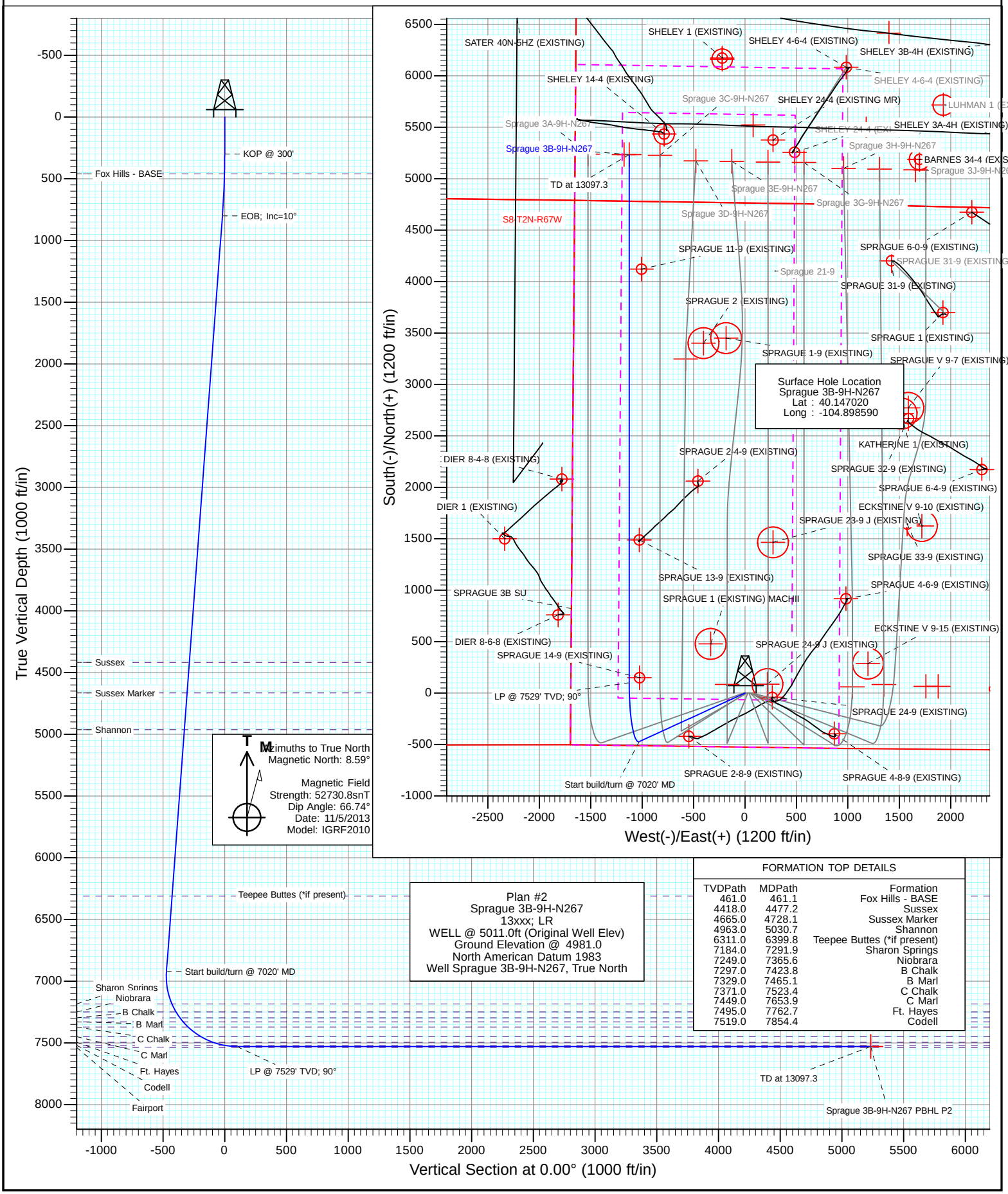
encana natural gas

Project: DJ Wattenberg
Site: S9-T2N-R67W (Sprague)
Well: Sprague 3B-9H-N267
Wellbore: Hz
Design: Plan #2

CATHEDRAL



Plan #2
Sprague 3B-9H-N267
13xxx; LR
WELL @ 5011.0ft (Original Well Elev)
Ground Elevation @ 4981.0
North American Datum 1983
Well Sprague 3B-9H-N267, True North

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
461.0	461.1	Fox Hills - BASE
4418.0	4477.2	Sussex
4665.0	4728.1	Sussex Marker
4963.0	5030.7	Shannon
6311.0	6399.8	Teepee Buttes (*if present)
7184.0	7291.9	Sharon Springs
7249.0	7365.6	Niobrara
7297.0	7423.8	B Chalk
7329.0	7465.1	B Marl
7371.0	7523.4	C Chalk
7449.0	7653.9	C Marl
7495.0	7762.7	Ft. Hayes
7519.0	7854.4	Codell

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site:	S9-T2N-R67W (Sprague)	**North Reference:**	True
Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Project DJ Wattenberg

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site S9-T2N-R67W (Sprague)

Site Position:		**Northing:**	1,298,443.90 ft	**Latitude:**	40.151070
From:	Lat/Long	**Easting:**	3,167,093.12 ft	**Longitude:**	-104.902260
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.39 °

Well Sprague 3B-9H-N267

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,296,975.52 ft	**Latitude:**	40.147020
	+E/-W	0.0 ft	**Easting:**	3,168,128.99 ft	**Longitude:**	-104.898590
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,981.0 ft

Wellbore Hz

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	11/5/2013	8.59	66.74	52,731

Design Plan #2

Audit Notes:

Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	0.00

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
803.6	10.07	245.36	801.0	-18.4	-40.1	2.00	2.00	0.00	245.36	
7,020.5	10.07	245.36	6,922.1	-471.7	-1,028.4	0.00	0.00	0.00	0.00	
7,962.3	90.00	0.00	7,529.0	99.8	-1,126.3	10.00	8.49	12.17	114.30	
13,097.3	90.00	0.00	7,529.0	5,234.8	-1,126.3	0.00	0.00	0.00	0.00	Sprague 3B-9H-N267

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site:	S9-T2N-R67W (Sprague)	**North Reference:**	True
Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	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	KOP @ 300'
400.0	2.00	245.36	400.0	-0.7	-1.6	-0.7	2.00	2.00	
461.1	3.22	245.36	461.0	-1.9	-4.1	-1.9	2.00	2.00	Fox Hills - BASE
500.0	4.00	245.36	499.8	-2.9	-6.3	-2.9	2.00	2.00	
600.0	6.00	245.36	599.5	-6.5	-14.3	-6.5	2.00	2.00	
700.0	8.00	245.36	698.7	-11.6	-25.3	-11.6	2.00	2.00	
800.0	10.00	245.36	797.5	-18.1	-39.6	-18.1	2.00	2.00	
803.6	10.07	245.36	801.0	-18.4	-40.1	-18.4	2.00	2.00	EOB; Inc=10°
900.0	10.07	245.36	895.9	-25.4	-55.5	-25.4	0.00	0.00	
1,000.0	10.07	245.36	994.4	-32.7	-71.3	-32.7	0.00	0.00	
1,100.0	10.07	245.36	1,092.8	-40.0	-87.2	-40.0	0.00	0.00	
1,200.0	10.07	245.36	1,191.3	-47.3	-103.1	-47.3	0.00	0.00	
1,300.0	10.07	245.36	1,289.8	-54.6	-119.0	-54.6	0.00	0.00	
1,400.0	10.07	245.36	1,388.2	-61.9	-134.9	-61.9	0.00	0.00	
1,500.0	10.07	245.36	1,486.7	-69.2	-150.8	-69.2	0.00	0.00	
1,600.0	10.07	245.36	1,585.1	-76.5	-166.7	-76.5	0.00	0.00	
1,700.0	10.07	245.36	1,683.6	-83.8	-182.6	-83.8	0.00	0.00	
1,800.0	10.07	245.36	1,782.1	-91.1	-198.5	-91.1	0.00	0.00	
1,900.0	10.07	245.36	1,880.5	-98.3	-214.4	-98.3	0.00	0.00	
2,000.0	10.07	245.36	1,979.0	-105.6	-230.3	-105.6	0.00	0.00	
2,100.0	10.07	245.36	2,077.4	-112.9	-246.2	-112.9	0.00	0.00	
2,200.0	10.07	245.36	2,175.9	-120.2	-262.1	-120.2	0.00	0.00	
2,300.0	10.07	245.36	2,274.3	-127.5	-278.0	-127.5	0.00	0.00	
2,400.0	10.07	245.36	2,372.8	-134.8	-293.9	-134.8	0.00	0.00	
2,500.0	10.07	245.36	2,471.3	-142.1	-309.8	-142.1	0.00	0.00	
2,600.0	10.07	245.36	2,569.7	-149.4	-325.7	-149.4	0.00	0.00	
2,700.0	10.07	245.36	2,668.2	-156.7	-341.6	-156.7	0.00	0.00	
2,800.0	10.07	245.36	2,766.6	-164.0	-357.5	-164.0	0.00	0.00	
2,900.0	10.07	245.36	2,865.1	-171.3	-373.4	-171.3	0.00	0.00	
3,000.0	10.07	245.36	2,963.6	-178.5	-389.3	-178.5	0.00	0.00	
3,100.0	10.07	245.36	3,062.0	-185.8	-405.2	-185.8	0.00	0.00	
3,200.0	10.07	245.36	3,160.5	-193.1	-421.1	-193.1	0.00	0.00	
3,300.0	10.07	245.36	3,258.9	-200.4	-437.0	-200.4	0.00	0.00	
3,400.0	10.07	245.36	3,357.4	-207.7	-452.9	-207.7	0.00	0.00	
3,500.0	10.07	245.36	3,455.9	-215.0	-468.7	-215.0	0.00	0.00	
3,600.0	10.07	245.36	3,554.3	-222.3	-484.6	-222.3	0.00	0.00	
3,700.0	10.07	245.36	3,652.8	-229.6	-500.5	-229.6	0.00	0.00	
3,800.0	10.07	245.36	3,751.2	-236.9	-516.4	-236.9	0.00	0.00	
3,900.0	10.07	245.36	3,849.7	-244.2	-532.3	-244.2	0.00	0.00	
4,000.0	10.07	245.36	3,948.2	-251.5	-548.2	-251.5	0.00	0.00	
4,100.0	10.07	245.36	4,046.6	-258.7	-564.1	-258.7	0.00	0.00	
4,200.0	10.07	245.36	4,145.1	-266.0	-580.0	-266.0	0.00	0.00	
4,300.0	10.07	245.36	4,243.5	-273.3	-595.9	-273.3	0.00	0.00	
4,400.0	10.07	245.36	4,342.0	-280.6	-611.8	-280.6	0.00	0.00	
4,477.2	10.07	245.36	4,418.0	-286.2	-624.1	-286.2	0.00	0.00	Sussex
4,500.0	10.07	245.36	4,440.4	-287.9	-627.7	-287.9	0.00	0.00	
4,600.0	10.07	245.36	4,538.9	-295.2	-643.6	-295.2	0.00	0.00	
4,700.0	10.07	245.36	4,637.4	-302.5	-659.5	-302.5	0.00	0.00	
4,728.1	10.07	245.36	4,665.0	-304.5	-664.0	-304.5	0.00	0.00	Sussex Marker

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site:	S9-T2N-R67W (Sprague)	**North Reference:**	True
Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	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
4,800.0	10.07	245.36	4,735.8	-309.8	-675.4	-309.8	0.00	0.00	
4,900.0	10.07	245.36	4,834.3	-317.1	-691.3	-317.1	0.00	0.00	
5,000.0	10.07	245.36	4,932.7	-324.4	-707.2	-324.4	0.00	0.00	
5,030.7	10.07	245.36	4,963.0	-326.6	-712.1	-326.6	0.00	0.00	Shannon
5,100.0	10.07	245.36	5,031.2	-331.6	-723.1	-331.6	0.00	0.00	
5,200.0	10.07	245.36	5,129.7	-338.9	-739.0	-338.9	0.00	0.00	
5,300.0	10.07	245.36	5,228.1	-346.2	-754.9	-346.2	0.00	0.00	
5,400.0	10.07	245.36	5,326.6	-353.5	-770.8	-353.5	0.00	0.00	
5,500.0	10.07	245.36	5,425.0	-360.8	-786.7	-360.8	0.00	0.00	
5,600.0	10.07	245.36	5,523.5	-368.1	-802.6	-368.1	0.00	0.00	
5,700.0	10.07	245.36	5,622.0	-375.4	-818.5	-375.4	0.00	0.00	
5,800.0	10.07	245.36	5,720.4	-382.7	-834.4	-382.7	0.00	0.00	
5,900.0	10.07	245.36	5,818.9	-390.0	-850.3	-390.0	0.00	0.00	
6,000.0	10.07	245.36	5,917.3	-397.3	-866.1	-397.3	0.00	0.00	
6,100.0	10.07	245.36	6,015.8	-404.6	-882.0	-404.6	0.00	0.00	
6,200.0	10.07	245.36	6,114.2	-411.8	-897.9	-411.8	0.00	0.00	
6,300.0	10.07	245.36	6,212.7	-419.1	-913.8	-419.1	0.00	0.00	
6,399.8	10.07	245.36	6,311.0	-426.4	-929.7	-426.4	0.00	0.00	Teepee Buttes (*if present)
6,400.0	10.07	245.36	6,311.2	-426.4	-929.7	-426.4	0.00	0.00	
6,500.0	10.07	245.36	6,409.6	-433.7	-945.6	-433.7	0.00	0.00	
6,600.0	10.07	245.36	6,508.1	-441.0	-961.5	-441.0	0.00	0.00	
6,700.0	10.07	245.36	6,606.5	-448.3	-977.4	-448.3	0.00	0.00	
6,800.0	10.07	245.36	6,705.0	-455.6	-993.3	-455.6	0.00	0.00	
6,900.0	10.07	245.36	6,803.5	-462.9	-1,009.2	-462.9	0.00	0.00	
7,000.0	10.07	245.36	6,901.9	-470.2	-1,025.1	-470.2	0.00	0.00	
7,020.5	10.07	245.36	6,922.1	-471.7	-1,028.4	-471.7	0.00	0.00	Start build/turn @ 7020' MD
7,100.0	9.91	292.44	7,000.5	-472.0	-1,041.0	-472.0	10.00	-0.21	
7,200.0	16.49	326.95	7,098.0	-456.7	-1,056.8	-456.7	10.00	6.58	
7,291.9	24.63	339.38	7,184.0	-427.8	-1,070.6	-427.8	10.00	8.85	Sharon Springs
7,300.0	25.38	340.10	7,191.3	-424.6	-1,071.8	-424.6	10.00	9.26	
7,365.6	31.56	344.76	7,249.0	-394.8	-1,081.1	-394.8	10.00	9.42	Niobrara
7,400.0	34.85	346.59	7,277.8	-376.5	-1,085.8	-376.5	10.00	9.57	
7,423.8	37.14	347.69	7,297.0	-362.9	-1,088.9	-362.9	10.00	9.62	B Chalk
7,465.1	41.13	349.35	7,329.0	-337.4	-1,094.1	-337.4	10.00	9.68	B Marl
7,500.0	44.53	350.55	7,354.6	-314.0	-1,098.2	-314.0	10.00	9.72	
7,523.4	46.81	351.28	7,371.0	-297.5	-1,100.8	-297.5	10.00	9.75	C Chalk
7,600.0	54.30	353.34	7,419.6	-238.9	-1,108.7	-238.9	10.00	9.78	
7,653.9	59.59	354.56	7,449.0	-194.0	-1,113.4	-194.0	10.00	9.82	C Marl
7,700.0	64.13	355.51	7,470.7	-153.5	-1,116.9	-153.5	10.00	9.84	
7,762.7	70.30	356.69	7,495.0	-95.9	-1,120.9	-95.9	10.00	9.85	Ft. Hayes
7,800.0	73.98	357.34	7,506.4	-60.4	-1,122.7	-60.4	10.00	9.86	
7,854.4	79.35	358.26	7,519.0	-7.5	-1,124.7	-7.5	10.00	9.86	Codell
7,900.0	83.85	359.00	7,525.7	37.6	-1,125.8	37.6	10.00	9.87	
7,962.3	90.00	0.00	7,529.0	99.8	-1,126.3	99.8	10.00	9.87	LP @ 7529' TVD; 90°
8,000.0	90.00	0.00	7,529.0	137.4	-1,126.3	137.4	0.00	0.00	
8,100.0	90.00	0.00	7,529.0	237.4	-1,126.3	237.4	0.00	0.00	
8,200.0	90.00	0.00	7,529.0	337.4	-1,126.3	337.4	0.00	0.00	
8,300.0	90.00	0.00	7,529.0	437.4	-1,126.3	437.4	0.00	0.00	
8,400.0	90.00	0.00	7,529.0	537.4	-1,126.3	537.4	0.00	0.00	
8,500.0	90.00	0.00	7,529.0	637.4	-1,126.3	637.4	0.00	0.00	
8,600.0	90.00	0.00	7,529.0	737.4	-1,126.3	737.4	0.00	0.00	
8,700.0	90.00	0.00	7,529.0	837.4	-1,126.3	837.4	0.00	0.00	

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Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	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
8,800.0	90.00	0.00	7,529.0	937.4	-1,126.3	937.4	0.00	0.00	
8,900.0	90.00	0.00	7,529.0	1,037.4	-1,126.3	1,037.4	0.00	0.00	
9,000.0	90.00	0.00	7,529.0	1,137.4	-1,126.3	1,137.4	0.00	0.00	
9,100.0	90.00	0.00	7,529.0	1,237.4	-1,126.3	1,237.4	0.00	0.00	
9,200.0	90.00	0.00	7,529.0	1,337.4	-1,126.3	1,337.4	0.00	0.00	
9,300.0	90.00	0.00	7,529.0	1,437.4	-1,126.3	1,437.4	0.00	0.00	
9,400.0	90.00	0.00	7,529.0	1,537.4	-1,126.3	1,537.4	0.00	0.00	
9,500.0	90.00	0.00	7,529.0	1,637.4	-1,126.3	1,637.4	0.00	0.00	
9,600.0	90.00	0.00	7,529.0	1,737.4	-1,126.3	1,737.4	0.00	0.00	
9,700.0	90.00	0.00	7,529.0	1,837.4	-1,126.3	1,837.4	0.00	0.00	
9,800.0	90.00	0.00	7,529.0	1,937.4	-1,126.3	1,937.4	0.00	0.00	
9,900.0	90.00	0.00	7,529.0	2,037.4	-1,126.3	2,037.4	0.00	0.00	
10,000.0	90.00	0.00	7,529.0	2,137.4	-1,126.3	2,137.4	0.00	0.00	
10,100.0	90.00	0.00	7,529.0	2,237.4	-1,126.3	2,237.4	0.00	0.00	
10,200.0	90.00	0.00	7,529.0	2,337.4	-1,126.3	2,337.4	0.00	0.00	
10,300.0	90.00	0.00	7,529.0	2,437.4	-1,126.3	2,437.4	0.00	0.00	
10,400.0	90.00	0.00	7,529.0	2,537.4	-1,126.3	2,537.4	0.00	0.00	
10,500.0	90.00	0.00	7,529.0	2,637.4	-1,126.3	2,637.4	0.00	0.00	
10,600.0	90.00	0.00	7,529.0	2,737.4	-1,126.3	2,737.4	0.00	0.00	
10,700.0	90.00	0.00	7,529.0	2,837.4	-1,126.3	2,837.4	0.00	0.00	
10,800.0	90.00	0.00	7,529.0	2,937.4	-1,126.3	2,937.4	0.00	0.00	
10,900.0	90.00	0.00	7,529.0	3,037.4	-1,126.3	3,037.4	0.00	0.00	
11,000.0	90.00	0.00	7,529.0	3,137.4	-1,126.3	3,137.4	0.00	0.00	
11,100.0	90.00	0.00	7,529.0	3,237.4	-1,126.3	3,237.4	0.00	0.00	
11,200.0	90.00	0.00	7,529.0	3,337.4	-1,126.3	3,337.4	0.00	0.00	
11,300.0	90.00	0.00	7,529.0	3,437.4	-1,126.3	3,437.4	0.00	0.00	
11,400.0	90.00	0.00	7,529.0	3,537.4	-1,126.3	3,537.4	0.00	0.00	
11,500.0	90.00	0.00	7,529.0	3,637.4	-1,126.3	3,637.4	0.00	0.00	
11,600.0	90.00	0.00	7,529.0	3,737.4	-1,126.3	3,737.4	0.00	0.00	
11,700.0	90.00	0.00	7,529.0	3,837.4	-1,126.3	3,837.4	0.00	0.00	
11,800.0	90.00	0.00	7,529.0	3,937.4	-1,126.3	3,937.4	0.00	0.00	
11,900.0	90.00	0.00	7,529.0	4,037.4	-1,126.3	4,037.4	0.00	0.00	
12,000.0	90.00	0.00	7,529.0	4,137.4	-1,126.3	4,137.4	0.00	0.00	
12,100.0	90.00	0.00	7,529.0	4,237.4	-1,126.3	4,237.4	0.00	0.00	
12,200.0	90.00	0.00	7,529.0	4,337.4	-1,126.3	4,337.4	0.00	0.00	
12,300.0	90.00	0.00	7,529.0	4,437.4	-1,126.3	4,437.4	0.00	0.00	
12,400.0	90.00	0.00	7,529.0	4,537.4	-1,126.3	4,537.4	0.00	0.00	
12,500.0	90.00	0.00	7,529.0	4,637.4	-1,126.3	4,637.4	0.00	0.00	
12,600.0	90.00	0.00	7,529.0	4,737.4	-1,126.3	4,737.4	0.00	0.00	
12,700.0	90.00	0.00	7,529.0	4,837.4	-1,126.3	4,837.4	0.00	0.00	
12,800.0	90.00	0.00	7,529.0	4,937.4	-1,126.3	4,937.4	0.00	0.00	
12,900.0	90.00	0.00	7,529.0	5,037.4	-1,126.3	5,037.4	0.00	0.00	
13,000.0	90.00	0.00	7,529.0	5,137.4	-1,126.3	5,137.4	0.00	0.00	
13,097.3	90.00	0.00	7,529.0	5,234.8	-1,126.3	5,234.8	0.00	0.00	TD at 13097.3

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site:	S9-T2N-R67W (Sprague)	**North Reference:**	True
Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

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
Sprague 3B-9H-N267 PI	0.00	0.00	7,529.0	5,234.8	-1,126.3	1,302,202.52	3,166,967.17	40.161390	-104.902620
- plan hits target center - Point									
Sprague 3B-9H-N267 PI	0.00	0.00	7,529.0	5,234.8	-1,176.7	1,302,202.18	3,166,916.86	40.161390	-104.902800
- plan misses target center by 50.3ft at 13097.3ft MD (7529.0 TVD, 5234.8 N, -1126.3 E) - Point									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
461.1	461.0	Fox Hills - BASE			
4,477.2	4,418.0	Sussex			
4,728.1	4,665.0	Sussex Marker			
5,030.7	4,963.0	Shannon			
6,399.8	6,311.0	Teepee Buttes (*if present)			
7,291.9	7,184.0	Sharon Springs			
7,365.6	7,249.0	Niobrara			
7,423.8	7,297.0	B Chalk			
7,465.1	7,329.0	B Marl			
7,523.4	7,371.0	C Chalk			
7,653.9	7,449.0	C Marl			
7,762.7	7,495.0	Ft. Hayes			
7,854.4	7,519.0	Codell			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.0	300.0	0.0	0.0	KOP @ 300'
803.6	801.0	-18.4	-40.1	EOB; Inc=10°
7,020.5	6,922.1	-471.7	-1,028.4	Start build/turn @ 7020' MD
7,962.3	7,529.0	99.8	-1,126.3	LP @ 7529' TVD; 90°
13,097.3	7,529.0	5,234.8	-1,126.3	TD at 13097.3

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S9-T2N-R67W (Sprague)
Sprague 3B-9H-N267
Hz
Plan #2

Anticollision Report

11 December, 2013

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference	Plan #2

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,211.4ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 12/11/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	13,097.3	Plan #2 (Hz)	Geolink MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S9-T2N-R67W (Sprague)						
BARNES 34-4 (EXISTING) - ENCANA WELL - ENCANA						Out of range
DIER 1 (EXISTING) - ENCANA WELL - NO SURVEYS	9,362.4	7,459.0	1,210.5	1,166.4	27.413	CC
DIER 1 (EXISTING) - ENCANA WELL - NO SURVEYS	9,400.0	7,459.0	1,211.1	1,166.4	27.063	ES, SF
DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS	9,926.2	7,583.8	667.7	611.3	11.857	CC, ES
DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS	10,100.0	7,588.8	689.9	630.7	11.655	SF
DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS	8,627.4	7,562.5	673.4	634.0	17.084	CC, ES
DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS	8,800.0	7,562.1	695.2	653.4	16.649	SF
ECKSTINE V 9-10 (EXISTING) - NOBLE WELL - NO SU						Out of range
ECKSTINE V 9-15 (EXISTING) - NOBLE WELL - NO SU						Out of range
ECKSTINE V 9-16 (EXISTING) - NOBLE WELL - NO SU						Out of range
KATHERINE 1 (EXISTING) - MACEY-MERSHON WELL						Out of range
LUHMAN 1 (EXISTING) - ENCANA WELL - Exising						Out of range
LUHMAN 44-4 (EXISTING) - ENCANA WELL - NO SURV						Out of range
SATER 40N-5HZ (EXISTING) - KERR-MCGEE WELL - S	13,097.3	10,260.3	1,120.2	968.6	7.390	CC, ES, SF
SHELEY 1 (EXISTING) - ENCANA WELL - NO SURVEY						Out of range
SHELEY 14-4 (EXISTING) - ENCANA WELL - NO SURV	13,097.3	7,428.0	393.9	286.4	3.664	CC, ES, SF
SHELEY 24-4 (EXISTING MR) - MACHII-ROSS WELL -						Out of range
SHELEY 24-4 (EXISTING) - ENCANA WELL - NO SURV						Out of range
SHELEY 3A-4H (EXISTING) - ENCANA WELL - SURVE	13,097.3	7,555.4	408.5	363.3	9.030	CC, ES, SF
SHELEY 3B-4H (EXISTING) - ENCANA WELL - Plan #4						Out of range
SHELEY 3B-4H (EXISTING) - ENCANA WELL - SURVE						Out of range
SHELEY 4-6-4 (EXISTING) - ENCANA WELL - Plan #2						Out of range
SHELEY 4-6-4 (EXISTING) - ENCANA WELL - SURVEY						Out of range
SPRAGUE 1 (EXISTING) - ENCANA WELL - NO SURVE						Out of range
SPRAGUE 1 (EXISTING) MACHII - MACHII-ROSS WEL	1,150.4	1,105.4	573.5	568.8	121.290	CC
SPRAGUE 1 (EXISTING) MACHII - MACHII-ROSS WEL	1,200.0	1,154.3	573.5	568.6	115.087	ES
SPRAGUE 1 (EXISTING) MACHII - MACHII-ROSS WEL	8,600.0	7,492.0	833.6	800.5	25.237	SF
SPRAGUE 11-9 (EXISTING) - ENCANA WELL - NO SUR	11,983.3	7,460.0	119.6	31.3	1.355	Level 3, CC, ES, SF
SPRAGUE 13-9 (EXISTING) - ENCANA WELL - NO SUR	9,350.7	7,490.0	98.5	54.5	2.237	CC, ES, SF
SPRAGUE 14-9 (EXISTING) - ENCANA WELL - NO SUR	8,011.9	7,488.0	100.4	73.1	3.681	CC, ES, SF
SPRAGUE 1-9 (EXISTING) - MACHII-ROSS WELL - NO	11,312.7	7,455.0	942.4	865.7	12.283	CC, ES
SPRAGUE 1-9 (EXISTING) - MACHII-ROSS WELL - NO	11,500.0	7,455.0	960.9	880.9	12.020	SF
SPRAGUE 2 (EXISTING) - MACHII-ROSS WELL - NO S	11,263.9	7,492.0	722.7	646.8	9.516	CC, ES
SPRAGUE 2 (EXISTING) - MACHII-ROSS WELL - NO S	11,400.0	7,492.0	735.4	657.2	9.394	SF
Sprague 21-9 - DD - Plan #1						Out of range
SPRAGUE 22-9 J (EXISTING) - MACHII-ROSS WELL -						Out of range
SPRAGUE 23-9 J (EXISTING) - MACHII-ROSS WELL -						Out of range
SPRAGUE 24-9 (EXISTING) - ENCANA WELL - NO SUR	300.0	269.0	267.6	266.7	284.442	CC, ES
SPRAGUE 24-9 (EXISTING) - ENCANA WELL - NO SUR	6,100.0	5,984.8	1,202.7	1,181.5	56.777	SF
SPRAGUE 2-4-9 (EXISTING) - ENCANA WELL - Plan #1	9,923.1	7,570.4	668.8	611.9	11.747	CC, ES
SPRAGUE 2-4-9 (EXISTING) - ENCANA WELL - Plan #1	10,100.0	7,570.4	691.8	631.9	11.556	SF
SPRAGUE 2-4-9 (EXISTING) - ENCANA WELL - SURVE	9,900.2	7,588.7	667.7	611.3	11.854	CC, ES
SPRAGUE 2-4-9 (EXISTING) - ENCANA WELL - SURVE	10,000.0	7,592.3	675.1	617.1	11.644	SF
SPRAGUE 24-9 J (EXISTING) - MACHII-ROSS WELL -	300.0	276.0	234.3	233.3	245.787	CC, ES
SPRAGUE 24-9 J (EXISTING) - MACHII-ROSS WELL -	6,100.0	5,991.8	1,204.4	1,183.5	57.412	SF
SPRAGUE 2-8-9 (EXISTING) - ENCANA WELL - SURVE	3,221.4	3,244.5	214.4	193.1	10.071	CC
SPRAGUE 2-8-9 (EXISTING) - ENCANA WELL - SURVE	3,900.0	3,922.6	219.3	192.6	8.202	ES
SPRAGUE 2-8-9 (EXISTING) - ENCANA WELL - SURVE	4,300.0	4,318.3	225.4	196.7	7.859	SF
SPRAGUE 31-9 (EXISTING) - ENCANA WELL - Plan #3						Out of range
SPRAGUE 31-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 32-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
SPRAGUE 33-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
SPRAGUE 34-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
S9-T2N-R67W (Sprague)						
SPRAGUE 3-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
Sprague 3A-9H-N267 - Hz - Plan #1	200.0	200.0	11.2	10.6	18.844	CC, ES
Sprague 3A-9H-N267 - Hz - Plan #1	13,097.3	12,963.2	457.2	290.5	2.742	SF
Sprague 3C-9H-N267 - Hz - Plan #1	300.0	300.0	8.4	7.4	8.898	CC, ES
Sprague 3C-9H-N267 - Hz - Plan #1	13,097.3	12,840.5	372.5	219.2	2.429	SF
Sprague 3D-9H-N267 - Hz - Plan #1	300.0	300.0	19.6	18.6	20.763	CC, ES
Sprague 3D-9H-N267 - Hz - Plan #1	13,097.3	12,876.7	651.4	463.4	3.465	SF
Sprague 3E-9H-N267 - Hz - Plan #1	323.7	323.9	27.6	26.5	26.819	CC, ES
Sprague 3E-9H-N267 - Hz - Plan #1	13,097.3	12,772.4	1,024.3	840.7	5.578	SF
Sprague 3F-9H-N267 - Hz - Plan #1	300.0	300.0	39.1	38.2	41.526	CC, ES
Sprague 3F-9H-N267 - Hz - Plan #1	600.0	599.2	54.0	52.0	27.133	SF
Sprague 3G-9H-N267 - Hz - Plan #1	300.0	300.0	50.3	49.4	53.390	CC, ES
Sprague 3G-9H-N267 - Hz - Plan #1	600.0	597.9	67.2	65.2	33.729	SF
Sprague 3H-9H-N267 - Hz - Plan #2	300.0	300.0	58.7	57.8	62.289	CC, ES
Sprague 3H-9H-N267 - Hz - Plan #2	600.0	595.2	78.8	76.8	39.573	SF
Sprague 3I-9H-N267 - Hz - Plan #2	300.0	300.0	70.0	69.0	74.253	CC, ES
Sprague 3I-9H-N267 - Hz - Plan #2	600.0	590.7	98.2	96.2	49.394	SF
Sprague 3J-9H-N267 - Hz - Plan #2	200.0	200.0	78.4	77.8	132.048	CC, ES
Sprague 3J-9H-N267 - Hz - Plan #2	600.0	585.1	118.6	116.7	59.992	SF
SPRAGUE 41-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 42-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
SPRAGUE 43-9 (EXISTING) - ENCANA WELL - GYRO						Out of range
SPRAGUE 44-9 (EXISTING) - ENCANA WELL - NO SUR						Out of range
SPRAGUE 4-6-9 (EXISTING) - ENCANA WELL - SURVE	168.8	151.2	273.3	272.8	558.656	CC
SPRAGUE 4-6-9 (EXISTING) - ENCANA WELL - SURVE	200.0	181.5	273.3	272.7	458.226	ES
SPRAGUE 4-6-9 (EXISTING) - ENCANA WELL - SURVE	1,900.0	1,703.6	739.4	732.3	104.784	SF
SPRAGUE 4-8-9 (EXISTING) - ENCANA WELL - SURVE	310.0	293.2	267.3	266.3	271.264	CC, ES
SPRAGUE 4-8-9 (EXISTING) - ENCANA WELL - SURVE	3,800.0	3,580.8	1,191.5	1,175.9	76.259	SF
SPRAGUE 6-0-9 (EXISTING) - ENCANA WELL - PLAN O						Out of range
SPRAGUE 6-4-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE 8-6-9 (EXISTING) - ENCANA WELL - SURVE						Out of range
SPRAGUE V 9-1 (EXISTING) - NOBLE WELL - NO SUR						Out of range
SPRAGUE V 9-7 (EXISTING) - NOBLE WELL - NO SUR						Out of range
SPRAGUE V 9-8 (EXISTING) - NOBLE WELL - NO SUR						Out of range

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - DIER 1 (EXISTING) - ENCANA WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8075-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,362.4	7,529.0	7,459.0	7,459.0	36.9	13.0	-90.00	1,499.9	-2,336.9	1,210.5	1,166.4	44.16	27.413	CC
9,400.0	7,529.0	7,459.0	7,459.0	37.4	13.0	-90.00	1,499.9	-2,336.9	1,211.1	1,166.4	44.75	27.063	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - DIER 8-4-8 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 78-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	7,529.0	7,557.2	7,467.2	32.4	18.8	-89.02	2,062.8	-1,794.4	1,141.4	1,099.9	41.56	27.467	
9,100.0	7,529.0	7,560.0	7,470.1	33.6	18.8	-89.27	2,062.9	-1,794.4	1,062.0	1,018.9	43.07	24.659	
9,200.0	7,529.0	7,562.9	7,473.0	34.8	18.8	-89.52	2,063.0	-1,794.3	986.2	941.6	44.60	22.110	
9,300.0	7,529.0	7,565.8	7,475.8	36.1	18.8	-89.76	2,063.1	-1,794.2	915.2	869.0	46.17	19.823	
9,400.0	7,529.0	7,568.7	7,478.7	37.4	18.8	-90.01	2,063.2	-1,794.2	849.9	802.2	47.75	17.800	
9,500.0	7,529.0	7,571.5	7,481.6	38.8	18.8	-90.26	2,063.2	-1,794.1	792.0	742.6	49.35	16.048	
9,600.0	7,529.0	7,574.4	7,484.4	40.2	18.8	-90.50	2,063.3	-1,794.0	743.0	692.0	50.96	14.579	
9,700.0	7,529.0	7,577.3	7,487.3	41.6	18.8	-90.75	2,063.4	-1,794.0	704.9	652.3	52.59	13.403	
9,800.0	7,529.0	7,580.1	7,490.2	43.0	18.8	-90.99	2,063.5	-1,793.9	679.5	625.2	54.23	12.530	
9,900.0	7,529.0	7,583.0	7,493.1	44.5	18.8	-91.24	2,063.6	-1,793.8	668.2	612.3	55.88	11.958	
9,926.2	7,529.0	7,583.8	7,493.8	44.9	18.8	-91.30	2,063.6	-1,793.8	667.7	611.3	56.31	11.857	CC, ES
10,000.0	7,529.0	7,585.9	7,495.9	46.0	18.8	-91.49	2,063.7	-1,793.8	671.7	614.2	57.53	11.676	
10,100.0	7,529.0	7,588.8	7,498.8	47.5	18.9	-91.73	2,063.7	-1,793.7	689.9	630.7	59.19	11.655	SF
10,200.0	7,529.0	7,591.6	7,501.7	49.0	18.9	-91.98	2,063.8	-1,793.7	721.6	660.7	60.86	11.857	
10,300.0	7,529.0	7,594.5	7,504.5	50.5	18.9	-92.23	2,063.9	-1,793.6	765.1	702.6	62.53	12.236	
10,400.0	7,529.0	7,597.4	7,507.4	52.1	18.9	-92.47	2,064.0	-1,793.5	818.6	754.4	64.21	12.750	
10,500.0	7,529.0	7,600.2	7,510.3	53.7	18.9	-92.72	2,064.1	-1,793.5	880.2	814.3	65.88	13.360	
10,600.0	7,529.0	7,603.1	7,513.1	55.2	18.9	-92.96	2,064.1	-1,793.4	948.4	880.8	67.57	14.036	
10,700.0	7,529.0	7,606.0	7,516.0	56.8	18.9	-93.21	2,064.2	-1,793.3	1,021.8	952.6	69.25	14.755	
10,800.0	7,529.0	7,608.9	7,518.9	58.4	18.9	-93.46	2,064.3	-1,793.3	1,099.4	1,028.5	70.94	15.498	
10,900.0	7,529.0	7,611.7	7,521.7	60.0	18.9	-93.70	2,064.4	-1,793.2	1,180.4	1,107.8	72.63	16.253	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - DIER 8-6-8 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 52-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,700.0	7,470.7	7,503.3	7,394.2	24.0	21.4	-53.63	765.0	-1,797.0	1,143.1	1,114.4	28.75	39.760	
7,800.0	7,506.4	7,540.9	7,431.8	24.1	21.4	-67.83	764.9	-1,798.5	1,067.0	1,036.0	30.91	34.518	
7,900.0	7,525.7	7,561.0	7,451.9	24.2	21.4	-81.18	764.9	-1,799.2	991.5	958.8	32.68	30.340	
8,000.0	7,529.0	7,564.2	7,455.1	24.5	21.4	-88.00	764.9	-1,799.4	920.4	887.2	33.26	27.674	
8,100.0	7,529.0	7,564.0	7,454.8	24.8	21.4	-87.98	764.9	-1,799.3	855.4	821.5	33.87	25.256	
8,200.0	7,529.0	7,563.7	7,454.6	25.3	21.4	-87.96	764.9	-1,799.3	797.6	763.0	34.65	23.018	
8,300.0	7,529.0	7,563.4	7,454.3	25.9	21.4	-87.93	764.9	-1,799.3	748.8	713.2	35.58	21.043	
8,400.0	7,529.0	7,563.2	7,454.0	26.5	21.4	-87.91	764.9	-1,799.3	710.8	674.1	36.64	19.397	
8,500.0	7,529.0	7,562.9	7,453.8	27.3	21.4	-87.89	764.9	-1,799.3	685.4	647.6	37.81	18.128	
8,600.0	7,529.0	7,562.6	7,453.5	28.2	21.4	-87.86	764.9	-1,799.3	674.0	634.9	39.06	17.256	
8,627.4	7,529.0	7,562.5	7,453.4	28.4	21.4	-87.86	764.9	-1,799.3	673.4	634.0	39.42	17.084	CC, ES
8,700.0	7,529.0	7,562.4	7,453.2	29.1	21.4	-87.84	764.9	-1,799.3	677.3	636.9	40.38	16.775	
8,800.0	7,529.0	7,562.1	7,453.0	30.1	21.4	-87.82	764.9	-1,799.3	695.2	653.4	41.75	16.649	SF
8,900.0	7,529.0	7,561.8	7,452.7	31.2	21.4	-87.79	764.9	-1,799.3	726.5	683.3	43.18	16.824	
9,000.0	7,529.0	7,561.6	7,452.4	32.4	21.4	-87.77	764.9	-1,799.3	769.6	725.0	44.65	17.236	
9,100.0	7,529.0	7,561.3	7,452.2	33.6	21.4	-87.75	764.9	-1,799.2	822.7	776.5	46.15	17.826	
9,200.0	7,529.0	7,561.0	7,451.9	34.8	21.4	-87.73	764.9	-1,799.2	883.9	836.2	47.68	18.538	
9,300.0	7,529.0	7,560.8	7,451.6	36.1	21.4	-87.70	764.9	-1,799.2	951.7	902.5	49.23	19.331	
9,400.0	7,529.0	7,560.5	7,451.4	37.4	21.4	-87.68	764.9	-1,799.2	1,024.9	974.0	50.81	20.171	
9,500.0	7,529.0	7,560.2	7,451.1	38.8	21.4	-87.66	764.9	-1,799.2	1,102.2	1,049.8	52.40	21.034	
9,600.0	7,529.0	7,560.0	7,450.8	40.2	21.4	-87.64	764.9	-1,799.2	1,182.9	1,128.9	54.01	21.903	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SATER 40N-5HZ (EXISTING) - KERR-MCGEE WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 1200-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,900.0	7,529.0	7,274.4	7,159.4	44.5	15.1	-74.04	2,281.5	-2,250.7	1,194.6	1,141.3	53.31	22.408	
10,000.0	7,529.0	7,324.9	7,187.5	46.0	15.2	-75.36	2,323.6	-2,250.3	1,176.5	1,121.2	55.31	21.270	
10,100.0	7,529.0	7,381.5	7,214.3	47.5	15.4	-76.65	2,373.4	-2,249.9	1,162.8	1,105.5	57.33	20.283	
10,200.0	7,529.0	7,443.9	7,238.0	49.0	15.7	-77.79	2,431.1	-2,249.5	1,152.9	1,093.6	59.34	19.429	
10,216.6	7,529.0	7,454.8	7,241.5	49.3	15.7	-77.96	2,441.4	-2,249.4	1,151.6	1,092.0	59.67	19.300	
10,300.0	7,529.0	7,635.3	7,270.0	50.5	16.8	-79.34	2,618.9	-2,248.0	1,155.7	1,093.9	61.78	18.705	
10,400.0	7,529.0	7,635.3	7,270.0	52.1	16.8	-79.34	2,618.9	-2,248.0	1,144.2	1,080.8	63.43	18.039	
10,500.0	7,529.0	7,663.1	7,270.0	53.7	17.2	-79.34	2,646.6	-2,247.8	1,141.1	1,075.6	65.54	17.413	
10,600.0	7,529.0	7,763.1	7,270.2	55.2	18.6	-79.34	2,746.6	-2,247.0	1,140.3	1,071.5	68.81	16.571	
10,700.0	7,529.0	7,863.0	7,270.3	56.8	20.2	-79.35	2,846.6	-2,246.2	1,139.5	1,067.4	72.10	15.806	
10,800.0	7,529.0	7,963.0	7,270.5	58.4	21.8	-79.35	2,946.6	-2,245.4	1,138.7	1,063.3	75.38	15.106	
10,900.0	7,529.0	8,063.0	7,270.6	60.0	23.4	-79.35	3,046.6	-2,244.6	1,137.9	1,059.2	78.68	14.463	
11,000.0	7,529.0	8,163.0	7,270.8	61.6	25.0	-79.35	3,146.6	-2,243.8	1,137.1	1,055.1	81.97	13.872	
11,100.0	7,529.0	8,263.0	7,270.9	63.2	26.6	-79.35	3,246.6	-2,243.0	1,136.3	1,051.0	85.27	13.326	
11,200.0	7,529.0	8,363.0	7,271.1	64.9	28.3	-79.35	3,346.6	-2,242.2	1,135.5	1,046.9	88.57	12.820	
11,300.0	7,529.0	8,463.0	7,271.3	66.5	29.9	-79.35	3,446.6	-2,241.5	1,134.7	1,042.8	91.88	12.350	
11,400.0	7,529.0	8,563.0	7,271.4	68.1	31.6	-79.35	3,546.6	-2,240.7	1,133.9	1,038.7	95.19	11.912	
11,500.0	7,529.0	8,663.0	7,271.6	69.8	33.2	-79.35	3,646.6	-2,239.9	1,133.1	1,034.6	98.50	11.504	
11,600.0	7,529.0	8,763.0	7,271.7	71.4	34.9	-79.35	3,746.6	-2,239.1	1,132.3	1,030.5	101.81	11.122	
11,700.0	7,529.0	8,863.0	7,271.9	73.1	36.5	-79.35	3,846.5	-2,238.3	1,131.5	1,026.4	105.12	10.763	
11,800.0	7,529.0	8,963.0	7,272.0	74.8	38.2	-79.35	3,946.5	-2,237.5	1,130.7	1,022.2	108.44	10.427	
11,900.0	7,529.0	9,063.0	7,272.2	76.4	39.8	-79.35	4,046.5	-2,236.7	1,129.9	1,018.1	111.76	10.110	
12,000.0	7,529.0	9,163.0	7,272.4	78.1	41.5	-79.35	4,146.5	-2,235.9	1,129.1	1,014.0	115.07	9.812	
12,100.0	7,529.0	9,263.0	7,272.5	79.8	43.1	-79.35	4,246.5	-2,235.1	1,128.3	1,009.9	118.40	9.530	
12,200.0	7,529.0	9,363.0	7,272.7	81.4	44.8	-79.35	4,346.5	-2,234.3	1,127.4	1,005.7	121.72	9.263	
12,300.0	7,529.0	9,463.0	7,272.8	83.1	46.4	-79.35	4,446.5	-2,233.5	1,126.6	1,001.6	125.04	9.010	
12,400.0	7,529.0	9,563.0	7,273.0	84.8	48.1	-79.35	4,546.5	-2,232.8	1,125.8	997.5	128.36	8.771	
12,500.0	7,529.0	9,663.0	7,273.1	86.5	49.7	-79.35	4,646.5	-2,232.0	1,125.0	993.3	131.69	8.543	
12,600.0	7,529.0	9,763.0	7,273.3	88.2	51.4	-79.35	4,746.5	-2,231.2	1,124.2	989.2	135.02	8.327	
12,700.0	7,529.0	9,863.0	7,273.5	89.9	53.0	-79.35	4,846.5	-2,230.4	1,123.4	985.1	138.34	8.120	
12,800.0	7,529.0	9,963.0	7,273.6	91.5	54.7	-79.35	4,946.5	-2,229.6	1,122.6	980.9	141.67	7.924	
12,900.0	7,529.0	10,063.0	7,273.8	93.2	56.3	-79.35	5,046.5	-2,228.8	1,121.8	976.8	145.00	7.736	
13,000.0	7,529.0	10,163.0	7,273.9	94.9	58.0	-79.35	5,146.5	-2,228.0	1,121.0	972.7	148.33	7.557	
13,097.3	7,529.0	10,260.3	7,274.1	96.6	59.6	-79.35	5,243.8	-2,227.2	1,120.2	968.6	151.57	7.390	CC, ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SHELEY 14-4 (EXISTING) - ENCANA WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8030-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,200.0	7,529.0	7,428.0	7,428.0	81.4	13.0	90.00	5,434.4	-786.8	1,148.3	1,056.3	91.96	12.488	
12,300.0	7,529.0	7,428.0	7,428.0	83.1	13.0	90.00	5,434.4	-786.8	1,053.2	959.5	93.68	11.242	
12,400.0	7,529.0	7,428.0	7,428.0	84.8	13.0	90.00	5,434.4	-786.8	959.1	863.7	95.41	10.052	
12,500.0	7,529.0	7,428.0	7,428.0	86.5	13.0	90.00	5,434.4	-786.8	866.3	769.1	97.14	8.917	
12,600.0	7,529.0	7,428.0	7,428.0	88.2	13.0	90.00	5,434.4	-786.8	775.3	676.4	98.88	7.841	
12,700.0	7,529.0	7,428.0	7,428.0	89.9	13.0	90.00	5,434.4	-786.8	686.8	586.2	100.61	6.826	
12,800.0	7,529.0	7,428.0	7,428.0	91.5	13.0	90.00	5,434.4	-786.8	601.9	499.5	102.34	5.881	
12,900.0	7,529.0	7,428.0	7,428.0	93.2	13.0	90.00	5,434.4	-786.8	522.4	418.3	104.08	5.019	
13,000.0	7,529.0	7,428.0	7,428.0	94.9	13.0	90.00	5,434.4	-786.8	451.1	345.3	105.81	4.263	
13,097.3	7,529.0	7,428.0	7,428.0	96.6	13.0	90.00	5,434.4	-786.8	393.9	286.4	107.50	3.664	CC, ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SHELEY 3A-4H (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 162-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
12,300.0	7,529.0	7,583.8	7,198.0	83.1	14.8	25.09	5,543.0	-1,011.6	1,138.2	1,090.8	47.38	24.023	
12,400.0	7,529.0	7,581.1	7,197.4	84.8	14.8	24.53	5,543.1	-1,014.3	1,041.3	993.8	47.45	21.944	
12,500.0	7,529.0	7,578.2	7,196.8	86.5	14.8	23.92	5,543.3	-1,017.1	945.1	897.6	47.45	19.917	
12,600.0	7,529.0	7,570.0	7,195.1	88.2	14.7	22.21	5,543.8	-1,025.1	849.7	803.7	46.06	18.448	
12,700.0	7,529.0	7,570.0	7,195.1	89.9	14.7	22.21	5,543.8	-1,025.1	755.5	708.7	46.73	16.166	
12,800.0	7,529.0	7,570.0	7,195.1	91.5	14.7	22.21	5,543.8	-1,025.1	662.9	615.5	47.40	13.984	
12,900.0	7,529.0	7,570.0	7,195.1	93.2	14.7	22.21	5,543.8	-1,025.1	572.9	524.8	48.08	11.916	
13,000.0	7,529.0	7,559.7	7,192.7	94.9	14.7	20.03	5,544.5	-1,035.1	486.5	440.7	45.86	10.608	
13,097.3	7,529.0	7,555.4	7,191.6	96.6	14.7	19.12	5,544.8	-1,039.2	408.5	363.3	45.24	9.030	CC, ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 1 (EXISTING) MACHII - MACHII-ROSS WELL - NO SURVEYS — **Offset Site Error:** 0.0 ft

Survey Program: 8036-Geolink MWD — **Offset Well Error:** 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-34.99	477.6	-334.3	584.1				
100.0	100.0	63.0	63.0	0.1	0.1	-34.99	477.6	-334.3	583.0	582.7	0.23	2,509.290	
200.0	200.0	163.0	163.0	0.3	0.3	-34.99	477.6	-334.3	583.0	582.4	0.58	1,002.728	
300.0	300.0	263.0	263.0	0.5	0.5	-34.99	477.6	-334.3	583.0	582.0	0.93	626.551	
400.0	400.0	363.0	363.0	0.6	0.6	79.82	477.6	-334.3	582.7	581.4	1.28	454.410	
500.0	499.8	462.8	462.8	0.8	0.8	80.34	477.6	-334.3	581.8	580.1	1.65	353.050	
600.0	599.5	562.5	562.5	1.1	1.0	81.22	477.6	-334.3	580.4	578.3	2.04	284.448	
700.0	698.7	661.7	661.7	1.3	1.2	82.43	477.6	-334.3	578.6	576.1	2.47	234.098	
800.0	797.5	760.5	760.5	1.6	1.3	83.99	477.6	-334.3	576.7	573.8	2.95	195.313	
900.0	895.9	858.9	858.9	2.0	1.5	85.70	477.6	-334.3	575.1	571.7	3.45	166.710	
1,000.0	994.4	957.4	957.4	2.3	1.7	87.42	477.6	-334.3	574.1	570.1	3.96	145.090	
1,100.0	1,092.8	1,055.8	1,055.8	2.6	1.8	89.13	477.6	-334.3	573.5	569.1	4.47	128.345	
1,150.4	1,142.4	1,105.4	1,105.4	2.8	1.9	90.00	477.6	-334.3	573.5	568.8	4.73	121.290	CC
1,200.0	1,191.3	1,154.3	1,154.3	3.0	2.0	90.85	477.6	-334.3	573.5	568.6	4.98	115.087	ES
1,300.0	1,289.8	1,252.8	1,252.8	3.3	2.2	92.57	477.6	-334.3	574.1	568.6	5.50	104.393	
1,400.0	1,388.2	1,351.2	1,351.2	3.7	2.4	94.29	477.6	-334.3	575.1	569.1	6.01	95.631	
1,500.0	1,486.7	1,449.7	1,449.7	4.0	2.5	95.99	477.6	-334.3	576.7	570.2	6.53	88.355	
1,600.0	1,585.1	1,548.1	1,548.1	4.4	2.7	97.69	477.6	-334.3	578.8	571.8	7.04	82.246	
1,700.0	1,683.6	1,646.6	1,646.6	4.7	2.9	99.37	477.6	-334.3	581.5	573.9	7.54	77.069	
1,800.0	1,782.1	1,745.1	1,745.1	5.1	3.0	101.04	477.6	-334.3	584.6	576.6	8.05	72.645	
1,900.0	1,880.5	1,843.5	1,843.5	5.4	3.2	102.68	477.6	-334.3	588.3	579.7	8.55	68.840	
2,000.0	1,979.0	1,942.0	1,942.0	5.8	3.4	104.31	477.6	-334.3	592.4	583.4	9.04	65.548	
2,100.0	2,077.4	2,040.4	2,040.4	6.1	3.6	105.91	477.6	-334.3	597.0	587.5	9.52	62.685	
2,200.0	2,175.9	2,138.9	2,138.9	6.5	3.7	107.49	477.6	-334.3	602.1	592.1	10.00	60.184	
2,300.0	2,274.3	2,237.3	2,237.3	6.8	3.9	109.04	477.6	-334.3	607.7	597.2	10.48	57.993	
2,400.0	2,372.8	2,335.8	2,335.8	7.2	4.1	110.57	477.6	-334.3	613.7	602.8	10.95	56.066	
2,500.0	2,471.3	2,434.3	2,434.3	7.5	4.2	112.06	477.6	-334.3	620.2	608.7	11.41	54.368	
2,600.0	2,569.7	2,532.7	2,532.7	7.9	4.4	113.52	477.6	-334.3	627.0	615.2	11.86	52.868	
2,700.0	2,668.2	2,631.2	2,631.2	8.2	4.6	114.95	477.6	-334.3	634.3	622.0	12.31	51.540	
2,800.0	2,766.6	2,729.6	2,729.6	8.6	4.8	116.35	477.6	-334.3	642.0	629.2	12.75	50.363	
2,900.0	2,865.1	2,828.1	2,828.1	8.9	4.9	117.71	477.6	-334.3	650.0	636.8	13.18	49.319	
3,000.0	2,963.6	2,926.6	2,926.6	9.3	5.1	119.05	477.6	-334.3	658.4	644.8	13.61	48.392	
3,100.0	3,062.0	3,025.0	3,025.0	9.7	5.3	120.34	477.6	-334.3	667.2	653.2	14.03	47.568	
3,200.0	3,160.5	3,123.5	3,123.5	10.0	5.5	121.61	477.6	-334.3	676.3	661.8	14.44	46.837	
3,300.0	3,258.9	3,221.9	3,221.9	10.4	5.6	122.84	477.6	-334.3	685.7	670.9	14.85	46.187	
3,400.0	3,357.4	3,320.4	3,320.4	10.7	5.8	124.04	477.6	-334.3	695.5	680.2	15.25	45.609	
3,500.0	3,455.9	3,418.9	3,418.9	11.1	6.0	125.20	477.6	-334.3	705.5	689.9	15.64	45.097	
3,600.0	3,554.3	3,517.3	3,517.3	11.4	6.1	126.33	477.6	-334.3	715.8	699.8	16.03	44.643	
3,700.0	3,652.8	3,615.8	3,615.8	11.8	6.3	127.44	477.6	-334.3	726.4	710.0	16.42	44.241	
3,800.0	3,751.2	3,714.2	3,714.2	12.1	6.5	128.50	477.6	-334.3	737.3	720.5	16.80	43.886	
3,900.0	3,849.7	3,812.7	3,812.7	12.5	6.7	129.54	477.6	-334.3	748.4	731.2	17.18	43.573	
4,000.0	3,948.2	3,911.2	3,911.2	12.8	6.8	130.55	477.6	-334.3	759.8	742.2	17.55	43.298	
4,100.0	4,046.6	4,009.6	4,009.6	13.2	7.0	131.53	477.6	-334.3	771.3	753.4	17.91	43.057	
4,200.0	4,145.1	4,108.1	4,108.1	13.5	7.2	132.48	477.6	-334.3	783.1	764.9	18.28	42.847	
4,300.0	4,243.5	4,206.5	4,206.5	13.9	7.3	133.40	477.6	-334.3	795.2	776.5	18.64	42.665	
4,400.0	4,342.0	4,305.0	4,305.0	14.3	7.5	134.30	477.6	-334.3	807.4	788.4	18.99	42.507	
4,500.0	4,440.4	4,403.4	4,403.4	14.6	7.7	135.16	477.6	-334.3	819.8	800.4	19.35	42.373	
4,600.0	4,538.9	4,501.9	4,501.9	15.0	7.9	136.01	477.6	-334.3	832.4	812.7	19.70	42.258	
4,700.0	4,637.4	4,600.4	4,600.4	15.3	8.0	136.82	477.6	-334.3	845.1	825.1	20.04	42.162	
4,800.0	4,735.8	4,698.8	4,698.8	15.7	8.2	137.62	477.6	-334.3	858.1	837.7	20.39	42.083	
4,900.0	4,834.3	4,797.3	4,797.3	16.0	8.4	138.39	477.6	-334.3	871.1	850.4	20.73	42.019	
5,000.0	4,932.7	4,895.7	4,895.7	16.4	8.5	139.13	477.6	-334.3	884.4	863.3	21.07	41.969	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 1 (EXISTING) MACHII - MACHII-ROSS WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8036-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,031.2	4,994.2	4,994.2	16.7	8.7	139.86	477.6	-334.3	897.8	876.4	21.41	41.931	
5,200.0	5,129.7	5,092.7	5,092.7	17.1	8.9	140.56	477.6	-334.3	911.3	889.5	21.75	41.904	
5,300.0	5,228.1	5,191.1	5,191.1	17.4	9.1	141.25	477.6	-334.3	924.9	902.9	22.08	41.887	
5,400.0	5,326.6	5,289.6	5,289.6	17.8	9.2	141.91	477.6	-334.3	938.7	916.3	22.41	41.879	
5,500.0	5,425.0	5,388.0	5,388.0	18.2	9.4	142.56	477.6	-334.3	952.6	929.9	22.75	41.880	
5,600.0	5,523.5	5,486.5	5,486.5	18.5	9.6	143.19	477.6	-334.3	966.7	943.6	23.08	41.888	
5,700.0	5,622.0	5,585.0	5,585.0	18.9	9.7	143.79	477.6	-334.3	980.8	957.4	23.41	41.903	
5,800.0	5,720.4	5,683.4	5,683.4	19.2	9.9	144.39	477.6	-334.3	995.0	971.3	23.73	41.923	
5,900.0	5,818.9	5,781.9	5,781.9	19.6	10.1	144.96	477.6	-334.3	1,009.4	985.3	24.06	41.949	
6,000.0	5,917.3	5,880.3	5,880.3	19.9	10.3	145.52	477.6	-334.3	1,023.8	999.4	24.39	41.980	
6,100.0	6,015.8	5,978.8	5,978.8	20.3	10.4	146.06	477.6	-334.3	1,038.3	1,013.6	24.71	42.015	
6,200.0	6,114.2	6,077.2	6,077.2	20.6	10.6	146.59	477.6	-334.3	1,053.0	1,027.9	25.04	42.054	
6,300.0	6,212.7	6,175.7	6,175.7	21.0	10.8	147.11	477.6	-334.3	1,067.7	1,042.3	25.36	42.097	
6,400.0	6,311.2	6,274.2	6,274.2	21.3	11.0	147.61	477.6	-334.3	1,082.5	1,056.8	25.69	42.143	
6,500.0	6,409.6	6,372.6	6,372.6	21.7	11.1	148.09	477.6	-334.3	1,097.3	1,071.3	26.01	42.191	
6,600.0	6,508.1	6,471.1	6,471.1	22.1	11.3	148.57	477.6	-334.3	1,112.3	1,086.0	26.33	42.242	
6,700.0	6,606.5	6,569.5	6,569.5	22.4	11.5	149.03	477.6	-334.3	1,127.3	1,100.7	26.65	42.295	
6,800.0	6,705.0	6,668.0	6,668.0	22.8	11.6	149.48	477.6	-334.3	1,142.4	1,115.4	26.98	42.350	
6,900.0	6,803.5	6,766.5	6,766.5	23.1	11.8	149.92	477.6	-334.3	1,157.6	1,130.3	27.30	42.406	
7,000.0	6,901.9	6,864.9	6,864.9	23.5	12.0	150.34	477.6	-334.3	1,172.8	1,145.2	27.62	42.464	
7,100.0	7,000.5	6,963.5	6,963.5	23.8	12.2	104.01	477.6	-334.3	1,183.7	1,155.6	28.02	42.243	
7,200.0	7,098.0	7,061.0	7,061.0	24.0	12.3	71.49	477.6	-334.3	1,181.0	1,153.2	27.84	42.422	
7,300.0	7,191.3	7,154.3	7,154.3	24.1	12.5	61.66	477.6	-334.3	1,165.3	1,138.1	27.12	42.964	
7,400.0	7,277.8	7,240.8	7,240.8	24.1	12.6	59.89	477.6	-334.3	1,137.6	1,111.5	26.16	43.494	
7,500.0	7,354.6	7,317.6	7,317.6	24.1	12.8	62.12	477.6	-334.3	1,100.0	1,074.7	25.36	43.375	
7,600.0	7,419.6	7,382.6	7,382.6	24.0	12.9	66.94	477.6	-334.3	1,055.0	1,029.8	25.12	41.991	
7,700.0	7,470.7	7,433.7	7,433.7	24.0	13.0	73.37	477.6	-334.3	1,005.4	979.9	25.50	39.422	
7,800.0	7,506.4	7,469.4	7,469.4	24.1	13.0	80.34	477.6	-334.3	954.4	928.3	26.15	36.492	
7,900.0	7,525.7	7,488.7	7,488.7	24.2	13.1	86.73	477.6	-334.3	905.6	878.8	26.73	33.873	
8,000.0	7,529.0	7,492.0	7,492.0	24.5	13.1	90.00	477.6	-334.3	862.0	834.8	27.21	31.675	
8,100.0	7,529.0	7,492.0	7,492.0	24.8	13.1	90.00	477.6	-334.3	827.6	799.8	27.82	29.745	
8,200.0	7,529.0	7,492.0	7,492.0	25.3	13.1	90.00	477.6	-334.3	804.3	775.7	28.61	28.113	
8,300.0	7,529.0	7,492.0	7,492.0	25.9	13.1	90.00	477.6	-334.3	793.0	763.5	29.55	26.840	
8,340.1	7,529.0	7,492.0	7,492.0	26.1	13.1	90.00	477.6	-334.3	792.0	762.0	29.97	26.424	
8,400.0	7,529.0	7,492.0	7,492.0	26.5	13.1	90.00	477.6	-334.3	794.3	763.7	30.61	25.949	
8,500.0	7,529.0	7,492.0	7,492.0	27.3	13.1	90.00	477.6	-334.3	808.0	776.2	31.78	25.428	
8,600.0	7,529.0	7,492.0	7,492.0	28.2	13.1	90.00	477.6	-334.3	833.6	800.5	33.03	25.237	SF
8,700.0	7,529.0	7,492.0	7,492.0	29.1	13.1	90.00	477.6	-334.3	869.9	835.6	34.35	25.324	
8,800.0	7,529.0	7,492.0	7,492.0	30.1	13.1	90.00	477.6	-334.3	915.8	880.1	35.73	25.628	
8,900.0	7,529.0	7,492.0	7,492.0	31.2	13.1	90.00	477.6	-334.3	969.9	932.7	37.17	26.097	
9,000.0	7,529.0	7,492.0	7,492.0	32.4	13.1	90.00	477.6	-334.3	1,030.9	992.2	38.64	26.681	
9,100.0	7,529.0	7,492.0	7,492.0	33.6	13.1	90.00	477.6	-334.3	1,097.6	1,057.4	40.14	27.342	
9,200.0	7,529.0	7,492.0	7,492.0	34.8	13.1	90.00	477.6	-334.3	1,169.0	1,127.4	41.67	28.051	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 11-9 (EXISTING) - ENCANA WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8053-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,800.0	7,529.0	7,460.0	7,460.0	58.4	13.0	90.00	4,120.8	-1,006.8	1,189.4	1,121.4	67.98	17.497	
10,900.0	7,529.0	7,460.0	7,460.0	60.0	13.0	90.00	4,120.8	-1,006.8	1,089.9	1,020.2	69.68	15.642	
11,000.0	7,529.0	7,460.0	7,460.0	61.6	13.0	90.00	4,120.8	-1,006.8	990.6	919.2	71.38	13.877	
11,100.0	7,529.0	7,460.0	7,460.0	63.2	13.0	90.00	4,120.8	-1,006.8	891.4	818.3	73.09	12.196	
11,200.0	7,529.0	7,460.0	7,460.0	64.9	13.0	90.00	4,120.8	-1,006.8	792.4	717.6	74.80	10.594	
11,300.0	7,529.0	7,460.0	7,460.0	66.5	13.0	90.00	4,120.8	-1,006.8	693.7	617.2	76.52	9.067	
11,400.0	7,529.0	7,460.0	7,460.0	68.1	13.0	90.00	4,120.8	-1,006.8	595.5	517.2	78.23	7.612	
11,500.0	7,529.0	7,460.0	7,460.0	69.8	13.0	90.00	4,120.8	-1,006.8	497.9	418.0	79.95	6.228	
11,600.0	7,529.0	7,460.0	7,460.0	71.4	13.0	90.00	4,120.8	-1,006.8	401.6	319.9	81.67	4.917	
11,700.0	7,529.0	7,460.0	7,460.0	73.1	13.0	90.00	4,120.8	-1,006.8	307.5	224.2	83.39	3.688	
11,800.0	7,529.0	7,460.0	7,460.0	74.8	13.0	90.00	4,120.8	-1,006.8	218.9	133.8	85.11	2.572	
11,900.0	7,529.0	7,460.0	7,460.0	76.4	13.0	90.00	4,120.8	-1,006.8	145.8	58.9	86.83	1.679	
11,983.3	7,529.0	7,460.0	7,460.0	77.8	13.0	90.00	4,120.8	-1,006.8	119.6	31.3	88.27	1.355	Level 3, CC, ES, SF
12,000.0	7,529.0	7,460.0	7,460.0	78.1	13.0	90.00	4,120.8	-1,006.8	120.7	32.2	88.56	1.363	Level 3
12,100.0	7,529.0	7,460.0	7,460.0	79.8	13.0	90.00	4,120.8	-1,006.8	167.1	76.8	90.28	1.850	
12,200.0	7,529.0	7,460.0	7,460.0	81.4	13.0	90.00	4,120.8	-1,006.8	247.5	155.4	92.01	2.689	
12,300.0	7,529.0	7,460.0	7,460.0	83.1	13.0	90.00	4,120.8	-1,006.8	338.5	244.7	93.74	3.611	
12,400.0	7,529.0	7,460.0	7,460.0	84.8	13.0	90.00	4,120.8	-1,006.8	433.5	338.0	95.47	4.540	
12,500.0	7,529.0	7,460.0	7,460.0	86.5	13.0	90.00	4,120.8	-1,006.8	530.3	433.1	97.20	5.456	
12,600.0	7,529.0	7,460.0	7,460.0	88.2	13.0	90.00	4,120.8	-1,006.8	628.1	529.2	98.93	6.349	
12,700.0	7,529.0	7,460.0	7,460.0	89.9	13.0	90.00	4,120.8	-1,006.8	726.6	625.9	100.66	7.218	
12,800.0	7,529.0	7,460.0	7,460.0	91.5	13.0	90.00	4,120.8	-1,006.8	825.4	723.0	102.40	8.060	
12,900.0	7,529.0	7,460.0	7,460.0	93.2	13.0	90.00	4,120.8	-1,006.8	924.4	820.3	104.13	8.877	
13,000.0	7,529.0	7,460.0	7,460.0	94.9	13.0	90.00	4,120.8	-1,006.8	1,023.7	917.8	105.87	9.669	
13,097.3	7,529.0	7,460.0	7,460.0	96.6	13.0	90.00	4,120.8	-1,006.8	1,120.4	1,012.8	107.56	10.417	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 13-9 (EXISTING) - ENCANA WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8083-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,200.0	7,529.0	7,490.0	7,490.0	25.3	13.1	90.00	1,488.1	-1,027.8	1,154.9	1,126.3	28.61	40.371	
8,300.0	7,529.0	7,490.0	7,490.0	25.9	13.1	90.00	1,488.1	-1,027.8	1,055.3	1,025.8	29.54	35.720	
8,400.0	7,529.0	7,490.0	7,490.0	26.5	13.1	90.00	1,488.1	-1,027.8	955.8	925.2	30.61	31.229	
8,500.0	7,529.0	7,490.0	7,490.0	27.3	13.1	90.00	1,488.1	-1,027.8	856.4	824.6	31.77	26.953	
8,600.0	7,529.0	7,490.0	7,490.0	28.2	13.1	90.00	1,488.1	-1,027.8	757.1	724.1	33.03	22.926	
8,700.0	7,529.0	7,490.0	7,490.0	29.1	13.1	90.00	1,488.1	-1,027.8	658.1	623.8	34.35	19.159	
8,800.0	7,529.0	7,490.0	7,490.0	30.1	13.1	90.00	1,488.1	-1,027.8	559.4	523.7	35.73	15.656	
8,900.0	7,529.0	7,490.0	7,490.0	31.2	13.1	90.00	1,488.1	-1,027.8	461.3	424.2	37.16	12.414	
9,000.0	7,529.0	7,490.0	7,490.0	32.4	13.1	90.00	1,488.1	-1,027.8	364.3	325.6	38.63	9.429	
9,100.0	7,529.0	7,490.0	7,490.0	33.6	13.1	90.00	1,488.1	-1,027.8	269.3	229.2	40.14	6.710	
9,200.0	7,529.0	7,490.0	7,490.0	34.8	13.1	90.00	1,488.1	-1,027.8	180.0	138.4	41.67	4.320	
9,300.0	7,529.0	7,490.0	7,490.0	36.1	13.1	90.00	1,488.1	-1,027.8	110.8	67.6	43.23	2.563	
9,350.7	7,529.0	7,490.0	7,490.0	36.8	13.1	90.00	1,488.1	-1,027.8	98.5	54.5	44.03	2.237	CC, ES, SF
9,400.0	7,529.0	7,490.0	7,490.0	37.4	13.1	90.00	1,488.1	-1,027.8	110.2	65.4	44.81	2.459	
9,500.0	7,529.0	7,490.0	7,490.0	38.8	13.1	90.00	1,488.1	-1,027.8	178.9	132.5	46.40	3.855	
9,600.0	7,529.0	7,490.0	7,490.0	40.2	13.1	90.00	1,488.1	-1,027.8	268.1	220.1	48.01	5.583	
9,700.0	7,529.0	7,490.0	7,490.0	41.6	13.1	90.00	1,488.1	-1,027.8	362.9	313.3	49.64	7.312	
9,800.0	7,529.0	7,490.0	7,490.0	43.0	13.1	90.00	1,488.1	-1,027.8	460.0	408.7	51.27	8.971	
9,900.0	7,529.0	7,490.0	7,490.0	44.5	13.1	90.00	1,488.1	-1,027.8	558.1	505.2	52.92	10.546	
10,000.0	7,529.0	7,490.0	7,490.0	46.0	13.1	90.00	1,488.1	-1,027.8	656.7	602.2	54.57	12.034	
10,100.0	7,529.0	7,490.0	7,490.0	47.5	13.1	90.00	1,488.1	-1,027.8	755.8	699.5	56.23	13.440	
10,200.0	7,529.0	7,490.0	7,490.0	49.0	13.1	90.00	1,488.1	-1,027.8	855.0	797.1	57.90	14.766	
10,300.0	7,529.0	7,490.0	7,490.0	50.5	13.1	90.00	1,488.1	-1,027.8	954.4	894.8	59.58	16.019	
10,400.0	7,529.0	7,490.0	7,490.0	52.1	13.1	90.00	1,488.1	-1,027.8	1,053.9	992.7	61.26	17.204	
10,500.0	7,529.0	7,490.0	7,490.0	53.7	13.1	90.00	1,488.1	-1,027.8	1,153.5	1,090.6	62.95	18.326	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 14-9 (EXISTING) - ENCANA WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8076-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-81.72	149.4	-1,025.9	1,037.6				
100.0	100.0	59.0	59.0	0.1	0.1	-81.72	149.4	-1,025.9	1,036.8	1,036.5	0.23	4,600.748	
200.0	200.0	159.0	159.0	0.3	0.3	-81.72	149.4	-1,025.9	1,036.8	1,036.2	0.57	1,804.916	
300.0	300.0	259.0	259.0	0.5	0.5	-81.72	149.4	-1,025.9	1,036.8	1,035.8	0.92	1,122.676	
400.0	400.0	359.0	359.0	0.6	0.6	32.99	149.4	-1,025.9	1,035.3	1,034.0	1.27	813.261	
500.0	499.8	458.8	458.8	0.8	0.8	33.20	149.4	-1,025.9	1,030.9	1,029.3	1.63	634.064	
600.0	599.5	558.5	558.5	1.1	1.0	33.55	149.4	-1,025.9	1,023.6	1,021.6	1.99	515.369	
700.0	698.7	657.7	657.7	1.3	1.1	34.04	149.4	-1,025.9	1,013.5	1,011.1	2.36	429.654	
800.0	797.5	756.5	756.5	1.6	1.3	34.69	149.4	-1,025.9	1,000.5	997.8	2.75	363.841	
900.0	895.9	854.9	854.9	2.0	1.5	35.27	149.4	-1,025.9	986.1	983.0	3.15	312.557	
1,000.0	994.4	953.4	953.4	2.3	1.7	35.86	149.4	-1,025.9	971.8	968.2	3.57	272.349	
1,100.0	1,092.8	1,051.8	1,051.8	2.6	1.8	36.47	149.4	-1,025.9	957.6	953.6	3.99	240.108	
1,200.0	1,191.3	1,150.3	1,150.3	3.0	2.0	37.10	149.4	-1,025.9	943.5	939.1	4.41	213.738	
1,300.0	1,289.8	1,248.8	1,248.8	3.3	2.2	37.74	149.4	-1,025.9	929.6	924.7	4.85	191.807	
1,400.0	1,388.2	1,347.2	1,347.2	3.7	2.4	38.41	149.4	-1,025.9	915.7	910.4	5.28	173.304	
1,500.0	1,486.7	1,445.7	1,445.7	4.0	2.5	39.10	149.4	-1,025.9	902.0	896.3	5.73	157.501	
1,600.0	1,585.1	1,544.1	1,544.1	4.4	2.7	39.80	149.4	-1,025.9	888.4	882.2	6.18	143.859	
1,700.0	1,683.6	1,642.6	1,642.6	4.7	2.9	40.53	149.4	-1,025.9	875.0	868.3	6.63	131.974	
1,800.0	1,782.1	1,741.1	1,741.1	5.1	3.0	41.28	149.4	-1,025.9	861.6	854.6	7.09	121.536	
1,900.0	1,880.5	1,839.5	1,839.5	5.4	3.2	42.06	149.4	-1,025.9	848.5	840.9	7.56	112.304	
2,000.0	1,979.0	1,938.0	1,938.0	5.8	3.4	42.85	149.4	-1,025.9	835.5	827.5	8.03	104.086	
2,100.0	2,077.4	2,036.4	2,036.4	6.1	3.6	43.68	149.4	-1,025.9	822.7	814.2	8.50	96.732	
2,200.0	2,175.9	2,134.9	2,134.9	6.5	3.7	44.52	149.4	-1,025.9	810.0	801.0	8.99	90.117	
2,300.0	2,274.3	2,233.3	2,233.3	6.8	3.9	45.40	149.4	-1,025.9	797.6	788.1	9.48	84.141	
2,400.0	2,372.8	2,331.8	2,331.8	7.2	4.1	46.30	149.4	-1,025.9	785.3	775.3	9.98	78.721	
2,500.0	2,471.3	2,430.3	2,430.3	7.5	4.2	47.23	149.4	-1,025.9	773.2	762.7	10.48	73.788	
2,600.0	2,569.7	2,528.7	2,528.7	7.9	4.4	48.19	149.4	-1,025.9	761.3	750.3	10.99	69.284	
2,700.0	2,668.2	2,627.2	2,627.2	8.2	4.6	49.17	149.4	-1,025.9	749.7	738.2	11.51	65.161	
2,800.0	2,766.6	2,725.6	2,725.6	8.6	4.8	50.19	149.4	-1,025.9	738.3	726.2	12.03	61.376	
2,900.0	2,865.1	2,824.1	2,824.1	8.9	4.9	51.24	149.4	-1,025.9	727.1	714.5	12.56	57.895	
3,000.0	2,963.6	2,922.6	2,922.6	9.3	5.1	52.32	149.4	-1,025.9	716.2	703.1	13.10	54.687	
3,100.0	3,062.0	3,021.0	3,021.0	9.7	5.3	53.43	149.4	-1,025.9	705.5	691.9	13.64	51.725	
3,200.0	3,160.5	3,119.5	3,119.5	10.0	5.4	54.58	149.4	-1,025.9	695.1	680.9	14.19	48.987	
3,300.0	3,258.9	3,217.9	3,217.9	10.4	5.6	55.76	149.4	-1,025.9	685.0	670.3	14.75	46.452	
3,400.0	3,357.4	3,316.4	3,316.4	10.7	5.8	56.97	149.4	-1,025.9	675.2	659.9	15.31	44.103	
3,500.0	3,455.9	3,414.9	3,414.9	11.1	6.0	58.22	149.4	-1,025.9	665.8	649.9	15.88	41.924	
3,600.0	3,554.3	3,513.3	3,513.3	11.4	6.1	59.50	149.4	-1,025.9	656.6	640.2	16.46	39.903	
3,700.0	3,652.8	3,611.8	3,611.8	11.8	6.3	60.82	149.4	-1,025.9	647.8	630.8	17.04	38.025	
3,800.0	3,751.2	3,710.2	3,710.2	12.1	6.5	62.17	149.4	-1,025.9	639.4	621.7	17.62	36.282	
3,900.0	3,849.7	3,808.7	3,808.7	12.5	6.6	63.56	149.4	-1,025.9	631.3	613.1	18.21	34.663	
4,000.0	3,948.2	3,907.2	3,907.2	12.8	6.8	64.98	149.4	-1,025.9	623.6	604.8	18.81	33.159	
4,100.0	4,046.6	4,005.6	4,005.6	13.2	7.0	66.43	149.4	-1,025.9	616.3	596.9	19.40	31.763	
4,200.0	4,145.1	4,104.1	4,104.1	13.5	7.2	67.92	149.4	-1,025.9	609.4	589.4	20.00	30.467	
4,300.0	4,243.5	4,202.5	4,202.5	13.9	7.3	69.44	149.4	-1,025.9	603.0	582.4	20.60	29.265	
4,400.0	4,342.0	4,301.0	4,301.0	14.3	7.5	70.99	149.4	-1,025.9	597.0	575.8	21.21	28.152	
4,500.0	4,440.4	4,399.4	4,399.4	14.6	7.7	72.57	149.4	-1,025.9	591.4	569.6	21.81	27.121	
4,600.0	4,538.9	4,497.9	4,497.9	15.0	7.9	74.18	149.4	-1,025.9	586.4	564.0	22.41	26.169	
4,700.0	4,637.4	4,596.4	4,596.4	15.3	8.0	75.81	149.4	-1,025.9	581.8	558.8	23.00	25.290	
4,800.0	4,735.8	4,694.8	4,694.8	15.7	8.2	77.47	149.4	-1,025.9	577.7	554.1	23.60	24.480	
4,900.0	4,834.3	4,793.3	4,793.3	16.0	8.4	79.15	149.4	-1,025.9	574.1	549.9	24.19	23.735	
5,000.0	4,932.7	4,891.7	4,891.7	16.4	8.5	80.85	149.4	-1,025.9	571.0	546.2	24.77	23.052	
5,100.0	5,031.2	4,990.2	4,990.2	16.7	8.7	82.56	149.4	-1,025.9	568.4	543.1	25.35	22.427	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 14-9 (EXISTING) - ENCANA WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8076-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,129.7	5,088.7	5,088.7	17.1	8.9	84.29	149.4	-1,025.9	566.4	540.5	25.91	21.858	
5,300.0	5,228.1	5,187.1	5,187.1	17.4	9.1	86.03	149.4	-1,025.9	564.9	538.4	26.47	21.341	
5,400.0	5,326.6	5,285.6	5,285.6	17.8	9.2	87.77	149.4	-1,025.9	563.9	536.9	27.02	20.873	
5,500.0	5,425.0	5,384.0	5,384.0	18.2	9.4	89.52	149.4	-1,025.9	563.5	536.0	27.55	20.452	
5,527.4	5,452.0	5,411.0	5,411.0	18.3	9.4	90.00	149.4	-1,025.9	563.5	535.8	27.70	20.344	
5,600.0	5,523.5	5,482.5	5,482.5	18.5	9.6	91.27	149.4	-1,025.9	563.6	535.6	28.08	20.075	
5,700.0	5,622.0	5,581.0	5,581.0	18.9	9.7	93.02	149.4	-1,025.9	564.3	535.7	28.59	19.739	
5,800.0	5,720.4	5,679.4	5,679.4	19.2	9.9	94.76	149.4	-1,025.9	565.5	536.4	29.08	19.443	
5,900.0	5,818.9	5,777.9	5,777.9	19.6	10.1	96.50	149.4	-1,025.9	567.3	537.7	29.57	19.185	
6,000.0	5,917.3	5,876.3	5,876.3	19.9	10.3	98.22	149.4	-1,025.9	569.5	539.5	30.04	18.961	
6,100.0	6,015.8	5,974.8	5,974.8	20.3	10.4	99.92	149.4	-1,025.9	572.3	541.8	30.49	18.771	
6,200.0	6,114.2	6,073.2	6,073.2	20.6	10.6	101.61	149.4	-1,025.9	575.6	544.7	30.93	18.612	
6,300.0	6,212.7	6,171.7	6,171.7	21.0	10.8	103.28	149.4	-1,025.9	579.5	548.1	31.35	18.482	
6,400.0	6,311.2	6,270.2	6,270.2	21.3	10.9	104.93	149.4	-1,025.9	583.8	552.0	31.76	18.379	
6,500.0	6,409.6	6,368.6	6,368.6	21.7	11.1	106.55	149.4	-1,025.9	588.6	556.4	32.16	18.303	
6,600.0	6,508.1	6,467.1	6,467.1	22.1	11.3	108.15	149.4	-1,025.9	593.9	561.4	32.54	18.250	
6,700.0	6,606.5	6,565.5	6,565.5	22.4	11.5	109.71	149.4	-1,025.9	599.6	566.7	32.91	18.221	
6,800.0	6,705.0	6,664.0	6,664.0	22.8	11.6	111.25	149.4	-1,025.9	605.9	572.6	33.27	18.212	
6,900.0	6,803.5	6,762.5	6,762.5	23.1	11.8	112.75	149.4	-1,025.9	612.5	578.9	33.61	18.224	
7,000.0	6,901.9	6,860.9	6,860.9	23.5	12.0	114.23	149.4	-1,025.9	619.6	585.6	33.94	18.253	
7,100.0	7,000.5	6,959.5	6,959.5	23.8	12.1	69.23	149.4	-1,025.9	621.5	587.4	34.09	18.234	
7,200.0	7,098.0	7,057.0	7,057.0	24.0	12.3	37.11	149.4	-1,025.9	606.9	573.5	33.43	18.154	
7,300.0	7,191.3	7,150.3	7,150.3	24.1	12.5	26.73	149.4	-1,025.9	575.8	543.9	31.96	18.015	
7,400.0	7,277.8	7,236.8	7,236.8	24.1	12.6	23.80	149.4	-1,025.9	529.3	499.5	29.78	17.775	
7,500.0	7,354.6	7,313.6	7,313.6	24.1	12.8	24.90	149.4	-1,025.9	469.0	441.9	27.08	17.316	
7,600.0	7,419.6	7,378.6	7,378.6	24.0	12.9	30.11	149.4	-1,025.9	397.0	372.6	24.38	16.287	
7,700.0	7,470.7	7,429.7	7,429.7	24.0	13.0	41.65	149.4	-1,025.9	316.3	293.3	22.92	13.796	
7,800.0	7,506.4	7,465.4	7,465.4	24.1	13.0	61.99	149.4	-1,025.9	231.0	206.6	24.47	9.442	
7,900.0	7,525.7	7,484.7	7,484.7	24.2	13.1	83.39	149.4	-1,025.9	149.9	123.4	26.58	5.641	
8,000.0	7,529.0	7,488.0	7,488.0	24.5	13.1	90.00	149.4	-1,025.9	101.1	73.9	27.21	3.717	
8,011.9	7,529.0	7,488.0	7,488.0	24.5	13.1	90.00	149.4	-1,025.9	100.4	73.1	27.28	3.681	CC, ES, SF
8,100.0	7,529.0	7,488.0	7,488.0	24.8	13.1	90.00	149.4	-1,025.9	133.5	105.7	27.82	4.801	
8,200.0	7,529.0	7,488.0	7,488.0	25.3	13.1	90.00	149.4	-1,025.9	213.2	184.6	28.60	7.453	
8,300.0	7,529.0	7,488.0	7,488.0	25.9	13.1	90.00	149.4	-1,025.9	305.0	275.5	29.54	10.327	
8,400.0	7,529.0	7,488.0	7,488.0	26.5	13.1	90.00	149.4	-1,025.9	400.8	370.2	30.60	13.098	
8,500.0	7,529.0	7,488.0	7,488.0	27.3	13.1	90.00	149.4	-1,025.9	498.3	466.5	31.77	15.684	
8,600.0	7,529.0	7,488.0	7,488.0	28.2	13.1	90.00	149.4	-1,025.9	596.6	563.5	33.02	18.066	
8,700.0	7,529.0	7,488.0	7,488.0	29.1	13.1	90.00	149.4	-1,025.9	695.3	661.0	34.35	20.245	
8,800.0	7,529.0	7,488.0	7,488.0	30.1	13.1	90.00	149.4	-1,025.9	794.4	758.7	35.73	22.235	
8,900.0	7,529.0	7,488.0	7,488.0	31.2	13.1	90.00	149.4	-1,025.9	893.7	856.5	37.16	24.051	
9,000.0	7,529.0	7,488.0	7,488.0	32.4	13.1	90.00	149.4	-1,025.9	993.1	954.5	38.63	25.709	
9,100.0	7,529.0	7,488.0	7,488.0	33.6	13.1	90.00	149.4	-1,025.9	1,092.7	1,052.5	40.13	27.225	
9,200.0	7,529.0	7,488.0	7,488.0	34.8	13.1	90.00	149.4	-1,025.9	1,192.3	1,150.6	41.67	28.614	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 1-9 (EXISTING) - MACHII-ROSS WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8150-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,600.0	7,529.0	7,455.0	7,455.0	55.2	13.0	90.00	3,450.1	-183.9	1,181.6	1,117.0	64.58	18.297	
10,700.0	7,529.0	7,455.0	7,455.0	56.8	13.0	90.00	3,450.1	-183.9	1,124.1	1,057.8	66.27	16.962	
10,800.0	7,529.0	7,455.0	7,455.0	58.4	13.0	90.00	3,450.1	-183.9	1,072.9	1,004.9	67.97	15.785	
10,900.0	7,529.0	7,455.0	7,455.0	60.0	13.0	90.00	3,450.1	-183.9	1,028.8	959.2	69.67	14.767	
11,000.0	7,529.0	7,455.0	7,455.0	61.6	13.0	90.00	3,450.1	-183.9	992.9	921.6	71.38	13.912	
11,100.0	7,529.0	7,455.0	7,455.0	63.2	13.0	90.00	3,450.1	-183.9	966.1	893.0	73.08	13.220	
11,200.0	7,529.0	7,455.0	7,455.0	64.9	13.0	90.00	3,450.1	-183.9	949.1	874.4	74.79	12.690	
11,300.0	7,529.0	7,455.0	7,455.0	66.5	13.0	90.00	3,450.1	-183.9	942.5	866.0	76.51	12.319	
11,312.7	7,529.0	7,455.0	7,455.0	66.7	13.0	90.00	3,450.1	-183.9	942.4	865.7	76.72	12.283	CC, ES
11,400.0	7,529.0	7,455.0	7,455.0	68.1	13.0	90.00	3,450.1	-183.9	946.5	868.2	78.22	12.100	
11,500.0	7,529.0	7,455.0	7,455.0	69.8	13.0	90.00	3,450.1	-183.9	960.9	880.9	79.94	12.020	SF
11,600.0	7,529.0	7,455.0	7,455.0	71.4	13.0	90.00	3,450.1	-183.9	985.3	903.6	81.66	12.066	
11,700.0	7,529.0	7,455.0	7,455.0	73.1	13.0	90.00	3,450.1	-183.9	1,018.9	935.5	83.38	12.220	
11,800.0	7,529.0	7,455.0	7,455.0	74.8	13.0	90.00	3,450.1	-183.9	1,061.0	975.9	85.10	12.467	
11,900.0	7,529.0	7,455.0	7,455.0	76.4	13.0	90.00	3,450.1	-183.9	1,110.5	1,023.6	86.82	12.790	
12,000.0	7,529.0	7,455.0	7,455.0	78.1	13.0	90.00	3,450.1	-183.9	1,166.4	1,077.9	88.55	13.173	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 2 (EXISTING) - MACHII-ROSS WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8100-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,300.0	7,529.0	7,492.0	7,492.0	50.5	13.1	90.00	3,401.3	-403.6	1,204.7	1,145.2	59.58	20.220	
10,400.0	7,529.0	7,492.0	7,492.0	52.1	13.1	90.00	3,401.3	-403.6	1,126.3	1,065.1	61.26	18.385	
10,500.0	7,529.0	7,492.0	7,492.0	53.7	13.1	90.00	3,401.3	-403.6	1,051.6	988.6	62.95	16.705	
10,600.0	7,529.0	7,492.0	7,492.0	55.2	13.1	90.00	3,401.3	-403.6	981.4	916.7	64.64	15.182	
10,700.0	7,529.0	7,492.0	7,492.0	56.8	13.1	90.00	3,401.3	-403.6	916.7	850.3	66.33	13.819	
10,800.0	7,529.0	7,492.0	7,492.0	58.4	13.1	90.00	3,401.3	-403.6	858.8	790.8	68.03	12.623	
10,900.0	7,529.0	7,492.0	7,492.0	60.0	13.1	90.00	3,401.3	-403.6	809.2	739.4	69.74	11.603	
11,000.0	7,529.0	7,492.0	7,492.0	61.6	13.1	90.00	3,401.3	-403.6	769.4	698.0	71.44	10.770	
11,100.0	7,529.0	7,492.0	7,492.0	63.2	13.1	90.00	3,401.3	-403.6	741.1	667.9	73.15	10.131	
11,200.0	7,529.0	7,492.0	7,492.0	64.9	13.1	90.00	3,401.3	-403.6	725.6	650.7	74.86	9.692	
11,263.9	7,529.0	7,492.0	7,492.0	65.9	13.1	90.00	3,401.3	-403.6	722.7	646.8	75.95	9.516	CC, ES
11,300.0	7,529.0	7,492.0	7,492.0	66.5	13.1	90.00	3,401.3	-403.6	723.6	647.1	76.57	9.451	
11,400.0	7,529.0	7,492.0	7,492.0	68.1	13.1	90.00	3,401.3	-403.6	735.4	657.2	78.29	9.394	SF
11,500.0	7,529.0	7,492.0	7,492.0	69.8	13.1	90.00	3,401.3	-403.6	760.3	680.3	80.00	9.504	
11,600.0	7,529.0	7,492.0	7,492.0	71.4	13.1	90.00	3,401.3	-403.6	797.1	715.4	81.72	9.754	
11,700.0	7,529.0	7,492.0	7,492.0	73.1	13.1	90.00	3,401.3	-403.6	844.1	760.7	83.44	10.116	
11,800.0	7,529.0	7,492.0	7,492.0	74.8	13.1	90.00	3,401.3	-403.6	899.9	814.7	85.16	10.566	
11,900.0	7,529.0	7,492.0	7,492.0	76.4	13.1	90.00	3,401.3	-403.6	962.8	875.9	86.89	11.081	
12,000.0	7,529.0	7,492.0	7,492.0	78.1	13.1	90.00	3,401.3	-403.6	1,031.6	943.0	88.61	11.642	
12,100.0	7,529.0	7,492.0	7,492.0	79.8	13.1	90.00	3,401.3	-403.6	1,105.2	1,014.9	90.34	12.234	
12,200.0	7,529.0	7,492.0	7,492.0	81.4	13.1	90.00	3,401.3	-403.6	1,182.7	1,090.6	92.07	12.846	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 24-9 (EXISTING) - ENCANA WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8116-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	98.85	-41.2	264.5	269.4				
100.0	100.0	69.0	69.0	0.1	0.1	98.85	-41.2	264.5	267.6	267.4	0.24	1,102.304	
200.0	200.0	169.0	169.0	0.3	0.3	98.85	-41.2	264.5	267.6	267.0	0.59	452.197	
300.0	300.0	269.0	269.0	0.5	0.5	98.85	-41.2	264.5	267.6	266.7	0.94	284.442	CC, ES
400.0	400.0	369.0	369.0	0.6	0.6	-146.70	-41.2	264.5	269.1	267.8	1.29	208.523	
500.0	499.8	468.8	468.8	0.8	0.8	-147.26	-41.2	264.5	273.5	271.8	1.64	166.440	
600.0	599.5	568.5	568.5	1.1	1.0	-148.14	-41.2	264.5	280.9	278.9	2.00	140.313	
700.0	698.7	667.7	667.7	1.3	1.2	-149.30	-41.2	264.5	291.3	288.9	2.37	123.040	
800.0	797.5	766.5	766.5	1.6	1.3	-150.66	-41.2	264.5	304.9	302.1	2.74	111.242	
900.0	895.9	864.9	864.9	2.0	1.5	-152.18	-41.2	264.5	320.3	317.2	3.12	102.758	
1,000.0	994.4	963.4	963.4	2.3	1.7	-153.57	-41.2	264.5	335.9	332.4	3.49	96.225	
1,100.0	1,092.8	1,061.8	1,061.8	2.6	1.9	-154.83	-41.2	264.5	351.7	347.8	3.86	91.079	
1,200.0	1,191.3	1,160.3	1,160.3	3.0	2.0	-155.99	-41.2	264.5	367.6	363.4	4.23	86.938	
1,300.0	1,289.8	1,258.8	1,258.8	3.3	2.2	-157.05	-41.2	264.5	383.7	379.1	4.59	83.545	
1,400.0	1,388.2	1,357.2	1,357.2	3.7	2.4	-158.03	-41.2	264.5	399.9	395.0	4.95	80.719	
1,500.0	1,486.7	1,455.7	1,455.7	4.0	2.5	-158.92	-41.2	264.5	416.2	410.9	5.31	78.334	
1,600.0	1,585.1	1,554.1	1,554.1	4.4	2.7	-159.76	-41.2	264.5	432.6	427.0	5.67	76.297	
1,700.0	1,683.6	1,652.6	1,652.6	4.7	2.9	-160.53	-41.2	264.5	449.1	443.1	6.03	74.538	
1,800.0	1,782.1	1,751.1	1,751.1	5.1	3.1	-161.24	-41.2	264.5	465.7	459.3	6.38	73.006	
1,900.0	1,880.5	1,849.5	1,849.5	5.4	3.2	-161.91	-41.2	264.5	482.3	475.5	6.73	71.660	
2,000.0	1,979.0	1,948.0	1,948.0	5.8	3.4	-162.53	-41.2	264.5	498.9	491.9	7.08	70.468	
2,100.0	2,077.4	2,046.4	2,046.4	6.1	3.6	-163.12	-41.2	264.5	515.7	508.2	7.43	69.406	
2,200.0	2,175.9	2,144.9	2,144.9	6.5	3.7	-163.66	-41.2	264.5	532.5	524.7	7.78	68.454	
2,300.0	2,274.3	2,243.3	2,243.3	6.8	3.9	-164.17	-41.2	264.5	549.3	541.2	8.13	67.596	
2,400.0	2,372.8	2,341.8	2,341.8	7.2	4.1	-164.66	-41.2	264.5	566.1	557.7	8.47	66.819	
2,500.0	2,471.3	2,440.3	2,440.3	7.5	4.3	-165.11	-41.2	264.5	583.0	574.2	8.82	66.111	
2,600.0	2,569.7	2,538.7	2,538.7	7.9	4.4	-165.54	-41.2	264.5	600.0	590.8	9.17	65.464	
2,700.0	2,668.2	2,637.2	2,637.2	8.2	4.6	-165.94	-41.2	264.5	616.9	607.4	9.51	64.871	
2,800.0	2,766.6	2,735.6	2,735.6	8.6	4.8	-166.33	-41.2	264.5	633.9	624.1	9.86	64.324	
2,900.0	2,865.1	2,834.1	2,834.1	8.9	4.9	-166.69	-41.2	264.5	651.0	640.8	10.20	63.819	
3,000.0	2,963.6	2,932.6	2,932.6	9.3	5.1	-167.04	-41.2	264.5	668.0	657.5	10.54	63.352	
3,100.0	3,062.0	3,031.0	3,031.0	9.7	5.3	-167.36	-41.2	264.5	685.1	674.2	10.89	62.917	
3,200.0	3,160.5	3,129.5	3,129.5	10.0	5.5	-167.68	-41.2	264.5	702.2	690.9	11.23	62.512	
3,300.0	3,258.9	3,227.9	3,227.9	10.4	5.6	-167.97	-41.2	264.5	719.3	707.7	11.58	62.133	
3,400.0	3,357.4	3,326.4	3,326.4	10.7	5.8	-168.26	-41.2	264.5	736.4	724.5	11.92	61.779	
3,500.0	3,455.9	3,424.9	3,424.9	11.1	6.0	-168.53	-41.2	264.5	753.5	741.3	12.26	61.447	
3,600.0	3,554.3	3,523.3	3,523.3	11.4	6.1	-168.79	-41.2	264.5	770.7	758.1	12.61	61.134	
3,700.0	3,652.8	3,621.8	3,621.8	11.8	6.3	-169.03	-41.2	264.5	787.9	774.9	12.95	60.840	
3,800.0	3,751.2	3,720.2	3,720.2	12.1	6.5	-169.27	-41.2	264.5	805.0	791.8	13.29	60.562	
3,900.0	3,849.7	3,818.7	3,818.7	12.5	6.7	-169.50	-41.2	264.5	822.2	808.6	13.64	60.299	
4,000.0	3,948.2	3,917.2	3,917.2	12.8	6.8	-169.71	-41.2	264.5	839.5	825.5	13.98	60.050	
4,100.0	4,046.6	4,015.6	4,015.6	13.2	7.0	-169.92	-41.2	264.5	856.7	842.4	14.32	59.814	
4,200.0	4,145.1	4,114.1	4,114.1	13.5	7.2	-170.12	-41.2	264.5	873.9	859.2	14.67	59.590	
4,300.0	4,243.5	4,212.5	4,212.5	13.9	7.4	-170.32	-41.2	264.5	891.1	876.1	15.01	59.377	
4,400.0	4,342.0	4,311.0	4,311.0	14.3	7.5	-170.50	-41.2	264.5	908.4	893.0	15.35	59.175	
4,500.0	4,440.4	4,409.4	4,409.4	14.6	7.7	-170.68	-41.2	264.5	925.7	910.0	15.69	58.981	
4,600.0	4,538.9	4,507.9	4,507.9	15.0	7.9	-170.85	-41.2	264.5	942.9	926.9	16.04	58.797	
4,700.0	4,637.4	4,606.4	4,606.4	15.3	8.0	-171.02	-41.2	264.5	960.2	943.8	16.38	58.620	
4,800.0	4,735.8	4,704.8	4,704.8	15.7	8.2	-171.18	-41.2	264.5	977.5	960.8	16.72	58.452	
4,900.0	4,834.3	4,803.3	4,803.3	16.0	8.4	-171.33	-41.2	264.5	994.8	977.7	17.07	58.290	
5,000.0	4,932.7	4,901.7	4,901.7	16.4	8.6	-171.48	-41.2	264.5	1,012.1	994.7	17.41	58.135	
5,100.0	5,031.2	5,000.2	5,000.2	16.7	8.7	-171.63	-41.2	264.5	1,029.4	1,011.6	17.75	57.987	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 24-9 (EXISTING) - ENCANA WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8116-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,129.7	5,098.7	5,098.7	17.1	8.9	-171.76	-41.2	264.5	1,046.7	1,028.6	18.09	57.844	
5,300.0	5,228.1	5,197.1	5,197.1	17.4	9.1	-171.90	-41.2	264.5	1,064.0	1,045.6	18.44	57.707	
5,400.0	5,326.6	5,295.6	5,295.6	17.8	9.2	-172.03	-41.2	264.5	1,081.3	1,062.5	18.78	57.575	
5,500.0	5,425.0	5,394.0	5,394.0	18.2	9.4	-172.16	-41.2	264.5	1,098.7	1,079.5	19.12	57.449	
5,600.0	5,523.5	5,492.5	5,492.5	18.5	9.6	-172.28	-41.2	264.5	1,116.0	1,096.5	19.47	57.326	
5,700.0	5,622.0	5,591.0	5,591.0	18.9	9.8	-172.40	-41.2	264.5	1,133.3	1,113.5	19.81	57.209	
5,800.0	5,720.4	5,689.4	5,689.4	19.2	9.9	-172.51	-41.2	264.5	1,150.7	1,130.5	20.15	57.095	
5,900.0	5,818.9	5,787.9	5,787.9	19.6	10.1	-172.62	-41.2	264.5	1,168.0	1,147.5	20.50	56.985	
6,000.0	5,917.3	5,886.3	5,886.3	19.9	10.3	-172.73	-41.2	264.5	1,185.4	1,164.5	20.84	56.879	
6,100.0	6,015.8	5,984.8	5,984.8	20.3	10.4	-172.84	-41.2	264.5	1,202.7	1,181.5	21.18	56.777	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 2-4-9 (EXISTING) - ENCANA WELL - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
9,000.0	7,529.0	7,570.4	7,507.0	32.4	19.5	90.00	2,060.6	-457.6	1,139.9	1,097.7	42.26	26.972	
9,100.0	7,529.0	7,570.4	7,507.0	33.6	19.5	90.00	2,060.6	-457.6	1,060.6	1,016.8	43.77	24.231	
9,200.0	7,529.0	7,570.4	7,507.0	34.8	19.5	90.00	2,060.6	-457.6	985.0	939.7	45.30	21.743	
9,300.0	7,529.0	7,570.4	7,507.0	36.1	19.5	90.00	2,060.6	-457.6	914.1	867.2	46.86	19.507	
9,400.0	7,529.0	7,570.4	7,507.0	37.4	19.5	90.00	2,060.6	-457.6	849.1	800.6	48.44	17.529	
9,500.0	7,529.0	7,570.4	7,507.0	38.8	19.5	90.00	2,060.6	-457.6	791.4	741.4	50.03	15.818	
9,600.0	7,529.0	7,570.4	7,507.0	40.2	19.5	90.00	2,060.6	-457.6	742.8	691.1	51.64	14.382	
9,700.0	7,529.0	7,570.4	7,507.0	41.6	19.5	90.00	2,060.6	-457.6	705.0	651.8	53.27	13.236	
9,800.0	7,529.0	7,570.4	7,507.0	43.0	19.5	90.00	2,060.6	-457.6	680.0	625.1	54.90	12.386	
9,900.0	7,529.0	7,570.4	7,507.0	44.5	19.5	90.00	2,060.6	-457.6	669.2	612.6	56.55	11.834	
9,923.1	7,529.0	7,570.4	7,507.0	44.8	19.5	90.00	2,060.6	-457.6	668.8	611.9	56.93	11.747	CC, ES
10,000.0	7,529.0	7,570.4	7,507.0	46.0	19.5	90.00	2,060.6	-457.6	673.2	615.0	58.20	11.566	
10,100.0	7,529.0	7,570.4	7,507.0	47.5	19.5	90.00	2,060.6	-457.6	691.8	631.9	59.86	11.556	SF
10,200.0	7,529.0	7,570.4	7,507.0	49.0	19.5	90.00	2,060.6	-457.6	723.8	662.3	61.53	11.763	
10,300.0	7,529.0	7,570.4	7,507.0	50.5	19.5	90.00	2,060.6	-457.6	767.7	704.5	63.21	12.145	
10,400.0	7,529.0	7,570.4	7,507.0	52.1	19.5	90.00	2,060.6	-457.6	821.4	756.5	64.89	12.658	
10,500.0	7,529.0	7,570.4	7,507.0	53.7	19.5	90.00	2,060.6	-457.6	883.2	816.6	66.58	13.266	
10,600.0	7,529.0	7,570.4	7,507.0	55.2	19.5	90.00	2,060.6	-457.6	951.5	883.3	68.27	13.939	
10,700.0	7,529.0	7,570.4	7,507.0	56.8	19.5	90.00	2,060.6	-457.6	1,025.1	955.1	69.96	14.652	
10,800.0	7,529.0	7,570.4	7,507.0	58.4	19.5	90.00	2,060.6	-457.6	1,102.8	1,031.1	71.66	15.389	
10,900.0	7,529.0	7,570.4	7,507.0	60.0	19.5	90.00	2,060.6	-457.6	1,183.9	1,110.5	73.36	16.137	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 2-4-9 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 488-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,900.0	7,529.0	7,548.0	7,481.1	31.2	19.2	87.78	2,036.0	-457.7	1,202.1	1,161.6	40.47	29.704	
9,000.0	7,529.0	7,548.0	7,481.1	32.4	19.2	87.78	2,036.0	-457.7	1,120.4	1,078.5	41.94	26.714	
9,100.0	7,529.0	7,563.1	7,496.2	33.6	19.2	89.07	2,036.6	-458.2	1,041.8	998.3	43.50	23.949	
9,200.0	7,529.0	7,566.0	7,499.1	34.8	19.2	89.32	2,036.7	-458.3	967.2	922.1	45.04	21.473	
9,300.0	7,529.0	7,569.0	7,502.1	36.1	19.2	89.58	2,036.8	-458.3	897.5	850.9	46.61	19.257	
9,400.0	7,529.0	7,572.1	7,505.2	37.4	19.2	89.84	2,037.0	-458.4	834.1	785.9	48.19	17.307	
9,500.0	7,529.0	7,575.3	7,508.3	38.8	19.2	90.11	2,037.1	-458.5	778.3	728.5	49.79	15.630	
9,600.0	7,529.0	7,578.5	7,511.5	40.2	19.2	90.39	2,037.2	-458.6	732.0	680.6	51.41	14.238	
9,700.0	7,529.0	7,581.8	7,514.8	41.6	19.2	90.67	2,037.4	-458.7	697.0	644.0	53.04	13.142	
9,800.0	7,529.0	7,585.2	7,518.3	43.0	19.2	90.96	2,037.5	-458.8	675.1	620.5	54.68	12.348	
9,900.0	7,529.0	7,588.7	7,521.7	44.5	19.2	91.26	2,037.6	-458.8	667.7	611.4	56.32	11.854	
9,900.2	7,529.0	7,588.7	7,521.8	44.5	19.2	91.27	2,037.6	-458.8	667.7	611.3	56.33	11.854	CC, ES
10,000.0	7,529.0	7,592.3	7,525.3	46.0	19.3	91.57	2,037.8	-458.9	675.1	617.1	57.98	11.644	SF
10,100.0	7,529.0	7,596.0	7,529.0	47.5	19.3	91.89	2,038.0	-459.0	696.9	637.2	59.64	11.686	
10,200.0	7,529.0	7,599.8	7,532.8	49.0	19.3	92.22	2,038.1	-459.1	731.8	670.5	61.30	11.938	
10,300.0	7,529.0	7,603.7	7,536.7	50.5	19.3	92.55	2,038.3	-459.1	778.0	715.1	62.97	12.356	
10,400.0	7,529.0	7,607.7	7,540.7	52.1	19.3	92.89	2,038.5	-459.2	833.8	769.1	64.64	12.899	
10,500.0	7,529.0	7,611.9	7,544.9	53.7	19.3	93.25	2,038.7	-459.3	897.2	830.9	66.31	13.531	
10,600.0	7,529.0	7,616.1	7,549.1	55.2	19.3	93.61	2,038.9	-459.3	966.8	898.8	67.98	14.222	
10,700.0	7,529.0	7,620.5	7,553.5	56.8	19.3	93.99	2,039.1	-459.4	1,041.3	971.7	69.65	14.951	
10,800.0	7,529.0	7,625.1	7,558.1	58.4	19.3	94.38	2,039.3	-459.4	1,119.8	1,048.5	71.32	15.701	
10,900.0	7,529.0	7,629.7	7,562.7	60.0	19.3	94.77	2,039.5	-459.5	1,201.5	1,128.5	72.99	16.461	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 24-9 J (EXISTING) - MACHII-ROSS WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8120-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	68.18	87.1	217.5	235.5				
100.0	100.0	76.0	76.0	0.1	0.1	68.18	87.1	217.5	234.3	234.0	0.26	918.647	
200.0	200.0	176.0	176.0	0.3	0.3	68.18	87.1	217.5	234.3	233.7	0.60	387.813	
300.0	300.0	276.0	276.0	0.5	0.5	68.18	87.1	217.5	234.3	233.3	0.95	245.787	CC, ES
400.0	400.0	376.0	376.0	0.6	0.7	-177.20	87.1	217.5	236.0	234.7	1.30	181.313	
500.0	499.8	475.8	475.8	0.8	0.8	-177.25	87.1	217.5	241.2	239.6	1.65	146.313	
600.0	599.5	575.5	575.5	1.1	1.0	-177.34	87.1	217.5	249.9	248.0	1.99	125.361	
700.0	698.7	674.7	674.7	1.3	1.2	-177.45	87.1	217.5	262.1	259.8	2.34	112.206	
800.0	797.5	773.5	773.5	1.6	1.4	-177.58	87.1	217.5	277.7	275.1	2.67	103.832	
900.0	895.9	871.9	871.9	2.0	1.5	-177.73	87.1	217.5	295.2	292.2	3.02	97.736	
1,000.0	994.4	970.4	970.4	2.3	1.7	-177.85	87.1	217.5	312.7	309.3	3.37	92.884	
1,100.0	1,092.8	1,068.8	1,068.8	2.6	1.9	-177.97	87.1	217.5	330.2	326.5	3.71	88.940	
1,200.0	1,191.3	1,167.3	1,167.3	3.0	2.0	-178.07	87.1	217.5	347.7	343.6	4.06	85.670	
1,300.0	1,289.8	1,265.8	1,265.8	3.3	2.2	-178.16	87.1	217.5	365.1	360.7	4.40	82.915	
1,400.0	1,388.2	1,364.2	1,364.2	3.7	2.4	-178.25	87.1	217.5	382.6	377.9	4.75	80.562	
1,500.0	1,486.7	1,462.7	1,462.7	4.0	2.6	-178.32	87.1	217.5	400.1	395.0	5.09	78.529	
1,600.0	1,585.1	1,561.1	1,561.1	4.4	2.7	-178.39	87.1	217.5	417.6	412.1	5.44	76.755	
1,700.0	1,683.6	1,659.6	1,659.6	4.7	2.9	-178.46	87.1	217.5	435.1	429.3	5.79	75.194	
1,800.0	1,782.1	1,758.1	1,758.1	5.1	3.1	-178.52	87.1	217.5	452.5	446.4	6.13	73.809	
1,900.0	1,880.5	1,856.5	1,856.5	5.4	3.2	-178.57	87.1	217.5	470.0	463.5	6.48	72.572	
2,000.0	1,979.0	1,955.0	1,955.0	5.8	3.4	-178.62	87.1	217.5	487.5	480.7	6.82	71.460	
2,100.0	2,077.4	2,053.4	2,053.4	6.1	3.6	-178.67	87.1	217.5	505.0	497.8	7.17	70.456	
2,200.0	2,175.9	2,151.9	2,151.9	6.5	3.8	-178.72	87.1	217.5	522.5	515.0	7.51	69.544	
2,300.0	2,274.3	2,250.3	2,250.3	6.8	3.9	-178.76	87.1	217.5	540.0	532.1	7.86	68.713	
2,400.0	2,372.8	2,348.8	2,348.8	7.2	4.1	-178.80	87.1	217.5	557.4	549.2	8.20	67.952	
2,500.0	2,471.3	2,447.3	2,447.3	7.5	4.3	-178.83	87.1	217.5	574.9	566.4	8.55	67.252	
2,600.0	2,569.7	2,545.7	2,545.7	7.9	4.4	-178.87	87.1	217.5	592.4	583.5	8.89	66.607	
2,700.0	2,668.2	2,644.2	2,644.2	8.2	4.6	-178.90	87.1	217.5	609.9	600.7	9.24	66.010	
2,800.0	2,766.6	2,742.6	2,742.6	8.6	4.8	-178.93	87.1	217.5	627.4	617.8	9.58	65.456	
2,900.0	2,865.1	2,841.1	2,841.1	8.9	5.0	-178.96	87.1	217.5	644.9	634.9	9.93	64.941	
3,000.0	2,963.6	2,939.6	2,939.6	9.3	5.1	-178.99	87.1	217.5	662.3	652.1	10.28	64.460	
3,100.0	3,062.0	3,038.0	3,038.0	9.7	5.3	-179.01	87.1	217.5	679.8	669.2	10.62	64.011	
3,200.0	3,160.5	3,136.5	3,136.5	10.0	5.5	-179.04	87.1	217.5	697.3	686.4	10.97	63.590	
3,300.0	3,258.9	3,234.9	3,234.9	10.4	5.6	-179.06	87.1	217.5	714.8	703.5	11.31	63.195	
3,400.0	3,357.4	3,333.4	3,333.4	10.7	5.8	-179.08	87.1	217.5	732.3	720.6	11.66	62.823	
3,500.0	3,455.9	3,431.9	3,431.9	11.1	6.0	-179.11	87.1	217.5	749.8	737.8	12.00	62.472	
3,600.0	3,554.3	3,530.3	3,530.3	11.4	6.2	-179.13	87.1	217.5	767.3	754.9	12.35	62.142	
3,700.0	3,652.8	3,628.8	3,628.8	11.8	6.3	-179.14	87.1	217.5	784.8	772.1	12.69	61.829	
3,800.0	3,751.2	3,727.2	3,727.2	12.1	6.5	-179.16	87.1	217.5	802.2	789.2	13.04	61.533	
3,900.0	3,849.7	3,825.7	3,825.7	12.5	6.7	-179.18	87.1	217.5	819.7	806.3	13.38	61.252	
4,000.0	3,948.2	3,924.2	3,924.2	12.8	6.8	-179.20	87.1	217.5	837.2	823.5	13.73	60.985	
4,100.0	4,046.6	4,022.6	4,022.6	13.2	7.0	-179.21	87.1	217.5	854.7	840.6	14.07	60.731	
4,200.0	4,145.1	4,121.1	4,121.1	13.5	7.2	-179.23	87.1	217.5	872.2	857.8	14.42	60.490	
4,300.0	4,243.5	4,219.5	4,219.5	13.9	7.4	-179.25	87.1	217.5	889.7	874.9	14.76	60.260	
4,400.0	4,342.0	4,318.0	4,318.0	14.3	7.5	-179.26	87.1	217.5	907.2	892.0	15.11	60.040	
4,500.0	4,440.4	4,416.4	4,416.4	14.6	7.7	-179.27	87.1	217.5	924.6	909.2	15.45	59.830	
4,600.0	4,538.9	4,514.9	4,514.9	15.0	7.9	-179.29	87.1	217.5	942.1	926.3	15.80	59.629	
4,700.0	4,637.4	4,613.4	4,613.4	15.3	8.1	-179.30	87.1	217.5	959.6	943.5	16.15	59.437	
4,800.0	4,735.8	4,711.8	4,711.8	15.7	8.2	-179.31	87.1	217.5	977.1	960.6	16.49	59.253	
4,900.0	4,834.3	4,810.3	4,810.3	16.0	8.4	-179.33	87.1	217.5	994.6	977.8	16.84	59.077	
5,000.0	4,932.7	4,908.7	4,908.7	16.4	8.6	-179.34	87.1	217.5	1,012.1	994.9	17.18	58.907	
5,100.0	5,031.2	5,007.2	5,007.2	16.7	8.7	-179.35	87.1	217.5	1,029.6	1,012.0	17.53	58.745	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 24-9 J (EXISTING) - MACHII-ROSS WELL - NO SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 8120-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,129.7	5,105.7	5,105.7	17.1	8.9	-179.36	87.1	217.5	1,047.1	1,029.2	17.87	58.588	
5,300.0	5,228.1	5,204.1	5,204.1	17.4	9.1	-179.37	87.1	217.5	1,064.5	1,046.3	18.22	58.438	
5,400.0	5,326.6	5,302.6	5,302.6	17.8	9.3	-179.38	87.1	217.5	1,082.0	1,063.5	18.56	58.293	
5,500.0	5,425.0	5,401.0	5,401.0	18.2	9.4	-179.39	87.1	217.5	1,099.5	1,080.6	18.91	58.153	
5,600.0	5,523.5	5,499.5	5,499.5	18.5	9.6	-179.40	87.1	217.5	1,117.0	1,097.7	19.25	58.019	
5,700.0	5,622.0	5,598.0	5,598.0	18.9	9.8	-179.41	87.1	217.5	1,134.5	1,114.9	19.60	57.889	
5,800.0	5,720.4	5,696.4	5,696.4	19.2	9.9	-179.42	87.1	217.5	1,152.0	1,132.0	19.94	57.764	
5,900.0	5,818.9	5,794.9	5,794.9	19.6	10.1	-179.43	87.1	217.5	1,169.5	1,149.2	20.29	57.643	
6,000.0	5,917.3	5,893.3	5,893.3	19.9	10.3	-179.43	87.1	217.5	1,187.0	1,166.3	20.63	57.526	
6,100.0	6,015.8	5,991.8	5,991.8	20.3	10.5	-179.44	87.1	217.5	1,204.4	1,183.5	20.98	57.412	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 2-8-9 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 79-Geolink MWD

Offset Well Error: 0.0 ft

Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+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	105.60	-73.2	262.2	272.8				
100.0	100.0	83.6	83.6	0.1	0.1	105.65	-73.4	262.0	272.0	271.8	0.25	1,083.468	
200.0	200.0	182.8	182.8	0.3	0.3	105.78	-73.9	261.5	271.8	271.2	0.60	454.016	
300.0	300.0	284.3	284.3	0.5	0.5	106.04	-75.0	260.9	271.4	270.5	0.95	285.635	
400.0	400.0	390.1	390.1	0.6	0.7	-139.29	-75.9	259.0	271.3	270.0	1.31	206.477	
500.0	499.8	501.5	501.3	0.8	0.9	-139.91	-75.3	253.5	270.4	268.7	1.69	159.996	
600.0	599.5	610.5	609.8	1.1	1.1	-140.87	-74.4	243.7	268.2	266.1	2.08	129.229	
700.0	698.7	717.3	715.8	1.3	1.4	-141.60	-76.0	230.3	265.9	263.4	2.48	107.063	
797.1	794.6	815.7	813.0	1.6	1.7	-141.78	-81.4	215.5	264.8	261.9	2.91	90.913	
800.0	797.5	818.7	815.8	1.6	1.7	-141.78	-81.6	215.0	264.8	261.9	2.93	90.507	
900.0	895.9	924.1	919.4	2.0	2.1	-141.54	-90.2	197.3	264.1	260.7	3.42	77.162	
1,000.0	994.4	1,029.6	1,022.3	2.3	2.5	-140.81	-100.3	176.6	261.0	257.1	3.97	65.771	
1,100.0	1,092.8	1,130.1	1,120.1	2.6	2.9	-139.88	-110.6	155.7	256.9	252.4	4.54	56.587	
1,200.0	1,191.3	1,229.0	1,216.2	3.0	3.4	-138.68	-121.8	134.8	252.9	247.8	5.16	49.060	
1,300.0	1,289.8	1,327.8	1,312.0	3.3	3.8	-137.17	-134.2	114.0	249.5	243.7	5.82	42.862	
1,400.0	1,388.2	1,426.7	1,407.8	3.7	4.2	-135.52	-147.1	93.4	246.6	240.0	6.53	37.776	
1,500.0	1,486.7	1,525.3	1,503.4	4.0	4.7	-133.87	-160.1	73.2	244.2	237.0	7.25	33.664	
1,600.0	1,585.1	1,627.5	1,602.8	4.4	5.1	-132.43	-172.2	52.7	242.0	234.0	7.98	30.313	
1,700.0	1,683.6	1,729.3	1,701.8	4.7	5.6	-131.23	-182.9	31.5	238.7	230.0	8.71	27.399	
1,800.0	1,782.1	1,828.4	1,798.0	5.1	6.0	-129.93	-193.6	10.6	235.3	225.8	9.46	24.870	
1,900.0	1,880.5	1,926.9	1,893.9	5.4	6.5	-128.66	-204.2	-9.6	232.6	222.4	10.21	22.775	
2,000.0	1,979.0	2,028.8	1,993.1	5.8	6.9	-127.41	-214.8	-30.4	230.0	219.0	10.99	20.920	
2,100.0	2,077.4	2,127.2	2,088.8	6.1	7.4	-126.17	-224.8	-51.1	226.8	215.0	11.77	19.269	
2,200.0	2,175.9	2,224.2	2,183.5	6.5	7.8	-125.16	-234.4	-69.9	225.0	212.5	12.51	17.984	
2,300.0	2,274.3	2,326.8	2,283.7	6.8	8.2	-124.18	-244.3	-89.5	223.4	210.1	13.29	16.812	
2,400.0	2,372.8	2,426.7	2,381.0	7.2	8.6	-123.09	-254.0	-109.4	221.2	207.1	14.08	15.712	
2,500.0	2,471.3	2,525.7	2,477.7	7.5	9.0	-122.09	-263.4	-128.8	219.2	204.4	14.86	14.749	
2,600.0	2,569.7	2,623.9	2,573.4	7.9	9.5	-120.74	-274.0	-148.3	217.9	202.2	15.71	13.867	
2,700.0	2,668.2	2,724.3	2,671.2	8.2	9.9	-119.24	-285.6	-167.9	217.3	200.7	16.60	13.090	
2,800.0	2,766.6	2,824.5	2,768.4	8.6	10.4	-117.48	-297.4	-188.6	216.1	198.6	17.53	12.329	
2,900.0	2,865.1	2,923.1	2,864.4	8.9	10.8	-115.88	-309.0	-208.4	215.6	197.1	18.43	11.695	
3,000.0	2,963.6	3,023.2	2,961.8	9.3	11.2	-114.37	-320.5	-228.0	215.4	196.1	19.33	11.145	
3,100.0	3,062.0	3,124.0	3,060.1	9.7	11.7	-113.06	-331.3	-247.4	215.2	195.0	20.20	10.652	
3,200.0	3,160.5	3,224.1	3,157.6	10.0	12.1	-111.60	-342.0	-267.5	214.4	193.3	21.10	10.161	
3,221.4	3,181.5	3,244.5	3,177.6	10.1	12.2	-111.30	-344.3	-271.5	214.4	193.1	21.29	10.071	CC
3,300.0	3,258.9	3,320.6	3,251.9	10.4	12.5	-110.35	-352.7	-285.7	214.9	193.0	21.95	9.794	
3,400.0	3,357.4	3,421.7	3,350.9	10.7	12.9	-109.44	-363.4	-303.2	216.3	193.5	22.76	9.501	
3,500.0	3,455.9	3,522.2	3,449.2	11.1	13.3	-108.55	-373.2	-321.3	216.6	193.0	23.58	9.184	
3,600.0	3,554.3	3,620.5	3,545.5	11.4	13.7	-107.72	-383.2	-338.6	217.5	193.1	24.38	8.922	
3,700.0	3,652.8	3,721.2	3,644.0	11.8	14.1	-106.82	-393.7	-356.3	218.7	193.5	25.21	8.676	
3,800.0	3,751.2	3,823.6	3,744.2	12.1	14.5	-105.88	-403.8	-375.0	219.1	193.1	26.03	8.418	
3,807.0	3,758.1	3,830.6	3,751.0	12.2	14.5	-105.83	-404.4	-376.2	219.1	193.0	26.08	8.401	
3,900.0	3,849.7	3,922.6	3,841.5	12.5	14.9	-105.58	-411.9	-391.4	219.3	192.6	26.74	8.202	ES
4,000.0	3,948.2	4,021.9	3,939.5	12.8	15.2	-105.92	-418.8	-405.8	219.9	192.6	27.36	8.039	
4,100.0	4,046.6	4,120.5	4,037.1	13.2	15.5	-106.84	-424.4	-418.2	220.9	193.0	27.88	7.922	
4,200.0	4,145.1	4,218.5	4,134.4	13.5	15.7	-108.14	-429.6	-428.9	222.8	194.5	28.34	7.863	
4,300.0	4,243.5	4,318.3	4,233.7	13.9	15.9	-109.95	-433.8	-437.9	225.4	196.7	28.68	7.859	SF
4,400.0	4,342.0	4,415.5	4,330.6	14.3	16.1	-112.24	-436.6	-444.9	228.6	199.7	28.90	7.909	
4,500.0	4,440.4	4,511.5	4,426.5	14.6	16.3	-114.94	-438.7	-449.5	233.5	204.5	28.97	8.059	
4,600.0	4,538.9	4,611.1	4,526.0	15.0	16.4	-117.96	-440.0	-452.8	239.6	210.6	28.93	8.280	
4,700.0	4,637.4	4,710.0	4,624.9	15.3	16.5	-120.89	-441.1	-456.0	246.2	217.4	28.84	8.537	
4,800.0	4,735.8	4,809.5	4,724.2	15.7	16.7	-123.73	-441.9	-459.1	253.5	224.8	28.71	8.828	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 2-8-9 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 79-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
4,900.0	4,834.3	4,910.2	4,824.9	16.0	16.8	-126.47	-442.4	-462.6	260.9	232.4	28.55	9.138	
5,000.0	4,932.7	5,009.9	4,924.6	16.4	16.9	-129.11	-442.3	-466.4	268.3	239.9	28.36	9.459	
5,100.0	5,031.2	5,108.1	5,022.7	16.7	17.1	-131.60	-442.0	-470.0	276.3	248.1	28.16	9.812	
5,200.0	5,129.7	5,205.9	5,120.5	17.1	17.2	-134.05	-441.4	-473.1	285.1	257.2	27.92	10.210	
5,300.0	5,228.1	5,304.7	5,219.2	17.4	17.3	-136.40	-440.8	-475.9	294.7	267.0	27.69	10.642	
5,400.0	5,326.6	5,403.5	5,318.0	17.8	17.4	-138.59	-440.2	-478.8	304.7	277.2	27.48	11.089	
5,500.0	5,425.0	5,502.4	5,416.8	18.2	17.6	-140.65	-439.5	-481.6	315.2	287.9	27.28	11.552	
5,600.0	5,523.5	5,601.2	5,515.6	18.5	17.7	-142.59	-438.8	-484.5	326.0	298.9	27.11	12.027	
5,700.0	5,622.0	5,700.0	5,614.3	18.9	17.8	-144.39	-438.1	-487.3	337.2	310.2	26.96	12.507	
5,800.0	5,720.4	5,799.4	5,713.6	19.2	17.9	-146.08	-437.5	-490.3	348.6	321.8	26.84	12.987	
5,900.0	5,818.9	5,898.9	5,813.2	19.6	18.1	-147.65	-436.9	-493.4	360.1	333.4	26.75	13.460	
6,000.0	5,917.3	5,996.1	5,910.3	19.9	18.2	-149.08	-436.4	-496.4	372.0	345.3	26.70	13.932	
6,100.0	6,015.8	6,093.3	6,007.4	20.3	18.3	-150.43	-435.9	-498.8	384.6	357.9	26.67	14.419	
6,200.0	6,114.2	6,191.2	6,105.3	20.6	18.4	-151.73	-435.2	-501.0	397.7	371.0	26.65	14.921	
6,300.0	6,212.7	6,289.2	6,203.3	21.0	18.6	-153.00	-434.1	-503.0	411.2	384.5	26.64	15.434	
6,400.0	6,311.2	6,387.5	6,301.5	21.3	18.7	-154.24	-432.8	-504.9	425.0	398.3	26.64	15.953	
6,500.0	6,409.6	6,486.3	6,400.4	21.7	18.8	-155.44	-431.2	-506.7	439.0	412.3	26.65	16.471	
6,600.0	6,508.1	6,585.7	6,499.7	22.1	18.9	-156.58	-429.4	-508.7	453.1	426.4	26.69	16.978	
6,700.0	6,606.5	6,687.5	6,601.5	22.4	19.1	-157.70	-427.5	-511.1	466.9	440.2	26.74	17.465	
6,800.0	6,705.0	6,789.7	6,703.6	22.8	19.2	-158.78	-425.5	-514.4	480.2	453.4	26.80	17.915	
6,900.0	6,803.5	6,890.1	6,803.9	23.1	19.3	-159.77	-423.6	-518.0	493.1	466.2	26.90	18.333	
7,000.0	6,901.9	6,989.1	6,902.8	23.5	19.5	-160.68	-422.0	-521.9	505.8	478.8	27.02	18.720	
7,100.0	7,000.5	7,086.1	6,999.8	23.8	19.6	151.77	-421.5	-525.3	518.4	491.4	27.06	19.157	
7,200.0	7,098.0	7,181.3	7,094.9	24.0	19.8	118.69	-422.2	-528.2	529.9	502.5	27.41	19.332	
7,300.0	7,191.3	7,272.1	7,185.7	24.1	19.9	108.45	-422.8	-530.4	541.6	513.6	27.97	19.363	
7,400.0	7,277.8	7,358.8	7,272.3	24.1	20.0	105.82	-423.1	-532.2	555.6	527.1	28.54	19.469	
7,500.0	7,354.6	7,436.9	7,350.5	24.1	20.1	105.80	-423.5	-534.1	574.8	546.0	28.84	19.929	
7,600.0	7,419.6	7,501.6	7,415.1	24.0	20.2	105.95	-423.7	-535.7	602.2	573.5	28.73	20.963	
7,700.0	7,470.7	7,551.3	7,464.8	24.0	20.3	104.86	-423.8	-536.8	640.1	611.7	28.40	22.542	
7,800.0	7,506.4	7,586.2	7,499.7	24.1	20.3	101.75	-423.8	-537.5	689.0	660.7	28.24	24.395	
7,900.0	7,525.7	7,605.2	7,518.7	24.2	20.4	96.01	-423.8	-537.8	747.5	719.0	28.43	26.290	
8,000.0	7,529.0	7,608.7	7,522.2	24.5	20.4	91.05	-423.8	-537.8	813.3	784.5	28.79	28.245	
8,100.0	7,529.0	7,608.9	7,522.4	24.8	20.4	91.07	-423.8	-537.9	885.2	855.8	29.40	30.105	
8,200.0	7,529.0	7,609.1	7,522.6	25.3	20.4	91.09	-423.8	-537.9	962.2	932.0	30.19	31.872	
8,300.0	7,529.0	7,609.3	7,522.8	25.9	20.4	91.11	-423.8	-537.9	1,043.1	1,012.0	31.13	33.513	
8,400.0	7,529.0	7,609.5	7,523.0	26.5	20.4	91.13	-423.8	-537.9	1,127.1	1,094.9	32.19	35.016	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3A-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.96	0.0	-11.2	11.2				
100.0	100.0	100.0	100.0	0.1	0.1	-89.96	0.0	-11.2	11.2	10.9	0.24	45.763	
200.0	200.0	200.0	200.0	0.3	0.3	-89.96	0.0	-11.2	11.2	10.6	0.59	18.844	CC, ES
300.0	300.0	299.6	299.6	0.5	0.5	-92.52	-0.6	-12.8	12.8	11.9	0.94	13.597	
400.0	400.0	399.0	398.9	0.6	0.7	19.13	-2.3	-17.7	16.2	14.9	1.29	12.568	
500.0	499.8	498.4	497.8	0.8	0.9	18.09	-5.1	-25.8	19.7	18.1	1.64	12.004	
600.0	599.5	597.6	596.3	1.1	1.2	18.14	-9.1	-37.2	23.3	21.3	2.00	11.644	
700.0	698.7	696.7	694.2	1.3	1.5	18.85	-14.2	-51.7	26.9	24.5	2.36	11.371	
800.0	797.5	795.6	791.4	1.6	1.8	19.97	-20.4	-69.4	30.6	27.8	2.75	11.123	
900.0	895.9	894.7	888.0	2.0	2.3	20.51	-27.6	-90.2	35.7	32.5	3.15	11.347	
1,000.0	994.4	994.6	985.1	2.3	2.7	20.59	-35.2	-111.9	41.7	38.1	3.55	11.753	
1,100.0	1,092.8	1,094.4	1,082.2	2.6	3.1	20.65	-42.8	-133.6	47.7	43.7	3.95	12.068	
1,200.0	1,191.3	1,194.2	1,179.4	3.0	3.5	20.70	-50.4	-155.4	53.7	49.3	4.36	12.319	
1,300.0	1,289.8	1,294.0	1,276.5	3.3	4.0	20.73	-58.0	-177.1	59.6	54.9	4.76	12.523	
1,400.0	1,388.2	1,393.8	1,373.6	3.7	4.4	20.77	-65.6	-198.8	65.6	60.5	5.17	12.691	
1,500.0	1,486.7	1,493.7	1,470.8	4.0	4.9	20.79	-73.2	-220.5	71.6	66.0	5.58	12.833	
1,600.0	1,585.1	1,593.5	1,567.9	4.4	5.3	20.81	-80.8	-242.3	77.6	71.6	5.99	12.954	
1,700.0	1,683.6	1,693.3	1,665.0	4.7	5.8	20.83	-88.4	-264.0	83.6	77.2	6.40	13.058	
1,800.0	1,782.1	1,793.1	1,762.2	5.1	6.2	20.85	-96.0	-285.7	89.6	82.8	6.81	13.148	
1,900.0	1,880.5	1,892.9	1,859.3	5.4	6.6	20.86	-103.6	-307.4	95.6	88.3	7.23	13.227	
2,000.0	1,979.0	1,992.8	1,956.4	5.8	7.1	20.87	-111.2	-329.2	101.6	93.9	7.64	13.298	
2,100.0	2,077.4	2,092.6	2,053.5	6.1	7.5	20.88	-118.8	-350.9	107.5	99.5	8.05	13.360	
2,200.0	2,175.9	2,192.4	2,150.7	6.5	8.0	20.89	-126.4	-372.6	113.5	105.1	8.46	13.416	
2,300.0	2,274.3	2,292.2	2,247.8	6.8	8.4	20.90	-134.0	-394.4	119.5	110.6	8.88	13.466	
2,400.0	2,372.8	2,392.1	2,344.9	7.2	8.9	20.91	-141.6	-416.1	125.5	116.2	9.29	13.512	
2,500.0	2,471.3	2,491.9	2,442.1	7.5	9.3	20.92	-149.2	-437.8	131.5	121.8	9.70	13.554	
2,600.0	2,569.7	2,591.7	2,539.2	7.9	9.7	20.92	-156.8	-459.5	137.5	127.4	10.12	13.591	
2,700.0	2,668.2	2,691.5	2,636.3	8.2	10.2	20.93	-164.4	-481.3	143.5	132.9	10.53	13.626	
2,800.0	2,766.6	2,791.3	2,733.5	8.6	10.6	20.94	-172.0	-503.0	149.5	138.5	10.94	13.658	
2,900.0	2,865.1	2,891.2	2,830.6	8.9	11.1	20.94	-179.6	-524.7	155.5	144.1	11.36	13.688	
3,000.0	2,963.6	2,991.0	2,927.7	9.3	11.5	20.95	-187.2	-546.4	161.4	149.7	11.77	13.715	
3,100.0	3,062.0	3,090.8	3,024.9	9.7	12.0	20.95	-194.9	-568.2	167.4	155.2	12.19	13.741	
3,200.0	3,160.5	3,190.6	3,122.0	10.0	12.4	20.95	-202.5	-589.9	173.4	160.8	12.60	13.764	
3,300.0	3,258.9	3,290.4	3,219.1	10.4	12.9	20.96	-210.1	-611.6	179.4	166.4	13.01	13.786	
3,400.0	3,357.4	3,390.3	3,316.2	10.7	13.3	20.96	-217.7	-633.3	185.4	172.0	13.43	13.807	
3,500.0	3,455.9	3,490.1	3,413.4	11.1	13.8	20.97	-225.3	-655.1	191.4	177.5	13.84	13.826	
3,600.0	3,554.3	3,589.9	3,510.5	11.4	14.2	20.97	-232.9	-676.8	197.4	183.1	14.26	13.845	
3,700.0	3,652.8	3,689.7	3,607.6	11.8	14.7	20.97	-240.5	-698.5	203.4	188.7	14.67	13.862	
3,800.0	3,751.2	3,789.5	3,704.8	12.1	15.1	20.97	-248.1	-720.3	209.3	194.3	15.08	13.878	
3,900.0	3,849.7	3,889.4	3,801.9	12.5	15.5	20.98	-255.7	-742.0	215.3	199.8	15.50	13.893	
4,000.0	3,948.2	3,989.2	3,899.0	12.8	16.0	20.98	-263.3	-763.7	221.3	205.4	15.91	13.908	
4,100.0	4,046.6	4,089.0	3,996.2	13.2	16.4	20.98	-270.9	-785.4	227.3	211.0	16.33	13.921	
4,200.0	4,145.1	4,188.8	4,093.3	13.5	16.9	20.98	-278.5	-807.2	233.3	216.6	16.74	13.934	
4,300.0	4,243.5	4,288.6	4,190.4	13.9	17.3	20.99	-286.1	-828.9	239.3	222.1	17.16	13.946	
4,400.0	4,342.0	4,388.5	4,287.5	14.3	17.8	20.99	-293.7	-850.6	245.3	227.7	17.57	13.958	
4,500.0	4,440.4	4,488.3	4,384.7	14.6	18.2	20.99	-301.3	-872.3	251.3	233.3	17.99	13.969	
4,600.0	4,538.9	4,588.1	4,481.8	15.0	18.7	20.99	-308.9	-894.1	257.3	238.9	18.40	13.980	
4,700.0	4,637.4	4,687.9	4,578.9	15.3	19.1	20.99	-316.5	-915.8	263.2	244.4	18.82	13.990	
4,800.0	4,735.8	4,787.7	4,676.1	15.7	19.6	21.00	-324.1	-937.5	269.2	250.0	19.23	14.000	
4,900.0	4,834.3	4,887.6	4,773.2	16.0	20.0	21.00	-331.7	-959.2	275.2	255.6	19.65	14.009	
5,000.0	4,932.7	4,987.4	4,870.3	16.4	20.5	21.00	-339.3	-981.0	281.2	261.1	20.06	14.018	
5,100.0	5,031.2	5,087.2	4,967.5	16.7	20.9	21.00	-346.9	-1,002.7	287.2	266.7	20.48	14.026	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3A-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,129.7	5,187.0	5,064.6	17.1	21.3	21.00	-354.5	-1,024.4	293.2	272.3	20.89	14.035	
5,300.0	5,228.1	5,286.8	5,161.7	17.4	21.8	21.00	-362.1	-1,046.2	299.2	277.9	21.30	14.042	
5,400.0	5,326.6	5,386.7	5,258.9	17.8	22.2	21.00	-369.7	-1,067.9	305.2	283.4	21.72	14.050	
5,500.0	5,425.0	5,486.5	5,356.0	18.2	22.7	21.01	-377.3	-1,089.6	311.1	289.0	22.13	14.057	
5,600.0	5,523.5	5,586.3	5,453.1	18.5	23.1	21.01	-384.9	-1,111.3	317.1	294.6	22.55	14.064	
5,700.0	5,622.0	5,686.1	5,550.2	18.9	23.6	21.01	-392.5	-1,133.1	323.1	300.2	22.96	14.071	
5,800.0	5,720.4	5,785.9	5,647.4	19.2	24.0	21.01	-400.1	-1,154.8	329.1	305.7	23.38	14.077	
5,900.0	5,818.9	5,885.8	5,744.5	19.6	24.5	21.01	-407.7	-1,176.5	335.1	311.3	23.79	14.083	
6,000.0	5,917.3	5,985.6	5,841.6	19.9	24.9	21.01	-415.3	-1,198.2	341.1	316.9	24.21	14.089	
6,100.0	6,015.8	6,085.4	5,938.8	20.3	25.4	21.01	-422.9	-1,220.0	347.1	322.5	24.62	14.095	
6,200.0	6,114.2	6,185.2	6,035.9	20.6	25.8	21.01	-430.5	-1,241.7	353.1	328.0	25.04	14.101	
6,300.0	6,212.7	6,285.1	6,133.0	21.0	26.3	21.01	-438.1	-1,263.4	359.1	333.6	25.45	14.106	
6,400.0	6,311.2	6,384.9	6,230.2	21.3	26.7	21.01	-445.7	-1,285.1	365.0	339.2	25.87	14.111	
6,500.0	6,409.6	6,484.7	6,327.3	21.7	27.1	21.02	-453.3	-1,306.9	371.0	344.7	26.28	14.116	
6,600.0	6,508.1	6,584.5	6,424.4	22.1	27.6	21.02	-460.9	-1,328.6	377.0	350.3	26.70	14.121	
6,700.0	6,606.5	6,684.3	6,521.5	22.4	28.0	21.02	-468.5	-1,350.3	383.0	355.9	27.11	14.126	
6,800.0	6,705.0	6,784.2	6,618.7	22.8	28.5	21.02	-476.1	-1,372.1	389.0	361.5	27.53	14.131	
6,900.0	6,803.5	6,884.4	6,716.2	23.1	28.9	21.04	-483.6	-1,393.9	395.0	367.0	27.95	14.134	
7,000.0	6,901.9	6,986.5	6,815.7	23.5	29.3	22.62	-480.3	-1,416.1	400.5	371.7	28.86	13.878	
7,100.0	7,000.5	7,083.7	6,908.4	23.8	29.6	-20.25	-460.4	-1,436.9	406.6	376.2	30.42	13.366	
7,200.0	7,098.0	7,177.4	6,993.4	24.0	29.7	-50.42	-426.3	-1,455.9	413.7	382.1	31.61	13.089	
7,300.0	7,191.3	7,268.1	7,069.6	24.1	29.9	-59.50	-380.2	-1,472.9	421.5	389.4	32.15	13.112	
7,400.0	7,277.8	7,356.4	7,136.0	24.1	29.9	-62.24	-324.0	-1,487.8	429.5	397.5	31.93	13.451	
7,500.0	7,354.6	7,442.7	7,191.9	24.1	30.0	-62.79	-259.7	-1,500.3	437.1	406.1	31.00	14.103	
7,600.0	7,419.6	7,527.3	7,237.1	24.0	30.1	-62.54	-188.9	-1,510.4	444.0	414.5	29.56	15.021	
7,700.0	7,470.7	7,610.8	7,271.2	24.0	30.1	-62.02	-113.2	-1,518.0	449.8	421.8	28.00	16.063	
7,800.0	7,506.4	7,693.3	7,294.1	24.1	30.2	-61.50	-34.2	-1,523.1	454.0	427.2	26.82	16.929	
7,900.0	7,525.7	7,775.2	7,305.5	24.2	30.3	-61.10	46.8	-1,525.7	456.6	430.0	26.54	17.202	
8,000.0	7,529.0	7,865.8	7,307.0	24.5	30.5	-60.95	137.4	-1,526.0	457.2	429.9	27.29	16.755	
8,100.0	7,529.0	7,965.8	7,307.0	24.8	30.7	-60.95	237.4	-1,526.0	457.2	428.8	28.35	16.128	
8,200.0	7,529.0	8,065.8	7,307.0	25.3	31.1	-60.95	337.4	-1,526.0	457.2	427.5	29.69	15.401	
8,300.0	7,529.0	8,165.8	7,307.0	25.9	31.6	-60.95	437.4	-1,526.0	457.2	425.9	31.27	14.620	
8,400.0	7,529.0	8,265.8	7,307.0	26.5	32.1	-60.95	537.4	-1,526.0	457.2	424.1	33.07	13.827	
8,500.0	7,529.0	8,365.8	7,307.0	27.3	32.7	-60.95	637.4	-1,526.0	457.2	422.2	35.04	13.048	
8,600.0	7,529.0	8,465.8	7,307.0	28.2	33.4	-60.95	737.4	-1,526.0	457.2	420.0	37.16	12.303	
8,700.0	7,529.0	8,565.8	7,307.0	29.1	34.2	-60.95	837.4	-1,526.0	457.2	417.8	39.41	11.601	
8,800.0	7,529.0	8,665.8	7,307.0	30.1	35.1	-60.95	937.4	-1,526.0	457.2	415.4	41.76	10.948	
8,900.0	7,529.0	8,765.8	7,307.0	31.2	36.0	-60.95	1,037.4	-1,526.0	457.2	413.0	44.20	10.343	
9,000.0	7,529.0	8,865.8	7,307.0	32.4	37.0	-60.95	1,137.4	-1,526.0	457.2	410.5	46.72	9.786	
9,100.0	7,529.0	8,965.8	7,307.0	33.6	38.0	-60.95	1,237.4	-1,526.0	457.2	407.9	49.30	9.274	
9,200.0	7,529.0	9,065.8	7,307.0	34.8	39.1	-60.95	1,337.4	-1,526.0	457.2	405.3	51.93	8.804	
9,300.0	7,529.0	9,165.8	7,307.0	36.1	40.3	-60.95	1,437.4	-1,526.0	457.2	402.6	54.61	8.372	
9,400.0	7,529.0	9,265.8	7,307.0	37.4	41.4	-60.95	1,537.4	-1,526.0	457.2	399.9	57.33	7.975	
9,500.0	7,529.0	9,365.8	7,307.0	38.8	42.7	-60.95	1,637.4	-1,526.0	457.2	397.1	60.08	7.609	
9,600.0	7,529.0	9,465.8	7,307.0	40.2	43.9	-60.95	1,737.4	-1,526.0	457.2	394.3	62.86	7.273	
9,700.0	7,529.0	9,565.8	7,307.0	41.6	45.2	-60.95	1,837.4	-1,526.0	457.2	391.5	65.67	6.962	
9,800.0	7,529.0	9,665.8	7,307.0	43.0	46.5	-60.95	1,937.4	-1,526.0	457.2	388.7	68.50	6.674	
9,900.0	7,529.0	9,765.8	7,307.0	44.5	47.9	-60.95	2,037.4	-1,526.0	457.2	385.8	71.36	6.407	
10,000.0	7,529.0	9,865.8	7,307.0	46.0	49.3	-60.95	2,137.4	-1,526.0	457.2	383.0	74.22	6.160	
10,100.0	7,529.0	9,965.8	7,307.0	47.5	50.7	-60.95	2,237.4	-1,526.0	457.2	380.1	77.11	5.929	
10,200.0	7,529.0	10,065.8	7,307.0	49.0	52.1	-60.95	2,337.4	-1,526.0	457.2	377.2	80.01	5.714	
10,300.0	7,529.0	10,165.8	7,307.0	50.5	53.5	-60.95	2,437.4	-1,526.0	457.2	374.3	82.92	5.514	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3A-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,400.0	7,529.0	10,265.8	7,307.0	52.1	55.0	-60.95	2,537.4	-1,526.0	457.2	371.3	85.84	5.326	
10,500.0	7,529.0	10,365.8	7,307.0	53.7	56.5	-60.95	2,637.4	-1,526.0	457.2	368.4	88.77	5.150	
10,600.0	7,529.0	10,465.8	7,307.0	55.2	58.0	-60.95	2,737.4	-1,526.0	457.2	365.5	91.71	4.985	
10,700.0	7,529.0	10,565.8	7,307.0	56.8	59.5	-60.95	2,837.4	-1,526.0	457.2	362.5	94.66	4.830	
10,800.0	7,529.0	10,665.8	7,307.0	58.4	61.0	-60.95	2,937.4	-1,526.0	457.2	359.6	97.62	4.683	
10,900.0	7,529.0	10,765.8	7,307.0	60.0	62.5	-60.95	3,037.4	-1,526.0	457.2	356.6	100.59	4.545	
11,000.0	7,529.0	10,865.8	7,307.0	61.6	64.1	-60.95	3,137.4	-1,526.0	457.2	353.6	103.56	4.415	
11,100.0	7,529.0	10,965.8	7,307.0	63.2	65.6	-60.95	3,237.4	-1,526.0	457.2	350.7	106.53	4.292	
11,200.0	7,529.0	11,065.8	7,307.0	64.9	67.2	-60.95	3,337.4	-1,526.0	457.2	347.7	109.52	4.175	
11,300.0	7,529.0	11,165.8	7,307.0	66.5	68.8	-60.95	3,437.4	-1,526.0	457.2	344.7	112.50	4.064	
11,400.0	7,529.0	11,265.8	7,307.0	68.1	70.4	-60.95	3,537.4	-1,526.0	457.2	341.7	115.49	3.959	
11,500.0	7,529.0	11,365.8	7,307.0	69.8	72.0	-60.95	3,637.4	-1,526.0	457.2	338.7	118.49	3.859	
11,600.0	7,529.0	11,465.8	7,307.0	71.4	73.6	-60.95	3,737.4	-1,526.0	457.2	335.7	121.49	3.763	
11,700.0	7,529.0	11,565.8	7,307.0	73.1	75.2	-60.95	3,837.4	-1,526.0	457.2	332.7	124.49	3.672	
11,800.0	7,529.0	11,665.8	7,307.0	74.8	76.8	-60.95	3,937.4	-1,526.0	457.2	329.7	127.50	3.586	
11,900.0	7,529.0	11,765.8	7,307.0	76.4	78.4	-60.95	4,037.4	-1,526.0	457.2	326.7	130.51	3.503	
12,000.0	7,529.0	11,865.8	7,307.0	78.1	80.0	-60.95	4,137.4	-1,526.0	457.2	323.7	133.52	3.424	
12,100.0	7,529.0	11,965.8	7,307.0	79.8	81.7	-60.95	4,237.4	-1,526.0	457.2	320.7	136.53	3.349	
12,200.0	7,529.0	12,065.8	7,307.0	81.4	83.3	-60.95	4,337.4	-1,526.0	457.2	317.6	139.55	3.276	
12,300.0	7,529.0	12,165.8	7,307.0	83.1	84.9	-60.95	4,437.4	-1,526.0	457.2	314.6	142.57	3.207	
12,400.0	7,529.0	12,265.8	7,307.0	84.8	86.6	-60.95	4,537.4	-1,526.0	457.2	311.6	145.59	3.140	
12,500.0	7,529.0	12,365.8	7,307.0	86.5	88.2	-60.95	4,637.4	-1,526.0	457.2	308.6	148.62	3.076	
12,600.0	7,529.0	12,465.8	7,307.0	88.2	89.9	-60.95	4,737.4	-1,526.0	457.2	305.5	151.64	3.015	
12,700.0	7,529.0	12,565.8	7,307.0	89.9	91.5	-60.95	4,837.4	-1,526.0	457.2	302.5	154.67	2.956	
12,800.0	7,529.0	12,665.8	7,307.0	91.5	93.2	-60.95	4,937.4	-1,526.0	457.2	299.5	157.70	2.899	
12,900.0	7,529.0	12,765.8	7,307.0	93.2	94.9	-60.95	5,037.4	-1,526.0	457.2	296.5	160.73	2.844	
13,000.0	7,529.0	12,865.8	7,307.0	94.9	96.5	-60.95	5,137.4	-1,526.0	457.2	293.4	163.76	2.792	
13,097.3	7,529.0	12,963.2	7,307.0	96.6	98.2	-60.95	5,234.8	-1,526.0	457.2	290.5	166.72	2.742	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3C-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.06	0.0	8.4	8.4				
100.0	100.0	100.0	100.0	0.1	0.1	90.06	0.0	8.4	8.4	8.1	0.24	34.322	
200.0	200.0	200.0	200.0	0.3	0.3	90.06	0.0	8.4	8.4	7.8	0.59	14.133	
300.0	300.0	300.0	300.0	0.5	0.5	90.06	0.0	8.4	8.4	7.4	0.94	8.898	CC, ES
400.0	400.0	400.0	400.0	0.6	0.6	-159.47	0.0	8.4	10.0	8.7	1.29	7.742	
500.0	499.8	500.1	500.1	0.8	0.8	-165.21	-0.5	7.6	14.2	12.6	1.64	8.660	
600.0	599.5	600.2	600.1	1.1	1.0	-168.66	-1.9	5.4	20.3	18.3	1.99	10.188	
700.0	698.7	700.2	700.1	1.3	1.2	-170.64	-4.2	1.7	28.1	25.8	2.33	12.042	
800.0	797.5	800.3	800.0	1.6	1.4	-171.77	-7.5	-3.4	37.8	35.1	2.68	14.086	
900.0	895.9	900.6	899.9	2.0	1.6	-172.21	-11.7	-10.1	47.6	44.5	3.04	15.674	
1,000.0	994.4	1,001.1	1,000.0	2.3	1.8	-172.02	-16.9	-18.2	55.7	52.3	3.39	16.414	
1,100.0	1,092.8	1,101.9	1,100.1	2.6	2.1	-171.43	-23.0	-27.9	62.2	58.4	3.76	16.538	
1,200.0	1,191.3	1,202.9	1,200.2	3.0	2.3	-170.52	-30.0	-39.1	67.0	62.8	4.13	16.202	
1,300.0	1,289.8	1,303.6	1,299.8	3.3	2.6	-169.32	-38.0	-51.6	70.2	65.7	4.52	15.539	
1,400.0	1,388.2	1,403.5	1,398.6	3.7	2.9	-168.14	-46.0	-64.4	73.1	68.2	4.91	14.890	
1,500.0	1,486.7	1,503.4	1,497.4	4.0	3.2	-167.04	-54.1	-77.1	76.0	70.7	5.31	14.322	
1,600.0	1,585.1	1,603.4	1,596.2	4.4	3.5	-166.03	-62.2	-89.9	78.9	73.2	5.71	13.819	
1,700.0	1,683.6	1,703.3	1,695.0	4.7	3.8	-165.09	-70.3	-102.6	81.9	75.8	6.13	13.370	
1,800.0	1,782.1	1,803.3	1,793.8	5.1	4.1	-164.21	-78.3	-115.4	84.9	78.4	6.55	12.968	
1,900.0	1,880.5	1,903.2	1,892.6	5.4	4.4	-163.40	-86.4	-128.2	87.9	80.9	6.97	12.606	
2,000.0	1,979.0	2,003.2	1,991.4	5.8	4.7	-162.64	-94.5	-140.9	91.0	83.5	7.41	12.278	
2,100.0	2,077.4	2,103.1	2,090.2	6.1	5.0	-161.92	-102.6	-153.7	94.0	86.1	7.85	11.980	
2,200.0	2,175.9	2,203.1	2,189.0	6.5	5.3	-161.26	-110.6	-166.4	97.0	88.8	8.29	11.708	
2,300.0	2,274.3	2,303.0	2,287.8	6.8	5.7	-160.63	-118.7	-179.2	100.1	91.4	8.74	11.458	
2,400.0	2,372.8	2,403.0	2,386.6	7.2	6.0	-160.04	-126.8	-191.9	103.2	94.0	9.19	11.229	
2,500.0	2,471.3	2,502.9	2,485.4	7.5	6.3	-159.49	-134.8	-204.7	106.3	96.6	9.65	11.018	
2,600.0	2,569.7	2,602.9	2,584.2	7.9	6.6	-158.97	-142.9	-217.5	109.4	99.3	10.11	10.823	
2,700.0	2,668.2	2,702.8	2,683.0	8.2	6.9	-158.47	-151.0	-230.2	112.5	101.9	10.57	10.642	
2,800.0	2,766.6	2,802.8	2,781.8	8.6	7.2	-158.00	-159.1	-243.0	115.6	104.6	11.04	10.475	
2,900.0	2,865.1	2,902.7	2,880.6	8.9	7.5	-157.56	-167.1	-255.7	118.7	107.2	11.51	10.318	
3,000.0	2,963.6	3,002.7	2,979.4	9.3	7.8	-157.14	-175.2	-268.5	121.9	109.9	11.98	10.173	
3,100.0	3,062.0	3,102.6	3,078.2	9.7	8.2	-156.74	-183.3	-281.2	125.0	112.5	12.45	10.037	
3,200.0	3,160.5	3,202.5	3,177.0	10.0	8.5	-156.36	-191.3	-294.0	128.1	115.2	12.93	9.909	
3,300.0	3,258.9	3,302.5	3,275.8	10.4	8.8	-156.00	-199.4	-306.8	131.3	117.9	13.41	9.790	
3,400.0	3,357.4	3,402.4	3,374.6	10.7	9.1	-155.65	-207.5	-319.5	134.4	120.6	13.89	9.677	
3,500.0	3,455.9	3,502.4	3,473.4	11.1	9.4	-155.33	-215.6	-332.3	137.6	123.2	14.38	9.572	
3,600.0	3,554.3	3,602.3	3,572.2	11.4	9.7	-155.01	-223.6	-345.0	140.8	125.9	14.86	9.472	
3,700.0	3,652.8	3,702.3	3,671.0	11.8	10.1	-154.71	-231.7	-357.8	143.9	128.6	15.35	9.378	
3,800.0	3,751.2	3,802.2	3,769.8	12.1	10.4	-154.42	-239.8	-370.5	147.1	131.3	15.84	9.289	
3,900.0	3,849.7	3,902.2	3,868.6	12.5	10.7	-154.15	-247.9	-383.3	150.3	133.9	16.32	9.205	
4,000.0	3,948.2	4,002.1	3,967.4	12.8	11.0	-153.88	-255.9	-396.1	153.4	136.6	16.82	9.125	
4,100.0	4,046.6	4,102.1	4,066.2	13.2	11.3	-153.63	-264.0	-408.8	156.6	139.3	17.31	9.049	
4,200.0	4,145.1	4,202.0	4,165.0	13.5	11.6	-153.39	-272.1	-421.6	159.8	142.0	17.80	8.977	
4,300.0	4,243.5	4,302.0	4,263.8	13.9	12.0	-153.15	-280.1	-434.3	163.0	144.7	18.30	8.909	
4,400.0	4,342.0	4,401.9	4,362.6	14.3	12.3	-152.93	-288.2	-447.1	166.2	147.4	18.79	8.844	
4,500.0	4,440.4	4,501.9	4,461.4	14.6	12.6	-152.71	-296.3	-459.9	169.4	150.1	19.29	8.782	
4,600.0	4,538.9	4,601.8	4,560.2	15.0	12.9	-152.51	-304.4	-472.6	172.6	152.8	19.78	8.722	
4,700.0	4,637.4	4,701.8	4,659.0	15.3	13.2	-152.31	-312.4	-485.4	175.8	155.5	20.28	8.666	
4,800.0	4,735.8	4,801.7	4,757.8	15.7	13.5	-152.11	-320.5	-498.1	179.0	158.2	20.78	8.612	
4,900.0	4,834.3	4,901.6	4,856.6	16.0	13.9	-151.93	-328.6	-510.9	182.2	160.9	21.28	8.560	
5,000.0	4,932.7	5,001.6	4,955.4	16.4	14.2	-151.75	-336.7	-523.6	185.4	163.6	21.78	8.510	
5,100.0	5,031.2	5,101.5	5,054.2	16.7	14.5	-151.57	-344.7	-536.4	188.6	166.3	22.28	8.462	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3C-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,129.7	5,201.5	5,153.0	17.1	14.8	-151.40	-352.8	-549.2	191.8	169.0	22.78	8.417	
5,300.0	5,228.1	5,301.4	5,251.8	17.4	15.1	-151.24	-360.9	-561.9	195.0	171.7	23.29	8.373	
5,400.0	5,326.6	5,401.4	5,350.6	17.8	15.4	-151.08	-368.9	-574.7	198.2	174.4	23.79	8.331	
5,500.0	5,425.0	5,501.3	5,449.4	18.2	15.8	-150.93	-377.0	-587.4	201.4	177.1	24.29	8.290	
5,600.0	5,523.5	5,601.3	5,548.2	18.5	16.1	-150.78	-385.1	-600.2	204.6	179.8	24.80	8.251	
5,700.0	5,622.0	5,701.2	5,647.0	18.9	16.4	-150.64	-393.2	-612.9	207.8	182.5	25.30	8.214	
5,800.0	5,720.4	5,801.2	5,745.8	19.2	16.7	-150.50	-401.2	-625.7	211.0	185.2	25.80	8.177	
5,900.0	5,818.9	5,901.1	5,844.6	19.6	17.0	-150.37	-409.3	-638.5	214.2	187.9	26.31	8.142	
6,000.0	5,917.3	6,001.1	5,943.4	19.9	17.3	-150.24	-417.4	-651.2	217.4	190.6	26.82	8.109	
6,100.0	6,015.8	6,101.0	6,042.2	20.3	17.7	-150.11	-425.5	-664.0	220.7	193.3	27.32	8.076	
6,200.0	6,114.2	6,201.0	6,141.0	20.6	18.0	-149.99	-433.5	-676.7	223.9	196.0	27.83	8.045	
6,300.0	6,212.7	6,300.9	6,239.8	21.0	18.3	-149.87	-441.6	-689.5	227.1	198.8	28.34	8.015	
6,400.0	6,311.2	6,400.9	6,338.6	21.3	18.6	-149.75	-449.7	-702.3	230.3	201.5	28.84	7.985	
6,500.0	6,409.6	6,500.8	6,437.4	21.7	18.9	-149.64	-457.7	-715.0	233.5	204.2	29.35	7.957	
6,600.0	6,508.1	6,600.7	6,536.2	22.1	19.2	-149.53	-465.8	-727.8	236.8	206.9	29.86	7.929	
6,700.0	6,606.5	6,700.7	6,635.0	22.4	19.6	-149.42	-473.9	-740.5	240.0	209.6	30.37	7.903	
6,800.0	6,705.0	6,802.6	6,735.8	22.8	19.9	-149.70	-480.5	-753.5	243.0	212.3	30.72	7.912	
6,900.0	6,803.5	6,904.5	6,836.4	23.1	20.0	-153.47	-472.0	-766.5	245.1	215.3	29.74	8.242	
7,000.0	6,901.9	6,998.1	6,926.2	23.5	20.1	-160.44	-448.4	-778.1	249.1	221.4	27.73	8.984	
7,100.0	7,000.5	7,082.6	7,002.9	23.8	20.0	144.47	-414.8	-788.0	259.4	233.6	25.78	10.060	
7,200.0	7,098.0	7,162.8	7,070.6	24.0	20.0	102.94	-372.7	-796.8	274.6	249.6	25.04	10.968	
7,300.0	7,191.3	7,239.9	7,129.4	24.1	19.9	83.99	-323.6	-804.4	292.5	267.3	25.20	11.610	
7,400.0	7,277.8	7,314.5	7,179.7	24.1	19.8	72.96	-268.9	-810.9	311.1	285.5	25.55	12.177	
7,500.0	7,354.6	7,387.2	7,221.6	24.1	19.7	65.64	-209.7	-816.3	328.8	303.2	25.59	12.845	
7,600.0	7,419.6	7,458.6	7,255.0	24.0	19.7	60.57	-146.9	-820.6	344.3	319.1	25.20	13.663	
7,700.0	7,470.7	7,528.9	7,280.2	24.0	19.7	57.09	-81.4	-823.8	357.0	332.5	24.50	14.572	
7,800.0	7,506.4	7,600.0	7,297.4	24.1	19.8	54.83	-12.5	-826.1	366.1	342.4	23.71	15.437	
7,900.0	7,525.7	7,667.6	7,305.8	24.2	19.9	53.66	54.6	-827.1	371.3	348.1	23.19	16.010	
8,000.0	7,529.0	7,750.5	7,307.0	24.5	20.2	53.41	137.4	-827.3	372.5	349.0	23.46	15.873	
8,100.0	7,529.0	7,850.5	7,307.0	24.8	20.6	53.41	237.4	-827.3	372.5	347.9	24.55	15.172	
8,200.0	7,529.0	7,950.5	7,307.0	25.3	21.1	53.41	337.4	-827.3	372.5	346.6	25.90	14.382	
8,300.0	7,529.0	8,050.5	7,307.0	25.9	21.8	53.41	437.4	-827.3	372.5	345.0	27.47	13.559	
8,400.0	7,529.0	8,150.5	7,307.0	26.5	22.6	53.41	537.4	-827.3	372.5	343.2	29.23	12.741	
8,500.0	7,529.0	8,250.5	7,307.0	27.3	23.5	53.41	637.4	-827.3	372.4	341.3	31.15	11.956	
8,600.0	7,529.0	8,350.5	7,307.0	28.2	24.5	53.41	737.4	-827.3	372.4	339.2	33.20	11.218	
8,700.0	7,529.0	8,450.5	7,307.0	29.1	25.6	53.41	837.4	-827.3	372.4	337.1	35.36	10.534	
8,800.0	7,529.0	8,550.5	7,307.0	30.1	26.8	53.41	937.4	-827.3	372.4	334.8	37.60	9.904	
8,900.0	7,529.0	8,650.5	7,307.0	31.2	28.0	53.41	1,037.4	-827.3	372.4	332.5	39.92	9.329	
9,000.0	7,529.0	8,750.5	7,307.0	32.4	29.3	53.41	1,137.4	-827.3	372.4	330.1	42.31	8.804	
9,100.0	7,529.0	8,850.5	7,307.0	33.6	30.6	53.41	1,237.4	-827.3	372.4	327.7	44.74	8.325	
9,200.0	7,529.0	8,950.5	7,307.0	34.8	31.9	53.41	1,337.4	-827.3	372.4	325.2	47.22	7.888	
9,300.0	7,529.0	9,050.5	7,307.0	36.1	33.3	53.41	1,437.4	-827.3	372.4	322.7	49.73	7.489	
9,400.0	7,529.0	9,150.5	7,307.0	37.4	34.8	53.41	1,537.4	-827.3	372.4	320.2	52.28	7.124	
9,500.0	7,529.0	9,250.5	7,307.0	38.8	36.2	53.41	1,637.4	-827.3	372.4	317.6	54.85	6.790	
9,600.0	7,529.0	9,350.5	7,307.0	40.2	37.7	53.41	1,737.4	-827.3	372.4	315.0	57.45	6.483	
9,700.0	7,529.0	9,450.5	7,307.0	41.6	39.2	53.41	1,837.4	-827.3	372.4	312.4	60.07	6.201	
9,800.0	7,529.0	9,550.5	7,307.0	43.0	40.8	53.41	1,937.4	-827.3	372.4	309.7	62.70	5.940	
9,900.0	7,529.0	9,650.5	7,307.0	44.5	42.3	53.41	2,037.4	-827.3	372.4	307.1	65.36	5.699	
10,000.0	7,529.0	9,750.5	7,307.0	46.0	43.9	53.41	2,137.4	-827.3	372.4	304.4	68.02	5.475	
10,100.0	7,529.0	9,850.5	7,307.0	47.5	45.4	53.41	2,237.4	-827.3	372.4	301.7	70.70	5.268	
10,200.0	7,529.0	9,950.5	7,307.0	49.0	47.0	53.41	2,337.4	-827.3	372.4	299.1	73.39	5.075	
10,300.0	7,529.0	10,050.5	7,307.0	50.5	48.6	53.41	2,437.4	-827.3	372.4	296.4	76.09	4.895	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3C-9H-N267 - Hz - Plan #1

Survey Program: 0-Geolink MWD

Offset Site Error: 0.0 ft

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,400.0	7,529.0	10,150.5	7,307.0	52.1	50.2	53.41	2,537.4	-827.3	372.4	293.7	78.80	4.727	
10,500.0	7,529.0	10,250.5	7,307.0	53.7	51.8	53.41	2,637.4	-827.3	372.4	290.9	81.52	4.569	
10,600.0	7,529.0	10,350.5	7,307.0	55.2	53.5	53.41	2,737.4	-827.3	372.4	288.2	84.24	4.421	
10,700.0	7,529.0	10,450.5	7,307.0	56.8	55.1	53.41	2,837.4	-827.3	372.4	285.5	86.97	4.282	
10,800.0	7,529.0	10,550.5	7,307.0	58.4	56.8	53.41	2,937.4	-827.3	372.4	282.7	89.71	4.152	
10,900.0	7,529.0	10,650.5	7,307.0	60.0	58.4	53.41	3,037.4	-827.3	372.4	280.0	92.45	4.029	
11,000.0	7,529.0	10,750.5	7,307.0	61.6	60.1	53.41	3,137.4	-827.3	372.4	277.3	95.19	3.912	
11,100.0	7,529.0	10,850.5	7,307.0	63.2	61.7	53.41	3,237.4	-827.3	372.4	274.5	97.95	3.803	
11,200.0	7,529.0	10,950.5	7,307.0	64.9	63.4	53.41	3,337.4	-827.3	372.4	271.7	100.70	3.699	
11,300.0	7,529.0	11,050.5	7,307.0	66.5	65.0	53.41	3,437.4	-827.3	372.4	269.0	103.46	3.600	
11,400.0	7,529.0	11,150.5	7,307.0	68.1	66.7	53.41	3,537.4	-827.3	372.4	266.2	106.22	3.506	
11,500.0	7,529.0	11,250.5	7,307.0	69.8	68.4	53.41	3,637.4	-827.3	372.4	263.5	108.99	3.417	
11,600.0	7,529.0	11,350.5	7,307.0	71.4	70.1	53.41	3,737.4	-827.3	372.4	260.7	111.76	3.333	
11,700.0	7,529.0	11,450.5	7,307.0	73.1	71.8	53.41	3,837.4	-827.3	372.4	257.9	114.53	3.252	
11,800.0	7,529.0	11,550.5	7,307.0	74.8	73.5	53.41	3,937.4	-827.3	372.4	255.1	117.30	3.175	
11,900.0	7,529.0	11,650.5	7,307.0	76.4	75.1	53.41	4,037.4	-827.3	372.4	252.4	120.08	3.102	
12,000.0	7,529.0	11,750.5	7,307.0	78.1	76.8	53.41	4,137.4	-827.3	372.4	249.6	122.86	3.031	
12,100.0	7,529.0	11,850.5	7,307.0	79.8	78.5	53.41	4,237.4	-827.3	372.4	246.8	125.64	2.964	
12,200.0	7,529.0	11,950.5	7,307.0	81.4	80.2	53.41	4,337.4	-827.3	372.4	244.0	128.43	2.900	
12,300.0	7,529.0	12,050.5	7,307.0	83.1	81.9	53.41	4,437.4	-827.3	372.4	241.2	131.21	2.839	
12,400.0	7,529.0	12,150.5	7,307.0	84.8	83.6	53.41	4,537.4	-827.3	372.4	238.5	134.00	2.780	
12,500.0	7,529.0	12,250.5	7,307.0	86.5	85.3	53.41	4,637.4	-827.3	372.4	235.7	136.79	2.723	
12,600.0	7,529.0	12,350.5	7,307.0	88.2	87.1	53.41	4,737.4	-827.3	372.4	232.9	139.58	2.668	
12,700.0	7,529.0	12,450.5	7,307.0	89.9	88.8	53.41	4,837.4	-827.3	372.4	230.1	142.37	2.616	
12,800.0	7,529.0	12,550.5	7,307.0	91.5	90.5	53.41	4,937.4	-827.3	372.4	227.3	145.16	2.566	
12,900.0	7,529.0	12,650.5	7,307.0	93.2	92.2	53.41	5,037.4	-827.3	372.4	224.5	147.95	2.517	
13,000.0	7,529.0	12,750.5	7,307.0	94.9	93.9	53.41	5,137.4	-827.3	372.4	221.7	150.75	2.471	
13,067.3	7,529.0	12,817.7	7,307.0	96.1	95.1	53.41	5,204.7	-827.3	372.4	219.8	152.63	2.440	
13,097.3	7,529.0	12,840.5	7,307.0	96.6	95.4	53.41	5,227.5	-827.3	372.5	219.2	153.37	2.429	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3D-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	19.6	19.6				
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	19.6	19.6	19.3	0.24	80.085	
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	19.6	19.6	19.0	0.59	32.976	
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	19.6	19.6	18.6	0.94	20.763	CC, ES
400.0	400.0	400.0	400.0	0.6	0.6	-157.27	0.0	19.6	21.2	19.9	1.29	16.389	
500.0	499.8	499.8	499.8	0.8	0.8	-161.69	0.0	19.6	26.1	24.4	1.64	15.895	
600.0	599.5	600.0	600.0	1.1	1.0	-165.74	-0.5	18.8	33.6	31.6	1.99	16.916	
700.0	698.7	700.2	700.1	1.3	1.2	-168.55	-1.8	16.5	43.1	40.7	2.34	18.436	
800.0	797.5	800.4	800.2	1.6	1.4	-170.48	-4.0	12.8	54.3	51.6	2.68	20.251	
900.0	895.9	900.7	900.4	2.0	1.6	-171.65	-7.0	7.4	65.7	62.7	3.03	21.660	
1,000.0	994.4	1,001.4	1,000.8	2.3	1.8	-172.18	-11.0	0.6	75.4	72.0	3.39	22.263	
1,100.0	1,092.8	1,102.5	1,101.4	2.6	2.0	-172.31	-15.8	-7.8	83.4	79.7	3.75	22.280	
1,200.0	1,191.3	1,203.8	1,202.0	3.0	2.2	-172.17	-21.6	-17.8	89.8	85.6	4.11	21.858	
1,300.0	1,289.8	1,305.2	1,302.5	3.3	2.5	-171.80	-28.3	-29.3	94.3	89.9	4.47	21.099	
1,400.0	1,388.2	1,405.1	1,401.5	3.7	2.8	-171.35	-35.2	-41.4	98.2	93.3	4.84	20.294	
1,500.0	1,486.7	1,505.0	1,500.4	4.0	3.0	-170.94	-42.2	-53.4	102.0	96.8	5.21	19.596	
1,600.0	1,585.1	1,604.9	1,599.4	4.4	3.3	-170.56	-49.1	-65.5	105.8	100.3	5.58	18.983	
1,700.0	1,683.6	1,704.9	1,698.3	4.7	3.6	-170.20	-56.1	-77.5	109.7	103.7	5.95	18.442	
1,800.0	1,782.1	1,804.8	1,797.3	5.1	3.9	-169.87	-63.0	-89.6	113.5	107.2	6.32	17.960	
1,900.0	1,880.5	1,904.7	1,896.2	5.4	4.2	-169.56	-70.0	-101.6	117.4	110.7	6.70	17.527	
2,000.0	1,979.0	2,004.6	1,995.2	5.8	4.5	-169.27	-76.9	-113.6	121.2	114.2	7.07	17.138	
2,100.0	2,077.4	2,104.6	2,094.1	6.1	4.7	-169.00	-83.9	-125.7	125.1	117.6	7.45	16.785	
2,200.0	2,175.9	2,204.5	2,193.1	6.5	5.0	-168.75	-90.8	-137.7	128.9	121.1	7.83	16.463	
2,300.0	2,274.3	2,304.4	2,292.0	6.8	5.3	-168.51	-97.8	-149.8	132.8	124.6	8.21	16.169	
2,400.0	2,372.8	2,404.3	2,391.0	7.2	5.6	-168.28	-104.7	-161.8	136.7	128.1	8.60	15.899	
2,500.0	2,471.3	2,504.3	2,489.9	7.5	5.9	-168.06	-111.7	-173.9	140.5	131.5	8.98	15.651	
2,600.0	2,569.7	2,604.2	2,588.9	7.9	6.2	-167.86	-118.7	-185.9	144.4	135.0	9.36	15.421	
2,700.0	2,668.2	2,704.1	2,687.8	8.2	6.5	-167.67	-125.6	-198.0	148.3	138.5	9.75	15.208	
2,800.0	2,766.6	2,804.0	2,786.8	8.6	6.8	-167.49	-132.6	-210.0	152.1	142.0	10.13	15.010	
2,900.0	2,865.1	2,904.0	2,885.8	8.9	7.1	-167.31	-139.5	-222.0	156.0	145.5	10.52	14.826	
3,000.0	2,963.6	3,003.9	2,984.7	9.3	7.4	-167.15	-146.5	-234.1	159.9	149.0	10.91	14.653	
3,100.0	3,062.0	3,103.8	3,083.7	9.7	7.7	-166.99	-153.4	-246.1	163.7	152.4	11.30	14.492	
3,200.0	3,160.5	3,203.7	3,182.6	10.0	8.0	-166.84	-160.4	-258.2	167.6	155.9	11.69	14.341	
3,300.0	3,258.9	3,303.7	3,281.6	10.4	8.3	-166.69	-167.3	-270.2	171.5	159.4	12.08	14.198	
3,400.0	3,357.4	3,403.6	3,380.5	10.7	8.6	-166.56	-174.3	-282.3	175.4	162.9	12.47	14.064	
3,500.0	3,455.9	3,503.5	3,479.5	11.1	8.9	-166.43	-181.2	-294.3	179.2	166.4	12.86	13.938	
3,600.0	3,554.3	3,603.4	3,578.4	11.4	9.2	-166.30	-188.2	-306.3	183.1	169.9	13.25	13.818	
3,700.0	3,652.8	3,703.4	3,677.4	11.8	9.5	-166.18	-195.1	-318.4	187.0	173.4	13.64	13.705	
3,800.0	3,751.2	3,803.3	3,776.3	12.1	9.8	-166.07	-202.1	-330.4	190.9	176.8	14.04	13.598	
3,900.0	3,849.7	3,903.2	3,875.3	12.5	10.1	-165.95	-209.0	-342.5	194.8	180.3	14.43	13.496	
4,000.0	3,948.2	4,003.1	3,974.2	12.8	10.4	-165.85	-216.0	-354.5	198.6	183.8	14.82	13.399	
4,100.0	4,046.6	4,103.0	4,073.2	13.2	10.7	-165.75	-223.0	-366.6	202.5	187.3	15.22	13.307	
4,200.0	4,145.1	4,203.0	4,172.1	13.5	11.0	-165.65	-229.9	-378.6	206.4	190.8	15.61	13.220	
4,300.0	4,243.5	4,302.9	4,271.1	13.9	11.3	-165.55	-236.9	-390.7	210.3	194.3	16.01	13.136	
4,400.0	4,342.0	4,402.8	4,370.0	14.3	11.6	-165.46	-243.8	-402.7	214.2	197.8	16.40	13.056	
4,500.0	4,440.4	4,502.7	4,469.0	14.6	11.9	-165.37	-250.8	-414.7	218.1	201.3	16.80	12.980	
4,600.0	4,538.9	4,602.7	4,567.9	15.0	12.2	-165.29	-257.7	-426.8	221.9	204.7	17.20	12.907	
4,700.0	4,637.4	4,702.6	4,666.9	15.3	12.5	-165.20	-264.7	-438.8	225.8	208.2	17.59	12.837	
4,800.0	4,735.8	4,802.5	4,765.8	15.7	12.8	-165.12	-271.6	-450.9	229.7	211.7	17.99	12.769	
4,900.0	4,834.3	4,902.4	4,864.8	16.0	13.1	-165.05	-278.6	-462.9	233.6	215.2	18.39	12.705	
5,000.0	4,932.7	5,002.4	4,963.7	16.4	13.4	-164.97	-285.5	-475.0	237.5	218.7	18.78	12.643	
5,100.0	5,031.2	5,102.3	5,062.7	16.7	13.7	-164.90	-292.5	-487.0	241.4	222.2	19.18	12.584	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3D-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,129.7	5,202.2	5,161.6	17.1	14.0	-164.83	-299.4	-499.0	245.3	225.7	19.58	12.527	
5,300.0	5,228.1	5,302.1	5,260.6	17.4	14.3	-164.76	-306.4	-511.1	249.1	229.2	19.98	12.472	
5,400.0	5,326.6	5,402.1	5,359.5	17.8	14.6	-164.70	-313.3	-523.1	253.0	232.7	20.38	12.419	
5,500.0	5,425.0	5,502.0	5,458.5	18.2	14.9	-164.64	-320.3	-535.2	256.9	236.2	20.77	12.368	
5,600.0	5,523.5	5,601.9	5,557.4	18.5	15.2	-164.57	-327.3	-547.2	260.8	239.6	21.17	12.319	
5,700.0	5,622.0	5,701.8	5,656.4	18.9	15.5	-164.51	-334.2	-559.3	264.7	243.1	21.57	12.271	
5,800.0	5,720.4	5,800.0	5,753.6	19.2	15.7	-164.46	-341.0	-571.1	268.6	246.6	21.97	12.228	
5,900.0	5,818.9	5,897.3	5,850.1	19.6	16.0	-164.46	-347.4	-582.1	273.3	250.9	22.34	12.231	
6,000.0	5,917.3	5,992.8	5,945.0	19.9	16.3	-164.59	-352.8	-591.5	279.5	256.8	22.69	12.319	
6,100.0	6,015.8	6,088.1	6,039.8	20.3	16.5	-164.82	-357.5	-599.6	287.4	264.3	23.01	12.486	
6,200.0	6,114.2	6,183.1	6,134.5	20.6	16.7	-165.14	-361.3	-606.3	296.7	273.4	23.31	12.728	
6,300.0	6,212.7	6,277.8	6,229.0	21.0	16.9	-165.55	-364.4	-611.5	307.6	284.1	23.59	13.041	
6,400.0	6,311.2	6,372.1	6,323.2	21.3	17.0	-166.01	-366.7	-615.5	320.1	296.3	23.85	13.421	
6,500.0	6,409.6	6,466.0	6,417.0	21.7	17.1	-166.53	-368.1	-618.0	334.2	310.1	24.10	13.866	
6,600.0	6,508.1	6,559.4	6,510.4	22.1	17.3	-167.09	-368.8	-619.3	349.8	325.5	24.34	14.370	
6,700.0	6,606.5	6,655.5	6,606.5	22.4	17.4	-167.68	-368.9	-619.4	366.7	342.2	24.58	14.919	
6,800.0	6,705.0	6,754.0	6,705.0	22.8	17.5	-168.24	-368.9	-619.4	383.8	359.0	24.83	15.457	
6,900.0	6,803.5	6,852.4	6,803.5	23.1	17.6	-168.74	-368.9	-619.4	401.0	375.9	25.09	15.979	
7,000.0	6,901.9	6,950.9	6,901.9	23.5	17.7	-169.21	-368.9	-619.4	418.2	392.8	25.37	16.486	
7,100.0	7,000.5	7,042.4	6,993.4	23.8	17.8	143.16	-367.7	-619.4	434.4	408.9	25.50	17.036	
7,200.0	7,098.0	7,125.3	7,075.5	24.0	17.8	108.58	-356.3	-619.2	449.5	423.9	25.60	17.558	
7,300.0	7,191.3	7,208.6	7,155.4	24.1	17.8	95.76	-333.1	-619.0	463.4	437.7	25.69	18.038	
7,400.0	7,277.8	7,292.7	7,231.8	24.1	17.7	90.01	-298.2	-618.6	476.0	450.2	25.79	18.458	
7,500.0	7,354.6	7,377.8	7,303.1	24.1	17.5	87.20	-251.9	-618.0	486.9	461.0	25.90	18.799	
7,600.0	7,419.6	7,464.4	7,367.7	24.0	17.4	85.98	-194.4	-617.3	496.1	470.0	26.06	19.035	
7,700.0	7,470.7	7,552.8	7,424.1	24.0	17.3	85.82	-126.4	-616.5	503.3	477.0	26.29	19.141	
7,800.0	7,506.4	7,643.4	7,470.3	24.1	17.4	86.44	-48.6	-615.6	508.5	481.8	26.65	19.079	
7,900.0	7,525.7	7,736.6	7,504.4	24.2	17.5	87.74	38.0	-614.6	511.6	484.4	27.18	18.821	
8,000.0	7,529.0	7,832.8	7,524.5	24.5	17.8	89.49	132.0	-613.5	512.9	484.9	28.01	18.311	
8,100.0	7,529.0	7,932.4	7,529.0	24.8	18.2	90.00	231.4	-612.4	514.0	484.8	29.26	17.569	
8,200.0	7,529.0	8,032.4	7,529.0	25.3	18.9	90.00	331.4	-611.2	515.2	484.4	30.83	16.710	
8,300.0	7,529.0	8,132.4	7,529.0	25.9	19.6	90.00	431.4	-610.0	516.4	483.7	32.71	15.789	
8,400.0	7,529.0	8,232.4	7,529.0	26.5	20.5	90.00	531.4	-608.8	517.5	482.7	34.83	14.858	
8,500.0	7,529.0	8,332.4	7,529.0	27.3	21.5	90.00	631.4	-607.7	518.7	481.5	37.17	13.955	
8,600.0	7,529.0	8,432.4	7,529.0	28.2	22.6	90.00	731.3	-606.5	519.9	480.2	39.68	13.102	
8,700.0	7,529.0	8,532.4	7,529.0	29.1	23.7	90.00	831.3	-605.3	521.1	478.7	42.33	12.309	
8,800.0	7,529.0	8,632.4	7,529.0	30.1	24.9	90.00	931.3	-604.2	522.2	477.1	45.10	11.579	
8,900.0	7,529.0	8,732.4	7,529.0	31.2	26.2	90.00	1,031.3	-603.0	523.4	475.4	47.97	10.911	
9,000.0	7,529.0	8,832.4	7,529.0	32.4	27.6	90.00	1,131.3	-601.8	524.6	473.7	50.91	10.303	
9,100.0	7,529.0	8,932.4	7,529.0	33.6	29.0	90.00	1,231.3	-600.6	525.7	471.8	53.93	9.749	
9,200.0	7,529.0	9,032.4	7,529.0	34.8	30.4	90.00	1,331.3	-599.5	526.9	469.9	57.00	9.244	
9,300.0	7,529.0	9,132.4	7,529.0	36.1	31.9	90.00	1,431.2	-598.3	528.1	468.0	60.12	8.784	
9,400.0	7,529.0	9,232.3	7,529.0	37.4	33.3	90.00	1,531.2	-597.1	529.3	466.0	63.28	8.364	
9,500.0	7,529.0	9,332.3	7,529.0	38.8	34.8	90.00	1,631.2	-596.0	530.4	464.0	66.47	7.980	
9,600.0	7,529.0	9,432.3	7,529.0	40.2	36.4	90.00	1,731.2	-594.8	531.6	461.9	69.70	7.627	
9,700.0	7,529.0	9,532.3	7,529.0	41.6	37.9	90.00	1,831.2	-593.6	532.8	459.8	72.95	7.303	
9,800.0	7,529.0	9,632.3	7,529.0	43.0	39.5	90.00	1,931.2	-592.5	533.9	457.7	76.22	7.005	
9,900.0	7,529.0	9,732.3	7,529.0	44.5	41.1	90.00	2,031.2	-591.3	535.1	455.6	79.51	6.730	
10,000.0	7,529.0	9,832.3	7,529.0	46.0	42.7	90.00	2,131.1	-590.1	536.3	453.5	82.82	6.475	
10,100.0	7,529.0	9,932.3	7,529.0	47.5	44.3	90.00	2,231.1	-588.9	537.4	451.3	86.15	6.238	
10,200.0	7,529.0	10,032.3	7,529.0	49.0	45.9	90.00	2,331.1	-587.8	538.6	449.1	89.49	6.019	
10,300.0	7,529.0	10,132.3	7,529.0	50.5	47.5	90.00	2,431.1	-586.6	539.8	446.9	92.85	5.814	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3D-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,400.0	7,529.0	10,232.3	7,529.0	52.1	49.2	90.00	2,531.1	-585.4	541.0	444.8	96.21	5.623	
10,500.0	7,529.0	10,332.3	7,529.0	53.7	50.8	90.00	2,631.1	-584.3	542.1	442.5	99.58	5.444	
10,600.0	7,529.0	10,432.3	7,529.0	55.2	52.5	90.00	2,731.1	-583.1	543.3	440.3	102.97	5.277	
10,700.0	7,529.0	10,532.3	7,529.0	56.8	54.1	90.00	2,831.1	-581.9	544.5	438.1	106.36	5.119	
10,800.0	7,529.0	10,632.3	7,529.0	58.4	55.8	90.00	2,931.0	-580.7	545.6	435.9	109.76	4.971	
10,900.0	7,529.0	10,732.2	7,529.0	60.0	57.5	90.00	3,031.0	-579.6	546.8	433.7	113.16	4.832	
11,000.0	7,529.0	10,832.2	7,529.0	61.6	59.1	90.00	3,131.0	-578.4	548.0	431.4	116.57	4.701	
11,100.0	7,529.0	10,932.2	7,529.0	63.2	60.8	90.00	3,231.0	-577.2	549.2	429.2	119.99	4.577	
11,200.0	7,529.0	11,024.9	7,529.0	64.9	62.4	90.00	3,323.7	-575.6	550.9	427.6	123.28	4.468	
11,300.0	7,529.0	11,116.1	7,529.0	66.5	63.9	90.00	3,414.8	-572.6	554.2	427.6	126.56	4.379	
11,400.0	7,529.0	11,208.6	7,529.0	68.1	65.5	90.00	3,507.2	-568.1	559.0	429.2	129.86	4.305	
11,500.0	7,529.0	11,308.5	7,529.0	69.8	67.1	90.00	3,606.9	-562.7	564.4	431.1	133.29	4.235	
11,600.0	7,529.0	11,408.3	7,529.0	71.4	68.8	90.00	3,706.6	-557.3	569.8	433.1	136.72	4.168	
11,700.0	7,529.0	11,508.2	7,529.0	73.1	70.5	90.00	3,806.3	-551.9	575.2	435.1	140.16	4.104	
11,800.0	7,529.0	11,608.0	7,529.0	74.8	72.2	90.00	3,906.0	-546.5	580.7	437.1	143.60	4.044	
11,900.0	7,529.0	11,707.9	7,529.0	76.4	73.9	90.00	4,005.7	-541.1	586.1	439.0	147.04	3.986	
12,000.0	7,529.0	11,807.7	7,529.0	78.1	75.6	90.00	4,105.4	-535.7	591.5	441.0	150.49	3.930	
12,100.0	7,529.0	11,907.6	7,529.0	79.8	77.3	90.00	4,205.1	-530.3	596.9	442.9	153.94	3.877	
12,200.0	7,529.0	12,007.4	7,529.0	81.4	79.0	90.00	4,304.9	-524.9	602.3	444.9	157.39	3.827	
12,300.0	7,529.0	12,107.3	7,529.0	83.1	80.7	90.00	4,404.6	-519.5	607.7	446.9	160.85	3.778	
12,400.0	7,529.0	12,207.1	7,529.0	84.8	82.4	90.00	4,504.3	-514.1	613.1	448.8	164.30	3.732	
12,500.0	7,529.0	12,307.0	7,529.0	86.5	84.1	90.00	4,604.0	-508.7	618.5	450.8	167.76	3.687	
12,600.0	7,529.0	12,406.8	7,529.0	88.2	85.8	90.00	4,703.7	-503.3	623.9	452.7	171.22	3.644	
12,700.0	7,529.0	12,506.7	7,529.0	89.9	87.5	90.00	4,803.4	-497.9	629.3	454.6	174.68	3.603	
12,800.0	7,529.0	12,606.6	7,529.0	91.5	89.2	90.00	4,903.1	-492.5	634.7	456.6	178.15	3.563	
12,900.0	7,529.0	12,706.4	7,529.0	93.2	90.9	90.00	5,002.8	-487.1	640.1	458.5	181.61	3.525	
13,000.0	7,529.0	12,806.3	7,529.0	94.9	92.6	90.00	5,102.5	-481.7	645.6	460.5	185.08	3.488	
13,097.3	7,529.0	12,876.7	7,529.0	96.6	93.9	90.00	5,172.8	-477.9	651.4	463.4	187.99	3.465	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3E-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	28.0	28.0				
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	28.0	28.0	27.7	0.24	114.407	
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	28.0	28.0	27.4	0.59	47.109	
300.0	300.0	300.2	300.2	0.5	0.5	91.73	-0.8	27.6	27.6	26.7	0.94	29.311	
323.7	323.7	323.9	323.9	0.5	0.5	-152.82	-1.3	27.4	27.6	26.5	1.03	26.819	CC, ES
400.0	400.0	400.3	400.3	0.6	0.7	-150.22	-3.3	26.6	28.3	27.0	1.30	21.813	
500.0	499.8	500.4	500.3	0.8	0.8	-147.34	-7.3	25.0	31.6	29.9	1.66	18.986	
600.0	599.5	600.3	600.0	1.1	1.0	-145.41	-12.9	22.6	37.4	35.4	2.05	18.251	
700.0	698.7	700.1	699.5	1.3	1.3	-144.39	-20.2	19.6	45.8	43.3	2.47	18.560	
800.0	797.5	799.7	798.6	1.6	1.5	-144.00	-29.0	16.0	56.6	53.7	2.92	19.404	
900.0	895.9	899.2	897.5	2.0	1.7	-143.31	-39.4	11.7	68.6	65.2	3.40	20.152	
1,000.0	994.4	998.7	996.1	2.3	2.0	-141.61	-51.4	6.8	80.3	76.4	3.93	20.415	
1,100.0	1,092.8	1,098.2	1,094.5	2.6	2.3	-139.28	-65.0	1.2	91.9	87.4	4.51	20.364	
1,200.0	1,191.3	1,197.6	1,192.5	3.0	2.6	-136.51	-80.1	-5.1	103.4	98.3	5.14	20.130	
1,300.0	1,289.8	1,296.8	1,290.1	3.3	3.0	-133.54	-96.6	-11.9	115.1	109.3	5.80	19.851	
1,400.0	1,388.2	1,395.9	1,387.6	3.7	3.3	-131.01	-113.3	-18.8	127.0	120.6	6.47	19.638	
1,500.0	1,486.7	1,495.1	1,485.1	4.0	3.7	-128.92	-130.0	-25.7	139.2	132.0	7.14	19.482	
1,600.0	1,585.1	1,594.2	1,582.6	4.4	4.0	-127.16	-146.7	-32.6	151.5	143.6	7.82	19.367	
1,700.0	1,683.6	1,693.4	1,680.1	4.7	4.4	-125.67	-163.4	-39.5	163.9	155.4	8.50	19.281	
1,800.0	1,782.1	1,792.5	1,777.6	5.1	4.7	-124.40	-180.1	-46.3	176.4	167.2	9.18	19.216	
1,900.0	1,880.5	1,891.6	1,875.0	5.4	5.1	-123.29	-196.8	-53.2	189.0	179.1	9.86	19.168	
2,000.0	1,979.0	1,990.8	1,972.5	5.8	5.4	-122.31	-213.5	-60.1	201.6	191.1	10.54	19.131	
2,100.0	2,077.4	2,089.9	2,070.0	6.1	5.8	-121.46	-230.2	-67.0	214.3	203.1	11.22	19.103	
2,200.0	2,175.9	2,189.1	2,167.5	6.5	6.1	-120.70	-246.9	-73.9	227.0	215.1	11.90	19.083	
2,300.0	2,274.3	2,288.2	2,265.0	6.8	6.5	-120.02	-263.6	-80.8	239.8	227.2	12.58	19.067	
2,400.0	2,372.8	2,387.4	2,362.5	7.2	6.8	-119.41	-280.3	-87.7	252.6	239.3	13.26	19.056	
2,500.0	2,471.3	2,486.5	2,459.9	7.5	7.2	-118.85	-297.0	-94.6	265.4	251.5	13.93	19.048	
2,600.0	2,569.7	2,585.7	2,557.4	7.9	7.5	-118.35	-313.7	-101.5	278.3	263.7	14.61	19.042	
2,700.0	2,668.2	2,684.8	2,654.9	8.2	7.9	-117.90	-330.4	-108.4	291.1	275.8	15.29	19.039	
2,800.0	2,766.6	2,783.9	2,752.4	8.6	8.3	-117.48	-347.1	-115.3	304.0	288.0	15.97	19.037	
2,900.0	2,865.1	2,883.1	2,849.9	8.9	8.6	-117.09	-363.8	-122.1	316.9	300.3	16.65	19.036	
3,000.0	2,963.6	2,982.2	2,947.4	9.3	9.0	-116.74	-380.5	-129.0	329.8	312.5	17.33	19.036	
3,100.0	3,062.0	3,081.4	3,044.8	9.7	9.3	-116.41	-397.2	-135.9	342.7	324.7	18.00	19.037	
3,200.0	3,160.5	3,181.9	3,143.8	10.0	9.7	-116.19	-413.6	-142.7	355.5	336.9	18.67	19.046	
3,300.0	3,258.9	3,282.9	3,243.5	10.4	10.0	-116.26	-428.5	-148.8	367.8	348.5	19.30	19.057	
3,400.0	3,357.4	3,384.0	3,343.6	10.7	10.3	-116.57	-441.8	-154.3	379.6	359.7	19.90	19.072	
3,500.0	3,455.9	3,485.2	3,443.9	11.1	10.6	-117.12	-453.4	-159.1	391.0	370.5	20.48	19.093	
3,600.0	3,554.3	3,586.2	3,544.4	11.4	10.8	-117.89	-463.4	-163.2	401.9	380.9	21.02	19.124	
3,700.0	3,652.8	3,687.2	3,645.0	11.8	11.0	-118.85	-471.8	-166.7	412.5	391.0	21.52	19.169	
3,800.0	3,751.2	3,787.9	3,745.5	12.1	11.2	-120.00	-478.5	-169.4	422.9	400.9	21.99	19.234	
3,900.0	3,849.7	3,888.5	3,845.9	12.5	11.4	-121.32	-483.5	-171.5	433.0	410.6	22.41	19.325	
4,000.0	3,948.2	3,988.7	3,946.1	12.8	11.5	-122.80	-487.0	-172.9	443.1	420.3	22.78	19.448	
4,100.0	4,046.6	4,088.6	4,045.9	13.2	11.6	-124.43	-488.8	-173.7	453.2	430.0	23.11	19.610	
4,200.0	4,145.1	4,187.8	4,145.1	13.5	11.8	-126.17	-489.1	-173.8	463.4	440.0	23.39	19.808	
4,300.0	4,243.5	4,286.2	4,243.5	13.9	11.9	-127.86	-489.1	-173.8	474.0	450.4	23.66	20.033	
4,400.0	4,342.0	4,384.7	4,342.0	14.3	12.0	-129.47	-489.1	-173.8	485.1	461.2	23.92	20.279	
4,500.0	4,440.4	4,483.2	4,440.4	14.6	12.1	-131.02	-489.1	-173.8	496.5	472.3	24.17	20.543	
4,600.0	4,538.9	4,581.6	4,538.9	15.0	12.2	-132.49	-489.1	-173.8	508.2	483.8	24.41	20.824	
4,700.0	4,637.4	4,680.1	4,637.4	15.3	12.3	-133.90	-489.1	-173.8	520.3	495.7	24.64	21.118	
4,800.0	4,735.8	4,778.5	4,735.8	15.7	12.4	-135.25	-489.1	-173.8	532.7	507.8	24.86	21.423	
4,900.0	4,834.3	4,877.0	4,834.3	16.0	12.5	-136.53	-489.1	-173.8	545.3	520.2	25.09	21.737	
5,000.0	4,932.7	4,975.5	4,932.7	16.4	12.7	-137.76	-489.1	-173.8	558.2	532.9	25.31	22.059	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3E-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,100.0	5,031.2	5,073.9	5,031.2	16.7	12.8	-138.93	-489.1	-173.8	571.4	545.9	25.52	22.387	
5,200.0	5,129.7	5,172.4	5,129.7	17.1	12.9	-140.05	-489.1	-173.8	584.8	559.0	25.74	22.719	
5,300.0	5,228.1	5,270.8	5,228.1	17.4	13.0	-141.12	-489.1	-173.8	598.4	572.4	25.95	23.055	
5,400.0	5,326.6	5,369.3	5,326.6	17.8	13.1	-142.14	-489.1	-173.8	612.2	586.0	26.17	23.392	
5,500.0	5,425.0	5,467.7	5,425.0	18.2	13.3	-143.12	-489.1	-173.8	626.1	599.7	26.38	23.731	
5,600.0	5,523.5	5,566.2	5,523.5	18.5	13.4	-144.05	-489.1	-173.8	640.3	613.7	26.60	24.070	
5,700.0	5,622.0	5,664.7	5,622.0	18.9	13.5	-144.94	-489.1	-173.8	654.6	627.8	26.82	24.409	
5,800.0	5,720.4	5,763.1	5,720.4	19.2	13.6	-145.80	-489.1	-173.8	669.1	642.0	27.04	24.746	
5,900.0	5,818.9	5,861.6	5,818.9	19.6	13.8	-146.62	-489.1	-173.8	683.7	656.4	27.26	25.082	
6,000.0	5,917.3	5,960.0	5,917.3	19.9	13.9	-147.41	-489.1	-173.8	698.4	670.9	27.48	25.415	
6,100.0	6,015.8	6,058.5	6,015.8	20.3	14.0	-148.16	-489.1	-173.8	713.3	685.6	27.70	25.746	
6,200.0	6,114.2	6,157.0	6,114.2	20.6	14.1	-148.88	-489.1	-173.8	728.2	700.3	27.93	26.073	
6,300.0	6,212.7	6,255.4	6,212.7	21.0	14.3	-149.58	-489.1	-173.8	743.3	715.2	28.16	26.397	
6,400.0	6,311.2	6,353.9	6,311.2	21.3	14.4	-150.24	-489.1	-173.8	758.5	730.1	28.39	26.717	
6,500.0	6,409.6	6,452.3	6,409.6	21.7	14.5	-150.88	-489.1	-173.8	773.8	745.2	28.63	27.032	
6,600.0	6,508.1	6,550.8	6,508.1	22.1	14.7	-151.50	-489.1	-173.8	789.2	760.3	28.86	27.344	
6,700.0	6,606.5	6,649.3	6,606.5	22.4	14.8	-152.09	-489.1	-173.8	804.6	775.5	29.10	27.651	
6,800.0	6,705.0	6,747.7	6,705.0	22.8	14.9	-152.66	-489.1	-173.8	820.2	790.8	29.34	27.953	
6,900.0	6,803.5	6,849.1	6,806.2	23.1	15.0	-153.54	-484.5	-173.8	835.7	806.2	29.45	28.381	
7,000.0	6,901.9	6,945.3	6,900.2	23.5	14.9	-155.40	-464.4	-173.8	851.3	822.2	29.17	29.188	
7,100.0	7,000.5	7,032.8	6,981.7	23.8	14.7	154.54	-432.8	-173.8	868.3	839.9	28.37	30.602	
7,200.0	7,098.0	7,116.2	7,054.0	24.0	14.5	117.08	-391.4	-173.8	886.5	859.0	27.51	32.222	
7,300.0	7,191.3	7,200.0	7,119.8	24.1	14.2	101.23	-339.7	-173.8	904.9	878.1	26.79	33.780	
7,400.0	7,277.8	7,274.1	7,171.2	24.1	13.9	92.57	-286.4	-173.8	922.6	896.3	26.32	35.051	
7,500.0	7,354.6	7,350.0	7,216.3	24.1	13.7	86.84	-225.4	-173.8	938.9	912.9	26.04	36.058	
7,600.0	7,419.6	7,424.6	7,252.4	24.0	13.6	82.82	-160.2	-173.8	953.0	927.1	25.93	36.749	
7,700.0	7,470.7	7,500.0	7,280.0	24.0	13.6	79.98	-90.1	-173.8	964.4	938.4	25.95	37.157	
7,800.0	7,506.4	7,570.9	7,297.2	24.1	13.6	78.13	-21.4	-173.8	972.5	946.4	26.12	37.231	
7,900.0	7,525.7	7,650.0	7,306.4	24.2	13.8	77.09	57.2	-173.7	977.2	950.7	26.45	36.939	
8,000.0	7,529.0	7,730.2	7,307.0	24.5	14.2	76.88	137.3	-173.7	978.1	951.0	27.12	36.073	
8,100.0	7,529.0	7,830.2	7,307.0	24.8	14.8	76.88	237.3	-173.7	978.1	949.8	28.34	34.519	
8,200.0	7,529.0	7,930.2	7,307.0	25.3	15.6	76.88	337.3	-173.7	978.2	948.3	29.90	32.714	
8,300.0	7,529.0	8,030.2	7,307.0	25.9	16.5	76.88	437.3	-173.7	978.2	946.4	31.76	30.802	
8,400.0	7,529.0	8,130.2	7,307.0	26.5	17.6	76.88	537.3	-173.7	978.2	944.3	33.86	28.891	
8,500.0	7,529.0	8,230.2	7,307.0	27.3	18.7	76.88	637.3	-173.7	978.2	942.0	36.16	27.052	
8,600.0	7,529.0	8,330.2	7,307.0	28.2	20.0	76.88	737.3	-173.7	978.2	939.6	38.63	25.324	
8,700.0	7,529.0	8,430.2	7,307.0	29.1	21.3	76.88	837.3	-173.7	978.2	937.0	41.23	23.725	
8,800.0	7,529.0	8,530.2	7,307.0	30.1	22.7	76.88	937.3	-173.6	978.2	934.3	43.95	22.260	
8,900.0	7,529.0	8,630.2	7,307.0	31.2	24.1	76.88	1,037.3	-173.6	978.2	931.5	46.75	20.923	
9,000.0	7,529.0	8,730.2	7,307.0	32.4	25.6	76.88	1,137.3	-173.6	978.2	928.6	49.64	19.707	
9,100.0	7,529.0	8,830.2	7,307.0	33.6	27.1	76.88	1,237.3	-173.6	978.3	925.7	52.59	18.603	
9,200.0	7,529.0	8,930.2	7,307.0	34.8	28.6	76.88	1,337.3	-173.6	978.3	922.7	55.59	17.598	
9,300.0	7,529.0	9,030.2	7,307.0	36.1	30.2	76.88	1,437.3	-173.6	978.3	919.6	58.64	16.684	
9,400.0	7,529.0	9,130.2	7,307.0	37.4	31.7	76.88	1,537.3	-173.6	978.3	916.6	61.72	15.850	
9,420.4	7,529.0	9,150.5	7,307.0	37.7	32.1	76.88	1,557.7	-173.6	978.3	915.9	62.36	15.689	
9,500.0	7,529.0	9,222.7	7,307.0	38.8	33.2	76.89	1,629.8	-173.4	978.5	913.8	64.73	15.118	
9,600.0	7,529.0	9,308.4	7,307.0	40.2	34.6	76.90	1,715.5	-172.1	980.0	912.4	67.65	14.486	
9,700.0	7,529.0	9,400.0	7,307.0	41.6	36.1	76.94	1,807.1	-169.2	983.0	912.3	70.70	13.904	
9,800.0	7,529.0	9,479.6	7,307.0	43.0	37.4	76.99	1,886.6	-165.6	987.4	913.8	73.57	13.420	
9,900.0	7,529.0	9,565.1	7,307.0	44.5	38.7	77.06	1,971.9	-160.4	993.3	916.7	76.57	12.973	
10,000.0	7,529.0	9,650.3	7,307.0	46.0	40.1	77.14	2,056.9	-154.0	1,000.6	921.0	79.58	12.574	
10,100.0	7,529.0	9,735.4	7,307.0	47.5	41.5	77.24	2,141.6	-146.4	1,009.3	926.7	82.60	12.220	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3E-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,200.0	7,529.0	9,827.7	7,307.0	49.0	43.0	77.35	2,233.4	-136.9	1,019.4	933.6	85.76	11.886	
10,300.0	7,529.0	9,927.1	7,307.0	50.5	44.7	77.48	2,332.3	-126.5	1,029.6	940.5	89.06	11.561	
10,400.0	7,529.0	10,026.6	7,307.0	52.1	46.3	77.61	2,431.2	-116.1	1,039.8	947.4	92.37	11.257	
10,500.0	7,529.0	10,126.0	7,307.0	53.7	48.0	77.73	2,530.2	-105.7	1,050.0	954.3	95.69	10.973	
10,600.0	7,529.0	10,225.5	7,307.0	55.2	49.7	77.85	2,629.1	-95.3	1,060.2	961.2	99.02	10.707	
10,700.0	7,529.0	10,324.9	7,307.0	56.8	51.3	77.97	2,728.0	-84.9	1,070.4	968.1	102.36	10.457	
10,800.0	7,529.0	10,424.4	7,307.0	58.4	53.0	78.08	2,826.9	-74.5	1,080.7	975.0	105.71	10.223	
10,900.0	7,529.0	10,523.8	7,307.0	60.0	54.7	78.20	2,925.8	-64.1	1,090.9	981.8	109.07	10.001	
11,000.0	7,529.0	10,629.4	7,307.0	61.6	56.5	78.31	3,030.8	-53.2	1,101.1	988.5	112.55	9.783	
11,100.0	7,529.0	10,752.2	7,307.0	63.2	58.6	78.43	3,153.1	-42.3	1,109.7	993.4	116.32	9.540	
11,200.0	7,529.0	10,875.4	7,307.0	64.9	60.7	78.51	3,276.1	-34.1	1,116.3	996.2	120.09	9.295	
11,300.0	7,529.0	10,999.0	7,307.0	66.5	62.8	78.57	3,399.5	-28.5	1,120.7	996.8	123.87	9.047	
11,400.0	7,529.0	11,122.7	7,307.0	68.1	64.9	78.60	3,523.2	-25.6	1,123.0	995.4	127.65	8.798	
11,500.0	7,529.0	11,246.5	7,307.0	69.8	67.0	78.60	3,646.9	-25.3	1,123.2	991.8	131.42	8.547	
11,600.0	7,529.0	11,370.2	7,307.0	71.4	69.2	78.58	3,770.7	-27.7	1,121.3	986.2	135.18	8.295	
11,700.0	7,529.0	11,493.8	7,307.0	73.1	71.3	78.52	3,894.1	-32.8	1,117.3	978.4	138.93	8.042	
11,800.0	7,529.0	11,617.1	7,307.0	74.8	73.4	78.45	4,017.2	-40.5	1,111.2	968.5	142.67	7.789	
11,900.0	7,529.0	11,720.1	7,307.0	76.4	75.2	78.36	4,119.9	-48.3	1,103.7	957.7	146.06	7.557	
12,000.0	7,529.0	11,819.8	7,307.0	78.1	76.9	78.28	4,219.3	-55.9	1,096.3	946.9	149.39	7.338	
12,100.0	7,529.0	11,919.5	7,307.0	79.8	78.7	78.20	4,318.7	-63.5	1,088.8	936.1	152.73	7.129	
12,200.0	7,529.0	12,019.2	7,307.0	81.4	80.4	78.12	4,418.1	-71.1	1,081.3	925.3	156.06	6.929	
12,300.0	7,529.0	12,118.9	7,307.0	83.1	82.1	78.04	4,517.5	-78.7	1,073.9	914.5	159.40	6.737	
12,400.0	7,529.0	12,218.6	7,307.0	84.8	83.8	77.95	4,617.0	-86.3	1,066.4	903.7	162.73	6.553	
12,500.0	7,529.0	12,318.3	7,307.0	86.5	85.6	77.86	4,716.4	-93.9	1,059.0	892.9	166.06	6.377	
12,600.0	7,529.0	12,418.1	7,307.0	88.2	87.3	77.78	4,815.8	-101.5	1,051.5	882.1	169.39	6.208	
12,700.0	7,529.0	12,517.8	7,307.0	89.9	89.0	77.69	4,915.2	-109.1	1,044.1	871.3	172.72	6.045	
12,800.0	7,529.0	12,617.5	7,307.0	91.5	90.8	77.60	5,014.6	-116.7	1,036.6	860.6	176.05	5.888	
12,900.0	7,529.0	12,717.2	7,307.0	93.2	92.5	77.51	5,114.1	-124.4	1,029.2	849.8	179.37	5.738	
13,000.0	7,529.0	12,772.4	7,307.0	94.9	93.5	77.46	5,169.2	-128.6	1,022.7	840.7	181.97	5.620	
13,031.7	7,529.0	12,772.4	7,307.0	95.5	93.5	77.46	5,169.2	-128.6	1,022.2	839.7	182.50	5.601	
13,097.3	7,529.0	12,772.4	7,307.0	96.6	93.5	77.46	5,169.2	-128.6	1,024.3	840.7	183.62	5.578	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3F-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	39.1	39.1				
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	39.1	39.1	38.9	0.24	160.170	
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	39.1	39.1	38.5	0.59	65.953	
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	39.1	39.1	38.2	0.94	41.526	CC, ES
400.0	400.0	400.0	400.0	0.6	0.6	-156.32	0.0	39.1	40.7	39.4	1.29	31.535	
500.0	499.8	499.8	499.8	0.8	0.8	-158.93	0.0	39.1	45.6	43.9	1.64	27.770	
600.0	599.5	599.2	599.2	1.1	1.0	-161.32	-0.8	39.4	54.0	52.0	1.99	27.133	SF
700.0	698.7	698.2	698.2	1.3	1.2	-162.45	-3.2	40.3	66.2	63.9	2.34	28.266	
800.0	797.5	796.6	796.5	1.6	1.4	-162.73	-7.2	41.9	82.1	79.4	2.70	30.396	
900.0	895.9	894.6	894.3	2.0	1.5	-162.33	-12.7	43.9	100.2	97.1	3.08	32.530	
1,000.0	994.4	992.4	991.8	2.3	1.7	-161.27	-19.8	46.6	118.7	115.2	3.48	34.138	
1,100.0	1,092.8	1,090.0	1,089.0	2.6	2.0	-159.81	-28.4	49.9	137.7	133.8	3.89	35.344	
1,200.0	1,191.3	1,187.3	1,185.6	3.0	2.2	-158.12	-38.5	53.7	157.2	152.8	4.34	36.240	
1,300.0	1,289.8	1,284.2	1,281.7	3.3	2.4	-156.29	-50.2	58.1	177.4	172.5	4.81	36.904	
1,400.0	1,388.2	1,381.7	1,378.3	3.7	2.7	-154.53	-62.8	62.9	198.1	192.8	5.29	37.431	
1,500.0	1,486.7	1,479.3	1,475.0	4.0	3.0	-153.09	-75.5	67.7	218.9	213.1	5.78	37.846	
1,600.0	1,585.1	1,577.0	1,571.7	4.4	3.2	-151.91	-88.3	72.5	239.9	233.6	6.28	38.184	
1,700.0	1,683.6	1,674.7	1,668.4	4.7	3.5	-150.91	-101.0	77.3	260.9	254.1	6.78	38.463	
1,800.0	1,782.1	1,772.3	1,765.1	5.1	3.8	-150.06	-113.7	82.1	282.0	274.7	7.29	38.698	
1,900.0	1,880.5	1,870.0	1,861.9	5.4	4.1	-149.34	-126.4	86.9	303.2	295.4	7.79	38.898	
2,000.0	1,979.0	1,967.7	1,958.6	5.8	4.3	-148.70	-139.1	91.7	324.4	316.1	8.30	39.071	
2,100.0	2,077.4	2,065.3	2,055.3	6.1	4.6	-148.15	-151.8	96.5	345.6	336.8	8.81	39.221	
2,200.0	2,175.9	2,163.0	2,152.0	6.5	4.9	-147.65	-164.5	101.3	366.9	357.6	9.32	39.353	
2,300.0	2,274.3	2,260.7	2,248.7	6.8	5.2	-147.22	-177.3	106.1	388.2	378.3	9.83	39.470	
2,400.0	2,372.8	2,358.3	2,345.4	7.2	5.5	-146.82	-190.0	110.9	409.5	399.1	10.35	39.575	
2,500.0	2,471.3	2,456.0	2,442.2	7.5	5.8	-146.47	-202.7	115.7	430.8	419.9	10.86	39.669	
2,600.0	2,569.7	2,553.7	2,538.9	7.9	6.0	-146.15	-215.4	120.5	452.1	440.7	11.37	39.754	
2,700.0	2,668.2	2,651.3	2,635.6	8.2	6.3	-145.86	-228.1	125.3	473.5	461.6	11.89	39.831	
2,800.0	2,766.6	2,749.0	2,732.3	8.6	6.6	-145.59	-240.8	130.1	494.8	482.4	12.40	39.901	
2,900.0	2,865.1	2,846.7	2,829.0	8.9	6.9	-145.35	-253.6	134.9	516.2	503.3	12.92	39.966	
3,000.0	2,963.6	2,944.3	2,925.7	9.3	7.2	-145.12	-266.3	139.7	537.6	524.1	13.43	40.025	
3,100.0	3,062.0	3,042.0	3,022.5	9.7	7.5	-144.92	-279.0	144.5	558.9	545.0	13.95	40.079	
3,200.0	3,160.5	3,139.7	3,119.2	10.0	7.8	-144.72	-291.7	149.3	580.3	565.9	14.46	40.130	
3,300.0	3,258.9	3,237.4	3,215.9	10.4	8.1	-144.54	-304.4	154.2	601.7	586.8	14.98	40.177	
3,400.0	3,357.4	3,335.0	3,312.6	10.7	8.4	-144.38	-317.1	159.0	623.1	607.6	15.49	40.220	
3,500.0	3,455.9	3,432.7	3,409.3	11.1	8.6	-144.22	-329.8	163.8	644.5	628.5	16.01	40.261	
3,600.0	3,554.3	3,530.4	3,506.1	11.4	8.9	-144.08	-342.6	168.6	665.9	649.4	16.53	40.299	
3,700.0	3,652.8	3,628.0	3,602.8	11.8	9.2	-143.94	-355.3	173.4	687.4	670.3	17.04	40.335	
3,800.0	3,751.2	3,725.7	3,699.5	12.1	9.5	-143.81	-368.0	178.2	708.8	691.2	17.56	40.368	
3,900.0	3,849.7	3,823.4	3,796.2	12.5	9.8	-143.69	-380.7	183.0	730.2	712.1	18.07	40.400	
4,000.0	3,948.2	3,921.0	3,892.9	12.8	10.1	-143.58	-393.4	187.8	751.6	733.0	18.59	40.429	
4,100.0	4,046.6	4,018.7	3,989.6	13.2	10.4	-143.47	-406.1	192.6	773.0	753.9	19.11	40.457	
4,200.0	4,145.1	4,116.4	4,086.4	13.5	10.7	-143.37	-418.9	197.4	794.5	774.8	19.62	40.484	
4,300.0	4,243.5	4,214.0	4,183.1	13.9	11.0	-143.27	-431.6	202.2	815.9	795.8	20.14	40.509	
4,400.0	4,342.0	4,316.9	4,285.0	14.3	11.3	-143.20	-444.6	207.1	837.1	816.5	20.66	40.516	
4,500.0	4,440.4	4,423.2	4,390.6	14.6	11.5	-143.23	-456.4	211.6	857.5	836.3	21.16	40.519	
4,600.0	4,538.9	4,529.9	4,496.7	15.0	11.8	-143.38	-466.3	215.3	876.8	855.2	21.64	40.525	
4,700.0	4,637.4	4,636.9	4,603.3	15.3	12.0	-143.63	-474.5	218.4	895.3	873.2	22.09	40.536	
4,800.0	4,735.8	4,744.1	4,710.3	15.7	12.2	-143.97	-480.8	220.8	912.7	890.2	22.51	40.553	
4,900.0	4,834.3	4,851.5	4,817.6	16.0	12.4	-144.41	-485.2	222.5	929.2	906.3	22.90	40.580	
5,000.0	4,932.7	4,959.0	4,925.1	16.4	12.5	-144.94	-487.7	223.4	944.9	921.6	23.26	40.617	
5,100.0	5,031.2	5,065.1	5,031.2	16.7	12.7	-145.55	-488.4	223.7	959.7	936.1	23.60	40.661	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3F-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,129.7	5,163.6	5,129.7	17.1	12.8	-146.12	-488.4	223.7	974.2	950.3	23.93	40.718	
5,300.0	5,228.1	5,262.0	5,228.1	17.4	12.9	-146.69	-488.4	223.7	988.8	964.6	24.25	40.781	
5,400.0	5,326.6	5,360.5	5,326.6	17.8	13.0	-147.23	-488.4	223.7	1,003.6	979.0	24.57	40.849	
5,500.0	5,425.0	5,458.9	5,425.0	18.2	13.2	-147.76	-488.4	223.7	1,018.4	993.5	24.89	40.922	
5,600.0	5,523.5	5,557.4	5,523.5	18.5	13.3	-148.28	-488.4	223.7	1,033.3	1,008.1	25.20	40.998	
5,700.0	5,622.0	5,655.9	5,622.0	18.9	13.4	-148.78	-488.4	223.7	1,048.3	1,022.7	25.52	41.077	
5,800.0	5,720.4	5,754.3	5,720.4	19.2	13.5	-149.27	-488.4	223.7	1,063.3	1,037.5	25.83	41.160	
5,900.0	5,818.9	5,852.8	5,818.9	19.6	13.7	-149.74	-488.4	223.7	1,078.4	1,052.3	26.15	41.245	
6,000.0	5,917.3	5,951.2	5,917.3	19.9	13.8	-150.20	-488.4	223.7	1,093.6	1,067.2	26.46	41.332	
6,100.0	6,015.8	6,049.7	6,015.8	20.3	13.9	-150.65	-488.4	223.7	1,108.9	1,082.1	26.77	41.420	
6,200.0	6,114.2	6,148.2	6,114.2	20.6	14.0	-151.08	-488.4	223.7	1,124.2	1,097.1	27.08	41.510	
6,300.0	6,212.7	6,246.6	6,212.7	21.0	14.2	-151.50	-488.4	223.7	1,139.6	1,112.2	27.39	41.602	
6,400.0	6,311.2	6,345.1	6,311.2	21.3	14.3	-151.92	-488.4	223.7	1,155.1	1,127.4	27.70	41.694	
6,500.0	6,409.6	6,443.5	6,409.6	21.7	14.4	-152.32	-488.4	223.7	1,170.6	1,142.6	28.01	41.787	
6,600.0	6,508.1	6,542.0	6,508.1	22.1	14.6	-152.71	-488.4	223.7	1,186.2	1,157.8	28.32	41.881	
6,700.0	6,606.5	6,640.4	6,606.5	22.4	14.7	-153.09	-488.4	223.7	1,201.8	1,173.1	28.63	41.975	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3G-9H-N267 - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	50.3	50.3				
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	50.3	50.3	50.1	0.24	205.933	
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	50.3	50.3	49.7	0.59	84.796	
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	50.3	50.3	49.4	0.94	53.390	CC, ES
400.0	400.0	400.0	400.0	0.6	0.6	-156.11	0.0	50.3	51.9	50.6	1.29	40.191	
500.0	499.8	499.2	499.2	0.8	0.8	-157.56	-0.6	50.9	57.3	55.7	1.64	34.946	
600.0	599.5	597.9	597.9	1.1	1.0	-158.73	-2.4	52.8	67.2	65.2	1.99	33.729	SF
700.0	698.7	696.0	695.9	1.3	1.2	-159.50	-5.4	55.8	81.5	79.1	2.35	34.686	
800.0	797.5	793.3	793.0	1.6	1.4	-159.94	-9.4	60.0	100.1	97.4	2.71	36.897	
900.0	895.9	889.7	889.1	2.0	1.6	-160.02	-14.6	65.4	121.5	118.4	3.09	39.307	
1,000.0	994.4	985.7	984.7	2.3	1.8	-159.59	-20.8	71.8	144.0	140.5	3.48	41.353	
1,100.0	1,092.8	1,081.1	1,079.5	2.6	2.0	-158.85	-28.1	79.4	167.6	163.7	3.89	43.120	
1,200.0	1,191.3	1,176.0	1,173.6	3.0	2.3	-157.94	-36.5	88.1	192.3	188.0	4.31	44.669	
1,300.0	1,289.8	1,272.0	1,268.7	3.3	2.5	-157.00	-45.7	97.6	217.9	213.1	4.74	46.009	
1,400.0	1,388.2	1,368.6	1,364.4	3.7	2.8	-156.25	-55.1	107.3	243.5	238.3	5.17	47.093	
1,500.0	1,486.7	1,465.2	1,460.1	4.0	3.1	-155.63	-64.4	117.0	269.2	263.6	5.61	47.989	
1,600.0	1,585.1	1,561.9	1,555.7	4.4	3.3	-155.13	-73.8	126.7	294.9	288.8	6.05	48.741	
1,700.0	1,683.6	1,658.5	1,651.4	4.7	3.6	-154.70	-83.1	136.3	320.6	314.1	6.49	49.379	
1,800.0	1,782.1	1,755.1	1,747.1	5.1	3.9	-154.34	-92.4	146.0	346.3	339.4	6.94	49.928	
1,900.0	1,880.5	1,851.7	1,842.8	5.4	4.2	-154.03	-101.8	155.7	372.0	364.6	7.38	50.404	
2,000.0	1,979.0	1,948.3	1,938.4	5.8	4.4	-153.76	-111.1	165.3	397.8	389.9	7.83	50.822	
2,100.0	2,077.4	2,044.9	2,034.1	6.1	4.7	-153.52	-120.5	175.0	423.5	415.2	8.27	51.190	
2,200.0	2,175.9	2,141.5	2,129.8	6.5	5.0	-153.31	-129.8	184.7	449.3	440.5	8.72	51.517	
2,300.0	2,274.3	2,238.2	2,225.5	6.8	5.3	-153.12	-139.1	194.4	475.0	465.9	9.17	51.810	
2,400.0	2,372.8	2,334.8	2,321.1	7.2	5.6	-152.95	-148.5	204.0	500.8	491.2	9.62	52.073	
2,500.0	2,471.3	2,431.4	2,416.8	7.5	5.9	-152.80	-157.8	213.7	526.6	516.5	10.07	52.311	
2,600.0	2,569.7	2,528.0	2,512.5	7.9	6.2	-152.66	-167.2	223.4	552.3	541.8	10.52	52.527	
2,700.0	2,668.2	2,624.6	2,608.2	8.2	6.4	-152.54	-176.5	233.1	578.1	567.1	10.96	52.724	
2,800.0	2,766.6	2,721.2	2,703.8	8.6	6.7	-152.42	-185.8	242.7	603.9	592.5	11.41	52.905	
2,900.0	2,865.1	2,817.8	2,799.5	8.9	7.0	-152.32	-195.2	252.4	629.7	617.8	11.86	53.071	
3,000.0	2,963.6	2,914.5	2,895.2	9.3	7.3	-152.22	-204.5	262.1	655.4	643.1	12.31	53.224	
3,100.0	3,062.0	3,011.1	2,990.9	9.7	7.6	-152.13	-213.9	271.7	681.2	668.4	12.77	53.366	
3,200.0	3,160.5	3,107.7	3,086.5	10.0	7.9	-152.05	-223.2	281.4	707.0	693.8	13.22	53.497	
3,300.0	3,258.9	3,204.3	3,182.2	10.4	8.2	-151.97	-232.5	291.1	732.8	719.1	13.67	53.619	
3,400.0	3,357.4	3,300.9	3,277.9	10.7	8.4	-151.90	-241.9	300.8	758.6	744.4	14.12	53.733	
3,500.0	3,455.9	3,397.5	3,373.5	11.1	8.7	-151.83	-251.2	310.4	784.4	769.8	14.57	53.840	
3,600.0	3,554.3	3,494.1	3,469.2	11.4	9.0	-151.77	-260.6	320.1	810.1	795.1	15.02	53.939	
3,700.0	3,652.8	3,590.8	3,564.9	11.8	9.3	-151.71	-269.9	329.8	835.9	820.5	15.47	54.033	
3,800.0	3,751.2	3,687.4	3,660.6	12.1	9.6	-151.65	-279.2	339.4	861.7	845.8	15.92	54.121	
3,900.0	3,849.7	3,784.0	3,756.2	12.5	9.9	-151.60	-288.6	349.1	887.5	871.1	16.37	54.204	
4,000.0	3,948.2	3,880.6	3,851.9	12.8	10.2	-151.55	-297.9	358.8	913.3	896.5	16.82	54.282	
4,100.0	4,046.6	3,977.2	3,947.6	13.2	10.5	-151.50	-307.3	368.5	939.1	921.8	17.28	54.356	
4,200.0	4,145.1	4,073.8	4,043.3	13.5	10.8	-151.46	-316.6	378.1	964.9	947.1	17.73	54.426	
4,300.0	4,243.5	4,170.4	4,138.9	13.9	11.0	-151.42	-326.0	387.8	990.7	972.5	18.18	54.493	
4,400.0	4,342.0	4,267.1	4,234.6	14.3	11.3	-151.38	-335.3	397.5	1,016.5	997.8	18.63	54.556	
4,500.0	4,440.4	4,363.7	4,330.3	14.6	11.6	-151.34	-344.6	407.2	1,042.3	1,023.2	19.08	54.615	
4,600.0	4,538.9	4,460.3	4,426.0	15.0	11.9	-151.30	-354.0	416.8	1,068.0	1,048.5	19.54	54.673	
4,700.0	4,637.4	4,556.9	4,521.6	15.3	12.2	-151.27	-363.3	426.5	1,093.8	1,073.9	19.99	54.727	
4,800.0	4,735.8	4,653.5	4,617.3	15.7	12.5	-151.23	-372.7	436.2	1,119.6	1,099.2	20.44	54.779	
4,900.0	4,834.3	4,750.1	4,713.0	16.0	12.8	-151.20	-382.0	445.8	1,145.4	1,124.5	20.89	54.828	
5,000.0	4,932.7	4,846.7	4,808.7	16.4	13.1	-151.17	-391.3	455.5	1,171.2	1,149.9	21.34	54.875	
5,100.0	5,031.2	4,943.4	4,904.3	16.7	13.4	-151.14	-400.7	465.2	1,197.0	1,175.2	21.80	54.921	

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

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3H-9H-N267 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.05	0.0	58.7	58.7				
100.0	100.0	100.0	100.0	0.1	0.1	90.05	0.0	58.7	58.7	58.5	0.24	240.255	
200.0	200.0	200.0	200.0	0.3	0.3	90.05	0.0	58.7	58.7	58.1	0.59	98.929	
300.0	300.0	300.0	300.0	0.5	0.5	90.05	0.0	58.7	58.7	57.8	0.94	62.289	CC, ES
400.0	400.0	400.0	400.0	0.6	0.6	-155.99	0.0	58.7	60.3	59.0	1.29	46.684	
500.0	499.8	498.0	497.9	0.8	0.8	-156.97	-0.9	60.1	66.5	64.9	1.64	40.591	
600.0	599.5	595.2	595.0	1.1	1.0	-157.28	-3.6	64.3	78.8	76.8	1.99	39.573	SF
700.0	698.7	691.1	690.6	1.3	1.2	-157.12	-7.9	71.2	97.0	94.6	2.35	41.236	
800.0	797.5	785.2	784.0	1.6	1.4	-156.70	-13.7	80.6	121.0	118.3	2.73	44.379	
900.0	895.9	877.4	875.2	2.0	1.7	-156.15	-21.1	92.4	149.3	146.2	3.12	47.826	
1,000.0	994.4	971.7	968.1	2.3	2.0	-155.38	-29.7	106.2	179.5	176.0	3.53	50.812	
1,100.0	1,092.8	1,067.0	1,062.0	2.6	2.3	-154.81	-38.5	120.2	209.7	205.8	3.95	53.094	
1,200.0	1,191.3	1,162.3	1,155.8	3.0	2.6	-154.38	-47.3	134.2	240.0	235.7	4.37	54.891	
1,300.0	1,289.8	1,257.6	1,249.7	3.3	2.9	-154.05	-56.0	148.3	270.3	265.5	4.80	56.336	
1,400.0	1,388.2	1,352.9	1,343.5	3.7	3.3	-153.78	-64.8	162.3	300.6	295.4	5.23	57.523	
1,500.0	1,486.7	1,448.2	1,437.3	4.0	3.6	-153.57	-73.6	176.3	330.9	325.2	5.66	58.512	
1,600.0	1,585.1	1,543.5	1,531.2	4.4	3.9	-153.39	-82.3	190.4	361.2	355.1	6.09	59.349	
1,700.0	1,683.6	1,638.8	1,625.0	4.7	4.2	-153.23	-91.1	204.4	391.5	385.0	6.52	60.065	
1,800.0	1,782.1	1,734.1	1,718.9	5.1	4.6	-153.10	-99.9	218.4	421.8	414.9	6.95	60.685	
1,900.0	1,880.5	1,829.4	1,812.7	5.4	4.9	-152.99	-108.6	232.5	452.1	444.7	7.38	61.226	
2,000.0	1,979.0	1,924.7	1,906.6	5.8	5.2	-152.89	-117.4	246.5	482.4	474.6	7.82	61.702	
2,100.0	2,077.4	2,020.0	2,000.4	6.1	5.6	-152.81	-126.2	260.5	512.7	504.5	8.25	62.125	
2,200.0	2,175.9	2,115.3	2,094.3	6.5	5.9	-152.73	-134.9	274.6	543.1	534.4	8.69	62.502	
2,300.0	2,274.3	2,210.6	2,188.1	6.8	6.2	-152.66	-143.7	288.6	573.4	564.2	9.12	62.841	
2,400.0	2,372.8	2,305.8	2,282.0	7.2	6.6	-152.60	-152.5	302.6	603.7	594.1	9.56	63.147	
2,500.0	2,471.3	2,401.1	2,375.8	7.5	6.9	-152.54	-161.2	316.7	634.0	624.0	10.00	63.424	
2,600.0	2,569.7	2,496.4	2,469.6	7.9	7.2	-152.49	-170.0	330.7	664.3	653.9	10.43	63.677	
2,700.0	2,668.2	2,591.7	2,563.5	8.2	7.6	-152.44	-178.8	344.7	694.6	683.7	10.87	63.908	
2,800.0	2,766.6	2,687.0	2,657.3	8.6	7.9	-152.40	-187.6	358.8	724.9	713.6	11.31	64.121	
2,900.0	2,865.1	2,782.3	2,751.2	8.9	8.2	-152.36	-196.3	372.8	755.2	743.5	11.74	64.316	
3,000.0	2,963.6	2,877.6	2,845.0	9.3	8.6	-152.32	-205.1	386.8	785.6	773.4	12.18	64.497	
3,100.0	3,062.0	2,972.9	2,938.9	9.7	8.9	-152.29	-213.9	400.9	815.9	803.3	12.62	64.665	
3,200.0	3,160.5	3,068.2	3,032.7	10.0	9.2	-152.26	-222.6	414.9	846.2	833.1	13.05	64.820	
3,300.0	3,258.9	3,163.5	3,126.6	10.4	9.6	-152.23	-231.4	428.9	876.5	863.0	13.49	64.966	
3,400.0	3,357.4	3,258.8	3,220.4	10.7	9.9	-152.20	-240.2	443.0	906.8	892.9	13.93	65.101	
3,500.0	3,455.9	3,354.1	3,314.3	11.1	10.2	-152.18	-248.9	457.0	937.1	922.8	14.37	65.228	
3,600.0	3,554.3	3,449.4	3,408.1	11.4	10.6	-152.15	-257.7	471.0	967.5	952.6	14.80	65.347	
3,700.0	3,652.8	3,544.7	3,501.9	11.8	10.9	-152.13	-266.5	485.1	997.8	982.5	15.24	65.459	
3,800.0	3,751.2	3,640.0	3,595.8	12.1	11.2	-152.11	-275.2	499.1	1,028.1	1,012.4	15.68	65.565	
3,900.0	3,849.7	3,735.2	3,689.6	12.5	11.6	-152.09	-284.0	513.1	1,058.4	1,042.3	16.12	65.664	
4,000.0	3,948.2	3,830.5	3,783.5	12.8	11.9	-152.07	-292.8	527.2	1,088.7	1,072.2	16.56	65.758	
4,100.0	4,046.6	3,925.8	3,877.3	13.2	12.2	-152.06	-301.5	541.2	1,119.0	1,102.0	16.99	65.847	
4,200.0	4,145.1	4,021.1	3,971.2	13.5	12.6	-152.04	-310.3	555.2	1,149.4	1,131.9	17.43	65.931	
4,300.0	4,243.5	4,116.4	4,065.0	13.9	12.9	-152.02	-319.1	569.3	1,179.7	1,161.8	17.87	66.011	
4,400.0	4,342.0	4,211.7	4,158.9	14.3	13.3	-152.01	-327.9	583.3	1,210.0	1,191.7	18.31	66.087	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3I-9H-N267 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	92.98	-3.6	69.9	70.0				
100.0	100.0	100.0	100.0	0.1	0.1	92.98	-3.6	69.9	70.0	69.7	0.24	286.406	
200.0	200.0	200.0	200.0	0.3	0.3	92.98	-3.6	69.9	70.0	69.4	0.59	117.932	
300.0	300.0	300.0	300.0	0.5	0.5	92.98	-3.6	69.9	70.0	69.0	0.94	74.253	CC, ES
400.0	400.0	397.7	397.6	0.6	0.6	-152.53	-4.3	71.4	73.1	71.8	1.29	56.782	
500.0	499.8	494.7	494.6	0.8	0.8	-152.91	-6.2	76.0	82.6	80.9	1.64	50.475	
600.0	599.5	590.7	590.2	1.1	1.0	-153.36	-9.3	83.5	98.2	96.2	1.99	49.394	SF
700.0	698.7	684.9	683.7	1.3	1.3	-153.76	-13.6	93.7	120.0	117.7	2.35	51.088	
800.0	797.5	777.0	774.8	1.6	1.6	-154.05	-18.9	106.5	147.8	145.1	2.72	54.336	
900.0	895.9	866.9	863.2	2.0	1.9	-154.31	-25.1	121.5	180.0	176.8	3.10	57.996	
1,000.0	994.4	960.0	954.3	2.3	2.2	-154.29	-32.4	138.8	214.0	210.5	3.50	61.133	
1,100.0	1,092.8	1,054.0	1,046.4	2.6	2.6	-154.27	-39.7	156.4	248.0	244.1	3.90	63.547	
1,200.0	1,191.3	1,148.0	1,138.5	3.0	2.9	-154.25	-47.0	173.9	282.1	277.8	4.31	65.461	
1,300.0	1,289.8	1,242.0	1,230.6	3.3	3.3	-154.24	-54.3	191.5	316.1	311.4	4.72	67.012	
1,400.0	1,388.2	1,336.0	1,322.7	3.7	3.6	-154.23	-61.6	209.0	350.2	345.0	5.13	68.292	
1,500.0	1,486.7	1,430.1	1,414.7	4.0	4.0	-154.22	-68.9	226.6	384.2	378.7	5.54	69.366	
1,600.0	1,585.1	1,524.1	1,506.8	4.4	4.4	-154.22	-76.2	244.2	418.3	412.3	5.95	70.278	
1,700.0	1,683.6	1,618.1	1,598.9	4.7	4.7	-154.21	-83.5	261.7	452.3	446.0	6.37	71.062	
1,800.0	1,782.1	1,712.1	1,691.0	5.1	5.1	-154.21	-90.8	279.3	486.4	479.6	6.78	71.742	
1,900.0	1,880.5	1,806.2	1,783.1	5.4	5.5	-154.20	-98.1	296.8	520.4	513.2	7.19	72.339	
2,000.0	1,979.0	1,900.2	1,875.2	5.8	5.9	-154.20	-105.5	314.4	554.5	546.9	7.61	72.865	
2,100.0	2,077.4	1,994.2	1,967.2	6.1	6.2	-154.20	-112.8	331.9	588.5	580.5	8.03	73.333	
2,200.0	2,175.9	2,088.2	2,059.3	6.5	6.6	-154.19	-120.1	349.5	622.6	614.1	8.44	73.752	
2,300.0	2,274.3	2,182.3	2,151.4	6.8	7.0	-154.19	-127.4	367.0	656.6	647.8	8.86	74.129	
2,400.0	2,372.8	2,276.3	2,243.5	7.2	7.3	-154.19	-134.7	384.6	690.7	681.4	9.27	74.470	
2,500.0	2,471.3	2,370.3	2,335.6	7.5	7.7	-154.19	-142.0	402.1	724.7	715.1	9.69	74.780	
2,600.0	2,569.7	2,464.3	2,427.6	7.9	8.1	-154.18	-149.3	419.7	758.8	748.7	10.11	75.063	
2,700.0	2,668.2	2,558.3	2,519.7	8.2	8.5	-154.18	-156.6	437.2	792.9	782.3	10.53	75.322	
2,800.0	2,766.6	2,652.4	2,611.8	8.6	8.8	-154.18	-163.9	454.8	826.9	816.0	10.94	75.561	
2,900.0	2,865.1	2,746.4	2,703.9	8.9	9.2	-154.18	-171.3	472.4	861.0	849.6	11.36	75.781	
3,000.0	2,963.6	2,840.4	2,796.0	9.3	9.6	-154.18	-178.6	489.9	895.0	883.2	11.78	75.984	
3,100.0	3,062.0	2,934.4	2,888.0	9.7	10.0	-154.18	-185.9	507.5	929.1	916.9	12.20	76.173	
3,200.0	3,160.5	3,028.5	2,980.1	10.0	10.3	-154.18	-193.2	525.0	963.1	950.5	12.61	76.349	
3,300.0	3,258.9	3,122.5	3,072.2	10.4	10.7	-154.17	-200.5	542.6	997.2	984.1	13.03	76.513	
3,400.0	3,357.4	3,216.5	3,164.3	10.7	11.1	-154.17	-207.8	560.1	1,031.2	1,017.8	13.45	76.666	
3,500.0	3,455.9	3,310.5	3,256.4	11.1	11.5	-154.17	-215.1	577.7	1,065.3	1,051.4	13.87	76.809	
3,600.0	3,554.3	3,404.6	3,348.4	11.4	11.8	-154.17	-222.4	595.2	1,099.3	1,085.0	14.29	76.944	
3,700.0	3,652.8	3,498.6	3,440.5	11.8	12.2	-154.17	-229.7	612.8	1,133.4	1,118.7	14.71	77.071	
3,800.0	3,751.2	3,592.6	3,532.6	12.1	12.6	-154.17	-237.1	630.3	1,167.4	1,152.3	15.12	77.191	
3,900.0	3,849.7	3,686.6	3,624.7	12.5	13.0	-154.17	-244.4	647.9	1,201.5	1,185.9	15.54	77.303	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - Sprague 3J-9H-N267 - Hz - Plan #2

Offset Site Error: 0.0 ft

Survey Program: 0-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	92.66	-3.6	78.3	78.4				
100.0	100.0	100.0	100.0	0.1	0.1	92.66	-3.6	78.3	78.4	78.1	0.24	320.687	
200.0	200.0	200.0	200.0	0.3	0.3	92.66	-3.6	78.3	78.4	77.8	0.59	132.048	CC, ES
300.0	300.0	297.4	297.3	0.5	0.5	92.90	-4.1	79.9	80.0	79.1	0.94	84.999	
400.0	400.0	394.4	394.2	0.6	0.7	-152.27	-5.3	84.7	86.6	85.3	1.28	67.478	
500.0	499.8	490.5	490.0	0.8	0.9	-152.59	-7.3	92.5	99.5	97.8	1.63	61.065	
600.0	599.5	585.1	583.9	1.1	1.1	-153.17	-10.0	103.3	118.6	116.7	1.98	59.992	SF
700.0	698.7	677.7	675.5	1.3	1.4	-153.82	-13.5	116.8	144.0	141.7	2.33	61.776	
800.0	797.5	768.4	764.7	1.6	1.7	-154.40	-17.5	132.7	175.4	172.7	2.69	65.174	
900.0	895.9	862.4	856.9	2.0	2.1	-155.17	-22.0	150.3	209.4	206.4	3.07	68.264	
1,000.0	994.4	956.3	949.1	2.3	2.4	-155.73	-26.5	167.9	243.5	240.1	3.45	70.611	
1,100.0	1,092.8	1,050.3	1,041.3	2.6	2.8	-156.16	-31.0	185.4	277.7	273.8	3.83	72.452	
1,200.0	1,191.3	1,144.3	1,133.5	3.0	3.1	-156.49	-35.5	203.0	311.8	307.6	4.22	73.932	
1,300.0	1,289.8	1,238.3	1,225.7	3.3	3.5	-156.76	-40.0	220.6	345.9	341.3	4.60	75.145	
1,400.0	1,388.2	1,332.3	1,318.0	3.7	3.8	-156.97	-44.5	238.2	380.1	375.1	4.99	76.157	
1,500.0	1,486.7	1,426.3	1,410.2	4.0	4.2	-157.16	-49.0	255.7	414.2	408.8	5.38	77.013	
1,600.0	1,585.1	1,520.2	1,502.4	4.4	4.5	-157.31	-53.5	273.3	448.3	442.6	5.77	77.746	
1,700.0	1,683.6	1,614.2	1,594.6	4.7	4.9	-157.44	-58.0	290.9	482.5	476.3	6.16	78.380	
1,800.0	1,782.1	1,708.2	1,686.8	5.1	5.3	-157.56	-62.4	308.5	516.6	510.1	6.55	78.935	
1,900.0	1,880.5	1,802.2	1,779.0	5.4	5.6	-157.66	-66.9	326.0	550.8	543.9	6.93	79.424	
2,000.0	1,979.0	1,896.2	1,871.2	5.8	6.0	-157.75	-71.4	343.6	585.0	577.6	7.32	79.858	
2,100.0	2,077.4	1,990.2	1,963.5	6.1	6.3	-157.83	-75.9	361.2	619.1	611.4	7.72	80.245	
2,200.0	2,175.9	2,084.1	2,055.7	6.5	6.7	-157.90	-80.4	378.8	653.3	645.2	8.11	80.593	
2,300.0	2,274.3	2,178.1	2,147.9	6.8	7.1	-157.96	-84.9	396.4	687.4	678.9	8.50	80.908	
2,400.0	2,372.8	2,272.1	2,240.1	7.2	7.4	-158.02	-89.4	413.9	721.6	712.7	8.89	81.194	
2,500.0	2,471.3	2,366.1	2,332.3	7.5	7.8	-158.07	-93.9	431.5	755.7	746.5	9.28	81.454	
2,600.0	2,569.7	2,460.1	2,424.5	7.9	8.1	-158.12	-98.4	449.1	789.9	780.2	9.67	81.693	
2,700.0	2,668.2	2,554.0	2,516.7	8.2	8.5	-158.17	-102.9	466.7	824.1	814.0	10.06	81.912	
2,800.0	2,766.6	2,648.0	2,609.0	8.6	8.9	-158.21	-107.4	484.2	858.2	847.8	10.45	82.114	
2,900.0	2,865.1	2,742.0	2,701.2	8.9	9.2	-158.24	-111.8	501.8	892.4	881.5	10.84	82.301	
3,000.0	2,963.6	2,836.0	2,793.4	9.3	9.6	-158.28	-116.3	519.4	926.5	915.3	11.23	82.474	
3,100.0	3,062.0	2,930.0	2,885.6	9.7	9.9	-158.31	-120.8	537.0	960.7	949.1	11.63	82.635	
3,200.0	3,160.5	3,024.0	2,977.8	10.0	10.3	-158.34	-125.3	554.5	994.9	982.9	12.02	82.785	
3,300.0	3,258.9	3,117.9	3,070.0	10.4	10.7	-158.37	-129.8	572.1	1,029.0	1,016.6	12.41	82.926	
3,400.0	3,357.4	3,211.9	3,162.3	10.7	11.0	-158.40	-134.3	589.7	1,063.2	1,050.4	12.80	83.057	
3,500.0	3,455.9	3,305.9	3,254.5	11.1	11.4	-158.42	-138.8	607.3	1,097.4	1,084.2	13.19	83.181	
3,600.0	3,554.3	3,399.9	3,346.7	11.4	11.7	-158.44	-143.3	624.9	1,131.5	1,117.9	13.58	83.297	
3,700.0	3,652.8	3,493.9	3,438.9	11.8	12.1	-158.47	-147.8	642.4	1,165.7	1,151.7	13.98	83.406	
3,800.0	3,751.2	3,587.9	3,531.1	12.1	12.5	-158.49	-152.3	660.0	1,199.8	1,185.5	14.37	83.510	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 4-6-9 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 136-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	107.84	-83.8	260.3	274.0				
100.0	100.0	82.7	82.7	0.1	0.1	107.85	-83.8	260.2	273.4	273.1	0.26	1,067.627	
168.8	168.8	151.2	151.2	0.2	0.2	107.86	-83.8	260.1	273.3	272.8	0.49	558.656	CC
200.0	200.0	181.5	181.5	0.3	0.3	107.87	-83.9	260.2	273.3	272.7	0.60	458.226	ES
300.0	300.0	279.7	279.7	0.5	0.5	107.90	-84.2	260.8	274.1	273.1	0.94	290.774	
400.0	400.0	378.0	378.0	0.6	0.6	-137.89	-83.6	262.3	276.6	275.3	1.29	214.331	
500.0	499.8	468.6	468.5	0.8	0.8	-139.02	-81.6	265.4	283.3	281.6	1.63	173.464	
600.0	599.5	554.7	554.3	1.1	1.0	-140.27	-81.0	272.0	297.0	295.1	1.98	150.299	
700.0	698.7	642.7	641.7	1.3	1.2	-141.63	-81.6	281.9	317.5	315.2	2.34	135.947	
800.0	797.5	735.1	733.4	1.6	1.5	-143.45	-81.1	294.5	343.1	340.4	2.72	126.175	
900.0	895.9	827.7	824.9	2.0	1.7	-145.87	-78.1	307.9	371.0	367.9	3.11	119.450	
1,000.0	994.4	917.3	913.2	2.3	2.0	-148.18	-73.6	322.1	400.6	397.1	3.49	114.903	
1,100.0	1,092.8	1,007.6	1,001.8	2.6	2.3	-150.71	-65.4	337.6	431.9	428.1	3.87	111.546	
1,200.0	1,191.3	1,102.7	1,094.5	3.0	2.7	-153.53	-52.9	354.3	464.3	460.0	4.27	108.716	
1,300.0	1,289.8	1,192.0	1,181.3	3.3	3.1	-156.32	-37.3	369.2	496.9	492.2	4.66	106.567	
1,400.0	1,388.2	1,272.3	1,258.4	3.7	3.5	-158.82	-20.7	383.9	532.4	527.4	5.04	105.559	
1,500.0	1,486.7	1,352.8	1,334.8	4.0	3.9	-161.41	-0.8	399.3	570.4	564.9	5.43	105.044	
1,600.0	1,585.1	1,427.5	1,405.1	4.4	4.3	-163.71	19.5	414.9	611.5	605.7	5.80	105.428	
1,700.0	1,683.6	1,521.6	1,492.9	4.7	4.9	-166.47	46.9	434.3	653.9	647.7	6.22	105.099	
1,800.0	1,782.1	1,615.2	1,580.2	5.1	5.5	-169.04	75.6	452.1	696.5	689.8	6.64	104.817	
1,900.0	1,880.5	1,703.6	1,662.5	5.4	6.0	-171.32	103.9	467.9	739.4	732.3	7.06	104.784	SF
2,000.0	1,979.0	1,789.0	1,741.7	5.8	6.6	-173.36	132.2	482.9	783.3	775.8	7.46	105.013	
2,100.0	2,077.4	1,878.2	1,824.4	6.1	7.1	-175.28	161.6	498.5	827.9	820.0	7.86	105.270	
2,200.0	2,175.9	1,968.9	1,908.9	6.5	7.7	-176.98	190.7	514.1	872.6	864.3	8.27	105.551	
2,300.0	2,274.3	2,053.5	1,987.9	6.8	8.2	-178.38	217.2	528.9	917.8	909.1	8.65	106.089	
2,400.0	2,372.8	2,139.1	2,067.7	7.2	8.8	-179.64	243.7	544.4	963.7	954.7	9.03	106.712	
2,500.0	2,471.3	2,232.9	2,155.7	7.5	9.4	179.19	271.5	561.6	1,009.6	1,000.2	9.42	107.130	
2,600.0	2,569.7	2,326.2	2,243.3	7.9	9.9	178.16	298.5	578.5	1,055.3	1,045.4	9.81	107.550	
2,700.0	2,668.2	2,414.8	2,326.9	8.2	10.5	177.32	323.2	594.7	1,100.7	1,090.5	10.18	108.100	
2,800.0	2,766.6	2,509.2	2,416.0	8.6	11.0	176.53	348.9	612.3	1,146.5	1,135.9	10.57	108.491	
2,900.0	2,865.1	2,603.8	2,505.5	8.9	11.6	175.79	374.4	629.0	1,191.4	1,180.4	10.95	108.756	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Offset Design S9-T2N-R67W (Sprague) - SPRAGUE 4-8-9 (EXISTING) - ENCANA WELL - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 74-Geolink MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	98.85	-41.2	264.5	268.2				
100.0	100.0	82.5	82.5	0.1	0.1	98.86	-41.2	264.4	267.6	267.4	0.25	1,074.520	
200.0	200.0	182.8	182.8	0.3	0.3	98.97	-41.7	264.3	267.5	266.9	0.60	446.858	
300.0	300.0	283.2	283.2	0.5	0.5	99.19	-42.7	263.9	267.3	266.4	0.95	281.826	
310.0	310.0	293.2	293.2	0.5	0.5	-146.14	-42.8	263.8	267.3	266.3	0.99	271.264	CC, ES
400.0	400.0	383.5	383.5	0.6	0.7	-146.02	-44.3	263.3	268.4	267.1	1.30	206.045	
500.0	499.8	483.9	483.8	0.8	0.8	-146.08	-46.6	262.4	272.3	270.6	1.66	163.850	
600.0	599.5	583.3	583.2	1.1	1.0	-146.41	-49.3	261.4	279.0	276.9	2.03	137.684	
700.0	698.7	682.1	682.0	1.3	1.2	-147.25	-51.2	260.7	288.8	286.4	2.40	120.486	
800.0	797.5	781.2	781.1	1.6	1.4	-148.44	-52.6	260.2	301.8	299.0	2.78	108.655	
900.0	895.9	879.8	879.7	2.0	1.5	-149.90	-53.6	259.7	316.4	313.3	3.16	100.140	
1,000.0	994.4	978.6	978.4	2.3	1.7	-151.25	-54.5	259.1	331.1	327.6	3.54	93.504	
1,100.0	1,092.8	1,068.1	1,067.9	2.6	1.9	-152.11	-56.9	259.6	347.3	343.4	3.91	88.733	
1,200.0	1,191.3	1,155.0	1,154.7	3.0	2.0	-152.61	-61.1	262.7	366.6	362.3	4.29	85.475	
1,300.0	1,289.8	1,246.6	1,246.0	3.3	2.2	-152.83	-67.2	267.8	387.9	383.2	4.68	82.831	
1,400.0	1,388.2	1,331.0	1,329.8	3.7	2.4	-152.96	-73.2	274.7	411.8	406.8	5.07	81.290	
1,500.0	1,486.7	1,417.3	1,415.2	4.0	2.6	-152.87	-81.1	283.9	438.2	432.7	5.47	80.071	
1,600.0	1,585.1	1,491.0	1,487.7	4.4	2.8	-152.57	-89.5	294.2	468.0	462.1	5.87	79.779	
1,700.0	1,683.6	1,566.6	1,561.5	4.7	3.1	-152.24	-98.8	308.0	501.8	495.6	6.27	80.074	
1,800.0	1,782.1	1,656.5	1,648.8	5.1	3.4	-152.01	-108.9	326.8	538.2	531.5	6.69	80.447	
1,900.0	1,880.5	1,757.8	1,747.4	5.4	3.7	-151.91	-119.0	347.5	574.0	566.9	7.13	80.457	
2,000.0	1,979.0	1,851.3	1,838.6	5.8	4.1	-151.81	-128.6	366.0	609.2	601.6	7.57	80.503	
2,100.0	2,077.4	1,955.9	1,940.8	6.1	4.5	-151.74	-138.9	385.7	643.5	635.5	8.02	80.239	
2,200.0	2,175.9	2,053.8	2,036.8	6.5	4.8	-151.71	-148.2	402.8	676.5	668.1	8.46	79.978	
2,300.0	2,274.3	2,153.3	2,134.2	6.8	5.2	-151.65	-158.0	420.2	709.5	700.6	8.91	79.677	
2,400.0	2,372.8	2,251.7	2,230.8	7.2	5.5	-151.58	-167.9	436.2	741.4	732.0	9.36	79.212	
2,500.0	2,471.3	2,348.3	2,325.5	7.5	5.9	-151.41	-178.9	451.8	773.2	763.4	9.82	78.766	
2,600.0	2,569.7	2,445.5	2,420.9	7.9	6.3	-151.30	-189.4	467.2	804.7	794.4	10.26	78.398	
2,700.0	2,668.2	2,534.8	2,508.6	8.2	6.6	-151.29	-197.9	481.5	836.3	825.6	10.69	78.267	
2,800.0	2,766.6	2,626.0	2,598.1	8.6	6.9	-151.26	-206.9	496.6	868.4	857.3	11.12	78.076	
2,900.0	2,865.1	2,715.9	2,686.2	8.9	7.3	-151.19	-216.3	511.8	900.9	889.3	11.55	77.970	
3,000.0	2,963.6	2,805.5	2,774.0	9.3	7.6	-151.16	-225.3	527.6	934.0	922.0	11.98	77.947	
3,100.0	3,062.0	2,902.7	2,869.1	9.7	8.0	-151.12	-235.1	544.8	967.3	954.9	12.43	77.816	
3,200.0	3,160.5	3,005.3	2,969.7	10.0	8.4	-151.10	-245.1	562.4	999.9	987.1	12.88	77.614	
3,300.0	3,258.9	3,101.4	3,064.1	10.4	8.7	-151.12	-254.0	578.4	1,032.1	1,018.8	13.32	77.496	
3,400.0	3,357.4	3,193.8	3,154.7	10.7	9.1	-151.15	-262.1	593.9	1,064.4	1,050.6	13.75	77.430	
3,500.0	3,455.9	3,288.4	3,247.6	11.1	9.4	-151.11	-271.9	609.8	1,096.8	1,082.6	14.20	77.227	
3,600.0	3,554.3	3,397.3	3,354.1	11.4	9.9	-150.93	-285.6	627.5	1,128.8	1,114.1	14.71	76.741	
3,700.0	3,652.8	3,489.6	3,444.6	11.8	10.2	-150.79	-297.0	641.6	1,159.9	1,144.8	15.17	76.486	
3,800.0	3,751.2	3,580.8	3,533.9	12.1	10.6	-150.68	-307.9	656.1	1,191.5	1,175.9	15.62	76.259	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Sprague 3B-9H-N267
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Reference Site:	S9-T2N-R67W (Sprague)	**MD Reference:**	WELL @ 5011.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Sprague 3B-9H-N267	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Hz	**Database:**	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 5011.0ft (Original Well Elev)	Coordinates are relative to: Sprague 3B-9H-N267
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 °	Grid Convergence at Surface is: 0.39°