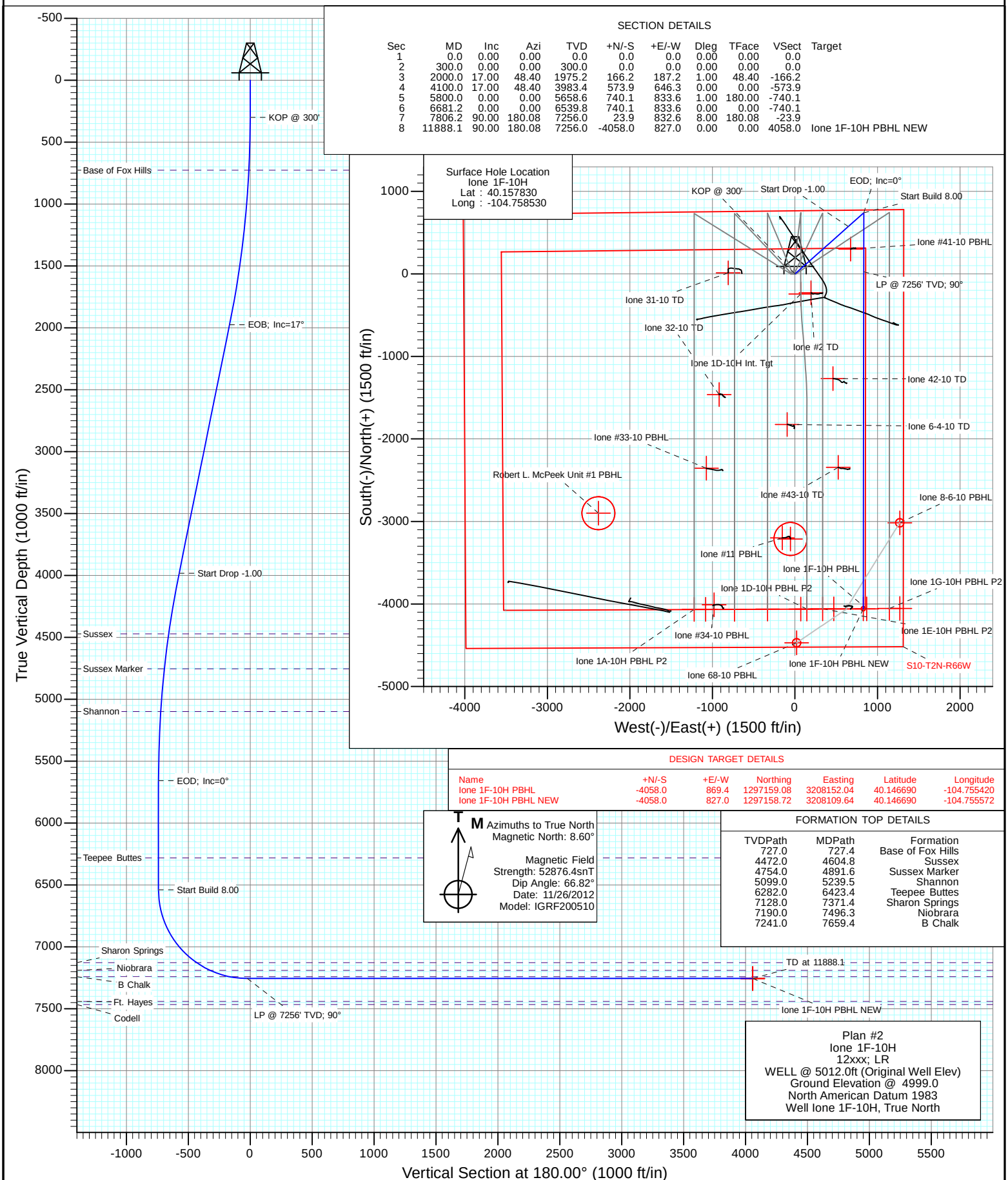
Project: DJ Wattenberg
Site: S10-T2N-R66W (Ione)
Well: Ione 1F-10H
Wellbore: Hz
Design: Plan #2

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	2000.0	17.00	48.40	1975.2	166.2	187.2	1.00	48.40	-166.2	
4	4100.0	17.00	48.40	3983.4	573.9	646.3	0.00	0.00	-573.9	
5	5800.0	0.00	0.00	5658.6	740.1	833.6	1.00	180.00	-740.1	
6	6681.2	0.00	0.00	6539.8	740.1	833.6	0.00	0.00	-740.1	
7	7806.2	90.00	180.08	7256.0	23.9	832.6	8.00	180.08	-23.9	
8	11888.1	90.00	180.08	7256.0	-4058.0	827.0	0.00	0.00	4058.0	Ione 1F-10H PBHL NEW



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Ione 1F-10H PBHL	-4058.0	869.4	1297159.08	3208152.04	40.146690	-104.755420
Ione 1F-10H PBHL NEW	-4058.0	827.0	1297158.72	3208109.64	40.146690	-104.755572

Azimuths to True North
Magnetic North: 8.60°

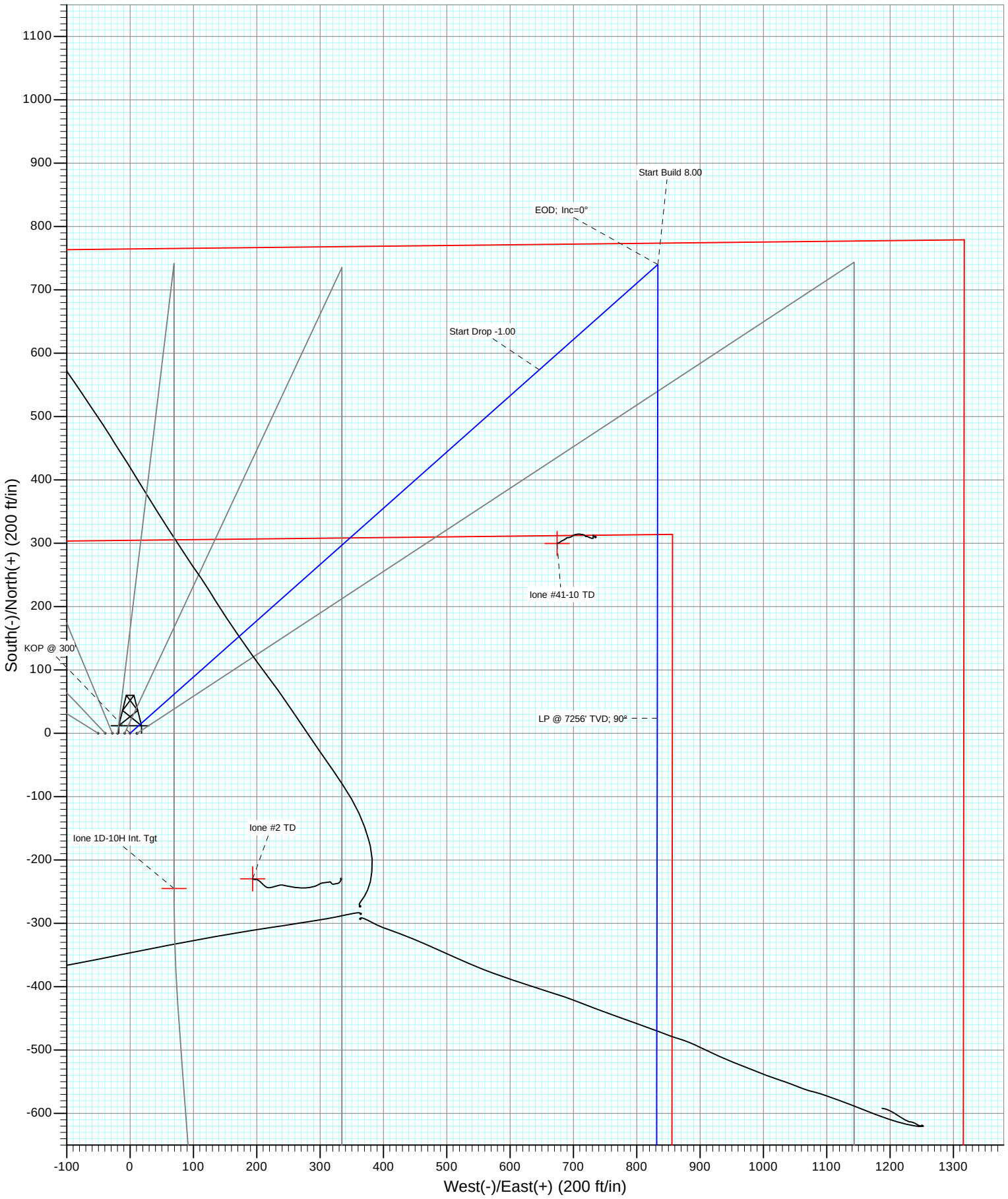
Magnetic Field
Strength: 52876.4snT
Dip Angle: 66.82°
Date: 11/26/2012
Model: IGRF200510

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
727.0	727.4	Base of Fox Hills
4472.0	4604.8	Sussex
4754.0	4891.6	Sussex Marker
5099.0	5239.5	Shannon
6282.0	6423.4	Teepee Buttes
7128.0	7371.4	Sharon Springs
7190.0	7496.3	Niobrara
7241.0	7659.4	B Chalk

Plan #2
Ione 1F-10H
12xxx; LR
WELL @ 5012.0ft (Original Well Elev)
Ground Elevation @ 4999.0
North American Datum 1983
Well Ione 1F-10H, True North

Project: DJ Wattenberg
Site: S10-T2N-R66W (Ione)
Well: Ione 1F-10H
Wellbore: Hz
Design: Plan #2



Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site:	S10-T2N-R66W (Ione)	**North Reference:**	True
Well:	Ione 1F-10H	**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	S10-T2N-R66W (Ione)				
Site Position:		**Northing:**	1,297,164.02 ft	**Latitude:**	40.146710
From:	Lat/Long	**Easting:**	3,207,875.24 ft	**Longitude:**	-104.756410
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.48 °

Well	Ione 1F-10H				
Well Position	**+N/-S**	0.0 ft	**Northing:**	1,301,209.69 ft	**Latitude:** 40.157830
	+E/-W	0.0 ft	**Easting:**	3,207,248.74 ft	**Longitude:** -104.758530
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:** 4,999.0 ft

Wellbore	Hz				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF200510	11/26/2012	8.60	66.82	52,876

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	180.00	

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	
2,000.0	17.00	48.40	1,975.2	166.2	187.2	1.00	1.00	0.00	48.40	
4,100.0	17.00	48.40	3,983.4	573.9	646.3	0.00	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,658.6	740.1	833.6	1.00	-1.00	0.00	180.00	
6,681.2	0.00	0.00	6,539.8	740.1	833.6	0.00	0.00	0.00	0.00	
7,806.2	90.00	180.08	7,256.0	23.9	832.6	8.00	8.00	0.00	180.08	
11,888.1	90.00	180.08	7,256.0	-4,058.0	827.0	0.00	0.00	0.00	0.00	Ione 1F-10H PBHL NI

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Ione 1F-10H
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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site:	S10-T2N-R66W (Ione)	**North Reference:**	True
Well:	Ione 1F-10H	**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	1.00	48.40	400.0	0.6	0.7	-0.6	1.00	1.00	
500.0	2.00	48.40	500.0	2.3	2.6	-2.3	1.00	1.00	
600.0	3.00	48.40	599.9	5.2	5.9	-5.2	1.00	1.00	
700.0	4.00	48.40	699.7	9.3	10.4	-9.3	1.00	1.00	
727.4	4.27	48.40	727.0	10.6	11.9	-10.6	1.00	1.00	Base of Fox Hills
800.0	5.00	48.40	799.4	14.5	16.3	-14.5	1.00	1.00	
900.0	6.00	48.40	898.9	20.8	23.5	-20.8	1.00	1.00	
1,000.0	7.00	48.40	998.3	28.4	31.9	-28.4	1.00	1.00	
1,100.0	8.00	48.40	1,097.4	37.0	41.7	-37.0	1.00	1.00	
1,200.0	9.00	48.40	1,196.3	46.8	52.8	-46.8	1.00	1.00	
1,300.0	10.00	48.40	1,294.9	57.8	65.1	-57.8	1.00	1.00	
1,400.0	11.00	48.40	1,393.3	69.9	78.7	-69.9	1.00	1.00	
1,500.0	12.00	48.40	1,491.2	83.1	93.6	-83.1	1.00	1.00	
1,600.0	13.00	48.40	1,588.9	97.5	109.8	-97.5	1.00	1.00	
1,700.0	14.00	48.40	1,686.1	113.0	127.3	-113.0	1.00	1.00	
1,800.0	15.00	48.40	1,782.9	129.6	146.0	-129.6	1.00	1.00	
1,900.0	16.00	48.40	1,879.3	147.4	166.0	-147.4	1.00	1.00	
2,000.0	17.00	48.40	1,975.2	166.2	187.2	-166.2	1.00	1.00	EOB; Inc=17°
2,100.0	17.00	48.40	2,070.8	185.6	209.1	-185.6	0.00	0.00	
2,200.0	17.00	48.40	2,166.4	205.0	230.9	-205.0	0.00	0.00	
2,300.0	17.00	48.40	2,262.1	224.5	252.8	-224.5	0.00	0.00	
2,400.0	17.00	48.40	2,357.7	243.9	274.7	-243.9	0.00	0.00	
2,500.0	17.00	48.40	2,453.3	263.3	296.5	-263.3	0.00	0.00	
2,600.0	17.00	48.40	2,548.9	282.7	318.4	-282.7	0.00	0.00	
2,700.0	17.00	48.40	2,644.6	302.1	340.3	-302.1	0.00	0.00	
2,800.0	17.00	48.40	2,740.2	321.5	362.1	-321.5	0.00	0.00	
2,900.0	17.00	48.40	2,835.8	340.9	384.0	-340.9	0.00	0.00	
3,000.0	17.00	48.40	2,931.5	360.3	405.9	-360.3	0.00	0.00	
3,100.0	17.00	48.40	3,027.1	379.7	427.7	-379.7	0.00	0.00	
3,200.0	17.00	48.40	3,122.7	399.2	449.6	-399.2	0.00	0.00	
3,300.0	17.00	48.40	3,218.4	418.6	471.4	-418.6	0.00	0.00	
3,400.0	17.00	48.40	3,314.0	438.0	493.3	-438.0	0.00	0.00	
3,500.0	17.00	48.40	3,409.6	457.4	515.2	-457.4	0.00	0.00	
3,600.0	17.00	48.40	3,505.3	476.8	537.0	-476.8	0.00	0.00	
3,700.0	17.00	48.40	3,600.9	496.2	558.9	-496.2	0.00	0.00	
3,800.0	17.00	48.40	3,696.5	515.6	580.8	-515.6	0.00	0.00	
3,900.0	17.00	48.40	3,792.1	535.0	602.6	-535.0	0.00	0.00	
4,000.0	17.00	48.40	3,887.8	554.4	624.5	-554.4	0.00	0.00	
4,100.0	17.00	48.40	3,983.4	573.9	646.3	-573.9	0.00	0.00	Start Drop -1.00
4,200.0	16.00	48.40	4,079.3	592.7	667.6	-592.7	1.00	-1.00	
4,300.0	15.00	48.40	4,175.6	610.5	687.6	-610.5	1.00	-1.00	
4,400.0	14.00	48.40	4,272.5	627.1	706.3	-627.1	1.00	-1.00	
4,500.0	13.00	48.40	4,369.7	642.6	723.8	-642.6	1.00	-1.00	
4,600.0	12.00	48.40	4,467.3	656.9	739.9	-656.9	1.00	-1.00	
4,604.8	11.95	48.40	4,472.0	657.6	740.7	-657.6	1.00	-1.00	Sussex
4,700.0	11.00	48.40	4,565.3	670.2	754.8	-670.2	1.00	-1.00	
4,800.0	10.00	48.40	4,663.6	682.3	768.5	-682.3	1.00	-1.00	
4,891.6	9.08	48.40	4,754.0	692.4	779.8	-692.4	1.00	-1.00	Sussex Marker

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site:	S10-T2N-R66W (Ione)	**North Reference:**	True
Well:	Ione 1F-10H	**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
4,900.0	9.00	48.40	4,762.3	693.2	780.8	-693.2	1.00	-1.00	
5,000.0	8.00	48.40	4,861.2	703.1	791.9	-703.1	1.00	-1.00	
5,100.0	7.00	48.40	4,960.3	711.7	801.6	-711.7	1.00	-1.00	
5,200.0	6.00	48.40	5,059.7	719.2	810.1	-719.2	1.00	-1.00	
5,239.5	5.60	48.40	5,099.0	721.9	813.1	-721.9	1.00	-1.00	Shannon
5,300.0	5.00	48.40	5,159.2	725.6	817.3	-725.6	1.00	-1.00	
5,400.0	4.00	48.40	5,258.9	730.8	823.1	-730.8	1.00	-1.00	
5,500.0	3.00	48.40	5,358.7	734.9	827.7	-734.9	1.00	-1.00	
5,600.0	2.00	48.40	5,458.6	737.8	831.0	-737.8	1.00	-1.00	
5,700.0	1.00	48.40	5,558.6	739.5	832.9	-739.5	1.00	-1.00	
5,800.0	0.00	0.00	5,658.6	740.1	833.6	-740.1	1.00	-1.00	EOD; Inc=0°
5,900.0	0.00	0.00	5,758.6	740.1	833.6	-740.1	0.00	0.00	
6,000.0	0.00	0.00	5,858.6	740.1	833.6	-740.1	0.00	0.00	
6,100.0	0.00	0.00	5,958.6	740.1	833.6	-740.1	0.00	0.00	
6,200.0	0.00	0.00	6,058.6	740.1	833.6	-740.1	0.00	0.00	
6,300.0	0.00	0.00	6,158.6	740.1	833.6	-740.1	0.00	0.00	
6,400.0	0.00	0.00	6,258.6	740.1	833.6	-740.1	0.00	0.00	
6,423.4	0.00	0.00	6,282.0	740.1	833.6	-740.1	0.00	0.00	Teepee Buttes
6,500.0	0.00	0.00	6,358.6	740.1	833.6	-740.1	0.00	0.00	
6,600.0	0.00	0.00	6,458.6	740.1	833.6	-740.1	0.00	0.00	
6,681.2	0.00	0.00	6,539.8	740.1	833.6	-740.1	0.00	0.00	Start Build 8.00
6,700.0	1.50	180.08	6,558.6	739.8	833.6	-739.8	8.00	8.00	
6,800.0	9.50	180.08	6,658.0	730.2	833.6	-730.2	8.00	8.00	
6,900.0	17.50	180.08	6,755.2	706.9	833.5	-706.9	8.00	8.00	
7,000.0	25.50	180.08	6,848.2	670.3	833.5	-670.3	8.00	8.00	
7,100.0	33.50	180.08	6,935.1	621.1	833.4	-621.1	8.00	8.00	
7,200.0	41.50	180.08	7,014.4	560.3	833.3	-560.3	8.00	8.00	
7,300.0	49.50	180.08	7,084.4	489.0	833.2	-489.0	8.00	8.00	
7,371.4	55.21	180.08	7,128.0	432.5	833.1	-432.5	8.00	8.00	Sharon Springs
7,400.0	57.50	180.08	7,143.8	408.7	833.1	-408.7	8.00	8.00	
7,496.3	65.21	180.08	7,190.0	324.2	833.0	-324.2	8.00	8.00	Niobrara
7,500.0	65.50	180.08	7,191.5	320.9	833.0	-320.9	8.00	8.00	
7,600.0	73.50	180.08	7,226.5	227.3	832.9	-227.3	8.00	8.00	
7,659.4	78.25	180.08	7,241.0	169.7	832.8	-169.7	8.00	8.00	B Chalk
7,700.0	81.50	180.08	7,248.1	129.7	832.7	-129.7	8.00	8.00	
7,800.0	89.50	180.08	7,256.0	30.1	832.6	-30.1	8.00	8.00	
7,806.2	90.00	180.08	7,256.0	23.9	832.6	-23.9	8.00	8.00	LP @ 7256' TVD; 90°
7,900.0	90.00	180.08	7,256.0	-69.9	832.5	69.9	0.00	0.00	
8,000.0	90.00	180.08	7,256.0	-169.9	832.3	169.9	0.00	0.00	
8,100.0	90.00	180.08	7,256.0	-269.9	832.2	269.9	0.00	0.00	
8,200.0	90.00	180.08	7,256.0	-369.9	832.0	369.9	0.00	0.00	
8,300.0	90.00	180.08	7,256.0	-469.9	831.9	469.9	0.00	0.00	
8,400.0	90.00	180.08	7,256.0	-569.9	831.8	569.9	0.00	0.00	
8,500.0	90.00	180.08	7,256.0	-669.9	831.6	669.9	0.00	0.00	
8,600.0	90.00	180.08	7,256.0	-769.9	831.5	769.9	0.00	0.00	
8,700.0	90.00	180.08	7,256.0	-869.9	831.4	869.9	0.00	0.00	
8,800.0	90.00	180.08	7,256.0	-969.9	831.2	969.9	0.00	0.00	
8,900.0	90.00	180.08	7,256.0	-1,069.9	831.1	1,069.9	0.00	0.00	
9,000.0	90.00	180.08	7,256.0	-1,169.9	831.0	1,169.9	0.00	0.00	
9,100.0	90.00	180.08	7,256.0	-1,269.9	830.8	1,269.9	0.00	0.00	
9,200.0	90.00	180.08	7,256.0	-1,369.9	830.7	1,369.9	0.00	0.00	
9,300.0	90.00	180.08	7,256.0	-1,469.9	830.5	1,469.9	0.00	0.00	

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site:	S10-T2N-R66W (Ione)	**North Reference:**	True
Well:	Ione 1F-10H	**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
9,400.0	90.00	180.08	7,256.0	-1,569.9	830.4	1,569.9	0.00	0.00	
9,500.0	90.00	180.08	7,256.0	-1,669.9	830.3	1,669.9	0.00	0.00	
9,600.0	90.00	180.08	7,256.0	-1,769.9	830.1	1,769.9	0.00	0.00	
9,700.0	90.00	180.08	7,256.0	-1,869.9	830.0	1,869.9	0.00	0.00	
9,800.0	90.00	180.08	7,256.0	-1,969.9	829.9	1,969.9	0.00	0.00	
9,900.0	90.00	180.08	7,256.0	-2,069.9	829.7	2,069.9	0.00	0.00	
10,000.0	90.00	180.08	7,256.0	-2,169.9	829.6	2,169.9	0.00	0.00	
10,100.0	90.00	180.08	7,256.0	-2,269.9	829.4	2,269.9	0.00	0.00	
10,200.0	90.00	180.08	7,256.0	-2,369.9	829.3	2,369.9	0.00	0.00	
10,300.0	90.00	180.08	7,256.0	-2,469.9	829.2	2,469.9	0.00	0.00	
10,400.0	90.00	180.08	7,256.0	-2,569.9	829.0	2,569.9	0.00	0.00	
10,500.0	90.00	180.08	7,256.0	-2,669.9	828.9	2,669.9	0.00	0.00	
10,600.0	90.00	180.08	7,256.0	-2,769.9	828.8	2,769.9	0.00	0.00	
10,700.0	90.00	180.08	7,256.0	-2,869.9	828.6	2,869.9	0.00	0.00	
10,800.0	90.00	180.08	7,256.0	-2,969.9	828.5	2,969.9	0.00	0.00	
10,900.0	90.00	180.08	7,256.0	-3,069.9	828.4	3,069.9	0.00	0.00	
11,000.0	90.00	180.08	7,256.0	-3,169.9	828.2	3,169.9	0.00	0.00	
11,100.0	90.00	180.08	7,256.0	-3,269.9	828.1	3,269.9	0.00	0.00	
11,200.0	90.00	180.08	7,256.0	-3,369.9	827.9	3,369.9	0.00	0.00	
11,300.0	90.00	180.08	7,256.0	-3,469.9	827.8	3,469.9	0.00	0.00	
11,400.0	90.00	180.08	7,256.0	-3,569.9	827.7	3,569.9	0.00	0.00	
11,500.0	90.00	180.08	7,256.0	-3,669.9	827.5	3,669.9	0.00	0.00	
11,600.0	90.00	180.08	7,256.0	-3,769.9	827.4	3,769.9	0.00	0.00	
11,700.0	90.00	180.08	7,256.0	-3,869.9	827.3	3,869.9	0.00	0.00	
11,800.0	90.00	180.08	7,256.0	-3,969.9	827.1	3,969.9	0.00	0.00	
11,888.1	90.00	180.08	7,256.0	-4,058.0	827.0	4,058.0	0.00	0.00	Ione 1F-10H PBHL
11,888.1	90.00	180.08	7,256.0	-4,058.0	827.0	4,058.0	0.00	0.00	TD at 11888.1 - Ione 1F-10H PBHL NEW

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
Ione 1F-10H PBHL	0.00	0.00	7,256.0	-4,058.0	869.4	1,297,159.08	3,208,152.04	40.146690	-104.755420
- plan misses target center by 42.4ft at 11888.1ft MD (7256.0 TVD, -4058.0 N, 827.0 E)									
- Point									
Ione 1F-10H PBHL NEW	0.00	0.00	7,256.0	-4,058.0	827.0	1,297,158.72	3,208,109.64	40.146690	-104.755572
- plan hits target center									
- Circle (radius 25.0)									

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site:	S10-T2N-R66W (Ione)	**North Reference:**	True
Well:	Ione 1F-10H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #2		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
727.4	727.0	Base of Fox Hills			
4,604.8	4,472.0	Sussex			
4,891.6	4,754.0	Sussex Marker			
5,239.5	5,099.0	Shannon			
6,423.4	6,282.0	Teepee Buttes			
7,371.4	7,128.0	Sharon Springs			
7,496.3	7,190.0	Niobrara			
7,659.4	7,241.0	B Chalk			

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'
2,000.0	1,975.2	166.2	187.2	EOB; Inc=17°
4,100.0	3,983.4	573.9	646.3	Start Drop -1.00
5,800.0	5,658.6	740.1	833.6	EOD; Inc=0°
6,681.2	6,539.8	740.1	833.6	Start Build 8.00
7,806.2	7,256.0	23.9	832.6	LP @ 7256' TVD; 90°
11,888.1	7,256.0	-4,058.0	827.0	TD at 11888.1

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S10-T2N-R66W (Ione)
Ione 1F-10H
Hz
Plan #2

Anticollision Report

31 January, 2013

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 500.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 1/31/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,888.1	Plan #2 (Hz)	MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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
S10-T2N-R66W (Ione)						
HSR McPeek 13-10A (Existing) - Existing - NO SURVEY						Out of range
Ione #11 (Existing) - Existing - GYRO						Out of range
Ione #2 (Exsiting) - Existing - GYRO	1,341.4	1,326.6	392.8	388.7	95.595	CC
Ione #2 (Exsiting) - Existing - GYRO	1,400.0	1,383.4	393.0	388.7	90.146	ES
Ione #2 (Exsiting) - Existing - GYRO	2,500.0	2,444.8	498.9	489.6	53.426	SF
Ione #31-10 (Existing) - Existing - Existing						Out of range
Ione #32-10 (Existing) - Existing - GYRO						Out of range
Ione #33-10 (Existing) - Existing - GYRO						Out of range
Ione #34-10 (Existing) - Existing - GYRO						Out of range
Ione #41-10 (Existing) - Existing - GYRO	7,518.1	7,181.6	151.3	124.6	5.670	CC, ES, SF
Ione #43-10 (Existing) - Existing - GYRO	10,182.4	7,227.2	287.7	230.0	4.986	CC, ES
Ione #43-10 (Existing) - Existing - GYRO	10,200.0	7,226.8	288.2	230.2	4.971	SF
Ione #44-10 (Existing) - Existing - GYRO	11,860.5	7,259.6	213.1	133.0	2.661	CC, ES, SF
Ione #8-2-10 (Exsiting) - Existing - SURVEYS	8,437.2	7,379.7	387.8	355.3	11.951	CC, ES
Ione #8-2-10 (Exsiting) - Existing - SURVEYS	8,500.0	7,378.4	392.8	359.6	11.832	SF
Ione 1A-10H - Hz - Plan #2	200.0	200.0	50.3	49.7	77.075	CC, ES
Ione 1A-10H - Hz - Plan #2	700.0	694.4	79.1	76.6	32.607	SF
Ione 1B-10H - Hz - Plan #1	300.0	300.0	39.1	38.1	39.060	CC, ES
Ione 1B-10H - Hz - Plan #1	700.0	697.1	59.1	56.7	24.349	SF
Ione 1C-10H - Hz - Plan #1	300.0	300.0	28.0	26.9	27.900	CC, ES
Ione 1C-10H - Hz - Plan #1	700.0	699.1	41.4	39.0	17.107	SF
Ione 1E-10H - Hz - Plan #2	300.0	300.0	8.4	7.4	8.370	CC, ES
Ione 1E-10H - Hz - Plan #2	600.0	600.2	12.9	10.9	6.296	SF
Ione 1G-10H - Hz - Plan #2	200.0	200.0	11.2	10.5	17.128	CC, ES
Ione 1G-10H - Hz - Plan #2	11,888.1	12,101.1	366.3	237.1	2.834	SF
Ione 42-10 (Existing) - Existing - GYRO	9,104.5	7,229.5	337.7	297.4	8.370	CC, ES, SF
Ione 4-2-10 (Existing) - Existing - SURVEYS	1,289.3	1,312.1	391.2	384.6	58.876	CC
Ione 4-2-10 (Existing) - Existing - SURVEYS	1,300.0	1,321.8	391.3	384.5	58.122	ES
Ione 4-2-10 (Existing) - Existing - SURVEYS	1,700.0	1,657.5	450.4	440.6	46.073	SF
Ione 44-10 (Existing) - Existing - GYRO	11,860.6	7,238.9	212.8	126.4	2.463	CC, ES, SF
Ione 6-0-10 (Existing) - Existing - SURVEYS	2,063.6	2,118.7	58.5	51.0	7.812	CC, ES, SF
Ione 6-4-10 (Existing) - Existing - GYRO						Out of range
Ione 6-8-10 (Existing) - DD - Plan #1						Out of range
Ione 8-6-10 (Existing) - DD - Plan #1	10,845.7	7,445.7	440.7	361.9	5.597	CC, ES
Ione 8-6-10 (Existing) - DD - Plan #1	10,900.0	7,445.7	444.0	364.4	5.574	SF
McPeek #14-10 (Existing) - Existing - SURVEYS						Out of range
McPeek #24-10 (Existing) - Existing - SURVEYS						Out of range
Robert L. McPeek Unit #1 (Existing) - Existing - NO SUR						Out of range

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione #2 (Exsiting) - Existing - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-Gyro

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	124.55	-229.8	333.7	405.4				
100.0	100.0	88.5	88.5	0.2	0.1	124.58	-230.0	333.7	405.3	405.0	0.23	1,768.272	
200.0	200.0	188.5	188.5	0.3	0.2	124.67	-230.6	333.4	405.4	404.9	0.49	825.327	
300.0	300.0	287.8	287.8	0.5	0.3	124.84	-231.7	332.9	405.6	404.8	0.75	538.763	
400.0	400.0	389.1	389.1	0.7	0.3	76.75	-232.9	332.2	405.6	404.5	1.02	398.580	
500.0	500.0	488.1	488.1	0.9	0.4	77.30	-234.0	331.5	405.0	403.7	1.28	315.675	
600.0	599.9	589.0	589.0	1.0	0.5	78.09	-235.1	330.9	404.2	402.7	1.56	259.587	
700.0	699.7	690.1	690.0	1.2	0.6	79.14	-236.0	330.0	402.8	401.0	1.84	218.731	
800.0	799.4	790.4	790.4	1.4	0.7	80.40	-236.5	329.1	401.0	398.9	2.14	187.441	
900.0	898.9	890.6	890.6	1.7	0.8	81.91	-236.8	328.1	398.9	396.5	2.45	162.550	
1,000.0	998.3	989.6	989.6	1.9	0.9	83.66	-237.1	327.0	396.9	394.1	2.79	142.320	
1,100.0	1,097.4	1,088.7	1,088.7	2.2	1.0	85.67	-237.3	326.0	395.1	391.9	3.15	125.607	
1,200.0	1,196.3	1,187.4	1,187.3	2.5	1.0	87.90	-237.4	325.1	393.7	390.2	3.53	111.656	
1,300.0	1,294.9	1,286.1	1,286.1	2.8	1.1	90.38	-237.5	324.2	392.9	389.0	3.93	99.942	
1,341.4	1,335.7	1,326.6	1,326.5	2.9	1.2	91.47	-237.5	323.9	392.8	388.7	4.11	95.595	CC
1,400.0	1,393.3	1,383.4	1,383.4	3.1	1.2	93.06	-237.6	323.4	393.0	388.7	4.36	90.146	ES
1,500.0	1,491.2	1,481.4	1,481.3	3.5	1.3	95.97	-237.8	322.8	394.4	389.6	4.81	81.966	
1,600.0	1,588.9	1,578.7	1,578.6	3.9	1.4	99.06	-238.0	322.2	397.0	391.7	5.28	75.165	
1,700.0	1,686.1	1,676.2	1,676.1	4.4	1.5	102.32	-238.1	321.5	401.3	395.5	5.77	69.571	
1,800.0	1,782.9	1,773.4	1,773.3	4.8	1.6	105.70	-238.2	320.8	407.2	401.0	6.26	65.017	
1,900.0	1,879.3	1,869.9	1,869.8	5.3	1.6	109.16	-238.1	320.1	415.1	408.4	6.76	61.387	
2,000.0	1,975.2	1,967.0	1,966.9	5.8	1.7	112.69	-237.9	319.2	425.2	417.9	7.26	58.571	
2,100.0	2,070.8	2,062.9	2,062.8	6.3	1.8	116.15	-237.4	318.7	437.0	429.2	7.73	56.550	
2,200.0	2,166.4	2,158.5	2,158.4	6.9	1.9	119.43	-236.8	318.1	450.4	442.3	8.17	55.143	
2,300.0	2,262.1	2,254.3	2,254.2	7.4	2.0	122.51	-236.3	317.7	465.3	456.7	8.58	54.209	
2,400.0	2,357.7	2,349.5	2,349.4	7.9	2.1	125.39	-235.7	317.2	481.5	472.5	8.97	53.661	
2,500.0	2,453.3	2,444.8	2,444.7	8.5	2.1	128.08	-235.2	316.9	498.9	489.6	9.34	53.426	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione #41-10 (Existing) - Existing - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-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
2,300.0	2,262.1	2,250.3	2,250.2	7.4	3.9	32.64	309.4	725.1	479.9	470.8	9.06	52.993	
2,400.0	2,357.7	2,346.1	2,346.0	7.9	4.1	34.53	309.8	724.2	454.4	444.7	9.67	47.012	
2,500.0	2,453.3	2,443.0	2,442.9	8.5	4.3	36.66	310.3	723.0	429.1	418.8	10.32	41.581	
2,600.0	2,548.9	2,539.2	2,539.0	9.0	4.4	39.04	310.6	721.6	404.2	393.2	11.02	36.673	
2,700.0	2,644.6	2,632.6	2,632.5	9.6	4.6	41.66	310.9	720.3	380.1	368.4	11.77	32.298	
2,800.0	2,740.2	2,724.5	2,724.4	10.1	4.8	44.58	310.9	719.9	358.0	345.4	12.57	28.477	
2,900.0	2,835.8	2,820.6	2,820.5	10.6	4.9	48.00	311.0	719.8	337.1	323.7	13.45	25.063	
3,000.0	2,931.5	2,915.6	2,915.5	11.2	5.1	51.80	310.9	719.7	317.7	303.3	14.39	22.076	
3,100.0	3,027.1	3,010.6	3,010.5	11.7	5.3	56.04	310.8	719.8	300.1	284.7	15.39	19.503	
3,200.0	3,122.7	3,106.4	3,106.3	12.3	5.4	60.76	310.8	720.0	284.5	268.0	16.43	17.312	
3,300.0	3,218.4	3,203.1	3,203.0	12.8	5.6	66.02	310.9	720.0	270.8	253.3	17.50	15.473	
3,400.0	3,314.0	3,299.0	3,298.9	13.4	5.8	71.69	311.1	719.8	259.6	241.0	18.56	13.984	
3,500.0	3,409.6	3,394.6	3,394.5	13.9	5.9	77.77	311.3	719.5	251.2	231.6	19.57	12.834	
3,600.0	3,505.3	3,490.7	3,490.6	14.5	6.1	84.19	311.5	719.1	245.9	225.4	20.49	12.004	
3,700.0	3,600.9	3,587.2	3,587.0	15.0	6.3	90.81	311.9	718.6	243.8	222.6	21.26	11.468	
3,715.0	3,615.2	3,601.6	3,601.5	15.1	6.3	91.81	312.0	718.4	243.8	222.4	21.37	11.411	
3,800.0	3,696.5	3,683.3	3,683.2	15.5	6.4	97.46	312.5	717.7	245.0	223.1	21.87	11.203	
3,900.0	3,792.1	3,779.3	3,779.1	16.1	6.6	104.01	313.1	716.6	249.5	227.2	22.29	11.191	
4,000.0	3,887.8	3,874.2	3,874.0	16.6	6.8	110.23	313.7	715.3	257.4	234.8	22.55	11.414	
4,100.0	3,983.4	3,968.0	3,967.9	17.2	6.9	115.92	313.9	714.5	268.7	246.0	22.67	11.853	
4,200.0	4,079.3	4,063.5	4,063.3	17.7	7.1	121.11	313.9	714.2	282.7	260.0	22.68	12.464	
4,300.0	4,175.6	4,160.0	4,159.9	18.2	7.3	125.61	313.9	713.8	297.7	275.1	22.65	13.147	
4,400.0	4,272.5	4,257.3	4,257.1	18.7	7.4	129.53	314.0	713.1	313.2	290.6	22.59	13.866	
4,500.0	4,369.7	4,354.6	4,354.4	19.1	7.6	132.99	314.2	711.6	328.6	306.1	22.52	14.592	
4,600.0	4,467.3	4,451.1	4,450.9	19.5	7.8	136.04	314.4	709.5	343.9	321.4	22.45	15.316	
4,700.0	4,565.3	4,547.4	4,547.1	19.9	8.0	138.71	314.4	706.9	359.0	336.6	22.40	16.027	
4,800.0	4,663.6	4,643.9	4,643.6	20.2	8.1	141.01	314.0	704.2	373.9	351.5	22.38	16.707	
4,900.0	4,762.3	4,740.4	4,740.0	20.6	8.3	142.97	313.2	701.4	388.3	365.9	22.39	17.340	
5,000.0	4,861.2	4,837.7	4,837.4	20.8	8.5	144.61	311.9	698.9	402.1	379.7	22.45	17.915	
5,100.0	4,960.3	4,938.3	4,937.9	21.1	8.6	145.96	310.5	697.0	414.7	392.2	22.55	18.393	
5,200.0	5,059.7	5,039.7	5,039.3	21.4	8.8	147.05	309.6	695.5	425.4	402.7	22.68	18.754	
5,300.0	5,159.2	5,140.5	5,140.1	21.6	9.0	147.99	309.1	693.9	434.4	411.5	22.83	19.023	
5,400.0	5,258.9	5,241.8	5,241.4	21.7	9.2	148.74	309.0	692.5	441.6	418.5	23.01	19.186	
5,500.0	5,358.7	5,341.8	5,341.4	21.9	9.4	149.29	309.0	691.6	447.1	423.9	23.22	19.253	
5,600.0	5,458.6	5,441.2	5,440.8	22.0	9.5	149.69	308.9	690.7	451.2	427.7	23.45	19.242	
5,700.0	5,558.6	5,541.0	5,540.5	22.1	9.7	149.96	308.7	689.9	453.9	430.2	23.69	19.160	
5,800.0	5,658.6	5,641.4	5,640.9	22.2	9.9	-161.50	308.5	689.1	455.1	431.1	23.96	18.989	
5,900.0	5,758.6	5,741.5	5,741.0	22.3	10.1	-161.50	308.2	689.1	455.4	431.1	24.27	18.767	
6,000.0	5,858.6	5,841.1	5,840.6	22.4	10.2	-161.50	307.8	689.0	455.8	431.2	24.57	18.554	
6,100.0	5,958.6	5,941.0	5,940.6	22.5	10.4	-161.50	307.4	688.8	456.2	431.4	24.87	18.347	
6,200.0	6,058.6	6,041.0	6,040.6	22.5	10.6	-161.44	307.2	688.2	456.6	431.5	25.16	18.151	
6,300.0	6,158.6	6,140.6	6,140.2	22.6	10.8	-161.37	306.9	687.5	457.1	431.7	25.45	17.963	
6,400.0	6,258.6	6,240.4	6,240.0	22.7	10.9	-161.32	306.5	687.0	457.7	432.0	25.74	17.780	
6,500.0	6,358.6	6,341.3	6,340.9	22.8	11.1	-161.29	306.1	686.6	458.2	432.1	26.04	17.593	
6,600.0	6,458.6	6,441.9	6,441.4	22.9	11.3	-161.26	305.9	686.3	458.5	432.1	26.35	17.401	
6,700.0	6,558.6	6,541.9	6,541.4	23.0	11.5	18.71	305.7	685.9	458.5	431.9	26.60	17.234	
6,800.0	6,658.0	6,641.3	6,640.9	22.9	11.6	19.37	305.6	685.6	449.7	423.2	26.44	17.008	
6,900.0	6,755.2	6,738.2	6,737.7	22.8	11.8	21.06	305.4	685.3	428.0	402.2	25.76	16.617	
7,000.0	6,848.2	6,831.0	6,830.5	22.5	12.0	24.14	305.2	684.9	394.2	369.6	24.62	16.009	
7,100.0	6,935.1	6,917.5	6,917.1	22.1	12.1	29.30	305.0	684.3	349.5	326.3	23.24	15.039	
7,200.0	7,014.4	6,996.4	6,995.9	21.7	12.2	37.70	304.7	683.6	296.2	274.0	22.18	13.353	
7,300.0	7,084.4	7,066.4	7,065.9	21.3	12.4	50.89	304.4	683.0	238.1	215.5	22.59	10.537	

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 Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione #41-10 (Existing) - Existing - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-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
7,400.0	7,143.8	7,126.1	7,125.6	20.9	12.5	68.87	304.0	682.3	183.5	158.7	24.84	7.390	
7,500.0	7,191.5	7,174.2	7,173.7	20.5	12.6	86.65	303.8	681.8	152.2	125.6	26.56	5.729	
7,518.1	7,198.8	7,181.6	7,181.1	20.4	12.6	89.28	303.7	681.7	151.3	124.6	26.68	5.670	CC, ES, SF
7,600.0	7,226.5	7,209.6	7,209.2	20.2	12.6	97.63	303.6	681.4	169.6	143.0	26.61	6.375	
7,700.0	7,248.1	7,231.8	7,231.4	20.1	12.7	99.30	303.4	681.1	230.6	204.2	26.33	8.758	
7,800.0	7,256.0	7,240.2	7,239.7	20.1	12.7	90.81	303.4	681.0	312.5	286.1	26.42	11.831	
7,900.0	7,256.0	7,240.8	7,240.3	20.2	12.7	90.11	303.4	681.0	402.8	376.2	26.67	15.103	
8,000.0	7,256.0	7,241.3	7,240.8	20.5	12.7	90.31	303.4	681.0	496.9	469.7	27.15	18.301	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione #43-10 (Existing) - Existing - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-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
9,800.0	7,256.0	7,236.4	7,234.7	41.4	12.8	88.95	-2,351.6	541.6	478.4	427.0	51.43	9.302	
9,900.0	7,256.0	7,234.0	7,232.4	43.0	12.8	88.48	-2,351.7	541.7	403.0	350.0	53.06	7.595	
10,000.0	7,256.0	7,231.6	7,230.0	44.5	12.8	88.01	-2,351.7	541.8	340.6	285.9	54.70	6.226	
10,100.0	7,256.0	7,229.2	7,227.6	46.1	12.8	87.53	-2,351.8	541.9	299.2	242.9	56.34	5.311	
10,182.4	7,256.0	7,227.2	7,225.6	47.4	12.8	87.13	-2,351.9	542.0	287.7	230.0	57.69	4.986	CC, ES
10,200.0	7,256.0	7,226.8	7,225.2	47.7	12.8	87.05	-2,351.9	542.0	288.2	230.2	57.98	4.971	SF
10,300.0	7,256.0	7,224.4	7,222.8	49.3	12.8	86.57	-2,351.9	542.2	310.8	251.2	59.63	5.212	
10,400.0	7,256.0	7,222.0	7,220.4	50.9	12.8	86.08	-2,352.0	542.3	360.7	299.4	61.27	5.887	
10,500.0	7,256.0	7,219.5	7,217.9	52.5	12.8	85.60	-2,352.0	542.4	428.5	365.6	62.92	6.810	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione #44-10 (Existing) - Existing - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-Gyro

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
11,500.0	7,256.0	7,261.4	7,259.7	69.1	6.4	89.64	-4,030.1	614.0	418.8	344.9	73.87	5.669	
11,600.0	7,256.0	7,260.9	7,259.2	70.8	6.4	89.51	-4,030.1	614.0	336.6	261.0	75.59	4.452	
11,700.0	7,256.0	7,260.4	7,258.7	72.4	6.4	89.38	-4,030.1	614.0	266.8	189.5	77.31	3.451	
11,800.0	7,256.0	7,259.9	7,258.2	74.1	6.4	89.25	-4,030.1	614.0	221.5	142.5	79.03	2.803	
11,860.5	7,256.0	7,259.6	7,257.9	75.2	6.4	89.17	-4,030.1	614.0	213.1	133.0	80.07	2.661	CC, ES, SF
11,888.1	7,256.0	7,259.5	7,257.8	75.6	6.4	89.14	-4,030.1	614.0	214.8	134.3	80.54	2.667	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione #8-2-10 (Exsiting) - Existing - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 93-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	5.2	5.2	0.0	0.0	128.84	-292.8	363.6	466.9				
100.0	100.0	107.5	107.5	0.2	0.2	128.76	-292.0	363.7	466.4	466.1	0.34	1,368.124	
126.8	126.8	131.8	131.8	0.2	0.2	128.73	-291.7	363.8	466.3	465.9	0.43	1,085.152	
200.0	200.0	197.8	197.8	0.3	0.3	128.63	-291.4	364.7	466.9	466.2	0.67	694.477	
300.0	300.0	285.4	285.3	0.5	0.5	128.46	-291.8	367.5	469.7	468.7	1.00	469.933	
400.0	400.0	367.0	366.8	0.7	0.7	79.90	-293.7	372.3	475.6	474.3	1.32	359.205	
500.0	500.0	459.0	458.3	0.9	0.9	79.87	-297.7	380.4	484.6	483.0	1.67	290.752	
600.0	599.9	539.6	538.2	1.0	1.1	79.93	-302.2	389.4	496.0	494.0	2.00	248.189	
8,200.0	7,256.0	7,384.6	7,277.5	21.6	20.7	-92.44	-607.5	1,219.2	454.5	424.6	29.92	15.191	
8,300.0	7,256.0	7,382.6	7,275.4	22.3	20.7	-92.13	-607.5	1,219.2	411.3	380.4	30.90	13.310	
8,400.0	7,256.0	7,380.5	7,273.3	23.1	20.7	-91.82	-607.6	1,219.3	389.5	357.5	32.00	12.172	
8,437.2	7,256.0	7,379.7	7,272.6	23.4	20.7	-91.71	-607.6	1,219.3	387.8	355.3	32.45	11.951	CC, ES
8,500.0	7,256.0	7,378.4	7,271.3	24.0	20.7	-91.52	-607.6	1,219.3	392.8	359.6	33.20	11.832	SF
8,600.0	7,256.0	7,376.4	7,269.3	25.1	20.7	-91.22	-607.7	1,219.4	420.5	386.1	34.48	12.198	
8,700.0	7,256.0	7,374.4	7,267.2	26.2	20.7	-90.92	-607.7	1,219.5	468.4	432.6	35.82	13.077	

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 Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione 1A-10H - Hz - Plan #2

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
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	-50.3	50.3				
100.0	100.0	100.0	100.0	0.2	0.2	-89.95	0.0	-50.3	50.3	50.0	0.30	165.667	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-50.3	50.3	49.7	0.65	77.075	CC, ES
300.0	300.0	299.3	299.2	0.5	0.5	-89.44	0.5	-51.0	51.0	50.0	1.00	50.977	
400.0	400.0	398.4	398.4	0.7	0.7	-137.01	1.9	-53.2	53.9	52.6	1.35	39.940	
500.0	500.0	497.4	497.3	0.9	0.9	-136.57	4.1	-56.9	59.6	57.9	1.70	34.987	
600.0	599.9	596.1	595.8	1.0	1.1	-136.48	7.3	-61.9	67.9	65.9	2.06	32.987	
700.0	699.7	694.4	693.8	1.2	1.3	-136.62	11.3	-68.4	79.1	76.6	2.43	32.607	SF
800.0	799.4	792.2	791.1	1.4	1.5	-136.89	16.2	-76.2	92.9	90.1	2.80	33.184	
900.0	898.9	889.3	887.7	1.7	1.7	-137.22	22.0	-85.4	109.5	106.3	3.19	34.349	
1,000.0	998.3	985.7	983.3	1.9	2.0	-137.55	28.5	-95.9	128.7	125.2	3.59	35.875	
1,100.0	1,097.4	1,081.3	1,077.9	2.2	2.3	-137.85	35.9	-107.7	150.7	146.7	4.00	37.619	
1,200.0	1,196.3	1,176.0	1,171.3	2.5	2.6	-138.12	44.0	-120.6	175.2	170.8	4.44	39.483	
1,300.0	1,294.9	1,269.6	1,263.4	2.8	2.9	-138.35	52.8	-134.7	202.4	197.5	4.89	41.402	
1,400.0	1,393.3	1,362.2	1,354.2	3.1	3.3	-138.53	62.3	-149.9	232.1	226.7	5.36	43.332	
1,500.0	1,491.2	1,453.5	1,443.5	3.5	3.6	-138.68	72.4	-166.1	264.3	258.5	5.84	45.240	
1,600.0	1,588.9	1,543.6	1,531.3	3.9	4.0	-138.78	83.1	-183.3	299.1	292.7	6.35	47.107	
1,700.0	1,686.1	1,632.3	1,617.5	4.4	4.4	-138.85	94.4	-201.4	336.2	329.4	6.87	48.919	
1,800.0	1,782.9	1,719.7	1,701.9	4.8	4.8	-138.89	106.2	-220.2	375.8	368.4	7.42	50.668	
1,900.0	1,879.3	1,805.6	1,784.6	5.3	5.2	-138.90	118.5	-239.8	417.7	409.7	7.98	52.352	
2,000.0	1,975.2	1,892.6	1,868.1	5.8	5.7	-138.90	131.5	-260.7	461.8	453.2	8.56	53.921	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione 1B-10H - Hz - 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
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	-39.1	39.1				
100.0	100.0	100.0	100.0	0.2	0.2	-89.95	0.0	-39.1	39.1	38.8	0.30	128.852	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-39.1	39.1	38.5	0.65	59.947	
300.0	300.0	300.0	300.0	0.5	0.5	-89.95	0.0	-39.1	39.1	38.1	1.00	39.060	CC, ES
400.0	400.0	399.5	399.5	0.7	0.7	-138.27	0.7	-39.7	40.4	39.0	1.35	29.898	
500.0	500.0	498.9	498.9	0.9	0.9	-138.06	2.5	-41.5	44.1	42.4	1.70	25.922	
600.0	599.9	598.2	598.0	1.0	1.0	-137.78	5.7	-44.5	50.4	48.3	2.06	24.450	
700.0	699.7	697.1	696.8	1.2	1.2	-137.47	10.0	-48.6	59.1	56.7	2.43	24.349	SF
800.0	799.4	795.7	795.1	1.4	1.4	-137.18	15.6	-53.9	70.3	67.5	2.81	25.049	
900.0	898.9	893.9	892.8	1.7	1.7	-136.92	22.3	-60.3	84.0	80.8	3.20	26.230	
1,000.0	998.3	991.4	989.8	1.9	1.9	-136.68	30.3	-67.8	100.1	96.5	3.62	27.695	
1,100.0	1,097.4	1,088.4	1,085.9	2.2	2.2	-136.47	39.3	-76.4	118.7	114.6	4.05	29.316	
1,200.0	1,196.3	1,184.6	1,181.1	2.5	2.4	-136.27	49.5	-86.0	139.6	135.1	4.50	31.009	
1,300.0	1,294.9	1,280.1	1,275.3	2.8	2.7	-136.09	60.7	-96.7	163.0	158.0	4.98	32.717	
1,400.0	1,393.3	1,374.7	1,368.4	3.1	3.1	-135.92	72.9	-108.3	188.7	183.2	5.49	34.402	
1,500.0	1,491.2	1,468.3	1,460.3	3.5	3.4	-135.75	86.1	-120.8	216.7	210.7	6.01	36.038	
1,600.0	1,588.9	1,561.0	1,550.8	3.9	3.8	-135.58	100.3	-134.3	247.0	240.5	6.57	37.612	
1,700.0	1,686.1	1,652.6	1,640.0	4.4	4.1	-135.41	115.3	-148.5	279.6	272.5	7.15	39.114	
1,800.0	1,782.9	1,743.0	1,727.8	4.8	4.5	-135.23	131.1	-163.6	314.4	306.7	7.76	40.539	
1,900.0	1,879.3	1,833.7	1,815.4	5.3	5.0	-135.07	148.0	-179.5	351.3	343.0	8.39	41.880	
2,000.0	1,975.2	1,926.0	1,904.7	5.8	5.4	-135.03	165.3	-196.0	389.6	380.6	9.05	43.066	
2,100.0	2,070.8	2,018.2	1,993.6	6.3	5.8	-135.33	182.6	-212.4	428.5	418.8	9.73	44.059	
2,200.0	2,166.4	2,110.3	2,082.6	6.9	6.3	-135.58	199.9	-228.8	467.3	456.9	10.41	44.900	

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 Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione 1C-10H - Hz - 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
0.0	0.0	0.0	0.0	0.0	0.0	-89.95	0.0	-28.0	28.0				
100.0	100.0	100.0	100.0	0.2	0.2	-89.95	0.0	-28.0	28.0	27.6	0.30	92.037	
200.0	200.0	200.0	200.0	0.3	0.3	-89.95	0.0	-28.0	28.0	27.3	0.65	42.820	
300.0	300.0	300.0	300.0	0.5	0.5	-89.95	0.0	-28.0	28.0	26.9	1.00	27.900	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	-139.51	0.0	-28.0	28.6	27.3	1.35	21.174	
500.0	500.0	499.8	499.8	0.9	0.9	-141.14	0.8	-28.3	30.9	29.2	1.70	18.176	
600.0	599.9	599.5	599.5	1.0	1.0	-141.56	3.2	-29.3	35.2	33.2	2.06	17.116	
700.0	699.7	699.1	698.9	1.2	1.2	-141.10	7.2	-30.9	41.4	39.0	2.42	17.107	SF
800.0	799.4	798.5	798.2	1.4	1.4	-140.13	12.8	-33.3	49.6	46.8	2.80	17.708	
900.0	898.9	897.6	897.0	1.7	1.6	-138.95	20.0	-36.2	59.7	56.5	3.20	18.670	
1,000.0	998.3	996.4	995.4	1.9	1.8	-137.74	28.7	-39.8	71.8	68.2	3.62	19.840	
1,100.0	1,097.4	1,094.9	1,093.2	2.2	2.1	-136.59	38.9	-44.1	85.9	81.8	4.07	21.113	
1,200.0	1,196.3	1,192.9	1,190.4	2.5	2.3	-135.54	50.6	-48.9	101.9	97.4	4.55	22.421	
1,300.0	1,294.9	1,290.5	1,286.9	2.8	2.6	-134.59	63.8	-54.4	119.9	114.8	5.06	23.717	
1,400.0	1,393.3	1,387.5	1,382.6	3.1	2.9	-133.74	78.4	-60.4	139.8	134.2	5.60	24.973	
1,500.0	1,491.2	1,483.9	1,477.5	3.5	3.2	-132.98	94.5	-67.1	161.7	155.5	6.18	26.170	
1,600.0	1,588.9	1,579.7	1,571.4	3.9	3.6	-132.29	111.8	-74.3	185.5	178.7	6.79	27.297	
1,700.0	1,686.1	1,674.8	1,664.3	4.4	3.9	-131.66	130.5	-82.0	211.1	203.7	7.45	28.351	
1,800.0	1,782.9	1,769.2	1,756.2	4.8	4.3	-131.09	150.5	-90.3	238.7	230.5	8.14	29.331	
1,900.0	1,879.3	1,864.2	1,848.4	5.3	4.7	-130.63	171.6	-99.0	267.9	259.0	8.86	30.244	
2,000.0	1,975.2	1,959.5	1,940.9	5.8	5.1	-130.45	192.9	-107.8	298.2	288.6	9.60	31.067	
2,100.0	2,070.8	2,054.6	2,033.1	6.3	5.6	-130.62	214.2	-116.7	329.1	318.8	10.36	31.778	
2,200.0	2,166.4	2,149.7	2,125.4	6.9	6.0	-130.77	235.4	-125.5	360.0	348.9	11.12	32.373	
2,300.0	2,262.1	2,244.8	2,217.7	7.4	6.4	-130.89	256.7	-134.3	390.9	379.0	11.89	32.878	
2,400.0	2,357.7	2,339.9	2,310.0	7.9	6.8	-130.99	277.9	-143.1	421.8	409.2	12.66	33.310	
2,500.0	2,453.3	2,435.0	2,402.3	8.5	7.2	-131.08	299.2	-151.9	452.7	439.3	13.44	33.684	
2,600.0	2,548.9	2,530.1	2,494.5	9.0	7.7	-131.16	320.4	-160.7	483.6	469.4	14.22	34.010	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione 1E-10H - Hz - Plan #2

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
0.0	0.0	0.0	0.0	0.0	0.0	-89.94	0.0	-8.4	8.4				
100.0	100.0	100.0	100.0	0.2	0.2	-89.94	0.0	-8.4	8.4	8.1	0.30	27.611	
200.0	200.0	200.0	200.0	0.3	0.3	-89.94	0.0	-8.4	8.4	7.7	0.65	12.846	
300.0	300.0	300.0	300.0	0.5	0.5	-89.94	0.0	-8.4	8.4	7.4	1.00	8.370	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	-142.01	0.0	-8.4	9.1	7.7	1.35	6.703	
500.0	500.0	500.1	500.1	0.9	0.9	-146.52	0.8	-8.0	10.7	9.0	1.70	6.308	
600.0	599.9	600.2	600.1	1.0	1.0	-147.45	3.2	-6.9	12.9	10.9	2.06	6.296	SF
700.0	699.7	700.3	700.1	1.2	1.2	-146.22	7.1	-5.1	15.6	13.2	2.42	6.471	
800.0	799.4	800.4	800.0	1.4	1.4	-143.86	12.7	-2.5	18.9	16.1	2.80	6.751	
900.0	898.9	900.5	899.8	1.7	1.6	-141.02	19.8	0.8	22.7	19.5	3.20	7.091	
1,000.0	998.3	1,000.5	999.4	1.9	1.8	-138.07	28.5	4.9	27.1	23.4	3.63	7.458	
1,100.0	1,097.4	1,100.6	1,098.9	2.2	2.1	-135.23	38.8	9.7	32.1	28.0	4.10	7.828	
1,200.0	1,196.3	1,200.7	1,198.1	2.5	2.3	-132.58	50.6	15.2	37.8	33.1	4.61	8.186	
1,300.0	1,294.9	1,300.7	1,297.0	2.8	2.6	-130.18	64.0	21.5	44.1	38.9	5.18	8.520	
1,400.0	1,393.3	1,400.6	1,395.5	3.1	2.9	-128.01	79.0	28.4	51.1	45.3	5.79	8.826	
1,500.0	1,491.2	1,500.5	1,493.8	3.5	3.3	-126.06	95.5	36.1	58.9	52.4	6.47	9.101	
1,600.0	1,588.9	1,600.4	1,591.6	3.9	3.6	-124.32	113.6	44.6	67.3	60.1	7.20	9.347	
1,700.0	1,686.1	1,700.2	1,689.1	4.4	4.0	-122.76	133.1	53.7	76.3	68.4	7.98	9.564	
1,800.0	1,782.9	1,799.9	1,786.0	4.8	4.5	-121.41	154.2	63.5	86.1	77.3	8.82	9.766	
1,900.0	1,879.3	1,899.3	1,882.6	5.3	4.9	-120.95	175.5	73.4	96.8	87.1	9.67	10.012	
2,000.0	1,975.2	1,998.6	1,979.1	5.8	5.3	-121.36	196.8	83.4	108.3	97.8	10.51	10.306	
2,100.0	2,070.8	2,097.9	2,075.5	6.3	5.7	-122.13	218.1	93.3	120.3	109.0	11.35	10.604	
2,200.0	2,166.4	2,197.2	2,172.0	6.9	6.2	-122.76	239.4	103.3	132.3	120.2	12.19	10.859	
2,300.0	2,262.1	2,296.4	2,268.4	7.4	6.6	-123.28	260.7	113.2	144.4	131.4	13.03	11.078	
2,400.0	2,357.7	2,395.7	2,364.9	7.9	7.0	-123.72	282.0	123.1	156.4	142.6	13.88	11.269	
2,500.0	2,453.3	2,494.9	2,461.3	8.5	7.5	-124.10	303.4	133.1	168.5	153.8	14.73	11.436	
2,600.0	2,548.9	2,594.2	2,557.7	9.0	7.9	-124.43	324.7	143.0	180.6	165.0	15.59	11.584	
2,700.0	2,644.6	2,693.5	2,654.2	9.6	8.3	-124.72	346.0	152.9	192.6	176.2	16.44	11.715	
2,800.0	2,740.2	2,792.7	2,750.6	10.1	8.8	-124.97	367.3	162.9	204.7	187.4	17.30	11.833	
2,900.0	2,835.8	2,892.0	2,847.1	10.6	9.2	-125.20	388.6	172.8	216.8	198.6	18.16	11.939	
3,000.0	2,931.5	2,991.3	2,943.5	11.2	9.6	-125.40	409.9	182.7	228.9	209.8	19.02	12.035	
3,100.0	3,027.1	3,090.5	3,039.9	11.7	10.1	-125.58	431.2	192.7	240.9	221.1	19.88	12.122	
3,200.0	3,122.7	3,189.8	3,136.4	12.3	10.5	-125.74	452.5	202.6	253.0	232.3	20.74	12.201	
3,300.0	3,218.4	3,289.1	3,232.8	12.8	11.0	-125.89	473.8	212.6	265.1	243.5	21.60	12.274	
3,400.0	3,314.0	3,388.3	3,329.3	13.4	11.4	-126.03	495.1	222.5	277.2	254.7	22.46	12.340	
3,500.0	3,409.6	3,487.6	3,425.7	13.9	11.9	-126.15	516.4	232.4	289.3	266.0	23.33	12.402	
3,600.0	3,505.3	3,586.9	3,522.1	14.5	12.3	-126.27	537.7	242.4	301.4	277.2	24.19	12.459	
3,700.0	3,600.9	3,686.1	3,618.6	15.0	12.7	-126.37	559.0	252.3	313.5	288.4	25.05	12.512	
3,800.0	3,696.5	3,785.4	3,715.0	15.5	13.2	-126.47	580.3	262.2	325.6	299.6	25.92	12.561	
3,900.0	3,792.1	3,883.7	3,810.7	16.1	13.6	-126.62	601.1	271.9	337.7	311.0	26.76	12.623	
4,000.0	3,887.8	3,981.5	3,906.1	16.6	14.0	-127.01	620.4	280.9	350.3	322.8	27.52	12.729	
4,100.0	3,983.4	4,079.0	4,001.6	17.2	14.4	-127.63	638.2	289.2	363.3	335.1	28.21	12.880	
4,200.0	4,079.3	4,176.4	4,097.3	17.7	14.7	-128.44	654.5	296.8	376.3	347.5	28.82	13.058	
4,300.0	4,175.6	4,273.7	4,193.2	18.2	15.0	-129.25	669.2	303.7	388.8	359.4	29.38	13.234	
4,400.0	4,272.5	4,370.9	4,289.3	18.7	15.3	-130.04	682.5	309.9	400.6	370.7	29.88	13.409	
4,500.0	4,369.7	4,468.1	4,385.6	19.1	15.6	-130.82	694.3	315.4	411.9	381.6	30.32	13.584	
4,600.0	4,467.3	4,565.1	4,482.0	19.5	15.8	-131.60	704.7	320.2	422.7	392.0	30.72	13.761	
4,700.0	4,565.3	4,662.1	4,578.5	19.9	16.1	-132.37	713.5	324.3	432.9	401.8	31.06	13.939	
4,800.0	4,663.6	4,759.0	4,675.0	20.2	16.3	-133.15	720.8	327.7	442.6	411.2	31.35	14.119	
4,900.0	4,762.3	4,855.8	4,771.6	20.6	16.4	-133.93	726.7	330.5	451.7	420.1	31.58	14.302	
5,000.0	4,861.2	4,952.5	4,868.2	20.8	16.6	-134.72	731.1	332.5	460.3	428.5	31.77	14.489	
5,100.0	4,960.3	5,049.0	4,964.7	21.1	16.7	-135.51	733.9	333.9	468.3	436.4	31.90	14.680	

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 Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione 1E-10H - Hz - Plan #2

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
5,200.0	5,059.7	5,145.5	5,061.1	21.4	16.8	-136.31	735.4	334.5	475.9	443.9	31.99	14.875	
5,300.0	5,159.2	5,243.6	5,159.2	21.6	16.9	-137.11	735.5	334.6	482.8	450.7	32.05	15.065	
5,400.0	5,258.9	5,343.3	5,258.9	21.7	17.0	-137.78	735.5	334.6	488.6	456.4	32.12	15.209	
5,500.0	5,358.7	5,443.1	5,358.7	21.9	17.1	-138.28	735.5	334.6	493.1	460.9	32.23	15.300	
5,600.0	5,458.6	5,543.0	5,458.6	22.0	17.2	-138.64	735.5	334.6	496.4	464.0	32.36	15.340	
5,700.0	5,558.6	5,642.9	5,558.6	22.1	17.3	-138.85	735.5	334.6	498.3	465.8	32.52	15.326	
5,800.0	5,658.6	5,742.9	5,658.6	22.2	17.4	-90.52	735.5	334.6	499.0	466.3	32.68	15.271	
5,900.0	5,758.6	5,842.9	5,758.6	22.3	17.5	-90.52	735.5	334.6	499.0	466.1	32.89	15.171	
6,000.0	5,858.6	5,942.9	5,858.6	22.4	17.6	-90.52	735.5	334.6	499.0	465.9	33.11	15.071	
6,100.0	5,958.6	6,042.9	5,958.6	22.5	17.7	-90.52	735.5	334.6	499.0	465.7	33.33	14.971	
6,200.0	6,058.6	6,142.9	6,058.6	22.5	17.8	-90.52	735.5	334.6	499.0	465.4	33.55	14.872	
6,300.0	6,158.6	6,242.9	6,158.6	22.6	17.9	-90.52	735.5	334.6	499.0	465.2	33.78	14.773	
6,400.0	6,258.6	6,342.9	6,258.6	22.7	18.0	-90.52	735.5	334.6	499.0	465.0	34.00	14.674	
6,500.0	6,358.6	6,442.9	6,358.6	22.8	18.1	-90.52	735.5	334.6	499.0	464.8	34.23	14.576	
6,600.0	6,458.6	6,542.9	6,458.6	22.9	18.2	-90.52	735.5	334.6	499.0	464.5	34.46	14.479	
6,700.0	6,558.6	6,642.9	6,558.6	23.0	18.3	89.43	735.5	334.6	499.0	464.3	34.72	14.372	
6,767.9	6,626.3	6,710.6	6,626.3	22.9	18.4	90.00	735.5	334.6	499.0	464.0	34.92	14.288	
6,800.0	6,658.0	6,742.4	6,658.0	22.9	18.4	90.52	735.5	334.6	499.0	463.9	35.08	14.223	
6,900.0	6,755.2	6,839.6	6,755.2	22.8	18.5	93.05	735.5	334.6	499.8	464.1	35.61	14.035	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione 1G-10H - Hz - Plan #2

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
0.0	0.0	0.0	0.0	0.0	0.0	90.04	0.0	11.2	11.2				
100.0	100.0	100.0	100.0	0.2	0.2	90.04	0.0	11.2	11.2	10.9	0.30	36.815	
200.0	200.0	200.0	200.0	0.3	0.3	90.04	0.0	11.2	11.2	10.5	0.65	17.128	CC, ES
300.0	300.0	299.8	299.8	0.5	0.5	87.74	0.5	11.9	11.9	10.9	1.00	11.899	
400.0	400.0	399.6	399.6	0.7	0.7	35.97	1.9	14.1	13.5	12.2	1.35	9.991	
500.0	500.0	499.4	499.2	0.9	0.9	34.14	4.3	17.7	15.3	13.5	1.70	8.950	
600.0	599.9	599.1	598.8	1.0	1.1	33.44	7.6	22.8	17.1	15.1	2.06	8.313	
700.0	699.7	698.8	698.2	1.2	1.3	33.53	11.9	29.3	19.1	16.7	2.42	7.893	
800.0	799.4	798.5	797.4	1.4	1.5	34.21	17.1	37.3	21.2	18.4	2.79	7.598	
900.0	898.9	898.1	896.4	1.7	1.8	35.29	23.3	46.7	23.5	20.3	3.18	7.379	
1,000.0	998.3	997.7	995.1	1.9	2.0	36.66	30.4	57.5	25.9	22.3	3.59	7.204	
1,100.0	1,097.4	1,097.2	1,093.6	2.2	2.3	38.22	38.5	69.8	28.4	24.4	4.02	7.054	
1,200.0	1,196.3	1,196.8	1,191.7	2.5	2.7	39.90	47.5	83.5	31.1	26.6	4.49	6.915	
1,300.0	1,294.9	1,296.2	1,289.6	2.8	3.0	41.65	57.4	98.6	33.9	28.9	5.00	6.781	
1,400.0	1,393.3	1,395.7	1,387.0	3.1	3.4	43.43	68.2	115.1	36.9	31.4	5.56	6.646	
1,500.0	1,491.2	1,495.1	1,484.1	3.5	3.8	45.21	80.0	133.0	40.1	34.0	6.17	6.508	
1,600.0	1,588.9	1,594.4	1,580.7	3.9	4.2	46.97	92.7	152.3	43.5	36.7	6.84	6.368	
1,700.0	1,686.1	1,693.8	1,676.9	4.4	4.7	48.68	106.3	173.0	47.1	39.6	7.57	6.228	
1,800.0	1,782.9	1,793.0	1,772.6	4.8	5.2	50.35	120.8	195.1	50.9	42.6	8.37	6.088	
1,900.0	1,879.3	1,892.9	1,868.6	5.3	5.7	52.52	135.9	218.1	54.4	45.2	9.26	5.874	
2,000.0	1,975.2	1,992.8	1,964.6	5.8	6.2	55.85	151.0	241.1	57.0	46.7	10.32	5.521	
2,100.0	2,070.8	2,092.7	2,060.7	6.3	6.7	59.63	166.1	264.1	59.3	47.8	11.47	5.165	
2,200.0	2,166.4	2,192.6	2,156.7	6.9	7.2	63.11	181.3	287.1	61.8	49.1	12.65	4.883	
2,300.0	2,262.1	2,292.5	2,252.7	7.4	7.7	66.31	196.4	310.2	64.5	50.7	13.85	4.660	
2,400.0	2,357.7	2,392.4	2,348.8	7.9	8.2	69.24	211.5	333.2	67.5	52.4	15.04	4.484	
2,500.0	2,453.3	2,492.3	2,444.8	8.5	8.7	71.92	226.6	356.2	70.5	54.3	16.24	4.344	
2,600.0	2,548.9	2,592.2	2,540.8	9.0	9.2	74.37	241.7	379.2	73.8	56.3	17.43	4.233	
2,700.0	2,644.6	2,692.1	2,636.9	9.6	9.8	76.61	256.9	402.2	77.1	58.5	18.60	4.145	
2,800.0	2,740.2	2,792.0	2,732.9	10.1	10.3	78.66	272.0	425.2	80.6	60.8	19.77	4.074	
2,900.0	2,835.8	2,891.9	2,828.9	10.6	10.8	80.55	287.1	448.2	84.1	63.2	20.93	4.019	
3,000.0	2,931.5	2,991.8	2,924.9	11.2	11.3	82.28	302.2	471.3	87.7	65.7	22.08	3.974	
3,100.0	3,027.1	3,091.7	3,021.0	11.7	11.8	83.87	317.3	494.3	91.5	68.2	23.21	3.940	
3,200.0	3,122.7	3,191.6	3,117.0	12.3	12.3	85.33	332.4	517.3	95.2	70.9	24.34	3.912	
3,300.0	3,218.4	3,291.5	3,213.0	12.8	12.9	86.68	347.6	540.3	99.1	73.6	25.46	3.891	
3,400.0	3,314.0	3,391.4	3,309.1	13.4	13.4	87.93	362.7	563.3	102.9	76.4	26.57	3.875	
3,500.0	3,409.6	3,491.3	3,405.1	13.9	13.9	89.09	377.8	586.3	106.9	79.2	27.67	3.863	
3,600.0	3,505.3	3,591.2	3,501.1	14.5	14.4	90.17	392.9	609.4	110.8	82.1	28.76	3.854	
3,700.0	3,600.9	3,691.1	3,597.2	15.0	14.9	91.17	408.0	632.4	114.8	85.0	29.85	3.848	
3,800.0	3,696.5	3,791.0	3,693.2	15.5	15.5	92.11	423.2	655.4	118.9	87.9	30.93	3.844	
3,900.0	3,792.1	3,890.9	3,789.2	16.1	16.0	92.98	438.3	678.4	122.9	90.9	32.00	3.842	
4,000.0	3,887.8	3,990.8	3,885.2	16.6	16.5	93.80	453.4	701.4	127.0	94.0	33.07	3.841	
4,100.0	3,983.4	4,090.7	3,981.3	17.2	17.0	94.56	468.5	724.4	131.1	97.0	34.13	3.842	
4,200.0	4,079.3	4,190.6	4,077.3	17.7	17.5	94.96	483.6	747.4	135.2	100.0	35.17	3.845	
4,300.0	4,175.6	4,290.6	4,173.4	18.2	18.1	94.61	498.7	770.5	139.1	102.9	36.18	3.845	
4,400.0	4,272.5	4,390.5	4,269.4	18.7	18.6	93.58	513.9	793.5	142.9	105.8	37.16	3.846	
4,500.0	4,369.7	4,490.3	4,365.4	19.1	19.1	91.93	529.0	816.5	146.7	108.6	38.10	3.851	
4,600.0	4,467.3	4,590.0	4,461.2	19.5	19.6	89.71	544.1	839.5	150.6	111.7	38.95	3.867	
4,700.0	4,565.3	4,689.7	4,557.0	19.9	20.2	86.97	559.1	862.4	154.8	115.1	39.68	3.901	
4,800.0	4,663.6	4,789.2	4,652.6	20.2	20.7	83.77	574.2	885.3	159.6	119.3	40.25	3.964	
4,900.0	4,762.3	4,888.5	4,748.1	20.6	21.2	80.18	589.2	908.2	165.1	124.4	40.62	4.064	
5,000.0	4,861.2	4,987.6	4,843.4	20.8	21.7	76.29	604.2	931.0	171.6	130.9	40.75	4.211	
5,100.0	4,960.3	5,086.4	4,938.4	21.1	22.2	72.20	619.2	953.8	179.5	138.8	40.62	4.417	

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 Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione 1G-10H - Hz - Plan #2

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
5,200.0	5,059.7	5,186.4	5,034.7	21.4	22.7	68.10	634.0	976.4	188.5	148.3	40.26	4.683	
5,300.0	5,159.2	5,286.9	5,131.9	21.6	23.2	64.34	648.0	997.7	198.3	158.5	39.76	4.987	
5,400.0	5,258.9	5,387.7	5,229.8	21.7	23.6	60.90	661.1	1,017.6	208.6	169.4	39.16	5.326	
5,500.0	5,358.7	5,488.8	5,328.5	21.9	24.1	57.76	673.2	1,036.1	219.4	180.9	38.51	5.697	
5,600.0	5,458.6	5,590.2	5,427.8	22.0	24.4	54.88	684.5	1,053.2	230.6	192.8	37.83	6.096	
5,700.0	5,558.6	5,691.9	5,527.8	22.1	24.8	52.24	694.8	1,068.9	242.1	205.0	37.12	6.522	
5,800.0	5,658.6	5,793.9	5,628.3	22.2	25.1	98.20	704.1	1,083.1	253.9	217.5	36.38	6.979	
5,900.0	5,758.6	5,896.4	5,729.6	22.3	25.4	96.00	712.5	1,095.9	265.3	229.6	35.73	7.425	
6,000.0	5,858.6	5,999.3	5,831.7	22.4	25.7	94.21	719.9	1,107.2	275.7	240.5	35.24	7.824	
6,100.0	5,958.6	6,102.7	5,934.4	22.5	26.0	92.76	726.4	1,117.0	284.8	250.0	34.87	8.168	
6,200.0	6,058.6	6,206.5	6,037.7	22.5	26.2	91.61	731.9	1,125.3	292.6	258.0	34.63	8.451	
6,300.0	6,158.6	6,310.7	6,141.6	22.6	26.4	90.72	736.3	1,132.1	299.0	264.6	34.49	8.671	
6,400.0	6,258.6	6,415.1	6,245.8	22.7	26.5	90.07	739.7	1,137.3	304.0	269.5	34.45	8.824	
6,500.0	6,358.6	6,519.7	6,350.3	22.8	26.7	89.63	742.1	1,140.9	307.5	273.0	34.50	8.912	
6,600.0	6,458.6	6,624.4	6,455.0	22.9	26.8	89.38	743.4	1,142.9	309.4	274.8	34.63	8.933	
6,700.0	6,558.6	6,728.0	6,558.6	23.0	26.8	-90.80	743.7	1,143.4	309.8	275.0	34.85	8.890	
6,800.0	6,658.0	6,827.4	6,658.0	22.9	26.9	-92.53	743.7	1,143.4	310.1	276.0	34.13	9.085	
6,900.0	6,755.2	6,926.2	6,756.8	22.8	27.0	-96.50	743.0	1,143.4	312.0	279.6	32.31	9.655	
7,000.0	6,848.2	7,030.0	6,859.8	22.5	26.9	-100.97	730.9	1,143.4	316.0	285.8	30.23	10.454	
7,100.0	6,935.1	7,138.1	6,964.0	22.1	26.7	-105.21	702.6	1,143.4	321.8	293.5	28.35	11.353	
7,200.0	7,014.4	7,250.8	7,066.8	21.7	26.5	-109.10	656.8	1,143.4	328.9	302.1	26.79	12.278	
7,300.0	7,084.4	7,368.3	7,165.0	21.3	26.1	-112.55	592.4	1,143.4	336.7	311.1	25.60	13.153	
7,400.0	7,143.8	7,490.6	7,254.6	20.9	25.6	-115.48	509.4	1,143.4	344.5	319.7	24.77	13.907	
7,500.0	7,191.5	7,617.4	7,331.2	20.5	25.2	-117.81	408.6	1,143.4	351.5	327.2	24.27	14.480	
7,600.0	7,226.5	7,747.9	7,390.2	20.2	24.8	-119.49	292.4	1,143.4	357.0	332.9	24.08	14.825	
7,700.0	7,248.1	7,881.1	7,427.7	20.1	24.6	-120.49	164.8	1,143.4	360.5	336.3	24.20	14.898	
7,800.0	7,256.0	8,015.7	7,441.0	20.1	24.5	-120.77	31.0	1,143.3	361.7	337.1	24.60	14.702	
7,817.5	7,256.1	8,034.2	7,441.0	20.1	24.6	-120.75	12.6	1,143.3	361.6	336.9	24.70	14.641	
7,900.0	7,256.0	8,116.6	7,441.0	20.2	24.7	-120.76	-69.9	1,143.3	361.8	336.6	25.16	14.377	
8,000.0	7,256.0	8,216.6	7,441.0	20.5	24.9	-120.74	-169.9	1,143.3	361.9	335.8	26.05	13.894	
8,100.0	7,256.0	8,316.6	7,441.0	21.0	25.3	-120.73	-269.9	1,143.3	362.0	334.8	27.24	13.289	
8,200.0	7,256.0	8,416.6	7,441.0	21.6	25.7	-120.72	-369.9	1,143.3	362.1	333.4	28.70	12.616	
8,300.0	7,256.0	8,516.6	7,441.0	22.3	26.3	-120.71	-469.9	1,143.3	362.2	331.8	30.40	11.917	
8,400.0	7,256.0	8,616.6	7,441.0	23.1	27.0	-120.70	-569.9	1,143.3	362.3	330.1	32.29	11.223	
8,500.0	7,256.0	8,716.6	7,441.0	24.0	27.8	-120.69	-669.9	1,143.3	362.5	328.1	34.34	10.555	
8,600.0	7,256.0	8,816.6	7,441.0	25.1	28.7	-120.68	-769.9	1,143.3	362.6	326.0	36.53	9.926	
8,700.0	7,256.0	8,916.6	7,441.0	26.2	29.6	-120.67	-869.9	1,143.3	362.7	323.9	38.83	9.340	
8,800.0	7,256.0	9,016.6	7,441.0	27.3	30.7	-120.66	-969.9	1,143.3	362.8	321.6	41.23	8.800	
8,900.0	7,256.0	9,116.6	7,441.0	28.6	31.8	-120.65	-1,069.9	1,143.3	362.9	319.2	43.70	8.304	
9,000.0	7,256.0	9,216.6	7,441.0	29.9	32.9	-120.64	-1,169.9	1,143.3	363.0	316.8	46.24	7.850	
9,100.0	7,256.0	9,316.6	7,441.0	31.2	34.1	-120.63	-1,269.9	1,143.3	363.1	314.3	48.84	7.435	
9,200.0	7,256.0	9,416.6	7,441.0	32.6	35.4	-120.62	-1,369.9	1,143.3	363.3	311.8	51.49	7.055	
9,300.0	7,256.0	9,516.6	7,441.0	34.0	36.7	-120.61	-1,469.9	1,143.3	363.4	309.2	54.17	6.708	
9,400.0	7,256.0	9,616.6	7,441.0	35.4	38.0	-120.60	-1,569.9	1,143.3	363.5	306.6	56.89	6.389	
9,500.0	7,256.0	9,716.6	7,441.0	36.9	39.4	-120.58	-1,669.9	1,143.3	363.6	303.9	59.65	6.096	
9,600.0	7,256.0	9,816.6	7,441.0	38.4	40.8	-120.57	-1,769.9	1,143.3	363.7	301.3	62.42	5.826	
9,700.0	7,256.0	9,916.6	7,441.0	39.9	42.2	-120.56	-1,869.9	1,143.3	363.8	298.6	65.23	5.578	
9,800.0	7,256.0	10,016.6	7,441.0	41.4	43.7	-120.55	-1,969.9	1,143.3	363.9	295.9	68.05	5.348	
9,900.0	7,256.0	10,116.6	7,441.0	43.0	45.2	-120.54	-2,069.9	1,143.3	364.1	293.2	70.89	5.136	
10,000.0	7,256.0	10,216.6	7,441.0	44.5	46.6	-120.53	-2,169.9	1,143.3	364.2	290.4	73.74	4.938	
10,100.0	7,256.0	10,316.6	7,441.0	46.1	48.2	-120.52	-2,269.9	1,143.3	364.3	287.7	76.61	4.755	
10,200.0	7,256.0	10,416.6	7,441.0	47.7	49.7	-120.51	-2,369.9	1,143.3	364.4	284.9	79.50	4.584	

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 Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione 1G-10H - Hz - Plan #2

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
10,300.0	7,256.0	10,516.6	7,441.0	49.3	51.2	-120.50	-2,469.9	1,143.2	364.5	282.1	82.39	4.424	
10,400.0	7,256.0	10,616.6	7,441.0	50.9	52.8	-120.49	-2,569.9	1,143.2	364.6	279.3	85.30	4.275	
10,500.0	7,256.0	10,716.6	7,441.0	52.5	54.3	-120.48	-2,669.9	1,143.2	364.7	276.5	88.21	4.135	
10,600.0	7,256.0	10,816.6	7,441.0	54.1	55.9	-120.47	-2,769.9	1,143.2	364.9	273.7	91.14	4.003	
10,700.0	7,256.0	10,916.6	7,441.0	55.8	57.5	-120.46	-2,869.9	1,143.2	365.0	270.9	94.07	3.880	
10,800.0	7,256.0	11,016.6	7,441.0	57.4	59.1	-120.45	-2,969.9	1,143.2	365.1	268.1	97.01	3.763	
10,900.0	7,256.0	11,116.6	7,441.0	59.1	60.7	-120.44	-3,069.9	1,143.2	365.2	265.2	99.95	3.654	
11,000.0	7,256.0	11,216.6	7,441.0	60.7	62.3	-120.43	-3,169.9	1,143.2	365.3	262.4	102.90	3.550	
11,100.0	7,256.0	11,316.6	7,441.0	62.4	63.9	-120.42	-3,269.9	1,143.2	365.4	259.6	105.86	3.452	
11,200.0	7,256.0	11,416.6	7,441.0	64.1	65.6	-120.40	-3,369.9	1,143.2	365.5	256.7	108.82	3.359	
11,300.0	7,256.0	11,516.6	7,441.0	65.7	67.2	-120.39	-3,469.9	1,143.2	365.7	253.9	111.79	3.271	
11,400.0	7,256.0	11,616.6	7,441.0	67.4	68.8	-120.38	-3,569.9	1,143.2	365.8	251.0	114.76	3.187	
11,500.0	7,256.0	11,716.6	7,441.0	69.1	70.5	-120.37	-3,669.9	1,143.2	365.9	248.1	117.74	3.108	
11,600.0	7,256.0	11,816.6	7,441.0	70.8	72.1	-120.36	-3,769.9	1,143.2	366.0	245.3	120.72	3.032	
11,700.0	7,256.0	11,916.6	7,441.0	72.4	73.8	-120.35	-3,869.9	1,143.2	366.1	242.4	123.70	2.960	
11,800.0	7,256.0	12,016.6	7,441.0	74.1	75.5	-120.34	-3,969.9	1,143.2	366.2	239.5	126.69	2.891	
11,845.9	7,256.0	12,062.6	7,441.0	74.9	76.2	-120.34	-4,015.8	1,143.2	366.3	238.2	128.06	2.860	
11,888.1	7,256.0	12,101.1	7,441.0	75.6	76.9	-120.33	-4,054.4	1,143.2	366.3	237.1	129.27	2.834	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione 42-10 (Existing) - Existing - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-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
8,800.0	7,256.0	7,230.4	7,227.9	27.3	12.9	87.95	-1,274.0	493.3	454.7	418.9	35.86	12.681	
8,900.0	7,256.0	7,230.1	7,227.6	28.6	12.9	87.90	-1,274.0	493.3	394.8	357.5	37.30	10.586	
9,000.0	7,256.0	7,229.8	7,227.3	29.9	12.9	87.85	-1,274.0	493.3	353.5	314.8	38.77	9.118	
9,100.0	7,256.0	7,229.5	7,227.0	31.2	12.9	87.80	-1,274.0	493.3	337.7	297.5	40.28	8.385	
9,104.5	7,256.0	7,229.5	7,227.0	31.3	12.9	87.80	-1,274.0	493.3	337.7	297.4	40.35	8.370	CC, ES, SF
9,200.0	7,256.0	7,229.2	7,226.7	32.6	12.9	87.75	-1,274.0	493.4	351.0	309.1	41.81	8.393	
9,300.0	7,256.0	7,228.9	7,226.4	34.0	12.9	87.69	-1,274.0	493.4	390.2	346.8	43.37	8.997	
9,400.0	7,256.0	7,228.5	7,226.1	35.4	12.9	87.64	-1,274.0	493.4	448.7	403.8	44.95	9.983	

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 Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione 4-2-10 (Existing) - Existing - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 123-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	128.03	-284.8	364.2	462.6				
100.0	100.0	86.8	86.8	0.2	0.2	128.03	-284.7	364.0	462.1	461.8	0.30	1,521.078	
200.0	200.0	188.0	188.0	0.3	0.3	128.03	-284.2	363.3	461.3	460.6	0.66	704.017	
300.0	300.0	287.4	287.4	0.5	0.5	128.03	-283.7	362.7	460.4	459.4	1.00	458.882	
400.0	400.0	389.5	389.5	0.7	0.7	79.78	-283.3	361.8	459.4	458.0	1.36	338.806	
500.0	500.0	503.1	503.0	0.9	0.9	80.50	-283.4	357.9	456.4	454.6	1.74	262.518	
600.0	599.9	615.2	614.6	1.0	1.1	82.11	-285.1	348.3	450.0	447.8	2.15	209.757	
700.0	699.7	723.5	722.1	1.2	1.4	84.48	-288.1	334.7	441.6	439.0	2.59	170.212	
800.0	799.4	832.5	829.5	1.4	1.8	87.68	-291.5	316.7	431.3	428.2	3.12	138.415	
900.0	898.9	939.3	934.0	1.7	2.2	91.70	-295.4	294.7	419.7	416.0	3.73	112.479	
1,000.0	998.3	1,036.4	1,028.2	1.9	2.6	96.13	-299.0	271.7	408.3	403.9	4.38	93.121	
1,100.0	1,097.4	1,134.2	1,122.8	2.2	3.1	101.14	-302.9	247.4	399.5	394.3	5.11	78.126	
1,200.0	1,196.3	1,229.8	1,214.8	2.5	3.6	106.65	-306.7	221.5	393.3	387.4	5.91	66.547	
1,289.3	1,284.4	1,312.1	1,293.4	2.8	4.0	111.87	-310.3	197.4	391.2	384.6	6.65	58.876	CC
1,300.0	1,294.9	1,321.8	1,302.7	2.8	4.1	112.51	-310.7	194.5	391.3	384.5	6.73	58.122	ES
1,400.0	1,393.3	1,408.4	1,384.8	3.1	4.6	118.39	-315.1	167.2	395.1	387.5	7.56	52.277	
1,500.0	1,491.2	1,493.1	1,464.1	3.5	5.2	124.43	-320.3	138.2	406.0	397.7	8.37	48.513	
1,600.0	1,588.9	1,576.2	1,541.3	3.9	5.7	130.40	-325.9	107.8	424.6	415.4	9.11	46.595	
1,700.0	1,686.1	1,657.5	1,616.5	4.4	6.3	135.93	-331.4	77.7	450.4	440.6	9.77	46.073	SF
1,800.0	1,782.9	1,735.7	1,688.5	4.8	6.9	140.98	-336.9	47.6	483.2	472.9	10.34	46.711	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione 44-10 (Existing) - Existing - GYRO

Offset Site Error: 0.0 ft

Survey Program: 100-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
11,500.0	7,256.0	7,240.4	7,238.8	69.1	12.7	89.67	-4,030.2	614.3	418.7	338.5	80.18	5.222	
11,600.0	7,256.0	7,240.0	7,238.3	70.8	12.7	89.55	-4,030.2	614.3	336.5	254.6	81.90	4.108	
11,700.0	7,256.0	7,239.6	7,237.9	72.4	12.7	89.43	-4,030.2	614.3	266.6	183.0	83.61	3.188	
11,800.0	7,256.0	7,239.1	7,237.4	74.1	12.7	89.31	-4,030.2	614.3	221.2	135.9	85.33	2.593	
11,860.6	7,256.0	7,238.9	7,237.2	75.2	12.7	89.24	-4,030.2	614.3	212.8	126.4	86.38	2.463	CC, ES, SF
11,888.1	7,256.0	7,238.7	7,237.1	75.6	12.7	89.21	-4,030.2	614.3	214.5	127.7	86.85	2.470	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione 6-0-10 (Existing) - Existing - SURVEYS

Offset Site Error: 0.0 ft

Survey Program: 94-Gyro

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	8.0	8.0	0.0	0.0	126.93	-273.2	363.4	454.6				
100.0	100.0	117.5	117.5	0.2	0.1	126.86	-271.6	362.2	452.9	452.6	0.25	1,841.824	
200.0	200.0	211.6	211.6	0.3	0.2	126.63	-269.2	362.1	451.2	450.7	0.51	893.303	
300.0	300.0	308.0	307.8	0.5	0.3	126.17	-266.0	363.9	450.7	449.9	0.77	586.410	
400.0	400.0	407.6	407.3	0.7	0.4	77.08	-260.9	367.5	450.5	449.5	1.05	429.383	
500.0	500.0	515.8	514.9	0.9	0.5	76.06	-251.6	373.2	449.3	447.9	1.36	329.657	
600.0	599.9	631.0	629.0	1.0	0.7	74.65	-236.1	379.0	444.9	443.1	1.72	259.369	
700.0	699.7	751.9	747.9	1.2	0.9	73.07	-214.7	382.1	435.9	433.8	2.11	206.762	
800.0	799.4	869.1	862.4	1.4	1.1	71.55	-190.1	381.6	422.4	419.9	2.52	167.809	
900.0	898.9	985.2	975.3	1.7	1.3	70.36	-163.8	375.6	403.6	400.7	2.94	137.374	
1,000.0	998.3	1,091.2	1,078.1	1.9	1.6	69.55	-139.0	367.1	381.7	378.3	3.36	113.676	
1,100.0	1,097.4	1,201.0	1,184.1	2.2	1.8	69.11	-113.1	355.0	356.4	352.6	3.80	93.906	
1,200.0	1,196.3	1,307.4	1,286.0	2.5	2.1	69.03	-86.8	339.6	327.0	322.8	4.24	77.146	
1,300.0	1,294.9	1,405.1	1,379.2	2.8	2.3	69.42	-62.5	323.3	295.1	290.4	4.69	62.986	
1,400.0	1,393.3	1,502.2	1,471.7	3.1	2.6	70.24	-38.0	306.5	262.0	256.9	5.15	50.881	
1,500.0	1,491.2	1,598.4	1,562.9	3.5	2.8	71.62	-13.1	289.2	227.3	221.7	5.63	40.391	
1,600.0	1,588.9	1,693.6	1,652.9	3.9	3.1	73.68	12.6	271.5	191.3	185.2	6.12	31.247	
1,700.0	1,686.1	1,785.8	1,739.8	4.4	3.4	76.85	38.2	254.4	154.7	148.1	6.61	23.405	
1,800.0	1,782.9	1,877.3	1,826.2	4.8	3.6	82.88	62.8	237.5	119.0	111.9	7.03	16.932	
1,900.0	1,879.3	1,967.9	1,912.4	5.3	3.9	95.02	85.5	220.8	86.6	79.4	7.24	11.957	
2,000.0	1,975.2	2,060.1	2,000.3	5.8	4.1	118.78	107.7	204.3	63.6	56.3	7.28	8.730	
2,063.6	2,036.0	2,118.7	2,056.2	6.2	4.3	140.21	122.1	193.8	58.5	51.0	7.48	7.812	CC, ES, SF
2,100.0	2,070.8	2,152.2	2,088.1	6.3	4.4	152.73	130.2	188.0	60.2	52.6	7.59	7.928	
2,200.0	2,166.4	2,244.7	2,176.6	6.9	4.6	179.55	152.4	172.6	78.6	70.5	8.08	9.728	
2,300.0	2,262.1	2,337.5	2,265.6	7.4	4.8	-165.59	174.1	157.9	107.5	98.5	8.96	11.996	
2,400.0	2,357.7	2,431.6	2,356.0	7.9	5.1	-157.22	195.8	143.4	140.1	130.2	9.81	14.272	
2,500.0	2,453.3	2,525.3	2,446.3	8.5	5.3	-152.14	217.3	129.9	173.5	162.9	10.59	16.386	
2,600.0	2,548.9	2,617.1	2,534.4	9.0	5.6	-148.53	239.0	116.2	208.0	196.7	11.31	18.395	
2,700.0	2,644.6	2,710.4	2,624.3	9.6	5.8	-146.25	259.7	102.0	243.5	231.6	11.97	20.351	
2,800.0	2,740.2	2,805.5	2,716.1	10.1	6.0	-144.72	280.0	88.2	278.8	266.2	12.60	22.124	
2,900.0	2,835.8	2,896.8	2,804.1	10.6	6.2	-143.37	300.5	75.0	314.1	300.8	13.24	23.724	
3,000.0	2,931.5	2,988.5	2,892.1	11.2	6.5	-142.12	321.9	60.8	350.2	336.3	13.88	25.224	
3,100.0	3,027.1	3,080.7	2,980.4	11.7	6.7	-140.94	344.4	46.4	386.7	372.1	14.55	26.579	
3,200.0	3,122.7	3,172.8	3,068.1	12.3	7.0	-139.76	368.2	31.8	423.5	408.2	15.22	27.818	
3,300.0	3,218.4	3,265.3	3,156.3	12.8	7.2	-138.77	392.0	17.0	460.4	444.6	15.89	28.969	
3,400.0	3,314.0	3,359.8	3,246.2	13.4	7.5	-137.86	416.7	2.0	497.4	480.9	16.56	30.030	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 S10-T2N-R66W (Ione) - Ione 8-6-10 (Existing) - DD - 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
10,700.0	7,256.0	7,445.7	7,274.0	55.8	25.1	-90.00	-3,016.2	1,269.1	464.1	387.9	76.26	6.086	
10,800.0	7,256.0	7,445.7	7,274.0	57.4	25.1	-90.00	-3,016.2	1,269.1	443.0	365.1	77.96	5.683	
10,845.7	7,256.0	7,445.7	7,274.0	58.2	25.1	-90.00	-3,016.2	1,269.1	440.7	361.9	78.74	5.597	CC, ES
10,900.0	7,256.0	7,445.7	7,274.0	59.1	25.1	-90.00	-3,016.2	1,269.1	444.0	364.4	79.66	5.574	SF
11,000.0	7,256.0	7,445.7	7,274.0	60.7	25.1	-90.00	-3,016.2	1,269.1	466.9	385.6	81.36	5.739	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Ione 1F-10H
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Reference Site:	S10-T2N-R66W (Ione)	**MD Reference:**	WELL @ 5012.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Ione 1F-10H	**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 @ 5012.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Ione 1F-10H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.48°