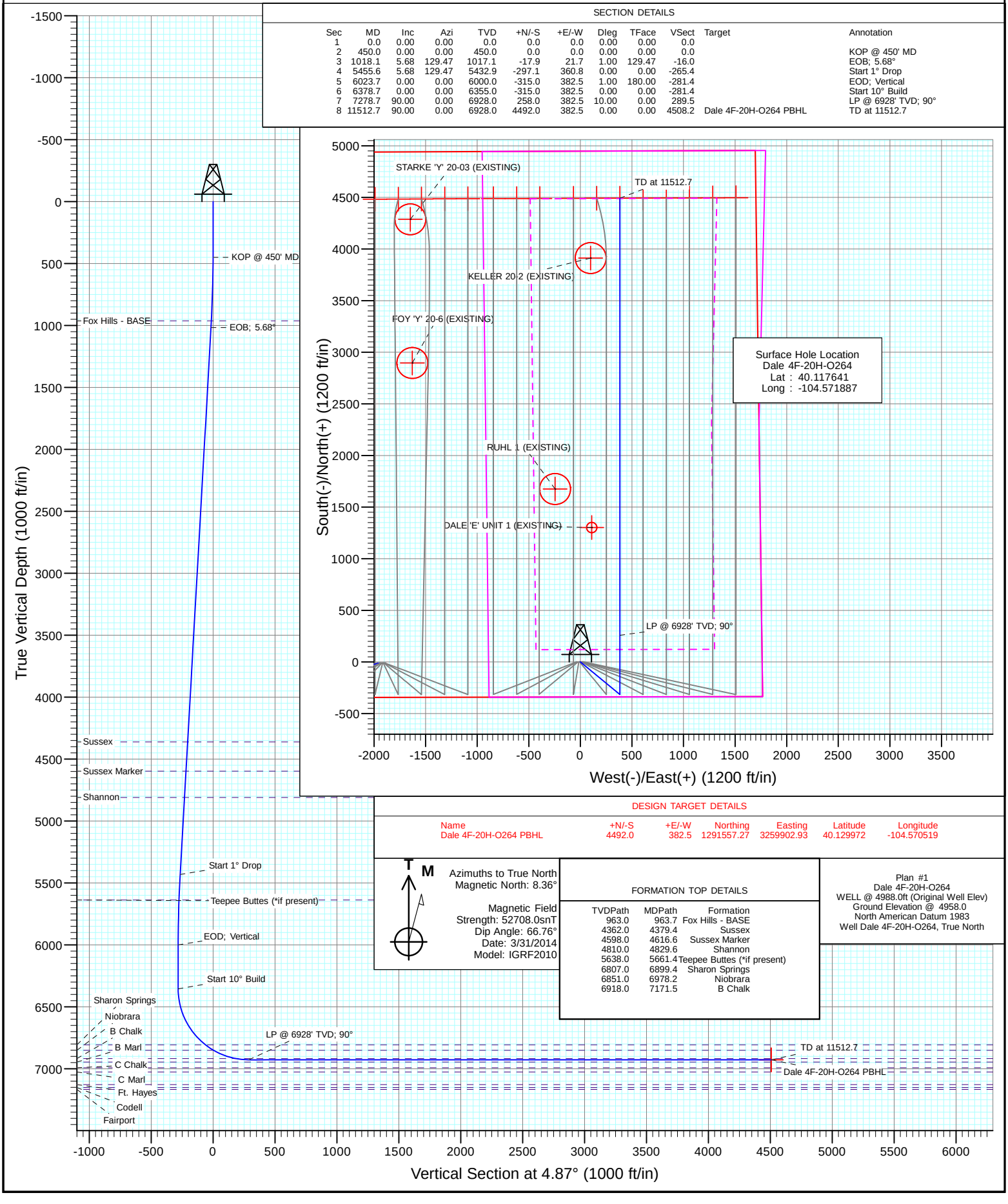
encana natural gas

Project: DJ Wattenberg
Site: S20-T2N-R64W (Dale)
Well: Dale 4F-20H-O264
Wellbore: HZ
Design: Plan #1

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSect	Target	Annotation
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0		
2	450.0	0.00	0.00	450.0	0.0	0.0	0.00	0.00	0.0		KOP @ 450' MD
3	1018.1	5.68	129.47	1017.1	-17.9	21.7	1.00	129.47	-16.0		EOB; 5.68°
4	5455.6	5.68	129.47	5432.9	-297.1	360.8	0.00	0.00	-265.4		Start 1° Drop
5	6023.7	0.00	0.00	6000.0	-315.0	382.5	1.00	180.00	-281.4		EOD; Vertical
6	6378.7	0.00	0.00	6355.0	-315.0	382.5	0.00	0.00	-281.4		Start 10° Build
7	7278.7	90.00	0.00	6928.0	258.0	382.5	10.00	0.00	289.5		LP @ 6928' TVD; 90°
8	11512.7	90.00	0.00	6928.0	4492.0	382.5	0.00	0.00	4508.2	Dale 4F-20H-O264 PBHL	TD at 11512.7



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Dale 4F-20H-O264 PBHL	4492.0	382.5	1291557.27	3259902.93	40.129972	-104.570519

Azimuths to True North
Magnetic North: 8.36°

Magnetic Field
Strength: 52708.0snT
Dip Angle: 66.76°
Date: 3/31/2014
Model: IGRF2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
963.0	963.7	Fox Hills - BASE
4362.0	4379.4	Sussex
4598.0	4616.6	Sussex Marker
4810.0	4829.6	Shannon
5638.0	5661.4	Teepee Buttes (*if present)
6807.0	6899.4	Sharon Springs
6851.0	6978.2	Niobrara
6918.0	7171.5	B Chalk

Plan #1
Dale 4F-20H-O264
WELL @ 4988.0ft (Original Well Elev)
Ground Elevation @ 4958.0
North American Datum 1983
Well Dale 4F-20H-O264, True North

ENCANA

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site:	S20-T2N-R64W (Dale)	**North Reference:**	True
Well:	Dale 4F-20H-O264	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

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 S20-T2N-R64W (Dale)

Site Position:		**Northing:**	1,287,029.38 ft	**Latitude:**	40.117609
From:	Lat/Long	**Easting:**	3,257,598.23 ft	**Longitude:**	-104.578929
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.60 °

Well Dale 4F-20H-O264

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,287,061.55 ft	**Latitude:**	40.117641
	+E/-W	0.0 ft	**Easting:**	3,259,567.44 ft	**Longitude:**	-104.571887
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,958.0 ft

Wellbore HZ

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/31/2014	8.36	66.76	52,708

Design Plan #1

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	4.87

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	
450.0	0.00	0.00	450.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,018.1	5.68	129.47	1,017.1	-17.9	21.7	1.00	1.00	0.00	129.47	
5,455.6	5.68	129.47	5,432.9	-297.1	360.8	0.00	0.00	0.00	0.00	
6,023.7	0.00	0.00	6,000.0	-315.0	382.5	1.00	-1.00	0.00	180.00	
6,378.7	0.00	0.00	6,355.0	-315.0	382.5	0.00	0.00	0.00	0.00	
7,278.7	90.00	0.00	6,928.0	258.0	382.5	10.00	10.00	0.00	0.00	
11,512.7	90.00	0.00	6,928.0	4,492.0	382.5	0.00	0.00	0.00	0.00	Dale 4F-20H-O264 PI

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Project:	DJ Wattenberg	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site:	S20-T2N-R64W (Dale)	**North Reference:**	True
Well:	Dale 4F-20H-O264	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	KOP @ 450' MD
500.0	0.50	129.47	500.0	-0.1	0.2	-0.1	1.00	1.00	
600.0	1.50	129.47	600.0	-1.2	1.5	-1.1	1.00	1.00	
700.0	2.50	129.47	699.9	-3.5	4.2	-3.1	1.00	1.00	
800.0	3.50	129.47	799.8	-6.8	8.2	-6.1	1.00	1.00	
900.0	4.50	129.47	899.5	-11.2	13.6	-10.0	1.00	1.00	
963.7	5.14	129.47	963.0	-14.6	17.8	-13.1	1.00	1.00	Fox Hills - BASE
1,000.0	5.50	129.47	999.2	-16.8	20.4	-15.0	1.00	1.00	
1,018.1	5.68	129.47	1,017.1	-17.9	21.7	-16.0	1.00	1.00	EOB; 5.68°
1,100.0	5.68	129.47	1,098.7	-23.0	28.0	-20.6	0.00	0.00	
1,200.0	5.68	129.47	1,198.2	-29.3	35.6	-26.2	0.00	0.00	
1,300.0	5.68	129.47	1,297.7	-35.6	43.3	-31.8	0.00	0.00	
1,400.0	5.68	129.47	1,397.2	-41.9	50.9	-37.4	0.00	0.00	
1,500.0	5.68	129.47	1,496.7	-48.2	58.5	-43.1	0.00	0.00	
1,600.0	5.68	129.47	1,596.2	-54.5	66.2	-48.7	0.00	0.00	
1,700.0	5.68	129.47	1,695.7	-60.8	73.8	-54.3	0.00	0.00	
1,800.0	5.68	129.47	1,795.2	-67.1	81.5	-59.9	0.00	0.00	
1,900.0	5.68	129.47	1,894.7	-73.4	89.1	-65.6	0.00	0.00	
2,000.0	5.68	129.47	1,994.2	-79.7	96.7	-71.2	0.00	0.00	
2,100.0	5.68	129.47	2,093.8	-86.0	104.4	-76.8	0.00	0.00	
2,200.0	5.68	129.47	2,193.3	-92.3	112.0	-82.4	0.00	0.00	
2,300.0	5.68	129.47	2,292.8	-98.6	119.7	-88.0	0.00	0.00	
2,400.0	5.68	129.47	2,392.3	-104.8	127.3	-93.7	0.00	0.00	
2,500.0	5.68	129.47	2,491.8	-111.1	135.0	-99.3	0.00	0.00	
2,600.0	5.68	129.47	2,591.3	-117.4	142.6	-104.9	0.00	0.00	
2,700.0	5.68	129.47	2,690.8	-123.7	150.2	-110.5	0.00	0.00	
2,800.0	5.68	129.47	2,790.3	-130.0	157.9	-116.1	0.00	0.00	
2,900.0	5.68	129.47	2,889.8	-136.3	165.5	-121.8	0.00	0.00	
3,000.0	5.68	129.47	2,989.3	-142.6	173.2	-127.4	0.00	0.00	
3,100.0	5.68	129.47	3,088.8	-148.9	180.8	-133.0	0.00	0.00	
3,200.0	5.68	129.47	3,188.4	-155.2	188.4	-138.6	0.00	0.00	
3,300.0	5.68	129.47	3,287.9	-161.5	196.1	-144.3	0.00	0.00	
3,400.0	5.68	129.47	3,387.4	-167.8	203.7	-149.9	0.00	0.00	
3,500.0	5.68	129.47	3,486.9	-174.1	211.4	-155.5	0.00	0.00	
3,600.0	5.68	129.47	3,586.4	-180.4	219.0	-161.1	0.00	0.00	
3,700.0	5.68	129.47	3,685.9	-186.6	226.6	-166.7	0.00	0.00	
3,800.0	5.68	129.47	3,785.4	-192.9	234.3	-172.4	0.00	0.00	
3,900.0	5.68	129.47	3,884.9	-199.2	241.9	-178.0	0.00	0.00	
4,000.0	5.68	129.47	3,984.4	-205.5	249.6	-183.6	0.00	0.00	
4,100.0	5.68	129.47	4,083.9	-211.8	257.2	-189.2	0.00	0.00	
4,200.0	5.68	129.47	4,183.4	-218.1	264.8	-194.8	0.00	0.00	
4,300.0	5.68	129.47	4,283.0	-224.4	272.5	-200.5	0.00	0.00	
4,379.4	5.68	129.47	4,362.0	-229.4	278.6	-204.9	0.00	0.00	Sussex
4,400.0	5.68	129.47	4,382.5	-230.7	280.1	-206.1	0.00	0.00	
4,500.0	5.68	129.47	4,482.0	-237.0	287.8	-211.7	0.00	0.00	
4,600.0	5.68	129.47	4,581.5	-243.3	295.4	-217.3	0.00	0.00	
4,616.6	5.68	129.47	4,598.0	-244.3	296.7	-218.3	0.00	0.00	Sussex Marker

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Well:	Dale 4F-20H-O264	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,700.0	5.68	129.47	4,681.0	-249.6	303.0	-223.0	0.00	0.00	
4,800.0	5.68	129.47	4,780.5	-255.9	310.7	-228.6	0.00	0.00	
4,829.6	5.68	129.47	4,810.0	-257.7	313.0	-230.2	0.00	0.00	Shannon
4,900.0	5.68	129.47	4,880.0	-262.2	318.3	-234.2	0.00	0.00	
5,000.0	5.68	129.47	4,979.5	-268.4	326.0	-239.8	0.00	0.00	
5,100.0	5.68	129.47	5,079.0	-274.7	333.6	-245.4	0.00	0.00	
5,200.0	5.68	129.47	5,178.5	-281.0	341.3	-251.1	0.00	0.00	
5,300.0	5.68	129.47	5,278.0	-287.3	348.9	-256.7	0.00	0.00	
5,400.0	5.68	129.47	5,377.6	-293.6	356.5	-262.3	0.00	0.00	
5,455.6	5.68	129.47	5,432.9	-297.1	360.8	-265.4	0.00	0.00	Start 1° Drop
5,500.0	5.24	129.47	5,477.1	-299.8	364.0	-267.8	1.00	-1.00	
5,600.0	4.24	129.47	5,576.7	-305.0	370.4	-272.5	1.00	-1.00	
5,661.4	3.62	129.47	5,638.0	-307.7	373.7	-274.9	1.00	-1.00	Teepee Buttes (*if present)
5,700.0	3.24	129.47	5,676.5	-309.2	375.4	-276.2	1.00	-1.00	
5,800.0	2.24	129.47	5,776.4	-312.2	379.1	-278.9	1.00	-1.00	
5,900.0	1.24	129.47	5,876.4	-314.2	381.5	-280.7	1.00	-1.00	
6,000.0	0.24	129.47	5,976.3	-315.0	382.5	-281.4	1.00	-1.00	
6,023.7	0.00	0.00	6,000.0	-315.0	382.5	-281.4	1.00	-1.00	EOD; Vertical
6,100.0	0.00	0.00	6,076.3	-315.0	382.5	-281.4	0.00	0.00	
6,200.0	0.00	0.00	6,176.3	-315.0	382.5	-281.4	0.00	0.00	
6,300.0	0.00	0.00	6,276.3	-315.0	382.5	-281.4	0.00	0.00	
6,378.7	0.00	0.00	6,355.0	-315.0	382.5	-281.4	0.00	0.00	Start 10° Build
6,400.0	2.13	0.00	6,376.3	-314.6	382.5	-281.0	10.00	10.00	
6,450.0	7.13	0.00	6,426.2	-310.6	382.5	-277.0	10.00	10.00	
6,500.0	12.13	0.00	6,475.4	-302.2	382.5	-268.7	10.00	10.00	
6,550.0	17.13	0.00	6,523.8	-289.6	382.5	-256.1	10.00	10.00	
6,600.0	22.13	0.00	6,570.9	-272.8	382.5	-239.4	10.00	10.00	
6,650.0	27.13	0.00	6,616.3	-252.0	382.5	-218.6	10.00	10.00	
6,700.0	32.13	0.00	6,659.8	-227.2	382.5	-194.0	10.00	10.00	
6,750.0	37.13	0.00	6,700.9	-198.8	382.5	-165.7	10.00	10.00	
6,800.0	42.13	0.00	6,739.4	-167.0	382.5	-133.9	10.00	10.00	
6,850.0	47.13	0.00	6,775.0	-131.8	382.5	-98.9	10.00	10.00	
6,899.4	52.07	0.00	6,807.0	-94.2	382.5	-61.4	10.00	10.00	Sharon Springs
6,900.0	52.13	0.00	6,807.3	-93.8	382.5	-61.0	10.00	10.00	
6,950.0	57.13	0.00	6,836.3	-53.0	382.5	-20.4	10.00	10.00	
6,978.2	59.95	0.00	6,851.0	-28.9	382.5	3.6	10.00	10.00	Niobrara
7,000.0	62.13	0.00	6,861.5	-9.9	382.5	22.6	10.00	10.00	
7,050.0	67.13	0.00	6,883.0	35.3	382.5	67.6	10.00	10.00	
7,100.0	72.13	0.00	6,900.4	82.1	382.5	114.3	10.00	10.00	
7,150.0	77.13	0.00	6,913.6	130.3	382.5	162.3	10.00	10.00	
7,171.5	79.28	0.00	6,918.0	151.4	382.5	183.3	10.00	10.00	B Chalk
7,200.0	82.13	0.00	6,922.6	179.5	382.5	211.3	10.00	10.00	
7,250.0	87.13	0.00	6,927.3	229.3	382.5	260.9	10.00	10.00	
7,278.7	90.00	0.00	6,928.0	258.0	382.5	289.5	10.00	10.00	LP @ 6928' TVD; 90°
7,300.0	90.00	0.00	6,928.0	279.3	382.5	310.7	0.00	0.00	
7,400.0	90.00	0.00	6,928.0	379.3	382.5	410.4	0.00	0.00	
7,500.0	90.00	0.00	6,928.0	479.3	382.5	510.0	0.00	0.00	
7,600.0	90.00	0.00	6,928.0	579.3	382.5	609.6	0.00	0.00	
7,700.0	90.00	0.00	6,928.0	679.3	382.5	709.3	0.00	0.00	
7,800.0	90.00	0.00	6,928.0	779.3	382.5	808.9	0.00	0.00	
7,900.0	90.00	0.00	6,928.0	879.3	382.5	908.5	0.00	0.00	
8,000.0	90.00	0.00	6,928.0	979.3	382.5	1,008.2	0.00	0.00	

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Well:	Dale 4F-20H-O264	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
8,100.0	90.00	0.00	6,928.0	1,079.3	382.5	1,107.8	0.00	0.00	
8,200.0	90.00	0.00	6,928.0	1,179.3	382.5	1,207.5	0.00	0.00	
8,300.0	90.00	0.00	6,928.0	1,279.3	382.5	1,307.1	0.00	0.00	
8,400.0	90.00	0.00	6,928.0	1,379.3	382.5	1,406.7	0.00	0.00	
8,500.0	90.00	0.00	6,928.0	1,479.3	382.5	1,506.4	0.00	0.00	
8,600.0	90.00	0.00	6,928.0	1,579.3	382.5	1,606.0	0.00	0.00	
8,700.0	90.00	0.00	6,928.0	1,679.3	382.5	1,705.7	0.00	0.00	
8,800.0	90.00	0.00	6,928.0	1,779.3	382.5	1,805.3	0.00	0.00	
8,900.0	90.00	0.00	6,928.0	1,879.3	382.5	1,904.9	0.00	0.00	
9,000.0	90.00	0.00	6,928.0	1,979.3	382.5	2,004.6	0.00	0.00	
9,100.0	90.00	0.00	6,928.0	2,079.3	382.5	2,104.2	0.00	0.00	
9,200.0	90.00	0.00	6,928.0	2,179.3	382.5	2,203.9	0.00	0.00	
9,300.0	90.00	0.00	6,928.0	2,279.3	382.5	2,303.5	0.00	0.00	
9,400.0	90.00	0.00	6,928.0	2,379.3	382.5	2,403.1	0.00	0.00	
9,500.0	90.00	0.00	6,928.0	2,479.3	382.5	2,502.8	0.00	0.00	
9,600.0	90.00	0.00	6,928.0	2,579.3	382.5	2,602.4	0.00	0.00	
9,700.0	90.00	0.00	6,928.0	2,679.3	382.5	2,702.1	0.00	0.00	
9,800.0	90.00	0.00	6,928.0	2,779.3	382.5	2,801.7	0.00	0.00	
9,900.0	90.00	0.00	6,928.0	2,879.3	382.5	2,901.3	0.00	0.00	
10,000.0	90.00	0.00	6,928.0	2,979.3	382.5	3,001.0	0.00	0.00	
10,100.0	90.00	0.00	6,928.0	3,079.3	382.5	3,100.6	0.00	0.00	
10,200.0	90.00	0.00	6,928.0	3,179.3	382.5	3,200.3	0.00	0.00	
10,300.0	90.00	0.00	6,928.0	3,279.3	382.5	3,299.9	0.00	0.00	
10,400.0	90.00	0.00	6,928.0	3,379.3	382.5	3,399.5	0.00	0.00	
10,500.0	90.00	0.00	6,928.0	3,479.3	382.5	3,499.2	0.00	0.00	
10,600.0	90.00	0.00	6,928.0	3,579.3	382.5	3,598.8	0.00	0.00	
10,700.0	90.00	0.00	6,928.0	3,679.3	382.5	3,698.5	0.00	0.00	
10,800.0	90.00	0.00	6,928.0	3,779.3	382.5	3,798.1	0.00	0.00	
10,900.0	90.00	0.00	6,928.0	3,879.3	382.5	3,897.7	0.00	0.00	
11,000.0	90.00	0.00	6,928.0	3,979.3	382.5	3,997.4	0.00	0.00	
11,100.0	90.00	0.00	6,928.0	4,079.3	382.5	4,097.0	0.00	0.00	
11,200.0	90.00	0.00	6,928.0	4,179.3	382.5	4,196.6	0.00	0.00	
11,300.0	90.00	0.00	6,928.0	4,279.3	382.5	4,296.3	0.00	0.00	
11,400.0	90.00	0.00	6,928.0	4,379.3	382.5	4,395.9	0.00	0.00	
11,500.0	90.00	0.00	6,928.0	4,479.3	382.5	4,495.6	0.00	0.00	
11,512.7	90.00	0.00	6,928.0	4,492.0	382.5	4,508.2	0.00	0.00	TD at 11512.7

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
Dale 4F-20H-O264 PBH - plan hits target center - Point	0.00	0.00	6,928.0	4,492.0	382.5	1,291,557.27	3,259,902.93	40.129972	-104.570519

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Project:	DJ Wattenberg	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site:	S20-T2N-R64W (Dale)	**North Reference:**	True
Well:	Dale 4F-20H-O264	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
963.7	963.0	Fox Hills - BASE			
4,379.4	4,362.0	Sussex			
4,616.6	4,598.0	Sussex Marker			
4,829.6	4,810.0	Shannon			
5,661.4	5,638.0	Teepee Buttes (*if present)			
6,899.4	6,807.0	Sharon Springs			
6,978.2	6,851.0	Niobrara			
7,171.5	6,918.0	B Chalk			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
450.0	450.0	0.0	0.0	KOP @ 450' MD
1,018.1	1,017.1	-17.9	21.7	EOB; 5.68°
5,455.6	5,432.9	-297.1	360.8	Start 1° Drop
6,023.7	6,000.0	-315.0	382.5	EOD; Vertical
6,378.7	6,355.0	-315.0	382.5	Start 10° Build
7,278.7	6,928.0	258.0	382.5	LP @ 6928' TVD; 90°
11,512.7	6,928.0	4,492.0	382.5	TD at 11512.7

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S20-T2N-R64W (Dale)
Dale 4F-20H-O264
HZ
Plan #1

Anticollision Report

02 April, 2014

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Reference	Plan #1

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,550.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 4/2/2014

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,512.7	Plan #1 (HZ)	Geolink MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**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
S20-T2N-R64W (Dale)						
DALE 1 (EXISTING) - EXISTING - NOBLE WELL						Out of range
Dale 3A-20H-N264 - HZ - Plan #1						Out of range
Dale 3B-20H-N264 - HZ - Plan #1						Out of range
Dale 3C-20H-N264 - HZ - Plan #1						Out of range
Dale 3D-20H-N264 - HZ - Plan #1						Out of range
Dale 3E-20H-N264 - HZ - Plan #1						Out of range
Dale 3F-20H-N264 - Hz - Plan #1						Out of range
Dale 3G-20H-N264 - HZ - Plan #1						Out of range
Dale 3H-20H-N264 - HZ - Plan #1						Out of range
Dale 3I-20H-N264 - HZ - Plan #1						Out of range
Dale 3J-20H-N264 - HZ - Plan #1						Out of range
Dale 3K-20H-N264 - HZ - Plan #1						Out of range
Dale 3L-20H-N264 - HZ - Plan #1	11,507.2	11,572.7	1,472.2	1,309.5	9.048	CC
Dale 3L-20H-N264 - HZ - Plan #1	11,512.7	11,572.7	1,472.2	1,309.4	9.043	ES, SF
Dale 4A-20H-O264 - HZ - Plan #1	166.3	167.3	37.5	37.0	78.466	CC
Dale 4A-20H-O264 - HZ - Plan #1	200.0	201.0	37.5	36.9	62.971	ES
Dale 4A-20H-O264 - HZ - Plan #1	11,512.7	11,645.9	1,228.5	1,066.4	7.575	SF
Dale 4B-20H-O264 - HZ - Plan #1	232.1	233.1	29.9	29.2	42.316	CC, ES
Dale 4B-20H-O264 - HZ - Plan #1	11,512.7	11,752.2	1,025.2	866.3	6.452	SF
Dale 4C-20H-O264 - HZ - Plan #1	300.0	300.0	22.4	21.4	23.743	CC, ES
Dale 4C-20H-O264 - HZ - Plan #1	11,512.7	11,508.6	774.8	612.2	4.765	SF
Dale 4D-20H-O264 - HZ - Plan #1	336.3	336.3	14.8	13.8	13.867	CC
Dale 4D-20H-O264 - HZ - Plan #1	450.0	450.0	15.0	13.5	10.211	ES
Dale 4D-20H-O264 - HZ - Plan #1	11,512.7	11,590.6	459.6	300.2	2.883	SF
Dale 4E-20H-O264 - HZ - Plan #1	594.7	594.8	7.0	5.0	3.545	CC
Dale 4E-20H-O264 - HZ - Plan #1	700.0	700.2	7.3	4.9	3.080	ES
Dale 4E-20H-O264 - HZ - Plan #1	11,512.7	11,685.7	317.8	207.4	2.878	SF
Dale 4G-20H-O264 - HZ - Plan #1	400.0	400.0	7.6	6.3	5.847	CC, ES
Dale 4G-20H-O264 - HZ - Plan #1	11,512.7	11,627.1	243.5	92.6	1.614	SF
Dale 4H-20H-O264 - HZ - Plan #1	333.4	333.4	15.1	14.0	14.260	CC
Dale 4H-20H-O264 - HZ - Plan #1	400.0	399.9	15.3	14.0	11.852	ES
Dale 4H-20H-O264 - HZ - Plan #1	11,512.7	11,799.9	507.4	362.1	3.492	SF
Dale 4I-20H-O264 - HZ - Plan #1	300.0	300.0	22.7	21.7	24.036	CC, ES
Dale 4I-20H-O264 - HZ - Plan #1	11,512.7	11,603.0	675.0	512.3	4.149	SF
Dale 4J-20H-O264 - HZ - Plan #1	234.7	233.7	29.9	29.2	41.993	CC, ES
Dale 4J-20H-O264 - HZ - Plan #1	11,512.7	11,737.1	904.9	743.0	5.589	SF
Dale 4K-20H-O264 - HZ - Plan #1	200.0	199.0	37.5	36.9	63.342	CC, ES
Dale 4K-20H-O264 - HZ - Plan #1	11,512.7	11,933.4	1,149.3	989.7	7.204	SF
DALE 'E' UNIT 1 (EXISTING) - EXISTING - ENCANA WE	8,322.7	6,865.0	272.0	232.8	6.926	CC, ES, SF
FOY 1 (EXISTING) - EXISTING - NOBLE WELL						Out of range
FOY 'Y' 20-6 (EXISTING) - EXISTING - NOBLE WELL						Out of range
KELLER 20-2 (EXISTING) - EXISTING - NOBLE WELL	10,932.8	6,834.0	282.7	199.5	3.397	CC, ES, SF
RUHL 1 (EXISTING) - EXISTING - NEBRASKA WELL	8,695.7	6,859.0	627.5	582.2	13.864	CC
RUHL 1 (EXISTING) - EXISTING - NEBRASKA WELL	8,700.0	6,859.0	627.5	582.2	13.843	ES
RUHL 1 (EXISTING) - EXISTING - NEBRASKA WELL	8,800.0	6,859.0	636.1	589.1	13.543	SF
STARKE 'Y' 20-03 (EXISTING) - EXISTING - NOBLE WE						Out of range

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3L-20H-N264 - HZ - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-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
4,600.0	4,581.5	4,877.7	4,823.0	10.5	15.1	140.21	-262.3	-1,231.7	1,543.9	1,525.2	18.69	82.603	
4,700.0	4,681.0	4,977.4	4,921.5	10.7	15.4	140.24	-267.9	-1,217.0	1,536.8	1,517.7	19.09	80.481	
4,800.0	4,780.5	5,077.2	5,020.0	11.0	15.7	140.26	-273.6	-1,202.3	1,529.7	1,510.2	19.50	78.447	
4,900.0	4,880.0	5,176.9	5,118.5	11.2	16.1	140.28	-279.2	-1,187.6	1,522.5	1,502.6	19.90	76.497	
5,000.0	4,979.5	5,276.7	5,217.0	11.4	16.4	140.30	-284.8	-1,172.9	1,515.4	1,495.1	20.31	74.625	
5,100.0	5,079.0	5,376.4	5,315.5	11.7	16.7	140.33	-290.4	-1,158.2	1,508.3	1,487.6	20.71	72.827	
5,200.0	5,178.5	5,476.1	5,414.0	11.9	17.1	140.35	-296.0	-1,143.6	1,501.2	1,480.1	21.11	71.098	
5,300.0	5,278.0	5,575.9	5,512.5	12.2	17.4	140.38	-301.6	-1,128.9	1,494.0	1,472.5	21.52	69.435	
5,400.0	5,377.6	5,655.0	5,590.7	12.4	17.6	140.40	-305.9	-1,117.5	1,487.4	1,465.5	21.88	67.994	
5,455.6	5,432.9	5,700.0	5,635.3	12.6	17.8	140.42	-308.1	-1,111.8	1,484.5	1,462.5	22.07	67.259	
5,500.0	5,477.1	5,722.4	5,657.5	12.7	17.8	140.42	-309.0	-1,109.3	1,482.6	1,460.4	22.20	66.787	
5,600.0	5,576.7	5,800.0	5,734.7	12.9	18.0	140.44	-312.0	-1,101.6	1,478.9	1,456.4	22.52	65.670	
5,700.0	5,676.5	5,857.2	5,791.7	13.1	18.1	140.45	-313.7	-1,097.1	1,476.0	1,453.2	22.79	64.763	
5,800.0	5,776.4	5,924.8	5,859.1	13.3	18.2	140.46	-315.1	-1,093.3	1,474.0	1,450.9	23.06	63.908	
5,900.0	5,876.4	6,000.0	5,934.3	13.4	18.3	140.47	-316.1	-1,090.8	1,472.9	1,449.5	23.34	63.116	
6,000.0	5,976.3	6,065.7	6,000.0	13.6	18.4	140.47	-316.4	-1,090.1	1,472.6	1,449.0	23.58	62.455	
6,004.9	5,981.2	6,065.7	6,000.0	13.6	18.4	140.47	-316.4	-1,090.1	1,472.5	1,449.0	23.58	62.436	
6,023.7	6,000.0	6,080.7	6,015.0	13.6	18.4	-90.05	-316.4	-1,090.1	1,472.6	1,448.9	23.63	62.307	
6,100.0	6,076.3	6,157.1	6,091.3	13.7	18.5	-90.05	-316.4	-1,090.1	1,472.6	1,448.7	23.87	61.688	
6,200.0	6,176.3	6,257.1	6,191.3	13.8	18.6	-90.05	-316.4	-1,090.1	1,472.6	1,448.4	24.18	60.892	
6,300.0	6,276.3	6,357.1	6,291.3	14.0	18.7	-90.05	-316.4	-1,090.1	1,472.6	1,448.1	24.50	60.115	
6,378.7	6,355.0	6,435.8	6,370.0	14.1	18.7	-90.05	-316.4	-1,090.1	1,472.6	1,447.8	24.74	59.515	
6,400.0	6,376.3	6,457.1	6,391.4	14.1	18.8	-90.06	-316.2	-1,090.1	1,472.6	1,447.8	24.80	59.380	
6,450.0	6,426.2	6,507.3	6,441.4	14.1	18.8	-90.09	-312.7	-1,090.1	1,472.6	1,447.7	24.87	59.207	
6,500.0	6,475.4	6,557.5	6,491.0	14.1	18.8	-90.11	-304.9	-1,090.1	1,472.6	1,447.7	24.88	59.177	
6,550.0	6,523.8	6,607.8	6,539.8	14.1	18.8	-90.13	-292.8	-1,090.1	1,472.6	1,447.7	24.84	59.272	
6,600.0	6,570.9	6,658.1	6,587.3	14.1	18.8	-90.15	-276.4	-1,090.1	1,472.6	1,447.8	24.76	59.470	
6,650.0	6,616.3	6,708.5	6,633.3	14.0	18.7	-90.17	-255.9	-1,090.1	1,472.6	1,447.9	24.65	59.742	
6,700.0	6,659.8	6,758.9	6,677.4	13.9	18.7	-90.19	-231.4	-1,090.1	1,472.6	1,448.0	24.52	60.053	
6,750.0	6,700.9	6,809.3	6,719.1	13.9	18.6	-90.21	-203.1	-1,090.1	1,472.6	1,448.2	24.40	60.363	
6,800.0	6,739.4	6,859.8	6,758.2	13.8	18.6	-90.22	-171.2	-1,090.1	1,472.6	1,448.3	24.29	60.625	
6,850.0	6,775.0	6,910.4	6,794.4	13.8	18.6	-90.24	-135.9	-1,090.0	1,472.6	1,448.3	24.22	60.792	
6,900.0	6,807.3	6,960.9	6,827.4	13.8	18.6	-90.25	-97.6	-1,090.0	1,472.6	1,448.3	24.22	60.812	
6,950.0	6,836.3	7,011.5	6,856.9	13.8	18.6	-90.26	-56.5	-1,090.0	1,472.6	1,448.3	24.28	60.642	
7,000.0	6,861.5	7,062.1	6,882.6	13.9	18.7	-90.27	-13.0	-1,090.0	1,472.6	1,448.1	24.44	60.243	
7,050.0	6,883.0	7,112.7	6,904.4	14.0	18.7	-90.27	32.7	-1,090.0	1,472.6	1,447.8	24.71	59.599	
7,100.0	6,900.4	7,163.3	6,922.1	14.2	18.9	-90.28	80.1	-1,090.0	1,472.6	1,447.5	25.08	58.705	
7,150.0	6,913.6	7,214.0	6,935.6	14.4	19.0	-90.28	128.9	-1,090.0	1,472.5	1,447.0	25.57	57.578	
7,200.0	6,922.6	7,264.6	6,944.7	14.6	19.2	-90.28	178.7	-1,090.0	1,472.5	1,446.4	26.18	56.250	
7,250.0	6,927.3	7,315.2	6,949.3	14.9	19.5	-90.27	229.1	-1,090.0	1,472.5	1,445.7	26.89	54.768	
7,278.7	6,928.0	7,344.3	6,950.0	15.1	19.6	-90.27	258.1	-1,090.0	1,472.5	1,445.2	27.34	53.870	
7,300.0	6,928.0	7,365.6	6,950.0	15.3	19.8	-90.27	279.4	-1,090.0	1,472.5	1,444.8	27.69	53.175	
7,400.0	6,928.0	7,465.6	6,950.0	16.1	20.4	-90.27	379.4	-1,090.0	1,472.5	1,443.0	29.55	49.837	
7,500.0	6,928.0	7,565.6	6,950.0	17.1	21.2	-90.27	479.4	-1,090.0	1,472.5	1,440.8	31.67	46.494	
7,600.0	6,928.0	7,665.6	6,950.0	18.2	22.1	-90.27	579.4	-1,090.0	1,472.5	1,438.5	34.03	43.276	
7,700.0	6,928.0	7,765.6	6,950.0	19.4	23.1	-90.27	679.4	-1,090.0	1,472.5	1,435.9	36.57	40.270	
7,800.0	6,928.0	7,865.6	6,950.0	20.6	24.2	-90.27	779.4	-1,090.0	1,472.5	1,433.2	39.26	37.510	
7,900.0	6,928.0	7,965.6	6,950.0	22.0	25.3	-90.27	879.4	-1,090.0	1,472.5	1,430.4	42.07	35.004	
8,000.0	6,928.0	8,065.6	6,950.0	23.3	26.6	-90.27	979.4	-1,090.0	1,472.5	1,427.5	44.98	32.740	
8,100.0	6,928.0	8,165.6	6,950.0	24.8	27.8	-90.27	1,079.4	-1,090.0	1,472.5	1,424.5	47.96	30.699	
8,200.0	6,928.0	8,265.6	6,950.0	26.3	29.2	-90.27	1,179.4	-1,089.9	1,472.5	1,421.4	51.02	28.861	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 3L-20H-N264 - 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
8,300.0	6,928.0	8,365.6	6,950.0	27.8	30.5	-90.27	1,279.4	-1,089.9	1,472.5	1,418.3	54.13	27.202	
8,400.0	6,928.0	8,465.6	6,950.0	29.3	32.0	-90.27	1,379.4	-1,089.9	1,472.5	1,415.2	57.29	25.703	
8,500.0	6,928.0	8,565.6	6,950.0	30.9	33.4	-90.27	1,479.4	-1,089.9	1,472.4	1,412.0	60.48	24.345	
8,600.0	6,928.0	8,665.6	6,950.0	32.4	34.9	-90.27	1,579.4	-1,089.9	1,472.4	1,408.7	63.71	23.112	
8,700.0	6,928.0	8,765.6	6,950.0	34.0	36.4	-90.27	1,679.4	-1,089.9	1,472.4	1,405.5	66.97	21.988	
8,800.0	6,928.0	8,865.6	6,950.0	35.6	37.9	-90.27	1,779.4	-1,089.9	1,472.4	1,402.2	70.25	20.961	
8,900.0	6,928.0	8,965.6	6,950.0	37.3	39.4	-90.27	1,879.4	-1,089.9	1,472.4	1,398.9	73.55	20.020	
9,000.0	6,928.0	9,065.6	6,950.0	38.9	41.0	-90.27	1,979.4	-1,089.9	1,472.4	1,395.5	76.87	19.155	
9,100.0	6,928.0	9,165.6	6,950.0	40.5	42.6	-90.27	2,079.4	-1,089.9	1,472.4	1,392.2	80.20	18.358	
9,200.0	6,928.0	9,265.6	6,950.0	42.2	44.2	-90.27	2,179.4	-1,089.9	1,472.4	1,388.8	83.55	17.622	
9,300.0	6,928.0	9,365.6	6,950.0	43.8	45.8	-90.27	2,279.4	-1,089.9	1,472.4	1,385.5	86.92	16.940	
9,400.0	6,928.0	9,465.6	6,950.0	45.5	47.4	-90.27	2,379.4	-1,089.8	1,472.4	1,382.1	90.29	16.307	
9,500.0	6,928.0	9,565.6	6,950.0	47.2	49.0	-90.27	2,479.4	-1,089.8	1,472.4	1,378.7	93.67	15.718	
9,600.0	6,928.0	9,665.6	6,950.0	48.9	50.6	-90.27	2,579.4	-1,089.8	1,472.4	1,375.3	97.07	15.169	
9,700.0	6,928.0	9,765.6	6,950.0	50.6	52.2	-90.27	2,679.4	-1,089.8	1,472.4	1,371.9	100.47	14.655	
9,800.0	6,928.0	9,865.6	6,950.0	52.2	53.9	-90.27	2,779.4	-1,089.8	1,472.3	1,368.5	103.87	14.174	
9,900.0	6,928.0	9,965.6	6,950.0	53.9	55.5	-90.27	2,879.4	-1,089.8	1,472.3	1,365.1	107.29	13.723	
10,000.0	6,928.0	10,065.6	6,950.0	55.6	57.2	-90.27	2,979.4	-1,089.8	1,472.3	1,361.6	110.71	13.299	
10,100.0	6,928.0	10,165.6	6,950.0	57.3	58.9	-90.27	3,079.4	-1,089.8	1,472.3	1,358.2	114.13	12.900	
10,200.0	6,928.0	10,265.6	6,950.0	59.0	60.5	-90.27	3,179.4	-1,089.8	1,472.3	1,354.8	117.56	12.524	
10,300.0	6,928.0	10,365.6	6,950.0	60.7	62.2	-90.27	3,279.4	-1,089.8	1,472.3	1,351.3	121.00	12.168	
10,400.0	6,928.0	10,465.6	6,950.0	62.5	63.9	-90.27	3,379.4	-1,089.8	1,472.3	1,347.9	124.44	11.832	
10,500.0	6,928.0	10,565.6	6,950.0	64.2	65.6	-90.27	3,479.4	-1,089.8	1,472.3	1,344.4	127.88	11.513	
10,600.0	6,928.0	10,665.6	6,950.0	65.9	67.2	-90.27	3,579.4	-1,089.8	1,472.3	1,341.0	131.32	11.211	
10,700.0	6,928.0	10,765.6	6,950.0	67.6	68.9	-90.27	3,679.4	-1,089.7	1,472.3	1,337.5	134.77	10.924	
10,800.0	6,928.0	10,865.6	6,950.0	69.3	70.6	-90.27	3,779.4	-1,089.7	1,472.3	1,334.0	138.23	10.651	
10,900.0	6,928.0	10,965.6	6,950.0	71.0	72.3	-90.27	3,879.4	-1,089.7	1,472.3	1,330.6	141.68	10.391	
11,000.0	6,928.0	11,065.6	6,950.0	72.8	74.0	-90.27	3,979.4	-1,089.7	1,472.3	1,327.1	145.14	10.144	
11,100.0	6,928.0	11,165.6	6,950.0	74.5	75.7	-90.27	4,079.4	-1,089.7	1,472.2	1,323.7	148.60	9.908	
11,200.0	6,928.0	11,265.6	6,950.0	76.2	77.4	-90.27	4,179.4	-1,089.7	1,472.2	1,320.2	152.06	9.682	
11,300.0	6,928.0	11,365.6	6,950.0	77.9	79.1	-90.27	4,279.4	-1,089.7	1,472.2	1,316.7	155.52	9.466	
11,400.0	6,928.0	11,465.6	6,950.0	79.7	80.8	-90.27	4,379.4	-1,089.7	1,472.2	1,313.2	158.99	9.260	
11,500.0	6,928.0	11,565.6	6,950.0	81.4	82.5	-90.27	4,479.4	-1,089.7	1,472.2	1,309.8	162.46	9.062	
11,507.2	6,928.0	11,572.7	6,950.0	81.5	82.7	-90.27	4,486.5	-1,089.7	1,472.2	1,309.5	162.71	9.048	CC
11,512.7	6,928.0	11,572.7	6,950.0	81.6	82.7	-90.27	4,486.5	-1,089.7	1,472.2	1,309.4	162.80	9.043	ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4A-20H-O264 - 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	1.0	1.0	0.0	0.0	-89.46	0.4	-37.5	37.5				
100.0	100.0	101.0	101.0	0.1	0.1	-89.46	0.4	-37.5	37.5	37.2	0.25	152.291	
166.3	166.3	167.3	167.3	0.2	0.2	-89.46	0.4	-37.5	37.5	37.0	0.48	78.466	CC
200.0	200.0	201.0	201.0	0.3	0.3	-89.46	0.4	-37.5	37.5	36.9	0.60	62.971	ES
300.0	300.0	300.0	300.0	0.5	0.5	-90.42	-0.3	-39.1	39.1	38.2	0.95	41.348	
400.0	400.0	398.3	398.1	0.6	0.7	-92.80	-2.1	-43.9	44.0	42.7	1.31	33.585	
450.0	450.0	447.4	447.1	0.7	0.8	-94.27	-3.5	-47.4	47.7	46.2	1.50	31.720	
500.0	500.0	496.3	495.8	0.8	0.9	134.89	-5.2	-51.7	52.4	50.8	1.64	31.959	
600.0	600.0	593.5	592.3	1.0	1.1	133.05	-9.5	-62.6	65.2	63.2	1.99	32.799	
700.0	699.9	690.5	688.1	1.2	1.4	132.16	-14.9	-76.3	82.3	80.0	2.34	35.188	
800.0	799.8	788.6	785.0	1.4	1.7	132.16	-20.6	-90.9	101.4	98.7	2.70	37.556	
900.0	899.5	886.6	881.7	1.6	2.1	132.72	-26.3	-105.5	121.6	118.5	3.07	39.646	
1,000.0	999.2	984.2	978.1	1.8	2.4	133.60	-32.0	-120.1	142.9	139.5	3.44	41.519	
1,018.1	1,017.1	1,001.8	995.5	1.8	2.4	133.78	-33.0	-122.7	146.9	143.4	3.51	41.843	
1,100.0	1,098.7	1,081.7	1,074.3	2.0	2.7	134.63	-37.6	-134.6	165.2	161.3	3.83	43.135	
1,200.0	1,198.2	1,179.2	1,170.5	2.2	3.0	135.44	-43.3	-149.1	187.4	183.2	4.22	44.428	
1,300.0	1,297.7	1,276.6	1,266.7	2.5	3.3	136.08	-49.0	-163.6	209.7	205.1	4.61	45.484	
1,400.0	1,397.2	1,374.1	1,362.9	2.7	3.6	136.60	-54.7	-178.1	232.0	227.0	5.00	46.363	
1,500.0	1,496.7	1,471.5	1,459.1	2.9	4.0	137.03	-60.3	-192.6	254.4	249.0	5.40	47.105	
1,600.0	1,596.2	1,569.0	1,555.3	3.2	4.3	137.39	-66.0	-207.1	276.7	270.9	5.80	47.739	
1,700.0	1,695.7	1,666.4	1,651.5	3.4	4.6	137.69	-71.7	-221.6	299.0	292.9	6.19	48.287	
1,800.0	1,795.2	1,763.9	1,747.7	3.6	4.9	137.95	-77.4	-236.1	321.4	314.8	6.59	48.765	
1,900.0	1,894.7	1,861.4	1,844.0	3.9	5.3	138.18	-83.0	-250.6	343.8	336.8	6.99	49.186	
2,000.0	1,994.2	1,958.8	1,940.2	4.1	5.6	138.38	-88.7	-265.1	366.1	358.7	7.39	49.559	
2,100.0	2,093.8	2,056.3	2,036.4	4.4	5.9	138.56	-94.4	-279.6	388.5	380.7	7.79	49.891	
2,200.0	2,193.3	2,153.7	2,132.6	4.6	6.2	138.72	-100.1	-294.1	410.9	402.7	8.19	50.190	
2,300.0	2,292.8	2,251.2	2,228.8	4.8	6.5	138.86	-105.7	-308.6	433.3	424.7	8.59	50.460	
2,400.0	2,392.3	2,348.7	2,325.0	5.1	6.9	138.99	-111.4	-323.1	455.6	446.6	8.99	50.704	
2,500.0	2,491.8	2,446.1	2,421.2	5.3	7.2	139.10	-117.1	-337.6	478.0	468.6	9.39	50.927	
2,600.0	2,591.3	2,543.6	2,517.4	5.6	7.5	139.21	-122.8	-352.1	500.4	490.6	9.79	51.130	
2,700.0	2,690.8	2,641.0	2,613.6	5.8	7.8	139.30	-128.5	-366.6	522.8	512.6	10.19	51.318	
2,800.0	2,790.3	2,738.5	2,709.8	6.1	8.2	139.39	-134.1	-381.1	545.2	534.6	10.59	51.490	
2,900.0	2,889.8	2,836.0	2,806.0	6.3	8.5	139.47	-139.8	-395.7	567.5	556.6	10.99	51.649	
3,000.0	2,989.3	2,933.4	2,902.2	6.6	8.8	139.55	-145.5	-410.2	589.9	578.5	11.39	51.797	
3,100.0	3,088.8	3,030.9	2,998.4	6.8	9.1	139.62	-151.2	-424.7	612.3	600.5	11.79	51.934	
3,200.0	3,188.4	3,128.3	3,094.6	7.0	9.4	139.68	-156.8	-439.2	634.7	622.5	12.19	52.062	
3,300.0	3,287.9	3,225.8	3,190.8	7.3	9.8	139.74	-162.5	-453.7	657.1	644.5	12.59	52.182	
3,400.0	3,387.4	3,323.3	3,287.0	7.5	10.1	139.80	-168.2	-468.2	679.5	666.5	12.99	52.294	
3,500.0	3,486.9	3,420.7	3,383.3	7.8	10.4	139.85	-173.9	-482.7	701.9	688.5	13.40	52.399	
3,600.0	3,586.4	3,518.2	3,479.5	8.0	10.7	139.90	-179.5	-497.2	724.3	710.5	13.80	52.497	
3,700.0	3,685.9	3,615.6	3,575.7	8.3	11.1	139.95	-185.2	-511.7	746.7	732.5	14.20	52.590	
3,800.0	3,785.4	3,713.1	3,671.9	8.5	11.4	139.99	-190.9	-526.2	769.1	754.5	14.60	52.678	
3,900.0	3,884.9	3,810.5	3,768.1	8.8	11.7	140.03	-196.6	-540.7	791.5	776.5	15.00	52.761	
4,000.0	3,984.4	3,908.0	3,864.3	9.0	12.0	140.07	-202.2	-555.2	813.8	798.4	15.40	52.839	
4,100.0	4,083.9	4,005.5	3,960.5	9.2	12.3	140.11	-207.9	-569.7	836.2	820.4	15.80	52.913	
4,200.0	4,183.4	4,102.9	4,056.7	9.5	12.7	140.15	-213.6	-584.2	858.6	842.4	16.21	52.984	
4,300.0	4,283.0	4,200.4	4,152.9	9.7	13.0	140.18	-219.3	-598.7	881.0	864.4	16.61	53.051	
4,400.0	4,382.5	4,297.8	4,249.1	10.0	13.3	140.21	-224.9	-613.2	903.4	886.4	17.01	53.115	
4,500.0	4,482.0	4,395.3	4,345.3	10.2	13.6	140.24	-230.6	-627.7	925.8	908.4	17.41	53.175	
4,600.0	4,581.5	4,492.8	4,441.5	10.5	14.0	140.27	-236.3	-642.2	948.2	930.4	17.81	53.233	
4,700.0	4,681.0	4,590.2	4,537.7	10.7	14.3	140.30	-242.0	-656.7	970.6	952.4	18.21	53.289	
4,800.0	4,780.5	4,687.7	4,633.9	11.0	14.6	140.32	-247.6	-671.3	993.0	974.4	18.62	53.342	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4A-20H-O264 - 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
4,900.0	4,880.0	4,785.1	4,730.1	11.2	14.9	140.35	-253.3	-685.8	1,015.4	996.4	19.02	53.392	
5,000.0	4,979.5	4,882.6	4,826.3	11.4	15.3	140.37	-259.0	-700.3	1,037.8	1,018.4	19.42	53.441	
5,100.0	5,079.0	4,980.1	4,922.6	11.7	15.6	140.39	-264.7	-714.8	1,060.2	1,040.4	19.82	53.487	
5,200.0	5,178.5	5,077.5	5,018.8	11.9	15.9	140.42	-270.3	-729.3	1,082.6	1,062.4	20.22	53.532	
5,300.0	5,278.0	5,175.0	5,115.0	12.2	16.2	140.44	-276.0	-743.8	1,105.0	1,084.4	20.63	53.575	
5,400.0	5,377.6	5,272.4	5,211.2	12.4	16.5	140.46	-281.7	-758.3	1,127.4	1,106.3	21.03	53.616	
5,455.6	5,432.9	5,326.6	5,264.7	12.6	16.7	140.47	-284.9	-766.3	1,139.8	1,118.6	21.25	53.638	
5,500.0	5,477.1	5,369.9	5,307.4	12.7	16.9	140.54	-287.4	-772.8	1,149.6	1,128.2	21.44	53.619	
5,600.0	5,576.7	5,467.7	5,403.9	12.9	17.2	140.64	-293.1	-787.3	1,170.8	1,148.9	21.86	53.568	
5,700.0	5,676.5	5,565.7	5,500.6	13.1	17.5	140.68	-298.8	-801.9	1,190.6	1,168.4	22.26	53.494	
5,800.0	5,776.4	5,700.2	5,633.6	13.3	17.9	140.63	-306.1	-820.6	1,208.3	1,185.6	22.70	53.219	
5,900.0	5,876.4	5,864.2	5,796.8	13.4	18.3	140.57	-312.0	-835.8	1,219.9	1,196.7	23.17	52.656	
6,000.0	5,976.3	6,029.9	5,962.4	13.6	18.5	140.54	-314.6	-842.2	1,224.8	1,201.2	23.60	51.902	
6,023.7	6,000.0	6,068.5	6,001.0	13.6	18.5	-89.98	-314.6	-842.5	1,225.0	1,201.3	23.70	51.695	
6,100.0	6,076.3	6,144.9	6,077.3	13.7	18.6	-89.98	-314.6	-842.5	1,225.0	1,201.0	23.93	51.184	
6,200.0	6,176.3	6,244.9	6,177.3	13.8	18.7	-89.98	-314.6	-842.5	1,225.0	1,200.7	24.24	50.528	
6,300.0	6,276.3	6,344.9	6,277.3	14.0	18.8	-89.98	-314.6	-842.5	1,225.0	1,200.4	24.56	49.887	
6,378.7	6,355.0	6,423.6	6,356.0	14.1	18.9	-89.98	-314.6	-842.5	1,225.0	1,200.2	24.80	49.392	
6,398.7	6,375.0	6,443.6	6,376.0	14.1	18.9	-90.00	-314.6	-842.5	1,225.0	1,200.1	24.86	49.281	
6,400.0	6,376.3	6,444.9	6,377.3	14.1	18.9	-90.00	-314.6	-842.5	1,225.0	1,200.1	24.86	49.274	
6,450.0	6,426.2	6,494.7	6,427.2	14.1	19.0	-90.19	-314.6	-842.5	1,225.0	1,200.0	24.96	49.080	
6,500.0	6,475.4	6,544.6	6,477.0	14.1	19.0	-90.54	-314.0	-842.5	1,225.0	1,200.0	25.00	48.992	
6,550.0	6,523.8	6,595.3	6,527.5	14.1	19.0	-90.92	-309.2	-842.5	1,225.1	1,200.2	24.99	49.031	
6,600.0	6,570.9	6,646.8	6,578.2	14.1	19.0	-91.29	-299.9	-842.5	1,225.3	1,200.4	24.92	49.167	
6,650.0	6,616.3	6,699.1	6,628.5	14.0	19.0	-91.65	-285.8	-842.5	1,225.5	1,200.7	24.82	49.382	
6,700.0	6,659.8	6,752.2	6,678.1	13.9	19.0	-92.00	-266.9	-842.5	1,225.7	1,201.1	24.69	49.651	
6,750.0	6,700.9	6,806.1	6,726.4	13.9	18.9	-92.34	-243.1	-842.5	1,226.0	1,201.5	24.55	49.942	
6,800.0	6,739.4	6,860.7	6,772.9	13.8	18.9	-92.66	-214.4	-842.5	1,226.3	1,201.9	24.42	50.217	
6,850.0	6,775.0	6,916.2	6,817.0	13.8	18.8	-92.96	-180.9	-842.5	1,226.6	1,202.3	24.32	50.432	
6,900.0	6,807.3	6,972.4	6,858.3	13.8	18.8	-93.25	-142.7	-842.5	1,227.0	1,202.7	24.28	50.542	
6,950.0	6,836.3	7,029.3	6,896.0	13.8	18.8	-93.50	-100.1	-842.5	1,227.3	1,203.0	24.30	50.501	
7,000.0	6,861.5	7,086.9	6,929.7	13.9	18.8	-93.73	-53.5	-842.5	1,227.6	1,203.2	24.42	50.269	
7,050.0	6,883.0	7,145.1	6,958.9	14.0	18.9	-93.92	-3.1	-842.5	1,227.9	1,203.2	24.64	49.825	
7,100.0	6,900.4	7,203.8	6,982.9	14.2	19.0	-94.08	50.4	-842.5	1,228.1	1,203.1	24.99	49.136	
7,150.0	6,913.6	7,262.9	7,001.5	14.4	19.1	-94.20	106.5	-842.5	1,228.3	1,202.8	25.48	48.214	
7,200.0	6,922.6	7,322.3	7,014.3	14.6	19.3	-94.29	164.5	-842.5	1,228.4	1,202.3	26.08	47.094	
7,250.0	6,927.3	7,381.9	7,021.0	14.9	19.6	-94.33	223.7	-842.5	1,228.5	1,201.7	26.81	45.816	
7,278.7	6,928.0	7,416.2	7,022.0	15.1	19.8	-94.34	257.9	-842.5	1,228.5	1,201.2	27.28	45.037	
7,300.0	6,928.0	7,437.5	7,022.0	15.3	19.9	-94.34	279.3	-842.5	1,228.5	1,200.9	27.63	44.457	
7,400.0	6,928.0	7,537.5	7,022.0	16.1	20.5	-94.34	379.3	-842.5	1,228.5	1,199.1	29.45	41.709	
7,500.0	6,928.0	7,637.5	7,022.0	17.1	21.3	-94.34	479.3	-842.5	1,228.5	1,197.0	31.55	38.937	
7,600.0	6,928.0	7,737.5	7,022.0	18.2	22.1	-94.34	579.3	-842.5	1,228.5	1,194.6	33.88	36.260	
7,700.0	6,928.0	7,837.5	7,022.0	19.4	23.1	-94.34	679.3	-842.5	1,228.5	1,192.1	36.40	33.753	
7,800.0	6,928.0	7,937.5	7,022.0	20.6	24.2	-94.34	779.3	-842.5	1,228.5	1,189.4	39.07	31.447	
7,900.0	6,928.0	8,037.5	7,022.0	22.0	25.3	-94.34	879.3	-842.5	1,228.5	1,186.7	41.86	29.350	
8,000.0	6,928.0	8,137.5	7,022.0	23.3	26.5	-94.34	979.3	-842.5	1,228.5	1,183.8	44.75	27.454	
8,100.0	6,928.0	8,237.5	7,022.0	24.8	27.8	-94.34	1,079.3	-842.5	1,228.5	1,180.8	47.72	25.744	
8,200.0	6,928.0	8,337.5	7,022.0	26.3	29.1	-94.34	1,179.3	-842.5	1,228.5	1,177.8	50.76	24.202	
8,300.0	6,928.0	8,437.5	7,022.0	27.8	30.5	-94.34	1,279.3	-842.5	1,228.5	1,174.7	53.86	22.811	
8,400.0	6,928.0	8,537.5	7,022.0	29.3	31.9	-94.34	1,379.3	-842.5	1,228.5	1,171.5	57.00	21.554	
8,500.0	6,928.0	8,637.5	7,022.0	30.9	33.3	-94.34	1,479.3	-842.5	1,228.5	1,168.3	60.18	20.415	
8,600.0	6,928.0	8,737.5	7,022.0	32.4	34.8	-94.34	1,579.3	-842.5	1,228.5	1,165.1	63.39	19.379	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4A-20H-O264 - 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
8,700.0	6,928.0	8,837.5	7,022.0	34.0	36.3	-94.34	1,679.3	-842.5	1,228.5	1,161.9	66.64	18.436	
8,800.0	6,928.0	8,937.5	7,022.0	35.6	37.8	-94.34	1,779.3	-842.5	1,228.5	1,158.6	69.90	17.574	
8,900.0	6,928.0	9,037.5	7,022.0	37.3	39.3	-94.34	1,879.3	-842.5	1,228.5	1,155.3	73.19	16.785	
9,000.0	6,928.0	9,137.5	7,022.0	38.9	40.9	-94.34	1,979.3	-842.5	1,228.5	1,152.0	76.50	16.059	
9,100.0	6,928.0	9,237.5	7,022.0	40.5	42.5	-94.34	2,079.3	-842.5	1,228.5	1,148.7	79.82	15.390	
9,200.0	6,928.0	9,337.5	7,022.0	42.2	44.0	-94.34	2,179.3	-842.5	1,228.5	1,145.4	83.16	14.772	
9,300.0	6,928.0	9,437.5	7,022.0	43.8	45.6	-94.34	2,279.3	-842.5	1,228.5	1,142.0	86.51	14.200	
9,400.0	6,928.0	9,537.5	7,022.0	45.5	47.2	-94.34	2,379.3	-842.5	1,228.5	1,138.6	89.88	13.669	
9,500.0	6,928.0	9,637.5	7,022.0	47.2	48.9	-94.34	2,479.3	-842.5	1,228.5	1,135.3	93.25	13.175	
9,600.0	6,928.0	9,737.5	7,022.0	48.9	50.5	-94.34	2,579.3	-842.5	1,228.5	1,131.9	96.63	12.714	
9,700.0	6,928.0	9,837.5	7,022.0	50.6	52.1	-94.34	2,679.3	-842.5	1,228.5	1,128.5	100.02	12.283	
9,800.0	6,928.0	9,937.5	7,022.0	52.2	53.8	-94.34	2,779.3	-842.5	1,228.5	1,125.1	103.41	11.880	
9,900.0	6,928.0	10,037.5	7,022.0	53.9	55.4	-94.34	2,879.3	-842.5	1,228.5	1,121.7	106.82	11.501	
10,000.0	6,928.0	10,137.5	7,022.0	55.6	57.1	-94.34	2,979.3	-842.5	1,228.5	1,118.3	110.23	11.145	
10,100.0	6,928.0	10,237.5	7,022.0	57.3	58.7	-94.34	3,079.3	-842.5	1,228.5	1,114.9	113.64	10.811	
10,200.0	6,928.0	10,337.5	7,022.0	59.0	60.4	-94.34	3,179.3	-842.5	1,228.5	1,111.5	117.06	10.495	
10,300.0	6,928.0	10,437.5	7,022.0	60.7	62.1	-94.34	3,279.3	-842.5	1,228.5	1,108.0	120.48	10.197	
10,400.0	6,928.0	10,537.5	7,022.0	62.5	63.7	-94.34	3,379.3	-842.5	1,228.5	1,104.6	123.91	9.915	
10,500.0	6,928.0	10,637.5	7,022.0	64.2	65.4	-94.34	3,479.3	-842.5	1,228.5	1,101.2	127.34	9.647	
10,600.0	6,928.0	10,737.5	7,022.0	65.9	67.1	-94.34	3,579.3	-842.5	1,228.5	1,097.8	130.78	9.394	
10,700.0	6,928.0	10,837.5	7,022.0	67.6	68.8	-94.34	3,679.3	-842.5	1,228.5	1,094.3	134.22	9.153	
10,800.0	6,928.0	10,937.5	7,022.0	69.3	70.5	-94.34	3,779.3	-842.5	1,228.5	1,090.9	137.66	8.924	
10,900.0	6,928.0	11,037.5	7,022.0	71.0	72.2	-94.34	3,879.3	-842.5	1,228.5	1,087.4	141.10	8.707	
11,000.0	6,928.0	11,137.5	7,022.0	72.8	73.9	-94.34	3,979.3	-842.5	1,228.5	1,084.0	144.55	8.499	
11,100.0	6,928.0	11,237.5	7,022.0	74.5	75.6	-94.34	4,079.3	-842.5	1,228.5	1,080.5	148.00	8.301	
11,200.0	6,928.0	11,337.5	7,022.0	76.2	77.3	-94.34	4,179.3	-842.5	1,228.5	1,077.1	151.45	8.112	
11,300.0	6,928.0	11,437.5	7,022.0	77.9	79.0	-94.34	4,279.3	-842.5	1,228.5	1,073.6	154.91	7.931	
11,400.0	6,928.0	11,537.5	7,022.0	79.7	80.7	-94.34	4,379.3	-842.5	1,228.5	1,070.2	158.36	7.758	
11,500.0	6,928.0	11,637.5	7,022.0	81.4	82.4	-94.34	4,479.3	-842.5	1,228.5	1,066.7	161.82	7.592	
11,500.7	6,928.0	11,638.2	7,022.0	81.4	82.4	-94.34	4,479.9	-842.5	1,228.5	1,066.7	161.84	7.591	
11,512.7	6,928.0	11,645.9	7,022.0	81.6	82.5	-94.34	4,487.6	-842.5	1,228.5	1,066.4	162.18	7.575 SF	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4B-20H-O264 - 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	1.0	1.0	0.0	0.0	-89.30	0.4	-29.9	29.9				
100.0	100.0	101.0	101.0	0.1	0.1	-89.30	0.4	-29.9	29.9	29.7	0.25	121.609	
200.0	200.0	201.0	201.0	0.3	0.3	-89.30	0.4	-29.9	29.9	29.3	0.60	50.284	
232.1	232.1	233.1	233.1	0.4	0.4	-89.30	0.4	-29.9	29.9	29.2	0.71	42.316	CC, ES
300.0	300.0	300.5	300.5	0.5	0.5	-89.71	0.2	-30.3	30.3	29.4	0.94	32.131	
400.0	400.0	400.0	399.9	0.6	0.7	-92.56	-1.5	-33.4	33.4	32.1	1.30	25.723	
450.0	450.0	448.9	448.7	0.7	0.8	-94.60	-2.9	-36.0	36.2	34.7	1.49	24.364	
500.0	500.0	498.1	497.8	0.8	0.9	133.91	-4.7	-39.4	39.9	38.3	1.64	24.318	
600.0	600.0	596.0	595.2	1.0	1.1	130.99	-9.5	-48.3	50.8	48.9	1.99	25.496	
700.0	699.9	694.9	693.4	1.2	1.3	129.74	-15.2	-59.0	64.7	62.4	2.35	27.547	
800.0	799.8	793.8	791.5	1.4	1.6	129.86	-21.0	-69.7	79.7	77.0	2.71	29.403	
900.0	899.5	892.5	889.4	1.6	1.9	130.71	-26.7	-80.3	95.9	92.8	3.08	31.097	
1,000.0	999.2	990.9	987.1	1.8	2.1	131.95	-32.4	-91.0	113.2	109.7	3.46	32.669	
1,018.1	1,017.1	1,008.7	1,004.7	1.8	2.2	132.19	-33.4	-92.9	116.4	112.9	3.53	32.946	
1,100.0	1,098.7	1,089.2	1,084.7	2.0	2.4	133.30	-38.1	-101.6	131.3	127.4	3.85	34.069	
1,200.0	1,198.2	1,187.5	1,182.2	2.2	2.7	134.35	-43.8	-112.2	149.5	145.3	4.25	35.200	
1,300.0	1,297.7	1,285.8	1,279.8	2.5	2.9	135.18	-49.4	-122.8	167.7	163.1	4.64	36.132	
1,400.0	1,397.2	1,384.1	1,377.4	2.7	3.2	135.84	-55.1	-133.5	186.0	181.0	5.04	36.911	
1,500.0	1,496.7	1,482.4	1,474.9	2.9	3.5	136.38	-60.8	-144.1	204.3	198.8	5.44	37.573	
1,600.0	1,596.2	1,580.7	1,572.5	3.2	3.7	136.84	-66.5	-154.7	222.6	216.7	5.84	38.141	
1,700.0	1,695.7	1,679.0	1,670.0	3.4	4.0	137.22	-72.2	-165.3	240.9	234.7	6.24	38.634	
1,800.0	1,795.2	1,777.3	1,767.6	3.6	4.3	137.55	-77.9	-175.9	259.2	252.6	6.64	39.065	
1,900.0	1,894.7	1,875.6	1,865.1	3.9	4.6	137.84	-83.6	-186.5	277.5	270.5	7.04	39.446	
2,000.0	1,994.2	1,973.9	1,962.7	4.1	4.8	138.09	-89.3	-197.2	295.9	288.4	7.44	39.785	
2,100.0	2,093.8	2,072.2	2,060.3	4.4	5.1	138.31	-95.0	-207.8	314.2	306.4	7.84	40.088	
2,200.0	2,193.3	2,170.5	2,157.8	4.6	5.4	138.51	-100.7	-218.4	332.5	324.3	8.24	40.361	
2,300.0	2,292.8	2,268.8	2,255.4	4.8	5.6	138.69	-106.4	-229.0	350.9	342.2	8.64	40.608	
2,400.0	2,392.3	2,367.1	2,352.9	5.1	5.9	138.85	-112.1	-239.6	369.2	360.2	9.04	40.832	
2,500.0	2,491.8	2,465.4	2,450.5	5.3	6.2	138.99	-117.8	-250.3	387.6	378.1	9.44	41.037	
2,600.0	2,591.3	2,563.7	2,548.0	5.6	6.5	139.12	-123.5	-260.9	405.9	396.1	9.85	41.225	
2,700.0	2,690.8	2,662.0	2,645.6	5.8	6.7	139.24	-129.2	-271.5	424.3	414.0	10.25	41.397	
2,800.0	2,790.3	2,760.3	2,743.1	6.1	7.0	139.35	-134.9	-282.1	442.6	432.0	10.65	41.556	
2,900.0	2,889.8	2,858.6	2,840.7	6.3	7.3	139.45	-140.5	-292.7	461.0	449.9	11.05	41.704	
3,000.0	2,989.3	2,956.9	2,938.3	6.6	7.5	139.55	-146.2	-303.3	479.4	467.9	11.46	41.841	
3,100.0	3,088.8	3,055.2	3,035.8	6.8	7.8	139.63	-151.9	-314.0	497.7	485.9	11.86	41.968	
3,200.0	3,188.4	3,153.5	3,133.4	7.0	8.1	139.71	-157.6	-324.6	516.1	503.8	12.26	42.087	
3,300.0	3,287.9	3,251.8	3,230.9	7.3	8.4	139.79	-163.3	-335.2	534.4	521.8	12.66	42.198	
3,400.0	3,387.4	3,350.1	3,328.5	7.5	8.6	139.86	-169.0	-345.8	552.8	539.7	13.07	42.302	
3,500.0	3,486.9	3,448.4	3,426.0	7.8	8.9	139.93	-174.7	-356.4	571.2	557.7	13.47	42.400	
3,600.0	3,586.4	3,546.7	3,523.6	8.0	9.2	139.99	-180.4	-367.1	589.5	575.6	13.87	42.492	
3,700.0	3,685.9	3,645.0	3,621.2	8.3	9.4	140.04	-186.1	-377.7	607.9	593.6	14.28	42.579	
3,800.0	3,785.4	3,743.3	3,718.7	8.5	9.7	140.10	-191.8	-388.3	626.2	611.6	14.68	42.661	
3,900.0	3,884.9	3,841.6	3,816.3	8.8	10.0	140.15	-197.5	-398.9	644.6	629.5	15.08	42.738	
4,000.0	3,984.4	3,939.9	3,913.8	9.0	10.3	140.20	-203.2	-409.5	663.0	647.5	15.49	42.811	
4,100.0	4,083.9	4,038.2	4,011.4	9.2	10.5	140.24	-208.9	-420.2	681.3	665.5	15.89	42.881	
4,200.0	4,183.4	4,136.5	4,108.9	9.5	10.8	140.29	-214.6	-430.8	699.7	683.4	16.29	42.947	
4,300.0	4,283.0	4,234.8	4,206.5	9.7	11.1	140.33	-220.3	-441.4	718.1	701.4	16.70	43.010	
4,400.0	4,382.5	4,333.1	4,304.0	10.0	11.3	140.37	-225.9	-452.0	736.4	719.3	17.10	43.070	
4,500.0	4,482.0	4,431.4	4,401.6	10.2	11.6	140.40	-231.6	-462.6	754.8	737.3	17.50	43.127	
4,600.0	4,581.5	4,529.7	4,499.2	10.5	11.9	140.44	-237.3	-473.2	773.2	755.3	17.91	43.181	
4,700.0	4,681.0	4,628.0	4,596.7	10.7	12.2	140.47	-243.0	-483.9	791.5	773.2	18.31	43.233	
4,800.0	4,780.5	4,726.3	4,694.3	11.0	12.4	140.51	-248.7	-494.5	809.9	791.2	18.71	43.283	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4B-20H-O264 - 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
4,900.0	4,880.0	4,824.6	4,791.8	11.2	12.7	140.54	-254.4	-505.1	828.3	809.2	19.12	43.331	
5,000.0	4,979.5	4,922.9	4,889.4	11.4	13.0	140.57	-260.1	-515.7	846.7	827.1	19.52	43.376	
5,100.0	5,079.0	5,021.2	4,986.9	11.7	13.3	140.59	-265.8	-526.3	865.0	845.1	19.92	43.420	
5,200.0	5,178.5	5,119.4	5,084.5	11.9	13.5	140.62	-271.5	-537.0	883.4	863.1	20.33	43.462	
5,300.0	5,278.0	5,217.7	5,182.1	12.2	13.8	140.65	-277.2	-547.6	901.8	881.0	20.73	43.502	
5,400.0	5,377.6	5,316.0	5,279.6	12.4	14.1	140.67	-282.9	-558.2	920.1	899.0	21.13	43.541	
5,455.6	5,432.9	5,370.7	5,333.8	12.6	14.2	140.69	-286.0	-564.1	930.3	909.0	21.36	43.562	
5,500.0	5,477.1	5,414.4	5,377.2	12.7	14.3	140.74	-288.6	-568.8	938.4	916.8	21.54	43.556	
5,600.0	5,576.7	5,512.9	5,475.0	12.9	14.6	140.81	-294.3	-579.5	955.5	933.5	21.95	43.523	
5,700.0	5,676.5	5,611.6	5,573.0	13.1	14.9	140.81	-300.0	-590.1	971.3	948.9	22.35	43.458	
5,800.0	5,776.4	5,720.3	5,680.8	13.3	15.2	140.72	-306.2	-601.7	985.6	962.9	22.75	43.327	
5,900.0	5,876.4	5,863.3	5,823.3	13.4	15.5	140.60	-312.1	-612.6	995.6	972.4	23.17	42.959	
6,000.0	5,976.3	6,007.4	5,967.3	13.6	15.7	140.55	-314.5	-617.3	999.8	976.2	23.57	42.419	
6,023.7	6,000.0	6,041.1	6,001.0	13.6	15.7	-89.98	-314.6	-617.4	999.9	976.3	23.66	42.266	
6,100.0	6,076.3	6,117.5	6,077.3	13.7	15.8	-89.98	-314.6	-617.4	999.9	976.0	23.89	41.848	
6,200.0	6,176.3	6,217.5	6,177.3	13.8	15.9	-89.98	-314.6	-617.4	999.9	975.7	24.20	41.311	
6,300.0	6,276.3	6,317.5	6,277.3	14.0	16.0	-89.98	-314.6	-617.4	999.9	975.4	24.52	40.786	
6,378.7	6,355.0	6,396.2	6,356.0	14.1	16.1	-89.98	-314.6	-617.4	999.9	975.2	24.76	40.381	
6,399.0	6,375.4	6,416.5	6,376.4	14.1	16.2	-90.00	-314.6	-617.4	999.9	975.1	24.82	40.288	
6,400.0	6,376.3	6,417.5	6,377.3	14.1	16.2	-90.00	-314.6	-617.4	999.9	975.1	24.82	40.283	
6,450.0	6,426.2	6,467.3	6,427.2	14.1	16.2	-90.23	-314.6	-617.4	999.9	975.0	24.92	40.118	
6,500.0	6,475.4	6,516.6	6,476.4	14.1	16.3	-90.70	-314.6	-617.4	1,000.0	975.0	24.99	40.018	
6,550.0	6,523.8	6,564.9	6,524.8	14.1	16.3	-91.37	-314.6	-617.4	1,000.2	975.2	25.02	39.981	
6,600.0	6,570.9	6,612.0	6,571.9	14.1	16.4	-92.22	-314.6	-617.4	1,000.8	975.8	25.02	40.007	
6,650.0	6,616.3	6,661.7	6,621.6	14.0	16.4	-93.23	-313.3	-617.4	1,001.8	976.8	24.97	40.115	
6,700.0	6,659.8	6,714.3	6,673.7	13.9	16.5	-94.27	-307.2	-617.4	1,003.2	978.3	24.89	40.310	
6,750.0	6,700.9	6,769.1	6,727.3	13.9	16.5	-95.30	-295.9	-617.4	1,004.9	980.2	24.77	40.570	
6,800.0	6,739.4	6,826.4	6,782.0	13.8	16.4	-96.32	-278.6	-617.4	1,007.0	982.4	24.64	40.875	
6,850.0	6,775.0	6,886.5	6,837.1	13.8	16.4	-97.32	-254.8	-617.4	1,009.3	984.8	24.50	41.197	
6,900.0	6,807.3	6,949.5	6,891.8	13.8	16.3	-98.29	-223.7	-617.4	1,011.8	987.4	24.38	41.499	
6,950.0	6,836.3	7,015.6	6,945.3	13.8	16.2	-99.22	-184.8	-617.4	1,014.3	990.0	24.31	41.727	
7,000.0	6,861.5	7,085.0	6,996.2	13.9	16.2	-100.09	-137.6	-617.4	1,016.9	992.6	24.31	41.830	
7,050.0	6,883.0	7,157.6	7,042.9	14.0	16.2	-100.87	-82.1	-617.4	1,019.3	994.8	24.42	41.743	
7,100.0	6,900.4	7,233.3	7,083.7	14.2	16.3	-101.55	-18.5	-617.4	1,021.4	996.7	24.67	41.402	
7,150.0	6,913.6	7,311.7	7,116.8	14.4	16.4	-102.10	52.6	-617.4	1,023.1	998.0	25.09	40.780	
7,200.0	6,922.6	7,392.2	7,140.3	14.6	16.7	-102.49	129.5	-617.4	1,024.4	998.7	25.70	39.859	
7,250.0	6,927.3	7,474.2	7,153.0	14.9	17.1	-102.70	210.4	-617.4	1,025.0	998.5	26.51	38.671	
7,278.7	6,928.0	7,521.6	7,155.0	15.1	17.3	-102.74	257.7	-617.4	1,025.1	998.1	27.04	37.907	
7,300.0	6,928.0	7,543.1	7,155.0	15.3	17.5	-102.74	279.3	-617.4	1,025.1	997.8	27.39	37.426	
7,400.0	6,928.0	7,643.1	7,155.0	16.1	18.2	-102.74	379.3	-617.4	1,025.1	996.0	29.17	35.147	
7,500.0	6,928.0	7,743.1	7,155.0	17.1	19.1	-102.74	479.3	-617.4	1,025.1	993.9	31.21	32.847	
7,600.0	6,928.0	7,843.1	7,155.0	18.2	20.1	-102.74	579.3	-617.4	1,025.1	991.7	33.48	30.621	
7,700.0	6,928.0	7,943.1	7,155.0	19.4	21.1	-102.74	679.3	-617.4	1,025.1	989.2	35.93	28.531	
7,800.0	6,928.0	8,043.1	7,155.0	20.6	22.3	-102.74	779.3	-617.4	1,025.1	986.6	38.53	26.605	
7,900.0	6,928.0	8,143.1	7,155.0	22.0	23.5	-102.74	879.3	-617.4	1,025.1	983.9	41.25	24.850	
8,000.0	6,928.0	8,243.1	7,155.0	23.3	24.8	-102.74	979.3	-617.4	1,025.1	981.1	44.07	23.261	
8,100.0	6,928.0	8,343.1	7,155.0	24.8	26.2	-102.74	1,079.3	-617.4	1,025.1	978.2	46.97	21.825	
8,200.0	6,928.0	8,443.1	7,155.0	26.3	27.6	-102.74	1,179.3	-617.4	1,025.1	975.2	49.94	20.529	
8,300.0	6,928.0	8,543.1	7,155.0	27.8	29.0	-102.74	1,279.3	-617.4	1,025.1	972.2	52.96	19.358	
8,400.0	6,928.0	8,643.1	7,155.0	29.3	30.5	-102.74	1,379.3	-617.4	1,025.1	969.1	56.03	18.298	
8,500.0	6,928.0	8,743.1	7,155.0	30.9	32.0	-102.74	1,479.3	-617.4	1,025.1	966.0	59.13	17.336	
8,600.0	6,928.0	8,843.1	7,155.0	32.4	33.5	-102.74	1,579.3	-617.4	1,025.1	962.9	62.27	16.462	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4B-20H-O264 - 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
8,700.0	6,928.0	8,943.1	7,155.0	34.0	35.1	-102.74	1,679.3	-617.4	1,025.1	959.7	65.44	15.665	
8,800.0	6,928.0	9,043.1	7,155.0	35.6	36.6	-102.74	1,779.3	-617.4	1,025.1	956.5	68.63	14.937	
8,900.0	6,928.0	9,143.1	7,155.0	37.3	38.2	-102.74	1,879.3	-617.4	1,025.1	953.3	71.85	14.269	
9,000.0	6,928.0	9,243.1	7,155.0	38.9	39.8	-102.74	1,979.3	-617.4	1,025.1	950.1	75.08	13.654	
9,100.0	6,928.0	9,343.1	7,155.0	40.5	41.4	-102.74	2,079.3	-617.4	1,025.1	946.8	78.33	13.088	
9,200.0	6,928.0	9,443.1	7,155.0	42.2	43.1	-102.74	2,179.3	-617.4	1,025.1	943.6	81.59	12.565	
9,300.0	6,928.0	9,543.1	7,155.0	43.8	44.7	-102.74	2,279.3	-617.4	1,025.1	940.3	84.87	12.080	
9,400.0	6,928.0	9,643.1	7,155.0	45.5	46.3	-102.74	2,379.3	-617.4	1,025.1	937.0	88.15	11.629	
9,500.0	6,928.0	9,743.1	7,155.0	47.2	48.0	-102.74	2,479.3	-617.4	1,025.1	933.7	91.45	11.210	
9,600.0	6,928.0	9,843.1	7,155.0	48.9	49.6	-102.74	2,579.3	-617.4	1,025.1	930.4	94.75	10.819	
9,700.0	6,928.0	9,943.1	7,155.0	50.6	51.3	-102.74	2,679.3	-617.4	1,025.1	927.1	98.07	10.453	
9,800.0	6,928.0	10,043.1	7,155.0	52.2	53.0	-102.74	2,779.3	-617.4	1,025.1	923.8	101.39	10.111	
9,900.0	6,928.0	10,143.1	7,155.0	53.9	54.6	-102.74	2,879.3	-617.4	1,025.1	920.4	104.72	9.790	
10,000.0	6,928.0	10,243.1	7,155.0	55.6	56.3	-102.74	2,979.3	-617.4	1,025.1	917.1	108.05	9.488	
10,100.0	6,928.0	10,343.1	7,155.0	57.3	58.0	-102.74	3,079.3	-617.4	1,025.1	913.8	111.39	9.203	
10,200.0	6,928.0	10,443.1	7,155.0	59.0	59.7	-102.74	3,179.3	-617.4	1,025.1	910.4	114.73	8.935	
10,300.0	6,928.0	10,543.1	7,155.0	60.7	61.4	-102.74	3,279.3	-617.4	1,025.1	907.1	118.08	8.682	
10,400.0	6,928.0	10,643.1	7,155.0	62.5	63.1	-102.74	3,379.3	-617.4	1,025.1	903.7	121.43	8.442	
10,500.0	6,928.0	10,743.1	7,155.0	64.2	64.8	-102.74	3,479.3	-617.4	1,025.1	900.4	124.79	8.215	
10,600.0	6,928.0	10,843.1	7,155.0	65.9	66.5	-102.74	3,579.3	-617.4	1,025.1	897.0	128.15	8.000	
10,700.0	6,928.0	10,943.1	7,155.0	67.6	68.2	-102.74	3,679.3	-617.4	1,025.1	893.6	131.51	7.795	
10,800.0	6,928.0	11,043.1	7,155.0	69.3	69.9	-102.74	3,779.3	-617.4	1,025.1	890.3	134.88	7.601	
10,900.0	6,928.0	11,143.1	7,155.0	71.0	71.6	-102.74	3,879.3	-617.4	1,025.1	886.9	138.25	7.415	
11,000.0	6,928.0	11,243.1	7,155.0	72.8	73.3	-102.74	3,979.3	-617.4	1,025.1	883.5	141.62	7.239	
11,100.0	6,928.0	11,343.1	7,155.0	74.5	75.0	-102.74	4,079.3	-617.4	1,025.1	880.2	144.99	7.070	
11,200.0	6,928.0	11,443.1	7,155.0	76.2	76.7	-102.74	4,179.3	-617.4	1,025.1	876.8	148.37	6.909	
11,300.0	6,928.0	11,543.1	7,155.0	77.9	78.4	-102.74	4,279.3	-617.4	1,025.1	873.4	151.75	6.756	
11,400.0	6,928.0	11,643.1	7,155.0	79.7	80.1	-102.74	4,379.3	-617.4	1,025.1	870.0	155.13	6.608	
11,500.0	6,928.0	11,743.1	7,155.0	81.4	81.9	-102.74	4,479.3	-617.4	1,025.1	866.6	158.51	6.467	
11,509.1	6,928.0	11,752.2	7,155.0	81.5	82.0	-102.74	4,488.3	-617.4	1,025.1	866.3	158.82	6.455	
11,512.7	6,928.0	11,752.2	7,155.0	81.6	82.0	-102.74	4,488.3	-617.4	1,025.2	866.3	158.88	6.452	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4C-20H-O264 - 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	-89.04	0.4	-22.4	22.4				
100.0	100.0	100.0	100.0	0.1	0.1	-89.04	0.4	-22.4	22.4	22.1	0.24	91.578	
200.0	200.0	200.0	200.0	0.3	0.3	-89.04	0.4	-22.4	22.4	21.8	0.59	37.709	
300.0	300.0	300.0	300.0	0.5	0.5	-89.04	0.4	-22.4	22.4	21.4	0.94	23.743	CC, ES
400.0	400.0	399.4	399.4	0.6	0.6	-91.76	-0.7	-23.7	23.7	22.4	1.29	18.339	
450.0	450.0	449.0	448.9	0.7	0.7	-94.74	-2.1	-25.3	25.5	24.0	1.47	17.262	
500.0	500.0	498.5	498.3	0.8	0.8	132.56	-4.0	-27.7	28.1	26.5	1.64	17.122	
600.0	600.0	597.6	597.0	1.0	1.0	127.60	-9.3	-34.0	36.6	34.6	2.00	18.308	
700.0	699.9	697.0	696.1	1.2	1.3	125.91	-15.1	-40.9	46.7	44.4	2.36	19.842	
800.0	799.8	796.4	795.1	1.4	1.5	126.21	-20.8	-47.8	58.0	55.2	2.72	21.294	
900.0	899.5	895.6	893.9	1.6	1.7	127.53	-26.5	-54.7	70.2	67.1	3.10	22.672	
1,000.0	999.2	994.7	992.6	1.8	1.9	129.36	-32.2	-61.5	83.6	80.1	3.48	23.999	
1,018.1	1,017.1	1,012.6	1,010.4	1.8	2.0	129.73	-33.3	-62.7	86.1	82.6	3.55	24.239	
1,100.0	1,098.7	1,093.6	1,091.1	2.0	2.2	131.27	-37.9	-68.4	97.8	93.9	3.88	25.227	
1,200.0	1,198.2	1,192.6	1,189.7	2.2	2.4	132.71	-43.6	-75.2	112.1	107.8	4.27	26.233	
1,300.0	1,297.7	1,291.5	1,288.2	2.5	2.6	133.83	-49.3	-82.0	126.4	121.7	4.67	27.070	
1,400.0	1,397.2	1,390.5	1,386.7	2.7	2.9	134.72	-55.0	-88.9	140.8	135.7	5.07	27.777	
1,500.0	1,496.7	1,489.4	1,485.3	2.9	3.1	135.44	-60.8	-95.7	155.2	149.7	5.47	28.381	
1,600.0	1,596.2	1,588.3	1,583.8	3.2	3.3	136.05	-66.5	-102.6	169.6	163.8	5.87	28.902	
1,700.0	1,695.7	1,687.3	1,682.3	3.4	3.5	136.55	-72.2	-109.4	184.1	177.8	6.27	29.357	
1,800.0	1,795.2	1,786.2	1,780.9	3.6	3.8	136.99	-77.9	-116.3	198.5	191.9	6.67	29.758	
1,900.0	1,894.7	1,885.1	1,879.4	3.9	4.0	137.36	-83.6	-123.1	213.0	205.9	7.07	30.113	
2,000.0	1,994.2	1,984.1	1,977.9	4.1	4.2	137.69	-89.3	-130.0	227.5	220.0	7.48	30.429	
2,100.0	2,093.8	2,083.0	2,076.5	4.4	4.5	137.98	-95.0	-136.8	242.0	234.1	7.88	30.713	
2,200.0	2,193.3	2,182.0	2,175.0	4.6	4.7	138.23	-100.7	-143.6	256.5	248.2	8.28	30.970	
2,300.0	2,292.8	2,280.9	2,273.6	4.8	4.9	138.46	-106.4	-150.5	271.0	262.3	8.68	31.202	
2,400.0	2,392.3	2,379.8	2,372.1	5.1	5.2	138.66	-112.1	-157.3	285.5	276.4	9.09	31.414	
2,500.0	2,491.8	2,478.8	2,470.6	5.3	5.4	138.85	-117.8	-164.2	300.0	290.5	9.49	31.608	
2,600.0	2,591.3	2,577.7	2,569.2	5.6	5.6	139.02	-123.5	-171.0	314.5	304.6	9.89	31.786	
2,700.0	2,690.8	2,676.7	2,667.7	5.8	5.9	139.17	-129.2	-177.9	329.0	318.7	10.30	31.950	
2,800.0	2,790.3	2,775.6	2,766.2	6.1	6.1	139.31	-134.9	-184.7	343.5	332.8	10.70	32.101	
2,900.0	2,889.8	2,874.5	2,864.8	6.3	6.3	139.44	-140.6	-191.6	358.0	346.9	11.10	32.242	
3,000.0	2,989.3	2,973.5	2,963.3	6.6	6.6	139.56	-146.3	-198.4	372.5	361.0	11.51	32.372	
3,100.0	3,088.8	3,072.4	3,061.8	6.8	6.8	139.67	-152.0	-205.3	387.0	375.1	11.91	32.494	
3,200.0	3,188.4	3,171.4	3,160.4	7.0	7.0	139.77	-157.7	-212.1	401.5	389.2	12.31	32.608	
3,300.0	3,287.9	3,270.3	3,258.9	7.3	7.3	139.86	-163.4	-218.9	416.0	403.3	12.72	32.714	
3,400.0	3,387.4	3,369.2	3,357.5	7.5	7.5	139.95	-169.1	-225.8	430.5	417.4	13.12	32.814	
3,500.0	3,486.9	3,468.2	3,456.0	7.8	7.7	140.03	-174.8	-232.6	445.1	431.5	13.52	32.908	
3,600.0	3,586.4	3,567.1	3,554.5	8.0	8.0	140.11	-180.5	-239.5	459.6	445.7	13.93	32.997	
3,700.0	3,685.9	3,666.0	3,653.1	8.3	8.2	140.18	-186.2	-246.3	474.1	459.8	14.33	33.080	
3,800.0	3,785.4	3,765.0	3,751.6	8.5	8.4	140.25	-191.9	-253.2	488.6	473.9	14.74	33.159	
3,900.0	3,884.9	3,863.9	3,850.1	8.8	8.7	140.32	-197.7	-260.0	503.1	488.0	15.14	33.234	
4,000.0	3,984.4	3,962.9	3,948.7	9.0	8.9	140.38	-203.4	-266.9	517.7	502.1	15.54	33.304	
4,100.0	4,083.9	4,061.8	4,047.2	9.2	9.1	140.44	-209.1	-273.7	532.2	516.2	15.95	33.371	
4,200.0	4,183.4	4,160.7	4,145.8	9.5	9.3	140.49	-214.8	-280.5	546.7	530.3	16.35	33.435	
4,300.0	4,283.0	4,259.7	4,244.3	9.7	9.6	140.54	-220.5	-287.4	561.2	544.5	16.75	33.496	
4,400.0	4,382.5	4,358.6	4,342.8	10.0	9.8	140.59	-226.2	-294.2	575.7	558.6	17.16	33.554	
4,500.0	4,482.0	4,457.6	4,441.4	10.2	10.0	140.64	-231.9	-301.1	590.3	572.7	17.56	33.609	
4,600.0	4,581.5	4,556.5	4,539.9	10.5	10.3	140.68	-237.6	-307.9	604.8	586.8	17.97	33.662	
4,700.0	4,681.0	4,655.4	4,638.4	10.7	10.5	140.72	-243.3	-314.8	619.3	600.9	18.37	33.712	
4,800.0	4,780.5	4,754.4	4,737.0	11.0	10.7	140.76	-249.0	-321.6	633.8	615.1	18.77	33.760	
4,900.0	4,880.0	4,853.3	4,835.5	11.2	11.0	140.80	-254.7	-328.5	648.4	629.2	19.18	33.806	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4C-20H-O264 - 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
5,000.0	4,979.5	4,952.2	4,934.0	11.4	11.2	140.84	-260.4	-335.3	662.9	643.3	19.58	33.851	
5,100.0	5,079.0	5,051.2	5,032.6	11.7	11.4	140.88	-266.1	-342.2	677.4	657.4	19.99	33.893	
5,200.0	5,178.5	5,150.1	5,131.1	11.9	11.7	140.91	-271.8	-349.0	691.9	671.5	20.39	33.934	
5,300.0	5,278.0	5,249.1	5,229.7	12.2	11.9	140.94	-277.5	-355.8	706.5	685.7	20.79	33.973	
5,400.0	5,377.6	5,348.0	5,328.2	12.4	12.1	140.97	-283.2	-362.7	721.0	699.8	21.20	34.011	
5,455.6	5,432.9	5,403.0	5,383.0	12.6	12.3	140.99	-286.4	-366.5	729.1	707.6	21.42	34.031	
5,500.0	5,477.1	5,447.0	5,426.7	12.7	12.4	141.03	-288.9	-369.5	735.4	713.8	21.61	34.033	
5,600.0	5,576.7	5,546.1	5,525.5	12.9	12.6	141.07	-294.6	-376.4	748.6	726.6	22.01	34.009	
5,700.0	5,676.5	5,645.3	5,624.3	13.1	12.8	141.01	-300.4	-383.3	760.5	738.1	22.41	33.943	
5,800.0	5,776.4	5,744.7	5,723.3	13.3	13.1	140.87	-306.1	-390.1	771.1	748.3	22.79	33.837	
5,900.0	5,876.4	5,865.5	5,843.8	13.4	13.3	140.65	-311.9	-397.1	779.3	756.1	23.18	33.612	
6,000.0	5,976.3	5,991.9	5,970.1	13.6	13.5	140.56	-314.5	-400.3	782.7	759.2	23.55	33.240	
6,023.7	6,000.0	6,021.9	6,000.0	13.6	13.5	-89.97	-314.6	-400.4	782.9	759.2	23.63	33.129	
6,100.0	6,076.3	6,098.2	6,076.3	13.7	13.7	-89.97	-314.6	-400.4	782.9	759.0	23.87	32.801	
6,200.0	6,176.3	6,198.2	6,176.3	13.8	13.8	-89.97	-314.6	-400.4	782.9	758.7	24.18	32.380	
6,300.0	6,276.3	6,298.2	6,276.3	14.0	13.9	-89.97	-314.6	-400.4	782.9	758.4	24.49	31.968	
6,378.7	6,355.0	6,376.9	6,355.0	14.1	14.0	-89.97	-314.6	-400.4	782.9	758.1	24.73	31.651	
6,400.0	6,376.3	6,398.2	6,376.4	14.1	14.1	-89.98	-314.3	-400.4	782.9	758.1	24.79	31.581	
6,450.0	6,426.2	6,448.3	6,426.3	14.1	14.1	-89.98	-310.3	-400.4	782.9	758.0	24.85	31.501	
6,500.0	6,475.4	6,498.4	6,475.7	14.1	14.1	-89.99	-302.0	-400.4	782.9	758.0	24.85	31.497	
6,550.0	6,523.8	6,548.5	6,524.2	14.1	14.1	-90.00	-289.4	-400.3	782.8	758.0	24.80	31.560	
6,600.0	6,570.9	6,598.6	6,571.4	14.1	14.0	-90.00	-272.6	-400.3	782.8	758.1	24.71	31.676	
6,650.0	6,616.3	6,648.7	6,616.9	14.0	14.0	-90.01	-251.8	-400.3	782.8	758.2	24.59	31.832	
6,700.0	6,659.8	6,698.8	6,660.5	13.9	13.9	-90.02	-227.1	-400.2	782.7	758.3	24.45	32.007	
6,750.0	6,700.9	6,749.0	6,701.7	13.9	13.8	-90.02	-198.6	-400.2	782.7	758.4	24.32	32.181	
6,800.0	6,739.4	6,799.1	6,740.3	13.8	13.8	-90.03	-166.7	-400.1	782.6	758.4	24.21	32.330	
6,850.0	6,775.0	6,849.2	6,776.0	13.8	13.8	-90.04	-131.5	-400.1	782.6	758.4	24.13	32.426	
6,900.0	6,807.3	6,899.3	6,808.4	13.8	13.8	-90.04	-93.3	-400.0	782.5	758.4	24.12	32.444	
6,950.0	6,836.3	6,949.4	6,837.4	13.8	13.8	-90.05	-52.4	-399.9	782.4	758.3	24.18	32.361	
7,000.0	6,861.5	6,999.6	6,862.7	13.9	13.8	-90.05	-9.2	-399.9	782.4	758.0	24.33	32.157	
7,050.0	6,883.0	7,049.7	6,884.1	14.0	14.0	-90.06	36.1	-399.8	782.3	757.7	24.58	31.821	
7,100.0	6,900.4	7,099.8	6,901.5	14.2	14.1	-90.06	83.1	-399.7	782.2	757.3	24.95	31.353	
7,150.0	6,913.6	7,149.9	6,914.8	14.4	14.3	-90.07	131.4	-399.6	782.1	756.7	25.43	30.761	
7,200.0	6,922.6	7,200.0	6,923.7	14.6	14.6	-90.07	180.7	-399.5	782.0	756.0	26.02	30.060	
7,250.0	6,927.3	7,250.1	6,928.3	14.9	14.9	-90.07	230.5	-399.5	782.0	755.3	26.71	29.275	
7,278.7	6,928.0	7,278.8	6,929.0	15.1	15.1	-90.07	259.3	-399.4	781.9	754.8	27.15	28.797	
7,300.0	6,928.0	7,300.1	6,929.0	15.3	15.3	-90.07	280.6	-399.4	781.9	754.4	27.50	28.432	
7,400.0	6,928.0	7,400.1	6,929.0	16.1	16.1	-90.07	380.6	-399.2	781.7	752.4	29.33	26.651	
7,500.0	6,928.0	7,500.1	6,929.0	17.1	17.1	-90.07	480.6	-399.0	781.5	750.1	31.45	24.852	
7,600.0	6,928.0	7,600.1	6,929.0	18.2	18.1	-90.07	580.6	-398.9	781.4	747.6	33.80	23.120	
7,700.0	6,928.0	7,700.1	6,929.0	19.4	19.3	-90.07	680.6	-398.7	781.2	744.9	36.33	21.501	
7,800.0	6,928.0	7,800.1	6,929.0	20.6	20.6	-90.07	780.6	-398.5	781.0	742.0	39.02	20.016	
7,900.0	6,928.0	7,900.1	6,929.0	22.0	21.9	-90.07	880.6	-398.4	780.9	739.0	41.83	18.668	
8,000.0	6,928.0	8,000.1	6,929.0	23.3	23.3	-90.07	980.6	-398.2	780.7	736.0	44.74	17.451	
8,100.0	6,928.0	8,100.1	6,929.0	24.8	24.8	-90.07	1,080.6	-398.0	780.5	732.8	47.73	16.355	
8,200.0	6,928.0	8,200.1	6,929.0	26.3	26.2	-90.07	1,180.6	-397.9	780.4	729.6	50.78	15.368	
8,300.0	6,928.0	8,300.1	6,929.0	27.8	27.7	-90.07	1,280.6	-397.7	780.2	726.3	53.89	14.477	
8,400.0	6,928.0	8,400.1	6,929.0	29.3	29.3	-90.07	1,380.6	-397.5	780.0	723.0	57.05	13.674	
8,500.0	6,928.0	8,500.1	6,929.0	30.9	30.8	-90.07	1,480.6	-397.4	779.9	719.6	60.24	12.945	
8,600.0	6,928.0	8,600.1	6,929.0	32.4	32.4	-90.07	1,580.6	-397.2	779.7	716.2	63.47	12.284	
8,700.0	6,928.0	8,700.1	6,929.0	34.0	34.0	-90.07	1,680.6	-397.0	779.5	712.8	66.73	11.682	
8,800.0	6,928.0	8,800.1	6,929.0	35.6	35.6	-90.07	1,780.6	-396.9	779.4	709.4	70.01	11.132	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4C-20H-O264 - 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
8,900.0	6,928.0	8,900.1	6,929.0	37.3	37.2	-90.07	1,880.6	-396.7	779.2	705.9	73.31	10.629	
9,000.0	6,928.0	9,000.1	6,929.0	38.9	38.9	-90.07	1,980.6	-396.5	779.0	702.4	76.63	10.166	
9,100.0	6,928.0	9,100.1	6,929.0	40.5	40.5	-90.07	2,080.6	-396.4	778.9	698.9	79.97	9.740	
9,200.0	6,928.0	9,200.1	6,929.0	42.2	42.2	-90.07	2,180.6	-396.2	778.7	695.4	83.32	9.346	
9,300.0	6,928.0	9,300.1	6,929.0	43.8	43.8	-90.07	2,280.6	-396.0	778.5	691.8	86.68	8.982	
9,400.0	6,928.0	9,400.1	6,929.0	45.5	45.5	-90.07	2,380.6	-395.8	778.4	688.3	90.05	8.643	
9,500.0	6,928.0	9,500.1	6,929.0	47.2	47.2	-90.07	2,480.6	-395.7	778.2	684.8	93.44	8.328	
9,600.0	6,928.0	9,600.1	6,929.0	48.9	48.9	-90.07	2,580.6	-395.5	778.0	681.2	96.83	8.035	
9,700.0	6,928.0	9,700.1	6,929.0	50.6	50.5	-90.07	2,680.6	-395.3	777.9	677.6	100.23	7.761	
9,800.0	6,928.0	9,800.1	6,929.0	52.2	52.2	-90.07	2,780.6	-395.2	777.7	674.1	103.64	7.504	
9,900.0	6,928.0	9,900.1	6,929.0	53.9	53.9	-90.07	2,880.6	-395.0	777.5	670.5	107.05	7.263	
10,000.0	6,928.0	10,000.1	6,929.0	55.6	55.6	-90.07	2,980.6	-394.8	777.4	666.9	110.47	7.037	
10,100.0	6,928.0	10,100.1	6,929.0	57.3	57.3	-90.07	3,080.6	-394.7	777.2	663.3	113.90	6.823	
10,200.0	6,928.0	10,200.1	6,929.0	59.0	59.0	-90.07	3,180.6	-394.5	777.0	659.7	117.33	6.623	
10,300.0	6,928.0	10,300.1	6,929.0	60.7	60.7	-90.07	3,280.6	-394.3	776.9	656.1	120.76	6.433	
10,400.0	6,928.0	10,400.1	6,929.0	62.5	62.4	-90.07	3,380.6	-394.2	776.7	652.5	124.20	6.253	
10,500.0	6,928.0	10,500.1	6,929.0	64.2	64.2	-90.07	3,480.6	-394.0	776.5	648.9	127.65	6.083	
10,600.0	6,928.0	10,600.1	6,929.0	65.9	65.9	-90.07	3,580.6	-393.8	776.4	645.3	131.09	5.922	
10,700.0	6,928.0	10,700.1	6,929.0	67.6	67.6	-90.07	3,680.6	-393.7	776.2	641.6	134.54	5.769	
10,800.0	6,928.0	10,800.1	6,929.0	69.3	69.3	-90.07	3,780.6	-393.5	776.0	638.0	137.99	5.624	
10,900.0	6,928.0	10,900.1	6,929.0	71.0	71.0	-90.07	3,880.6	-393.3	775.8	634.4	141.45	5.485	
11,000.0	6,928.0	11,000.1	6,929.0	72.8	72.7	-90.07	3,980.6	-393.2	775.7	630.8	144.91	5.353	
11,100.0	6,928.0	11,100.1	6,929.0	74.5	74.5	-90.07	4,080.6	-393.0	775.5	627.1	148.37	5.227	
11,200.0	6,928.0	11,200.1	6,929.0	76.2	76.2	-90.07	4,180.6	-392.8	775.3	623.5	151.83	5.107	
11,300.0	6,928.0	11,300.1	6,929.0	77.9	77.9	-90.07	4,280.6	-392.7	775.2	619.9	155.29	4.992	
11,400.0	6,928.0	11,400.1	6,929.0	79.7	79.7	-90.07	4,380.6	-392.5	775.0	616.3	158.76	4.882	
11,500.0	6,928.0	11,500.1	6,929.0	81.4	81.4	-90.07	4,480.6	-392.3	774.8	612.6	162.23	4.776	
11,509.8	6,928.0	11,508.6	6,929.0	81.6	81.5	-90.07	4,489.1	-392.3	774.8	612.3	162.54	4.767	
11,512.7	6,928.0	11,508.6	6,929.0	81.6	81.5	-90.07	4,489.1	-392.3	774.8	612.2	162.59	4.765	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4D-20H-O264 - 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	-88.50	0.4	-14.8	14.8				
100.0	100.0	100.0	100.0	0.1	0.1	-88.50	0.4	-14.8	14.8	14.6	0.24	60.683	
200.0	200.0	200.0	200.0	0.3	0.3	-88.50	0.4	-14.8	14.8	14.2	0.59	24.987	
300.0	300.0	300.0	300.0	0.5	0.5	-88.50	0.4	-14.8	14.8	13.9	0.94	15.733	
336.3	336.3	336.3	336.3	0.5	0.5	-88.50	0.4	-14.8	14.8	13.8	1.07	13.867	CC
400.0	400.0	400.0	400.0	0.6	0.6	-89.33	0.2	-14.9	14.9	13.6	1.29	11.505	
450.0	450.0	450.0	449.9	0.7	0.7	-91.80	-0.5	-15.0	15.0	13.5	1.47	10.211	ES
500.0	500.0	499.9	499.9	0.8	0.8	135.28	-1.5	-15.1	15.4	13.7	1.64	9.365	
600.0	600.0	599.8	599.7	1.0	1.0	128.28	-5.0	-15.7	17.6	15.6	2.00	8.831	
700.0	699.9	699.5	699.3	1.2	1.2	122.69	-10.1	-16.6	21.8	19.5	2.36	9.249	
800.0	799.8	799.4	799.0	1.4	1.4	120.69	-16.0	-17.6	27.4	24.7	2.73	10.037	
900.0	899.5	899.2	898.6	1.6	1.6	121.91	-22.0	-18.6	33.9	30.8	3.12	10.893	
1,000.0	999.2	998.9	998.1	1.8	1.8	124.75	-27.9	-19.5	41.4	37.9	3.51	11.807	
1,018.1	1,017.1	1,016.8	1,016.1	1.8	1.8	125.36	-28.9	-19.7	42.9	39.3	3.58	11.981	
1,100.0	1,098.7	1,098.5	1,097.5	2.0	2.0	127.82	-33.8	-20.5	49.7	45.8	3.91	12.720	
1,200.0	1,198.2	1,198.1	1,197.0	2.2	2.2	130.05	-39.7	-21.5	58.1	53.8	4.31	13.486	
1,300.0	1,297.7	1,297.7	1,296.4	2.5	2.4	131.71	-45.6	-22.5	66.5	61.8	4.71	14.132	
1,400.0	1,397.2	1,397.4	1,395.9	2.7	2.6	132.99	-51.5	-23.5	75.0	69.9	5.11	14.683	
1,500.0	1,496.7	1,497.0	1,495.3	2.9	2.8	134.02	-57.4	-24.5	83.5	78.0	5.51	15.158	
1,600.0	1,596.2	1,596.6	1,594.8	3.2	3.0	134.85	-63.3	-25.5	92.1	86.2	5.91	15.570	
1,700.0	1,695.7	1,696.2	1,694.2	3.4	3.2	135.54	-69.2	-26.4	100.6	94.3	6.32	15.932	
1,800.0	1,795.2	1,795.9	1,793.7	3.6	3.4	136.12	-75.1	-27.4	109.2	102.5	6.72	16.251	
1,900.0	1,894.7	1,895.5	1,893.1	3.9	3.6	136.62	-81.0	-28.4	117.8	110.7	7.12	16.535	
2,000.0	1,994.2	1,995.1	1,992.6	4.1	3.8	137.05	-86.9	-29.4	126.4	118.8	7.53	16.789	
2,100.0	2,093.8	2,094.8	2,092.0	4.4	4.0	137.43	-92.8	-30.4	135.0	127.0	7.93	17.017	
2,200.0	2,193.3	2,194.4	2,191.5	4.6	4.2	137.76	-98.7	-31.4	143.6	135.2	8.33	17.224	
2,300.0	2,292.8	2,294.0	2,290.9	4.8	4.4	138.06	-104.6	-32.4	152.2	143.4	8.74	17.412	
2,400.0	2,392.3	2,393.6	2,390.4	5.1	4.6	138.32	-110.5	-33.3	160.8	151.6	9.14	17.583	
2,500.0	2,491.8	2,493.3	2,489.8	5.3	4.8	138.55	-116.4	-34.3	169.4	159.8	9.55	17.740	
2,600.0	2,591.3	2,592.9	2,589.2	5.6	5.0	138.77	-122.3	-35.3	178.0	168.0	9.95	17.885	
2,700.0	2,690.8	2,692.5	2,688.7	5.8	5.2	138.96	-128.2	-36.3	186.6	176.2	10.36	18.018	
2,800.0	2,790.3	2,792.1	2,788.1	6.1	5.4	139.13	-134.1	-37.3	195.2	184.5	10.76	18.141	
2,900.0	2,889.8	2,891.8	2,887.6	6.3	5.6	139.30	-140.0	-38.3	203.8	192.7	11.17	18.255	
3,000.0	2,989.3	2,991.4	2,987.0	6.6	5.8	139.44	-146.0	-39.3	212.5	200.9	11.57	18.362	
3,100.0	3,088.8	3,091.0	3,086.5	6.8	6.0	139.58	-151.9	-40.2	221.1	209.1	11.98	18.461	
3,200.0	3,188.4	3,190.6	3,185.9	7.0	6.2	139.71	-157.8	-41.2	229.7	217.3	12.38	18.554	
3,300.0	3,287.9	3,290.3	3,285.4	7.3	6.4	139.82	-163.7	-42.2	238.3	225.5	12.78	18.641	
3,400.0	3,387.4	3,389.9	3,384.8	7.5	6.6	139.93	-169.6	-43.2	246.9	233.8	13.19	18.722	
3,500.0	3,486.9	3,489.5	3,484.3	7.8	6.8	140.03	-175.5	-44.2	255.6	242.0	13.59	18.799	
3,600.0	3,586.4	3,589.1	3,583.7	8.0	7.0	140.13	-181.4	-45.2	264.2	250.2	14.00	18.872	
3,700.0	3,685.9	3,688.8	3,683.2	8.3	7.2	140.22	-187.3	-46.2	272.8	258.4	14.40	18.940	
3,800.0	3,785.4	3,788.4	3,782.6	8.5	7.4	140.30	-193.2	-47.1	281.4	266.6	14.81	19.004	
3,900.0	3,884.9	3,888.0	3,882.0	8.8	7.6	140.38	-199.1	-48.1	290.1	274.9	15.21	19.066	
4,000.0	3,984.4	3,987.7	3,981.5	9.0	7.8	140.45	-205.0	-49.1	298.7	283.1	15.62	19.123	
4,100.0	4,083.9	4,087.3	4,080.9	9.2	8.0	140.52	-210.9	-50.1	307.3	291.3	16.02	19.179	
4,200.0	4,183.4	4,186.9	4,180.4	9.5	8.2	140.59	-216.8	-51.1	316.0	299.5	16.43	19.231	
4,300.0	4,283.0	4,286.5	4,279.8	9.7	8.4	140.65	-222.7	-52.1	324.6	307.7	16.83	19.281	
4,400.0	4,382.5	4,386.2	4,379.3	10.0	8.6	140.71	-228.6	-53.1	333.2	316.0	17.24	19.328	
4,500.0	4,482.0	4,485.8	4,478.7	10.2	8.8	140.77	-234.5	-54.0	341.8	324.2	17.64	19.374	
4,600.0	4,581.5	4,585.4	4,578.2	10.5	9.0	140.82	-240.4	-55.0	350.5	332.4	18.05	19.417	
4,700.0	4,681.0	4,685.0	4,677.6	10.7	9.2	140.87	-246.3	-56.0	359.1	340.6	18.45	19.458	
4,800.0	4,780.5	4,784.7	4,777.1	11.0	9.4	140.92	-252.2	-57.0	367.7	348.9	18.86	19.498	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4D-20H-O264 - 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
4,900.0	4,880.0	4,884.3	4,876.5	11.2	9.7	140.97	-258.1	-58.0	376.4	357.1	19.27	19.536	
5,000.0	4,979.5	4,983.9	4,976.0	11.4	9.9	141.01	-264.0	-59.0	385.0	365.3	19.67	19.572	
5,100.0	5,079.0	5,083.5	5,075.4	11.7	10.1	141.05	-269.9	-60.0	393.6	373.5	20.08	19.607	
5,200.0	5,178.5	5,183.2	5,174.9	11.9	10.3	141.10	-275.8	-61.0	402.3	381.8	20.48	19.641	
5,300.0	5,278.0	5,282.8	5,274.3	12.2	10.5	141.13	-281.8	-61.9	410.9	390.0	20.89	19.673	
5,400.0	5,377.6	5,382.4	5,373.7	12.4	10.7	141.17	-287.7	-62.9	419.5	398.2	21.29	19.704	
5,455.6	5,432.9	5,437.8	5,429.0	12.6	10.8	141.19	-290.9	-63.5	424.3	402.8	21.52	19.721	
5,500.0	5,477.1	5,482.1	5,473.2	12.7	10.9	141.22	-293.6	-63.9	428.0	406.3	21.70	19.726	
5,600.0	5,576.7	5,581.8	5,572.7	12.9	11.1	141.16	-299.5	-64.9	435.4	413.3	22.10	19.697	
5,700.0	5,676.5	5,681.8	5,672.6	13.1	11.3	140.96	-305.4	-65.9	441.4	418.9	22.50	19.614	
5,800.0	5,776.4	5,782.9	5,773.6	13.3	11.5	140.76	-310.2	-66.7	445.8	423.0	22.88	19.488	
5,900.0	5,876.4	5,884.1	5,874.8	13.4	11.6	140.63	-313.3	-67.2	448.7	425.4	23.22	19.321	
6,000.0	5,976.3	5,985.4	5,976.0	13.6	11.8	140.58	-314.6	-67.4	449.9	426.3	23.54	19.114	
6,023.7	6,000.0	6,009.4	6,000.0	13.6	11.8	-89.95	-314.6	-67.4	449.9	426.3	23.61	19.058	
6,100.0	6,076.3	6,085.7	6,076.3	13.7	11.9	-89.95	-314.6	-67.4	449.9	426.1	23.84	18.869	
6,200.0	6,176.3	6,185.7	6,176.3	13.8	12.1	-89.95	-314.6	-67.4	449.9	425.8	24.16	18.626	
6,300.0	6,276.3	6,285.7	6,276.3	14.0	12.3	-89.95	-314.6	-67.4	449.9	425.5	24.47	18.389	
6,378.7	6,355.0	6,364.4	6,355.0	14.1	12.4	-89.95	-314.6	-67.4	449.9	425.2	24.71	18.206	
6,399.8	6,376.1	6,385.5	6,376.1	14.1	12.4	-90.00	-314.6	-67.4	449.9	425.1	24.77	18.161	
6,400.0	6,376.3	6,385.7	6,376.3	14.1	12.4	-90.00	-314.6	-67.4	449.9	425.1	24.78	18.160	
6,450.0	6,426.2	6,435.6	6,426.2	14.1	12.5	-90.51	-314.6	-67.4	449.9	425.0	24.91	18.065	
6,500.0	6,475.4	6,485.4	6,476.0	14.1	12.6	-91.48	-314.0	-67.4	450.1	425.1	25.01	17.996	
6,550.0	6,523.8	6,536.1	6,526.5	14.1	12.6	-92.51	-309.4	-67.4	450.4	425.3	25.05	17.979	
6,600.0	6,570.9	6,587.6	6,577.2	14.1	12.6	-93.52	-300.1	-67.4	450.8	425.8	25.03	18.012	
6,650.0	6,616.3	6,639.9	6,627.5	14.0	12.6	-94.51	-286.1	-67.4	451.4	426.4	24.95	18.089	
6,700.0	6,659.8	6,693.0	6,677.1	13.9	12.5	-95.47	-267.3	-67.4	452.0	427.2	24.83	18.204	
6,750.0	6,700.9	6,746.9	6,725.5	13.9	12.4	-96.40	-243.5	-67.4	452.8	428.1	24.68	18.344	
6,800.0	6,739.4	6,801.7	6,772.1	13.8	12.4	-97.28	-214.9	-67.4	453.6	429.1	24.52	18.498	
6,850.0	6,775.0	6,857.2	6,816.4	13.8	12.3	-98.10	-181.4	-67.4	454.5	430.2	24.38	18.646	
6,900.0	6,807.3	6,913.4	6,857.7	13.8	12.3	-98.86	-143.2	-67.4	455.4	431.2	24.27	18.767	
6,950.0	6,836.3	6,970.4	6,895.6	13.8	12.2	-99.55	-100.7	-67.4	456.3	432.1	24.22	18.839	
7,000.0	6,861.5	7,028.1	6,929.4	13.9	12.3	-100.16	-54.0	-67.4	457.1	432.9	24.27	18.839	
7,050.0	6,883.0	7,086.4	6,958.6	14.0	12.4	-100.68	-3.6	-67.4	457.9	433.5	24.42	18.750	
7,100.0	6,900.4	7,145.2	6,982.8	14.2	12.5	-101.10	50.0	-67.4	458.5	433.8	24.71	18.555	
7,150.0	6,913.6	7,204.4	7,001.4	14.4	12.8	-101.43	106.2	-67.4	459.0	433.9	25.15	18.251	
7,200.0	6,922.6	7,263.9	7,014.2	14.6	13.1	-101.66	164.3	-67.4	459.4	433.7	25.75	17.843	
7,250.0	6,927.3	7,323.7	7,020.9	14.9	13.5	-101.78	223.6	-67.4	459.6	433.1	26.49	17.351	
7,278.7	6,928.0	7,358.0	7,022.0	15.1	13.7	-101.80	257.9	-67.4	459.6	432.7	26.97	17.043	
7,300.0	6,928.0	7,379.4	7,022.0	15.3	13.9	-101.80	279.3	-67.4	459.6	432.3	27.31	16.829	
7,400.0	6,928.0	7,479.4	7,022.0	16.1	14.8	-101.80	379.3	-67.4	459.6	430.5	29.10	15.794	
7,500.0	6,928.0	7,579.4	7,022.0	17.1	15.9	-101.80	479.3	-67.4	459.6	428.5	31.16	14.751	
7,600.0	6,928.0	7,679.4	7,022.0	18.2	17.0	-101.80	579.3	-67.4	459.6	426.2	33.44	13.743	
7,700.0	6,928.0	7,779.4	7,022.0	19.4	18.3	-101.80	679.3	-67.4	459.6	423.7	35.91	12.799	
7,800.0	6,928.0	7,879.4	7,022.0	20.6	19.6	-101.80	779.3	-67.4	459.6	421.1	38.53	11.929	
7,900.0	6,928.0	7,979.4	7,022.0	22.0	21.0	-101.80	879.3	-67.4	459.6	418.4	41.27	11.138	
8,000.0	6,928.0	8,079.4	7,022.0	23.3	22.5	-101.80	979.3	-67.4	459.6	415.5	44.10	10.422	
8,100.0	6,928.0	8,179.4	7,022.0	24.8	24.0	-101.80	1,079.3	-67.4	459.6	412.6	47.02	9.776	
8,200.0	6,928.0	8,279.4	7,022.0	26.3	25.5	-101.80	1,179.3	-67.4	459.6	409.6	50.00	9.193	
8,300.0	6,928.0	8,379.4	7,022.0	27.8	27.0	-101.80	1,279.3	-67.4	459.6	406.6	53.03	8.667	
8,400.0	6,928.0	8,479.4	7,022.0	29.3	28.6	-101.80	1,379.3	-67.4	459.6	403.5	56.12	8.191	
8,500.0	6,928.0	8,579.4	7,022.0	30.9	30.2	-101.80	1,479.3	-67.4	459.6	400.4	59.24	7.759	
8,600.0	6,928.0	8,679.4	7,022.0	32.4	31.8	-101.80	1,579.3	-67.4	459.6	397.2	62.39	7.367	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4D-20H-O264 - 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
8,700.0	6,928.0	8,779.4	7,022.0	34.0	33.4	-101.80	1,679.3	-67.4	459.6	394.1	65.57	7.009	
8,800.0	6,928.0	8,879.4	7,022.0	35.6	35.1	-101.80	1,779.3	-67.4	459.6	390.9	68.78	6.683	
8,900.0	6,928.0	8,979.4	7,022.0	37.3	36.7	-101.80	1,879.3	-67.4	459.6	387.6	72.01	6.383	
9,000.0	6,928.0	9,079.4	7,022.0	38.9	38.4	-101.80	1,979.3	-67.4	459.6	384.4	75.25	6.108	
9,100.0	6,928.0	9,179.4	7,022.0	40.5	40.0	-101.80	2,079.3	-67.4	459.6	381.1	78.52	5.854	
9,200.0	6,928.0	9,279.4	7,022.0	42.2	41.7	-101.80	2,179.3	-67.4	459.6	377.8	81.79	5.620	
9,300.0	6,928.0	9,379.4	7,022.0	43.8	43.4	-101.80	2,279.3	-67.4	459.6	374.5	85.08	5.402	
9,400.0	6,928.0	9,479.4	7,022.0	45.5	45.1	-101.80	2,379.3	-67.4	459.6	371.2	88.38	5.201	
9,500.0	6,928.0	9,579.4	7,022.0	47.2	46.8	-101.80	2,479.3	-67.4	459.6	367.9	91.69	5.013	
9,600.0	6,928.0	9,679.4	7,022.0	48.9	48.5	-101.80	2,579.3	-67.4	459.6	364.6	95.01	4.838	
9,700.0	6,928.0	9,779.4	7,022.0	50.6	50.2	-101.80	2,679.3	-67.4	459.6	361.3	98.34	4.674	
9,800.0	6,928.0	9,879.4	7,022.0	52.2	51.9	-101.80	2,779.3	-67.4	459.6	358.0	101.67	4.521	
9,900.0	6,928.0	9,979.4	7,022.0	53.9	53.6	-101.80	2,879.3	-67.4	459.6	354.6	105.01	4.377	
10,000.0	6,928.0	10,079.4	7,022.0	55.6	55.3	-101.80	2,979.3	-67.4	459.6	351.3	108.36	4.242	
10,100.0	6,928.0	10,179.4	7,022.0	57.3	57.0	-101.80	3,079.3	-67.4	459.6	347.9	111.71	4.115	
10,200.0	6,928.0	10,279.4	7,022.0	59.0	58.7	-101.80	3,179.3	-67.4	459.6	344.6	115.06	3.995	
10,300.0	6,928.0	10,379.4	7,022.0	60.7	60.4	-101.80	3,279.3	-67.4	459.6	341.2	118.43	3.881	
10,400.0	6,928.0	10,479.4	7,022.0	62.5	62.1	-101.80	3,379.3	-67.4	459.6	337.8	121.79	3.774	
10,500.0	6,928.0	10,579.4	7,022.0	64.2	63.9	-101.80	3,479.3	-67.4	459.6	334.5	125.16	3.672	
10,600.0	6,928.0	10,679.4	7,022.0	65.9	65.6	-101.80	3,579.3	-67.4	459.6	331.1	128.53	3.576	
10,700.0	6,928.0	10,779.4	7,022.0	67.6	67.3	-101.80	3,679.3	-67.4	459.6	327.7	131.91	3.484	
10,800.0	6,928.0	10,879.4	7,022.0	69.3	69.0	-101.80	3,779.3	-67.4	459.6	324.3	135.29	3.397	
10,900.0	6,928.0	10,979.4	7,022.0	71.0	70.8	-101.80	3,879.3	-67.4	459.6	321.0	138.67	3.315	
11,000.0	6,928.0	11,079.4	7,022.0	72.8	72.5	-101.80	3,979.3	-67.4	459.6	317.6	142.05	3.236	
11,100.0	6,928.0	11,179.4	7,022.0	74.5	74.2	-101.80	4,079.3	-67.4	459.6	314.2	145.44	3.160	
11,200.0	6,928.0	11,279.4	7,022.0	76.2	76.0	-101.80	4,179.3	-67.4	459.6	310.8	148.83	3.088	
11,300.0	6,928.0	11,379.4	7,022.0	77.9	77.7	-101.80	4,279.3	-67.4	459.6	307.4	152.22	3.020	
11,400.0	6,928.0	11,479.4	7,022.0	79.7	79.4	-101.80	4,379.3	-67.4	459.6	304.0	155.61	2.954	
11,500.0	6,928.0	11,579.4	7,022.0	81.4	81.1	-101.80	4,479.3	-67.4	459.6	300.6	159.00	2.891	
11,511.2	6,928.0	11,590.6	7,022.0	81.6	81.3	-101.80	4,490.5	-67.4	459.6	300.2	159.39	2.884	
11,512.7	6,928.0	11,590.6	7,022.0	81.6	81.3	-101.80	4,490.5	-67.4	459.6	300.2	159.41	2.883	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4E-20H-O264 - 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	-90.13	0.0	-7.6	7.6				
100.0	100.0	100.0	100.0	0.1	0.1	-90.13	0.0	-7.6	7.6	7.3	0.24	30.903	
200.0	200.0	200.0	200.0	0.3	0.3	-90.13	0.0	-7.6	7.6	7.0	0.59	12.725	
300.0	300.0	300.0	300.0	0.5	0.5	-90.13	0.0	-7.6	7.6	6.6	0.94	8.012	
400.0	400.0	400.0	400.0	0.6	0.6	-90.13	0.0	-7.6	7.6	6.3	1.29	5.847	
450.0	450.0	450.0	450.0	0.7	0.7	-91.43	-0.2	-7.4	7.4	5.9	1.47	5.057	
500.0	500.0	500.1	500.1	0.8	0.8	136.12	-0.7	-7.0	7.2	5.5	1.64	4.379	
594.7	594.7	594.8	594.8	1.0	1.0	128.89	-2.6	-5.4	7.0	5.0	1.98	3.545	CC
600.0	600.0	600.1	600.1	1.0	1.0	128.43	-2.7	-5.3	7.0	5.0	1.99	3.512	
700.0	699.9	700.2	700.0	1.2	1.2	119.36	-6.1	-2.6	7.3	4.9	2.36	3.080	ES
800.0	799.8	800.2	799.9	1.4	1.4	110.44	-10.8	1.3	8.0	5.3	2.74	2.923	
900.0	899.5	900.2	899.6	1.6	1.6	104.10	-16.7	6.2	9.3	6.1	3.14	2.946	
1,000.0	999.2	1,000.2	999.2	1.8	1.8	107.05	-22.8	11.2	11.0	7.4	3.56	3.086	
1,018.1	1,017.1	1,018.2	1,017.2	1.8	1.8	108.38	-23.9	12.1	11.4	7.7	3.63	3.124	
1,100.0	1,098.7	1,100.1	1,098.9	2.0	2.0	113.97	-28.9	16.2	13.2	9.2	3.97	3.312	
1,200.0	1,198.2	1,200.1	1,198.6	2.2	2.2	118.98	-35.0	21.2	15.5	11.1	4.38	3.532	
1,300.0	1,297.7	1,300.1	1,298.2	2.5	2.4	122.65	-41.1	26.2	17.9	13.1	4.79	3.735	
1,400.0	1,397.2	1,400.0	1,397.9	2.7	2.6	125.45	-47.2	31.3	20.4	15.2	5.20	3.917	
1,500.0	1,496.7	1,500.0	1,497.5	2.9	2.9	127.64	-53.3	36.3	22.9	17.3	5.60	4.081	
1,600.0	1,596.2	1,600.0	1,597.2	3.2	3.1	129.39	-59.4	41.3	25.4	19.4	6.01	4.228	
1,700.0	1,695.7	1,699.9	1,696.8	3.4	3.3	130.83	-65.5	46.3	27.9	21.5	6.41	4.360	
1,800.0	1,795.2	1,799.9	1,796.5	3.6	3.5	132.02	-71.6	51.3	30.5	23.7	6.81	4.478	
1,900.0	1,894.7	1,899.9	1,896.1	3.9	3.7	133.03	-77.7	56.3	33.1	25.9	7.22	4.585	
2,000.0	1,994.2	1,999.8	1,995.8	4.1	4.0	133.89	-83.8	61.3	35.7	28.1	7.62	4.682	
2,100.0	2,093.8	2,099.8	2,095.4	4.4	4.2	134.64	-89.9	66.4	38.3	30.2	8.02	4.770	
2,200.0	2,193.3	2,199.8	2,195.1	4.6	4.4	135.29	-96.0	71.4	40.9	32.4	8.43	4.850	
2,300.0	2,292.8	2,299.7	2,294.7	4.8	4.6	135.86	-102.1	76.4	43.5	34.6	8.83	4.924	
2,400.0	2,392.3	2,399.7	2,394.4	5.1	4.8	136.37	-108.2	81.4	46.1	36.8	9.23	4.991	
2,500.0	2,491.8	2,499.7	2,494.0	5.3	5.1	136.83	-114.3	86.4	48.7	39.1	9.63	5.054	
2,600.0	2,591.3	2,599.6	2,593.7	5.6	5.3	137.23	-120.4	91.4	51.3	41.3	10.04	5.112	
2,700.0	2,690.8	2,699.6	2,693.3	5.8	5.5	137.60	-126.5	96.5	53.9	43.5	10.44	5.165	
2,800.0	2,790.3	2,799.6	2,793.0	6.1	5.7	137.94	-132.6	101.5	56.5	45.7	10.84	5.215	
2,900.0	2,889.8	2,899.5	2,892.7	6.3	5.9	138.24	-138.7	106.5	59.1	47.9	11.24	5.261	
3,000.0	2,989.3	2,999.5	2,992.3	6.6	6.2	138.52	-144.8	111.5	61.8	50.1	11.64	5.304	
3,100.0	3,088.8	3,099.4	3,092.0	6.8	6.4	138.77	-150.9	116.5	64.4	52.3	12.05	5.345	
3,200.0	3,188.4	3,199.4	3,191.6	7.0	6.6	139.01	-157.0	121.5	67.0	54.6	12.45	5.383	
3,300.0	3,287.9	3,299.4	3,291.3	7.3	6.8	139.23	-163.1	126.5	69.6	56.8	12.85	5.419	
3,400.0	3,387.4	3,399.3	3,390.9	7.5	7.1	139.43	-169.2	131.6	72.3	59.0	13.25	5.452	
3,500.0	3,486.9	3,499.3	3,490.6	7.8	7.3	139.62	-175.3	136.6	74.9	61.2	13.66	5.484	
3,600.0	3,586.4	3,599.3	3,590.2	8.0	7.5	139.79	-181.4	141.6	77.5	63.5	14.06	5.514	
3,700.0	3,685.9	3,699.2	3,689.9	8.3	7.7	139.96	-187.5	146.6	80.1	65.7	14.46	5.542	
3,800.0	3,785.4	3,799.2	3,789.5	8.5	7.9	140.11	-193.6	151.6	82.8	67.9	14.86	5.569	
3,900.0	3,884.9	3,899.2	3,889.2	8.8	8.2	140.26	-199.7	156.6	85.4	70.1	15.27	5.594	
4,000.0	3,984.4	3,999.1	3,988.8	9.0	8.4	140.39	-205.8	161.6	88.0	72.4	15.67	5.618	
4,100.0	4,083.9	4,099.1	4,088.5	9.2	8.6	140.52	-211.9	166.7	90.7	74.6	16.07	5.641	
4,200.0	4,183.4	4,199.1	4,188.1	9.5	8.8	140.64	-218.0	171.7	93.3	76.8	16.47	5.663	
4,300.0	4,283.0	4,299.0	4,287.8	9.7	9.0	140.75	-224.1	176.7	95.9	79.0	16.87	5.684	
4,400.0	4,382.5	4,399.0	4,387.4	10.0	9.3	140.86	-230.2	181.7	98.5	81.3	17.28	5.704	
4,500.0	4,482.0	4,499.0	4,487.1	10.2	9.5	140.96	-236.3	186.7	101.2	83.5	17.68	5.723	
4,600.0	4,581.5	4,598.9	4,586.8	10.5	9.7	141.06	-242.4	191.7	103.8	85.7	18.08	5.741	
4,700.0	4,681.0	4,698.9	4,686.4	10.7	9.9	141.15	-248.5	196.7	106.4	88.0	18.48	5.759	
4,800.0	4,780.5	4,798.9	4,786.1	11.0	10.2	141.24	-254.6	201.8	109.1	90.2	18.89	5.776	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4E-20H-O264 - 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
4,900.0	4,880.0	4,898.8	4,885.7	11.2	10.4	141.32	-260.7	206.8	111.7	92.4	19.29	5.792	
5,000.0	4,979.5	4,998.8	4,985.4	11.4	10.6	141.40	-266.8	211.8	114.3	94.6	19.69	5.807	
5,100.0	5,079.0	5,098.8	5,085.0	11.7	10.8	141.48	-272.9	216.8	117.0	96.9	20.09	5.822	
5,200.0	5,178.5	5,198.7	5,184.7	11.9	11.0	141.55	-279.0	221.8	119.6	99.1	20.49	5.836	
5,300.0	5,278.0	5,298.7	5,284.3	12.2	11.3	141.62	-285.1	226.8	122.2	101.3	20.90	5.850	
5,400.0	5,377.6	5,398.6	5,384.0	12.4	11.5	141.69	-291.2	231.9	124.9	103.6	21.30	5.863	
5,455.6	5,432.9	5,454.2	5,439.4	12.6	11.6	141.72	-294.6	234.6	126.3	104.8	21.52	5.870	
5,500.0	5,477.1	5,498.6	5,483.6	12.7	11.7	141.71	-297.3	236.9	127.4	105.7	21.70	5.868	
5,600.0	5,576.7	5,598.1	5,582.8	12.9	11.9	141.37	-303.3	241.8	128.8	106.7	22.13	5.819	
5,700.0	5,676.5	5,696.6	5,681.2	13.1	12.1	141.01	-308.2	245.8	129.7	107.2	22.53	5.757	
5,800.0	5,776.4	5,795.2	5,779.6	13.3	12.3	140.75	-311.7	248.8	130.4	107.5	22.90	5.694	
5,900.0	5,876.4	5,893.8	5,878.1	13.4	12.5	140.59	-314.0	250.6	130.9	107.6	23.24	5.630	
6,000.0	5,976.3	5,992.3	5,976.7	13.6	12.6	140.52	-315.0	251.4	131.0	107.5	23.55	5.564	
6,023.7	6,000.0	6,015.7	6,000.0	13.6	12.6	-90.01	-315.0	251.4	131.1	107.4	23.62	5.548	
6,100.0	6,076.3	6,092.0	6,076.3	13.7	12.8	-90.01	-315.0	251.4	131.1	107.2	23.86	5.493	
6,200.0	6,176.3	6,192.0	6,176.3	13.8	12.9	-90.01	-315.0	251.4	131.1	106.9	24.17	5.422	
6,300.0	6,276.3	6,292.0	6,276.3	14.0	13.0	-90.01	-315.0	251.4	131.1	106.6	24.48	5.353	
6,378.7	6,355.0	6,370.7	6,355.0	14.1	13.2	-90.01	-315.0	251.4	131.1	106.3	24.73	5.300	
6,379.6	6,356.0	6,371.6	6,356.0	14.1	13.2	-90.01	-315.0	251.4	131.1	106.3	24.73	5.299	
6,400.0	6,376.3	6,392.0	6,376.3	14.1	13.2	-90.18	-315.0	251.4	131.1	106.2	24.80	5.284	
6,450.0	6,426.2	6,441.8	6,426.2	14.1	13.3	-91.93	-315.0	251.4	131.1	106.1	25.06	5.232	
6,500.0	6,475.4	6,491.1	6,475.4	14.1	13.3	-95.46	-315.0	251.4	131.7	106.2	25.43	5.179	
6,550.0	6,523.8	6,539.5	6,523.8	14.1	13.4	-100.51	-315.0	251.4	133.5	107.7	25.83	5.169	
6,600.0	6,570.9	6,586.5	6,570.9	14.1	13.5	-106.62	-315.0	251.4	137.7	111.5	26.15	5.265	
6,650.0	6,616.3	6,635.3	6,619.7	14.0	13.5	-113.47	-314.2	251.4	145.1	118.8	26.27	5.523	
6,700.0	6,659.8	6,687.6	6,671.7	13.9	13.6	-119.98	-309.0	251.4	154.9	128.9	26.07	5.942	
6,750.0	6,700.9	6,742.3	6,725.3	13.9	13.6	-125.72	-298.6	251.4	166.5	140.9	25.57	6.510	
6,800.0	6,739.4	6,799.6	6,780.2	13.8	13.5	-130.72	-282.2	251.4	179.2	154.4	24.83	7.217	
6,850.0	6,775.0	6,859.7	6,835.7	13.8	13.5	-135.02	-259.2	251.4	192.6	168.6	23.92	8.050	
6,900.0	6,807.3	6,923.0	6,891.2	13.8	13.4	-138.69	-228.8	251.4	206.0	183.1	22.92	8.990	
6,950.0	6,836.3	6,989.6	6,945.6	13.8	13.3	-141.79	-190.5	251.4	219.2	197.3	21.90	10.008	
7,000.0	6,861.5	7,059.7	6,997.7	13.9	13.3	-144.37	-143.6	251.4	231.5	210.6	20.93	11.059	
7,050.0	6,883.0	7,133.2	7,045.7	14.0	13.3	-146.49	-88.0	251.4	242.6	222.5	20.10	12.071	
7,100.0	6,900.4	7,210.2	7,087.9	14.2	13.3	-148.16	-23.8	251.4	252.1	232.7	19.47	12.947	
7,150.0	6,913.6	7,290.1	7,122.2	14.4	13.5	-149.41	48.3	251.4	259.7	240.5	19.12	13.581	
7,200.0	6,922.6	7,372.4	7,146.8	14.6	13.8	-150.25	126.8	251.4	264.9	245.8	19.10	13.869	
7,250.0	6,927.3	7,456.2	7,159.9	14.9	14.3	-150.68	209.6	251.4	267.7	248.3	19.45	13.767	
7,278.7	6,928.0	7,504.7	7,162.0	15.1	14.7	-150.74	258.0	251.4	268.2	248.3	19.81	13.534	
7,300.0	6,928.0	7,526.0	7,162.0	15.3	14.8	-150.74	279.3	251.4	268.2	248.2	20.01	13.403	
7,400.0	6,928.0	7,626.0	7,162.0	16.1	15.7	-150.74	379.3	251.4	268.2	247.2	20.96	12.793	
7,500.0	6,928.0	7,726.0	7,162.0	17.1	16.7	-150.74	479.3	251.4	268.2	246.2	22.01	12.183	
7,600.0	6,928.0	7,826.0	7,162.0	18.2	17.8	-150.74	579.3	251.4	268.2	245.0	23.15	11.586	
7,700.0	6,928.0	7,926.0	7,162.0	19.4	19.0	-150.74	679.3	251.4	268.2	243.8	24.35	11.011	
7,800.0	6,928.0	8,026.0	7,162.0	20.6	20.3	-150.74	779.3	251.4	268.2	242.5	25.62	10.465	
7,900.0	6,928.0	8,126.0	7,162.0	22.0	21.7	-150.74	879.3	251.4	268.2	241.2	26.95	9.951	
8,000.0	6,928.0	8,226.0	7,162.0	23.3	23.1	-150.74	979.3	251.4	268.2	239.8	28.32	9.470	
8,100.0	6,928.0	8,326.0	7,162.0	24.8	24.5	-150.74	1,079.3	251.4	268.2	238.4	29.73	9.021	
8,200.0	6,928.0	8,426.0	7,162.0	26.3	26.0	-150.74	1,179.3	251.4	268.2	237.0	31.17	8.603	
8,300.0	6,928.0	8,526.0	7,162.0	27.8	27.5	-150.74	1,279.3	251.4	268.2	235.5	32.64	8.215	
8,400.0	6,928.0	8,626.0	7,162.0	29.3	29.1	-150.74	1,379.3	251.4	268.2	234.0	34.14	7.854	
8,500.0	6,928.0	8,726.0	7,162.0	30.9	30.7	-150.74	1,479.3	251.4	268.2	232.5	35.67	7.519	
8,600.0	6,928.0	8,826.0	7,162.0	32.4	32.2	-150.74	1,579.3	251.4	268.2	231.0	37.21	7.207	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4E-20H-O264 - 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
8,700.0	6,928.0	8,926.0	7,162.0	34.0	33.9	-150.74	1,679.3	251.4	268.2	229.4	38.77	6.917	
8,800.0	6,928.0	9,026.0	7,162.0	35.6	35.5	-150.74	1,779.3	251.4	268.2	227.8	40.34	6.647	
8,900.0	6,928.0	9,126.0	7,162.0	37.3	37.1	-150.74	1,879.3	251.4	268.2	226.2	41.93	6.395	
9,000.0	6,928.0	9,226.0	7,162.0	38.9	38.7	-150.74	1,979.3	251.4	268.2	224.6	43.53	6.160	
9,100.0	6,928.0	9,326.0	7,162.0	40.5	40.4	-150.74	2,079.3	251.4	268.2	223.0	45.14	5.940	
9,200.0	6,928.0	9,426.0	7,162.0	42.2	42.1	-150.74	2,179.3	251.4	268.2	221.4	46.77	5.734	
9,300.0	6,928.0	9,526.0	7,162.0	43.8	43.7	-150.74	2,279.3	251.4	268.2	219.8	48.40	5.541	
9,400.0	6,928.0	9,626.0	7,162.0	45.5	45.4	-150.74	2,379.3	251.4	268.2	218.1	50.03	5.360	
9,500.0	6,928.0	9,726.0	7,162.0	47.2	47.1	-150.74	2,479.3	251.4	268.2	216.5	51.68	5.189	
9,600.0	6,928.0	9,826.0	7,162.0	48.9	48.8	-150.74	2,579.3	251.4	268.2	214.8	53.33	5.028	
9,700.0	6,928.0	9,926.0	7,162.0	50.6	50.5	-150.74	2,679.3	251.4	268.2	213.2	54.99	4.877	
9,800.0	6,928.0	10,026.0	7,162.0	52.2	52.1	-150.74	2,779.3	251.4	268.2	211.5	56.65	4.733	
9,900.0	6,928.0	10,126.0	7,162.0	53.9	53.8	-150.74	2,879.3	251.4	268.2	209.8	58.32	4.598	
10,000.0	6,928.0	10,226.0	7,162.0	55.6	55.5	-150.74	2,979.3	251.4	268.2	208.2	60.00	4.470	
10,100.0	6,928.0	10,326.0	7,162.0	57.3	57.3	-150.74	3,079.3	251.4	268.2	206.5	61.67	4.348	
10,200.0	6,928.0	10,426.0	7,162.0	59.0	59.0	-150.74	3,179.3	251.4	268.2	204.8	63.35	4.233	
10,300.0	6,928.0	10,526.0	7,162.0	60.7	60.7	-150.74	3,279.3	251.4	268.2	203.1	65.04	4.123	
10,400.0	6,928.0	10,626.0	7,162.0	62.5	62.4	-150.74	3,379.3	251.4	268.2	201.4	66.73	4.019	
10,500.0	6,928.0	10,726.0	7,162.0	64.2	64.1	-150.74	3,479.3	251.4	268.2	199.8	68.42	3.920	
10,600.0	6,928.0	10,826.0	7,162.0	65.9	65.8	-150.74	3,579.3	251.4	268.2	198.1	70.11	3.825	
10,700.0	6,928.0	10,926.0	7,162.0	67.6	67.5	-150.74	3,679.3	251.5	268.2	196.4	71.81	3.735	
10,800.0	6,928.0	11,026.0	7,162.0	69.3	69.3	-150.74	3,779.3	251.5	268.2	194.7	73.51	3.648	
10,900.0	6,928.0	11,126.0	7,162.0	71.0	71.0	-150.74	3,879.3	251.5	268.2	193.0	75.21	3.566	
11,000.0	6,928.0	11,221.0	7,162.0	72.8	72.6	-150.49	3,974.3	250.1	268.9	191.5	77.34	3.476	
11,100.0	6,928.0	11,314.2	7,162.0	74.5	74.2	-149.43	4,067.2	244.3	272.0	190.9	81.09	3.354	
11,200.0	6,928.0	11,406.5	7,162.0	76.2	75.8	-147.61	4,159.0	234.1	277.8	191.4	86.44	3.214	
11,300.0	6,928.0	11,500.0	7,162.0	77.9	77.3	-145.08	4,251.3	219.1	286.7	193.4	93.34	3.072	
11,400.0	6,928.0	11,587.1	7,162.0	79.7	78.8	-142.22	4,336.5	201.1	299.1	198.2	100.95	2.963	
11,500.0	6,928.0	11,674.7	7,162.0	81.4	80.2	-139.00	4,421.3	179.1	315.4	206.1	109.33	2.885	
11,512.7	6,928.0	11,685.7	7,162.0	81.6	80.4	-138.58	4,431.8	176.1	317.8	207.4	110.42	2.878 SF	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4G-20H-O264 - 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	89.90	0.0	7.6	7.6				
100.0	100.0	100.0	100.0	0.1	0.1	89.90	0.0	7.6	7.6	7.3	0.24	30.903	
200.0	200.0	200.0	200.0	0.3	0.3	89.90	0.0	7.6	7.6	7.0	0.59	12.725	
300.0	300.0	300.0	300.0	0.5	0.5	89.90	0.0	7.6	7.6	6.6	0.94	8.012	
400.0	400.0	400.0	400.0	0.6	0.6	89.90	0.0	7.6	7.6	6.3	1.29	5.847	CC, ES
450.0	450.0	449.9	449.9	0.7	0.7	90.66	-0.1	7.7	7.7	6.3	1.47	5.283	
500.0	500.0	499.9	499.9	0.8	0.8	-37.69	-0.4	8.3	8.2	6.5	1.64	4.973	
600.0	600.0	599.7	599.7	1.0	1.0	-37.21	-1.6	10.6	9.1	7.1	1.99	4.587	
700.0	699.9	699.6	699.4	1.2	1.2	-38.53	-3.6	14.5	10.3	7.9	2.34	4.390	
800.0	799.8	799.4	799.1	1.4	1.4	-41.06	-6.5	19.9	11.6	8.9	2.70	4.310	
900.0	899.5	899.2	898.6	1.6	1.6	-44.28	-10.1	26.8	13.2	10.2	3.08	4.306	
1,000.0	999.2	999.0	997.9	1.8	1.8	-47.83	-14.5	35.2	15.1	11.6	3.47	4.353	
1,018.1	1,017.1	1,017.0	1,015.8	1.8	1.9	-48.48	-15.4	36.9	15.5	11.9	3.54	4.365	
1,100.0	1,098.7	1,098.7	1,097.0	2.0	2.1	-49.96	-19.8	45.2	17.6	13.8	3.88	4.542	
1,200.0	1,198.2	1,198.4	1,195.8	2.2	2.3	-48.65	-25.8	56.7	21.5	17.2	4.29	5.018	
1,300.0	1,297.7	1,298.2	1,294.7	2.5	2.6	-46.49	-32.3	69.1	26.2	21.5	4.69	5.594	
1,400.0	1,397.2	1,398.1	1,393.6	2.7	2.9	-44.98	-38.8	81.5	30.9	25.9	5.09	6.084	
1,500.0	1,496.7	1,498.0	1,492.5	2.9	3.2	-43.87	-45.3	93.9	35.7	30.2	5.49	6.504	
1,600.0	1,596.2	1,597.9	1,591.4	3.2	3.4	-43.02	-51.8	106.2	40.4	34.5	5.89	6.868	
1,700.0	1,695.7	1,697.8	1,690.3	3.4	3.7	-42.35	-58.3	118.6	45.2	38.9	6.29	7.186	
1,800.0	1,795.2	1,797.7	1,789.2	3.6	4.0	-41.81	-64.8	131.0	50.0	43.3	6.69	7.466	
1,900.0	1,894.7	1,897.5	1,888.1	3.9	4.3	-41.36	-71.3	143.4	54.7	47.6	7.09	7.714	
2,000.0	1,994.2	1,997.4	1,987.0	4.1	4.6	-40.99	-77.8	155.8	59.5	52.0	7.50	7.935	
2,100.0	2,093.8	2,097.3	2,085.9	4.4	4.9	-40.67	-84.3	168.1	64.3	56.4	7.90	8.134	
2,200.0	2,193.3	2,197.2	2,184.8	4.6	5.2	-40.39	-90.8	180.5	69.0	60.7	8.30	8.314	
2,300.0	2,292.8	2,297.1	2,283.7	4.8	5.5	-40.15	-97.3	192.9	73.8	65.1	8.71	8.477	
2,400.0	2,392.3	2,397.0	2,382.6	5.1	5.8	-39.94	-103.8	205.3	78.6	69.5	9.11	8.625	
2,500.0	2,491.8	2,496.9	2,481.5	5.3	6.1	-39.75	-110.3	217.7	83.4	73.8	9.51	8.760	
2,600.0	2,591.3	2,596.7	2,580.4	5.6	6.4	-39.59	-116.8	230.0	88.1	78.2	9.92	8.885	
2,700.0	2,690.8	2,696.6	2,679.3	5.8	6.7	-39.44	-123.3	242.4	92.9	82.6	10.32	9.000	
2,800.0	2,790.3	2,796.5	2,778.2	6.1	7.0	-39.30	-129.8	254.8	97.7	87.0	10.73	9.106	
2,900.0	2,889.8	2,896.4	2,877.1	6.3	7.3	-39.18	-136.3	267.2	102.5	91.3	11.13	9.204	
3,000.0	2,989.3	2,996.3	2,976.0	6.6	7.6	-39.07	-142.8	279.6	107.2	95.7	11.54	9.295	
3,100.0	3,088.8	3,096.2	3,074.9	6.8	7.9	-38.97	-149.3	291.9	112.0	100.1	11.94	9.380	
3,200.0	3,188.4	3,196.1	3,173.8	7.0	8.2	-38.87	-155.8	304.3	116.8	104.5	12.35	9.460	
3,300.0	3,287.9	3,295.9	3,272.7	7.3	8.5	-38.79	-162.3	316.7	121.6	108.8	12.75	9.534	
3,400.0	3,387.4	3,395.8	3,371.6	7.5	8.8	-38.71	-168.8	329.1	126.4	113.2	13.16	9.604	
3,500.0	3,486.9	3,495.7	3,470.5	7.8	9.1	-38.63	-175.3	341.5	131.1	117.6	13.56	9.669	
3,600.0	3,586.4	3,595.6	3,569.4	8.0	9.4	-38.57	-181.8	353.8	135.9	121.9	13.97	9.731	
3,700.0	3,685.9	3,695.5	3,668.3	8.3	9.7	-38.50	-188.3	366.2	140.7	126.3	14.37	9.789	
3,800.0	3,785.4	3,795.4	3,767.2	8.5	10.0	-38.44	-194.8	378.6	145.5	130.7	14.78	9.844	
3,900.0	3,884.9	3,895.3	3,866.1	8.8	10.3	-38.39	-201.3	391.0	150.3	135.1	15.18	9.896	
4,000.0	3,984.4	3,995.1	3,965.0	9.0	10.6	-38.33	-207.8	403.4	155.0	139.4	15.59	9.946	
4,100.0	4,083.9	4,095.0	4,063.9	9.2	10.9	-38.28	-214.3	415.7	159.8	143.8	15.99	9.992	
4,200.0	4,183.4	4,194.9	4,162.8	9.5	11.2	-38.24	-220.8	428.1	164.6	148.2	16.40	10.037	
4,300.0	4,283.0	4,294.8	4,261.7	9.7	11.5	-38.19	-227.3	440.5	169.4	152.6	16.80	10.079	
4,400.0	4,382.5	4,394.7	4,360.6	10.0	11.8	-38.15	-233.7	452.9	174.2	157.0	17.21	10.120	
4,500.0	4,482.0	4,494.6	4,459.5	10.2	12.1	-38.11	-240.2	465.3	178.9	161.3	17.62	10.158	
4,600.0	4,581.5	4,594.5	4,558.4	10.5	12.4	-38.08	-246.7	477.6	183.7	165.7	18.02	10.195	
4,700.0	4,681.0	4,694.3	4,657.3	10.7	12.7	-38.04	-253.2	490.0	188.5	170.1	18.43	10.230	
4,800.0	4,780.5	4,794.2	4,756.2	11.0	13.0	-38.01	-259.7	502.4	193.3	174.5	18.83	10.263	
4,900.0	4,880.0	4,894.1	4,855.1	11.2	13.3	-37.97	-266.2	514.8	198.1	178.8	19.24	10.296	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4G-20H-O264 - 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
5,000.0	4,979.5	4,994.0	4,954.0	11.4	13.6	-37.94	-272.7	527.2	202.9	183.2	19.64	10.326	
5,100.0	5,079.0	5,093.9	5,052.9	11.7	13.9	-37.91	-279.2	539.5	207.6	187.6	20.05	10.356	
5,200.0	5,178.5	5,193.8	5,151.9	11.9	14.2	-37.89	-285.7	551.9	212.4	192.0	20.46	10.384	
5,300.0	5,278.0	5,295.5	5,252.6	12.2	14.5	-37.89	-292.2	564.3	217.0	196.1	20.87	10.398	
5,400.0	5,377.6	5,399.0	5,355.4	12.4	14.7	-38.09	-298.1	575.4	220.1	198.8	21.30	10.332	
5,455.6	5,432.9	5,456.6	5,412.6	12.6	14.9	-38.29	-301.0	580.9	221.1	199.6	21.55	10.260	
5,500.0	5,477.1	5,502.6	5,458.4	12.7	15.0	-38.47	-303.1	584.9	221.7	200.0	21.75	10.194	
5,600.0	5,576.7	5,606.1	5,561.5	12.9	15.2	-38.82	-307.2	592.8	222.9	200.7	22.17	10.051	
5,700.0	5,676.5	5,709.7	5,664.9	13.1	15.4	-39.09	-310.4	599.0	223.8	201.3	22.57	9.916	
5,800.0	5,776.4	5,813.3	5,768.4	13.3	15.6	-39.29	-312.8	603.5	224.5	201.6	22.94	9.787	
5,900.0	5,876.4	5,916.9	5,871.9	13.4	15.7	-39.42	-314.3	606.4	225.0	201.7	23.28	9.662	
6,000.0	5,976.3	6,020.5	5,975.5	13.6	15.9	-39.47	-315.0	607.6	225.1	201.5	23.60	9.542	
6,023.7	6,000.0	6,045.0	6,000.0	13.6	15.9	90.00	-315.0	607.7	225.2	201.5	23.67	9.513	
6,100.0	6,076.3	6,121.4	6,076.3	13.7	16.0	90.00	-315.0	607.7	225.2	201.2	23.90	9.419	
6,200.0	6,176.3	6,221.4	6,176.3	13.8	16.1	90.00	-315.0	607.7	225.2	200.9	24.21	9.298	
6,300.0	6,276.3	6,321.4	6,276.3	14.0	16.2	90.00	-315.0	607.7	225.2	200.6	24.53	9.180	
6,378.7	6,355.0	6,400.1	6,355.0	14.1	16.3	90.00	-315.0	607.7	225.2	200.4	24.77	9.089	
6,382.7	6,359.0	6,404.1	6,359.0	14.1	16.3	90.00	-315.0	607.7	225.2	200.4	24.78	9.085	
6,400.0	6,376.3	6,421.4	6,376.3	14.1	16.3	90.10	-315.0	607.7	225.2	200.3	24.82	9.072	
6,450.0	6,426.2	6,471.2	6,426.2	14.1	16.4	91.12	-315.0	607.7	225.2	200.4	24.79	9.083	
6,500.0	6,475.4	6,521.1	6,476.0	14.1	16.4	93.04	-314.3	607.7	225.5	200.9	24.61	9.161	
6,550.0	6,523.8	6,571.8	6,526.6	14.1	16.5	95.06	-309.6	607.7	226.1	201.7	24.39	9.269	
6,600.0	6,570.9	6,623.4	6,577.2	14.1	16.5	97.04	-300.2	607.7	226.9	202.8	24.16	9.394	
6,650.0	6,616.3	6,675.7	6,627.6	14.0	16.4	98.97	-286.1	607.7	228.0	204.1	23.93	9.528	
6,700.0	6,659.8	6,728.8	6,677.2	13.9	16.4	100.83	-267.2	607.7	229.3	205.6	23.73	9.665	
6,750.0	6,700.9	6,782.7	6,725.5	13.9	16.3	102.60	-243.3	607.7	230.8	207.3	23.56	9.797	
6,800.0	6,739.4	6,837.4	6,772.0	13.8	16.3	104.26	-214.6	607.7	232.4	209.0	23.43	9.919	
6,850.0	6,775.0	6,892.9	6,816.2	13.8	16.2	105.80	-181.0	607.7	234.1	210.8	23.36	10.022	
6,900.0	6,807.3	6,949.2	6,857.5	13.8	16.2	107.20	-142.8	607.6	235.8	212.5	23.34	10.103	
6,950.0	6,836.3	7,006.1	6,895.2	13.8	16.2	108.46	-100.2	607.6	237.5	214.1	23.39	10.152	
7,000.0	6,861.5	7,063.7	6,928.9	13.9	16.2	109.55	-53.5	607.6	239.0	215.5	23.52	10.163	
7,050.0	6,883.0	7,121.9	6,958.0	14.0	16.3	110.49	-3.2	607.6	240.4	216.8	23.68	10.155	
7,100.0	6,900.4	7,180.6	6,982.1	14.2	16.4	111.24	50.4	607.6	241.6	217.6	23.96	10.082	
7,150.0	6,913.6	7,239.8	7,000.6	14.4	16.6	111.82	106.5	607.6	242.5	218.2	24.31	9.976	
7,200.0	6,922.6	7,299.2	7,013.3	14.6	16.8	112.21	164.5	607.6	243.2	218.5	24.74	9.829	
7,250.0	6,927.3	7,358.8	7,020.0	14.9	17.1	112.41	223.7	607.6	243.5	218.3	25.26	9.641	
7,278.7	6,928.0	7,393.0	7,021.0	15.1	17.3	112.44	258.0	607.6	243.6	218.0	25.60	9.517	
7,300.0	6,928.0	7,414.4	7,021.0	15.3	17.5	112.44	279.3	607.6	243.6	217.7	25.93	9.394	
7,400.0	6,928.0	7,514.4	7,021.0	16.1	18.2	112.44	379.3	607.6	243.6	216.0	27.64	8.814	
7,500.0	6,928.0	7,614.4	7,021.0	17.1	19.0	112.44	479.3	607.6	243.6	214.0	29.60	8.229	
7,600.0	6,928.0	7,714.4	7,021.0	18.2	20.0	112.44	579.3	607.6	243.6	211.8	31.78	7.665	
7,700.0	6,928.0	7,814.4	7,021.0	19.4	21.1	112.44	679.3	607.6	243.6	209.5	34.13	7.138	
7,800.0	6,928.0	7,914.4	7,021.0	20.6	22.3	112.44	779.3	607.6	243.6	207.0	36.61	6.654	
7,900.0	6,928.0	8,014.4	7,021.0	22.0	23.5	112.44	879.3	607.6	243.6	204.4	39.21	6.213	
8,000.0	6,928.0	8,114.4	7,021.0	23.3	24.8	112.44	979.3	607.6	243.6	201.7	41.89	5.815	
8,100.0	6,928.0	8,214.4	7,021.0	24.8	26.2	112.44	1,079.3	607.6	243.6	198.9	44.65	5.455	
8,200.0	6,928.0	8,314.4	7,021.0	26.3	27.6	112.44	1,179.3	607.6	243.6	196.1	47.48	5.131	
8,300.0	6,928.0	8,414.4	7,021.0	27.8	29.0	112.45	1,279.3	607.6	243.6	193.2	50.35	4.838	
8,400.0	6,928.0	8,514.4	7,021.0	29.3	30.5	112.45	1,379.3	607.6	243.6	190.3	53.27	4.573	
8,500.0	6,928.0	8,614.4	7,021.0	30.9	32.0	112.45	1,479.3	607.6	243.6	187.4	56.22	4.333	
8,600.0	6,928.0	8,714.4	7,021.0	32.4	33.5	112.45	1,579.3	607.6	243.6	184.4	59.20	4.114	
8,700.0	6,928.0	8,814.4	7,021.0	34.0	35.1	112.45	1,679.3	607.6	243.6	181.4	62.21	3.915	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4G-20H-O264 - 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
8,800.0	6,928.0	8,914.4	7,021.0	35.6	36.6	112.45	1,779.3	607.6	243.6	178.3	65.24	3.733	
8,900.0	6,928.0	9,014.4	7,021.0	37.3	38.2	112.45	1,879.3	607.6	243.6	175.3	68.29	3.567	
9,000.0	6,928.0	9,114.4	7,021.0	38.9	39.8	112.45	1,979.3	607.6	243.6	172.2	71.36	3.413	
9,100.0	6,928.0	9,214.4	7,021.0	40.5	41.4	112.45	2,079.3	607.6	243.6	169.1	74.45	3.272	
9,200.0	6,928.0	9,314.4	7,021.0	42.2	43.0	112.45	2,179.3	607.6	243.6	166.0	77.54	3.141	
9,300.0	6,928.0	9,414.4	7,021.0	43.8	44.7	112.45	2,279.3	607.6	243.6	162.9	80.65	3.020	
9,400.0	6,928.0	9,514.4	7,021.0	45.5	46.3	112.45	2,379.3	607.6	243.6	159.8	83.77	2.908	
9,500.0	6,928.0	9,614.4	7,021.0	47.2	47.9	112.45	2,479.3	607.6	243.6	156.7	86.90	2.803	
9,600.0	6,928.0	9,714.4	7,021.0	48.9	49.6	112.45	2,579.3	607.6	243.6	153.5	90.04	2.705	
9,700.0	6,928.0	9,814.4	7,021.0	50.6	51.3	112.45	2,679.3	607.6	243.6	150.4	93.18	2.614	
9,800.0	6,928.0	9,914.4	7,021.0	52.2	52.9	112.45	2,779.3	607.6	243.6	147.2	96.33	2.528	
9,900.0	6,928.0	10,014.4	7,021.0	53.9	54.6	112.45	2,879.3	607.6	243.6	144.1	99.49	2.448	
10,000.0	6,928.0	10,114.4	7,021.0	55.6	56.3	112.45	2,979.3	607.6	243.6	140.9	102.65	2.373	
10,100.0	6,928.0	10,214.4	7,021.0	57.3	58.0	112.45	3,079.3	607.6	243.6	137.7	105.82	2.302	
10,200.0	6,928.0	10,314.4	7,021.0	59.0	59.7	112.45	3,179.3	607.6	243.6	134.6	108.99	2.235	
10,300.0	6,928.0	10,414.4	7,021.0	60.7	61.3	112.45	3,279.3	607.6	243.6	131.4	112.17	2.171	
10,400.0	6,928.0	10,514.4	7,021.0	62.5	63.0	112.45	3,379.3	607.6	243.6	128.2	115.35	2.112	
10,500.0	6,928.0	10,614.4	7,021.0	64.2	64.7	112.45	3,479.3	607.6	243.6	125.0	118.53	2.055	
10,600.0	6,928.0	10,714.4	7,021.0	65.9	66.4	112.45	3,579.3	607.6	243.6	121.8	121.72	2.001	
10,700.0	6,928.0	10,814.4	7,021.0	67.6	68.1	112.45	3,679.3	607.6	243.6	118.6	124.91	1.950	
10,800.0	6,928.0	10,914.4	7,021.0	69.3	69.8	112.45	3,779.3	607.6	243.6	115.5	128.10	1.901	
10,900.0	6,928.0	11,014.4	7,021.0	71.0	71.5	112.45	3,879.3	607.6	243.6	112.3	131.30	1.855	
11,000.0	6,928.0	11,114.4	7,021.0	72.8	73.3	112.45	3,979.3	607.6	243.6	109.1	134.49	1.811	
11,100.0	6,928.0	11,214.4	7,021.0	74.5	75.0	112.45	4,079.3	607.6	243.6	105.9	137.69	1.769	
11,200.0	6,928.0	11,314.4	7,021.0	76.2	76.7	112.45	4,179.3	607.6	243.6	102.7	140.90	1.729	
11,300.0	6,928.0	11,414.4	7,021.0	77.9	78.4	112.45	4,279.3	607.6	243.6	99.5	144.10	1.690	
11,400.0	6,928.0	11,514.4	7,021.0	79.7	80.1	112.45	4,379.3	607.6	243.6	96.2	147.31	1.653	
11,500.0	6,928.0	11,614.4	7,021.0	81.4	81.8	112.45	4,479.3	607.6	243.5	93.0	150.51	1.618	
11,512.7	6,928.0	11,627.1	7,021.0	81.6	82.1	112.45	4,492.0	607.6	243.5	92.6	150.92	1.614	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4H-20H-O264 - 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	89.90	0.0	15.1	15.1				
100.0	100.0	100.0	100.0	0.1	0.1	89.90	0.0	15.1	15.1	14.9	0.24	61.807	
200.0	200.0	200.0	200.0	0.3	0.3	89.90	0.0	15.1	15.1	14.5	0.59	25.450	
300.0	300.0	300.0	300.0	0.5	0.5	89.90	0.0	15.1	15.1	14.2	0.94	16.024	
333.4	333.4	333.4	333.4	0.5	0.5	89.90	0.0	15.1	15.1	14.0	1.06	14.260	CC
400.0	400.0	399.9	399.9	0.6	0.6	90.20	-0.1	15.3	15.3	14.0	1.29	11.852	ES
450.0	450.0	449.7	449.7	0.7	0.7	91.03	-0.3	15.9	15.9	14.5	1.47	10.858	
500.0	500.0	499.6	499.6	0.8	0.8	-37.63	-0.7	16.9	16.8	15.1	1.64	10.225	
600.0	600.0	599.3	599.2	1.0	1.0	-37.37	-1.9	20.2	18.7	16.7	1.99	9.386	
700.0	699.9	698.9	698.7	1.2	1.2	-38.51	-3.8	25.0	20.8	18.5	2.34	8.899	
800.0	799.8	798.6	798.1	1.4	1.4	-40.62	-6.3	31.5	23.3	20.6	2.70	8.626	
900.0	899.5	898.1	897.3	1.6	1.6	-43.34	-9.4	39.5	26.1	23.0	3.07	8.492	
1,000.0	999.2	997.6	996.2	1.8	1.8	-46.41	-13.1	49.2	29.2	25.8	3.46	8.449	
1,018.1	1,017.1	1,015.6	1,014.1	1.8	1.9	-46.99	-13.9	51.1	29.8	26.3	3.53	8.448	
1,100.0	1,098.7	1,097.1	1,095.0	2.0	2.1	-48.88	-17.5	60.5	33.2	29.3	3.87	8.581	
1,200.0	1,198.2	1,196.4	1,193.3	2.2	2.4	-49.47	-22.4	73.3	38.6	34.4	4.28	9.027	
1,300.0	1,297.7	1,295.5	1,291.2	2.5	2.7	-48.78	-28.0	87.7	45.6	40.9	4.69	9.715	
1,400.0	1,397.2	1,394.4	1,388.6	2.7	3.0	-47.37	-34.1	103.7	54.0	48.9	5.10	10.598	
1,500.0	1,496.7	1,493.5	1,486.0	2.9	3.3	-45.72	-40.8	121.0	63.8	58.3	5.50	11.603	
1,600.0	1,596.2	1,593.0	1,583.7	3.2	3.7	-44.44	-47.5	138.5	73.7	67.8	5.90	12.504	
1,700.0	1,695.7	1,692.5	1,681.4	3.4	4.0	-43.47	-54.3	156.0	83.7	77.4	6.30	13.294	
1,800.0	1,795.2	1,792.0	1,779.1	3.6	4.4	-42.71	-61.0	173.6	93.7	87.0	6.70	13.990	
1,900.0	1,894.7	1,891.5	1,876.8	3.9	4.8	-42.09	-67.8	191.1	103.7	96.6	7.10	14.609	
2,000.0	1,994.2	1,991.0	1,974.5	4.1	5.1	-41.58	-74.5	208.6	113.7	106.2	7.50	15.163	
2,100.0	2,093.8	2,090.5	2,072.2	4.4	5.5	-41.16	-81.3	226.1	123.7	115.8	7.90	15.660	
2,200.0	2,193.3	2,190.0	2,170.0	4.6	5.9	-40.80	-88.0	243.7	133.7	125.4	8.30	16.110	
2,300.0	2,292.8	2,289.5	2,267.7	4.8	6.2	-40.48	-94.8	261.2	143.8	135.1	8.70	16.517	
2,400.0	2,392.3	2,389.0	2,365.4	5.1	6.6	-40.21	-101.5	278.7	153.8	144.7	9.11	16.889	
2,500.0	2,491.8	2,488.5	2,463.1	5.3	7.0	-39.97	-108.3	296.2	163.8	154.3	9.51	17.230	
2,600.0	2,591.3	2,588.0	2,560.8	5.6	7.3	-39.76	-115.0	313.7	173.9	164.0	9.91	17.542	
2,700.0	2,690.8	2,687.5	2,658.5	5.8	7.7	-39.58	-121.8	331.3	183.9	173.6	10.31	17.831	
2,800.0	2,790.3	2,787.0	2,756.2	6.1	8.1	-39.41	-128.5	348.8	193.9	183.2	10.72	18.097	
2,900.0	2,889.8	2,886.4	2,853.9	6.3	8.4	-39.26	-135.3	366.3	204.0	192.9	11.12	18.344	
3,000.0	2,989.3	2,985.9	2,951.6	6.6	8.8	-39.12	-142.0	383.8	214.0	202.5	11.52	18.574	
3,100.0	3,088.8	3,085.4	3,049.3	6.8	9.2	-39.00	-148.8	401.4	224.1	212.2	11.93	18.788	
3,200.0	3,188.4	3,184.9	3,147.0	7.0	9.6	-38.88	-155.5	418.9	234.1	221.8	12.33	18.988	
3,300.0	3,287.9	3,284.4	3,244.7	7.3	9.9	-38.78	-162.3	436.4	244.2	231.4	12.73	19.176	
3,400.0	3,387.4	3,383.9	3,342.4	7.5	10.3	-38.68	-169.0	453.9	254.2	241.1	13.14	19.352	
3,500.0	3,486.9	3,483.4	3,440.1	7.8	10.7	-38.59	-175.8	471.4	264.3	250.7	13.54	19.517	
3,600.0	3,586.4	3,582.9	3,537.8	8.0	11.0	-38.51	-182.5	489.0	274.3	260.4	13.94	19.673	
3,700.0	3,685.9	3,682.4	3,635.5	8.3	11.4	-38.43	-189.3	506.5	284.4	270.0	14.35	19.820	
3,800.0	3,785.4	3,781.9	3,733.2	8.5	11.8	-38.36	-196.0	524.0	294.4	279.7	14.75	19.958	
3,900.0	3,884.9	3,881.4	3,830.9	8.8	12.2	-38.29	-202.8	541.5	304.5	289.3	15.16	20.090	
4,000.0	3,984.4	3,980.9	3,928.6	9.0	12.5	-38.23	-209.5	559.1	314.5	299.0	15.56	20.214	
4,100.0	4,083.9	4,080.4	4,026.3	9.2	12.9	-38.17	-216.3	576.6	324.6	308.6	15.96	20.333	
4,200.0	4,183.4	4,179.9	4,124.0	9.5	13.3	-38.12	-223.1	594.1	334.6	318.3	16.37	20.445	
4,300.0	4,283.0	4,279.3	4,221.8	9.7	13.7	-38.06	-229.8	611.6	344.7	327.9	16.77	20.552	
4,400.0	4,382.5	4,378.8	4,319.5	10.0	14.0	-38.02	-236.6	629.2	354.7	337.5	17.17	20.654	
4,500.0	4,482.0	4,478.3	4,417.2	10.2	14.4	-37.97	-243.3	646.7	364.8	347.2	17.58	20.751	
4,600.0	4,581.5	4,577.8	4,514.9	10.5	14.8	-37.93	-250.1	664.2	374.8	356.8	17.98	20.844	
4,700.0	4,681.0	4,677.3	4,612.6	10.7	15.2	-37.88	-256.8	681.7	384.9	366.5	18.39	20.933	
4,800.0	4,780.5	4,776.8	4,710.3	11.0	15.5	-37.84	-263.6	699.2	394.9	376.1	18.79	21.017	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4H-20H-O264 - 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
4,900.0	4,880.0	4,876.3	4,808.0	11.2	15.9	-37.81	-270.3	716.8	405.0	385.8	19.19	21.099	
5,000.0	4,979.5	4,975.8	4,905.7	11.4	16.3	-37.77	-277.1	734.3	415.0	395.4	19.60	21.177	
5,100.0	5,079.0	5,081.8	5,009.9	11.7	16.7	-37.77	-284.0	752.3	424.4	404.4	20.02	21.204	
5,200.0	5,178.5	5,189.0	5,115.7	11.9	17.0	-37.86	-290.3	768.6	432.1	411.6	20.45	21.133	
5,300.0	5,278.0	5,296.5	5,222.1	12.2	17.3	-38.03	-295.9	783.2	438.0	417.1	20.88	20.971	
5,400.0	5,377.6	5,404.2	5,328.9	12.4	17.6	-38.28	-300.8	795.9	442.1	420.8	21.33	20.724	
5,455.6	5,432.9	5,464.1	5,388.4	12.6	17.8	-38.46	-303.2	802.2	443.7	422.1	21.59	20.552	
5,500.0	5,477.1	5,512.0	5,436.0	12.7	17.9	-38.62	-305.0	806.7	444.6	422.8	21.79	20.409	
5,600.0	5,576.7	5,619.8	5,543.4	12.9	18.1	-38.92	-308.4	815.7	446.5	424.3	22.21	20.104	
5,700.0	5,676.5	5,727.7	5,651.0	13.1	18.3	-39.15	-311.1	822.8	448.1	425.5	22.61	19.818	
5,800.0	5,776.4	5,835.5	5,758.7	13.3	18.5	-39.32	-313.1	828.0	449.2	426.2	22.98	19.546	
5,900.0	5,876.4	5,943.4	5,866.6	13.4	18.6	-39.43	-314.4	831.3	449.9	426.6	23.32	19.289	
6,000.0	5,976.3	6,051.4	5,974.5	13.6	18.7	-39.47	-315.0	832.6	450.2	426.5	23.64	19.043	
6,023.7	6,000.0	6,076.9	6,000.0	13.6	18.7	90.00	-315.0	832.7	450.2	426.5	23.71	18.985	
6,100.0	6,076.3	6,153.2	6,076.3	13.7	18.8	90.00	-315.0	832.7	450.2	426.3	23.95	18.798	
6,200.0	6,176.3	6,253.2	6,176.3	13.8	18.9	90.00	-315.0	832.7	450.2	425.9	24.26	18.557	
6,300.0	6,276.3	6,353.2	6,276.3	14.0	19.0	90.00	-315.0	832.7	450.2	425.6	24.57	18.321	
6,378.7	6,355.0	6,431.9	6,355.0	14.1	19.1	90.00	-315.0	832.7	450.2	425.4	24.82	18.140	
6,384.3	6,360.7	6,437.5	6,360.7	14.1	19.1	90.00	-315.0	832.7	450.2	425.4	24.83	18.129	
6,400.0	6,376.3	6,453.2	6,376.3	14.1	19.1	90.05	-315.0	832.7	450.2	425.3	24.87	18.102	
6,450.0	6,426.2	6,503.0	6,426.2	14.1	19.2	90.56	-315.0	832.7	450.2	425.3	24.90	18.084	
6,500.0	6,475.4	6,552.3	6,475.4	14.1	19.2	91.59	-315.0	832.7	450.4	425.6	24.81	18.151	
6,550.0	6,523.8	6,600.7	6,523.8	14.1	19.3	93.09	-315.0	832.7	450.9	426.3	24.65	18.296	
6,600.0	6,570.9	6,647.8	6,570.9	14.1	19.3	94.96	-315.0	832.7	452.2	427.7	24.43	18.512	
6,650.0	6,616.3	6,696.5	6,619.6	14.0	19.4	97.20	-314.2	832.7	454.5	430.3	24.17	18.802	
6,700.0	6,659.8	6,748.8	6,671.7	13.9	19.4	99.53	-309.0	832.7	457.7	433.8	23.92	19.135	
6,750.0	6,700.9	6,803.5	6,725.3	13.9	19.4	101.82	-298.5	832.7	461.8	438.1	23.70	19.485	
6,800.0	6,739.4	6,860.8	6,780.2	13.8	19.4	104.06	-282.2	832.7	466.5	443.0	23.51	19.840	
6,850.0	6,775.0	6,920.9	6,835.7	13.8	19.3	106.24	-259.2	832.7	471.8	448.4	23.37	20.188	
6,900.0	6,807.3	6,984.2	6,891.2	13.8	19.3	108.32	-228.8	832.7	477.4	454.2	23.27	20.515	
6,950.0	6,836.3	7,050.8	6,945.6	13.8	19.2	110.29	-190.5	832.7	483.3	460.0	23.22	20.808	
7,000.0	6,861.5	7,120.8	6,997.7	13.9	19.2	112.11	-143.7	832.7	489.0	465.7	23.24	21.036	
7,050.0	6,883.0	7,194.4	7,045.7	14.0	19.2	113.73	-88.0	832.7	494.3	471.0	23.33	21.193	
7,100.0	6,900.4	7,271.3	7,087.9	14.2	19.2	115.11	-23.8	832.7	499.1	475.6	23.52	21.218	
7,150.0	6,913.6	7,351.2	7,122.2	14.4	19.3	116.22	48.3	832.7	502.9	479.2	23.77	21.160	
7,200.0	6,922.6	7,433.5	7,146.8	14.6	19.5	116.99	126.8	832.7	505.7	481.5	24.16	20.926	
7,250.0	6,927.3	7,517.4	7,159.9	14.9	19.9	117.40	209.5	832.7	507.2	482.5	24.69	20.543	
7,278.7	6,928.0	7,565.9	7,162.0	15.1	20.1	117.46	257.9	832.7	507.4	482.3	25.04	20.260	
7,300.0	6,928.0	7,587.2	7,162.0	15.3	20.2	117.46	279.3	832.7	507.4	482.0	25.36	20.008	
7,400.0	6,928.0	7,687.2	7,162.0	16.1	20.8	117.46	379.3	832.7	507.4	480.4	27.01	18.788	
7,500.0	6,928.0	7,787.2	7,162.0	17.1	21.6	117.46	479.3	832.7	507.4	478.5	28.89	17.563	
7,600.0	6,928.0	7,887.2	7,162.0	18.2	22.5	117.46	579.3	832.7	507.4	476.4	30.97	16.381	
7,700.0	6,928.0	7,987.2	7,162.0	19.4	23.4	117.46	679.3	832.7	507.4	474.2	33.22	15.273	
7,800.0	6,928.0	8,087.2	7,162.0	20.6	24.5	117.46	779.3	832.7	507.4	471.8	35.60	14.253	
7,900.0	6,928.0	8,187.2	7,162.0	22.0	25.6	117.46	879.3	832.7	507.4	469.3	38.08	13.323	
8,000.0	6,928.0	8,287.2	7,162.0	23.3	26.8	117.46	979.3	832.7	507.4	466.7	40.66	12.480	
8,100.0	6,928.0	8,387.2	7,162.0	24.8	28.1	117.46	1,079.3	832.7	507.4	464.1	43.30	11.718	
8,200.0	6,928.0	8,487.2	7,162.0	26.3	29.4	117.46	1,179.3	832.7	507.4	461.4	46.00	11.029	
8,300.0	6,928.0	8,587.2	7,162.0	27.8	30.7	117.46	1,279.3	832.7	507.4	458.6	48.76	10.406	
8,400.0	6,928.0	8,687.2	7,162.0	29.3	32.1	117.46	1,379.3	832.7	507.4	455.8	51.55	9.842	
8,500.0	6,928.0	8,787.2	7,162.0	30.9	33.6	117.46	1,479.3	832.7	507.4	453.0	54.38	9.330	
8,600.0	6,928.0	8,887.2	7,162.0	32.4	35.0	117.46	1,579.3	832.7	507.4	450.1	57.24	8.864	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4H-20H-O264 - 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
8,700.0	6,928.0	8,987.2	7,162.0	34.0	36.5	117.46	1,679.3	832.7	507.4	447.3	60.13	8.438	
8,800.0	6,928.0	9,087.2	7,162.0	35.6	38.0	117.46	1,779.3	832.7	507.4	444.3	63.04	8.049	
8,900.0	6,928.0	9,187.2	7,162.0	37.3	39.5	117.46	1,879.3	832.7	507.4	441.4	65.96	7.692	
9,000.0	6,928.0	9,287.2	7,162.0	38.9	41.1	117.46	1,979.3	832.7	507.4	438.5	68.91	7.363	
9,100.0	6,928.0	9,387.2	7,162.0	40.5	42.6	117.46	2,079.3	832.7	507.4	435.5	71.86	7.060	
9,200.0	6,928.0	9,487.2	7,162.0	42.2	44.2	117.46	2,179.3	832.7	507.4	432.5	74.84	6.780	
9,300.0	6,928.0	9,587.2	7,162.0	43.8	45.8	117.46	2,279.3	832.7	507.4	429.6	77.82	6.520	
9,400.0	6,928.0	9,687.2	7,162.0	45.5	47.4	117.46	2,379.3	832.7	507.4	426.6	80.81	6.279	
9,500.0	6,928.0	9,787.2	7,162.0	47.2	49.0	117.46	2,479.3	832.7	507.4	423.6	83.81	6.054	
9,600.0	6,928.0	9,887.2	7,162.0	48.9	50.6	117.46	2,579.3	832.7	507.4	420.6	86.82	5.844	
9,700.0	6,928.0	9,987.2	7,162.0	50.6	52.3	117.46	2,679.3	832.7	507.4	417.5	89.84	5.647	
9,800.0	6,928.0	10,087.2	7,162.0	52.2	53.9	117.46	2,779.3	832.7	507.4	414.5	92.87	5.464	
9,900.0	6,928.0	10,187.2	7,162.0	53.9	55.6	117.46	2,879.3	832.7	507.4	411.5	95.90	5.291	
10,000.0	6,928.0	10,287.2	7,162.0	55.6	57.2	117.46	2,979.3	832.7	507.4	408.4	98.93	5.129	
10,100.0	6,928.0	10,387.2	7,162.0	57.3	58.9	117.46	3,079.3	832.7	507.4	405.4	101.97	4.976	
10,200.0	6,928.0	10,487.2	7,162.0	59.0	60.5	117.46	3,179.3	832.7	507.4	402.4	105.02	4.831	
10,300.0	6,928.0	10,587.2	7,162.0	60.7	62.2	117.46	3,279.3	832.7	507.4	399.3	108.07	4.695	
10,400.0	6,928.0	10,687.2	7,162.0	62.5	63.9	117.46	3,379.3	832.7	507.4	396.3	111.12	4.566	
10,500.0	6,928.0	10,787.2	7,162.0	64.2	65.5	117.46	3,479.3	832.7	507.4	393.2	114.18	4.444	
10,600.0	6,928.0	10,887.2	7,162.0	65.9	67.2	117.46	3,579.3	832.7	507.4	390.1	117.24	4.328	
10,700.0	6,928.0	10,987.2	7,162.0	67.6	68.9	117.46	3,679.3	832.7	507.4	387.1	120.30	4.218	
10,800.0	6,928.0	11,087.2	7,162.0	69.3	70.6	117.46	3,779.3	832.7	507.4	384.0	123.36	4.113	
10,900.0	6,928.0	11,187.2	7,162.0	71.0	72.3	117.46	3,879.3	832.7	507.4	380.9	126.43	4.013	
11,000.0	6,928.0	11,287.2	7,162.0	72.8	74.0	117.46	3,979.3	832.7	507.4	377.9	129.50	3.918	
11,100.0	6,928.0	11,387.2	7,162.0	74.5	75.7	117.46	4,079.3	832.7	507.4	374.8	132.58	3.827	
11,200.0	6,928.0	11,487.2	7,162.0	76.2	77.4	117.46	4,179.3	832.7	507.4	371.7	135.65	3.740	
11,300.0	6,928.0	11,587.2	7,162.0	77.9	79.1	117.46	4,279.3	832.7	507.4	368.6	138.73	3.657	
11,400.0	6,928.0	11,687.2	7,162.0	79.7	80.8	117.46	4,379.3	832.7	507.4	365.6	141.81	3.578	
11,500.0	6,928.0	11,787.2	7,162.0	81.4	82.5	117.46	4,479.3	832.7	507.4	362.5	144.89	3.502	
11,512.7	6,928.0	11,799.9	7,162.0	81.6	82.7	117.46	4,492.0	832.7	507.4	362.1	145.28	3.492 SF	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4I-20H-O264 - 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	89.94	0.0	22.7	22.7				
100.0	100.0	100.0	100.0	0.1	0.1	89.94	0.0	22.7	22.7	22.4	0.24	92.710	
200.0	200.0	200.0	200.0	0.3	0.3	89.94	0.0	22.7	22.7	22.1	0.59	38.175	
300.0	300.0	300.0	300.0	0.5	0.5	89.94	0.0	22.7	22.7	21.7	0.94	24.036	CC, ES
400.0	400.0	399.2	399.2	0.6	0.6	91.12	-0.5	24.3	24.3	23.0	1.29	18.833	
450.0	450.0	448.7	448.7	0.7	0.7	92.39	-1.1	26.3	26.4	24.9	1.47	17.983	
500.0	500.0	498.2	498.0	0.8	0.8	-35.84	-2.0	29.2	29.2	27.5	1.64	17.799	
600.0	600.0	596.9	596.3	1.0	1.1	-34.29	-4.4	37.4	36.2	34.2	1.99	18.198	
700.0	699.9	695.1	693.8	1.2	1.3	-33.62	-7.9	48.7	45.1	42.8	2.34	19.288	
800.0	799.8	792.8	790.4	1.4	1.6	-33.47	-12.3	63.1	55.9	53.2	2.69	20.770	
900.0	899.5	889.9	885.8	1.6	2.0	-33.61	-17.6	80.6	68.6	65.6	3.05	22.478	
1,000.0	999.2	987.6	981.1	1.8	2.3	-33.92	-23.8	100.9	82.8	79.4	3.42	24.207	
1,018.1	1,017.1	1,005.5	998.5	1.8	2.4	-34.03	-25.0	104.7	85.4	81.9	3.49	24.453	
1,100.0	1,098.7	1,086.6	1,077.6	2.0	2.7	-34.52	-30.2	122.0	96.6	92.8	3.80	25.406	
1,200.0	1,198.2	1,185.7	1,174.2	2.2	3.2	-34.99	-36.7	143.2	110.4	106.2	4.19	26.352	
1,300.0	1,297.7	1,284.7	1,270.7	2.5	3.6	-35.35	-43.1	164.3	124.2	119.6	4.58	27.118	
1,400.0	1,397.2	1,383.7	1,367.3	2.7	4.0	-35.64	-49.5	185.4	138.0	133.0	4.97	27.750	
1,500.0	1,496.7	1,482.8	1,463.8	2.9	4.4	-35.88	-55.9	206.5	151.8	146.4	5.37	28.278	
1,600.0	1,596.2	1,581.8	1,560.4	3.2	4.8	-36.07	-62.4	227.7	165.6	159.8	5.76	28.725	
1,700.0	1,695.7	1,680.9	1,656.9	3.4	5.3	-36.24	-68.8	248.8	179.4	173.2	6.16	29.108	
1,800.0	1,795.2	1,779.9	1,753.5	3.6	5.7	-36.39	-75.2	269.9	193.2	186.6	6.56	29.439	
1,900.0	1,894.7	1,878.9	1,850.0	3.9	6.1	-36.51	-81.7	291.0	207.0	200.0	6.96	29.729	
2,000.0	1,994.2	1,978.0	1,946.6	4.1	6.5	-36.62	-88.1	312.2	220.8	213.4	7.36	29.983	
2,100.0	2,093.8	2,077.0	2,043.1	4.4	7.0	-36.72	-94.5	333.3	234.6	226.8	7.77	30.208	
2,200.0	2,193.3	2,176.1	2,139.6	4.6	7.4	-36.80	-101.0	354.4	248.4	240.2	8.17	30.409	
2,300.0	2,292.8	2,275.1	2,236.2	4.8	7.8	-36.88	-107.4	375.5	262.2	253.6	8.57	30.590	
2,400.0	2,392.3	2,374.2	2,332.7	5.1	8.2	-36.95	-113.8	396.7	276.0	267.0	8.98	30.752	
2,500.0	2,491.8	2,473.2	2,429.3	5.3	8.7	-37.01	-120.2	417.8	289.8	280.4	9.38	30.900	
2,600.0	2,591.3	2,572.2	2,525.8	5.6	9.1	-37.06	-126.7	438.9	303.6	293.8	9.78	31.034	
2,700.0	2,690.8	2,671.3	2,622.4	5.8	9.5	-37.12	-133.1	460.0	317.4	307.2	10.19	31.156	
2,800.0	2,790.3	2,770.3	2,718.9	6.1	10.0	-37.16	-139.5	481.2	331.2	320.6	10.59	31.268	
2,900.0	2,889.8	2,869.4	2,815.5	6.3	10.4	-37.21	-146.0	502.3	345.0	334.0	11.00	31.372	
3,000.0	2,989.3	2,968.4	2,912.0	6.6	10.8	-37.25	-152.4	523.4	358.8	347.4	11.40	31.467	
3,100.0	3,088.8	3,067.5	3,008.6	6.8	11.2	-37.28	-158.8	544.5	372.6	360.8	11.81	31.555	
3,200.0	3,188.4	3,166.5	3,105.1	7.0	11.7	-37.32	-165.3	565.7	386.4	374.2	12.21	31.637	
3,300.0	3,287.9	3,265.5	3,201.7	7.3	12.1	-37.35	-171.7	586.8	400.2	387.6	12.62	31.714	
3,400.0	3,387.4	3,364.6	3,298.2	7.5	12.5	-37.38	-178.1	607.9	414.0	401.0	13.03	31.785	
3,500.0	3,486.9	3,463.6	3,394.8	7.8	13.0	-37.41	-184.5	629.1	427.9	414.4	13.43	31.852	
3,600.0	3,586.4	3,562.7	3,491.3	8.0	13.4	-37.44	-191.0	650.2	441.7	427.8	13.84	31.914	
3,700.0	3,685.9	3,661.7	3,587.9	8.3	13.8	-37.46	-197.4	671.3	455.5	441.2	14.25	31.973	
3,800.0	3,785.4	3,760.8	3,684.4	8.5	14.2	-37.48	-203.8	692.4	469.3	454.6	14.65	32.028	
3,900.0	3,884.9	3,859.8	3,781.0	8.8	14.7	-37.51	-210.3	713.6	483.1	468.0	15.06	32.080	
4,000.0	3,984.4	3,958.8	3,877.5	9.0	15.1	-37.53	-216.7	734.7	496.9	481.4	15.47	32.129	
4,100.0	4,083.9	4,057.9	3,974.1	9.2	15.5	-37.55	-223.1	755.8	510.7	494.8	15.87	32.175	
4,200.0	4,183.4	4,156.9	4,070.6	9.5	16.0	-37.56	-229.6	776.9	524.5	508.2	16.28	32.219	
4,300.0	4,283.0	4,256.0	4,167.2	9.7	16.4	-37.58	-236.0	798.1	538.3	521.6	16.69	32.261	
4,400.0	4,382.5	4,355.0	4,263.7	10.0	16.8	-37.60	-242.4	819.2	552.1	535.0	17.09	32.300	
4,500.0	4,482.0	4,454.0	4,360.3	10.2	17.3	-37.61	-248.9	840.3	565.9	548.4	17.50	32.338	
4,600.0	4,581.5	4,553.1	4,456.8	10.5	17.7	-37.63	-255.3	861.4	579.7	561.8	17.91	32.374	
4,700.0	4,681.0	4,652.1	4,553.4	10.7	18.1	-37.64	-261.7	882.6	593.5	575.2	18.31	32.408	
4,800.0	4,780.5	4,751.2	4,649.9	11.0	18.5	-37.66	-268.1	903.7	607.3	588.6	18.72	32.440	
4,900.0	4,880.0	4,853.1	4,749.3	11.2	19.0	-37.67	-274.7	925.4	621.1	601.9	19.13	32.459	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4I-20H-O264 - 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
5,000.0	4,979.5	4,964.0	4,857.8	11.4	19.4	-37.73	-281.5	947.5	633.5	613.9	19.57	32.376	
5,100.0	5,079.0	5,075.4	4,967.2	11.7	19.8	-37.83	-287.6	967.8	644.1	624.1	20.01	32.193	
5,200.0	5,178.5	5,187.2	5,077.3	11.9	20.2	-37.98	-293.2	986.0	652.8	632.3	20.45	31.917	
5,300.0	5,278.0	5,299.3	5,188.1	12.2	20.5	-38.18	-298.1	1,002.2	659.6	638.7	20.90	31.554	
5,400.0	5,377.6	5,411.7	5,299.5	12.4	20.8	-38.42	-302.5	1,016.4	664.6	643.2	21.36	31.110	
5,455.6	5,432.9	5,474.2	5,361.5	12.6	21.0	-38.58	-304.6	1,023.4	666.5	644.9	21.62	30.829	
5,500.0	5,477.1	5,524.1	5,411.2	12.7	21.1	-38.72	-306.1	1,028.5	667.8	646.0	21.82	30.606	
5,600.0	5,576.7	5,636.7	5,523.3	12.9	21.3	-38.98	-309.2	1,038.5	670.3	648.0	22.25	30.130	
5,700.0	5,676.5	5,749.3	5,635.6	13.1	21.5	-39.19	-311.6	1,046.5	672.3	649.6	22.65	29.683	
5,800.0	5,776.4	5,861.9	5,748.0	13.3	21.7	-39.34	-313.4	1,052.3	673.7	650.7	23.02	29.264	
5,900.0	5,876.4	5,974.6	5,860.7	13.4	21.9	-39.43	-314.5	1,055.9	674.6	651.3	23.37	28.868	
6,000.0	5,976.3	6,087.3	5,973.3	13.6	22.0	-39.47	-315.0	1,057.5	675.0	651.3	23.69	28.493	
6,023.7	6,000.0	6,114.0	6,000.0	13.6	22.0	90.00	-315.0	1,057.6	675.1	651.3	23.77	28.405	
6,100.0	6,076.3	6,190.3	6,076.3	13.7	22.0	90.00	-315.0	1,057.6	675.1	651.1	24.00	28.125	
6,200.0	6,176.3	6,290.3	6,176.3	13.8	22.1	90.00	-315.0	1,057.6	675.1	650.7	24.31	27.765	
6,300.0	6,276.3	6,390.3	6,276.3	14.0	22.2	90.00	-315.0	1,057.6	675.1	650.4	24.62	27.413	
6,352.5	6,328.8	6,442.8	6,328.8	14.0	22.3	90.00	-315.0	1,057.6	675.1	650.3	24.79	27.232	
6,378.7	6,355.0	6,469.0	6,355.0	14.1	22.3	90.00	-315.0	1,057.6	675.1	650.2	24.87	27.142	
6,400.0	6,376.3	6,490.3	6,376.3	14.1	22.3	90.00	-314.6	1,057.6	675.1	650.1	24.92	27.086	
6,450.0	6,426.2	6,540.3	6,426.2	14.1	22.3	90.00	-310.5	1,057.6	675.1	650.1	24.99	27.017	
6,500.0	6,475.4	6,590.3	6,475.4	14.1	22.3	90.00	-302.2	1,057.6	675.1	650.1	24.99	27.014	
6,550.0	6,523.8	6,640.3	6,523.8	14.1	22.3	90.00	-289.6	1,057.6	675.1	650.1	24.94	27.066	
6,600.0	6,570.9	6,690.3	6,570.9	14.1	22.3	90.00	-272.8	1,057.6	675.1	650.2	24.85	27.165	
6,650.0	6,616.3	6,740.3	6,616.3	14.0	22.2	90.00	-251.9	1,057.6	675.1	650.3	24.73	27.296	
6,700.0	6,659.8	6,790.3	6,659.8	13.9	22.2	90.00	-227.2	1,057.6	675.1	650.5	24.60	27.444	
6,750.0	6,700.9	6,840.3	6,700.9	13.9	22.2	90.00	-198.8	1,057.6	675.1	650.6	24.47	27.590	
6,800.0	6,739.4	6,890.3	6,739.4	13.8	22.1	90.00	-166.9	1,057.6	675.1	650.7	24.36	27.715	
6,850.0	6,775.0	6,940.3	6,775.0	13.8	22.1	90.00	-131.8	1,057.6	675.1	650.8	24.29	27.797	
6,900.0	6,807.3	6,990.3	6,807.3	13.8	22.1	90.00	-93.7	1,057.6	675.1	650.8	24.27	27.812	
6,950.0	6,836.3	7,040.3	6,836.3	13.8	22.1	90.00	-53.0	1,057.6	675.1	650.7	24.33	27.742	
7,000.0	6,861.5	7,090.3	6,861.5	13.9	22.2	90.00	-9.9	1,057.6	675.1	650.6	24.48	27.570	
7,050.0	6,883.0	7,140.3	6,883.0	14.0	22.2	90.00	35.3	1,057.6	675.0	650.3	24.74	27.288	
7,100.0	6,900.4	7,190.3	6,900.4	14.2	22.3	90.00	82.2	1,057.6	675.0	649.9	25.10	26.893	
7,150.0	6,913.6	7,240.3	6,913.6	14.4	22.4	90.00	130.3	1,057.6	675.0	649.5	25.58	26.393	
7,200.0	6,922.6	7,290.3	6,922.6	14.6	22.6	90.00	179.5	1,057.6	675.0	648.9	26.16	25.802	
7,250.0	6,927.3	7,340.3	6,927.3	14.9	22.8	90.00	229.3	1,057.6	675.0	648.2	26.85	25.138	
7,278.7	6,928.0	7,369.0	6,928.0	15.1	22.9	90.00	258.0	1,057.6	675.0	647.8	27.29	24.737	
7,300.0	6,928.0	7,390.3	6,928.0	15.3	23.0	90.00	279.3	1,057.5	675.0	647.4	27.64	24.426	
7,400.0	6,928.0	7,490.3	6,928.0	16.1	23.5	90.00	379.3	1,057.5	675.0	645.6	29.46	22.911	
7,500.0	6,928.0	7,590.3	6,928.0	17.1	24.2	90.00	479.3	1,057.5	675.0	643.5	31.57	21.381	
7,600.0	6,928.0	7,690.3	6,928.0	18.2	25.0	90.00	579.3	1,057.5	675.0	641.1	33.91	19.906	
7,700.0	6,928.0	7,790.3	6,928.0	19.4	25.8	90.00	679.3	1,057.5	675.0	638.6	36.44	18.525	
7,800.0	6,928.0	7,890.3	6,928.0	20.6	26.8	90.00	779.3	1,057.5	675.0	635.9	39.12	17.256	
7,900.0	6,928.0	7,990.3	6,928.0	22.0	27.8	90.00	879.3	1,057.5	675.0	633.1	41.92	16.102	
8,000.0	6,928.0	8,090.3	6,928.0	23.3	28.9	90.00	979.3	1,057.5	675.0	630.2	44.82	15.060	
8,100.0	6,928.0	8,190.3	6,928.0	24.8	30.1	90.00	1,079.3	1,057.5	675.0	627.2	47.81	14.120	
8,200.0	6,928.0	8,290.3	6,928.0	26.3	31.3	90.00	1,179.3	1,057.5	675.0	624.2	50.86	13.273	
8,300.0	6,928.0	8,390.3	6,928.0	27.8	32.5	90.00	1,279.3	1,057.5	675.0	621.1	53.96	12.509	
8,400.0	6,928.0	8,490.3	6,928.0	29.3	33.9	90.00	1,379.3	1,057.5	675.0	617.9	57.12	11.819	
8,500.0	6,928.0	8,590.3	6,928.0	30.9	35.2	90.00	1,479.3	1,057.5	675.0	614.7	60.31	11.193	
8,600.0	6,928.0	8,690.3	6,928.0	32.4	36.6	90.00	1,579.3	1,057.5	675.0	611.5	63.53	10.625	
8,700.0	6,928.0	8,790.3	6,928.0	34.0	38.0	90.00	1,679.3	1,057.5	675.0	608.2	66.79	10.107	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4I-20H-O264 - 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
8,800.0	6,928.0	8,890.3	6,928.0	35.6	39.5	90.00	1,779.3	1,057.5	675.0	605.0	70.07	9.634	
8,900.0	6,928.0	8,990.3	6,928.0	37.3	40.9	90.00	1,879.3	1,057.5	675.0	601.7	73.36	9.201	
9,000.0	6,928.0	9,090.3	6,928.0	38.9	42.4	90.00	1,979.3	1,057.5	675.0	598.3	76.68	8.803	
9,100.0	6,928.0	9,190.3	6,928.0	40.5	43.9	90.00	2,079.3	1,057.5	675.0	595.0	80.02	8.436	
9,200.0	6,928.0	9,290.3	6,928.0	42.2	45.5	90.00	2,179.3	1,057.5	675.0	591.7	83.37	8.097	
9,300.0	6,928.0	9,390.3	6,928.0	43.8	47.0	90.00	2,279.3	1,057.5	675.0	588.3	86.73	7.783	
9,400.0	6,928.0	9,490.3	6,928.0	45.5	48.6	90.00	2,379.3	1,057.5	675.0	584.9	90.10	7.492	
9,500.0	6,928.0	9,590.3	6,928.0	47.2	50.1	90.00	2,479.3	1,057.5	675.0	581.5	93.48	7.221	
9,600.0	6,928.0	9,690.3	6,928.0	48.9	51.7	90.00	2,579.3	1,057.5	675.0	578.2	96.87	6.968	
9,700.0	6,928.0	9,790.3	6,928.0	50.6	53.3	90.00	2,679.3	1,057.5	675.0	574.7	100.27	6.732	
9,800.0	6,928.0	9,890.3	6,928.0	52.2	54.9	90.00	2,779.3	1,057.5	675.0	571.3	103.68	6.511	
9,900.0	6,928.0	9,990.3	6,928.0	53.9	56.5	90.00	2,879.3	1,057.5	675.0	567.9	107.09	6.303	
10,000.0	6,928.0	10,090.3	6,928.0	55.6	58.2	90.00	2,979.3	1,057.5	675.0	564.5	110.51	6.108	
10,100.0	6,928.0	10,190.3	6,928.0	57.3	59.8	90.00	3,079.3	1,057.5	675.0	561.1	113.94	5.925	
10,200.0	6,928.0	10,290.3	6,928.0	59.0	61.4	90.00	3,179.3	1,057.5	675.0	557.7	117.37	5.751	
10,300.0	6,928.0	10,390.3	6,928.0	60.7	63.1	90.00	3,279.3	1,057.5	675.0	554.2	120.80	5.588	
10,400.0	6,928.0	10,490.3	6,928.0	62.5	64.7	90.00	3,379.3	1,057.5	675.0	550.8	124.24	5.433	
10,500.0	6,928.0	10,590.3	6,928.0	64.2	66.4	90.00	3,479.3	1,057.5	675.0	547.3	127.68	5.287	
10,600.0	6,928.0	10,690.3	6,928.0	65.9	68.0	90.00	3,579.3	1,057.5	675.0	543.9	131.12	5.148	
10,700.0	6,928.0	10,790.3	6,928.0	67.6	69.7	90.00	3,679.3	1,057.5	675.0	540.4	134.57	5.016	
10,800.0	6,928.0	10,890.3	6,928.0	69.3	71.4	90.00	3,779.3	1,057.5	675.0	537.0	138.02	4.891	
10,900.0	6,928.0	10,990.3	6,928.0	71.0	73.0	90.00	3,879.3	1,057.5	675.0	533.5	141.48	4.771	
11,000.0	6,928.0	11,090.3	6,928.0	72.8	74.7	90.00	3,979.3	1,057.5	675.0	530.1	144.94	4.657	
11,100.0	6,928.0	11,190.3	6,928.0	74.5	76.4	90.00	4,079.3	1,057.5	675.0	526.6	148.40	4.549	
11,200.0	6,928.0	11,290.3	6,928.0	76.2	78.1	90.00	4,179.3	1,057.5	675.0	523.1	151.86	4.445	
11,300.0	6,928.0	11,390.3	6,928.0	77.9	79.8	90.00	4,279.3	1,057.5	675.0	519.7	155.32	4.346	
11,400.0	6,928.0	11,490.3	6,928.0	79.7	81.4	90.00	4,379.3	1,057.5	675.0	516.2	158.79	4.251	
11,500.0	6,928.0	11,590.3	6,928.0	81.4	83.1	90.00	4,479.3	1,057.5	675.0	512.7	162.25	4.160	
11,512.7	6,928.0	11,603.0	6,928.0	81.6	83.4	90.00	4,492.0	1,057.5	675.0	512.3	162.69	4.149	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4J-20H-O264 - 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	90.67	-0.4	29.9	29.9				
100.0	100.0	99.0	99.0	0.1	0.1	90.67	-0.4	29.9	29.9	29.7	0.24	123.093	
200.0	200.0	199.0	199.0	0.3	0.3	90.67	-0.4	29.9	29.9	29.3	0.59	50.581	
234.7	234.7	233.7	233.7	0.4	0.4	90.67	-0.4	29.9	29.9	29.2	0.71	41.993	CC, ES
300.0	300.0	298.5	298.5	0.5	0.5	90.85	-0.5	30.3	30.3	29.4	0.94	32.268	
400.0	400.0	397.4	397.3	0.6	0.6	92.17	-1.3	33.6	33.7	32.4	1.29	26.092	
450.0	450.0	446.7	446.5	0.7	0.8	93.14	-2.0	36.5	36.6	35.1	1.47	24.898	
500.0	500.0	495.9	495.6	0.8	0.9	-35.46	-2.9	40.2	40.2	38.6	1.63	24.607	
600.0	600.0	594.0	593.2	1.0	1.1	-34.50	-5.4	49.9	48.9	47.0	1.98	24.684	
700.0	699.9	691.6	689.9	1.2	1.4	-34.25	-8.6	62.9	59.6	57.2	2.33	25.547	
800.0	799.8	788.6	785.5	1.4	1.7	-34.40	-12.7	78.9	72.1	69.4	2.69	26.858	
900.0	899.5	885.0	879.8	1.6	2.1	-34.77	-17.4	97.9	86.5	83.5	3.04	28.426	
1,000.0	999.2	980.9	973.0	1.8	2.5	-35.23	-23.0	119.8	102.8	99.4	3.41	30.126	
1,018.1	1,017.1	998.7	990.2	1.8	2.6	-35.34	-24.0	124.1	105.8	102.3	3.48	30.403	
1,100.0	1,098.7	1,079.5	1,068.5	2.0	2.9	-35.85	-28.9	143.6	119.4	115.6	3.79	31.475	
1,200.0	1,198.2	1,178.1	1,164.0	2.2	3.4	-36.33	-34.9	167.4	136.1	131.9	4.18	32.536	
1,300.0	1,297.7	1,276.7	1,259.5	2.5	3.8	-36.71	-40.9	191.2	152.7	148.1	4.57	33.390	
1,400.0	1,397.2	1,375.3	1,355.0	2.7	4.3	-37.01	-46.9	215.1	169.3	164.4	4.97	34.090	
1,500.0	1,496.7	1,473.9	1,450.5	2.9	4.8	-37.26	-52.9	238.9	186.0	180.6	5.36	34.672	
1,600.0	1,596.2	1,572.5	1,546.0	3.2	5.2	-37.47	-58.9	262.7	202.6	196.8	5.76	35.163	
1,700.0	1,695.7	1,671.1	1,641.5	3.4	5.7	-37.64	-64.9	286.5	219.3	213.1	6.16	35.582	
1,800.0	1,795.2	1,769.7	1,737.0	3.6	6.2	-37.80	-70.8	310.3	235.9	229.3	6.56	35.942	
1,900.0	1,894.7	1,868.3	1,832.5	3.9	6.6	-37.93	-76.8	334.1	252.5	245.6	6.97	36.256	
2,000.0	1,994.2	1,966.9	1,928.0	4.1	7.1	-38.04	-82.8	357.9	269.2	261.8	7.37	36.531	
2,100.0	2,093.8	2,065.5	2,023.5	4.4	7.6	-38.15	-88.8	381.7	285.8	278.1	7.77	36.774	
2,200.0	2,193.3	2,164.1	2,119.0	4.6	8.0	-38.24	-94.8	405.5	302.5	294.3	8.18	36.989	
2,300.0	2,292.8	2,262.7	2,214.5	4.8	8.5	-38.32	-100.8	429.3	319.1	310.6	8.58	37.182	
2,400.0	2,392.3	2,361.3	2,310.0	5.1	9.0	-38.39	-106.8	453.1	335.8	326.8	8.99	37.356	
2,500.0	2,491.8	2,459.9	2,405.5	5.3	9.5	-38.46	-112.7	476.9	352.5	343.1	9.40	37.513	
2,600.0	2,591.3	2,558.5	2,500.9	5.6	9.9	-38.52	-118.7	500.7	369.1	359.3	9.80	37.655	
2,700.0	2,690.8	2,657.1	2,596.4	5.8	10.4	-38.57	-124.7	524.5	385.8	375.5	10.21	37.785	
2,800.0	2,790.3	2,755.7	2,691.9	6.1	10.9	-38.62	-130.7	548.3	402.4	391.8	10.62	37.904	
2,900.0	2,889.8	2,854.3	2,787.4	6.3	11.3	-38.67	-136.7	572.1	419.1	408.0	11.02	38.013	
3,000.0	2,989.3	2,952.9	2,882.9	6.6	11.8	-38.71	-142.7	595.9	435.7	424.3	11.43	38.113	
3,100.0	3,088.8	3,051.5	2,978.4	6.8	12.3	-38.75	-148.7	619.7	452.4	440.5	11.84	38.206	
3,200.0	3,188.4	3,150.1	3,073.9	7.0	12.8	-38.79	-154.7	643.5	469.0	456.8	12.25	38.292	
3,300.0	3,287.9	3,248.7	3,169.4	7.3	13.2	-38.82	-160.6	667.4	485.7	473.0	12.66	38.372	
3,400.0	3,387.4	3,347.3	3,264.9	7.5	13.7	-38.86	-166.6	691.2	502.3	489.3	13.07	38.447	
3,500.0	3,486.9	3,445.9	3,360.4	7.8	14.2	-38.89	-172.6	715.0	519.0	505.5	13.47	38.516	
3,600.0	3,586.4	3,544.5	3,455.9	8.0	14.7	-38.91	-178.6	738.8	535.7	521.8	13.88	38.582	
3,700.0	3,685.9	3,643.1	3,551.4	8.3	15.1	-38.94	-184.6	762.6	552.3	538.0	14.29	38.643	
3,800.0	3,785.4	3,741.7	3,646.9	8.5	15.6	-38.97	-190.6	786.4	569.0	554.3	14.70	38.700	
3,900.0	3,884.9	3,840.4	3,742.4	8.8	16.1	-38.99	-196.6	810.2	585.6	570.5	15.11	38.754	
4,000.0	3,984.4	3,939.0	3,837.9	9.0	16.5	-39.01	-202.5	834.0	602.3	586.8	15.52	38.805	
4,100.0	4,083.9	4,037.6	3,933.4	9.2	17.0	-39.03	-208.5	857.8	618.9	603.0	15.93	38.853	
4,200.0	4,183.4	4,136.2	4,028.9	9.5	17.5	-39.05	-214.5	881.6	635.6	619.2	16.34	38.899	
4,300.0	4,283.0	4,234.8	4,124.4	9.7	18.0	-39.07	-220.5	905.4	652.2	635.5	16.75	38.942	
4,400.0	4,382.5	4,333.4	4,219.9	10.0	18.4	-39.09	-226.5	929.2	668.9	651.7	17.16	38.983	
4,500.0	4,482.0	4,432.0	4,315.4	10.2	18.9	-39.11	-232.5	953.0	685.6	668.0	17.57	39.022	
4,600.0	4,581.5	4,530.6	4,410.9	10.5	19.4	-39.12	-238.5	976.8	702.2	684.2	17.98	39.059	
4,700.0	4,681.0	4,629.2	4,506.4	10.7	19.8	-39.14	-244.4	1,000.6	718.9	700.5	18.39	39.094	
4,800.0	4,780.5	4,727.8	4,601.9	11.0	20.3	-39.15	-250.4	1,024.4	735.5	716.7	18.80	39.127	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4J-20H-O264 - 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
4,900.0	4,880.0	4,826.4	4,697.4	11.2	20.8	-39.17	-256.4	1,048.2	752.2	733.0	19.21	39.159	
5,000.0	4,979.5	4,925.0	4,792.9	11.4	21.3	-39.18	-262.4	1,072.0	768.8	749.2	19.62	39.190	
5,100.0	5,079.0	5,023.6	4,888.4	11.7	21.7	-39.19	-268.4	1,095.8	785.5	765.5	20.03	39.219	
5,200.0	5,178.5	5,122.2	4,983.9	11.9	22.2	-39.21	-274.4	1,119.7	802.1	781.7	20.44	39.247	
5,300.0	5,278.0	5,220.8	5,079.4	12.2	22.7	-39.22	-280.4	1,143.5	818.8	798.0	20.85	39.274	
5,400.0	5,377.6	5,319.4	5,174.9	12.4	23.2	-39.23	-286.3	1,167.3	835.5	814.2	21.26	39.300	
5,455.6	5,432.9	5,374.2	5,228.0	12.6	23.4	-39.24	-289.7	1,180.5	844.7	823.2	21.49	39.313	
5,500.0	5,477.1	5,418.0	5,270.4	12.7	23.6	-39.28	-292.3	1,191.1	852.2	830.6	21.67	39.329	
5,600.0	5,576.7	5,550.3	5,399.1	12.9	24.2	-39.34	-299.8	1,220.8	868.6	846.5	22.12	39.265	
5,700.0	5,676.5	5,691.2	5,537.5	13.1	24.7	-39.39	-306.2	1,246.2	881.6	859.0	22.56	39.077	
5,800.0	5,776.4	5,833.4	5,678.4	13.3	25.0	-39.42	-310.9	1,265.1	891.2	868.3	22.97	38.792	
5,900.0	5,876.4	5,976.5	5,821.0	13.4	25.3	-39.44	-314.0	1,277.2	897.4	874.0	23.36	38.410	
6,000.0	5,976.3	6,120.2	5,964.5	13.6	25.5	-39.45	-315.3	1,282.4	900.0	876.3	23.73	37.932	
6,023.7	6,000.0	6,154.3	5,998.6	13.6	25.5	90.02	-315.4	1,282.6	900.1	876.3	23.81	37.802	
6,100.0	6,076.3	6,231.0	6,075.3	13.7	25.5	90.02	-315.4	1,282.6	900.1	876.1	24.05	37.429	
6,200.0	6,176.3	6,331.0	6,175.3	13.8	25.6	90.02	-315.4	1,282.6	900.1	875.8	24.36	36.950	
6,300.0	6,276.3	6,431.0	6,275.3	14.0	25.7	90.02	-315.4	1,282.6	900.1	875.5	24.67	36.482	
6,378.7	6,355.0	6,509.7	6,354.0	14.1	25.8	90.02	-315.4	1,282.6	900.1	875.2	24.92	36.122	
6,400.0	6,376.3	6,531.0	6,375.3	14.1	25.8	90.05	-315.4	1,282.6	900.1	875.2	24.97	36.042	
6,450.0	6,426.2	6,580.9	6,425.2	14.1	25.8	90.30	-315.4	1,282.6	900.1	875.1	25.03	35.968	
6,500.0	6,475.4	6,630.8	6,475.1	14.1	25.8	90.78	-314.7	1,282.6	900.2	875.2	24.98	36.031	
6,550.0	6,523.8	6,681.6	6,525.6	14.1	25.9	91.29	-309.9	1,282.6	900.4	875.5	24.89	36.173	
6,600.0	6,570.9	6,733.1	6,576.3	14.1	25.9	91.79	-300.6	1,282.6	900.6	875.8	24.76	36.368	
6,650.0	6,616.3	6,785.5	6,626.7	14.0	25.8	92.28	-286.5	1,282.6	900.9	876.2	24.62	36.596	
6,700.0	6,659.8	6,838.6	6,676.3	13.9	25.8	92.76	-267.5	1,282.6	901.2	876.7	24.47	36.834	
6,750.0	6,700.9	6,892.6	6,724.7	13.9	25.8	93.22	-243.6	1,282.6	901.6	877.2	24.33	37.058	
6,800.0	6,739.4	6,947.3	6,771.2	13.8	25.7	93.66	-214.8	1,282.6	902.0	877.8	24.22	37.241	
6,850.0	6,775.0	7,002.9	6,815.4	13.8	25.7	94.07	-181.2	1,282.6	902.4	878.3	24.16	37.353	
6,900.0	6,807.3	7,059.1	6,856.7	13.8	25.7	94.44	-143.0	1,282.6	902.9	878.7	24.16	37.366	
6,950.0	6,836.3	7,116.1	6,894.4	13.8	25.7	94.79	-100.3	1,282.6	903.3	879.1	24.25	37.257	
7,000.0	6,861.5	7,173.8	6,928.1	13.9	25.7	95.09	-53.6	1,282.6	903.7	879.3	24.42	37.011	
7,050.0	6,883.0	7,232.0	6,957.2	14.0	25.7	95.35	-3.2	1,282.6	904.1	879.4	24.68	36.630	
7,100.0	6,900.4	7,290.7	6,981.2	14.2	25.8	95.56	50.4	1,282.6	904.4	879.3	25.05	36.099	
7,150.0	6,913.6	7,349.9	6,999.7	14.4	25.9	95.72	106.5	1,282.6	904.6	879.1	25.53	35.433	
7,200.0	6,922.6	7,409.3	7,012.4	14.6	26.0	95.83	164.6	1,282.6	904.8	878.7	26.12	34.642	
7,250.0	6,927.3	7,468.9	7,019.0	14.9	26.2	95.89	223.8	1,282.6	904.9	878.1	26.80	33.761	
7,278.7	6,928.0	7,503.1	7,020.0	15.1	26.3	95.90	258.0	1,282.6	904.9	877.7	27.23	33.234	
7,300.0	6,928.0	7,524.4	7,020.0	15.3	26.4	95.90	279.3	1,282.6	904.9	877.3	27.59	32.803	
7,400.0	6,928.0	7,624.4	7,020.0	16.1	26.9	95.90	379.3	1,282.6	904.9	875.5	29.40	30.779	
7,500.0	6,928.0	7,724.4	7,020.0	17.1	27.5	95.90	479.3	1,282.6	904.9	873.4	31.50	28.731	
7,600.0	6,928.0	7,824.4	7,020.0	18.2	28.1	95.90	579.3	1,282.6	904.9	871.1	33.82	26.754	
7,700.0	6,928.0	7,924.4	7,020.0	19.4	28.9	95.90	679.3	1,282.6	904.9	868.6	36.34	24.903	
7,800.0	6,928.0	8,024.4	7,020.0	20.6	29.7	95.90	779.3	1,282.6	904.9	865.9	39.00	23.202	
7,900.0	6,928.0	8,124.4	7,020.0	22.0	30.6	95.90	879.3	1,282.6	904.9	863.1	41.79	21.655	
8,000.0	6,928.0	8,224.4	7,020.0	23.3	31.6	95.90	979.3	1,282.6	904.9	860.2	44.67	20.256	
8,100.0	6,928.0	8,324.4	7,020.0	24.8	32.7	95.90	1,079.3	1,282.6	904.9	857.3	47.64	18.995	
8,200.0	6,928.0	8,424.4	7,020.0	26.3	33.8	95.90	1,179.3	1,282.6	904.9	854.2	50.67	17.858	
8,300.0	6,928.0	8,524.4	7,020.0	27.8	35.0	95.90	1,279.3	1,282.6	904.9	851.1	53.76	16.832	
8,400.0	6,928.0	8,624.4	7,020.0	29.3	36.2	95.90	1,379.3	1,282.6	904.9	848.0	56.90	15.905	
8,500.0	6,928.0	8,724.4	7,020.0	30.9	37.5	95.90	1,479.3	1,282.6	904.9	844.8	60.07	15.064	
8,600.0	6,928.0	8,824.4	7,020.0	32.4	38.8	95.90	1,579.3	1,282.6	904.9	841.6	63.28	14.301	
8,700.0	6,928.0	8,924.4	7,020.0	34.0	40.1	95.90	1,679.3	1,282.6	904.9	838.4	66.51	13.605	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4J-20H-O264 - 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
8,800.0	6,928.0	9,024.4	7,020.0	35.6	41.5	95.90	1,779.3	1,282.6	904.9	835.1	69.77	12.969	
8,900.0	6,928.0	9,124.4	7,020.0	37.3	42.9	95.90	1,879.3	1,282.6	904.9	831.8	73.05	12.387	
9,000.0	6,928.0	9,224.4	7,020.0	38.9	44.3	95.90	1,979.3	1,282.6	904.9	828.5	76.35	11.851	
9,100.0	6,928.0	9,324.4	7,020.0	40.5	45.7	95.90	2,079.3	1,282.6	904.9	825.2	79.67	11.358	
9,200.0	6,928.0	9,424.4	7,020.0	42.2	47.2	95.90	2,179.3	1,282.6	904.9	821.9	83.00	10.902	
9,300.0	6,928.0	9,524.4	7,020.0	43.8	48.7	95.90	2,279.3	1,282.6	904.9	818.6	86.34	10.480	
9,400.0	6,928.0	9,624.4	7,020.0	45.5	50.2	95.90	2,379.3	1,282.6	904.9	815.2	89.70	10.088	
9,500.0	6,928.0	9,724.4	7,020.0	47.2	51.7	95.90	2,479.3	1,282.6	904.9	811.8	93.06	9.724	
9,600.0	6,928.0	9,824.4	7,020.0	48.9	53.3	95.90	2,579.3	1,282.6	904.9	808.5	96.44	9.383	
9,700.0	6,928.0	9,924.4	7,020.0	50.6	54.8	95.90	2,679.3	1,282.6	904.9	805.1	99.82	9.066	
9,800.0	6,928.0	10,024.4	7,020.0	52.2	56.4	95.90	2,779.3	1,282.6	904.9	801.7	103.21	8.768	
9,900.0	6,928.0	10,124.4	7,020.0	53.9	58.0	95.90	2,879.3	1,282.6	904.9	798.3	106.60	8.489	
10,000.0	6,928.0	10,224.4	7,020.0	55.6	59.5	95.90	2,979.3	1,282.6	904.9	794.9	110.00	8.226	
10,100.0	6,928.0	10,324.4	7,020.0	57.3	61.1	95.90	3,079.3	1,282.6	904.9	791.5	113.41	7.979	
10,200.0	6,928.0	10,424.4	7,020.0	59.0	62.7	95.90	3,179.3	1,282.6	904.9	788.1	116.82	7.746	
10,300.0	6,928.0	10,524.4	7,020.0	60.7	64.3	95.90	3,279.3	1,282.6	904.9	784.7	120.23	7.526	
10,400.0	6,928.0	10,624.4	7,020.0	62.5	66.0	95.90	3,379.3	1,282.6	904.9	781.2	123.65	7.318	
10,500.0	6,928.0	10,724.4	7,020.0	64.2	67.6	95.90	3,479.3	1,282.6	904.9	777.8	127.08	7.121	
10,600.0	6,928.0	10,824.4	7,020.0	65.9	69.2	95.90	3,579.3	1,282.6	904.9	774.4	130.50	6.934	
10,700.0	6,928.0	10,924.4	7,020.0	67.6	70.9	95.90	3,679.3	1,282.6	904.9	771.0	133.93	6.756	
10,800.0	6,928.0	11,024.4	7,020.0	69.3	72.5	95.90	3,779.3	1,282.6	904.9	767.5	137.37	6.587	
10,900.0	6,928.0	11,124.4	7,020.0	71.0	74.1	95.90	3,879.3	1,282.6	904.9	764.1	140.80	6.427	
11,000.0	6,928.0	11,224.4	7,020.0	72.8	75.8	95.90	3,979.3	1,282.6	904.9	760.6	144.24	6.273	
11,100.0	6,928.0	11,324.4	7,020.0	74.5	77.5	95.90	4,079.3	1,282.6	904.9	757.2	147.68	6.127	
11,200.0	6,928.0	11,424.4	7,020.0	76.2	79.1	95.90	4,179.3	1,282.6	904.9	753.8	151.13	5.988	
11,300.0	6,928.0	11,524.4	7,020.0	77.9	80.8	95.90	4,279.3	1,282.6	904.9	750.3	154.57	5.854	
11,400.0	6,928.0	11,624.4	7,020.0	79.7	82.4	95.90	4,379.3	1,282.6	904.9	746.9	158.02	5.726	
11,500.0	6,928.0	11,724.4	7,020.0	81.4	84.1	95.90	4,479.3	1,282.6	904.9	743.4	161.47	5.604	
11,512.7	6,928.0	11,737.1	7,020.0	81.6	84.3	95.90	4,492.0	1,282.6	904.9	743.0	161.91	5.589	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4K-20H-O264 - 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	90.52	-0.3	37.5	37.5				
100.0	100.0	99.0	99.0	0.1	0.1	90.52	-0.3	37.5	37.5	37.2	0.24	154.149	
200.0	200.0	199.0	199.0	0.3	0.3	90.52	-0.3	37.5	37.5	36.9	0.59	63.342	CC, ES
300.0	300.0	297.7	297.7	0.5	0.5	91.01	-0.7	39.1	39.1	38.2	0.94	41.629	
400.0	400.0	396.2	396.0	0.6	0.7	92.27	-1.7	44.0	44.2	42.9	1.30	34.100	
450.0	450.0	445.2	444.9	0.7	0.8	93.04	-2.5	47.7	48.0	46.5	1.48	32.410	
500.0	500.0	494.2	493.7	0.8	0.9	-35.75	-3.5	52.2	52.4	50.8	1.63	32.130	
600.0	600.0	591.7	590.5	1.0	1.1	-35.04	-5.9	63.6	62.9	60.9	1.98	31.761	
700.0	699.9	688.6	686.3	1.2	1.5	-34.94	-9.0	78.1	75.2	72.9	2.33	32.308	
800.0	799.8	784.9	780.8	1.4	1.8	-35.18	-12.8	95.7	89.4	86.8	2.68	33.376	
900.0	899.5	880.4	874.0	1.6	2.2	-35.60	-17.2	116.1	105.5	102.5	3.04	34.744	
1,000.0	999.2	975.0	965.6	1.8	2.7	-36.11	-22.2	139.4	123.5	120.1	3.40	36.275	
1,018.1	1,017.1	992.0	981.9	1.8	2.7	-36.21	-23.1	143.8	126.9	123.5	3.47	36.565	
1,100.0	1,098.7	1,069.8	1,056.5	2.0	3.2	-36.63	-27.8	165.5	143.6	139.8	3.78	37.995	
1,200.0	1,198.2	1,167.6	1,150.1	2.2	3.7	-36.99	-33.7	193.3	164.6	160.4	4.17	39.512	
1,300.0	1,297.7	1,265.3	1,243.6	2.5	4.2	-37.28	-39.7	221.1	185.6	181.1	4.56	40.742	
1,400.0	1,397.2	1,363.1	1,337.1	2.7	4.7	-37.50	-45.6	248.9	206.6	201.7	4.95	41.754	
1,500.0	1,496.7	1,460.8	1,430.7	2.9	5.3	-37.69	-51.6	276.7	227.6	222.3	5.34	42.600	
1,600.0	1,596.2	1,558.6	1,524.2	3.2	5.8	-37.84	-57.5	304.4	248.6	242.9	5.74	43.316	
1,700.0	1,695.7	1,656.4	1,617.8	3.4	6.3	-37.97	-63.5	332.2	269.6	263.5	6.14	43.930	
1,800.0	1,795.2	1,754.1	1,711.3	3.6	6.9	-38.08	-69.4	360.0	290.6	284.1	6.54	44.460	
1,900.0	1,894.7	1,851.9	1,804.9	3.9	7.4	-38.18	-75.4	387.8	311.7	304.7	6.94	44.923	
2,000.0	1,994.2	1,949.7	1,898.4	4.1	8.0	-38.26	-81.4	415.6	332.7	325.3	7.34	45.330	
2,100.0	2,093.8	2,047.4	1,992.0	4.4	8.5	-38.33	-87.3	443.4	353.7	345.9	7.74	45.691	
2,200.0	2,193.3	2,145.2	2,085.5	4.6	9.0	-38.40	-93.3	471.2	374.7	366.5	8.14	46.013	
2,300.0	2,292.8	2,243.0	2,179.0	4.8	9.6	-38.46	-99.2	499.0	395.7	387.2	8.55	46.301	
2,400.0	2,392.3	2,340.7	2,272.6	5.1	10.1	-38.51	-105.2	526.8	416.7	407.8	8.95	46.561	
2,500.0	2,491.8	2,438.5	2,366.1	5.3	10.7	-38.56	-111.1	554.6	437.7	428.4	9.35	46.797	
2,600.0	2,591.3	2,536.3	2,459.7	5.6	11.2	-38.60	-117.1	582.3	458.7	449.0	9.76	47.011	
2,700.0	2,690.8	2,634.0	2,553.2	5.8	11.7	-38.64	-123.0	610.1	479.8	469.6	10.16	47.207	
2,800.0	2,790.3	2,731.8	2,646.8	6.1	12.3	-38.68	-129.0	637.9	500.8	490.2	10.57	47.387	
2,900.0	2,889.8	2,829.6	2,740.3	6.3	12.8	-38.71	-134.9	665.7	521.8	510.8	10.97	47.552	
3,000.0	2,989.3	2,927.3	2,833.9	6.6	13.4	-38.74	-140.9	693.5	542.8	531.4	11.38	47.705	
3,100.0	3,088.8	3,025.1	2,927.4	6.8	13.9	-38.77	-146.9	721.3	563.8	552.0	11.78	47.846	
3,200.0	3,188.4	3,122.9	3,020.9	7.0	14.5	-38.80	-152.8	749.1	584.8	572.6	12.19	47.978	
3,300.0	3,287.9	3,220.6	3,114.5	7.3	15.0	-38.82	-158.8	776.9	605.8	593.3	12.60	48.100	
3,400.0	3,387.4	3,318.4	3,208.0	7.5	15.5	-38.84	-164.7	804.7	626.9	613.9	13.00	48.214	
3,500.0	3,486.9	3,416.2	3,301.6	7.8	16.1	-38.86	-170.7	832.5	647.9	634.5	13.41	48.320	
3,600.0	3,586.4	3,513.9	3,395.1	8.0	16.6	-38.88	-176.6	860.3	668.9	655.1	13.81	48.420	
3,700.0	3,685.9	3,611.7	3,488.7	8.3	17.2	-38.90	-182.6	888.0	689.9	675.7	14.22	48.514	
3,800.0	3,785.4	3,709.5	3,582.2	8.5	17.7	-38.92	-188.5	915.8	710.9	696.3	14.63	48.602	
3,900.0	3,884.9	3,807.2	3,675.8	8.8	18.2	-38.94	-194.5	943.6	731.9	716.9	15.03	48.685	
4,000.0	3,984.4	3,905.0	3,769.3	9.0	18.8	-38.95	-200.4	971.4	753.0	737.5	15.44	48.764	
4,100.0	4,083.9	4,002.8	3,862.8	9.2	19.3	-38.97	-206.4	999.2	774.0	758.1	15.85	48.838	
4,200.0	4,183.4	4,100.5	3,956.4	9.5	19.9	-38.98	-212.3	1,027.0	795.0	778.7	16.25	48.908	
4,300.0	4,283.0	4,198.3	4,049.9	9.7	20.4	-39.00	-218.3	1,054.8	816.0	799.3	16.66	48.975	
4,400.0	4,382.5	4,296.1	4,143.5	10.0	21.0	-39.01	-224.3	1,082.6	837.0	820.0	17.07	49.038	
4,500.0	4,482.0	4,393.8	4,237.0	10.2	21.5	-39.02	-230.2	1,110.4	858.0	840.6	17.48	49.099	
4,600.0	4,581.5	4,491.6	4,330.6	10.5	22.0	-39.03	-236.2	1,138.2	879.1	861.2	17.88	49.156	
4,700.0	4,681.0	4,589.4	4,424.1	10.7	22.6	-39.04	-242.1	1,165.9	900.1	881.8	18.29	49.210	
4,800.0	4,780.5	4,687.1	4,517.7	11.0	23.1	-39.05	-248.1	1,193.7	921.1	902.4	18.70	49.263	
4,900.0	4,880.0	4,784.9	4,611.2	11.2	23.7	-39.06	-254.0	1,221.5	942.1	923.0	19.10	49.312	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4K-20H-O264 - 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
5,000.0	4,979.5	4,882.7	4,704.7	11.4	24.2	-39.07	-260.0	1,249.3	963.1	943.6	19.51	49.360	
5,100.0	5,079.0	4,980.4	4,798.3	11.7	24.8	-39.08	-265.9	1,277.1	984.1	964.2	19.92	49.405	
5,200.0	5,178.5	5,078.2	4,891.8	11.9	25.3	-39.09	-271.9	1,304.9	1,005.1	984.8	20.33	49.449	
5,300.0	5,278.0	5,176.0	4,985.4	12.2	25.8	-39.10	-277.8	1,332.7	1,026.2	1,005.4	20.73	49.491	
5,400.0	5,377.6	5,273.7	5,078.9	12.4	26.4	-39.11	-283.8	1,360.5	1,047.2	1,026.0	21.14	49.531	
5,455.6	5,432.9	5,328.1	5,130.9	12.6	26.7	-39.11	-287.1	1,375.9	1,058.9	1,037.5	21.37	49.552	
5,500.0	5,477.1	5,374.6	5,175.5	12.7	26.9	-39.17	-289.9	1,389.1	1,068.3	1,046.8	21.56	49.553	
5,600.0	5,576.7	5,529.8	5,325.2	12.9	27.7	-39.27	-298.5	1,428.9	1,087.7	1,065.6	22.06	49.304	
5,700.0	5,676.5	5,687.7	5,479.6	13.1	28.3	-39.35	-305.4	1,461.1	1,103.2	1,080.6	22.54	48.949	
5,800.0	5,776.4	5,847.5	5,637.5	13.3	28.7	-39.41	-310.5	1,485.2	1,114.6	1,091.6	22.99	48.492	
5,900.0	5,876.4	6,008.8	5,798.0	13.4	29.0	-39.44	-313.8	1,500.7	1,121.9	1,098.5	23.41	47.933	
6,000.0	5,976.3	6,171.0	5,960.0	13.6	29.2	-39.45	-315.3	1,507.4	1,125.0	1,101.2	23.80	47.275	
6,023.7	6,000.0	6,209.4	5,998.4	13.6	29.2	90.02	-315.3	1,507.7	1,125.2	1,101.3	23.89	47.102	
6,100.0	6,076.3	6,286.4	6,075.3	13.7	29.3	90.02	-315.3	1,507.7	1,125.2	1,101.1	24.13	46.637	
6,200.0	6,176.3	6,386.4	6,175.3	13.8	29.4	90.02	-315.3	1,507.7	1,125.2	1,100.7	24.44	46.042	
6,300.0	6,276.3	6,486.4	6,275.3	14.0	29.4	90.02	-315.3	1,507.7	1,125.2	1,100.4	24.75	45.460	
6,378.7	6,355.0	6,565.1	6,354.0	14.1	29.5	90.02	-315.3	1,507.7	1,125.2	1,100.2	25.00	45.011	
6,400.0	6,376.3	6,586.4	6,375.3	14.1	29.5	90.04	-315.3	1,507.7	1,125.2	1,100.1	25.05	44.912	
6,450.0	6,426.2	6,636.2	6,425.2	14.1	29.5	90.24	-315.3	1,507.7	1,125.2	1,100.1	25.11	44.810	
6,500.0	6,475.4	6,685.5	6,474.4	14.1	29.6	90.65	-315.3	1,507.7	1,125.3	1,100.2	25.09	44.856	
6,550.0	6,523.8	6,733.8	6,522.8	14.1	29.6	91.25	-315.3	1,507.7	1,125.5	1,100.5	25.00	45.024	
6,600.0	6,570.9	6,780.9	6,569.9	14.1	29.6	92.01	-315.3	1,507.7	1,126.0	1,101.1	24.87	45.284	
6,650.0	6,616.3	6,829.7	6,618.7	14.0	29.6	92.91	-314.5	1,507.7	1,126.9	1,102.2	24.70	45.633	
6,700.0	6,659.8	6,882.0	6,670.7	13.9	29.7	93.86	-309.3	1,507.7	1,128.2	1,103.7	24.52	46.013	
6,750.0	6,700.9	6,936.7	6,724.4	13.9	29.7	94.80	-298.9	1,507.7	1,129.9	1,105.5	24.36	46.385	
6,800.0	6,739.4	6,994.0	6,779.3	13.8	29.6	95.74	-282.5	1,507.7	1,131.8	1,107.6	24.23	46.720	
6,850.0	6,775.0	7,054.2	6,834.9	13.8	29.6	96.66	-259.4	1,507.7	1,134.0	1,109.9	24.13	46.989	
6,900.0	6,807.3	7,117.6	6,890.4	13.8	29.6	97.56	-229.1	1,507.7	1,136.4	1,112.3	24.10	47.157	
6,950.0	6,836.3	7,184.2	6,944.8	13.8	29.5	98.43	-190.7	1,507.7	1,138.9	1,114.7	24.13	47.194	
7,000.0	6,861.5	7,254.4	6,996.9	13.9	29.5	99.24	-143.8	1,507.7	1,141.3	1,117.0	24.25	47.068	
7,050.0	6,883.0	7,328.0	7,045.0	14.0	29.5	99.99	-88.0	1,507.7	1,143.6	1,119.1	24.47	46.732	
7,100.0	6,900.4	7,405.0	7,087.2	14.2	29.5	100.63	-23.7	1,507.7	1,145.6	1,120.8	24.81	46.180	
7,150.0	6,913.6	7,484.9	7,121.4	14.4	29.6	101.15	48.4	1,507.7	1,147.3	1,122.1	25.26	45.426	
7,200.0	6,922.6	7,567.2	7,145.9	14.6	29.7	101.52	127.0	1,507.7	1,148.5	1,122.7	25.85	44.425	
7,250.0	6,927.3	7,651.1	7,159.0	14.9	29.9	101.72	209.8	1,507.7	1,149.2	1,122.6	26.57	43.249	
7,278.7	6,928.0	7,699.4	7,161.0	15.1	30.1	101.75	257.9	1,507.7	1,149.3	1,122.2	27.04	42.505	
7,300.0	6,928.0	7,720.7	7,161.0	15.3	30.1	101.75	279.3	1,507.7	1,149.3	1,121.9	27.39	41.958	
7,400.0	6,928.0	7,820.7	7,161.0	16.1	30.5	101.75	379.3	1,507.7	1,149.3	1,120.1	29.17	39.395	
7,500.0	6,928.0	7,920.7	7,161.0	17.1	31.0	101.75	479.3	1,507.7	1,149.3	1,118.0	31.23	36.796	
7,600.0	6,928.0	8,020.7	7,161.0	18.2	31.6	101.75	579.3	1,507.7	1,149.3	1,115.7	33.52	34.286	
7,700.0	6,928.0	8,120.7	7,161.0	19.4	32.3	101.75	679.3	1,507.7	1,149.3	1,113.3	35.99	31.933	
7,800.0	6,928.0	8,220.7	7,161.0	20.6	33.0	101.75	779.3	1,507.7	1,149.3	1,110.6	38.61	29.768	
7,900.0	6,928.0	8,320.7	7,161.0	22.0	33.8	101.75	879.3	1,507.7	1,149.3	1,107.9	41.35	27.797	
8,000.0	6,928.0	8,420.7	7,161.0	23.3	34.7	101.75	979.3	1,507.7	1,149.3	1,105.1	44.18	26.013	
8,100.0	6,928.0	8,520.7	7,161.0	24.8	35.7	101.75	1,079.3	1,507.7	1,149.3	1,102.2	47.10	24.402	
8,200.0	6,928.0	8,620.7	7,161.0	26.3	36.7	101.75	1,179.3	1,507.7	1,149.3	1,099.2	50.08	22.949	
8,300.0	6,928.0	8,720.7	7,161.0	27.8	37.8	101.75	1,279.3	1,507.7	1,149.3	1,096.1	53.11	21.637	
8,400.0	6,928.0	8,820.7	7,161.0	29.3	38.9	101.75	1,379.3	1,507.7	1,149.3	1,093.1	56.20	20.451	
8,500.0	6,928.0	8,920.7	7,161.0	30.9	40.0	101.75	1,479.3	1,507.7	1,149.3	1,089.9	59.32	19.375	
8,600.0	6,928.0	9,020.7	7,161.0	32.4	41.3	101.75	1,579.3	1,507.7	1,149.3	1,086.8	62.47	18.396	
8,700.0	6,928.0	9,120.7	7,161.0	34.0	42.5	101.75	1,679.3	1,507.7	1,149.3	1,083.6	65.65	17.505	
8,800.0	6,928.0	9,220.7	7,161.0	35.6	43.8	101.75	1,779.3	1,507.7	1,149.3	1,080.4	68.86	16.689	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - Dale 4K-20H-O264 - 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
8,900.0	6,928.0	9,320.7	7,161.0	37.3	45.1	101.75	1,879.3	1,507.7	1,149.3	1,077.2	72.09	15.942	
9,000.0	6,928.0	9,420.7	7,161.0	38.9	46.5	101.75	1,979.3	1,507.7	1,149.3	1,073.9	75.34	15.255	
9,100.0	6,928.0	9,520.7	7,161.0	40.5	47.9	101.75	2,079.3	1,507.7	1,149.3	1,070.7	78.60	14.622	
9,200.0	6,928.0	9,620.7	7,161.0	42.2	49.3	101.75	2,179.3	1,507.7	1,149.3	1,067.4	81.87	14.037	
9,300.0	6,928.0	9,720.7	7,161.0	43.8	50.7	101.75	2,279.3	1,507.7	1,149.3	1,064.1	85.16	13.495	
9,400.0	6,928.0	9,820.7	7,161.0	45.5	52.1	101.75	2,379.3	1,507.7	1,149.3	1,060.8	88.46	12.991	
9,500.0	6,928.0	9,920.7	7,161.0	47.2	53.6	101.75	2,479.3	1,507.7	1,149.3	1,057.5	91.77	12.523	
9,600.0	6,928.0	10,020.7	7,161.0	48.9	55.1	101.75	2,579.3	1,507.7	1,149.3	1,054.2	95.09	12.086	
9,700.0	6,928.0	10,120.7	7,161.0	50.6	56.6	101.75	2,679.3	1,507.7	1,149.3	1,050.8	98.42	11.677	
9,800.0	6,928.0	10,220.7	7,161.0	52.2	58.1	101.75	2,779.3	1,507.7	1,149.3	1,047.5	101.75	11.294	
9,900.0	6,928.0	10,320.7	7,161.0	53.9	59.6	101.75	2,879.3	1,507.7	1,149.3	1,044.2	105.10	10.935	
10,000.0	6,928.0	10,420.7	7,161.0	55.6	61.2	101.75	2,979.3	1,507.7	1,149.3	1,040.8	108.44	10.598	
10,100.0	6,928.0	10,520.7	7,161.0	57.3	62.7	101.75	3,079.3	1,507.7	1,149.3	1,037.5	111.79	10.280	
10,200.0	6,928.0	10,620.7	7,161.0	59.0	64.3	101.75	3,179.3	1,507.7	1,149.3	1,034.1	115.15	9.980	
10,300.0	6,928.0	10,720.7	7,161.0	60.7	65.8	101.75	3,279.3	1,507.7	1,149.3	1,030.7	118.51	9.697	
10,400.0	6,928.0	10,820.7	7,161.0	62.5	67.4	101.75	3,379.3	1,507.7	1,149.3	1,027.4	121.88	9.430	
10,500.0	6,928.0	10,920.7	7,161.0	64.2	69.0	101.75	3,479.3	1,507.7	1,149.3	1,024.0	125.25	9.176	
10,600.0	6,928.0	11,020.7	7,161.0	65.9	70.6	101.75	3,579.3	1,507.7	1,149.3	1,020.6	128.62	8.935	
10,700.0	6,928.0	11,120.7	7,161.0	67.6	72.2	101.75	3,679.3	1,507.7	1,149.3	1,017.3	132.00	8.707	
10,800.0	6,928.0	11,220.7	7,161.0	69.3	73.8	101.75	3,779.3	1,507.7	1,149.3	1,013.9	135.38	8.489	
10,900.0	6,928.0	11,320.7	7,161.0	71.0	75.4	101.75	3,879.3	1,507.7	1,149.3	1,010.5	138.76	8.283	
11,000.0	6,928.0	11,420.7	7,161.0	72.8	77.1	101.75	3,979.3	1,507.7	1,149.3	1,007.1	142.14	8.085	
11,100.0	6,928.0	11,520.7	7,161.0	74.5	78.7	101.75	4,079.3	1,507.7	1,149.3	1,003.7	145.53	7.897	
11,200.0	6,928.0	11,620.7	7,161.0	76.2	80.3	101.75	4,179.3	1,507.7	1,149.3	1,000.3	148.92	7.717	
11,300.0	6,928.0	11,720.7	7,161.0	77.9	82.0	101.75	4,279.3	1,507.7	1,149.3	997.0	152.31	7.546	
11,400.0	6,928.0	11,820.7	7,161.0	79.7	83.6	101.75	4,379.3	1,507.7	1,149.3	993.6	155.70	7.381	
11,500.0	6,928.0	11,920.7	7,161.0	81.4	85.3	101.75	4,479.3	1,507.7	1,149.3	990.2	159.10	7.224	
11,512.7	6,928.0	11,933.4	7,161.0	81.6	85.5	101.75	4,492.0	1,507.7	1,149.3	989.7	159.53	7.204	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - DALE 'E' UNIT 1 (EXISTING) - EXISTING - ENCANA WELL

Offset Site Error: 0.0 ft

Survey Program: 7877-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	4.85	1,302.0	110.5	1,308.2				
100.0	100.0	37.0	37.0	0.1	0.1	4.85	1,302.0	110.5	1,306.6	1,306.5	0.19	6,989.260	
200.0	200.0	137.0	137.0	0.3	0.2	4.85	1,302.0	110.5	1,306.6	1,306.1	0.54	2,437.700	
300.0	300.0	237.0	237.0	0.5	0.4	4.85	1,302.0	110.5	1,306.6	1,305.8	0.89	1,476.301	
400.0	400.0	337.0	337.0	0.6	0.6	4.85	1,302.0	110.5	1,306.6	1,305.4	1.23	1,058.745	
450.0	450.0	387.0	387.0	0.7	0.7	4.85	1,302.0	110.5	1,306.6	1,305.2	1.41	927.568	
500.0	500.0	437.0	437.0	0.8	0.8	-124.63	1,302.0	110.5	1,306.8	1,305.2	1.58	825.386	
600.0	600.0	537.0	537.0	1.0	0.9	-124.68	1,302.0	110.5	1,307.8	1,305.8	1.93	676.516	
700.0	699.9	636.9	636.9	1.2	1.1	-124.79	1,302.0	110.5	1,309.7	1,307.5	2.29	573.038	
800.0	799.8	736.8	736.8	1.4	1.3	-124.96	1,302.0	110.5	1,312.7	1,310.1	2.64	496.683	
900.0	899.5	836.5	836.5	1.6	1.5	-125.17	1,302.0	110.5	1,316.8	1,313.7	3.01	437.832	
1,000.0	999.2	936.2	936.2	1.8	1.6	-125.44	1,302.0	110.5	1,321.8	1,318.4	3.38	390.959	
1,018.1	1,017.1	954.1	954.1	1.8	1.7	-125.49	1,302.0	110.5	1,322.8	1,319.4	3.45	383.540	
1,100.0	1,098.7	1,035.7	1,035.7	2.0	1.8	-125.78	1,302.0	110.5	1,327.6	1,323.8	3.76	353.054	
1,200.0	1,198.2	1,135.2	1,135.2	2.2	2.0	-126.12	1,302.0	110.5	1,333.4	1,329.3	4.14	321.868	
1,300.0	1,297.7	1,234.7	1,234.7	2.5	2.2	-126.46	1,302.0	110.5	1,339.3	1,334.7	4.53	295.836	
1,400.0	1,397.2	1,334.2	1,334.2	2.7	2.3	-126.80	1,302.0	110.5	1,345.2	1,340.3	4.91	273.817	
1,500.0	1,496.7	1,433.7	1,433.7	2.9	2.5	-127.13	1,302.0	110.5	1,351.2	1,345.9	5.30	254.973	
1,600.0	1,596.2	1,533.2	1,533.2	3.2	2.7	-127.47	1,302.0	110.5	1,357.2	1,351.5	5.69	238.679	
1,700.0	1,695.7	1,632.7	1,632.7	3.4	2.8	-127.80	1,302.0	110.5	1,363.3	1,357.2	6.07	224.460	
1,800.0	1,795.2	1,732.2	1,732.2	3.6	3.0	-128.12	1,302.0	110.5	1,369.4	1,362.9	6.46	211.950	
1,900.0	1,894.7	1,831.7	1,831.7	3.9	3.2	-128.45	1,302.0	110.5	1,375.5	1,368.7	6.85	200.865	
2,000.0	1,994.2	1,931.2	1,931.2	4.1	3.4	-128.77	1,302.0	110.5	1,381.7	1,374.5	7.23	190.976	
2,100.0	2,093.8	2,030.8	2,030.8	4.4	3.5	-129.08	1,302.0	110.5	1,387.9	1,380.3	7.62	182.104	
2,200.0	2,193.3	2,130.3	2,130.3	4.6	3.7	-129.40	1,302.0	110.5	1,394.2	1,386.2	8.01	174.102	
2,300.0	2,292.8	2,229.8	2,229.8	4.8	3.9	-129.71	1,302.0	110.5	1,400.5	1,392.1	8.39	166.848	
2,400.0	2,392.3	2,329.3	2,329.3	5.1	4.1	-130.02	1,302.0	110.5	1,406.9	1,398.1	8.78	160.245	
2,500.0	2,491.8	2,428.8	2,428.8	5.3	4.2	-130.33	1,302.0	110.5	1,413.3	1,404.1	9.16	154.209	
2,600.0	2,591.3	2,528.3	2,528.3	5.6	4.4	-130.63	1,302.0	110.5	1,419.8	1,410.2	9.55	148.672	
2,700.0	2,690.8	2,627.8	2,627.8	5.8	4.6	-130.93	1,302.0	110.5	1,426.2	1,416.3	9.93	143.575	
2,800.0	2,790.3	2,727.3	2,727.3	6.1	4.8	-131.23	1,302.0	110.5	1,432.8	1,422.4	10.32	138.868	
2,900.0	2,889.8	2,826.8	2,826.8	6.3	4.9	-131.52	1,302.0	110.5	1,439.3	1,428.6	10.70	134.509	
3,000.0	2,989.3	2,926.3	2,926.3	6.6	5.1	-131.82	1,302.0	110.5	1,445.9	1,434.8	11.08	130.461	
3,100.0	3,088.8	3,025.8	3,025.8	6.8	5.3	-132.11	1,302.0	110.5	1,452.6	1,441.1	11.47	126.692	
3,200.0	3,188.4	3,125.4	3,125.4	7.0	5.5	-132.39	1,302.0	110.5	1,459.2	1,447.4	11.85	123.176	
3,300.0	3,287.9	3,224.9	3,224.9	7.3	5.6	-132.68	1,302.0	110.5	1,465.9	1,453.7	12.23	119.887	
3,400.0	3,387.4	3,324.4	3,324.4	7.5	5.8	-132.96	1,302.0	110.5	1,472.7	1,460.1	12.61	116.804	
3,500.0	3,486.9	3,423.9	3,423.9	7.8	6.0	-133.24	1,302.0	110.5	1,479.5	1,466.5	12.99	113.910	
3,600.0	3,586.4	3,523.4	3,523.4	8.0	6.1	-133.52	1,302.0	110.5	1,486.3	1,472.9	13.37	111.187	
3,700.0	3,685.9	3,622.9	3,622.9	8.3	6.3	-133.79	1,302.0	110.5	1,493.1	1,479.4	13.75	108.622	
3,800.0	3,785.4	3,722.4	3,722.4	8.5	6.5	-134.07	1,302.0	110.5	1,500.0	1,485.9	14.12	106.200	
3,900.0	3,884.9	3,821.9	3,821.9	8.8	6.7	-134.34	1,302.0	110.5	1,506.9	1,492.4	14.50	103.911	
4,000.0	3,984.4	3,921.4	3,921.4	9.0	6.8	-134.60	1,302.0	110.5	1,513.9	1,499.0	14.88	101.745	
4,100.0	4,083.9	4,020.9	4,020.9	9.2	7.0	-134.87	1,302.0	110.5	1,520.9	1,505.6	15.26	99.691	
4,200.0	4,183.4	4,120.4	4,120.4	9.5	7.2	-135.13	1,302.0	110.5	1,527.9	1,512.3	15.63	97.741	
4,300.0	4,283.0	4,220.0	4,220.0	9.7	7.4	-135.39	1,302.0	110.5	1,534.9	1,518.9	16.01	95.888	
4,400.0	4,382.5	4,319.5	4,319.5	10.0	7.5	-135.65	1,302.0	110.5	1,542.0	1,525.6	16.38	94.125	
4,500.0	4,482.0	4,419.0	4,419.0	10.2	7.7	-135.90	1,302.0	110.5	1,549.1	1,532.4	16.76	92.445	
6,750.0	6,700.9	6,637.9	6,637.9	13.9	11.6	-12.81	1,302.0	110.5	1,525.3	1,504.1	21.20	71.956	
6,800.0	6,739.4	6,676.4	6,676.4	13.8	11.7	-14.02	1,302.0	110.5	1,493.9	1,473.4	20.53	72.756	
6,850.0	6,775.0	6,712.0	6,712.0	13.8	11.7	-15.58	1,302.0	110.5	1,459.4	1,439.5	19.86	73.492	
6,900.0	6,807.3	6,744.3	6,744.3	13.8	11.8	-17.62	1,302.0	110.5	1,422.0	1,402.8	19.22	73.977	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - DALE 'E' UNIT 1 (EXISTING) - EXISTING - ENCANA WELL

Offset Site Error: 0.0 ft

Survey Program: 7877-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
6,950.0	6,836.3	6,773.3	6,773.3	13.8	11.8	-20.30	1,302.0	110.5	1,382.0	1,363.3	18.70	73.908	
7,000.0	6,861.5	6,798.5	6,798.5	13.9	11.9	-23.92	1,302.0	110.5	1,339.7	1,321.3	18.40	72.827	
7,050.0	6,883.0	6,820.0	6,820.0	14.0	11.9	-28.93	1,302.0	110.5	1,295.6	1,277.1	18.47	70.133	
7,100.0	6,900.4	6,837.4	6,837.4	14.2	11.9	-36.01	1,302.0	110.5	1,249.8	1,230.6	19.15	65.274	
7,150.0	6,913.6	6,850.6	6,850.6	14.4	12.0	-46.19	1,302.0	110.5	1,202.8	1,182.1	20.64	58.285	
7,200.0	6,922.6	6,859.6	6,859.6	14.6	12.0	-60.54	1,302.0	110.5	1,154.9	1,132.1	22.87	50.500	
7,250.0	6,927.3	6,864.3	6,864.3	14.9	12.0	-78.83	1,302.0	110.5	1,106.6	1,081.7	24.96	44.338	
7,278.7	6,928.0	6,865.0	6,865.0	15.1	12.0	-90.00	1,302.0	110.5	1,078.9	1,053.3	25.56	42.216	
7,300.0	6,928.0	6,865.0	6,865.0	15.3	12.0	-90.00	1,302.0	110.5	1,058.3	1,032.5	25.73	41.130	
7,400.0	6,928.0	6,865.0	6,865.0	16.1	12.0	-90.00	1,302.0	110.5	962.0	935.3	26.64	36.104	
7,500.0	6,928.0	6,865.0	6,865.0	17.1	12.0	-90.00	1,302.0	110.5	866.5	838.8	27.70	31.279	
7,600.0	6,928.0	6,865.0	6,865.0	18.2	12.0	-90.00	1,302.0	110.5	772.2	743.3	28.88	26.742	
7,700.0	6,928.0	6,865.0	6,865.0	19.4	12.0	-90.00	1,302.0	110.5	679.5	649.4	30.14	22.543	
7,800.0	6,928.0	6,865.0	6,865.0	20.6	12.0	-90.00	1,302.0	110.5	589.3	557.8	31.49	18.714	
7,900.0	6,928.0	6,865.0	6,865.0	22.0	12.0	-90.00	1,302.0	110.5	502.7	469.8	32.89	15.283	
8,000.0	6,928.0	6,865.0	6,865.0	23.3	12.0	-90.00	1,302.0	110.5	422.1	387.7	34.35	12.289	
8,100.0	6,928.0	6,865.0	6,865.0	24.8	12.0	-90.00	1,302.0	110.5	351.6	315.7	35.84	9.810	
8,200.0	6,928.0	6,865.0	6,865.0	26.3	12.0	-90.00	1,302.0	110.5	298.4	261.1	37.37	7.987	
8,300.0	6,928.0	6,865.0	6,865.0	27.8	12.0	-90.00	1,302.0	110.5	273.0	234.1	38.92	7.014	
8,322.7	6,928.0	6,865.0	6,865.0	28.1	12.0	-90.00	1,302.0	110.5	272.0	232.8	39.28	6.926	CC, ES, SF
8,400.0	6,928.0	6,865.0	6,865.0	29.3	12.0	-90.00	1,302.0	110.5	282.8	242.3	40.50	6.983	
8,500.0	6,928.0	6,865.0	6,865.0	30.9	12.0	-90.00	1,302.0	110.5	324.7	282.6	42.10	7.714	
8,600.0	6,928.0	6,865.0	6,865.0	32.4	12.0	-90.00	1,302.0	110.5	388.5	344.8	43.71	8.887	
8,700.0	6,928.0	6,865.0	6,865.0	34.0	12.0	-90.00	1,302.0	110.5	465.2	419.8	45.34	10.259	
8,800.0	6,928.0	6,865.0	6,865.0	35.6	12.0	-90.00	1,302.0	110.5	549.4	502.4	46.98	11.694	
8,900.0	6,928.0	6,865.0	6,865.0	37.3	12.0	-90.00	1,302.0	110.5	638.2	589.6	48.63	13.123	
9,000.0	6,928.0	6,865.0	6,865.0	38.9	12.0	-90.00	1,302.0	110.5	729.9	679.6	50.29	14.513	
9,100.0	6,928.0	6,865.0	6,865.0	40.5	12.0	-90.00	1,302.0	110.5	823.5	771.6	51.96	15.850	
9,200.0	6,928.0	6,865.0	6,865.0	42.2	12.0	-90.00	1,302.0	110.5	918.5	864.9	53.63	17.125	
9,300.0	6,928.0	6,865.0	6,865.0	43.8	12.0	-90.00	1,302.0	110.5	1,014.5	959.1	55.32	18.339	
9,400.0	6,928.0	6,865.0	6,865.0	45.5	12.0	-90.00	1,302.0	110.5	1,111.1	1,054.1	57.00	19.492	
9,500.0	6,928.0	6,865.0	6,865.0	47.2	12.0	-90.00	1,302.0	110.5	1,208.3	1,149.6	58.69	20.587	
9,600.0	6,928.0	6,865.0	6,865.0	48.9	12.0	-90.00	1,302.0	110.5	1,306.0	1,245.6	60.39	21.625	
9,700.0	6,928.0	6,865.0	6,865.0	50.6	12.0	-90.00	1,302.0	110.5	1,403.9	1,341.8	62.09	22.610	
9,800.0	6,928.0	6,865.0	6,865.0	52.2	12.0	-90.00	1,302.0	110.5	1,502.1	1,438.3	63.80	23.546	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - KELLER 20-2 (EXISTING) - EXISTING - NOBLE WELL

Offset Site Error: 0.0 ft

Survey Program: 7693-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
9,500.0	6,928.0	6,834.0	6,834.0	47.2	11.9	-90.00	3,912.0	99.8	1,460.4	1,401.7	58.64	24.904	
9,600.0	6,928.0	6,834.0	6,834.0	48.9	11.9	-90.00	3,912.0	99.8	1,362.4	1,302.1	60.34	22.580	
9,700.0	6,928.0	6,834.0	6,834.0	50.6	11.9	-90.00	3,912.0	99.8	1,264.8	1,202.7	62.04	20.387	
9,800.0	6,928.0	6,834.0	6,834.0	52.2	11.9	-90.00	3,912.0	99.8	1,167.5	1,103.8	63.74	18.316	
9,900.0	6,928.0	6,834.0	6,834.0	53.9	11.9	-90.00	3,912.0	99.8	1,070.8	1,005.3	65.45	16.360	
10,000.0	6,928.0	6,834.0	6,834.0	55.6	11.9	-90.00	3,912.0	99.8	974.7	907.5	67.16	14.513	
10,100.0	6,928.0	6,834.0	6,834.0	57.3	11.9	-90.00	3,912.0	99.8	879.4	810.6	68.87	12.769	
10,200.0	6,928.0	6,834.0	6,834.0	59.0	11.9	-90.00	3,912.0	99.8	785.4	714.8	70.59	11.127	
10,300.0	6,928.0	6,834.0	6,834.0	60.7	11.9	-90.00	3,912.0	99.8	693.0	620.7	72.30	9.585	
10,400.0	6,928.0	6,834.0	6,834.0	62.5	11.9	-90.00	3,912.0	99.8	603.1	529.1	74.02	8.148	
10,500.0	6,928.0	6,834.0	6,834.0	64.2	11.9	-90.00	3,912.0	99.8	516.9	441.2	75.74	6.824	
10,600.0	6,928.0	6,834.0	6,834.0	65.9	11.9	-90.00	3,912.0	99.8	436.6	359.2	77.47	5.636	
10,700.0	6,928.0	6,834.0	6,834.0	67.6	11.9	-90.00	3,912.0	99.8	366.2	287.0	79.19	4.624	
10,800.0	6,928.0	6,834.0	6,834.0	69.3	11.9	-90.00	3,912.0	99.8	312.3	231.4	80.92	3.860	
10,900.0	6,928.0	6,834.0	6,834.0	71.0	11.9	-90.00	3,912.0	99.8	284.6	201.9	82.65	3.443	
10,932.8	6,928.0	6,834.0	6,834.0	71.6	11.9	-90.00	3,912.0	99.8	282.7	199.5	83.21	3.397	CC, ES, SF
11,000.0	6,928.0	6,834.0	6,834.0	72.8	11.9	-90.00	3,912.0	99.8	290.6	206.2	84.37	3.444	
11,100.0	6,928.0	6,834.0	6,834.0	74.5	11.9	-90.00	3,912.0	99.8	328.5	242.4	86.10	3.815	
11,200.0	6,928.0	6,834.0	6,834.0	76.2	11.9	-90.00	3,912.0	99.8	389.0	301.2	87.84	4.429	
11,300.0	6,928.0	6,834.0	6,834.0	77.9	11.9	-90.00	3,912.0	99.8	463.4	373.9	89.57	5.174	
11,400.0	6,928.0	6,834.0	6,834.0	79.7	11.9	-90.00	3,912.0	99.8	546.1	454.8	91.30	5.981	
11,500.0	6,928.0	6,834.0	6,834.0	81.4	11.9	-90.00	3,912.0	99.8	633.8	540.7	93.04	6.812	
11,512.7	6,928.0	6,834.0	6,834.0	81.6	11.9	-90.00	3,912.0	99.8	645.2	551.9	93.26	6.918	

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 Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Offset Design S20-T2N-R64W (Dale) - RUHL 1 (EXISTING) - EXISTING - NEBRASKA WELL — **Offset Site Error:** 0.0 ft

Survey Program: 7638-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
7,278.7	6,928.0	6,859.0	6,859.0	15.1	12.0	-90.00	1,675.0	-245.0	1,549.7	1,524.2	25.55	60.666	
7,300.0	6,928.0	6,859.0	6,859.0	15.3	12.0	-90.00	1,675.0	-245.0	1,530.3	1,504.6	25.72	59.500	
7,400.0	6,928.0	6,859.0	6,859.0	16.1	12.0	-90.00	1,675.0	-245.0	1,439.7	1,413.0	26.63	54.054	
7,500.0	6,928.0	6,859.0	6,859.0	17.1	12.0	-90.00	1,675.0	-245.0	1,350.4	1,322.7	27.69	48.764	
7,600.0	6,928.0	6,859.0	6,859.0	18.2	12.0	-90.00	1,675.0	-245.0	1,262.7	1,233.8	28.87	43.743	
7,700.0	6,928.0	6,859.0	6,859.0	19.4	12.0	-90.00	1,675.0	-245.0	1,176.9	1,146.8	30.13	39.057	
7,800.0	6,928.0	6,859.0	6,859.0	20.6	12.0	-90.00	1,675.0	-245.0	1,093.6	1,062.2	31.48	34.744	
7,900.0	6,928.0	6,859.0	6,859.0	22.0	12.0	-90.00	1,675.0	-245.0	1,013.4	980.5	32.88	30.819	
8,000.0	6,928.0	6,859.0	6,859.0	23.3	12.0	-90.00	1,675.0	-245.0	936.9	902.6	34.33	27.287	
8,100.0	6,928.0	6,859.0	6,859.0	24.8	12.0	-90.00	1,675.0	-245.0	865.2	829.4	35.83	24.149	
8,200.0	6,928.0	6,859.0	6,859.0	26.3	12.0	-90.00	1,675.0	-245.0	799.7	762.3	37.36	21.407	
8,300.0	6,928.0	6,859.0	6,859.0	27.8	12.0	-90.00	1,675.0	-245.0	741.8	702.9	38.91	19.065	
8,400.0	6,928.0	6,859.0	6,859.0	29.3	12.0	-90.00	1,675.0	-245.0	693.7	653.2	40.49	17.132	
8,500.0	6,928.0	6,859.0	6,859.0	30.9	12.0	-90.00	1,675.0	-245.0	657.3	615.2	42.09	15.618	
8,600.0	6,928.0	6,859.0	6,859.0	32.4	12.0	-90.00	1,675.0	-245.0	634.7	591.0	43.70	14.525	
8,695.7	6,928.0	6,859.0	6,859.0	34.0	12.0	-90.00	1,675.0	-245.0	627.5	582.2	45.26	13.864	CC
8,700.0	6,928.0	6,859.0	6,859.0	34.0	12.0	-90.00	1,675.0	-245.0	627.5	582.2	45.33	13.843	ES
8,800.0	6,928.0	6,859.0	6,859.0	35.6	12.0	-90.00	1,675.0	-245.0	636.1	589.1	46.97	13.543	SF
8,900.0	6,928.0	6,859.0	6,859.0	37.3	12.0	-90.00	1,675.0	-245.0	659.9	611.3	48.62	13.572	
9,000.0	6,928.0	6,859.0	6,859.0	38.9	12.0	-90.00	1,675.0	-245.0	697.4	647.1	50.28	13.869	
9,100.0	6,928.0	6,859.0	6,859.0	40.5	12.0	-90.00	1,675.0	-245.0	746.4	694.5	51.95	14.369	
9,200.0	6,928.0	6,859.0	6,859.0	42.2	12.0	-90.00	1,675.0	-245.0	805.0	751.4	53.62	15.012	
9,300.0	6,928.0	6,859.0	6,859.0	43.8	12.0	-90.00	1,675.0	-245.0	871.1	815.8	55.31	15.751	
9,400.0	6,928.0	6,859.0	6,859.0	45.5	12.0	-90.00	1,675.0	-245.0	943.3	886.3	56.99	16.551	
9,500.0	6,928.0	6,859.0	6,859.0	47.2	12.0	-90.00	1,675.0	-245.0	1,020.1	961.4	58.68	17.383	
9,600.0	6,928.0	6,859.0	6,859.0	48.9	12.0	-90.00	1,675.0	-245.0	1,100.7	1,040.3	60.38	18.229	
9,700.0	6,928.0	6,859.0	6,859.0	50.6	12.0	-90.00	1,675.0	-245.0	1,184.2	1,122.1	62.08	19.075	
9,800.0	6,928.0	6,859.0	6,859.0	52.2	12.0	-90.00	1,675.0	-245.0	1,270.1	1,206.3	63.78	19.912	
9,900.0	6,928.0	6,859.0	6,859.0	53.9	12.0	-90.00	1,675.0	-245.0	1,358.0	1,292.5	65.49	20.735	
10,000.0	6,928.0	6,859.0	6,859.0	55.6	12.0	-90.00	1,675.0	-245.0	1,447.4	1,380.2	67.20	21.538	
10,100.0	6,928.0	6,859.0	6,859.0	57.3	12.0	-90.00	1,675.0	-245.0	1,538.1	1,469.2	68.91	22.319	

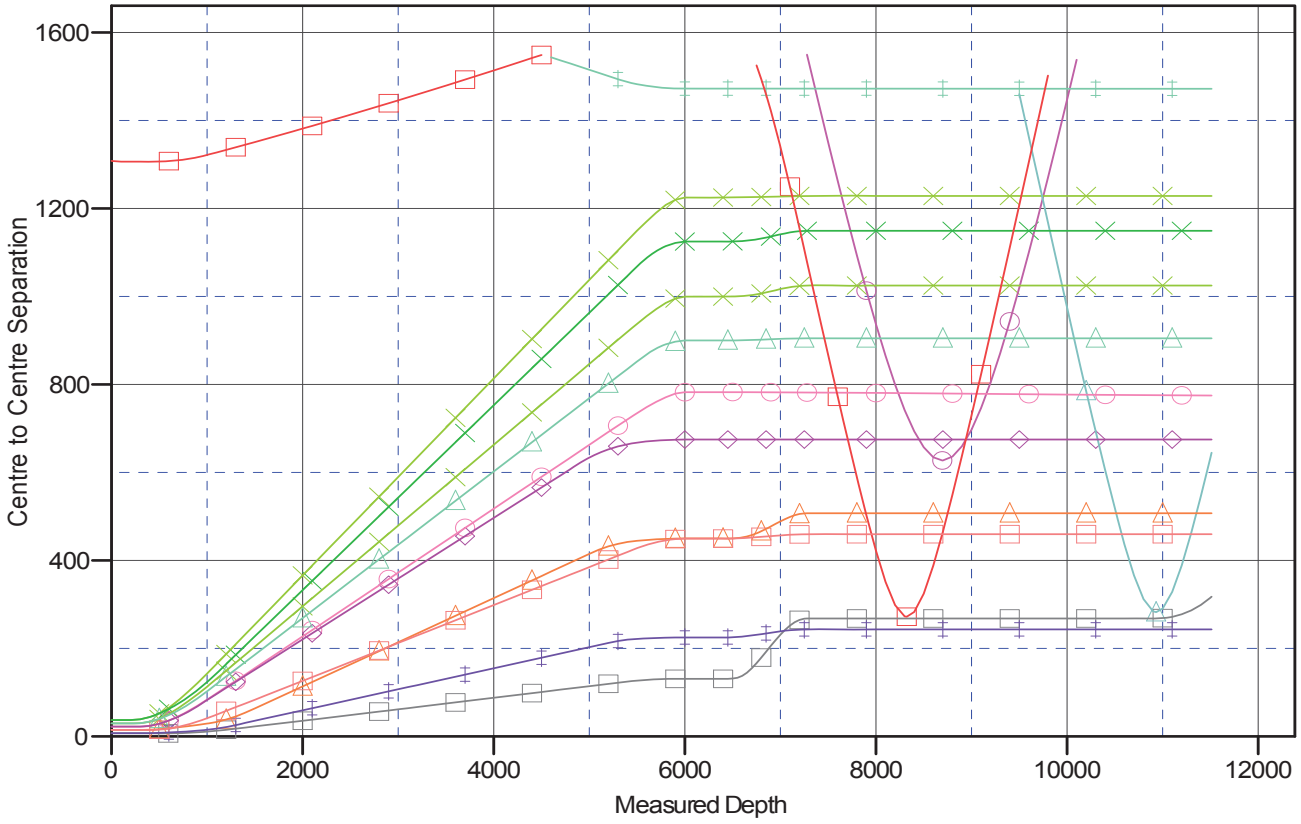
CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4F-20H-O264
Project:	DJ Wattenberg	**TVD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Reference Site:	S20-T2N-R64W (Dale)	**MD Reference:**	WELL @ 4988.0ft (Original Well Elev)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Dale 4F-20H-O264	**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 #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4988.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Dale 4F-20H-O264
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.60°

Ladder Plot



LEGEND

)264, HZ, Plan #1 V0
TING), EXISTING, NEBRASKA WELL V0
)264, HZ, Plan #1 V0
(EXISTING), EXISTING, NOBLE WELL V0
)264, HZ, Plan #1 V0
Dale 4I-20H-O264, HZ, Plan #1 V0
Dale 4B-20H-O264, HZ, Plan #1 V0
Dale 4H-20H-O264, HZ, Plan #1 V0
Dale 4K-20H-O264, HZ, Plan #1 V0
Dale 4J-20H-O264, HZ, Plan #1 V0
Dale 3L-20H-N264, HZ, Plan #1 V0
DALE 'E' UNIT 1 (EXISTING), EXISTING
Dale 4G-20H-O264, HZ, Plan #1 V0
Dale 4D-20H-O264, HZ, Plan #1 V0