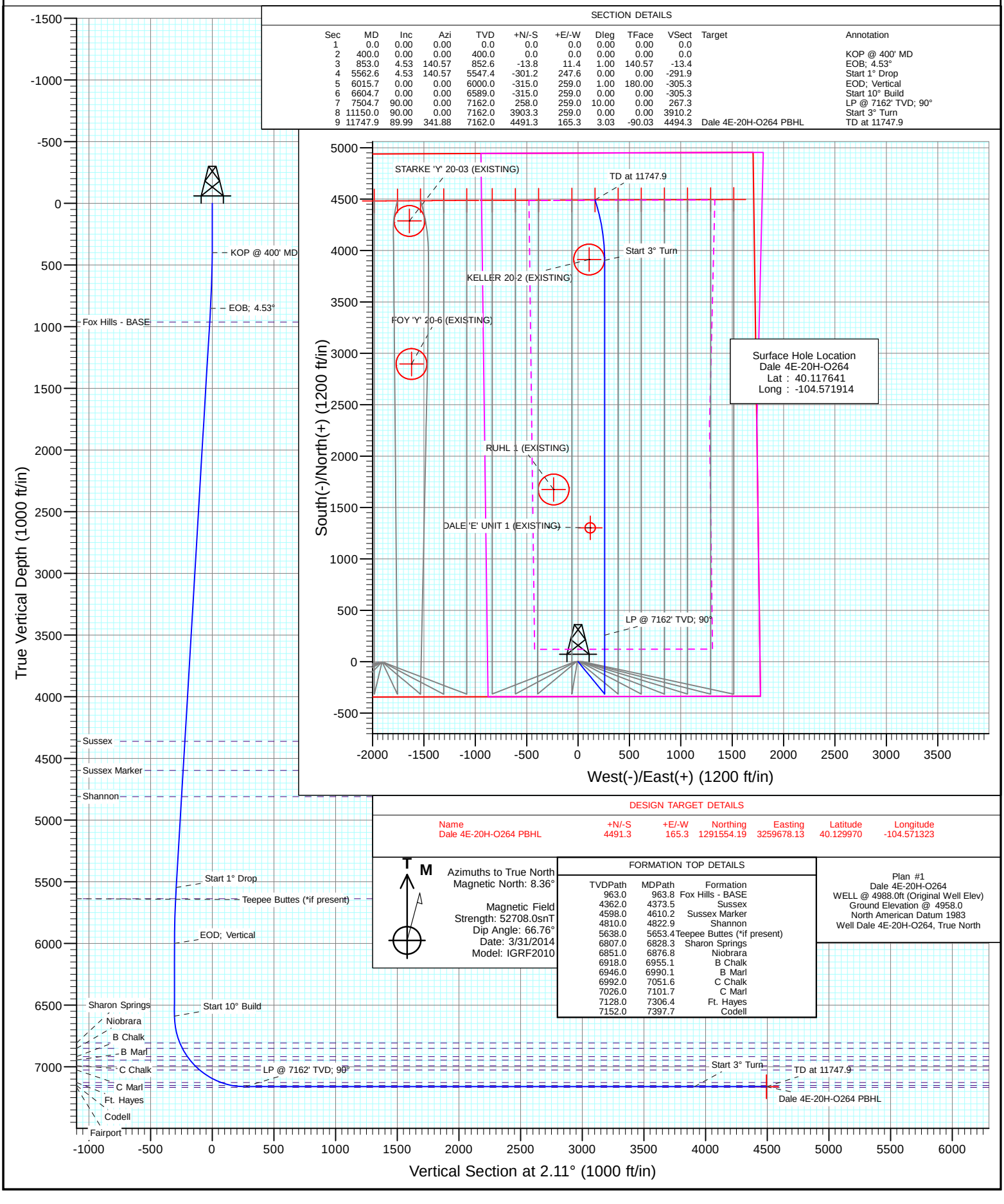
encana natural gas

Project: DJ Wattenberg
Site: S20-T2N-R64W (Dale)
Well: Dale 4E-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	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0		KOP @ 400' MD
3	853.0	4.53	140.57	852.6	-13.8	11.4	1.00	140.57	-13.4		EOB; 4.53°
4	5562.6	4.53	140.57	5547.4	-301.2	247.6	0.00	0.00	-291.9		Start 1° Drop
5	6015.7	0.00	0.00	6000.0	-315.0	259.0	1.00	180.00	-305.3		EOD; Vertical
6	6604.7	0.00	0.00	6589.0	-315.0	259.0	0.00	0.00	-305.3		Start 10° Build
7	7504.7	90.00	0.00	7162.0	258.0	259.0	10.00	0.00	267.3		LP @ 7162' TVD; 90°
8	11150.0	90.00	0.00	7162.0	3903.3	259.0	0.00	0.00	3910.2		Start 3° Turn
9	11747.9	89.99	341.88	7162.0	4491.3	165.3	3.03	-90.03	4494.3	Dale 4E-20H-O264 PBHL	TD at 11747.9



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Dale 4E-20H-O264 PBHL	4491.3	165.3	1291554.19	3259678.13	40.129970	-104.571323

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	963.8	Fox Hills - BASE
4362.0	4373.5	Sussex
4598.0	4610.2	Sussex Marker
4810.0	4822.9	Shannon
5638.0	5653.4	Teepee Buttes (*if present)
6807.0	6828.3	Sharon Springs
6851.0	6876.8	Niobrara
6918.0	6955.1	B Chalk
6946.0	6990.1	B Marl
6992.0	7051.6	C Chalk
7026.0	7101.7	C Marl
7128.0	7306.4	Ft. Hayes
7152.0	7397.7	Codell

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

ENCANA

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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 4E-20H-O264

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,287,061.45 ft	**Latitude:**	40.117641
	+E/-W	0.0 ft	**Easting:**	3,259,559.89 ft	**Longitude:**	-104.571914
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	2.11

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
853.0	4.53	140.57	852.6	-13.8	11.4	1.00	1.00	0.00	140.57	
5,562.6	4.53	140.57	5,547.4	-301.2	247.6	0.00	0.00	0.00	0.00	
6,015.7	0.00	0.00	6,000.0	-315.0	259.0	1.00	-1.00	0.00	180.00	
6,604.7	0.00	0.00	6,589.0	-315.0	259.0	0.00	0.00	0.00	0.00	
7,504.7	90.00	0.00	7,162.0	258.0	259.0	10.00	10.00	0.00	0.00	
11,150.0	90.00	0.00	7,162.0	3,903.3	259.0	0.00	0.00	0.00	0.00	
11,747.9	89.99	341.88	7,162.0	4,491.3	165.3	3.03	0.00	-3.03	-90.03	Dale 4E-20H-O264 Pl

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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	KOP @ 400' MD
500.0	1.00	140.57	500.0	-0.7	0.6	-0.7	1.00	1.00	
600.0	2.00	140.57	600.0	-2.7	2.2	-2.6	1.00	1.00	
700.0	3.00	140.57	699.9	-6.1	5.0	-5.9	1.00	1.00	
800.0	4.00	140.57	799.7	-10.8	8.9	-10.4	1.00	1.00	
853.0	4.53	140.57	852.6	-13.8	11.4	-13.4	1.00	1.00	EOB; 4.53°
900.0	4.53	140.57	899.4	-16.7	13.7	-16.2	0.00	0.00	
963.8	4.53	140.57	963.0	-20.6	16.9	-20.0	0.00	0.00	Fox Hills - BASE
1,000.0	4.53	140.57	999.1	-22.8	18.7	-22.1	0.00	0.00	
1,100.0	4.53	140.57	1,098.8	-28.9	23.8	-28.0	0.00	0.00	
1,200.0	4.53	140.57	1,198.4	-35.0	28.8	-33.9	0.00	0.00	
1,300.0	4.53	140.57	1,298.1	-41.1	33.8	-39.8	0.00	0.00	
1,400.0	4.53	140.57	1,397.8	-47.2	38.8	-45.7	0.00	0.00	
1,500.0	4.53	140.57	1,497.5	-53.3	43.8	-51.7	0.00	0.00	
1,600.0	4.53	140.57	1,597.2	-59.4	48.8	-57.6	0.00	0.00	
1,700.0	4.53	140.57	1,696.9	-65.5	53.9	-63.5	0.00	0.00	
1,800.0	4.53	140.57	1,796.6	-71.6	58.9	-69.4	0.00	0.00	
1,900.0	4.53	140.57	1,896.3	-77.7	63.9	-75.3	0.00	0.00	
2,000.0	4.53	140.57	1,995.9	-83.8	68.9	-81.2	0.00	0.00	
2,100.0	4.53	140.57	2,095.6	-89.9	73.9	-87.1	0.00	0.00	
2,200.0	4.53	140.57	2,195.3	-96.0	78.9	-93.0	0.00	0.00	
2,300.0	4.53	140.57	2,295.0	-102.1	84.0	-99.0	0.00	0.00	
2,400.0	4.53	140.57	2,394.7	-108.2	89.0	-104.9	0.00	0.00	
2,500.0	4.53	140.57	2,494.4	-114.3	94.0	-110.8	0.00	0.00	
2,600.0	4.53	140.57	2,594.1	-120.4	99.0	-116.7	0.00	0.00	
2,700.0	4.53	140.57	2,693.8	-126.5	104.0	-122.6	0.00	0.00	
2,800.0	4.53	140.57	2,793.4	-132.6	109.0	-128.5	0.00	0.00	
2,900.0	4.53	140.57	2,893.1	-138.7	114.1	-134.4	0.00	0.00	
3,000.0	4.53	140.57	2,992.8	-144.8	119.1	-140.3	0.00	0.00	
3,100.0	4.53	140.57	3,092.5	-150.9	124.1	-146.3	0.00	0.00	
3,200.0	4.53	140.57	3,192.2	-157.0	129.1	-152.2	0.00	0.00	
3,300.0	4.53	140.57	3,291.9	-163.1	134.1	-158.1	0.00	0.00	
3,400.0	4.53	140.57	3,391.6	-169.2	139.1	-164.0	0.00	0.00	
3,500.0	4.53	140.57	3,491.3	-175.3	144.2	-169.9	0.00	0.00	
3,600.0	4.53	140.57	3,590.9	-181.4	149.2	-175.8	0.00	0.00	
3,700.0	4.53	140.57	3,690.6	-187.5	154.2	-181.7	0.00	0.00	
3,800.0	4.53	140.57	3,790.3	-193.6	159.2	-187.6	0.00	0.00	
3,900.0	4.53	140.57	3,890.0	-199.7	164.2	-193.6	0.00	0.00	
4,000.0	4.53	140.57	3,989.7	-205.8	169.2	-199.5	0.00	0.00	
4,100.0	4.53	140.57	4,089.4	-211.9	174.3	-205.4	0.00	0.00	
4,200.0	4.53	140.57	4,189.1	-218.0	179.3	-211.3	0.00	0.00	
4,300.0	4.53	140.57	4,288.8	-224.1	184.3	-217.2	0.00	0.00	
4,373.5	4.53	140.57	4,362.0	-228.6	188.0	-221.6	0.00	0.00	Sussex
4,400.0	4.53	140.57	4,388.4	-230.2	189.3	-223.1	0.00	0.00	
4,500.0	4.53	140.57	4,488.1	-236.3	194.3	-229.0	0.00	0.00	
4,600.0	4.53	140.57	4,587.8	-242.4	199.3	-234.9	0.00	0.00	
4,610.2	4.53	140.57	4,598.0	-243.1	199.9	-235.6	0.00	0.00	Sussex Marker
4,700.0	4.53	140.57	4,687.5	-248.5	204.4	-240.9	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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
4,800.0	4.53	140.57	4,787.2	-254.6	209.4	-246.8	0.00	0.00	
4,822.9	4.53	140.57	4,810.0	-256.0	210.5	-248.1	0.00	0.00	Shannon
4,900.0	4.53	140.57	4,886.9	-260.7	214.4	-252.7	0.00	0.00	
5,000.0	4.53	140.57	4,986.6	-266.8	219.4	-258.6	0.00	0.00	
5,100.0	4.53	140.57	5,086.3	-272.9	224.4	-264.5	0.00	0.00	
5,200.0	4.53	140.57	5,185.9	-279.0	229.4	-270.4	0.00	0.00	
5,300.0	4.53	140.57	5,285.6	-285.1	234.5	-276.3	0.00	0.00	
5,400.0	4.53	140.57	5,385.3	-291.3	239.5	-282.2	0.00	0.00	
5,500.0	4.53	140.57	5,485.0	-297.4	244.5	-288.2	0.00	0.00	
5,562.6	4.53	140.57	5,547.4	-301.2	247.6	-291.9	0.00	0.00	Start 1° Drop
5,600.0	4.16	140.57	5,584.7	-303.4	249.4	-294.0	1.00	-1.00	
5,653.4	3.62	140.57	5,638.0	-306.2	251.7	-296.7	1.00	-1.00	Teepee Buttes (*if present)
5,700.0	3.16	140.57	5,684.5	-308.3	253.5	-298.8	1.00	-1.00	
5,800.0	2.16	140.57	5,784.4	-311.9	256.4	-302.2	1.00	-1.00	
5,900.0	1.16	140.57	5,884.3	-314.1	258.3	-304.4	1.00	-1.00	
6,000.0	0.16	140.57	5,984.3	-315.0	259.0	-305.2	1.00	-1.00	
6,015.7	0.00	0.00	6,000.0	-315.0	259.0	-305.3	1.00	-1.00	EOD; Vertical
6,100.0	0.00	0.00	6,084.3	-315.0	259.0	-305.3	0.00	0.00	
6,200.0	0.00	0.00	6,184.3	-315.0	259.0	-305.3	0.00	0.00	
6,300.0	0.00	0.00	6,284.3	-315.0	259.0	-305.3	0.00	0.00	
6,400.0	0.00	0.00	6,384.3	-315.0	259.0	-305.3	0.00	0.00	
6,500.0	0.00	0.00	6,484.3	-315.0	259.0	-305.3	0.00	0.00	
6,604.7	0.00	0.00	6,589.0	-315.0	259.0	-305.3	0.00	0.00	Start 10° Build
6,650.0	4.53	0.00	6,634.3	-313.2	259.0	-303.5	10.00	10.00	
6,700.0	9.53	0.00	6,683.9	-307.1	259.0	-297.4	10.00	10.00	
6,750.0	14.53	0.00	6,732.8	-296.7	259.0	-286.9	10.00	10.00	
6,800.0	19.53	0.00	6,780.6	-282.0	259.0	-272.3	10.00	10.00	
6,828.3	22.36	0.00	6,807.0	-271.9	259.0	-262.2	10.00	10.00	Sharon Springs
6,850.0	24.53	0.00	6,826.9	-263.3	259.0	-253.6	10.00	10.00	
6,876.8	27.21	0.00	6,851.0	-251.6	259.0	-241.9	10.00	10.00	Niobrara
6,900.0	29.53	0.00	6,871.4	-240.6	259.0	-230.9	10.00	10.00	
6,950.0	34.53	0.00	6,913.8	-214.0	259.0	-204.4	10.00	10.00	
6,955.1	35.04	0.00	6,918.0	-211.1	259.0	-201.5	10.00	10.00	B Chalk
6,990.1	38.54	0.00	6,946.0	-190.2	259.0	-180.5	10.00	10.00	B Marl
7,000.0	39.53	0.00	6,953.7	-183.9	259.0	-174.3	10.00	10.00	
7,050.0	44.53	0.00	6,990.8	-150.5	259.0	-140.8	10.00	10.00	
7,051.6	44.70	0.00	6,992.0	-149.3	259.0	-139.7	10.00	10.00	C Chalk
7,100.0	49.53	0.00	7,024.9	-113.9	259.0	-104.3	10.00	10.00	
7,101.7	49.70	0.00	7,026.0	-112.6	259.0	-103.0	10.00	10.00	C Marl
7,150.0	54.53	0.00	7,055.7	-74.5	259.0	-64.9	10.00	10.00	
7,200.0	59.53	0.00	7,082.9	-32.5	259.0	-23.0	10.00	10.00	
7,250.0	64.53	0.00	7,106.3	11.6	259.0	21.1	10.00	10.00	
7,300.0	69.53	0.00	7,125.8	57.6	259.0	67.1	10.00	10.00	
7,306.4	70.17	0.00	7,128.0	63.6	259.0	73.1	10.00	10.00	Ft. Hayes
7,350.0	74.53	0.00	7,141.2	105.2	259.0	114.6	10.00	10.00	
7,397.7	79.30	0.00	7,152.0	151.6	259.0	161.0	10.00	10.00	Codell
7,400.0	79.53	0.00	7,152.4	153.9	259.0	163.3	10.00	10.00	
7,450.0	84.53	0.00	7,159.4	203.4	259.0	212.8	10.00	10.00	
7,504.7	90.00	0.00	7,162.0	258.0	259.0	267.3	10.00	10.00	LP @ 7162' TVD; 90°
7,600.0	90.00	0.00	7,162.0	353.3	259.0	362.6	0.00	0.00	
7,700.0	90.00	0.00	7,162.0	453.3	259.0	462.5	0.00	0.00	
7,800.0	90.00	0.00	7,162.0	553.3	259.0	562.4	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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
7,900.0	90.00	0.00	7,162.0	653.3	259.0	662.4	0.00	0.00	
8,000.0	90.00	0.00	7,162.0	753.3	259.0	762.3	0.00	0.00	
8,100.0	90.00	0.00	7,162.0	853.3	259.0	862.2	0.00	0.00	
8,200.0	90.00	0.00	7,162.0	953.3	259.0	962.2	0.00	0.00	
8,300.0	90.00	0.00	7,162.0	1,053.3	259.0	1,062.1	0.00	0.00	
8,400.0	90.00	0.00	7,162.0	1,153.3	259.0	1,162.0	0.00	0.00	
8,500.0	90.00	0.00	7,162.0	1,253.3	259.0	1,262.0	0.00	0.00	
8,600.0	90.00	0.00	7,162.0	1,353.3	259.0	1,361.9	0.00	0.00	
8,700.0	90.00	0.00	7,162.0	1,453.3	259.0	1,461.8	0.00	0.00	
8,800.0	90.00	0.00	7,162.0	1,553.3	259.0	1,561.8	0.00	0.00	
8,900.0	90.00	0.00	7,162.0	1,653.3	259.0	1,661.7	0.00	0.00	
9,000.0	90.00	0.00	7,162.0	1,753.3	259.0	1,761.6	0.00	0.00	
9,100.0	90.00	0.00	7,162.0	1,853.3	259.0	1,861.6	0.00	0.00	
9,200.0	90.00	0.00	7,162.0	1,953.3	259.0	1,961.5	0.00	0.00	
9,300.0	90.00	0.00	7,162.0	2,053.3	259.0	2,061.4	0.00	0.00	
9,400.0	90.00	0.00	7,162.0	2,153.3	259.0	2,161.4	0.00	0.00	
9,500.0	90.00	0.00	7,162.0	2,253.3	259.0	2,261.3	0.00	0.00	
9,600.0	90.00	0.00	7,162.0	2,353.3	259.0	2,361.2	0.00	0.00	
9,700.0	90.00	0.00	7,162.0	2,453.3	259.0	2,461.2	0.00	0.00	
9,800.0	90.00	0.00	7,162.0	2,553.3	259.0	2,561.1	0.00	0.00	
9,900.0	90.00	0.00	7,162.0	2,653.3	259.0	2,661.0	0.00	0.00	
10,000.0	90.00	0.00	7,162.0	2,753.3	259.0	2,761.0	0.00	0.00	
10,100.0	90.00	0.00	7,162.0	2,853.3	259.0	2,860.9	0.00	0.00	
10,200.0	90.00	0.00	7,162.0	2,953.3	259.0	2,960.8	0.00	0.00	
10,300.0	90.00	0.00	7,162.0	3,053.3	259.0	3,060.8	0.00	0.00	
10,400.0	90.00	0.00	7,162.0	3,153.3	259.0	3,160.7	0.00	0.00	
10,500.0	90.00	0.00	7,162.0	3,253.3	259.0	3,260.6	0.00	0.00	
10,600.0	90.00	0.00	7,162.0	3,353.3	259.0	3,360.6	0.00	0.00	
10,700.0	90.00	0.00	7,162.0	3,453.3	259.0	3,460.5	0.00	0.00	
10,800.0	90.00	0.00	7,162.0	3,553.3	259.0	3,560.4	0.00	0.00	
10,900.0	90.00	0.00	7,162.0	3,653.3	259.0	3,660.4	0.00	0.00	
11,000.0	90.00	0.00	7,162.0	3,753.3	259.0	3,760.3	0.00	0.00	
11,100.0	90.00	0.00	7,162.0	3,853.3	259.0	3,860.2	0.00	0.00	
11,150.0	90.00	0.00	7,162.0	3,903.3	259.0	3,910.2	0.00	0.00	Start 3° Turn
11,200.0	90.00	358.48	7,162.0	3,953.3	258.3	3,960.1	3.03	0.00	
11,300.0	90.00	355.45	7,162.0	4,053.1	253.1	4,059.7	3.03	0.00	
11,400.0	90.00	352.42	7,162.0	4,152.6	242.5	4,158.7	3.03	0.00	
11,500.0	90.00	349.39	7,162.0	4,251.3	226.7	4,256.8	3.03	0.00	
11,600.0	89.99	346.36	7,162.0	4,349.1	205.7	4,353.7	3.03	0.00	
11,700.0	89.99	343.33	7,162.0	4,445.6	179.6	4,449.2	3.03	0.00	
11,747.9	89.99	341.88	7,162.0	4,491.3	165.3	4,494.3	3.03	0.00	TD at 11747.9

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 4E-20H-O264 PBH - plan hits target center - Point	0.00	0.00	7,162.0	4,491.3	165.3	1,291,554.19	3,259,678.13	40.129970	-104.571323

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-20H-O264	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
963.8	963.0	Fox Hills - BASE			
4,373.5	4,362.0	Sussex			
4,610.2	4,598.0	Sussex Marker			
4,822.9	4,810.0	Shannon			
5,653.4	5,638.0	Teepee Buttes (*if present)			
6,828.3	6,807.0	Sharon Springs			
6,876.8	6,851.0	Niobrara			
6,955.1	6,918.0	B Chalk			
6,990.1	6,946.0	B Marl			
7,051.6	6,992.0	C Chalk			
7,101.7	7,026.0	C Marl			
7,306.4	7,128.0	Ft. Hayes			
7,397.7	7,152.0	Codell			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
400.0	400.0	0.0	0.0	KOP @ 400' MD
853.0	852.6	-13.8	11.4	EOB; 4.53°
5,562.6	5,547.4	-301.2	247.6	Start 1° Drop
6,015.7	6,000.0	-315.0	259.0	EOD; Vertical
6,604.7	6,589.0	-315.0	259.0	Start 10° Build
7,504.7	7,162.0	258.0	259.0	LP @ 7162' TVD; 90°
11,150.0	7,162.0	3,903.3	259.0	Start 3° Turn
11,747.9	7,162.0	4,491.3	165.3	TD at 11747.9

EnCana Oil & Gas (USA) Inc

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

Anticollision Report

02 April, 2014

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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	11,747.9	Plan #1 (HZ)	Geolink MWD	Geolink MWD

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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	11,747.9	11,773.8	1,472.5	1,321.0	9.720	CC, ES, SF
Dale 3L-20H-N264 - HZ - Plan #1	11,747.9	11,572.7	1,267.9	1,120.3	8.589	CC, ES, SF
Dale 4A-20H-O264 - HZ - Plan #1	166.3	167.3	29.9	29.4	62.658	CC
Dale 4A-20H-O264 - HZ - Plan #1	200.0	201.0	29.9	29.3	50.284	ES
Dale 4A-20H-O264 - HZ - Plan #1	11,747.9	11,645.9	1,010.1	853.2	6.439	SF
Dale 4B-20H-O264 - HZ - Plan #1	232.2	233.2	22.4	21.7	31.632	CC, ES
Dale 4B-20H-O264 - HZ - Plan #1	11,747.9	11,752.2	775.2	617.7	4.923	SF
Dale 4C-20H-O264 - HZ - Plan #1	300.0	300.0	14.8	13.9	15.733	CC, ES
Dale 4C-20H-O264 - HZ - Plan #1	11,747.9	11,508.6	597.3	454.1	4.169	SF
Dale 4D-20H-O264 - HZ - Plan #1	339.7	339.7	7.3	6.2	6.737	CC
Dale 4D-20H-O264 - HZ - Plan #1	400.0	400.0	7.3	6.0	5.660	ES
Dale 4D-20H-O264 - HZ - Plan #1	11,747.9	11,590.6	265.1	134.5	2.029	SF
Dale 4F-20H-O264 - HZ - Plan #1	594.8	594.7	7.0	5.0	3.545	CC
Dale 4F-20H-O264 - HZ - Plan #1	700.0	699.8	7.3	4.9	3.080	ES
Dale 4F-20H-O264 - HZ - Plan #1	853.0	852.7	8.6	5.7	2.915	SF
Dale 4G-20H-O264 - HZ - Plan #1	400.0	400.0	15.1	13.8	11.693	CC
Dale 4G-20H-O264 - HZ - Plan #1	500.0	499.8	15.3	13.7	9.339	ES
Dale 4G-20H-O264 - HZ - Plan #1	11,300.0	11,188.2	388.6	251.9	2.842	SF
Dale 4H-20H-O264 - HZ - Plan #1	333.4	333.4	22.7	21.6	21.392	CC
Dale 4H-20H-O264 - HZ - Plan #1	400.0	399.8	22.9	21.6	17.701	ES
Dale 4H-20H-O264 - HZ - Plan #1	11,300.0	11,361.1	587.2	441.4	4.027	SF
Dale 4I-20H-O264 - HZ - Plan #1	300.0	300.0	30.2	29.3	32.048	CC, ES
Dale 4I-20H-O264 - HZ - Plan #1	11,300.0	11,164.1	845.1	704.9	6.029	SF
Dale 4J-20H-O264 - HZ - Plan #1	234.7	233.7	37.5	36.8	52.589	CC, ES
Dale 4J-20H-O264 - HZ - Plan #1	11,300.0	11,298.3	1,046.7	902.6	7.266	SF
Dale 4K-20H-O264 - HZ - Plan #1	200.0	199.0	45.0	44.4	76.104	CC, ES
Dale 4K-20H-O264 - HZ - Plan #1	11,300.0	11,494.5	1,262.2	1,117.2	8.703	SF
DALE 'E' UNIT 1 (EXISTING) - EXISTING - ENCANA WE	8,548.7	7,099.0	141.0	101.1	3.533	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	11,159.5	7,068.0	151.6	67.9	1.811	CC, ES, SF
RUHL 1 (EXISTING) - EXISTING - NEBRASKA WELL	8,921.7	7,093.0	496.4	450.6	10.826	CC, ES
RUHL 1 (EXISTING) - EXISTING - NEBRASKA WELL	9,000.0	7,093.0	502.6	455.4	10.663	SF
STARKE 'Y' 20-03 (EXISTING) - EXISTING - NOBLE WE						Out of range

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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 3K-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
11,400.0	7,162.0	11,441.0	7,177.0	75.7	76.5	-90.00	4,152.7	-1,307.2	1,549.7	1,401.5	148.27	10.452	
11,500.0	7,162.0	11,539.7	7,177.0	77.3	78.2	-90.00	4,251.4	-1,307.2	1,533.9	1,384.2	149.77	10.242	
11,600.0	7,162.0	11,637.5	7,177.0	79.0	79.8	-90.00	4,349.2	-1,307.2	1,512.9	1,362.1	150.84	10.030	
11,700.0	7,162.0	11,734.0	7,177.0	80.7	81.5	-90.00	4,445.7	-1,307.2	1,486.8	1,335.3	151.46	9.817	
11,747.9	7,162.0	11,773.8	7,177.0	81.4	82.2	-90.00	4,485.5	-1,307.2	1,472.5	1,321.0	151.49	9.720	CC, ES, SF

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 4E-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 4E-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
3,500.0	3,491.3	3,773.9	3,733.0	7.3	11.5	128.93	-200.3	-1,386.6	1,547.7	1,533.4	14.21	108.918	
3,600.0	3,590.9	3,873.4	3,831.3	7.5	11.8	128.94	-205.9	-1,371.9	1,537.9	1,523.3	14.61	105.241	
3,700.0	3,690.6	3,972.9	3,929.6	7.7	12.1	128.95	-211.5	-1,357.3	1,528.2	1,513.2	15.02	101.761	
3,800.0	3,790.3	4,072.5	4,027.9	7.9	12.5	128.97	-217.1	-1,342.6	1,518.4	1,503.0	15.42	98.465	
3,900.0	3,890.0	4,172.0	4,126.1	8.2	12.8	128.98	-222.7	-1,328.0	1,508.7	1,492.9	15.82	95.337	
4,000.0	3,989.7	4,271.5	4,224.4	8.4	13.1	128.99	-228.3	-1,313.3	1,498.9	1,482.7	16.23	92.365	
4,100.0	4,089.4	4,371.0	4,322.7	8.6	13.4	129.01	-233.9	-1,298.7	1,489.2	1,472.6	16.63	89.538	
4,200.0	4,189.1	4,470.5	4,421.0	8.8	13.8	129.02	-239.5	-1,284.0	1,479.5	1,462.4	17.04	86.846	
4,300.0	4,288.8	4,570.1	4,519.3	9.1	14.1	129.04	-245.1	-1,269.4	1,469.7	1,452.3	17.44	84.278	
4,400.0	4,388.4	4,669.6	4,617.5	9.3	14.4	129.05	-250.6	-1,254.7	1,460.0	1,442.1	17.84	81.827	
4,500.0	4,488.1	4,769.1	4,715.8	9.5	14.7	129.07	-256.2	-1,240.1	1,450.2	1,432.0	18.25	79.484	
4,600.0	4,587.8	4,868.6	4,814.1	9.7	15.1	129.08	-261.8	-1,225.4	1,440.5	1,421.8	18.65	77.244	
4,700.0	4,687.5	4,968.2	4,912.4	9.9	15.4	129.10	-267.4	-1,210.8	1,430.7	1,411.7	19.05	75.098	
4,800.0	4,787.2	5,067.7	5,010.7	10.2	15.7	129.11	-273.0	-1,196.1	1,421.0	1,401.5	19.45	73.042	
4,900.0	4,886.9	5,167.2	5,108.9	10.4	16.0	129.13	-278.6	-1,181.5	1,411.3	1,391.4	19.86	71.069	
5,000.0	4,986.6	5,266.7	5,207.2	10.6	16.4	129.15	-284.2	-1,166.8	1,401.5	1,381.3	20.26	69.176	
5,100.0	5,086.3	5,366.3	5,305.5	10.8	16.7	129.16	-289.8	-1,152.2	1,391.8	1,371.1	20.66	67.357	
5,200.0	5,185.9	5,465.8	5,403.8	11.0	17.0	129.18	-295.4	-1,137.5	1,382.0	1,361.0	21.07	65.607	
5,300.0	5,285.6	5,565.3	5,502.1	11.3	17.3	129.19	-301.0	-1,122.9	1,372.3	1,350.8	21.47	63.924	
5,400.0	5,385.3	5,648.7	5,584.5	11.5	17.6	129.21	-305.6	-1,110.8	1,362.9	1,341.0	21.83	62.419	
5,500.0	5,485.0	5,717.9	5,653.0	11.7	17.8	129.25	-308.8	-1,102.2	1,355.4	1,333.3	22.16	61.155	
5,562.6	5,547.4	5,761.3	5,696.1	11.9	17.9	129.29	-310.6	-1,097.6	1,351.9	1,329.5	22.36	60.448	
5,600.0	5,584.7	5,800.0	5,734.7	11.9	18.0	129.31	-312.0	-1,094.0	1,350.2	1,327.7	22.50	60.001	
5,700.0	5,684.5	5,856.6	5,791.1	12.1	18.1	129.32	-313.6	-1,089.6	1,346.2	1,323.5	22.78	59.103	
5,800.0	5,784.4	5,926.1	5,860.5	12.3	18.2	129.34	-315.1	-1,085.7	1,343.5	1,320.4	23.06	58.264	
5,900.0	5,884.3	6,000.0	5,934.3	12.5	18.3	129.36	-316.1	-1,083.2	1,341.9	1,318.6	23.33	57.516	
5,985.5	5,969.8	6,055.2	5,989.5	12.6	18.4	129.37	-316.4	-1,082.5	1,341.5	1,317.9	23.54	56.989	
6,000.0	5,984.3	6,065.7	6,000.0	12.6	18.4	129.37	-316.4	-1,082.5	1,341.5	1,317.9	23.58	56.900	
6,015.7	6,000.0	6,080.7	6,015.0	12.6	18.4	-90.06	-316.4	-1,082.5	1,341.5	1,317.9	23.62	56.790	
6,100.0	6,084.3	6,165.1	6,099.3	12.8	18.5	-90.06	-316.4	-1,082.5	1,341.5	1,317.6	23.88	56.167	
6,200.0	6,184.3	6,265.1	6,199.3	12.9	18.6	-90.06	-316.4	-1,082.5	1,341.5	1,317.3	24.20	55.443	
6,300.0	6,284.3	6,365.1	6,299.3	13.1	18.7	-90.06	-316.4	-1,082.5	1,341.5	1,317.0	24.51	54.735	
6,400.0	6,384.3	6,465.1	6,399.4	13.2	18.8	-90.04	-315.9	-1,082.5	1,341.5	1,316.7	24.81	54.075	
6,421.9	6,406.3	6,487.0	6,421.2	13.2	18.8	-89.99	-314.7	-1,082.5	1,341.5	1,316.7	24.85	53.976	
6,500.0	6,484.3	6,563.6	6,496.9	13.4	18.8	-89.52	-303.7	-1,082.5	1,341.6	1,316.6	24.93	53.807	
6,604.7	6,589.0	6,659.4	6,588.5	13.5	18.8	-88.33	-275.9	-1,082.5	1,342.2	1,317.3	24.91	53.890	
6,650.0	6,634.3	6,700.0	6,625.7	13.6	18.7	-87.64	-259.6	-1,082.5	1,342.8	1,317.9	24.84	54.056	
6,700.0	6,683.9	6,740.1	6,661.2	13.6	18.7	-86.95	-240.9	-1,082.5	1,343.7	1,318.9	24.76	54.270	
6,750.0	6,732.8	6,781.1	6,696.0	13.6	18.7	-86.25	-219.3	-1,082.5	1,344.7	1,320.1	24.67	54.518	
6,800.0	6,780.6	6,821.3	6,728.6	13.5	18.6	-85.58	-195.8	-1,082.5	1,345.9	1,321.4	24.57	54.770	
6,850.0	6,826.9	6,860.9	6,759.0	13.5	18.6	-84.94	-170.5	-1,082.5	1,347.3	1,322.8	24.49	55.007	
6,900.0	6,871.4	6,900.0	6,787.3	13.4	18.6	-84.32	-143.4	-1,082.5	1,348.7	1,324.2	24.43	55.213	
6,950.0	6,913.8	6,938.2	6,813.0	13.4	18.6	-83.74	-115.2	-1,082.5	1,350.1	1,325.7	24.39	55.344	
7,000.0	6,953.7	6,976.1	6,836.6	13.3	18.6	-83.20	-85.5	-1,082.5	1,351.6	1,327.2	24.40	55.402	
7,050.0	6,990.8	7,013.6	6,858.0	13.3	18.6	-82.70	-54.7	-1,082.5	1,353.0	1,328.6	24.45	55.339	
7,100.0	7,024.9	7,050.0	6,876.8	13.2	18.6	-82.25	-23.6	-1,082.5	1,354.4	1,329.9	24.50	55.275	
7,150.0	7,055.7	7,087.7	6,894.1	13.3	18.7	-81.83	9.8	-1,082.5	1,355.7	1,331.0	24.63	55.031	
7,200.0	7,082.9	7,124.3	6,908.8	13.3	18.8	-81.46	43.4	-1,082.5	1,356.9	1,332.0	24.83	54.650	
7,250.0	7,106.3	7,160.6	6,921.3	13.4	18.9	-81.15	77.5	-1,082.5	1,357.9	1,332.8	25.07	54.159	
7,300.0	7,125.8	7,200.0	6,932.3	13.5	19.0	-80.87	115.3	-1,082.5	1,358.8	1,333.4	25.39	53.511	
7,350.0	7,141.2	7,232.9	6,939.5	13.7	19.1	-80.68	147.4	-1,082.5	1,359.5	1,333.8	25.75	52.806	
7,400.0	7,152.4	7,268.8	6,945.2	14.0	19.3	-80.53	182.8	-1,082.5	1,360.1	1,333.9	26.17	51.964	

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 4E-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 4E-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
7,450.0	7,159.4	7,300.0	6,948.4	14.3	19.4	-80.44	213.9	-1,082.5	1,360.4	1,333.8	26.62	51.105	
7,504.7	7,162.0	7,344.2	6,950.0	14.7	19.6	-80.40	258.1	-1,082.5	1,360.5	1,333.3	27.26	49.915	
7,600.0	7,162.0	7,439.6	6,950.0	15.4	20.2	-80.40	353.4	-1,082.5	1,360.5	1,331.6	28.93	47.024	
7,700.0	7,162.0	7,539.6	6,950.0	16.4	21.0	-80.40	453.4	-1,082.5	1,360.5	1,329.6	30.95	43.954	
7,800.0	7,162.0	7,639.6	6,950.0	17.5	21.8	-80.40	553.4	-1,082.4	1,360.5	1,327.3	33.21	40.964	
7,900.0	7,162.0	7,739.6	6,950.0	18.7	22.8	-80.40	653.4	-1,082.4	1,360.5	1,324.8	35.66	38.147	
8,000.0	7,162.0	7,839.6	6,950.0	20.0	23.9	-80.40	753.4	-1,082.4	1,360.5	1,322.2	38.27	35.547	
8,100.0	7,162.0	7,939.6	6,950.0	21.3	25.0	-80.40	853.4	-1,082.4	1,360.5	1,319.5	41.01	33.176	
8,200.0	7,162.0	8,039.6	6,950.0	22.7	26.2	-80.40	953.4	-1,082.4	1,360.5	1,316.6	43.84	31.029	
8,300.0	7,162.0	8,139.6	6,950.0	24.1	27.5	-80.40	1,053.4	-1,082.4	1,360.5	1,313.7	46.77	29.091	
8,400.0	7,162.0	8,239.6	6,950.0	25.6	28.8	-80.40	1,153.4	-1,082.4	1,360.5	1,310.7	49.76	27.342	
8,500.0	7,162.0	8,339.6	6,950.0	27.1	30.2	-80.40	1,253.4	-1,082.4	1,360.5	1,307.6	52.80	25.764	
8,600.0	7,162.0	8,439.6	6,950.0	28.7	31.6	-80.40	1,353.4	-1,082.4	1,360.4	1,304.5	55.90	24.337	
8,700.0	7,162.0	8,539.6	6,950.0	30.2	33.0	-80.40	1,453.4	-1,082.4	1,360.4	1,301.4	59.04	23.044	
8,800.0	7,162.0	8,639.6	6,950.0	31.8	34.5	-80.40	1,553.4	-1,082.4	1,360.4	1,298.2	62.21	21.870	
8,900.0	7,162.0	8,739.6	6,950.0	33.4	36.0	-80.40	1,653.4	-1,082.4	1,360.4	1,295.0	65.41	20.799	
9,000.0	7,162.0	8,839.6	6,950.0	35.0	37.5	-80.40	1,753.4	-1,082.3	1,360.4	1,291.8	68.63	19.822	
9,100.0	7,162.0	8,939.6	6,950.0	36.7	39.0	-80.40	1,853.4	-1,082.3	1,360.4	1,288.5	71.88	18.926	
9,200.0	7,162.0	9,039.6	6,950.0	38.3	40.6	-80.40	1,953.4	-1,082.3	1,360.4	1,285.3	75.14	18.104	
9,300.0	7,162.0	9,139.6	6,950.0	40.0	42.2	-80.40	2,053.4	-1,082.3	1,360.4	1,282.0	78.43	17.346	
9,400.0	7,162.0	9,239.6	6,950.0	41.6	43.7	-80.40	2,153.4	-1,082.3	1,360.4	1,278.7	81.72	16.646	
9,500.0	7,162.0	9,339.6	6,950.0	43.3	45.3	-80.40	2,253.4	-1,082.3	1,360.4	1,275.3	85.03	15.998	
9,600.0	7,162.0	9,439.6	6,950.0	45.0	46.9	-80.40	2,353.4	-1,082.3	1,360.4	1,272.0	88.36	15.397	
9,700.0	7,162.0	9,539.6	6,950.0	46.6	48.6	-80.40	2,453.4	-1,082.3	1,360.4	1,268.7	91.69	14.837	
9,800.0	7,162.0	9,639.6	6,950.0	48.3	50.2	-80.40	2,553.4	-1,082.3	1,360.4	1,265.3	95.03	14.315	
9,900.0	7,162.0	9,739.6	6,950.0	50.0	51.8	-80.40	2,653.4	-1,082.3	1,360.3	1,262.0	98.38	13.828	
10,000.0	7,162.0	9,839.6	6,950.0	51.7	53.5	-80.40	2,753.4	-1,082.3	1,360.3	1,258.6	101.73	13.372	
10,100.0	7,162.0	9,939.6	6,950.0	53.4	55.1	-80.40	2,853.4	-1,082.3	1,360.3	1,255.2	105.10	12.944	
10,200.0	7,162.0	10,039.6	6,950.0	55.1	56.8	-80.40	2,953.4	-1,082.3	1,360.3	1,251.9	108.47	12.541	
10,300.0	7,162.0	10,139.6	6,950.0	56.8	58.4	-80.40	3,053.4	-1,082.2	1,360.3	1,248.5	111.84	12.163	
10,400.0	7,162.0	10,239.6	6,950.0	58.5	60.1	-80.40	3,153.4	-1,082.2	1,360.3	1,245.1	115.22	11.806	
10,500.0	7,162.0	10,339.6	6,950.0	60.2	61.8	-80.40	3,253.4	-1,082.2	1,360.3	1,241.7	118.60	11.469	
10,600.0	7,162.0	10,439.6	6,950.0	61.9	63.4	-80.40	3,353.4	-1,082.2	1,360.3	1,238.3	121.99	11.151	
10,700.0	7,162.0	10,539.6	6,950.0	63.7	65.1	-80.40	3,453.4	-1,082.2	1,360.3	1,234.9	125.39	10.849	
10,800.0	7,162.0	10,639.6	6,950.0	65.4	66.8	-80.40	3,553.4	-1,082.2	1,360.3	1,231.5	128.78	10.563	
10,900.0	7,162.0	10,739.6	6,950.0	67.1	68.5	-80.40	3,653.4	-1,082.2	1,360.3	1,228.1	132.18	10.291	
11,000.0	7,162.0	10,839.6	6,950.0	68.8	70.2	-80.40	3,753.4	-1,082.2	1,360.3	1,224.7	135.58	10.033	
11,100.0	7,162.0	10,939.6	6,950.0	70.5	71.9	-80.40	3,853.4	-1,082.2	1,360.2	1,221.3	138.99	9.787	
11,150.0	7,162.0	10,989.6	6,950.0	71.4	72.7	-80.40	3,903.4	-1,082.2	1,360.2	1,219.6	140.69	9.668	
11,200.0	7,162.0	11,039.6	6,950.0	72.2	73.6	-80.39	3,953.4	-1,082.2	1,359.6	1,217.7	141.87	9.583	
11,300.0	7,162.0	11,139.4	6,950.0	74.0	75.3	-80.32	4,053.2	-1,082.2	1,354.4	1,210.4	143.93	9.410	
11,400.0	7,162.0	11,238.8	6,950.0	75.7	77.0	-80.19	4,152.7	-1,082.2	1,344.0	1,198.4	145.57	9.232	
11,500.0	7,162.0	11,337.6	6,950.0	77.3	78.6	-79.99	4,251.4	-1,082.1	1,328.4	1,181.6	146.77	9.051	
11,600.0	7,162.0	11,435.3	6,950.0	79.0	80.3	-79.72	4,349.2	-1,082.1	1,307.7	1,160.2	147.50	8.866	
11,700.0	7,162.0	11,531.8	6,950.0	80.7	82.0	-79.36	4,445.7	-1,082.1	1,282.0	1,134.2	147.74	8.677	
11,747.9	7,162.0	11,572.7	6,950.0	81.4	82.7	-79.17	4,486.5	-1,082.1	1,267.9	1,120.3	147.61	8.589	CC, ES, SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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	-89.29	0.4	-29.9	29.9				
100.0	100.0	101.0	101.0	0.1	0.1	-89.29	0.4	-29.9	29.9	29.7	0.25	121.609	
166.3	166.3	167.3	167.3	0.2	0.2	-89.29	0.4	-29.9	29.9	29.4	0.48	62.658	CC
200.0	200.0	201.0	201.0	0.3	0.3	-89.29	0.4	-29.9	29.9	29.3	0.60	50.284	ES
300.0	300.0	300.0	300.0	0.5	0.5	-90.49	-0.3	-31.5	31.6	30.6	0.95	33.389	
400.0	400.0	398.8	398.6	0.6	0.7	-93.37	-2.1	-36.3	36.5	35.2	1.31	27.909	
500.0	500.0	497.0	496.5	0.8	0.9	123.53	-5.2	-44.2	45.3	43.6	1.64	27.577	
600.0	600.0	594.5	593.2	1.0	1.2	122.41	-9.5	-55.2	58.3	56.3	1.99	29.254	
700.0	699.9	691.6	689.2	1.2	1.4	122.18	-14.9	-68.9	75.4	73.0	2.35	32.051	
800.0	799.7	789.8	786.2	1.4	1.8	122.76	-20.6	-83.6	94.1	91.4	2.72	34.569	
853.0	852.6	841.8	837.5	1.5	1.9	123.29	-23.6	-91.3	104.4	101.5	2.92	35.724	
900.0	899.4	887.8	882.9	1.6	2.1	123.84	-26.3	-98.2	113.6	110.5	3.10	36.635	
1,000.0	999.1	985.9	979.7	1.8	2.4	124.75	-32.0	-112.7	133.4	129.9	3.49	38.231	
1,100.0	1,098.8	1,083.9	1,076.5	2.0	2.7	125.42	-37.7	-127.3	153.1	149.3	3.88	39.482	
1,200.0	1,198.4	1,181.9	1,173.2	2.2	3.0	125.94	-43.5	-141.9	172.9	168.6	4.27	40.486	
1,300.0	1,298.1	1,279.9	1,270.0	2.4	3.3	126.36	-49.2	-156.5	192.7	188.0	4.66	41.308	
1,400.0	1,397.8	1,377.9	1,366.7	2.6	3.7	126.69	-54.9	-171.1	212.5	207.4	5.06	41.993	
1,500.0	1,497.5	1,475.9	1,463.5	2.9	4.0	126.97	-60.6	-185.7	232.3	226.8	5.46	42.572	
1,600.0	1,597.2	1,574.0	1,560.2	3.1	4.3	127.21	-66.3	-200.3	252.1	246.2	5.85	43.067	
1,700.0	1,696.9	1,672.0	1,657.0	3.3	4.6	127.41	-72.0	-214.9	271.9	265.6	6.25	43.496	
1,800.0	1,796.6	1,770.0	1,753.7	3.5	5.0	127.58	-77.7	-229.4	291.7	285.0	6.65	43.870	
1,900.0	1,896.3	1,868.0	1,850.5	3.7	5.3	127.73	-83.4	-244.0	311.5	304.5	7.05	44.199	
2,000.0	1,995.9	1,966.0	1,947.2	4.0	5.6	127.87	-89.1	-258.6	331.3	323.9	7.45	44.492	
2,100.0	2,095.6	2,064.0	2,044.0	4.2	5.9	127.99	-94.8	-273.2	351.1	343.3	7.85	44.752	
2,200.0	2,195.3	2,162.0	2,140.8	4.4	6.2	128.09	-100.5	-287.8	371.0	362.7	8.25	44.987	
2,300.0	2,295.0	2,260.1	2,237.5	4.6	6.6	128.19	-106.2	-302.4	390.8	382.1	8.65	45.198	
2,400.0	2,394.7	2,358.1	2,334.3	4.8	6.9	128.27	-112.0	-317.0	410.6	401.5	9.05	45.390	
2,500.0	2,494.4	2,456.1	2,431.0	5.1	7.2	128.35	-117.7	-331.6	430.4	421.0	9.45	45.565	
2,600.0	2,594.1	2,554.1	2,527.8	5.3	7.5	128.42	-123.4	-346.1	450.2	440.4	9.85	45.725	
2,700.0	2,693.8	2,652.1	2,624.5	5.5	7.9	128.49	-129.1	-360.7	470.0	459.8	10.25	45.872	
2,800.0	2,793.4	2,750.1	2,721.3	5.7	8.2	128.55	-134.8	-375.3	489.9	479.2	10.65	46.008	
2,900.0	2,893.1	2,848.1	2,818.0	5.9	8.5	128.60	-140.5	-389.9	509.7	498.6	11.05	46.133	
3,000.0	2,992.8	2,946.2	2,914.8	6.2	8.8	128.65	-146.2	-404.5	529.5	518.1	11.45	46.249	
3,100.0	3,092.5	3,044.2	3,011.6	6.4	9.2	128.70	-151.9	-419.1	549.3	537.5	11.85	46.357	
3,200.0	3,192.2	3,142.2	3,108.3	6.6	9.5	128.75	-157.6	-433.7	569.2	556.9	12.25	46.458	
3,300.0	3,291.9	3,240.2	3,205.1	6.8	9.8	128.79	-163.3	-448.3	589.0	576.3	12.65	46.552	
3,400.0	3,391.6	3,338.2	3,301.8	7.1	10.1	128.83	-169.0	-462.9	608.8	595.7	13.05	46.640	
3,500.0	3,491.3	3,436.2	3,398.6	7.3	10.5	128.86	-174.7	-477.4	628.6	615.2	13.45	46.723	
3,600.0	3,590.9	3,534.2	3,495.3	7.5	10.8	128.90	-180.5	-492.0	648.4	634.6	13.86	46.801	
3,700.0	3,690.6	3,632.3	3,592.1	7.7	11.1	128.93	-186.2	-506.6	668.3	654.0	14.26	46.874	
3,800.0	3,790.3	3,730.3	3,688.8	7.9	11.4	128.96	-191.9	-521.2	688.1	673.4	14.66	46.943	
3,900.0	3,890.0	3,828.3	3,785.6	8.2	11.8	128.99	-197.6	-535.8	707.9	692.9	15.06	47.008	
4,000.0	3,989.7	3,926.3	3,882.3	8.4	12.1	129.01	-203.3	-550.4	727.7	712.3	15.46	47.070	
4,100.0	4,089.4	4,024.3	3,979.1	8.6	12.4	129.04	-209.0	-565.0	747.6	731.7	15.86	47.128	
4,200.0	4,189.1	4,122.3	4,075.9	8.8	12.7	129.06	-214.7	-579.6	767.4	751.1	16.26	47.184	
4,300.0	4,288.8	4,220.4	4,172.6	9.1	13.1	129.08	-220.4	-594.1	787.2	770.5	16.67	47.237	
4,400.0	4,388.4	4,318.4	4,269.4	9.3	13.4	129.11	-226.1	-608.7	807.0	790.0	17.07	47.287	
4,500.0	4,488.1	4,416.4	4,366.1	9.5	13.7	129.13	-231.8	-623.3	826.9	809.4	17.47	47.335	
4,600.0	4,587.8	4,514.4	4,462.9	9.7	14.0	129.15	-237.5	-637.9	846.7	828.8	17.87	47.381	
4,700.0	4,687.5	4,612.4	4,559.6	9.9	14.4	129.17	-243.2	-652.5	866.5	848.2	18.27	47.424	
4,800.0	4,787.2	4,710.4	4,656.4	10.2	14.7	129.18	-249.0	-667.1	886.3	867.7	18.67	47.466	
4,900.0	4,886.9	4,808.4	4,753.1	10.4	15.0	129.20	-254.7	-681.7	906.2	887.1	19.07	47.506	

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 4E-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 4E-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
5,000.0	4,986.6	4,906.5	4,849.9	10.6	15.3	129.22	-260.4	-696.3	926.0	906.5	19.48	47.544	
5,100.0	5,086.3	5,004.5	4,946.7	10.8	15.7	129.23	-266.1	-710.8	945.8	925.9	19.88	47.581	
5,200.0	5,185.9	5,102.5	5,043.4	11.0	16.0	129.25	-271.8	-725.4	965.6	945.4	20.28	47.616	
5,300.0	5,285.6	5,200.5	5,140.2	11.3	16.3	129.26	-277.5	-740.0	985.5	964.8	20.68	47.650	
5,400.0	5,385.3	5,298.5	5,236.9	11.5	16.6	129.28	-283.2	-754.6	1,005.3	984.2	21.08	47.682	
5,500.0	5,485.0	5,396.5	5,333.7	11.7	17.0	129.29	-288.9	-769.2	1,025.1	1,003.6	21.48	47.713	
5,562.6	5,547.4	5,457.9	5,394.3	11.9	17.2	129.30	-292.5	-778.3	1,037.5	1,015.8	21.74	47.732	
5,600.0	5,584.7	5,494.6	5,430.4	11.9	17.3	129.36	-294.6	-783.8	1,044.9	1,023.0	21.90	47.721	
5,700.0	5,684.5	5,592.8	5,527.4	12.1	17.6	129.45	-300.3	-798.4	1,063.7	1,041.4	22.30	47.692	
5,800.0	5,784.4	5,736.2	5,669.4	12.3	18.0	129.45	-307.7	-817.1	1,079.8	1,057.0	22.77	47.427	
5,900.0	5,884.3	5,889.9	5,822.5	12.5	18.3	129.45	-312.6	-829.8	1,089.9	1,066.7	23.21	46.952	
6,000.0	5,984.3	6,044.8	5,977.3	12.6	18.5	129.45	-314.6	-834.8	1,093.9	1,070.2	23.62	46.304	
6,015.7	6,000.0	6,068.5	6,001.0	12.6	18.5	-89.98	-314.6	-834.9	1,093.9	1,070.2	23.69	46.186	
6,100.0	6,084.3	6,152.9	6,085.3	12.8	18.6	-89.98	-314.6	-834.9	1,093.9	1,070.0	23.95	45.682	
6,200.0	6,184.3	6,252.9	6,185.3	12.9	18.7	-89.98	-314.6	-834.9	1,093.9	1,069.7	24.26	45.097	
6,300.0	6,284.3	6,352.9	6,285.3	13.1	18.8	-89.98	-314.6	-834.9	1,093.9	1,069.4	24.57	44.525	
6,400.0	6,384.3	6,452.9	6,385.3	13.2	18.9	-89.98	-314.6	-834.9	1,093.9	1,069.0	24.88	43.965	
6,456.9	6,441.3	6,509.8	6,442.3	13.3	19.0	-89.98	-314.6	-834.9	1,093.9	1,068.9	25.06	43.652	
6,500.0	6,484.3	6,552.8	6,485.2	13.4	19.0	-89.92	-313.5	-834.9	1,093.9	1,068.7	25.18	43.441	
6,604.7	6,589.0	6,654.7	6,585.8	13.5	19.0	-89.11	-298.1	-834.9	1,094.1	1,068.6	25.42	43.042	
6,650.0	6,634.3	6,697.1	6,626.6	13.6	19.0	-88.57	-286.4	-834.9	1,094.3	1,068.8	25.47	42.959	
6,700.0	6,683.9	6,743.0	6,669.6	13.6	19.0	-87.98	-270.5	-834.9	1,094.6	1,069.2	25.48	42.960	
6,750.0	6,732.8	6,788.2	6,710.6	13.6	18.9	-87.40	-251.5	-834.9	1,095.1	1,069.7	25.44	43.043	
6,800.0	6,780.6	6,832.7	6,749.3	13.5	18.9	-86.85	-229.6	-834.9	1,095.7	1,070.3	25.37	43.192	
6,850.0	6,826.9	6,876.5	6,785.8	13.5	18.9	-86.32	-205.2	-834.9	1,096.3	1,071.0	25.27	43.391	
6,900.0	6,871.4	6,919.8	6,819.8	13.4	18.8	-85.82	-178.5	-834.9	1,096.9	1,071.8	25.15	43.618	
6,950.0	6,913.8	6,962.6	6,851.3	13.4	18.8	-85.35	-149.7	-834.9	1,097.7	1,072.6	25.03	43.851	
7,000.0	6,953.7	7,004.9	6,880.3	13.3	18.8	-84.91	-118.9	-834.9	1,098.4	1,073.5	24.93	44.064	
7,050.0	6,990.8	7,050.0	6,908.7	13.3	18.8	-84.47	-83.8	-834.9	1,099.1	1,074.3	24.85	44.231	
7,100.0	7,024.9	7,088.3	6,930.5	13.2	18.8	-84.13	-52.3	-834.9	1,099.8	1,075.0	24.82	44.305	
7,150.0	7,055.7	7,129.5	6,951.6	13.3	18.8	-83.79	-16.9	-834.9	1,100.5	1,075.6	24.86	44.273	
7,200.0	7,082.9	7,170.4	6,969.9	13.3	18.9	-83.50	19.7	-834.9	1,101.1	1,076.1	24.97	44.096	
7,250.0	7,106.3	7,211.1	6,985.5	13.4	19.0	-83.25	57.2	-834.9	1,101.6	1,076.5	25.16	43.788	
7,300.0	7,125.8	7,250.0	6,998.0	13.5	19.1	-83.04	94.1	-834.9	1,102.1	1,076.7	25.43	43.331	
7,350.0	7,141.2	7,292.0	7,008.5	13.7	19.2	-82.88	134.7	-834.9	1,102.5	1,076.6	25.83	42.677	
7,400.0	7,152.4	7,332.2	7,015.8	14.0	19.4	-82.76	174.3	-834.9	1,102.7	1,076.4	26.33	41.889	
7,450.0	7,159.4	7,372.4	7,020.3	14.3	19.5	-82.68	214.2	-834.9	1,102.9	1,076.0	26.92	40.977	
7,504.7	7,162.0	7,416.6	7,022.0	14.7	19.8	-82.66	258.3	-834.9	1,103.0	1,075.3	27.66	39.873	
7,530.4	7,162.0	7,442.0	7,022.0	14.9	19.9	-82.66	283.7	-834.9	1,103.0	1,074.9	28.10	39.256	
7,600.0	7,162.0	7,511.6	7,022.0	15.4	20.3	-82.66	353.3	-834.9	1,103.0	1,073.7	29.30	37.650	
7,700.0	7,162.0	7,611.6	7,022.0	16.4	21.1	-82.66	453.3	-834.9	1,103.0	1,071.7	31.29	35.250	
7,800.0	7,162.0	7,711.6	7,022.0	17.5	21.9	-82.66	553.3	-834.9	1,103.0	1,069.4	33.53	32.896	
7,900.0	7,162.0	7,811.6	7,022.0	18.7	22.9	-82.66	653.3	-834.9	1,103.0	1,067.0	35.97	30.668	
8,000.0	7,162.0	7,911.6	7,022.0	20.0	23.9	-82.66	753.3	-834.9	1,103.0	1,064.4	38.56	28.602	
8,100.0	7,162.0	8,011.6	7,022.0	21.3	25.0	-82.66	853.3	-834.9	1,103.0	1,061.7	41.29	26.713	
8,200.0	7,162.0	8,111.6	7,022.0	22.7	26.2	-82.66	953.3	-834.9	1,103.0	1,058.9	44.12	24.998	
8,300.0	7,162.0	8,211.6	7,022.0	24.1	27.5	-82.66	1,053.3	-834.9	1,103.0	1,055.9	47.04	23.446	
8,400.0	7,162.0	8,311.6	7,022.0	25.6	28.8	-82.66	1,153.3	-834.9	1,103.0	1,052.9	50.03	22.044	
8,500.0	7,162.0	8,411.6	7,022.0	27.1	30.1	-82.66	1,253.3	-834.9	1,103.0	1,049.9	53.09	20.777	
8,600.0	7,162.0	8,511.6	7,022.0	28.7	31.5	-82.66	1,353.3	-834.9	1,103.0	1,046.8	56.19	19.631	
8,700.0	7,162.0	8,611.6	7,022.0	30.2	33.0	-82.66	1,453.3	-834.9	1,103.0	1,043.6	59.33	18.591	
8,800.0	7,162.0	8,711.6	7,022.0	31.8	34.4	-82.66	1,553.3	-834.9	1,103.0	1,040.5	62.51	17.645	

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 4E-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 4E-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
8,900.0	7,162.0	8,811.6	7,022.0	33.4	35.9	-82.66	1,653.3	-834.9	1,103.0	1,037.3	65.72	16.783	
9,000.0	7,162.0	8,911.6	7,022.0	35.0	37.4	-82.66	1,753.3	-834.9	1,103.0	1,034.0	68.95	15.996	
9,100.0	7,162.0	9,011.6	7,022.0	36.7	38.9	-82.66	1,853.3	-834.9	1,103.0	1,030.8	72.21	15.274	
9,200.0	7,162.0	9,111.6	7,022.0	38.3	40.5	-82.66	1,953.3	-834.9	1,103.0	1,027.5	75.49	14.611	
9,300.0	7,162.0	9,211.6	7,022.0	40.0	42.1	-82.66	2,053.3	-834.9	1,103.0	1,024.2	78.79	14.000	
9,400.0	7,162.0	9,311.6	7,022.0	41.6	43.6	-82.66	2,153.3	-834.9	1,103.0	1,020.9	82.10	13.435	
9,500.0	7,162.0	9,411.6	7,022.0	43.3	45.2	-82.66	2,253.3	-834.9	1,103.0	1,017.6	85.42	12.912	
9,600.0	7,162.0	9,511.6	7,022.0	45.0	46.8	-82.66	2,353.3	-834.9	1,103.0	1,014.2	88.76	12.427	
9,700.0	7,162.0	9,611.6	7,022.0	46.6	48.4	-82.66	2,453.3	-834.9	1,103.0	1,010.9	92.10	11.976	
9,800.0	7,162.0	9,711.6	7,022.0	48.3	50.1	-82.66	2,553.3	-834.9	1,103.0	1,007.5	95.46	11.555	
9,900.0	7,162.0	9,811.6	7,022.0	50.0	51.7	-82.66	2,653.3	-834.9	1,103.0	1,004.2	98.82	11.161	
10,000.0	7,162.0	9,911.6	7,022.0	51.7	53.3	-82.66	2,753.3	-834.9	1,103.0	1,000.8	102.20	10.793	
10,100.0	7,162.0	10,011.6	7,022.0	53.4	55.0	-82.66	2,853.3	-834.9	1,103.0	997.4	105.57	10.447	
10,200.0	7,162.0	10,111.6	7,022.0	55.1	56.6	-82.66	2,953.3	-834.9	1,103.0	994.0	108.96	10.123	
10,300.0	7,162.0	10,211.6	7,022.0	56.8	58.3	-82.66	3,053.3	-834.9	1,103.0	990.6	112.35	9.817	
10,400.0	7,162.0	10,311.6	7,022.0	58.5	60.0	-82.66	3,153.3	-834.9	1,103.0	987.2	115.75	9.529	
10,500.0	7,162.0	10,411.6	7,022.0	60.2	61.6	-82.66	3,253.3	-834.9	1,103.0	983.8	119.15	9.257	
10,600.0	7,162.0	10,511.6	7,022.0	61.9	63.3	-82.66	3,353.3	-834.9	1,103.0	980.4	122.56	9.000	
10,700.0	7,162.0	10,611.6	7,022.0	63.7	65.0	-82.66	3,453.3	-834.9	1,103.0	977.0	125.97	8.756	
10,800.0	7,162.0	10,711.6	7,022.0	65.4	66.7	-82.66	3,553.3	-834.9	1,103.0	973.6	129.38	8.525	
10,900.0	7,162.0	10,811.6	7,022.0	67.1	68.3	-82.66	3,653.3	-834.9	1,103.0	970.2	132.80	8.306	
11,000.0	7,162.0	10,911.6	7,022.0	68.8	70.0	-82.66	3,753.3	-834.9	1,103.0	966.8	136.22	8.097	
11,100.0	7,162.0	11,011.6	7,022.0	70.5	71.7	-82.66	3,853.3	-834.9	1,103.0	963.3	139.64	7.899	
11,150.0	7,162.0	11,061.6	7,022.0	71.4	72.6	-82.66	3,903.3	-834.9	1,103.0	961.6	141.35	7.803	
11,200.0	7,162.0	11,111.5	7,022.0	72.2	73.4	-82.65	3,953.3	-834.9	1,102.3	959.1	143.25	7.695	
11,300.0	7,162.0	11,211.4	7,022.0	74.0	75.1	-82.59	4,053.1	-834.9	1,097.1	950.3	146.76	7.476	
11,400.0	7,162.0	11,310.8	7,022.0	75.7	76.8	-82.48	4,152.6	-834.9	1,086.6	936.8	149.84	7.252	
11,500.0	7,162.0	11,409.6	7,022.0	77.3	78.5	-82.31	4,251.3	-834.9	1,071.0	918.5	152.48	7.024	
11,600.0	7,162.0	11,507.3	7,022.0	79.0	80.2	-82.06	4,349.1	-834.9	1,050.2	895.5	154.65	6.791	
11,700.0	7,162.0	11,603.8	7,022.0	80.7	81.8	-81.74	4,445.6	-834.9	1,024.3	867.9	156.32	6.552	
11,747.9	7,162.0	11,645.9	7,022.0	81.4	82.5	-81.57	4,487.6	-834.9	1,010.1	853.2	156.88	6.439	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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	-89.02	0.4	-22.4	22.4				
100.0	100.0	101.0	101.0	0.1	0.1	-89.02	0.4	-22.4	22.4	22.1	0.25	90.929	
200.0	200.0	201.0	201.0	0.3	0.3	-89.02	0.4	-22.4	22.4	21.8	0.60	37.598	
232.2	232.2	233.2	233.2	0.4	0.4	-89.02	0.4	-22.4	22.4	21.7	0.71	31.632	CC, ES
300.0	300.0	300.6	300.6	0.5	0.5	-89.57	0.2	-22.8	22.8	21.8	0.94	24.126	
400.0	400.0	400.0	399.9	0.6	0.7	-93.27	-1.5	-25.8	25.9	24.6	1.30	19.942	
500.0	500.0	498.7	498.3	0.8	0.9	122.25	-4.7	-31.9	32.8	31.1	1.64	19.949	
600.0	600.0	596.8	595.9	1.0	1.1	120.20	-9.5	-40.9	43.9	41.9	2.00	21.964	
700.0	699.9	695.8	694.2	1.2	1.3	119.85	-15.3	-51.5	57.7	55.3	2.36	24.424	
800.0	799.7	794.7	792.3	1.4	1.6	120.80	-21.0	-62.2	72.3	69.6	2.73	26.447	
853.0	852.6	847.1	844.3	1.5	1.7	121.57	-24.0	-67.9	80.4	77.5	2.94	27.395	
900.0	899.4	893.5	890.4	1.6	1.9	122.31	-26.7	-72.9	87.8	84.7	3.12	28.154	
1,000.0	999.1	992.2	988.4	1.8	2.1	123.54	-32.4	-83.6	103.4	99.9	3.51	29.490	
1,100.0	1,098.8	1,090.9	1,086.4	2.0	2.4	124.44	-38.1	-94.2	119.1	115.2	3.90	30.544	
1,200.0	1,198.4	1,189.7	1,184.4	2.2	2.7	125.13	-43.9	-104.9	134.8	130.5	4.29	31.394	
1,300.0	1,298.1	1,288.4	1,282.4	2.4	2.9	125.68	-49.6	-115.6	150.5	145.8	4.69	32.094	
1,400.0	1,397.8	1,387.2	1,380.4	2.6	3.2	126.12	-55.3	-126.2	166.3	161.2	5.09	32.679	
1,500.0	1,497.5	1,485.9	1,478.4	2.9	3.5	126.49	-61.0	-136.9	182.0	176.5	5.49	33.175	
1,600.0	1,597.2	1,584.7	1,576.4	3.1	3.8	126.80	-66.7	-147.6	197.7	191.9	5.89	33.601	
1,700.0	1,696.9	1,683.4	1,674.4	3.3	4.0	127.06	-72.5	-158.2	213.5	207.2	6.28	33.971	
1,800.0	1,796.6	1,782.2	1,772.4	3.5	4.3	127.29	-78.2	-168.9	229.3	222.6	6.68	34.294	
1,900.0	1,896.3	1,880.9	1,870.4	3.7	4.6	127.49	-83.9	-179.6	245.0	237.9	7.09	34.579	
2,000.0	1,995.9	1,979.7	1,968.4	4.0	4.8	127.66	-89.6	-190.2	260.8	253.3	7.49	34.833	
2,100.0	2,095.6	2,078.4	2,066.4	4.2	5.1	127.81	-95.3	-200.9	276.5	268.6	7.89	35.060	
2,200.0	2,195.3	2,177.2	2,164.4	4.4	5.4	127.95	-101.1	-211.6	292.3	284.0	8.29	35.264	
2,300.0	2,295.0	2,275.9	2,262.4	4.6	5.7	128.08	-106.8	-222.2	308.1	299.4	8.69	35.448	
2,400.0	2,394.7	2,374.7	2,360.4	4.8	5.9	128.19	-112.5	-232.9	323.8	314.7	9.09	35.616	
2,500.0	2,494.4	2,473.4	2,458.4	5.1	6.2	128.29	-118.2	-243.6	339.6	330.1	9.49	35.769	
2,600.0	2,594.1	2,572.2	2,556.4	5.3	6.5	128.38	-123.9	-254.2	355.4	345.5	9.90	35.909	
2,700.0	2,693.8	2,670.9	2,654.4	5.5	6.7	128.46	-129.7	-264.9	371.1	360.8	10.30	36.038	
2,800.0	2,793.4	2,769.7	2,752.4	5.7	7.0	128.54	-135.4	-275.6	386.9	376.2	10.70	36.157	
2,900.0	2,893.1	2,868.4	2,850.4	5.9	7.3	128.61	-141.1	-286.2	402.7	391.6	11.10	36.267	
3,000.0	2,992.8	2,967.1	2,948.4	6.2	7.6	128.68	-146.8	-296.9	418.5	406.9	11.51	36.369	
3,100.0	3,092.5	3,065.9	3,046.4	6.4	7.8	128.74	-152.5	-307.6	434.2	422.3	11.91	36.464	
3,200.0	3,192.2	3,164.6	3,144.4	6.6	8.1	128.80	-158.3	-318.2	450.0	437.7	12.31	36.553	
3,300.0	3,291.9	3,263.4	3,242.4	6.8	8.4	128.85	-164.0	-328.9	465.8	453.1	12.71	36.636	
3,400.0	3,391.6	3,362.1	3,340.4	7.1	8.7	128.90	-169.7	-339.6	481.5	468.4	13.12	36.713	
3,500.0	3,491.3	3,460.9	3,438.4	7.3	8.9	128.95	-175.4	-350.2	497.3	483.8	13.52	36.786	
3,600.0	3,590.9	3,559.6	3,536.4	7.5	9.2	128.99	-181.1	-360.9	513.1	499.2	13.92	36.855	
3,700.0	3,690.6	3,658.4	3,634.4	7.7	9.5	129.03	-186.8	-371.6	528.9	514.5	14.32	36.920	
3,800.0	3,790.3	3,757.1	3,732.4	7.9	9.8	129.07	-192.6	-382.2	544.6	529.9	14.73	36.981	
3,900.0	3,890.0	3,855.9	3,830.5	8.2	10.0	129.11	-198.3	-392.9	560.4	545.3	15.13	37.038	
4,000.0	3,989.7	3,954.6	3,928.5	8.4	10.3	129.14	-204.0	-403.6	576.2	560.7	15.53	37.093	
4,100.0	4,089.4	4,053.4	4,026.5	8.6	10.6	129.17	-209.7	-414.2	592.0	576.0	15.94	37.145	
4,200.0	4,189.1	4,152.1	4,124.5	8.8	10.8	129.20	-215.4	-424.9	607.7	591.4	16.34	37.194	
4,300.0	4,288.8	4,250.9	4,222.5	9.1	11.1	129.23	-221.2	-435.6	623.5	606.8	16.74	37.241	
4,400.0	4,388.4	4,349.6	4,320.5	9.3	11.4	129.26	-226.9	-446.2	639.3	622.1	17.15	37.286	
4,500.0	4,488.1	4,448.4	4,418.5	9.5	11.7	129.29	-232.6	-456.9	655.1	637.5	17.55	37.328	
4,600.0	4,587.8	4,547.1	4,516.5	9.7	11.9	129.31	-238.3	-467.6	670.8	652.9	17.95	37.369	
4,700.0	4,687.5	4,645.8	4,614.5	9.9	12.2	129.34	-244.0	-478.2	686.6	668.3	18.36	37.407	
4,800.0	4,787.2	4,744.6	4,712.5	10.2	12.5	129.36	-249.8	-488.9	702.4	683.6	18.76	37.444	
4,900.0	4,886.9	4,843.3	4,810.5	10.4	12.8	129.38	-255.5	-499.6	718.2	699.0	19.16	37.480	

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 4E-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 4E-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
5,000.0	4,986.6	4,942.1	4,908.5	10.6	13.0	129.40	-261.2	-510.2	734.0	714.4	19.56	37.514	
5,100.0	5,086.3	5,040.8	5,006.5	10.8	13.3	129.42	-266.9	-520.9	749.7	729.8	19.97	37.546	
5,200.0	5,185.9	5,139.6	5,104.5	11.0	13.6	129.44	-272.6	-531.6	765.5	745.1	20.37	37.578	
5,300.0	5,285.6	5,238.3	5,202.5	11.3	13.9	129.46	-278.4	-542.3	781.3	760.5	20.77	37.608	
5,400.0	5,385.3	5,337.1	5,300.5	11.5	14.1	129.48	-284.1	-552.9	797.1	775.9	21.18	37.636	
5,500.0	5,485.0	5,435.8	5,398.5	11.7	14.4	129.50	-289.8	-563.6	812.8	791.3	21.58	37.664	
5,562.6	5,547.4	5,497.7	5,459.9	11.9	14.6	129.51	-293.4	-570.3	822.7	800.9	21.83	37.681	
5,600.0	5,584.7	5,534.6	5,496.5	11.9	14.7	129.55	-295.5	-574.3	828.5	806.5	21.99	37.678	
5,700.0	5,684.5	5,633.5	5,594.7	12.1	14.9	129.60	-301.2	-584.9	843.4	821.0	22.39	37.663	
5,800.0	5,784.4	5,748.4	5,708.8	12.3	15.2	129.54	-307.6	-596.8	856.7	833.9	22.80	37.572	
5,900.0	5,884.3	5,883.8	5,843.8	12.5	15.5	129.48	-312.6	-606.1	865.4	842.2	23.21	37.282	
6,000.0	5,984.3	6,020.1	5,980.0	12.6	15.7	129.45	-314.6	-609.8	868.8	845.2	23.59	36.830	
6,015.7	6,000.0	6,041.1	6,001.0	12.6	15.7	-89.97	-314.6	-609.9	868.9	845.2	23.65	36.743	
6,100.0	6,084.3	6,125.5	6,085.3	12.8	15.8	-89.97	-314.6	-609.9	868.9	845.0	23.91	36.342	
6,200.0	6,184.3	6,225.5	6,185.3	12.9	15.9	-89.97	-314.6	-609.9	868.9	844.7	24.22	35.876	
6,300.0	6,284.3	6,325.5	6,285.3	13.1	16.1	-89.97	-314.6	-609.9	868.9	844.3	24.53	35.420	
6,400.0	6,384.3	6,425.5	6,385.3	13.2	16.2	-89.97	-314.6	-609.9	868.9	844.0	24.84	34.974	
6,500.0	6,484.3	6,525.5	6,485.3	13.4	16.3	-89.97	-314.6	-609.9	868.9	843.7	25.16	34.539	
6,567.1	6,551.4	6,592.6	6,552.4	13.5	16.4	-89.97	-314.6	-609.9	868.9	843.5	25.37	34.251	
6,604.7	6,589.0	6,630.1	6,590.0	13.5	16.4	-89.97	-314.6	-609.9	868.9	843.4	25.48	34.096	
6,650.0	6,634.3	6,675.4	6,635.2	13.6	16.4	-89.93	-312.1	-609.9	868.9	843.3	25.57	33.983	
6,700.0	6,683.9	6,725.3	6,684.6	13.6	16.5	-89.88	-305.4	-609.9	868.9	843.3	25.60	33.936	
6,750.0	6,732.8	6,775.1	6,733.2	13.6	16.5	-89.84	-294.3	-609.9	868.9	843.3	25.58	33.962	
6,800.0	6,780.6	6,824.8	6,780.5	13.5	16.4	-89.80	-279.1	-609.9	868.9	843.4	25.52	34.049	
6,850.0	6,826.9	6,874.5	6,826.3	13.5	16.4	-89.76	-259.9	-609.9	868.9	843.5	25.42	34.182	
6,900.0	6,871.4	6,924.2	6,870.3	13.4	16.3	-89.72	-236.8	-609.9	868.9	843.6	25.30	34.345	
6,950.0	6,913.8	6,973.8	6,912.0	13.4	16.3	-89.68	-210.1	-609.9	868.9	843.7	25.17	34.516	
7,000.0	6,953.7	7,023.3	6,951.2	13.3	16.2	-89.64	-179.8	-609.9	868.9	843.8	25.06	34.673	
7,050.0	6,990.8	7,072.9	6,987.7	13.3	16.2	-89.61	-146.3	-609.9	868.9	843.9	24.97	34.791	
7,100.0	7,024.9	7,122.3	7,021.1	13.2	16.2	-89.58	-109.8	-609.9	868.9	844.0	24.94	34.843	
7,150.0	7,055.7	7,171.8	7,051.2	13.3	16.2	-89.56	-70.6	-609.9	868.9	843.9	24.96	34.806	
7,200.0	7,082.9	7,221.2	7,077.7	13.3	16.2	-89.53	-29.0	-609.9	868.9	843.8	25.07	34.658	
7,250.0	7,106.3	7,270.5	7,100.6	13.4	16.3	-89.51	14.7	-609.9	868.9	843.6	25.27	34.383	
7,300.0	7,125.8	7,319.9	7,119.7	13.5	16.4	-89.50	60.3	-609.9	868.9	843.3	25.57	33.977	
7,350.0	7,141.2	7,369.2	7,134.7	13.7	16.6	-89.49	107.2	-609.9	868.9	842.9	25.98	33.441	
7,400.0	7,152.4	7,418.6	7,145.7	14.0	16.8	-89.48	155.3	-609.9	868.9	842.4	26.50	32.787	
7,450.0	7,159.4	7,467.9	7,152.4	14.3	17.0	-89.48	204.1	-609.9	868.9	841.8	27.12	32.034	
7,504.7	7,162.0	7,521.8	7,155.0	14.7	17.3	-89.48	258.0	-609.9	868.9	841.0	27.91	31.130	
7,600.0	7,162.0	7,617.1	7,155.0	15.4	18.0	-89.48	353.3	-609.9	868.9	839.3	29.56	29.395	
7,700.0	7,162.0	7,717.1	7,155.0	16.4	18.8	-89.48	453.3	-609.9	868.9	837.3	31.57	27.527	
7,800.0	7,162.0	7,817.1	7,155.0	17.5	19.8	-89.48	553.3	-609.9	868.9	835.1	33.82	25.694	
7,900.0	7,162.0	7,917.1	7,155.0	18.7	20.8	-89.48	653.3	-609.9	868.9	832.6	36.27	23.956	
8,000.0	7,162.0	8,017.1	7,155.0	20.0	22.0	-89.48	753.3	-609.9	868.9	830.0	38.88	22.346	
8,100.0	7,162.0	8,117.1	7,155.0	21.3	23.2	-89.48	853.3	-609.9	868.9	827.3	41.63	20.872	
8,200.0	7,162.0	8,217.1	7,155.0	22.7	24.5	-89.48	953.3	-609.9	868.9	824.4	44.48	19.533	
8,300.0	7,162.0	8,317.1	7,155.0	24.1	25.8	-89.48	1,053.3	-609.9	868.9	821.5	47.43	18.321	
8,400.0	7,162.0	8,417.1	7,155.0	25.6	27.2	-89.48	1,153.3	-609.9	868.9	818.5	50.44	17.226	
8,500.0	7,162.0	8,517.1	7,155.0	27.1	28.7	-89.48	1,253.3	-609.9	868.9	815.4	53.51	16.237	
8,600.0	7,162.0	8,617.1	7,155.0	28.7	30.1	-89.48	1,353.3	-609.9	868.9	812.3	56.64	15.341	
8,700.0	7,162.0	8,717.1	7,155.0	30.2	31.6	-89.48	1,453.3	-609.9	868.9	809.1	59.81	14.529	
8,800.0	7,162.0	8,817.1	7,155.0	31.8	33.1	-89.48	1,553.3	-609.9	868.9	805.9	63.01	13.790	
8,900.0	7,162.0	8,917.1	7,155.0	33.4	34.7	-89.48	1,653.3	-609.9	868.9	802.7	66.24	13.117	

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 4E-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 4E-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
9,000.0	7,162.0	9,017.1	7,155.0	35.0	36.2	-89.48	1,753.3	-609.9	868.9	799.4	69.50	12.501	
9,100.0	7,162.0	9,117.1	7,155.0	36.7	37.8	-89.48	1,853.3	-609.9	868.9	796.1	72.79	11.937	
9,200.0	7,162.0	9,217.1	7,155.0	38.3	39.4	-89.48	1,953.3	-609.9	868.9	792.8	76.09	11.419	
9,300.0	7,162.0	9,317.1	7,155.0	40.0	41.0	-89.48	2,053.3	-609.9	868.9	789.5	79.41	10.941	
9,400.0	7,162.0	9,417.1	7,155.0	41.6	42.6	-89.48	2,153.3	-609.9	868.9	786.1	82.75	10.500	
9,500.0	7,162.0	9,517.1	7,155.0	43.3	44.3	-89.48	2,253.3	-609.9	868.9	782.8	86.10	10.092	
9,600.0	7,162.0	9,617.1	7,155.0	45.0	45.9	-89.48	2,353.3	-609.9	868.9	779.4	89.46	9.712	
9,700.0	7,162.0	9,717.1	7,155.0	46.6	47.5	-89.48	2,453.3	-609.9	868.9	776.1	92.84	9.359	
9,800.0	7,162.0	9,817.1	7,155.0	48.3	49.2	-89.48	2,553.3	-609.9	868.9	772.7	96.22	9.030	
9,900.0	7,162.0	9,917.1	7,155.0	50.0	50.9	-89.48	2,653.3	-609.9	868.9	769.3	99.61	8.723	
10,000.0	7,162.0	10,017.1	7,155.0	51.7	52.5	-89.48	2,753.3	-609.9	868.9	765.9	103.01	8.435	
10,100.0	7,162.0	10,117.1	7,155.0	53.4	54.2	-89.48	2,853.3	-609.9	868.9	762.5	106.42	8.165	
10,200.0	7,162.0	10,217.1	7,155.0	55.1	55.9	-89.48	2,953.3	-609.9	868.9	759.1	109.83	7.911	
10,300.0	7,162.0	10,317.1	7,155.0	56.8	57.5	-89.48	3,053.3	-609.9	868.9	755.6	113.25	7.673	
10,400.0	7,162.0	10,417.1	7,155.0	58.5	59.2	-89.48	3,153.3	-609.9	868.9	752.2	116.67	7.447	
10,500.0	7,162.0	10,517.1	7,155.0	60.2	60.9	-89.48	3,253.3	-609.9	868.9	748.8	120.10	7.235	
10,600.0	7,162.0	10,617.1	7,155.0	61.9	62.6	-89.48	3,353.3	-609.9	868.9	745.4	123.53	7.034	
10,700.0	7,162.0	10,717.1	7,155.0	63.7	64.3	-89.48	3,453.3	-609.9	868.9	741.9	126.97	6.843	
10,800.0	7,162.0	10,817.1	7,155.0	65.4	66.0	-89.48	3,553.3	-609.9	868.9	738.5	130.41	6.663	
10,900.0	7,162.0	10,917.1	7,155.0	67.1	67.7	-89.48	3,653.3	-609.9	868.9	735.0	133.86	6.491	
11,000.0	7,162.0	11,017.1	7,155.0	68.8	69.4	-89.48	3,753.3	-609.9	868.9	731.6	137.30	6.328	
11,100.0	7,162.0	11,117.1	7,155.0	70.5	71.1	-89.48	3,853.3	-609.9	868.9	728.1	140.75	6.173	
11,150.0	7,162.0	11,167.1	7,155.0	71.4	72.0	-89.48	3,903.3	-609.9	868.9	726.4	142.48	6.098	
11,200.0	7,162.0	11,217.1	7,155.0	72.2	72.8	-89.47	3,953.3	-609.9	868.2	723.9	144.31	6.017	
11,300.0	7,162.0	11,317.0	7,155.0	74.0	74.5	-89.47	4,053.1	-609.9	862.9	715.3	147.67	5.844	
11,400.0	7,162.0	11,416.4	7,155.0	75.7	76.2	-89.46	4,152.6	-609.9	852.4	701.8	150.63	5.659	
11,500.0	7,162.0	11,515.1	7,155.0	77.3	77.9	-89.44	4,251.3	-609.9	836.6	683.4	153.17	5.462	
11,600.0	7,162.0	11,612.9	7,155.0	79.0	79.6	-89.42	4,349.1	-609.9	815.6	660.3	155.26	5.253	
11,700.0	7,162.0	11,709.4	7,155.0	80.7	81.3	-89.39	4,445.6	-609.9	789.5	632.6	156.89	5.032	
11,747.9	7,162.0	11,752.2	7,155.0	81.4	82.0	-89.38	4,488.3	-609.9	775.2	617.7	157.45	4.923 SF	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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	-88.48	0.4	-14.8	14.8				
100.0	100.0	100.0	100.0	0.1	0.1	-88.48	0.4	-14.8	14.8	14.6	0.24	60.683	
200.0	200.0	200.0	200.0	0.3	0.3	-88.48	0.4	-14.8	14.8	14.2	0.59	24.987	
300.0	300.0	300.0	300.0	0.5	0.5	-88.48	0.4	-14.8	14.8	13.9	0.94	15.733	CC, ES
400.0	400.0	399.6	399.6	0.6	0.6	-92.53	-0.7	-16.2	16.2	14.9	1.29	12.504	
500.0	500.0	498.9	498.7	0.8	0.8	120.17	-4.0	-20.1	21.0	19.3	1.64	12.763	
600.0	600.0	598.1	597.6	1.0	1.0	116.23	-9.4	-26.5	29.6	27.6	2.00	14.788	
700.0	699.9	697.6	696.7	1.2	1.3	115.95	-15.1	-33.4	39.6	37.2	2.37	16.724	
800.0	799.7	797.0	795.7	1.4	1.5	117.54	-20.8	-40.3	50.3	47.6	2.74	18.352	
853.0	852.6	849.7	848.1	1.5	1.6	118.76	-23.9	-43.9	56.4	53.4	2.95	19.134	
900.0	899.4	896.3	894.6	1.6	1.7	119.85	-26.5	-47.1	61.9	58.7	3.13	19.770	
1,000.0	999.1	995.6	993.5	1.8	1.9	121.63	-32.3	-54.0	73.6	70.1	3.52	20.902	
1,100.0	1,098.8	1,094.9	1,092.3	2.0	2.2	122.93	-38.0	-60.9	85.4	81.5	3.92	21.805	
1,200.0	1,198.4	1,194.2	1,191.2	2.2	2.4	123.90	-43.7	-67.8	97.2	92.9	4.31	22.540	
1,300.0	1,298.1	1,293.5	1,290.1	2.4	2.6	124.67	-49.4	-74.6	109.0	104.3	4.71	23.149	
1,400.0	1,397.8	1,392.7	1,389.0	2.6	2.9	125.28	-55.2	-81.5	120.9	115.8	5.11	23.661	
1,500.0	1,497.5	1,492.0	1,487.9	2.9	3.1	125.79	-60.9	-88.4	132.8	127.2	5.51	24.098	
1,600.0	1,597.2	1,591.3	1,586.8	3.1	3.3	126.21	-66.6	-95.2	144.6	138.7	5.91	24.474	
1,700.0	1,696.9	1,690.6	1,685.7	3.3	3.6	126.57	-72.3	-102.1	156.5	150.2	6.31	24.802	
1,800.0	1,796.6	1,789.9	1,784.5	3.5	3.8	126.88	-78.1	-109.0	168.4	161.7	6.71	25.090	
1,900.0	1,896.3	1,889.2	1,883.4	3.7	4.0	127.15	-83.8	-115.8	180.3	173.2	7.11	25.345	
2,000.0	1,995.9	1,988.5	1,982.3	4.0	4.3	127.38	-89.5	-122.7	192.2	184.7	7.52	25.572	
2,100.0	2,095.6	2,087.8	2,081.2	4.2	4.5	127.59	-95.2	-129.6	204.1	196.2	7.92	25.775	
2,200.0	2,195.3	2,187.0	2,180.1	4.4	4.7	127.77	-101.0	-136.4	216.0	207.7	8.32	25.959	
2,300.0	2,295.0	2,286.3	2,279.0	4.6	4.9	127.94	-106.7	-143.3	227.9	219.2	8.72	26.125	
2,400.0	2,394.7	2,385.6	2,377.8	4.8	5.2	128.08	-112.4	-150.2	239.8	230.7	9.13	26.276	
2,500.0	2,494.4	2,484.9	2,476.7	5.1	5.4	128.22	-118.1	-157.1	251.7	242.2	9.53	26.414	
2,600.0	2,594.1	2,584.2	2,575.6	5.3	5.6	128.34	-123.9	-163.9	263.6	253.7	9.93	26.541	
2,700.0	2,693.8	2,683.5	2,674.5	5.5	5.9	128.45	-129.6	-170.8	275.5	265.2	10.33	26.658	
2,800.0	2,793.4	2,782.8	2,773.4	5.7	6.1	128.56	-135.3	-177.7	287.4	276.7	10.74	26.766	
2,900.0	2,893.1	2,882.0	2,872.3	5.9	6.3	128.65	-141.0	-184.5	299.3	288.2	11.14	26.866	
3,000.0	2,992.8	2,981.3	2,971.1	6.2	6.6	128.74	-146.8	-191.4	311.2	299.7	11.54	26.959	
3,100.0	3,092.5	3,080.6	3,070.0	6.4	6.8	128.82	-152.5	-198.3	323.1	311.2	11.95	27.046	
3,200.0	3,192.2	3,179.9	3,168.9	6.6	7.0	128.89	-158.2	-205.1	335.1	322.7	12.35	27.126	
3,300.0	3,291.9	3,279.2	3,267.8	6.8	7.3	128.96	-163.9	-212.0	347.0	334.2	12.76	27.202	
3,400.0	3,391.6	3,378.5	3,366.7	7.1	7.5	129.03	-169.6	-218.9	358.9	345.7	13.16	27.273	
3,500.0	3,491.3	3,477.8	3,465.6	7.3	7.7	129.09	-175.4	-225.7	370.8	357.2	13.56	27.340	
3,600.0	3,590.9	3,577.1	3,564.4	7.5	8.0	129.15	-181.1	-232.6	382.7	368.7	13.97	27.403	
3,700.0	3,690.6	3,676.3	3,663.3	7.7	8.2	129.20	-186.8	-239.5	394.6	380.2	14.37	27.462	
3,800.0	3,790.3	3,775.6	3,762.2	7.9	8.4	129.25	-192.5	-246.4	406.5	391.8	14.77	27.518	
3,900.0	3,890.0	3,874.9	3,861.1	8.2	8.7	129.30	-198.3	-253.2	418.4	403.3	15.18	27.571	
4,000.0	3,989.7	3,974.2	3,960.0	8.4	8.9	129.34	-204.0	-260.1	430.4	414.8	15.58	27.621	
4,100.0	4,089.4	4,073.5	4,058.9	8.6	9.1	129.39	-209.7	-267.0	442.3	426.3	15.98	27.668	
4,200.0	4,189.1	4,172.8	4,157.7	8.8	9.4	129.43	-215.4	-273.8	454.2	437.8	16.39	27.714	
4,300.0	4,288.8	4,272.1	4,256.6	9.1	9.6	129.46	-221.2	-280.7	466.1	449.3	16.79	27.757	
4,400.0	4,388.4	4,371.4	4,355.5	9.3	9.8	129.50	-226.9	-287.6	478.0	460.8	17.20	27.798	
4,500.0	4,488.1	4,470.6	4,454.4	9.5	10.1	129.53	-232.6	-294.4	489.9	472.3	17.60	27.837	
4,600.0	4,587.8	4,569.9	4,553.3	9.7	10.3	129.57	-238.3	-301.3	501.9	483.8	18.00	27.874	
4,700.0	4,687.5	4,669.2	4,652.2	9.9	10.5	129.60	-244.1	-308.2	513.8	495.4	18.41	27.910	
4,800.0	4,787.2	4,768.5	4,751.0	10.2	10.8	129.63	-249.8	-315.0	525.7	506.9	18.81	27.944	
4,900.0	4,886.9	4,867.8	4,849.9	10.4	11.0	129.66	-255.5	-321.9	537.6	518.4	19.22	27.976	
5,000.0	4,986.6	4,967.1	4,948.8	10.6	11.2	129.69	-261.2	-328.8	549.5	529.9	19.62	28.008	

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 4E-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 4E-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
5,100.0	5,086.3	5,066.4	5,047.7	10.8	11.5	129.71	-267.0	-335.6	561.4	541.4	20.02	28.038	
5,200.0	5,185.9	5,165.7	5,146.6	11.0	11.7	129.74	-272.7	-342.5	573.3	552.9	20.43	28.066	
5,300.0	5,285.6	5,264.9	5,245.5	11.3	11.9	129.76	-278.4	-349.4	585.3	564.4	20.83	28.094	
5,400.0	5,385.3	5,364.2	5,344.3	11.5	12.2	129.78	-284.1	-356.3	597.2	575.9	21.24	28.121	
5,500.0	5,485.0	5,463.5	5,443.2	11.7	12.4	129.81	-289.9	-363.1	609.1	587.5	21.64	28.146	
5,562.6	5,547.4	5,525.7	5,505.2	11.9	12.6	129.82	-293.4	-367.4	616.6	594.7	21.89	28.162	
5,600.0	5,584.7	5,562.8	5,542.1	11.9	12.6	129.85	-295.6	-370.0	620.9	598.9	22.05	28.164	
5,700.0	5,684.5	5,662.2	5,641.1	12.1	12.9	129.85	-301.3	-376.9	631.9	609.4	22.45	28.152	
5,800.0	5,784.4	5,761.7	5,740.2	12.3	13.1	129.72	-307.0	-383.8	641.7	618.9	22.83	28.111	
5,900.0	5,884.3	5,881.8	5,860.0	12.5	13.3	129.54	-312.4	-390.2	648.9	625.7	23.21	27.952	
6,000.0	5,984.3	6,002.9	5,981.0	12.6	13.5	129.46	-314.6	-392.8	651.8	628.2	23.57	27.656	
6,015.7	6,000.0	6,021.9	6,000.0	12.6	13.5	-89.97	-314.6	-392.8	651.8	628.2	23.62	27.596	
6,100.0	6,084.3	6,106.2	6,084.3	12.8	13.7	-89.97	-314.6	-392.8	651.8	627.9	23.88	27.294	
6,200.0	6,184.3	6,206.2	6,184.3	12.9	13.8	-89.97	-314.6	-392.8	651.8	627.6	24.19	26.944	
6,300.0	6,284.3	6,306.2	6,284.3	13.1	13.9	-89.97	-314.6	-392.8	651.8	627.3	24.50	26.602	
6,400.0	6,384.3	6,406.2	6,384.3	13.2	14.1	-89.90	-313.9	-392.8	651.8	627.0	24.80	26.279	
6,407.3	6,391.7	6,413.5	6,391.7	13.2	14.1	-89.87	-313.5	-392.8	651.8	627.0	24.82	26.261	
6,500.0	6,484.3	6,504.3	6,481.4	13.4	14.1	-88.75	-300.7	-392.8	652.0	627.0	25.00	26.077	
6,604.7	6,589.0	6,600.0	6,572.6	13.5	14.0	-86.23	-272.1	-392.8	653.4	628.3	25.11	26.017	
6,650.0	6,634.3	6,637.9	6,607.2	13.6	14.0	-84.87	-256.6	-392.7	654.7	629.6	25.11	26.071	
6,700.0	6,683.9	6,679.4	6,643.9	13.6	13.9	-83.38	-237.1	-392.7	656.7	631.6	25.07	26.189	
6,750.0	6,732.8	6,720.1	6,678.3	13.6	13.9	-81.94	-215.4	-392.7	659.0	634.0	25.00	26.361	
6,800.0	6,780.6	6,760.0	6,710.4	13.5	13.8	-80.55	-191.8	-392.6	661.6	636.7	24.89	26.576	
6,850.0	6,826.9	6,800.0	6,741.0	13.5	13.8	-79.21	-166.0	-392.6	664.4	639.6	24.77	26.825	
6,900.0	6,871.4	6,837.8	6,768.2	13.4	13.8	-77.99	-139.7	-392.5	667.3	642.7	24.63	27.089	
6,950.0	6,913.8	6,875.9	6,793.7	13.4	13.8	-76.82	-111.4	-392.5	670.4	645.9	24.50	27.360	
7,000.0	6,953.7	6,913.6	6,817.0	13.3	13.8	-75.73	-81.9	-392.4	673.4	649.0	24.38	27.622	
7,050.0	6,990.8	6,950.0	6,837.7	13.3	13.8	-74.75	-51.9	-392.4	676.4	652.1	24.28	27.853	
7,100.0	7,024.9	6,987.6	6,857.0	13.2	13.8	-73.83	-19.6	-392.3	679.2	655.0	24.23	28.036	
7,150.0	7,055.7	7,024.2	6,873.7	13.3	13.9	-73.02	12.9	-392.3	681.8	657.6	24.23	28.140	
7,200.0	7,082.9	7,060.5	6,888.3	13.3	14.0	-72.32	46.1	-392.2	684.2	659.9	24.28	28.181	
7,250.0	7,106.3	7,100.0	6,901.6	13.4	14.1	-71.68	83.3	-392.2	686.3	661.9	24.41	28.113	
7,300.0	7,125.8	7,132.5	6,910.7	13.5	14.2	-71.22	114.5	-392.1	688.1	663.5	24.63	27.936	
7,350.0	7,141.2	7,168.3	6,918.5	13.7	14.4	-70.83	149.4	-392.0	689.5	664.5	24.94	27.645	
7,400.0	7,152.4	7,200.0	6,923.7	14.0	14.6	-70.56	180.7	-392.0	690.5	665.2	25.32	27.270	
7,450.0	7,159.4	7,239.5	6,927.7	14.3	14.8	-70.37	220.0	-391.9	691.1	665.3	25.85	26.734	
7,504.7	7,162.0	7,278.6	6,929.0	14.7	15.1	-70.31	259.1	-391.9	691.3	664.8	26.51	26.078	
7,600.0	7,162.0	7,373.9	6,929.0	15.4	15.9	-70.30	354.4	-391.7	691.1	663.1	28.08	24.610	
7,700.0	7,162.0	7,473.9	6,929.0	16.4	16.8	-70.30	454.4	-391.5	691.0	661.0	29.99	23.041	
7,800.0	7,162.0	7,573.9	6,929.0	17.5	17.8	-70.29	554.4	-391.4	690.8	658.7	32.12	21.507	
7,900.0	7,162.0	7,673.9	6,929.0	18.7	19.0	-70.29	654.4	-391.2	690.7	656.2	34.44	20.054	
8,000.0	7,162.0	7,773.9	6,929.0	20.0	20.3	-70.28	754.4	-391.0	690.5	653.6	36.91	18.709	
8,100.0	7,162.0	7,873.9	6,929.0	21.3	21.6	-70.28	854.4	-390.9	690.4	650.9	39.50	17.477	
8,200.0	7,162.0	7,973.9	6,929.0	22.7	23.0	-70.27	954.4	-390.7	690.2	648.0	42.19	16.359	
8,300.0	7,162.0	8,073.9	6,929.0	24.1	24.4	-70.27	1,054.4	-390.5	690.0	645.1	44.96	15.347	
8,400.0	7,162.0	8,173.9	6,929.0	25.6	25.8	-70.26	1,154.4	-390.4	689.9	642.1	47.80	14.432	
8,500.0	7,162.0	8,273.9	6,929.0	27.1	27.3	-70.26	1,254.4	-390.2	689.7	639.0	50.70	13.604	
8,600.0	7,162.0	8,373.9	6,929.0	28.7	28.9	-70.26	1,354.4	-390.0	689.6	635.9	53.64	12.855	
8,700.0	7,162.0	8,473.9	6,929.0	30.2	30.4	-70.25	1,454.4	-389.9	689.4	632.8	56.63	12.175	
8,800.0	7,162.0	8,573.9	6,929.0	31.8	32.0	-70.25	1,554.4	-389.7	689.2	629.6	59.64	11.556	
8,900.0	7,162.0	8,673.9	6,929.0	33.4	33.6	-70.24	1,654.4	-389.5	689.1	626.4	62.69	10.993	
9,000.0	7,162.0	8,773.9	6,929.0	35.0	35.2	-70.24	1,754.4	-389.3	688.9	623.2	65.76	10.477	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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
9,100.0	7,162.0	8,873.9	6,929.0	36.7	36.8	-70.23	1,854.4	-389.2	688.8	619.9	68.85	10.004	
9,200.0	7,162.0	8,973.9	6,929.0	38.3	38.4	-70.23	1,954.4	-389.0	688.6	616.7	71.96	9.570	
9,300.0	7,162.0	9,073.9	6,929.0	40.0	40.1	-70.22	2,054.4	-388.8	688.5	613.4	75.08	9.169	
9,400.0	7,162.0	9,173.9	6,929.0	41.6	41.7	-70.22	2,154.4	-388.7	688.3	610.1	78.22	8.799	
9,500.0	7,162.0	9,273.9	6,929.0	43.3	43.4	-70.21	2,254.4	-388.5	688.1	606.8	81.38	8.456	
9,600.0	7,162.0	9,373.9	6,929.0	45.0	45.1	-70.21	2,354.4	-388.3	688.0	603.4	84.54	8.138	
9,700.0	7,162.0	9,473.9	6,929.0	46.6	46.7	-70.20	2,454.4	-388.2	687.8	600.1	87.72	7.842	
9,800.0	7,162.0	9,573.9	6,929.0	48.3	48.4	-70.20	2,554.4	-388.0	687.7	596.8	90.90	7.565	
9,900.0	7,162.0	9,673.9	6,929.0	50.0	50.1	-70.19	2,654.4	-387.8	687.5	593.4	94.09	7.307	
10,000.0	7,162.0	9,773.9	6,929.0	51.7	51.8	-70.19	2,754.4	-387.7	687.4	590.1	97.29	7.065	
10,100.0	7,162.0	9,873.9	6,929.0	53.4	53.5	-70.18	2,854.4	-387.5	687.2	586.7	100.49	6.838	
10,200.0	7,162.0	9,973.9	6,929.0	55.1	55.2	-70.18	2,954.4	-387.3	687.0	583.3	103.70	6.625	
10,300.0	7,162.0	10,073.9	6,929.0	56.8	56.9	-70.17	3,054.4	-387.2	686.9	580.0	106.92	6.424	
10,400.0	7,162.0	10,173.9	6,929.0	58.5	58.6	-70.17	3,154.4	-387.0	686.7	576.6	110.14	6.235	
10,500.0	7,162.0	10,273.9	6,929.0	60.2	60.3	-70.17	3,254.4	-386.8	686.6	573.2	113.36	6.056	
10,600.0	7,162.0	10,373.9	6,929.0	61.9	62.0	-70.16	3,354.4	-386.7	686.4	569.8	116.59	5.887	
10,700.0	7,162.0	10,473.9	6,929.0	63.7	63.7	-70.16	3,454.4	-386.5	686.2	566.4	119.82	5.727	
10,800.0	7,162.0	10,573.9	6,929.0	65.4	65.4	-70.15	3,554.4	-386.3	686.1	563.0	123.06	5.575	
10,900.0	7,162.0	10,673.9	6,929.0	67.1	67.1	-70.15	3,654.4	-386.2	685.9	559.6	126.30	5.431	
11,000.0	7,162.0	10,773.9	6,929.0	68.8	68.9	-70.14	3,754.4	-386.0	685.8	556.2	129.54	5.294	
11,100.0	7,162.0	10,873.9	6,929.0	70.5	70.6	-70.14	3,854.4	-385.8	685.6	552.8	132.78	5.163	
11,150.0	7,162.0	10,923.9	6,929.0	71.4	71.4	-70.13	3,904.4	-385.7	685.5	551.1	134.41	5.100	
11,200.0	7,162.0	10,973.9	6,929.0	72.2	72.3	-70.11	3,954.4	-385.7	684.8	548.8	136.00	5.036	
11,300.0	7,162.0	11,073.8	6,929.0	74.0	74.0	-69.90	4,054.2	-385.5	679.7	540.9	138.78	4.898	
11,400.0	7,162.0	11,173.2	6,929.0	75.7	75.7	-69.47	4,153.6	-385.3	669.6	528.7	141.00	4.749	
11,500.0	7,162.0	11,271.9	6,929.0	77.3	77.4	-68.82	4,252.3	-385.2	654.7	512.1	142.58	4.592	
11,600.0	7,162.0	11,369.6	6,929.0	79.0	79.1	-67.90	4,350.1	-385.0	635.0	491.5	143.47	4.426	
11,700.0	7,162.0	11,466.1	6,929.0	80.7	80.8	-66.68	4,446.5	-384.8	610.6	467.0	143.56	4.253	
11,747.9	7,162.0	11,508.6	6,929.0	81.4	81.5	-66.00	4,489.1	-384.8	597.3	454.1	143.28	4.169	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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	-86.80	0.4	-7.3	7.3				
100.0	100.0	100.0	100.0	0.1	0.1	-86.80	0.4	-7.3	7.3	7.0	0.24	29.805	
200.0	200.0	200.0	200.0	0.3	0.3	-86.80	0.4	-7.3	7.3	6.7	0.59	12.273	
300.0	300.0	300.0	300.0	0.5	0.5	-86.80	0.4	-7.3	7.3	6.3	0.94	7.727	
339.7	339.7	339.7	339.7	0.5	0.5	-86.80	0.4	-7.3	7.3	6.2	1.08	6.737	CC
400.0	400.0	400.0	400.0	0.6	0.6	-88.50	0.2	-7.3	7.3	6.0	1.29	5.660	ES
500.0	500.0	500.0	499.9	0.8	0.8	123.43	-1.5	-7.6	8.2	6.6	1.64	4.989	
600.0	600.0	599.9	599.8	1.0	1.0	117.05	-5.0	-8.2	10.6	8.6	2.00	5.317	
700.0	699.9	699.7	699.5	1.2	1.2	113.21	-10.1	-9.0	14.6	12.2	2.37	6.161	
800.0	799.7	799.6	799.2	1.4	1.4	113.74	-16.0	-10.0	19.6	16.9	2.75	7.130	
853.0	852.6	852.5	852.0	1.5	1.5	115.55	-19.2	-10.5	22.6	19.6	2.96	7.632	
900.0	899.4	899.4	898.8	1.6	1.6	117.26	-21.9	-11.0	25.3	22.1	3.14	8.055	
1,000.0	999.1	999.2	998.5	1.8	1.8	119.90	-27.9	-12.0	31.2	27.6	3.53	8.817	
1,100.0	1,098.8	1,099.0	1,098.1	2.0	2.0	121.70	-33.8	-13.0	37.1	33.1	3.93	9.431	
1,200.0	1,198.4	1,198.9	1,197.7	2.2	2.2	123.01	-39.7	-14.0	43.0	38.7	4.33	9.935	
1,300.0	1,298.1	1,298.7	1,297.4	2.4	2.4	123.99	-45.6	-15.0	49.0	44.2	4.73	10.355	
1,400.0	1,397.8	1,398.5	1,397.0	2.6	2.6	124.77	-51.5	-15.9	54.9	49.8	5.13	10.710	
1,500.0	1,497.5	1,498.3	1,496.7	2.9	2.8	125.39	-57.4	-16.9	60.9	55.4	5.53	11.013	
1,600.0	1,597.2	1,598.1	1,596.3	3.1	3.0	125.90	-63.4	-17.9	66.9	61.0	5.93	11.275	
1,700.0	1,696.9	1,698.0	1,695.9	3.3	3.2	126.33	-69.3	-18.9	72.9	66.5	6.33	11.503	
1,800.0	1,796.6	1,797.8	1,795.6	3.5	3.4	126.69	-75.2	-19.9	78.9	72.1	6.74	11.704	
1,900.0	1,896.3	1,897.6	1,895.2	3.7	3.6	127.00	-81.1	-20.9	84.8	77.7	7.14	11.882	
2,000.0	1,995.9	1,997.4	1,994.9	4.0	3.8	127.27	-87.0	-21.9	90.8	83.3	7.54	12.041	
2,100.0	2,095.6	2,097.2	2,094.5	4.2	4.0	127.50	-92.9	-22.9	96.8	88.9	7.95	12.184	
2,200.0	2,195.3	2,197.1	2,194.1	4.4	4.2	127.71	-98.9	-23.8	102.8	94.5	8.35	12.313	
2,300.0	2,295.0	2,296.9	2,293.8	4.6	4.4	127.90	-104.8	-24.8	108.8	100.1	8.76	12.430	
2,400.0	2,394.7	2,396.7	2,393.4	4.8	4.6	128.07	-110.7	-25.8	114.8	105.7	9.16	12.536	
2,500.0	2,494.4	2,496.5	2,493.0	5.1	4.8	128.21	-116.6	-26.8	120.8	111.3	9.56	12.633	
2,600.0	2,594.1	2,596.3	2,592.7	5.3	5.0	128.35	-122.5	-27.8	126.8	116.9	9.97	12.723	
2,700.0	2,693.8	2,696.2	2,692.3	5.5	5.2	128.47	-128.4	-28.8	132.8	122.5	10.37	12.805	
2,800.0	2,793.4	2,796.0	2,792.0	5.7	5.4	128.59	-134.4	-29.8	138.8	128.1	10.78	12.881	
2,900.0	2,893.1	2,895.8	2,891.6	5.9	5.6	128.69	-140.3	-30.8	144.8	133.7	11.18	12.952	
3,000.0	2,992.8	2,995.6	2,991.2	6.2	5.8	128.79	-146.2	-31.7	150.8	139.3	11.59	13.017	
3,100.0	3,092.5	3,095.4	3,090.9	6.4	6.0	128.87	-152.1	-32.7	156.8	144.8	11.99	13.078	
3,200.0	3,192.2	3,195.2	3,190.5	6.6	6.2	128.95	-158.0	-33.7	162.8	150.4	12.40	13.135	
3,300.0	3,291.9	3,295.1	3,290.2	6.8	6.4	129.03	-163.9	-34.7	168.8	156.0	12.80	13.189	
3,400.0	3,391.6	3,394.9	3,389.8	7.1	6.6	129.10	-169.8	-35.7	174.9	161.6	13.21	13.239	
3,500.0	3,491.3	3,494.7	3,489.4	7.3	6.8	129.17	-175.8	-36.7	180.9	167.2	13.61	13.286	
3,600.0	3,590.9	3,594.5	3,589.1	7.5	7.0	129.23	-181.7	-37.7	186.9	172.8	14.02	13.330	
3,700.0	3,690.6	3,694.3	3,688.7	7.7	7.2	129.29	-187.6	-38.7	192.9	178.4	14.42	13.372	
3,800.0	3,790.3	3,794.2	3,788.4	7.9	7.4	129.34	-193.5	-39.7	198.9	184.0	14.83	13.412	
3,900.0	3,890.0	3,894.0	3,888.0	8.2	7.6	129.39	-199.4	-40.6	204.9	189.6	15.23	13.449	
4,000.0	3,989.7	3,993.8	3,987.6	8.4	7.8	129.44	-205.3	-41.6	210.9	195.2	15.64	13.485	
4,100.0	4,089.4	4,093.6	4,087.3	8.6	8.0	129.48	-211.3	-42.6	216.9	200.8	16.04	13.519	
4,200.0	4,189.1	4,193.4	4,186.9	8.8	8.2	129.53	-217.2	-43.6	222.9	206.4	16.45	13.551	
4,300.0	4,288.8	4,293.3	4,286.6	9.1	8.4	129.57	-223.1	-44.6	228.9	212.0	16.85	13.581	
4,400.0	4,388.4	4,393.1	4,386.2	9.3	8.7	129.61	-229.0	-45.6	234.9	217.6	17.26	13.610	
4,500.0	4,488.1	4,492.9	4,485.8	9.5	8.9	129.64	-234.9	-46.6	240.9	223.2	17.66	13.638	
4,600.0	4,587.8	4,592.7	4,585.5	9.7	9.1	129.68	-240.8	-47.6	246.9	228.8	18.07	13.664	
4,700.0	4,687.5	4,692.5	4,685.1	9.9	9.3	129.71	-246.8	-48.5	252.9	234.4	18.48	13.689	
4,800.0	4,787.2	4,792.4	4,784.7	10.2	9.5	129.74	-252.7	-49.5	258.9	240.0	18.88	13.714	
4,900.0	4,886.9	4,892.2	4,884.4	10.4	9.7	129.77	-258.6	-50.5	264.9	245.6	19.29	13.737	

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 4E-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 4E-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
5,000.0	4,986.6	4,992.0	4,984.0	10.6	9.9	129.80	-264.5	-51.5	270.9	251.2	19.69	13.759	
5,100.0	5,086.3	5,091.8	5,083.7	10.8	10.1	129.83	-270.4	-52.5	276.9	256.8	20.10	13.780	
5,200.0	5,185.9	5,191.6	5,183.3	11.0	10.3	129.86	-276.3	-53.5	282.9	262.4	20.50	13.801	
5,300.0	5,285.6	5,291.5	5,282.9	11.3	10.5	129.88	-282.2	-54.5	289.0	268.0	20.91	13.820	
5,400.0	5,385.3	5,391.3	5,382.6	11.5	10.7	129.91	-288.2	-55.5	295.0	273.6	21.31	13.839	
5,500.0	5,485.0	5,491.1	5,482.2	11.7	10.9	129.93	-294.1	-56.4	301.0	279.2	21.72	13.857	
5,562.6	5,547.4	5,553.6	5,544.6	11.9	11.0	129.94	-297.8	-57.1	304.7	282.8	21.97	13.868	
5,600.0	5,584.7	5,590.9	5,581.9	11.9	11.1	129.95	-300.0	-57.4	306.9	284.8	22.12	13.871	
5,700.0	5,684.5	5,691.0	5,681.8	12.1	11.3	129.81	-305.9	-58.4	311.9	289.4	22.52	13.848	
5,800.0	5,784.4	5,791.8	5,782.5	12.3	11.5	129.64	-310.5	-59.2	315.6	292.7	22.89	13.786	
5,900.0	5,884.3	5,892.7	5,883.3	12.5	11.6	129.54	-313.4	-59.7	317.9	294.7	23.24	13.682	
6,000.0	5,984.3	5,993.6	5,984.2	12.6	11.8	129.50	-314.6	-59.9	318.9	295.3	23.55	13.540	
6,015.7	6,000.0	6,009.4	6,000.0	12.6	11.8	-89.93	-314.6	-59.9	318.9	295.3	23.60	13.513	
6,100.0	6,084.3	6,093.7	6,084.3	12.8	12.0	-89.93	-314.6	-59.9	318.9	295.0	23.86	13.365	
6,200.0	6,184.3	6,193.7	6,184.3	12.9	12.1	-89.93	-314.6	-59.9	318.9	294.7	24.17	13.194	
6,300.0	6,284.3	6,293.7	6,284.3	13.1	12.3	-89.93	-314.6	-59.9	318.9	294.4	24.48	13.026	
6,400.0	6,384.3	6,393.7	6,384.3	13.2	12.4	-89.93	-314.6	-59.9	318.9	294.1	24.79	12.862	
6,457.0	6,441.4	6,450.7	6,441.4	13.3	12.5	-89.93	-314.6	-59.9	318.9	293.9	24.97	12.770	
6,500.0	6,484.3	6,493.7	6,484.2	13.4	12.6	-89.73	-313.5	-59.9	318.9	293.8	25.08	12.714	
6,604.7	6,589.0	6,595.6	6,584.9	13.5	12.6	-86.99	-298.3	-59.9	319.3	294.2	25.18	12.681	
6,650.0	6,634.3	6,638.0	6,625.7	13.6	12.6	-85.14	-286.7	-59.9	320.1	294.9	25.14	12.730	
6,700.0	6,683.9	6,684.0	6,668.8	13.6	12.5	-83.15	-270.8	-59.9	321.3	296.2	25.06	12.822	
6,750.0	6,732.8	6,729.2	6,709.8	13.6	12.5	-81.23	-251.8	-59.9	322.8	297.9	24.94	12.946	
6,800.0	6,780.6	6,773.7	6,748.7	13.5	12.4	-79.40	-230.0	-59.9	324.7	299.9	24.79	13.095	
6,850.0	6,826.9	6,817.6	6,785.2	13.5	12.3	-77.66	-205.6	-59.9	326.7	302.1	24.64	13.262	
6,900.0	6,871.4	6,861.0	6,819.3	13.4	12.3	-76.03	-178.9	-59.9	328.9	304.5	24.47	13.440	
6,950.0	6,913.8	6,903.8	6,850.9	13.4	12.3	-74.51	-150.1	-59.9	331.3	306.9	24.32	13.621	
7,000.0	6,953.7	6,946.1	6,879.9	13.3	12.2	-73.11	-119.3	-59.9	333.6	309.4	24.18	13.796	
7,050.0	6,990.8	6,988.1	6,906.4	13.3	12.2	-71.83	-86.8	-59.9	336.0	311.9	24.08	13.954	
7,100.0	7,024.9	7,029.6	6,930.2	13.2	12.3	-70.69	-52.7	-59.9	338.2	314.2	24.01	14.087	
7,150.0	7,055.7	7,070.9	6,951.4	13.3	12.3	-69.67	-17.3	-59.9	340.3	316.3	23.99	14.185	
7,200.0	7,082.9	7,111.9	6,969.8	13.3	12.4	-68.78	19.4	-59.9	342.3	318.3	24.03	14.243	
7,250.0	7,106.3	7,150.0	6,984.5	13.4	12.5	-68.07	54.5	-59.9	344.0	319.9	24.13	14.254	
7,300.0	7,125.8	7,193.2	6,998.3	13.5	12.7	-67.42	95.4	-59.9	345.5	321.1	24.33	14.197	
7,350.0	7,141.2	7,233.6	7,008.5	13.7	12.9	-66.94	134.6	-59.9	346.6	322.0	24.61	14.083	
7,400.0	7,152.4	7,273.9	7,015.8	14.0	13.1	-66.59	174.2	-59.9	347.5	322.5	24.98	13.910	
7,450.0	7,159.4	7,314.2	7,020.3	14.3	13.4	-66.38	214.1	-59.9	348.0	322.6	25.44	13.680	
7,504.7	7,162.0	7,358.4	7,022.0	14.7	13.7	-66.30	258.4	-59.9	348.2	322.2	26.05	13.370	
7,536.8	7,162.0	7,390.2	7,022.0	14.9	14.0	-66.30	290.1	-59.9	348.2	321.7	26.54	13.119	
7,600.0	7,162.0	7,453.4	7,022.0	15.4	14.6	-66.30	353.3	-59.9	348.2	320.6	27.58	12.625	
7,700.0	7,162.0	7,553.4	7,022.0	16.4	15.6	-66.30	453.3	-59.9	348.2	318.8	29.43	11.830	
7,800.0	7,162.0	7,653.4	7,022.0	17.5	16.7	-66.30	553.3	-59.9	348.2	316.7	31.51	11.052	
7,900.0	7,162.0	7,753.4	7,022.0	18.7	18.0	-66.30	653.3	-59.9	348.2	314.5	33.76	10.314	
8,000.0	7,162.0	7,853.4	7,022.0	20.0	19.3	-66.30	753.3	-59.9	348.2	312.1	36.16	9.630	
8,100.0	7,162.0	7,953.4	7,022.0	21.3	20.7	-66.30	853.3	-59.9	348.2	309.5	38.68	9.003	
8,200.0	7,162.0	8,053.4	7,022.0	22.7	22.1	-66.30	953.3	-59.9	348.2	306.9	41.29	8.433	
8,300.0	7,162.0	8,153.4	7,022.0	24.1	23.6	-66.30	1,053.3	-59.9	348.2	304.2	43.99	7.916	
8,400.0	7,162.0	8,253.4	7,022.0	25.6	25.1	-66.30	1,153.3	-59.9	348.2	301.5	46.75	7.449	
8,500.0	7,162.0	8,353.4	7,022.0	27.1	26.6	-66.30	1,253.3	-59.9	348.2	298.7	49.57	7.025	
8,600.0	7,162.0	8,453.4	7,022.0	28.7	28.2	-66.30	1,353.3	-59.9	348.2	295.8	52.43	6.642	
8,700.0	7,162.0	8,553.4	7,022.0	30.2	29.8	-66.30	1,453.3	-59.9	348.2	292.9	55.33	6.294	
8,800.0	7,162.0	8,653.4	7,022.0	31.8	31.4	-66.30	1,553.3	-59.9	348.2	290.0	58.26	5.977	

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 4E-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 4E-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
8,900.0	7,162.0	8,753.4	7,022.0	33.4	33.0	-66.30	1,653.3	-59.9	348.2	287.0	61.23	5.687	
9,000.0	7,162.0	8,853.4	7,022.0	35.0	34.6	-66.30	1,753.3	-59.9	348.2	284.0	64.21	5.423	
9,100.0	7,162.0	8,953.4	7,022.0	36.7	36.3	-66.30	1,853.3	-59.9	348.2	281.0	67.22	5.180	
9,200.0	7,162.0	9,053.4	7,022.0	38.3	37.9	-66.30	1,953.3	-59.9	348.2	278.0	70.25	4.957	
9,300.0	7,162.0	9,153.4	7,022.0	40.0	39.6	-66.30	2,053.3	-59.9	348.2	274.9	73.29	4.751	
9,400.0	7,162.0	9,253.4	7,022.0	41.6	41.3	-66.30	2,153.3	-59.9	348.2	271.9	76.35	4.561	
9,500.0	7,162.0	9,353.4	7,022.0	43.3	43.0	-66.30	2,253.3	-59.9	348.2	268.8	79.42	4.385	
9,600.0	7,162.0	9,453.4	7,022.0	45.0	44.6	-66.30	2,353.3	-59.9	348.2	265.7	82.50	4.221	
9,700.0	7,162.0	9,553.4	7,022.0	46.6	46.3	-66.30	2,453.3	-59.9	348.2	262.6	85.59	4.068	
9,800.0	7,162.0	9,653.4	7,022.0	48.3	48.0	-66.30	2,553.3	-59.9	348.2	259.5	88.69	3.926	
9,900.0	7,162.0	9,753.4	7,022.0	50.0	49.7	-66.30	2,653.3	-59.9	348.2	256.4	91.80	3.793	
10,000.0	7,162.0	9,853.4	7,022.0	51.7	51.4	-66.30	2,753.3	-59.9	348.2	253.3	94.91	3.669	
10,100.0	7,162.0	9,953.4	7,022.0	53.4	53.1	-66.30	2,853.3	-59.8	348.2	250.2	98.03	3.552	
10,200.0	7,162.0	10,053.4	7,022.0	55.1	54.8	-66.30	2,953.3	-59.8	348.2	247.1	101.16	3.442	
10,300.0	7,162.0	10,153.4	7,022.0	56.8	56.5	-66.30	3,053.3	-59.8	348.2	243.9	104.29	3.339	
10,400.0	7,162.0	10,253.4	7,022.0	58.5	58.3	-66.30	3,153.3	-59.8	348.2	240.8	107.43	3.241	
10,500.0	7,162.0	10,353.4	7,022.0	60.2	60.0	-66.30	3,253.3	-59.8	348.2	237.6	110.57	3.149	
10,600.0	7,162.0	10,453.4	7,022.0	61.9	61.7	-66.30	3,353.3	-59.8	348.2	234.5	113.72	3.062	
10,700.0	7,162.0	10,553.4	7,022.0	63.7	63.4	-66.30	3,453.3	-59.8	348.2	231.3	116.87	2.980	
10,800.0	7,162.0	10,653.4	7,022.0	65.4	65.1	-66.30	3,553.3	-59.8	348.2	228.2	120.02	2.901	
10,900.0	7,162.0	10,753.4	7,022.0	67.1	66.9	-66.30	3,653.3	-59.8	348.2	225.0	123.18	2.827	
11,000.0	7,162.0	10,853.4	7,022.0	68.8	68.6	-66.30	3,753.3	-59.8	348.2	221.9	126.34	2.756	
11,100.0	7,162.0	10,953.4	7,022.0	70.5	70.3	-66.30	3,853.3	-59.8	348.2	218.7	129.50	2.689	
11,150.0	7,162.0	11,003.4	7,022.0	71.4	71.2	-66.30	3,903.3	-59.8	348.2	217.1	131.08	2.656	
11,200.0	7,162.0	11,053.4	7,022.0	72.2	72.0	-66.25	3,953.3	-59.8	347.6	215.1	132.47	2.624	
11,300.0	7,162.0	11,153.2	7,022.0	74.0	73.8	-65.83	4,053.1	-59.8	342.8	208.1	134.68	2.545	
11,400.0	7,162.0	11,252.6	7,022.0	75.7	75.5	-64.97	4,152.6	-59.8	333.2	197.1	136.03	2.449	
11,500.0	7,162.0	11,351.4	7,022.0	77.3	77.2	-63.57	4,251.3	-59.8	318.9	182.5	136.37	2.339	
11,600.0	7,162.0	11,449.1	7,022.0	79.0	78.9	-61.52	4,349.1	-59.8	300.2	164.8	135.41	2.217	
11,700.0	7,162.0	11,545.7	7,022.0	80.7	80.6	-58.60	4,445.6	-59.8	277.3	144.6	132.71	2.090	
11,747.9	7,162.0	11,590.6	7,022.0	81.4	81.3	-56.82	4,490.5	-59.8	265.1	134.5	130.62	2.029	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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 4F-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	89.87	0.0	7.6	7.6				
100.0	100.0	100.0	100.0	0.1	0.1	89.87	0.0	7.6	7.6	7.3	0.24	30.903	
200.0	200.0	200.0	200.0	0.3	0.3	89.87	0.0	7.6	7.6	7.0	0.59	12.725	
300.0	300.0	300.0	300.0	0.5	0.5	89.87	0.0	7.6	7.6	6.6	0.94	8.012	
400.0	400.0	400.0	400.0	0.6	0.6	89.87	0.0	7.6	7.6	6.3	1.29	5.847	
500.0	500.0	500.0	499.9	0.8	0.8	-54.98	-0.1	7.7	7.2	5.5	1.64	4.380	
594.8	594.8	594.7	594.7	1.0	1.0	-62.21	-1.1	9.0	7.0	5.0	1.98	3.545	CC
600.0	600.0	599.9	599.8	1.0	1.0	-62.65	-1.2	9.1	7.0	5.0	1.99	3.513	
700.0	699.9	699.8	699.7	1.2	1.2	-71.71	-3.4	11.8	7.3	4.9	2.36	3.080	ES
800.0	799.7	799.7	799.5	1.4	1.4	-80.62	-6.8	15.8	8.0	5.3	2.74	2.923	
853.0	852.6	852.7	852.4	1.5	1.5	-84.83	-9.0	18.5	8.6	5.7	2.95	2.915	SF
900.0	899.4	899.7	899.2	1.6	1.6	-86.96	-11.2	21.2	9.3	6.1	3.14	2.945	
1,000.0	999.1	999.6	998.8	1.8	1.8	-84.03	-16.7	27.9	11.0	7.4	3.56	3.085	
1,100.0	1,098.8	1,099.6	1,098.2	2.0	2.0	-77.10	-23.0	35.5	13.1	9.2	3.97	3.310	
1,200.0	1,198.4	1,199.5	1,197.7	2.2	2.2	-72.09	-29.3	43.1	15.5	11.1	4.38	3.530	
1,300.0	1,298.1	1,299.5	1,297.2	2.4	2.5	-68.41	-35.6	50.8	17.9	13.1	4.79	3.733	
1,400.0	1,397.8	1,399.5	1,396.7	2.6	2.7	-65.61	-41.9	58.4	20.3	15.2	5.20	3.916	
1,500.0	1,497.5	1,499.4	1,496.1	2.9	2.9	-63.42	-48.2	66.1	22.9	17.3	5.60	4.079	
1,600.0	1,597.2	1,599.4	1,595.6	3.1	3.2	-61.67	-54.4	73.7	25.4	19.4	6.01	4.226	
1,700.0	1,696.9	1,699.3	1,695.1	3.3	3.4	-60.23	-60.7	81.3	27.9	21.5	6.41	4.358	
1,800.0	1,796.6	1,799.3	1,794.5	3.5	3.6	-59.04	-67.0	89.0	30.5	23.7	6.81	4.476	
1,900.0	1,896.3	1,899.3	1,894.0	3.7	3.9	-58.03	-73.3	96.6	33.1	25.9	7.22	4.583	
2,000.0	1,995.9	1,999.2	1,993.5	4.0	4.1	-57.17	-79.6	104.2	35.7	28.0	7.62	4.680	
2,100.0	2,095.6	2,099.2	2,093.0	4.2	4.4	-56.42	-85.9	111.9	38.3	30.2	8.02	4.768	
2,200.0	2,195.3	2,199.2	2,192.4	4.4	4.6	-55.77	-92.2	119.5	40.9	32.4	8.43	4.849	
2,300.0	2,295.0	2,299.1	2,291.9	4.6	4.8	-55.19	-98.5	127.2	43.5	34.6	8.83	4.922	
2,400.0	2,394.7	2,399.1	2,391.4	4.8	5.1	-54.69	-104.8	134.8	46.1	36.8	9.23	4.990	
2,500.0	2,494.4	2,499.1	2,490.9	5.1	5.3	-54.23	-111.1	142.4	48.7	39.0	9.63	5.053	
2,600.0	2,594.1	2,599.0	2,590.3	5.3	5.6	-53.82	-117.4	150.1	51.3	41.3	10.04	5.110	
2,700.0	2,693.8	2,699.0	2,689.8	5.5	5.8	-53.46	-123.6	157.7	53.9	43.5	10.44	5.164	
2,800.0	2,793.4	2,799.0	2,789.3	5.7	6.1	-53.12	-129.9	165.3	56.5	45.7	10.84	5.214	
2,900.0	2,893.1	2,898.9	2,888.8	5.9	6.3	-52.82	-136.2	173.0	59.1	47.9	11.24	5.260	
3,000.0	2,992.8	2,998.9	2,988.2	6.2	6.5	-52.54	-142.5	180.6	61.8	50.1	11.65	5.303	
3,100.0	3,092.5	3,098.9	3,087.7	6.4	6.8	-52.28	-148.8	188.3	64.4	52.3	12.05	5.344	
3,200.0	3,192.2	3,198.8	3,187.2	6.6	7.0	-52.05	-155.1	195.9	67.0	54.6	12.45	5.382	
3,300.0	3,291.9	3,298.8	3,286.7	6.8	7.3	-51.83	-161.4	203.5	69.6	56.8	12.85	5.417	
3,400.0	3,391.6	3,398.8	3,386.1	7.1	7.5	-51.63	-167.7	211.2	72.3	59.0	13.26	5.451	
3,500.0	3,491.3	3,498.7	3,485.6	7.3	7.8	-51.44	-174.0	218.8	74.9	61.2	13.66	5.483	
3,600.0	3,590.9	3,598.7	3,585.1	7.5	8.0	-51.26	-180.3	226.5	77.5	63.4	14.06	5.513	
3,700.0	3,690.6	3,698.7	3,684.6	7.7	8.3	-51.10	-186.5	234.1	80.1	65.7	14.46	5.541	
3,800.0	3,790.3	3,798.6	3,784.0	7.9	8.5	-50.94	-192.8	241.7	82.8	67.9	14.86	5.568	
3,900.0	3,890.0	3,898.6	3,883.5	8.2	8.7	-50.80	-199.1	249.4	85.4	70.1	15.27	5.593	
4,000.0	3,989.7	3,998.5	3,983.0	8.4	9.0	-50.67	-205.4	257.0	88.0	72.4	15.67	5.618	
4,100.0	4,089.4	4,098.5	4,082.5	8.6	9.2	-50.54	-211.7	264.6	90.6	74.6	16.07	5.641	
4,200.0	4,189.1	4,198.5	4,181.9	8.8	9.5	-50.42	-218.0	272.3	93.3	76.8	16.47	5.663	
4,300.0	4,288.8	4,298.4	4,281.4	9.1	9.7	-50.30	-224.3	279.9	95.9	79.0	16.88	5.683	
4,400.0	4,388.4	4,398.4	4,380.9	9.3	10.0	-50.20	-230.6	287.6	98.5	81.3	17.28	5.703	
4,500.0	4,488.1	4,498.4	4,480.4	9.5	10.2	-50.09	-236.9	295.2	101.2	83.5	17.68	5.722	
4,600.0	4,587.8	4,598.3	4,579.8	9.7	10.5	-50.00	-243.2	302.8	103.8	85.7	18.08	5.741	
4,700.0	4,687.5	4,698.3	4,679.3	9.9	10.7	-49.90	-249.4	310.5	106.4	87.9	18.48	5.758	
4,800.0	4,787.2	4,798.3	4,778.8	10.2	11.0	-49.82	-255.7	318.1	109.1	90.2	18.89	5.775	
4,900.0	4,886.9	4,898.2	4,878.3	10.4	11.2	-49.73	-262.0	325.7	111.7	92.4	19.29	5.791	

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 4E-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 4E-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 4F-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	4,986.6	4,998.2	4,977.7	10.6	11.4	-49.65	-268.3	333.4	114.3	94.6	19.69	5.806	
5,100.0	5,086.3	5,098.2	5,077.2	10.8	11.7	-49.58	-274.6	341.0	117.0	96.9	20.09	5.821	
5,200.0	5,185.9	5,198.1	5,176.7	11.0	11.9	-49.50	-280.9	348.7	119.6	99.1	20.50	5.835	
5,300.0	5,285.6	5,298.1	5,276.1	11.3	12.2	-49.43	-287.2	356.3	122.2	101.3	20.90	5.849	
5,400.0	5,385.3	5,398.1	5,375.6	11.5	12.4	-49.37	-293.5	363.9	124.9	103.6	21.30	5.862	
5,500.0	5,485.0	5,498.8	5,475.9	11.7	12.7	-49.35	-299.7	371.5	127.4	105.7	21.71	5.868	
5,562.6	5,547.4	5,562.5	5,539.3	11.9	12.8	-49.54	-303.2	375.7	128.4	106.4	21.97	5.842	
5,600.0	5,584.7	5,600.6	5,577.3	11.9	12.9	-49.71	-305.1	378.0	128.8	106.7	22.13	5.819	
5,700.0	5,684.5	5,702.3	5,678.8	12.1	13.1	-50.08	-309.3	383.1	129.7	107.2	22.54	5.756	
5,800.0	5,784.4	5,804.1	5,780.5	12.3	13.3	-50.35	-312.3	386.8	130.4	107.5	22.92	5.692	
5,900.0	5,884.3	5,905.9	5,882.3	12.5	13.4	-50.51	-314.2	389.1	130.9	107.6	23.26	5.626	
6,000.0	5,984.3	6,007.7	5,984.1	12.6	13.6	-50.58	-315.0	390.0	131.0	107.5	23.57	5.559	
6,015.7	6,000.0	6,023.7	6,000.0	12.6	13.6	89.99	-315.0	390.1	131.1	107.4	23.62	5.548	
6,100.0	6,084.3	6,108.0	6,084.3	12.8	13.7	89.99	-315.0	390.1	131.1	107.2	23.88	5.487	
6,200.0	6,184.3	6,208.0	6,184.3	12.9	13.8	89.99	-315.0	390.1	131.1	106.9	24.19	5.417	
6,300.0	6,284.3	6,308.0	6,284.3	13.1	14.0	89.99	-315.0	390.1	131.1	106.5	24.51	5.348	
6,360.8	6,345.1	6,368.8	6,345.1	13.1	14.1	89.99	-315.0	390.1	131.1	106.4	24.70	5.307	
6,400.0	6,384.3	6,408.0	6,384.3	13.2	14.1	89.67	-314.2	390.1	131.1	106.2	24.83	5.277	
6,500.0	6,484.3	6,505.9	6,481.2	13.4	14.1	83.87	-300.9	390.1	131.8	106.4	25.49	5.172	
6,604.7	6,589.0	6,600.0	6,570.9	13.5	14.1	72.14	-272.8	390.1	138.9	112.5	26.41	5.259	
6,650.0	6,634.3	6,639.2	6,606.7	13.6	14.0	65.96	-256.8	390.1	145.3	118.6	26.73	5.437	
6,700.0	6,683.9	6,680.7	6,643.2	13.6	14.0	60.01	-237.2	390.1	154.0	127.1	26.88	5.728	
6,750.0	6,732.8	6,721.3	6,677.6	13.6	13.9	54.83	-215.6	390.1	163.7	136.9	26.82	6.105	
6,800.0	6,780.6	6,761.1	6,709.7	13.5	13.9	50.38	-192.0	390.1	174.1	147.5	26.56	6.554	
6,850.0	6,826.9	6,800.0	6,739.4	13.5	13.8	46.59	-166.9	390.1	184.7	158.6	26.13	7.067	
6,900.0	6,871.4	6,838.8	6,767.3	13.4	13.8	43.34	-140.0	390.1	195.3	169.7	25.56	7.640	
6,950.0	6,913.8	6,876.8	6,792.7	13.4	13.8	40.60	-111.8	390.1	205.7	180.8	24.88	8.265	
7,000.0	6,953.7	6,914.4	6,816.0	13.3	13.8	38.28	-82.3	390.1	215.6	191.4	24.12	8.939	
7,050.0	6,990.8	6,950.0	6,836.3	13.3	13.8	36.38	-53.0	390.1	224.9	201.6	23.31	9.648	
7,100.0	7,024.9	6,988.3	6,856.0	13.2	13.9	34.69	-20.1	390.1	233.5	211.0	22.46	10.393	
7,150.0	7,055.7	7,024.8	6,872.7	13.3	13.9	33.31	12.3	390.1	241.2	219.6	21.66	11.136	
7,200.0	7,082.9	7,061.1	6,887.2	13.3	14.0	32.18	45.6	390.1	248.1	227.2	20.89	11.879	
7,250.0	7,106.3	7,100.0	6,900.4	13.4	14.2	31.22	82.2	390.1	254.1	233.9	20.22	12.567	
7,300.0	7,125.8	7,133.0	6,909.6	13.5	14.3	30.53	113.8	390.1	259.0	239.3	19.71	13.144	
7,350.0	7,141.2	7,168.7	6,917.5	13.7	14.5	29.97	148.7	390.1	262.9	243.5	19.37	13.573	
7,400.0	7,152.4	7,200.0	6,922.6	14.0	14.6	29.60	179.5	390.1	265.8	246.6	19.24	13.812	
7,450.0	7,159.4	7,239.9	6,926.7	14.3	14.9	29.34	219.2	390.1	267.5	248.1	19.38	13.800	
7,504.7	7,162.0	7,278.7	6,928.0	14.7	15.1	29.26	258.0	390.1	268.2	248.3	19.81	13.534	
7,529.5	7,162.0	7,303.5	6,928.0	14.9	15.3	29.26	282.8	390.1	268.2	248.1	20.04	13.381	
7,600.0	7,162.0	7,374.0	6,928.0	15.4	15.9	29.26	353.3	390.1	268.2	247.5	20.70	12.952	
7,700.0	7,162.0	7,474.0	6,928.0	16.4	16.8	29.26	453.3	390.1	268.2	246.4	21.73	12.341	
7,800.0	7,162.0	7,574.0	6,928.0	17.5	17.9	29.26	553.3	390.1	268.2	245.3	22.84	11.739	
7,900.0	7,162.0	7,674.0	6,928.0	18.7	19.0	29.26	653.3	390.1	268.2	244.1	24.03	11.158	
8,000.0	7,162.0	7,774.0	6,928.0	20.0	20.3	29.26	753.3	390.1	268.2	242.9	25.29	10.604	
8,100.0	7,162.0	7,874.0	6,928.0	21.3	21.6	29.26	853.3	390.1	268.2	241.6	26.60	10.082	
8,200.0	7,162.0	7,974.0	6,928.0	22.7	23.0	29.26	953.3	390.1	268.2	240.2	27.96	9.592	
8,300.0	7,162.0	8,074.0	6,928.0	24.1	24.4	29.26	1,053.3	390.1	268.2	238.8	29.36	9.135	
8,400.0	7,162.0	8,174.0	6,928.0	25.6	25.9	29.26	1,153.3	390.1	268.2	237.4	30.79	8.709	
8,500.0	7,162.0	8,274.0	6,928.0	27.1	27.4	29.26	1,253.3	390.1	268.2	235.9	32.26	8.313	
8,600.0	7,162.0	8,374.0	6,928.0	28.7	28.9	29.26	1,353.3	390.1	268.2	234.4	33.75	7.945	
8,700.0	7,162.0	8,474.0	6,928.0	30.2	30.4	29.26	1,453.3	390.1	268.2	232.9	35.27	7.604	
8,800.0	7,162.0	8,574.0	6,928.0	31.8	32.0	29.26	1,553.3	390.1	268.2	231.4	36.81	7.286	

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 4E-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 4E-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 4F-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	7,162.0	8,674.0	6,928.0	33.4	33.6	29.26	1,653.3	390.1	268.2	229.8	38.36	6.991	
9,000.0	7,162.0	8,774.0	6,928.0	35.0	35.2	29.26	1,753.3	390.1	268.2	228.2	39.93	6.716	
9,100.0	7,162.0	8,874.0	6,928.0	36.7	36.8	29.26	1,853.3	390.1	268.2	226.6	41.52	6.459	
9,200.0	7,162.0	8,974.0	6,928.0	38.3	38.5	29.26	1,953.3	390.1	268.2	225.1	43.11	6.220	
9,300.0	7,162.0	9,074.0	6,928.0	40.0	40.1	29.26	2,053.3	390.1	268.2	223.4	44.72	5.996	
9,400.0	7,162.0	9,174.0	6,928.0	41.6	41.8	29.26	2,153.3	390.1	268.2	221.8	46.34	5.787	
9,500.0	7,162.0	9,274.0	6,928.0	43.3	43.4	29.26	2,253.3	390.1	268.2	220.2	47.97	5.590	
9,600.0	7,162.0	9,374.0	6,928.0	45.0	45.1	29.26	2,353.3	390.1	268.2	218.6	49.61	5.406	
9,700.0	7,162.0	9,474.0	6,928.0	46.6	46.8	29.26	2,453.3	390.1	268.2	216.9	51.25	5.232	
9,800.0	7,162.0	9,574.0	6,928.0	48.3	48.4	29.26	2,553.3	390.1	268.2	215.3	52.90	5.069	
9,900.0	7,162.0	9,674.0	6,928.0	50.0	50.1	29.26	2,653.3	390.1	268.2	213.6	54.56	4.915	
10,000.0	7,162.0	9,774.0	6,928.0	51.7	51.8	29.26	2,753.3	390.1	268.2	211.9	56.22	4.770	
10,100.0	7,162.0	9,874.0	6,928.0	53.4	53.5	29.26	2,853.3	390.1	268.2	210.3	57.89	4.633	
10,200.0	7,162.0	9,974.0	6,928.0	55.1	55.2	29.26	2,953.3	390.1	268.2	208.6	59.56	4.502	
10,300.0	7,162.0	10,074.0	6,928.0	56.8	56.9	29.26	3,053.3	390.1	268.2	206.9	61.24	4.379	
10,400.0	7,162.0	10,174.0	6,928.0	58.5	58.6	29.26	3,153.3	390.1	268.2	205.3	62.92	4.262	
10,500.0	7,162.0	10,274.0	6,928.0	60.2	60.3	29.26	3,253.3	390.1	268.2	203.6	64.60	4.151	
10,600.0	7,162.0	10,374.0	6,928.0	61.9	62.0	29.26	3,353.3	390.1	268.2	201.9	66.29	4.046	
10,700.0	7,162.0	10,474.0	6,928.0	63.7	63.7	29.26	3,453.3	390.1	268.2	200.2	67.98	3.945	
10,800.0	7,162.0	10,574.0	6,928.0	65.4	65.4	29.26	3,553.3	390.1	268.2	198.5	69.67	3.849	
10,900.0	7,162.0	10,674.0	6,928.0	67.1	67.2	29.26	3,653.3	390.1	268.2	196.8	71.37	3.758	
11,000.0	7,162.0	10,774.0	6,928.0	68.8	68.9	29.26	3,753.3	390.1	268.2	195.1	73.06	3.670	
11,100.0	7,162.0	10,874.0	6,928.0	70.5	70.6	29.26	3,853.3	390.1	268.2	193.4	74.76	3.587	
11,150.0	7,162.0	10,924.0	6,928.0	71.4	71.4	29.26	3,903.3	390.1	268.2	192.6	75.62	3.547	
11,200.0	7,162.0	10,974.0	6,928.0	72.2	72.3	29.37	3,953.3	390.1	268.5	191.9	76.57	3.507	
11,300.0	7,162.0	11,073.9	6,928.0	74.0	74.0	30.28	4,053.1	390.1	271.1	191.5	79.66	3.404	
11,400.0	7,162.0	11,173.3	6,928.0	75.7	75.7	32.02	4,152.6	390.1	276.6	192.4	84.24	3.284	
11,500.0	7,162.0	11,272.0	6,928.0	77.3	77.4	34.46	4,251.3	390.1	285.4	195.3	90.04	3.169	
11,600.0	7,162.0	11,369.8	6,928.0	79.0	79.1	37.44	4,349.1	390.1	297.9	201.3	96.60	3.084	
11,700.0	7,162.0	11,466.3	6,928.0	80.7	80.8	40.76	4,445.6	390.1	314.7	211.4	103.38	3.044	
11,747.9	7,162.0	11,512.0	6,928.0	81.4	81.6	42.40	4,491.3	390.1	324.5	217.9	106.56	3.045	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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	89.89	0.0	15.1	15.1				
100.0	100.0	100.0	100.0	0.1	0.1	89.89	0.0	15.1	15.1	14.9	0.24	61.807	
200.0	200.0	200.0	200.0	0.3	0.3	89.89	0.0	15.1	15.1	14.5	0.59	25.450	
300.0	300.0	300.0	300.0	0.5	0.5	89.89	0.0	15.1	15.1	14.2	0.94	16.024	
400.0	400.0	400.0	400.0	0.6	0.6	89.89	0.0	15.1	15.1	13.8	1.29	11.693	CC
500.0	500.0	499.8	499.8	0.8	0.8	-51.69	-0.4	15.9	15.3	13.7	1.64	9.339	ES
600.0	600.0	599.5	599.5	1.0	1.0	-54.52	-1.6	18.2	16.0	14.0	1.99	8.033	
700.0	699.9	699.3	699.1	1.2	1.2	-58.73	-3.6	22.0	17.2	14.9	2.35	7.323	
800.0	799.7	799.0	798.7	1.4	1.4	-63.66	-6.4	27.4	19.1	16.3	2.73	6.989	
853.0	852.6	851.9	851.4	1.5	1.5	-66.37	-8.2	30.9	20.3	17.4	2.94	6.920	
900.0	899.4	898.7	898.1	1.6	1.6	-68.26	-10.1	34.3	21.7	18.5	3.12	6.937	
1,000.0	999.1	998.3	997.2	1.8	1.8	-69.44	-14.5	42.7	25.5	21.9	3.53	7.212	
1,100.0	1,098.8	1,097.9	1,096.1	2.0	2.0	-67.91	-19.7	52.7	30.5	26.5	3.94	7.730	
1,200.0	1,198.4	1,197.2	1,194.7	2.2	2.3	-64.94	-25.7	64.1	36.8	32.4	4.35	8.449	
1,300.0	1,298.1	1,296.9	1,293.4	2.4	2.6	-61.99	-32.2	76.5	43.9	39.1	4.75	9.232	
1,400.0	1,397.8	1,396.6	1,392.1	2.6	2.9	-59.87	-38.7	88.8	51.1	45.9	5.15	9.911	
1,500.0	1,497.5	1,496.4	1,490.9	2.9	3.1	-58.28	-45.2	101.2	58.3	52.8	5.56	10.500	
1,600.0	1,597.2	1,596.1	1,589.6	3.1	3.4	-57.04	-51.7	113.6	65.6	59.7	5.96	11.017	
1,700.0	1,696.9	1,695.8	1,688.3	3.3	3.7	-56.04	-58.1	125.9	72.9	66.6	6.36	11.471	
1,800.0	1,796.6	1,795.5	1,787.1	3.5	4.0	-55.23	-64.6	138.3	80.3	73.5	6.76	11.874	
1,900.0	1,896.3	1,895.3	1,885.8	3.7	4.3	-54.56	-71.1	150.6	87.6	80.5	7.16	12.234	
2,000.0	1,995.9	1,995.0	1,984.6	4.0	4.6	-53.98	-77.6	163.0	95.0	87.4	7.56	12.556	
2,100.0	2,095.6	2,094.7	2,083.3	4.2	4.9	-53.50	-84.1	175.4	102.4	94.4	7.97	12.847	
2,200.0	2,195.3	2,194.4	2,182.1	4.4	5.2	-53.07	-90.6	187.7	109.7	101.4	8.37	13.110	
2,300.0	2,295.0	2,294.2	2,280.8	4.6	5.5	-52.70	-97.1	200.1	117.1	108.3	8.77	13.350	
2,400.0	2,394.7	2,393.9	2,379.5	4.8	5.8	-52.38	-103.6	212.4	124.5	115.3	9.17	13.569	
2,500.0	2,494.4	2,493.6	2,478.3	5.1	6.1	-52.09	-110.0	224.8	131.9	122.3	9.58	13.770	
2,600.0	2,594.1	2,593.3	2,577.0	5.3	6.4	-51.83	-116.5	237.2	139.3	129.3	9.98	13.955	
2,700.0	2,693.8	2,693.1	2,675.8	5.5	6.7	-51.59	-123.0	249.5	146.7	136.3	10.38	14.126	
2,800.0	2,793.4	2,792.8	2,774.5	5.7	7.0	-51.38	-129.5	261.9	154.0	143.3	10.78	14.284	
2,900.0	2,893.1	2,892.5	2,873.3	5.9	7.3	-51.19	-136.0	274.3	161.4	150.3	11.19	14.431	
3,000.0	2,992.8	2,992.2	2,972.0	6.2	7.6	-51.02	-142.5	286.6	168.8	157.3	11.59	14.568	
3,100.0	3,092.5	3,092.0	3,070.7	6.4	7.9	-50.86	-149.0	299.0	176.2	164.2	11.99	14.696	
3,200.0	3,192.2	3,191.7	3,169.5	6.6	8.2	-50.71	-155.5	311.3	183.6	171.2	12.40	14.815	
3,300.0	3,291.9	3,291.4	3,268.2	6.8	8.5	-50.58	-162.0	323.7	191.0	178.2	12.80	14.927	
3,400.0	3,391.6	3,391.1	3,367.0	7.1	8.8	-50.45	-168.4	336.1	198.4	185.2	13.20	15.032	
3,500.0	3,491.3	3,490.9	3,465.7	7.3	9.1	-50.33	-174.9	348.4	205.8	192.2	13.60	15.131	
3,600.0	3,590.9	3,590.6	3,564.5	7.5	9.3	-50.23	-181.4	360.8	213.3	199.2	14.01	15.225	
3,700.0	3,690.6	3,690.3	3,663.2	7.7	9.6	-50.13	-187.9	373.1	220.7	206.2	14.41	15.313	
3,800.0	3,790.3	3,790.0	3,761.9	7.9	9.9	-50.03	-194.4	385.5	228.1	213.2	14.81	15.396	
3,900.0	3,890.0	3,889.8	3,860.7	8.2	10.2	-49.94	-200.9	397.9	235.5	220.3	15.22	15.475	
4,000.0	3,989.7	3,989.5	3,959.4	8.4	10.5	-49.86	-207.4	410.2	242.9	227.3	15.62	15.550	
4,100.0	4,089.4	4,089.2	4,058.2	8.6	10.8	-49.78	-213.9	422.6	250.3	234.3	16.02	15.621	
4,200.0	4,189.1	4,188.9	4,156.9	8.8	11.1	-49.71	-220.3	434.9	257.7	241.3	16.42	15.689	
4,300.0	4,288.8	4,288.7	4,255.7	9.1	11.4	-49.64	-226.8	447.3	265.1	248.3	16.83	15.753	
4,400.0	4,388.4	4,388.4	4,354.4	9.3	11.7	-49.57	-233.3	459.7	272.5	255.3	17.23	15.815	
4,500.0	4,488.1	4,488.1	4,453.1	9.5	12.0	-49.51	-239.8	472.0	279.9	262.3	17.63	15.873	
4,600.0	4,587.8	4,587.8	4,551.9	9.7	12.3	-49.45	-246.3	484.4	287.3	269.3	18.04	15.929	
4,700.0	4,687.5	4,687.6	4,650.6	9.9	12.6	-49.39	-252.8	496.7	294.7	276.3	18.44	15.983	
4,800.0	4,787.2	4,787.3	4,749.4	10.2	12.9	-49.34	-259.3	509.1	302.1	283.3	18.84	16.034	
4,900.0	4,886.9	4,887.0	4,848.1	10.4	13.2	-49.29	-265.8	521.5	309.5	290.3	19.25	16.083	
5,000.0	4,986.6	4,986.7	4,946.9	10.6	13.5	-49.24	-272.3	533.8	317.0	297.3	19.65	16.131	

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 4E-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 4E-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
5,100.0	5,086.3	5,086.5	5,045.6	10.8	13.8	-49.20	-278.7	546.2	324.4	304.3	20.05	16.176	
5,200.0	5,185.9	5,186.2	5,144.3	11.0	14.1	-49.15	-285.2	558.5	331.8	311.3	20.46	16.219	
5,300.0	5,285.6	5,288.5	5,245.6	11.3	14.4	-49.12	-291.8	571.0	339.0	318.2	20.86	16.249	
5,400.0	5,385.3	5,393.9	5,350.3	11.5	14.7	-49.22	-297.8	582.5	344.9	323.6	21.28	16.202	
5,500.0	5,485.0	5,499.6	5,455.4	11.7	15.0	-49.45	-302.9	592.2	349.0	327.3	21.72	16.073	
5,562.6	5,547.4	5,565.7	5,521.3	11.9	15.1	-49.67	-305.7	597.5	350.8	328.8	21.99	15.954	
5,600.0	5,584.7	5,605.3	5,560.7	11.9	15.2	-49.81	-307.1	600.3	351.7	329.5	22.15	15.875	
5,700.0	5,684.5	5,711.0	5,666.2	12.1	15.4	-50.14	-310.4	606.6	353.6	331.0	22.56	15.672	
5,800.0	5,784.4	5,816.8	5,771.9	12.3	15.6	-50.37	-312.9	611.2	355.0	332.0	22.94	15.474	
5,900.0	5,884.3	5,922.6	5,877.6	12.5	15.7	-50.52	-314.4	614.0	355.9	332.6	23.29	15.280	
6,000.0	5,984.3	6,028.4	5,983.4	12.6	15.9	-50.58	-315.0	615.2	356.2	332.6	23.61	15.088	
6,015.7	6,000.0	6,045.0	6,000.0	12.6	15.9	90.00	-315.0	615.2	356.2	332.5	23.66	15.058	
6,100.0	6,084.3	6,129.4	6,084.3	12.8	16.0	90.00	-315.0	615.2	356.2	332.3	23.92	14.893	
6,200.0	6,184.3	6,229.4	6,184.3	12.9	16.1	90.00	-315.0	615.2	356.2	332.0	24.23	14.702	
6,300.0	6,284.3	6,329.4	6,284.3	13.1	16.2	90.00	-315.0	615.2	356.2	331.7	24.54	14.516	
6,400.0	6,384.3	6,429.4	6,384.3	13.2	16.3	90.00	-315.0	615.2	356.2	331.4	24.85	14.333	
6,454.1	6,438.4	6,483.4	6,438.4	13.3	16.4	90.00	-315.0	615.2	356.2	331.2	25.02	14.236	
6,500.0	6,484.3	6,529.3	6,484.3	13.4	16.4	89.81	-313.8	615.2	356.2	331.0	25.16	14.155	
6,604.7	6,589.0	6,631.3	6,584.9	13.5	16.4	87.33	-298.4	615.2	356.6	331.0	25.62	13.919	
6,650.0	6,634.3	6,673.7	6,625.7	13.6	16.4	85.66	-286.7	615.2	357.3	331.5	25.82	13.838	
6,700.0	6,683.9	6,719.6	6,668.7	13.6	16.4	83.86	-270.8	615.2	358.4	332.4	25.97	13.801	
6,750.0	6,732.8	6,764.8	6,709.7	13.6	16.4	82.12	-251.7	615.2	359.8	333.7	26.04	13.817	
6,800.0	6,780.6	6,809.3	6,748.5	13.5	16.3	80.46	-229.9	615.2	361.4	335.4	26.03	13.884	
6,850.0	6,826.9	6,853.2	6,784.9	13.5	16.3	78.88	-205.5	615.2	363.3	337.3	25.95	13.997	
6,900.0	6,871.4	6,896.5	6,818.9	13.4	16.2	77.39	-178.7	615.2	365.3	339.5	25.81	14.152	
6,950.0	6,913.8	6,939.2	6,850.5	13.4	16.2	76.00	-149.8	615.2	367.4	341.8	25.62	14.341	
7,000.0	6,953.7	6,981.6	6,879.5	13.3	16.2	74.72	-119.0	615.2	369.6	344.2	25.40	14.553	
7,050.0	6,990.8	7,023.4	6,905.9	13.3	16.2	73.55	-86.5	615.2	371.7	346.6	25.16	14.776	
7,100.0	7,024.9	7,065.0	6,929.6	13.2	16.2	72.49	-52.5	615.2	373.8	348.9	24.93	14.996	
7,150.0	7,055.7	7,106.2	6,950.7	13.3	16.2	71.55	-17.0	615.2	375.8	351.0	24.76	15.176	
7,200.0	7,082.9	7,150.0	6,970.2	13.3	16.3	70.69	22.1	615.2	377.6	352.9	24.64	15.323	
7,250.0	7,106.3	7,187.9	6,984.6	13.4	16.4	70.03	57.1	615.2	379.1	354.5	24.63	15.390	
7,300.0	7,125.8	7,228.4	6,997.5	13.5	16.5	69.46	95.6	615.2	380.5	355.8	24.75	15.376	
7,350.0	7,141.2	7,268.7	7,007.6	13.7	16.7	69.01	134.6	615.2	381.6	356.6	25.00	15.265	
7,400.0	7,152.4	7,309.0	7,014.8	14.0	16.9	68.68	174.2	615.2	382.4	357.0	25.40	15.052	
7,450.0	7,159.4	7,350.0	7,019.4	14.3	17.1	68.48	215.0	615.2	382.9	356.9	25.97	14.741	
7,504.7	7,162.0	7,393.1	7,021.0	14.7	17.3	68.41	258.0	615.2	383.1	356.3	26.77	14.311	
7,541.9	7,162.0	7,430.3	7,021.0	15.0	17.6	68.41	295.2	615.2	383.1	355.7	27.36	14.000	
7,600.0	7,162.0	7,488.4	7,021.0	15.4	18.0	68.41	353.3	615.2	383.1	354.8	28.30	13.538	
7,700.0	7,162.0	7,588.4	7,021.0	16.4	18.8	68.41	453.3	615.2	383.1	352.9	30.15	12.703	
7,800.0	7,162.0	7,688.4	7,021.0	17.5	19.8	68.41	553.3	615.2	383.1	350.8	32.24	11.883	
7,900.0	7,162.0	7,788.4	7,021.0	18.7	20.8	68.41	653.3	615.2	383.1	348.6	34.50	11.102	
8,000.0	7,162.0	7,888.4	7,021.0	20.0	22.0	68.41	753.3	615.2	383.1	346.2	36.92	10.376	
8,100.0	7,162.0	7,988.4	7,021.0	21.3	23.2	68.41	853.3	615.2	383.1	343.6	39.46	9.708	
8,200.0	7,162.0	8,088.4	7,021.0	22.7	24.5	68.41	953.3	615.2	383.1	341.0	42.10	9.099	
8,300.0	7,162.0	8,188.4	7,021.0	24.1	25.8	68.41	1,053.3	615.2	383.1	338.2	44.82	8.547	
8,400.0	7,162.0	8,288.4	7,021.0	25.6	27.2	68.41	1,153.3	615.2	383.1	335.5	47.61	8.046	
8,500.0	7,162.0	8,388.4	7,021.0	27.1	28.6	68.41	1,253.3	615.2	383.1	332.6	50.46	7.592	
8,600.0	7,162.0	8,488.4	7,021.0	28.7	30.1	68.41	1,353.3	615.2	383.1	329.7	53.35	7.180	
8,700.0	7,162.0	8,588.4	7,021.0	30.2	31.6	68.41	1,453.3	615.2	383.1	326.8	56.29	6.805	
8,800.0	7,162.0	8,688.4	7,021.0	31.8	33.1	68.41	1,553.3	615.2	383.1	323.8	59.26	6.464	
8,900.0	7,162.0	8,788.4	7,021.0	33.4	34.7	68.41	1,653.3	615.2	383.1	320.8	62.26	6.153	

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 4E-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 4E-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
9,000.0	7,162.0	8,888.4	7,021.0	35.0	36.2	68.41	1,753.3	615.2	383.1	317.8	65.28	5.868	
9,100.0	7,162.0	8,988.4	7,021.0	36.7	37.8	68.41	1,853.3	615.2	383.1	314.7	68.33	5.606	
9,200.0	7,162.0	9,088.4	7,021.0	38.3	39.4	68.41	1,953.3	615.2	383.1	311.7	71.40	5.365	
9,300.0	7,162.0	9,188.4	7,021.0	40.0	41.0	68.41	2,053.3	615.2	383.1	308.6	74.48	5.143	
9,400.0	7,162.0	9,288.4	7,021.0	41.6	42.6	68.41	2,153.3	615.2	383.1	305.5	77.58	4.938	
9,500.0	7,162.0	9,388.4	7,021.0	43.3	44.2	68.41	2,253.3	615.2	383.1	302.4	80.69	4.747	
9,600.0	7,162.0	9,488.4	7,021.0	45.0	45.9	68.41	2,353.3	615.2	383.1	299.2	83.81	4.570	
9,700.0	7,162.0	9,588.4	7,021.0	46.6	47.5	68.41	2,453.3	615.2	383.1	296.1	86.95	4.406	
9,800.0	7,162.0	9,688.4	7,021.0	48.3	49.2	68.41	2,553.3	615.2	383.1	293.0	90.09	4.252	
9,900.0	7,162.0	9,788.4	7,021.0	50.0	50.8	68.41	2,653.3	615.2	383.1	289.8	93.24	4.108	
10,000.0	7,162.0	9,888.4	7,021.0	51.7	52.5	68.41	2,753.3	615.2	383.1	286.7	96.40	3.974	
10,100.0	7,162.0	9,988.4	7,021.0	53.4	54.2	68.41	2,853.3	615.2	383.1	283.5	99.57	3.847	
10,200.0	7,162.0	10,088.4	7,021.0	55.1	55.8	68.41	2,953.3	615.2	383.1	280.3	102.74	3.728	
10,300.0	7,162.0	10,188.4	7,021.0	56.8	57.5	68.41	3,053.3	615.2	383.1	277.1	105.92	3.617	
10,400.0	7,162.0	10,288.4	7,021.0	58.5	59.2	68.41	3,153.3	615.2	383.1	274.0	109.10	3.511	
10,500.0	7,162.0	10,388.4	7,021.0	60.2	60.9	68.41	3,253.3	615.2	383.1	270.8	112.29	3.411	
10,600.0	7,162.0	10,488.4	7,021.0	61.9	62.6	68.41	3,353.3	615.2	383.1	267.6	115.48	3.317	
10,700.0	7,162.0	10,588.4	7,021.0	63.7	64.3	68.41	3,453.3	615.2	383.1	264.4	118.67	3.228	
10,800.0	7,162.0	10,688.4	7,021.0	65.4	66.0	68.41	3,553.3	615.2	383.1	261.2	121.87	3.143	
10,900.0	7,162.0	10,788.4	7,021.0	67.1	67.7	68.41	3,653.3	615.2	383.0	258.0	125.08	3.063	
11,000.0	7,162.0	10,888.4	7,021.0	68.8	69.4	68.41	3,753.3	615.2	383.0	254.8	128.28	2.986	
11,100.0	7,162.0	10,988.4	7,021.0	70.5	71.1	68.41	3,853.3	615.2	383.0	251.6	131.49	2.913	
11,150.0	7,162.0	11,038.4	7,021.0	71.4	72.0	68.41	3,903.3	615.2	383.0	250.0	133.10	2.878	
11,150.0	7,162.0	11,038.4	7,021.0	71.4	72.0	68.41	3,903.3	615.2	383.0	250.0	133.10	2.878	
11,200.0	7,162.0	11,088.4	7,021.0	72.2	72.8	68.44	3,953.3	615.2	383.7	249.3	134.34	2.856	
11,300.0	7,162.0	11,188.2	7,021.0	74.0	74.5	68.67	4,053.1	615.2	388.6	251.9	136.72	2.842 SF	
11,400.0	7,162.0	11,287.6	7,021.0	75.7	76.2	69.11	4,152.6	615.2	398.4	259.5	138.92	2.868	
11,500.0	7,162.0	11,386.4	7,021.0	77.3	77.9	69.74	4,251.3	615.2	413.3	272.4	140.88	2.933	
11,600.0	7,162.0	11,484.1	7,021.0	79.0	79.6	70.49	4,349.1	615.2	433.1	290.5	142.53	3.038	
11,700.0	7,162.0	11,580.7	7,021.0	80.7	81.3	71.33	4,445.6	615.2	457.8	314.0	143.81	3.184	
11,747.9	7,162.0	11,626.3	7,021.0	81.4	82.0	71.75	4,491.3	615.2	471.5	327.2	144.27	3.268	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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	89.89	0.0	22.7	22.7				
100.0	100.0	100.0	100.0	0.1	0.1	89.89	0.0	22.7	22.7	22.4	0.24	92.710	
200.0	200.0	200.0	200.0	0.3	0.3	89.89	0.0	22.7	22.7	22.1	0.59	38.175	
300.0	300.0	300.0	300.0	0.5	0.5	89.89	0.0	22.7	22.7	21.7	0.94	24.036	
333.4	333.4	333.4	333.4	0.5	0.5	89.89	0.0	22.7	22.7	21.6	1.06	21.392	CC
400.0	400.0	399.8	399.8	0.6	0.6	90.09	0.0	22.9	22.9	21.6	1.29	17.701	ES
500.0	500.0	499.4	499.4	0.8	0.8	-50.59	-0.7	24.5	23.9	22.3	1.64	14.587	
600.0	600.0	599.0	598.9	1.0	1.0	-52.31	-1.9	27.7	25.5	23.5	1.99	12.812	
700.0	699.9	698.6	698.3	1.2	1.2	-55.24	-3.8	32.5	27.7	25.3	2.35	11.785	
800.0	799.7	798.1	797.6	1.4	1.4	-58.95	-6.3	39.0	30.5	27.8	2.72	11.221	
853.0	852.6	850.8	850.2	1.5	1.5	-61.08	-7.8	43.1	32.3	29.4	2.93	11.053	
900.0	899.4	897.5	896.7	1.6	1.6	-62.74	-9.4	47.0	34.2	31.1	3.11	11.002	
1,000.0	999.1	996.8	995.5	1.8	1.8	-64.64	-13.1	56.7	39.3	35.8	3.51	11.201	
1,100.0	1,098.8	1,096.0	1,093.9	2.0	2.1	-64.81	-17.4	67.9	45.9	42.0	3.92	11.706	
1,200.0	1,198.4	1,195.0	1,191.9	2.2	2.4	-63.87	-22.3	80.7	53.8	49.5	4.33	12.437	
1,300.0	1,298.1	1,293.7	1,289.4	2.4	2.7	-62.31	-27.8	95.0	63.2	58.5	4.74	13.349	
1,400.0	1,397.8	1,392.1	1,386.3	2.6	3.0	-60.47	-33.9	110.8	74.1	69.0	5.14	14.417	
1,500.0	1,497.5	1,490.8	1,483.3	2.9	3.3	-58.60	-40.6	128.1	86.4	80.8	5.54	15.583	
1,600.0	1,597.2	1,589.9	1,580.7	3.1	3.7	-57.15	-47.3	145.5	98.8	92.9	5.94	16.630	
1,700.0	1,696.9	1,689.1	1,678.1	3.3	4.0	-56.02	-54.0	163.0	111.3	105.0	6.34	17.553	
1,800.0	1,796.6	1,788.3	1,775.5	3.5	4.4	-55.11	-60.8	180.5	123.9	117.1	6.74	18.371	
1,900.0	1,896.3	1,887.5	1,872.9	3.7	4.8	-54.38	-67.5	197.9	136.4	129.3	7.14	19.101	
2,000.0	1,995.9	1,986.7	1,970.3	4.0	5.1	-53.76	-74.2	215.4	149.0	141.5	7.54	19.755	
2,100.0	2,095.6	2,085.9	2,067.7	4.2	5.5	-53.25	-80.9	232.9	161.6	153.7	7.94	20.344	
2,200.0	2,195.3	2,185.1	2,165.2	4.4	5.8	-52.81	-87.7	250.3	174.2	165.9	8.35	20.879	
2,300.0	2,295.0	2,284.3	2,262.6	4.6	6.2	-52.42	-94.4	267.8	186.9	178.1	8.75	21.364	
2,400.0	2,394.7	2,383.5	2,360.0	4.8	6.6	-52.09	-101.1	285.3	199.5	190.3	9.15	21.808	
2,500.0	2,494.4	2,482.7	2,457.4	5.1	6.9	-51.80	-107.9	302.8	212.1	202.6	9.55	22.215	
2,600.0	2,594.1	2,581.9	2,554.8	5.3	7.3	-51.53	-114.6	320.2	224.7	214.8	9.95	22.590	
2,700.0	2,693.8	2,681.1	2,652.2	5.5	7.7	-51.30	-121.3	337.7	237.4	227.0	10.35	22.936	
2,800.0	2,793.4	2,780.3	2,749.6	5.7	8.0	-51.09	-128.1	355.2	250.0	239.3	10.75	23.256	
2,900.0	2,893.1	2,879.5	2,847.0	5.9	8.4	-50.90	-134.8	372.6	262.7	251.5	11.15	23.553	
3,000.0	2,992.8	2,978.7	2,944.4	6.2	8.8	-50.73	-141.5	390.1	275.3	263.8	11.55	23.830	
3,100.0	3,092.5	3,077.9	3,041.8	6.4	9.2	-50.57	-148.3	407.6	288.0	276.0	11.96	24.088	
3,200.0	3,192.2	3,177.0	3,139.3	6.6	9.5	-50.43	-155.0	425.0	300.6	288.3	12.36	24.330	
3,300.0	3,291.9	3,276.2	3,236.7	6.8	9.9	-50.30	-161.7	442.5	313.3	300.5	12.76	24.556	
3,400.0	3,391.6	3,375.4	3,334.1	7.1	10.3	-50.17	-168.4	460.0	326.0	312.8	13.16	24.769	
3,500.0	3,491.3	3,474.6	3,431.5	7.3	10.6	-50.06	-175.2	477.5	338.6	325.1	13.56	24.969	
3,600.0	3,590.9	3,573.8	3,528.9	7.5	11.0	-49.96	-181.9	494.9	351.3	337.3	13.96	25.158	
3,700.0	3,690.6	3,673.0	3,626.3	7.7	11.4	-49.86	-188.6	512.4	363.9	349.6	14.36	25.336	
3,800.0	3,790.3	3,772.2	3,723.7	7.9	11.8	-49.77	-195.4	529.9	376.6	361.8	14.77	25.504	
3,900.0	3,890.0	3,871.4	3,821.1	8.2	12.1	-49.68	-202.1	547.3	389.3	374.1	15.17	25.664	
4,000.0	3,989.7	3,970.6	3,918.5	8.4	12.5	-49.60	-208.8	564.8	401.9	386.4	15.57	25.815	
4,100.0	4,089.4	4,069.8	4,016.0	8.6	12.9	-49.53	-215.6	582.3	414.6	398.6	15.97	25.959	
4,200.0	4,189.1	4,169.0	4,113.4	8.8	13.2	-49.46	-222.3	599.7	427.3	410.9	16.37	26.096	
4,300.0	4,288.8	4,268.2	4,210.8	9.1	13.6	-49.39	-229.0	617.2	439.9	423.1	16.77	26.226	
4,400.0	4,388.4	4,367.4	4,308.2	9.3	14.0	-49.33	-235.8	634.7	452.6	435.4	17.18	26.350	
4,500.0	4,488.1	4,466.6	4,405.6	9.5	14.4	-49.27	-242.5	652.2	465.3	447.7	17.58	26.468	
4,600.0	4,587.8	4,565.8	4,503.0	9.7	14.7	-49.22	-249.2	669.6	477.9	459.9	17.98	26.581	
4,700.0	4,687.5	4,664.9	4,600.4	9.9	15.1	-49.16	-256.0	687.1	490.6	472.2	18.38	26.690	
4,800.0	4,787.2	4,764.1	4,697.8	10.2	15.5	-49.11	-262.7	704.6	503.3	484.5	18.78	26.793	
4,900.0	4,886.9	4,863.3	4,795.2	10.4	15.9	-49.06	-269.4	722.0	515.9	496.7	19.18	26.892	

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 4E-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 4E-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
5,000.0	4,986.6	4,962.5	4,892.7	10.6	16.2	-49.02	-276.1	739.5	528.6	509.0	19.59	26.988	
5,100.0	5,086.3	5,068.8	4,997.1	10.8	16.6	-48.99	-283.2	757.7	540.8	520.8	20.00	27.037	
5,200.0	5,185.9	5,178.1	5,104.9	11.0	17.0	-49.04	-289.7	774.6	551.3	530.8	20.43	26.987	
5,300.0	5,285.6	5,287.7	5,213.3	11.3	17.3	-49.15	-295.4	789.6	559.9	539.1	20.86	26.846	
5,400.0	5,385.3	5,397.6	5,322.3	11.5	17.6	-49.34	-300.5	802.7	566.8	545.5	21.29	26.619	
5,500.0	5,485.0	5,507.7	5,431.8	11.7	17.9	-49.59	-304.8	813.9	571.9	550.2	21.74	26.311	
5,562.6	5,547.4	5,576.8	5,500.5	11.9	18.0	-49.78	-307.1	819.9	574.2	552.2	22.02	26.080	
5,600.0	5,584.7	5,618.0	5,541.6	11.9	18.1	-49.91	-308.4	823.1	575.3	553.1	22.18	25.938	
5,700.0	5,684.5	5,728.3	5,651.6	12.1	18.3	-50.19	-311.1	830.4	577.8	555.2	22.59	25.575	
5,800.0	5,784.4	5,838.7	5,761.9	12.3	18.5	-50.40	-313.2	835.6	579.7	556.7	22.98	25.229	
5,900.0	5,884.3	5,949.1	5,872.3	12.5	18.6	-50.53	-314.4	838.9	580.8	557.5	23.33	24.896	
6,000.0	5,984.3	6,059.6	5,982.7	12.6	18.7	-50.58	-314.9	840.2	581.2	557.6	23.65	24.574	
6,015.7	6,000.0	6,076.9	6,000.0	12.6	18.7	90.00	-315.0	840.3	581.3	557.6	23.70	24.523	
6,100.0	6,084.3	6,161.2	6,084.3	12.8	18.8	90.00	-315.0	840.3	581.3	557.3	23.96	24.256	
6,200.0	6,184.3	6,261.2	6,184.3	12.9	18.9	90.00	-315.0	840.3	581.3	557.0	24.27	23.945	
6,300.0	6,284.3	6,361.2	6,284.3	13.1	19.0	90.00	-315.0	840.3	581.3	556.7	24.59	23.642	
6,400.0	6,384.3	6,461.2	6,384.3	13.2	19.1	90.00	-315.0	840.3	581.3	556.4	24.90	23.345	
6,500.0	6,484.3	6,561.2	6,484.3	13.4	19.2	90.00	-315.0	840.3	581.3	556.0	25.21	23.054	
6,604.7	6,589.0	6,665.9	6,589.0	13.5	19.3	90.00	-315.0	840.3	581.3	555.7	25.54	22.757	
6,650.0	6,634.3	6,711.2	6,634.3	13.6	19.4	90.00	-313.2	840.3	581.3	555.6	25.63	22.678	
6,700.0	6,683.9	6,761.2	6,683.9	13.6	19.4	90.00	-307.1	840.3	581.3	555.6	25.67	22.645	
6,750.0	6,732.8	6,811.2	6,732.8	13.6	19.4	90.00	-296.6	840.3	581.3	555.6	25.65	22.660	
6,800.0	6,780.6	6,861.2	6,780.6	13.5	19.4	90.00	-282.0	840.3	581.3	555.7	25.59	22.715	
6,850.0	6,826.9	6,911.2	6,826.9	13.5	19.3	90.00	-263.3	840.3	581.3	555.8	25.49	22.802	
6,900.0	6,871.4	6,961.2	6,871.4	13.4	19.3	90.00	-240.5	840.3	581.3	555.9	25.37	22.910	
6,950.0	6,913.8	7,011.2	6,913.8	13.4	19.2	90.00	-214.0	840.3	581.3	556.0	25.25	23.023	
7,000.0	6,953.7	7,061.2	6,953.7	13.3	19.2	90.00	-183.9	840.3	581.3	556.1	25.13	23.128	
7,050.0	6,990.8	7,111.2	6,990.8	13.3	19.2	90.00	-150.5	840.3	581.3	556.2	25.05	23.207	
7,100.0	7,024.9	7,161.2	7,024.9	13.2	19.2	90.00	-113.9	840.3	581.3	556.2	25.01	23.243	
7,150.0	7,055.7	7,211.2	7,055.7	13.3	19.2	90.00	-74.5	840.3	581.3	556.2	25.03	23.220	
7,200.0	7,082.9	7,261.2	7,082.9	13.3	19.2	90.00	-32.6	840.3	581.3	556.1	25.14	23.122	
7,250.0	7,106.3	7,311.2	7,106.3	13.4	19.3	90.00	11.6	840.3	581.3	555.9	25.34	22.941	
7,300.0	7,125.8	7,361.2	7,125.8	13.5	19.3	90.00	57.6	840.3	581.3	555.6	25.64	22.670	
7,350.0	7,141.2	7,411.2	7,141.2	13.7	19.5	90.00	105.2	840.3	581.3	555.2	26.05	22.313	
7,400.0	7,152.4	7,461.2	7,152.5	14.0	19.6	90.00	153.9	840.3	581.3	554.7	26.57	21.877	
7,450.0	7,159.4	7,511.2	7,159.4	14.3	19.8	90.00	203.4	840.3	581.3	554.1	27.19	21.374	
7,504.7	7,162.0	7,565.9	7,162.0	14.7	20.1	90.00	258.0	840.3	581.3	553.3	27.99	20.769	
7,600.0	7,162.0	7,661.2	7,162.0	15.4	20.7	90.00	353.3	840.3	581.3	551.6	29.64	19.611	
7,700.0	7,162.0	7,761.2	7,162.0	16.4	21.4	90.00	453.3	840.3	581.3	549.6	31.64	18.370	
7,800.0	7,162.0	7,861.2	7,162.0	17.5	22.2	90.00	553.3	840.3	581.3	547.4	33.89	17.151	
7,900.0	7,162.0	7,961.2	7,162.0	18.7	23.2	90.00	653.3	840.3	581.3	544.9	36.34	15.995	
8,000.0	7,162.0	8,061.2	7,162.0	20.0	24.2	90.00	753.3	840.3	581.3	542.3	38.95	14.923	
8,100.0	7,162.0	8,161.2	7,162.0	21.3	25.3	90.00	853.3	840.3	581.3	539.6	41.69	13.941	
8,200.0	7,162.0	8,261.2	7,162.0	22.7	26.5	90.00	953.3	840.3	581.3	536.7	44.54	13.049	
8,300.0	7,162.0	8,361.2	7,162.0	24.1	27.7	90.00	1,053.3	840.3	581.3	533.8	47.48	12.241	
8,400.0	7,162.0	8,461.2	7,162.0	25.6	29.0	90.00	1,153.3	840.3	581.3	530.8	50.49	11.511	
8,500.0	7,162.0	8,561.2	7,162.0	27.1	30.4	90.00	1,253.3	840.3	581.3	527.7	53.57	10.851	
8,600.0	7,162.0	8,661.2	7,162.0	28.7	31.8	90.00	1,353.3	840.3	581.3	524.6	56.69	10.253	
8,700.0	7,162.0	8,761.2	7,162.0	30.2	33.2	90.00	1,453.3	840.3	581.3	521.4	59.86	9.711	
8,800.0	7,162.0	8,861.2	7,162.0	31.8	34.6	90.00	1,553.3	840.3	581.3	518.2	63.06	9.218	
8,900.0	7,162.0	8,961.2	7,162.0	33.4	36.1	90.00	1,653.3	840.3	581.3	515.0	66.29	8.768	
9,000.0	7,162.0	9,061.2	7,162.0	35.0	37.6	90.00	1,753.3	840.3	581.3	511.7	69.55	8.357	

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 4E-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 4E-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
9,100.0	7,162.0	9,161.2	7,162.0	36.7	39.1	90.00	1,853.3	840.3	581.3	508.4	72.83	7.981	
9,200.0	7,162.0	9,261.2	7,162.0	38.3	40.7	90.00	1,953.3	840.3	581.3	505.1	76.14	7.634	
9,300.0	7,162.0	9,361.2	7,162.0	40.0	42.2	90.00	2,053.3	840.3	581.3	501.8	79.46	7.315	
9,400.0	7,162.0	9,461.2	7,162.0	41.6	43.8	90.00	2,153.3	840.3	581.3	498.5	82.79	7.021	
9,500.0	7,162.0	9,561.2	7,162.0	43.3	45.4	90.00	2,253.3	840.3	581.3	495.1	86.14	6.748	
9,600.0	7,162.0	9,661.2	7,162.0	45.0	47.0	90.00	2,353.3	840.3	581.3	491.8	89.50	6.494	
9,700.0	7,162.0	9,761.2	7,162.0	46.6	48.6	90.00	2,453.3	840.3	581.3	488.4	92.88	6.258	
9,800.0	7,162.0	9,861.2	7,162.0	48.3	50.2	90.00	2,553.3	840.3	581.3	485.0	96.26	6.038	
9,900.0	7,162.0	9,961.2	7,162.0	50.0	51.8	90.00	2,653.3	840.3	581.3	481.6	99.65	5.833	
10,000.0	7,162.0	10,061.2	7,162.0	51.7	53.5	90.00	2,753.3	840.3	581.3	478.2	103.05	5.641	
10,100.0	7,162.0	10,161.2	7,162.0	53.4	55.1	90.00	2,853.3	840.3	581.3	474.8	106.45	5.460	
10,200.0	7,162.0	10,261.2	7,162.0	55.1	56.8	90.00	2,953.3	840.3	581.3	471.4	109.87	5.291	
10,300.0	7,162.0	10,361.2	7,162.0	56.8	58.4	90.00	3,053.3	840.3	581.3	468.0	113.28	5.131	
10,400.0	7,162.0	10,461.2	7,162.0	58.5	60.1	90.00	3,153.3	840.3	581.3	464.5	116.71	4.980	
10,500.0	7,162.0	10,561.2	7,162.0	60.2	61.8	90.00	3,253.3	840.3	581.3	461.1	120.14	4.838	
10,600.0	7,162.0	10,661.2	7,162.0	61.9	63.4	90.00	3,353.3	840.3	581.3	457.7	123.57	4.704	
10,700.0	7,162.0	10,761.2	7,162.0	63.7	65.1	90.00	3,453.3	840.3	581.3	454.3	127.01	4.577	
10,800.0	7,162.0	10,861.2	7,162.0	65.4	66.8	90.00	3,553.3	840.3	581.3	450.8	130.45	4.456	
10,900.0	7,162.0	10,961.2	7,162.0	67.1	68.5	90.00	3,653.3	840.3	581.3	447.4	133.89	4.341	
11,000.0	7,162.0	11,061.2	7,162.0	68.8	70.2	90.00	3,753.3	840.3	581.3	443.9	137.34	4.232	
11,100.0	7,162.0	11,161.2	7,162.0	70.5	71.8	90.00	3,853.3	840.3	581.3	440.5	140.79	4.129	
11,150.0	7,162.0	11,211.2	7,162.0	71.4	72.7	90.00	3,903.3	840.3	581.3	438.7	142.52	4.079	
11,200.0	7,162.0	11,261.2	7,162.0	72.2	73.5	90.00	3,953.3	840.3	581.9	438.2	143.72	4.049	
11,300.0	7,162.0	11,361.1	7,162.0	74.0	75.2	90.00	4,053.1	840.3	587.2	441.4	145.83	4.027	SF
11,400.0	7,162.0	11,460.5	7,162.0	75.7	76.9	90.00	4,152.6	840.3	597.8	450.2	147.54	4.052	
11,500.0	7,162.0	11,559.2	7,162.0	77.3	78.6	90.00	4,251.3	840.3	613.6	464.7	148.84	4.122	
11,600.0	7,162.0	11,657.0	7,162.0	79.0	80.3	90.00	4,349.1	840.3	634.6	484.9	149.70	4.239	
11,700.0	7,162.0	11,753.5	7,162.0	80.7	81.9	90.00	4,445.6	840.3	660.7	510.6	150.12	4.401	
11,747.9	7,162.0	11,799.2	7,162.0	81.4	82.7	90.00	4,491.3	840.3	675.0	524.8	150.15	4.495	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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	89.92	0.0	30.2	30.2				
100.0	100.0	100.0	100.0	0.1	0.1	89.92	0.0	30.2	30.2	30.0	0.24	123.613	
200.0	200.0	200.0	200.0	0.3	0.3	89.92	0.0	30.2	30.2	29.6	0.59	50.900	
300.0	300.0	300.0	300.0	0.5	0.5	89.92	0.0	30.2	30.2	29.3	0.94	32.048	CC, ES
400.0	400.0	399.0	398.9	0.6	0.6	90.82	-0.5	31.8	31.9	30.6	1.29	24.694	
500.0	500.0	497.7	497.6	0.8	0.8	-48.52	-1.9	36.7	36.3	34.6	1.64	22.144	
600.0	600.0	596.2	595.7	1.0	1.1	-48.13	-4.4	44.8	42.9	40.9	1.99	21.549	
700.0	699.9	694.3	693.0	1.2	1.3	-48.32	-7.8	56.1	51.6	49.3	2.35	21.996	
800.0	799.7	791.8	789.4	1.4	1.6	-48.80	-12.2	70.5	62.5	59.8	2.71	23.030	
853.0	852.6	843.3	840.0	1.5	1.8	-49.11	-14.9	79.3	69.1	66.2	2.91	23.724	
900.0	899.4	888.7	884.5	1.6	1.9	-49.34	-17.5	87.9	75.6	72.5	3.09	24.453	
1,000.0	999.1	985.9	979.5	1.8	2.3	-49.35	-23.7	108.1	91.5	88.0	3.48	26.318	
1,100.0	1,098.8	1,084.6	1,075.6	2.0	2.7	-49.27	-30.1	129.1	107.9	104.0	3.87	27.907	
1,200.0	1,198.4	1,183.2	1,171.8	2.2	3.1	-49.21	-36.5	150.2	124.3	120.1	4.26	29.188	
1,300.0	1,298.1	1,281.9	1,267.9	2.4	3.6	-49.16	-42.9	171.2	140.7	136.1	4.65	30.241	
1,400.0	1,397.8	1,380.5	1,364.1	2.6	4.0	-49.13	-49.3	192.3	157.1	152.1	5.05	31.120	
1,500.0	1,497.5	1,479.1	1,460.3	2.9	4.4	-49.10	-55.7	213.3	173.5	168.1	5.45	31.865	
1,600.0	1,597.2	1,577.8	1,556.4	3.1	4.8	-49.08	-62.1	234.4	190.0	184.1	5.84	32.504	
1,700.0	1,696.9	1,676.4	1,652.6	3.3	5.2	-49.06	-68.5	255.4	206.4	200.1	6.24	33.058	
1,800.0	1,796.6	1,775.1	1,748.7	3.5	5.7	-49.04	-74.9	276.4	222.8	216.1	6.64	33.542	
1,900.0	1,896.3	1,873.7	1,844.9	3.7	6.1	-49.02	-81.3	297.5	239.2	232.1	7.04	33.969	
2,000.0	1,995.9	1,972.4	1,941.1	4.0	6.5	-49.01	-87.7	318.5	255.6	248.2	7.44	34.348	
2,100.0	2,095.6	2,071.0	2,037.2	4.2	6.9	-49.00	-94.1	339.6	272.0	264.2	7.84	34.687	
2,200.0	2,195.3	2,169.7	2,133.4	4.4	7.4	-48.99	-100.5	360.6	288.4	280.2	8.24	34.992	
2,300.0	2,295.0	2,268.3	2,229.6	4.6	7.8	-48.98	-106.9	381.6	304.8	296.2	8.64	35.267	
2,400.0	2,394.7	2,366.9	2,325.7	4.8	8.2	-48.97	-113.3	402.7	321.2	312.2	9.04	35.518	
2,500.0	2,494.4	2,465.6	2,421.9	5.1	8.6	-48.97	-119.7	423.7	337.7	328.2	9.45	35.746	
2,600.0	2,594.1	2,564.2	2,518.0	5.3	9.1	-48.96	-126.1	444.8	354.1	344.2	9.85	35.955	
2,700.0	2,693.8	2,662.9	2,614.2	5.5	9.5	-48.95	-132.5	465.8	370.5	360.2	10.25	36.147	
2,800.0	2,793.4	2,761.5	2,710.4	5.7	9.9	-48.95	-138.9	486.8	386.9	376.2	10.65	36.324	
2,900.0	2,893.1	2,860.2	2,806.5	5.9	10.3	-48.94	-145.4	507.9	403.3	392.2	11.05	36.488	
3,000.0	2,992.8	2,958.8	2,902.7	6.2	10.8	-48.94	-151.8	528.9	419.7	408.2	11.45	36.640	
3,100.0	3,092.5	3,057.5	2,998.8	6.4	11.2	-48.94	-158.2	550.0	436.1	424.3	11.86	36.781	
3,200.0	3,192.2	3,156.1	3,095.0	6.6	11.6	-48.93	-164.6	571.0	452.5	440.3	12.26	36.913	
3,300.0	3,291.9	3,254.7	3,191.2	6.8	12.0	-48.93	-171.0	592.0	468.9	456.3	12.66	37.037	
3,400.0	3,391.6	3,353.4	3,287.3	7.1	12.5	-48.92	-177.4	613.1	485.3	472.3	13.06	37.152	
3,500.0	3,491.3	3,452.0	3,383.5	7.3	12.9	-48.92	-183.8	634.1	501.8	488.3	13.47	37.260	
3,600.0	3,590.9	3,550.7	3,479.6	7.5	13.3	-48.92	-190.2	655.2	518.2	504.3	13.87	37.362	
3,700.0	3,690.6	3,649.3	3,575.8	7.7	13.8	-48.92	-196.6	676.2	534.6	520.3	14.27	37.459	
3,800.0	3,790.3	3,748.0	3,672.0	7.9	14.2	-48.91	-203.0	697.3	551.0	536.3	14.67	37.549	
3,900.0	3,890.0	3,846.6	3,768.1	8.2	14.6	-48.91	-209.4	718.3	567.4	552.3	15.08	37.635	
4,000.0	3,989.7	3,945.3	3,864.3	8.4	15.0	-48.91	-215.8	739.3	583.8	568.3	15.48	37.716	
4,100.0	4,089.4	4,043.9	3,960.5	8.6	15.5	-48.91	-222.2	760.4	600.2	584.3	15.88	37.793	
4,200.0	4,189.1	4,142.5	4,056.6	8.8	15.9	-48.90	-228.6	781.4	616.6	600.3	16.28	37.866	
4,300.0	4,288.8	4,241.2	4,152.8	9.1	16.3	-48.90	-235.0	802.5	633.0	616.4	16.69	37.936	
4,400.0	4,388.4	4,339.8	4,248.9	9.3	16.8	-48.90	-241.4	823.5	649.5	632.4	17.09	38.002	
4,500.0	4,488.1	4,438.5	4,345.1	9.5	17.2	-48.90	-247.8	844.5	665.9	648.4	17.49	38.065	
4,600.0	4,587.8	4,537.1	4,441.3	9.7	17.6	-48.90	-254.2	865.6	682.3	664.4	17.90	38.125	
4,700.0	4,687.5	4,635.8	4,537.4	9.9	18.0	-48.89	-260.6	886.6	698.7	680.4	18.30	38.182	
4,800.0	4,787.2	4,734.4	4,633.6	10.2	18.5	-48.89	-267.0	907.7	715.1	696.4	18.70	38.237	
4,900.0	4,886.9	4,834.1	4,730.8	10.4	18.9	-48.89	-273.5	928.9	731.5	712.4	19.11	38.286	
5,000.0	4,986.6	4,946.9	4,841.0	10.6	19.4	-48.92	-280.5	951.8	746.8	727.3	19.54	38.226	

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 4E-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 4E-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
5,100.0	5,086.3	5,060.4	4,952.4	10.8	19.8	-48.99	-286.8	972.7	760.3	740.3	19.97	38.066	
5,200.0	5,185.9	5,174.4	5,064.6	11.0	20.2	-49.10	-292.6	991.6	771.8	751.4	20.41	37.812	
5,300.0	5,285.6	5,288.8	5,177.7	11.3	20.5	-49.25	-297.7	1,008.4	781.5	760.6	20.86	37.470	
5,400.0	5,385.3	5,403.7	5,291.5	11.5	20.8	-49.45	-302.2	1,023.0	789.2	767.9	21.30	37.045	
5,500.0	5,485.0	5,518.7	5,405.8	11.7	21.1	-49.69	-306.0	1,035.6	795.1	773.3	21.76	36.543	
5,562.6	5,547.4	5,590.9	5,477.7	11.9	21.3	-49.86	-308.0	1,042.3	797.7	775.7	22.04	36.191	
5,600.0	5,584.7	5,634.0	5,520.6	11.9	21.3	-49.98	-309.1	1,045.9	799.1	776.8	22.21	35.981	
5,700.0	5,684.5	5,749.3	5,635.6	12.1	21.5	-50.23	-311.6	1,054.0	802.0	779.4	22.63	35.447	
5,800.0	5,784.4	5,864.8	5,750.9	12.3	21.7	-50.41	-313.4	1,059.9	804.2	781.2	23.01	34.942	
5,900.0	5,884.3	5,980.3	5,866.4	12.5	21.9	-50.53	-314.5	1,063.6	805.6	782.2	23.37	34.464	
6,000.0	5,984.3	6,095.9	5,981.9	12.6	22.0	-50.57	-314.9	1,065.1	806.1	782.4	23.70	34.007	
6,015.7	6,000.0	6,114.0	6,000.0	12.6	22.0	90.00	-315.0	1,065.1	806.1	782.4	23.75	33.936	
6,100.0	6,084.3	6,198.3	6,084.3	12.8	22.1	90.00	-315.0	1,065.1	806.1	782.1	24.02	33.566	
6,200.0	6,184.3	6,298.3	6,184.3	12.9	22.1	90.00	-315.0	1,065.1	806.1	781.8	24.33	33.137	
6,300.0	6,284.3	6,398.3	6,284.3	13.1	22.2	90.00	-315.0	1,065.1	806.1	781.5	24.64	32.717	
6,360.6	6,345.0	6,458.9	6,345.0	13.1	22.3	90.00	-315.0	1,065.1	806.1	781.3	24.83	32.468	
6,400.0	6,384.3	6,498.3	6,384.3	13.2	22.3	89.94	-314.2	1,065.1	806.1	781.2	24.95	32.310	
6,500.0	6,484.3	6,596.2	6,481.2	13.4	22.3	89.00	-300.9	1,065.1	806.2	780.9	25.29	31.875	
6,604.7	6,589.0	6,691.1	6,571.6	13.5	22.3	86.98	-272.4	1,065.1	807.4	781.7	25.72	31.398	
6,650.0	6,634.3	6,729.5	6,606.7	13.6	22.3	85.85	-256.7	1,065.1	808.6	782.7	25.89	31.231	
6,700.0	6,683.9	6,771.0	6,643.2	13.6	22.2	84.64	-237.2	1,065.1	810.1	784.1	26.02	31.136	
6,750.0	6,732.8	6,811.6	6,677.6	13.6	22.2	83.46	-215.6	1,065.1	812.1	786.0	26.08	31.132	
6,800.0	6,780.6	6,850.0	6,708.6	13.5	22.2	82.36	-192.9	1,065.1	814.2	788.1	26.08	31.216	
6,850.0	6,826.9	6,890.5	6,739.6	13.5	22.1	81.25	-166.8	1,065.1	816.5	790.5	26.02	31.380	
6,900.0	6,871.4	6,929.1	6,767.2	13.4	22.1	80.22	-140.0	1,065.1	819.0	793.1	25.90	31.616	
6,950.0	6,913.8	6,967.1	6,792.7	13.4	22.1	79.26	-111.7	1,065.1	821.5	795.8	25.75	31.910	
7,000.0	6,953.7	7,000.0	6,813.2	13.3	22.1	78.44	-86.0	1,065.1	824.1	798.5	25.57	32.232	
7,050.0	6,990.8	7,041.8	6,837.1	13.3	22.1	77.53	-51.7	1,065.1	826.6	801.2	25.37	32.583	
7,100.0	7,024.9	7,078.6	6,856.0	13.2	22.1	76.78	-20.1	1,065.1	828.9	803.8	25.16	32.943	
7,150.0	7,055.7	7,115.1	6,872.7	13.3	22.2	76.10	12.4	1,065.1	831.2	806.1	25.08	33.138	
7,200.0	7,082.9	7,150.0	6,886.7	13.3	22.2	75.53	44.3	1,065.1	833.2	808.2	25.00	33.328	
7,250.0	7,106.3	7,187.4	6,899.5	13.4	22.3	75.01	79.4	1,065.1	835.0	809.9	25.04	33.343	
7,300.0	7,125.8	7,223.3	6,909.6	13.5	22.4	74.59	113.8	1,065.1	836.5	811.3	25.20	33.199	
7,350.0	7,141.2	7,259.0	6,917.5	13.7	22.5	74.26	148.7	1,065.1	837.7	812.2	25.48	32.873	
7,400.0	7,152.4	7,300.0	6,923.9	14.0	22.6	74.00	189.2	1,065.1	838.6	812.7	25.95	32.323	
7,450.0	7,159.4	7,330.1	6,926.7	14.3	22.7	73.87	219.2	1,065.1	839.2	812.6	26.52	31.645	
7,504.7	7,162.0	7,369.0	6,928.0	14.7	22.9	73.82	258.0	1,065.1	839.4	812.0	27.33	30.717	
7,544.0	7,162.0	7,408.3	6,928.0	15.0	23.1	73.82	297.3	1,065.1	839.4	811.4	27.96	30.019	
7,600.0	7,162.0	7,464.3	6,928.0	15.4	23.4	73.82	353.3	1,065.1	839.4	810.5	28.91	29.034	
7,700.0	7,162.0	7,564.3	6,928.0	16.4	24.0	73.82	453.3	1,065.1	839.4	808.5	30.83	27.228	
7,800.0	7,162.0	7,664.3	6,928.0	17.5	24.7	73.82	553.3	1,065.1	839.4	806.4	32.98	25.452	
7,900.0	7,162.0	7,764.3	6,928.0	18.7	25.6	73.82	653.3	1,065.1	839.4	804.0	35.32	23.764	
8,000.0	7,162.0	7,864.3	6,928.0	20.0	26.5	73.82	753.3	1,065.1	839.4	801.5	37.82	22.194	
8,100.0	7,162.0	7,964.3	6,928.0	21.3	27.5	73.82	853.3	1,065.1	839.4	798.9	40.44	20.754	
8,200.0	7,162.0	8,064.3	6,928.0	22.7	28.6	73.82	953.3	1,065.1	839.4	796.2	43.17	19.442	
8,300.0	7,162.0	8,164.3	6,928.0	24.1	29.7	73.82	1,053.3	1,065.1	839.4	793.4	45.99	18.252	
8,400.0	7,162.0	8,264.3	6,928.0	25.6	30.9	73.82	1,153.3	1,065.1	839.4	790.5	48.87	17.174	
8,500.0	7,162.0	8,364.3	6,928.0	27.1	32.2	73.82	1,253.3	1,065.1	839.4	787.5	51.82	16.199	
8,600.0	7,162.0	8,464.3	6,928.0	28.7	33.5	73.82	1,353.3	1,065.1	839.4	784.5	54.81	15.314	
8,700.0	7,162.0	8,564.3	6,928.0	30.2	34.9	73.82	1,453.3	1,065.1	839.4	781.5	57.84	14.511	
8,800.0	7,162.0	8,664.3	6,928.0	31.8	36.2	73.82	1,553.3	1,065.1	839.4	778.4	60.91	13.779	
8,900.0	7,162.0	8,764.3	6,928.0	33.4	37.6	73.82	1,653.3	1,065.1	839.4	775.3	64.01	13.112	

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 4E-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 4E-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
9,000.0	7,162.0	8,864.3	6,928.0	35.0	39.1	73.82	1,753.3	1,065.1	839.4	772.2	67.14	12.501	
9,100.0	7,162.0	8,964.3	6,928.0	36.7	40.5	73.82	1,853.3	1,065.1	839.4	769.1	70.29	11.941	
9,200.0	7,162.0	9,064.3	6,928.0	38.3	42.0	73.82	1,953.3	1,065.1	839.4	765.9	73.46	11.426	
9,300.0	7,162.0	9,164.3	6,928.0	40.0	43.5	73.82	2,053.3	1,065.1	839.4	762.7	76.64	10.951	
9,400.0	7,162.0	9,264.3	6,928.0	41.6	45.1	73.82	2,153.3	1,065.1	839.4	759.5	79.85	10.512	
9,500.0	7,162.0	9,364.3	6,928.0	43.3	46.6	73.82	2,253.3	1,065.1	839.4	756.3	83.06	10.105	
9,600.0	7,162.0	9,464.3	6,928.0	45.0	48.2	73.82	2,353.3	1,065.1	839.4	753.1	86.29	9.727	
9,700.0	7,162.0	9,564.3	6,928.0	46.6	49.7	73.82	2,453.3	1,065.1	839.4	749.8	89.52	9.376	
9,800.0	7,162.0	9,664.3	6,928.0	48.3	51.3	73.82	2,553.3	1,065.1	839.4	746.6	92.77	9.048	
9,900.0	7,162.0	9,764.3	6,928.0	50.0	52.9	73.82	2,653.3	1,065.1	839.4	743.3	96.03	8.741	
10,000.0	7,162.0	9,864.3	6,928.0	51.7	54.5	73.82	2,753.3	1,065.1	839.4	740.1	99.29	8.454	
10,100.0	7,162.0	9,964.3	6,928.0	53.4	56.1	73.82	2,853.3	1,065.1	839.3	736.8	102.56	8.184	
10,200.0	7,162.0	10,064.3	6,928.0	55.1	57.7	73.82	2,953.3	1,065.1	839.3	733.5	105.83	7.931	
10,300.0	7,162.0	10,164.3	6,928.0	56.8	59.4	73.82	3,053.3	1,065.1	839.3	730.2	109.12	7.692	
10,400.0	7,162.0	10,264.3	6,928.0	58.5	61.0	73.82	3,153.3	1,065.1	839.3	726.9	112.40	7.467	
10,500.0	7,162.0	10,364.3	6,928.0	60.2	62.6	73.82	3,253.3	1,065.1	839.3	723.7	115.70	7.255	
10,600.0	7,162.0	10,464.3	6,928.0	61.9	64.3	73.82	3,353.3	1,065.1	839.3	720.4	118.99	7.054	
10,700.0	7,162.0	10,564.3	6,928.0	63.7	65.9	73.82	3,453.3	1,065.1	839.3	717.1	122.29	6.863	
10,800.0	7,162.0	10,664.3	6,928.0	65.4	67.6	73.82	3,553.3	1,065.1	839.3	713.7	125.60	6.683	
10,900.0	7,162.0	10,764.3	6,928.0	67.1	69.3	73.82	3,653.3	1,065.1	839.3	710.4	128.91	6.511	
11,000.0	7,162.0	10,864.3	6,928.0	68.8	70.9	73.82	3,753.3	1,065.1	839.3	707.1	132.22	6.348	
11,100.0	7,162.0	10,964.3	6,928.0	70.5	72.6	73.82	3,853.3	1,065.1	839.3	703.8	135.53	6.193	
11,150.0	7,162.0	11,014.3	6,928.0	71.4	73.4	73.82	3,903.3	1,065.1	839.3	702.2	137.19	6.118	
11,150.0	7,162.0	11,014.3	6,928.0	71.4	73.4	73.82	3,903.3	1,065.1	839.3	702.2	137.19	6.118	
11,200.0	7,162.0	11,064.3	6,928.0	72.2	74.3	73.82	3,953.3	1,065.1	840.0	701.7	138.26	6.075	
11,300.0	7,162.0	11,164.1	6,928.0	74.0	76.0	73.88	4,053.1	1,065.1	845.1	704.9	140.17	6.029 SF	
11,400.0	7,162.0	11,263.6	6,928.0	75.7	77.6	73.99	4,152.6	1,065.1	855.2	713.5	141.73	6.034	
11,500.0	7,162.0	11,362.3	6,928.0	77.3	79.3	74.15	4,251.3	1,065.1	870.4	727.5	142.93	6.090	
11,600.0	7,162.0	11,460.1	6,928.0	79.0	80.9	74.35	4,349.1	1,065.1	890.7	746.9	143.74	6.196	
11,700.0	7,162.0	11,556.6	6,928.0	80.7	82.6	74.58	4,445.6	1,065.1	915.9	771.8	144.14	6.354	
11,747.9	7,162.0	11,602.3	6,928.0	81.4	83.3	74.70	4,491.3	1,065.1	929.7	785.6	144.18	6.448	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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	90.51	-0.3	37.5	37.5				
100.0	100.0	99.0	99.0	0.1	0.1	90.51	-0.3	37.5	37.5	37.2	0.24	154.149	
200.0	200.0	199.0	199.0	0.3	0.3	90.51	-0.3	37.5	37.5	36.9	0.59	63.342	
234.7	234.7	233.7	233.7	0.4	0.4	90.51	-0.3	37.5	37.5	36.8	0.71	52.589	CC, ES
300.0	300.0	298.4	298.4	0.5	0.5	90.66	-0.4	37.9	37.9	36.9	0.94	40.310	
400.0	400.0	397.0	396.9	0.6	0.6	91.75	-1.3	41.1	41.2	39.9	1.29	31.988	
500.0	500.0	495.3	495.0	0.8	0.9	-47.81	-2.9	47.7	47.3	45.7	1.63	28.954	
600.0	600.0	593.3	592.4	1.0	1.1	-47.67	-5.3	57.4	55.6	53.6	1.98	28.032	
700.0	699.9	690.7	688.9	1.2	1.4	-48.06	-8.6	70.3	66.1	63.8	2.34	28.246	
800.0	799.7	787.5	784.3	1.4	1.7	-48.74	-12.6	86.2	78.7	76.0	2.70	29.101	
853.0	852.6	838.6	834.4	1.5	1.9	-49.15	-15.0	95.9	86.3	83.4	2.90	29.715	
900.0	899.4	883.6	878.4	1.6	2.1	-49.50	-17.4	105.1	93.6	90.5	3.08	30.377	
1,000.0	999.1	978.9	971.1	1.8	2.5	-49.78	-22.8	126.9	111.5	108.0	3.46	32.210	
1,100.0	1,098.8	1,077.1	1,066.1	2.0	2.9	-49.85	-28.8	150.6	130.7	126.9	3.85	33.950	
1,200.0	1,198.4	1,175.2	1,161.2	2.2	3.4	-49.90	-34.7	174.3	150.0	145.7	4.24	35.349	
1,300.0	1,298.1	1,273.3	1,256.2	2.4	3.8	-49.94	-40.7	198.0	169.2	164.6	4.64	36.494	
1,400.0	1,397.8	1,371.5	1,351.3	2.6	4.3	-49.97	-46.7	221.7	188.5	183.4	5.03	37.448	
1,500.0	1,497.5	1,469.6	1,446.3	2.9	4.8	-49.99	-52.6	245.4	207.7	202.3	5.43	38.254	
1,600.0	1,597.2	1,567.7	1,541.4	3.1	5.2	-50.01	-58.6	269.1	227.0	221.1	5.83	38.943	
1,700.0	1,696.9	1,665.9	1,636.4	3.3	5.7	-50.03	-64.5	292.8	246.2	240.0	6.23	39.539	
1,800.0	1,796.6	1,764.0	1,731.4	3.5	6.1	-50.04	-70.5	316.4	265.4	258.8	6.63	40.059	
1,900.0	1,896.3	1,862.1	1,826.5	3.7	6.6	-50.06	-76.4	340.1	284.7	277.7	7.03	40.517	
2,000.0	1,995.9	1,960.2	1,921.5	4.0	7.1	-50.07	-82.4	363.8	303.9	296.5	7.43	40.923	
2,100.0	2,095.6	2,058.4	2,016.6	4.2	7.5	-50.08	-88.4	387.5	323.2	315.3	7.83	41.285	
2,200.0	2,195.3	2,156.5	2,111.6	4.4	8.0	-50.09	-94.3	411.2	342.4	334.2	8.23	41.611	
2,300.0	2,295.0	2,254.6	2,206.6	4.6	8.5	-50.10	-100.3	434.9	361.7	353.0	8.63	41.904	
2,400.0	2,394.7	2,352.8	2,301.7	4.8	8.9	-50.10	-106.2	458.6	380.9	371.9	9.03	42.171	
2,500.0	2,494.4	2,450.9	2,396.7	5.1	9.4	-50.11	-112.2	482.3	400.2	390.7	9.43	42.413	
2,600.0	2,594.1	2,549.0	2,491.8	5.3	9.9	-50.11	-118.1	506.0	419.4	409.6	9.84	42.635	
2,700.0	2,693.8	2,647.2	2,586.8	5.5	10.4	-50.12	-124.1	529.7	438.6	428.4	10.24	42.839	
2,800.0	2,793.4	2,745.3	2,681.8	5.7	10.8	-50.12	-130.1	553.4	457.9	447.2	10.64	43.027	
2,900.0	2,893.1	2,843.4	2,776.9	5.9	11.3	-50.13	-136.0	577.1	477.1	466.1	11.04	43.201	
3,000.0	2,992.8	2,941.6	2,871.9	6.2	11.8	-50.13	-142.0	600.7	496.4	484.9	11.45	43.362	
3,100.0	3,092.5	3,039.7	2,967.0	6.4	12.2	-50.14	-147.9	624.4	515.6	503.8	11.85	43.511	
3,200.0	3,192.2	3,137.8	3,062.0	6.6	12.7	-50.14	-153.9	648.1	534.9	522.6	12.25	43.651	
3,300.0	3,291.9	3,235.9	3,157.1	6.8	13.2	-50.14	-159.8	671.8	554.1	541.5	12.66	43.781	
3,400.0	3,391.6	3,334.1	3,252.1	7.1	13.6	-50.15	-165.8	695.5	573.4	560.3	13.06	43.903	
3,500.0	3,491.3	3,432.2	3,347.1	7.3	14.1	-50.15	-171.8	719.2	592.6	579.1	13.46	44.017	
3,600.0	3,590.9	3,530.3	3,442.2	7.5	14.6	-50.15	-177.7	742.9	611.8	598.0	13.87	44.125	
3,700.0	3,690.6	3,628.5	3,537.2	7.7	15.1	-50.15	-183.7	766.6	631.1	616.8	14.27	44.226	
3,800.0	3,790.3	3,726.6	3,632.3	7.9	15.5	-50.16	-189.6	790.3	650.3	635.7	14.67	44.322	
3,900.0	3,890.0	3,824.7	3,727.3	8.2	16.0	-50.16	-195.6	814.0	669.6	654.5	15.08	44.412	
4,000.0	3,989.7	3,922.9	3,822.3	8.4	16.5	-50.16	-201.5	837.7	688.8	673.3	15.48	44.498	
4,100.0	4,089.4	4,021.0	3,917.4	8.6	16.9	-50.16	-207.5	861.3	708.1	692.2	15.88	44.579	
4,200.0	4,189.1	4,119.1	4,012.4	8.8	17.4	-50.17	-213.5	885.0	727.3	711.0	16.29	44.655	
4,300.0	4,288.8	4,217.3	4,107.5	9.1	17.9	-50.17	-219.4	908.7	746.6	729.9	16.69	44.728	
4,400.0	4,388.4	4,315.4	4,202.5	9.3	18.3	-50.17	-225.4	932.4	765.8	748.7	17.09	44.798	
4,500.0	4,488.1	4,413.5	4,297.6	9.5	18.8	-50.17	-231.3	956.1	785.0	767.5	17.50	44.864	
4,600.0	4,587.8	4,511.6	4,392.6	9.7	19.3	-50.17	-237.3	979.8	804.3	786.4	17.90	44.927	
4,700.0	4,687.5	4,609.8	4,487.6	9.9	19.8	-50.17	-243.2	1,003.5	823.5	805.2	18.31	44.988	
4,800.0	4,787.2	4,707.9	4,582.7	10.2	20.2	-50.17	-249.2	1,027.2	842.8	824.1	18.71	45.045	
4,900.0	4,886.9	4,806.0	4,677.7	10.4	20.7	-50.18	-255.2	1,050.9	862.0	842.9	19.11	45.100	

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 4E-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 4E-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
5,000.0	4,986.6	4,904.2	4,772.8	10.6	21.2	-50.18	-261.1	1,074.6	881.3	861.7	19.52	45.153	
5,100.0	5,086.3	5,002.3	4,867.8	10.8	21.6	-50.18	-267.1	1,098.3	900.5	880.6	19.92	45.204	
5,200.0	5,185.9	5,100.4	4,962.8	11.0	22.1	-50.18	-273.0	1,121.9	919.7	899.4	20.32	45.252	
5,300.0	5,285.6	5,198.6	5,057.9	11.3	22.6	-50.18	-279.0	1,145.6	939.0	918.3	20.73	45.299	
5,400.0	5,385.3	5,296.7	5,152.9	11.5	23.0	-50.18	-284.9	1,169.3	958.2	937.1	21.13	45.344	
5,500.0	5,485.0	5,394.8	5,248.0	11.7	23.5	-50.18	-290.9	1,193.0	977.5	955.9	21.54	45.387	
5,562.6	5,547.4	5,467.0	5,317.9	11.9	23.9	-50.19	-295.2	1,210.3	989.4	967.6	21.81	45.364	
5,600.0	5,584.7	5,522.5	5,371.9	11.9	24.1	-50.25	-298.3	1,222.6	995.9	973.9	22.00	45.268	
5,700.0	5,684.5	5,672.3	5,518.8	12.1	24.6	-50.38	-305.4	1,250.7	1,010.7	988.3	22.48	44.952	
5,800.0	5,784.4	5,823.8	5,668.9	12.3	25.0	-50.47	-310.7	1,271.6	1,021.6	998.6	22.94	44.539	
5,900.0	5,884.3	5,976.6	5,821.0	12.5	25.3	-50.53	-314.0	1,284.8	1,028.4	1,005.0	23.36	44.032	
6,000.0	5,984.3	6,130.1	5,974.4	12.6	25.5	-50.55	-315.3	1,290.1	1,031.1	1,007.4	23.74	43.430	
6,015.7	6,000.0	6,154.2	5,998.5	12.6	25.5	90.02	-315.3	1,290.2	1,031.2	1,007.4	23.80	43.325	
6,100.0	6,084.3	6,239.0	6,083.3	12.8	25.5	90.02	-315.3	1,290.2	1,031.2	1,007.1	24.06	42.852	
6,200.0	6,184.3	6,339.0	6,183.3	12.9	25.6	90.02	-315.3	1,290.2	1,031.2	1,006.8	24.38	42.305	
6,300.0	6,284.3	6,439.0	6,283.3	13.1	25.7	90.02	-315.3	1,290.2	1,031.2	1,006.5	24.69	41.769	
6,400.0	6,384.3	6,539.0	6,383.3	13.2	25.8	90.02	-315.3	1,290.2	1,031.2	1,006.2	25.00	41.246	
6,467.7	6,452.0	6,606.7	6,451.0	13.3	25.8	90.02	-315.3	1,290.2	1,031.2	1,006.0	25.21	40.902	
6,500.0	6,484.3	6,639.0	6,483.3	13.4	25.8	89.95	-314.2	1,290.2	1,031.2	1,005.9	25.31	40.748	
6,604.7	6,589.0	6,741.0	6,584.0	13.5	25.9	89.10	-298.7	1,290.2	1,031.3	1,005.7	25.66	40.188	
6,650.0	6,634.3	6,783.4	6,624.8	13.6	25.8	88.52	-287.1	1,290.2	1,031.5	1,005.7	25.79	39.991	
6,700.0	6,683.9	6,829.4	6,667.9	13.6	25.8	87.89	-271.1	1,290.2	1,031.9	1,006.0	25.88	39.870	
6,750.0	6,732.8	6,874.6	6,708.9	13.6	25.8	87.28	-252.0	1,290.2	1,032.4	1,006.5	25.91	39.844	
6,800.0	6,780.6	6,919.2	6,747.6	13.5	25.8	86.69	-230.2	1,290.2	1,033.0	1,007.1	25.89	39.903	
6,850.0	6,826.9	6,963.0	6,784.1	13.5	25.7	86.13	-205.7	1,290.2	1,033.6	1,007.8	25.82	40.036	
6,900.0	6,871.4	7,006.3	6,818.1	13.4	25.7	85.60	-179.0	1,290.2	1,034.3	1,008.6	25.71	40.227	
6,950.0	6,913.8	7,050.0	6,850.2	13.4	25.7	85.08	-149.5	1,290.2	1,035.1	1,009.5	25.58	40.458	
7,000.0	6,953.7	7,091.5	6,878.6	13.3	25.7	84.62	-119.2	1,290.2	1,035.9	1,010.4	25.45	40.696	
7,050.0	6,990.8	7,133.4	6,905.0	13.3	25.7	84.19	-86.7	1,290.2	1,036.6	1,011.3	25.33	40.918	
7,100.0	7,024.9	7,174.9	6,928.7	13.2	25.7	83.79	-52.6	1,290.2	1,037.4	1,012.1	25.25	41.089	
7,150.0	7,055.7	7,216.1	6,949.8	13.3	25.7	83.44	-17.2	1,290.2	1,038.1	1,012.9	25.21	41.184	
7,200.0	7,082.9	7,257.1	6,968.1	13.3	25.7	83.12	19.4	1,290.2	1,038.7	1,013.5	25.27	41.113	
7,250.0	7,106.3	7,300.0	6,984.5	13.4	25.8	82.84	59.1	1,290.2	1,039.3	1,013.9	25.40	40.916	
7,300.0	7,125.8	7,338.3	6,996.6	13.5	25.9	82.63	95.5	1,290.2	1,039.8	1,014.2	25.65	40.538	
7,350.0	7,141.2	7,378.7	7,006.6	13.7	26.0	82.45	134.6	1,290.2	1,040.2	1,014.2	26.02	39.980	
7,400.0	7,152.4	7,419.0	7,013.9	14.0	26.1	82.33	174.1	1,290.2	1,040.5	1,014.0	26.51	39.251	
7,450.0	7,159.4	7,459.1	7,018.3	14.3	26.2	82.25	214.1	1,290.2	1,040.7	1,013.6	27.12	38.371	
7,504.7	7,162.0	7,503.1	7,020.0	14.7	26.3	82.22	258.0	1,290.2	1,040.8	1,012.8	27.92	37.271	
7,600.0	7,162.0	7,598.4	7,020.0	15.4	26.8	82.22	353.3	1,290.2	1,040.8	1,011.2	29.54	35.231	
7,700.0	7,162.0	7,698.4	7,020.0	16.4	27.3	82.22	453.3	1,290.2	1,040.8	1,009.2	31.52	33.016	
7,800.0	7,162.0	7,798.4	7,020.0	17.5	27.9	82.22	553.3	1,290.2	1,040.8	1,007.0	33.75	30.840	
7,900.0	7,162.0	7,898.4	7,020.0	18.7	28.7	82.22	653.3	1,290.2	1,040.8	1,004.6	36.17	28.775	
8,000.0	7,162.0	7,998.4	7,020.0	20.0	29.5	82.22	753.3	1,290.2	1,040.8	1,002.0	38.75	26.857	
8,100.0	7,162.0	8,098.4	7,020.0	21.3	30.4	82.22	853.3	1,290.2	1,040.8	999.3	41.47	25.100	
8,200.0	7,162.0	8,198.4	7,020.0	22.7	31.4	82.22	953.3	1,290.2	1,040.8	996.5	44.29	23.501	
8,300.0	7,162.0	8,298.4	7,020.0	24.1	32.4	82.22	1,053.3	1,290.2	1,040.8	993.6	47.19	22.053	
8,400.0	7,162.0	8,398.4	7,020.0	25.6	33.5	82.22	1,153.3	1,290.2	1,040.8	990.6	50.17	20.743	
8,500.0	7,162.0	8,498.4	7,020.0	27.1	34.7	82.22	1,253.3	1,290.2	1,040.8	987.5	53.21	19.558	
8,600.0	7,162.0	8,598.4	7,020.0	28.7	35.9	82.22	1,353.3	1,290.2	1,040.8	984.5	56.30	18.484	
8,700.0	7,162.0	8,698.4	7,020.0	30.2	37.1	82.22	1,453.3	1,290.2	1,040.8	981.3	59.44	17.510	
8,800.0	7,162.0	8,798.4	7,020.0	31.8	38.4	82.22	1,553.3	1,290.2	1,040.8	978.2	62.61	16.624	
8,900.0	7,162.0	8,898.4	7,020.0	33.4	39.8	82.22	1,653.3	1,290.2	1,040.8	975.0	65.81	15.815	

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 4E-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 4E-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
9,000.0	7,162.0	8,998.4	7,020.0	35.0	41.1	82.22	1,753.3	1,290.2	1,040.8	971.7	69.04	15.076	
9,100.0	7,162.0	9,098.4	7,020.0	36.7	42.5	82.22	1,853.3	1,290.2	1,040.8	968.5	72.29	14.398	
9,200.0	7,162.0	9,198.4	7,020.0	38.3	43.9	82.22	1,953.3	1,290.2	1,040.8	965.2	75.56	13.775	
9,300.0	7,162.0	9,298.4	7,020.0	40.0	45.4	82.22	2,053.3	1,290.2	1,040.8	961.9	78.84	13.200	
9,400.0	7,162.0	9,398.4	7,020.0	41.6	46.8	82.22	2,153.3	1,290.2	1,040.8	958.6	82.15	12.669	
9,500.0	7,162.0	9,498.4	7,020.0	43.3	48.3	82.22	2,253.3	1,290.2	1,040.8	955.3	85.47	12.178	
9,600.0	7,162.0	9,598.4	7,020.0	45.0	49.8	82.22	2,353.3	1,290.2	1,040.8	952.0	88.79	11.721	
9,700.0	7,162.0	9,698.4	7,020.0	46.6	51.3	82.22	2,453.3	1,290.2	1,040.8	948.6	92.13	11.296	
9,800.0	7,162.0	9,798.4	7,020.0	48.3	52.9	82.22	2,553.3	1,290.2	1,040.8	945.3	95.48	10.900	
9,900.0	7,162.0	9,898.4	7,020.0	50.0	54.4	82.22	2,653.3	1,290.2	1,040.8	941.9	98.84	10.529	
10,000.0	7,162.0	9,998.4	7,020.0	51.7	56.0	82.22	2,753.3	1,290.2	1,040.8	938.6	102.21	10.183	
10,100.0	7,162.0	10,098.4	7,020.0	53.4	57.5	82.22	2,853.3	1,290.2	1,040.8	935.2	105.58	9.857	
10,200.0	7,162.0	10,198.4	7,020.0	55.1	59.1	82.22	2,953.3	1,290.2	1,040.8	931.8	108.96	9.551	
10,300.0	7,162.0	10,298.4	7,020.0	56.8	60.7	82.22	3,053.3	1,290.2	1,040.8	928.4	112.35	9.264	
10,400.0	7,162.0	10,398.4	7,020.0	58.5	62.3	82.22	3,153.3	1,290.2	1,040.8	925.0	115.74	8.992	
10,500.0	7,162.0	10,498.4	7,020.0	60.2	63.9	82.22	3,253.3	1,290.2	1,040.8	921.6	119.14	8.736	
10,600.0	7,162.0	10,598.4	7,020.0	61.9	65.5	82.22	3,353.3	1,290.2	1,040.8	918.2	122.54	8.493	
10,700.0	7,162.0	10,698.4	7,020.0	63.7	67.2	82.22	3,453.3	1,290.2	1,040.8	914.8	125.94	8.264	
10,800.0	7,162.0	10,798.4	7,020.0	65.4	68.8	82.22	3,553.3	1,290.2	1,040.8	911.4	129.35	8.046	
10,900.0	7,162.0	10,898.4	7,020.0	67.1	70.4	82.22	3,653.3	1,290.2	1,040.8	908.0	132.76	7.839	
11,000.0	7,162.0	10,998.4	7,020.0	68.8	72.1	82.22	3,753.3	1,290.2	1,040.8	904.6	136.18	7.643	
11,100.0	7,162.0	11,098.4	7,020.0	70.5	73.7	82.22	3,853.3	1,290.2	1,040.8	901.2	139.60	7.455	
11,150.0	7,162.0	11,148.4	7,020.0	71.4	74.5	82.22	3,903.3	1,290.2	1,040.8	899.5	141.31	7.365	
11,150.0	7,162.0	11,148.4	7,020.0	71.4	74.5	82.22	3,903.3	1,290.2	1,040.8	899.5	141.31	7.365	
11,200.0	7,162.0	11,198.4	7,020.0	72.2	75.4	82.22	3,953.3	1,290.2	1,041.4	899.1	142.31	7.318	
11,300.0	7,162.0	11,298.3	7,020.0	74.0	77.0	82.24	4,053.1	1,290.2	1,046.7	902.6	144.04	7.266	SF
11,400.0	7,162.0	11,397.7	7,020.0	75.7	78.7	82.27	4,152.6	1,290.2	1,057.1	911.7	145.38	7.271	
11,500.0	7,162.0	11,496.4	7,020.0	77.3	80.3	82.32	4,251.3	1,290.2	1,072.8	926.5	146.32	7.332	
11,600.0	7,162.0	11,594.2	7,020.0	79.0	81.9	82.38	4,349.1	1,290.2	1,093.6	946.8	146.84	7.448	
11,700.0	7,162.0	11,690.7	7,020.0	80.7	83.6	82.45	4,445.6	1,290.2	1,119.5	972.6	146.92	7.620	
11,747.9	7,162.0	11,736.4	7,020.0	81.4	84.3	82.49	4,491.3	1,290.2	1,133.7	986.9	146.80	7.723	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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	90.41	-0.3	45.0	45.0				
100.0	100.0	99.0	99.0	0.1	0.1	90.41	-0.3	45.0	45.0	44.8	0.24	185.206	
200.0	200.0	199.0	199.0	0.3	0.3	90.41	-0.3	45.0	45.0	44.4	0.59	76.104	CC, ES
300.0	300.0	297.5	297.4	0.5	0.5	90.82	-0.7	46.6	46.7	45.7	0.94	49.715	
400.0	400.0	395.7	395.5	0.6	0.7	91.91	-1.7	51.6	51.7	50.4	1.29	40.081	
500.0	500.0	493.5	493.0	0.8	0.9	-47.80	-3.5	59.7	59.5	57.9	1.63	36.483	
600.0	600.0	590.8	589.6	1.0	1.1	-47.73	-5.9	71.1	69.5	67.6	1.98	35.108	
700.0	699.9	687.6	685.2	1.2	1.4	-48.15	-9.0	85.5	81.7	79.4	2.33	34.996	
800.0	799.7	783.6	779.6	1.4	1.8	-48.84	-12.7	103.0	96.0	93.3	2.70	35.593	
853.0	852.6	834.2	829.1	1.5	2.0	-49.26	-15.0	113.4	104.5	101.6	2.90	36.090	
900.0	899.4	878.8	872.5	1.6	2.2	-49.64	-17.1	123.3	112.6	109.5	3.07	36.657	
1,000.0	999.1	972.9	963.6	1.8	2.7	-50.06	-22.0	146.4	132.2	128.8	3.45	38.314	
1,100.0	1,098.8	1,066.9	1,053.7	2.0	3.1	-50.14	-27.6	172.2	154.9	151.0	3.83	40.412	
1,200.0	1,198.4	1,164.1	1,146.7	2.2	3.7	-50.13	-33.5	199.8	178.4	174.2	4.22	42.263	
1,300.0	1,298.1	1,261.2	1,239.7	2.4	4.2	-50.13	-39.4	227.5	202.0	197.4	4.61	43.783	
1,400.0	1,397.8	1,358.4	1,332.7	2.6	4.7	-50.12	-45.3	255.1	225.6	220.6	5.01	45.051	
1,500.0	1,497.5	1,455.6	1,425.7	2.9	5.2	-50.12	-51.2	282.7	249.2	243.8	5.40	46.124	
1,600.0	1,597.2	1,552.8	1,518.7	3.1	5.8	-50.12	-57.2	310.3	272.8	267.0	5.80	47.043	
1,700.0	1,696.9	1,650.0	1,611.6	3.3	6.3	-50.12	-63.1	338.0	296.3	290.1	6.19	47.839	
1,800.0	1,796.6	1,747.1	1,704.6	3.5	6.8	-50.11	-69.0	365.6	319.9	313.3	6.59	48.534	
1,900.0	1,896.3	1,844.3	1,797.6	3.7	7.4	-50.11	-74.9	393.2	343.5	336.5	6.99	49.146	
2,000.0	1,995.9	1,941.5	1,890.6	4.0	7.9	-50.11	-80.8	420.8	367.1	359.7	7.39	49.690	
2,100.0	2,095.6	2,038.7	1,983.6	4.2	8.5	-50.11	-86.8	448.5	390.7	382.9	7.79	50.176	
2,200.0	2,195.3	2,135.9	2,076.5	4.4	9.0	-50.11	-92.7	476.1	414.2	406.1	8.18	50.612	
2,300.0	2,295.0	2,233.0	2,169.5	4.6	9.5	-50.11	-98.6	503.7	437.8	429.2	8.58	51.006	
2,400.0	2,394.7	2,330.2	2,262.5	4.8	10.1	-50.11	-104.5	531.3	461.4	452.4	8.98	51.364	
2,500.0	2,494.4	2,427.4	2,355.5	5.1	10.6	-50.11	-110.4	559.0	485.0	475.6	9.38	51.690	
2,600.0	2,594.1	2,524.6	2,448.5	5.3	11.1	-50.11	-116.4	586.6	508.6	498.8	9.78	51.989	
2,700.0	2,693.8	2,621.8	2,541.5	5.5	11.7	-50.11	-122.3	614.2	532.2	522.0	10.18	52.263	
2,800.0	2,793.4	2,718.9	2,634.4	5.7	12.2	-50.11	-128.2	641.8	555.7	545.1	10.58	52.516	
2,900.0	2,893.1	2,816.1	2,727.4	5.9	12.8	-50.10	-134.1	669.4	579.3	568.3	10.98	52.750	
3,000.0	2,992.8	2,913.3	2,820.4	6.2	13.3	-50.10	-140.0	697.1	602.9	591.5	11.38	52.966	
3,100.0	3,092.5	3,010.5	2,913.4	6.4	13.8	-50.10	-145.9	724.7	626.5	614.7	11.78	53.168	
3,200.0	3,192.2	3,107.7	3,006.4	6.6	14.4	-50.10	-151.9	752.3	650.1	637.9	12.18	53.356	
3,300.0	3,291.9	3,204.8	3,099.4	6.8	14.9	-50.10	-157.8	779.9	673.6	661.1	12.58	53.532	
3,400.0	3,391.6	3,302.0	3,192.3	7.1	15.4	-50.10	-163.7	807.6	697.2	684.2	12.98	53.696	
3,500.0	3,491.3	3,399.2	3,285.3	7.3	16.0	-50.10	-169.6	835.2	720.8	707.4	13.39	53.851	
3,600.0	3,590.9	3,496.4	3,378.3	7.5	16.5	-50.10	-175.5	862.8	744.4	730.6	13.79	53.996	
3,700.0	3,690.6	3,593.6	3,471.3	7.7	17.1	-50.10	-181.5	890.4	768.0	753.8	14.19	54.133	
3,800.0	3,790.3	3,690.7	3,564.3	7.9	17.6	-50.10	-187.4	918.1	791.5	777.0	14.59	54.262	
3,900.0	3,890.0	3,787.9	3,657.3	8.2	18.1	-50.10	-193.3	945.7	815.1	800.1	14.99	54.384	
4,000.0	3,989.7	3,885.1	3,750.2	8.4	18.7	-50.10	-199.2	973.3	838.7	823.3	15.39	54.499	
4,100.0	4,089.4	3,982.3	3,843.2	8.6	19.2	-50.10	-205.1	1,000.9	862.3	846.5	15.79	54.609	
4,200.0	4,189.1	4,079.5	3,936.2	8.8	19.8	-50.10	-211.0	1,028.5	885.9	869.7	16.19	54.713	
4,300.0	4,288.8	4,176.6	4,029.2	9.1	20.3	-50.10	-217.0	1,056.2	909.4	892.9	16.59	54.812	
4,400.0	4,388.4	4,273.8	4,122.2	9.3	20.8	-50.10	-222.9	1,083.8	933.0	916.0	16.99	54.906	
4,500.0	4,488.1	4,371.0	4,215.2	9.5	21.4	-50.10	-228.8	1,111.4	956.6	939.2	17.39	54.995	
4,600.0	4,587.8	4,468.2	4,308.1	9.7	21.9	-50.10	-234.7	1,139.0	980.2	962.4	17.80	55.081	
4,700.0	4,687.5	4,565.4	4,401.1	9.9	22.5	-50.10	-240.6	1,166.7	1,003.8	985.6	18.20	55.162	
4,800.0	4,787.2	4,662.5	4,494.1	10.2	23.0	-50.10	-246.6	1,194.3	1,027.3	1,008.7	18.60	55.240	
4,900.0	4,886.9	4,759.7	4,587.1	10.4	23.5	-50.10	-252.5	1,221.9	1,050.9	1,031.9	19.00	55.315	
5,000.0	4,986.6	4,856.9	4,680.1	10.6	24.1	-50.10	-258.4	1,249.5	1,074.5	1,055.1	19.40	55.386	

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 4E-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 4E-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
5,100.0	5,086.3	4,954.1	4,773.1	10.8	24.6	-50.10	-264.3	1,277.2	1,098.1	1,078.3	19.80	55.455	
5,200.0	5,185.9	5,051.3	4,866.0	11.0	25.2	-50.10	-270.2	1,304.8	1,121.7	1,101.5	20.20	55.521	
5,300.0	5,285.6	5,148.4	4,959.0	11.3	25.7	-50.10	-276.1	1,332.4	1,145.3	1,124.6	20.60	55.584	
5,400.0	5,385.3	5,245.6	5,052.0	11.5	26.2	-50.10	-282.1	1,360.0	1,168.8	1,147.8	21.01	55.645	
5,500.0	5,485.0	5,342.8	5,145.0	11.7	26.8	-50.10	-288.0	1,387.7	1,192.4	1,171.0	21.41	55.703	
5,562.6	5,547.4	5,430.0	5,228.7	11.9	27.2	-50.11	-293.2	1,411.8	1,206.8	1,185.1	21.71	55.586	
5,600.0	5,584.7	5,492.4	5,288.9	11.9	27.5	-50.18	-296.5	1,427.6	1,214.5	1,192.6	21.92	55.412	
5,700.0	5,684.5	5,661.4	5,453.8	12.1	28.2	-50.34	-304.3	1,463.8	1,232.0	1,209.5	22.44	54.891	
5,800.0	5,784.4	5,833.3	5,623.3	12.3	28.7	-50.46	-310.1	1,490.9	1,244.8	1,221.9	22.94	54.272	
5,900.0	5,884.3	6,007.0	5,796.2	12.5	29.0	-50.53	-313.8	1,508.1	1,252.9	1,229.5	23.39	53.558	
6,000.0	5,984.3	6,181.8	5,970.8	12.6	29.2	-50.56	-315.3	1,515.1	1,256.2	1,232.3	23.81	52.750	
6,015.7	6,000.0	6,209.3	5,998.2	12.6	29.2	90.01	-315.3	1,515.2	1,256.2	1,232.3	23.88	52.612	
6,100.0	6,084.3	6,294.3	6,083.3	12.8	29.3	90.01	-315.3	1,515.2	1,256.2	1,232.1	24.14	52.038	
6,200.0	6,184.3	6,394.3	6,183.3	12.9	29.4	90.01	-315.3	1,515.2	1,256.2	1,231.8	24.45	51.374	
6,300.0	6,284.3	6,494.3	6,283.3	13.1	29.4	90.01	-315.3	1,515.2	1,256.2	1,231.5	24.77	50.725	
6,400.0	6,384.3	6,594.3	6,383.3	13.2	29.5	90.01	-315.3	1,515.2	1,256.2	1,231.1	25.08	50.091	
6,500.0	6,484.3	6,694.3	6,483.3	13.4	29.6	90.01	-315.3	1,515.2	1,256.2	1,230.8	25.39	49.470	
6,604.7	6,589.0	6,799.0	6,588.0	13.5	29.6	90.01	-315.3	1,515.2	1,256.2	1,230.5	25.72	48.835	
6,650.0	6,634.3	6,844.4	6,633.3	13.6	29.7	90.01	-313.5	1,515.2	1,256.2	1,230.4	25.81	48.670	
6,700.0	6,683.9	6,894.4	6,683.0	13.6	29.7	90.01	-307.4	1,515.2	1,256.2	1,230.4	25.85	48.596	
6,750.0	6,732.8	6,944.4	6,731.9	13.6	29.7	90.01	-297.0	1,515.2	1,256.2	1,230.4	25.84	48.625	
6,800.0	6,780.6	6,994.5	6,779.7	13.5	29.6	90.01	-282.3	1,515.2	1,256.2	1,230.5	25.77	48.739	
6,850.0	6,826.9	7,044.5	6,826.0	13.5	29.6	90.01	-263.6	1,515.2	1,256.2	1,230.5	25.68	48.920	
6,900.0	6,871.4	7,094.5	6,870.6	13.4	29.6	90.01	-240.8	1,515.2	1,256.2	1,230.7	25.56	49.143	
6,950.0	6,913.8	7,144.5	6,913.0	13.4	29.6	90.01	-214.3	1,515.2	1,256.2	1,230.8	25.44	49.379	
7,000.0	6,953.7	7,194.6	6,952.9	13.3	29.5	90.01	-184.1	1,515.2	1,256.2	1,230.9	25.33	49.597	
7,050.0	6,990.8	7,244.6	6,990.0	13.3	29.5	90.01	-150.7	1,515.2	1,256.2	1,231.0	25.25	49.760	
7,100.0	7,024.9	7,294.6	7,024.1	13.2	29.5	90.01	-114.0	1,515.2	1,256.2	1,231.0	25.21	49.832	
7,150.0	7,055.7	7,344.6	7,054.8	13.3	29.5	90.01	-74.6	1,515.2	1,256.2	1,231.0	25.24	49.777	
7,200.0	7,082.9	7,394.6	7,082.0	13.3	29.5	90.01	-32.7	1,515.2	1,256.2	1,230.9	25.34	49.567	
7,250.0	7,106.3	7,444.7	7,105.4	13.4	29.6	90.01	11.5	1,515.2	1,256.2	1,230.7	25.54	49.180	
7,300.0	7,125.8	7,494.7	7,124.9	13.5	29.6	90.01	57.6	1,515.2	1,256.2	1,230.4	25.85	48.605	
7,350.0	7,141.2	7,544.7	7,140.3	13.7	29.7	90.01	105.1	1,515.2	1,256.2	1,230.0	26.26	47.847	
7,400.0	7,152.4	7,594.7	7,151.5	14.0	29.8	90.00	153.9	1,515.2	1,256.2	1,229.5	26.77	46.921	
7,450.0	7,159.4	7,644.7	7,158.4	14.3	29.9	90.00	203.4	1,515.2	1,256.2	1,228.8	27.40	45.854	
7,504.7	7,162.0	7,699.4	7,161.0	14.7	30.1	90.00	257.9	1,515.2	1,256.2	1,228.0	28.19	44.567	
7,600.0	7,162.0	7,794.7	7,161.0	15.4	30.4	90.00	353.3	1,515.2	1,256.2	1,226.4	29.82	42.128	
7,700.0	7,162.0	7,894.7	7,161.0	16.4	30.9	90.00	453.3	1,515.2	1,256.2	1,224.4	31.82	39.484	
7,800.0	7,162.0	7,994.7	7,161.0	17.5	31.4	90.00	553.3	1,515.2	1,256.2	1,222.2	34.06	36.885	
7,900.0	7,162.0	8,094.7	7,161.0	18.7	32.1	90.00	653.3	1,515.2	1,256.2	1,219.7	36.50	34.417	
8,000.0	7,162.0	8,194.7	7,161.0	20.0	32.8	90.00	753.3	1,515.2	1,256.2	1,217.1	39.11	32.125	
8,100.0	7,162.0	8,294.7	7,161.0	21.3	33.6	90.00	853.3	1,515.2	1,256.2	1,214.4	41.84	30.023	
8,200.0	7,162.0	8,394.7	7,161.0	22.7	34.5	90.00	953.3	1,515.2	1,256.2	1,211.5	44.69	28.112	
8,300.0	7,162.0	8,494.7	7,161.0	24.1	35.4	90.00	1,053.3	1,515.2	1,256.2	1,208.6	47.62	26.380	
8,400.0	7,162.0	8,594.7	7,161.0	25.6	36.4	90.00	1,153.3	1,515.2	1,256.2	1,205.6	50.63	24.814	
8,500.0	7,162.0	8,694.7	7,161.0	27.1	37.5	90.00	1,253.3	1,515.2	1,256.2	1,202.5	53.69	23.396	
8,600.0	7,162.0	8,794.7	7,161.0	28.7	38.6	90.00	1,353.3	1,515.2	1,256.2	1,199.4	56.81	22.112	
8,700.0	7,162.0	8,894.7	7,161.0	30.2	39.7	90.00	1,453.3	1,515.2	1,256.2	1,196.3	59.97	20.946	
8,800.0	7,162.0	8,994.7	7,161.0	31.8	40.9	90.00	1,553.3	1,515.2	1,256.2	1,193.1	63.17	19.886	
8,900.0	7,162.0	9,094.7	7,161.0	33.4	42.2	90.00	1,653.3	1,515.2	1,256.2	1,189.8	66.40	18.919	
9,000.0	7,162.0	9,194.7	7,161.0	35.0	43.5	90.00	1,753.3	1,515.2	1,256.2	1,186.6	69.66	18.034	
9,100.0	7,162.0	9,294.7	7,161.0	36.7	44.8	90.00	1,853.3	1,515.2	1,256.2	1,183.3	72.94	17.223	

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 4E-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 4E-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
9,200.0	7,162.0	9,394.7	7,161.0	38.3	46.1	90.00	1,953.3	1,515.2	1,256.2	1,180.0	76.24	16.478	
9,300.0	7,162.0	9,494.7	7,161.0	40.0	47.5	90.00	2,053.3	1,515.2	1,256.2	1,176.7	79.56	15.791	
9,400.0	7,162.0	9,594.7	7,161.0	41.6	48.9	90.00	2,153.3	1,515.2	1,256.2	1,173.4	82.89	15.156	
9,500.0	7,162.0	9,694.7	7,161.0	43.3	50.3	90.00	2,253.3	1,515.2	1,256.2	1,170.0	86.24	14.567	
9,600.0	7,162.0	9,794.7	7,161.0	45.0	51.8	90.00	2,353.3	1,515.2	1,256.2	1,166.6	89.60	14.021	
9,700.0	7,162.0	9,894.7	7,161.0	46.6	53.2	90.00	2,453.3	1,515.2	1,256.2	1,163.3	92.97	13.513	
9,800.0	7,162.0	9,994.7	7,161.0	48.3	54.7	90.00	2,553.3	1,515.2	1,256.2	1,159.9	96.35	13.039	
9,900.0	7,162.0	10,094.7	7,161.0	50.0	56.2	90.00	2,653.3	1,515.2	1,256.2	1,156.5	99.74	12.596	
10,000.0	7,162.0	10,194.7	7,161.0	51.7	57.7	90.00	2,753.3	1,515.2	1,256.2	1,153.1	103.13	12.181	
10,100.0	7,162.0	10,294.7	7,161.0	53.4	59.2	90.00	2,853.3	1,515.3	1,256.3	1,149.7	106.54	11.791	
10,200.0	7,162.0	10,394.7	7,161.0	55.1	60.8	90.00	2,953.3	1,515.3	1,256.3	1,146.3	109.95	11.426	
10,300.0	7,162.0	10,494.7	7,161.0	56.8	62.3	90.00	3,053.3	1,515.3	1,256.3	1,142.9	113.37	11.081	
10,400.0	7,162.0	10,594.7	7,161.0	58.5	63.9	90.00	3,153.3	1,515.3	1,256.3	1,139.5	116.79	10.757	
10,500.0	7,162.0	10,694.7	7,161.0	60.2	65.4	90.00	3,253.3	1,515.3	1,256.3	1,136.0	120.22	10.450	
10,600.0	7,162.0	10,794.7	7,161.0	61.9	67.0	90.00	3,353.3	1,515.3	1,256.3	1,132.6	123.65	10.160	
10,700.0	7,162.0	10,894.7	7,161.0	63.7	68.6	90.00	3,453.3	1,515.3	1,256.3	1,129.2	127.08	9.885	
10,800.0	7,162.0	10,994.7	7,161.0	65.4	70.2	90.00	3,553.3	1,515.3	1,256.3	1,125.7	130.52	9.625	
10,900.0	7,162.0	11,094.7	7,161.0	67.1	71.8	90.00	3,653.3	1,515.3	1,256.3	1,122.3	133.97	9.377	
11,000.0	7,162.0	11,194.7	7,161.0	68.8	73.4	90.00	3,753.3	1,515.3	1,256.3	1,118.8	137.41	9.142	
11,100.0	7,162.0	11,294.7	7,161.0	70.5	75.0	90.00	3,853.3	1,515.3	1,256.3	1,115.4	140.86	8.918	
11,150.0	7,162.0	11,344.7	7,161.0	71.4	75.8	90.00	3,903.3	1,515.3	1,256.3	1,113.7	142.59	8.810	
11,200.0	7,162.0	11,394.7	7,161.0	72.2	76.7	90.00	3,953.3	1,515.3	1,256.9	1,113.4	143.50	8.759	
11,300.0	7,162.0	11,494.5	7,161.0	74.0	78.3	90.00	4,053.1	1,515.3	1,262.2	1,117.2	145.04	8.703	SF
11,400.0	7,162.0	11,594.0	7,161.0	75.7	79.9	90.00	4,152.6	1,515.3	1,272.8	1,126.6	146.18	8.707	
11,500.0	7,162.0	11,692.7	7,161.0	77.3	81.5	90.00	4,251.3	1,515.3	1,288.6	1,141.7	146.91	8.771	
11,600.0	7,162.0	11,790.5	7,161.0	79.0	83.1	90.00	4,349.1	1,515.3	1,309.6	1,162.3	147.22	8.895	
11,700.0	7,162.0	11,887.0	7,161.0	80.7	84.7	90.00	4,445.6	1,515.3	1,335.7	1,188.6	147.09	9.081	
11,747.9	7,162.0	11,932.7	7,161.0	81.4	85.5	90.00	4,491.2	1,515.3	1,350.0	1,203.1	146.87	9.192	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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	5.18	1,302.0	118.0	1,308.8				
100.0	100.0	37.0	37.0	0.1	0.1	5.18	1,302.0	118.0	1,307.3	1,307.1	0.19	6,992.880	
200.0	200.0	137.0	137.0	0.3	0.2	5.18	1,302.0	118.0	1,307.3	1,306.8	0.54	2,438.963	
300.0	300.0	237.0	237.0	0.5	0.4	5.18	1,302.0	118.0	1,307.3	1,306.4	0.89	1,477.065	
400.0	400.0	337.0	337.0	0.6	0.6	5.18	1,302.0	118.0	1,307.3	1,306.1	1.23	1,059.293	
500.0	500.0	437.0	437.0	0.8	0.8	-135.42	1,302.0	118.0	1,307.9	1,306.4	1.58	826.033	
600.0	600.0	537.0	537.0	1.0	0.9	-135.48	1,302.0	118.0	1,309.8	1,307.9	1.93	677.281	
700.0	699.9	636.9	636.9	1.2	1.1	-135.59	1,302.0	118.0	1,312.9	1,310.6	2.29	574.028	
800.0	799.7	736.7	736.7	1.4	1.3	-135.75	1,302.0	118.0	1,317.3	1,314.6	2.64	498.060	
853.0	852.6	789.6	789.6	1.5	1.4	-135.85	1,302.0	118.0	1,320.1	1,317.3	2.84	465.429	
900.0	899.4	836.4	836.4	1.6	1.5	-135.96	1,302.0	118.0	1,322.8	1,319.8	3.01	439.914	
1,000.0	999.1	936.1	936.1	1.8	1.6	-136.20	1,302.0	118.0	1,328.5	1,325.1	3.37	394.027	
1,100.0	1,098.8	1,035.8	1,035.8	2.0	1.8	-136.43	1,302.0	118.0	1,334.2	1,330.5	3.74	356.977	
1,200.0	1,198.4	1,135.4	1,135.4	2.2	2.0	-136.66	1,302.0	118.0	1,339.9	1,335.8	4.10	326.474	
1,300.0	1,298.1	1,235.1	1,235.1	2.4	2.2	-136.89	1,302.0	118.0	1,345.7	1,341.2	4.47	300.943	
1,400.0	1,397.8	1,334.8	1,334.8	2.6	2.3	-137.12	1,302.0	118.0	1,351.5	1,346.7	4.84	279.274	
1,500.0	1,497.5	1,434.5	1,434.5	2.9	2.5	-137.35	1,302.0	118.0	1,357.3	1,352.1	5.21	260.660	
1,600.0	1,597.2	1,534.2	1,534.2	3.1	2.7	-137.57	1,302.0	118.0	1,363.1	1,357.6	5.58	244.504	
1,700.0	1,696.9	1,633.9	1,633.9	3.3	2.9	-137.80	1,302.0	118.0	1,369.0	1,363.0	5.94	230.351	
1,800.0	1,796.6	1,733.6	1,733.6	3.5	3.0	-138.02	1,302.0	118.0	1,374.9	1,368.5	6.31	217.854	
1,900.0	1,896.3	1,833.3	1,833.3	3.7	3.2	-138.24	1,302.0	118.0	1,380.7	1,374.1	6.68	206.740	
2,000.0	1,995.9	1,932.9	1,932.9	4.0	3.4	-138.45	1,302.0	118.0	1,386.7	1,379.6	7.05	196.794	
2,100.0	2,095.6	2,032.6	2,032.6	4.2	3.5	-138.67	1,302.0	118.0	1,392.6	1,385.2	7.41	187.840	
2,200.0	2,195.3	2,132.3	2,132.3	4.4	3.7	-138.88	1,302.0	118.0	1,398.5	1,390.8	7.78	179.739	
2,300.0	2,295.0	2,232.0	2,232.0	4.6	3.9	-139.09	1,302.0	118.0	1,404.5	1,396.4	8.15	172.376	
2,400.0	2,394.7	2,331.7	2,331.7	4.8	4.1	-139.30	1,302.0	118.0	1,410.5	1,402.0	8.51	165.653	
2,500.0	2,494.4	2,431.4	2,431.4	5.1	4.2	-139.51	1,302.0	118.0	1,416.5	1,407.6	8.88	159.492	
2,600.0	2,594.1	2,531.1	2,531.1	5.3	4.4	-139.72	1,302.0	118.0	1,422.5	1,413.3	9.25	153.826	
2,700.0	2,693.8	2,630.8	2,630.8	5.5	4.6	-139.92	1,302.0	118.0	1,428.6	1,418.9	9.61	148.597	
2,800.0	2,793.4	2,730.4	2,730.4	5.7	4.8	-140.13	1,302.0	118.0	1,434.6	1,424.6	9.98	143.757	
2,900.0	2,893.1	2,830.1	2,830.1	5.9	4.9	-140.33	1,302.0	118.0	1,440.7	1,430.4	10.35	139.264	
3,000.0	2,992.8	2,929.8	2,929.8	6.2	5.1	-140.53	1,302.0	118.0	1,446.8	1,436.1	10.71	135.083	
3,100.0	3,092.5	3,029.5	3,029.5	6.4	5.3	-140.72	1,302.0	118.0	1,452.9	1,441.8	11.08	131.182	
3,200.0	3,192.2	3,129.2	3,129.2	6.6	5.5	-140.92	1,302.0	118.0	1,459.0	1,447.6	11.44	127.535	
3,300.0	3,291.9	3,228.9	3,228.9	6.8	5.6	-141.11	1,302.0	118.0	1,465.2	1,453.4	11.80	124.117	
3,400.0	3,391.6	3,328.6	3,328.6	7.1	5.8	-141.31	1,302.0	118.0	1,471.4	1,459.2	12.17	120.908	
3,500.0	3,491.3	3,428.3	3,428.3	7.3	6.0	-141.50	1,302.0	118.0	1,477.5	1,465.0	12.53	117.889	
3,600.0	3,590.9	3,527.9	3,527.9	7.5	6.2	-141.69	1,302.0	118.0	1,483.7	1,470.8	12.90	115.044	
3,700.0	3,690.6	3,627.6	3,627.6	7.7	6.3	-141.88	1,302.0	118.0	1,489.9	1,476.7	13.26	112.359	
3,800.0	3,790.3	3,727.3	3,727.3	7.9	6.5	-142.06	1,302.0	118.0	1,496.2	1,482.6	13.62	109.820	
3,900.0	3,890.0	3,827.0	3,827.0	8.2	6.7	-142.25	1,302.0	118.0	1,502.4	1,488.4	13.99	107.416	
4,000.0	3,989.7	3,926.7	3,926.7	8.4	6.9	-142.43	1,302.0	118.0	1,508.7	1,494.3	14.35	105.136	
4,100.0	4,089.4	4,026.4	4,026.4	8.6	7.0	-142.61	1,302.0	118.0	1,515.0	1,500.2	14.71	102.972	
4,200.0	4,189.1	4,126.1	4,126.1	8.8	7.2	-142.79	1,302.0	118.0	1,521.2	1,506.2	15.07	100.914	
4,300.0	4,288.8	4,225.8	4,225.8	9.1	7.4	-142.97	1,302.0	118.0	1,527.6	1,512.1	15.44	98.955	
4,400.0	4,388.4	4,325.4	4,325.4	9.3	7.5	-143.15	1,302.0	118.0	1,533.9	1,518.1	15.80	97.089	
4,500.0	4,488.1	4,425.1	4,425.1	9.5	7.7	-143.33	1,302.0	118.0	1,540.2	1,524.0	16.16	95.308	
4,600.0	4,587.8	4,524.8	4,524.8	9.7	7.9	-143.50	1,302.0	118.0	1,546.6	1,530.0	16.52	93.608	
6,900.0	6,871.4	6,808.4	6,808.4	13.4	11.9	-6.00	1,302.0	118.0	1,549.0	1,526.7	22.27	69.567	
6,950.0	6,913.8	6,850.8	6,850.8	13.4	12.0	-6.44	1,302.0	118.0	1,522.6	1,500.9	21.68	70.225	
7,000.0	6,953.7	6,890.7	6,890.7	13.3	12.0	-7.01	1,302.0	118.0	1,492.6	1,471.6	21.02	71.002	
7,050.0	6,990.8	6,927.8	6,927.8	13.3	12.1	-7.75	1,302.0	118.0	1,459.3	1,439.0	20.31	71.854	

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 4E-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 4E-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
7,100.0	7,024.9	6,961.9	6,961.9	13.2	12.2	-8.72	1,302.0	118.0	1,422.9	1,403.3	19.57	72.707	
7,150.0	7,055.7	6,992.7	6,992.7	13.3	12.2	-10.01	1,302.0	118.0	1,383.7	1,364.8	18.84	73.432	
7,200.0	7,082.9	7,019.9	7,019.9	13.3	12.3	-11.77	1,302.0	118.0	1,342.0	1,323.8	18.18	73.815	
7,250.0	7,106.3	7,043.3	7,043.3	13.4	12.3	-14.26	1,302.0	118.0	1,298.1	1,280.4	17.66	73.499	
7,300.0	7,125.8	7,062.8	7,062.8	13.5	12.3	-17.95	1,302.0	118.0	1,252.3	1,234.9	17.42	71.878	
7,350.0	7,141.2	7,078.2	7,078.2	13.7	12.4	-23.83	1,302.0	118.0	1,205.1	1,187.3	17.74	67.946	
7,400.0	7,152.4	7,089.4	7,089.4	14.0	12.4	-34.06	1,302.0	118.0	1,156.7	1,137.5	19.18	60.322	
7,450.0	7,159.4	7,096.4	7,096.4	14.3	12.4	-53.42	1,302.0	118.0	1,107.6	1,085.0	22.63	48.943	
7,504.7	7,162.0	7,099.0	7,099.0	14.7	12.4	-90.00	1,302.0	118.0	1,053.5	1,027.2	26.33	40.004	
7,600.0	7,162.0	7,099.0	7,099.0	15.4	12.4	-90.00	1,302.0	118.0	959.1	931.9	27.15	35.320	
7,700.0	7,162.0	7,099.0	7,099.0	16.4	12.4	-90.00	1,302.0	118.0	860.3	832.1	28.16	30.551	
7,800.0	7,162.0	7,099.0	7,099.0	17.5	12.4	-90.00	1,302.0	118.0	761.8	732.5	29.29	26.012	
7,900.0	7,162.0	7,099.0	7,099.0	18.7	12.4	-90.00	1,302.0	118.0	663.8	633.3	30.52	21.753	
8,000.0	7,162.0	7,099.0	7,099.0	20.0	12.4	-90.00	1,302.0	118.0	566.5	534.7	31.82	17.801	
8,100.0	7,162.0	7,099.0	7,099.0	21.3	12.4	-90.00	1,302.0	118.0	470.3	437.1	33.20	14.166	
8,200.0	7,162.0	7,099.0	7,099.0	22.7	12.4	-90.00	1,302.0	118.0	376.1	341.5	34.63	10.862	
8,300.0	7,162.0	7,099.0	7,099.0	24.1	12.4	-90.00	1,302.0	118.0	285.9	249.8	36.10	7.919	
8,400.0	7,162.0	7,099.0	7,099.0	25.6	12.4	-90.00	1,302.0	118.0	204.9	167.3	37.61	5.448	
8,500.0	7,162.0	7,099.0	7,099.0	27.1	12.4	-90.00	1,302.0	118.0	149.2	110.0	39.14	3.810	
8,548.7	7,162.0	7,099.0	7,099.0	27.9	12.4	-90.00	1,302.0	118.0	141.0	101.1	39.91	3.533	CC, ES, SF
8,600.0	7,162.0	7,099.0	7,099.0	28.7	12.4	-90.00	1,302.0	118.0	150.0	109.3	40.71	3.686	
8,700.0	7,162.0	7,099.0	7,099.0	30.2	12.4	-90.00	1,302.0	118.0	206.8	164.5	42.29	4.890	
8,800.0	7,162.0	7,099.0	7,099.0	31.8	12.4	-90.00	1,302.0	118.0	288.2	244.3	43.89	6.565	
8,900.0	7,162.0	7,099.0	7,099.0	33.4	12.4	-90.00	1,302.0	118.0	378.6	333.0	45.51	8.318	
9,000.0	7,162.0	7,099.0	7,099.0	35.0	12.4	-90.00	1,302.0	118.0	472.8	425.7	47.14	10.030	
9,100.0	7,162.0	7,099.0	7,099.0	36.7	12.4	-90.00	1,302.0	118.0	569.1	520.3	48.78	11.665	
9,200.0	7,162.0	7,099.0	7,099.0	38.3	12.4	-90.00	1,302.0	118.0	666.4	616.0	50.44	13.213	
9,300.0	7,162.0	7,099.0	7,099.0	40.0	12.4	-90.00	1,302.0	118.0	764.4	712.3	52.10	14.673	
9,400.0	7,162.0	7,099.0	7,099.0	41.6	12.4	-90.00	1,302.0	118.0	862.9	809.2	53.77	16.049	
9,500.0	7,162.0	7,099.0	7,099.0	43.3	12.4	-90.00	1,302.0	118.0	961.7	906.3	55.44	17.346	
9,600.0	7,162.0	7,099.0	7,099.0	45.0	12.4	-90.00	1,302.0	118.0	1,060.7	1,003.6	57.12	18.569	
9,700.0	7,162.0	7,099.0	7,099.0	46.6	12.4	-90.00	1,302.0	118.0	1,159.9	1,101.1	58.81	19.723	
9,800.0	7,162.0	7,099.0	7,099.0	48.3	12.4	-90.00	1,302.0	118.0	1,259.2	1,198.7	60.50	20.813	
9,900.0	7,162.0	7,099.0	7,099.0	50.0	12.4	-90.00	1,302.0	118.0	1,358.7	1,296.5	62.20	21.844	
10,000.0	7,162.0	7,099.0	7,099.0	51.7	12.4	-90.00	1,302.0	118.0	1,458.2	1,394.3	63.90	22.820	

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 4E-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 4E-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
9,700.0	7,162.0	7,068.0	7,068.0	46.6	12.3	-90.00	3,912.0	107.4	1,466.6	1,407.8	58.76	24.961	
9,800.0	7,162.0	7,068.0	7,068.0	48.3	12.3	-90.00	3,912.0	107.4	1,367.2	1,306.7	60.45	22.617	
9,900.0	7,162.0	7,068.0	7,068.0	50.0	12.3	-90.00	3,912.0	107.4	1,267.8	1,205.7	62.14	20.402	
10,000.0	7,162.0	7,068.0	7,068.0	51.7	12.3	-90.00	3,912.0	107.4	1,168.6	1,104.8	63.84	18.304	
10,100.0	7,162.0	7,068.0	7,068.0	53.4	12.3	-90.00	3,912.0	107.4	1,069.5	1,004.0	65.55	16.317	
10,200.0	7,162.0	7,068.0	7,068.0	55.1	12.3	-90.00	3,912.0	107.4	970.7	903.4	67.25	14.433	
10,300.0	7,162.0	7,068.0	7,068.0	56.8	12.3	-90.00	3,912.0	107.4	872.0	803.1	68.96	12.645	
10,400.0	7,162.0	7,068.0	7,068.0	58.5	12.3	-90.00	3,912.0	107.4	773.7	703.1	70.68	10.948	
10,500.0	7,162.0	7,068.0	7,068.0	60.2	12.3	-90.00	3,912.0	107.4	676.0	603.6	72.39	9.338	
10,600.0	7,162.0	7,068.0	7,068.0	61.9	12.3	-90.00	3,912.0	107.4	579.0	504.8	74.11	7.812	
10,700.0	7,162.0	7,068.0	7,068.0	63.7	12.3	-90.00	3,912.0	107.4	483.2	407.3	75.83	6.372	
10,800.0	7,162.0	7,068.0	7,068.0	65.4	12.3	-90.00	3,912.0	107.4	389.5	311.9	77.55	5.022	
10,900.0	7,162.0	7,068.0	7,068.0	67.1	12.3	-90.00	3,912.0	107.4	299.9	220.6	79.27	3.783	
11,000.0	7,162.0	7,068.0	7,068.0	68.8	12.3	-90.00	3,912.0	107.4	219.5	138.5	80.99	2.710	
11,100.0	7,162.0	7,068.0	7,068.0	70.5	12.3	-90.00	3,912.0	107.4	162.6	79.9	82.72	1.966	
11,150.0	7,162.0	7,068.0	7,068.0	71.4	12.3	-90.00	3,912.0	107.4	151.9	68.3	83.58	1.817	
11,159.5	7,162.0	7,068.0	7,068.0	71.6	12.3	-90.00	3,912.0	107.4	151.6	67.9	83.72	1.811	CC, ES, SF
11,200.0	7,162.0	7,068.0	7,068.0	72.2	12.3	-90.00	3,912.0	107.4	156.5	72.2	84.31	1.856	
11,300.0	7,162.0	7,068.0	7,068.0	74.0	12.3	-90.00	3,912.0	107.4	202.8	117.2	85.61	2.369	
11,400.0	7,162.0	7,068.0	7,068.0	75.7	12.3	-90.00	3,912.0	107.4	275.9	189.1	86.74	3.181	
11,500.0	7,162.0	7,068.0	7,068.0	77.3	12.3	-90.01	3,912.0	107.4	359.6	272.0	87.66	4.102	
11,600.0	7,162.0	7,068.0	7,068.0	79.0	12.3	-90.01	3,912.0	107.4	447.9	359.5	88.40	5.067	
11,700.0	7,162.0	7,068.0	7,068.0	80.7	12.3	-90.02	3,912.0	107.4	538.4	449.4	88.95	6.053	
11,747.9	7,162.0	7,068.0	7,068.0	81.4	12.3	-90.02	3,912.0	107.4	582.1	493.0	89.14	6.530	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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

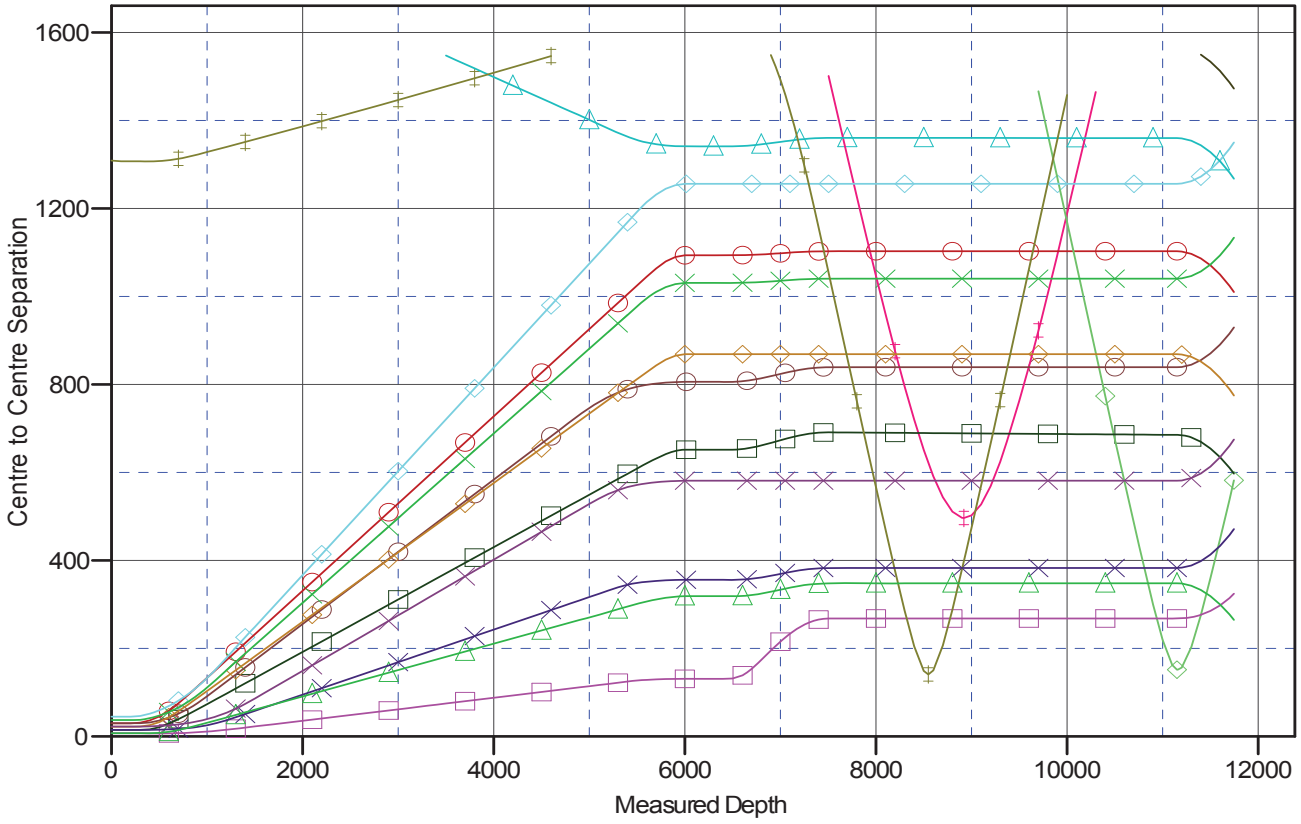
Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
7,504.7	7,162.0	7,093.0	7,093.0	14.7	12.4	-90.00	1,675.0	-237.4	1,501.5	1,475.2	26.32	57.038	
7,600.0	7,162.0	7,093.0	7,093.0	15.4	12.4	-90.00	1,675.0	-237.4	1,411.9	1,384.7	27.14	52.013	
7,700.0	7,162.0	7,093.0	7,093.0	16.4	12.4	-90.00	1,675.0	-237.4	1,318.7	1,290.6	28.15	46.846	
7,800.0	7,162.0	7,093.0	7,093.0	17.5	12.4	-90.00	1,675.0	-237.4	1,226.6	1,197.4	29.28	41.897	
7,900.0	7,162.0	7,093.0	7,093.0	18.7	12.4	-90.00	1,675.0	-237.4	1,135.9	1,105.4	30.51	37.237	
8,000.0	7,162.0	7,093.0	7,093.0	20.0	12.4	-90.00	1,675.0	-237.4	1,046.9	1,015.1	31.81	32.906	
8,100.0	7,162.0	7,093.0	7,093.0	21.3	12.4	-90.00	1,675.0	-237.4	960.0	926.8	33.19	28.926	
8,200.0	7,162.0	7,093.0	7,093.0	22.7	12.4	-90.00	1,675.0	-237.4	876.0	841.3	34.62	25.304	
8,300.0	7,162.0	7,093.0	7,093.0	24.1	12.4	-90.00	1,675.0	-237.4	795.6	759.5	36.09	22.045	
8,400.0	7,162.0	7,093.0	7,093.0	25.6	12.4	-90.00	1,675.0	-237.4	720.1	682.5	37.60	19.155	
8,500.0	7,162.0	7,093.0	7,093.0	27.1	12.4	-90.00	1,675.0	-237.4	651.4	612.2	39.13	16.644	
8,600.0	7,162.0	7,093.0	7,093.0	28.7	12.4	-90.00	1,675.0	-237.4	591.5	550.9	40.70	14.535	
8,700.0	7,162.0	7,093.0	7,093.0	30.2	12.4	-90.00	1,675.0	-237.4	543.7	501.4	42.28	12.859	
8,800.0	7,162.0	7,093.0	7,093.0	31.8	12.4	-90.00	1,675.0	-237.4	511.1	467.2	43.88	11.647	
8,900.0	7,162.0	7,093.0	7,093.0	33.4	12.4	-90.00	1,675.0	-237.4	496.9	451.4	45.50	10.921	
8,921.7	7,162.0	7,093.0	7,093.0	33.8	12.4	-90.00	1,675.0	-237.4	496.4	450.6	45.85	10.826	CC, ES
9,000.0	7,162.0	7,093.0	7,093.0	35.0	12.4	-90.00	1,675.0	-237.4	502.6	455.4	47.13	10.663	SF
9,100.0	7,162.0	7,093.0	7,093.0	36.7	12.4	-90.00	1,675.0	-237.4	527.5	478.7	48.77	10.815	
9,200.0	7,162.0	7,093.0	7,093.0	38.3	12.4	-90.00	1,675.0	-237.4	569.1	518.7	50.43	11.286	
9,300.0	7,162.0	7,093.0	7,093.0	40.0	12.4	-90.00	1,675.0	-237.4	624.1	572.0	52.09	11.983	
9,400.0	7,162.0	7,093.0	7,093.0	41.6	12.4	-90.00	1,675.0	-237.4	689.4	635.6	53.76	12.824	
9,500.0	7,162.0	7,093.0	7,093.0	43.3	12.4	-90.00	1,675.0	-237.4	762.1	706.7	55.43	13.749	
9,600.0	7,162.0	7,093.0	7,093.0	45.0	12.4	-90.00	1,675.0	-237.4	840.6	783.4	57.11	14.717	
9,700.0	7,162.0	7,093.0	7,093.0	46.6	12.4	-90.00	1,675.0	-237.4	923.1	864.3	58.80	15.700	
9,800.0	7,162.0	7,093.0	7,093.0	48.3	12.4	-90.00	1,675.0	-237.4	1,008.9	948.4	60.49	16.678	
9,900.0	7,162.0	7,093.0	7,093.0	50.0	12.4	-90.00	1,675.0	-237.4	1,097.0	1,034.9	62.19	17.641	
10,000.0	7,162.0	7,093.0	7,093.0	51.7	12.4	-90.00	1,675.0	-237.4	1,187.1	1,123.2	63.89	18.581	
10,100.0	7,162.0	7,093.0	7,093.0	53.4	12.4	-90.00	1,675.0	-237.4	1,278.6	1,213.0	65.59	19.494	
10,200.0	7,162.0	7,093.0	7,093.0	55.1	12.4	-90.00	1,675.0	-237.4	1,371.3	1,304.0	67.30	20.377	
10,300.0	7,162.0	7,093.0	7,093.0	56.8	12.4	-90.00	1,675.0	-237.4	1,465.0	1,396.0	69.01	21.229	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well Dale 4E-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 4E-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 4E-20H-O264
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.60°

Ladder Plot



LEGEND

ΠNG), EXISTING, NEBRASKA WELL V0	Dale 4I-20H-O264, HZ, Plan #1 V0	Dale 4J-20H-O264, HZ, Plan #1 V0
)264, HZ, Plan #1 V0	Dale 4B-20H-O264, HZ, Plan #1 V0	Dale 3L-20H-N264, HZ, Plan #1 V0
[EXISTING), EXISTING, NOBLE WELL V0	Dale 4H-20H-O264, HZ, Plan #1 V0	DALE 'E' UNIT 1 (EXISTING), EXISTING
)264, HZ, Plan #1 V0	Dale 4K-20H-O264, HZ, Plan #1 V0	Dale 4G-20H-O264, HZ, Plan #1 V0
J264, HZ, Plan #1 V0	Dale 4F-20H-O264, HZ, Plan #1 V0	Dale 4D-20H-O264, HZ, Plan #1 V0