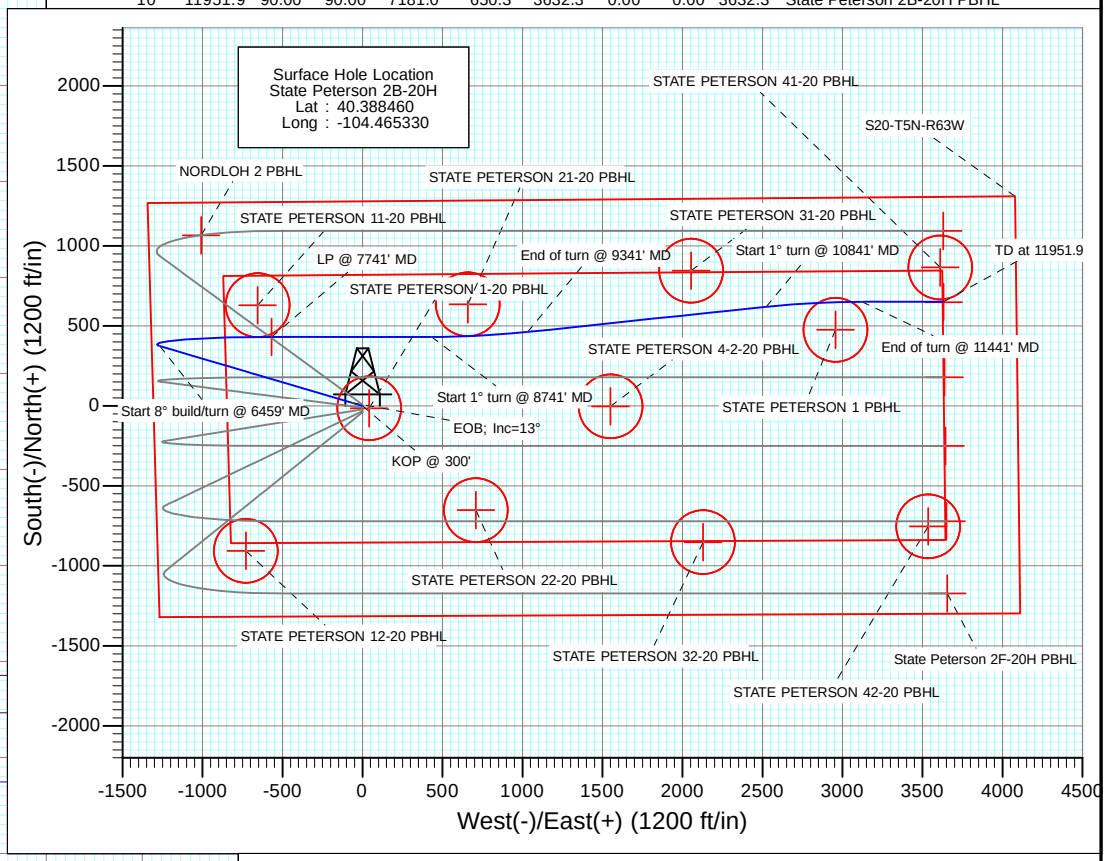
Project: DJ Wattenberg
Site: S20-T5N-R63W (State Peterson)
Well: State Peterson 2B-20H
Wellbore: Hz
Design: Plan #1

encana

CATHEDRAL

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.0	
3	954.2	13.08	286.43	948.5	21.0	-71.3	2.00	286.43	-71.3	
4	6459.8	13.08	286.43	6311.2	373.5	-1266.8	0.00	0.00	-1266.8	
5	7741.5	90.00	90.00	7181.0	430.7	-567.7	8.00	163.16	-567.7	State Peterson 2B-20H LP
6	8741.5	90.00	90.00	7181.0	430.7	432.3	0.00	0.00	432.3	
7	9341.5	90.00	84.00	7181.0	462.1	1031.2	1.00	-90.00	1031.2	
8	10841.5	90.00	84.00	7181.0	618.9	2523.0	0.00	0.00	2523.0	
9	11441.5	90.00	90.00	7181.0	650.3	3121.9	1.00	90.00	3121.9	
10	11951.9	90.00	90.00	7181.0	650.3	3632.3	0.00	0.00	3632.3	State Peterson 2B-20H PBHL



DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
State Peterson 2B-20H LP	430.7	-567.7	1386464.67	3287642.72	40.389642	-104.467368
State Peterson 2B-20H PBHL	648.7	3632.3	1386731.68	3291839.89	40.390240	-104.452290

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
128.0	128.0	Base of Fox Hills
4073.0	4161.9	Sussex
4268.0	4362.1	Sussex Marker
4628.0	4731.7	Shannon
5855.0	5991.4	Teepee Buttes
6298.0	6446.3	Sharon Springs
6362.0	6511.6	Niobrara
6607.0	6758.4	Ft. Hayes
6630.0	6782.0	Codell
7166.0	7594.5	B Chalk

Plan #1
State Peterson 2B-20H
12xxx; LR
Well @ 4592.0ft (Ensign)
Ground Elevation @ 4579.0
North American Datum 1983
Well State Peterson 2B-20H, True North

T M Azimuths to True North
Magnetic North: 8.45°

Magnetic Field
Strength: 53027.4snT
Dip Angle: 67.05°
Date: 12/7/2012
Model: IGRF200510

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site:	S20-T5N-R63W (State Peterson)	**North Reference:**	True
Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson)

Site Position:		**Northing:**	1,386,047.92 ft	**Latitude:**	40.388480
From:	Lat/Long	**Easting:**	3,288,215.31 ft	**Longitude:**	-104.465330
Position Uncertainty:	0.0 ft	**Slot Radius:**	13.200 in	**Grid Convergence:**	0.67 °

Well State Peterson 2B-20H

Well Position	**+N/-S**	0.0 ft	**Northing:**	1,386,040.62 ft	**Latitude:**	40.388460
	+E/-W	0.0 ft	**Easting:**	3,288,215.40 ft	**Longitude:**	-104.465330
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,579.0 ft

Wellbore Hz

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/7/2012	8.45	67.05	53,027

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	90.00

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
954.2	13.08	286.43	948.5	21.0	-71.3	2.00	2.00	0.00	286.43	
6,459.8	13.08	286.43	6,311.2	373.5	-1,266.8	0.00	0.00	0.00	0.00	
7,741.5	90.00	90.00	7,181.0	430.7	-567.7	8.00	6.00	12.76	163.16	State Peterson 2B-20
8,741.5	90.00	90.00	7,181.0	430.7	432.3	0.00	0.00	0.00	0.00	
9,341.5	90.00	84.00	7,181.0	462.1	1,031.2	1.00	0.00	-1.00	-90.00	
10,841.5	90.00	84.00	7,181.0	618.9	2,523.0	0.00	0.00	0.00	0.00	
11,441.5	90.00	90.00	7,181.0	650.3	3,121.9	1.00	0.00	1.00	90.00	
11,951.9	90.00	90.00	7,181.0	650.3	3,632.3	0.00	0.00	0.00	0.00	State Peterson 2B-20

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site:	S20-T5N-R63W (State Peterson)	**North Reference:**	True
Well:	State Peterson 2B-20H	**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	
128.0	0.00	0.00	128.0	0.0	0.0	0.0	0.00	0.00	Base of Fox Hills
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	KOP @ 300'
400.0	2.00	286.43	400.0	0.5	-1.7	-1.7	2.00	2.00	
500.0	4.00	286.43	499.8	2.0	-6.7	-6.7	2.00	2.00	
600.0	6.00	286.43	599.5	4.4	-15.1	-15.1	2.00	2.00	
700.0	8.00	286.43	698.7	7.9	-26.7	-26.7	2.00	2.00	
800.0	10.00	286.43	797.5	12.3	-41.7	-41.7	2.00	2.00	
900.0	12.00	286.43	895.6	17.7	-60.0	-60.0	2.00	2.00	
954.2	13.08	286.43	948.5	21.0	-71.3	-71.3	2.00	2.00	EOB; Inc=13°
1,000.0	13.08	286.43	993.1	24.0	-81.3	-81.3	0.00	0.00	
1,100.0	13.08	286.43	1,090.5	30.4	-103.0	-103.0	0.00	0.00	
1,200.0	13.08	286.43	1,187.9	36.8	-124.7	-124.7	0.00	0.00	
1,300.0	13.08	286.43	1,285.4	43.2	-146.4	-146.4	0.00	0.00	
1,400.0	13.08	286.43	1,382.8	49.6	-168.1	-168.1	0.00	0.00	
1,500.0	13.08	286.43	1,480.2	56.0	-189.8	-189.8	0.00	0.00	
1,600.0	13.08	286.43	1,577.6	62.4	-211.6	-211.6	0.00	0.00	
1,700.0	13.08	286.43	1,675.0	68.8	-233.3	-233.3	0.00	0.00	
1,800.0	13.08	286.43	1,772.4	75.2	-255.0	-255.0	0.00	0.00	
1,900.0	13.08	286.43	1,869.8	81.6	-276.7	-276.7	0.00	0.00	
2,000.0	13.08	286.43	1,967.2	88.0	-298.4	-298.4	0.00	0.00	
2,100.0	13.08	286.43	2,064.6	94.4	-320.1	-320.1	0.00	0.00	
2,200.0	13.08	286.43	2,162.0	100.8	-341.8	-341.8	0.00	0.00	
2,300.0	13.08	286.43	2,259.4	107.2	-363.6	-363.6	0.00	0.00	
2,400.0	13.08	286.43	2,356.8	113.6	-385.3	-385.3	0.00	0.00	
2,500.0	13.08	286.43	2,454.2	120.0	-407.0	-407.0	0.00	0.00	
2,600.0	13.08	286.43	2,551.6	126.4	-428.7	-428.7	0.00	0.00	
2,700.0	13.08	286.43	2,649.0	132.8	-450.4	-450.4	0.00	0.00	
2,800.0	13.08	286.43	2,746.4	139.2	-472.1	-472.1	0.00	0.00	
2,900.0	13.08	286.43	2,843.8	145.6	-493.8	-493.8	0.00	0.00	
3,000.0	13.08	286.43	2,941.2	152.0	-515.6	-515.6	0.00	0.00	
3,100.0	13.08	286.43	3,038.6	158.4	-537.3	-537.3	0.00	0.00	
3,200.0	13.08	286.43	3,136.0	164.8	-559.0	-559.0	0.00	0.00	
3,300.0	13.08	286.43	3,233.4	171.2	-580.7	-580.7	0.00	0.00	
3,400.0	13.08	286.43	3,330.8	177.6	-602.4	-602.4	0.00	0.00	
3,500.0	13.08	286.43	3,428.2	184.0	-624.1	-624.1	0.00	0.00	
3,600.0	13.08	286.43	3,525.6	190.4	-645.8	-645.8	0.00	0.00	
3,700.0	13.08	286.43	3,623.0	196.8	-667.6	-667.6	0.00	0.00	
3,800.0	13.08	286.43	3,720.4	203.2	-689.3	-689.3	0.00	0.00	
3,900.0	13.08	286.43	3,817.9	209.6	-711.0	-711.0	0.00	0.00	
4,000.0	13.08	286.43	3,915.3	216.0	-732.7	-732.7	0.00	0.00	
4,100.0	13.08	286.43	4,012.7	222.4	-754.4	-754.4	0.00	0.00	
4,161.9	13.08	286.43	4,073.0	226.4	-767.9	-767.9	0.00	0.00	Sussex
4,200.0	13.08	286.43	4,110.1	228.8	-776.1	-776.1	0.00	0.00	
4,300.0	13.08	286.43	4,207.5	235.2	-797.8	-797.8	0.00	0.00	
4,362.1	13.08	286.43	4,268.0	239.2	-811.3	-811.3	0.00	0.00	Sussex Marker
4,400.0	13.08	286.43	4,304.9	241.6	-819.6	-819.6	0.00	0.00	
4,500.0	13.08	286.43	4,402.3	248.1	-841.3	-841.3	0.00	0.00	
4,600.0	13.08	286.43	4,499.7	254.5	-863.0	-863.0	0.00	0.00	
4,700.0	13.08	286.43	4,597.1	260.9	-884.7	-884.7	0.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site:	S20-T5N-R63W (State Peterson)	**North Reference:**	True
Well:	State Peterson 2B-20H	**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
4,731.7	13.08	286.43	4,628.0	262.9	-891.6	-891.6	0.00	0.00	Shannon
4,800.0	13.08	286.43	4,694.5	267.3	-906.4	-906.4	0.00	0.00	
4,900.0	13.08	286.43	4,791.9	273.7	-928.1	-928.1	0.00	0.00	
5,000.0	13.08	286.43	4,889.3	280.1	-949.8	-949.8	0.00	0.00	
5,100.0	13.08	286.43	4,986.7	286.5	-971.5	-971.5	0.00	0.00	
5,200.0	13.08	286.43	5,084.1	292.9	-993.3	-993.3	0.00	0.00	
5,300.0	13.08	286.43	5,181.5	299.3	-1,015.0	-1,015.0	0.00	0.00	
5,400.0	13.08	286.43	5,278.9	305.7	-1,036.7	-1,036.7	0.00	0.00	
5,500.0	13.08	286.43	5,376.3	312.1	-1,058.4	-1,058.4	0.00	0.00	
5,600.0	13.08	286.43	5,473.7	318.5	-1,080.1	-1,080.1	0.00	0.00	
5,700.0	13.08	286.43	5,571.1	324.9	-1,101.8	-1,101.8	0.00	0.00	
5,800.0	13.08	286.43	5,668.5	331.3	-1,123.5	-1,123.5	0.00	0.00	
5,900.0	13.08	286.43	5,765.9	337.7	-1,145.3	-1,145.3	0.00	0.00	
5,991.4	13.08	286.43	5,855.0	343.5	-1,165.1	-1,165.1	0.00	0.00	Teepee Buttes
6,000.0	13.08	286.43	5,863.3	344.1	-1,167.0	-1,167.0	0.00	0.00	
6,100.0	13.08	286.43	5,960.7	350.5	-1,188.7	-1,188.7	0.00	0.00	
6,200.0	13.08	286.43	6,058.1	356.9	-1,210.4	-1,210.4	0.00	0.00	
6,300.0	13.08	286.43	6,155.5	363.3	-1,232.1	-1,232.1	0.00	0.00	
6,400.0	13.08	286.43	6,253.0	369.7	-1,253.8	-1,253.8	0.00	0.00	
6,446.3	13.08	286.43	6,298.0	372.7	-1,263.9	-1,263.9	0.00	0.00	Sharon Springs
6,459.8	13.08	286.43	6,311.2	373.5	-1,266.8	-1,266.8	0.00	0.00	Start 8° build/turn @ 6459' MD
6,500.0	10.05	291.78	6,350.6	376.1	-1,274.4	-1,274.4	8.00	-7.55	
6,511.6	9.19	293.96	6,362.0	376.9	-1,276.2	-1,276.2	8.00	-7.36	Niobrara
6,600.0	3.99	340.61	6,449.9	382.6	-1,283.7	-1,283.7	8.00	-5.89	
6,700.0	7.66	60.74	6,549.4	389.2	-1,279.0	-1,279.0	8.00	3.67	
6,758.4	11.95	71.91	6,607.0	393.0	-1,269.9	-1,269.9	8.00	7.34	Ft. Hayes
6,782.0	13.75	74.42	6,630.0	394.5	-1,264.9	-1,264.9	8.00	7.64	Codell
6,800.0	15.14	75.94	6,647.4	395.6	-1,260.5	-1,260.5	8.00	7.72	
6,900.0	22.97	81.08	6,741.9	401.8	-1,228.5	-1,228.5	8.00	7.83	
7,000.0	30.88	83.69	6,831.0	407.7	-1,183.7	-1,183.7	8.00	7.91	
7,100.0	38.83	85.32	6,913.0	413.1	-1,126.8	-1,126.8	8.00	7.95	
7,200.0	46.79	86.46	6,986.3	417.9	-1,059.1	-1,059.1	8.00	7.96	
7,300.0	54.76	87.34	7,049.4	422.1	-981.8	-981.8	8.00	7.97	
7,400.0	62.74	88.06	7,101.3	425.5	-896.4	-896.4	8.00	7.98	
7,500.0	70.72	88.68	7,140.7	428.1	-804.7	-804.7	8.00	7.98	
7,594.5	78.27	89.22	7,166.0	429.7	-713.7	-713.7	8.00	7.98	B Chalk
7,600.0	78.70	89.25	7,167.1	429.8	-708.3	-708.3	8.00	7.98	
7,700.0	86.68	89.78	7,179.8	430.6	-609.2	-609.2	8.00	7.98	
7,741.5	90.00	90.00	7,181.0	430.7	-567.7	-567.7	8.00	7.98	LP @ 7741' MD - State Peterson 2B-20H LP
7,800.0	90.00	90.00	7,181.0	430.7	-509.2	-509.2	0.00	0.00	
7,900.0	90.00	90.00	7,181.0	430.7	-409.2	-409.2	0.00	0.00	
8,000.0	90.00	90.00	7,181.0	430.7	-309.2	-309.2	0.00	0.00	
8,100.0	90.00	90.00	7,181.0	430.7	-209.2	-209.2	0.00	0.00	
8,200.0	90.00	90.00	7,181.0	430.7	-109.2	-109.2	0.00	0.00	
8,300.0	90.00	90.00	7,181.0	430.7	-9.2	-9.2	0.00	0.00	
8,400.0	90.00	90.00	7,181.0	430.7	90.8	90.8	0.00	0.00	
8,500.0	90.00	90.00	7,181.0	430.7	190.8	190.8	0.00	0.00	
8,600.0	90.00	90.00	7,181.0	430.7	290.8	290.8	0.00	0.00	
8,700.0	90.00	90.00	7,181.0	430.7	390.8	390.8	0.00	0.00	
8,741.5	90.00	90.00	7,181.0	430.7	432.3	432.3	0.00	0.00	Start 1° turn @ 8741' MD
8,800.0	90.00	89.42	7,181.0	431.0	490.8	490.8	1.00	0.00	
8,900.0	90.00	88.42	7,181.0	432.9	590.8	590.8	1.00	0.00	

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site:	S20-T5N-R63W (State Peterson)	**North Reference:**	True
Well:	State Peterson 2B-20H	**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
9,000.0	90.00	87.42	7,181.0	436.5	690.7	690.7	1.00	0.00	
9,100.0	90.00	86.42	7,181.0	441.9	790.5	790.5	1.00	0.00	
9,200.0	90.00	85.42	7,181.0	449.0	890.3	890.3	1.00	0.00	
9,300.0	90.00	84.42	7,181.0	457.9	989.9	989.9	1.00	0.00	
9,341.5	90.00	84.00	7,181.0	462.1	1,031.2	1,031.2	1.00	0.00	End of turn @ 9341' MD
9,400.0	90.00	84.00	7,181.0	468.2	1,089.4	1,089.4	0.00	0.00	
9,500.0	90.00	84.00	7,181.0	478.7	1,188.8	1,188.8	0.00	0.00	
9,600.0	90.00	84.00	7,181.0	489.1	1,288.3	1,288.3	0.00	0.00	
9,700.0	90.00	84.00	7,181.0	499.6	1,387.7	1,387.7	0.00	0.00	
9,800.0	90.00	84.00	7,181.0	510.0	1,487.2	1,487.2	0.00	0.00	
9,900.0	90.00	84.00	7,181.0	520.5	1,586.6	1,586.6	0.00	0.00	
10,000.0	90.00	84.00	7,181.0	530.9	1,686.1	1,686.1	0.00	0.00	
10,100.0	90.00	84.00	7,181.0	541.4	1,785.5	1,785.5	0.00	0.00	
10,200.0	90.00	84.00	7,181.0	551.8	1,885.0	1,885.0	0.00	0.00	
10,300.0	90.00	84.00	7,181.0	562.3	1,984.4	1,984.4	0.00	0.00	
10,400.0	90.00	84.00	7,181.0	572.7	2,083.9	2,083.9	0.00	0.00	
10,500.0	90.00	84.00	7,181.0	583.2	2,183.3	2,183.3	0.00	0.00	
10,600.0	90.00	84.00	7,181.0	593.6	2,282.8	2,282.8	0.00	0.00	
10,700.0	90.00	84.00	7,181.0	604.1	2,382.2	2,382.2	0.00	0.00	
10,800.0	90.00	84.00	7,181.0	614.5	2,481.7	2,481.7	0.00	0.00	
10,841.5	90.00	84.00	7,181.0	618.9	2,523.0	2,523.0	0.00	0.00	Start 1° turn @ 10841' MD
10,900.0	90.00	84.58	7,181.0	624.7	2,581.2	2,581.2	1.00	0.00	
11,000.0	90.00	85.58	7,181.0	633.3	2,680.8	2,680.8	1.00	0.00	
11,100.0	90.00	86.58	7,181.0	640.1	2,780.6	2,780.6	1.00	0.00	
11,200.0	90.00	87.58	7,181.0	645.2	2,880.4	2,880.4	1.00	0.00	
11,300.0	90.00	88.58	7,181.0	648.5	2,980.4	2,980.4	1.00	0.00	
11,400.0	90.00	89.58	7,181.0	650.1	3,080.4	3,080.4	1.00	0.00	
11,441.5	90.00	90.00	7,181.0	650.3	3,121.9	3,121.9	1.00	0.00	End of turn @ 11441' MD
11,500.0	90.00	90.00	7,181.0	650.3	3,180.4	3,180.4	0.00	0.00	
11,600.0	90.00	90.00	7,181.0	650.3	3,280.4	3,280.4	0.00	0.00	
11,700.0	90.00	90.00	7,181.0	650.3	3,380.4	3,380.4	0.00	0.00	
11,800.0	90.00	90.00	7,181.0	650.3	3,480.4	3,480.4	0.00	0.00	
11,900.0	90.00	90.00	7,181.0	650.3	3,580.4	3,580.4	0.00	0.00	
11,951.9	90.00	90.00	7,181.0	650.3	3,632.3	3,632.3	0.00	0.00	TD at 11951.9 - State Peterson 2B-20H PBHL

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
State Peterson 2B-20H I	0.00	0.00	7,181.0	648.7	3,632.3	1,386,731.68	3,291,839.89	40.390240	-104.452290
- plan misses target center by 1.5ft at 11951.9ft MD (7181.0 TVD, 650.3 N, 3632.3 E)									
- Point									
State Peterson 2B-20H I	0.00	0.00	7,181.0	430.7	-567.7	1,386,464.67	3,287,642.72	40.389642	-104.467368
- plan hits target center									
- Point									

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Project:	DJ Wattenberg	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site:	S20-T5N-R63W (State Peterson)	**North Reference:**	True
Well:	State Peterson 2B-20H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
128.0	128.0	Base of Fox Hills			
4,161.9	4,073.0	Sussex			
4,362.1	4,268.0	Sussex Marker			
4,731.7	4,628.0	Shannon			
5,991.4	5,855.0	Teepee Buttes			
6,446.3	6,298.0	Sharon Springs			
6,511.6	6,362.0	Niobrara			
6,758.4	6,607.0	Ft. Hayes			
6,782.0	6,630.0	Codell			
7,594.5	7,166.0	B Chalk			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
300.0	300.0	0.0	0.0	KOP @ 300'
954.2	948.5	21.0	-71.3	EOB; Inc=13°
6,459.8	6,311.2	373.5	-1,266.8	Start 8° build/turn @ 6459' MD
7,741.5	7,181.0	430.7	-567.7	LP @ 7741' MD
8,741.5	7,181.0	430.7	432.3	Start 1° turn @ 8741' MD
9,341.5	7,181.0	462.1	1,031.2	End of turn @ 9341' MD
10,841.5	7,181.0	618.9	2,523.0	Start 1° turn @ 10841' MD
11,441.5	7,181.0	650.3	3,121.9	End of turn @ 11441' MD
11,951.9	7,181.0	650.3	3,632.3	TD at 11951.9

EnCana Oil & Gas (USA) Inc

DJ Wattenberg
S20-T5N-R63W (State Peterson)
State Peterson 2B-20H
Hz
Plan #1

Anticollision Report

07 December, 2012

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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:	MD Interval 100.0ft	**Error Model:**	Systematic Ellipse
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	**Error Surface:**	Elliptical Conic
Warning Levels Evaluated at:	2.00 **Sigma**		

Survey Tool Program **Date** 12/7/2012

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,951.9	Plan #1 (Hz)	MWD	Geolink MWD

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-T5N-R63W (State Peterson)						
NORDLOH 2 - DD - Plan #1						Out of range
STATE PETERSON 1 (EXISTING) - Existing - Existing	11,270.4	7,231.0	172.6	72.9	1.732	CC, ES, SF
STATE PETERSON 11-20 (EXISTING) - Existing - Existin	7,654.9	7,170.8	199.2	168.9	6.573	CC, ES, SF
STATE PETERSON 1-20 (EXISTING) - Existing - Existin	300.0	287.0	44.4	43.4	44.293	CC, ES
STATE PETERSON 1-20 (EXISTING) - Existing - Existin	8,400.0	7,168.0	448.3	413.3	12.810	SF
STATE PETERSON 12-20 (EXISTING) - Existing - Existi						Out of range
STATE PETERSON 21-20 (EXISTING) - Existing - Existi	8,975.4	7,176.0	199.7	153.6	4.331	CC, ES
STATE PETERSON 21-20 (EXISTING) - Existing - Existi	9,000.0	7,176.0	201.1	154.5	4.312	SF
STATE PETERSON 22-20 (EXISTING) - Existing - Existi						Out of range
State Peterson 2A-20H - Hz - Plan #1	200.0	200.0	7.3	6.6	11.168	CC, ES
State Peterson 2A-20H - Hz - Plan #1	300.0	299.8	8.4	7.4	8.401	SF
State Peterson 2C-20H - Hz - Plan #1	300.0	300.0	10.9	9.9	10.909	CC, ES
State Peterson 2C-20H - Hz - Plan #1	6,285.8	6,312.7	200.0	150.1	4.010	SF
State Peterson 2D-20H - Hz - Plan #1	300.0	300.0	21.9	20.9	21.818	CC, ES
State Peterson 2D-20H - Hz - Plan #1	5,500.0	5,480.3	499.1	457.2	11.927	SF
State Peterson 2E-20H - Hz - Plan #1	300.0	300.0	32.8	31.8	32.727	CC, ES
State Peterson 2E-20H - Hz - Plan #1	800.0	795.6	63.8	60.6	19.805	SF
State Peterson 2F-20H - Hz - Plan #1	200.0	200.0	40.1	39.4	61.390	CC, ES
State Peterson 2F-20H - Hz - Plan #1	800.0	789.0	91.2	88.0	27.959	SF
STATE PETERSON 31-20 (EXISTING) - Existing - Existi	10,398.5	7,206.0	273.8	194.8	3.464	CC
STATE PETERSON 31-20 (EXISTING) - Existing - Existi	10,400.0	7,206.0	273.8	194.7	3.463	ES, SF
STATE PETERSON 32-20 (EXISTING) - Existing - Existi						Out of range
STATE PETERSON 41-20 (EXISTING) - Existing - Existi	11,930.2	7,229.0	214.8	99.4	1.862	CC, ES, SF
STATE PETERSON 42-20 (EXISTING) - Existing - Existi						Out of range
STATE PETERSON 4-2-20 (EXISTING) - Existing - Exist						Out of range

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson) - STATE PETERSON 1 (EXISTING) - Existing - Existing

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,800.0	7,181.0	7,231.0	7,231.0	76.1	12.6	90.00	475.2	2,956.0	494.4	405.6	88.71	5.573	
10,900.0	7,181.0	7,231.0	7,231.0	78.6	12.6	90.00	475.2	2,956.0	403.5	312.5	91.08	4.431	
11,000.0	7,181.0	7,231.0	7,231.0	81.0	12.6	90.00	475.2	2,956.0	317.4	223.9	93.42	3.397	
11,100.0	7,181.0	7,231.0	7,231.0	83.4	12.6	90.00	475.2	2,956.0	240.7	145.0	95.74	2.515	
11,200.0	7,181.0	7,231.0	7,231.0	85.8	12.6	90.00	475.2	2,956.0	186.0	88.0	98.04	1.897	
11,270.4	7,181.0	7,231.0	7,231.0	87.5	12.6	90.00	475.2	2,956.0	172.6	72.9	99.65	1.732	CC, ES, SF
11,300.0	7,181.0	7,231.0	7,231.0	88.2	12.6	90.00	475.2	2,956.0	175.0	74.7	100.32	1.745	
11,400.0	7,181.0	7,231.0	7,231.0	90.6	12.6	90.00	475.2	2,956.0	214.6	112.0	102.57	2.092	
11,500.0	7,181.0	7,231.0	7,231.0	93.0	12.6	90.00	475.2	2,956.0	284.6	179.6	104.92	2.712	
11,600.0	7,181.0	7,231.0	7,231.0	95.4	12.6	90.00	475.2	2,956.0	368.6	261.2	107.36	3.433	
11,700.0	7,181.0	7,231.0	7,231.0	97.9	12.6	90.00	475.2	2,956.0	459.0	349.3	109.79	4.181	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson) - STATE PETERSON 11-20 (EXISTING) - Existing - Existing

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
3,000.0	2,941.2	2,936.2	2,936.2	11.1	5.1	57.90	629.5	-655.7	497.6	482.8	14.89	33.428	
3,100.0	3,038.6	3,033.6	3,033.6	11.5	5.3	60.11	629.5	-655.7	485.8	470.1	15.61	31.109	
3,200.0	3,136.0	3,131.0	3,131.0	12.0	5.5	62.44	629.5	-655.7	474.7	458.3	16.35	29.024	
3,300.0	3,233.4	3,228.4	3,228.4	12.4	5.6	64.86	629.5	-655.7	464.4	447.3	17.10	27.154	
3,400.0	3,330.8	3,325.8	3,325.8	12.8	5.8	67.38	629.5	-655.7	455.0	437.2	17.86	25.484	
3,500.0	3,428.2	3,423.2	3,423.2	13.3	6.0	70.01	629.5	-655.7	446.6	428.0	18.61	23.998	
3,600.0	3,525.6	3,520.6	3,520.6	13.7	6.1	72.72	629.5	-655.7	439.2	419.8	19.36	22.684	
3,700.0	3,623.0	3,618.0	3,618.0	14.2	6.3	75.51	629.5	-655.7	432.8	412.7	20.11	21.529	
3,800.0	3,720.4	3,715.4	3,715.4	14.6	6.5	78.37	629.5	-655.7	427.6	406.8	20.84	20.523	
3,900.0	3,817.9	3,812.9	3,812.9	15.0	6.7	81.30	629.5	-655.7	423.5	402.0	21.55	19.655	
4,000.0	3,915.3	3,910.3	3,910.3	15.5	6.8	84.27	629.5	-655.7	420.6	398.3	22.23	18.917	
4,100.0	4,012.7	4,007.7	4,007.7	15.9	7.0	87.27	629.5	-655.7	418.9	396.0	22.89	18.298	
4,190.4	4,100.7	4,095.7	4,095.7	16.3	7.1	90.00	629.5	-655.7	418.4	394.9	23.46	17.836	
4,200.0	4,110.1	4,105.1	4,105.1	16.4	7.2	90.29	629.5	-655.7	418.4	394.9	23.52	17.792	
4,300.0	4,207.5	4,202.5	4,202.5	16.8	7.3	93.31	629.5	-655.7	419.1	395.0	24.10	17.389	
4,400.0	4,304.9	4,299.9	4,299.9	17.2	7.5	96.30	629.5	-655.7	421.0	396.4	24.65	17.081	
4,500.0	4,402.3	4,397.3	4,397.3	17.7	7.7	99.27	629.5	-655.7	424.2	399.0	25.16	16.862	
4,600.0	4,499.7	4,494.7	4,494.7	18.1	7.8	102.18	629.5	-655.7	428.5	402.9	25.62	16.725	
4,700.0	4,597.1	4,592.1	4,592.1	18.5	8.0	105.04	629.5	-655.7	434.0	407.9	26.05	16.662	
4,800.0	4,694.5	4,689.5	4,689.5	19.0	8.2	107.81	629.5	-655.7	440.5	414.1	26.43	16.667	
4,900.0	4,791.9	4,786.9	4,786.9	19.4	8.4	110.51	629.5	-655.7	448.1	421.4	26.78	16.734	
5,000.0	4,889.3	4,884.3	4,884.3	19.9	8.5	113.11	629.5	-655.7	456.8	429.7	27.10	16.857	
5,100.0	4,986.7	4,981.7	4,981.7	20.3	8.7	115.61	629.5	-655.7	466.3	438.9	27.38	17.030	
5,200.0	5,084.1	5,079.1	5,079.1	20.7	8.9	118.02	629.5	-655.7	476.7	449.1	27.64	17.248	
5,300.0	5,181.5	5,176.5	5,176.5	21.2	9.0	120.32	629.5	-655.7	488.0	460.1	27.87	17.506	
7,200.0	6,986.3	6,981.3	6,981.3	23.5	12.2	-33.21	629.5	-655.7	455.5	426.7	28.79	15.823	
7,300.0	7,049.4	7,044.4	7,044.4	22.5	12.3	-44.80	629.5	-655.7	386.5	356.8	29.63	13.042	
7,400.0	7,101.3	7,096.3	7,096.3	21.4	12.4	-59.93	629.5	-655.7	315.6	284.8	30.77	10.255	
7,500.0	7,140.7	7,135.7	7,135.7	20.4	12.5	-75.64	629.5	-655.7	250.6	219.4	31.16	8.041	
7,600.0	7,167.1	7,162.1	7,162.1	19.5	12.5	-86.89	629.5	-655.7	206.5	175.9	30.61	6.747	
7,654.9	7,175.8	7,170.8	7,170.8	19.1	12.5	-90.00	629.5	-655.7	199.2	168.9	30.30	6.573	CC, ES, SF
7,700.0	7,179.8	7,174.8	7,174.8	18.7	12.5	-90.76	629.5	-655.7	204.3	174.2	30.06	6.796	
7,800.0	7,181.0	7,176.0	7,176.0	18.2	12.5	-90.00	629.5	-655.7	247.0	217.1	29.84	8.276	
7,900.0	7,181.0	7,176.0	7,176.0	17.9	12.5	-90.00	629.5	-655.7	316.7	286.7	29.94	10.575	
8,000.0	7,181.0	7,176.0	7,176.0	18.0	12.5	-90.00	629.5	-655.7	399.5	369.1	30.40	13.142	
8,100.0	7,181.0	7,176.0	7,176.0	18.6	12.5	-90.00	629.5	-655.7	488.7	457.6	31.17	15.681	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson) - STATE PETERSON 1-20 (EXISTING) - Existing - Existing

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	109.67	-14.9	41.8	46.2				
100.0	100.0	87.0	87.0	0.2	0.2	109.67	-14.9	41.8	44.4	44.1	0.30	146.102	
200.0	200.0	187.0	187.0	0.3	0.3	109.67	-14.9	41.8	44.4	43.7	0.65	67.978	
300.0	300.0	287.0	287.0	0.5	0.5	109.67	-14.9	41.8	44.4	43.4	1.00	44.293	CC, ES
400.0	400.0	387.0	387.0	0.7	0.7	-176.88	-14.9	41.8	46.1	44.8	1.35	34.151	
500.0	499.8	486.8	486.8	0.9	0.8	-177.19	-14.9	41.8	51.3	49.6	1.70	30.247	
600.0	599.5	586.5	586.5	1.1	1.0	-177.59	-14.9	41.8	60.0	58.0	2.04	29.403	
700.0	698.7	685.7	685.7	1.3	1.2	-177.99	-14.9	41.8	72.2	69.8	2.38	30.292	
800.0	797.5	784.5	784.5	1.7	1.4	-178.34	-14.9	41.8	87.9	85.1	2.72	32.269	
900.0	895.6	882.6	882.6	2.0	1.5	-178.63	-14.9	41.8	106.9	103.9	3.06	34.980	
1,000.0	993.1	980.1	980.1	2.4	1.7	-178.86	-14.9	41.8	129.1	125.7	3.39	38.033	
1,100.0	1,090.5	1,077.5	1,077.5	2.8	1.9	-179.03	-14.9	41.8	151.7	148.0	3.74	40.594	
1,200.0	1,187.9	1,174.9	1,174.9	3.2	2.1	-179.15	-14.9	41.8	174.3	170.3	4.08	42.725	
1,300.0	1,285.4	1,272.4	1,272.4	3.7	2.2	-179.25	-14.9	41.8	197.0	192.5	4.42	44.527	
1,400.0	1,382.8	1,369.8	1,369.8	4.1	2.4	-179.33	-14.9	41.8	219.6	214.8	4.77	46.070	
1,500.0	1,480.2	1,467.2	1,467.2	4.5	2.6	-179.39	-14.9	41.8	242.2	237.1	5.11	47.406	
1,600.0	1,577.6	1,564.6	1,564.6	5.0	2.7	-179.44	-14.9	41.8	264.9	259.4	5.45	48.575	
1,700.0	1,675.0	1,662.0	1,662.0	5.4	2.9	-179.49	-14.9	41.8	287.5	281.7	5.80	49.606	
1,800.0	1,772.4	1,759.4	1,759.4	5.8	3.1	-179.52	-14.9	41.8	310.2	304.0	6.14	50.522	
1,900.0	1,869.8	1,856.8	1,856.8	6.3	3.2	-179.56	-14.9	41.8	332.8	326.3	6.48	51.341	
2,000.0	1,967.2	1,954.2	1,954.2	6.7	3.4	-179.58	-14.9	41.8	355.4	348.6	6.82	52.079	
2,100.0	2,064.6	2,051.6	2,051.6	7.1	3.6	-179.61	-14.9	41.8	378.1	370.9	7.17	52.746	
2,200.0	2,162.0	2,149.0	2,149.0	7.6	3.8	-179.63	-14.9	41.8	400.7	393.2	7.51	53.352	
2,300.0	2,259.4	2,246.4	2,246.4	8.0	3.9	-179.65	-14.9	41.8	423.3	415.5	7.85	53.905	
2,400.0	2,356.8	2,343.8	2,343.8	8.4	4.1	-179.67	-14.9	41.8	446.0	437.8	8.20	54.412	
2,500.0	2,454.2	2,441.2	2,441.2	8.9	4.3	-179.69	-14.9	41.8	468.6	460.1	8.54	54.879	
2,600.0	2,551.6	2,538.6	2,538.6	9.3	4.4	-179.70	-14.9	41.8	491.3	482.4	8.88	55.309	
8,200.0	7,181.0	7,168.0	7,168.0	19.7	12.5	90.00	-14.9	41.8	470.5	438.3	32.21	14.608	
8,300.0	7,181.0	7,168.0	7,168.0	21.1	12.5	90.00	-14.9	41.8	448.5	415.0	33.50	13.388	
8,351.0	7,181.0	7,168.0	7,168.0	21.9	12.5	90.00	-14.9	41.8	445.6	411.4	34.27	13.005	
8,400.0	7,181.0	7,168.0	7,168.0	22.7	12.5	90.00	-14.9	41.8	448.3	413.3	35.00	12.810	SF
8,500.0	7,181.0	7,168.0	7,168.0	24.4	12.5	90.00	-14.9	41.8	469.9	433.2	36.65	12.820	

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 State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson) - STATE PETERSON 21-20 (EXISTING) - Existing - Existing

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,600.0	7,181.0	7,176.0	7,176.0	26.2	12.5	-90.00	635.0	657.9	420.2	381.7	38.45	10.927	
8,700.0	7,181.0	7,176.0	7,176.0	28.1	12.5	-90.00	635.0	657.9	336.3	296.0	40.34	8.336	
8,800.0	7,181.0	7,176.0	7,176.0	30.1	12.5	-90.00	635.0	657.9	263.7	221.4	42.36	6.226	
8,900.0	7,181.0	7,176.0	7,176.0	32.2	12.5	-90.00	635.0	657.9	213.0	168.5	44.47	4.789	
8,975.4	7,181.0	7,176.0	7,176.0	33.8	12.5	-90.00	635.0	657.9	199.7	153.6	46.11	4.331	CC, ES
9,000.0	7,181.0	7,176.0	7,176.0	34.3	12.5	-90.00	635.0	657.9	201.1	154.5	46.64	4.312	SF
9,100.0	7,181.0	7,176.0	7,176.0	36.5	12.5	-90.00	635.0	657.9	234.2	185.4	48.85	4.794	
9,200.0	7,181.0	7,176.0	7,176.0	38.7	12.5	-90.00	635.0	657.9	297.6	246.5	51.10	5.824	
9,300.0	7,181.0	7,176.0	7,176.0	40.9	12.5	-90.00	635.0	657.9	376.2	322.9	53.37	7.050	
9,400.0	7,181.0	7,176.0	7,176.0	43.2	12.5	-90.00	635.0	657.9	462.5	406.9	55.64	8.313	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson) - State Peterson 2A-20H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	7.3	0.0	7.3				
100.0	100.0	100.0	100.0	0.2	0.2	0.00	7.3	0.0	7.3	7.0	0.30	24.005	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	7.3	0.0	7.3	6.6	0.65	11.168	CC, ES
300.0	300.0	299.8	299.8	0.5	0.5	-9.57	8.3	-1.4	8.4	7.4	1.00	8.401	SF
400.0	400.0	399.5	399.3	0.7	0.7	53.70	11.4	-5.6	11.6	10.2	1.36	8.537	
500.0	499.8	499.0	498.4	0.9	0.9	51.34	16.5	-12.6	15.7	14.0	1.73	9.092	
600.0	599.5	598.3	597.0	1.1	1.2	52.49	23.6	-22.3	20.7	18.5	2.14	9.667	
700.0	698.7	697.5	695.0	1.3	1.5	55.06	32.8	-34.7	26.4	23.8	2.60	10.139	
800.0	797.5	796.4	792.1	1.7	1.9	58.10	43.9	-49.9	33.0	29.9	3.16	10.459	
900.0	895.6	895.2	888.4	2.0	2.3	61.15	56.9	-67.7	40.6	36.8	3.82	10.628	
1,000.0	993.1	993.6	983.5	2.4	2.8	63.72	71.9	-88.1	49.3	44.8	4.58	10.771	
1,100.0	1,090.5	1,092.3	1,078.1	2.8	3.3	63.89	88.6	-110.9	60.1	54.8	5.33	11.268	
1,200.0	1,187.9	1,191.7	1,173.1	3.2	3.8	63.70	105.8	-134.3	71.2	65.2	6.09	11.697	
1,300.0	1,285.4	1,291.1	1,268.2	3.7	4.3	63.56	122.9	-157.8	82.4	75.5	6.86	12.017	
1,400.0	1,382.8	1,390.5	1,363.2	4.1	4.9	63.45	140.1	-181.2	93.5	85.9	7.63	12.262	
1,500.0	1,480.2	1,489.8	1,458.2	4.5	5.4	63.37	157.3	-204.6	104.7	96.3	8.40	12.456	
1,600.0	1,577.6	1,589.2	1,553.3	5.0	6.0	63.30	174.4	-228.0	115.8	106.7	9.18	12.612	
1,700.0	1,675.0	1,688.6	1,648.3	5.4	6.5	63.25	191.6	-251.4	127.0	117.0	9.97	12.741	
1,800.0	1,772.4	1,788.0	1,743.4	5.8	7.0	63.20	208.8	-274.8	138.1	127.4	10.75	12.849	
1,900.0	1,869.8	1,887.3	1,838.4	6.3	7.6	63.16	225.9	-298.2	149.3	137.7	11.54	12.940	
2,000.0	1,967.2	1,986.7	1,933.4	6.7	8.1	63.12	243.1	-321.6	160.4	148.1	12.32	13.018	
2,100.0	2,064.6	2,086.1	2,028.5	7.1	8.7	63.10	260.3	-345.1	171.6	158.5	13.11	13.086	
2,200.0	2,162.0	2,185.5	2,123.5	7.6	9.2	63.07	277.4	-368.5	182.7	168.8	13.90	13.145	
2,300.0	2,259.4	2,284.9	2,218.6	8.0	9.8	63.05	294.6	-391.9	193.9	179.2	14.69	13.198	
2,400.0	2,356.8	2,384.2	2,313.6	8.4	10.3	63.03	311.8	-415.3	205.0	189.6	15.48	13.244	
2,500.0	2,454.2	2,483.6	2,408.6	8.9	10.9	63.01	328.9	-438.7	216.2	199.9	16.27	13.286	
2,600.0	2,551.6	2,583.0	2,503.7	9.3	11.4	62.99	346.1	-462.1	227.3	210.3	17.06	13.323	
2,700.0	2,649.0	2,682.4	2,598.7	9.8	12.0	62.97	363.3	-485.5	238.5	220.6	17.85	13.357	
2,800.0	2,746.4	2,781.7	2,693.8	10.2	12.5	62.96	380.4	-509.0	249.6	231.0	18.65	13.387	
2,900.0	2,843.8	2,881.1	2,788.8	10.6	13.1	62.95	397.6	-532.4	260.8	241.3	19.44	13.415	
3,000.0	2,941.2	2,980.5	2,883.9	11.1	13.6	62.94	414.8	-555.8	271.9	251.7	20.23	13.441	
3,100.0	3,038.6	3,079.9	2,978.9	11.5	14.1	62.93	431.9	-579.2	283.1	262.1	21.02	13.464	
3,200.0	3,136.0	3,179.2	3,073.9	12.0	14.7	62.92	449.1	-602.6	294.2	272.4	21.82	13.486	
3,300.0	3,233.4	3,278.6	3,169.0	12.4	15.2	62.91	466.3	-626.0	305.4	282.8	22.61	13.506	
3,400.0	3,330.8	3,378.0	3,264.0	12.8	15.8	62.90	483.4	-649.4	316.5	293.1	23.40	13.525	
3,500.0	3,428.2	3,477.4	3,359.1	13.3	16.3	62.89	500.6	-672.9	327.7	303.5	24.20	13.542	
3,600.0	3,525.6	3,576.7	3,454.1	13.7	16.9	62.88	517.8	-696.3	338.8	313.8	24.99	13.558	
3,700.0	3,623.0	3,676.1	3,549.1	14.2	17.4	62.88	534.9	-719.7	350.0	324.2	25.78	13.573	
3,800.0	3,720.4	3,775.5	3,644.2	14.6	18.0	62.87	552.1	-743.1	361.1	334.5	26.58	13.587	
3,900.0	3,817.9	3,874.9	3,739.2	15.0	18.5	62.86	569.3	-766.5	372.3	344.9	27.37	13.600	
4,000.0	3,915.3	3,974.3	3,834.3	15.5	19.1	62.86	586.4	-789.9	383.4	355.3	28.17	13.613	
4,100.0	4,012.7	4,073.6	3,929.3	15.9	19.6	62.85	603.6	-813.3	394.6	365.6	28.96	13.624	
4,200.0	4,110.1	4,173.0	4,024.3	16.4	20.2	62.85	620.8	-836.7	405.7	376.0	29.76	13.635	
4,300.0	4,207.5	4,272.4	4,119.4	16.8	20.7	62.84	637.9	-860.2	416.9	386.3	30.55	13.646	
4,400.0	4,304.9	4,371.8	4,214.4	17.2	21.3	62.84	655.1	-883.6	428.0	396.7	31.34	13.656	
4,500.0	4,402.3	4,471.1	4,309.5	17.7	21.8	62.83	672.2	-907.0	439.2	407.0	32.14	13.665	
4,600.0	4,499.7	4,570.5	4,404.5	18.1	22.4	62.83	689.4	-930.4	450.3	417.4	32.93	13.674	
4,700.0	4,597.1	4,669.9	4,499.6	18.5	22.9	62.83	706.6	-953.8	461.5	427.7	33.73	13.683	
4,800.0	4,694.5	4,769.3	4,594.6	19.0	23.5	62.82	723.7	-977.2	472.6	438.1	34.52	13.691	
4,900.0	4,791.9	4,868.6	4,689.6	19.4	24.0	62.82	740.9	-1,000.6	483.8	448.5	35.32	13.698	
5,000.0	4,889.3	4,968.0	4,784.7	19.9	24.6	62.81	758.1	-1,024.1	494.9	458.8	36.11	13.706	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson) - State Peterson 2C-20H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-10.9	0.0	10.9				
100.0	100.0	100.0	100.0	0.2	0.2	180.00	-10.9	0.0	10.9	10.6	0.30	35.987	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-10.9	0.0	10.9	10.3	0.65	16.743	
300.0	300.0	300.0	300.0	0.5	0.5	180.00	-10.9	0.0	10.9	9.9	1.00	10.909	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	-114.75	-10.9	0.0	11.5	10.2	1.35	8.532	
500.0	499.8	500.1	500.1	0.9	0.9	-127.78	-10.7	-1.7	13.6	11.9	1.71	7.949	
600.0	599.5	600.3	600.1	1.1	1.0	-135.70	-10.0	-6.9	16.6	14.5	2.09	7.951	
700.0	698.7	700.6	700.1	1.3	1.3	-139.96	-8.9	-15.6	20.2	17.7	2.49	8.117	
800.0	797.5	801.1	799.8	1.7	1.5	-141.92	-7.4	-27.8	24.2	21.3	2.92	8.286	
900.0	895.6	901.6	899.1	2.0	1.8	-142.44	-5.4	-43.4	28.6	25.2	3.41	8.391	
1,000.0	993.1	1,002.3	997.8	2.4	2.2	-141.71	-2.9	-62.6	33.1	29.1	3.97	8.329	
1,100.0	1,090.5	1,103.0	1,096.0	2.8	2.6	-137.49	0.0	-85.1	35.7	31.0	4.69	7.603	
1,200.0	1,187.9	1,203.0	1,192.9	3.2	3.0	-131.30	3.1	-109.5	37.3	31.7	5.56	6.703	
1,300.0	1,285.4	1,302.9	1,289.7	3.7	3.5	-125.65	6.2	-133.9	39.3	32.8	6.50	6.044	
1,400.0	1,382.8	1,402.8	1,386.5	4.1	3.9	-120.59	9.3	-158.3	41.6	34.1	7.47	5.570	
1,500.0	1,480.2	1,502.7	1,483.4	4.5	4.4	-116.10	12.5	-182.6	44.2	35.8	8.45	5.230	
1,600.0	1,577.6	1,602.6	1,580.2	5.0	4.8	-112.14	15.6	-207.0	47.1	37.6	9.44	4.987	
1,700.0	1,675.0	1,702.5	1,677.1	5.4	5.3	-108.64	18.7	-231.4	50.1	39.7	10.42	4.811	
1,800.0	1,772.4	1,802.4	1,773.9	5.8	5.7	-105.56	21.8	-255.8	53.4	42.0	11.39	4.685	
1,900.0	1,869.8	1,902.3	1,870.7	6.3	6.2	-102.83	25.0	-280.2	56.7	44.4	12.35	4.595	
2,000.0	1,967.2	2,002.2	1,967.6	6.7	6.7	-100.41	28.1	-304.5	60.2	46.9	13.29	4.530	
2,100.0	2,064.6	2,102.1	2,064.4	7.1	7.1	-98.27	31.2	-328.9	63.8	49.6	14.22	4.485	
2,200.0	2,162.0	2,202.1	2,161.2	7.6	7.6	-96.35	34.3	-353.3	67.4	52.3	15.14	4.453	
2,300.0	2,259.4	2,302.0	2,258.1	8.0	8.1	-94.63	37.5	-377.7	71.2	55.1	16.06	4.433	
2,400.0	2,356.8	2,401.9	2,354.9	8.4	8.6	-93.08	40.6	-402.0	74.9	58.0	16.96	4.420	
2,500.0	2,454.2	2,501.8	2,451.8	8.9	9.0	-91.68	43.7	-426.4	78.8	60.9	17.85	4.413	
2,600.0	2,551.6	2,601.7	2,548.6	9.3	9.5	-90.41	46.8	-450.8	82.6	63.9	18.74	4.411	
2,700.0	2,649.0	2,701.6	2,645.4	9.8	10.0	-89.26	50.0	-475.2	86.6	66.9	19.62	4.412	
2,800.0	2,746.4	2,801.5	2,742.3	10.2	10.4	-88.20	53.1	-499.6	90.5	70.0	20.49	4.416	
2,900.0	2,843.8	2,901.4	2,839.1	10.6	10.9	-87.24	56.2	-523.9	94.5	73.1	21.36	4.422	
3,000.0	2,941.2	3,001.3	2,936.0	11.1	11.4	-86.35	59.3	-548.3	98.5	76.2	22.23	4.430	
3,100.0	3,038.6	3,101.2	3,032.8	11.5	11.9	-85.53	62.4	-572.7	102.5	79.4	23.09	4.438	
3,200.0	3,136.0	3,201.1	3,129.6	12.0	12.3	-84.78	65.6	-597.1	106.5	82.6	23.95	4.448	
3,300.0	3,233.4	3,301.1	3,226.5	12.4	12.8	-84.07	68.7	-621.5	110.6	85.8	24.80	4.458	
3,400.0	3,330.8	3,401.0	3,323.3	12.8	13.3	-83.42	71.8	-645.8	114.6	89.0	25.65	4.468	
3,500.0	3,428.2	3,500.9	3,420.2	13.3	13.7	-82.82	74.9	-670.2	118.7	92.2	26.50	4.479	
3,600.0	3,525.6	3,600.8	3,517.0	13.7	14.2	-82.25	78.1	-694.6	122.8	95.4	27.35	4.489	
3,700.0	3,623.0	3,700.7	3,613.8	14.2	14.7	-81.72	81.2	-719.0	126.9	98.7	28.20	4.500	
3,800.0	3,720.4	3,800.6	3,710.7	14.6	15.2	-81.22	84.3	-743.3	131.0	102.0	29.04	4.511	
3,900.0	3,817.9	3,900.5	3,807.5	15.0	15.6	-80.76	87.4	-767.7	135.1	105.2	29.88	4.522	
4,000.0	3,915.3	4,000.4	3,904.3	15.5	16.1	-80.32	90.6	-792.1	139.3	108.5	30.73	4.533	
4,100.0	4,012.7	4,100.3	4,001.2	15.9	16.6	-79.90	93.7	-816.5	143.4	111.8	31.57	4.543	
4,200.0	4,110.1	4,200.2	4,098.0	16.4	17.1	-79.51	96.8	-840.9	147.6	115.1	32.40	4.554	
4,300.0	4,207.5	4,300.1	4,194.9	16.8	17.5	-79.15	99.9	-865.2	151.7	118.5	33.24	4.564	
4,400.0	4,304.9	4,400.1	4,291.7	17.2	18.0	-78.80	103.0	-889.6	155.9	121.8	34.08	4.574	
4,500.0	4,402.3	4,500.0	4,388.5	17.7	18.5	-78.47	106.2	-914.0	160.0	125.1	34.91	4.584	
4,600.0	4,499.7	4,599.9	4,485.4	18.1	19.0	-78.15	109.3	-938.4	164.2	128.4	35.75	4.593	
4,700.0	4,597.1	4,699.8	4,582.2	18.5	19.4	-77.85	112.4	-962.7	168.4	131.8	36.58	4.603	
4,800.0	4,694.5	4,799.7	4,679.1	19.0	19.9	-77.57	115.5	-987.1	172.5	135.1	37.41	4.612	
4,900.0	4,791.9	4,899.6	4,775.9	19.4	20.4	-77.30	118.7	-1,011.5	176.7	138.5	38.25	4.621	
5,000.0	4,889.3	4,999.5	4,872.7	19.9	20.9	-77.04	121.8	-1,035.9	180.9	141.8	39.08	4.630	
5,100.0	4,986.7	5,099.4	4,969.6	20.3	21.3	-76.79	124.9	-1,060.3	185.1	145.2	39.91	4.638	

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 State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson) - State Peterson 2C-20H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,084.1	5,199.3	5,066.4	20.7	21.8	-76.56	128.0	-1,084.6	189.3	148.6	40.74	4.647	
5,300.0	5,181.5	5,299.2	5,163.3	21.2	22.3	-76.33	131.2	-1,109.0	193.5	151.9	41.57	4.655	
5,400.0	5,278.9	5,399.1	5,260.1	21.6	22.8	-76.12	134.3	-1,133.4	197.7	155.3	42.40	4.663	
5,500.0	5,376.3	5,499.1	5,356.9	22.1	23.2	-75.91	137.4	-1,157.8	201.9	158.7	43.23	4.670	
5,600.0	5,473.7	5,599.0	5,453.8	22.5	23.7	-75.71	140.5	-1,182.2	206.1	162.0	44.06	4.678	
5,700.0	5,571.1	5,698.9	5,550.6	22.9	24.2	-75.52	143.6	-1,206.5	210.3	165.4	44.89	4.685	
5,800.0	5,668.5	5,798.8	5,647.4	23.4	24.6	-75.34	146.8	-1,230.9	214.5	168.8	45.71	4.693	
5,900.0	5,765.9	5,898.7	5,744.3	23.8	25.1	-75.16	149.9	-1,255.3	218.7	172.2	46.54	4.700	
6,000.0	5,863.3	6,016.0	5,859.7	24.3	25.5	-76.91	153.6	-1,275.3	219.2	171.5	47.70	4.595	
6,100.0	5,960.7	6,129.5	5,973.0	24.7	25.5	-82.92	157.3	-1,276.6	212.6	163.4	49.27	4.315	
6,200.0	6,058.1	6,233.3	6,075.7	25.1	25.3	-92.77	160.6	-1,262.0	203.7	153.4	50.32	4.049	
6,285.8	6,141.7	6,312.7	6,152.1	25.5	25.0	-103.34	163.1	-1,241.0	200.0	150.1	49.86	4.010	SF
6,300.0	6,155.5	6,325.0	6,163.7	25.6	24.9	-105.18	163.4	-1,237.0	200.1	150.5	49.63	4.032	
6,400.0	6,253.0	6,404.0	6,236.5	26.0	24.5	-117.96	165.8	-1,206.5	210.0	163.1	46.85	4.482	
6,500.0	6,350.6	6,472.0	6,296.2	26.4	23.9	-135.41	167.7	-1,174.0	237.7	195.1	42.54	5.587	
6,600.0	6,449.9	6,536.1	6,349.3	26.6	23.4	164.65	169.4	-1,138.3	277.0	239.6	37.42	7.403	
6,700.0	6,549.4	6,600.0	6,399.0	26.6	22.7	75.74	171.0	-1,098.0	320.9	288.0	32.92	9.750	
6,800.0	6,647.4	6,659.2	6,441.6	26.4	22.1	54.18	172.4	-1,057.0	365.6	336.0	29.55	12.369	
6,900.0	6,741.9	6,719.0	6,481.1	25.9	21.4	44.22	173.7	-1,012.0	408.6	381.6	26.96	15.156	
7,000.0	6,831.0	6,778.0	6,516.2	25.3	20.7	38.06	174.8	-964.7	448.7	423.7	24.95	17.983	
7,100.0	6,913.0	6,836.4	6,546.9	24.5	20.0	33.83	175.8	-915.2	484.8	461.5	23.33	20.782	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson) - State Peterson 2D-20H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-21.9	0.0	21.9				
100.0	100.0	100.0	100.0	0.2	0.2	180.00	-21.9	0.0	21.9	21.6	0.30	71.975	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-21.9	0.0	21.9	21.2	0.65	33.486	
300.0	300.0	300.0	300.0	0.5	0.5	180.00	-21.9	0.0	21.9	20.9	1.00	21.818	CC, ES
400.0	400.0	400.0	400.0	0.7	0.7	-110.70	-21.9	0.0	22.4	21.1	1.35	16.564	
500.0	499.8	499.8	499.8	0.9	0.8	-122.05	-21.9	0.0	24.8	23.0	1.71	14.450	
600.0	599.5	599.8	599.8	1.1	1.0	-132.97	-22.1	-1.7	29.7	27.6	2.08	14.280	
700.0	698.7	699.9	699.7	1.3	1.2	-139.07	-23.0	-6.9	36.7	34.2	2.47	14.868	
800.0	797.5	800.1	799.6	1.7	1.4	-141.89	-24.3	-15.5	45.1	42.2	2.89	15.631	
900.0	895.6	900.5	899.2	2.0	1.7	-142.71	-26.3	-27.6	54.8	51.4	3.36	16.316	
1,000.0	993.1	1,000.9	998.3	2.4	2.0	-142.23	-28.8	-43.1	65.3	61.4	3.90	16.750	
1,100.0	1,090.5	1,101.5	1,097.1	2.8	2.3	-139.75	-31.8	-62.1	74.7	70.1	4.54	16.436	
1,200.0	1,187.9	1,201.4	1,194.6	3.2	2.7	-136.01	-35.3	-83.8	83.1	77.8	5.29	15.712	
1,300.0	1,285.4	1,300.9	1,291.6	3.7	3.1	-132.80	-38.8	-105.6	91.8	85.7	6.08	15.099	
1,400.0	1,382.8	1,400.4	1,388.6	4.1	3.5	-130.15	-42.3	-127.5	100.6	93.7	6.89	14.610	
1,500.0	1,480.2	1,499.9	1,485.6	4.5	3.9	-127.94	-45.8	-149.3	109.7	101.9	7.71	14.219	
1,600.0	1,577.6	1,599.4	1,582.6	5.0	4.3	-126.06	-49.3	-171.2	118.8	110.3	8.55	13.903	
1,700.0	1,675.0	1,699.0	1,679.7	5.4	4.7	-124.46	-52.8	-193.0	128.1	118.7	9.39	13.645	
1,800.0	1,772.4	1,798.5	1,776.7	5.8	5.1	-123.07	-56.3	-214.8	137.5	127.3	10.24	13.433	
1,900.0	1,869.8	1,898.0	1,873.7	6.3	5.5	-121.86	-59.8	-236.7	146.9	135.9	11.09	13.255	
2,000.0	1,967.2	1,997.5	1,970.7	6.7	6.0	-120.79	-63.3	-258.5	156.5	144.5	11.94	13.106	
2,100.0	2,064.6	2,097.0	2,067.7	7.1	6.4	-119.85	-66.7	-280.4	166.0	153.2	12.79	12.979	
2,200.0	2,162.0	2,196.5	2,164.7	7.6	6.8	-119.01	-70.2	-302.2	175.6	161.9	13.64	12.869	
2,300.0	2,259.4	2,296.0	2,261.8	8.0	7.2	-118.26	-73.7	-324.1	185.2	170.7	14.50	12.775	
2,400.0	2,356.8	2,395.5	2,358.8	8.4	7.7	-117.58	-77.2	-345.9	194.9	179.5	15.35	12.692	
2,500.0	2,454.2	2,495.0	2,455.8	8.9	8.1	-116.97	-80.7	-367.8	204.5	188.3	16.21	12.619	
2,600.0	2,551.6	2,594.5	2,552.8	9.3	8.5	-116.41	-84.2	-389.6	214.2	197.2	17.06	12.555	
2,700.0	2,649.0	2,694.0	2,649.8	9.8	8.9	-115.90	-87.7	-411.4	224.0	206.0	17.92	12.498	
2,800.0	2,746.4	2,793.5	2,746.8	10.2	9.4	-115.43	-91.2	-433.3	233.7	214.9	18.77	12.447	
2,900.0	2,843.8	2,893.0	2,843.9	10.6	9.8	-115.00	-94.7	-455.1	243.4	223.8	19.63	12.401	
3,000.0	2,941.2	2,992.6	2,940.9	11.1	10.2	-114.60	-98.2	-477.0	253.2	232.7	20.49	12.360	
3,100.0	3,038.6	3,092.1	3,037.9	11.5	10.7	-114.23	-101.7	-498.8	263.0	241.6	21.34	12.322	
3,200.0	3,136.0	3,191.6	3,134.9	12.0	11.1	-113.89	-105.2	-520.7	272.7	250.6	22.20	12.288	
3,300.0	3,233.4	3,291.1	3,231.9	12.4	11.5	-113.57	-108.7	-542.5	282.5	259.5	23.05	12.257	
3,400.0	3,330.8	3,390.6	3,329.0	12.8	11.9	-113.28	-112.2	-564.4	292.3	268.4	23.91	12.228	
3,500.0	3,428.2	3,490.1	3,426.0	13.3	12.4	-113.00	-115.7	-586.2	302.1	277.4	24.76	12.202	
3,600.0	3,525.6	3,589.6	3,523.0	13.7	12.8	-112.74	-119.2	-608.0	312.0	286.3	25.62	12.178	
3,700.0	3,623.0	3,689.1	3,620.0	14.2	13.2	-112.50	-122.7	-629.9	321.8	295.3	26.47	12.156	
3,800.0	3,720.4	3,788.6	3,717.0	14.6	13.7	-112.27	-126.2	-651.7	331.6	304.3	27.33	12.135	
3,900.0	3,817.9	3,888.1	3,814.0	15.0	14.1	-112.05	-129.7	-673.6	341.4	313.2	28.18	12.116	
4,000.0	3,915.3	3,987.6	3,911.1	15.5	14.5	-111.85	-133.2	-695.4	351.2	322.2	29.03	12.098	
4,100.0	4,012.7	4,087.1	4,008.1	15.9	15.0	-111.65	-136.7	-717.3	361.1	331.2	29.89	12.081	
4,200.0	4,110.1	4,186.7	4,105.1	16.4	15.4	-111.47	-140.2	-739.1	370.9	340.2	30.74	12.065	
4,300.0	4,207.5	4,286.2	4,202.1	16.8	15.8	-111.30	-143.7	-761.0	380.8	349.2	31.60	12.051	
4,400.0	4,304.9	4,385.7	4,299.1	17.2	16.2	-111.13	-147.2	-782.8	390.6	358.2	32.45	12.037	
4,500.0	4,402.3	4,485.2	4,396.1	17.7	16.7	-110.98	-150.7	-804.6	400.5	367.2	33.31	12.024	
4,600.0	4,499.7	4,584.7	4,493.2	18.1	17.1	-110.83	-154.2	-826.5	410.3	376.2	34.16	12.012	
4,700.0	4,597.1	4,684.2	4,590.2	18.5	17.5	-110.69	-157.7	-848.3	420.2	385.2	35.01	12.000	
4,800.0	4,694.5	4,783.7	4,687.2	19.0	18.0	-110.55	-161.2	-870.2	430.0	394.2	35.87	11.989	
4,900.0	4,791.9	4,883.2	4,784.2	19.4	18.4	-110.42	-164.7	-892.0	439.9	403.2	36.72	11.979	
5,000.0	4,889.3	4,982.7	4,881.2	19.9	18.8	-110.30	-168.2	-913.9	449.8	412.2	37.58	11.969	
5,100.0	4,986.7	5,082.2	4,978.3	20.3	19.3	-110.18	-171.7	-935.7	459.6	421.2	38.43	11.960	

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 State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson) - State Peterson 2D-20H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
5,200.0	5,084.1	5,181.7	5,075.3	20.7	19.7	-110.07	-175.2	-957.6	469.5	430.2	39.28	11.951	
5,300.0	5,181.5	5,281.2	5,172.3	21.2	20.1	-109.96	-178.7	-979.4	479.4	439.2	40.14	11.943	
5,400.0	5,278.9	5,380.7	5,269.3	21.6	20.6	-109.85	-182.2	-1,001.2	489.2	448.2	40.99	11.935	
5,500.0	5,376.3	5,480.3	5,366.3	22.1	21.0	-109.75	-185.7	-1,023.1	499.1	457.2	41.84	11.927	SF

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson) - State Peterson 2E-20H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-32.8	0.0	32.8				
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-32.8	0.0	32.8	32.5	0.30	107.962	
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-32.8	0.0	32.8	32.1	0.65	50.228	
300.0	300.0	300.0	300.0	0.5	0.5	-180.00	-32.8	0.0	32.8	31.8	1.00	32.727	CC, ES
400.0	400.0	399.5	399.5	0.7	0.7	-106.58	-33.5	-1.6	34.0	32.7	1.35	25.120	
500.0	499.8	498.9	498.7	0.9	0.9	-106.99	-35.8	-6.2	37.8	36.0	1.73	21.807	
600.0	599.5	598.1	597.6	1.1	1.1	-107.49	-39.5	-14.0	44.0	41.8	2.15	20.402	
700.0	698.7	697.1	695.8	1.3	1.3	-107.97	-44.6	-24.8	52.6	50.0	2.65	19.897	
800.0	797.5	795.6	793.2	1.7	1.6	-108.37	-51.2	-38.6	63.8	60.6	3.22	19.805	SF
900.0	895.6	893.8	889.5	2.0	2.0	-108.65	-59.2	-55.3	77.3	73.4	3.89	19.885	
1,000.0	993.1	991.4	984.7	2.4	2.4	-108.76	-68.6	-74.9	93.2	88.5	4.64	20.070	
1,100.0	1,090.5	1,089.2	1,079.3	2.8	2.8	-107.72	-79.3	-97.2	110.4	104.9	5.44	20.286	
1,200.0	1,187.9	1,187.6	1,174.4	3.2	3.3	-106.71	-90.2	-120.1	127.8	121.6	6.26	20.423	
1,300.0	1,285.4	1,286.0	1,269.5	3.7	3.8	-105.95	-101.2	-143.1	145.3	138.2	7.09	20.505	
1,400.0	1,382.8	1,384.5	1,364.6	4.1	4.2	-105.35	-112.2	-166.0	162.8	154.9	7.92	20.556	
1,500.0	1,480.2	1,482.9	1,459.7	4.5	4.7	-104.86	-123.2	-189.0	180.3	171.6	8.76	20.587	
1,600.0	1,577.6	1,581.4	1,554.8	5.0	5.2	-104.46	-134.1	-211.9	197.8	188.2	9.60	20.607	
1,700.0	1,675.0	1,679.8	1,649.9	5.4	5.7	-104.13	-145.1	-234.9	215.4	204.9	10.45	20.619	
1,800.0	1,772.4	1,778.3	1,745.0	5.8	6.1	-103.85	-156.1	-257.8	232.9	221.6	11.29	20.627	
1,900.0	1,869.8	1,876.7	1,840.1	6.3	6.6	-103.60	-167.1	-280.8	250.5	238.3	12.14	20.631	
2,000.0	1,967.2	1,975.2	1,935.2	6.7	7.1	-103.39	-178.1	-303.7	268.0	255.0	12.99	20.633	
2,100.0	2,064.6	2,073.6	2,030.3	7.1	7.6	-103.20	-189.0	-326.7	285.6	271.7	13.84	20.634	
2,200.0	2,162.0	2,172.0	2,125.4	7.6	8.1	-103.04	-200.0	-349.6	303.1	288.4	14.69	20.634	
2,300.0	2,259.4	2,270.5	2,220.5	8.0	8.6	-102.89	-211.0	-372.6	320.7	305.1	15.54	20.633	
2,400.0	2,356.8	2,368.9	2,315.6	8.4	9.0	-102.76	-222.0	-395.5	338.2	321.8	16.39	20.631	
2,500.0	2,454.2	2,467.4	2,410.7	8.9	9.5	-102.64	-232.9	-418.4	355.8	338.5	17.25	20.629	
2,600.0	2,551.6	2,565.8	2,505.8	9.3	10.0	-102.54	-243.9	-441.4	373.3	355.2	18.10	20.627	
2,700.0	2,649.0	2,664.3	2,600.9	9.8	10.5	-102.44	-254.9	-464.3	390.9	372.0	18.95	20.625	
2,800.0	2,746.4	2,762.7	2,696.0	10.2	11.0	-102.35	-265.9	-487.3	408.5	388.7	19.81	20.622	
2,900.0	2,843.8	2,861.1	2,791.1	10.6	11.5	-102.27	-276.8	-510.2	426.0	405.4	20.66	20.620	
3,000.0	2,941.2	2,959.6	2,886.2	11.1	12.0	-102.19	-287.8	-533.2	443.6	422.1	21.52	20.618	
3,100.0	3,038.6	3,058.0	2,981.3	11.5	12.4	-102.12	-298.8	-556.1	461.2	438.8	22.37	20.615	
3,200.0	3,136.0	3,156.5	3,076.4	12.0	12.9	-102.06	-309.8	-579.1	478.7	455.5	23.22	20.613	
3,300.0	3,233.4	3,254.9	3,171.5	12.4	13.4	-102.00	-320.7	-602.0	496.3	472.2	24.08	20.611	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson) - State Peterson 2F-20H - Hz - Plan #1

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-40.1	0.0	40.1				
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-40.1	0.0	40.1	39.8	0.30	131.953	
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-40.1	0.0	40.1	39.4	0.65	61.390	CC, ES
300.0	300.0	299.1	299.1	0.5	0.5	-178.14	-41.1	-1.3	41.2	40.2	1.00	41.143	
400.0	400.0	398.0	397.8	0.7	0.7	-101.67	-44.4	-5.3	45.1	43.7	1.36	33.064	
500.0	499.8	496.6	496.0	0.9	0.9	-100.31	-49.7	-11.9	52.1	50.3	1.75	29.747	
600.0	599.5	594.7	593.4	1.1	1.2	-100.14	-57.1	-21.1	62.1	59.9	2.18	28.433	
700.0	698.7	692.2	689.8	1.3	1.5	-100.68	-66.5	-32.9	75.2	72.5	2.68	28.006	
800.0	797.5	789.0	784.8	1.7	1.8	-101.54	-77.9	-47.0	91.2	88.0	3.26	27.959	SF
900.0	895.6	884.8	878.3	2.0	2.2	-102.47	-91.1	-63.5	110.3	106.3	3.93	28.057	
1,000.0	993.1	980.2	970.6	2.4	2.7	-103.42	-106.2	-82.2	132.1	127.5	4.67	28.328	
1,100.0	1,090.5	1,077.5	1,064.5	2.8	3.2	-104.14	-122.4	-102.3	154.9	149.5	5.43	28.513	
1,200.0	1,187.9	1,174.9	1,158.4	3.2	3.6	-104.67	-138.5	-122.3	177.8	171.5	6.22	28.596	
1,300.0	1,285.4	1,272.2	1,252.3	3.7	4.1	-105.08	-154.6	-142.3	200.6	193.6	7.01	28.624	
1,400.0	1,382.8	1,369.6	1,346.1	4.1	4.6	-105.40	-170.7	-162.4	223.4	215.6	7.80	28.624	
1,500.0	1,480.2	1,466.9	1,440.0	4.5	5.1	-105.67	-186.9	-182.4	246.2	237.6	8.61	28.610	
1,600.0	1,577.6	1,564.3	1,533.9	5.0	5.5	-105.89	-203.0	-202.5	269.1	259.7	9.41	28.588	
1,700.0	1,675.0	1,661.6	1,627.8	5.4	6.0	-106.08	-219.1	-222.5	291.9	281.7	10.22	28.563	
1,800.0	1,772.4	1,759.0	1,721.7	5.8	6.5	-106.24	-235.2	-242.5	314.8	303.7	11.03	28.537	
1,900.0	1,869.8	1,856.3	1,815.6	6.3	7.0	-106.37	-251.4	-262.6	337.6	325.8	11.84	28.510	
2,000.0	1,967.2	1,953.7	1,909.5	6.7	7.5	-106.49	-267.5	-282.6	360.5	347.8	12.65	28.484	
2,100.0	2,064.6	2,051.0	2,003.4	7.1	8.0	-106.60	-283.6	-302.7	383.3	369.8	13.47	28.459	
2,200.0	2,162.0	2,148.4	2,097.3	7.6	8.5	-106.69	-299.7	-322.7	406.2	391.9	14.28	28.436	
2,300.0	2,259.4	2,245.8	2,191.2	8.0	8.9	-106.78	-315.9	-342.7	429.0	413.9	15.10	28.413	
2,400.0	2,356.8	2,343.1	2,285.1	8.4	9.4	-106.85	-332.0	-362.8	451.9	436.0	15.92	28.392	
2,500.0	2,454.2	2,440.5	2,379.0	8.9	9.9	-106.92	-348.1	-382.8	474.7	458.0	16.73	28.372	
2,600.0	2,551.6	2,537.8	2,472.9	9.3	10.4	-106.98	-364.2	-402.8	497.6	480.0	17.55	28.353	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson) - STATE PETERSON 31-20 (EXISTING) - Existing - Existing

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
10,000.0	7,181.0	7,206.0	7,206.0	57.1	12.6	-90.00	844.9	2,053.7	483.5	413.9	69.59	6.947	
10,100.0	7,181.0	7,206.0	7,206.0	59.4	12.6	-90.00	844.9	2,053.7	405.0	333.1	71.95	5.629	
10,200.0	7,181.0	7,206.0	7,206.0	61.8	12.6	-90.00	844.9	2,053.7	338.2	263.9	74.32	4.550	
10,300.0	7,181.0	7,206.0	7,206.0	64.2	12.6	-90.00	844.9	2,053.7	291.0	214.3	76.70	3.794	
10,398.5	7,181.0	7,206.0	7,206.0	66.5	12.6	-90.00	844.9	2,053.7	273.8	194.8	79.04	3.464	CC
10,400.0	7,181.0	7,206.0	7,206.0	66.6	12.6	-90.00	844.9	2,053.7	273.8	194.7	79.08	3.463	ES, SF
10,500.0	7,181.0	7,206.0	7,206.0	69.0	12.6	-90.00	844.9	2,053.7	292.0	210.6	81.47	3.585	
10,600.0	7,181.0	7,206.0	7,206.0	71.3	12.6	-90.00	844.9	2,053.7	340.0	256.1	83.86	4.054	
10,700.0	7,181.0	7,206.0	7,206.0	73.7	12.6	-90.00	844.9	2,053.7	407.3	321.0	86.26	4.722	
10,800.0	7,181.0	7,206.0	7,206.0	76.1	12.6	-90.00	844.9	2,053.7	486.0	397.3	88.66	5.481	

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 State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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-T5N-R63W (State Peterson) - STATE PETERSON 41-20 (EXISTING) - Existing - Existing

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
11,500.0	7,181.0	7,229.0	7,229.0	93.0	12.6	-90.00	865.1	3,610.5	480.8	375.9	104.92	4.583	
11,600.0	7,181.0	7,229.0	7,229.0	95.4	12.6	-90.00	865.1	3,610.5	393.9	286.6	107.35	3.669	
11,700.0	7,181.0	7,229.0	7,229.0	97.9	12.6	-90.00	865.1	3,610.5	314.9	205.1	109.79	2.868	
11,800.0	7,181.0	7,229.0	7,229.0	100.3	12.6	-90.00	865.1	3,610.5	251.2	139.0	112.22	2.238	
11,900.0	7,181.0	7,229.0	7,229.0	102.7	12.6	-90.00	865.1	3,610.5	216.9	102.3	114.66	1.892	
11,930.2	7,181.0	7,229.0	7,229.0	103.4	12.6	-90.00	865.1	3,610.5	214.8	99.4	115.40	1.862	CC, ES, SF
11,951.9	7,181.0	7,229.0	7,229.0	104.0	12.6	-90.00	865.1	3,610.5	215.9	100.0	115.93	1.863	

Company:	EnCana Oil & Gas (USA) Inc	**Local Co-ordinate Reference:**	Well State Peterson 2B-20H
Project:	DJ Wattenberg	**TVD Reference:**	Well @ 4592.0ft (Ensign)
Reference Site:	S20-T5N-R63W (State Peterson)	**MD Reference:**	Well @ 4592.0ft (Ensign)
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	State Peterson 2B-20H	**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 @ 4592.0ft (Ensign)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: State Peterson 2B-20H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.67°