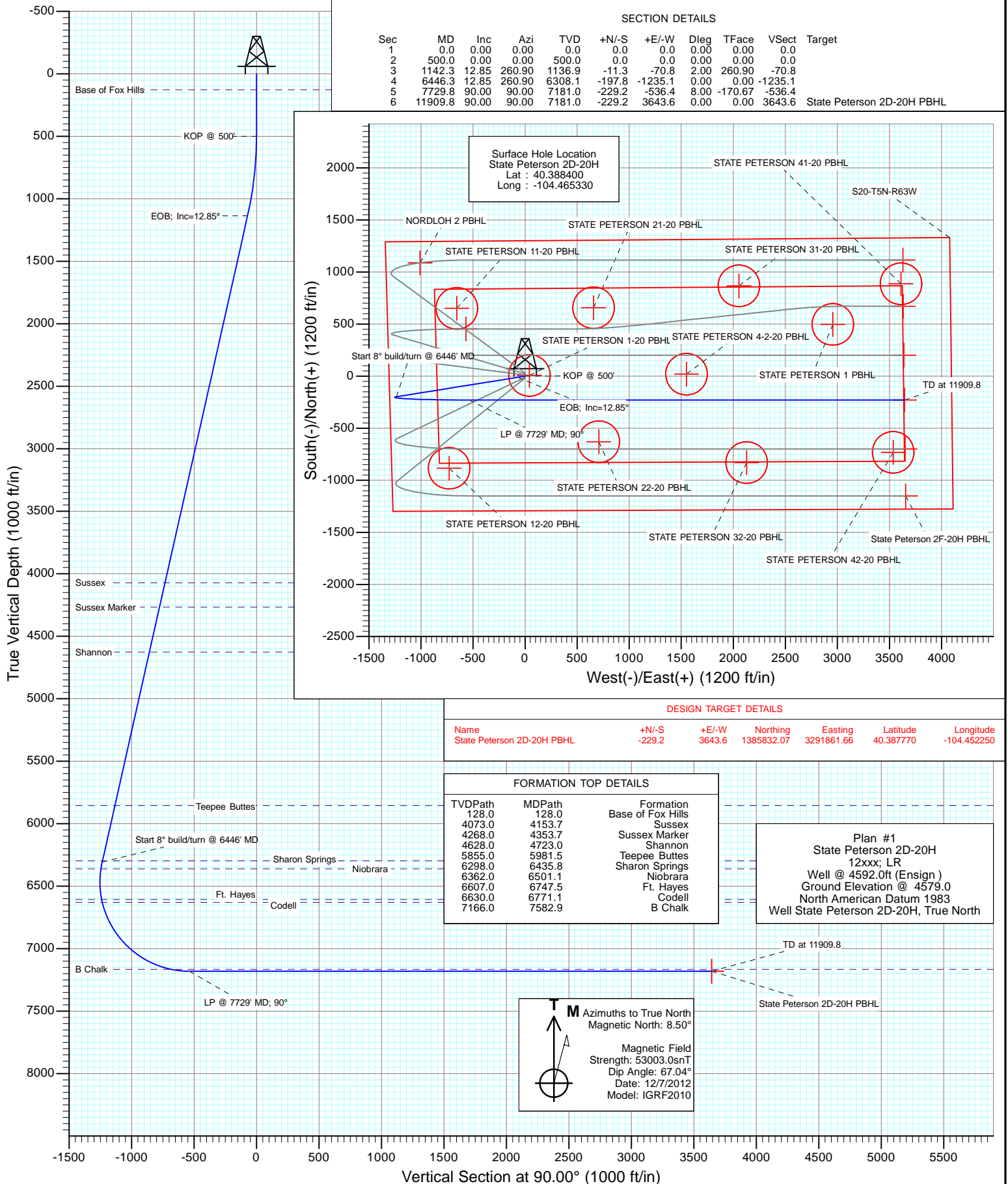




Project: DJ Wattenberg
Site: S20-T5N-R63W (State Peterson)
Well: State Peterson 2D-20H
Wellbore: Hz
Design: Plan #1



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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 2D-20H					
Well Position	+N/-S	0.0 ft	Northing:	1,386,018.76 ft	Latitude:	40.388400
	+E/-W	0.0 ft	Easting:	3,288,215.65 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)
	IGRF2010	12/7/2012	8.50	67.04	53,003

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	
500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,142.3	12.85	260.90	1,136.9	-11.3	-70.8	2.00	2.00	0.00	260.90	
6,446.3	12.85	260.90	6,308.1	-197.8	-1,235.1	0.00	0.00	0.00	0.00	
7,729.8	90.00	90.00	7,181.0	-229.2	-536.4	8.00	6.01	-13.32	-170.67	
11,909.8	90.00	90.00	7,181.0	-229.2	3,643.6	0.00	0.00	0.00	0.00	State Peterson 2D-20

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 500'
600.0	2.00	260.90	600.0	-0.3	-1.7	-1.7	2.00	2.00	
700.0	4.00	260.90	699.8	-1.1	-6.9	-6.9	2.00	2.00	
800.0	6.00	260.90	799.5	-2.5	-15.5	-15.5	2.00	2.00	
900.0	8.00	260.90	898.7	-4.4	-27.5	-27.5	2.00	2.00	
1,000.0	10.00	260.90	997.5	-6.9	-43.0	-43.0	2.00	2.00	
1,100.0	12.00	260.90	1,095.6	-9.9	-61.8	-61.8	2.00	2.00	
1,142.3	12.85	260.90	1,136.9	-11.3	-70.8	-70.8	2.00	2.00	EOB; Inc=12.85°
1,200.0	12.85	260.90	1,193.2	-13.4	-83.5	-83.5	0.00	0.00	
1,300.0	12.85	260.90	1,290.7	-16.9	-105.4	-105.4	0.00	0.00	
1,400.0	12.85	260.90	1,388.2	-20.4	-127.4	-127.4	0.00	0.00	
1,500.0	12.85	260.90	1,485.7	-23.9	-149.3	-149.3	0.00	0.00	
1,600.0	12.85	260.90	1,583.2	-27.4	-171.3	-171.3	0.00	0.00	
1,700.0	12.85	260.90	1,680.7	-30.9	-193.2	-193.2	0.00	0.00	
1,800.0	12.85	260.90	1,778.2	-34.5	-215.2	-215.2	0.00	0.00	
1,900.0	12.85	260.90	1,875.7	-38.0	-237.1	-237.1	0.00	0.00	
2,000.0	12.85	260.90	1,973.2	-41.5	-259.1	-259.1	0.00	0.00	
2,100.0	12.85	260.90	2,070.7	-45.0	-281.0	-281.0	0.00	0.00	
2,200.0	12.85	260.90	2,168.2	-48.5	-303.0	-303.0	0.00	0.00	
2,300.0	12.85	260.90	2,265.7	-52.0	-324.9	-324.9	0.00	0.00	
2,400.0	12.85	260.90	2,363.2	-55.5	-346.9	-346.9	0.00	0.00	
2,500.0	12.85	260.90	2,460.7	-59.1	-368.8	-368.8	0.00	0.00	
2,600.0	12.85	260.90	2,558.2	-62.6	-390.8	-390.8	0.00	0.00	
2,700.0	12.85	260.90	2,655.6	-66.1	-412.8	-412.8	0.00	0.00	
2,800.0	12.85	260.90	2,753.1	-69.6	-434.7	-434.7	0.00	0.00	
2,900.0	12.85	260.90	2,850.6	-73.1	-456.7	-456.7	0.00	0.00	
3,000.0	12.85	260.90	2,948.1	-76.6	-478.6	-478.6	0.00	0.00	
3,100.0	12.85	260.90	3,045.6	-80.1	-500.6	-500.6	0.00	0.00	
3,200.0	12.85	260.90	3,143.1	-83.7	-522.5	-522.5	0.00	0.00	
3,300.0	12.85	260.90	3,240.6	-87.2	-544.5	-544.5	0.00	0.00	
3,400.0	12.85	260.90	3,338.1	-90.7	-566.4	-566.4	0.00	0.00	
3,500.0	12.85	260.90	3,435.6	-94.2	-588.4	-588.4	0.00	0.00	
3,600.0	12.85	260.90	3,533.1	-97.7	-610.3	-610.3	0.00	0.00	
3,700.0	12.85	260.90	3,630.6	-101.2	-632.3	-632.3	0.00	0.00	
3,800.0	12.85	260.90	3,728.1	-104.7	-654.2	-654.2	0.00	0.00	
3,900.0	12.85	260.90	3,825.6	-108.3	-676.2	-676.2	0.00	0.00	
4,000.0	12.85	260.90	3,923.1	-111.8	-698.1	-698.1	0.00	0.00	
4,100.0	12.85	260.90	4,020.6	-115.3	-720.1	-720.1	0.00	0.00	
4,153.7	12.85	260.90	4,073.0	-117.2	-731.9	-731.9	0.00	0.00	Sussex
4,200.0	12.85	260.90	4,118.1	-118.8	-742.0	-742.0	0.00	0.00	
4,300.0	12.85	260.90	4,215.6	-122.3	-764.0	-764.0	0.00	0.00	
4,353.7	12.85	260.90	4,268.0	-124.2	-775.8	-775.8	0.00	0.00	Sussex Marker
4,400.0	12.85	260.90	4,313.1	-125.8	-785.9	-785.9	0.00	0.00	
4,500.0	12.85	260.90	4,410.6	-129.4	-807.9	-807.9	0.00	0.00	
4,600.0	12.85	260.90	4,508.1	-132.9	-829.8	-829.8	0.00	0.00	
4,700.0	12.85	260.90	4,605.6	-136.4	-851.8	-851.8	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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
4,723.0	12.85	260.90	4,628.0	-137.2	-856.8	-856.8	0.00	0.00	Shannon
4,800.0	12.85	260.90	4,703.1	-139.9	-873.8	-873.8	0.00	0.00	
4,900.0	12.85	260.90	4,800.6	-143.4	-895.7	-895.7	0.00	0.00	
5,000.0	12.85	260.90	4,898.1	-146.9	-917.7	-917.7	0.00	0.00	
5,100.0	12.85	260.90	4,995.6	-150.4	-939.6	-939.6	0.00	0.00	
5,200.0	12.85	260.90	5,093.1	-154.0	-961.6	-961.6	0.00	0.00	
5,300.0	12.85	260.90	5,190.6	-157.5	-983.5	-983.5	0.00	0.00	
5,400.0	12.85	260.90	5,288.1	-161.0	-1,005.5	-1,005.5	0.00	0.00	
5,500.0	12.85	260.90	5,385.6	-164.5	-1,027.4	-1,027.4	0.00	0.00	
5,600.0	12.85	260.90	5,483.1	-168.0	-1,049.4	-1,049.4	0.00	0.00	
5,700.0	12.85	260.90	5,580.6	-171.5	-1,071.3	-1,071.3	0.00	0.00	
5,800.0	12.85	260.90	5,678.1	-175.0	-1,093.3	-1,093.3	0.00	0.00	
5,900.0	12.85	260.90	5,775.6	-178.6	-1,115.2	-1,115.2	0.00	0.00	
5,981.5	12.85	260.90	5,855.0	-181.4	-1,133.1	-1,133.1	0.00	0.00	Teepee Buttes
6,000.0	12.85	260.90	5,873.1	-182.1	-1,137.2	-1,137.2	0.00	0.00	
6,100.0	12.85	260.90	5,970.6	-185.6	-1,159.1	-1,159.1	0.00	0.00	
6,200.0	12.85	260.90	6,068.1	-189.1	-1,181.1	-1,181.1	0.00	0.00	
6,300.0	12.85	260.90	6,165.6	-192.6	-1,203.0	-1,203.0	0.00	0.00	
6,400.0	12.85	260.90	6,263.1	-196.1	-1,225.0	-1,225.0	0.00	0.00	
6,435.8	12.85	260.90	6,298.0	-197.4	-1,232.9	-1,232.9	0.00	0.00	Sharon Springs
6,446.3	12.85	260.90	6,308.1	-197.8	-1,235.1	-1,235.1	0.00	0.00	Start 8° build/turn @ 6446' MD
6,500.0	8.63	256.26	6,360.9	-199.7	-1,245.0	-1,245.0	8.00	-7.84	
6,501.1	8.55	256.12	6,362.0	-199.7	-1,245.1	-1,245.1	8.00	-7.76	Niobrara
6,600.0	2.10	190.47	6,460.5	-203.3	-1,252.6	-1,252.6	8.00	-6.52	
6,700.0	7.89	105.07	6,560.2	-206.8	-1,246.3	-1,246.3	8.00	5.79	
6,747.5	11.60	100.11	6,607.0	-208.5	-1,238.4	-1,238.4	8.00	7.81	Ft. Hayes
6,771.1	13.46	98.66	6,630.0	-209.4	-1,233.4	-1,233.4	8.00	7.89	Codell
6,800.0	15.75	97.34	6,658.0	-210.4	-1,226.2	-1,226.2	8.00	7.92	
6,900.0	23.70	94.71	6,752.0	-213.8	-1,192.6	-1,192.6	8.00	7.95	
7,000.0	31.68	93.35	6,840.5	-217.0	-1,146.3	-1,146.3	8.00	7.98	
7,100.0	39.66	92.49	6,921.7	-219.9	-1,088.1	-1,088.1	8.00	7.98	
7,200.0	47.65	91.88	6,994.0	-222.5	-1,019.2	-1,019.2	8.00	7.99	
7,300.0	55.64	91.41	7,056.0	-224.7	-940.9	-940.9	8.00	7.99	
7,400.0	63.64	91.02	7,106.5	-226.5	-854.7	-854.7	8.00	7.99	
7,500.0	71.63	90.69	7,144.5	-227.9	-762.3	-762.3	8.00	7.99	
7,582.9	78.26	90.43	7,166.0	-228.7	-682.3	-682.3	8.00	7.99	B Chalk
7,600.0	79.63	90.38	7,169.3	-228.8	-665.5	-665.5	8.00	7.99	
7,700.0	87.62	90.09	7,180.4	-229.2	-566.2	-566.2	8.00	7.99	
7,729.8	90.00	90.00	7,181.0	-229.2	-536.4	-536.4	8.00	7.99	LP @ 7729' MD; 90°
7,800.0	90.00	90.00	7,181.0	-229.2	-466.2	-466.2	0.00	0.00	
7,900.0	90.00	90.00	7,181.0	-229.2	-366.2	-366.2	0.00	0.00	
8,000.0	90.00	90.00	7,181.0	-229.2	-266.2	-266.2	0.00	0.00	
8,100.0	90.00	90.00	7,181.0	-229.2	-166.2	-166.2	0.00	0.00	
8,200.0	90.00	90.00	7,181.0	-229.2	-66.2	-66.2	0.00	0.00	
8,300.0	90.00	90.00	7,181.0	-229.2	33.8	33.8	0.00	0.00	
8,400.0	90.00	90.00	7,181.0	-229.2	133.8	133.8	0.00	0.00	
8,500.0	90.00	90.00	7,181.0	-229.2	233.8	233.8	0.00	0.00	
8,600.0	90.00	90.00	7,181.0	-229.2	333.8	333.8	0.00	0.00	
8,700.0	90.00	90.00	7,181.0	-229.2	433.8	433.8	0.00	0.00	
8,800.0	90.00	90.00	7,181.0	-229.2	533.8	533.8	0.00	0.00	
8,900.0	90.00	90.00	7,181.0	-229.2	633.8	633.8	0.00	0.00	
9,000.0	90.00	90.00	7,181.0	-229.2	733.8	733.8	0.00	0.00	

Planning Report

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Project:	DJ Wattenberg	MD Reference:	Well @ 4592.0ft (Ensign)
Site:	S20-T5N-R63W (State Peterson)	North Reference:	True
Well:	State Peterson 2D-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
9,100.0	90.00	90.00	7,181.0	-229.2	833.8	833.8	0.00	0.00	
9,200.0	90.00	90.00	7,181.0	-229.2	933.8	933.8	0.00	0.00	
9,300.0	90.00	90.00	7,181.0	-229.2	1,033.8	1,033.8	0.00	0.00	
9,400.0	90.00	90.00	7,181.0	-229.2	1,133.8	1,133.8	0.00	0.00	
9,500.0	90.00	90.00	7,181.0	-229.2	1,233.8	1,233.8	0.00	0.00	
9,600.0	90.00	90.00	7,181.0	-229.2	1,333.8	1,333.8	0.00	0.00	
9,700.0	90.00	90.00	7,181.0	-229.2	1,433.8	1,433.8	0.00	0.00	
9,800.0	90.00	90.00	7,181.0	-229.2	1,533.8	1,533.8	0.00	0.00	
9,900.0	90.00	90.00	7,181.0	-229.2	1,633.8	1,633.8	0.00	0.00	
10,000.0	90.00	90.00	7,181.0	-229.2	1,733.8	1,733.8	0.00	0.00	
10,100.0	90.00	90.00	7,181.0	-229.2	1,833.8	1,833.8	0.00	0.00	
10,200.0	90.00	90.00	7,181.0	-229.2	1,933.8	1,933.8	0.00	0.00	
10,300.0	90.00	90.00	7,181.0	-229.2	2,033.8	2,033.8	0.00	0.00	
10,400.0	90.00	90.00	7,181.0	-229.2	2,133.8	2,133.8	0.00	0.00	
10,500.0	90.00	90.00	7,181.0	-229.2	2,233.8	2,233.8	0.00	0.00	
10,600.0	90.00	90.00	7,181.0	-229.2	2,333.8	2,333.8	0.00	0.00	
10,700.0	90.00	90.00	7,181.0	-229.2	2,433.8	2,433.8	0.00	0.00	
10,800.0	90.00	90.00	7,181.0	-229.2	2,533.8	2,533.8	0.00	0.00	
10,900.0	90.00	90.00	7,181.0	-229.2	2,633.8	2,633.8	0.00	0.00	
11,000.0	90.00	90.00	7,181.0	-229.2	2,733.8	2,733.8	0.00	0.00	
11,100.0	90.00	90.00	7,181.0	-229.2	2,833.8	2,833.8	0.00	0.00	
11,200.0	90.00	90.00	7,181.0	-229.2	2,933.8	2,933.8	0.00	0.00	
11,300.0	90.00	90.00	7,181.0	-229.2	3,033.8	3,033.8	0.00	0.00	
11,400.0	90.00	90.00	7,181.0	-229.2	3,133.8	3,133.8	0.00	0.00	
11,500.0	90.00	90.00	7,181.0	-229.2	3,233.8	3,233.8	0.00	0.00	
11,600.0	90.00	90.00	7,181.0	-229.2	3,333.8	3,333.8	0.00	0.00	
11,700.0	90.00	90.00	7,181.0	-229.2	3,433.8	3,433.8	0.00	0.00	
11,800.0	90.00	90.00	7,181.0	-229.2	3,533.8	3,533.8	0.00	0.00	
11,900.0	90.00	90.00	7,181.0	-229.2	3,633.8	3,633.8	0.00	0.00	
11,909.8	90.00	90.00	7,181.0	-229.2	3,643.6	3,643.6	0.00	0.00	TD at 11909.8 - State Peterson 2D-20H PBHL

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
State Peterson 2D-20H I	0.00	0.00	7,181.0	-229.2	3,643.6	1,385,832.07	3,291,861.66	40.387770	-104.452250
- plan hits target center									
- Point									

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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				
4,153.7	4,073.0	Sussex				
4,353.7	4,268.0	Sussex Marker				
4,723.0	4,628.0	Shannon				
5,981.5	5,855.0	Teepee Buttes				
6,435.8	6,298.0	Sharon Springs				
6,501.1	6,362.0	Niobrara				
6,747.5	6,607.0	Ft. Hayes				
6,771.1	6,630.0	Codell				
7,582.9	7,166.0	B Chalk				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
500.0	500.0	0.0	0.0	KOP @ 500'	
1,142.3	1,136.9	-11.3	-70.8	EOB; Inc=12.85°	
6,446.3	6,308.1	-197.8	-1,235.1	Start 8° build/turn @ 6446' MD	
7,729.8	7,181.0	-229.2	-536.4	LP @ 7729' MD; 90°	
11,909.8	7,181.0	-229.2	3,643.6	TD at 11909.8	

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S20-T5N-R63W (State Peterson)

State Peterson 2D-20H

Hz

Plan #1

Anticollision Report

07 December, 2012

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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	11,909.8	Plan #1 (Hz)	MWD	Geolink MWD	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
S20-T5N-R63W (State Peterson)						
NORDLOH 2 - DD - Plan #1						Out of range
STATE PETERSON 1 (EXISTING) - Existing - Existing						Out of range
STATE PETERSON 11-20 (EXISTING) - Existing - Existin						Out of range
STATE PETERSON 1-20 (EXISTING) - Existing - Existin	500.0	487.0	42.4	40.7	24.914	CC, ES
STATE PETERSON 1-20 (EXISTING) - Existing - Existin	8,307.9	7,168.0	236.1	202.3	6.976	SF
STATE PETERSON 12-20 (EXISTING) - Existing - Existi						Out of range
STATE PETERSON 21-20 (EXISTING) - Existing - Existi						Out of range
STATE PETERSON 22-20 (EXISTING) - Existing - Existi	8,974.3	7,164.0	400.6	354.2	8.633	CC, ES
STATE PETERSON 22-20 (EXISTING) - Existing - Existi	9,100.0	7,164.0	419.9	370.8	8.548	SF
State Peterson 2A-20H - Hz - Plan #1	200.0	200.0	29.1	28.5	44.654	CC, ES
State Peterson 2A-20H - Hz - Plan #1	500.0	497.1	40.4	38.6	23.290	SF
State Peterson 2B-20H - Hz - Plan #1	300.0	300.0	21.9	20.9	21.818	CC, ES
State Peterson 2B-20H - Hz - Plan #1	5,500.0	5,470.4	498.6	456.8	11.927	SF
State Peterson 2C-20H - Hz - Plan #1	400.0	400.0	10.9	9.6	8.090	CC, ES
State Peterson 2C-20H - Hz - Plan #1	600.0	599.7	13.2	11.1	6.381	SF
State Peterson 2E-20H - Hz - Plan #1	300.0	300.0	10.9	9.9	10.909	CC, ES
State Peterson 2E-20H - Hz - Plan #1	400.0	399.8	11.8	10.4	8.719	SF
State Peterson 2F-20H - Hz - Plan #1	200.0	200.0	18.2	17.6	27.905	CC, ES
State Peterson 2F-20H - Hz - Plan #1	4,200.0	4,157.4	498.8	468.6	16.523	SF
STATE PETERSON 31-20 (EXISTING) - Existing - Existi						Out of range
STATE PETERSON 32-20 (EXISTING) - Existing - Existi						Out of range
STATE PETERSON 41-20 (EXISTING) - Existing - Existi						Out of range
STATE PETERSON 42-20 (EXISTING) - Existing - Existi						Out of range
STATE PETERSON 4-2-20 (EXISTING) - Existing - Exist	9,816.4	7,190.0	248.2	182.7	3.789	CC, ES, SF

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	80.59	6.9	41.8	44.3					
100.0	100.0	87.0	87.0	0.2	0.2	80.59	6.9	41.8	42.4	42.0	0.30	139.451		
200.0	200.0	187.0	187.0	0.3	0.3	80.59	6.9	41.8	42.4	41.7	0.65	64.884		
300.0	300.0	287.0	287.0	0.5	0.5	80.59	6.9	41.8	42.4	41.4	1.00	42.276		
400.0	400.0	387.0	387.0	0.7	0.7	80.59	6.9	41.8	42.4	41.0	1.35	31.352		
500.0	500.0	487.0	487.0	0.8	0.8	80.59	6.9	41.8	42.4	40.7	1.70	24.914	CC, ES	
600.0	600.0	587.0	587.0	1.0	1.0	179.70	6.9	41.8	44.1	42.1	2.05	21.530		
700.0	699.8	686.8	686.8	1.2	1.2	179.73	6.9	41.8	49.3	46.9	2.39	20.604		
800.0	799.5	786.5	786.5	1.4	1.4	179.77	6.9	41.8	58.0	55.3	2.74	21.203		
900.0	898.7	885.7	885.7	1.7	1.5	179.81	6.9	41.8	70.2	67.2	3.08	22.820		
1,000.0	997.5	984.5	984.5	2.0	1.7	179.85	6.9	41.8	85.9	82.5	3.41	25.157		
1,100.0	1,095.6	1,082.6	1,082.6	2.3	1.9	179.87	6.9	41.8	105.0	101.2	3.74	28.027		
1,200.0	1,193.2	1,180.2	1,180.2	2.7	2.1	179.89	6.9	41.8	126.9	122.8	4.08	31.085		
1,300.0	1,290.7	1,277.7	1,277.7	3.1	2.2	179.91	6.9	41.8	149.1	144.7	4.43	33.694		
1,400.0	1,388.2	1,375.2	1,375.2	3.5	2.4	179.92	6.9	41.8	171.3	166.6	4.77	35.927		
1,500.0	1,485.7	1,472.7	1,472.7	3.9	2.6	179.93	6.9	41.8	193.6	188.5	5.11	37.861		
1,600.0	1,583.2	1,570.2	1,570.2	4.3	2.7	179.94	6.9	41.8	215.8	210.4	5.46	39.552		
1,700.0	1,680.7	1,667.7	1,667.7	4.7	2.9	179.94	6.9	41.8	238.0	232.2	5.80	41.043		
1,800.0	1,778.2	1,765.2	1,765.2	5.1	3.1	179.95	6.9	41.8	260.3	254.1	6.14	42.367		
1,900.0	1,875.7	1,862.7	1,862.7	5.5	3.3	179.95	6.9	41.8	282.5	276.0	6.49	43.552		
2,000.0	1,973.2	1,960.2	1,960.2	6.0	3.4	179.96	6.9	41.8	304.7	297.9	6.83	44.618		
2,100.0	2,070.7	2,057.7	2,057.7	6.4	3.6	179.96	6.9	41.8	327.0	319.8	7.17	45.582		
2,200.0	2,168.2	2,155.2	2,155.2	6.8	3.8	179.96	6.9	41.8	349.2	341.7	7.52	46.459		
2,300.0	2,265.7	2,252.7	2,252.7	7.3	3.9	179.96	6.9	41.8	371.4	363.6	7.86	47.259		
2,400.0	2,363.2	2,350.2	2,350.2	7.7	4.1	179.97	6.9	41.8	393.7	385.5	8.20	47.992		
2,500.0	2,460.7	2,447.7	2,447.7	8.1	4.3	179.97	6.9	41.8	415.9	407.4	8.55	48.666		
2,600.0	2,558.2	2,545.2	2,545.2	8.5	4.4	179.97	6.9	41.8	438.1	429.2	8.89	49.289		
2,700.0	2,655.6	2,642.6	2,642.6	9.0	4.6	179.97	6.9	41.8	460.4	451.1	9.23	49.865		
2,800.0	2,753.1	2,740.1	2,740.1	9.4	4.8	179.97	6.9	41.8	482.6	473.0	9.58	50.400		
2,900.0	2,850.6	2,837.6	2,837.6	9.8	5.0	179.97	6.9	41.8	504.8	495.5	9.92	50.935		
2,900.0	7,181.0	7,168.0	7,168.0	17.4	12.5	-90.00	6.9	41.8	471.4	441.6	29.79	15.825		
8,000.0	7,181.0	7,168.0	7,168.0	17.8	12.5	-90.00	6.9	41.8	388.1	357.7	30.34	12.789		
8,100.0	7,181.0	7,168.0	7,168.0	18.7	12.5	-90.00	6.9	41.8	314.7	283.5	31.21	10.081		
8,200.0	7,181.0	7,168.0	7,168.0	19.9	12.5	-90.00	6.9	41.8	259.7	227.3	32.36	8.025		
8,300.0	7,181.0	7,168.0	7,168.0	21.3	12.5	-90.00	6.9	41.8	236.3	202.6	33.73	7.006		
8,307.9	7,181.0	7,168.0	7,168.0	21.4	12.5	-90.00	6.9	41.8	236.1	202.3	33.85	6.976	SF	
8,400.0	7,181.0	7,168.0	7,168.0	22.8	12.5	-90.00	6.9	41.8	253.4	218.2	35.28	7.183		
8,500.0	7,181.0	7,168.0	7,168.0	24.6	12.5	-90.00	6.9	41.8	304.4	267.4	36.99	8.228		
8,600.0	7,181.0	7,168.0	7,168.0	26.4	12.5	-90.00	6.9	41.8	375.6	336.7	38.82	9.673		
8,700.0	7,181.0	7,168.0	7,168.0	28.3	12.5	-90.00	6.9	41.8	457.7	416.9	40.75	11.230		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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 22-20 (EXISTING) - Existing - Existing												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning
8,700.0	7,181.0	7,164.0	7,164.0	28.3	12.5	90.00	-629.9	708.1	485.5	444.8	40.75	11.916	
8,800.0	7,181.0	7,164.0	7,164.0	30.3	12.5	90.00	-629.9	708.1	436.9	394.2	42.75	10.219	
8,900.0	7,181.0	7,164.0	7,164.0	32.4	12.5	90.00	-629.9	708.1	407.5	362.6	44.83	9.090	
8,974.3	7,181.0	7,164.0	7,164.0	34.0	12.5	90.00	-629.9	708.1	400.6	354.2	46.41	8.633 CC, ES	
9,000.0	7,181.0	7,164.0	7,164.0	34.6	12.5	90.00	-629.9	708.1	401.5	354.5	46.95	8.550	
9,100.0	7,181.0	7,164.0	7,164.0	36.7	12.5	90.00	-629.9	708.1	419.9	370.8	49.12	8.548 SF	
9,200.0	7,181.0	7,164.0	7,164.0	38.9	12.5	90.00	-629.9	708.1	459.8	408.5	51.33	8.958	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	29.1	0.0	29.1					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	29.1	0.0	29.1	28.8	0.30	95.980		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	29.1	0.0	29.1	28.5	0.65	44.654 CC, ES		
300.0	300.0	299.4	299.3	0.5	0.5	-2.64	30.2	-1.4	30.2	29.2	1.00	30.157		
400.0	400.0	398.5	398.3	0.7	0.7	-9.48	33.2	-5.5	33.7	32.4	1.36	24.845		
500.0	500.0	497.1	496.6	0.8	0.9	-17.98	38.3	-12.4	40.4	38.6	1.73	23.290 SF		
600.0	600.0	595.2	594.0	1.0	1.2	74.91	45.2	-22.0	50.2	48.1	2.08	24.065		
700.0	699.8	692.8	690.4	1.2	1.5	72.33	54.1	-34.1	62.3	59.8	2.47	25.265		
800.0	799.5	789.7	785.5	1.4	1.8	71.85	64.9	-48.8	76.4	73.5	2.88	26.506		
900.0	898.7	885.9	879.3	1.7	2.2	72.50	77.5	-65.9	92.5	89.1	3.36	27.545		
1,000.0	997.5	981.2	971.6	2.0	2.7	73.73	91.7	-85.4	110.4	106.5	3.91	28.273		
1,100.0	1,095.6	1,076.8	1,063.2	2.3	3.2	75.27	107.8	-107.3	130.3	125.7	4.54	28.673		
1,200.0	1,193.2	1,174.6	1,156.7	2.7	3.7	77.48	124.7	-130.3	150.3	145.0	5.27	28.499		
1,300.0	1,290.7	1,272.4	1,250.3	3.1	4.2	79.40	141.6	-153.3	170.4	164.4	6.04	28.214		
1,400.0	1,388.2	1,370.2	1,343.8	3.5	4.8	80.91	158.5	-176.4	190.7	183.9	6.83	27.928		
1,500.0	1,485.7	1,468.0	1,437.3	3.9	5.3	82.14	175.4	-199.4	211.1	203.5	7.63	27.665		
1,600.0	1,583.2	1,565.8	1,530.9	4.3	5.8	83.14	192.3	-222.5	231.6	223.1	8.44	27.427		
1,700.0	1,680.7	1,663.6	1,624.4	4.7	6.4	83.99	209.2	-245.5	252.1	242.8	9.26	27.217		
1,800.0	1,778.2	1,761.4	1,718.0	5.1	6.9	84.70	226.0	-268.6	272.6	262.6	10.09	27.030		
1,900.0	1,875.7	1,859.2	1,811.5	5.5	7.4	85.32	242.9	-291.6	293.2	282.3	10.92	26.865		
2,000.0	1,973.2	1,957.0	1,905.1	6.0	8.0	85.86	259.8	-314.7	313.9	302.1	11.75	26.718		
2,100.0	2,070.7	2,054.9	1,998.6	6.4	8.5	86.33	276.7	-337.7	334.5	322.0	12.58	26.588		
2,200.0	2,168.2	2,152.7	2,092.1	6.8	9.0	86.74	293.6	-360.7	355.2	341.8	13.42	26.470		
2,300.0	2,265.7	2,250.5	2,185.7	7.3	9.6	87.11	310.5	-383.8	375.9	361.6	14.26	26.365		
2,400.0	2,363.2	2,348.3	2,279.2	7.7	10.1	87.44	327.4	-406.8	396.6	381.5	15.10	26.270		
2,500.0	2,460.7	2,446.1	2,372.8	8.1	10.7	87.74	344.3	-429.9	417.3	401.4	15.94	26.184		
2,600.0	2,558.2	2,543.9	2,466.3	8.5	11.2	88.01	361.2	-452.9	438.0	421.3	16.78	26.105		
2,700.0	2,655.6	2,641.7	2,559.9	9.0	11.7	88.25	378.1	-476.0	458.8	441.2	17.62	26.033		
2,800.0	2,753.1	2,739.5	2,653.4	9.4	12.3	88.48	395.0	-499.0	479.5	461.1	18.47	25.968		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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 2B-20H - Hz - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	21.9	0.0	21.9					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	21.9	0.0	21.9	21.6	0.30	71.975		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	21.9	0.0	21.9	21.2	0.65	33.486		
300.0	300.0	300.0	300.0	0.5	0.5	0.00	21.9	0.0	21.9	20.9	1.00	21.818 CC, ES		
400.0	400.0	399.7	399.7	0.7	0.7	-4.26	22.3	-1.7	22.4	21.1	1.35	16.595		
500.0	500.0	499.2	499.1	0.8	0.9	-15.59	23.8	-6.6	24.7	23.0	1.70	14.541		
600.0	600.0	598.4	597.9	1.0	1.1	72.56	26.2	-14.9	29.7	27.6	2.08	14.260		
700.0	699.8	697.3	696.0	1.2	1.3	66.39	29.6	-26.4	36.6	34.1	2.47	14.823		
800.0	799.5	795.8	793.4	1.4	1.6	63.44	34.0	-41.1	44.9	42.0	2.89	15.558		
900.0	898.7	894.0	889.8	1.7	2.0	62.45	39.2	-58.9	54.4	51.1	3.36	16.221		
1,000.0	997.5	992.5	985.9	2.0	2.4	62.74	45.3	-79.7	64.9	61.0	3.89	16.672		
1,100.0	1,095.6	1,092.0	1,082.8	2.3	2.8	65.02	51.7	-101.3	74.3	69.8	4.53	16.409		
1,200.0	1,193.2	1,191.5	1,179.7	2.7	3.2	68.71	58.1	-122.9	82.7	77.4	5.27	15.707		
1,300.0	1,290.7	1,291.0	1,276.6	3.1	3.6	71.95	64.5	-144.5	91.3	85.3	6.05	15.098		
1,400.0	1,388.2	1,390.6	1,373.6	3.5	4.1	74.62	70.8	-166.1	100.2	93.3	6.86	14.610		
1,500.0	1,485.7	1,490.1	1,470.5	3.9	4.5	76.86	77.2	-187.7	109.2	101.5	7.68	14.219		
1,600.0	1,583.2	1,589.6	1,567.4	4.3	4.9	78.75	83.6	-209.3	118.4	109.9	8.51	13.904		
1,700.0	1,680.7	1,689.1	1,664.3	4.7	5.3	80.37	89.9	-230.9	127.7	118.3	9.36	13.646		
1,800.0	1,778.2	1,788.6	1,761.3	5.1	5.8	81.76	96.3	-252.5	137.0	126.8	10.20	13.433		
1,900.0	1,875.7	1,888.1	1,858.2	5.5	6.2	82.98	102.7	-274.1	146.5	135.4	11.05	13.256		
2,000.0	1,973.2	1,987.6	1,955.1	6.0	6.6	84.05	109.1	-295.7	156.0	144.1	11.90	13.106		
2,100.0	2,070.7	2,087.1	2,052.0	6.4	7.1	85.00	115.4	-317.3	165.5	152.8	12.75	12.979		
2,200.0	2,168.2	2,186.6	2,149.0	6.8	7.5	85.85	121.8	-338.9	175.1	161.5	13.61	12.869		
2,300.0	2,265.7	2,286.1	2,245.9	7.3	7.9	86.60	128.2	-360.5	184.7	170.3	14.46	12.775		
2,400.0	2,363.2	2,385.6	2,342.8	7.7	8.4	87.28	134.5	-382.2	194.4	179.1	15.32	12.692		
2,500.0	2,460.7	2,485.1	2,439.7	8.1	8.8	87.90	140.9	-403.8	204.1	187.9	16.17	12.619		
2,600.0	2,558.2	2,584.7	2,536.7	8.5	9.3	88.46	147.3	-425.4	213.8	196.7	17.03	12.555		
2,700.0	2,655.6	2,684.2	2,633.6	9.0	9.7	88.97	153.7	-447.0	223.5	205.6	17.88	12.498		
2,800.0	2,753.1	2,783.7	2,730.5	9.4	10.1	89.44	160.0	-468.6	233.2	214.5	18.74	12.447		
2,900.0	2,850.6	2,883.2	2,827.4	9.8	10.6	89.88	166.4	-490.2	243.0	223.4	19.59	12.401		
3,000.0	2,948.1	2,982.7	2,924.4	10.3	11.0	90.27	172.8	-511.8	252.7	232.3	20.45	12.360		
3,100.0	3,045.6	3,082.2	3,021.3	10.7	11.4	90.64	179.1	-533.4	262.5	241.2	21.30	12.322		
3,200.0	3,143.1	3,181.7	3,118.2	11.1	11.9	90.99	185.5	-555.0	272.3	250.1	22.16	12.288		
3,300.0	3,240.6	3,281.2	3,215.1	11.6	12.3	91.30	191.9	-576.6	282.1	259.0	23.01	12.257		
3,400.0	3,338.1	3,380.7	3,312.0	12.0	12.7	91.60	198.2	-598.2	291.9	268.0	23.87	12.228		
3,500.0	3,435.6	3,480.2	3,409.0	12.4	13.2	91.88	204.6	-619.8	301.7	276.9	24.72	12.202		
3,600.0	3,533.1	3,579.7	3,505.9	12.8	13.6	92.14	211.0	-641.4	311.5	285.9	25.58	12.178		
3,700.0	3,630.6	3,679.2	3,602.8	13.3	14.1	92.39	217.4	-663.0	321.3	294.9	26.43	12.155		
3,800.0	3,728.1	3,778.7	3,699.7	13.7	14.5	92.62	223.7	-684.7	331.1	303.8	27.29	12.135		
3,900.0	3,825.6	3,878.3	3,796.7	14.1	14.9	92.83	230.1	-706.3	340.9	312.8	28.14	12.115		
4,000.0	3,923.1	3,977.8	3,893.6	14.6	15.4	93.04	236.5	-727.9	350.8	321.8	28.99	12.097		
4,100.0	4,020.6	4,077.3	3,990.5	15.0	15.8	93.23	242.8	-749.5	360.6	330.7	29.85	12.081		
4,200.0	4,118.1	4,176.8	4,087.4	15.4	16.2	93.41	249.2	-771.1	370.4	339.7	30.70	12.065		
4,300.0	4,215.6	4,276.3	4,184.4	15.9	16.7	93.59	255.6	-792.7	380.3	348.7	31.56	12.050		
4,400.0	4,313.1	4,375.8	4,281.3	16.3	17.1	93.75	262.0	-814.3	390.1	357.7	32.41	12.037		
4,500.0	4,410.6	4,475.3	4,378.2	16.7	17.6	93.91	268.3	-835.9	400.0	366.7	33.27	12.024		
4,600.0	4,508.1	4,574.8	4,475.1	17.2	18.0	94.06	274.7	-857.5	409.8	375.7	34.12	12.011		
4,700.0	4,605.6	4,674.3	4,572.1	17.6	18.4	94.20	281.1	-879.1	419.7	384.7	34.97	12.000		
4,800.0	4,703.1	4,773.8	4,669.0	18.0	18.9	94.34	287.4	-900.7	429.5	393.7	35.83	11.989		
4,900.0	4,800.6	4,873.3	4,765.9	18.5	19.3	94.47	293.8	-922.3	439.4	402.7	36.68	11.979		
5,000.0	4,898.1	4,972.8	4,862.8	18.9	19.7	94.59	300.2	-943.9	449.3	411.7	37.54	11.969		
5,100.0	4,995.6	5,072.3	4,959.8	19.3	20.2	94.71	306.6	-965.5	459.1	420.7	38.39	11.960		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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 2B-20H - Hz - Plan #1													Offset Site Error: 0.0 ft
Survey Program: 0-MWD													Offset Well Error: 0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	
5,200.0	5,093.1	5,171.9	5,056.7	19.8	20.6	94.82	312.9	-987.1	469.0	429.8	39.24	11.951	
5,300.0	5,190.6	5,271.4	5,153.6	20.2	21.1	94.93	319.3	-1,008.8	478.9	438.8	40.10	11.943	
5,400.0	5,288.1	5,370.9	5,250.5	20.6	21.5	95.04	325.7	-1,030.4	488.7	447.8	40.95	11.935	
5,500.0	5,385.6	5,470.4	5,347.5	21.1	21.9	95.14	332.0	-1,052.0	498.6	456.8	41.80	11.927 SF	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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		Offset		Semi Major Axis			Distance				Total Uncertainty Axis	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	0.00	10.9	0.0	10.9					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	10.9	0.0	10.9	10.6	0.30	35.987		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	10.9	0.0	10.9	10.3	0.65	16.743		
300.0	300.0	300.0	300.0	0.5	0.5	0.00	10.9	0.0	10.9	9.9	1.00	10.909		
400.0	400.0	400.0	400.0	0.7	0.7	0.00	10.9	0.0	10.9	9.6	1.35	8.090 CC, ES		
500.0	500.0	499.9	499.9	0.8	0.9	-8.81	11.2	-1.7	11.3	9.6	1.70	6.638		
600.0	600.0	599.7	599.5	1.0	1.0	75.86	11.8	-6.9	13.2	11.1	2.06	6.381 SF		
700.0	699.8	699.3	698.8	1.2	1.3	67.36	12.9	-15.5	16.5	14.0	2.44	6.751		
800.0	799.5	798.8	797.5	1.4	1.5	63.41	14.5	-27.5	20.8	18.0	2.85	7.303		
900.0	898.7	898.1	895.6	1.7	1.8	62.15	16.4	-42.8	26.0	22.7	3.32	7.851		
1,000.0	997.5	997.2	992.9	2.0	2.1	62.35	18.8	-61.5	32.0	28.2	3.85	8.311		
1,100.0	1,095.6	1,096.1	1,089.3	2.3	2.5	63.32	21.6	-83.5	38.8	34.3	4.48	8.649		
1,200.0	1,193.2	1,195.7	1,185.8	2.7	3.0	65.23	24.7	-107.7	45.8	40.6	5.20	8.806		
1,300.0	1,290.7	1,295.5	1,282.5	3.1	3.4	66.95	27.9	-132.1	52.7	46.8	5.95	8.852		
1,400.0	1,388.2	1,395.2	1,379.2	3.5	3.9	68.27	31.0	-156.4	59.7	53.0	6.73	8.863		
1,500.0	1,485.7	1,495.0	1,475.9	3.9	4.3	69.32	34.1	-180.8	66.7	59.2	7.53	8.856		
1,600.0	1,583.2	1,594.7	1,572.6	4.3	4.8	70.16	37.2	-205.1	73.7	65.4	8.34	8.841		
1,700.0	1,680.7	1,694.5	1,669.3	4.7	5.2	70.86	40.3	-229.4	80.7	71.6	9.15	8.822		
1,800.0	1,778.2	1,794.2	1,765.9	5.1	5.7	71.44	43.4	-253.8	87.8	77.8	9.97	8.801		
1,900.0	1,875.7	1,894.0	1,862.6	5.5	6.2	71.94	46.6	-278.1	94.8	84.0	10.80	8.781		
2,000.0	1,973.2	1,993.7	1,959.3	6.0	6.6	72.37	49.7	-302.5	101.9	90.3	11.63	8.761		
2,100.0	2,070.7	2,093.5	2,056.0	6.4	7.1	72.75	52.8	-326.8	109.0	96.5	12.46	8.742		
2,200.0	2,168.2	2,193.2	2,152.7	6.8	7.6	73.08	55.9	-351.1	116.0	102.7	13.30	8.724		
2,300.0	2,265.7	2,293.0	2,249.4	7.3	8.0	73.37	59.0	-375.5	123.1	109.0	14.14	8.707		
2,400.0	2,363.2	2,392.7	2,346.0	7.7	8.5	73.63	62.2	-399.8	130.2	115.2	14.98	8.691		
2,500.0	2,460.7	2,492.5	2,442.7	8.1	9.0	73.86	65.3	-424.1	137.2	121.4	15.82	8.677		
2,600.0	2,558.2	2,592.2	2,539.4	8.5	9.5	74.07	68.4	-448.5	144.3	127.7	16.66	8.663		
2,700.0	2,655.6	2,691.9	2,636.1	9.0	9.9	74.26	71.5	-472.8	151.4	133.9	17.50	8.650		
2,800.0	2,753.1	2,791.7	2,732.8	9.4	10.4	74.43	74.6	-497.2	158.5	140.1	18.35	8.638		
2,900.0	2,850.6	2,891.4	2,829.5	9.8	10.9	74.59	77.7	-521.5	165.6	146.4	19.19	8.627		
3,000.0	2,948.1	2,991.2	2,926.1	10.3	11.3	74.73	80.9	-545.8	172.7	152.6	20.04	8.617		
3,100.0	3,045.6	3,090.9	3,022.8	10.7	11.8	74.87	84.0	-570.2	179.7	158.9	20.88	8.607		
3,200.0	3,143.1	3,190.7	3,119.5	11.1	12.3	74.99	87.1	-594.5	186.8	165.1	21.73	8.598		
3,300.0	3,240.6	3,290.4	3,216.2	11.6	12.8	75.11	90.2	-618.9	193.9	171.3	22.58	8.589		
3,400.0	3,338.1	3,390.2	3,312.9	12.0	13.2	75.21	93.3	-643.2	201.0	177.6	23.42	8.581		
3,500.0	3,435.6	3,489.9	3,409.5	12.4	13.7	75.31	96.5	-667.5	208.1	183.8	24.27	8.574		
3,600.0	3,533.1	3,589.7	3,506.2	12.8	14.2	75.41	99.6	-691.9	215.2	190.1	25.12	8.566		
3,700.0	3,630.6	3,689.4	3,602.9	13.3	14.6	75.49	102.7	-716.2	222.3	196.3	25.97	8.559		
3,800.0	3,728.1	3,789.2	3,699.6	13.7	15.1	75.57	105.8	-740.6	229.3	202.5	26.81	8.553		
3,900.0	3,825.6	3,888.9	3,796.3	14.1	15.6	75.65	108.9	-764.9	236.4	208.8	27.66	8.547		
4,000.0	3,923.1	3,988.7	3,893.0	14.6	16.1	75.72	112.0	-789.2	243.5	215.0	28.51	8.541		
4,100.0	4,020.6	4,088.4	3,989.6	15.0	16.5	75.79	115.2	-813.6	250.6	221.3	29.36	8.536		
4,200.0	4,118.1	4,188.2	4,086.3	15.4	17.0	75.86	118.3	-837.9	257.7	227.5	30.21	8.530		
4,300.0	4,215.6	4,287.9	4,183.0	15.9	17.5	75.92	121.4	-862.3	264.8	233.7	31.06	8.525		
4,400.0	4,313.1	4,387.7	4,279.7	16.3	18.0	75.97	124.5	-886.6	271.9	240.0	31.91	8.521		
4,500.0	4,410.6	4,487.4	4,376.4	16.7	18.4	76.03	127.6	-910.9	279.0	246.2	32.76	8.516		
4,600.0	4,508.1	4,587.2	4,473.1	17.2	18.9	76.08	130.8	-935.3	286.1	252.5	33.61	8.512		
4,700.0	4,605.6	4,686.9	4,569.7	17.6	19.4	76.13	133.9	-959.6	293.2	258.7	34.46	8.508		
4,800.0	4,703.1	4,786.7	4,666.4	18.0	19.8	76.18	137.0	-983.9	300.3	264.9	35.31	8.504		
4,900.0	4,800.6	4,886.4	4,763.1	18.5	20.3	76.22	140.1	-1,008.3	307.3	271.2	36.16	8.500		
5,000.0	4,898.1	4,986.1	4,859.8	18.9	20.8	76.27	143.2	-1,032.6	314.4	277.4	37.01	8.496		
5,100.0	4,995.6	5,085.9	4,956.5	19.3	21.3	76.31	146.3	-1,057.0	321.5	283.7	37.86	8.493		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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		Offset		Semi Major Axis			Distance						Warning	
Measured Depth Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,093.1	5,185.6	5,053.2	19.8	21.7	76.35	149.5	-1,081.3	328.6	289.9	38.71	8.489		
5,300.0	5,190.6	5,285.4	5,149.8	20.2	22.2	76.38	152.6	-1,105.6	335.7	296.2	39.56	8.486		
5,400.0	5,288.1	5,385.1	5,246.5	20.6	22.7	76.42	155.7	-1,130.0	342.8	302.4	40.41	8.483		
5,500.0	5,385.6	5,484.9	5,343.2	21.1	23.2	76.45	158.8	-1,154.3	349.9	308.6	41.26	8.480		
5,600.0	5,483.1	5,584.6	5,439.9	21.5	23.6	76.49	161.9	-1,178.7	357.0	314.9	42.11	8.477		
5,700.0	5,580.6	5,684.4	5,536.6	21.9	24.1	76.52	165.1	-1,203.0	364.1	321.1	42.96	8.474		
5,800.0	5,678.1	5,784.1	5,633.2	22.4	24.6	76.55	168.2	-1,227.3	371.2	327.4	43.81	8.472		
5,900.0	5,775.6	5,883.9	5,729.9	22.8	25.1	76.58	171.3	-1,251.7	378.3	333.6	44.67	8.469		
6,000.0	5,873.1	6,002.9	5,846.6	23.2	25.4	77.56	175.1	-1,274.0	383.4	337.7	45.68	8.393		
6,100.0	5,970.6	6,122.1	5,965.7	23.7	25.5	81.23	178.9	-1,277.0	383.1	336.1	46.97	8.157		
6,200.0	6,068.1	6,231.1	6,073.4	24.1	25.3	87.00	182.4	-1,262.5	380.3	332.2	48.17	7.896		
6,272.9	6,139.2	6,302.2	6,142.1	24.4	25.0	92.00	184.6	-1,244.3	379.2	330.5	48.74	7.780		
6,300.0	6,165.6	6,326.7	6,165.3	24.5	24.9	93.94	185.3	-1,236.4	379.4	330.6	48.86	7.766		
6,400.0	6,263.1	6,408.5	6,240.6	25.0	24.4	101.13	187.8	-1,204.5	385.1	336.2	48.86	7.882		
6,500.0	6,360.9	6,478.8	6,302.0	25.3	23.9	113.16	189.7	-1,170.4	400.8	352.7	48.13	8.329		
6,600.0	6,460.5	6,545.4	6,356.8	25.5	23.3	-173.50	191.5	-1,132.7	425.4	378.9	46.53	9.144		
6,700.0	6,560.2	6,609.7	6,406.2	25.4	22.6	-81.18	193.1	-1,091.5	455.6	411.4	44.29	10.287		
6,800.0	6,658.0	6,672.5	6,450.7	25.2	21.9	-67.34	194.5	-1,047.3	488.8	447.1	41.70	11.723		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
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	399.8	399.8	0.7	0.7	-172.35	-11.7	-1.6	11.8	10.4	1.35	8.719 SF		
500.0	500.0	499.3	499.2	0.8	0.9	-155.81	-13.9	-6.3	15.3	13.6	1.71	8.921		
600.0	600.0	598.6	598.0	1.0	1.1	-45.47	-17.6	-14.0	21.4	19.3	2.06	10.359		
700.0	699.8	697.5	696.3	1.2	1.3	-41.05	-22.8	-24.8	28.4	26.0	2.43	11.707		
800.0	799.5	796.2	793.8	1.4	1.6	-39.74	-29.4	-38.7	36.0	33.2	2.81	12.833		
900.0	898.7	894.6	890.4	1.7	2.0	-39.98	-37.5	-55.5	44.1	40.9	3.21	13.713		
1,000.0	997.5	992.8	986.0	2.0	2.4	-41.03	-46.9	-75.2	52.6	49.0	3.67	14.340		
1,100.0	1,095.6	1,091.4	1,081.4	2.3	2.8	-42.68	-57.7	-97.7	61.4	57.2	4.19	14.651		
1,200.0	1,193.2	1,191.1	1,177.7	2.7	3.3	-45.44	-68.8	-120.9	68.7	63.8	4.81	14.284		
1,300.0	1,290.7	1,290.8	1,274.1	3.1	3.8	-47.87	-79.9	-144.2	75.8	70.4	5.47	13.855		
1,400.0	1,388.2	1,390.5	1,370.4	3.5	4.3	-49.89	-91.0	-167.4	83.1	76.9	6.17	13.464		
1,500.0	1,485.7	1,490.2	1,466.7	3.9	4.7	-51.58	-102.1	-190.7	90.5	83.6	6.90	13.117		
1,600.0	1,583.2	1,589.9	1,563.0	4.3	5.2	-53.01	-113.2	-213.9	97.9	90.3	7.64	12.814		
1,700.0	1,680.7	1,689.6	1,659.3	4.7	5.7	-54.24	-124.4	-237.1	105.4	97.0	8.40	12.549		
1,800.0	1,778.2	1,789.3	1,755.6	5.1	6.2	-55.31	-135.5	-260.4	112.9	103.8	9.17	12.318		
1,900.0	1,875.7	1,888.9	1,851.9	5.5	6.7	-56.24	-146.6	-283.6	120.5	110.6	9.95	12.116		
2,000.0	1,973.2	1,988.6	1,948.2	6.0	7.2	-57.06	-157.7	-306.9	128.1	117.4	10.73	11.938		
2,100.0	2,070.7	2,088.3	2,044.5	6.4	7.7	-57.80	-168.8	-330.1	135.7	124.2	11.52	11.781		
2,200.0	2,168.2	2,188.0	2,140.8	6.8	8.2	-58.45	-179.9	-353.3	143.4	131.0	12.31	11.641		
2,300.0	2,265.7	2,287.7	2,237.2	7.3	8.6	-59.04	-191.0	-376.6	151.0	137.9	13.11	11.517		
2,400.0	2,363.2	2,387.4	2,333.5	7.7	9.1	-59.57	-202.2	-399.8	158.7	144.8	13.91	11.405		
2,500.0	2,460.7	2,487.1	2,429.8	8.1	9.6	-60.05	-213.3	-423.0	166.4	151.6	14.72	11.304		
2,600.0	2,558.2	2,586.8	2,526.1	8.5	10.1	-60.49	-224.4	-446.3	174.0	158.5	15.52	11.213		
2,700.0	2,655.6	2,686.5	2,622.4	9.0	10.6	-60.89	-235.5	-469.5	181.7	165.4	16.33	11.130		
2,800.0	2,753.1	2,786.2	2,718.7	9.4	11.1	-61.26	-246.6	-492.8	189.5	172.3	17.14	11.055		
2,900.0	2,850.6	2,885.9	2,815.0	9.8	11.6	-61.60	-257.7	-516.0	197.2	179.2	17.95	10.986		
3,000.0	2,948.1	2,985.6	2,911.3	10.3	12.1	-61.91	-268.8	-539.2	204.9	186.1	18.76	10.922		
3,100.0	3,045.6	3,085.3	3,007.6	10.7	12.6	-62.20	-280.0	-562.5	212.6	193.0	19.57	10.864		
3,200.0	3,143.1	3,185.0	3,103.9	11.1	13.1	-62.47	-291.1	-585.7	220.3	200.0	20.38	10.810		
3,300.0	3,240.6	3,284.7	3,200.3	11.6	13.6	-62.73	-302.2	-609.0	228.1	206.9	21.20	10.760		
3,400.0	3,338.1	3,384.4	3,296.6	12.0	14.0	-62.96	-313.3	-632.2	235.8	213.8	22.01	10.713		
3,500.0	3,435.6	3,484.1	3,392.9	12.4	14.5	-63.18	-324.4	-655.4	243.6	220.7	22.83	10.670		
3,600.0	3,533.1	3,583.8	3,489.2	12.8	15.0	-63.39	-335.5	-678.7	251.3	227.7	23.64	10.630		
3,700.0	3,630.6	3,683.5	3,585.5	13.3	15.5	-63.59	-346.7	-701.9	259.1	234.6	24.46	10.592		
3,800.0	3,728.1	3,783.2	3,681.8	13.7	16.0	-63.77	-357.8	-725.2	266.8	241.5	25.28	10.556		
3,900.0	3,825.6	3,882.9	3,778.1	14.1	16.5	-63.94	-368.9	-748.4	274.6	248.5	26.09	10.523		
4,000.0	3,923.1	3,982.5	3,874.4	14.6	17.0	-64.11	-380.0	-771.6	282.3	255.4	26.91	10.492		
4,100.0	4,020.6	4,082.2	3,970.7	15.0	17.5	-64.26	-391.1	-794.9	290.1	262.4	27.73	10.462		
4,200.0	4,118.1	4,181.9	4,067.0	15.4	18.0	-64.41	-402.2	-818.1	297.9	269.3	28.55	10.434		
4,300.0	4,215.6	4,281.6	4,163.4	15.9	18.5	-64.55	-413.3	-841.3	305.6	276.3	29.36	10.408		
4,400.0	4,313.1	4,381.3	4,259.7	16.3	19.0	-64.68	-424.5	-864.6	313.4	283.2	30.18	10.383		
4,500.0	4,410.6	4,481.0	4,356.0	16.7	19.5	-64.81	-435.6	-887.8	321.2	290.2	31.00	10.360		
4,600.0	4,508.1	4,580.7	4,452.3	17.2	20.0	-64.93	-446.7	-911.1	328.9	297.1	31.82	10.337		
4,700.0	4,605.6	4,680.4	4,548.6	17.6	20.4	-65.04	-457.8	-934.3	336.7	304.1	32.64	10.316		
4,800.0	4,703.1	4,780.1	4,644.9	18.0	20.9	-65.15	-468.9	-957.5	344.5	311.0	33.46	10.295		
4,900.0	4,800.6	4,879.8	4,741.2	18.5	21.4	-65.26	-480.0	-980.8	352.2	318.0	34.28	10.276		
5,000.0	4,898.1	4,979.5	4,837.5	18.9	21.9	-65.36	-491.1	-1,004.0	360.0	324.9	35.10	10.258		
5,100.0	4,995.6	5,079.2	4,933.8	19.3	22.4	-65.45	-502.3	-1,027.3	367.8	331.9	35.92	10.240		

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

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
5,200.0	5,093.1	5,178.9	5,030.1	19.8	22.9	-65.55	-513.4	-1,050.5	375.6	338.8	36.74	10.223		
5,300.0	5,190.6	5,278.6	5,126.5	20.2	23.4	-65.63	-524.5	-1,073.7	383.3	345.8	37.56	10.207		
5,400.0	5,288.1	5,378.3	5,222.8	20.6	23.9	-65.72	-535.6	-1,097.0	391.1	352.7	38.38	10.192		
5,500.0	5,385.6	5,478.0	5,319.1	21.1	24.4	-65.80	-546.7	-1,120.2	398.9	359.7	39.20	10.177		
5,600.0	5,483.1	5,577.7	5,415.4	21.5	24.9	-65.88	-557.8	-1,143.4	406.7	366.7	40.02	10.163		
5,700.0	5,580.6	5,677.4	5,511.7	21.9	25.4	-65.95	-569.0	-1,166.7	414.5	373.6	40.84	10.149		
5,800.0	5,678.1	5,777.1	5,608.0	22.4	25.9	-66.03	-580.1	-1,189.9	422.2	380.6	41.66	10.136		
5,900.0	5,775.6	5,876.8	5,704.3	22.8	26.4	-66.10	-591.2	-1,213.2	430.0	387.5	42.48	10.123		
6,000.0	5,873.1	5,982.9	5,807.2	23.2	26.8	-66.35	-603.1	-1,236.5	437.5	394.2	43.35	10.093		
6,100.0	5,970.6	6,096.9	5,919.8	23.7	27.1	-68.48	-616.0	-1,246.9	442.2	397.6	44.67	9.900		
6,200.0	6,068.1	6,203.7	6,025.6	24.1	27.1	-72.46	-628.3	-1,240.3	445.2	398.8	46.32	9.611		
6,300.0	6,165.6	6,299.8	6,119.0	24.5	26.9	-77.60	-639.0	-1,220.8	449.2	401.3	47.94	9.370		
6,400.0	6,263.1	6,383.8	6,198.0	25.0	26.6	-83.18	-648.2	-1,193.6	457.8	408.5	49.24	9.296		
6,500.0	6,360.9	6,457.2	6,263.9	25.3	26.2	-84.76	-655.8	-1,162.4	473.6	423.4	50.18	9.438		
6,600.0	6,460.5	6,526.7	6,323.1	25.5	25.8	-25.54	-662.6	-1,126.8	495.7	445.3	50.39	9.837		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis			
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-18.2	0.0	18.2					
100.0	100.0	100.0	100.0	0.2	0.2	-180.00	-18.2	0.0	18.2	17.9	0.30	59.979		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-18.2	0.0	18.2	17.6	0.65	27.905 CC, ES		
300.0	300.0	299.6	299.5	0.5	0.5	-176.01	-19.3	-1.3	19.4	18.3	1.00	19.287		
400.0	400.0	398.9	398.7	0.7	0.7	-166.58	-22.5	-5.4	23.2	21.8	1.37	16.971		
500.0	500.0	497.7	497.2	0.8	0.9	-156.66	-27.9	-12.0	30.5	28.8	1.76	17.315		
600.0	600.0	596.1	594.8	1.0	1.2	-51.56	-35.4	-21.3	40.5	38.4	2.07	19.585		
700.0	699.8	694.0	691.5	1.2	1.5	-49.55	-44.8	-33.1	51.7	49.2	2.43	21.222		
800.0	799.5	791.4	787.2	1.4	1.8	-49.54	-56.3	-47.4	63.8	61.0	2.83	22.574		
900.0	898.7	888.3	881.7	1.7	2.3	-50.55	-69.8	-64.1	76.8	73.6	3.26	23.582		
1,000.0	997.5	985.2	975.4	2.0	2.7	-52.13	-85.2	-83.3	90.8	87.1	3.75	24.212		
1,100.0	1,095.6	1,084.2	1,070.9	2.3	3.2	-54.57	-101.6	-103.6	103.8	99.5	4.34	23.935		
1,200.0	1,193.2	1,183.4	1,166.6	2.7	3.7	-57.76	-118.0	-124.1	115.4	110.4	5.02	22.984		
1,300.0	1,290.7	1,282.5	1,262.2	3.1	4.2	-60.56	-134.5	-144.5	127.1	121.4	5.76	22.089		
1,400.0	1,388.2	1,381.6	1,357.8	3.5	4.6	-62.87	-150.9	-164.9	139.1	132.6	6.52	21.330		
1,500.0	1,485.7	1,480.8	1,453.4	3.9	5.1	-64.82	-167.3	-185.3	151.3	144.0	7.31	20.693		
1,600.0	1,583.2	1,579.9	1,549.0	4.3	5.6	-66.48	-183.7	-205.7	163.6	155.5	8.12	20.159		
1,700.0	1,680.7	1,679.0	1,644.6	4.7	6.1	-67.90	-200.1	-226.1	176.1	167.2	8.93	19.708		
1,800.0	1,778.2	1,778.2	1,740.2	5.1	6.6	-69.14	-216.6	-246.5	188.6	178.9	9.76	19.326		
1,900.0	1,875.7	1,877.3	1,835.8	5.5	7.1	-70.22	-233.0	-266.9	201.2	190.7	10.59	18.998		
2,000.0	1,973.2	1,976.4	1,931.4	6.0	7.6	-71.17	-249.4	-287.3	213.9	202.5	11.43	18.716		
2,100.0	2,070.7	2,075.6	2,027.1	6.4	8.1	-72.02	-265.8	-307.7	226.7	214.4	12.27	18.471		
2,200.0	2,168.2	2,174.7	2,122.7	6.8	8.6	-72.77	-282.2	-328.1	239.4	226.3	13.11	18.257		
2,300.0	2,265.7	2,273.8	2,218.3	7.3	9.1	-73.45	-298.6	-348.5	252.2	238.3	13.96	18.068		
2,400.0	2,363.2	2,373.0	2,313.9	7.7	9.6	-74.07	-315.1	-368.9	265.1	250.3	14.81	17.900		
2,500.0	2,460.7	2,472.1	2,409.5	8.1	10.1	-74.63	-331.5	-389.3	277.9	262.3	15.66	17.751		
2,600.0	2,558.2	2,571.2	2,505.1	8.5	10.6	-75.13	-347.9	-409.7	290.8	274.3	16.51	17.617		
2,700.0	2,655.6	2,670.4	2,600.7	9.0	11.1	-75.60	-364.3	-430.1	303.8	286.4	17.36	17.497		
2,800.0	2,753.1	2,769.5	2,696.3	9.4	11.6	-76.03	-380.7	-450.5	316.7	298.5	18.21	17.388		
2,900.0	2,850.6	2,868.6	2,791.9	9.8	12.1	-76.42	-397.2	-470.9	329.6	310.6	19.07	17.289		
3,000.0	2,948.1	2,967.8	2,887.6	10.3	12.6	-76.78	-413.6	-491.4	342.6	322.7	19.92	17.198		
3,100.0	3,045.6	3,066.9	2,983.2	10.7	13.0	-77.12	-430.0	-511.8	355.6	334.8	20.77	17.116		
3,200.0	3,143.1	3,166.0	3,078.8	11.1	13.5	-77.43	-446.4	-532.2	368.6	346.9	21.63	17.040		
3,300.0	3,240.6	3,265.2	3,174.4	11.6	14.0	-77.73	-462.8	-552.6	381.5	359.1	22.48	16.970		
3,400.0	3,338.1	3,364.3	3,270.0	12.0	14.5	-78.00	-479.3	-573.0	394.6	371.2	23.34	16.905		
3,500.0	3,435.6	3,463.4	3,365.6	12.4	15.0	-78.25	-495.7	-593.4	407.6	383.4	24.20	16.845		
3,600.0	3,533.1	3,562.6	3,461.2	12.8	15.5	-78.49	-512.1	-613.8	420.6	395.5	25.05	16.789		
3,700.0	3,630.6	3,661.7	3,556.8	13.3	16.0	-78.72	-528.5	-634.2	433.6	407.7	25.91	16.737		
3,800.0	3,728.1	3,760.8	3,652.4	13.7	16.5	-78.93	-544.9	-654.6	446.6	419.9	26.76	16.688		
3,900.0	3,825.6	3,860.0	3,748.1	14.1	17.0	-79.13	-561.4	-675.0	459.7	432.1	27.62	16.643		
4,000.0	3,923.1	3,959.1	3,843.7	14.6	17.5	-79.32	-577.8	-695.4	472.7	444.3	28.48	16.600		
4,100.0	4,020.6	4,058.3	3,939.3	15.0	18.0	-79.50	-594.2	-715.8	485.8	456.4	29.33	16.560		
4,200.0	4,118.1	4,157.4	4,034.9	15.4	18.5	-79.67	-610.6	-736.2	498.8	468.6	30.19	16.523 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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 4-2-20 (EXISTING) - Existing - Existing		Offset Site Error:		0.0 ft
Survey Program:													0-MWD	Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor					
9,400.0	7,181.0	7,190.0	7,190.0	43.4	12.5	-90.00	19.0	1,550.2	484.7	428.9	55.88	8.675					
9,500.0	7,181.0	7,190.0	7,190.0	45.7	12.5	-90.00	19.0	1,550.2	402.1	344.0	58.16	6.914					
9,600.0	7,181.0	7,190.0	7,190.0	48.0	12.5	-90.00	19.0	1,550.2	329.3	268.8	60.46	5.446					
9,700.0	7,181.0	7,190.0	7,190.0	50.3	12.5	-90.00	19.0	1,550.2	274.1	211.4	62.78	4.366					
9,800.0	7,181.0	7,190.0	7,190.0	52.7	12.5	-90.00	19.0	1,550.2	248.8	183.6	65.12	3.820					
9,816.4	7,181.0	7,190.0	7,190.0	53.0	12.5	-90.00	19.0	1,550.2	248.2	182.7	65.50	3.789	CC, ES, SF				
9,900.0	7,181.0	7,190.0	7,190.0	55.0	12.5	-90.00	19.0	1,550.2	261.9	194.5	67.47	3.882					
10,000.0	7,181.0	7,190.0	7,190.0	57.4	12.5	-90.00	19.0	1,550.2	308.8	238.9	69.82	4.422					
10,100.0	7,181.0	7,190.0	7,190.0	59.7	12.5	-90.00	19.0	1,550.2	376.9	304.7	72.19	5.221					
10,200.0	7,181.0	7,190.0	7,190.0	62.1	12.5	-90.00	19.0	1,550.2	456.9	382.4	74.56	6.128					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well State Peterson 2D-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 2D-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 2D-20H

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.67°

