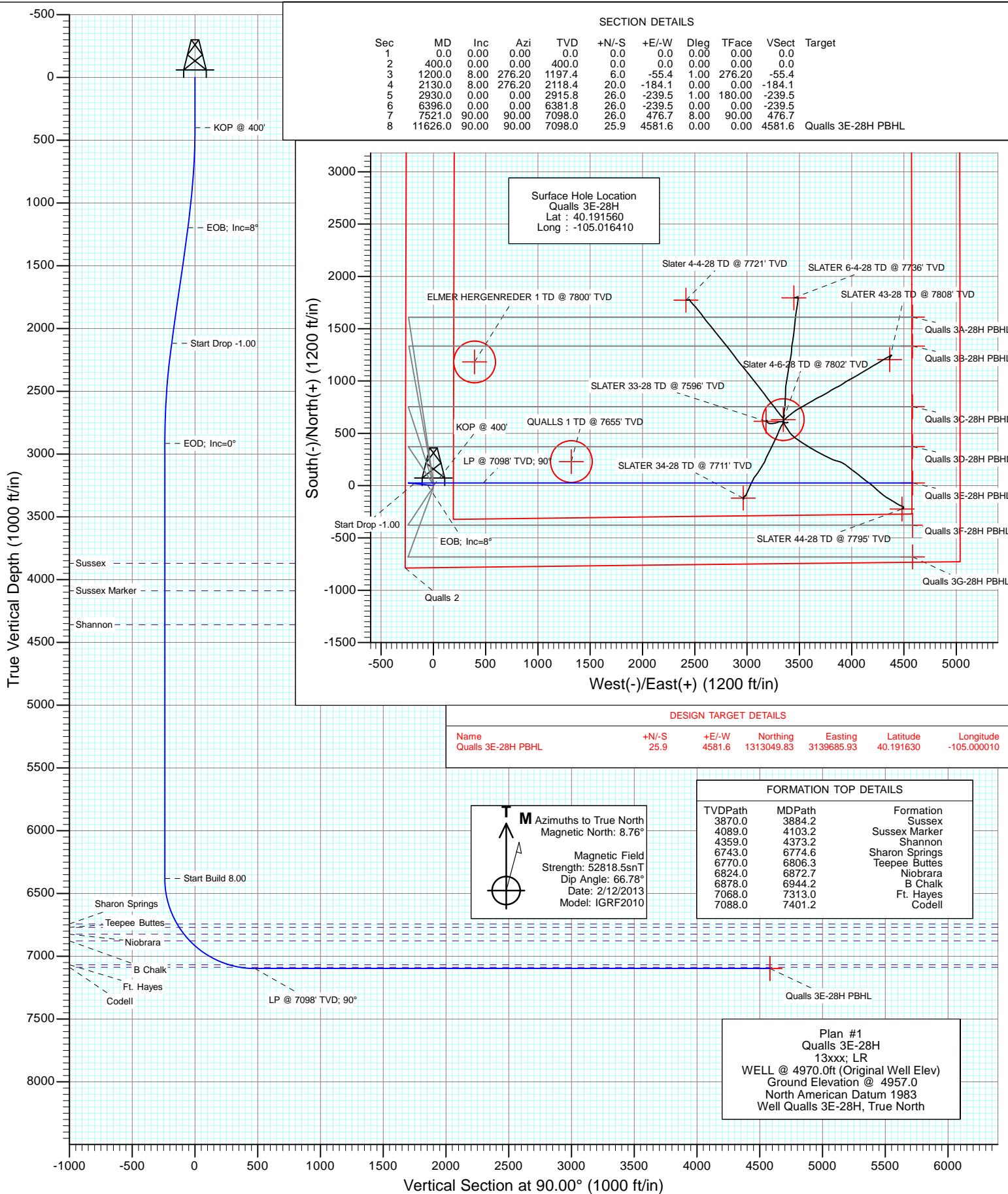




Project: DJ Wattenberg
Site: S28-T3N-R68W (Qualls)
Well: Qualls 3E-28H
Wellbore: Hz
Design: Plan #1



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Qualls 3E-28H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site:	S28-T3N-R68W (Qualls)	North Reference:	True
Well:	Qualls 3E-28H	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		S28-T3N-R68W (Qualls)			
Site Position:		Northing:	1,313,038.99 ft	Latitude:	40.191670
From:	Lat/Long	Easting:	3,135,104.30 ft	Longitude:	-105.016410
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.31 °

Well	Qualls 3E-28H					
Well Position	+N/-S	0.0 ft	Northing:	1,312,998.91 ft	Latitude:	40.191560
	+E/-W	0.0 ft	Easting:	3,135,104.52 ft	Longitude:	-105.016410
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,957.0 ft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/12/2013	8.76	66.78	52,818

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	8.00	276.20	1,197.4	6.0	-55.4	1.00	1.00	0.00	276.20	
2,130.0	8.00	276.20	2,118.4	20.0	-184.1	0.00	0.00	0.00	0.00	
2,930.0	0.00	0.00	2,915.8	26.0	-239.5	1.00	-1.00	0.00	180.00	
6,396.0	0.00	0.00	6,381.8	26.0	-239.5	0.00	0.00	0.00	0.00	
7,521.0	90.00	90.00	7,098.0	26.0	476.7	8.00	8.00	0.00	90.00	
11,626.0	90.00	90.00	7,098.0	25.9	4,581.6	0.00	0.00	0.00	0.00	Qualls 3E-28H PBHL

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Qualls 3E-28H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site:	S28-T3N-R68W (Qualls)	North Reference:	True
Well:	Qualls 3E-28H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	KOP @ 400'
500.0	1.00	276.20	500.0	0.1	-0.9	-0.9	1.00	1.00	
600.0	2.00	276.20	600.0	0.4	-3.5	-3.5	1.00	1.00	
700.0	3.00	276.20	699.9	0.8	-7.8	-7.8	1.00	1.00	
800.0	4.00	276.20	799.7	1.5	-13.9	-13.9	1.00	1.00	
900.0	5.00	276.20	899.4	2.4	-21.7	-21.7	1.00	1.00	
1,000.0	6.00	276.20	998.9	3.4	-31.2	-31.2	1.00	1.00	
1,100.0	7.00	276.20	1,098.3	4.6	-42.5	-42.5	1.00	1.00	
1,200.0	8.00	276.20	1,197.4	6.0	-55.4	-55.4	1.00	1.00	EOB; Inc=8°
1,300.0	8.00	276.20	1,296.4	7.5	-69.3	-69.3	0.00	0.00	
1,400.0	8.00	276.20	1,395.5	9.0	-83.1	-83.1	0.00	0.00	
1,500.0	8.00	276.20	1,494.5	10.5	-96.9	-96.9	0.00	0.00	
1,600.0	8.00	276.20	1,593.5	12.0	-110.8	-110.8	0.00	0.00	
1,700.0	8.00	276.20	1,692.5	13.5	-124.6	-124.6	0.00	0.00	
1,800.0	8.00	276.20	1,791.6	15.0	-138.4	-138.4	0.00	0.00	
1,900.0	8.00	276.20	1,890.6	16.5	-152.3	-152.3	0.00	0.00	
2,000.0	8.00	276.20	1,989.6	18.0	-166.1	-166.1	0.00	0.00	
2,100.0	8.00	276.20	2,088.6	19.5	-180.0	-180.0	0.00	0.00	
2,130.0	8.00	276.20	2,118.4	20.0	-184.1	-184.1	0.00	0.00	Start Drop -1.00
2,200.0	7.30	276.20	2,187.7	21.0	-193.4	-193.4	1.00	-1.00	
2,300.0	6.30	276.20	2,287.0	22.3	-205.1	-205.1	1.00	-1.00	
2,400.0	5.30	276.20	2,386.5	23.4	-215.2	-215.2	1.00	-1.00	
2,500.0	4.30	276.20	2,486.2	24.3	-223.5	-223.5	1.00	-1.00	
2,600.0	3.30	276.20	2,585.9	25.0	-230.1	-230.1	1.00	-1.00	
2,700.0	2.30	276.20	2,685.8	25.5	-235.0	-235.0	1.00	-1.00	
2,800.0	1.30	276.20	2,785.8	25.9	-238.1	-238.1	1.00	-1.00	
2,900.0	0.30	276.20	2,885.8	26.0	-239.5	-239.5	1.00	-1.00	
2,930.0	0.00	0.00	2,915.8	26.0	-239.5	-239.5	1.00	-1.00	EOD; Inc=0°
3,000.0	0.00	0.00	2,985.8	26.0	-239.5	-239.5	0.00	0.00	
3,100.0	0.00	0.00	3,085.8	26.0	-239.5	-239.5	0.00	0.00	
3,200.0	0.00	0.00	3,185.8	26.0	-239.5	-239.5	0.00	0.00	
3,300.0	0.00	0.00	3,285.8	26.0	-239.5	-239.5	0.00	0.00	
3,400.0	0.00	0.00	3,385.8	26.0	-239.5	-239.5	0.00	0.00	
3,500.0	0.00	0.00	3,485.8	26.0	-239.5	-239.5	0.00	0.00	
3,600.0	0.00	0.00	3,585.8	26.0	-239.5	-239.5	0.00	0.00	
3,700.0	0.00	0.00	3,685.8	26.0	-239.5	-239.5	0.00	0.00	
3,800.0	0.00	0.00	3,785.8	26.0	-239.5	-239.5	0.00	0.00	
3,884.2	0.00	0.00	3,870.0	26.0	-239.5	-239.5	0.00	0.00	Sussex
3,900.0	0.00	0.00	3,885.8	26.0	-239.5	-239.5	0.00	0.00	
4,000.0	0.00	0.00	3,985.8	26.0	-239.5	-239.5	0.00	0.00	
4,100.0	0.00	0.00	4,085.8	26.0	-239.5	-239.5	0.00	0.00	
4,103.2	0.00	0.00	4,089.0	26.0	-239.5	-239.5	0.00	0.00	Sussex Marker
4,200.0	0.00	0.00	4,185.8	26.0	-239.5	-239.5	0.00	0.00	
4,300.0	0.00	0.00	4,285.8	26.0	-239.5	-239.5	0.00	0.00	
4,373.2	0.00	0.00	4,359.0	26.0	-239.5	-239.5	0.00	0.00	Shannon
4,400.0	0.00	0.00	4,385.8	26.0	-239.5	-239.5	0.00	0.00	
4,500.0	0.00	0.00	4,485.8	26.0	-239.5	-239.5	0.00	0.00	
4,600.0	0.00	0.00	4,585.8	26.0	-239.5	-239.5	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Qualls 3E-28H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site:	S28-T3N-R68W (Qualls)	North Reference:	True
Well:	Qualls 3E-28H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,700.0	0.00	0.00	4,685.8	26.0	-239.5	-239.5	0.00	0.00	
4,800.0	0.00	0.00	4,785.8	26.0	-239.5	-239.5	0.00	0.00	
4,900.0	0.00	0.00	4,885.8	26.0	-239.5	-239.5	0.00	0.00	
5,000.0	0.00	0.00	4,985.8	26.0	-239.5	-239.5	0.00	0.00	
5,100.0	0.00	0.00	5,085.8	26.0	-239.5	-239.5	0.00	0.00	
5,200.0	0.00	0.00	5,185.8	26.0	-239.5	-239.5	0.00	0.00	
5,300.0	0.00	0.00	5,285.8	26.0	-239.5	-239.5	0.00	0.00	
5,400.0	0.00	0.00	5,385.8	26.0	-239.5	-239.5	0.00	0.00	
5,500.0	0.00	0.00	5,485.8	26.0	-239.5	-239.5	0.00	0.00	
5,600.0	0.00	0.00	5,585.8	26.0	-239.5	-239.5	0.00	0.00	
5,700.0	0.00	0.00	5,685.8	26.0	-239.5	-239.5	0.00	0.00	
5,800.0	0.00	0.00	5,785.8	26.0	-239.5	-239.5	0.00	0.00	
5,900.0	0.00	0.00	5,885.8	26.0	-239.5	-239.5	0.00	0.00	
6,000.0	0.00	0.00	5,985.8	26.0	-239.5	-239.5	0.00	0.00	
6,100.0	0.00	0.00	6,085.8	26.0	-239.5	-239.5	0.00	0.00	
6,200.0	0.00	0.00	6,185.8	26.0	-239.5	-239.5	0.00	0.00	
6,300.0	0.00	0.00	6,285.8	26.0	-239.5	-239.5	0.00	0.00	
6,396.0	0.00	0.00	6,381.8	26.0	-239.5	-239.5	0.00	0.00	Start Build 8.00
6,400.0	0.32	90.00	6,385.8	26.0	-239.5	-239.5	8.00	8.00	
6,500.0	8.32	90.00	6,485.4	26.0	-232.0	-232.0	8.00	8.00	
6,600.0	16.32	90.00	6,583.0	26.0	-210.7	-210.7	8.00	8.00	
6,700.0	24.32	90.00	6,676.7	26.0	-176.0	-176.0	8.00	8.00	
6,774.6	30.29	90.00	6,743.0	26.0	-141.8	-141.8	8.00	8.00	Sharon Springs
6,800.0	32.32	90.00	6,764.7	26.0	-128.6	-128.6	8.00	8.00	
6,806.3	32.82	90.00	6,770.0	26.0	-125.2	-125.2	8.00	8.00	Teepee Buttes
6,872.7	38.13	90.00	6,824.0	26.0	-86.7	-86.7	8.00	8.00	Niobrara
6,900.0	40.32	90.00	6,845.2	26.0	-69.4	-69.4	8.00	8.00	
6,944.2	43.85	90.00	6,878.0	26.0	-39.8	-39.8	8.00	8.00	B Chalk
7,000.0	48.32	90.00	6,916.7	26.0	0.4	0.4	8.00	8.00	
7,100.0	56.32	90.00	6,977.8	26.0	79.4	79.4	8.00	8.00	
7,200.0	64.32	90.00	7,027.2	26.0	166.3	166.3	8.00	8.00	
7,300.0	72.32	90.00	7,064.2	26.0	259.1	259.1	8.00	8.00	
7,313.0	73.36	90.00	7,068.0	26.0	271.5	271.5	8.00	8.00	Ft. Hayes
7,400.0	80.32	90.00	7,087.8	26.0	356.2	356.2	8.00	8.00	
7,401.2	80.41	90.00	7,088.0	26.0	357.4	357.4	8.00	8.00	Codell
7,500.0	88.32	90.00	7,097.7	26.0	455.6	455.6	8.00	8.00	
7,521.0	90.00	90.00	7,098.0	26.0	476.7	476.7	8.00	8.00	LP @ 7098' TVD; 90°
7,600.0	90.00	90.00	7,098.0	26.0	555.6	555.6	0.00	0.00	
7,700.0	90.00	90.00	7,098.0	26.0	655.6	655.6	0.00	0.00	
7,800.0	90.00	90.00	7,098.0	26.0	755.6	755.6	0.00	0.00	
7,900.0	90.00	90.00	7,098.0	26.0	855.6	855.6	0.00	0.00	
8,000.0	90.00	90.00	7,098.0	26.0	955.6	955.6	0.00	0.00	
8,100.0	90.00	90.00	7,098.0	26.0	1,055.6	1,055.6	0.00	0.00	
8,200.0	90.00	90.00	7,098.0	26.0	1,155.6	1,155.6	0.00	0.00	
8,300.0	90.00	90.00	7,098.0	26.0	1,255.6	1,255.6	0.00	0.00	
8,400.0	90.00	90.00	7,098.0	26.0	1,355.6	1,355.6	0.00	0.00	
8,500.0	90.00	90.00	7,098.0	26.0	1,455.6	1,455.6	0.00	0.00	
8,600.0	90.00	90.00	7,098.0	26.0	1,555.6	1,555.6	0.00	0.00	
8,700.0	90.00	90.00	7,098.0	26.0	1,655.6	1,655.6	0.00	0.00	
8,800.0	90.00	90.00	7,098.0	26.0	1,755.6	1,755.6	0.00	0.00	
8,900.0	90.00	90.00	7,098.0	26.0	1,855.6	1,855.6	0.00	0.00	
9,000.0	90.00	90.00	7,098.0	26.0	1,955.6	1,955.6	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Qualls 3E-28H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site:	S28-T3N-R68W (Qualls)	North Reference:	True
Well:	Qualls 3E-28H	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	7,098.0	26.0	2,055.6	2,055.6	0.00	0.00	
9,200.0	90.00	90.00	7,098.0	26.0	2,155.6	2,155.6	0.00	0.00	
9,300.0	90.00	90.00	7,098.0	26.0	2,255.6	2,255.6	0.00	0.00	
9,400.0	90.00	90.00	7,098.0	26.0	2,355.6	2,355.6	0.00	0.00	
9,500.0	90.00	90.00	7,098.0	26.0	2,455.6	2,455.6	0.00	0.00	
9,600.0	90.00	90.00	7,098.0	26.0	2,555.6	2,555.6	0.00	0.00	
9,700.0	90.00	90.00	7,098.0	26.0	2,655.6	2,655.6	0.00	0.00	
9,800.0	90.00	90.00	7,098.0	26.0	2,755.6	2,755.6	0.00	0.00	
9,900.0	90.00	90.00	7,098.0	26.0	2,855.6	2,855.6	0.00	0.00	
10,000.0	90.00	90.00	7,098.0	26.0	2,955.6	2,955.6	0.00	0.00	
10,100.0	90.00	90.00	7,098.0	26.0	3,055.6	3,055.6	0.00	0.00	
10,200.0	90.00	90.00	7,098.0	26.0	3,155.6	3,155.6	0.00	0.00	
10,300.0	90.00	90.00	7,098.0	26.0	3,255.6	3,255.6	0.00	0.00	
10,400.0	90.00	90.00	7,098.0	26.0	3,355.6	3,355.6	0.00	0.00	
10,500.0	90.00	90.00	7,098.0	26.0	3,455.6	3,455.6	0.00	0.00	
10,600.0	90.00	90.00	7,098.0	26.0	3,555.6	3,555.6	0.00	0.00	
10,700.0	90.00	90.00	7,098.0	25.9	3,655.6	3,655.6	0.00	0.00	
10,800.0	90.00	90.00	7,098.0	25.9	3,755.6	3,755.6	0.00	0.00	
10,900.0	90.00	90.00	7,098.0	25.9	3,855.6	3,855.6	0.00	0.00	
11,000.0	90.00	90.00	7,098.0	25.9	3,955.6	3,955.6	0.00	0.00	
11,100.0	90.00	90.00	7,098.0	25.9	4,055.6	4,055.6	0.00	0.00	
11,200.0	90.00	90.00	7,098.0	25.9	4,155.6	4,155.6	0.00	0.00	
11,300.0	90.00	90.00	7,098.0	25.9	4,255.6	4,255.6	0.00	0.00	
11,400.0	90.00	90.00	7,098.0	25.9	4,355.6	4,355.6	0.00	0.00	
11,500.0	90.00	90.00	7,098.0	25.9	4,455.6	4,455.6	0.00	0.00	
11,600.0	90.00	90.00	7,098.0	25.9	4,555.6	4,555.6	0.00	0.00	
11,626.0	90.00	90.00	7,098.0	25.9	4,581.6	4,581.6	0.00	0.00	TD at 11626.0 - Qualls 3E-28H 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
Qualls 3E-28H PBHL - plan hits target center - Point	0.00	0.00	7,098.0	25.9	4,581.6	1,313,049.83	3,139,685.93	40.191630	-105.000010

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Qualls 3E-28H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site:	S28-T3N-R68W (Qualls)	North Reference:	True
Well:	Qualls 3E-28H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,884.2	3,870.0	Sussex				
4,103.2	4,089.0	Sussex Marker				
4,373.2	4,359.0	Shannon				
6,774.6	6,743.0	Sharon Springs				
6,806.3	6,770.0	Teepee Buttes				
6,872.7	6,824.0	Niobrara				
6,944.2	6,878.0	B Chalk				
7,313.0	7,068.0	Ft. Hayes				
7,401.2	7,088.0	Codell				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
400.0	400.0	0.0	0.0	KOP @ 400'
1,200.0	1,197.4	6.0	-55.4	EOB; Inc=8°
2,130.0	2,118.4	20.0	-184.1	Start Drop -1.00
2,930.0	2,915.8	26.0	-239.5	EOD; Inc=0°
6,396.0	6,381.8	26.0	-239.5	Start Build 8.00
7,521.0	7,098.0	26.0	476.7	LP @ 7098' TVD; 90°
11,626.0	7,098.0	25.9	4,581.6	TD at 11626.0

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S28-T3N-R68W (Qualls)

Qualls 3E-28H

Hz

Plan #1

Anticollision Report

12 February, 2013

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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	2/12/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,625.9	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						
S28-T3N-R68W (Qualls)						
ANDERSON FAMILY TRUST 1 (EXISTING) - EXISTING						Out of range
ELMER HERGENREDER 1 (EXISTING) - EXISTING - N						Out of range
QUALLS 1 (EXISTING) - EXISTING - NO SURVEYS	8,363.8	7,065.0	203.9	154.7	4.142	CC, ES
QUALLS 1 (EXISTING) - EXISTING - NO SURVEYS	8,400.0	7,065.0	207.1	157.0	4.136	SF
Qualls 3A-28H - Hz - Plan #1	200.0	200.0	40.1	39.4	61.394	CC, ES
Qualls 3A-28H - Hz - Plan #1	500.0	493.3	59.0	57.3	34.916	SF
Qualls 3B-28H - Hz - Plan #1	300.0	300.0	29.1	28.1	29.090	CC, ES
Qualls 3B-28H - Hz - Plan #1	500.0	497.7	35.8	34.1	21.122	SF
Qualls 3C-28H - Hz - Plan #1	400.0	400.0	18.2	16.9	13.483	CC, ES
Qualls 3C-28H - Hz - Plan #1	600.0	599.3	21.3	19.2	10.368	SF
Qualls 3D-28H - Hz - Plan #1	503.1	503.1	10.9	9.2	6.351	CC, ES
Qualls 3D-28H - Hz - Plan #1	11,626.5	11,379.8	435.3	249.2	2.339	SF
Qualls 3F-28H - Hz - Plan #1	300.0	300.0	10.9	9.9	10.909	CC, ES
Qualls 3F-28H - Hz - Plan #1	11,626.5	11,439.4	455.6	248.6	2.201	SF
Qualls 3G-28H - Hz - Plan #1	200.0	200.0	18.2	17.6	27.904	CC, ES
Qualls 3G-28H - Hz - Plan #1	500.0	498.8	25.7	24.0	15.133	SF
SLATER 33-28 (EXISTING) - EXISTING - GYRO						Out of range
SLATER 34-28 (EXISTING) - EXISTING - SURVEYS	10,013.3	7,173.5	143.7	52.9	1.583	CC, ES, SF
SLATER 43-28 (EXISTING) - EXISTING - SURVEYS						Out of range
SLATER 44-28 (EXISTING) - EXISTING - SURVEYS	11,536.6	7,294.5	242.4	104.3	1.755	CC, ES, SF
SLATER 4-4-28 (EXISTING) - Existing - SURVEYS						Out of range
SLATER 4-6-28 (EXISTING) - Existing - NO SURVEYS						Out of range
SLATER 6-4-28 (EXISTING) - EXISTING - SURVEYS						Out of range
WATERFRONT 11-27 (EXISTING) - EXISTING - NO SU						Out of range
WATERFRONT 12-27 (EXISTING) - EXISTING - NO SU						Out of range
WATERFRONT 13-27 (EXISTING) - EXISTING - NO SU						Out of range
WATERFRONT 14-27 (EXISTING) - EXISTING - NO SU						Out of range
WATERFRONT 33-27 (EXISTING) - EXISTING - NO SU						Out of range

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 S28-T3N-R68W (Qualls) - QUALLS 1 (EXISTING) - EXISTING - NO SURVEYS													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		
8,000.0	7,098.0	7,065.0	7,065.0	28.6	12.3	-90.00	229.9	1,319.4	417.1	376.2	40.88	10.202		
8,100.0	7,098.0	7,065.0	7,065.0	30.8	12.3	-90.00	229.9	1,319.4	333.4	290.3	43.14	7.729		
8,200.0	7,098.0	7,065.0	7,065.0	33.1	12.3	-90.00	229.9	1,319.4	261.6	216.1	45.43	5.758		
8,300.0	7,098.0	7,065.0	7,065.0	35.4	12.3	-90.00	229.9	1,319.4	213.7	165.9	47.74	4.476		
8,363.8	7,098.0	7,065.0	7,065.0	36.9	12.3	-90.00	229.9	1,319.4	203.9	154.7	49.23	4.142 CC, ES		
8,400.0	7,098.0	7,065.0	7,065.0	37.7	12.3	-90.00	229.9	1,319.4	207.1	157.0	50.07	4.136 SF		
8,500.0	7,098.0	7,065.0	7,065.0	40.1	12.3	-90.00	229.9	1,319.4	245.2	192.8	52.42	4.677		
8,600.0	7,098.0	7,065.0	7,065.0	42.5	12.3	-90.00	229.9	1,319.4	312.0	257.2	54.79	5.695		
8,700.0	7,098.0	7,065.0	7,065.0	44.8	12.3	-90.00	229.9	1,319.4	393.2	336.0	57.16	6.878		
8,800.0	7,098.0	7,065.0	7,065.0	47.2	12.3	-90.00	229.9	1,319.4	481.5	421.9	59.55	8.085		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 S28-T3N-R68W (Qualls) - Qualls 3A-28H - 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	0.00	40.1	0.0	40.1					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	40.1	0.0	40.1	39.8	0.30	131.962		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	40.1	0.0	40.1	39.4	0.65	61.394	CC, ES	
300.0	300.0	298.2	298.2	0.5	0.5	-0.43	42.2	-0.3	42.2	41.2	1.00	42.012		
400.0	400.0	396.1	395.9	0.7	0.7	-1.49	48.4	-1.3	48.6	47.2	1.38	35.177		
500.0	500.0	493.3	492.5	0.9	0.9	81.78	58.6	-2.8	59.0	57.3	1.69	34.916	SF	
600.0	600.0	589.5	587.6	1.0	1.2	82.30	72.7	-4.9	73.4	71.4	2.04	36.004		
700.0	699.9	684.4	680.8	1.2	1.6	83.29	90.5	-7.6	91.7	89.3	2.39	38.284		
800.0	799.7	777.8	771.7	1.4	2.0	84.38	111.7	-10.8	113.7	111.0	2.76	41.182		
900.0	899.4	870.3	860.8	1.6	2.4	85.43	136.3	-14.5	139.5	136.4	3.15	44.327		
1,000.0	998.9	966.5	953.1	1.8	2.9	86.62	163.0	-18.6	166.6	163.0	3.57	46.709		
1,100.0	1,098.3	1,062.7	1,045.4	2.1	3.4	87.93	189.8	-22.6	193.6	189.6	4.01	48.221		
1,200.0	1,197.4	1,158.8	1,137.6	2.3	3.9	89.32	216.5	-26.7	220.7	216.2	4.50	49.060		
1,300.0	1,296.4	1,254.8	1,229.7	2.6	4.4	90.83	243.3	-30.7	248.0	243.0	5.01	49.520		
1,400.0	1,395.5	1,350.8	1,321.9	2.9	4.9	92.04	270.0	-34.8	275.4	269.9	5.53	49.808		
1,500.0	1,494.5	1,446.8	1,414.0	3.2	5.4	93.04	296.7	-38.8	302.9	296.9	6.06	49.989		
1,600.0	1,593.5	1,542.9	1,506.2	3.5	5.9	93.86	323.5	-42.9	330.5	323.9	6.60	50.100		
1,700.0	1,692.5	1,638.9	1,598.3	3.8	6.4	94.56	350.2	-46.9	358.1	351.0	7.14	50.166		
1,800.0	1,791.6	1,734.9	1,690.4	4.0	6.9	95.17	376.9	-50.9	385.8	378.1	7.68	50.201		
1,900.0	1,890.6	1,830.9	1,782.6	4.3	7.4	95.69	403.6	-55.0	413.5	405.3	8.23	50.215		
2,000.0	1,989.6	1,926.9	1,874.7	4.6	7.9	96.14	430.4	-59.0	441.2	432.4	8.79	50.216		
2,100.0	2,088.6	2,023.0	1,966.9	4.9	8.4	96.54	457.1	-63.1	469.0	459.6	9.34	50.207		
2,200.0	2,187.7	2,119.0	2,059.0	5.2	8.9	97.05	483.8	-67.1	496.7	486.8	9.90	50.173		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 S28-T3N-R68W (Qualls) - Qualls 3B-28H - 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	95.963		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	29.1	0.0	29.1	28.5	0.65	44.646		
300.0	300.0	300.0	300.0	0.5	0.5	0.00	29.1	0.0	29.1	28.1	1.00	29.090 CC, ES		
400.0	400.0	399.0	398.9	0.7	0.7	-0.56	30.8	-0.3	30.8	29.5	1.35	22.817		
500.0	500.0	497.7	497.6	0.9	0.9	83.19	35.9	-1.2	35.8	34.1	1.70	21.122 SF		
600.0	600.0	596.0	595.5	1.0	1.1	84.60	44.2	-2.7	44.0	42.0	2.05	21.498		
700.0	699.9	693.7	692.5	1.2	1.3	86.55	55.7	-4.8	55.5	53.0	2.41	23.027		
800.0	799.7	790.5	788.2	1.4	1.6	88.49	70.4	-7.4	70.1	67.3	2.78	25.200		
900.0	899.4	886.4	882.3	1.6	2.0	90.18	88.0	-10.6	88.0	84.9	3.18	27.704		
1,000.0	998.9	981.0	974.6	1.8	2.3	91.58	108.4	-14.3	109.1	105.5	3.60	30.333		
1,100.0	1,098.3	1,075.7	1,066.3	2.1	2.8	92.75	131.7	-18.4	133.2	129.1	4.05	32.895		
1,200.0	1,197.4	1,172.5	1,159.9	2.3	3.2	94.06	156.0	-22.8	158.0	153.5	4.54	34.807		
1,300.0	1,296.4	1,269.3	1,253.5	2.6	3.6	95.49	180.3	-27.2	183.0	177.9	5.05	36.216		
1,400.0	1,395.5	1,366.0	1,347.0	2.9	4.1	96.58	204.6	-31.6	208.0	202.4	5.58	37.303		
1,500.0	1,494.5	1,462.8	1,440.5	3.2	4.5	97.43	229.0	-36.0	233.1	227.0	6.11	38.160		
1,600.0	1,593.5	1,559.5	1,534.1	3.5	5.0	98.11	253.3	-40.3	258.3	251.6	6.65	38.847		
1,700.0	1,692.5	1,656.3	1,627.6	3.8	5.4	98.68	277.6	-44.7	283.4	276.2	7.19	39.408		
1,800.0	1,791.6	1,753.0	1,721.1	4.0	5.9	99.15	301.9	-49.1	308.6	300.9	7.74	39.874		
1,900.0	1,890.6	1,849.7	1,814.7	4.3	6.4	99.55	326.3	-53.5	333.8	325.6	8.29	40.264		
2,000.0	1,989.6	1,946.5	1,908.2	4.6	6.8	99.90	350.6	-57.8	359.1	350.2	8.85	40.596		
2,100.0	2,088.6	2,043.2	2,001.7	4.9	7.3	100.19	374.9	-62.2	384.3	374.9	9.40	40.881		
2,200.0	2,187.7	2,140.0	2,095.3	5.2	7.7	100.58	399.2	-66.6	409.5	399.5	9.96	41.124		
2,300.0	2,287.0	2,236.9	2,188.9	5.5	8.2	100.78	423.6	-71.0	434.4	423.9	10.48	41.433		
2,400.0	2,386.5	2,333.8	2,282.6	5.7	8.7	100.77	448.0	-75.4	458.9	447.9	10.98	41.810		
2,500.0	2,486.2	2,430.7	2,376.4	5.9	9.1	100.57	472.3	-79.7	483.2	471.7	11.44	42.253		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 S28-T3N-R68W (Qualls) - Qualls 3C-28H - 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	18.2	0.0	18.2					
100.0	100.0	100.0	100.0	0.2	0.2	0.00	18.2	0.0	18.2	17.9	0.30	59.977		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	18.2	0.0	18.2	17.6	0.65	27.904		
300.0	300.0	300.0	300.0	0.5	0.5	0.00	18.2	0.0	18.2	17.2	1.00	18.181		
400.0	400.0	400.0	400.0	0.7	0.7	0.00	18.2	0.0	18.2	16.9	1.35	13.483 CC, ES		
500.0	500.0	499.7	499.7	0.9	0.8	85.60	19.0	-0.3	19.0	17.3	1.70	11.151		
600.0	600.0	599.3	599.3	1.0	1.0	90.21	21.5	-1.1	21.3	19.2	2.05	10.368 SF		
700.0	699.9	698.9	698.7	1.2	1.2	95.95	25.6	-2.4	25.4	23.0	2.41	10.519		
800.0	799.7	798.2	797.9	1.4	1.4	101.37	31.4	-4.3	31.4	28.6	2.79	11.273		
900.0	899.4	897.4	896.8	1.6	1.6	105.84	38.7	-6.7	39.4	36.3	3.18	12.405		
1,000.0	998.9	996.3	995.2	1.8	1.8	109.29	47.7	-9.6	49.4	45.8	3.59	13.756		
1,100.0	1,098.3	1,094.9	1,093.2	2.1	2.1	111.88	58.2	-13.0	61.4	57.4	4.04	15.214		
1,200.0	1,197.4	1,193.1	1,190.5	2.3	2.3	113.83	70.3	-16.9	75.3	70.8	4.51	16.701		
1,300.0	1,296.4	1,290.9	1,287.4	2.6	2.6	114.93	84.0	-21.4	90.7	85.7	5.00	18.137		
1,400.0	1,395.5	1,388.5	1,383.6	2.9	2.9	115.02	99.1	-26.3	107.2	101.7	5.51	19.451		
1,500.0	1,494.5	1,485.6	1,479.2	3.2	3.2	114.49	115.7	-31.7	124.7	118.7	6.04	20.666		
1,600.0	1,593.5	1,582.4	1,574.0	3.5	3.6	113.59	133.8	-37.6	143.4	136.9	6.58	21.807		
1,700.0	1,692.5	1,680.1	1,669.6	3.8	3.9	112.60	153.1	-43.8	162.9	155.8	7.13	22.857		
1,800.0	1,791.6	1,778.2	1,765.5	4.0	4.3	111.81	172.5	-50.1	182.4	174.7	7.68	23.751		
1,900.0	1,890.6	1,876.2	1,861.4	4.3	4.7	111.18	191.9	-56.4	202.0	193.7	8.24	24.518		
2,000.0	1,989.6	1,974.3	1,957.3	4.6	5.1	110.65	211.3	-62.7	221.5	212.7	8.80	25.184		
2,100.0	2,088.6	2,072.3	2,053.2	4.9	5.4	110.21	230.7	-69.0	241.1	231.8	9.36	25.766		
2,200.0	2,187.7	2,170.4	2,149.2	5.2	5.8	109.88	250.1	-75.3	260.6	250.6	9.91	26.280		
2,300.0	2,287.0	2,268.5	2,245.2	5.5	6.2	109.33	269.5	-81.6	279.5	269.0	10.44	26.758		
2,400.0	2,386.5	2,366.7	2,341.2	5.7	6.6	108.55	288.9	-87.9	297.9	287.0	10.95	27.214		
2,500.0	2,486.2	2,464.9	2,437.2	5.9	7.0	107.58	308.3	-94.3	315.9	304.4	11.42	27.663		
2,600.0	2,585.9	2,563.0	2,533.2	6.1	7.4	106.43	327.7	-100.6	333.5	321.6	11.86	28.123		
2,700.0	2,685.8	2,661.2	2,629.2	6.3	7.8	105.14	347.1	-106.9	350.8	338.5	12.26	28.605		
2,800.0	2,785.8	2,759.2	2,725.1	6.4	8.1	103.72	366.5	-113.2	367.9	355.2	12.63	29.122		
2,900.0	2,885.8	2,857.1	2,820.9	6.6	8.5	102.19	385.9	-119.5	384.8	371.9	12.96	29.685		
3,000.0	2,985.8	2,954.9	2,916.6	6.7	8.9	16.71	405.2	-125.7	401.9	388.7	13.15	30.551		
3,100.0	3,085.8	3,052.8	3,012.3	6.9	9.3	15.10	424.6	-132.0	419.3	405.5	13.74	30.520		
3,200.0	3,185.8	3,150.6	3,107.9	7.0	9.7	13.62	443.9	-138.3	436.9	422.6	14.32	30.504		
3,300.0	3,285.8	3,248.4	3,203.6	7.1	10.1	12.25	463.2	-144.6	454.9	440.0	14.91	30.502		
3,400.0	3,385.8	3,346.2	3,299.3	7.3	10.5	10.99	482.6	-150.9	473.1	457.5	15.50	30.512		
3,500.0	3,485.8	3,444.0	3,395.0	7.4	10.9	9.82	501.9	-157.2	491.4	475.3	16.10	30.533		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 S28-T3N-R68W (Qualls) - Qualls 3D-28H - 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	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	35.986		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	10.9	0.0	10.9	10.3	0.65	16.742		
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		
500.0	500.0	500.0	500.0	0.9	0.8	88.38	10.9	0.0	10.9	9.2	1.70	6.392		
503.1	503.1	503.1	503.1	0.9	0.9	88.66	10.9	0.0	10.9	9.2	1.71	6.351	CC, ES	
600.0	600.0	599.8	599.8	1.0	1.0	98.62	11.7	-0.5	11.7	9.6	2.05	5.683		
700.0	699.9	699.6	699.6	1.2	1.2	108.12	13.8	-1.9	14.3	11.8	2.41	5.910		
800.0	799.7	799.4	799.3	1.4	1.4	114.61	17.4	-4.3	18.6	15.8	2.78	6.681		
900.0	899.4	899.1	898.7	1.6	1.6	118.39	22.5	-7.7	24.6	21.4	3.17	7.746		
1,000.0	998.9	998.6	998.0	1.8	1.8	120.41	29.0	-12.0	32.1	28.5	3.58	8.956		
1,100.0	1,098.3	1,098.0	1,096.9	2.1	2.0	121.41	36.9	-17.2	41.0	37.0	4.01	10.220		
1,200.0	1,197.4	1,197.2	1,195.5	2.3	2.2	121.83	46.3	-23.4	51.5	47.0	4.48	11.483		
1,300.0	1,296.4	1,296.2	1,293.7	2.6	2.5	121.35	57.0	-30.5	62.9	57.9	4.98	12.635		
1,400.0	1,395.5	1,395.1	1,391.4	2.9	2.8	119.77	69.1	-38.5	74.9	69.4	5.50	13.613		
1,500.0	1,494.5	1,493.7	1,488.7	3.2	3.1	117.58	82.6	-47.4	87.6	81.6	6.06	14.469		
1,600.0	1,593.5	1,592.7	1,586.3	3.5	3.4	115.44	96.9	-56.9	100.8	94.2	6.62	15.234		
1,700.0	1,692.5	1,691.8	1,683.8	3.8	3.7	113.79	111.3	-66.4	114.1	106.9	7.18	15.885		
1,800.0	1,791.6	1,790.9	1,781.4	4.0	4.0	112.49	125.6	-75.9	127.5	119.7	7.75	16.443		
1,900.0	1,890.6	1,889.9	1,878.9	4.3	4.3	111.43	140.0	-85.4	140.9	132.5	8.32	16.926		
2,000.0	1,989.6	1,989.0	1,976.5	4.6	4.7	110.56	154.3	-94.9	154.3	145.4	8.90	17.347		
2,100.0	2,088.6	2,088.1	2,074.1	4.9	5.0	109.83	168.7	-104.4	167.8	158.3	9.47	17.717		
2,200.0	2,187.7	2,187.2	2,171.6	5.2	5.3	109.17	183.0	-113.9	181.2	171.1	10.04	18.045		
2,300.0	2,287.0	2,286.3	2,269.2	5.5	5.7	108.17	197.4	-123.4	194.0	183.5	10.58	18.337		
2,400.0	2,386.5	2,385.3	2,366.8	5.7	6.0	106.85	211.7	-132.9	206.5	195.4	11.10	18.607		
2,500.0	2,486.2	2,484.4	2,464.4	5.9	6.4	105.24	226.1	-142.4	218.6	207.0	11.58	18.874		
2,600.0	2,585.9	2,583.4	2,561.9	6.1	6.7	103.40	240.4	-151.9	230.4	218.4	12.03	19.157		
2,700.0	2,685.8	2,682.3	2,659.3	6.3	7.0	101.34	254.7	-161.4	242.2	229.7	12.44	19.471		
2,800.0	2,785.8	2,781.1	2,756.6	6.4	7.4	99.11	269.0	-170.8	254.0	241.2	12.81	19.832		
2,900.0	2,885.8	2,879.7	2,853.7	6.6	7.7	96.72	283.3	-180.3	265.9	252.8	13.13	20.254		
3,000.0	2,985.8	2,978.2	2,950.7	6.7	8.1	10.40	297.6	-189.7	278.3	266.3	12.04	23.123		
3,100.0	3,085.8	3,080.1	3,051.2	6.9	8.4	8.06	311.7	-199.1	290.6	278.0	12.59	23.085		
3,200.0	3,185.8	3,183.1	3,153.0	7.0	8.7	6.11	324.6	-207.6	302.0	288.9	13.12	23.013		
3,300.0	3,285.8	3,286.5	3,255.5	7.1	9.0	4.51	335.9	-215.1	312.3	298.7	13.63	22.909		
3,400.0	3,385.8	3,390.5	3,358.8	7.3	9.2	3.21	345.7	-221.6	321.3	307.2	14.11	22.769		
3,500.0	3,485.8	3,494.8	3,462.7	7.4	9.5	2.17	354.0	-227.1	329.0	314.5	14.56	22.593		
3,600.0	3,585.8	3,599.5	3,567.0	7.6	9.7	1.37	360.8	-231.5	335.4	320.4	14.99	22.378		
3,700.0	3,685.8	3,704.4	3,671.7	7.7	9.9	0.77	365.9	-235.0	340.2	324.8	15.38	22.124		
3,800.0	3,785.8	3,809.5	3,776.8	7.9	10.1	0.37	369.5	-237.3	343.6	327.8	15.74	21.828		
3,900.0	3,885.8	3,914.8	3,882.0	8.0	10.2	0.15	371.4	-238.6	345.4	329.4	16.07	21.490		
4,000.0	3,985.8	4,018.5	3,985.8	8.1	10.3	0.11	371.9	-238.9	345.8	329.4	16.39	21.106		
4,100.0	4,085.8	4,118.5	4,085.8	8.3	10.4	0.11	371.9	-238.9	345.8	329.1	16.69	20.721		
4,200.0	4,185.8	4,218.5	4,185.8	8.4	10.6	0.11	371.9	-238.9	345.8	328.8	17.00	20.348		
4,300.0	4,285.8	4,318.5	4,285.8	8.6	10.7	0.11	371.9	-238.9	345.8	328.5	17.30	19.987		
4,400.0	4,385.8	4,418.5	4,385.8	8.8	10.8	0.11	371.9	-238.9	345.8	328.2	17.61	19.637		
4,500.0	4,485.8	4,518.5	4,485.8	8.9	10.9	0.11	371.9	-238.9	345.8	327.9	17.92	19.297		
4,600.0	4,585.8	4,618.5	4,585.8	9.1	11.1	0.11	371.9	-238.9	345.8	327.6	18.23	18.968		
4,700.0	4,685.8	4,718.5	4,685.8	9.2	11.2	0.11	371.9	-238.9	345.8	327.3	18.54	18.648		
4,800.0	4,785.8	4,818.5	4,785.8	9.4	11.3	0.11	371.9	-238.9	345.8	327.0	18.86	18.339		
4,900.0	4,885.8	4,918.5	4,885.8	9.5	11.4	0.11	371.9	-238.9	345.8	326.7	19.17	18.038		
5,000.0	4,985.8	5,018.5	4,985.8	9.7	11.6	0.11	371.9	-238.9	345.8	326.3	19.49	17.746		

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 Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 S28-T3N-R68W (Qualls) - Qualls 3D-28H - 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		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	Separation Factor		
5,100.0	5,085.8	5,118.5	5,085.8	9.8	11.7	0.11	371.9	-238.9	345.8	326.0	19.80	17.463		
5,200.0	5,185.8	5,218.5	5,185.8	10.0	11.8	0.11	371.9	-238.9	345.8	325.7	20.12	17.187		
5,300.0	5,285.8	5,318.5	5,285.8	10.2	12.0	0.11	371.9	-238.9	345.8	325.4	20.44	16.920		
5,400.0	5,385.8	5,418.5	5,385.8	10.3	12.1	0.11	371.9	-238.9	345.8	325.1	20.76	16.660		
5,500.0	5,485.8	5,518.5	5,485.8	10.5	12.2	0.11	371.9	-238.9	345.8	324.8	21.08	16.407		
5,600.0	5,585.8	5,618.5	5,585.8	10.6	12.4	0.11	371.9	-238.9	345.8	324.4	21.40	16.161		
5,700.0	5,685.8	5,718.5	5,685.8	10.8	12.5	0.11	371.9	-238.9	345.8	324.1	21.72	15.922		
5,800.0	5,785.8	5,818.5	5,785.8	11.0	12.7	0.11	371.9	-238.9	345.8	323.8	22.04	15.689		
5,900.0	5,885.8	5,918.5	5,885.8	11.1	12.8	0.11	371.9	-238.9	345.8	323.5	22.37	15.462		
6,000.0	5,985.8	6,018.5	5,985.8	11.3	12.9	0.11	371.9	-238.9	345.8	323.1	22.69	15.242		
6,100.0	6,085.8	6,118.5	6,085.8	11.4	13.1	0.11	371.9	-238.9	345.8	322.8	23.01	15.027		
6,139.0	6,124.8	6,157.6	6,124.8	11.5	13.1	0.11	371.9	-238.9	345.8	322.7	23.14	14.945		
6,200.0	6,185.8	6,218.3	6,185.4	11.6	13.2	0.64	371.9	-235.7	345.9	322.5	23.32	14.832		
6,300.0	6,285.8	6,315.4	6,281.2	11.8	13.2	3.23	371.9	-220.0	346.4	322.9	23.55	14.711		
6,400.0	6,385.8	6,406.8	6,368.6	11.9	13.2	-82.41	371.9	-193.6	349.3	325.5	23.79	14.685		
6,500.0	6,485.4	6,493.0	6,447.3	12.0	13.2	-77.27	371.9	-158.6	355.6	331.6	23.97	14.835		
6,600.0	6,583.0	6,576.4	6,519.0	12.1	13.2	-72.53	371.9	-116.0	364.2	340.3	23.99	15.182		
6,700.0	6,676.7	6,657.4	6,583.4	12.0	13.2	-68.27	371.9	-66.9	374.5	350.6	23.88	15.680		
6,800.0	6,764.7	6,736.5	6,640.5	12.0	13.3	-64.54	371.9	-12.3	385.4	361.7	23.74	16.233		
6,900.0	6,845.2	6,813.9	6,690.3	12.1	13.5	-61.35	371.9	47.0	396.4	372.8	23.60	16.799		
7,000.0	6,916.7	6,890.1	6,732.7	12.4	13.9	-58.69	371.9	110.2	406.8	383.2	23.64	17.206		
7,100.0	6,977.8	6,965.2	6,767.8	12.9	14.5	-56.54	371.9	176.6	416.1	392.1	24.01	17.328		
7,200.0	7,027.2	7,039.5	6,795.5	13.7	15.2	-54.88	371.9	245.5	423.8	399.0	24.83	17.071		
7,300.0	7,064.2	7,113.3	6,815.7	14.9	16.2	-53.69	371.9	316.4	429.7	403.5	26.18	16.414		
7,400.0	7,087.8	7,186.6	6,828.5	16.4	17.4	-52.95	371.9	388.6	433.5	405.4	28.09	15.431		
7,500.0	7,097.7	7,259.7	6,833.8	18.1	18.7	-52.65	371.9	461.4	435.1	404.5	30.53	14.252		
7,600.0	7,098.0	7,353.9	6,834.0	20.0	20.4	-52.65	371.9	555.6	435.1	401.6	33.48	12.995		
7,700.0	7,098.0	7,453.9	6,834.0	22.1	22.4	-52.65	371.9	655.6	435.1	398.5	36.65	11.873		
7,800.0	7,098.0	7,553.9	6,834.0	24.2	24.5	-52.65	371.9	755.6	435.1	395.2	39.95	10.891		
7,900.0	7,098.0	7,653.9	6,834.0	26.3	26.6	-52.65	371.9	855.6	435.1	391.8	43.36	10.034		
8,000.0	7,098.0	7,753.9	6,834.0	28.6	28.8	-52.65	371.9	955.6	435.1	388.3	46.86	9.286		
8,100.0	7,098.0	7,853.9	6,834.0	30.8	31.1	-52.65	371.9	1,055.6	435.1	384.7	50.42	8.630		
8,200.0	7,098.0	7,953.9	6,834.0	33.1	33.3	-52.65	371.9	1,155.6	435.1	381.1	54.03	8.053		
8,300.0	7,098.0	8,053.9	6,834.0	35.4	35.6	-52.65	371.9	1,255.6	435.1	377.5	57.69	7.543		
8,400.0	7,098.0	8,153.9	6,834.0	37.7	38.0	-52.65	371.9	1,355.6	435.1	373.8	61.38	7.089		
8,500.0	7,098.0	8,253.9	6,834.0	40.1	40.3	-52.65	371.9	1,455.6	435.1	370.0	65.10	6.684		
8,600.0	7,098.0	8,353.9	6,834.0	42.5	42.7	-52.65	371.9	1,555.6	435.2	366.3	68.85	6.320		
8,700.0	7,098.0	8,453.9	6,834.0	44.8	45.0	-52.65	371.9	1,655.6	435.2	362.5	72.61	5.993		
8,800.0	7,098.0	8,553.9	6,834.0	47.2	47.4	-52.65	371.9	1,755.6	435.2	358.8	76.40	5.696		
8,900.0	7,098.0	8,653.9	6,834.0	49.6	49.8	-52.65	371.9	1,855.6	435.2	355.0	80.20	5.426		
9,000.0	7,098.0	8,753.9	6,834.0	52.0	52.2	-52.65	371.9	1,955.6	435.2	351.2	84.01	5.180		
9,100.0	7,098.0	8,853.9	6,834.0	54.4	54.6	-52.65	371.9	2,055.6	435.2	347.3	87.84	4.954		
9,200.0	7,098.0	8,953.9	6,834.0	56.8	57.0	-52.65	371.9	2,155.6	435.2	343.5	91.67	4.747		
9,300.0	7,098.0	9,053.9	6,834.0	59.3	59.4	-52.65	371.9	2,255.6	435.2	339.7	95.51	4.556		
9,400.0	7,098.0	9,153.9	6,834.0	61.7	61.9	-52.65	371.9	2,355.6	435.2	335.8	99.36	4.380		
9,500.0	7,098.0	9,253.9	6,834.0	64.1	64.3	-52.65	371.9	2,455.6	435.2	332.0	103.22	4.216		
9,600.0	7,098.0	9,353.9	6,834.0	66.5	66.7	-52.65	371.9	2,555.6	435.2	328.1	107.08	4.064		
9,700.0	7,098.0	9,453.9	6,834.0	69.0	69.1	-52.65	371.9	2,655.6	435.2	324.2	110.95	3.922		
9,800.0	7,098.0	9,553.9	6,834.0	71.4	71.6	-52.65	371.9	2,755.6	435.2	320.4	114.83	3.790		
9,900.0	7,098.0	9,653.9	6,834.0	73.9	74.0	-52.65	371.9	2,855.6	435.2	316.5	118.71	3.666		
10,000.0	7,098.0	9,753.9	6,834.0	76.3	76.4	-52.66	372.0	2,955.6	435.2	312.6	122.59	3.550		
10,100.0	7,098.0	9,853.9	6,834.0	78.7	78.9	-52.66	372.0	3,055.6	435.2	308.7	126.48	3.441		

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 Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 S28-T3N-R68W (Qualls) - Qualls 3D-28H - 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		
10,200.0	7,098.0	9,953.9	6,834.0	81.2	81.3	-52.66	372.0	3,155.6	435.2	304.8	130.37	3.338		
10,300.0	7,098.0	10,053.9	6,834.0	83.6	83.8	-52.66	372.0	3,255.6	435.2	301.0	134.26	3.242		
10,400.0	7,098.0	10,153.9	6,834.0	86.1	86.2	-52.66	372.0	3,355.6	435.2	297.1	138.16	3.150		
10,500.0	7,098.0	10,253.9	6,834.0	88.5	88.7	-52.66	372.0	3,455.6	435.2	293.2	142.05	3.064		
10,600.0	7,098.0	10,353.9	6,834.0	91.0	91.1	-52.66	372.0	3,555.6	435.2	289.3	145.95	2.982		
10,700.0	7,098.0	10,453.9	6,834.0	93.4	93.6	-52.66	372.0	3,655.6	435.2	285.4	149.86	2.904		
10,800.0	7,098.0	10,553.9	6,834.0	95.9	96.0	-52.66	372.0	3,755.6	435.2	281.5	153.76	2.831		
10,900.0	7,098.0	10,653.9	6,834.0	98.3	98.5	-52.66	372.0	3,855.6	435.2	277.6	157.67	2.760		
11,000.0	7,098.0	10,753.9	6,834.0	100.8	100.9	-52.66	372.0	3,955.6	435.2	273.7	161.58	2.694		
11,100.0	7,098.0	10,853.9	6,834.0	103.3	103.4	-52.66	372.0	4,055.6	435.2	269.8	165.49	2.630		
11,200.0	7,098.0	10,953.9	6,834.0	105.7	105.8	-52.66	372.0	4,155.6	435.3	265.9	169.40	2.569		
11,300.0	7,098.0	11,053.9	6,834.0	108.2	108.3	-52.66	372.0	4,255.6	435.3	261.9	173.31	2.511		
11,400.0	7,098.0	11,153.9	6,834.0	110.6	110.8	-52.66	372.0	4,355.6	435.3	258.0	177.23	2.456		
11,500.0	7,098.0	11,253.9	6,834.0	113.1	113.2	-52.66	372.0	4,455.6	435.3	254.1	181.14	2.403		
11,600.0	7,098.0	11,353.9	6,834.0	115.6	115.7	-52.66	372.0	4,555.6	435.3	250.2	185.06	2.352		
11,611.5	7,098.0	11,365.4	6,834.0	115.8	116.0	-52.66	372.0	4,567.1	435.3	249.8	185.51	2.346		
11,626.5	7,098.0	11,379.8	6,834.0	116.2	116.3	-52.66	372.0	4,581.6	435.3	249.2	186.09	2.339 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 S28-T3N-R68W (Qualls) - Qualls 3F-28H - 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	-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	35.986		
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-10.9	0.0	10.9	10.3	0.65	16.742		
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	-177.64	-11.7	-0.5	11.7	10.3	1.35	8.634		
500.0	500.0	499.6	499.6	0.9	0.9	-91.85	-13.8	-1.9	14.0	12.3	1.70	8.212		
600.0	600.0	599.3	599.2	1.0	1.0	-93.40	-17.4	-4.3	17.9	15.8	2.06	8.687		
700.0	699.9	698.8	698.5	1.2	1.2	-96.38	-22.5	-7.7	23.4	21.0	2.42	9.658		
800.0	799.7	798.2	797.6	1.4	1.4	-99.52	-29.0	-11.9	30.6	27.8	2.80	10.924		
900.0	899.4	897.3	896.2	1.6	1.7	-102.32	-36.9	-17.2	39.6	36.4	3.21	12.354		
1,000.0	998.9	996.1	994.4	1.8	1.9	-104.65	-46.1	-23.3	50.4	46.7	3.64	13.854		
1,100.0	1,098.3	1,094.6	1,092.0	2.1	2.2	-106.56	-56.8	-30.4	62.9	58.8	4.09	15.362		
1,200.0	1,197.4	1,192.7	1,189.1	2.3	2.5	-108.10	-68.8	-38.3	77.2	72.6	4.59	16.831		
1,300.0	1,296.4	1,290.4	1,285.5	2.6	2.8	-109.00	-82.1	-47.1	93.0	87.9	5.10	18.231		
1,400.0	1,395.5	1,389.0	1,382.5	2.9	3.1	-109.25	-96.4	-56.6	109.5	103.9	5.63	19.460		
1,500.0	1,494.5	1,487.6	1,479.7	3.2	3.4	-109.44	-110.7	-66.0	126.0	119.8	6.16	20.454		
1,600.0	1,593.5	1,586.2	1,576.8	3.5	3.7	-109.58	-125.0	-75.5	142.5	135.8	6.70	21.271		
1,700.0	1,692.5	1,684.9	1,673.9	3.8	4.1	-109.69	-139.2	-84.9	158.9	151.7	7.24	21.952		
1,800.0	1,791.6	1,783.5	1,771.1	4.0	4.4	-109.78	-153.5	-94.4	175.4	167.6	7.79	22.528		
1,900.0	1,890.6	1,882.1	1,868.2	4.3	4.7	-109.86	-167.8	-103.8	191.9	183.6	8.34	23.021		
2,000.0	1,989.6	1,980.7	1,965.3	4.6	5.1	-109.92	-182.1	-113.3	208.4	199.5	8.89	23.446		
2,100.0	2,088.6	2,079.4	2,062.5	4.9	5.4	-109.97	-196.4	-122.7	224.9	215.5	9.44	23.817		
2,200.0	2,187.7	2,178.0	2,159.6	5.2	5.8	-110.03	-210.7	-132.2	241.2	231.3	9.99	24.144		
2,300.0	2,287.0	2,276.8	2,256.8	5.5	6.1	-109.79	-225.0	-141.7	257.0	246.5	10.51	24.447		
2,400.0	2,386.5	2,375.5	2,354.1	5.7	6.4	-109.23	-239.3	-151.1	272.3	261.3	11.01	24.731		
2,500.0	2,486.2	2,474.3	2,451.4	5.9	6.8	-108.41	-253.6	-160.6	287.0	275.5	11.48	25.009		
2,600.0	2,585.9	2,573.1	2,548.7	6.1	7.1	-107.36	-267.9	-170.1	301.3	289.4	11.91	25.293		
2,700.0	2,685.8	2,671.9	2,646.0	6.3	7.5	-106.12	-282.2	-179.5	315.2	302.9	12.31	25.595		
2,800.0	2,785.8	2,770.6	2,743.2	6.4	7.8	-104.69	-296.5	-189.0	328.8	316.1	12.68	25.928		
2,900.0	2,885.8	2,870.8	2,841.9	6.6	8.2	-103.09	-310.9	-198.5	342.2	329.2	13.01	26.293		
3,000.0	2,985.8	2,974.4	2,944.2	6.7	8.5	174.79	-324.6	-207.6	354.5	341.9	12.63	26.062		
3,100.0	3,085.8	3,078.6	3,047.3	6.9	8.8	176.24	-336.8	-215.7	365.6	352.5	13.13	27.848		
3,200.0	3,185.8	3,183.3	3,151.2	7.0	9.1	177.43	-347.5	-222.8	375.5	361.9	13.60	27.604		
3,300.0	3,285.8	3,288.4	3,255.8	7.1	9.3	178.40	-356.6	-228.8	384.0	369.9	14.05	27.329		
3,400.0	3,385.8	3,393.9	3,360.9	7.3	9.5	179.16	-364.2	-233.8	391.1	376.6	14.47	27.022		
3,500.0	3,485.8	3,499.7	3,466.5	7.4	9.7	179.75	-370.2	-237.8	396.7	381.8	14.87	26.682		
3,600.0	3,585.8	3,605.8	3,572.4	7.6	9.9	-179.84	-374.5	-240.7	400.8	385.6	15.23	26.308		
3,700.0	3,685.8	3,711.9	3,678.5	7.7	10.1	-179.58	-377.3	-242.5	403.4	387.8	15.58	25.898		
3,800.0	3,785.8	3,818.2	3,784.8	7.9	10.2	-179.48	-378.4	-243.2	404.4	388.5	15.89	25.447		
3,900.0	3,885.8	3,919.2	3,885.8	8.0	10.3	-179.48	-378.4	-243.2	404.4	388.2	16.19	24.974		
4,000.0	3,985.8	4,019.2	3,985.8	8.1	10.4	-179.48	-378.4	-243.2	404.4	387.9	16.49	24.517		
4,100.0	4,085.8	4,119.2	4,085.8	8.3	10.5	-179.48	-378.4	-243.2	404.4	387.6	16.80	24.075		
4,200.0	4,185.8	4,219.2	4,185.8	8.4	10.7	-179.48	-378.4	-243.2	404.4	387.3	17.10	23.646		
4,300.0	4,285.8	4,319.2	4,285.8	8.6	10.8	-179.48	-378.4	-243.2	404.4	387.0	17.41	23.231		
4,400.0	4,385.8	4,419.2	4,385.8	8.8	10.9	-179.48	-378.4	-243.2	404.4	386.7	17.72	22.828		
4,500.0	4,485.8	4,519.2	4,485.8	8.9	11.0	-179.48	-378.4	-243.2	404.4	386.4	18.02	22.437		
4,600.0	4,585.8	4,619.2	4,585.8	9.1	11.1	-179.48	-378.4	-243.2	404.4	386.1	18.33	22.058		
4,700.0	4,685.8	4,719.2	4,685.8	9.2	11.3	-179.48	-378.4	-243.2	404.4	385.8	18.64	21.690		
4,800.0	4,785.8	4,819.2	4,785.8	9.4	11.4	-179.48	-378.4	-243.2	404.4	385.5	18.96	21.333		
4,900.0	4,885.8	4,919.2	4,885.8	9.5	11.5	-179.48	-378.4	-243.2	404.4	385.1	19.27	20.986		
5,000.0	4,985.8	5,019.2	4,985.8	9.7	11.7	-179.48	-378.4	-243.2	404.4	384.8	19.58	20.650		
5,100.0	5,085.8	5,119.2	5,085.8	9.8	11.8	-179.48	-378.4	-243.2	404.4	384.5	19.90	20.323		

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 Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 S28-T3N-R68W (Qualls) - Qualls 3F-28H - 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			
5,200.0	5,185.8	5,219.2	5,185.8	10.0	11.9	-179.48	-378.4	-243.2	404.4	384.2	20.22	20.005		
5,300.0	5,285.8	5,319.2	5,285.8	10.2	12.1	-179.48	-378.4	-243.2	404.4	383.9	20.53	19.696		
5,400.0	5,385.8	5,419.2	5,385.8	10.3	12.2	-179.48	-378.4	-243.2	404.4	383.6	20.85	19.396		
5,500.0	5,485.8	5,519.2	5,485.8	10.5	12.3	-179.48	-378.4	-243.2	404.4	383.2	21.17	19.104		
5,600.0	5,585.8	5,619.2	5,585.8	10.6	12.5	-179.48	-378.4	-243.2	404.4	382.9	21.49	18.820		
5,700.0	5,685.8	5,719.2	5,685.8	10.8	12.6	-179.48	-378.4	-243.2	404.4	382.6	21.81	18.543		
5,800.0	5,785.8	5,819.2	5,785.8	11.0	12.7	-179.48	-378.4	-243.2	404.4	382.3	22.13	18.274		
5,900.0	5,885.8	5,919.2	5,885.8	11.1	12.9	-179.48	-378.4	-243.2	404.4	382.0	22.45	18.012		
6,000.0	5,985.8	6,019.2	5,985.8	11.3	13.0	-179.48	-378.4	-243.2	404.4	381.6	22.77	17.757		
6,100.0	6,085.8	6,119.2	6,085.8	11.4	13.2	-179.48	-378.4	-243.2	404.4	381.3	23.10	17.508		
6,200.0	6,185.8	6,219.3	6,185.8	11.6	13.3	-179.50	-378.4	-243.1	404.4	381.0	23.42	17.267		
6,258.4	6,244.1	6,277.7	6,244.1	11.7	13.4	-180.00	-378.4	-239.5	404.4	380.8	23.59	17.140		
6,300.0	6,285.8	6,318.8	6,284.9	11.8	13.4	179.25	-378.4	-234.2	404.4	380.7	23.70	17.062		
6,400.0	6,385.8	6,414.2	6,377.8	11.9	13.4	86.23	-378.4	-212.9	405.3	381.6	23.77	17.053		
6,500.0	6,485.4	6,505.0	6,462.9	12.0	13.4	82.48	-378.4	-181.4	408.2	384.2	23.93	17.055		
6,600.0	6,583.0	6,593.1	6,540.9	12.1	13.4	78.95	-378.4	-140.7	412.6	388.6	23.96	17.218		
6,700.0	6,676.7	6,678.8	6,611.6	12.0	13.4	75.69	-378.4	-92.3	418.1	394.2	23.91	17.485		
6,800.0	6,764.7	6,762.5	6,674.5	12.0	13.4	72.76	-378.4	-37.1	424.3	400.5	23.85	17.789		
6,900.0	6,845.2	6,844.6	6,729.6	12.1	13.6	70.17	-378.4	23.7	430.8	406.9	23.94	17.997		
7,000.0	6,916.7	6,925.3	6,776.5	12.4	13.9	67.95	-378.4	89.3	437.1	412.9	24.27	18.010		
7,100.0	6,977.8	7,000.0	6,813.2	12.9	14.4	66.19	-378.4	154.3	443.0	418.0	24.95	17.753		
7,200.0	7,027.2	7,083.7	6,846.0	13.7	15.2	64.66	-378.4	231.2	447.9	421.7	26.22	17.084		
7,300.0	7,064.2	7,161.8	6,868.3	14.9	16.2	63.58	-378.4	306.1	451.8	423.8	28.00	16.137		
7,400.0	7,087.8	7,239.4	6,882.2	16.4	17.4	62.89	-378.4	382.4	454.4	424.1	30.32	14.987		
7,500.0	7,097.7	7,316.8	6,887.9	18.1	18.7	62.57	-378.4	459.5	455.6	422.5	33.12	13.758		
7,600.0	7,098.0	7,412.9	6,888.0	20.0	20.5	62.56	-378.4	555.6	455.7	419.2	36.45	12.501		
7,700.0	7,098.0	7,512.9	6,888.0	22.1	22.5	62.56	-378.4	655.6	455.7	415.6	40.02	11.387		
7,800.0	7,098.0	7,612.9	6,888.0	24.2	24.6	62.56	-378.4	755.6	455.7	411.9	43.73	10.420		
7,900.0	7,098.0	7,712.9	6,888.0	26.3	26.7	62.56	-378.4	855.6	455.7	408.1	47.56	9.580		
8,000.0	7,098.0	7,812.9	6,888.0	28.6	28.9	62.56	-378.4	955.6	455.7	404.2	51.49	8.850		
8,100.0	7,098.0	7,912.9	6,888.0	30.8	31.2	62.56	-378.4	1,055.6	455.7	400.2	55.48	8.213		
8,200.0	7,098.0	8,012.9	6,888.0	33.1	33.4	62.56	-378.4	1,155.6	455.7	396.1	59.53	7.654		
8,300.0	7,098.0	8,112.9	6,888.0	35.4	35.7	62.56	-378.4	1,255.6	455.7	392.0	63.63	7.161		
8,400.0	7,098.0	8,212.9	6,888.0	37.7	38.1	62.56	-378.4	1,355.6	455.7	387.9	67.76	6.725		
8,500.0	7,098.0	8,312.9	6,888.0	40.1	40.4	62.56	-378.4	1,455.6	455.7	383.7	71.92	6.335		
8,600.0	7,098.0	8,412.9	6,888.0	42.5	42.8	62.56	-378.4	1,555.6	455.7	379.5	76.12	5.986		
8,700.0	7,098.0	8,512.9	6,888.0	44.8	45.1	62.56	-378.4	1,655.6	455.7	375.3	80.33	5.672		
8,800.0	7,098.0	8,612.9	6,888.0	47.2	47.5	62.56	-378.4	1,755.6	455.7	371.1	84.56	5.389		
8,900.0	7,098.0	8,712.9	6,888.0	49.6	49.9	62.56	-378.4	1,855.6	455.7	366.8	88.81	5.131		
9,000.0	7,098.0	8,812.9	6,888.0	52.0	52.3	62.56	-378.4	1,955.6	455.7	362.6	93.07	4.896		
9,100.0	7,098.0	8,912.9	6,888.0	54.4	54.7	62.56	-378.4	2,055.6	455.7	358.3	97.34	4.681		
9,200.0	7,098.0	9,012.9	6,888.0	56.8	57.1	62.56	-378.4	2,155.6	455.7	354.0	101.62	4.484		
9,300.0	7,098.0	9,112.9	6,888.0	59.3	59.5	62.56	-378.4	2,255.6	455.7	349.7	105.92	4.302		
9,400.0	7,098.0	9,212.9	6,888.0	61.7	61.9	62.56	-378.4	2,355.6	455.7	345.4	110.22	4.134		
9,500.0	7,098.0	9,312.9	6,888.0	64.1	64.4	62.56	-378.4	2,455.6	455.7	341.1	114.53	3.979		
9,600.0	7,098.0	9,412.9	6,888.0	66.5	66.8	62.56	-378.4	2,555.6	455.6	336.8	118.84	3.834		
9,700.0	7,098.0	9,512.9	6,888.0	69.0	69.2	62.56	-378.4	2,655.6	455.6	332.5	123.16	3.700		
9,800.0	7,098.0	9,612.9	6,888.0	71.4	71.6	62.56	-378.4	2,755.6	455.6	328.2	127.49	3.574		
9,900.0	7,098.0	9,712.9	6,888.0	73.9	74.1	62.56	-378.4	2,855.6	455.6	323.8	131.82	3.457		
10,000.0	7,098.0	9,812.9	6,888.0	76.3	76.5	62.56	-378.4	2,955.6	455.6	319.5	136.15	3.347		
10,100.0	7,098.0	9,912.9	6,888.0	78.7	79.0	62.56	-378.4	3,055.6	455.6	315.2	140.49	3.243		
10,200.0	7,098.0	10,012.9	6,888.0	81.2	81.4	62.56	-378.4	3,155.6	455.6	310.8	144.83	3.146		

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 Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 S28-T3N-R68W (Qualls) - Qualls 3F-28H - 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)				
10,300.0	7,098.0	10,112.9	6,888.0	83.6	83.8	62.56	-378.4	3,255.6	455.6	306.5	149.17	3.054		
10,400.0	7,098.0	10,212.9	6,888.0	86.1	86.3	62.56	-378.4	3,355.6	455.6	302.1	153.52	2.968		
10,500.0	7,098.0	10,312.9	6,888.0	88.5	88.7	62.56	-378.4	3,455.6	455.6	297.8	157.87	2.886		
10,600.0	7,098.0	10,412.9	6,888.0	91.0	91.2	62.56	-378.4	3,555.6	455.6	293.4	162.22	2.809		
10,700.0	7,098.0	10,512.9	6,888.0	93.4	93.6	62.56	-378.4	3,655.6	455.6	289.1	166.58	2.735		
10,800.0	7,098.0	10,612.9	6,888.0	95.9	96.1	62.56	-378.4	3,755.6	455.6	284.7	170.94	2.666		
10,900.0	7,098.0	10,712.9	6,888.0	98.3	98.5	62.56	-378.4	3,855.6	455.6	280.3	175.29	2.599		
11,000.0	7,098.0	10,812.9	6,888.0	100.8	101.0	62.56	-378.4	3,955.6	455.6	276.0	179.65	2.536		
11,100.0	7,098.0	10,912.9	6,888.0	103.3	103.5	62.56	-378.4	4,055.6	455.6	271.6	184.02	2.476		
11,200.0	7,098.0	11,012.9	6,888.0	105.7	105.9	62.56	-378.4	4,155.6	455.6	267.3	188.38	2.419		
11,300.0	7,098.0	11,112.9	6,888.0	108.2	108.4	62.56	-378.4	4,255.6	455.6	262.9	192.75	2.364		
11,400.0	7,098.0	11,212.9	6,888.0	110.6	110.8	62.56	-378.4	4,355.6	455.6	258.5	197.11	2.312		
11,500.0	7,098.0	11,312.9	6,888.0	113.1	113.3	62.56	-378.4	4,455.6	455.6	254.2	201.48	2.261		
11,600.0	7,098.0	11,412.9	6,888.0	115.6	115.7	62.56	-378.4	4,555.6	455.6	249.8	205.85	2.213		
11,626.5	7,098.0	11,439.4	6,888.0	116.2	116.4	62.56	-378.4	4,582.1	455.6	248.6	207.01	2.201 SF		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 S28-T3N-R68W (Qualls) - Qualls 3G-28H - 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	-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	59.977		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-18.2	0.0	18.2	17.6	0.65	27.904 CC, ES		
300.0	300.0	299.7	299.7	0.5	0.5	-179.11	-19.0	-0.3	19.0	18.0	1.00	18.995		
400.0	400.0	399.3	399.3	0.7	0.7	-176.84	-21.5	-1.2	21.5	20.2	1.35	15.881		
500.0	500.0	498.8	498.7	0.9	0.9	-92.14	-25.5	-2.7	25.7	24.0	1.70	15.133 SF		
600.0	600.0	598.2	597.9	1.0	1.1	-93.78	-31.2	-4.7	31.7	29.6	2.05	15.425		
700.0	699.9	697.3	696.7	1.2	1.3	-96.57	-38.5	-7.4	39.5	37.0	2.42	16.325		
800.0	799.7	796.1	795.0	1.4	1.5	-99.64	-47.3	-10.6	49.2	46.4	2.80	17.590		
900.0	899.4	894.5	892.8	1.6	1.8	-102.55	-57.7	-14.4	60.9	57.7	3.19	19.065		
1,000.0	998.9	992.5	989.9	1.8	2.0	-105.12	-69.6	-18.7	74.6	71.0	3.61	20.645		
1,100.0	1,098.3	1,089.9	1,086.4	2.1	2.3	-107.34	-83.0	-23.6	90.4	86.4	4.06	22.255		
1,200.0	1,197.4	1,186.9	1,182.0	2.3	2.6	-109.21	-97.9	-29.0	108.3	103.8	4.54	23.844		
1,300.0	1,296.4	1,284.8	1,278.4	2.6	2.9	-110.79	-113.8	-34.8	127.4	122.4	5.04	25.292		
1,400.0	1,395.5	1,382.9	1,375.0	2.9	3.3	-111.96	-129.8	-40.6	146.7	141.1	5.54	26.454		
1,500.0	1,494.5	1,481.0	1,471.6	3.2	3.6	-112.86	-145.9	-46.5	165.9	159.9	6.06	27.401		
1,600.0	1,593.5	1,579.1	1,568.2	3.5	3.9	-113.57	-161.9	-52.3	185.2	178.6	6.57	28.184		
1,700.0	1,692.5	1,677.2	1,664.8	3.8	4.3	-114.15	-177.9	-58.1	204.5	197.4	7.09	28.842		
1,800.0	1,791.6	1,775.3	1,761.4	4.0	4.6	-114.62	-193.9	-63.9	223.8	216.2	7.61	29.401		
1,900.0	1,890.6	1,873.3	1,858.1	4.3	4.9	-115.03	-209.9	-69.8	243.2	235.0	8.14	29.881		
2,000.0	1,989.6	1,971.4	1,954.7	4.6	5.3	-115.37	-225.9	-75.6	262.5	253.9	8.67	30.298		
2,100.0	2,088.6	2,069.5	2,051.3	4.9	5.6	-115.66	-241.9	-81.4	281.9	272.7	9.19	30.662		
2,200.0	2,187.7	2,167.7	2,147.9	5.2	5.9	-115.97	-257.9	-87.2	301.1	291.4	9.72	30.976		
2,300.0	2,287.0	2,266.0	2,244.7	5.5	6.3	-116.03	-273.9	-93.1	319.5	309.3	10.22	31.260		
2,400.0	2,386.5	2,364.4	2,341.6	5.7	6.6	-115.82	-290.0	-98.9	337.3	326.6	10.70	31.517		
2,500.0	2,486.2	2,462.8	2,438.6	5.9	7.0	-115.38	-306.1	-104.8	354.3	343.1	11.16	31.757		
2,600.0	2,585.9	2,561.4	2,535.6	6.1	7.3	-114.74	-322.2	-110.6	370.6	359.0	11.58	31.991		
2,700.0	2,685.8	2,659.9	2,632.7	6.3	7.7	-113.93	-338.2	-116.5	386.2	374.3	11.98	32.228		
2,800.0	2,785.8	2,758.5	2,729.8	6.4	8.0	-112.96	-354.3	-122.3	401.3	389.0	12.36	32.479		
2,900.0	2,885.8	2,857.0	2,826.8	6.6	8.3	-111.84	-370.4	-128.2	415.9	403.2	12.70	32.751		
3,000.0	2,985.8	2,955.5	2,923.8	6.7	8.7	165.65	-386.5	-134.0	430.3	417.1	13.14	32.733		
3,100.0	3,085.8	3,054.0	3,020.8	6.9	9.0	166.91	-402.5	-139.9	444.8	431.1	13.66	32.571		
3,200.0	3,185.8	3,152.5	3,117.7	7.0	9.4	168.09	-418.6	-145.7	459.5	445.3	14.17	32.424		
3,300.0	3,285.8	3,251.0	3,214.7	7.1	9.7	169.19	-434.7	-151.6	474.4	459.7	14.69	32.293		
3,400.0	3,385.8	3,349.4	3,311.7	7.3	10.1	170.23	-450.7	-157.4	489.4	474.2	15.21	32.176		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 S28-T3N-R68W (Qualls) - SLATER 34-28 (EXISTING) - EXISTING - SURVEYS													Offset Site Error:	0.0 ft
Survey Program: 113-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		
9,600.0	7,098.0	7,173.6	7,101.4	66.5	18.9	89.77	-117.7	2,968.9	437.6	356.9	80.66	5.425		
9,700.0	7,098.0	7,173.6	7,101.4	69.0	18.9	89.75	-117.7	2,968.9	344.7	261.6	83.09	4.148		
9,800.0	7,098.0	7,173.5	7,101.3	71.4	18.9	89.74	-117.7	2,968.9	257.2	171.7	85.53	3.007		
9,900.0	7,098.0	7,173.5	7,101.3	73.9	18.9	89.72	-117.7	2,968.9	183.0	95.0	87.97	2.080		
10,000.0	7,098.0	7,173.5	7,101.3	76.3	18.9	89.71	-117.7	2,968.9	144.3	53.9	90.41	1.596		
10,013.3	7,098.0	7,173.5	7,101.3	76.6	18.9	89.70	-117.7	2,968.9	143.7	52.9	90.73	1.583 CC, ES, SF		
10,100.0	7,098.0	7,173.4	7,101.2	78.7	18.9	89.69	-117.7	2,968.9	167.8	75.0	92.85	1.807		
10,200.0	7,098.0	7,173.4	7,101.2	81.2	18.9	89.68	-117.7	2,968.9	235.6	140.3	95.30	2.472		
10,300.0	7,098.0	7,173.4	7,101.2	83.6	18.9	89.66	-117.7	2,968.9	320.7	222.9	97.75	3.281		
10,400.0	7,098.0	7,173.3	7,101.1	86.1	18.9	89.65	-117.7	2,968.9	412.5	312.3	100.19	4.117		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 S28-T3N-R68W (Qualls) - SLATER 44-28 (EXISTING) - EXISTING - SURVEYS													Offset Site Error: 0.0 ft
Survey Program: 146-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	
11,100.0	7,098.0	7,299.4	7,094.0	103.3	28.3	91.18	-216.5	4,492.2	499.4	372.1	127.35	3.922	
11,200.0	7,098.0	7,298.3	7,092.9	105.7	28.3	90.92	-216.5	4,492.2	414.8	285.0	129.82	3.196	
11,300.0	7,098.0	7,297.1	7,091.8	108.2	28.3	90.65	-216.5	4,492.2	338.8	206.5	132.29	2.561	
11,400.0	7,098.0	7,296.0	7,090.7	110.6	28.3	90.39	-216.5	4,492.2	278.3	143.5	134.75	2.065	
11,500.0	7,098.0	7,294.9	7,089.6	113.1	28.3	90.13	-216.5	4,492.2	245.2	108.0	137.22	1.787	
11,536.6	7,098.0	7,294.5	7,089.2	114.0	28.3	90.04	-216.5	4,492.3	242.4	104.3	138.12	1.755 CC, ES, SF	
11,600.0	7,098.0	7,293.9	7,088.5	115.6	28.3	89.88	-216.5	4,492.3	250.6	110.9	139.68	1.794	
11,626.5	7,098.0	7,293.6	7,088.2	116.2	28.3	89.81	-216.5	4,492.3	258.5	118.2	140.33	1.842	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Qualls 3E-28H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 4970.0ft (Original Well Elev)
Reference Site:	S28-T3N-R68W (Qualls)	MD Reference:	WELL @ 4970.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Qualls 3E-28H	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 @ 4970.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Qualls 3E-28H
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.31°

