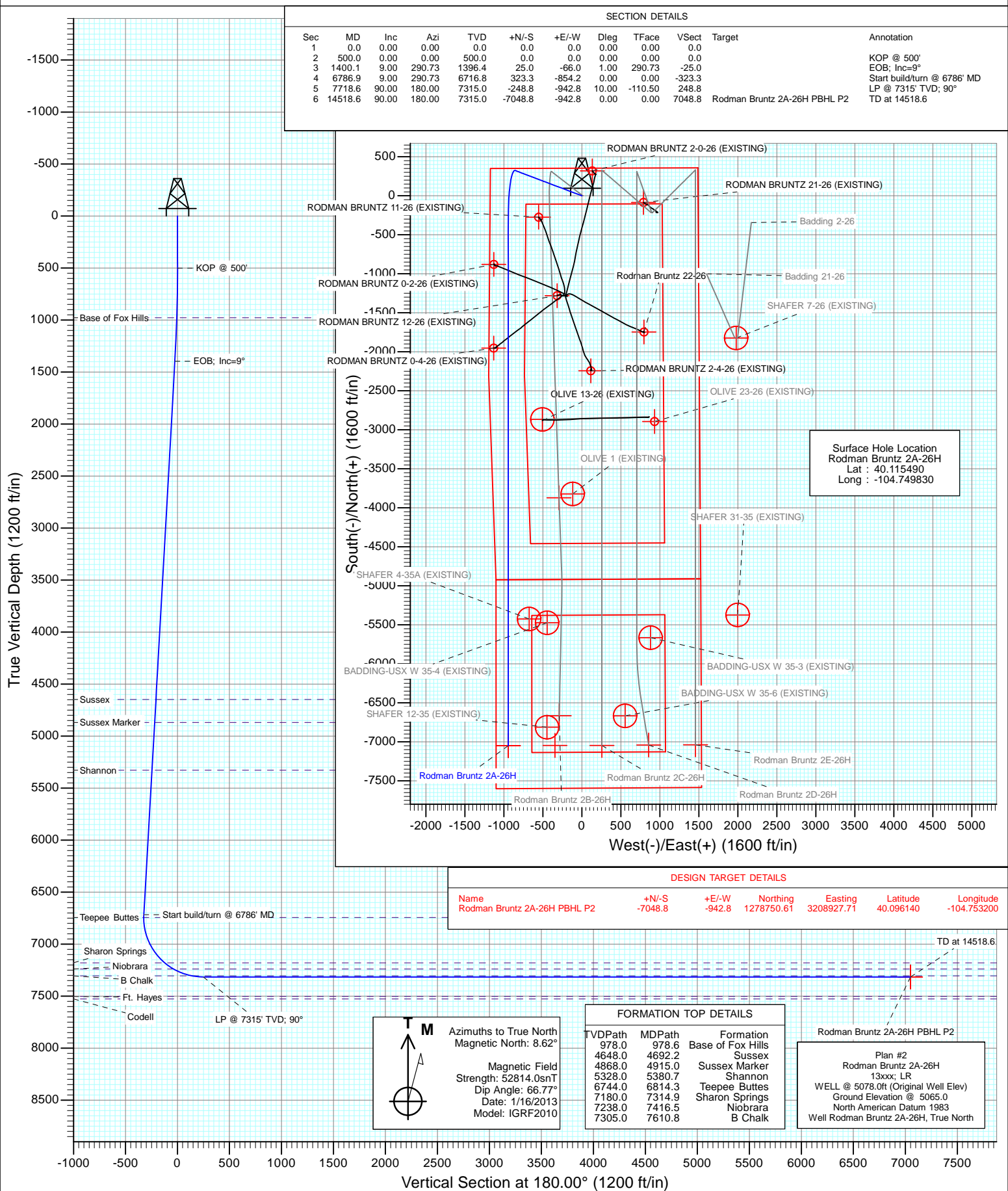




Project: DJ Wattenberg
Site: S26-T2N-R66W (Rodman Bruntz)
Well: Rodman Bruntz 2A-26H
Wellbore: DD
Design: Plan #2



Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site:	S26-T2N-R66W (Rodman Bruntz)	North Reference:	True
Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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		S26-T2N-R66W (Rodman Bruntz)			
Site Position:		Northing:	1,285,917.94 ft	Latitude:	40.115810
From:	Lat/Long	Easting:	3,209,130.25 ft	Longitude:	-104.752260
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.48 °

Well	Rodman Bruntz 2A-26H					
Well Position	+N/-S	0.0 ft	Northing:	1,285,807.10 ft	Latitude:	40.115490
	+E/-W	0.0 ft	Easting:	3,209,810.83 ft	Longitude:	-104.749830
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	5,065.0 ft

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/16/2013	8.62	66.77	52,814

Design	Plan #2				
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	180.00	

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	
1,400.1	9.00	290.73	1,396.4	25.0	-66.0	1.00	1.00	0.00	290.73	
6,786.9	9.00	290.73	6,716.8	323.3	-854.2	0.00	0.00	0.00	0.00	
7,718.6	90.00	180.00	7,315.0	-248.8	-942.8	10.00	8.69	-11.88	-110.50	
14,518.6	90.00	180.00	7,315.0	-7,048.8	-942.8	0.00	0.00	0.00	0.00	Rodman Bruntz 2A-26H

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site:	S26-T2N-R66W (Rodman Bruntz)	North Reference:	True
Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	KOP @ 500'
600.0	1.00	290.73	600.0	0.3	-0.8	-0.3	1.00	1.00	
700.0	2.00	290.73	700.0	1.2	-3.3	-1.2	1.00	1.00	
800.0	3.00	290.73	799.9	2.8	-7.3	-2.8	1.00	1.00	
900.0	4.00	290.73	899.7	4.9	-13.1	-4.9	1.00	1.00	
978.6	4.79	290.73	978.0	7.1	-18.7	-7.1	1.00	1.00	Base of Fox Hills
1,000.0	5.00	290.73	999.4	7.7	-20.4	-7.7	1.00	1.00	
1,100.0	6.00	290.73	1,098.9	11.1	-29.4	-11.1	1.00	1.00	
1,200.0	7.00	290.73	1,198.3	15.1	-39.9	-15.1	1.00	1.00	
1,300.0	8.00	290.73	1,297.4	19.7	-52.1	-19.7	1.00	1.00	
1,400.0	9.00	290.73	1,396.3	25.0	-66.0	-25.0	1.00	1.00	
1,400.1	9.00	290.73	1,396.4	25.0	-66.0	-25.0	1.00	1.00	EOB; Inc=9°
1,500.0	9.00	290.73	1,495.1	30.5	-80.6	-30.5	0.00	0.00	
1,600.0	9.00	290.73	1,593.8	36.0	-95.2	-36.0	0.00	0.00	
1,700.0	9.00	290.73	1,692.6	41.6	-109.9	-41.6	0.00	0.00	
1,800.0	9.00	290.73	1,791.4	47.1	-124.5	-47.1	0.00	0.00	
1,900.0	9.00	290.73	1,890.1	52.7	-139.1	-52.7	0.00	0.00	
2,000.0	9.00	290.73	1,988.9	58.2	-153.8	-58.2	0.00	0.00	
2,100.0	9.00	290.73	2,087.7	63.7	-168.4	-63.7	0.00	0.00	
2,200.0	9.00	290.73	2,186.5	69.3	-183.0	-69.3	0.00	0.00	
2,300.0	9.00	290.73	2,285.2	74.8	-197.7	-74.8	0.00	0.00	
2,400.0	9.00	290.73	2,384.0	80.4	-212.3	-80.4	0.00	0.00	
2,500.0	9.00	290.73	2,482.8	85.9	-226.9	-85.9	0.00	0.00	
2,600.0	9.00	290.73	2,581.5	91.4	-241.6	-91.4	0.00	0.00	
2,700.0	9.00	290.73	2,680.3	97.0	-256.2	-97.0	0.00	0.00	
2,800.0	9.00	290.73	2,779.1	102.5	-270.8	-102.5	0.00	0.00	
2,900.0	9.00	290.73	2,877.8	108.0	-285.5	-108.0	0.00	0.00	
3,000.0	9.00	290.73	2,976.6	113.6	-300.1	-113.6	0.00	0.00	
3,100.0	9.00	290.73	3,075.4	119.1	-314.7	-119.1	0.00	0.00	
3,200.0	9.00	290.73	3,174.1	124.7	-329.3	-124.7	0.00	0.00	
3,300.0	9.00	290.73	3,272.9	130.2	-344.0	-130.2	0.00	0.00	
3,400.0	9.00	290.73	3,371.7	135.7	-358.6	-135.7	0.00	0.00	
3,500.0	9.00	290.73	3,470.4	141.3	-373.2	-141.3	0.00	0.00	
3,600.0	9.00	290.73	3,569.2	146.8	-387.9	-146.8	0.00	0.00	
3,700.0	9.00	290.73	3,668.0	152.3	-402.5	-152.3	0.00	0.00	
3,800.0	9.00	290.73	3,766.7	157.9	-417.1	-157.9	0.00	0.00	
3,900.0	9.00	290.73	3,865.5	163.4	-431.8	-163.4	0.00	0.00	
4,000.0	9.00	290.73	3,964.3	169.0	-446.4	-169.0	0.00	0.00	
4,100.0	9.00	290.73	4,063.1	174.5	-461.0	-174.5	0.00	0.00	
4,200.0	9.00	290.73	4,161.8	180.0	-475.7	-180.0	0.00	0.00	
4,300.0	9.00	290.73	4,260.6	185.6	-490.3	-185.6	0.00	0.00	
4,400.0	9.00	290.73	4,359.4	191.1	-504.9	-191.1	0.00	0.00	
4,500.0	9.00	290.73	4,458.1	196.7	-519.6	-196.7	0.00	0.00	
4,600.0	9.00	290.73	4,556.9	202.2	-534.2	-202.2	0.00	0.00	
4,692.2	9.00	290.73	4,648.0	207.3	-547.7	-207.3	0.00	0.00	Sussex
4,700.0	9.00	290.73	4,655.7	207.7	-548.8	-207.7	0.00	0.00	
4,800.0	9.00	290.73	4,754.4	213.3	-563.5	-213.3	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site:	S26-T2N-R66W (Rodman Bruntz)	North Reference:	True
Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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
4,900.0	9.00	290.73	4,853.2	218.8	-578.1	-218.8	0.00	0.00	
4,915.0	9.00	290.73	4,868.0	219.6	-580.3	-219.6	0.00	0.00	Sussex Marker
5,000.0	9.00	290.73	4,952.0	224.3	-592.7	-224.3	0.00	0.00	
5,100.0	9.00	290.73	5,050.7	229.9	-607.4	-229.9	0.00	0.00	
5,200.0	9.00	290.73	5,149.5	235.4	-622.0	-235.4	0.00	0.00	
5,300.0	9.00	290.73	5,248.3	241.0	-636.6	-241.0	0.00	0.00	
5,380.7	9.00	290.73	5,328.0	245.4	-648.4	-245.4	0.00	0.00	Shannon
5,400.0	9.00	290.73	5,347.0	246.5	-651.2	-246.5	0.00	0.00	
5,500.0	9.00	290.73	5,445.8	252.0	-665.9	-252.0	0.00	0.00	
5,600.0	9.00	290.73	5,544.6	257.6	-680.5	-257.6	0.00	0.00	
5,700.0	9.00	290.73	5,643.4	263.1	-695.1	-263.1	0.00	0.00	
5,800.0	9.00	290.73	5,742.1	268.7	-709.8	-268.7	0.00	0.00	
5,900.0	9.00	290.73	5,840.9	274.2	-724.4	-274.2	0.00	0.00	
6,000.0	9.00	290.73	5,939.7	279.7	-739.0	-279.7	0.00	0.00	
6,100.0	9.00	290.73	6,038.4	285.3	-753.7	-285.3	0.00	0.00	
6,200.0	9.00	290.73	6,137.2	290.8	-768.3	-290.8	0.00	0.00	
6,300.0	9.00	290.73	6,236.0	296.3	-782.9	-296.3	0.00	0.00	
6,400.0	9.00	290.73	6,334.7	301.9	-797.6	-301.9	0.00	0.00	
6,500.0	9.00	290.73	6,433.5	307.4	-812.2	-307.4	0.00	0.00	
6,600.0	9.00	290.73	6,532.3	313.0	-826.8	-313.0	0.00	0.00	
6,700.0	9.00	290.73	6,631.0	318.5	-841.5	-318.5	0.00	0.00	
6,786.9	9.00	290.73	6,716.8	323.3	-854.2	-323.3	0.00	0.00	Start build/turn @ 6786' MD
6,800.0	8.63	282.51	6,729.8	323.9	-856.1	-323.9	10.00	-2.84	
6,814.3	8.44	272.91	6,744.0	324.2	-858.2	-324.2	10.00	-1.33	Teepee Buttes
6,900.0	11.69	225.70	6,828.5	318.4	-870.7	-318.4	10.00	3.80	
7,000.0	19.94	204.10	6,924.7	295.7	-885.0	-295.7	10.00	8.25	
7,100.0	29.27	195.32	7,015.5	256.5	-898.4	-256.5	10.00	9.33	
7,200.0	38.92	190.57	7,098.2	201.9	-910.7	-201.9	10.00	9.65	
7,300.0	48.69	187.48	7,170.3	133.6	-921.4	-133.6	10.00	9.77	
7,314.9	50.15	187.10	7,180.0	122.4	-922.8	-122.4	10.00	9.81	Sharon Springs
7,400.0	58.52	185.20	7,229.6	53.7	-930.1	-53.7	10.00	9.84	
7,416.5	60.14	184.88	7,238.0	39.6	-931.4	-39.6	10.00	9.85	Niobrara
7,500.0	68.39	183.36	7,274.2	-35.4	-936.8	35.4	10.00	9.87	
7,600.0	78.27	181.76	7,302.9	-131.0	-941.0	131.0	10.00	9.88	
7,610.8	79.34	181.60	7,305.0	-141.6	-941.3	141.6	10.00	9.89	B Chalk
7,700.0	88.16	180.27	7,314.7	-230.2	-942.7	230.2	10.00	9.89	
7,718.6	90.00	180.00	7,315.0	-248.8	-942.8	248.8	10.00	9.89	LP @ 7315' TVD; 90°
7,800.0	90.00	180.00	7,315.0	-330.2	-942.8	330.2	0.00	0.00	
7,900.0	90.00	180.00	7,315.0	-430.2	-942.8	430.2	0.00	0.00	
8,000.0	90.00	180.00	7,315.0	-530.2	-942.8	530.2	0.00	0.00	
8,100.0	90.00	180.00	7,315.0	-630.2	-942.8	630.2	0.00	0.00	
8,200.0	90.00	180.00	7,315.0	-730.2	-942.8	730.2	0.00	0.00	
8,300.0	90.00	180.00	7,315.0	-830.2	-942.8	830.2	0.00	0.00	
8,400.0	90.00	180.00	7,315.0	-930.2	-942.8	930.2	0.00	0.00	
8,500.0	90.00	180.00	7,315.0	-1,030.2	-942.8	1,030.2	0.00	0.00	
8,600.0	90.00	180.00	7,315.0	-1,130.2	-942.8	1,130.2	0.00	0.00	
8,700.0	90.00	180.00	7,315.0	-1,230.2	-942.8	1,230.2	0.00	0.00	
8,800.0	90.00	180.00	7,315.0	-1,330.2	-942.8	1,330.2	0.00	0.00	
8,900.0	90.00	180.00	7,315.0	-1,430.2	-942.8	1,430.2	0.00	0.00	
9,000.0	90.00	180.00	7,315.0	-1,530.2	-942.8	1,530.2	0.00	0.00	
9,100.0	90.00	180.00	7,315.0	-1,630.2	-942.8	1,630.2	0.00	0.00	
9,200.0	90.00	180.00	7,315.0	-1,730.2	-942.8	1,730.2	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site:	S26-T2N-R66W (Rodman Bruntz)	North Reference:	True
Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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
9,300.0	90.00	180.00	7,315.0	-1,830.2	-942.8	1,830.2	0.00	0.00	
9,400.0	90.00	180.00	7,315.0	-1,930.2	-942.8	1,930.2	0.00	0.00	
9,500.0	90.00	180.00	7,315.0	-2,030.2	-942.8	2,030.2	0.00	0.00	
9,600.0	90.00	180.00	7,315.0	-2,130.2	-942.8	2,130.2	0.00	0.00	
9,700.0	90.00	180.00	7,315.0	-2,230.2	-942.8	2,230.2	0.00	0.00	
9,800.0	90.00	180.00	7,315.0	-2,330.2	-942.8	2,330.2	0.00	0.00	
9,900.0	90.00	180.00	7,315.0	-2,430.2	-942.8	2,430.2	0.00	0.00	
10,000.0	90.00	180.00	7,315.0	-2,530.2	-942.8	2,530.2	0.00	0.00	
10,100.0	90.00	180.00	7,315.0	-2,630.2	-942.8	2,630.2	0.00	0.00	
10,200.0	90.00	180.00	7,315.0	-2,730.2	-942.8	2,730.2	0.00	0.00	
10,300.0	90.00	180.00	7,315.0	-2,830.2	-942.8	2,830.2	0.00	0.00	
10,400.0	90.00	180.00	7,315.0	-2,930.2	-942.8	2,930.2	0.00	0.00	
10,500.0	90.00	180.00	7,315.0	-3,030.2	-942.8	3,030.2	0.00	0.00	
10,600.0	90.00	180.00	7,315.0	-3,130.2	-942.8	3,130.2	0.00	0.00	
10,700.0	90.00	180.00	7,315.0	-3,230.2	-942.8	3,230.2	0.00	0.00	
10,800.0	90.00	180.00	7,315.0	-3,330.2	-942.8	3,330.2	0.00	0.00	
10,900.0	90.00	180.00	7,315.0	-3,430.2	-942.8	3,430.2	0.00	0.00	
11,000.0	90.00	180.00	7,315.0	-3,530.2	-942.8	3,530.2	0.00	0.00	
11,100.0	90.00	180.00	7,315.0	-3,630.2	-942.8	3,630.2	0.00	0.00	
11,200.0	90.00	180.00	7,315.0	-3,730.2	-942.8	3,730.2	0.00	0.00	
11,300.0	90.00	180.00	7,315.0	-3,830.2	-942.8	3,830.2	0.00	0.00	
11,400.0	90.00	180.00	7,315.0	-3,930.2	-942.8	3,930.2	0.00	0.00	
11,500.0	90.00	180.00	7,315.0	-4,030.2	-942.8	4,030.2	0.00	0.00	
11,600.0	90.00	180.00	7,315.0	-4,130.2	-942.8	4,130.2	0.00	0.00	
11,700.0	90.00	180.00	7,315.0	-4,230.2	-942.8	4,230.2	0.00	0.00	
11,800.0	90.00	180.00	7,315.0	-4,330.2	-942.8	4,330.2	0.00	0.00	
11,900.0	90.00	180.00	7,315.0	-4,430.2	-942.8	4,430.2	0.00	0.00	
12,000.0	90.00	180.00	7,315.0	-4,530.2	-942.8	4,530.2	0.00	0.00	
12,100.0	90.00	180.00	7,315.0	-4,630.2	-942.8	4,630.2	0.00	0.00	
12,200.0	90.00	180.00	7,315.0	-4,730.2	-942.8	4,730.2	0.00	0.00	
12,300.0	90.00	180.00	7,315.0	-4,830.2	-942.8	4,830.2	0.00	0.00	
12,400.0	90.00	180.00	7,315.0	-4,930.2	-942.8	4,930.2	0.00	0.00	
12,500.0	90.00	180.00	7,315.0	-5,030.2	-942.8	5,030.2	0.00	0.00	
12,600.0	90.00	180.00	7,315.0	-5,130.2	-942.8	5,130.2	0.00	0.00	
12,700.0	90.00	180.00	7,315.0	-5,230.2	-942.8	5,230.2	0.00	0.00	
12,800.0	90.00	180.00	7,315.0	-5,330.2	-942.8	5,330.2	0.00	0.00	
12,900.0	90.00	180.00	7,315.0	-5,430.2	-942.8	5,430.2	0.00	0.00	
13,000.0	90.00	180.00	7,315.0	-5,530.2	-942.8	5,530.2	0.00	0.00	
13,100.0	90.00	180.00	7,315.0	-5,630.2	-942.8	5,630.2	0.00	0.00	
13,200.0	90.00	180.00	7,315.0	-5,730.2	-942.8	5,730.2	0.00	0.00	
13,300.0	90.00	180.00	7,315.0	-5,830.2	-942.8	5,830.2	0.00	0.00	
13,400.0	90.00	180.00	7,315.0	-5,930.2	-942.8	5,930.2	0.00	0.00	
13,500.0	90.00	180.00	7,315.0	-6,030.2	-942.8	6,030.2	0.00	0.00	
13,600.0	90.00	180.00	7,315.0	-6,130.2	-942.8	6,130.2	0.00	0.00	
13,700.0	90.00	180.00	7,315.0	-6,230.2	-942.8	6,230.2	0.00	0.00	
13,800.0	90.00	180.00	7,315.0	-6,330.2	-942.8	6,330.2	0.00	0.00	
13,900.0	90.00	180.00	7,315.0	-6,430.2	-942.8	6,430.2	0.00	0.00	
14,000.0	90.00	180.00	7,315.0	-6,530.2	-942.8	6,530.2	0.00	0.00	
14,100.0	90.00	180.00	7,315.0	-6,630.2	-942.8	6,630.2	0.00	0.00	
14,200.0	90.00	180.00	7,315.0	-6,730.2	-942.8	6,730.2	0.00	0.00	
14,300.0	90.00	180.00	7,315.0	-6,830.2	-942.8	6,830.2	0.00	0.00	
14,400.0	90.00	180.00	7,315.0	-6,930.2	-942.8	6,930.2	0.00	0.00	

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Project:	DJ Wattenberg	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site:	S26-T2N-R66W (Rodman Bruntz)	North Reference:	True
Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #2		

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
14,500.0	90.00	180.00	7,315.0	-7,030.2	-942.8	7,030.2	0.00	0.00	
14,518.6	90.00	180.00	7,315.0	-7,048.8	-942.8	7,048.8	0.00	0.00	TD at 14518.6 - Rodman Bruntz 2A-26H 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									
Rodman Bruntz 2A-26H	0.00	0.00	7,315.0	-7,048.8	-942.8	1,278,750.61	3,208,927.71	40.096140	-104.753200
- plan hits target center									
- Point									
Rodman Bruntz 2A-26H	0.00	0.00	7,334.0	-7,048.8	-942.8	1,278,750.61	3,208,927.71	40.096140	-104.753200
- plan misses target center by 19.0ft at 14518.6ft MD (7315.0 TVD, -7048.8 N, -942.8 E)									
- Point									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
978.6	978.0	Base of Fox Hills				
4,692.2	4,648.0	Sussex				
4,915.0	4,868.0	Sussex Marker				
5,380.7	5,328.0	Shannon				
6,814.3	6,744.0	Teepee Buttes				
7,314.9	7,180.0	Sharon Springs				
7,416.5	7,238.0	Niobrara				
7,610.8	7,305.0	B Chalk				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
500.0	500.0	0.0	0.0	KOP @ 500'
1,400.1	1,396.4	25.0	-66.0	EOB; Inc=9°
6,786.9	6,716.8	323.3	-854.2	Start build/turn @ 6786' MD
7,718.6	7,315.0	-248.8	-942.8	LP @ 7315' TVD; 90°
14,518.6	7,315.0	-7,048.8	-942.8	TD at 14518.6

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S26-T2N-R66W (Rodman Bruntz)

Rodman Bruntz 2A-26H

DD

Plan #2

Anticollision Report

17 July, 2013

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Reference Site:	S26-T2N-R66W (Rodman Bruntz)	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
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	7/17/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	14,518.6	Plan #2 (DD)	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
S26-T2N-R66W (Rodman Bruntz)						
Badding 21-26 - DD - Plan #1						Out of range
Badding 2-26 - DD - Plan #1						Out of range
BADDING-USX W 35-3 (EXISTING) - Existing - Existing						Out of range
BADDING-USX W 35-4 (EXISTING) - Existing - Existing	12,943.1	7,323.0	496.9	385.6	4.464	CC, ES, SF
BADDING-USX W 35-6 (EXISTING) - Existing - Existing						Out of range
OLIVE 1 (EXISTING) - Existing - Existing						Out of range
OLIVE 13-26 (EXISTING) - Existing - Existing	10,347.8	7,546.4	440.9	374.1	6.595	CC, ES
OLIVE 13-26 (EXISTING) - Existing - Existing	10,400.0	7,546.5	444.0	376.3	6.554	SF
OLIVE 13-26 (EXISTING) - Existing - Plan #2	10,336.7	7,518.6	436.5	370.0	6.558	CC, ES
OLIVE 13-26 (EXISTING) - Existing - Plan #2	10,400.0	7,518.6	441.1	373.4	6.521	SF
OLIVE 23-26 (EXISTING) - Existing - Existing						Out of range
RODMAN BRUNTZ 0-2-26 (EXISTING) - ENCANA WEL	8,346.5	7,431.5	180.8	144.8	5.028	CC, ES, SF
RODMAN BRUNTZ 0-4-26 (EXISTING) - ENCANA WEL	9,422.8	7,477.2	176.9	120.8	3.150	CC, ES, SF
RODMAN BRUNTZ 11-26 (EXISTING) - ENCANA WELL	7,758.9	7,453.3	401.6	365.7	11.173	CC, ES
RODMAN BRUNTZ 11-26 (EXISTING) - ENCANA WELL	7,800.0	7,451.2	403.5	367.3	11.127	SF
RODMAN BRUNTZ 12-26 (EXISTING) - ENCANA WELL						Out of range
RODMAN BRUNTZ 2-0-26 (EXISTING) - ENCANA WEL						Out of range
RODMAN BRUNTZ 21-26 (EXISTING) - ENCANA WELL						Out of range
Rodman Bruntz 22-26 - DD - SURVEYS						Out of range
RODMAN BRUNTZ 2-4-26 (EXISTING) - ENCANA WEL						Out of range
Rodman Bruntz 2B-26H - Hz - Plan #2	500.0	500.0	11.2	9.5	6.581	CC, ES
Rodman Bruntz 2B-26H - Hz - Plan #2	600.0	600.0	12.0	10.0	5.860	SF
Rodman Bruntz 2C-26H - Hz - Plan #1						Out of range
Rodman Bruntz 2D-26H - Hz - Plan #3						Out of range
Rodman Bruntz 2E-26H - Hz - Plan #1						Out of range
SHAFAER 12-35 (EXISTING) - Existing - Existing	14,282.6	7,337.0	496.3	361.6	3.685	CC, ES
SHAFAER 12-35 (EXISTING) - Existing - Existing	14,300.0	7,337.0	496.6	361.6	3.679	SF
SHAFAER 31-35 (EXISTING) - Existing - Existing						Out of range
SHAFAER 4-35A (EXISTING) - Existing - Existing	12,894.6	7,317.0	266.1	155.6	2.409	CC
SHAFAER 4-35A (EXISTING) - Existing - Existing	12,900.0	7,317.0	266.1	155.6	2.407	ES, SF
SHAFAER 7-26 (EXISTING) - Existing - Existing						Out of range

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Reference Site:	S26-T2N-R66W (Rodman Bruntz)	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design		S26-T2N-R66W (Rodman Bruntz) - BADDING-USX W 35-4 (EXISTING) - Existing - Existing										Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Total Uncertainty Axis	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
12,900.0	7,315.0	7,323.0	7,323.0	99.2	12.8	-90.00	-5,473.3	-445.9	498.7	388.2	110.57	4.511	
12,943.1	7,315.0	7,323.0	7,323.0	99.9	12.8	-90.00	-5,473.3	-445.9	496.9	385.6	111.32	4.464	CC, ES, SF

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Reference Site:	S26-T2N-R66W (Rodman Bruntz)	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T2N-R66W (Rodman Bruntz) - OLIVE 13-26 (EXISTING) - Existing - Existing												Offset Site Error:	0.0 ft
Survey Program: 1163-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
10,200.0	7,315.0	7,546.4	7,329.6	53.8	28.3	-90.47	-2,877.9	-501.9	465.0	400.7	64.34	7.228	
10,300.0	7,315.0	7,546.4	7,329.6	55.5	28.3	-90.47	-2,877.9	-501.9	443.5	377.5	66.04	6.716	
10,347.8	7,315.0	7,546.4	7,329.7	56.2	28.3	-90.47	-2,877.9	-501.9	440.9	374.1	66.85	6.595 CC, ES	
10,400.0	7,315.0	7,546.5	7,329.7	57.1	28.3	-90.48	-2,877.9	-501.9	444.0	376.3	67.74	6.554 SF	
10,500.0	7,315.0	7,546.5	7,329.7	58.7	28.3	-90.48	-2,877.9	-501.9	466.5	397.0	69.45	6.717	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Reference Site:	S26-T2N-R66W (Rodman Bruntz)	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design											S26-T2N-R66W (Rodman Bruntz) - OLIVE 13-26 (EXISTING) - Existing - Plan #2			Offset Site Error:		0.0 ft
Survey Program:		0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance									
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	+E/-W	Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor	Warning			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)						
10,100.0	7,315.0	7,518.6	7,342.0	52.2	27.9	-90.00	-2,866.9	-506.3	496.6	434.0	62.54	7.940				
10,200.0	7,315.0	7,518.6	7,342.0	53.8	27.9	-90.00	-2,866.9	-506.3	457.4	393.2	64.23	7.121				
10,300.0	7,315.0	7,518.6	7,342.0	55.5	27.9	-90.00	-2,866.9	-506.3	438.1	372.1	65.93	6.644				
10,336.7	7,315.0	7,518.6	7,342.0	56.1	27.9	-90.00	-2,866.9	-506.3	436.5	370.0	66.56	6.558 CC, ES				
10,400.0	7,315.0	7,518.6	7,342.0	57.1	27.9	-90.00	-2,866.9	-506.3	441.1	373.4	67.64	6.521 SF				
10,500.0	7,315.0	7,518.6	7,342.0	58.7	27.9	-90.00	-2,866.9	-506.3	466.1	396.7	69.34	6.721				

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Reference Site:	S26-T2N-R66W (Rodman Bruntz)	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T2N-R66W (Rodman Bruntz) - RODMAN BRUNTZ 0-2-26 (EXISTING) - ENCANA WELL - SURVE													Offset Site Error: 0.0 ft
Survey Program: 95-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		
7,900.0	7,315.0	7,433.7	7,322.8	23.0	21.5	89.61	-876.7	-1,123.6	481.7	451.3	30.40	15.844	
8,000.0	7,315.0	7,433.2	7,322.3	23.8	21.5	89.45	-876.7	-1,123.6	390.8	359.4	31.49	12.411	
8,100.0	7,315.0	7,432.7	7,321.8	24.6	21.5	89.29	-876.7	-1,123.6	305.7	273.0	32.68	9.354	
8,200.0	7,315.0	7,432.2	7,321.3	25.6	21.5	89.13	-876.7	-1,123.6	232.7	198.8	33.96	6.853	
8,300.0	7,315.0	7,431.7	7,320.8	26.6	21.5	88.97	-876.7	-1,123.5	186.7	151.4	35.31	5.287	
8,346.5	7,315.0	7,431.5	7,320.5	27.1	21.5	88.90	-876.7	-1,123.5	180.8	144.8	35.96	5.028 CC, ES, SF	
8,400.0	7,315.0	7,431.2	7,320.3	27.7	21.5	88.82	-876.7	-1,123.5	188.5	151.8	36.71	5.136	
8,500.0	7,315.0	7,430.7	7,319.8	28.9	21.5	88.66	-876.7	-1,123.5	237.1	199.0	38.16	6.215	
8,600.0	7,315.0	7,430.2	7,319.3	30.1	21.5	88.50	-876.7	-1,123.5	311.3	271.7	39.65	7.853	
8,700.0	7,315.0	7,429.7	7,318.8	31.4	21.5	88.34	-876.7	-1,123.5	397.0	355.8	41.17	9.644	
8,800.0	7,315.0	7,429.2	7,318.3	32.7	21.5	88.18	-876.7	-1,123.5	488.2	445.5	42.71	11.429	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Reference Site:	S26-T2N-R66W (Rodman Bruntz)	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T2N-R66W (Rodman Bruntz) - RODMAN BRUNTZ 0-4-26 (EXISTING) - ENCANA WELL - SURVE													Offset Site Error: 0.0 ft
Survey Program: 92-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	
9,000.0	7,315.0	7,480.1	7,323.3	35.4	24.1	89.44	-1,953.0	-1,119.7	458.4	409.1	49.27	9.302	
9,100.0	7,315.0	7,479.4	7,322.6	36.9	24.1	89.21	-1,953.0	-1,119.7	368.1	317.3	50.88	7.235	
9,200.0	7,315.0	7,478.7	7,321.9	38.3	24.1	88.98	-1,953.0	-1,119.7	284.5	232.0	52.50	5.419	
9,300.0	7,315.0	7,478.0	7,321.2	39.8	24.1	88.77	-1,953.0	-1,119.7	215.4	161.2	54.14	3.978	
9,400.0	7,315.0	7,477.3	7,320.5	41.3	24.0	88.55	-1,953.0	-1,119.6	178.4	122.6	55.78	3.198	
9,422.8	7,315.0	7,477.2	7,320.4	41.6	24.0	88.50	-1,953.0	-1,119.6	176.9	120.8	56.16	3.150 CC, ES, SF	
9,500.0	7,315.0	7,476.7	7,319.9	42.8	24.0	88.34	-1,953.0	-1,119.6	193.0	135.6	57.43	3.361	
9,600.0	7,315.0	7,476.0	7,319.2	44.3	24.0	88.14	-1,953.0	-1,119.6	250.4	191.3	59.09	4.237	
9,700.0	7,315.0	7,475.4	7,318.6	45.9	24.0	87.94	-1,953.0	-1,119.6	328.8	268.0	60.76	5.412	
9,800.0	7,315.0	7,474.8	7,318.0	47.5	24.0	87.74	-1,953.0	-1,119.6	416.6	354.1	62.43	6.673	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Reference Site:	S26-T2N-R66W (Rodman Bruntz)	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T2N-R66W (Rodman Bruntz) - RODMAN BRUNTZ 11-26 (EXISTING) - ENCANA WELL - SURVEY													Offset Site Error: 0.0 ft
Survey Program: 92-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
7,500.0	7,274.2	7,418.2	7,286.5	21.1	22.0	-80.17	-290.6	-540.6	471.5	438.0	33.49	14.078	
7,600.0	7,302.9	7,444.5	7,312.7	21.4	22.1	-87.56	-289.9	-541.2	430.4	395.7	34.70	12.402	
7,700.0	7,314.7	7,453.6	7,321.9	21.8	22.1	-91.18	-289.7	-541.4	405.9	370.4	35.48	11.440	
7,758.9	7,316.0	7,453.3	7,321.6	22.1	22.1	-91.22	-289.7	-541.4	401.6	365.7	35.95	11.173 CC, ES	
7,800.0	7,315.0	7,451.2	7,319.4	22.4	22.1	-91.06	-289.8	-541.3	403.5	367.3	36.27	11.127 SF	
7,900.0	7,315.0	7,448.4	7,316.7	23.0	22.1	-90.67	-289.8	-541.3	425.3	388.1	37.21	11.430	
8,000.0	7,315.0	7,445.7	7,314.0	23.8	22.1	-90.28	-289.9	-541.2	467.9	429.7	38.29	12.223	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Reference Site:	S26-T2N-R66W (Rodman Bruntz)	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T2N-R66W (Rodman Bruntz) - Rodman Bruntz 2B-26H - Hz - Plan #2													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	90.00	0.0	11.2	11.2					
100.0	100.0	100.0	100.0	0.2	0.2	90.00	0.0	11.2	11.2	10.9	0.30	36.838		
200.0	200.0	200.0	200.0	0.3	0.3	90.00	0.0	11.2	11.2	10.5	0.65	17.138		
300.0	300.0	300.0	300.0	0.5	0.5	90.00	0.0	11.2	11.2	10.2	1.00	11.167		
400.0	400.0	400.0	400.0	0.7	0.7	90.00	0.0	11.2	11.2	9.8	1.35	8.281		
500.0	500.0	500.0	500.0	0.8	0.8	90.00	0.0	11.2	11.2	9.5	1.70	6.581 CC, ES		
600.0	600.0	600.0	600.0	1.0	1.0	160.74	0.0	11.2	12.0	10.0	2.05	5.860 SF		
700.0	700.0	700.0	700.0	1.2	1.2	164.15	0.0	11.2	14.5	12.1	2.40	6.050		
800.0	799.9	799.9	799.9	1.4	1.4	167.78	0.0	11.2	18.7	16.0	2.75	6.825		
900.0	899.7	899.7	899.7	1.6	1.5	170.77	0.0	11.2	24.7	21.6	3.09	8.000		
1,000.0	999.4	999.4	999.4	1.8	1.7	172.98	0.0	11.2	32.5	29.1	3.44	9.455		
1,100.0	1,098.9	1,098.9	1,098.9	2.0	1.9	174.56	0.0	11.2	42.0	38.3	3.78	11.112		
1,200.0	1,198.3	1,199.1	1,199.1	2.2	2.1	175.43	0.5	10.5	52.5	48.4	4.13	12.721		
1,300.0	1,297.4	1,299.5	1,299.5	2.5	2.2	175.64	2.0	8.3	63.1	58.6	4.47	14.099		
1,400.1	1,396.4	1,400.2	1,400.1	2.8	2.4	175.47	4.4	4.7	73.7	68.9	4.82	15.295		
1,500.0	1,495.1	1,500.9	1,500.6	3.1	2.6	175.02	7.9	-0.4	83.5	78.3	5.17	16.148		
1,600.0	1,593.8	1,602.1	1,601.4	3.4	2.8	174.31	12.3	-7.0	91.7	86.2	5.53	16.584		
1,700.0	1,692.6	1,702.8	1,701.7	3.7	3.0	173.39	17.7	-14.9	98.3	92.4	5.89	16.702		
1,800.0	1,791.4	1,802.6	1,801.0	4.0	3.2	172.54	23.2	-23.0	104.7	98.5	6.25	16.758		
1,900.0	1,890.1	1,902.3	1,900.3	4.3	3.4	171.78	28.7	-31.1	111.1	104.5	6.61	16.805		
2,000.0	1,988.9	2,002.1	1,999.6	4.6	3.7	171.11	34.2	-39.2	117.5	110.5	6.98	16.844		
2,100.0	2,087.7	2,101.9	2,098.9	4.9	3.9	170.50	39.7	-47.3	123.9	116.6	7.34	16.877		
2,200.0	2,186.5	2,201.7	2,198.2	5.2	4.1	169.96	45.2	-55.4	130.4	122.7	7.71	16.903		
2,300.0	2,285.2	2,301.5	2,297.5	5.6	4.3	169.47	50.7	-63.5	136.8	128.7	8.08	16.925		
2,400.0	2,384.0	2,401.3	2,396.8	5.9	4.6	169.02	56.2	-71.6	143.3	134.8	8.46	16.942		
2,500.0	2,482.8	2,501.1	2,496.1	6.2	4.8	168.61	61.7	-79.7	149.8	140.9	8.83	16.956		
2,600.0	2,581.5	2,600.8	2,595.4	6.5	5.0	168.23	67.2	-87.8	156.2	147.0	9.21	16.966		
2,700.0	2,680.3	2,700.6	2,694.7	6.8	5.2	167.89	72.7	-95.9	162.7	153.1	9.59	16.974		
2,800.0	2,779.1	2,800.4	2,794.0	7.1	5.5	167.57	78.3	-104.0	169.2	159.2	9.96	16.980		
2,900.0	2,877.8	2,900.2	2,893.3	7.5	5.7	167.27	83.8	-112.2	175.7	165.3	10.34	16.984		
3,000.0	2,976.6	3,000.0	2,992.6	7.8	5.9	167.00	89.3	-120.3	182.2	171.4	10.72	16.987		
3,100.0	3,075.4	3,099.8	3,091.9	8.1	6.2	166.74	94.8	-128.4	188.7	177.6	11.11	16.988		
3,200.0	3,174.1	3,199.6	3,191.2	8.4	6.4	166.50	100.3	-136.5	195.2	183.7	11.49	16.988		
3,300.0	3,272.9	3,299.3	3,290.5	8.8	6.7	166.28	105.8	-144.6	201.7	189.8	11.87	16.987		
3,400.0	3,371.7	3,399.1	3,389.8	9.1	6.9	166.07	111.3	-152.7	208.2	195.9	12.26	16.986		
3,500.0	3,470.4	3,498.9	3,489.1	9.4	7.1	165.87	116.8	-160.8	214.7	202.1	12.64	16.983		
3,600.0	3,569.2	3,598.7	3,588.4	9.7	7.4	165.69	122.3	-168.9	221.2	208.2	13.03	16.980		
3,700.0	3,668.0	3,698.5	3,687.7	10.1	7.6	165.51	127.8	-177.0	227.7	214.3	13.41	16.977		
3,800.0	3,766.7	3,798.3	3,787.1	10.4	7.8	165.35	133.3	-185.1	234.2	220.4	13.80	16.974		
3,900.0	3,865.5	3,898.1	3,886.4	10.7	8.1	165.19	138.8	-193.2	240.8	226.6	14.19	16.970		
4,000.0	3,964.3	3,997.8	3,985.7	11.0	8.3	165.04	144.3	-201.3	247.3	232.7	14.58	16.965		
4,100.0	4,063.1	4,097.6	4,085.0	11.3	8.6	164.90	149.8	-209.4	253.8	238.8	14.96	16.961		
4,200.0	4,161.8	4,197.4	4,184.3	11.7	8.8	164.77	155.3	-217.5	260.3	245.0	15.35	16.957		
4,300.0	4,260.6	4,297.2	4,283.6	12.0	9.0	164.64	160.8	-225.6	266.8	251.1	15.74	16.952		
4,400.0	4,359.4	4,397.0	4,382.9	12.3	9.3	164.52	166.3	-233.7	273.4	257.2	16.13	16.947		
4,500.0	4,458.1	4,496.8	4,482.2	12.6	9.5	164.41	171.8	-241.8	279.9	263.4	16.52	16.942		
4,600.0	4,556.9	4,596.6	4,581.5	13.0	9.8	164.30	177.3	-249.9	286.4	269.5	16.91	16.937		
4,700.0	4,655.7	4,696.3	4,680.8	13.3	10.0	164.19	182.8	-258.0	293.0	275.7	17.30	16.932		
4,800.0	4,754.4	4,796.1	4,780.1	13.6	10.3	164.09	188.3	-266.1	299.5	281.8	17.69	16.927		
4,900.0	4,853.2	4,895.9	4,879.4	13.9	10.5	164.00	193.8	-274.2	306.0	287.9	18.08	16.923		
5,000.0	4,952.0	4,995.7	4,978.7	14.3	10.7	163.90	199.3	-282.3	312.5	294.1	18.47	16.918		
5,100.0	5,050.7	5,095.5	5,078.0	14.6	11.0	163.82	204.8	-290.4	319.1	300.2	18.87	16.913		

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 Rodman Bruntz 2A-26H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Reference Site:	S26-T2N-R66W (Rodman Bruntz)	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design S26-T2N-R66W (Rodman Bruntz) - Rodman Bruntz 2B-26H - Hz - Plan #2													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
5,200.0	5,149.5	5,195.3	5,177.3	14.9	11.2	163.73	210.3	-298.5	325.6	306.4	19.26	16.908		
5,300.0	5,248.3	5,295.0	5,276.6	15.2	11.5	163.65	215.8	-306.6	332.1	312.5	19.65	16.903		
5,400.0	5,347.0	5,394.8	5,375.9	15.6	11.7	163.57	221.3	-314.7	338.7	318.6	20.04	16.898		
5,500.0	5,445.8	5,494.6	5,475.2	15.9	11.9	163.50	226.8	-322.8	345.2	324.8	20.43	16.893		
5,600.0	5,544.6	5,594.4	5,574.5	16.2	12.2	163.42	232.3	-331.0	351.7	330.9	20.83	16.889		
5,700.0	5,643.4	5,694.2	5,673.8	16.5	12.4	163.36	237.8	-339.1	358.3	337.1	21.22	16.884		
5,800.0	5,742.1	5,794.0	5,773.1	16.9	12.7	163.29	243.3	-347.2	364.8	343.2	21.61	16.879		
5,900.0	5,840.9	5,893.8	5,872.4	17.2	12.9	163.22	248.8	-355.3	371.4	349.4	22.01	16.875		
6,000.0	5,939.7	5,993.5	5,971.7	17.5	13.2	163.16	254.3	-363.4	377.9	355.5	22.40	16.870		
6,100.0	6,038.4	6,093.3	6,071.0	17.8	13.4	163.10	259.8	-371.5	384.4	361.6	22.79	16.866		
6,200.0	6,137.2	6,193.1	6,170.3	18.2	13.6	163.04	265.3	-379.6	391.0	367.8	23.19	16.862		
6,300.0	6,236.0	6,292.9	6,269.6	18.5	13.9	162.98	270.8	-387.7	397.5	373.9	23.58	16.857		
6,400.0	6,334.7	6,392.7	6,368.9	18.8	14.1	162.93	276.3	-395.8	404.1	380.1	23.97	16.853		
6,500.0	6,433.5	6,492.5	6,468.2	19.2	14.4	162.88	281.9	-403.9	410.6	386.2	24.37	16.849		
6,600.0	6,532.3	6,592.3	6,567.5	19.5	14.6	162.83	287.4	-412.0	417.1	392.4	24.76	16.845		
6,700.0	6,631.0	6,692.0	6,666.8	19.8	14.9	162.78	292.9	-420.1	423.7	398.5	25.16	16.841		
6,800.0	6,729.8	6,791.8	6,766.1	20.1	15.1	170.92	298.4	-428.2	430.2	404.7	25.54	16.844		
6,900.0	6,828.5	6,890.9	6,864.7	20.4	15.3	-133.88	303.8	-436.2	436.2	410.3	25.98	16.794		
7,000.0	6,924.7	6,986.4	6,959.8	20.5	15.6	-115.80	308.3	-444.0	442.6	416.0	26.55	16.667		
7,100.0	7,015.5	7,083.2	7,055.9	20.7	15.7	-110.87	300.6	-451.4	451.1	424.2	26.89	16.774		
7,200.0	7,098.2	7,185.7	7,154.8	20.7	15.7	-109.88	274.9	-458.3	461.7	434.8	26.87	17.180		
7,300.0	7,170.3	7,295.2	7,253.5	20.8	15.7	-110.40	228.5	-464.6	473.9	447.3	26.54	17.858		
7,400.0	7,229.6	7,412.5	7,347.5	20.9	15.6	-111.52	158.8	-469.6	486.9	460.8	26.04	18.693		
7,500.0	7,274.2	7,538.4	7,430.5	21.1	15.7	-112.79	64.6	-473.0	499.5	473.8	25.71	19.428		

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Reference Site:	S26-T2N-R66W (Rodman Bruntz)	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design												S26-T2N-R66W (Rodman Bruntz) - SHAFER 12-35 (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					
14,282.6	7,315.0	7,337.0	7,337.0	123.0	12.8	-90.00	-6,812.7	-446.5	496.3	361.6	134.68	3.685 CC, ES					
14,300.0	7,315.0	7,337.0	7,337.0	123.3	12.8	-90.00	-6,812.7	-446.5	496.6	361.6	134.98	3.679 SF					

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Reference Site:	S26-T2N-R66W (Rodman Bruntz)	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
S26-T2N-R66W (Rodman Bruntz) - SHAFER 4-35A (EXISTING) - Existing - Existing												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
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
12,500.0	7,315.0	7,317.0	7,317.0	92.3	12.8	-90.00	-5,424.8	-676.7	476.0	372.4	103.61	4.594	
12,600.0	7,315.0	7,317.0	7,317.0	94.0	12.8	-90.00	-5,424.8	-676.7	397.0	291.7	105.35	3.769	
12,700.0	7,315.0	7,317.0	7,317.0	95.8	12.8	-90.00	-5,424.8	-676.7	329.7	222.6	107.08	3.079	
12,800.0	7,315.0	7,317.0	7,317.0	97.5	12.8	-90.00	-5,424.8	-676.7	282.4	173.6	108.82	2.595	
12,894.6	7,315.0	7,317.0	7,317.0	99.1	12.8	-90.00	-5,424.8	-676.7	266.1	155.6	110.47	2.409 CC	
12,900.0	7,315.0	7,317.0	7,317.0	99.2	12.8	-90.00	-5,424.8	-676.7	266.1	155.6	110.56	2.407 ES, SF	
13,000.0	7,315.0	7,317.0	7,317.0	100.9	12.8	-90.00	-5,424.8	-676.7	286.2	173.9	112.30	2.548	
13,100.0	7,315.0	7,317.0	7,317.0	102.6	12.8	-90.00	-5,424.8	-676.7	336.1	222.1	114.04	2.947	
13,200.0	7,315.0	7,317.0	7,317.0	104.3	12.8	-90.00	-5,424.8	-676.7	405.0	289.2	115.78	3.498	
13,300.0	7,315.0	7,317.0	7,317.0	106.1	12.8	-90.00	-5,424.8	-676.7	484.9	367.3	117.52	4.126	

Anticollision Report

Company:	EnCana Oil & Gas (USA) Inc	Local Co-ordinate Reference:	Well Rodman Bruntz 2A-26H
Project:	DJ Wattenberg	TVD Reference:	WELL @ 5078.0ft (Original Well Elev)
Reference Site:	S26-T2N-R66W (Rodman Bruntz)	MD Reference:	WELL @ 5078.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Rodman Bruntz 2A-26H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	DD	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5078.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: Rodman Bruntz 2A-26H
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.48°

