

Project: Weld County, CO  
 Site: SEC 34, T8N-R66W  
 Well: Regina 7-66-3-10-6N  
 Wellbore: Hz  
 Design: Plan 1

## Reference Details

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Latitude: 40° 36' 44.921 N  
 Longitude: 104° 45' 28.415 W  
 Grid Convergence: 0.48° West  
 Ground Elevation: 4997.0  
 KB Elevation: Well @ 5013.0usft

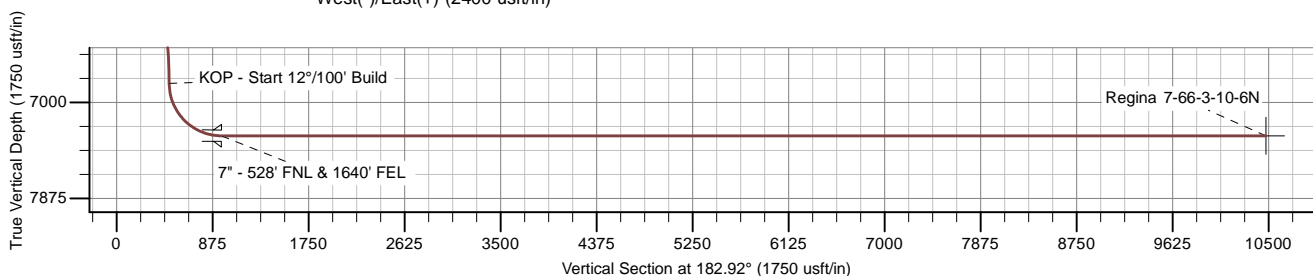
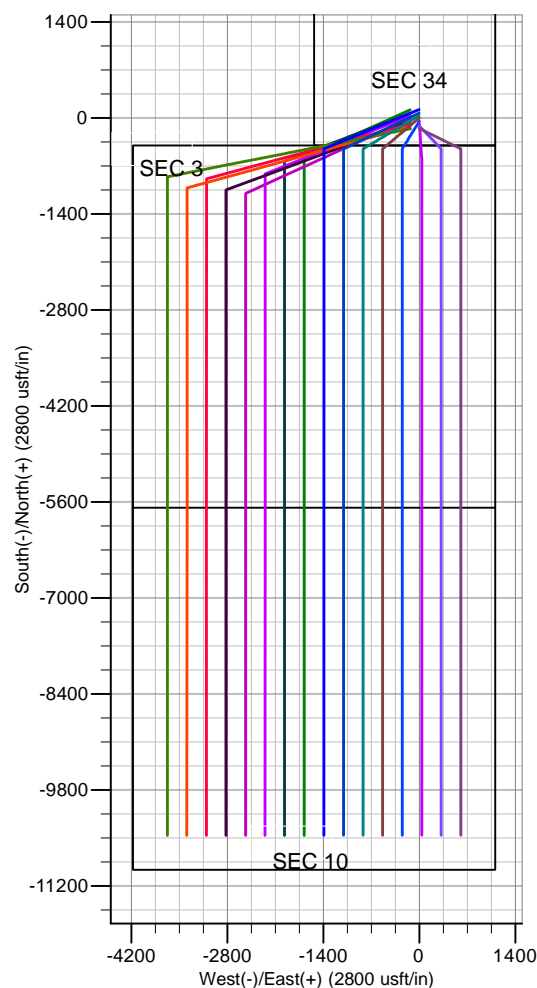
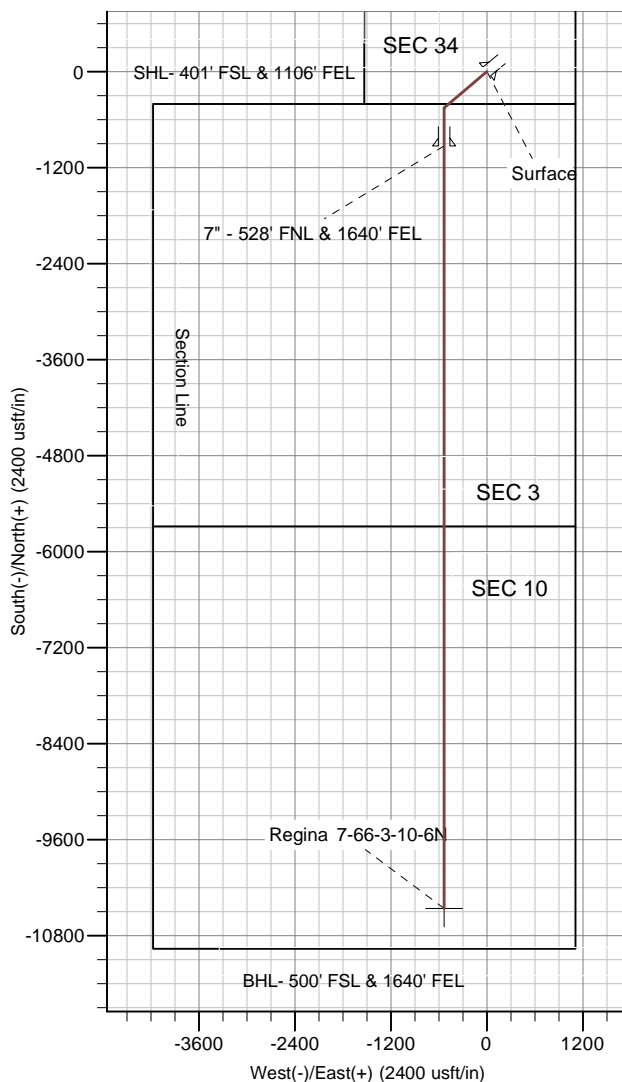
RPM Consulting, Inc.  
 1600 Broadway, Suite 1510  
 Denver, CO 80013  
 303-595-7625

## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0
1964.9	0.00	0.00	1964.9	0.0	0.0	0.00	0.00	0.0
2414.9	9.00	229.79	2413.0	-22.8	-26.9	2.00	229.79	24.1
6429.6	9.00	229.79	6378.3	-428.2	-506.6	0.00	0.00	453.5
6879.6	0.00	0.00	6826.5	-451.0	-533.5	2.00	180.00	477.6
7629.6	90.00	180.00	7304.0	-928.5	-533.5	12.00	180.00	954.5
7659.8	90.00	180.00	7304.0	-958.6	-533.5	0.01	94.02	984.6
17162.2	90.00	180.00	7304.0	-10461.0	-534.0	0.00	0.00	10474.6

## CASING DETAILS

TVD	MD	Name
1500.0	1500.0	Surface
7304.0	7629.6	Intermediate



# **Enerplus Resources (USA) Corporation**

**Weld County, CO  
SEC 34, T8N-R66W  
Regina 7-66-3-10-6N**

**Hz**

**Plan: Plan 1**

## **Standard Planning Report**

**05 May, 2017**

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Well Regina 7-66-3-10-6N
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	Well @ 5013.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	Well @ 5013.0usft
<b>Site:</b>	SEC 34, T8N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Regina 7-66-3-10-6N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan 1		

<b>Project</b>	Weld County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		SEC 34, T8N-R66W			
Site Position:		Northing:	1,466,670.78 usft	Latitude:	40° 36' 43.362 N
From:	Lat/Long	Easting:	3,205,908.72 usft	Longitude:	104° 45' 30.060 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.48 °

Well	Regina 7-66-3-10-6N					
Well Position	+N/-S	157.7 usft	Northing:	1,466,829.58 usft	Latitude:	40° 36' 44.921 N
	+E/-W	126.9 usft	Easting:	3,206,034.27 usft	Longitude:	104° 45' 28.415 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	4,997.0 usft

<b>Wellbore</b>	Hz				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	5/5/2017	8.08	67.02	52,621

<b>Design</b>	Plan 1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	182.92

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,964.9	0.00	0.00	1,964.9	0.0	0.0	0.00	0.00	0.00	0.00	
2,414.9	9.00	229.79	2,413.0	-22.8	-26.9	2.00	2.00	0.00	229.79	
6,429.6	9.00	229.79	6,378.3	-428.2	-506.6	0.00	0.00	0.00	0.00	
6,879.6	0.00	0.00	6,826.5	-451.0	-533.5	2.00	-2.00	0.00	180.00	
7,629.6	90.00	180.00	7,304.0	-928.5	-533.5	12.00	12.00	0.00	180.00	
7,659.8	90.00	180.00	7,304.0	-958.6	-533.5	0.01	0.00	0.01	94.02	
17,162.2	90.00	180.00	7,304.0	-10,461.0	-534.0	0.00	0.00	0.00	0.00	Regina 7-66-3-10-6N

# Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Well Regina 7-66-3-10-6N
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	Well @ 5013.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	Well @ 5013.0usft
<b>Site:</b>	SEC 34, T8N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Regina 7-66-3-10-6N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
9-5/8" - Surface									
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,964.9	0.00	0.00	1,964.9	0.0	0.0	0.0	0.00	0.00	0.00
Begin Nudge									
2,000.0	0.70	229.79	2,000.0	-0.1	-0.2	0.1	2.00	2.00	0.00
2,100.0	2.70	229.79	2,099.9	-2.1	-2.4	2.2	2.00	2.00	0.00
2,200.0	4.70	229.79	2,199.7	-6.2	-7.4	6.6	2.00	2.00	0.00
2,300.0	6.70	229.79	2,299.2	-12.6	-15.0	13.4	2.00	2.00	0.00
2,400.0	8.70	229.79	2,398.3	-21.3	-25.2	22.5	2.00	2.00	0.00
2,414.9	9.00	229.79	2,413.0	-22.8	-26.9	24.1	2.00	2.00	0.00
2,500.0	9.00	229.79	2,497.1	-31.4	-37.1	33.2	0.00	0.00	0.00
2,600.0	9.00	229.79	2,595.9	-41.5	-49.1	43.9	0.00	0.00	0.00
2,700.0	9.00	229.79	2,694.6	-51.6	-61.0	54.6	0.00	0.00	0.00
2,800.0	9.00	229.79	2,793.4	-61.7	-72.9	65.3	0.00	0.00	0.00
2,900.0	9.00	229.79	2,892.2	-71.8	-84.9	76.0	0.00	0.00	0.00
3,000.0	9.00	229.79	2,990.9	-81.9	-96.8	86.7	0.00	0.00	0.00
3,100.0	9.00	229.79	3,089.7	-92.0	-108.8	97.4	0.00	0.00	0.00
3,200.0	9.00	229.79	3,188.5	-102.1	-120.7	108.1	0.00	0.00	0.00
3,300.0	9.00	229.79	3,287.3	-112.2	-132.7	118.8	0.00	0.00	0.00
3,400.0	9.00	229.79	3,386.0	-122.3	-144.6	129.5	0.00	0.00	0.00
3,500.0	9.00	229.79	3,484.8	-132.4	-156.6	140.2	0.00	0.00	0.00
3,600.0	9.00	229.79	3,583.6	-142.5	-168.5	150.9	0.00	0.00	0.00
3,700.0	9.00	229.79	3,682.3	-152.6	-180.5	161.6	0.00	0.00	0.00
3,800.0	9.00	229.79	3,781.1	-162.7	-192.4	172.3	0.00	0.00	0.00
3,900.0	9.00	229.79	3,879.9	-172.8	-204.4	183.0	0.00	0.00	0.00
4,000.0	9.00	229.79	3,978.6	-182.9	-216.3	193.6	0.00	0.00	0.00
4,100.0	9.00	229.79	4,077.4	-193.0	-228.3	204.3	0.00	0.00	0.00
4,200.0	9.00	229.79	4,176.2	-203.1	-240.2	215.0	0.00	0.00	0.00
4,300.0	9.00	229.79	4,274.9	-213.2	-252.1	225.7	0.00	0.00	0.00
4,400.0	9.00	229.79	4,373.7	-223.3	-264.1	236.4	0.00	0.00	0.00
4,500.0	9.00	229.79	4,472.5	-233.4	-276.0	247.1	0.00	0.00	0.00
4,600.0	9.00	229.79	4,571.2	-243.5	-288.0	257.8	0.00	0.00	0.00
4,700.0	9.00	229.79	4,670.0	-253.6	-299.9	268.5	0.00	0.00	0.00
4,759.7	9.00	229.79	4,729.0	-259.6	-307.1	274.9	0.00	0.00	0.00

# Planning Report

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<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	Well @ 5013.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	Well @ 5013.0usft
<b>Site:</b>	SEC 34, T8N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Regina 7-66-3-10-6N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
<b>TERRY</b>									
4,800.0	9.00	229.79	4,768.8	-263.7	-311.9	279.2	0.00	0.00	0.00
4,900.0	9.00	229.79	4,867.6	-273.7	-323.8	289.9	0.00	0.00	0.00
5,000.0	9.00	229.79	4,966.3	-283.8	-335.8	300.6	0.00	0.00	0.00
5,100.0	9.00	229.79	5,065.1	-293.9	-347.7	311.3	0.00	0.00	0.00
5,185.0	9.00	229.79	5,149.0	-302.5	-357.9	320.4	0.00	0.00	0.00
<b>HYGENE</b>									
5,200.0	9.00	229.79	5,163.9	-304.0	-359.7	322.0	0.00	0.00	0.00
5,300.0	9.00	229.79	5,262.6	-314.1	-371.6	332.7	0.00	0.00	0.00
5,400.0	9.00	229.79	5,361.4	-324.2	-383.6	343.4	0.00	0.00	0.00
5,500.0	9.00	229.79	5,460.2	-334.3	-395.5	354.1	0.00	0.00	0.00
5,600.0	9.00	229.79	5,558.9	-344.4	-407.5	364.8	0.00	0.00	0.00
5,700.0	9.00	229.79	5,657.7	-354.5	-419.4	375.5	0.00	0.00	0.00
5,800.0	9.00	229.79	5,756.5	-364.6	-431.3	386.2	0.00	0.00	0.00
5,900.0	9.00	229.79	5,855.2	-374.7	-443.3	396.9	0.00	0.00	0.00
6,000.0	9.00	229.79	5,954.0	-384.8	-455.2	407.5	0.00	0.00	0.00
6,100.0	9.00	229.79	6,052.8	-394.9	-467.2	418.2	0.00	0.00	0.00
6,200.0	9.00	229.79	6,151.6	-405.0	-479.1	428.9	0.00	0.00	0.00
6,273.4	9.00	229.79	6,224.0	-412.4	-487.9	436.8	0.00	0.00	0.00
<b>Lower Pierre marker</b>									
6,300.0	9.00	229.79	6,250.3	-415.1	-491.1	439.6	0.00	0.00	0.00
6,400.0	9.00	229.79	6,349.1	-425.2	-503.0	450.3	0.00	0.00	0.00
6,429.6	9.00	229.79	6,378.3	-428.2	-506.6	453.5	0.00	0.00	0.00
6,500.0	7.59	229.79	6,448.0	-434.8	-514.3	460.4	2.00	-2.00	0.00
6,600.0	5.59	229.79	6,547.3	-442.2	-523.1	468.3	2.00	-2.00	0.00
6,700.0	3.59	229.79	6,647.0	-447.4	-529.2	473.8	2.00	-2.00	0.00
6,800.0	1.59	229.79	6,746.9	-450.3	-532.7	476.9	2.00	-2.00	0.00
6,879.6	0.00	229.79	6,826.5	-451.0	-533.5	477.6	2.00	-2.00	0.00
<b>KOP - Start 12°/100' Build</b>									
6,900.0	2.45	180.00	6,846.9	-451.4	-533.5	478.0	11.98	11.98	-244.07
7,000.0	14.45	180.00	6,945.6	-466.1	-533.5	492.7	12.00	12.00	0.00
7,100.0	26.45	180.00	7,039.1	-501.0	-533.5	527.5	12.00	12.00	0.00
7,194.4	37.78	180.00	7,119.0	-551.1	-533.5	577.6	12.00	12.00	0.00
<b>SHARON SPRINGS</b>									
7,200.0	38.45	180.00	7,123.4	-554.5	-533.5	581.0	12.00	12.00	0.00
7,282.1	48.30	180.00	7,183.0	-610.8	-533.5	637.3	12.00	12.00	0.00
<b>NIOBRARA A CHALK</b>									
7,300.0	50.45	180.00	7,194.6	-624.4	-533.5	650.8	12.00	12.00	0.00
7,316.6	52.44	180.00	7,205.0	-637.4	-533.5	663.8	12.00	12.00	0.00
<b>NIOBRARA A MARL</b>									
7,400.0	62.45	180.00	7,249.8	-707.6	-533.5	733.9	12.00	12.00	0.00
7,404.8	63.02	180.00	7,252.0	-711.8	-533.5	738.1	12.00	12.00	0.00
<b>NIOBRARA B TOP</b>									
7,500.0	74.45	180.00	7,286.5	-800.4	-533.5	826.6	12.00	12.00	0.00
7,600.0	86.45	180.00	7,303.0	-898.9	-533.5	924.9	12.00	12.00	0.00
7,629.6	90.00	180.00	7,304.0	-928.4	-533.5	954.4	12.00	12.00	0.00
<b>7" - 528' FNL &amp; 1640' FEL - NIOBRARA B CHALK - Intermediate</b>									
7,659.8	90.00	180.00	7,304.0	-958.6	-533.5	984.6	0.01	0.01	0.01
7,700.0	90.00	180.00	7,304.0	-998.8	-533.5	1,024.7	0.00	0.00	0.00
7,800.0	90.00	180.00	7,304.0	-1,098.8	-533.5	1,124.6	0.00	0.00	0.00
7,900.0	90.00	180.00	7,304.0	-1,198.8	-533.5	1,224.5	0.00	0.00	0.00
8,000.0	90.00	180.00	7,304.0	-1,298.8	-533.5	1,324.4	0.00	0.00	0.00
8,100.0	90.00	180.00	7,304.0	-1,398.8	-533.5	1,424.2	0.00	0.00	0.00

# Planning Report

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<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	Well @ 5013.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	Well @ 5013.0usft
<b>Site:</b>	SEC 34, T8N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Regina 7-66-3-10-6N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,200.0	90.00	180.00	7,304.0	-1,498.8	-533.5	1,524.1	0.00	0.00	0.00
8,300.0	90.00	180.00	7,304.0	-1,598.8	-533.5	1,624.0	0.00	0.00	0.00
8,400.0	90.00	180.00	7,304.0	-1,698.8	-533.5	1,723.8	0.00	0.00	0.00
8,500.0	90.00	180.00	7,304.0	-1,798.8	-533.5	1,823.7	0.00	0.00	0.00
8,600.0	90.00	180.00	7,304.0	-1,898.8	-533.6	1,923.6	0.00	0.00	0.00
8,700.0	90.00	180.00	7,304.0	-1,998.8	-533.6	2,023.4	0.00	0.00	0.00
8,800.0	90.00	180.00	7,304.0	-2,098.8	-533.6	2,123.3	0.00	0.00	0.00
8,900.0	90.00	180.00	7,304.0	-2,198.8	-533.6	2,223.2	0.00	0.00	0.00
9,000.0	90.00	180.00	7,304.0	-2,298.8	-533.6	2,323.1	0.00	0.00	0.00
9,100.0	90.00	180.00	7,304.0	-2,398.8	-533.6	2,422.9	0.00	0.00	0.00
9,200.0	90.00	180.00	7,304.0	-2,498.8	-533.6	2,522.8	0.00	0.00	0.00
9,300.0	90.00	180.00	7,304.0	-2,598.8	-533.6	2,622.7	0.00	0.00	0.00
9,400.0	90.00	180.00	7,304.0	-2,698.8	-533.6	2,722.5	0.00	0.00	0.00
9,500.0	90.00	180.00	7,304.0	-2,798.8	-533.6	2,822.4	0.00	0.00	0.00
9,600.0	90.00	180.00	7,304.0	-2,898.8	-533.6	2,922.3	0.00	0.00	0.00
9,700.0	90.00	180.00	7,304.0	-2,998.8	-533.6	3,022.1	0.00	0.00	0.00
9,800.0	90.00	180.00	7,304.0	-3,098.8	-533.6	3,122.0	0.00	0.00	0.00
9,900.0	90.00	180.00	7,304.0	-3,198.8	-533.6	3,221.9	0.00	0.00	0.00
10,000.0	90.00	180.00	7,304.0	-3,298.8	-533.6	3,321.8	0.00	0.00	0.00
10,100.0	90.00	180.00	7,304.0	-3,398.8	-533.6	3,421.6	0.00	0.00	0.00
10,200.0	90.00	180.00	7,304.0	-3,498.8	-533.6	3,521.5	0.00	0.00	0.00
10,300.0	90.00	180.00	7,304.0	-3,598.8	-533.6	3,621.4	0.00	0.00	0.00
10,400.0	90.00	180.00	7,304.0	-3,698.8	-533.6	3,721.2	0.00	0.00	0.00
10,500.0	90.00	180.00	7,304.0	-3,798.8	-533.6	3,821.1	0.00	0.00	0.00
10,600.0	90.00	180.00	7,304.0	-3,898.8	-533.7	3,921.0	0.00	0.00	0.00
10,700.0	90.00	180.00	7,304.0	-3,998.8	-533.7	4,020.8	0.00	0.00	0.00
10,800.0	90.00	180.00	7,304.0	-4,098.8	-533.7	4,120.7	0.00	0.00	0.00
10,900.0	90.00	180.00	7,304.0	-4,198.8	-533.7	4,220.6	0.00	0.00	0.00
11,000.0	90.00	180.00	7,304.0	-4,298.8	-533.7	4,320.5	0.00	0.00	0.00
11,100.0	90.00	180.00	7,304.0	-4,398.8	-533.7	4,420.3	0.00	0.00	0.00
11,200.0	90.00	180.00	7,304.0	-4,498.8	-533.7	4,520.2	0.00	0.00	0.00
11,300.0	90.00	180.00	7,304.0	-4,598.8	-533.7	4,620.1	0.00	0.00	0.00
11,400.0	90.00	180.00	7,304.0	-4,698.8	-533.7	4,719.9	0.00	0.00	0.00
11,500.0	90.00	180.00	7,304.0	-4,798.8	-533.7	4,819.8	0.00	0.00	0.00
11,600.0	90.00	180.00	7,304.0	-4,898.8	-533.7	4,919.7	0.00	0.00	0.00
11,700.0	90.00	180.00	7,304.0	-4,998.8	-533.7	5,019.5	0.00	0.00	0.00
11,800.0	90.00	180.00	7,304.0	-5,098.8	-533.7	5,119.4	0.00	0.00	0.00
11,900.0	90.00	180.00	7,304.0	-5,198.8	-533.7	5,219.3	0.00	0.00	0.00
12,000.0	90.00	180.00	7,304.0	-5,298.8	-533.7	5,319.2	0.00	0.00	0.00
12,100.0	90.00	180.00	7,304.0	-5,398.8	-533.7	5,419.0	0.00	0.00	0.00
12,200.0	90.00	180.00	7,304.0	-5,498.8	-533.7	5,518.9	0.00	0.00	0.00
12,300.0	90.00	180.00	7,304.0	-5,598.8	-533.7	5,618.8	0.00	0.00	0.00
12,400.0	90.00	180.00	7,304.0	-5,698.8	-533.7	5,718.6	0.00	0.00	0.00
12,500.0	90.00	180.00	7,304.0	-5,798.8	-533.8	5,818.5	0.00	0.00	0.00
12,600.0	90.00	180.00	7,304.0	-5,898.8	-533.8	5,918.4	0.00	0.00	0.00
12,700.0	90.00	180.00	7,304.0	-5,998.8	-533.8	6,018.3	0.00	0.00	0.00
12,800.0	90.00	180.00	7,304.0	-6,098.8	-533.8	6,118.1	0.00	0.00	0.00
12,900.0	90.00	180.00	7,304.0	-6,198.8	-533.8	6,218.0	0.00	0.00	0.00
13,000.0	90.00	180.00	7,304.0	-6,298.8	-533.8	6,317.9	0.00	0.00	0.00
13,100.0	90.00	180.00	7,304.0	-6,398.8	-533.8	6,417.7	0.00	0.00	0.00
13,200.0	90.00	180.00	7,304.0	-6,498.8	-533.8	6,517.6	0.00	0.00	0.00
13,300.0	90.00	180.00	7,304.0	-6,598.8	-533.8	6,617.5	0.00	0.00	0.00
13,400.0	90.00	180.00	7,304.0	-6,698.8	-533.8	6,717.3	0.00	0.00	0.00
13,500.0	90.00	180.00	7,304.0	-6,798.8	-533.8	6,817.2	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Well Regina 7-66-3-10-6N
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	Well @ 5013.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	Well @ 5013.0usft
<b>Site:</b>	SEC 34, T8N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Regina 7-66-3-10-6N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,600.0	90.00	180.00	7,304.0	-6,898.8	-533.8	6,917.1	0.00	0.00	0.00	
13,700.0	90.00	180.00	7,304.0	-6,998.8	-533.8	7,017.0	0.00	0.00	0.00	
13,800.0	90.00	180.00	7,304.0	-7,098.8	-533.8	7,116.8	0.00	0.00	0.00	
13,900.0	90.00	180.00	7,304.0	-7,198.8	-533.8	7,216.7	0.00	0.00	0.00	
14,000.0	90.00	180.00	7,304.0	-7,298.8	-533.8	7,316.6	0.00	0.00	0.00	
14,100.0	90.00	180.00	7,304.0	-7,398.8	-533.8	7,416.4	0.00	0.00	0.00	
14,200.0	90.00	180.00	7,304.0	-7,498.8	-533.8	7,516.3	0.00	0.00	0.00	
14,300.0	90.00	180.00	7,304.0	-7,598.8	-533.8	7,616.2	0.00	0.00	0.00	
14,400.0	90.00	180.00	7,304.0	-7,698.8	-533.9	7,716.0	0.00	0.00	0.00	
14,500.0	90.00	180.00	7,304.0	-7,798.8	-533.9	7,815.9	0.00	0.00	0.00	
14,600.0	90.00	180.00	7,304.0	-7,898.8	-533.9	7,915.8	0.00	0.00	0.00	
14,700.0	90.00	180.00	7,304.0	-7,998.8	-533.9	8,015.7	0.00	0.00	0.00	
14,800.0	90.00	180.00	7,304.0	-8,098.8	-533.9	8,115.5	0.00	0.00	0.00	
14,900.0	90.00	180.00	7,304.0	-8,198.8	-533.9	8,215.4	0.00	0.00	0.00	
15,000.0	90.00	180.00	7,304.0	-8,298.8	-533.9	8,315.3	0.00	0.00	0.00	
15,100.0	90.00	180.00	7,304.0	-8,398.8	-533.9	8,415.1	0.00	0.00	0.00	
15,200.0	90.00	180.00	7,304.0	-8,498.8	-533.9	8,515.0	0.00	0.00	0.00	
15,300.0	90.00	180.00	7,304.0	-8,598.8	-533.9	8,614.9	0.00	0.00	0.00	
15,400.0	90.00	180.00	7,304.0	-8,698.8	-533.9	8,714.7	0.00	0.00	0.00	
15,500.0	90.00	180.00	7,304.0	-8,798.8	-533.9	8,814.6	0.00	0.00	0.00	
15,600.0	90.00	180.00	7,304.0	-8,898.8	-533.9	8,914.5	0.00	0.00	0.00	
15,700.0	90.00	180.00	7,304.0	-8,998.8	-533.9	9,014.4	0.00	0.00	0.00	
15,800.0	90.00	180.00	7,304.0	-9,098.8	-533.9	9,114.2	0.00	0.00	0.00	
15,900.0	90.00	180.00	7,304.0	-9,198.8	-533.9	9,214.1	0.00	0.00	0.00	
16,000.0	90.00	180.00	7,304.0	-9,298.8	-533.9	9,314.0	0.00	0.00	0.00	
16,100.0	90.00	180.00	7,304.0	-9,398.8	-533.9	9,413.8	0.00	0.00	0.00	
16,200.0	90.00	180.00	7,304.0	-9,498.8	-533.9	9,513.7	0.00	0.00	0.00	
16,300.0	90.00	180.00	7,304.0	-9,598.8	-534.0	9,613.6	0.00	0.00	0.00	
16,400.0	90.00	180.00	7,304.0	-9,698.8	-534.0	9,713.4	0.00	0.00	0.00	
16,500.0	90.00	180.00	7,304.0	-9,798.8	-534.0	9,813.3	0.00	0.00	0.00	
16,600.0	90.00	180.00	7,304.0	-9,898.8	-534.0	9,913.2	0.00	0.00	0.00	
16,700.0	90.00	180.00	7,304.0	-9,998.8	-534.0	10,013.1	0.00	0.00	0.00	
16,800.0	90.00	180.00	7,304.0	-10,098.8	-534.0	10,112.9	0.00	0.00	0.00	
16,900.0	90.00	180.00	7,304.0	-10,198.8	-534.0	10,212.8	0.00	0.00	0.00	
17,000.0	90.00	180.00	7,304.0	-10,298.8	-534.0	10,312.7	0.00	0.00	0.00	
17,100.0	90.00	180.00	7,304.0	-10,398.8	-534.0	10,412.5	0.00	0.00	0.00	
17,162.2	90.00	180.00	7,304.0	-10,461.0	-534.0	10,474.6	0.00	0.00	0.00	
Total Depth - Regina 7-66-3-10-6N										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude		
- hit/miss target										
- Shape										
Regina 7-66-3-10-6N	0.00	0.00	7,304.0	-10,461.0	-534.0	1,456,364.48	3,205,587.84	40° 35' 1.550 N		
- plan hits target center										
- Point								104° 45' 35.336 W		

## Planning Report

<b>Database:</b>	EDM	<b>Local Co-ordinate Reference:</b>	Well Regina 7-66-3-10-6N
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	Well @ 5013.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	Well @ 5013.0usft
<b>Site:</b>	SEC 34, T8N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Regina 7-66-3-10-6N	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan 1		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,500.0	1,500.0	Surface	9-5/8	9-5/8	
7,629.6	7,304.0	Intermediate	7	7	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,759.7	4,729.0	TERRY				
5,185.0	5,149.0	HYGENE				
6,273.4	6,224.0	Lower Pierre marker				
7,194.4	7,119.0	SHARON SPRINGS				
7,282.1	7,183.0	NIOBRARA A CHALK				
7,316.6	7,205.0	NIOBRARA A MARL				
7,404.8	7,252.0	NIOBRARA B TOP				
7,629.6	7,304.0	NIOBRARA B CHALK				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,500.0	1,500.0	0.0	0.0	9-5/8"	
1,964.9	1,964.9	0.0	0.0	Begin Nudge	
6,879.6	6,826.5	-451.0	-533.5	KOP - Start 12"/100' Build	
7,629.6	7,304.0	-928.4	-533.5	7" - 528' FNL & 1640' FEL	
17,162.2	7,304.0	-10,461.0	-534.0	Total Depth	