

Project: Weld County, CO
Site: SEC 34 T8N-R66W
Well: Regina 7-66-3-10-6N
Wellbore: Original Wellbore
Design: Plan 4

Reference Details

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Latitude: 40° 36' 45.587 N
 Longitude: 104° 45' 30.118 W
 Grid Convergence: 0.48° West
 Ground Elevation: 4993.0
 KB Elevation: KB @ 5018.0usft



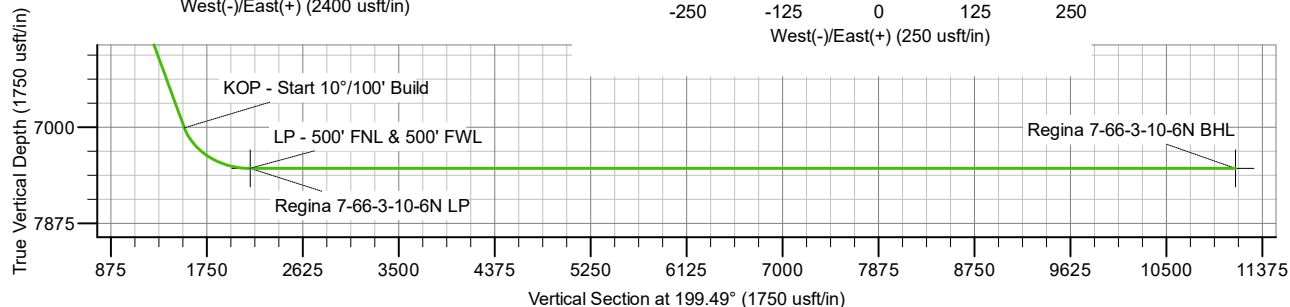
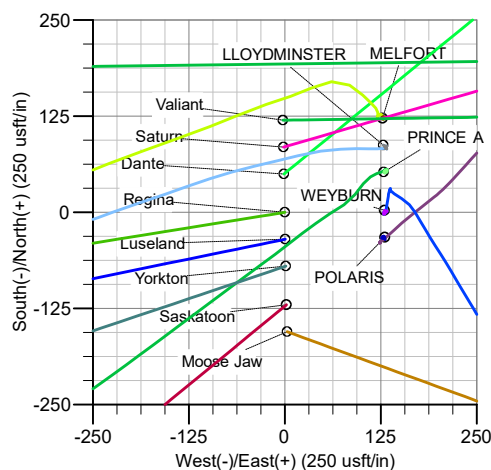
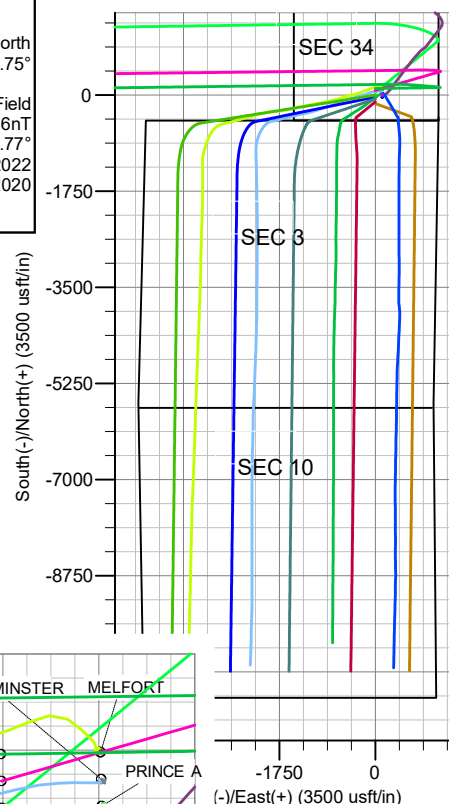
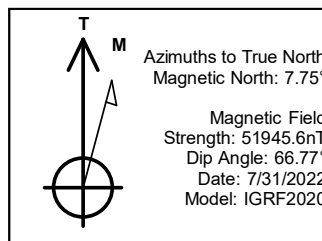
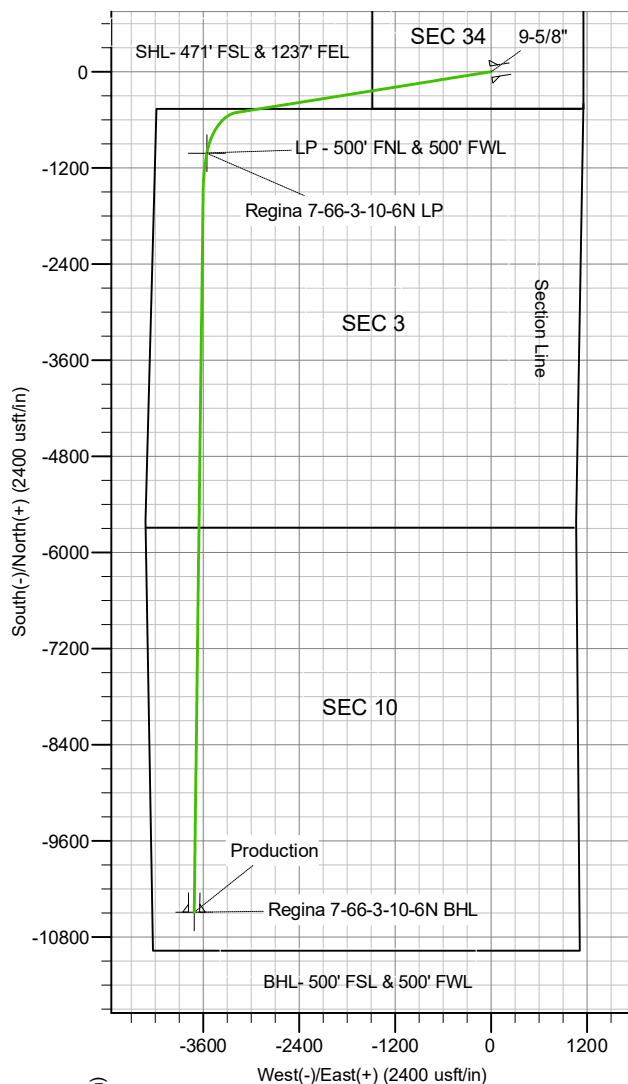
RPM Consulting, Inc.
 1600 Broadway, Suite 1480
 Denver, CO 80202
 303-595-7625

SECTION DETAILS

CASING 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
4000.0	37.50	260.90	3825.3	-124.8	-779.4	1.50	260.90	377.6
8008.2	37.50	260.90	7005.2	-510.5	-3188.8	0.00	0.00	1544.9
8790.8	90.00	190.44	7375.0	-1013.7	-3553.4	10.00	285.72	2140.9
9277.1	90.00	180.71	7375.0	-1497.1	-3600.6	2.00	-90.00	2612.4
18273.0	90.00	180.71	7375.0	-10492.3	-3712.5	0.00	0.00	11129.8

TVD	MD	Name
1500.0	1500.0	Surface
7375.0	18273.0	Production



Enerplus Resources (USA) Corporation

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

Original Wellbore

Plan: Plan 4

Standard Planning Report

07 June, 2022

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well Regina 7-66-3-10-6N
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	KB @ 5018.0usft
Project:	Weld County, CO	MD Reference:	KB @ 5018.0usft
Site:	SEC 34 T8N-R66W	North Reference:	True
Well:	Regina 7-66-3-10-6N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan 4		

Project	Weld County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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	"

Well		Regina 7-66-3-10-6N				
Well Position	+N/-S	0.0 usft	Northing:	1,466,895.88 usft	Latitude:	40° 36' 45.587 N
	+E/-W	0.0 usft	Easting:	3,205,902.39 usft	Longitude:	104° 45' 30.118 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	4,993.0 usft
Grid Convergence:		0.48 °				

Wellbore	Original Wellbore				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	7/31/2022	7.75	66.77	51,945.60312716

Design	Plan 4				
Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:		Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
		0.0	0.0	0.0	199.49

Plan Survey Tool Program	Date	6/7/2022			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	18,272.8 Plan 4 (Original Wellbore)	MWD		
			OWSG MWD - Standard		

Plan Sections										
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	
4,000.0	37.50	260.91	3,825.3	-124.8	-779.4	1.50	1.50	0.00	260.91	
8,008.2	37.50	260.91	7,005.2	-510.5	-3,188.8	0.00	0.00	0.00	0.00	
8,790.8	90.00	190.44	7,375.0	-1,013.7	-3,553.4	10.00	6.71	-9.00	285.72	
9,277.0	90.00	180.71	7,375.0	-1,497.1	-3,600.6	2.00	0.00	-2.00	-90.00	
18,273.0	90.00	180.71	7,375.0	-10,492.3	-3,712.5	0.00	0.00	0.00	0.00	Regina 7-66-3-10-6N

Planning Report

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Project:	Weld County, CO	MD Reference:	KB @ 5018.0usft
Site:	SEC 34 T8N-R66W	North Reference:	True
Well:	Regina 7-66-3-10-6N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan 4		

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" - Begin 1.5° Nudge - Surface									
1,600.0	1.50	260.91	1,600.0	-0.2	-1.3	0.6	1.50	1.50	0.00
1,687.1	2.81	260.91	1,687.0	-0.7	-4.5	2.2	1.50	1.50	0.00
Pierre									
1,700.0	3.00	260.91	1,699.9	-0.8	-5.2	2.5	1.50	1.50	0.00
1,800.0	4.50	260.91	1,799.7	-1.9	-11.6	5.6	1.50	1.50	0.00
1,900.0	6.00	260.91	1,899.3	-3.3	-20.7	10.0	1.50	1.50	0.00
2,000.0	7.50	260.91	1,998.6	-5.2	-32.3	15.6	1.50	1.50	0.00
2,100.0	9.00	260.91	2,097.5	-7.4	-46.4	22.5	1.50	1.50	0.00
2,200.0	10.50	260.91	2,196.1	-10.1	-63.2	30.6	1.50	1.50	0.00
2,300.0	12.00	260.91	2,294.2	-13.2	-82.4	39.9	1.50	1.50	0.00
2,400.0	13.50	260.91	2,391.7	-16.7	-104.2	50.5	1.50	1.50	0.00
2,500.0	15.00	260.91	2,488.6	-20.6	-128.5	62.3	1.50	1.50	0.00
2,600.0	16.50	260.91	2,584.9	-24.9	-155.3	75.2	1.50	1.50	0.00
2,700.0	18.00	260.91	2,680.4	-29.6	-184.6	89.4	1.50	1.50	0.00
2,800.0	19.50	260.91	2,775.0	-34.6	-216.3	104.8	1.50	1.50	0.00
2,900.0	21.00	260.91	2,868.9	-40.1	-250.5	121.4	1.50	1.50	0.00
3,000.0	22.50	260.91	2,961.7	-46.0	-287.1	139.1	1.50	1.50	0.00
3,100.0	24.00	260.91	3,053.6	-52.2	-326.1	158.0	1.50	1.50	0.00
3,200.0	25.50	260.91	3,144.4	-58.8	-367.4	178.0	1.50	1.50	0.00
3,300.0	27.00	260.91	3,234.1	-65.8	-411.1	199.2	1.50	1.50	0.00
3,400.0	28.50	260.91	3,322.6	-73.2	-457.1	221.4	1.50	1.50	0.00
3,500.0	30.00	260.91	3,409.9	-80.9	-505.3	244.8	1.50	1.50	0.00
3,600.0	31.50	260.91	3,495.8	-89.0	-555.8	269.3	1.50	1.50	0.00
3,700.0	33.00	260.91	3,580.4	-97.4	-608.5	294.8	1.50	1.50	0.00
3,800.0	34.50	260.91	3,663.5	-106.2	-663.3	321.4	1.50	1.50	0.00
3,900.0	36.00	260.91	3,745.2	-115.3	-720.3	349.0	1.50	1.50	0.00
4,000.0	37.50	260.91	3,825.3	-124.8	-779.4	377.6	1.50	1.50	0.00
Begin 37.5° Nudge									
4,100.0	37.50	260.91	3,904.6	-134.4	-839.5	406.7	0.00	0.00	0.00
4,200.0	37.50	260.91	3,984.0	-144.0	-899.6	435.9	0.00	0.00	0.00
4,201.3	37.50	260.91	3,985.0	-144.1	-900.4	436.2	0.00	0.00	0.00
Richards									
4,300.0	37.50	260.91	4,063.3	-153.6	-959.7	465.0	0.00	0.00	0.00
4,400.0	37.50	260.91	4,142.6	-163.3	-1,019.9	494.1	0.00	0.00	0.00
4,500.0	37.50	260.91	4,222.0	-172.9	-1,080.0	523.2	0.00	0.00	0.00
4,600.0	37.50	260.91	4,301.3	-182.5	-1,140.1	552.3	0.00	0.00	0.00

Planning Report

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Well:	Regina 7-66-3-10-6N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan 4		

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)
4,700.0	37.50	260.91	4,380.6	-192.1	-1,200.2	581.5	0.00	0.00	0.00
4,800.0	37.50	260.91	4,460.0	-201.8	-1,260.3	610.6	0.00	0.00	0.00
4,893.3	37.50	260.91	4,534.0	-210.7	-1,316.4	637.8	0.00	0.00	0.00
Terry									
4,900.0	37.50	260.91	4,539.3	-211.4	-1,320.4	639.7	0.00	0.00	0.00
5,000.0	37.50	260.91	4,618.7	-221.0	-1,380.5	668.8	0.00	0.00	0.00
5,100.0	37.50	260.91	4,698.0	-230.6	-1,440.6	698.0	0.00	0.00	0.00
5,200.0	37.50	260.91	4,777.3	-240.2	-1,500.7	727.1	0.00	0.00	0.00
5,300.0	37.50	260.91	4,856.7	-249.9	-1,560.8	756.2	0.00	0.00	0.00
5,400.0	37.50	260.91	4,936.0	-259.5	-1,621.0	785.3	0.00	0.00	0.00
5,500.0	37.50	260.91	5,015.3	-269.1	-1,681.1	814.4	0.00	0.00	0.00
5,600.0	37.50	260.91	5,094.7	-278.7	-1,741.2	843.6	0.00	0.00	0.00
5,700.0	37.50	260.91	5,174.0	-288.4	-1,801.3	872.7	0.00	0.00	0.00
5,731.5	37.50	260.91	5,199.0	-291.4	-1,820.2	881.9	0.00	0.00	0.00
Hygeine									
5,800.0	37.50	260.91	5,253.3	-298.0	-1,861.4	901.8	0.00	0.00	0.00
5,900.0	37.50	260.91	5,332.7	-307.6	-1,921.5	930.9	0.00	0.00	0.00
6,000.0	37.50	260.91	5,412.0	-317.2	-1,981.6	960.1	0.00	0.00	0.00
6,100.0	37.50	260.91	5,491.3	-326.9	-2,041.7	989.2	0.00	0.00	0.00
6,200.0	37.50	260.91	5,570.7	-336.5	-2,101.8	1,018.3	0.00	0.00	0.00
6,300.0	37.50	260.91	5,650.0	-346.1	-2,162.0	1,047.4	0.00	0.00	0.00
6,400.0	37.50	260.91	5,729.3	-355.7	-2,222.1	1,076.5	0.00	0.00	0.00
6,456.3	37.50	260.91	5,774.0	-361.1	-2,255.9	1,092.9	0.00	0.00	0.00
Lower Pierre zero									
6,500.0	37.50	260.91	5,808.7	-365.3	-2,282.2	1,105.7	0.00	0.00	0.00
6,600.0	37.50	260.91	5,888.0	-375.0	-2,342.3	1,134.8	0.00	0.00	0.00
6,700.0	37.50	260.91	5,967.4	-384.6	-2,402.4	1,163.9	0.00	0.00	0.00
6,800.0	37.50	260.91	6,046.7	-394.2	-2,462.5	1,193.0	0.00	0.00	0.00
6,900.0	37.50	260.91	6,126.0	-403.8	-2,522.6	1,222.2	0.00	0.00	0.00
7,000.0	37.50	260.91	6,205.4	-413.5	-2,582.7	1,251.3	0.00	0.00	0.00
7,021.0	37.50	260.91	6,222.0	-415.5	-2,595.3	1,257.4	0.00	0.00	0.00
Lower Pierre 1									
7,100.0	37.50	260.91	6,284.7	-423.1	-2,642.8	1,280.4	0.00	0.00	0.00
7,200.0	37.50	260.91	6,364.0	-432.7	-2,703.0	1,309.5	0.00	0.00	0.00
7,300.0	37.50	260.91	6,443.4	-442.3	-2,763.1	1,338.6	0.00	0.00	0.00
7,400.0	37.50	260.91	6,522.7	-451.9	-2,823.2	1,367.8	0.00	0.00	0.00
7,500.0	37.50	260.91	6,602.0	-461.6	-2,883.3	1,396.9	0.00	0.00	0.00
7,600.0	37.50	260.91	6,681.4	-471.2	-2,943.4	1,426.0	0.00	0.00	0.00
7,700.0	37.50	260.91	6,760.7	-480.8	-3,003.5	1,455.1	0.00	0.00	0.00
7,800.0	37.50	260.91	6,840.0	-490.4	-3,063.6	1,484.3	0.00	0.00	0.00
7,884.4	37.50	260.91	6,907.0	-498.6	-3,114.4	1,508.8	0.00	0.00	0.00
Lower Pierre 2									
7,900.0	37.50	260.91	6,919.4	-500.1	-3,123.7	1,513.4	0.00	0.00	0.00
8,000.0	37.50	260.91	6,998.7	-509.7	-3,183.8	1,542.5	0.00	0.00	0.00
8,008.2	37.50	260.91	7,005.2	-510.5	-3,188.8	1,544.9	0.00	0.00	0.00
KOP - Start 10°/100' Build									
8,100.0	40.81	247.31	7,076.5	-526.5	-3,244.2	1,578.5	10.00	3.61	-14.80
8,200.0	45.96	234.81	7,149.3	-559.9	-3,303.8	1,629.9	10.00	5.15	-12.51
8,205.3	46.27	234.21	7,153.0	-562.1	-3,307.0	1,633.0	10.00	5.82	-11.28
Lower Pierre 3									
8,300.0	52.25	224.49	7,214.8	-608.9	-3,361.1	1,695.2	10.00	6.31	-10.26
8,332.1	54.44	221.57	7,234.0	-627.8	-3,378.6	1,718.8	10.00	6.83	-9.11
Sharon Springs									

Planning Report

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Wellbore:	Original Wellbore		
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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)	
8,367.6	56.94	218.52	7,254.0	-650.2	-3,397.4	1,746.2	10.00	7.05	-8.59	
Nio A Chalk										
8,400.0	59.28	215.88	7,271.1	-672.1	-3,414.1	1,772.4	10.00	7.24	-8.13	
8,409.6	59.99	215.13	7,276.0	-678.9	-3,418.9	1,780.4	10.00	7.34	-7.87	
Nio A Marl										
8,500.0	66.81	208.49	7,316.5	-747.5	-3,461.3	1,859.3	10.00	7.55	-7.35	
8,501.3	66.91	208.39	7,317.0	-748.6	-3,461.9	1,860.5	10.00	7.71	-6.93	
Nio B upper										
8,600.0	74.64	201.89	7,349.5	-832.9	-3,501.3	1,953.1	10.00	7.84	-6.59	
8,691.2	81.95	196.31	7,368.0	-917.2	-3,530.5	2,042.3	10.00	8.01	-6.12	
Nio B chalk										
8,700.0	82.66	195.79	7,369.2	-925.6	-3,532.9	2,051.0	10.00	8.06	-5.97	
8,790.8	90.00	190.44	7,375.0	-1,013.7	-3,553.4	2,141.0	10.00	8.09	-5.89	
LP - 500' FNL & 500' FWL										
8,800.0	90.00	190.25	7,375.0	-1,022.8	-3,555.0	2,150.0	2.01	0.00	-2.01	
8,900.0	90.00	188.25	7,375.0	-1,121.5	-3,571.1	2,248.5	2.00	0.00	-2.00	
9,000.0	90.00	186.25	7,375.0	-1,220.7	-3,583.8	2,346.2	2.00	0.00	-2.00	
9,100.0	90.00	184.25	7,375.0	-1,320.3	-3,592.9	2,443.1	2.00	0.00	-2.00	
9,200.0	90.00	182.25	7,375.0	-1,420.1	-3,598.6	2,539.1	2.00	0.00	-2.00	
9,277.0	90.00	180.71	7,375.0	-1,497.1	-3,600.6	2,612.4	2.00	0.00	-2.00	
9,300.0	90.00	180.71	7,375.0	-1,520.1	-3,600.9	2,634.1	0.00	0.00	0.00	
9,400.0	90.00	180.71	7,375.0	-1,620.1	-3,602.1	2,728.8	0.00	0.00	0.00	
9,500.0	90.00	180.71	7,375.0	-1,720.0	-3,603.4	2,823.5	0.00	0.00	0.00	
9,600.0	90.00	180.71	7,375.0	-1,820.0	-3,604.6	2,918.2	0.00	0.00	0.00	
9,700.0	90.00	180.71	7,375.0	-1,920.0	-3,605.8	3,012.8	0.00	0.00	0.00	
9,800.0	90.00	180.71	7,375.0	-2,020.0	-3,607.1	3,107.5	0.00	0.00	0.00	
9,900.0	90.00	180.71	7,375.0	-2,120.0	-3,608.3	3,202.2	0.00	0.00	0.00	
10,000.0	90.00	180.71	7,375.0	-2,220.0	-3,609.6	3,296.9	0.00	0.00	0.00	
10,100.0	90.00	180.71	7,375.0	-2,320.0	-3,610.8	3,391.6	0.00	0.00	0.00	
10,200.0	90.00	180.71	7,375.0	-2,420.0	-3,612.1	3,486.2	0.00	0.00	0.00	
10,300.0	90.00	180.71	7,375.0	-2,520.0	-3,613.3	3,580.9	0.00	0.00	0.00	
10,400.0	90.00	180.71	7,375.0	-2,620.0	-3,614.5	3,675.6	0.00	0.00	0.00	
10,500.0	90.00	180.71	7,375.0	-2,720.0	-3,615.8	3,770.3	0.00	0.00	0.00	
10,600.0	90.00	180.71	7,375.0	-2,820.0	-3,617.0	3,865.0	0.00	0.00	0.00	
10,700.0	90.00	180.71	7,375.0	-2,920.0	-3,618.3	3,959.6	0.00	0.00	0.00	
10,800.0	90.00	180.71	7,375.0	-3,019.9	-3,619.5	4,054.3	0.00	0.00	0.00	
10,900.0	90.00	180.71	7,375.0	-3,119.9	-3,620.8	4,149.0	0.00	0.00	0.00	
11,000.0	90.00	180.71	7,375.0	-3,219.9	-3,622.0	4,243.7	0.00	0.00	0.00	
11,100.0	90.00	180.71	7,375.0	-3,319.9	-3,623.3	4,338.4	0.00	0.00	0.00	
11,200.0	90.00	180.71	7,375.0	-3,419.9	-3,624.5	4,433.0	0.00	0.00	0.00	
11,300.0	90.00	180.71	7,375.0	-3,519.9	-3,625.7	4,527.7	0.00	0.00	0.00	
11,400.0	90.00	180.71	7,375.0	-3,619.9	-3,627.0	4,622.4	0.00	0.00	0.00	
11,500.0	90.00	180.71	7,375.0	-3,719.9	-3,628.2	4,717.1	0.00	0.00	0.00	
11,600.0	90.00	180.71	7,375.0	-3,819.9	-3,629.5	4,811.8	0.00	0.00	0.00	
11,700.0	90.00	180.71	7,375.0	-3,919.9	-3,630.7	4,906.4	0.00	0.00	0.00	
11,800.0	90.00	180.71	7,375.0	-4,019.9	-3,632.0	5,001.1	0.00	0.00	0.00	
11,900.0	90.00	180.71	7,375.0	-4,119.9	-3,633.2	5,095.8	0.00	0.00	0.00	
12,000.0	90.00	180.71	7,375.0	-4,219.9	-3,634.4	5,190.5	0.00	0.00	0.00	
12,100.0	90.00	180.71	7,375.0	-4,319.8	-3,635.7	5,285.2	0.00	0.00	0.00	
12,200.0	90.00	180.71	7,375.0	-4,419.8	-3,636.9	5,379.8	0.00	0.00	0.00	
12,300.0	90.00	180.71	7,375.0	-4,519.8	-3,638.2	5,474.5	0.00	0.00	0.00	
12,400.0	90.00	180.71	7,375.0	-4,619.8	-3,639.4	5,569.2	0.00	0.00	0.00	
12,500.0	90.00	180.71	7,375.0	-4,719.8	-3,640.7	5,663.9	0.00	0.00	0.00	

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well Regina 7-66-3-10-6N
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	KB @ 5018.0usft
Project:	Weld County, CO	MD Reference:	KB @ 5018.0usft
Site:	SEC 34 T8N-R66W	North Reference:	True
Well:	Regina 7-66-3-10-6N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan 4		

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)
12,600.0	90.00	180.71	7,375.0	-4,819.8	-3,641.9	5,758.6	0.00	0.00	0.00
12,700.0	90.00	180.71	7,375.0	-4,919.8	-3,643.2	5,853.3	0.00	0.00	0.00
12,800.0	90.00	180.71	7,375.0	-5,019.8	-3,644.4	5,947.9	0.00	0.00	0.00
12,900.0	90.00	180.71	7,375.0	-5,119.8	-3,645.6	6,042.6	0.00	0.00	0.00
13,000.0	90.00	180.71	7,375.0	-5,219.8	-3,646.9	6,137.3	0.00	0.00	0.00
13,100.0	90.00	180.71	7,375.0	-5,319.8	-3,648.1	6,232.0	0.00	0.00	0.00
13,200.0	90.00	180.71	7,375.0	-5,419.8	-3,649.4	6,326.7	0.00	0.00	0.00
13,300.0	90.00	180.71	7,375.0	-5,519.8	-3,650.6	6,421.3	0.00	0.00	0.00
13,400.0	90.00	180.71	7,375.0	-5,619.7	-3,651.9	6,516.0	0.00	0.00	0.00
13,500.0	90.00	180.71	7,375.0	-5,719.7	-3,653.1	6,610.7	0.00	0.00	0.00
13,600.0	90.00	180.71	7,375.0	-5,819.7	-3,654.3	6,705.4	0.00	0.00	0.00
13,700.0	90.00	180.71	7,375.0	-5,919.7	-3,655.6	6,800.1	0.00	0.00	0.00
13,800.0	90.00	180.71	7,375.0	-6,019.7	-3,656.8	6,894.7	0.00	0.00	0.00
13,900.0	90.00	180.71	7,375.0	-6,119.7	-3,658.1	6,989.4	0.00	0.00	0.00
14,000.0	90.00	180.71	7,375.0	-6,219.7	-3,659.3	7,084.1	0.00	0.00	0.00
14,100.0	90.00	180.71	7,375.0	-6,319.7	-3,660.6	7,178.8	0.00	0.00	0.00
14,200.0	90.00	180.71	7,375.0	-6,419.7	-3,661.8	7,273.5	0.00	0.00	0.00
14,300.0	90.00	180.71	7,375.0	-6,519.7	-3,663.1	7,368.1	0.00	0.00	0.00
14,400.0	90.00	180.71	7,375.0	-6,619.7	-3,664.3	7,462.8	0.00	0.00	0.00
14,500.0	90.00	180.71	7,375.0	-6,719.7	-3,665.5	7,557.5	0.00	0.00	0.00
14,600.0	90.00	180.71	7,375.0	-6,819.7	-3,666.8	7,652.2	0.00	0.00	0.00
14,700.0	90.00	180.71	7,375.0	-6,919.6	-3,668.0	7,746.9	0.00	0.00	0.00
14,800.0	90.00	180.71	7,375.0	-7,019.6	-3,669.3	7,841.5	0.00	0.00	0.00
14,900.0	90.00	180.71	7,375.0	-7,119.6	-3,670.5	7,936.2	0.00	0.00	0.00
15,000.0	90.00	180.71	7,375.0	-7,219.6	-3,671.8	8,030.9	0.00	0.00	0.00
15,100.0	90.00	180.71	7,375.0	-7,319.6	-3,673.0	8,125.6	0.00	0.00	0.00
15,200.0	90.00	180.71	7,375.0	-7,419.6	-3,674.3	8,220.3	0.00	0.00	0.00
15,300.0	90.00	180.71	7,375.0	-7,519.6	-3,675.5	8,314.9	0.00	0.00	0.00
15,400.0	90.00	180.71	7,375.0	-7,619.6	-3,676.7	8,409.6	0.00	0.00	0.00
15,500.0	90.00	180.71	7,375.0	-7,719.6	-3,678.0	8,504.3	0.00	0.00	0.00
15,600.0	90.00	180.71	7,375.0	-7,819.6	-3,679.2	8,599.0	0.00	0.00	0.00
15,700.0	90.00	180.71	7,375.0	-7,919.6	-3,680.5	8,693.7	0.00	0.00	0.00
15,800.0	90.00	180.71	7,375.0	-8,019.6	-3,681.7	8,788.3	0.00	0.00	0.00
15,900.0	90.00	180.71	7,375.0	-8,119.6	-3,683.0	8,883.0	0.00	0.00	0.00
16,000.0	90.00	180.71	7,375.0	-8,219.5	-3,684.2	8,977.7	0.00	0.00	0.00
16,100.0	90.00	180.71	7,375.0	-8,319.5	-3,685.4	9,072.4	0.00	0.00	0.00
16,200.0	90.00	180.71	7,375.0	-8,419.5	-3,686.7	9,167.1	0.00	0.00	0.00
16,300.0	90.00	180.71	7,375.0	-8,519.5	-3,687.9	9,261.7	0.00	0.00	0.00
16,400.0	90.00	180.71	7,375.0	-8,619.5	-3,689.2	9,356.4	0.00	0.00	0.00
16,500.0	90.00	180.71	7,375.0	-8,719.5	-3,690.4	9,451.1	0.00	0.00	0.00
16,600.0	90.00	180.71	7,375.0	-8,819.5	-3,691.7	9,545.8	0.00	0.00	0.00
16,700.0	90.00	180.71	7,375.0	-8,919.5	-3,692.9	9,640.5	0.00	0.00	0.00
16,800.0	90.00	180.71	7,375.0	-9,019.5	-3,694.2	9,735.1	0.00	0.00	0.00
16,900.0	90.00	180.71	7,375.0	-9,119.5	-3,695.4	9,829.8	0.00	0.00	0.00
17,000.0	90.00	180.71	7,375.0	-9,219.5	-3,696.6	9,924.5	0.00	0.00	0.00
17,100.0	90.00	180.71	7,375.0	-9,319.5	-3,697.9	10,019.2	0.00	0.00	0.00
17,200.0	90.00	180.71	7,375.0	-9,419.5	-3,699.1	10,113.9	0.00	0.00	0.00
17,300.0	90.00	180.71	7,375.0	-9,519.4	-3,700.4	10,208.6	0.00	0.00	0.00
17,400.0	90.00	180.71	7,375.0	-9,619.4	-3,701.6	10,303.2	0.00	0.00	0.00
17,500.0	90.00	180.71	7,375.0	-9,719.4	-3,702.9	10,397.9	0.00	0.00	0.00
17,600.0	90.00	180.71	7,375.0	-9,819.4	-3,704.1	10,492.6	0.00	0.00	0.00
17,700.0	90.00	180.71	7,375.0	-9,919.4	-3,705.3	10,587.3	0.00	0.00	0.00
17,800.0	90.00	180.71	7,375.0	-10,019.4	-3,706.6	10,682.0	0.00	0.00	0.00
17,900.0	90.00	180.71	7,375.0	-10,119.4	-3,707.8	10,776.6	0.00	0.00	0.00

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well Regina 7-66-3-10-6N
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	KB @ 5018.0usft
Project:	Weld County, CO	MD Reference:	KB @ 5018.0usft
Site:	SEC 34 T8N-R66W	North Reference:	True
Well:	Regina 7-66-3-10-6N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan 4		

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)
18,000.0	90.00	180.71	7,375.0	-10,219.4	-3,709.1	10,871.3	0.00	0.00	0.00
18,100.0	90.00	180.71	7,375.0	-10,319.4	-3,710.3	10,966.0	0.00	0.00	0.00
18,200.0	90.00	180.71	7,375.0	-10,419.4	-3,711.6	11,060.7	0.00	0.00	0.00
18,273.0	90.00	180.71	7,375.0	-10,492.3	-3,712.5	11,129.8	0.00	0.00	0.00
5-1/2" Production - PBHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Regina 7-66-3-10-6N BF	0.00	0.00	7,375.0	-10,492.3	-3,712.5	1,456,372.85	3,202,277.80	40° 35' 1.903 N	104° 46' 18.235 W
- plan hits target center									
- Point									
Regina 7-66-3-10-6N LP	0.00	0.00	7,375.0	-1,018.7	-3,553.3	1,465,847.47	3,202,357.70	40° 36' 35.518 N	104° 46' 16.190 W
- plan misses target center by 1.0usft at 8795.7usft MD (7375.0 TVD, -1018.6 N, -3554.3 E)									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,500.0	1,500.0	Surface	9-5/8	13-1/2	
18,273.0	7,375.0	Production	5-1/2	8-1/2	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,687.1	1,687.0	Pierre				
4,201.3	3,985.0	Richards				
4,893.3	4,534.0	Terry				
5,731.5	5,199.0	Hygeine				
6,456.3	5,774.0	Lower Pierre zero				
7,021.0	6,222.0	Lower Pierre 1				
7,884.4	6,907.0	Lower Pierre 2				
8,205.3	7,153.0	Lower Pierre 3				
8,332.1	7,234.0	Sharon Springs				
8,367.6	7,254.0	Nio A Chalk				
8,409.6	7,276.0	Nio A Marl				
8,501.3	7,317.0	Nio B upper				
8,691.2	7,368.0	Nio B chalk				

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well Regina 7-66-3-10-6N
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	KB @ 5018.0usft
Project:	Weld County, CO	MD Reference:	KB @ 5018.0usft
Site:	SEC 34 T8N-R66W	North Reference:	True
Well:	Regina 7-66-3-10-6N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan 4		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,500.0	1,500.0	0.0	0.0	9-5/8"
1,500.0	1,500.0	0.0	0.0	Begin 1.5° Nudge
4,000.0	3,825.3	-124.8	-779.4	Begin 37.5° Nudge
8,008.2	7,005.2	-510.5	-3,188.8	KOP - Start 10°/100' Build
8,790.8	7,375.0	-1,013.7	-3,553.4	LP - 500' FNL & 500' FWL
18,273.0	7,375.0	-10,492.3	-3,712.5	5-1/2" Production - PBHL