

Project: Weld County, CO
Site: SEC 26 T8N-R67W
Well: CROWCHILD 7-67-3-34C
Wellbore: Original Wellbore
Design: Plan 5

Reference Details

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Latitude: 40° 37' 34.547 N
 Longitude: 104° 52' 7.086 W
 Grid Convergence: 0.41° West
 Ground Elevation: 5154.0
 KB Elevation: KB @ 5179.0usft



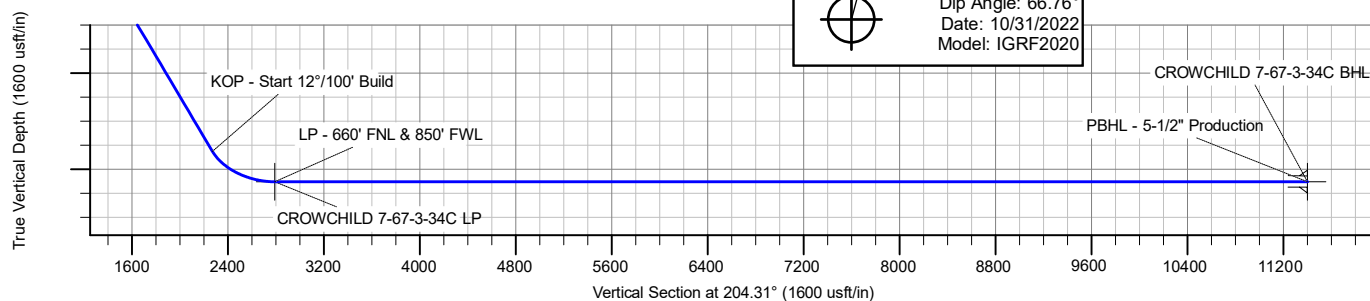
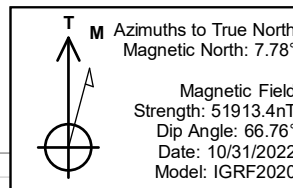
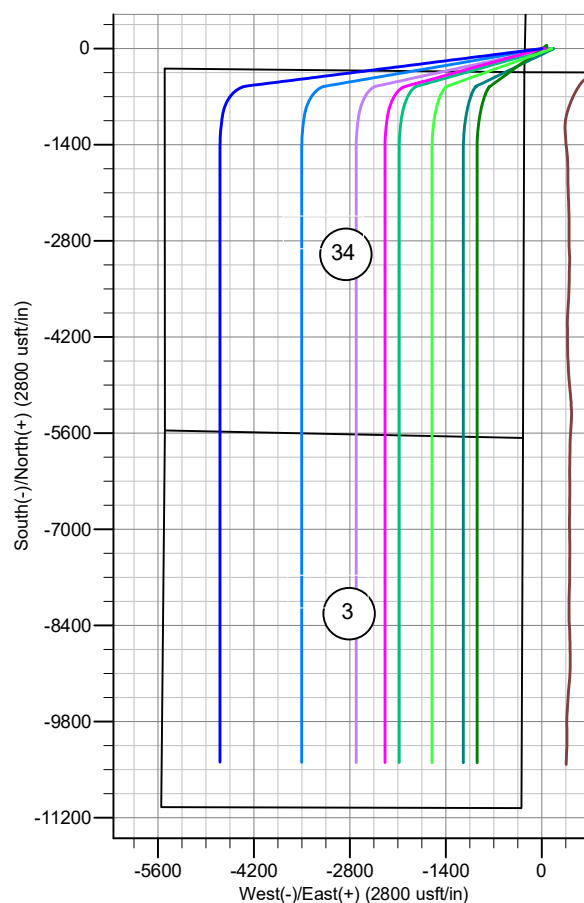
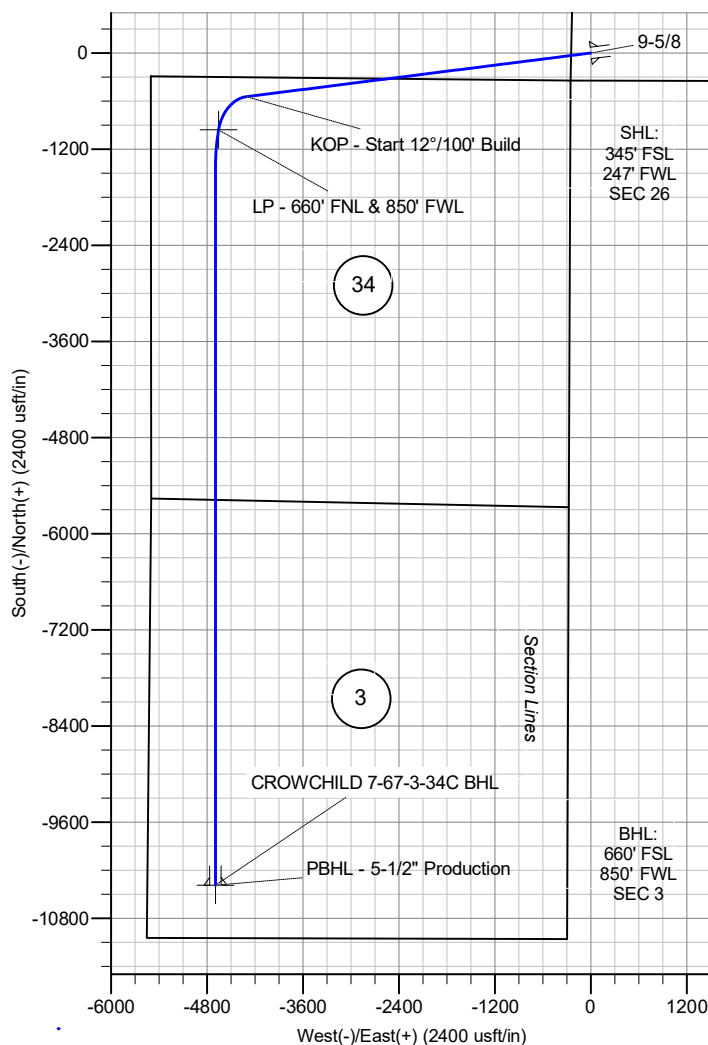
RPM Consulting, Inc.
 1600 Broadway, Suite 1480
 Denver, CO 80202
 303-595-7625

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec
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
4740.0	48.60	262.79	4365.2	-162.4	-1283.5	1.50	262.79	676.4
8801.8	48.60	262.79	7051.3	-544.8	-4306.1	0.00	0.00	2269.4
9448.1	90.00	189.48	7305.0	-959.2	-4654.8	12.00	281.21	2790.6
9922.1	90.00	180.00	7305.0	-1431.1	-4693.9	2.00	-90.00	3236.7
18879.8	90.00	180.00	7305.0	-10388.8	-4693.9	0.00	0.00	11400.0

CASING DETAILS

TVD	MD	Name
1500.0	1500.0	Surface
7305.0	18879.8	Production



Enerplus Resources (USA) Corporation

**Weld County, CO
SEC 26 T8N-R67W
CROWCHILD 7-67-3-34C**

Original Wellbore

Plan: Plan 5

Standard Planning Report

26 October, 2022

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well CROWCHILD 7-67-3-34C
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	KB @ 5179.0usft
Project:	Weld County, CO	MD Reference:	KB @ 5179.0usft
Site:	SEC 26 T8N-R67W	North Reference:	True
Well:	CROWCHILD 7-67-3-34C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan 5		

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 26 T8N-R67W		
Site Position:		Northing:	1,471,710.17 usft
From:	Lat/Long	Easting:	3,178,017.95 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	40° 37' 35.306 N
		Longitude:	104° 51' 31.223 W

Well	CROWCHILD 7-67-3-34C		
Well Position	+N/-S	0.0 usft	Northing: 1,471,613.46 usft
	+E/-W	0.0 usft	Easting: 3,175,253.32 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
Grid Convergence:	0.41 °	Ground Level:	5,154.0 usft

Wellbore	Original Wellbore				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	10/31/2022	7.78	66.76	51,913.42968741

Design	Plan 5				
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	204.31	

Plan Survey Tool Program	Date	10/26/2022			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.0	18,879.8	Plan 5 (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	
4,740.0	48.60	262.79	4,365.2	-162.4	-1,283.5	1.50	1.50	0.00	262.79	
8,801.8	48.60	262.79	7,051.3	-544.8	-4,306.1	0.00	0.00	0.00	0.00	
9,448.1	90.00	189.48	7,305.0	-959.2	-4,654.8	12.00	6.41	-11.34	281.22	
9,922.1	90.00	180.00	7,305.0	-1,431.1	-4,693.9	2.00	0.00	-2.00	-90.00	
18,879.8	90.00	180.00	7,305.0	-10,388.8	-4,693.9	0.00	0.00	0.00	0.00	CROWCHILD 7-67-3-

Planning Report

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Company:	Enerplus Resources (USA) Corporation	TVD Reference:	KB @ 5179.0usft
Project:	Weld County, CO	MD Reference:	KB @ 5179.0usft
Site:	SEC 26 T8N-R67W	North Reference:	True
Well:	CROWCHILD 7-67-3-34C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan 5		

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	1.50	262.79	1,600.0	-0.2	-1.3	0.7	1.50	1.50	0.00
1,700.0	3.00	262.79	1,699.9	-0.7	-5.2	2.7	1.50	1.50	0.00
1,800.0	4.50	262.79	1,799.7	-1.5	-11.7	6.2	1.50	1.50	0.00
1,900.0	6.00	262.79	1,899.3	-2.6	-20.8	10.9	1.50	1.50	0.00
2,000.0	7.50	262.79	1,998.6	-4.1	-32.4	17.1	1.50	1.50	0.00
2,100.0	9.00	262.79	2,097.5	-5.9	-46.7	24.6	1.50	1.50	0.00
2,200.0	10.50	262.79	2,196.1	-8.0	-63.5	33.4	1.50	1.50	0.00
2,300.0	12.00	262.79	2,294.2	-10.5	-82.8	43.6	1.50	1.50	0.00
2,400.0	13.50	262.79	2,391.7	-13.2	-104.7	55.2	1.50	1.50	0.00
2,500.0	15.00	262.79	2,488.6	-16.3	-129.1	68.0	1.50	1.50	0.00
2,600.0	16.50	262.79	2,584.9	-19.7	-156.1	82.2	1.50	1.50	0.00
2,700.0	18.00	262.79	2,680.4	-23.5	-185.5	97.7	1.50	1.50	0.00
2,800.0	19.50	262.79	2,775.0	-27.5	-217.4	114.6	1.50	1.50	0.00
2,900.0	21.00	262.79	2,868.9	-31.8	-251.7	132.6	1.50	1.50	0.00
3,000.0	22.50	262.79	2,961.7	-36.5	-288.5	152.0	1.50	1.50	0.00
3,100.0	24.00	262.79	3,053.6	-41.4	-327.6	172.7	1.50	1.50	0.00
3,200.0	25.50	262.79	3,144.4	-46.7	-369.2	194.5	1.50	1.50	0.00
3,300.0	27.00	262.79	3,234.1	-52.3	-413.0	217.7	1.50	1.50	0.00
3,400.0	28.50	262.79	3,322.6	-58.1	-459.2	242.0	1.50	1.50	0.00
3,500.0	30.00	262.79	3,409.9	-64.2	-507.7	267.6	1.50	1.50	0.00
3,600.0	31.50	262.79	3,495.8	-70.6	-558.4	294.3	1.50	1.50	0.00
3,648.5	32.23	262.79	3,537.0	-73.9	-583.8	307.7	1.50	1.50	0.00
Richards									
3,700.0	33.00	262.79	3,580.4	-77.3	-611.4	322.2	1.50	1.50	0.00
3,800.0	34.50	262.79	3,663.5	-84.3	-666.5	351.2	1.50	1.50	0.00
3,900.0	36.00	262.79	3,745.2	-91.6	-723.7	381.4	1.50	1.50	0.00
4,000.0	37.50	262.79	3,825.3	-99.1	-783.1	412.7	1.50	1.50	0.00
4,100.0	39.00	262.79	3,903.8	-106.8	-844.5	445.1	1.50	1.50	0.00
4,200.0	40.50	262.79	3,980.7	-114.9	-907.9	478.5	1.50	1.50	0.00
4,300.0	42.00	262.79	4,055.9	-123.1	-973.4	513.0	1.50	1.50	0.00
4,387.2	43.31	262.79	4,120.0	-130.5	-1,032.0	543.8	1.50	1.50	0.00
Terry									
4,400.0	43.50	262.79	4,129.3	-131.7	-1,040.7	548.5	1.50	1.50	0.00
4,500.0	45.00	262.79	4,200.9	-140.4	-1,109.9	584.9	1.50	1.50	0.00
4,600.0	46.50	262.79	4,270.7	-149.4	-1,181.0	622.4	1.50	1.50	0.00
4,700.0	48.00	262.79	4,338.6	-158.6	-1,253.8	660.8	1.50	1.50	0.00

Planning Report

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Project:	Weld County, CO	MD Reference:	KB @ 5179.0usft
Site:	SEC 26 T8N-R67W	North Reference:	True
Well:	CROWCHILD 7-67-3-34C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan 5		

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)	
4,740.0	48.60	262.79	4,365.2	-162.4	-1,283.5	676.4	1.50	1.50	0.00	
Begin 48.60° Tangent										
4,800.0	48.60	262.79	4,404.9	-168.0	-1,328.1	699.9	0.00	0.00	0.00	
4,900.0	48.60	262.79	4,471.0	-177.4	-1,402.5	739.1	0.00	0.00	0.00	
5,000.0	48.60	262.79	4,537.2	-186.8	-1,477.0	778.4	0.00	0.00	0.00	
5,100.0	48.60	262.79	4,603.3	-196.3	-1,551.4	817.6	0.00	0.00	0.00	
5,200.0	48.60	262.79	4,669.4	-205.7	-1,625.8	856.8	0.00	0.00	0.00	
5,234.1	48.60	262.79	4,692.0	-208.9	-1,651.2	870.2	0.00	0.00	0.00	
Hygiene										
5,300.0	48.60	262.79	4,735.5	-215.1	-1,700.2	896.0	0.00	0.00	0.00	
5,400.0	48.60	262.79	4,801.7	-224.5	-1,774.6	935.2	0.00	0.00	0.00	
5,500.0	48.60	262.79	4,867.8	-233.9	-1,849.0	974.5	0.00	0.00	0.00	
5,600.0	48.60	262.79	4,933.9	-243.3	-1,923.5	1,013.7	0.00	0.00	0.00	
5,700.0	48.60	262.79	5,000.1	-252.7	-1,997.9	1,052.9	0.00	0.00	0.00	
5,800.0	48.60	262.79	5,066.2	-262.2	-2,072.3	1,092.1	0.00	0.00	0.00	
5,900.0	48.60	262.79	5,132.3	-271.6	-2,146.7	1,131.3	0.00	0.00	0.00	
6,000.0	48.60	262.79	5,198.5	-281.0	-2,221.1	1,170.5	0.00	0.00	0.00	
6,100.0	48.60	262.79	5,264.6	-290.4	-2,295.5	1,209.8	0.00	0.00	0.00	
6,200.0	48.60	262.79	5,330.7	-299.8	-2,370.0	1,249.0	0.00	0.00	0.00	
6,298.7	48.60	262.79	5,396.0	-309.1	-2,443.4	1,287.7	0.00	0.00	0.00	
Lower Pierre zero										
6,300.0	48.60	262.79	5,396.9	-309.2	-2,444.4	1,288.2	0.00	0.00	0.00	
6,400.0	48.60	262.79	5,463.0	-318.6	-2,518.8	1,327.4	0.00	0.00	0.00	
6,500.0	48.60	262.79	5,529.1	-328.1	-2,593.2	1,366.6	0.00	0.00	0.00	
6,600.0	48.60	262.79	5,595.3	-337.5	-2,667.6	1,405.9	0.00	0.00	0.00	
6,700.0	48.60	262.79	5,661.4	-346.9	-2,742.1	1,445.1	0.00	0.00	0.00	
6,800.0	48.60	262.79	5,727.5	-356.3	-2,816.5	1,484.3	0.00	0.00	0.00	
6,900.0	48.60	262.79	5,793.6	-365.7	-2,890.9	1,523.5	0.00	0.00	0.00	
6,982.2	48.60	262.79	5,848.0	-373.5	-2,952.1	1,555.7	0.00	0.00	0.00	
Lower Pierre 1										
7,000.0	48.60	262.79	5,859.8	-375.1	-2,965.3	1,562.7	0.00	0.00	0.00	
7,100.0	48.60	262.79	5,925.9	-384.5	-3,039.7	1,601.9	0.00	0.00	0.00	
7,200.0	48.60	262.79	5,992.0	-394.0	-3,114.1	1,641.2	0.00	0.00	0.00	
7,300.0	48.60	262.79	6,058.2	-403.4	-3,188.6	1,680.4	0.00	0.00	0.00	
7,400.0	48.60	262.79	6,124.3	-412.8	-3,263.0	1,719.6	0.00	0.00	0.00	
7,500.0	48.60	262.79	6,190.4	-422.2	-3,337.4	1,758.8	0.00	0.00	0.00	
7,600.0	48.60	262.79	6,256.6	-431.6	-3,411.8	1,798.0	0.00	0.00	0.00	
7,700.0	48.60	262.79	6,322.7	-441.0	-3,486.2	1,837.3	0.00	0.00	0.00	
7,800.0	48.60	262.79	6,388.8	-450.4	-3,560.7	1,876.5	0.00	0.00	0.00	
7,900.0	48.60	262.79	6,455.0	-459.9	-3,635.1	1,915.7	0.00	0.00	0.00	
8,000.0	48.60	262.79	6,521.1	-469.3	-3,709.5	1,954.9	0.00	0.00	0.00	
8,055.8	48.60	262.79	6,558.0	-474.5	-3,751.0	1,976.8	0.00	0.00	0.00	
Lower Pierre 2										
8,100.0	48.60	262.79	6,587.2	-478.7	-3,783.9	1,994.1	0.00	0.00	0.00	
8,200.0	48.60	262.79	6,653.4	-488.1	-3,858.3	2,033.4	0.00	0.00	0.00	
8,300.0	48.60	262.79	6,719.5	-497.5	-3,932.7	2,072.6	0.00	0.00	0.00	
8,400.0	48.60	262.79	6,785.6	-506.9	-4,007.2	2,111.8	0.00	0.00	0.00	
8,500.0	48.60	262.79	6,851.7	-516.3	-4,081.6	2,151.0	0.00	0.00	0.00	
8,526.1	48.60	262.79	6,869.0	-518.8	-4,101.0	2,161.2	0.00	0.00	0.00	
Lower Pierre 3										
8,600.0	48.60	262.79	6,917.9	-525.8	-4,156.0	2,190.2	0.00	0.00	0.00	
8,659.2	48.60	262.79	6,957.0	-531.3	-4,200.0	2,213.4	0.00	0.00	0.00	
Sharon Springs										

Planning Report

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Project:	Weld County, CO	MD Reference:	KB @ 5179.0usft
Site:	SEC 26 T8N-R67W	North Reference:	True
Well:	CROWCHILD 7-67-3-34C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan 5		

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)	
8,700.0	48.60	262.79	6,984.0	-535.2	-4,230.4	2,229.4	0.00	0.00	0.00	
8,716.6	48.60	262.79	6,995.0	-536.7	-4,242.8	2,236.0	0.00	0.00	0.00	
Nio A Chalk										
8,745.4	48.60	262.79	7,014.0	-539.4	-4,264.2	2,247.2	0.00	0.00	0.00	
Nio A Marl										
8,793.7	48.60	262.79	7,046.0	-544.0	-4,300.2	2,266.2	0.00	0.00	0.00	
Nio B upper										
8,800.0	48.60	262.79	7,050.1	-544.6	-4,304.8	2,268.7	0.00	0.00	0.00	
8,801.8	48.60	262.79	7,051.3	-544.8	-4,306.2	2,269.4	0.00	0.00	0.00	
KOP - Start 12°/100' Build										
8,869.1	50.64	252.52	7,095.0	-555.8	-4,356.1	2,300.0	12.01	3.03	-15.26	
Nio B chalk										
8,900.0	51.86	248.03	7,114.3	-563.9	-4,378.8	2,316.7	12.00	3.97	-14.52	
8,961.3	54.77	239.60	7,151.0	-585.6	-4,422.8	2,354.6	12.00	4.74	-13.76	
Nio B marl										
9,000.0	56.89	234.60	7,172.8	-603.0	-4,449.7	2,381.5	12.00	5.48	-12.91	
9,017.2	57.89	232.47	7,182.0	-611.6	-4,461.3	2,394.1	12.00	5.84	-12.45	
Nio C Chalk										
9,093.8	62.77	223.48	7,220.0	-656.2	-4,510.6	2,455.1	12.00	6.36	-11.72	
Nio C Marl										
9,100.0	63.18	222.79	7,222.8	-660.2	-4,514.3	2,460.3	12.00	6.76	-11.13	
9,157.7	67.23	216.61	7,247.0	-700.5	-4,547.7	2,510.7	12.00	7.02	-10.72	
Nio D chalk										
9,200.0	70.35	212.31	7,262.3	-733.0	-4,570.0	2,549.6	12.00	7.37	-10.16	
9,255.3	74.57	206.93	7,279.0	-778.9	-4,596.1	2,602.1	12.00	7.63	-9.72	
Fort Hays										
9,300.0	78.07	202.75	7,289.6	-818.3	-4,614.3	2,645.5	12.00	7.83	-9.36	
9,356.0	82.54	197.66	7,299.0	-870.0	-4,633.3	2,700.5	12.00	7.98	-9.09	
Codell										
9,400.0	86.10	193.73	7,303.4	-912.2	-4,645.1	2,743.8	12.00	8.08	-8.92	
9,448.1	90.00	189.48	7,305.0	-959.3	-4,654.8	2,790.6	12.00	8.12	-8.84	
LP - 660' FNL & 850' FWL										
9,500.0	90.00	188.44	7,305.0	-1,010.5	-4,662.9	2,840.7	2.00	0.00	-2.00	
9,600.0	90.00	186.44	7,305.0	-1,109.7	-4,675.8	2,936.4	2.00	0.00	-2.00	
9,700.0	90.00	184.44	7,305.0	-1,209.2	-4,685.3	3,031.0	2.00	0.00	-2.00	
9,800.0	90.00	182.44	7,305.0	-1,309.0	-4,691.3	3,124.4	2.00	0.00	-2.00	
9,900.0	90.00	180.44	7,305.0	-1,409.0	-4,693.8	3,216.6	2.00	0.00	-2.00	
9,922.1	90.00	180.00	7,305.0	-1,431.1	-4,693.9	3,236.7	2.00	0.00	-2.00	
10,000.0	90.00	180.00	7,305.0	-1,509.0	-4,693.9	3,307.7	0.00	0.00	0.00	
10,100.0	90.00	180.00	7,305.0	-1,609.0	-4,693.9	3,398.9	0.00	0.00	0.00	
10,200.0	90.00	180.00	7,305.0	-1,709.0	-4,693.9	3,490.0	0.00	0.00	0.00	
10,300.0	90.00	180.00	7,305.0	-1,809.0	-4,693.9	3,581.1	0.00	0.00	0.00	
10,400.0	90.00	180.00	7,305.0	-1,909.0	-4,693.9	3,672.3	0.00	0.00	0.00	
10,500.0	90.00	180.00	7,305.0	-2,009.0	-4,693.9	3,763.4	0.00	0.00	0.00	
10,600.0	90.00	180.00	7,305.0	-2,109.0	-4,693.9	3,854.5	0.00	0.00	0.00	
10,700.0	90.00	180.00	7,305.0	-2,209.0	-4,693.9	3,945.6	0.00	0.00	0.00	
10,800.0	90.00	180.00	7,305.0	-2,309.0	-4,693.9	4,036.8	0.00	0.00	0.00	
10,900.0	90.00	180.00	7,305.0	-2,409.0	-4,693.9	4,127.9	0.00	0.00	0.00	
11,000.0	90.00	180.00	7,305.0	-2,509.0	-4,693.9	4,219.0	0.00	0.00	0.00	
11,100.0	90.00	180.00	7,305.0	-2,609.0	-4,693.9	4,310.2	0.00	0.00	0.00	
11,200.0	90.00	180.00	7,305.0	-2,709.0	-4,693.9	4,401.3	0.00	0.00	0.00	
11,300.0	90.00	180.00	7,305.0	-2,809.0	-4,693.9	4,492.4	0.00	0.00	0.00	

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well CROWCHILD 7-67-3-34C
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	KB @ 5179.0usft
Project:	Weld County, CO	MD Reference:	KB @ 5179.0usft
Site:	SEC 26 T8N-R67W	North Reference:	True
Well:	CROWCHILD 7-67-3-34C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan 5		

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)
11,400.0	90.00	180.00	7,305.0	-2,909.0	-4,693.9	4,583.6	0.00	0.00	0.00
11,500.0	90.00	180.00	7,305.0	-3,009.0	-4,693.9	4,674.7	0.00	0.00	0.00
11,600.0	90.00	180.00	7,305.0	-3,109.0	-4,693.9	4,765.8	0.00	0.00	0.00
11,700.0	90.00	180.00	7,305.0	-3,209.0	-4,693.9	4,857.0	0.00	0.00	0.00
11,800.0	90.00	180.00	7,305.0	-3,309.0	-4,693.9	4,948.1	0.00	0.00	0.00
11,900.0	90.00	180.00	7,305.0	-3,409.0	-4,693.9	5,039.2	0.00	0.00	0.00
12,000.0	90.00	180.00	7,305.0	-3,509.0	-4,693.9	5,130.4	0.00	0.00	0.00
12,100.0	90.00	180.00	7,305.0	-3,609.0	-4,693.9	5,221.5	0.00	0.00	0.00
12,200.0	90.00	180.00	7,305.0	-3,709.0	-4,693.9	5,312.6	0.00	0.00	0.00
12,300.0	90.00	180.00	7,305.0	-3,809.0	-4,693.9	5,403.7	0.00	0.00	0.00
12,400.0	90.00	180.00	7,305.0	-3,909.0	-4,693.9	5,494.9	0.00	0.00	0.00
12,500.0	90.00	180.00	7,305.0	-4,009.0	-4,693.9	5,586.0	0.00	0.00	0.00
12,600.0	90.00	180.00	7,305.0	-4,109.0	-4,693.9	5,677.1	0.00	0.00	0.00
12,700.0	90.00	180.00	7,305.0	-4,209.0	-4,693.9	5,768.3	0.00	0.00	0.00
12,800.0	90.00	180.00	7,305.0	-4,309.0	-4,693.9	5,859.4	0.00	0.00	0.00
12,900.0	90.00	180.00	7,305.0	-4,409.0	-4,693.9	5,950.5	0.00	0.00	0.00
13,000.0	90.00	180.00	7,305.0	-4,509.0	-4,693.9	6,041.7	0.00	0.00	0.00
13,100.0	90.00	180.00	7,305.0	-4,609.0	-4,693.9	6,132.8	0.00	0.00	0.00
13,200.0	90.00	180.00	7,305.0	-4,709.0	-4,693.9	6,223.9	0.00	0.00	0.00
13,300.0	90.00	180.00	7,305.0	-4,809.0	-4,693.9	6,315.1	0.00	0.00	0.00
13,400.0	90.00	180.00	7,305.0	-4,909.0	-4,693.9	6,406.2	0.00	0.00	0.00
13,500.0	90.00	180.00	7,305.0	-5,009.0	-4,693.9	6,497.3	0.00	0.00	0.00
13,600.0	90.00	180.00	7,305.0	-5,109.0	-4,693.9	6,588.5	0.00	0.00	0.00
13,700.0	90.00	180.00	7,305.0	-5,209.0	-4,693.9	6,679.6	0.00	0.00	0.00
13,800.0	90.00	180.00	7,305.0	-5,309.0	-4,693.9	6,770.7	0.00	0.00	0.00
13,900.0	90.00	180.00	7,305.0	-5,409.0	-4,693.9	6,861.8	0.00	0.00	0.00
14,000.0	90.00	180.00	7,305.0	-5,509.0	-4,693.9	6,953.0	0.00	0.00	0.00
14,100.0	90.00	180.00	7,305.0	-5,609.0	-4,693.9	7,044.1	0.00	0.00	0.00
14,200.0	90.00	180.00	7,305.0	-5,709.0	-4,693.9	7,135.2	0.00	0.00	0.00
14,300.0	90.00	180.00	7,305.0	-5,809.0	-4,693.9	7,226.4	0.00	0.00	0.00
14,400.0	90.00	180.00	7,305.0	-5,909.0	-4,693.9	7,317.5	0.00	0.00	0.00
14,500.0	90.00	180.00	7,305.0	-6,009.0	-4,693.9	7,408.6	0.00	0.00	0.00
14,600.0	90.00	180.00	7,305.0	-6,109.0	-4,693.9	7,499.8	0.00	0.00	0.00
14,700.0	90.00	180.00	7,305.0	-6,209.0	-4,693.9	7,590.9	0.00	0.00	0.00
14,800.0	90.00	180.00	7,305.0	-6,309.0	-4,693.9	7,682.0	0.00	0.00	0.00
14,900.0	90.00	180.00	7,305.0	-6,409.0	-4,693.9	7,773.2	0.00	0.00	0.00
15,000.0	90.00	180.00	7,305.0	-6,509.0	-4,693.9	7,864.3	0.00	0.00	0.00
15,100.0	90.00	180.00	7,305.0	-6,609.0	-4,693.9	7,955.4	0.00	0.00	0.00
15,200.0	90.00	180.00	7,305.0	-6,709.0	-4,693.9	8,046.6	0.00	0.00	0.00
15,300.0	90.00	180.00	7,305.0	-6,809.0	-4,693.9	8,137.7	0.00	0.00	0.00
15,400.0	90.00	180.00	7,305.0	-6,909.0	-4,693.9	8,228.8	0.00	0.00	0.00
15,500.0	90.00	180.00	7,305.0	-7,009.0	-4,693.9	8,319.9	0.00	0.00	0.00
15,600.0	90.00	180.00	7,305.0	-7,109.0	-4,693.9	8,411.1	0.00	0.00	0.00
15,700.0	90.00	180.00	7,305.0	-7,209.0	-4,693.9	8,502.2	0.00	0.00	0.00
15,800.0	90.00	180.00	7,305.0	-7,309.0	-4,693.9	8,593.3	0.00	0.00	0.00
15,900.0	90.00	180.00	7,305.0	-7,409.0	-4,693.9	8,684.5	0.00	0.00	0.00
16,000.0	90.00	180.00	7,305.0	-7,509.0	-4,693.9	8,775.6	0.00	0.00	0.00
16,100.0	90.00	180.00	7,305.0	-7,609.0	-4,693.9	8,866.7	0.00	0.00	0.00
16,200.0	90.00	180.00	7,305.0	-7,709.0	-4,693.9	8,957.9	0.00	0.00	0.00
16,300.0	90.00	180.00	7,305.0	-7,809.0	-4,693.9	9,049.0	0.00	0.00	0.00
16,400.0	90.00	180.00	7,305.0	-7,909.0	-4,693.9	9,140.1	0.00	0.00	0.00
16,500.0	90.00	180.00	7,305.0	-8,009.0	-4,693.9	9,231.3	0.00	0.00	0.00
16,600.0	90.00	180.00	7,305.0	-8,109.0	-4,693.9	9,322.4	0.00	0.00	0.00
16,700.0	90.00	180.00	7,305.0	-8,209.0	-4,693.9	9,413.5	0.00	0.00	0.00

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well CROWCHILD 7-67-3-34C
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	KB @ 5179.0usft
Project:	Weld County, CO	MD Reference:	KB @ 5179.0usft
Site:	SEC 26 T8N-R67W	North Reference:	True
Well:	CROWCHILD 7-67-3-34C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan 5		

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)	
16,800.0	90.00	180.00	7,305.0	-8,309.0	-4,693.9	9,504.7	0.00	0.00	0.00	
16,900.0	90.00	180.00	7,305.0	-8,409.0	-4,693.9	9,595.8	0.00	0.00	0.00	
17,000.0	90.00	180.00	7,305.0	-8,509.0	-4,693.9	9,686.9	0.00	0.00	0.00	
17,100.0	90.00	180.00	7,305.0	-8,609.0	-4,693.9	9,778.0	0.00	0.00	0.00	
17,200.0	90.00	180.00	7,305.0	-8,709.0	-4,693.9	9,869.2	0.00	0.00	0.00	
17,300.0	90.00	180.00	7,305.0	-8,809.0	-4,693.9	9,960.3	0.00	0.00	0.00	
17,400.0	90.00	180.00	7,305.0	-8,909.0	-4,693.9	10,051.4	0.00	0.00	0.00	
17,500.0	90.00	180.00	7,305.0	-9,009.0	-4,693.9	10,142.6	0.00	0.00	0.00	
17,600.0	90.00	180.00	7,305.0	-9,109.0	-4,693.9	10,233.7	0.00	0.00	0.00	
17,700.0	90.00	180.00	7,305.0	-9,209.0	-4,693.9	10,324.8	0.00	0.00	0.00	
17,800.0	90.00	180.00	7,305.0	-9,309.0	-4,693.9	10,416.0	0.00	0.00	0.00	
17,900.0	90.00	180.00	7,305.0	-9,409.0	-4,693.9	10,507.1	0.00	0.00	0.00	
18,000.0	90.00	180.00	7,305.0	-9,509.0	-4,693.9	10,598.2	0.00	0.00	0.00	
18,100.0	90.00	180.00	7,305.0	-9,609.0	-4,693.9	10,689.4	0.00	0.00	0.00	
18,200.0	90.00	180.00	7,305.0	-9,709.0	-4,693.9	10,780.5	0.00	0.00	0.00	
18,300.0	90.00	180.00	7,305.0	-9,809.0	-4,693.9	10,871.6	0.00	0.00	0.00	
18,400.0	90.00	180.00	7,305.0	-9,909.0	-4,693.9	10,962.7	0.00	0.00	0.00	
18,500.0	90.00	180.00	7,305.0	-10,009.0	-4,693.9	11,053.9	0.00	0.00	0.00	
18,600.0	90.00	180.00	7,305.0	-10,109.0	-4,693.9	11,145.0	0.00	0.00	0.00	
18,700.0	90.00	180.00	7,305.0	-10,209.0	-4,693.9	11,236.1	0.00	0.00	0.00	
18,800.0	90.00	180.00	7,305.0	-10,309.0	-4,693.9	11,327.3	0.00	0.00	0.00	
18,879.8	90.00	180.00	7,305.0	-10,388.8	-4,693.9	11,400.0	0.00	0.00	0.00	
PBHL - 5-1/2" Production										

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										
CROWCHILD 7-67-3-34	0.00	0.00	7,305.0	-959.2	-4,654.7	1,470,621.17	3,170,605.61	40° 37' 25.064 N		104° 53' 7.451 W
- plan misses target center by 0.1usft at 9448.0usft MD (7305.0 TVD, -959.1 N, -4654.8 E)										
- Point										
CROWCHILD 7-67-3-34	0.00	0.00	7,305.0	-10,388.8	-4,693.9	1,461,191.54	3,170,633.47	40° 35' 51.886 N		104° 53' 7.937 W
- plan hits target center										
- 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
18,879.8	7,305.0	Production		5-1/2	8-1/2

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well CROWCHILD 7-67-3-34C
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	KB @ 5179.0usft
Project:	Weld County, CO	MD Reference:	KB @ 5179.0usft
Site:	SEC 26 T8N-R67W	North Reference:	True
Well:	CROWCHILD 7-67-3-34C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan 5		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,648.5	3,537.0	Richards				
4,387.2	4,120.0	Terry				
5,234.1	4,692.0	Hygeine				
6,298.7	5,396.0	Lower Pierre zero				
6,982.2	5,848.0	Lower Pierre 1				
8,055.8	6,558.0	Lower Pierre 2				
8,526.1	6,869.0	Lower Pierre 3				
8,659.2	6,957.0	Sharon Springs				
8,716.6	6,995.0	Nio A Chalk				
8,745.4	7,014.0	Nio A Marl				
8,793.7	7,046.0	Nio B upper				
8,869.1	7,095.0	Nio B chalk				
8,961.3	7,151.0	Nio B marl				
9,017.2	7,182.0	Nio C Chalk				
9,093.8	7,220.0	Nio C Marl				
9,157.7	7,247.0	Nio D chalk				
9,255.3	7,279.0	Fort Hays				
9,356.0	7,299.0	Codell				

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	
4,740.0	4,365.2	-162.4	-1,283.5	Begin 48.60° Tangent	
8,801.8	7,051.3	-544.8	-4,306.2	KOP - Start 12°/100' Build	
9,448.1	7,305.0	-959.3	-4,654.8	LP - 660' FNL & 850' FWL	
18,879.8	7,305.0	-10,388.8	-4,693.9	PBHL - 5-1/2" Production	