

**Project:** Weld County, CO  
**Site:** SEC 36 T8N-R67W  
**Well:** Cowtown 8-67-36-25  
**Wellbore:** Hz  
**Design:** Plan 6

## Reference Details

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Latitude: 40° 36' 41.799 N  
 Longitude: 104° 50' 38.234 W  
 Grid Convergence: 0.42° West  
 Ground Elevation: 5179.0  
 KB Elevation: KB @ 5204.0usft



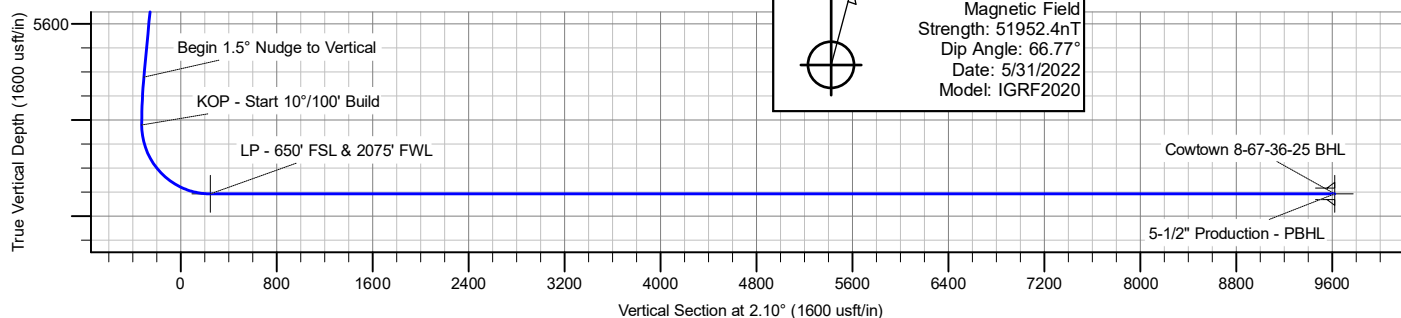
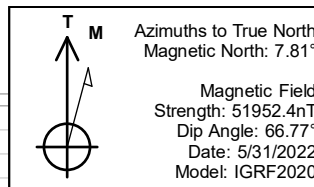
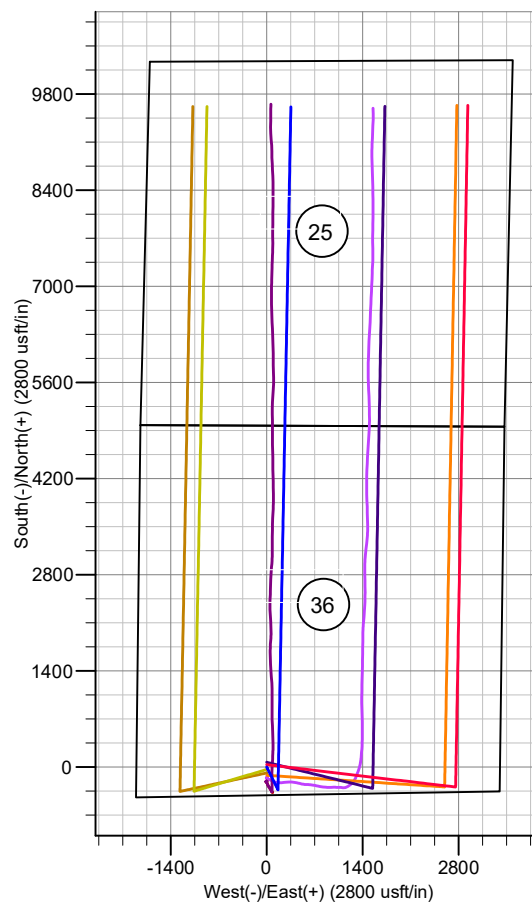
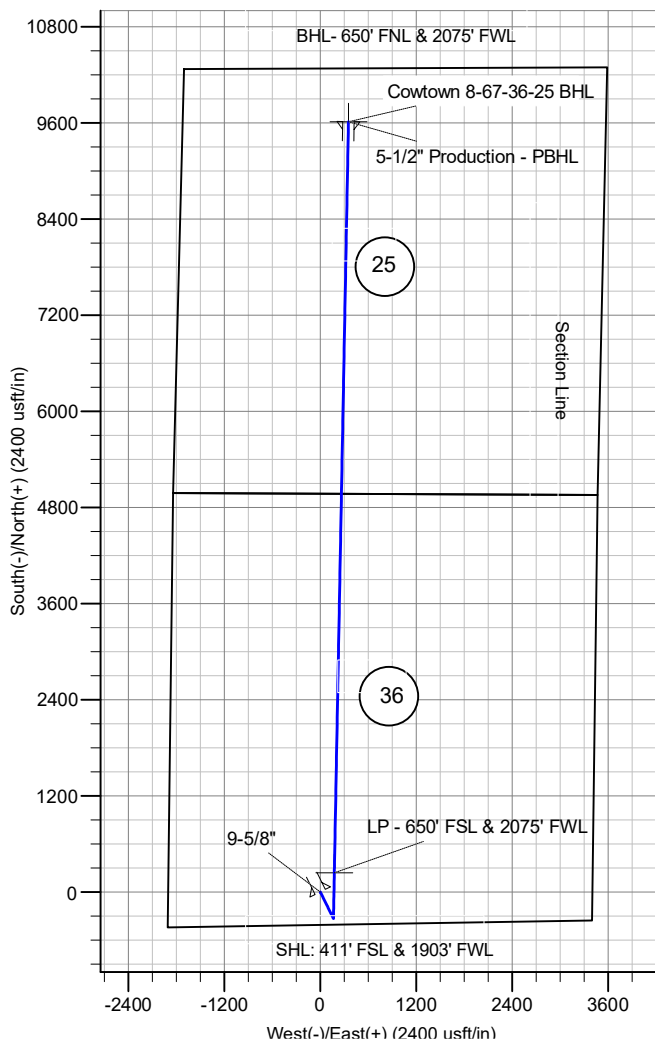
**RPM Consulting, Inc.**  
 1600 Broadway, Suite 1480  
 Denver, CO 80202  
 303-595-7625

## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	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
2515.5	0.00	0.00	2515.5	0.0	0.0	0.00	0.00	0.0
2915.5	6.00	153.75	2914.8	-18.8	9.3	1.50	153.75	-18.4
6060.7	6.00	153.75	6042.7	-313.6	154.6	0.00	0.00	-307.8
6460.7	0.00	0.00	6442.0	-332.4	163.9	1.50	180.00	-326.2
7360.7	90.00	1.08	7015.0	240.5	174.7	10.00	1.08	246.7
7424.1	90.00	1.08	7015.0	303.9	175.9	0.00	0.00	310.1
16735.5	90.00	1.08	7015.0	9613.6	352.0	0.00	0.00	9620.1

## CASING DETAILS

TVD	MD	Name
1500.0	1500.0	Surface
7015.0	16735.5	Production



# **Enerplus Resources (USA) Corporation**

**Weld County, CO  
SEC 36 T8N-R67W  
Cowtown 8-67-36-25**

**Hz**

**Plan: Plan 6**

## **Standard Planning Report**

**05 May, 2022**

## Planning Report

<b>Database:</b>	EDM Server Database	<b>Local Co-ordinate Reference:</b>	Well Cowtown 8-67-36-25
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	KB @ 5204.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	KB @ 5204.0usft
<b>Site:</b>	SEC 36 T8N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Cowtown 8-67-36-25	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan 6		

<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 36 T8N-R67W			
Site Position:		Northing:	1,466,170.19 usft	Latitude:	40° 36' 40.266 N
From:	Lat/Long	Easting:	3,182,147.25 usft	Longitude:	104° 50' 38.202 W
Position Uncertainty:		0.0 usft	Slot Radius:	13-3/16 "	

Well		Cowtown 8-67-36-25				
Well Position	+N/-S	0.0 usft	Northing:	1,466,325.35 usft	Latitude:	40° 36' 41.799 N
	+E/-W	0.0 usft	Easting:	3,182,143.60 usft	Longitude:	104° 50' 38.234 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	5,179.0 usft
Grid Convergence:		0.42 °				

<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>
	IGRF2020	5/31/2022	7.81	66.77	51,952.35783805

<b>Design</b>	Plan 6				
<b>Audit Notes:</b>					
<b>Version:</b>		<b>Phase:</b>	PLAN	<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	2.10	

<b>Plan Survey Tool Program</b>	<b>Date</b>	5/5/2022			
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.0	16,735.5 Plan 6 (Hz)	MWD		
			OWSG MWD - Standard		

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<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	KB @ 5204.0usft
<b>Site:</b>	SEC 36 T8N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Cowtown 8-67-36-25	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan 6		

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	
2,515.5	0.00	0.00	2,515.5	0.0	0.0	0.00	0.00	0.00	0.00	
2,915.5	6.00	153.75	2,914.8	-18.8	9.3	1.50	1.50	0.00	153.75	
6,060.7	6.00	153.75	6,042.7	-313.6	154.6	0.00	0.00	0.00	0.00	
6,460.7	0.00	0.00	6,442.0	-332.4	163.9	1.50	-1.50	0.00	180.00	
7,360.7	90.00	1.08	7,015.0	240.5	174.7	10.00	10.00	0.00	1.08	
7,424.1	90.00	1.08	7,015.0	303.9	175.9	0.00	0.00	0.00	0.00	
16,735.5	90.00	1.08	7,015.0	9,613.6	352.0	0.00	0.00	0.00	0.00	Cowtown 8-67-36-25

# Planning Report

<b>Database:</b>	EDM Server Database	<b>Local Co-ordinate Reference:</b>	Well Cowtown 8-67-36-25
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	KB @ 5204.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	KB @ 5204.0usft
<b>Site:</b>	SEC 36 T8N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Cowtown 8-67-36-25	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan 6		

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
1,326.0	0.00	0.00	1,326.0	0.0	0.0	0.0	0.00	0.00	0.00
Pierre									
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
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,515.5	0.00	0.00	2,515.5	0.0	0.0	0.0	0.00	0.00	0.00
Begin 1.5° Nudge									
2,600.0	1.27	153.75	2,600.0	-0.8	0.4	-0.8	1.50	1.50	0.00
2,700.0	2.77	153.75	2,699.9	-4.0	2.0	-3.9	1.50	1.50	0.00
2,800.0	4.27	153.75	2,799.7	-9.5	4.7	-9.3	1.50	1.50	0.00
2,900.0	5.77	153.75	2,899.4	-17.3	8.6	-17.0	1.50	1.50	0.00
2,915.5	6.00	153.75	2,914.8	-18.8	9.3	-18.4	1.50	1.50	0.00
Start 6° Tangent									
3,000.0	6.00	153.75	2,998.8	-26.7	13.2	-26.2	0.00	0.00	0.00
3,100.0	6.00	153.75	3,098.3	-36.1	17.8	-35.4	0.00	0.00	0.00
3,200.0	6.00	153.75	3,197.7	-45.4	22.4	-44.6	0.00	0.00	0.00
3,300.0	6.00	153.75	3,297.2	-54.8	27.0	-53.8	0.00	0.00	0.00
3,400.0	6.00	153.75	3,396.6	-64.2	31.7	-63.0	0.00	0.00	0.00
3,500.0	6.00	153.75	3,496.1	-73.6	36.3	-72.2	0.00	0.00	0.00
3,532.1	6.00	153.75	3,528.0	-76.6	37.8	-75.1	0.00	0.00	0.00
Richards									
3,600.0	6.00	153.75	3,595.5	-82.9	40.9	-81.4	0.00	0.00	0.00
3,700.0	6.00	153.75	3,695.0	-92.3	45.5	-90.6	0.00	0.00	0.00
3,800.0	6.00	153.75	3,794.4	-101.7	50.1	-99.8	0.00	0.00	0.00
3,900.0	6.00	153.75	3,893.9	-111.1	54.8	-109.0	0.00	0.00	0.00
4,000.0	6.00	153.75	3,993.3	-120.4	59.4	-118.2	0.00	0.00	0.00
4,100.0	6.00	153.75	4,092.8	-129.8	64.0	-127.4	0.00	0.00	0.00
4,114.3	6.00	153.75	4,107.0	-131.2	64.7	-128.7	0.00	0.00	0.00
Terry									

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<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	KB @ 5204.0usft
<b>Site:</b>	SEC 36 T8N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Cowtown 8-67-36-25	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan 6		

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)
4,200.0	6.00	153.75	4,192.2	-139.2	68.6	-136.6	0.00	0.00	0.00
4,300.0	6.00	153.75	4,291.7	-148.6	73.3	-145.8	0.00	0.00	0.00
4,400.0	6.00	153.75	4,391.1	-157.9	77.9	-155.0	0.00	0.00	0.00
4,500.0	6.00	153.75	4,490.6	-167.3	82.5	-164.2	0.00	0.00	0.00
4,600.0	6.00	153.75	4,590.0	-176.7	87.1	-173.4	0.00	0.00	0.00
4,689.4	6.00	153.75	4,679.0	-185.1	91.3	-181.6	0.00	0.00	0.00
Hygeine									
4,700.0	6.00	153.75	4,689.5	-186.1	91.7	-182.6	0.00	0.00	0.00
4,800.0	6.00	153.75	4,788.9	-195.4	96.4	-191.8	0.00	0.00	0.00
4,900.0	6.00	153.75	4,888.4	-204.8	101.0	-201.0	0.00	0.00	0.00
5,000.0	6.00	153.75	4,987.9	-214.2	105.6	-210.2	0.00	0.00	0.00
5,100.0	6.00	153.75	5,087.3	-223.6	110.2	-219.4	0.00	0.00	0.00
5,200.0	6.00	153.75	5,186.8	-232.9	114.9	-228.6	0.00	0.00	0.00
5,300.0	6.00	153.75	5,286.2	-242.3	119.5	-237.8	0.00	0.00	0.00
5,400.0	6.00	153.75	5,385.7	-251.7	124.1	-247.0	0.00	0.00	0.00
5,401.3	6.00	153.75	5,387.0	-251.8	124.2	-247.1	0.00	0.00	0.00
Lower Pierre zero									
5,500.0	6.00	153.75	5,485.1	-261.1	128.7	-256.2	0.00	0.00	0.00
5,600.0	6.00	153.75	5,584.6	-270.4	133.3	-265.4	0.00	0.00	0.00
5,700.0	6.00	153.75	5,684.0	-279.8	138.0	-274.6	0.00	0.00	0.00
5,800.0	6.00	153.75	5,783.5	-289.2	142.6	-283.8	0.00	0.00	0.00
5,851.8	6.00	153.75	5,835.0	-294.1	145.0	-288.5	0.00	0.00	0.00
Lower Pierre 1									
5,900.0	6.00	153.75	5,882.9	-298.6	147.2	-293.0	0.00	0.00	0.00
6,000.0	6.00	153.75	5,982.4	-307.9	151.8	-302.2	0.00	0.00	0.00
6,060.7	6.00	153.75	6,042.7	-313.6	154.6	-307.8	0.00	0.00	0.00
Begin 1.5° Nudge to Vertical									
6,100.0	5.41	153.75	6,081.8	-317.1	156.4	-311.2	1.50	-1.50	0.00
6,200.0	3.91	153.75	6,181.5	-324.4	160.0	-318.4	1.50	-1.50	0.00
6,300.0	2.41	153.75	6,281.4	-329.4	162.4	-323.2	1.50	-1.50	0.00
6,400.0	0.91	153.75	6,381.3	-332.0	163.7	-325.8	1.50	-1.50	0.00
6,460.7	0.00	0.00	6,442.0	-332.4	163.9	-326.2	1.50	-1.50	0.00
KOP - Start 10°/100' Build									
6,488.7	2.80	1.08	6,470.0	-331.7	163.9	-325.5	10.00	10.00	0.00
Lower Pierre 2									
6,500.0	3.93	1.08	6,481.3	-331.1	163.9	-324.8	10.00	10.00	0.00
6,600.0	13.93	1.08	6,579.9	-315.6	164.2	-309.3	10.00	10.00	0.00
6,700.0	23.93	1.08	6,674.4	-283.2	164.8	-276.9	10.00	10.00	0.00
6,800.0	33.93	1.08	6,761.8	-234.8	165.7	-228.6	10.00	10.00	0.00
6,812.4	35.17	1.08	6,772.0	-227.8	165.9	-221.6	10.00	10.00	0.00
Lower Pierre 3									
6,900.0	43.93	1.08	6,839.5	-172.1	166.9	-165.9	10.00	10.00	0.00
6,942.5	48.18	1.08	6,869.0	-141.5	167.5	-135.3	10.00	10.00	0.00
Sharon Springs									
7,000.0	53.93	1.08	6,905.1	-96.8	168.3	-90.6	10.00	10.00	0.00
7,003.2	54.25	1.08	6,907.0	-94.2	168.4	-88.0	10.00	10.00	0.00
Nio A Chalk									
7,037.1	57.64	1.08	6,926.0	-66.1	168.9	-59.9	10.00	10.00	0.00
Nio A Marl									
7,100.0	63.93	1.08	6,956.7	-11.3	170.0	-5.1	10.00	10.00	0.00
7,103.0	64.24	1.08	6,958.0	-8.5	170.0	-2.3	10.00	10.00	0.00
Nio B upper									
7,200.0	73.93	1.08	6,992.6	81.9	171.7	88.1	10.00	10.00	0.00

## Planning Report

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<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	KB @ 5204.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	KB @ 5204.0usft
<b>Site:</b>	SEC 36 T8N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Cowtown 8-67-36-25	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan 6		

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)
7,265.1	80.44	1.08	7,007.0	145.3	172.9	151.5	10.00	10.00	0.00
Nio B chalk									
7,300.0	83.93	1.08	7,011.7	179.9	173.6	186.1	10.00	10.00	0.00
7,360.7	90.00	1.08	7,015.0	240.5	174.7	246.7	10.00	10.00	0.00
LP - 650' FSL & 2075' FWL									
7,400.0	90.00	1.08	7,015.0	279.8	175.4	286.0	0.00	0.00	0.00
7,424.1	90.00	1.08	7,015.0	303.9	175.9	310.1	0.00	0.00	0.00
7,500.0	90.00	1.08	7,015.0	379.7	177.3	386.0	0.00	0.00	0.00
7,600.0	90.00	1.08	7,015.0	479.7	179.2	486.0	0.00	0.00	0.00
7,700.0	90.00	1.08	7,015.0	579.7	181.1	585.9	0.00	0.00	0.00
7,800.0	90.00	1.08	7,015.0	679.7	183.0	685.9	0.00	0.00	0.00
7,900.0	90.00	1.08	7,015.0	779.7	184.9	785.9	0.00	0.00	0.00
8,000.0	90.00	1.08	7,015.0	879.7	186.8	885.9	0.00	0.00	0.00
8,100.0	90.00	1.08	7,015.0	979.6	188.6	985.9	0.00	0.00	0.00
8,200.0	90.00	1.08	7,015.0	1,079.6	190.5	1,085.9	0.00	0.00	0.00
8,300.0	90.00	1.08	7,015.0	1,179.6	192.4	1,185.8	0.00	0.00	0.00
8,400.0	90.00	1.08	7,015.0	1,279.6	194.3	1,285.8	0.00	0.00	0.00
8,500.0	90.00	1.08	7,015.0	1,379.6	196.2	1,385.8	0.00	0.00	0.00
8,600.0	90.00	1.08	7,015.0	1,479.5	198.1	1,485.8	0.00	0.00	0.00
8,700.0	90.00	1.08	7,015.0	1,579.5	199.9	1,585.8	0.00	0.00	0.00
8,800.0	90.00	1.08	7,015.0	1,679.5	201.8	1,685.8	0.00	0.00	0.00
8,900.0	90.00	1.08	7,015.0	1,779.5	203.7	1,785.8	0.00	0.00	0.00
9,000.0	90.00	1.08	7,015.0	1,879.5	205.6	1,885.7	0.00	0.00	0.00
9,100.0	90.00	1.08	7,015.0	1,979.5	207.5	1,985.7	0.00	0.00	0.00
9,200.0	90.00	1.08	7,015.0	2,079.4	209.4	2,085.7	0.00	0.00	0.00
9,300.0	90.00	1.08	7,015.0	2,179.4	211.3	2,185.7	0.00	0.00	0.00
9,400.0	90.00	1.08	7,015.0	2,279.4	213.1	2,285.7	0.00	0.00	0.00
9,500.0	90.00	1.08	7,015.0	2,379.4	215.0	2,385.7	0.00	0.00	0.00
9,600.0	90.00	1.08	7,015.0	2,479.4	216.9	2,485.6	0.00	0.00	0.00
9,700.0	90.00	1.08	7,015.0	2,579.3	218.8	2,585.6	0.00	0.00	0.00
9,800.0	90.00	1.08	7,015.0	2,679.3	220.7	2,685.6	0.00	0.00	0.00
9,900.0	90.00	1.08	7,015.0	2,779.3	222.6	2,785.6	0.00	0.00	0.00
10,000.0	90.00	1.08	7,015.0	2,879.3	224.4	2,885.6	0.00	0.00	0.00
10,100.0	90.00	1.08	7,015.0	2,979.3	226.3	2,985.6	0.00	0.00	0.00
10,200.0	90.00	1.08	7,015.0	3,079.3	228.2	3,085.5	0.00	0.00	0.00
10,300.0	90.00	1.08	7,015.0	3,179.2	230.1	3,185.5	0.00	0.00	0.00
10,400.0	90.00	1.08	7,015.0	3,279.2	232.0	3,285.5	0.00	0.00	0.00
10,500.0	90.00	1.08	7,015.0	3,379.2	233.9	3,385.5	0.00	0.00	0.00
10,600.0	90.00	1.08	7,015.0	3,479.2	235.8	3,485.5	0.00	0.00	0.00
10,700.0	90.00	1.08	7,015.0	3,579.2	237.6	3,585.5	0.00	0.00	0.00
10,800.0	90.00	1.08	7,015.0	3,679.2	239.5	3,685.5	0.00	0.00	0.00
10,900.0	90.00	1.08	7,015.0	3,779.1	241.4	3,785.4	0.00	0.00	0.00
11,000.0	90.00	1.08	7,015.0	3,879.1	243.3	3,885.4	0.00	0.00	0.00
11,100.0	90.00	1.08	7,015.0	3,979.1	245.2	3,985.4	0.00	0.00	0.00
11,200.0	90.00	1.08	7,015.0	4,079.1	247.1	4,085.4	0.00	0.00	0.00
11,300.0	90.00	1.08	7,015.0	4,179.1	249.0	4,185.4	0.00	0.00	0.00
11,400.0	90.00	1.08	7,015.0	4,279.0	250.8	4,285.4	0.00	0.00	0.00
11,500.0	90.00	1.08	7,015.0	4,379.0	252.7	4,385.3	0.00	0.00	0.00
11,600.0	90.00	1.08	7,015.0	4,479.0	254.6	4,485.3	0.00	0.00	0.00
11,700.0	90.00	1.08	7,015.0	4,579.0	256.5	4,585.3	0.00	0.00	0.00
11,800.0	90.00	1.08	7,015.0	4,679.0	258.4	4,685.3	0.00	0.00	0.00
11,900.0	90.00	1.08	7,015.0	4,779.0	260.3	4,785.3	0.00	0.00	0.00
12,000.0	90.00	1.08	7,015.0	4,878.9	262.1	4,885.3	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM Server Database	<b>Local Co-ordinate Reference:</b>	Well Cowtown 8-67-36-25
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	KB @ 5204.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	KB @ 5204.0usft
<b>Site:</b>	SEC 36 T8N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Cowtown 8-67-36-25	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan 6		

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)
12,100.0	90.00	1.08	7,015.0	4,978.9	264.0	4,985.2	0.00	0.00	0.00
12,200.0	90.00	1.08	7,015.0	5,078.9	265.9	5,085.2	0.00	0.00	0.00
12,300.0	90.00	1.08	7,015.0	5,178.9	267.8	5,185.2	0.00	0.00	0.00
12,400.0	90.00	1.08	7,015.0	5,278.9	269.7	5,285.2	0.00	0.00	0.00
12,500.0	90.00	1.08	7,015.0	5,378.9	271.6	5,385.2	0.00	0.00	0.00
12,600.0	90.00	1.08	7,015.0	5,478.8	273.5	5,485.2	0.00	0.00	0.00
12,700.0	90.00	1.08	7,015.0	5,578.8	275.3	5,585.2	0.00	0.00	0.00
12,800.0	90.00	1.08	7,015.0	5,678.8	277.2	5,685.1	0.00	0.00	0.00
12,900.0	90.00	1.08	7,015.0	5,778.8	279.1	5,785.1	0.00	0.00	0.00
13,000.0	90.00	1.08	7,015.0	5,878.8	281.0	5,885.1	0.00	0.00	0.00
13,100.0	90.00	1.08	7,015.0	5,978.7	282.9	5,985.1	0.00	0.00	0.00
13,200.0	90.00	1.08	7,015.0	6,078.7	284.8	6,085.1	0.00	0.00	0.00
13,300.0	90.00	1.08	7,015.0	6,178.7	286.6	6,185.1	0.00	0.00	0.00
13,400.0	90.00	1.08	7,015.0	6,278.7	288.5	6,285.0	0.00	0.00	0.00
13,500.0	90.00	1.08	7,015.0	6,378.7	290.4	6,385.0	0.00	0.00	0.00
13,600.0	90.00	1.08	7,015.0	6,478.7	292.3	6,485.0	0.00	0.00	0.00
13,700.0	90.00	1.08	7,015.0	6,578.6	294.2	6,585.0	0.00	0.00	0.00
13,800.0	90.00	1.08	7,015.0	6,678.6	296.1	6,685.0	0.00	0.00	0.00
13,900.0	90.00	1.08	7,015.0	6,778.6	298.0	6,785.0	0.00	0.00	0.00
14,000.0	90.00	1.08	7,015.0	6,878.6	299.8	6,885.0	0.00	0.00	0.00
14,100.0	90.00	1.08	7,015.0	6,978.6	301.7	6,984.9	0.00	0.00	0.00
14,200.0	90.00	1.08	7,015.0	7,078.5	303.6	7,084.9	0.00	0.00	0.00
14,300.0	90.00	1.08	7,015.0	7,178.5	305.5	7,184.9	0.00	0.00	0.00
14,400.0	90.00	1.08	7,015.0	7,278.5	307.4	7,284.9	0.00	0.00	0.00
14,500.0	90.00	1.08	7,015.0	7,378.5	309.3	7,384.9	0.00	0.00	0.00
14,600.0	90.00	1.08	7,015.0	7,478.5	311.2	7,484.9	0.00	0.00	0.00
14,700.0	90.00	1.08	7,015.0	7,578.5	313.0	7,584.8	0.00	0.00	0.00
14,800.0	90.00	1.08	7,015.0	7,678.4	314.9	7,684.8	0.00	0.00	0.00
14,900.0	90.00	1.08	7,015.0	7,778.4	316.8	7,784.8	0.00	0.00	0.00
15,000.0	90.00	1.08	7,015.0	7,878.4	318.7	7,884.8	0.00	0.00	0.00
15,100.0	90.00	1.08	7,015.0	7,978.4	320.6	7,984.8	0.00	0.00	0.00
15,200.0	90.00	1.08	7,015.0	8,078.4	322.5	8,084.8	0.00	0.00	0.00
15,300.0	90.00	1.08	7,015.0	8,178.4	324.3	8,184.7	0.00	0.00	0.00
15,400.0	90.00	1.08	7,015.0	8,278.3	326.2	8,284.7	0.00	0.00	0.00
15,500.0	90.00	1.08	7,015.0	8,378.3	328.1	8,384.7	0.00	0.00	0.00
15,600.0	90.00	1.08	7,015.0	8,478.3	330.0	8,484.7	0.00	0.00	0.00
15,700.0	90.00	1.08	7,015.0	8,578.3	331.9	8,584.7	0.00	0.00	0.00
15,800.0	90.00	1.08	7,015.0	8,678.3	333.8	8,684.7	0.00	0.00	0.00
15,900.0	90.00	1.08	7,015.0	8,778.2	335.7	8,784.7	0.00	0.00	0.00
16,000.0	90.00	1.08	7,015.0	8,878.2	337.5	8,884.6	0.00	0.00	0.00
16,100.0	90.00	1.08	7,015.0	8,978.2	339.4	8,984.6	0.00	0.00	0.00
16,200.0	90.00	1.08	7,015.0	9,078.2	341.3	9,084.6	0.00	0.00	0.00
16,300.0	90.00	1.08	7,015.0	9,178.2	343.2	9,184.6	0.00	0.00	0.00
16,400.0	90.00	1.08	7,015.0	9,278.2	345.1	9,284.6	0.00	0.00	0.00
16,500.0	90.00	1.08	7,015.0	9,378.1	347.0	9,384.6	0.00	0.00	0.00
16,600.0	90.00	1.08	7,015.0	9,478.1	348.8	9,484.5	0.00	0.00	0.00
16,700.0	90.00	1.08	7,015.0	9,578.1	350.7	9,584.5	0.00	0.00	0.00
16,735.5	90.00	1.08	7,015.0	9,613.6	351.4	9,620.0	0.00	0.00	0.00
5-1/2" Production - PBHL - Production									



## Planning Report

<b>Database:</b>	EDM Server Database	<b>Local Co-ordinate Reference:</b>	Well Cowtown 8-67-36-25
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	KB @ 5204.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	KB @ 5204.0usft
<b>Site:</b>	SEC 36 T8N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Cowtown 8-67-36-25	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Design:</b>	Plan 6		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Cowtown 8-67-36-25 BH	0.00	0.00	7,015.0	9,613.6	352.0	1,475,941.32	3,182,424.47	40° 38' 16.796 N	104° 50' 33.668 W
- plan misses target center by 0.6usft at 16735.5usft MD (7015.0 TVD, 9613.6 N, 351.4 E)									
- Point									
Cowtown 8-67-36-25 LP	0.00	0.00	7,015.0	240.5	174.7	1,466,567.10	3,182,316.52	40° 36' 44.176 N	104° 50' 35.969 W
- plan hits target center									
- Point									

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(usft)	(usft)	Name	(")	(")
	1,500.0	1,500.0	Surface	9-5/8	13-1/2
	16,735.5	7,015.0	Production	5-1/2	8-1/2

Formations						
	Measured Depth	Vertical Depth			Dip	Dip Direction
	(usft)	(usft)	Name	Lithology	(°)	(°)
	1,326.0	1,326.0	Pierre			
	3,532.1	3,528.0	Richards			
	4,114.3	4,107.0	Terry			
	4,689.4	4,679.0	Hygeine			
	5,401.3	5,387.0	Lower Pierre zero			
	5,851.8	5,835.0	Lower Pierre 1			
	6,488.7	6,470.0	Lower Pierre 2			
	6,812.4	6,772.0	Lower Pierre 3			
	6,942.5	6,869.0	Sharon Springs			
	7,003.2	6,907.0	Nio A Chalk			
	7,037.1	6,926.0	Nio A Marl			
	7,103.0	6,958.0	Nio B upper			
	7,265.1	7,007.0	Nio B chalk			

Plan Annotations					
	Measured Depth	Vertical Depth	Local Coordinates		
	(usft)	(usft)	+N/-S	+E/-W	Comment
			(usft)	(usft)	
	1,500.0	1,500.0	0.0	0.0	9-5/8"
	2,515.5	2,515.5	0.0	0.0	Begin 1.5° Nudge
	2,915.5	2,914.8	-18.8	9.3	Start 6° Tangent
	6,060.7	6,042.7	-313.6	154.6	Begin 1.5° Nudge to Vertical
	6,460.7	6,442.0	-332.4	163.9	KOP - Start 10°/100' Build
	7,360.7	7,015.0	240.5	174.7	LP - 650' FSL & 2075' FWL
	16,735.5	7,015.0	9,613.6	351.4	5-1/2" Production - PBHL