



Project: Weld County, CO  
Site: SEC 33 T8N-R67W  
Well: AVIGNON 8-67-32-31C  
Wellbore: Original Wellbore  
Design: Plan 3

#### Reference Details

Geodetic System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Latitude: 40° 37' 28.445 N  
Longitude: 104° 54' 13.162 W  
Grid Convergence: 0.39° West  
Ground Elevation: 5176.0  
KB Elevation: KB @ 5202.0usft



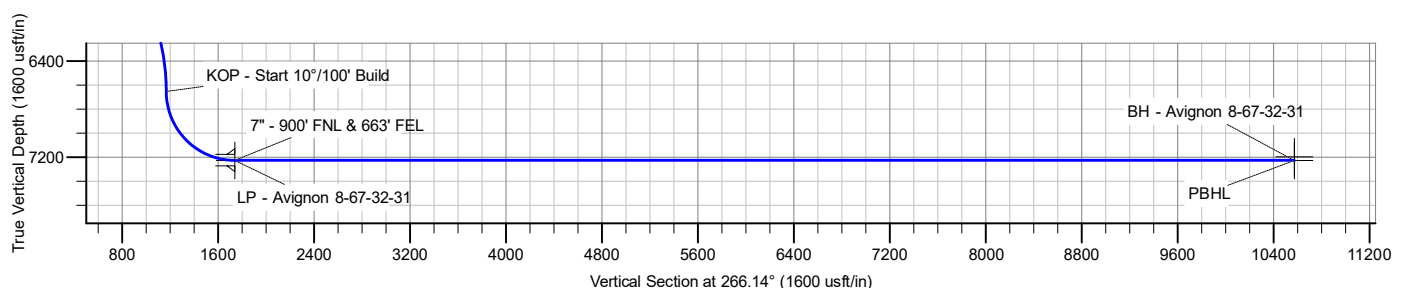
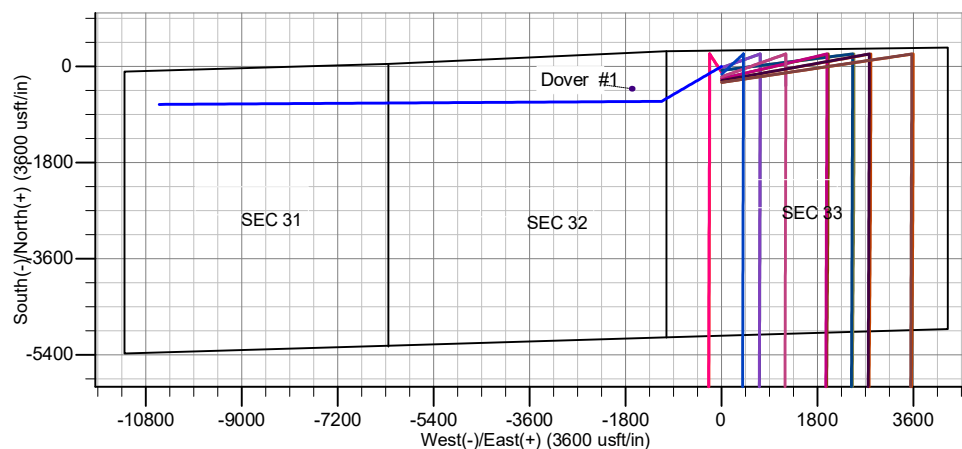
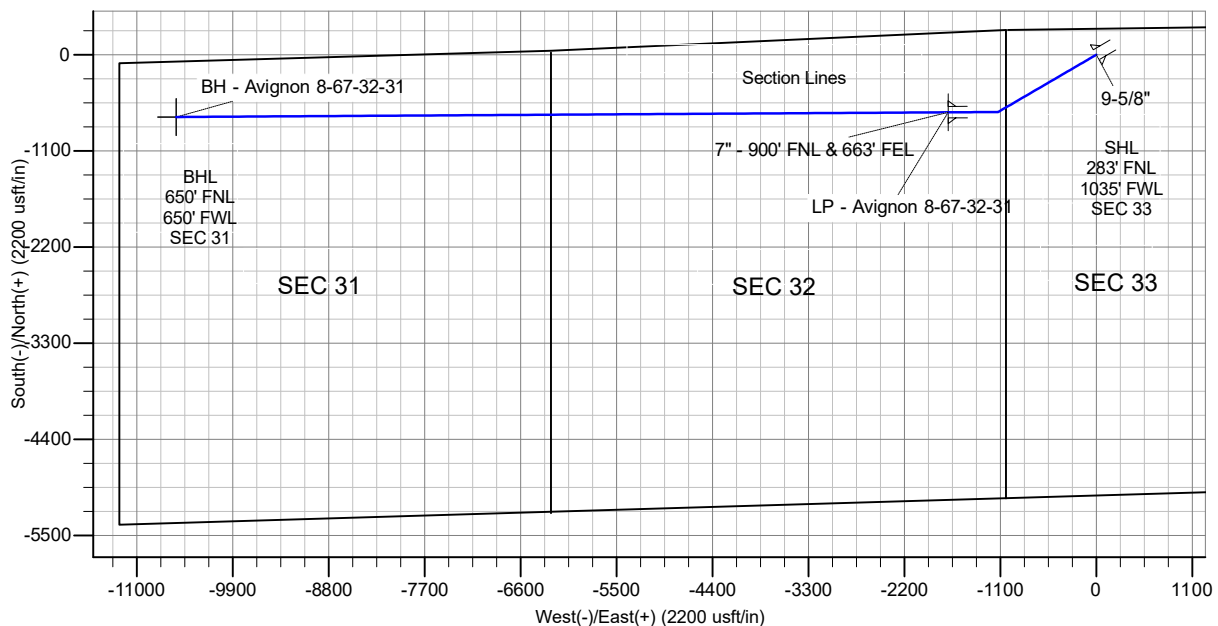
RPM Consulting, Inc.  
1600 Broadway, Suite 1510  
Denver, CO 80013  
303-595-7625

#### 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
2496.4	0.00	0.00	2496.4	0.0	0.0	0.00	0.00	0.0
3067.8	20.00	239.81	3056.3	-49.7	-85.3	3.50	239.81	88.5
6299.5	20.00	239.81	6093.1	-605.5	-1040.7	0.00	0.00	1079.1
6871.0	0.00	0.00	6653.0	-655.2	-1126.0	3.50	180.00	1167.6
7771.0	90.00	269.66	7226.0	-658.6	-1698.9	10.00	269.66	1739.4
7885.5	90.00	269.65	7226.0	-659.3	-1813.5	0.01	-92.34	1853.8
16621.7	90.00	269.65	7226.0	-712.2	-10549.5	0.00	0.00	10573.5

#### CASING DETAILS

TVD	MD	Name
1500.0	1500.0	Surface
7226.0	7771.0	Intermediate



# **Enerplus Resources (USA) Corporation**

**Weld County, CO  
SEC 33 T8N-R67W  
AVIGNON 8-67-32-31C**

**Original Wellbore**

**Plan: Plan 3**

## **Standard Planning Report**

**14 November, 2018**

## Planning Report

<b>Database:</b>	EDM Server Database	<b>Local Co-ordinate Reference:</b>	Well AVIGNON 8-67-32-31C
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	KB @ 5202.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	KB @ 5202.0usft
<b>Site:</b>	SEC 33 T8N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	AVIGNON 8-67-32-31C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	Plan 3		

<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 33 T8N-R67W			
Site Position:		Northing:	1,470,928.66 usft	Latitude:	40° 37' 28.445 N
From:	Lat/Long	Easting:	3,165,536.54 usft	Longitude:	104° 54' 13.162 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39 °

Well		AVIGNON 8-67-32-31C				
Well Position	+N/-S	0.0 usft	Northing:	1,470,928.65 usft	Latitude:	40° 37' 28.445 N
	+E/-W	0.0 usft	Easting:	3,165,536.54 usft	Longitude:	104° 54' 13.162 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	5,176.0 usft

<b>Wellbore</b>	Original Wellbore				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	11/30/2018	8.15	66.97	52,324.78647315

<b>Design</b>	Plan 3			
<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	266.14

<b>Plan Survey Tool Program</b>	<b>Date</b>	11/14/2018		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>
1	0.0	16,621.7	Plan 3 (Original Wellbore)	MWD
				OWSG MWD - Standard

<b>Plan Sections</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
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	
2,496.4	0.00	0.00	2,496.4	0.0	0.0	0.00	0.00	0.00	0.00	
3,067.8	20.00	239.81	3,056.3	-49.7	-85.3	3.50	3.50	0.00	239.81	
6,299.5	20.00	239.81	6,093.1	-605.5	-1,040.7	0.00	0.00	0.00	0.00	
6,871.0	0.00	0.00	6,653.0	-655.2	-1,126.0	3.50	-3.50	0.00	180.00	
7,771.0	90.00	269.66	7,226.0	-658.6	-1,698.9	10.00	10.00	0.00	269.66	
7,885.5	90.00	269.65	7,226.0	-659.3	-1,813.5	0.01	0.00	-0.01	-92.34	
16,621.7	90.00	269.65	7,226.0	-712.2	-10,549.5	0.00	0.00	0.00	0.00	BH - Avignon 8-67-32

# Planning Report

<b>Database:</b>	EDM Server Database	<b>Local Co-ordinate Reference:</b>	Well AVIGNON 8-67-32-31C
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	KB @ 5202.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	KB @ 5202.0usft
<b>Site:</b>	SEC 33 T8N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	AVIGNON 8-67-32-31C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	Plan 3		

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
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
2,496.4	0.00	0.00	2,496.4	0.0	0.0	0.0	0.00	0.00	0.00
Begin 3.5° Nudge									
2,500.0	0.13	239.81	2,500.0	0.0	0.0	0.0	3.48	3.48	0.00
2,600.0	3.63	239.81	2,599.9	-1.6	-2.8	2.9	3.50	3.50	0.00
2,700.0	7.13	239.81	2,699.5	-6.4	-10.9	11.3	3.50	3.50	0.00
2,800.0	10.63	239.81	2,798.3	-14.1	-24.3	25.2	3.50	3.50	0.00
2,900.0	14.13	239.81	2,895.9	-24.9	-42.8	44.4	3.50	3.50	0.00
3,000.0	17.63	239.81	2,992.1	-38.6	-66.4	68.9	3.50	3.50	0.00
3,067.8	20.00	239.81	3,056.3	-49.6	-85.3	88.5	3.50	3.50	0.00
Begin 20° Tangent									
3,100.0	20.00	239.81	3,086.5	-55.2	-94.8	98.3	0.00	0.00	0.00
3,200.0	20.00	239.81	3,180.5	-72.4	-124.4	129.0	0.00	0.00	0.00
3,300.0	20.00	239.81	3,274.5	-89.6	-154.0	159.6	0.00	0.00	0.00
3,400.0	20.00	239.81	3,368.4	-106.8	-183.5	190.3	0.00	0.00	0.00
3,500.0	20.00	239.81	3,462.4	-124.0	-213.1	220.9	0.00	0.00	0.00
3,600.0	20.00	239.81	3,556.4	-141.2	-242.6	251.6	0.00	0.00	0.00
3,700.0	20.00	239.81	3,650.3	-158.4	-272.2	282.3	0.00	0.00	0.00
3,800.0	20.00	239.81	3,744.3	-175.6	-301.8	312.9	0.00	0.00	0.00
3,900.0	20.00	239.81	3,838.3	-192.8	-331.3	343.6	0.00	0.00	0.00
4,000.0	20.00	239.81	3,932.3	-210.0	-360.9	374.2	0.00	0.00	0.00
4,100.0	20.00	239.81	4,026.2	-227.2	-390.5	404.9	0.00	0.00	0.00
4,200.0	20.00	239.81	4,120.2	-244.4	-420.0	435.5	0.00	0.00	0.00
4,300.0	20.00	239.81	4,214.2	-261.6	-449.6	466.2	0.00	0.00	0.00
4,400.0	20.00	239.81	4,308.1	-278.8	-479.1	496.8	0.00	0.00	0.00
4,500.0	20.00	239.81	4,402.1	-296.0	-508.7	527.5	0.00	0.00	0.00
4,600.0	20.00	239.81	4,496.1	-313.2	-538.3	558.1	0.00	0.00	0.00
4,700.0	20.00	239.81	4,590.0	-330.4	-567.8	588.8	0.00	0.00	0.00

# Planning Report

<b>Database:</b>	EDM Server Database	<b>Local Co-ordinate Reference:</b>	Well AVIGNON 8-67-32-31C
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	KB @ 5202.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	KB @ 5202.0usft
<b>Site:</b>	SEC 33 T8N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	AVIGNON 8-67-32-31C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	Plan 3		

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)
4,800.0	20.00	239.81	4,684.0	-347.6	-597.4	619.4	0.00	0.00	0.00
4,900.0	20.00	239.81	4,778.0	-364.8	-626.9	650.1	0.00	0.00	0.00
5,000.0	20.00	239.81	4,871.9	-382.0	-656.5	680.7	0.00	0.00	0.00
5,100.0	20.00	239.81	4,965.9	-399.2	-686.1	711.4	0.00	0.00	0.00
5,200.0	20.00	239.81	5,059.9	-416.4	-715.6	742.1	0.00	0.00	0.00
5,300.0	20.00	239.81	5,153.9	-433.6	-745.2	772.7	0.00	0.00	0.00
5,400.0	20.00	239.81	5,247.8	-450.8	-774.8	803.4	0.00	0.00	0.00
5,500.0	20.00	239.81	5,341.8	-468.0	-804.3	834.0	0.00	0.00	0.00
5,600.0	20.00	239.81	5,435.8	-485.2	-833.9	864.7	0.00	0.00	0.00
5,700.0	20.00	239.81	5,529.7	-502.4	-863.4	895.3	0.00	0.00	0.00
5,800.0	20.00	239.81	5,623.7	-519.6	-893.0	926.0	0.00	0.00	0.00
5,900.0	20.00	239.81	5,717.7	-536.8	-922.6	956.6	0.00	0.00	0.00
6,000.0	20.00	239.81	5,811.6	-554.0	-952.1	987.3	0.00	0.00	0.00
6,100.0	20.00	239.81	5,905.6	-571.2	-981.7	1,017.9	0.00	0.00	0.00
6,200.0	20.00	239.81	5,999.6	-588.4	-1,011.2	1,048.6	0.00	0.00	0.00
6,299.5	20.00	239.81	6,093.1	-605.5	-1,040.7	1,079.1	0.00	0.00	0.00
Begin Nudge Back to Vertical									
6,300.0	19.98	239.81	6,093.5	-605.6	-1,040.8	1,079.2	3.26	-3.26	0.00
6,400.0	16.48	239.81	6,188.5	-621.4	-1,067.8	1,107.3	3.50	-3.50	0.00
6,500.0	12.98	239.81	6,285.2	-634.2	-1,089.8	1,130.1	3.50	-3.50	0.00
6,600.0	9.48	239.81	6,383.3	-643.9	-1,106.7	1,147.5	3.50	-3.50	0.00
6,700.0	5.98	239.81	6,482.3	-650.7	-1,118.3	1,159.6	3.50	-3.50	0.00
6,800.0	2.48	239.81	6,582.1	-654.4	-1,124.7	1,166.2	3.50	-3.50	0.00
6,871.0	0.00	0.00	6,653.0	-655.2	-1,126.0	1,167.6	3.50	-3.50	0.00
KOP - Start 10°/100' Build									
6,900.0	2.90	269.66	6,682.0	-655.2	-1,126.7	1,168.3	10.01	10.01	0.00
7,000.0	12.90	269.66	6,780.9	-655.3	-1,140.5	1,182.0	10.00	10.00	0.00
7,100.0	22.90	269.66	6,876.0	-655.5	-1,171.2	1,212.7	10.00	10.00	0.00
7,200.0	32.90	269.66	6,964.2	-655.7	-1,217.9	1,259.3	10.00	10.00	0.00
7,300.0	42.90	269.66	7,043.1	-656.1	-1,279.3	1,320.6	10.00	10.00	0.00
7,400.0	52.90	269.66	7,110.0	-656.5	-1,353.4	1,394.5	10.00	10.00	0.00
7,500.0	62.90	269.66	7,163.1	-657.1	-1,438.0	1,479.0	10.00	10.00	0.00
7,600.0	72.90	269.66	7,200.6	-657.6	-1,530.5	1,571.3	10.00	10.00	0.00
7,700.0	82.90	269.66	7,221.6	-658.2	-1,628.2	1,668.8	10.00	10.00	0.00
7,771.0	90.00	269.66	7,226.0	-658.6	-1,699.0	1,739.5	9.99	9.99	0.00
7" - 900' FNL & 663' FEL - Intermediate									
7,800.0	90.00	269.66	7,226.0	-658.8	-1,728.0	1,768.4	0.01	0.00	-0.01
7,885.5	90.00	269.65	7,226.0	-659.3	-1,813.5	1,853.8	0.01	0.00	-0.01
7,900.0	90.00	269.65	7,226.0	-659.4	-1,828.0	1,868.2	0.00	0.00	0.00
8,000.0	90.00	269.65	7,226.0	-660.0	-1,928.0	1,968.1	0.00	0.00	0.00
8,100.0	90.00	269.65	7,226.0	-660.6	-2,028.0	2,067.9	0.00	0.00	0.00
8,200.0	90.00	269.65	7,226.0	-661.2	-2,128.0	2,167.7	0.00	0.00	0.00
8,300.0	90.00	269.65	7,226.0	-661.8	-2,228.0	2,267.5	0.00	0.00	0.00
8,400.0	90.00	269.65	7,226.0	-662.4	-2,328.0	2,367.3	0.00	0.00	0.00
8,500.0	90.00	269.65	7,226.0	-663.0	-2,428.0	2,467.1	0.00	0.00	0.00
8,600.0	90.00	269.65	7,226.0	-663.6	-2,528.0	2,566.9	0.00	0.00	0.00
8,700.0	90.00	269.65	7,226.0	-664.2	-2,628.0	2,666.7	0.00	0.00	0.00
8,800.0	90.00	269.65	7,226.0	-664.8	-2,728.0	2,766.5	0.00	0.00	0.00
8,900.0	90.00	269.65	7,226.0	-665.4	-2,828.0	2,866.4	0.00	0.00	0.00
9,000.0	90.00	269.65	7,226.0	-666.0	-2,928.0	2,966.2	0.00	0.00	0.00
9,100.0	90.00	269.65	7,226.0	-666.6	-3,028.0	3,066.0	0.00	0.00	0.00
9,200.0	90.00	269.65	7,226.0	-667.2	-3,128.0	3,165.8	0.00	0.00	0.00
9,300.0	90.00	269.65	7,226.0	-667.8	-3,228.0	3,265.6	0.00	0.00	0.00

# Planning Report

<b>Database:</b>	EDM Server Database	<b>Local Co-ordinate Reference:</b>	Well AVIGNON 8-67-32-31C
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	KB @ 5202.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	KB @ 5202.0usft
<b>Site:</b>	SEC 33 T8N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	AVIGNON 8-67-32-31C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	Plan 3		

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)
9,400.0	90.00	269.65	7,226.0	-668.5	-3,328.0	3,365.4	0.00	0.00	0.00
9,500.0	90.00	269.65	7,226.0	-669.1	-3,428.0	3,465.2	0.00	0.00	0.00
9,600.0	90.00	269.65	7,226.0	-669.7	-3,528.0	3,565.0	0.00	0.00	0.00
9,700.0	90.00	269.65	7,226.0	-670.3	-3,627.9	3,664.9	0.00	0.00	0.00
9,800.0	90.00	269.65	7,226.0	-670.9	-3,727.9	3,764.7	0.00	0.00	0.00
9,900.0	90.00	269.65	7,226.0	-671.5	-3,827.9	3,864.5	0.00	0.00	0.00
10,000.0	90.00	269.65	7,226.0	-672.1	-3,927.9	3,964.3	0.00	0.00	0.00
10,100.0	90.00	269.65	7,226.0	-672.7	-4,027.9	4,064.1	0.00	0.00	0.00
10,200.0	90.00	269.65	7,226.0	-673.3	-4,127.9	4,163.9	0.00	0.00	0.00
10,300.0	90.00	269.65	7,226.0	-673.9	-4,227.9	4,263.7	0.00	0.00	0.00
10,400.0	90.00	269.65	7,226.0	-674.5	-4,327.9	4,363.5	0.00	0.00	0.00
10,500.0	90.00	269.65	7,226.0	-675.1	-4,427.9	4,463.4	0.00	0.00	0.00
10,600.0	90.00	269.65	7,226.0	-675.7	-4,527.9	4,563.2	0.00	0.00	0.00
10,700.0	90.00	269.65	7,226.0	-676.3	-4,627.9	4,663.0	0.00	0.00	0.00
10,800.0	90.00	269.65	7,226.0	-676.9	-4,727.9	4,762.8	0.00	0.00	0.00
10,900.0	90.00	269.65	7,226.0	-677.5	-4,827.9	4,862.6	0.00	0.00	0.00
11,000.0	90.00	269.65	7,226.0	-678.1	-4,927.9	4,962.4	0.00	0.00	0.00
11,100.0	90.00	269.65	7,226.0	-678.7	-5,027.9	5,062.2	0.00	0.00	0.00
11,200.0	90.00	269.65	7,226.0	-679.3	-5,127.9	5,162.0	0.00	0.00	0.00
11,300.0	90.00	269.65	7,226.0	-679.9	-5,227.9	5,261.8	0.00	0.00	0.00
11,400.0	90.00	269.65	7,226.0	-680.6	-5,327.9	5,361.7	0.00	0.00	0.00
11,500.0	90.00	269.65	7,226.0	-681.2	-5,427.9	5,461.5	0.00	0.00	0.00
11,600.0	90.00	269.65	7,226.0	-681.8	-5,527.9	5,561.3	0.00	0.00	0.00
11,700.0	90.00	269.65	7,226.0	-682.4	-5,627.9	5,661.1	0.00	0.00	0.00
11,800.0	90.00	269.65	7,226.0	-683.0	-5,727.9	5,760.9	0.00	0.00	0.00
11,900.0	90.00	269.65	7,226.0	-683.6	-5,827.9	5,860.7	0.00	0.00	0.00
12,000.0	90.00	269.65	7,226.0	-684.2	-5,927.9	5,960.5	0.00	0.00	0.00
12,100.0	90.00	269.65	7,226.0	-684.8	-6,027.9	6,060.3	0.00	0.00	0.00
12,200.0	90.00	269.65	7,226.0	-685.4	-6,127.9	6,160.2	0.00	0.00	0.00
12,300.0	90.00	269.65	7,226.0	-686.0	-6,227.9	6,260.0	0.00	0.00	0.00
12,400.0	90.00	269.65	7,226.0	-686.6	-6,327.9	6,359.8	0.00	0.00	0.00
12,500.0	90.00	269.65	7,226.0	-687.2	-6,427.9	6,459.6	0.00	0.00	0.00
12,600.0	90.00	269.65	7,226.0	-687.8	-6,527.9	6,559.4	0.00	0.00	0.00
12,700.0	90.00	269.65	7,226.0	-688.4	-6,627.9	6,659.2	0.00	0.00	0.00
12,800.0	90.00	269.65	7,226.0	-689.0	-6,727.9	6,759.0	0.00	0.00	0.00
12,900.0	90.00	269.65	7,226.0	-689.6	-6,827.9	6,858.8	0.00	0.00	0.00
13,000.0	90.00	269.65	7,226.0	-690.2	-6,927.9	6,958.6	0.00	0.00	0.00
13,100.0	90.00	269.65	7,226.0	-690.8	-7,027.9	7,058.5	0.00	0.00	0.00
13,200.0	90.00	269.65	7,226.0	-691.4	-7,127.9	7,158.3	0.00	0.00	0.00
13,300.0	90.00	269.65	7,226.0	-692.1	-7,227.9	7,258.1	0.00	0.00	0.00
13,400.0	90.00	269.65	7,226.0	-692.7	-7,327.9	7,357.9	0.00	0.00	0.00
13,500.0	90.00	269.65	7,226.0	-693.3	-7,427.9	7,457.7	0.00	0.00	0.00
13,600.0	90.00	269.65	7,226.0	-693.9	-7,527.9	7,557.5	0.00	0.00	0.00
13,700.0	90.00	269.65	7,226.0	-694.5	-7,627.9	7,657.3	0.00	0.00	0.00
13,800.0	90.00	269.65	7,226.0	-695.1	-7,727.9	7,757.1	0.00	0.00	0.00
13,900.0	90.00	269.65	7,226.0	-695.7	-7,827.9	7,857.0	0.00	0.00	0.00
14,000.0	90.00	269.65	7,226.0	-696.3	-7,927.9	7,956.8	0.00	0.00	0.00
14,100.0	90.00	269.65	7,226.0	-696.9	-8,027.9	8,056.6	0.00	0.00	0.00
14,200.0	90.00	269.65	7,226.0	-697.5	-8,127.9	8,156.4	0.00	0.00	0.00
14,300.0	90.00	269.65	7,226.0	-698.1	-8,227.9	8,256.2	0.00	0.00	0.00
14,400.0	90.00	269.65	7,226.0	-698.7	-8,327.9	8,356.0	0.00	0.00	0.00
14,500.0	90.00	269.65	7,226.0	-699.3	-8,427.9	8,455.8	0.00	0.00	0.00
14,600.0	90.00	269.65	7,226.0	-699.9	-8,527.9	8,555.6	0.00	0.00	0.00
14,700.0	90.00	269.65	7,226.0	-700.5	-8,627.9	8,655.4	0.00	0.00	0.00

## Planning Report

<b>Database:</b>	EDM Server Database	<b>Local Co-ordinate Reference:</b>	Well AVIGNON 8-67-32-31C
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	KB @ 5202.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	KB @ 5202.0usft
<b>Site:</b>	SEC 33 T8N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	AVIGNON 8-67-32-31C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	Plan 3		

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)	
14,800.0	90.00	269.65	7,226.0	-701.1	-8,727.9	8,755.3	0.00	0.00	0.00	
14,900.0	90.00	269.65	7,226.0	-701.7	-8,827.9	8,855.1	0.00	0.00	0.00	
15,000.0	90.00	269.65	7,226.0	-702.3	-8,927.9	8,954.9	0.00	0.00	0.00	
15,100.0	90.00	269.65	7,226.0	-702.9	-9,027.9	9,054.7	0.00	0.00	0.00	
15,200.0	90.00	269.65	7,226.0	-703.6	-9,127.8	9,154.5	0.00	0.00	0.00	
15,300.0	90.00	269.65	7,226.0	-704.2	-9,227.8	9,254.3	0.00	0.00	0.00	
15,400.0	90.00	269.65	7,226.0	-704.8	-9,327.8	9,354.1	0.00	0.00	0.00	
15,500.0	90.00	269.65	7,226.0	-705.4	-9,427.8	9,453.9	0.00	0.00	0.00	
15,600.0	90.00	269.65	7,226.0	-706.0	-9,527.8	9,553.8	0.00	0.00	0.00	
15,700.0	90.00	269.65	7,226.0	-706.6	-9,627.8	9,653.6	0.00	0.00	0.00	
15,800.0	90.00	269.65	7,226.0	-707.2	-9,727.8	9,753.4	0.00	0.00	0.00	
15,900.0	90.00	269.65	7,226.0	-707.8	-9,827.8	9,853.2	0.00	0.00	0.00	
16,000.0	90.00	269.65	7,226.0	-708.4	-9,927.8	9,953.0	0.00	0.00	0.00	
16,100.0	90.00	269.65	7,226.0	-709.0	-10,027.8	10,052.8	0.00	0.00	0.00	
16,200.0	90.00	269.65	7,226.0	-709.6	-10,127.8	10,152.6	0.00	0.00	0.00	
16,300.0	90.00	269.65	7,226.0	-710.2	-10,227.8	10,252.4	0.00	0.00	0.00	
16,400.0	90.00	269.65	7,226.0	-710.8	-10,327.8	10,352.2	0.00	0.00	0.00	
16,500.0	90.00	269.65	7,226.0	-711.4	-10,427.8	10,452.1	0.00	0.00	0.00	
16,600.0	90.00	269.65	7,226.0	-712.0	-10,527.8	10,551.9	0.00	0.00	0.00	
16,621.7	90.00	269.65	7,226.0	-712.2	-10,549.5	10,573.5	0.00	0.00	0.00	
PBHL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
LP - Avignon 8-67-32-31 - hit/miss target - Shape - Point	0.00	0.00	7,226.0	-658.6	-1,698.9	1,470,258.62	3,163,842.13	40° 37' 21.936 N	104° 54' 35.194 W	
BH - Avignon 8-67-32-31 - plan hits target center - Point	0.00	0.00	7,226.0	-712.2	-10,549.5	1,470,145.57	3,154,992.10	40° 37' 21.385 N	104° 56' 29.972 W	

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	
7,771.0	7,226.0	Intermediate	7	7	

## Planning Report

<b>Database:</b>	EDM Server Database	<b>Local Co-ordinate Reference:</b>	Well AVIGNON 8-67-32-31C
<b>Company:</b>	Enerplus Resources (USA) Corporation	<b>TVD Reference:</b>	KB @ 5202.0usft
<b>Project:</b>	Weld County, CO	<b>MD Reference:</b>	KB @ 5202.0usft
<b>Site:</b>	SEC 33 T8N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	AVIGNON 8-67-32-31C	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Wellbore		
<b>Design:</b>	Plan 3		

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"
2,496.4	2,496.4	0.0	0.0	Begin 3.5° Nudge
3,067.8	3,056.3	-49.6	-85.3	Begin 20° Tangent
6,299.5	6,093.1	-605.5	-1,040.7	Begin Nudge Back to Vertical
6,871.0	6,653.0	-655.2	-1,126.0	KOP - Start 10°/100' Build
7,771.0	7,226.0	-658.6	-1,699.0	7" - 900' FNL & 663' FEL
16,621.7	7,226.0	-712.2	-10,549.5	PBHL