



Project: Weld County, CO
Site: SEC 20 T8N-R67W
Well: St. Albert 8-67-21-22C
Wellbore: Hz
Design: Plan 2

Reference Details

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Latitude: 40° 38' 32.080 N
Longitude: 104° 54' 28.790 W
Grid Convergence: 0.38° West
Ground Elevation: 5201.0
KB Elevation: Well @ 5216.0usft



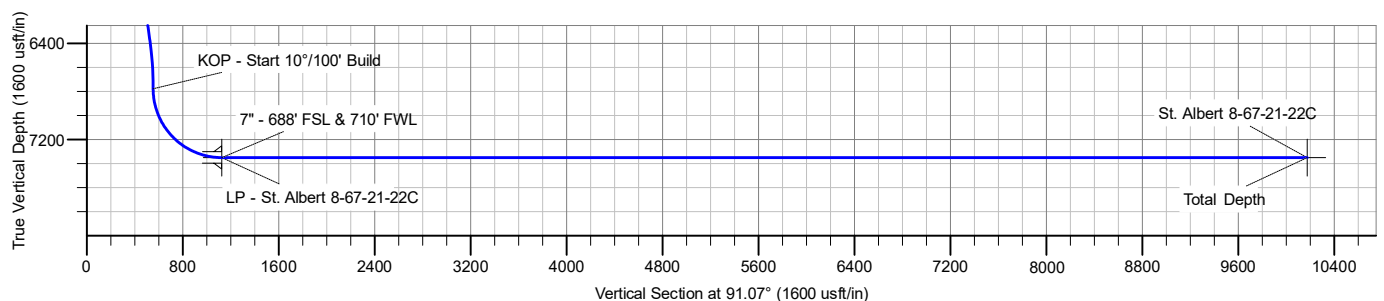
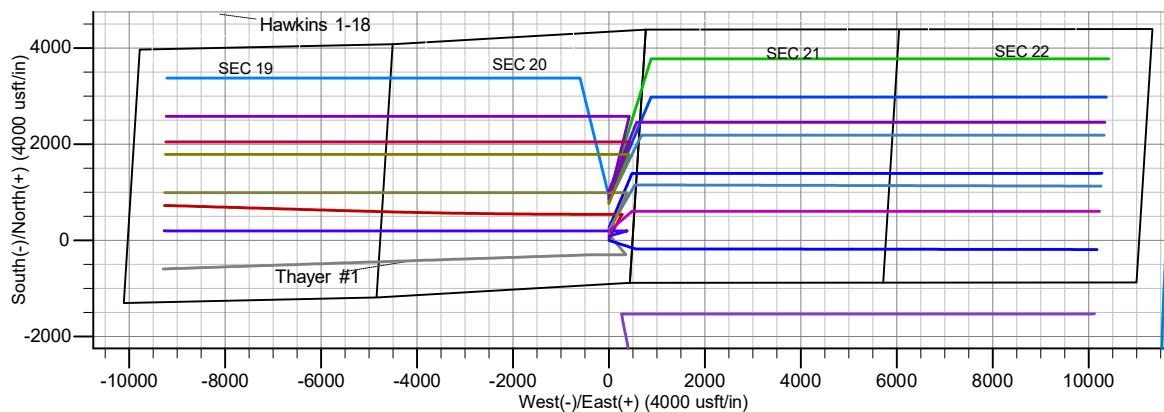
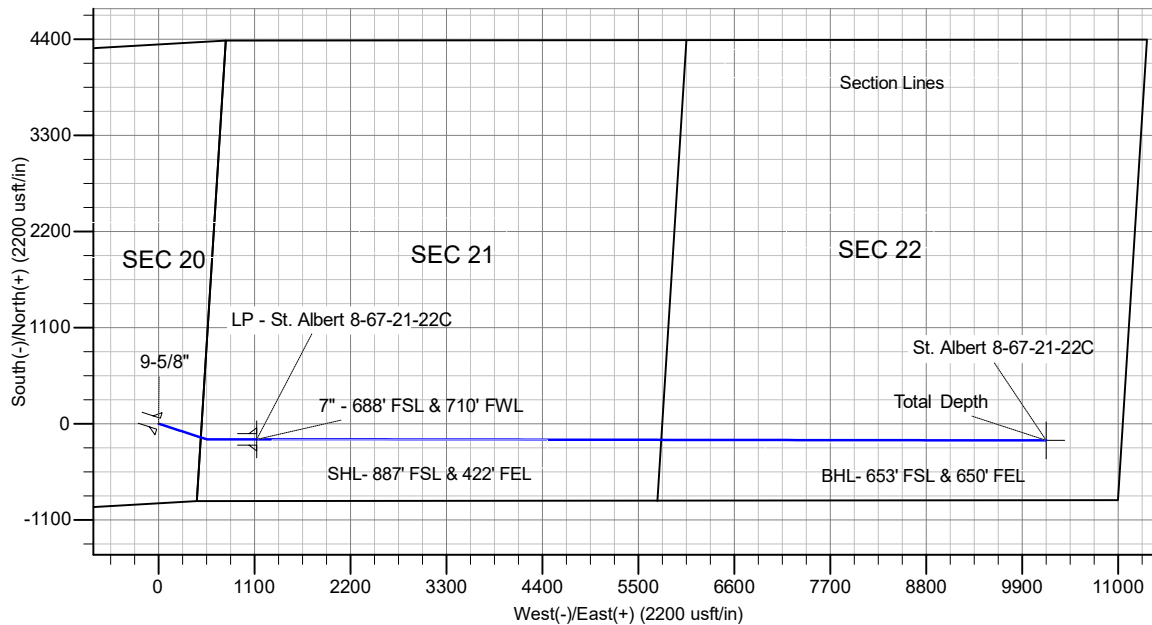
RPM Consulting, Inc.
1600 Broadway, Suite 1510
Denver, CO 80013
303-595-7625

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	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
2261.5	0.00	0.00	2261.5	0.0	0.0	0.00	0.00	0.0
2661.5	8.00	107.94	2660.2	-8.6	26.5	2.00	107.94	26.7
6416.1	8.00	107.94	6378.3	-169.5	523.7	0.00	0.00	526.8
6816.1	0.00	0.00	6777.0	-178.1	550.2	2.00	180.00	553.4
7716.1	90.00	90.00	7350.0	-178.1	1123.2	10.00	90.00	1126.3
8086.0	90.00	90.08	7350.0	-178.4	1493.0	0.02	90.19	1496.1
16766.8	90.00	90.08	7350.0	-190.8	10173.8	0.00	0.00	10175.6

CASING DETAILS

TVD	MD	Name
1500.0	1500.0	Surface
7350.0	7716.1	Intermediate



Enerplus Resources (USA) Corporation

**Weld County, CO
SEC 20 T8N-R67W
St. Albert 8-67-21-22C**

Hz

Plan: Plan 2

Standard Planning Report

16 January, 2019

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well St. Albert 8-67-21-22C
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	Well @ 5216.0usft
Project:	Weld County, CO	MD Reference:	Well @ 5216.0usft
Site:	SEC 20 T8N-R67W	North Reference:	True
Well:	St. Albert 8-67-21-22C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan 2		

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 20 T8N-R67W			
Site Position:		Northing:	1,477,620.62 usft	Latitude:	40° 38' 34.652 N
From:	Lat/Long	Easting:	3,164,287.39 usft	Longitude:	104° 54' 28.782 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.38 °

Well	St. Albert 8-67-21-22C					
Well Position	+N/-S	-260.3 usft	Northing:	1,477,360.29 usft	Latitude:	40° 38' 32.080 N
	+E/-W	-0.6 usft	Easting:	3,164,288.51 usft	Longitude:	104° 54' 28.790 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	5,201.0 usft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/31/2019	8.14	66.98	52,313.90730011

Design	Plan 2			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	91.07

Plan Survey Tool Program	Date	1/16/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	16,766.8 Plan 2 (Hz)	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	
2,261.5	0.00	0.00	2,261.5	0.0	0.0	0.00	0.00	0.00	0.00	
2,661.5	8.00	107.94	2,660.2	-8.6	26.5	2.00	2.00	0.00	107.94	
6,416.1	8.00	107.94	6,378.3	-169.5	523.7	0.00	0.00	0.00	0.00	
6,816.1	0.00	0.00	6,777.0	-178.1	550.2	2.00	-2.00	0.00	180.00	
7,716.1	90.00	90.00	7,350.0	-178.1	1,123.2	10.00	10.00	0.00	90.00	
8,086.0	90.00	90.08	7,350.0	-178.4	1,493.0	0.02	0.00	0.02	90.19	
16,766.8	90.00	90.08	7,350.0	-190.8	10,173.8	0.00	0.00	0.00	0.00	St. Albert 8-67-21-22C

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well St. Albert 8-67-21-22C
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	Well @ 5216.0usft
Project:	Weld County, CO	MD Reference:	Well @ 5216.0usft
Site:	SEC 20 T8N-R67W	North Reference:	True
Well:	St. Albert 8-67-21-22C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan 2		

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
2,261.5	0.00	0.00	2,261.5	0.0	0.0	0.0	0.00	0.00	0.00
Begin 2.0° Nudge									
2,300.0	0.77	107.94	2,300.0	-0.1	0.2	0.2	2.00	2.00	0.00
2,400.0	2.77	107.94	2,399.9	-1.0	3.2	3.2	2.00	2.00	0.00
2,500.0	4.77	107.94	2,499.7	-3.1	9.4	9.5	2.00	2.00	0.00
2,600.0	6.77	107.94	2,599.2	-6.2	19.0	19.1	2.00	2.00	0.00
2,661.5	8.00	107.94	2,660.2	-8.6	26.5	26.7	2.00	2.00	0.00
Begin 8.0° Tangent									
2,700.0	8.00	107.94	2,698.3	-10.2	31.6	31.8	0.00	0.00	0.00
2,800.0	8.00	107.94	2,797.4	-14.5	44.9	45.1	0.00	0.00	0.00
2,900.0	8.00	107.94	2,896.4	-18.8	58.1	58.4	0.00	0.00	0.00
3,000.0	8.00	107.94	2,995.4	-23.1	71.3	71.8	0.00	0.00	0.00
3,100.0	8.00	107.94	3,094.4	-27.4	84.6	85.1	0.00	0.00	0.00
3,200.0	8.00	107.94	3,193.5	-31.7	97.8	98.4	0.00	0.00	0.00
3,300.0	8.00	107.94	3,292.5	-36.0	111.1	111.7	0.00	0.00	0.00
3,400.0	8.00	107.94	3,391.5	-40.2	124.3	125.0	0.00	0.00	0.00
3,500.0	8.00	107.94	3,490.5	-44.5	137.6	138.4	0.00	0.00	0.00
3,600.0	8.00	107.94	3,589.6	-48.8	150.8	151.7	0.00	0.00	0.00
3,700.0	8.00	107.94	3,688.6	-53.1	164.0	165.0	0.00	0.00	0.00
3,800.0	8.00	107.94	3,787.6	-57.4	177.3	178.3	0.00	0.00	0.00
3,900.0	8.00	107.94	3,886.6	-61.7	190.5	191.6	0.00	0.00	0.00
4,000.0	8.00	107.94	3,985.7	-66.0	203.8	205.0	0.00	0.00	0.00
4,100.0	8.00	107.94	4,084.7	-70.2	217.0	218.3	0.00	0.00	0.00
4,200.0	8.00	107.94	4,183.7	-74.5	230.2	231.6	0.00	0.00	0.00
4,300.0	8.00	107.94	4,282.8	-78.8	243.5	244.9	0.00	0.00	0.00
4,400.0	8.00	107.94	4,381.8	-83.1	256.7	258.2	0.00	0.00	0.00
4,500.0	8.00	107.94	4,480.8	-87.4	270.0	271.6	0.00	0.00	0.00
4,600.0	8.00	107.94	4,579.8	-91.7	283.2	284.9	0.00	0.00	0.00
4,700.0	8.00	107.94	4,678.9	-96.0	296.4	298.2	0.00	0.00	0.00

Planning Report

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Company:	Enerplus Resources (USA) Corporation	TVD Reference:	Well @ 5216.0usft
Project:	Weld County, CO	MD Reference:	Well @ 5216.0usft
Site:	SEC 20 T8N-R67W	North Reference:	True
Well:	St. Albert 8-67-21-22C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan 2		

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	8.00	107.94	4,777.9	-100.2	309.7	311.5	0.00	0.00	0.00
4,900.0	8.00	107.94	4,876.9	-104.5	322.9	324.8	0.00	0.00	0.00
5,000.0	8.00	107.94	4,975.9	-108.8	336.2	338.1	0.00	0.00	0.00
5,100.0	8.00	107.94	5,075.0	-113.1	349.4	351.5	0.00	0.00	0.00
5,200.0	8.00	107.94	5,174.0	-117.4	362.6	364.8	0.00	0.00	0.00
5,300.0	8.00	107.94	5,273.0	-121.7	375.9	378.1	0.00	0.00	0.00
5,400.0	8.00	107.94	5,372.1	-126.0	389.1	391.4	0.00	0.00	0.00
5,500.0	8.00	107.94	5,471.1	-130.2	402.4	404.7	0.00	0.00	0.00
5,600.0	8.00	107.94	5,570.1	-134.5	415.6	418.1	0.00	0.00	0.00
5,700.0	8.00	107.94	5,669.1	-138.8	428.9	431.4	0.00	0.00	0.00
5,800.0	8.00	107.94	5,768.2	-143.1	442.1	444.7	0.00	0.00	0.00
5,900.0	8.00	107.94	5,867.2	-147.4	455.3	458.0	0.00	0.00	0.00
6,000.0	8.00	107.94	5,966.2	-151.7	468.6	471.3	0.00	0.00	0.00
6,100.0	8.00	107.94	6,065.2	-156.0	481.8	484.7	0.00	0.00	0.00
6,200.0	8.00	107.94	6,164.3	-160.3	495.1	498.0	0.00	0.00	0.00
6,300.0	8.00	107.94	6,263.3	-164.5	508.3	511.3	0.00	0.00	0.00
6,400.0	8.00	107.94	6,362.3	-168.8	521.5	524.6	0.00	0.00	0.00
6,416.1	8.00	107.94	6,378.3	-169.5	523.7	526.8	0.00	0.00	0.00
6,500.0	6.32	107.94	6,461.5	-172.7	533.6	536.8	2.00	-2.00	0.00
6,600.0	4.32	107.94	6,561.1	-175.6	542.4	545.6	2.00	-2.00	0.00
6,700.0	2.32	107.94	6,660.9	-177.4	548.0	551.2	2.00	-2.00	0.00
6,800.0	0.32	107.94	6,760.9	-178.1	550.2	553.4	2.00	-2.00	0.00
6,816.1	0.00	107.94	6,777.0	-178.1	550.2	553.4	2.00	-2.00	0.00
KOP - Start 10°/100' Build									
6,900.0	8.39	90.00	6,860.6	-178.1	556.3	559.6	9.99	9.99	-21.38
7,000.0	18.39	90.00	6,957.7	-178.1	579.4	582.7	10.00	10.00	0.00
7,100.0	28.39	90.00	7,049.4	-178.1	619.1	622.3	10.00	10.00	0.00
7,200.0	38.39	90.00	7,132.8	-178.1	674.0	677.3	10.00	10.00	0.00
7,300.0	48.39	90.00	7,205.4	-178.1	742.7	745.9	10.00	10.00	0.00
7,400.0	58.39	90.00	7,264.9	-178.1	822.8	826.0	10.00	10.00	0.00
7,500.0	68.39	90.00	7,309.7	-178.1	912.1	915.3	10.00	10.00	0.00
7,600.0	78.39	90.00	7,338.2	-178.1	1,007.8	1,011.0	10.00	10.00	0.00
7,700.0	88.39	90.00	7,349.7	-178.1	1,107.0	1,110.2	10.00	10.00	0.00
7,716.1	90.00	90.00	7,350.0	-178.1	1,123.1	1,126.3	10.00	10.00	0.00
7" - 688' FSL & 710' FWL - Intermediate									
7,800.0	90.00	90.02	7,350.0	-178.1	1,207.0	1,210.1	0.02	0.00	0.02
7,900.0	90.00	90.04	7,350.0	-178.2	1,307.0	1,310.1	0.02	0.00	0.02
8,000.0	90.00	90.06	7,350.0	-178.3	1,407.0	1,410.1	0.02	0.00	0.02
8,086.0	90.00	90.08	7,350.0	-178.4	1,493.0	1,496.1	0.02	0.00	0.02
8,100.0	90.00	90.08	7,350.0	-178.4	1,507.0	1,510.1	0.00	0.00	0.00
8,200.0	90.00	90.08	7,350.0	-178.5	1,607.0	1,610.1	0.00	0.00	0.00
8,300.0	90.00	90.08	7,350.0	-178.7	1,707.0	1,710.1	0.00	0.00	0.00
8,400.0	90.00	90.08	7,350.0	-178.8	1,807.0	1,810.1	0.00	0.00	0.00
8,500.0	90.00	90.08	7,350.0	-179.0	1,907.0	1,910.0	0.00	0.00	0.00
8,600.0	90.00	90.08	7,350.0	-179.1	2,007.0	2,010.0	0.00	0.00	0.00
8,700.0	90.00	90.08	7,350.0	-179.2	2,107.0	2,110.0	0.00	0.00	0.00
8,800.0	90.00	90.08	7,350.0	-179.4	2,207.0	2,210.0	0.00	0.00	0.00
8,900.0	90.00	90.08	7,350.0	-179.5	2,307.0	2,310.0	0.00	0.00	0.00
9,000.0	90.00	90.08	7,350.0	-179.7	2,407.0	2,410.0	0.00	0.00	0.00
9,100.0	90.00	90.08	7,350.0	-179.8	2,507.0	2,510.0	0.00	0.00	0.00
9,200.0	90.00	90.08	7,350.0	-180.0	2,607.0	2,609.9	0.00	0.00	0.00
9,300.0	90.00	90.08	7,350.0	-180.1	2,707.0	2,709.9	0.00	0.00	0.00
9,400.0	90.00	90.08	7,350.0	-180.2	2,807.0	2,809.9	0.00	0.00	0.00
9,500.0	90.00	90.08	7,350.0	-180.4	2,907.0	2,909.9	0.00	0.00	0.00

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well St. Albert 8-67-21-22C
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	Well @ 5216.0usft
Project:	Weld County, CO	MD Reference:	Well @ 5216.0usft
Site:	SEC 20 T8N-R67W	North Reference:	True
Well:	St. Albert 8-67-21-22C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan 2		

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)
9,600.0	90.00	90.08	7,350.0	-180.5	3,007.0	3,009.9	0.00	0.00	0.00
9,700.0	90.00	90.08	7,350.0	-180.7	3,107.0	3,109.9	0.00	0.00	0.00
9,800.0	90.00	90.08	7,350.0	-180.8	3,207.0	3,209.8	0.00	0.00	0.00
9,900.0	90.00	90.08	7,350.0	-181.0	3,307.0	3,309.8	0.00	0.00	0.00
10,000.0	90.00	90.08	7,350.0	-181.1	3,407.0	3,409.8	0.00	0.00	0.00
10,100.0	90.00	90.08	7,350.0	-181.2	3,507.0	3,509.8	0.00	0.00	0.00
10,200.0	90.00	90.08	7,350.0	-181.4	3,607.0	3,609.8	0.00	0.00	0.00
10,300.0	90.00	90.08	7,350.0	-181.5	3,707.0	3,709.8	0.00	0.00	0.00
10,400.0	90.00	90.08	7,350.0	-181.7	3,807.0	3,809.8	0.00	0.00	0.00
10,500.0	90.00	90.08	7,350.0	-181.8	3,907.0	3,909.7	0.00	0.00	0.00
10,600.0	90.00	90.08	7,350.0	-182.0	4,007.0	4,009.7	0.00	0.00	0.00
10,700.0	90.00	90.08	7,350.0	-182.1	4,107.0	4,109.7	0.00	0.00	0.00
10,800.0	90.00	90.08	7,350.0	-182.2	4,207.0	4,209.7	0.00	0.00	0.00
10,900.0	90.00	90.08	7,350.0	-182.4	4,307.0	4,309.7	0.00	0.00	0.00
11,000.0	90.00	90.08	7,350.0	-182.5	4,407.0	4,409.7	0.00	0.00	0.00
11,100.0	90.00	90.08	7,350.0	-182.7	4,507.0	4,509.7	0.00	0.00	0.00
11,200.0	90.00	90.08	7,350.0	-182.8	4,607.0	4,609.6	0.00	0.00	0.00
11,300.0	90.00	90.08	7,350.0	-183.0	4,707.0	4,709.6	0.00	0.00	0.00
11,400.0	90.00	90.08	7,350.0	-183.1	4,807.0	4,809.6	0.00	0.00	0.00
11,500.0	90.00	90.08	7,350.0	-183.2	4,907.0	4,909.6	0.00	0.00	0.00
11,600.0	90.00	90.08	7,350.0	-183.4	5,007.0	5,009.6	0.00	0.00	0.00
11,700.0	90.00	90.08	7,350.0	-183.5	5,107.0	5,109.6	0.00	0.00	0.00
11,800.0	90.00	90.08	7,350.0	-183.7	5,207.0	5,209.5	0.00	0.00	0.00
11,900.0	90.00	90.08	7,350.0	-183.8	5,307.0	5,309.5	0.00	0.00	0.00
12,000.0	90.00	90.08	7,350.0	-184.0	5,407.0	5,409.5	0.00	0.00	0.00
12,100.0	90.00	90.08	7,350.0	-184.1	5,507.0	5,509.5	0.00	0.00	0.00
12,200.0	90.00	90.08	7,350.0	-184.2	5,607.0	5,609.5	0.00	0.00	0.00
12,300.0	90.00	90.08	7,350.0	-184.4	5,707.0	5,709.5	0.00	0.00	0.00
12,400.0	90.00	90.08	7,350.0	-184.5	5,807.0	5,809.5	0.00	0.00	0.00
12,500.0	90.00	90.08	7,350.0	-184.7	5,907.0	5,909.4	0.00	0.00	0.00
12,600.0	90.00	90.08	7,350.0	-184.8	6,007.0	6,009.4	0.00	0.00	0.00
12,700.0	90.00	90.08	7,350.0	-185.0	6,107.0	6,109.4	0.00	0.00	0.00
12,800.0	90.00	90.08	7,350.0	-185.1	6,207.0	6,209.4	0.00	0.00	0.00
12,900.0	90.00	90.08	7,350.0	-185.2	6,307.0	6,309.4	0.00	0.00	0.00
13,000.0	90.00	90.08	7,350.0	-185.4	6,407.0	6,409.4	0.00	0.00	0.00
13,100.0	90.00	90.08	7,350.0	-185.5	6,507.0	6,509.4	0.00	0.00	0.00
13,200.0	90.00	90.08	7,350.0	-185.7	6,607.0	6,609.3	0.00	0.00	0.00
13,300.0	90.00	90.08	7,350.0	-185.8	6,707.0	6,709.3	0.00	0.00	0.00
13,400.0	90.00	90.08	7,350.0	-186.0	6,807.0	6,809.3	0.00	0.00	0.00
13,500.0	90.00	90.08	7,350.0	-186.1	6,907.0	6,909.3	0.00	0.00	0.00
13,600.0	90.00	90.08	7,350.0	-186.2	7,007.0	7,009.3	0.00	0.00	0.00
13,700.0	90.00	90.08	7,350.0	-186.4	7,107.0	7,109.3	0.00	0.00	0.00
13,800.0	90.00	90.08	7,350.0	-186.5	7,207.0	7,209.2	0.00	0.00	0.00
13,900.0	90.00	90.08	7,350.0	-186.7	7,307.0	7,309.2	0.00	0.00	0.00
14,000.0	90.00	90.08	7,350.0	-186.8	7,407.0	7,409.2	0.00	0.00	0.00
14,100.0	90.00	90.08	7,350.0	-187.0	7,507.0	7,509.2	0.00	0.00	0.00
14,200.0	90.00	90.08	7,350.0	-187.1	7,607.0	7,609.2	0.00	0.00	0.00
14,300.0	90.00	90.08	7,350.0	-187.2	7,707.0	7,709.2	0.00	0.00	0.00
14,400.0	90.00	90.08	7,350.0	-187.4	7,807.0	7,809.2	0.00	0.00	0.00
14,500.0	90.00	90.08	7,350.0	-187.5	7,907.0	7,909.1	0.00	0.00	0.00
14,600.0	90.00	90.08	7,350.0	-187.7	8,007.0	8,009.1	0.00	0.00	0.00
14,700.0	90.00	90.08	7,350.0	-187.8	8,107.0	8,109.1	0.00	0.00	0.00
14,800.0	90.00	90.08	7,350.0	-188.0	8,207.0	8,209.1	0.00	0.00	0.00
14,900.0	90.00	90.08	7,350.0	-188.1	8,307.0	8,309.1	0.00	0.00	0.00

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well St. Albert 8-67-21-22C
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	Well @ 5216.0usft
Project:	Weld County, CO	MD Reference:	Well @ 5216.0usft
Site:	SEC 20 T8N-R67W	North Reference:	True
Well:	St. Albert 8-67-21-22C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan 2		

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)	
15,000.0	90.00	90.08	7,350.0	-188.2	8,407.0	8,409.1	0.00	0.00	0.00	
15,100.0	90.00	90.08	7,350.0	-188.4	8,507.0	8,509.1	0.00	0.00	0.00	
15,200.0	90.00	90.08	7,350.0	-188.5	8,607.0	8,609.0	0.00	0.00	0.00	
15,300.0	90.00	90.08	7,350.0	-188.7	8,707.0	8,709.0	0.00	0.00	0.00	
15,400.0	90.00	90.08	7,350.0	-188.8	8,807.0	8,809.0	0.00	0.00	0.00	
15,500.0	90.00	90.08	7,350.0	-189.0	8,907.0	8,909.0	0.00	0.00	0.00	
15,600.0	90.00	90.08	7,350.0	-189.1	9,007.0	9,009.0	0.00	0.00	0.00	
15,700.0	90.00	90.08	7,350.0	-189.3	9,107.0	9,109.0	0.00	0.00	0.00	
15,800.0	90.00	90.08	7,350.0	-189.4	9,207.0	9,208.9	0.00	0.00	0.00	
15,900.0	90.00	90.08	7,350.0	-189.5	9,307.0	9,308.9	0.00	0.00	0.00	
16,000.0	90.00	90.08	7,350.0	-189.7	9,407.0	9,408.9	0.00	0.00	0.00	
16,100.0	90.00	90.08	7,350.0	-189.8	9,507.0	9,508.9	0.00	0.00	0.00	
16,200.0	90.00	90.08	7,350.0	-190.0	9,607.0	9,608.9	0.00	0.00	0.00	
16,300.0	90.00	90.08	7,350.0	-190.1	9,707.0	9,708.9	0.00	0.00	0.00	
16,400.0	90.00	90.08	7,350.0	-190.3	9,807.0	9,808.9	0.00	0.00	0.00	
16,500.0	90.00	90.08	7,350.0	-190.4	9,907.0	9,908.8	0.00	0.00	0.00	
16,600.0	90.00	90.08	7,350.0	-190.5	10,007.0	10,008.8	0.00	0.00	0.00	
16,700.0	90.00	90.08	7,350.0	-190.7	10,107.0	10,108.8	0.00	0.00	0.00	
16,766.8	90.00	90.08	7,350.0	-190.8	10,173.8	10,175.6	0.00	0.00	0.00	
Total Depth										

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								Longitude		
LP - St. Albert 8-67-21-2	0.00	0.00	7,350.0	-178.1	1,123.2	1,477,189.72	3,165,412.85	40° 38' 30.320 N		
- plan hits target center										
- Point										
St. Albert 8-67-21-22C	0.00	0.00	7,350.0	-190.8	10,173.8	1,477,237.44	3,174,463.40	40° 38' 30.174 N		
- 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	9-5/8
7,716.1	7,350.0	Intermediate		7	7

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"	
2,261.5	2,261.5	0.0	0.0	Begin 2.0° Nudge	
2,661.5	2,660.2	-8.6	26.5	Begin 8.0° Tangent	
6,816.1	6,777.0	-178.1	550.2	KOP - Start 10°/100' Build	
7,716.1	7,350.0	-178.1	1,123.1	7" - 688' FSL & 710' FWL	
16,766.8	7,350.0	-190.8	10,173.8	Total Depth	