

Enerplus Resources (USA) Corporation

**Weld County, CO
SEC 33 T8N-R67W
San Juan 8-67-33-4C**

Hz

Plan: Plan 3

Standard Planning Report

05 March, 2019

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well San Juan 8-67-33-4C
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	Well @ 5202.0usft
Project:	Weld County, CO	MD Reference:	Well @ 5202.0usft
Site:	SEC 33 T8N-R67W	North Reference:	True
Well:	San Juan 8-67-33-4C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	Plan 3		

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 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	San Juan 8-67-33-4C					
Well Position	+N/-S	-145.0 usft	Northing:	1,470,783.64 usft	Latitude:	40° 37' 27.012 N
	+E/-W	1.7 usft	Easting:	3,165,539.19 usft	Longitude:	104° 54' 13.140 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	5,176.0 usft

Wellbore	Hz				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/31/2019	8.11	66.97	52,286.71171164

Design	Plan 3			
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	177.73

Plan Survey Tool Program	Date	3/3/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	16,854.0 Plan 3 (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	
2,245.4	0.00	0.00	2,245.4	0.0	0.0	0.00	0.00	0.00	0.00	
2,632.9	7.75	50.05	2,631.7	16.8	20.1	2.00	2.00	0.00	50.05	
6,194.4	7.75	50.05	6,160.7	325.2	388.2	0.00	0.00	0.00	0.00	
6,581.9	0.00	0.00	6,547.0	342.0	408.3	2.00	-2.00	0.00	180.00	
7,481.9	90.00	180.00	7,120.0	-231.0	408.3	10.00	10.00	0.00	180.00	
7,515.3	90.00	180.17	7,120.0	-264.4	408.3	0.50	0.00	0.50	90.09	
16,853.9	90.00	180.17	7,120.0	-9,603.0	381.0	0.00	0.00	0.00	0.00	San Juan 8-67-33-4C

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Well:	San Juan 8-67-33-4C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	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
2,245.4	0.00	0.00	2,245.4	0.0	0.0	0.0	0.00	0.00	0.00
Begin 2° Nudge									
2,300.0	1.09	50.05	2,300.0	0.3	0.4	-0.3	2.00	2.00	0.00
2,400.0	3.09	50.05	2,399.9	2.7	3.2	-2.6	2.00	2.00	0.00
2,500.0	5.09	50.05	2,499.7	7.3	8.7	-6.9	2.00	2.00	0.00
2,600.0	7.09	50.05	2,599.1	14.1	16.8	-13.4	2.00	2.00	0.00
2,632.9	7.75	50.05	2,631.7	16.8	20.1	-16.0	2.00	2.00	0.00
Begin 7.75° Tangent									
2,700.0	7.75	50.05	2,698.2	22.6	27.0	-21.5	0.00	0.00	0.00
2,800.0	7.75	50.05	2,797.3	31.3	37.3	-29.8	0.00	0.00	0.00
2,900.0	7.75	50.05	2,896.4	39.9	47.7	-38.0	0.00	0.00	0.00
3,000.0	7.75	50.05	2,995.5	48.6	58.0	-46.3	0.00	0.00	0.00
3,100.0	7.75	50.05	3,094.6	57.3	68.4	-54.5	0.00	0.00	0.00
3,200.0	7.75	50.05	3,193.6	65.9	78.7	-62.7	0.00	0.00	0.00
3,300.0	7.75	50.05	3,292.7	74.6	89.0	-71.0	0.00	0.00	0.00
3,400.0	7.75	50.05	3,391.8	83.2	99.4	-79.2	0.00	0.00	0.00
3,500.0	7.75	50.05	3,490.9	91.9	109.7	-87.5	0.00	0.00	0.00
3,600.0	7.75	50.05	3,590.0	100.5	120.0	-95.7	0.00	0.00	0.00
3,700.0	7.75	50.05	3,689.1	109.2	130.4	-104.0	0.00	0.00	0.00
3,800.0	7.75	50.05	3,788.2	117.9	140.7	-112.2	0.00	0.00	0.00
3,900.0	7.75	50.05	3,887.2	126.5	151.1	-120.4	0.00	0.00	0.00
4,000.0	7.75	50.05	3,986.3	135.2	161.4	-128.7	0.00	0.00	0.00
4,100.0	7.75	50.05	4,085.4	143.8	171.7	-136.9	0.00	0.00	0.00
4,200.0	7.75	50.05	4,184.5	152.5	182.1	-145.2	0.00	0.00	0.00
4,300.0	7.75	50.05	4,283.6	161.2	192.4	-153.4	0.00	0.00	0.00
4,400.0	7.75	50.05	4,382.7	169.8	202.7	-161.6	0.00	0.00	0.00
4,500.0	7.75	50.05	4,481.8	178.5	213.1	-169.9	0.00	0.00	0.00
4,600.0	7.75	50.05	4,580.9	187.1	223.4	-178.1	0.00	0.00	0.00
4,700.0	7.75	50.05	4,679.9	195.8	233.8	-186.4	0.00	0.00	0.00

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Well:	San Juan 8-67-33-4C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	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	7.75	50.05	4,779.0	204.5	244.1	-194.6	0.00	0.00	0.00
4,900.0	7.75	50.05	4,878.1	213.1	254.4	-202.9	0.00	0.00	0.00
5,000.0	7.75	50.05	4,977.2	221.8	264.8	-211.1	0.00	0.00	0.00
5,100.0	7.75	50.05	5,076.3	230.4	275.1	-219.3	0.00	0.00	0.00
5,200.0	7.75	50.05	5,175.4	239.1	285.4	-227.6	0.00	0.00	0.00
5,300.0	7.75	50.05	5,274.5	247.8	295.8	-235.8	0.00	0.00	0.00
5,400.0	7.75	50.05	5,373.5	256.4	306.1	-244.1	0.00	0.00	0.00
5,500.0	7.75	50.05	5,472.6	265.1	316.5	-252.3	0.00	0.00	0.00
5,600.0	7.75	50.05	5,571.7	273.7	326.8	-260.6	0.00	0.00	0.00
5,700.0	7.75	50.05	5,670.8	282.4	337.1	-268.8	0.00	0.00	0.00
5,800.0	7.75	50.05	5,769.9	291.0	347.5	-277.0	0.00	0.00	0.00
5,900.0	7.75	50.05	5,869.0	299.7	357.8	-285.3	0.00	0.00	0.00
6,000.0	7.75	50.05	5,968.1	308.4	368.1	-293.5	0.00	0.00	0.00
6,100.0	7.75	50.05	6,067.2	317.0	378.5	-301.8	0.00	0.00	0.00
6,194.4	7.75	50.05	6,160.7	325.2	388.2	-309.6	0.00	0.00	0.00
6,200.0	7.64	50.05	6,166.2	325.7	388.8	-310.0	2.00	-2.00	0.00
6,300.0	5.64	50.05	6,265.6	333.1	397.7	-317.1	2.00	-2.00	0.00
6,400.0	3.64	50.05	6,365.2	338.3	403.9	-322.0	2.00	-2.00	0.00
6,500.0	1.64	50.05	6,465.1	341.2	407.4	-324.8	2.00	-2.00	0.00
6,581.9	0.00	0.00	6,547.0	342.0	408.3	-325.5	2.00	-2.00	0.00
KOP - Start 10°/100' Build									
6,600.0	1.81	180.00	6,565.1	341.7	408.3	-325.3	10.00	10.00	0.00
6,700.0	11.81	180.00	6,664.3	329.9	408.3	-313.4	10.00	10.00	0.00
6,800.0	21.81	180.00	6,759.9	301.0	408.3	-284.6	10.00	10.00	0.00
6,900.0	31.81	180.00	6,849.0	255.9	408.3	-239.6	10.00	10.00	0.00
7,000.0	41.81	180.00	6,929.0	196.1	408.3	-179.8	10.00	10.00	0.00
7,100.0	51.81	180.00	6,997.3	123.3	408.3	-107.0	10.00	10.00	0.00
7,200.0	61.81	180.00	7,052.0	39.7	408.3	-23.5	10.00	10.00	0.00
7,300.0	71.81	180.00	7,091.3	-52.1	408.3	68.3	10.00	10.00	0.00
7,400.0	81.81	180.00	7,114.1	-149.3	408.3	165.4	10.00	10.00	0.00
7,481.9	90.00	180.00	7,120.0	-231.0	408.3	247.0	10.00	10.00	0.00
7" - 663' FNL & 1446' FWL - Intermediate									
7,500.0	90.00	180.09	7,120.0	-249.1	408.3	265.1	0.50	0.00	0.50
7,515.3	90.00	180.17	7,120.0	-264.4	408.3	280.4	0.50	0.00	0.50
7,600.0	90.00	180.17	7,120.0	-349.1	408.0	365.0	0.00	0.00	0.00
7,700.0	90.00	180.17	7,120.0	-449.1	407.7	464.9	0.00	0.00	0.00
7,800.0	90.00	180.17	7,120.0	-549.1	407.4	564.8	0.00	0.00	0.00
7,900.0	90.00	180.17	7,120.0	-649.1	407.1	664.7	0.00	0.00	0.00
8,000.0	90.00	180.17	7,120.0	-749.1	406.8	764.6	0.00	0.00	0.00
8,100.0	90.00	180.17	7,120.0	-849.1	406.5	864.5	0.00	0.00	0.00
8,200.0	90.00	180.17	7,120.0	-949.1	406.3	964.4	0.00	0.00	0.00
8,300.0	90.00	180.17	7,120.0	-1,049.1	406.0	1,064.3	0.00	0.00	0.00
8,400.0	90.00	180.17	7,120.0	-1,149.1	405.7	1,164.2	0.00	0.00	0.00
8,500.0	90.00	180.17	7,120.0	-1,249.1	405.4	1,264.2	0.00	0.00	0.00
8,600.0	90.00	180.17	7,120.0	-1,349.1	405.1	1,364.1	0.00	0.00	0.00
8,700.0	90.00	180.17	7,120.0	-1,449.1	404.8	1,464.0	0.00	0.00	0.00
8,800.0	90.00	180.17	7,120.0	-1,549.1	404.5	1,563.9	0.00	0.00	0.00
8,900.0	90.00	180.17	7,120.0	-1,649.1	404.2	1,663.8	0.00	0.00	0.00
9,000.0	90.00	180.17	7,120.0	-1,749.1	403.9	1,763.7	0.00	0.00	0.00
9,100.0	90.00	180.17	7,120.0	-1,849.1	403.6	1,863.6	0.00	0.00	0.00
9,200.0	90.00	180.17	7,120.0	-1,949.1	403.3	1,963.5	0.00	0.00	0.00
9,300.0	90.00	180.17	7,120.0	-2,049.1	403.0	2,063.4	0.00	0.00	0.00
9,400.0	90.00	180.17	7,120.0	-2,149.1	402.8	2,163.3	0.00	0.00	0.00
9,500.0	90.00	180.17	7,120.0	-2,249.1	402.5	2,263.2	0.00	0.00	0.00

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Well:	San Juan 8-67-33-4C	Survey Calculation Method:	Minimum Curvature
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Design:	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)	
9,600.0	90.00	180.17	7,120.0	-2,349.1	402.2	2,363.2	0.00	0.00	0.00	
9,700.0	90.00	180.17	7,120.0	-2,449.1	401.9	2,463.1	0.00	0.00	0.00	
9,800.0	90.00	180.17	7,120.0	-2,549.1	401.6	2,563.0	0.00	0.00	0.00	
9,900.0	90.00	180.17	7,120.0	-2,649.1	401.3	2,662.9	0.00	0.00	0.00	
10,000.0	90.00	180.17	7,120.0	-2,749.1	401.0	2,762.8	0.00	0.00	0.00	
10,100.0	90.00	180.17	7,120.0	-2,849.1	400.7	2,862.7	0.00	0.00	0.00	
10,200.0	90.00	180.17	7,120.0	-2,949.1	400.4	2,962.6	0.00	0.00	0.00	
10,300.0	90.00	180.17	7,120.0	-3,049.1	400.1	3,062.5	0.00	0.00	0.00	
10,400.0	90.00	180.17	7,120.0	-3,149.1	399.8	3,162.4	0.00	0.00	0.00	
10,500.0	90.00	180.17	7,120.0	-3,249.1	399.5	3,262.3	0.00	0.00	0.00	
10,600.0	90.00	180.17	7,120.0	-3,349.1	399.3	3,362.2	0.00	0.00	0.00	
10,700.0	90.00	180.17	7,120.0	-3,449.1	399.0	3,462.2	0.00	0.00	0.00	
10,800.0	90.00	180.17	7,120.0	-3,549.1	398.7	3,562.1	0.00	0.00	0.00	
10,900.0	90.00	180.17	7,120.0	-3,649.1	398.4	3,662.0	0.00	0.00	0.00	
11,000.0	90.00	180.17	7,120.0	-3,749.1	398.1	3,761.9	0.00	0.00	0.00	
11,100.0	90.00	180.17	7,120.0	-3,849.1	397.8	3,861.8	0.00	0.00	0.00	
11,200.0	90.00	180.17	7,120.0	-3,949.0	397.5	3,961.7	0.00	0.00	0.00	
11,300.0	90.00	180.17	7,120.0	-4,049.0	397.2	4,061.6	0.00	0.00	0.00	
11,400.0	90.00	180.17	7,120.0	-4,149.0	396.9	4,161.5	0.00	0.00	0.00	
11,500.0	90.00	180.17	7,120.0	-4,249.0	396.6	4,261.4	0.00	0.00	0.00	
11,600.0	90.00	180.17	7,120.0	-4,349.0	396.3	4,361.3	0.00	0.00	0.00	
11,700.0	90.00	180.17	7,120.0	-4,449.0	396.0	4,461.3	0.00	0.00	0.00	
11,800.0	90.00	180.17	7,120.0	-4,549.0	395.7	4,561.2	0.00	0.00	0.00	
11,900.0	90.00	180.17	7,120.0	-4,649.0	395.5	4,661.1	0.00	0.00	0.00	
12,000.0	90.00	180.17	7,120.0	-4,749.0	395.2	4,761.0	0.00	0.00	0.00	
12,100.0	90.00	180.17	7,120.0	-4,849.0	394.9	4,860.9	0.00	0.00	0.00	
12,200.0	90.00	180.17	7,120.0	-4,949.0	394.6	4,960.8	0.00	0.00	0.00	
12,300.0	90.00	180.17	7,120.0	-5,049.0	394.3	5,060.7	0.00	0.00	0.00	
12,400.0	90.00	180.17	7,120.0	-5,149.0	394.0	5,160.6	0.00	0.00	0.00	
12,500.0	90.00	180.17	7,120.0	-5,249.0	393.7	5,260.5	0.00	0.00	0.00	
12,600.0	90.00	180.17	7,120.0	-5,349.0	393.4	5,360.4	0.00	0.00	0.00	
12,700.0	90.00	180.17	7,120.0	-5,449.0	393.1	5,460.3	0.00	0.00	0.00	
12,800.0	90.00	180.17	7,120.0	-5,549.0	392.8	5,560.3	0.00	0.00	0.00	
12,900.0	90.00	180.17	7,120.0	-5,649.0	392.5	5,660.2	0.00	0.00	0.00	
13,000.0	90.00	180.17	7,120.0	-5,749.0	392.2	5,760.1	0.00	0.00	0.00	
13,100.0	90.00	180.17	7,120.0	-5,849.0	392.0	5,860.0	0.00	0.00	0.00	
13,200.0	90.00	180.17	7,120.0	-5,949.0	391.7	5,959.9	0.00	0.00	0.00	
13,300.0	90.00	180.17	7,120.0	-6,049.0	391.4	6,059.8	0.00	0.00	0.00	
13,400.0	90.00	180.17	7,120.0	-6,149.0	391.1	6,159.7	0.00	0.00	0.00	
13,500.0	90.00	180.17	7,120.0	-6,249.0	390.8	6,259.6	0.00	0.00	0.00	
13,600.0	90.00	180.17	7,120.0	-6,349.0	390.5	6,359.5	0.00	0.00	0.00	
13,700.0	90.00	180.17	7,120.0	-6,449.0	390.2	6,459.4	0.00	0.00	0.00	
13,800.0	90.00	180.17	7,120.0	-6,549.0	389.9	6,559.3	0.00	0.00	0.00	
13,900.0	90.00	180.17	7,120.0	-6,649.0	389.6	6,659.3	0.00	0.00	0.00	
14,000.0	90.00	180.17	7,120.0	-6,749.0	389.3	6,759.2	0.00	0.00	0.00	
14,100.0	90.00	180.17	7,120.0	-6,849.0	389.0	6,859.1	0.00	0.00	0.00	
14,200.0	90.00	180.17	7,120.0	-6,949.0	388.7	6,959.0	0.00	0.00	0.00	
14,300.0	90.00	180.17	7,120.0	-7,049.0	388.5	7,058.9	0.00	0.00	0.00	
14,400.0	90.00	180.17	7,120.0	-7,149.0	388.2	7,158.8	0.00	0.00	0.00	
14,500.0	90.00	180.17	7,120.0	-7,249.0	387.9	7,258.7	0.00	0.00	0.00	
14,600.0	90.00	180.17	7,120.0	-7,349.0	387.6	7,358.6	0.00	0.00	0.00	
14,700.0	90.00	180.17	7,120.0	-7,449.0	387.3	7,458.5	0.00	0.00	0.00	
14,800.0	90.00	180.17	7,120.0	-7,549.0	387.0	7,558.4	0.00	0.00	0.00	
14,900.0	90.00	180.17	7,120.0	-7,649.0	386.7	7,658.4	0.00	0.00	0.00	

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well San Juan 8-67-33-4C
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	Well @ 5202.0usft
Project:	Weld County, CO	MD Reference:	Well @ 5202.0usft
Site:	SEC 33 T8N-R67W	North Reference:	True
Well:	San Juan 8-67-33-4C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	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)	
15,000.0	90.00	180.17	7,120.0	-7,749.0	386.4	7,758.3	0.00	0.00	0.00	
15,100.0	90.00	180.17	7,120.0	-7,849.0	386.1	7,858.2	0.00	0.00	0.00	
15,200.0	90.00	180.17	7,120.0	-7,949.0	385.8	7,958.1	0.00	0.00	0.00	
15,300.0	90.00	180.17	7,120.0	-8,049.0	385.5	8,058.0	0.00	0.00	0.00	
15,400.0	90.00	180.17	7,120.0	-8,149.0	385.2	8,157.9	0.00	0.00	0.00	
15,500.0	90.00	180.17	7,120.0	-8,249.0	385.0	8,257.8	0.00	0.00	0.00	
15,600.0	90.00	180.17	7,120.0	-8,349.0	384.7	8,357.7	0.00	0.00	0.00	
15,700.0	90.00	180.17	7,120.0	-8,449.0	384.4	8,457.6	0.00	0.00	0.00	
15,800.0	90.00	180.17	7,120.0	-8,549.0	384.1	8,557.5	0.00	0.00	0.00	
15,900.0	90.00	180.17	7,120.0	-8,649.0	383.8	8,657.4	0.00	0.00	0.00	
16,000.0	90.00	180.17	7,120.0	-8,749.0	383.5	8,757.4	0.00	0.00	0.00	
16,100.0	90.00	180.17	7,120.0	-8,849.0	383.2	8,857.3	0.00	0.00	0.00	
16,200.0	90.00	180.17	7,120.0	-8,949.0	382.9	8,957.2	0.00	0.00	0.00	
16,300.0	90.00	180.17	7,120.0	-9,049.0	382.6	9,057.1	0.00	0.00	0.00	
16,400.0	90.00	180.17	7,120.0	-9,149.0	382.3	9,157.0	0.00	0.00	0.00	
16,500.0	90.00	180.17	7,120.0	-9,249.0	382.0	9,256.9	0.00	0.00	0.00	
16,600.0	90.00	180.17	7,120.0	-9,349.0	381.7	9,356.8	0.00	0.00	0.00	
16,700.0	90.00	180.17	7,120.0	-9,449.0	381.5	9,456.7	0.00	0.00	0.00	
16,800.0	90.00	180.17	7,120.0	-9,549.0	381.2	9,556.6	0.00	0.00	0.00	
16,853.9	90.00	180.17	7,120.0	-9,603.0	381.0	9,610.5	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	Longitude	
- hit/miss target										
- Shape										
San Juan 8-67-33-4C	0.00	0.00	7,120.0	-9,603.0	381.0	1,461,183.45	3,165,984.76	40° 35' 52.120 N	104° 54' 8.201 W	
- plan hits target center										
- Point										
San Juan 8-67-33-4C L&	0.00	0.00	7,120.0	-230.9	408.3	1,470,555.46	3,165,949.07	40° 37' 24.730 N	104° 54' 7.844 W	
- plan misses target center by 0.1usft at 7481.9usft MD (7120.0 TVD, -230.9 N, 408.3 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	9-5/8	
7,481.9	7,120.0	Intermediate	7	7	

Planning Report

Database:	EDM Server Database	Local Co-ordinate Reference:	Well San Juan 8-67-33-4C
Company:	Enerplus Resources (USA) Corporation	TVD Reference:	Well @ 5202.0usft
Project:	Weld County, CO	MD Reference:	Well @ 5202.0usft
Site:	SEC 33 T8N-R67W	North Reference:	True
Well:	San Juan 8-67-33-4C	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hz		
Design:	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"	
2,245.4	2,245.4	0.0	0.0	Begin 2° Nudge	
2,632.9	2,631.7	16.8	20.1	Begin 7.75° Tangent	
6,581.9	6,547.0	342.0	408.3	KOP - Start 10°/100' Build	
7,481.9	7,120.0	-231.0	408.3	7" - 663' FNL & 1446' FWL	
16,853.9	7,120.0	-9,603.0	381.0	Total Depth	