

# **Catamount Energy Partners**

**San Juan Basin  
La Plata County CO  
Carpenter 32-6-3 #2**

**Lateral 1 ST3**

**Plan: Plan 1**

## **Standard Planning Report**

**22 August, 2014**



Project: San Juan Basin  
 Site: La Plata County CO  
 Well: Carpenter 32-6-3 #2  
 Wellbore: Lateral 1 ST3  
 Design: Plan 1

**WELL DETAILS** Carpenter 32-6-3 #2

Ground Level: 6372.0

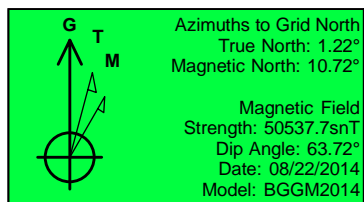
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1144155.18	2420736.52	37° 2' 44.379 N	107° 29' 5.342 W

**SITE DETAILS:** La Plata County CO

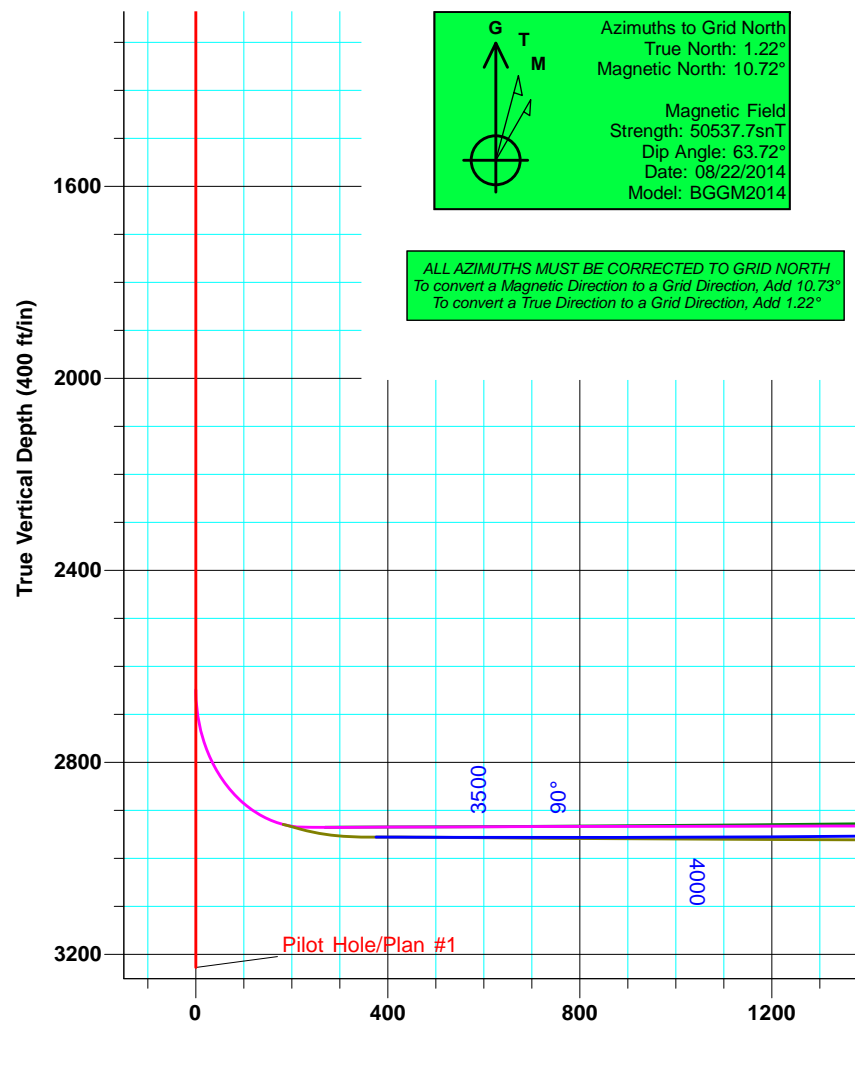
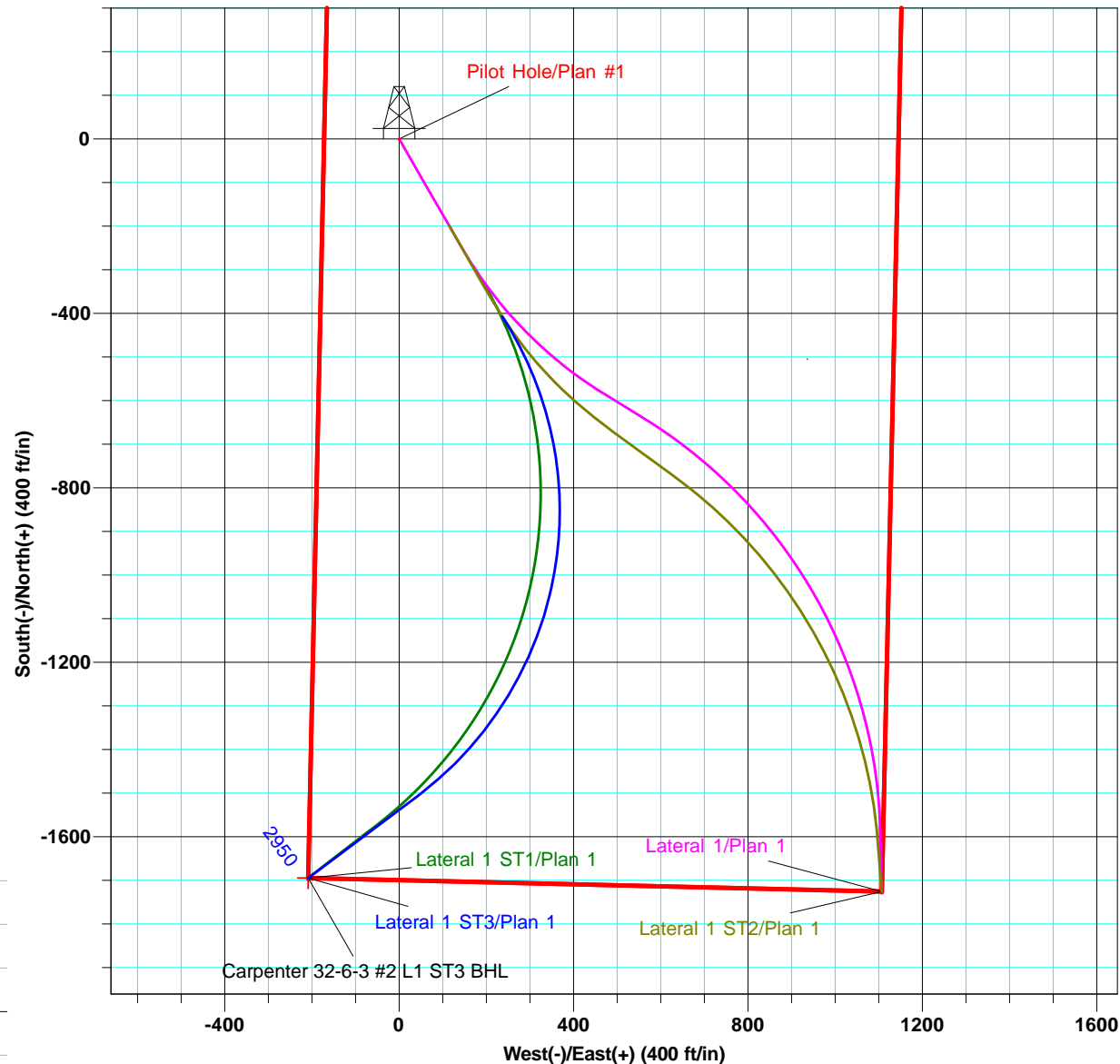
Site Centre Northing: 760788.19  
 Easting: 2556100.64  
 Positional Uncertainty: 0.0  
 Convergence: -0.92  
 Local North: Grid

**PROJECT DETAILS:** San Juan Basin

Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: Colorado Southern Zone  
 System Datum: Mean Sea Level



ALL AZIMUTHS MUST BE CORRECTED TO GRID NORTH  
 To convert a Magnetic Direction to a Grid Direction, Add 10.73°  
 To convert a True Direction to a Grid Direction, Add 1.22°



<b>Database:</b>	EDM 5000.1 Old	<b>Local Co-ordinate Reference:</b>	Well Carpenter 32-6-3 #2
<b>Company:</b>	Catamount Energy Partners	<b>TVD Reference:</b>	DFE @ 6385.5ft (GL + 13.5')
<b>Project:</b>	San Juan Basin	<b>MD Reference:</b>	DFE @ 6385.5ft (GL + 13.5')
<b>Site:</b>	La Plata County CO	<b>North Reference:</b>	Grid
<b>Well:</b>	Carpenter 32-6-3 #2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral 1 ST3		
<b>Design:</b>	Plan 1		

<b>Project</b>	San Juan Basin, Southern Colorado, Fruitland Coal HZ		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Southern Zone		Using geodetic scale factor

<b>Site</b>	La Plata County CO		
<b>Site Position:</b>		<b>Northing:</b>	760,788.19 usft
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,556,100.64 usft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	6-1/8 "
		<b>Latitude:</b>	36° 0' 0.000 N
		<b>Longitude:</b>	107° 0' 0.000 W
		<b>Grid Convergence:</b>	-0.92 °

<b>Well</b>	Carpenter 32-6-3 #2, Fruitland Coal HZ		
<b>Well Position</b>	<b>+N/-S</b>	383,194.7 ft	<b>Northing:</b> 1,144,155.18 usft
	<b>+E/-W</b>	-135,303.3 ft	<b>Easting:</b> 2,420,736.52 usft
<b>Position Uncertainty</b>		1.0 ft	<b>Wellhead Elevation:</b>
			<b>Ground Level:</b> 6,372.0 ft

<b>Wellbore</b>	Lateral 1 ST3				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2014	08/22/14	9.51	63.72	50,538

<b>Design</b>	Plan 1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	3,285.0	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	187.00	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
3,285.0	89.75	147.04	2,955.2	-407.4	236.7	0.00	0.00	0.00	0.00	
4,514.3	90.45	233.09	2,952.5	-1,507.2	41.5	7.00	0.06	7.00	89.53	
4,826.7	90.45	233.09	2,950.0	-1,694.8	-208.2	0.00	0.00	0.00	0.00	Carpenter 32-6-3 #2

<b>Database:</b>	EDM 5000.1 Old	<b>Local Co-ordinate Reference:</b>	Well Carpenter 32-6-3 #2
<b>Company:</b>	Catamount Energy Partners	<b>TVD Reference:</b>	DFE @ 6385.5ft (GL + 13.5')
<b>Project:</b>	San Juan Basin	<b>MD Reference:</b>	DFE @ 6385.5ft (GL + 13.5')
<b>Site:</b>	La Plata County CO	<b>North Reference:</b>	Grid
<b>Well:</b>	Carpenter 32-6-3 #2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral 1 ST3		
<b>Design:</b>	Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
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
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,648.5	0.00	0.00	2,648.5	0.0	0.0	0.0	0.00	0.00	0.00
2,650.0	0.30	150.00	2,650.0	0.0	0.0	0.0	20.00	20.00	0.00
2,675.0	5.30	150.00	2,675.0	-1.1	0.6	1.0	20.00	20.00	0.00
2,700.0	10.30	150.00	2,699.7	-4.0	2.3	3.7	20.00	20.00	0.00
2,725.0	15.30	150.00	2,724.1	-8.8	5.1	8.1	20.00	20.00	0.00
2,750.0	20.30	150.00	2,747.9	-15.4	8.9	14.2	20.00	20.00	0.00
2,775.0	25.30	150.00	2,770.9	-23.8	13.7	21.9	20.00	20.00	0.00
2,800.0	30.30	150.00	2,793.0	-33.9	19.6	31.3	20.00	20.00	0.00
2,825.0	35.30	150.00	2,814.0	-45.6	26.3	42.1	20.00	20.00	0.00
2,850.0	40.30	150.00	2,833.8	-58.9	34.0	54.3	20.00	20.00	0.00
2,875.0	45.30	150.00	2,852.1	-73.6	42.5	67.9	20.00	20.00	0.00
2,900.0	50.30	150.00	2,868.9	-89.6	51.7	82.6	20.00	20.00	0.00
2,925.0	55.30	150.00	2,884.0	-106.9	61.7	98.5	20.00	20.00	0.00
2,950.0	60.30	150.00	2,897.3	-125.2	72.3	115.4	20.00	20.00	0.00
2,975.0	65.30	150.00	2,908.8	-144.4	83.4	133.2	20.00	20.00	0.00
3,000.0	70.30	150.00	2,918.2	-164.5	95.0	151.7	20.00	20.00	0.00
3,025.0	75.30	150.00	2,925.6	-185.1	106.9	170.7	20.00	20.00	0.00
3,040.0	78.30	150.00	2,929.0	-197.8	114.2	182.4	20.00	20.00	0.00
3,050.0	77.70	150.00	2,931.1	-206.3	119.1	190.2	6.00	-6.00	0.00
3,085.0	77.70	150.00	2,938.6	-235.9	136.2	217.5	0.00	0.00	0.00
3,100.0	78.90	150.00	2,941.6	-248.6	143.5	229.2	8.00	8.00	0.00
3,150.0	82.90	150.00	2,949.5	-291.3	168.2	268.7	8.00	8.00	0.00
3,200.0	86.90	150.00	2,954.0	-334.5	193.1	308.4	8.00	8.00	0.00
3,235.6	89.75	150.00	2,955.0	-365.3	210.9	336.9	8.00	8.00	0.00
3,250.0	89.75	149.14	2,955.1	-377.7	218.2	348.3	6.00	0.00	-6.00
3,285.0	89.75	147.04	2,955.2	-407.4	236.7	375.5	6.00	0.00	-6.00
3,300.0	89.76	148.09	2,955.3	-420.1	244.7	387.1	7.00	0.06	7.00

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<b>Well:</b>	Carpenter 32-6-3 #2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral 1 ST3		
<b>Design:</b>	Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,350.0	89.79	151.59	2,955.5	-463.3	269.8	426.9	7.00	0.06	7.00
3,400.0	89.82	155.09	2,955.6	-508.0	292.3	468.5	7.00	0.06	7.00
<b>Carpenter Drilling Window</b>									
3,450.0	89.85	158.59	2,955.8	-553.9	311.9	511.8	7.00	0.06	7.00
3,500.0	89.88	162.09	2,955.9	-601.0	328.8	556.4	7.00	0.06	7.00
3,550.0	89.91	165.59	2,956.0	-649.0	342.7	602.4	7.00	0.06	7.00
3,600.0	89.95	169.09	2,956.1	-697.8	353.6	649.5	7.00	0.06	7.00
3,650.0	89.98	172.59	2,956.1	-747.1	361.6	697.5	7.00	0.07	7.00
3,700.0	90.01	176.09	2,956.1	-796.9	366.5	746.3	7.00	0.07	7.00
3,750.0	90.04	179.59	2,956.1	-846.8	368.4	795.6	7.00	0.07	7.00
3,800.0	90.08	183.09	2,956.0	-896.8	367.3	845.4	7.00	0.06	7.00
3,850.0	90.11	186.59	2,955.9	-946.6	363.0	895.3	7.00	0.06	7.00
3,900.0	90.14	190.09	2,955.8	-996.1	355.8	945.3	7.00	0.06	7.00
3,950.0	90.17	193.59	2,955.7	-1,045.0	345.5	995.1	7.00	0.06	7.00
4,000.0	90.20	197.09	2,955.5	-1,093.2	332.3	1,044.6	7.00	0.06	7.00
4,050.0	90.23	200.59	2,955.3	-1,140.6	316.2	1,093.5	7.00	0.06	7.00
4,100.0	90.26	204.09	2,955.1	-1,186.8	297.2	1,141.7	7.00	0.06	7.00
4,150.0	90.29	207.59	2,954.9	-1,231.8	275.4	1,189.0	7.00	0.06	7.00
4,200.0	90.32	211.09	2,954.6	-1,275.4	250.9	1,235.3	7.00	0.05	7.00
4,250.0	90.34	214.59	2,954.3	-1,317.4	223.8	1,280.3	7.00	0.05	7.00
4,300.0	90.37	218.09	2,954.0	-1,357.7	194.2	1,323.8	7.00	0.05	7.00
4,350.0	90.39	221.59	2,953.7	-1,396.0	162.2	1,365.9	7.00	0.05	7.00
4,400.0	90.41	225.09	2,953.3	-1,432.4	127.8	1,406.1	7.00	0.04	7.00
4,450.0	90.43	228.59	2,953.0	-1,466.6	91.4	1,444.5	7.00	0.04	7.00
4,500.0	90.45	232.09	2,952.6	-1,498.5	52.9	1,480.9	7.00	0.04	7.00
4,514.3	90.45	233.09	2,952.5	-1,507.2	41.5	1,490.9	7.00	0.03	7.00
4,600.0	90.45	233.09	2,951.8	-1,558.7	-27.0	1,550.3	0.00	0.00	0.00
4,700.0	90.45	233.09	2,951.0	-1,618.7	-106.9	1,619.7	0.00	0.00	0.00
4,800.0	90.45	233.09	2,950.2	-1,678.8	-186.9	1,689.0	0.00	0.00	0.00
4,826.7	90.45	233.09	2,950.0	-1,694.8	-208.2	1,707.5	0.00	0.00	0.00
<b>Carpenter 32-6-3 #2 L1 ST3 BHL</b>									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Carpenter Drilling Win	0.00	0.00	0.0	1,146,418.4	2,420,612.9	2,290,616.43	4,841,439.91	40° 1' 55.281 N	98° 55' 23.731 W
- plan misses target center by 2678320.6ft at 3400.0ft MD (2955.6 TVD, -508.0 N, 292.3 E)									
- Polygon									
Point 1			0.0	1,144,180.9	2,419,418.3	1,146,392.78	2,421,931.23		
Point 2			0.0	1,148,143.7	2,419,505.9	1,142,429.83	2,421,843.63		
Point 3			0.0	1,148,113.2	2,420,821.2	1,142,460.33	2,420,528.28		
Point 4			0.0	1,144,155.3	2,420,736.5	1,146,418.38	2,420,612.98		
Point 5			0.0	1,144,180.9	2,419,418.3	1,146,392.78	2,421,931.23		
Carpenter 32-6-3 #2 L	0.00	0.00	2,950.0	-1,694.8	-208.2	1,142,460.32	2,420,528.31	37° 2' 27.582 N	107° 29' 7.465 W
- plan hits target center									
- Point									