

# **Catamount Energy Partners**

**San Juan Basin  
La Plata County CO  
Carpenter 32-6-3 #1S**

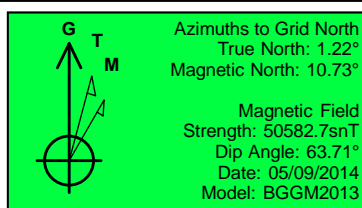
**Original Hole**

**Plan: Plan #1**

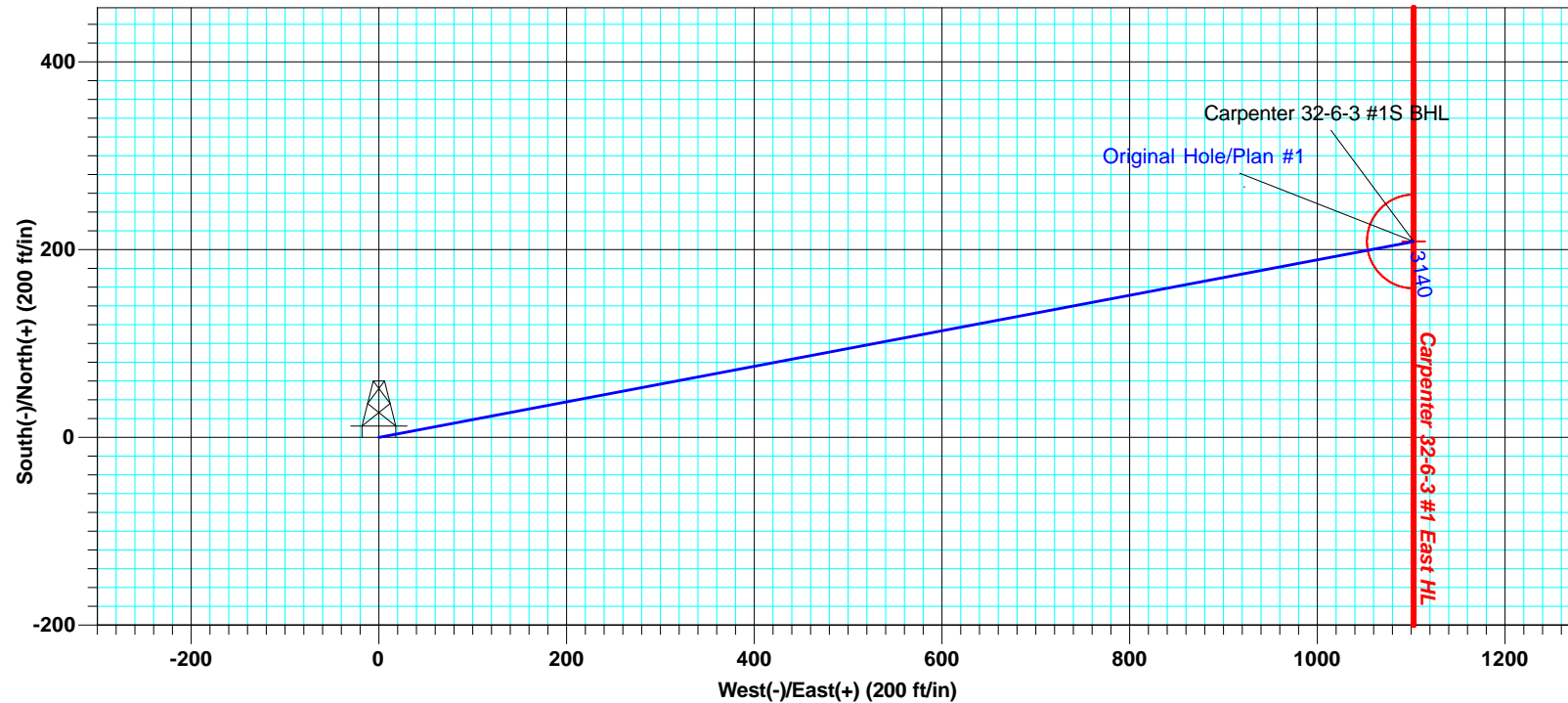
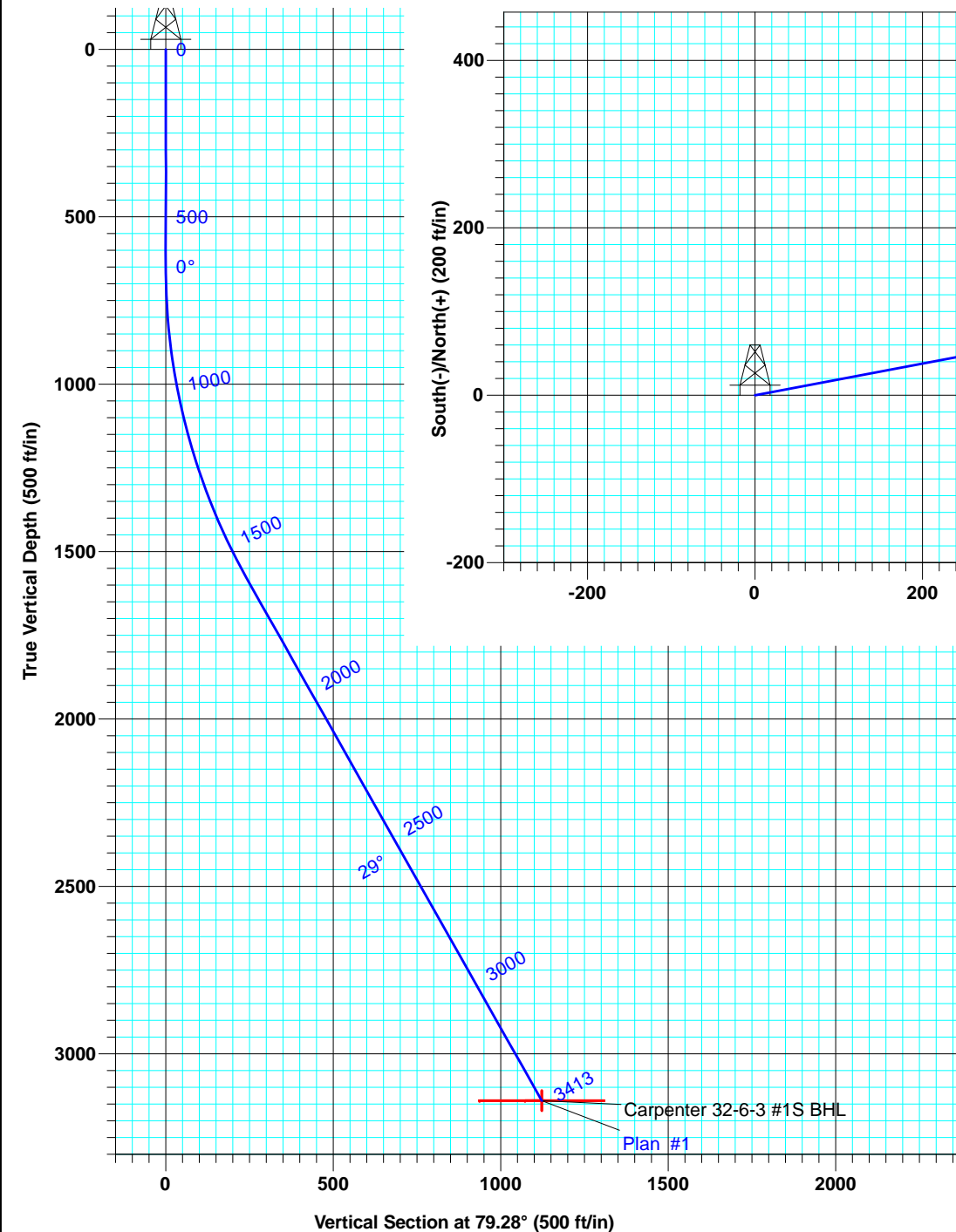
## **Standard Planning Report**

**09 May, 2014**





Project: San Juan Basin  
 Site: La Plata County CO  
 Well: Carpenter 32-6-3 #1S  
 Wellbore: Original Hole  
 Design: Plan #1



DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Carpenter 32-6-3 #1 BHL	3140.0	208.7	1103.0	37° 2' 46.923 N	107° 28' 51.264 W
Carpenter 32-6-3 #1 East HL	3140.0	208.7	1103.0	37° 2' 46.923 N	107° 28' 51.264 W

WELL DETAILS Carpenter 32-6-3 #1S					
DFE @ 6384.0ft (AWS 507)					
Ground Level: 6372.0					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1144179.43	2420780.01	37° 2' 44.628 N	107° 29' 4.812 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 #1S
<b>Company:</b>	Catamount Energy Partners	<b>TVD Reference:</b>	DFE @ 6384.0ft (AWS 507)
<b>Project:</b>	San Juan Basin	<b>MD Reference:</b>	DFE @ 6384.0ft (AWS 507)
<b>Site:</b>	La Plata County CO	<b>North Reference:</b>	Grid
<b>Well:</b>	Carpenter 32-6-3 #1S	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<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 #1S, FC Pilot Hole		
<b>Well Position</b>	<b>+N/-S</b>	383,218.9 ft	<b>Northing:</b>
	<b>+E/-W</b>	-135,259.8 ft	<b>Easting:</b>
<b>Position Uncertainty</b>		1.0 ft	<b>Wellhead Elevation:</b>
			6,384.0 ft
			<b>Latitude:</b>
			37° 2' 44.628 N
			<b>Longitude:</b>
			107° 29' 4.812 W
			<b>Ground Level:</b>
			6,372.0 ft

<b>Wellbore</b>	Original Hole				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2013	05/09/14	9.51	63.71	50,583

<b>Design</b>	Plan #1			
<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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	79.28

<b>Plan Sections</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</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	
650.0	0.00	0.00	650.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,631.7	29.45	79.28	1,589.1	45.9	242.5	3.00	3.00	0.00	79.28	
3,412.8	29.45	79.28	3,140.0	208.7	1,103.0	0.00	0.00	0.00	0.00	Carpenter 32-6-3 #

<b>Database:</b>	EDM 5000.1 Old	<b>Local Co-ordinate Reference:</b>	Well Carpenter 32-6-3 #1
<b>Company:</b>	Catamount Energy Partners	<b>TVD Reference:</b>	DFE @ 6384.0ft (AWS 507)
<b>Project:</b>	San Juan Basin	<b>MD Reference:</b>	DFE @ 6384.0ft (AWS 507)
<b>Site:</b>	La Plata County CO	<b>North Reference:</b>	Grid
<b>Well:</b>	Carpenter 32-6-3 #1S	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<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
650.0	0.00	0.00	650.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	1.50	79.28	700.0	0.1	0.6	0.7	3.00	3.00	0.00
800.0	4.50	79.28	799.8	1.1	5.8	5.9	3.00	3.00	0.00
900.0	7.50	79.28	899.3	3.0	16.1	16.3	3.00	3.00	0.00
1,000.0	10.50	79.28	998.0	5.9	31.4	32.0	3.00	3.00	0.00
1,100.0	13.50	79.28	1,095.8	9.8	51.8	52.8	3.00	3.00	0.00
1,200.0	16.50	79.28	1,192.4	14.6	77.3	78.6	3.00	3.00	0.00
1,300.0	19.50	79.28	1,287.5	20.4	107.6	109.5	3.00	3.00	0.00
1,400.0	22.50	79.28	1,380.9	27.0	142.8	145.4	3.00	3.00	0.00
1,500.0	25.50	79.28	1,472.2	34.6	182.8	186.0	3.00	3.00	0.00
1,600.0	28.50	79.28	1,561.3	43.0	227.4	231.4	3.00	3.00	0.00
1,631.7	29.45	79.28	1,589.1	45.9	242.5	246.8	3.00	3.00	0.00
1,668.4	29.45	79.28	1,621.0	49.2	260.2	264.8	0.00	0.00	0.00
<b>Animas</b>									
1,700.0	29.45	79.28	1,648.5	52.1	275.5	280.4	0.00	0.00	0.00
1,800.0	29.45	79.28	1,735.6	61.3	323.8	329.6	0.00	0.00	0.00
1,900.0	29.45	79.28	1,822.7	70.4	372.1	378.7	0.00	0.00	0.00
2,000.0	29.45	79.28	1,909.7	79.6	420.4	427.9	0.00	0.00	0.00
2,087.6	29.45	79.28	1,986.0	87.6	462.7	471.0	0.00	0.00	0.00
<b>Kirtland Shale</b>									
2,100.0	29.45	79.28	1,996.8	88.7	468.7	477.1	0.00	0.00	0.00
2,200.0	29.45	79.28	2,083.9	97.9	517.1	526.2	0.00	0.00	0.00
2,300.0	29.45	79.28	2,171.0	107.0	565.4	575.4	0.00	0.00	0.00
2,400.0	29.45	79.28	2,258.0	116.1	613.7	624.6	0.00	0.00	0.00
2,403.4	29.45	79.28	2,261.0	116.4	615.3	626.2	0.00	0.00	0.00
<b>Farmington SS</b>									
2,500.0	29.45	79.28	2,345.1	125.3	662.0	673.7	0.00	0.00	0.00
2,600.0	29.45	79.28	2,432.2	134.4	710.3	722.9	0.00	0.00	0.00
2,700.0	29.45	79.28	2,519.3	143.6	758.6	772.1	0.00	0.00	0.00
2,770.9	29.45	79.28	2,581.0	150.0	792.9	806.9	0.00	0.00	0.00
<b>Lower Kirtland Shale</b>									
2,800.0	29.45	79.28	2,606.4	152.7	806.9	821.2	0.00	0.00	0.00
2,900.0	29.45	79.28	2,693.4	161.9	855.2	870.4	0.00	0.00	0.00
3,000.0	29.45	79.28	2,780.5	171.0	903.5	919.6	0.00	0.00	0.00
3,086.7	29.45	79.28	2,856.0	178.9	945.4	962.2	0.00	0.00	0.00
<b>Upper FC</b>									
3,100.0	29.45	79.28	2,867.6	180.1	951.9	968.8	0.00	0.00	0.00
3,200.0	29.45	79.28	2,954.7	189.3	1,000.2	1,017.9	0.00	0.00	0.00
3,214.2	29.45	79.28	2,967.0	190.6	1,007.0	1,024.9	0.00	0.00	0.00
<b>Main FC</b>									
3,248.6	29.45	79.28	2,997.0	193.7	1,023.7	1,041.8	0.00	0.00	0.00
<b>Inter Tongue SS</b>									
3,300.0	29.45	79.28	3,041.7	198.4	1,048.5	1,067.1	0.00	0.00	0.00
3,352.0	29.45	79.28	3,087.0	203.2	1,073.6	1,092.7	0.00	0.00	0.00
<b>Inter Tongue Coal</b>									
3,357.7	29.45	79.28	3,092.0	203.7	1,076.4	1,095.5	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Old	<b>Local Co-ordinate Reference:</b>	Well Carpenter 32-6-3 #1
<b>Company:</b>	Catamount Energy Partners	<b>TVD Reference:</b>	DFE @ 6384.0ft (AWS 507)
<b>Project:</b>	San Juan Basin	<b>MD Reference:</b>	DFE @ 6384.0ft (AWS 507)
<b>Site:</b>	La Plata County CO	<b>North Reference:</b>	Grid
<b>Well:</b>	Carpenter 32-6-3 #1S	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Hole		
<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)
PC									
3,400.0	29.45	79.28	3,128.8	207.6	1,096.8	1,116.3	0.00	0.00	0.00
3,412.8	29.45	79.28	3,140.0	208.7	1,103.0	1,122.6	0.00	0.00	0.00
Carpenter 32-6-3 #1 BHL - Carpenter 32-6-3 #1 East HL									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Carpenter 32-6-3 #1 E - plan hits target center - Circle (radius 50.0)	0.00	0.00	3,140.0	208.7	1,103.0	1,144,388.17	2,421,883.06	37° 2' 46.923 N	107° 28' 51.264 W
Carpenter 32-6-3 #1 E - plan hits target center - Polygon	0.00	0.00	3,140.0	208.7	1,103.0	1,144,388.17	2,421,883.06	37° 2' 46.923 N	107° 28' 51.264 W
Point 1			3,140.0	1,000.0	0.0	1,145,388.21	2,421,883.06		
Point 2			3,140.0	-1,000.0	0.0	1,143,388.14	2,421,883.06		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,668.4	1,621.0	Animas		0.00		
2,087.6	1,986.0	Kirtland Shale		0.00		
2,403.4	2,261.0	Farmington SS		0.00		
2,770.9	2,581.0	Lower Kirtland Shale		0.00		
3,086.7	2,856.0	Upper FC		0.00		
3,214.2	2,967.0	Main FC		0.00		
3,248.6	2,997.0	Inter Tongue SS		0.00		
3,352.0	3,087.0	Inter Tongue Coal		0.00		
3,357.7	3,092.0	PC		0.00		