

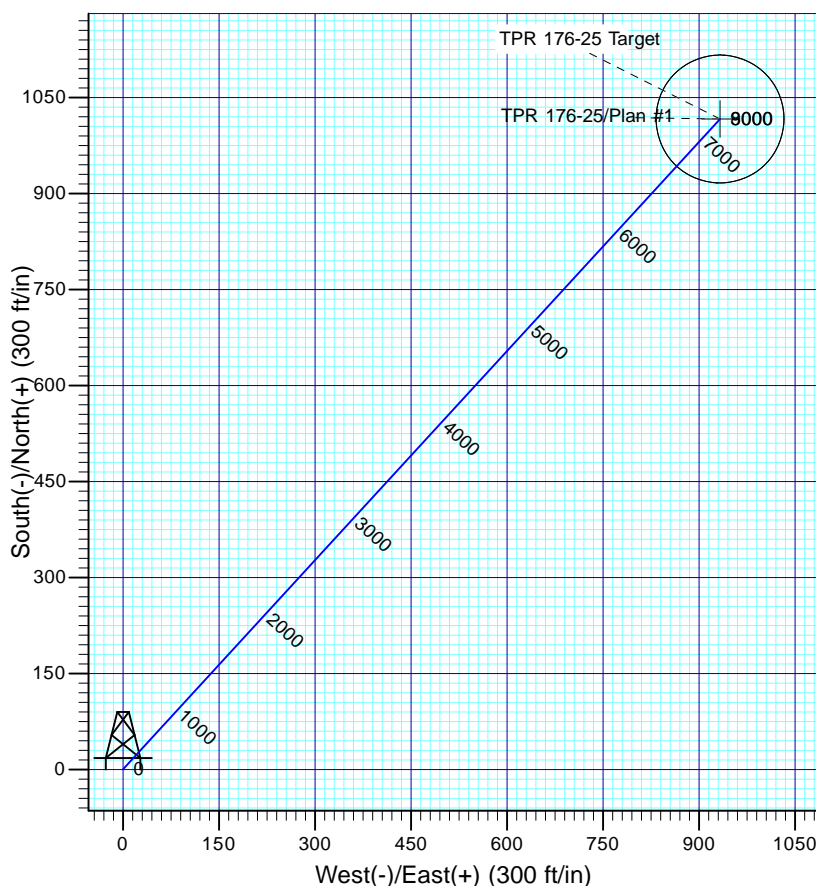
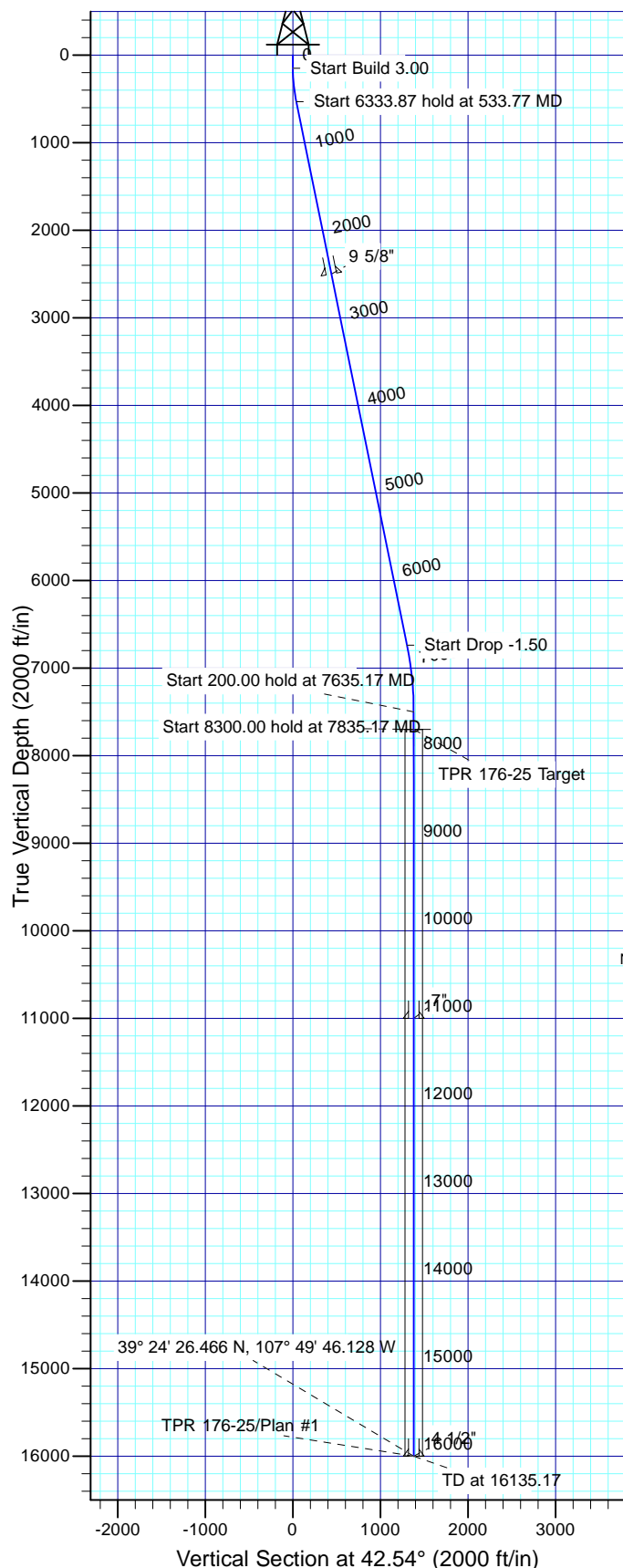
Well Details: TPR 176-25

TVD Reference: GL 9131' & RKB 24' @ 9155.00ft Ground Level: 9131.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 1580704.45 2340905.33 39° 24' 16.422 N 107° 49' 58.011 W A12



Azimuths to True North
Magnetic North: 10.06°

Magnetic Field
Strength: 51994.1nT
Dip Angle: 65.63°
Date: 7/9/2013
Model: BGM2013



FORMATION TOP DETAILS

No formation data is available

Plan: Plan #1

17:46, July 17 2013
Created By: Janie Collins

PROJECT DETAILS: Garfield County, CO

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Central Zone

System Datum: Mean Sea Level

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	
3	533.77	11.51	42.54	531.19	28.31	25.98	3.00	42.54	38.43	
4	6867.64	11.51	42.54	6737.62	959.71	880.77	0.00	0.001302.61		
5	7635.17	0.00	0.00	7500.00	1016.33	932.73	1.50	180.001379.46		
6	7835.17	0.00	0.00	7700.00	1016.33	932.73	0.00	0.001379.46		TPR 176-25 Target
7	16135.17	0.00	0.0016000.00	1016.33	932.73	0.00	0.001379.46			

Black Diamond Minerals, LLC

Garfield County, CO
Tepee Park Ranch 25A Pad
TPR 176-25 - Slot A12

OH

Plan: Plan #1

Standard Planning Report

17 July, 2013



Database:	Grand Junction District	Local Co-ordinate Reference:	Well TPR 176-25 - Slot A12
Company:	Black Diamond Minerals, LLC	TVD Reference:	GL 9131' & RKB 24' @ 9155.00ft
Project:	Garfield County, CO	MD Reference:	GL 9131' & RKB 24' @ 9155.00ft
Site:	Tepee Park Ranch 25A Pad	North Reference:	True
Well:	TPR 176-25	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Garfield County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		Using geodetic scale factor

Site		Tepee Park Ranch 25A Pad, Sec 25 T7S R94W			
Site Position:		Northing:	1,580,619.31 usft	Latitude:	39° 24' 15.594 N
From:	Map	Easting:	2,340,957.77 usft	Longitude:	107° 49' 57.316 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.47 °

Well	TPR 176-25 - Slot A12					
Well Position	+N/-S	83.77 ft	Northing:	1,580,704.44 usft	Latitude:	39° 24' 16.422 N
	+E/-W	-54.61 ft	Easting:	2,340,905.34 usft	Longitude:	107° 49' 58.011 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	9,131.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	7/9/2013	10.06	65.63	51,994

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	42.54

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
533.77	11.51	42.54	531.19	28.31	25.98	3.00	3.00	0.00	42.54	
6,867.64	11.51	42.54	6,737.62	959.71	880.77	0.00	0.00	0.00	0.00	
7,635.17	0.00	0.00	7,500.00	1,016.33	932.73	1.50	-1.50	0.00	180.00	
7,835.17	0.00	0.00	7,700.00	1,016.33	932.73	0.00	0.00	0.00	0.00	TPR 176-25 Target
16,135.17	0.00	0.00	16,000.00	1,016.33	932.73	0.00	0.00	0.00	0.00	

Database:	Grand Junction District	Local Co-ordinate Reference:	Well TPR 176-25 - Slot A12
Company:	Black Diamond Minerals, LLC	TVD Reference:	GL 9131' & RKB 24' @ 9155.00ft
Project:	Garfield County, CO	MD Reference:	GL 9131' & RKB 24' @ 9155.00ft
Site:	Tepee Park Ranch 25A Pad	North Reference:	True
Well:	TPR 176-25	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.00									
200.00	1.50	42.54	199.99	0.48	0.44	0.65	3.00	3.00	0.00
300.00	4.50	42.54	299.85	4.34	3.98	5.89	3.00	3.00	0.00
400.00	7.50	42.54	399.29	12.04	11.05	16.34	3.00	3.00	0.00
500.00	10.50	42.54	498.04	23.56	21.62	31.98	3.00	3.00	0.00
533.77	11.51	42.54	531.19	28.31	25.98	38.43	3.00	3.00	0.00
Start 6333.87 hold at 533.77 MD									
600.00	11.51	42.54	596.09	38.05	34.92	51.65	0.00	0.00	0.00
700.00	11.51	42.54	694.08	52.76	48.42	71.61	0.00	0.00	0.00
800.00	11.51	42.54	792.07	67.46	61.91	91.57	0.00	0.00	0.00
900.00	11.51	42.54	890.05	82.17	75.41	111.52	0.00	0.00	0.00
1,000.00	11.51	42.54	988.04	96.87	88.90	131.48	0.00	0.00	0.00
1,100.00	11.51	42.54	1,086.03	111.58	102.40	151.44	0.00	0.00	0.00
1,200.00	11.51	42.54	1,184.02	126.28	115.89	171.40	0.00	0.00	0.00
1,300.00	11.51	42.54	1,282.01	140.99	129.39	191.36	0.00	0.00	0.00
1,400.00	11.51	42.54	1,379.99	155.69	142.89	211.32	0.00	0.00	0.00
1,500.00	11.51	42.54	1,477.98	170.40	156.38	231.28	0.00	0.00	0.00
1,600.00	11.51	42.54	1,575.97	185.10	169.88	251.24	0.00	0.00	0.00
1,700.00	11.51	42.54	1,673.96	199.81	183.37	271.20	0.00	0.00	0.00
1,800.00	11.51	42.54	1,771.95	214.51	196.87	291.16	0.00	0.00	0.00
1,900.00	11.51	42.54	1,869.93	229.22	210.36	311.11	0.00	0.00	0.00
2,000.00	11.51	42.54	1,967.92	243.92	223.86	331.07	0.00	0.00	0.00
2,100.00	11.51	42.54	2,065.91	258.63	237.35	351.03	0.00	0.00	0.00
2,200.00	11.51	42.54	2,163.90	273.33	250.85	370.99	0.00	0.00	0.00
2,300.00	11.51	42.54	2,261.88	288.04	264.34	390.95	0.00	0.00	0.00
2,400.00	11.51	42.54	2,359.87	302.74	277.84	410.91	0.00	0.00	0.00
2,500.00	11.51	42.54	2,457.86	317.45	291.34	430.87	0.00	0.00	0.00
2,543.00	11.51	42.54	2,500.00	323.77	297.14	439.45	0.00	0.00	0.00
9 5/8"									
2,600.00	11.51	42.54	2,555.85	332.15	304.83	450.83	0.00	0.00	0.00
2,700.00	11.51	42.54	2,653.84	346.86	318.33	470.79	0.00	0.00	0.00
2,800.00	11.51	42.54	2,751.82	361.56	331.82	490.75	0.00	0.00	0.00
2,900.00	11.51	42.54	2,849.81	376.27	345.32	510.71	0.00	0.00	0.00
3,000.00	11.51	42.54	2,947.80	390.97	358.81	530.66	0.00	0.00	0.00
3,100.00	11.51	42.54	3,045.79	405.68	372.31	550.62	0.00	0.00	0.00
3,200.00	11.51	42.54	3,143.78	420.38	385.80	570.58	0.00	0.00	0.00
3,300.00	11.51	42.54	3,241.76	435.09	399.30	590.54	0.00	0.00	0.00
3,400.00	11.51	42.54	3,339.75	449.79	412.79	610.50	0.00	0.00	0.00
3,500.00	11.51	42.54	3,437.74	464.50	426.29	630.46	0.00	0.00	0.00
3,600.00	11.51	42.54	3,535.73	479.20	439.79	650.42	0.00	0.00	0.00
3,700.00	11.51	42.54	3,633.72	493.91	453.28	670.38	0.00	0.00	0.00
3,800.00	11.51	42.54	3,731.70	508.61	466.78	690.34	0.00	0.00	0.00
3,900.00	11.51	42.54	3,829.69	523.32	480.27	710.30	0.00	0.00	0.00
4,000.00	11.51	42.54	3,927.68	538.02	493.77	730.26	0.00	0.00	0.00
4,100.00	11.51	42.54	4,025.67	552.73	507.26	750.21	0.00	0.00	0.00
4,200.00	11.51	42.54	4,123.66	567.43	520.76	770.17	0.00	0.00	0.00
4,300.00	11.51	42.54	4,221.64	582.14	534.25	790.13	0.00	0.00	0.00
4,400.00	11.51	42.54	4,319.63	596.84	547.75	810.09	0.00	0.00	0.00
4,500.00	11.51	42.54	4,417.62	611.55	561.24	830.05	0.00	0.00	0.00
4,600.00	11.51	42.54	4,515.61	626.25	574.74	850.01	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well TPR 176-25 - Slot A12
Company:	Black Diamond Minerals, LLC	TVD Reference:	GL 9131' & RKB 24' @ 9155.00ft
Project:	Garfield County, CO	MD Reference:	GL 9131' & RKB 24' @ 9155.00ft
Site:	Tepee Park Ranch 25A Pad	North Reference:	True
Well:	TPR 176-25	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,700.00	11.51	42.54	4,613.60	640.96	588.24	869.97	0.00	0.00	0.00
4,800.00	11.51	42.54	4,711.58	655.66	601.73	889.93	0.00	0.00	0.00
4,900.00	11.51	42.54	4,809.57	670.37	615.23	909.89	0.00	0.00	0.00
5,000.00	11.51	42.54	4,907.56	685.07	628.72	929.85	0.00	0.00	0.00
5,100.00	11.51	42.54	5,005.55	699.78	642.22	949.81	0.00	0.00	0.00
5,200.00	11.51	42.54	5,103.54	714.48	655.71	969.76	0.00	0.00	0.00
5,300.00	11.51	42.54	5,201.52	729.19	669.21	989.72	0.00	0.00	0.00
5,400.00	11.51	42.54	5,299.51	743.89	682.70	1,009.68	0.00	0.00	0.00
5,500.00	11.51	42.54	5,397.50	758.60	696.20	1,029.64	0.00	0.00	0.00
5,600.00	11.51	42.54	5,495.49	773.30	709.69	1,049.60	0.00	0.00	0.00
5,700.00	11.51	42.54	5,593.47	788.01	723.19	1,069.56	0.00	0.00	0.00
5,800.00	11.51	42.54	5,691.46	802.71	736.69	1,089.52	0.00	0.00	0.00
5,900.00	11.51	42.54	5,789.45	817.42	750.18	1,109.48	0.00	0.00	0.00
6,000.00	11.51	42.54	5,887.44	832.12	763.68	1,129.44	0.00	0.00	0.00
6,100.00	11.51	42.54	5,985.43	846.83	777.17	1,149.40	0.00	0.00	0.00
6,200.00	11.51	42.54	6,083.41	861.53	790.67	1,169.36	0.00	0.00	0.00
6,300.00	11.51	42.54	6,181.40	876.24	804.16	1,189.31	0.00	0.00	0.00
6,400.00	11.51	42.54	6,279.39	890.94	817.66	1,209.27	0.00	0.00	0.00
6,500.00	11.51	42.54	6,377.38	905.65	831.15	1,229.23	0.00	0.00	0.00
6,600.00	11.51	42.54	6,475.37	920.35	844.65	1,249.19	0.00	0.00	0.00
6,700.00	11.51	42.54	6,573.35	935.06	858.14	1,269.15	0.00	0.00	0.00
6,800.00	11.51	42.54	6,671.34	949.76	871.64	1,289.11	0.00	0.00	0.00
6,867.64	11.51	42.54	6,737.62	959.71	880.77	1,302.61	0.00	0.00	0.00
Start Drop -1.50									
6,900.00	11.03	42.54	6,769.36	964.37	885.04	1,308.93	1.50	-1.50	0.00
7,000.00	9.53	42.54	6,867.75	977.51	897.11	1,326.78	1.50	-1.50	0.00
7,100.00	8.03	42.54	6,966.58	988.76	907.43	1,342.04	1.50	-1.50	0.00
7,200.00	6.53	42.54	7,065.77	998.09	915.99	1,354.70	1.50	-1.50	0.00
7,300.00	5.03	42.54	7,165.26	1,005.50	922.80	1,364.77	1.50	-1.50	0.00
7,400.00	3.53	42.54	7,264.98	1,011.00	927.84	1,372.23	1.50	-1.50	0.00
7,500.00	2.03	42.54	7,364.85	1,014.57	931.12	1,377.07	1.50	-1.50	0.00
7,600.00	0.53	42.54	7,464.83	1,016.21	932.62	1,379.30	1.50	-1.50	0.00
7,635.17	0.00	0.00	7,500.00	1,016.33	932.73	1,379.46	1.50	-1.50	0.00
Start 200.00 hold at 7635.17 MD									
7,700.00	0.00	0.00	7,564.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
7,800.00	0.00	0.00	7,664.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
7,835.17	0.00	0.00	7,700.00	1,016.33	932.73	1,379.46	0.00	0.00	0.00
Start 8300.00 hold at 7835.17 MD - TPR 176-25 Target									
7,900.00	0.00	0.00	7,764.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
8,000.00	0.00	0.00	7,864.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
8,100.00	0.00	0.00	7,964.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
8,200.00	0.00	0.00	8,064.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
8,300.00	0.00	0.00	8,164.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
8,400.00	0.00	0.00	8,264.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
8,500.00	0.00	0.00	8,364.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
8,600.00	0.00	0.00	8,464.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
8,700.00	0.00	0.00	8,564.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
8,800.00	0.00	0.00	8,664.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
8,900.00	0.00	0.00	8,764.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
9,000.00	0.00	0.00	8,864.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
9,100.00	0.00	0.00	8,964.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
9,200.00	0.00	0.00	9,064.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
9,300.00	0.00	0.00	9,164.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00

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Project:	Garfield County, CO	MD Reference:	GL 9131' & RKB 24' @ 9155.00ft
Site:	Tepee Park Ranch 25A Pad	North Reference:	True
Well:	TPR 176-25	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,400.00	0.00	0.00	9,264.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
9,500.00	0.00	0.00	9,364.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
9,600.00	0.00	0.00	9,464.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
9,700.00	0.00	0.00	9,564.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
9,800.00	0.00	0.00	9,664.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
9,900.00	0.00	0.00	9,764.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
10,000.00	0.00	0.00	9,864.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
10,100.00	0.00	0.00	9,964.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
10,200.00	0.00	0.00	10,064.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
10,300.00	0.00	0.00	10,164.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
10,400.00	0.00	0.00	10,264.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
10,500.00	0.00	0.00	10,364.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
10,600.00	0.00	0.00	10,464.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
10,700.00	0.00	0.00	10,564.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
10,800.00	0.00	0.00	10,664.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
10,900.00	0.00	0.00	10,764.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
11,000.00	0.00	0.00	10,864.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
11,100.00	0.00	0.00	10,964.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
11,135.17	0.00	0.00	11,000.00	1,016.33	932.73	1,379.46	0.00	0.00	0.00
7"									
11,200.00	0.00	0.00	11,064.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
11,300.00	0.00	0.00	11,164.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
11,400.00	0.00	0.00	11,264.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
11,500.00	0.00	0.00	11,364.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
11,600.00	0.00	0.00	11,464.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
11,700.00	0.00	0.00	11,564.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
11,800.00	0.00	0.00	11,664.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
11,900.00	0.00	0.00	11,764.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
12,000.00	0.00	0.00	11,864.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
12,100.00	0.00	0.00	11,964.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
12,200.00	0.00	0.00	12,064.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
12,300.00	0.00	0.00	12,164.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
12,400.00	0.00	0.00	12,264.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
12,500.00	0.00	0.00	12,364.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
12,600.00	0.00	0.00	12,464.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
12,700.00	0.00	0.00	12,564.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
12,800.00	0.00	0.00	12,664.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
12,900.00	0.00	0.00	12,764.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
13,000.00	0.00	0.00	12,864.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
13,100.00	0.00	0.00	12,964.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
13,200.00	0.00	0.00	13,064.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
13,300.00	0.00	0.00	13,164.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
13,400.00	0.00	0.00	13,264.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
13,500.00	0.00	0.00	13,364.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
13,600.00	0.00	0.00	13,464.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
13,700.00	0.00	0.00	13,564.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
13,800.00	0.00	0.00	13,664.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
13,900.00	0.00	0.00	13,764.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
14,000.00	0.00	0.00	13,864.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
14,100.00	0.00	0.00	13,964.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
14,200.00	0.00	0.00	14,064.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
14,300.00	0.00	0.00	14,164.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
14,400.00	0.00	0.00	14,264.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
14,500.00	0.00	0.00	14,364.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00

Database:	Grand Junction District	Local Co-ordinate Reference:	Well TPR 176-25 - Slot A12
Company:	Black Diamond Minerals, LLC	TVD Reference:	GL 9131' & RKB 24' @ 9155.00ft
Project:	Garfield County, CO	MD Reference:	GL 9131' & RKB 24' @ 9155.00ft
Site:	Tepee Park Ranch 25A Pad	North Reference:	True
Well:	TPR 176-25	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
14,600.00	0.00	0.00	14,464.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
14,700.00	0.00	0.00	14,564.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
14,800.00	0.00	0.00	14,664.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
14,900.00	0.00	0.00	14,764.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
15,000.00	0.00	0.00	14,864.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
15,100.00	0.00	0.00	14,964.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
15,200.00	0.00	0.00	15,064.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
15,300.00	0.00	0.00	15,164.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
15,400.00	0.00	0.00	15,264.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
15,500.00	0.00	0.00	15,364.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
15,600.00	0.00	0.00	15,464.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
15,700.00	0.00	0.00	15,564.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
15,800.00	0.00	0.00	15,664.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
15,900.00	0.00	0.00	15,764.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
16,000.00	0.00	0.00	15,864.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
16,100.00	0.00	0.00	15,964.83	1,016.33	932.73	1,379.46	0.00	0.00	0.00
16,135.17	0.00	0.00	16,000.00	1,016.33	932.73	1,379.46	0.00	0.00	0.00
39° 24' 26.466 N, 107° 49' 46.128 W									

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
TPR 176-25 Target - plan hits target center - Circle (radius 100.00)	0.00	0.00	7,700.00	1,016.33	932.73	1,581,696.44	2,341,863.81	39° 24' 26.466 N	107° 49' 46.128 W

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,543.00	2,500.00	9 5/8"	9.625	12.250
11,135.17	11,000.00	7"	7.000	7.500
16,135.17	16,000.00	4 1/2"	4.500	6.750

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
150.00	150.00	0.00	0.00	Start Build 3.00
533.77	531.19	28.31	25.98	Start 6333.87 hold at 533.77 MD
6,867.64	6,737.62	959.71	880.77	Start Drop -1.50
7,635.17	7,500.00	1,016.33	932.73	Start 200.00 hold at 7635.17 MD
7,835.17	7,700.00	1,016.33	932.73	Start 8300.00 hold at 7835.17 MD
16,135.17	16,000.00	1,016.33	932.73	39° 24' 26.466 N, 107° 49' 46.128 W
16,135.17	16,000.00	1,016.33	932.73	TD at 16135.17