

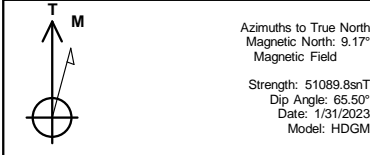


REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well WGV 511-27-697 - Slot WGV 511-27-697, True North  
 Vertical (TVD) Reference: RKB @ 30' @ 8412.0ft  
 Section (VS) Reference: Slot - WGV 511-27-697(0.0N, 0.0E)  
 Measured Depth Reference: RKB @ 30' @ 8412.0ft  
 Calculation Method: Minimum Curvature

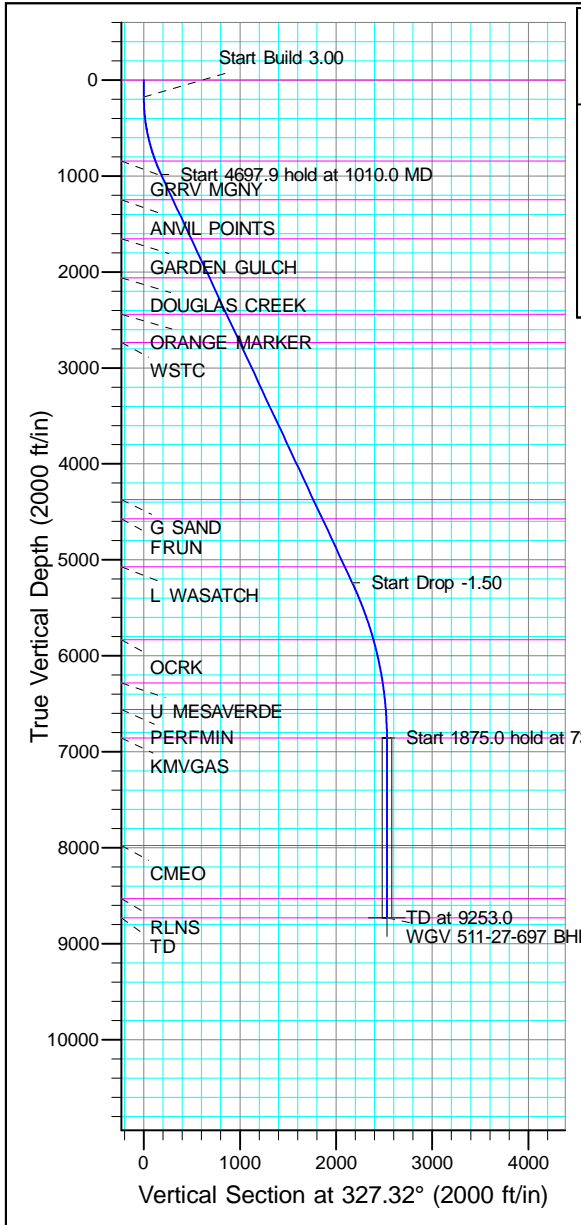


Project: Garfield County, CO (Nad 83)  
 Site: Acro Deep 1-27  
 Well: WGV 511-27-697  
 Wellbore: OWB  
 Design: Plan



WELL DETAILS: WGV 511-27-697

+N/-S	+E/-W	Northing	Ground Level:	8382.0	Easting	Latitude	Longitude
0/0	0.0	1615668.600			2235944.800	39.492525	-108.207758 WGV 511-27-697



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
175.0	0.00	0.00	175.0	0.0	0.0	0.00	0.00	0.0	
1010.0	25.05	327.32	983.7	151.2	-97.0	3.00	327.32	179.7	Start Build 3.00
5707.9	25.05	327.32	5239.6	1825.6	-1170.9	0.00	0.00	2168.9	Start 4697.9 hold at 1010.0 MD
7378.0	0.00	0.00	6857.0	2128.1	-1364.9	1.50	180.00	2528.2	Start Drop -1.50
9253.0	0.00	0.00	8732.0	2128.1	-1364.9	0.00	0.00	2528.2	Start 1875.0 hold at 7378.0 MD TD at 9253.0

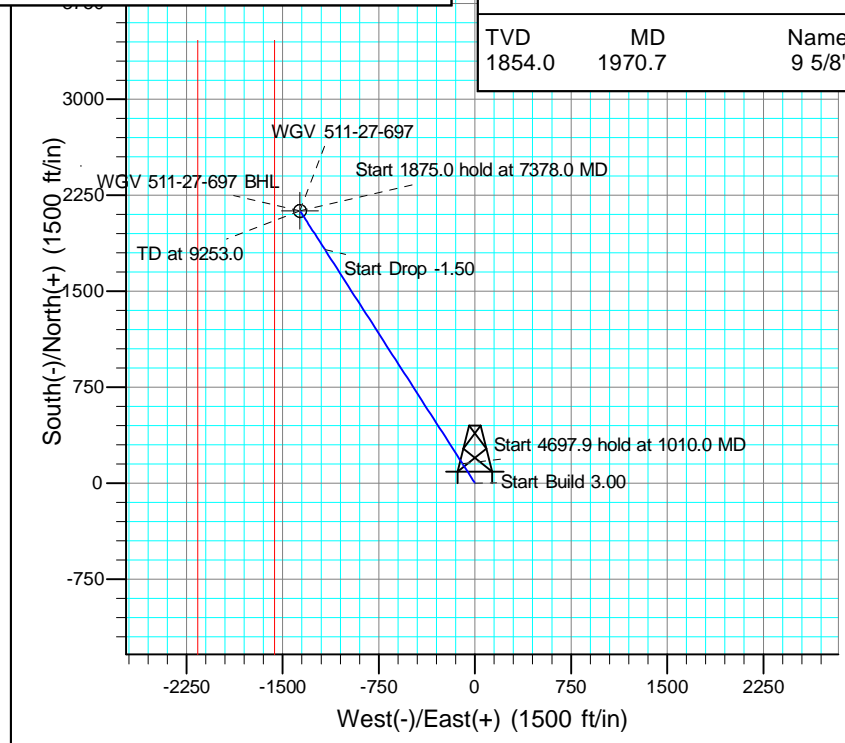
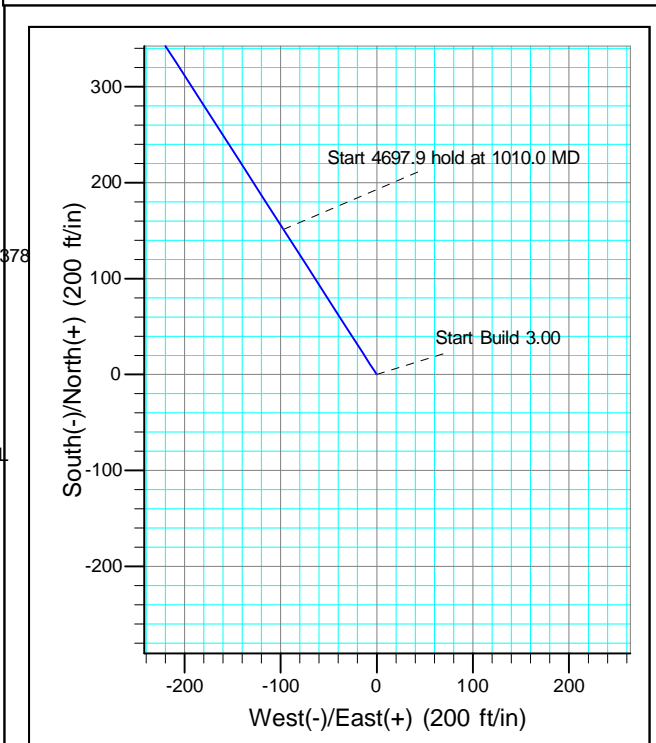
FORMATION TOP DETAILS

VDPPath	MDPath	Formation
0.0	0.0	GRRV
841.0	855.3	GRRV MGNV
1248.0	1301.8	ANVIL POINTS
1654.0	1750.0	GARDEN GULCH
2059.0	2197.0	DOUGLAS CREEK
2442.0	2619.8	ORANGE MARKER
2734.0	2942.1	WSTC
4372.0	4750.2	G SAND
4572.0	4971.0	FRUN
5072.0	5522.9	L WASATCH
5832.0	6340.3	OCRK
6282.0	6800.8	U MESAVERDE
6557.0	7077.7	PERFMIN
6857.0	7378.0	KMV GAS
7977.0	8498.0	CMEC
8532.0	9053.0	RLNS
8732.0	9253.0	TD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BHL	8732.0	2128.1	-1364.9	1617836.400	2234643.900	39.498367	-108.212595	Circle (Radius: 50.0)

- plan hits target center



CASING DETAILS

TVD	MD	Name
1854.0	1970.7	9 5/8"



# **Terra Energy Partners, LLP**

**Garfield County, CO (Nad 83)**

**Acro Deep 1-27**

**WGV 511-27-697 - Slot WGV 511-27-697**

**OWB**

**Plan: Plan**

## **Standard Planning Report**

**07 March, 2023**



<b>Database:</b>	NN	<b>Local Co-ordinate Reference:</b>	Well WGV 511-27-697 - Slot WGV 511-27-697
<b>Company:</b>	Terra Energy Partners, LLP	<b>TVD Reference:</b>	RKB @ 30' @ 8412.0ft
<b>Project:</b>	Garfield County, CO (Nad 83)	<b>MD Reference:</b>	RKB @ 30' @ 8412.0ft
<b>Site:</b>	Acro Deep 1-27	<b>North Reference:</b>	True
<b>Well:</b>	WGV 511-27-697	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	Plan		

<b>Project</b>	Garfield County, CO (Nad 83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		

<b>Site</b>	Acro Deep 1-27				
<b>Site Position:</b>		<b>Northing:</b>	1,615,634.200 usft	<b>Latitude:</b>	39.492428
<b>From:</b>	Map	<b>Easting:</b>	2,235,915.800 usft	<b>Longitude:</b>	-108.207857
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-1.71 °

<b>Well</b>	WGV 511-27-697 - Slot WGV 511-27-697					
<b>Well Position</b>	<b>+N/-S</b>	35.2 ft	<b>Northing:</b>	1,615,668.600 usft	<b>Latitude:</b>	39.492525
	<b>+E/-W</b>	28.0 ft	<b>Easting:</b>	2,235,944.800 usft	<b>Longitude:</b>	-108.207758
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>	8,412.0 ft	<b>Ground Level:</b>	8,382.0 ft

<b>Wellbore</b>	OWB				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	1/31/2023	9.17	65.50	51,090

<b>Design</b>	Plan			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<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	327.32

<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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
175.0	0.00	0.00	175.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,010.0	25.05	327.32	983.7	151.2	-97.0	3.00	3.00	0.00	327.32	
5,707.9	25.05	327.32	5,239.6	1,825.6	-1,170.9	0.00	0.00	0.00	0.00	
7,378.0	0.00	0.00	6,857.0	2,128.1	-1,364.9	1.50	-1.50	0.00	180.00	
9,253.0	0.00	0.00	8,732.0	2,128.1	-1,364.9	0.00	0.00	0.00	0.00	WGV 511-27-697 BHI

<b>Database:</b>	NN	<b>Local Co-ordinate Reference:</b>	Well WGV 511-27-697 - Slot WGV 511-27-697
<b>Company:</b>	Terra Energy Partners, LLP	<b>TVD Reference:</b>	RKB @ 30' @ 8412.0ft
<b>Project:</b>	Garfield County, CO (Nad 83)	<b>MD Reference:</b>	RKB @ 30' @ 8412.0ft
<b>Site:</b>	Acro Deep 1-27	<b>North Reference:</b>	True
<b>Well:</b>	WGV 511-27-697	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	Plan		

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	
175.0	0.00	0.00	175.0	0.0	0.0	0.0	0.00	0.00	0.00	
<b>Start Build 3.00</b>										
200.0	0.75	327.32	200.0	0.1	-0.1	0.2	3.00	3.00	0.00	
300.0	3.75	327.32	299.9	3.4	-2.2	4.1	3.00	3.00	0.00	
400.0	6.75	327.32	399.5	11.1	-7.1	13.2	3.00	3.00	0.00	
500.0	9.75	327.32	498.4	23.2	-14.9	27.6	3.00	3.00	0.00	
600.0	12.75	327.32	596.5	39.6	-25.4	47.1	3.00	3.00	0.00	
700.0	15.75	327.32	693.4	60.4	-38.7	71.7	3.00	3.00	0.00	
800.0	18.75	327.32	788.9	85.3	-54.7	101.4	3.00	3.00	0.00	
900.0	21.75	327.32	882.7	114.4	-73.4	136.0	3.00	3.00	0.00	
1,000.0	24.75	327.32	974.6	147.7	-94.7	175.4	3.00	3.00	0.00	
1,010.0	25.05	327.32	983.7	151.2	-97.0	179.7	3.00	3.00	0.00	
<b>Start 4697.9 hold at 1010.0 MD</b>										
1,100.0	25.05	327.32	1,065.2	183.3	-117.6	217.8	0.00	0.00	0.00	
1,200.0	25.05	327.32	1,155.8	218.9	-140.4	260.1	0.00	0.00	0.00	
1,300.0	25.05	327.32	1,246.4	254.6	-163.3	302.4	0.00	0.00	0.00	
1,400.0	25.05	327.32	1,337.0	290.2	-186.1	344.8	0.00	0.00	0.00	
1,500.0	25.05	327.32	1,427.6	325.9	-209.0	387.1	0.00	0.00	0.00	
1,600.0	25.05	327.32	1,518.2	361.5	-231.9	429.5	0.00	0.00	0.00	
1,700.0	25.05	327.32	1,608.7	397.1	-254.7	471.8	0.00	0.00	0.00	
1,800.0	25.05	327.32	1,699.3	432.8	-277.6	514.2	0.00	0.00	0.00	
1,900.0	25.05	327.32	1,789.9	468.4	-300.4	556.5	0.00	0.00	0.00	
2,000.0	25.05	327.32	1,880.5	504.1	-323.3	598.8	0.00	0.00	0.00	
2,100.0	25.05	327.32	1,971.1	539.7	-346.2	641.2	0.00	0.00	0.00	
2,200.0	25.05	327.32	2,061.7	575.3	-369.0	683.5	0.00	0.00	0.00	
2,300.0	25.05	327.32	2,152.3	611.0	-391.9	725.9	0.00	0.00	0.00	
2,400.0	25.05	327.32	2,242.9	646.6	-414.7	768.2	0.00	0.00	0.00	
2,500.0	25.05	327.32	2,333.5	682.3	-437.6	810.6	0.00	0.00	0.00	
2,600.0	25.05	327.32	2,424.1	717.9	-460.5	852.9	0.00	0.00	0.00	
2,700.0	25.05	327.32	2,514.7	753.6	-483.3	895.2	0.00	0.00	0.00	
2,800.0	25.05	327.32	2,605.3	789.2	-506.2	937.6	0.00	0.00	0.00	
2,900.0	25.05	327.32	2,695.9	824.8	-529.0	979.9	0.00	0.00	0.00	
3,000.0	25.05	327.32	2,786.5	860.5	-551.9	1,022.3	0.00	0.00	0.00	
3,100.0	25.05	327.32	2,877.0	896.1	-574.8	1,064.6	0.00	0.00	0.00	
3,200.0	25.05	327.32	2,967.6	931.8	-597.6	1,106.9	0.00	0.00	0.00	
3,300.0	25.05	327.32	3,058.2	967.4	-620.5	1,149.3	0.00	0.00	0.00	
3,400.0	25.05	327.32	3,148.8	1,003.0	-643.3	1,191.6	0.00	0.00	0.00	
3,500.0	25.05	327.32	3,239.4	1,038.7	-666.2	1,234.0	0.00	0.00	0.00	
3,600.0	25.05	327.32	3,330.0	1,074.3	-689.1	1,276.3	0.00	0.00	0.00	
3,700.0	25.05	327.32	3,420.6	1,110.0	-711.9	1,318.7	0.00	0.00	0.00	
3,800.0	25.05	327.32	3,511.2	1,145.6	-734.8	1,361.0	0.00	0.00	0.00	
3,900.0	25.05	327.32	3,601.8	1,181.3	-757.6	1,403.3	0.00	0.00	0.00	
4,000.0	25.05	327.32	3,692.4	1,216.9	-780.5	1,445.7	0.00	0.00	0.00	
4,100.0	25.05	327.32	3,783.0	1,252.5	-803.4	1,488.0	0.00	0.00	0.00	
4,200.0	25.05	327.32	3,873.6	1,288.2	-826.2	1,530.4	0.00	0.00	0.00	
4,300.0	25.05	327.32	3,964.2	1,323.8	-849.1	1,572.7	0.00	0.00	0.00	
4,400.0	25.05	327.32	4,054.8	1,359.5	-871.9	1,615.1	0.00	0.00	0.00	
4,500.0	25.05	327.32	4,145.3	1,395.1	-894.8	1,657.4	0.00	0.00	0.00	
4,600.0	25.05	327.32	4,235.9	1,430.7	-917.7	1,699.7	0.00	0.00	0.00	
4,700.0	25.05	327.32	4,326.5	1,466.4	-940.5	1,742.1	0.00	0.00	0.00	
4,800.0	25.05	327.32	4,417.1	1,502.0	-963.4	1,784.4	0.00	0.00	0.00	

<b>Database:</b>	NN	<b>Local Co-ordinate Reference:</b>	Well WGV 511-27-697 - Slot WGV 511-27-697
<b>Company:</b>	Terra Energy Partners, LLP	<b>TVD Reference:</b>	RKB @ 30' @ 8412.0ft
<b>Project:</b>	Garfield County, CO (Nad 83)	<b>MD Reference:</b>	RKB @ 30' @ 8412.0ft
<b>Site:</b>	Acro Deep 1-27	<b>North Reference:</b>	True
<b>Well:</b>	WGV 511-27-697	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	Plan		

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)	
4,900.0	25.05	327.32	4,507.7	1,537.7	-986.2	1,826.8	0.00	0.00	0.00	
5,000.0	25.05	327.32	4,598.3	1,573.3	-1,009.1	1,869.1	0.00	0.00	0.00	
5,100.0	25.05	327.32	4,688.9	1,609.0	-1,032.0	1,911.5	0.00	0.00	0.00	
5,200.0	25.05	327.32	4,779.5	1,644.6	-1,054.8	1,953.8	0.00	0.00	0.00	
5,300.0	25.05	327.32	4,870.1	1,680.2	-1,077.7	1,996.1	0.00	0.00	0.00	
5,400.0	25.05	327.32	4,960.7	1,715.9	-1,100.5	2,038.5	0.00	0.00	0.00	
5,500.0	25.05	327.32	5,051.3	1,751.5	-1,123.4	2,080.8	0.00	0.00	0.00	
5,600.0	25.05	327.32	5,141.9	1,787.2	-1,146.3	2,123.2	0.00	0.00	0.00	
5,700.0	25.05	327.32	5,232.5	1,822.8	-1,169.1	2,165.5	0.00	0.00	0.00	
5,707.9	25.05	327.32	5,239.6	1,825.6	-1,170.9	2,168.9	0.00	0.00	0.00	
<b>Start Drop -1.50</b>										
5,800.0	23.67	327.32	5,323.5	1,857.6	-1,191.4	2,206.9	1.50	-1.50	0.00	
5,900.0	22.17	327.32	5,415.6	1,890.4	-1,212.5	2,245.8	1.50	-1.50	0.00	
6,000.0	20.67	327.32	5,508.7	1,921.1	-1,232.2	2,282.3	1.50	-1.50	0.00	
6,100.0	19.17	327.32	5,602.7	1,949.8	-1,250.6	2,316.4	1.50	-1.50	0.00	
6,200.0	17.67	327.32	5,697.6	1,976.4	-1,267.6	2,348.0	1.50	-1.50	0.00	
6,300.0	16.17	327.32	5,793.3	2,000.9	-1,283.3	2,377.1	1.50	-1.50	0.00	
6,400.0	14.67	327.32	5,889.7	2,023.3	-1,297.7	2,403.7	1.50	-1.50	0.00	
6,500.0	13.17	327.32	5,986.7	2,043.5	-1,310.7	2,427.7	1.50	-1.50	0.00	
6,600.0	11.67	327.32	6,084.4	2,061.6	-1,322.3	2,449.2	1.50	-1.50	0.00	
6,700.0	10.17	327.32	6,182.6	2,077.6	-1,332.5	2,468.2	1.50	-1.50	0.00	
6,800.0	8.67	327.32	6,281.2	2,091.3	-1,341.4	2,484.5	1.50	-1.50	0.00	
6,900.0	7.17	327.32	6,380.3	2,102.9	-1,348.8	2,498.3	1.50	-1.50	0.00	
7,000.0	5.67	327.32	6,479.6	2,112.3	-1,354.8	2,509.5	1.50	-1.50	0.00	
7,100.0	4.17	327.32	6,579.3	2,119.6	-1,359.5	2,518.1	1.50	-1.50	0.00	
7,200.0	2.67	327.32	6,679.1	2,124.6	-1,362.7	2,524.0	1.50	-1.50	0.00	
7,300.0	1.17	327.32	6,779.0	2,127.4	-1,364.5	2,527.4	1.50	-1.50	0.00	
7,378.0	0.00	0.00	6,857.0	2,128.1	-1,364.9	2,528.2	1.50	-1.50	0.00	
<b>Start 1875.0 hold at 7378.0 MD</b>										
7,400.0	0.00	0.00	6,879.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
7,500.0	0.00	0.00	6,979.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
7,600.0	0.00	0.00	7,079.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,179.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,279.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,379.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
8,000.0	0.00	0.00	7,479.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
8,100.0	0.00	0.00	7,579.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
8,200.0	0.00	0.00	7,679.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
8,300.0	0.00	0.00	7,779.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
8,400.0	0.00	0.00	7,879.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
8,500.0	0.00	0.00	7,979.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,079.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,179.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,279.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
8,900.0	0.00	0.00	8,379.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
9,000.0	0.00	0.00	8,479.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
9,100.0	0.00	0.00	8,579.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
9,200.0	0.00	0.00	8,679.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
9,253.0	0.00	0.00	8,732.0	2,128.1	-1,364.9	2,528.2	0.00	0.00	0.00	
<b>TD at 9253.0</b>										

<b>Database:</b>	NN	<b>Local Co-ordinate Reference:</b>	Well WGV 511-27-697 - Slot WGV 511-27-697
<b>Company:</b>	Terra Energy Partners, LLP	<b>TVD Reference:</b>	RKB @ 30' @ 8412.0ft
<b>Project:</b>	Garfield County, CO (Nad 83)	<b>MD Reference:</b>	RKB @ 30' @ 8412.0ft
<b>Site:</b>	Acro Deep 1-27	<b>North Reference:</b>	True
<b>Well:</b>	WGV 511-27-697	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OWB		
<b>Design:</b>	Plan		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
WGV 511-27-697 BHL - plan hits target center - Circle (radius 50.0)	0.00	0.00	8,732.0	2,128.1	-1,364.9	1,617,836.400	2,234,643.900	39.498367	-108.212595

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,970.7	1,854.0	9 5/8"	9-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
0.0	0.0	GRRV		0.00		
855.3	841.0	GRRV MGNV		0.00		
1,301.8	1,248.0	ANVIL POINTS		0.00		
1,750.0	1,654.0	GARDEN GULCH		0.00		
2,197.0	2,059.0	DOUGLAS CREEK		0.00		
2,619.8	2,442.0	ORANGE MARKER		0.00		
2,942.1	2,734.0	WSTC		0.00		
4,750.2	4,372.0	G SAND		0.00		
4,971.0	4,572.0	FRUN		0.00		
5,522.9	5,072.0	L WASATCH		0.00		
6,340.3	5,832.0	OCRK		0.00		
6,800.8	6,282.0	U MESAVERDE		0.00		
7,077.7	6,557.0	PERFMIN		0.00		
7,378.0	6,857.0	KMVGAS		0.00		
8,498.0	7,977.0	CMEO		0.00		
9,053.0	8,532.0	RLNS		0.00		
9,253.0	8,732.0	TD		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
175.0	175.0	0.0	0.0	Start Build 3.00	
1,010.0	983.7	151.2	-97.0	Start 4697.9 hold at 1010.0 MD	
5,707.9	5,239.6	1,825.6	-1,170.9	Start Drop -1.50	
7,378.0	6,857.0	2,128.1	-1,364.9	Start 1875.0 hold at 7378.0 MD	
9,253.0	8,732.0	2,128.1	-1,364.9	TD at 9253.0	