

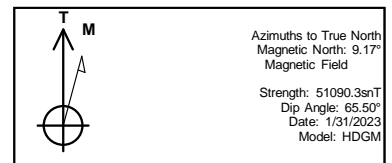


REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well WGV 413-27-697 - Slot WGV 413-27-697, True North  
 Vertical (TVD) Reference: RKB @ 30' @ 8412.0ft  
 Section (VS) Reference: Slot - WGV 413-27-697(0.0N, 0.0E)  
 Measured Depth Reference: RKB @ 30' @ 8412.0ft  
 Calculation Method: Minimum Curvature

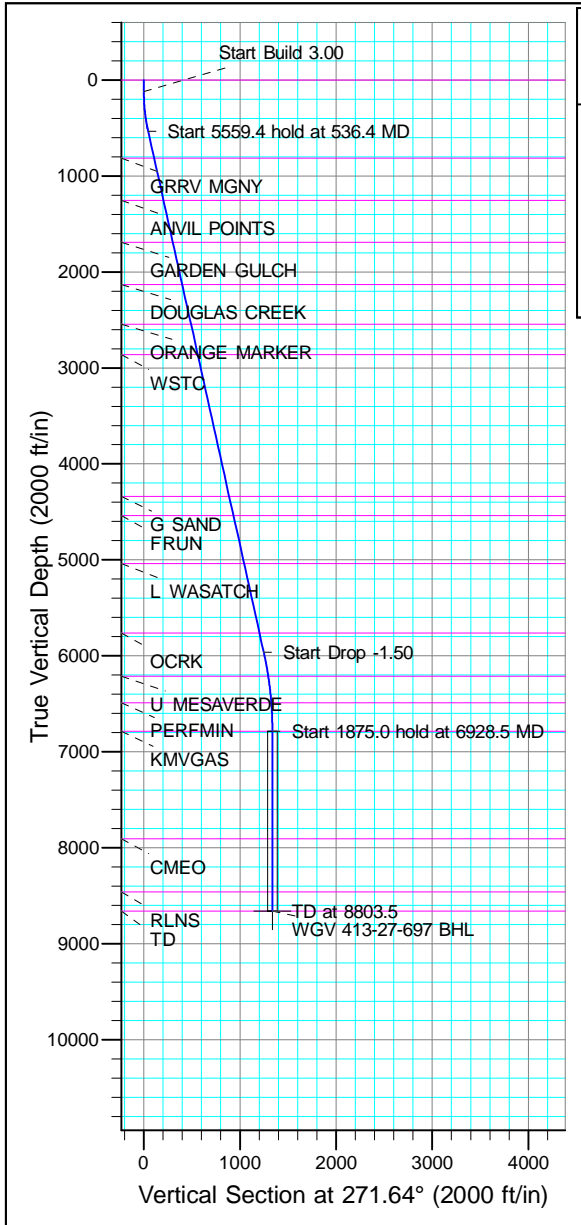


Project: Garfield County, CO (Nad 83)  
 Site: Acro Deep 1-27  
 Well: WGV 413-27-697  
 Wellbore: OWB  
 Design: Plan



WELL DETAILS: WGV 413-27-697

+N/-S	+E/-W	Northing	Ground Level:	8382.0	Longitude	SL
0/0	0.0	1615652.100	Easting	2235917.800	39.492477	-108.207852 WGV 413-27-697
			Latitude			



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	
120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.00	0.0	
536.4	12.49	271.64	533.1	1.3	-45.2	3.00	271.64	45.2	Start Build 3.00
6095.7	12.49	271.64	5960.9	35.8	-1247.1	0.00	0.00	1247.6	Start Drop -1.50
6928.5	0.00	0.00	6787.0	38.4	-1337.4	1.50	180.00	1338.0	Start 1875.0 hold at 6928.5 MD
8803.5	0.00	0.00	8662.0	38.4	-1337.4	0.00	0.00	1338.0	TD at 8803.5

FORMATION TOP DETAILS

VDPPath	MDPath	Formation
0.0	0.0	GRRV
814.0	824.1	GRRV MGNY
1253.0	1273.7	ANVIL POINTS
1692.0	1723.4	GARDEN GULCH
2131.0	2173.0	DOUGLAS CREEK
2545.0	2597.1	ORANGE MARKER
2862.0	2921.7	WSTC
4337.0	4432.5	G SAND
4537.0	4637.4	FRUN
5037.0	5149.5	L WASATCH
5762.0	5892.1	OCRK
6212.0	6351.3	U MESAVERDE
6487.0	6628.1	PERFMIN
6787.0	6928.5	KMV GAS
7907.0	8048.5	CMEC
8462.0	8603.5	RLNS
8662.0	8803.5	TD

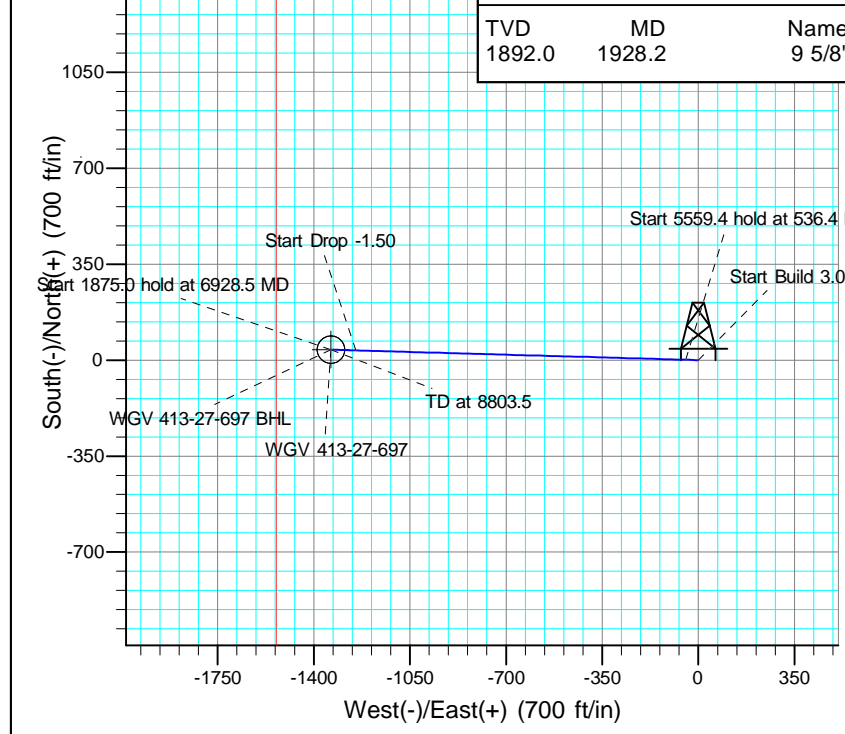
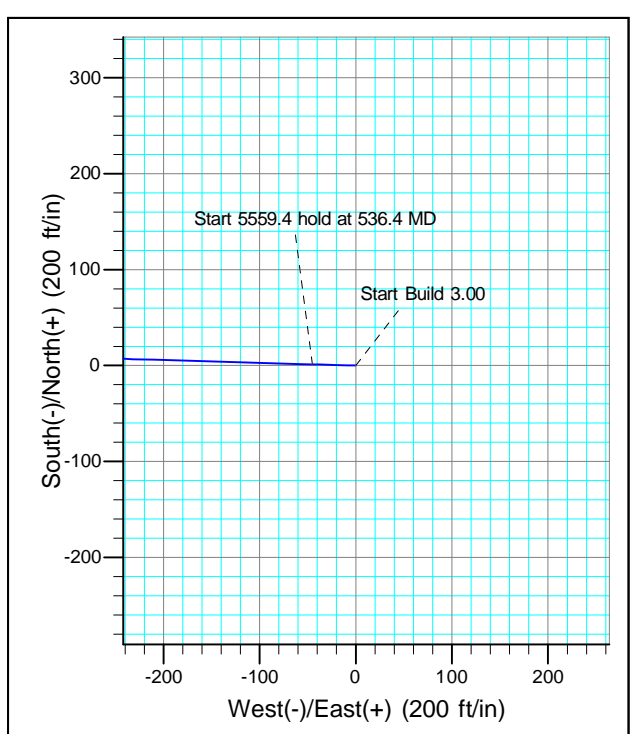
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BHL	8662.0	38.4	-1337.4	1615730.300	2234582.100	39.492583	-108.212591	Circle (Radius: 50.0)

- plan hits target center

CASING DETAILS

TVD	MD	Name
1892.0	1928.2	9 5/8"





# **Terra Energy Partners, LLP**

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

**Acro Deep 1-27**

**WGV 413-27-697 - Slot WGV 413-27-697**

**OWB**

**Plan: Plan**

## **Standard Planning Report**

**07 March, 2023**



<b>Database:</b>	NN	<b>Local Co-ordinate Reference:</b>	Well WGV 413-27-697 - Slot WGV 413-27-697
<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 413-27-697	<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 413-27-697 - Slot WGV 413-27-697					
<b>Well Position</b>	<b>+N/-S</b>	18.0 ft	<b>Northing:</b>	1,615,652.100 usft	<b>Latitude:</b>	39.492477
	<b>+E/-W</b>	1.5 ft	<b>Easting:</b>	2,235,917.800 usft	<b>Longitude:</b>	-108.207852
<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	271.64

<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	
120.0	0.00	0.00	120.0	0.0	0.0	0.00	0.00	0.00	0.00	
536.4	12.49	271.64	533.1	1.3	-45.2	3.00	3.00	0.00	271.64	
6,095.7	12.49	271.64	5,960.9	35.8	-1,247.1	0.00	0.00	0.00	0.00	
6,928.5	0.00	0.00	6,787.0	38.4	-1,337.4	1.50	-1.50	0.00	180.00	
8,803.5	0.00	0.00	8,662.0	38.4	-1,337.4	0.00	0.00	0.00	0.00	WGV 413-27-697 BHI

<b>Database:</b>	NN	<b>Local Co-ordinate Reference:</b>	Well WGV 413-27-697 - Slot WGV 413-27-697
<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 413-27-697	<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	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
<b>Start Build 3.00</b>										
200.0	2.40	271.64	200.0	0.0	-1.7	1.7	3.00	3.00	0.00	0.00
300.0	5.40	271.64	299.7	0.2	-8.5	8.5	3.00	3.00	0.00	0.00
400.0	8.40	271.64	399.0	0.6	-20.5	20.5	3.00	3.00	0.00	0.00
500.0	11.40	271.64	497.5	1.1	-37.7	37.7	3.00	3.00	0.00	0.00
536.4	12.49	271.64	533.1	1.3	-45.2	45.2	3.00	3.00	0.00	0.00
<b>Start 5559.4 hold at 536.4 MD</b>										
600.0	12.49	271.64	595.2	1.7	-58.9	59.0	0.00	0.00	0.00	0.00
700.0	12.49	271.64	692.8	2.3	-80.6	80.6	0.00	0.00	0.00	0.00
800.0	12.49	271.64	790.5	2.9	-102.2	102.2	0.00	0.00	0.00	0.00
900.0	12.49	271.64	888.1	3.6	-123.8	123.9	0.00	0.00	0.00	0.00
1,000.0	12.49	271.64	985.7	4.2	-145.4	145.5	0.00	0.00	0.00	0.00
1,100.0	12.49	271.64	1,083.4	4.8	-167.0	167.1	0.00	0.00	0.00	0.00
1,200.0	12.49	271.64	1,181.0	5.4	-188.7	188.7	0.00	0.00	0.00	0.00
1,300.0	12.49	271.64	1,278.6	6.0	-210.3	210.4	0.00	0.00	0.00	0.00
1,400.0	12.49	271.64	1,376.3	6.7	-231.9	232.0	0.00	0.00	0.00	0.00
1,500.0	12.49	271.64	1,473.9	7.3	-253.5	253.6	0.00	0.00	0.00	0.00
1,600.0	12.49	271.64	1,571.5	7.9	-275.1	275.2	0.00	0.00	0.00	0.00
1,700.0	12.49	271.64	1,669.2	8.5	-296.8	296.9	0.00	0.00	0.00	0.00
1,800.0	12.49	271.64	1,766.8	9.1	-318.4	318.5	0.00	0.00	0.00	0.00
1,900.0	12.49	271.64	1,864.4	9.8	-340.0	340.1	0.00	0.00	0.00	0.00
2,000.0	12.49	271.64	1,962.1	10.4	-361.6	361.8	0.00	0.00	0.00	0.00
2,100.0	12.49	271.64	2,059.7	11.0	-383.2	383.4	0.00	0.00	0.00	0.00
2,200.0	12.49	271.64	2,157.3	11.6	-404.8	405.0	0.00	0.00	0.00	0.00
2,300.0	12.49	271.64	2,255.0	12.2	-426.5	426.6	0.00	0.00	0.00	0.00
2,400.0	12.49	271.64	2,352.6	12.9	-448.1	448.3	0.00	0.00	0.00	0.00
2,500.0	12.49	271.64	2,450.2	13.5	-469.7	469.9	0.00	0.00	0.00	0.00
2,600.0	12.49	271.64	2,547.9	14.1	-491.3	491.5	0.00	0.00	0.00	0.00
2,700.0	12.49	271.64	2,645.5	14.7	-512.9	513.2	0.00	0.00	0.00	0.00
2,800.0	12.49	271.64	2,743.1	15.3	-534.6	534.8	0.00	0.00	0.00	0.00
2,900.0	12.49	271.64	2,840.8	16.0	-556.2	556.4	0.00	0.00	0.00	0.00
3,000.0	12.49	271.64	2,938.4	16.6	-577.8	578.0	0.00	0.00	0.00	0.00
3,100.0	12.49	271.64	3,036.0	17.2	-599.4	599.7	0.00	0.00	0.00	0.00
3,200.0	12.49	271.64	3,133.7	17.8	-621.0	621.3	0.00	0.00	0.00	0.00
3,300.0	12.49	271.64	3,231.3	18.4	-642.7	642.9	0.00	0.00	0.00	0.00
3,400.0	12.49	271.64	3,328.9	19.1	-664.3	664.5	0.00	0.00	0.00	0.00
3,500.0	12.49	271.64	3,426.6	19.7	-685.9	686.2	0.00	0.00	0.00	0.00
3,600.0	12.49	271.64	3,524.2	20.3	-707.5	707.8	0.00	0.00	0.00	0.00
3,700.0	12.49	271.64	3,621.8	20.9	-729.1	729.4	0.00	0.00	0.00	0.00
3,800.0	12.49	271.64	3,719.5	21.5	-750.8	751.1	0.00	0.00	0.00	0.00
3,900.0	12.49	271.64	3,817.1	22.2	-772.4	772.7	0.00	0.00	0.00	0.00
4,000.0	12.49	271.64	3,914.7	22.8	-794.0	794.3	0.00	0.00	0.00	0.00
4,100.0	12.49	271.64	4,012.4	23.4	-815.6	815.9	0.00	0.00	0.00	0.00
4,200.0	12.49	271.64	4,110.0	24.0	-837.2	837.6	0.00	0.00	0.00	0.00
4,300.0	12.49	271.64	4,207.6	24.6	-858.8	859.2	0.00	0.00	0.00	0.00
4,400.0	12.49	271.64	4,305.3	25.3	-880.5	880.8	0.00	0.00	0.00	0.00
4,500.0	12.49	271.64	4,402.9	25.9	-902.1	902.5	0.00	0.00	0.00	0.00
4,600.0	12.49	271.64	4,500.5	26.5	-923.7	924.1	0.00	0.00	0.00	0.00
4,700.0	12.49	271.64	4,598.2	27.1	-945.3	945.7	0.00	0.00	0.00	0.00
4,800.0	12.49	271.64	4,695.8	27.7	-966.9	967.3	0.00	0.00	0.00	0.00

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<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 413-27-697	<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	12.49	271.64	4,793.4	28.4	-988.6	989.0	0.00	0.00	0.00	
5,000.0	12.49	271.64	4,891.1	29.0	-1,010.2	1,010.6	0.00	0.00	0.00	
5,100.0	12.49	271.64	4,988.7	29.6	-1,031.8	1,032.2	0.00	0.00	0.00	
5,200.0	12.49	271.64	5,086.3	30.2	-1,053.4	1,053.9	0.00	0.00	0.00	
5,300.0	12.49	271.64	5,184.0	30.8	-1,075.0	1,075.5	0.00	0.00	0.00	
5,400.0	12.49	271.64	5,281.6	31.5	-1,096.7	1,097.1	0.00	0.00	0.00	
5,500.0	12.49	271.64	5,379.2	32.1	-1,118.3	1,118.7	0.00	0.00	0.00	
5,600.0	12.49	271.64	5,476.9	32.7	-1,139.9	1,140.4	0.00	0.00	0.00	
5,700.0	12.49	271.64	5,574.5	33.3	-1,161.5	1,162.0	0.00	0.00	0.00	
5,800.0	12.49	271.64	5,672.1	33.9	-1,183.1	1,183.6	0.00	0.00	0.00	
5,900.0	12.49	271.64	5,769.8	34.6	-1,204.8	1,205.2	0.00	0.00	0.00	
6,000.0	12.49	271.64	5,867.4	35.2	-1,226.4	1,226.9	0.00	0.00	0.00	
6,095.7	12.49	271.64	5,965.0	35.8	-1,247.1	1,247.6	0.00	0.00	0.00	
<b>Start Drop -1.50</b>										
6,100.0	12.43	271.64	5,965.0	35.8	-1,248.0	1,248.5	1.50	-1.50	0.00	
6,200.0	10.93	271.64	6,063.0	36.4	-1,268.2	1,268.7	1.50	-1.50	0.00	
6,300.0	9.43	271.64	6,161.4	36.9	-1,285.9	1,286.4	1.50	-1.50	0.00	
6,400.0	7.93	271.64	6,260.2	37.3	-1,301.0	1,301.5	1.50	-1.50	0.00	
6,500.0	6.43	271.64	6,359.4	37.7	-1,313.4	1,314.0	1.50	-1.50	0.00	
6,600.0	4.93	271.64	6,459.0	38.0	-1,323.3	1,323.9	1.50	-1.50	0.00	
6,700.0	3.43	271.64	6,558.7	38.2	-1,330.6	1,331.2	1.50	-1.50	0.00	
6,800.0	1.93	271.64	6,658.6	38.3	-1,335.3	1,335.8	1.50	-1.50	0.00	
6,900.0	0.43	271.64	6,758.5	38.4	-1,337.3	1,337.9	1.50	-1.50	0.00	
6,928.5	0.00	0.00	6,787.0	38.4	-1,337.4	1,338.0	1.50	-1.50	0.00	
<b>Start 1875.0 hold at 6928.5 MD</b>										
7,000.0	0.00	0.00	6,858.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
7,100.0	0.00	0.00	6,958.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
7,200.0	0.00	0.00	7,058.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
7,300.0	0.00	0.00	7,158.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
7,400.0	0.00	0.00	7,258.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
7,500.0	0.00	0.00	7,358.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
7,600.0	0.00	0.00	7,458.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,558.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,658.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
7,900.0	0.00	0.00	7,758.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
8,000.0	0.00	0.00	7,858.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
8,100.0	0.00	0.00	7,958.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
8,200.0	0.00	0.00	8,058.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
8,300.0	0.00	0.00	8,158.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
8,400.0	0.00	0.00	8,258.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
8,500.0	0.00	0.00	8,358.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
8,600.0	0.00	0.00	8,458.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
8,700.0	0.00	0.00	8,558.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
8,800.0	0.00	0.00	8,658.5	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
8,803.5	0.00	0.00	8,662.0	38.4	-1,337.4	1,338.0	0.00	0.00	0.00	
<b>TD at 8803.5</b>										

<b>Database:</b>	NN	<b>Local Co-ordinate Reference:</b>	Well WGV 413-27-697 - Slot WGV 413-27-697
<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 413-27-697	<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 413-27-697 BHL - plan hits target center - Circle (radius 50.0)	0.00	0.00	8,662.0	38.4	-1,337.4	1,615,730.300	2,234,582.100	39.492583	-108.212591

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,928.2	1,892.0	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		
824.1	814.0	GRRV MGNV		0.00		
1,273.7	1,253.0	ANVIL POINTS		0.00		
1,723.4	1,692.0	GARDEN GULCH		0.00		
2,173.0	2,131.0	DOUGLAS CREEK		0.00		
2,597.1	2,545.0	ORANGE MARKER		0.00		
2,921.7	2,862.0	WSTC		0.00		
4,432.5	4,337.0	G SAND		0.00		
4,637.4	4,537.0	FRUN		0.00		
5,149.5	5,037.0	L WASATCH		0.00		
5,892.1	5,762.0	OCRK		0.00		
6,351.3	6,212.0	U MESAVERDE		0.00		
6,628.1	6,487.0	PERFMIN		0.00		
6,928.5	6,787.0	KMVGAS		0.00		
8,048.5	7,907.0	CMEO		0.00		
8,603.5	8,462.0	RLNS		0.00		
8,803.5	8,662.0	TD		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
120.0	120.0	0.0	0.0	Start Build 3.00	
536.4	533.1	1.3	-45.2	Start 5559.4 hold at 536.4 MD	
6,095.7	5,960.9	35.8	-1,247.1	Start Drop -1.50	
6,928.5	6,787.0	38.4	-1,337.4	Start 1875.0 hold at 6928.5 MD	
8,803.5	8,662.0	38.4	-1,337.4	TD at 8803.5	