



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well TR 312-28-597 - Slot TR 312-28-597, True North  
Vertical (TVD) Reference: RKB @ 30' @ 8513.0ft  
Section (VS) Reference: Slot - TR 312-28-597(0.0N, 0.0E)  
Measured Depth Reference: RKB @ 30' @ 8513.0ft  
Calculation Method: Minimum Curvature

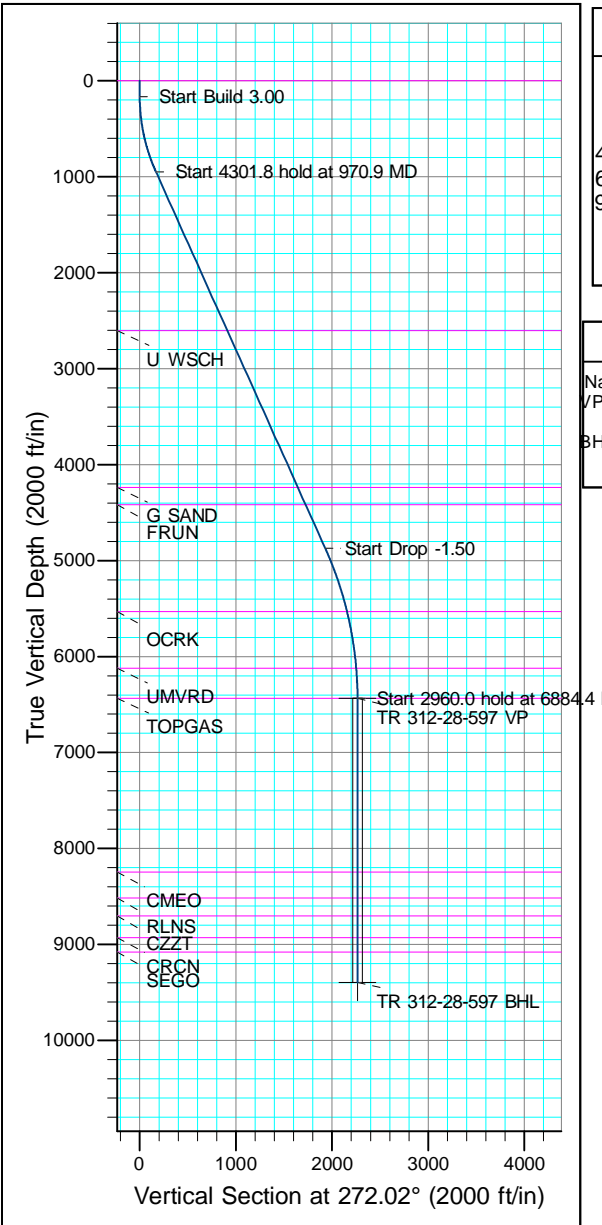


Project: Garfield County, CO (Nad 83)  
Site: TR 32-28-597 Pad  
Well: TR 312-28-597  
Wellbore: OWB  
Design: Plan

Azimuths to True North  
Magnetic North: 9.23°  
Magnetic Field

Strength: 51011.5nT  
Dip Angle: 65.58°  
Date: 6/5/2023  
Model: HDGM

WELL DETAILS: TR 312-28-597							
Ground Level:	8483.0	Latitude	39.587032	Longitude	-108.282011	Slot	TR 312-28-597
+N/-S	0.0	+E/-W	0.0	Northing	1650709.300	Easting	2216053.200

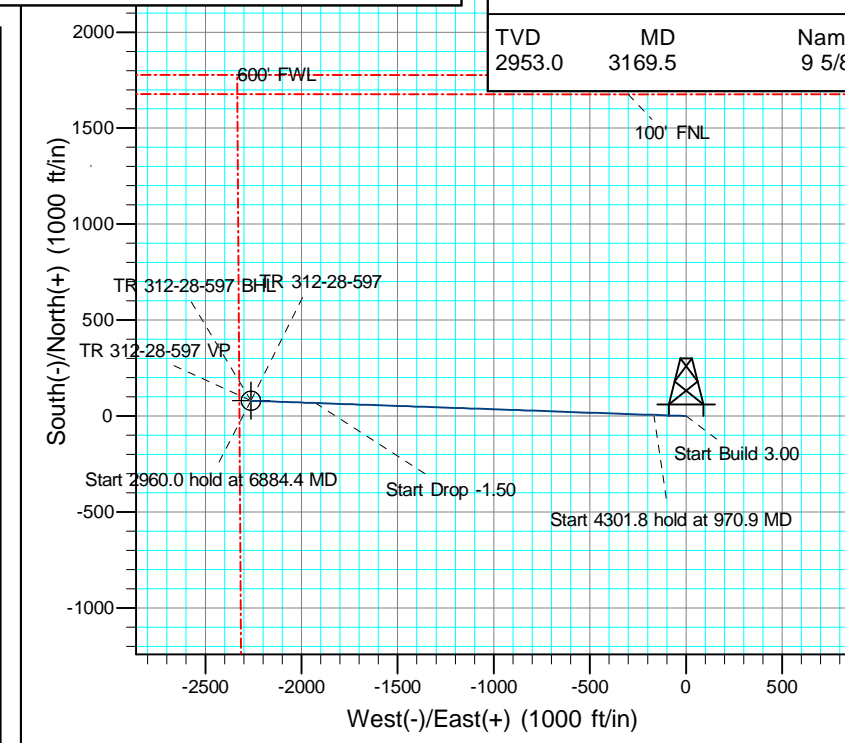
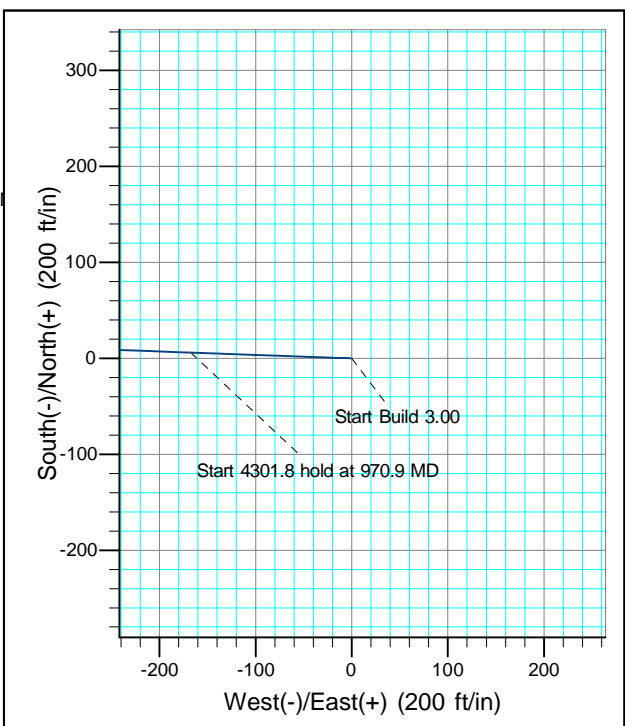


ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation	
165.0	165.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 3.00	
947.2	970.9	24.18	272.02	5.9	-167.4	167.5	167.5	Start 4301.8 hold at 970.9 MD	
4871.6	5272.7	24.18	272.02	68.1	-1928.1	1929.3	1929.3	Start Drop -1.50	
6436.0	6884.4	0.00	0.00	80.0	-2262.9	2264.3	2264.3	Start 2960.0 hold at 6884.4 MD	
9396.0	9844.4	0.00	0.00	80.0	-2262.9	2264.3	2264.3	TD at 9844.4	

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
0.0	0.0	GRRV
2603.0	2785.9	U WSCH
4237.0	4577.0	G SAND
4416.0	4773.2	FRUN
5529.0	5968.7	OCK
6119.0	6567.1	UMVRD
6436.0	6884.4	TOPGAS
8245.0	8693.4	CME
8515.0	8963.4	RLNS
8702.0	9150.4	CZT
8930.0	9378.4	CRCN
9080.0	9528.4	SEGO

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
VP	6436.0	80.0	-2262.9	1650858.500	2213793.800	39.587251	-108.290040	Point	
BHL	9396.0	80.0	-2262.9	1650858.500	2213793.800	39.587251	-108.290040	Circle (Radius: 50.0)	
- plan hits target center									

CASING DETAILS		
TVD	MD	Name
2953.0	3169.5	9 5/8"





# **Terra Energy Partners, LLP**

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

**TR 32-28-597 Pad**

**TR 312-28-597 - Slot TR 312-28-597**

**OWB**

**Plan: Plan**

## **Standard Planning Report**

**13 June, 2023**



<b>Database:</b>	NN	<b>Local Co-ordinate Reference:</b>	Well TR 312-28-597 - Slot TR 312-28-597
<b>Company:</b>	Terra Energy Partners, LLP	<b>TVD Reference:</b>	RKB @ 30' @ 8513.0ft
<b>Project:</b>	Garfield County, CO (Nad 83)	<b>MD Reference:</b>	RKB @ 30' @ 8513.0ft
<b>Site:</b>	TR 32-28-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 312-28-597	<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		

Site		TR 32-28-597 Pad, Sec 28, T5S, R97W			
Site Position:		Northing:	1,650,709.300 usft	Latitude:	39.587032
From:	Map	Easting:	2,216,053.200 usft	Longitude:	-108.282011
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.75 °

Well	TR 312-28-597 - Slot TR 312-28-597					
Well Position	+N/-S	0.0 ft	Northing:	1,650,709.300 usft	Latitude:	39.587032
	+E/-W	0.0 ft	Easting:	2,216,053.200 usft	Longitude:	-108.282011
Position Uncertainty		0.0 ft	Wellhead Elevation:	8,513.0 ft	Ground Level:	8,483.0 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	6/5/2023	9.23	65.58	51,012

<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)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	272.02

<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	
165.0	0.00	0.00	165.0	0.0	0.0	0.00	0.00	0.00	0.00	
970.9	24.18	272.02	947.2	5.9	-167.4	3.00	3.00	0.00	272.02	
5,272.7	24.18	272.02	4,871.6	68.1	-1,928.1	0.00	0.00	0.00	0.00	
6,884.4	0.00	0.00	6,436.0	80.0	-2,262.9	1.50	-1.50	0.00	180.00	
9,844.4	0.00	0.00	9,396.0	80.0	-2,262.9	0.00	0.00	0.00	0.00	TR 312-28-597 BHL

<b>Database:</b>	NN	<b>Local Co-ordinate Reference:</b>	Well TR 312-28-597 - Slot TR 312-28-597
<b>Company:</b>	Terra Energy Partners, LLP	<b>TVD Reference:</b>	RKB @ 30' @ 8513.0ft
<b>Project:</b>	Garfield County, CO (Nad 83)	<b>MD Reference:</b>	RKB @ 30' @ 8513.0ft
<b>Site:</b>	TR 32-28-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 312-28-597	<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
165.0	0.00	0.00	165.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 3.00									
200.0	1.05	272.02	200.0	0.0	-0.3	0.3	3.00	3.00	0.00
300.0	4.05	272.02	299.9	0.2	-4.8	4.8	3.00	3.00	0.00
400.0	7.05	272.02	399.4	0.5	-14.4	14.4	3.00	3.00	0.00
500.0	10.05	272.02	498.3	1.0	-29.3	29.3	3.00	3.00	0.00
600.0	13.05	272.02	596.2	1.7	-49.3	49.3	3.00	3.00	0.00
700.0	16.05	272.02	693.0	2.6	-74.4	74.4	3.00	3.00	0.00
800.0	19.05	272.02	788.4	3.7	-104.5	104.6	3.00	3.00	0.00
900.0	22.05	272.02	882.0	4.9	-139.6	139.7	3.00	3.00	0.00
970.9	24.18	272.02	947.2	5.9	-167.4	167.5	3.00	3.00	0.00
Start 4301.8 hold at 970.9 MD									
1,000.0	24.18	272.02	973.7	6.3	-179.3	179.4	0.00	0.00	0.00
1,100.0	24.18	272.02	1,065.0	7.8	-220.3	220.4	0.00	0.00	0.00
1,200.0	24.18	272.02	1,156.2	9.2	-261.2	261.4	0.00	0.00	0.00
1,300.0	24.18	272.02	1,247.4	10.7	-302.1	302.3	0.00	0.00	0.00
1,400.0	24.18	272.02	1,338.7	12.1	-343.0	343.3	0.00	0.00	0.00
1,500.0	24.18	272.02	1,429.9	13.6	-384.0	384.2	0.00	0.00	0.00
1,600.0	24.18	272.02	1,521.1	15.0	-424.9	425.2	0.00	0.00	0.00
1,700.0	24.18	272.02	1,612.3	16.5	-465.8	466.1	0.00	0.00	0.00
1,800.0	24.18	272.02	1,703.6	17.9	-506.8	507.1	0.00	0.00	0.00
1,900.0	24.18	272.02	1,794.8	19.4	-547.7	548.0	0.00	0.00	0.00
2,000.0	24.18	272.02	1,886.0	20.8	-588.6	589.0	0.00	0.00	0.00
2,100.0	24.18	272.02	1,977.3	22.2	-629.5	629.9	0.00	0.00	0.00
2,200.0	24.18	272.02	2,068.5	23.7	-670.5	670.9	0.00	0.00	0.00
2,300.0	24.18	272.02	2,159.7	25.1	-711.4	711.9	0.00	0.00	0.00
2,400.0	24.18	272.02	2,250.9	26.6	-752.3	752.8	0.00	0.00	0.00
2,500.0	24.18	272.02	2,342.2	28.0	-793.3	793.8	0.00	0.00	0.00
2,600.0	24.18	272.02	2,433.4	29.5	-834.2	834.7	0.00	0.00	0.00
2,700.0	24.18	272.02	2,524.6	30.9	-875.1	875.7	0.00	0.00	0.00
2,800.0	24.18	272.02	2,615.9	32.4	-916.1	916.6	0.00	0.00	0.00
2,900.0	24.18	272.02	2,707.1	33.8	-957.0	957.6	0.00	0.00	0.00
3,000.0	24.18	272.02	2,798.3	35.3	-997.9	998.5	0.00	0.00	0.00
3,100.0	24.18	272.02	2,889.6	36.7	-1,038.8	1,039.5	0.00	0.00	0.00
3,200.0	24.18	272.02	2,980.8	38.1	-1,079.8	1,080.4	0.00	0.00	0.00
3,300.0	24.18	272.02	3,072.0	39.6	-1,120.7	1,121.4	0.00	0.00	0.00
3,400.0	24.18	272.02	3,163.2	41.0	-1,161.6	1,162.4	0.00	0.00	0.00
3,500.0	24.18	272.02	3,254.5	42.5	-1,202.6	1,203.3	0.00	0.00	0.00
3,600.0	24.18	272.02	3,345.7	43.9	-1,243.5	1,244.3	0.00	0.00	0.00
3,700.0	24.18	272.02	3,436.9	45.4	-1,284.4	1,285.2	0.00	0.00	0.00
3,800.0	24.18	272.02	3,528.2	46.8	-1,325.3	1,326.2	0.00	0.00	0.00
3,900.0	24.18	272.02	3,619.4	48.3	-1,366.3	1,367.1	0.00	0.00	0.00
4,000.0	24.18	272.02	3,710.6	49.7	-1,407.2	1,408.1	0.00	0.00	0.00
4,100.0	24.18	272.02	3,801.8	51.2	-1,448.1	1,449.0	0.00	0.00	0.00
4,200.0	24.18	272.02	3,893.1	52.6	-1,489.1	1,490.0	0.00	0.00	0.00
4,300.0	24.18	272.02	3,984.3	54.1	-1,530.0	1,530.9	0.00	0.00	0.00
4,400.0	24.18	272.02	4,075.5	55.5	-1,570.9	1,571.9	0.00	0.00	0.00
4,500.0	24.18	272.02	4,166.8	56.9	-1,611.8	1,612.9	0.00	0.00	0.00
4,600.0	24.18	272.02	4,258.0	58.4	-1,652.8	1,653.8	0.00	0.00	0.00
4,700.0	24.18	272.02	4,349.2	59.8	-1,693.7	1,694.8	0.00	0.00	0.00
4,800.0	24.18	272.02	4,440.4	61.3	-1,734.6	1,735.7	0.00	0.00	0.00
4,900.0	24.18	272.02	4,531.7	62.7	-1,775.6	1,776.7	0.00	0.00	0.00

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<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)
5,000.0	24.18	272.02	4,622.9	64.2	-1,816.5	1,817.6	0.00	0.00	0.00
5,100.0	24.18	272.02	4,714.1	65.6	-1,857.4	1,858.6	0.00	0.00	0.00
5,200.0	24.18	272.02	4,805.4	67.1	-1,898.4	1,899.5	0.00	0.00	0.00
5,272.7	24.18	272.02	4,871.6	68.1	-1,928.1	1,929.3	0.00	0.00	0.00
Start Drop -1.50									
5,300.0	23.77	272.02	4,896.6	68.5	-1,939.2	1,940.4	1.50	-1.50	0.00
5,400.0	22.27	272.02	4,988.7	69.9	-1,978.3	1,979.5	1.50	-1.50	0.00
5,500.0	20.77	272.02	5,081.7	71.2	-2,014.9	2,016.2	1.50	-1.50	0.00
5,600.0	19.27	272.02	5,175.6	72.4	-2,049.1	2,050.4	1.50	-1.50	0.00
5,700.0	17.77	272.02	5,270.5	73.5	-2,080.9	2,082.2	1.50	-1.50	0.00
5,800.0	16.27	272.02	5,366.1	74.6	-2,110.1	2,111.4	1.50	-1.50	0.00
5,900.0	14.77	272.02	5,462.4	75.5	-2,136.8	2,138.2	1.50	-1.50	0.00
6,000.0	13.27	272.02	5,559.5	76.4	-2,161.0	2,162.4	1.50	-1.50	0.00
6,100.0	11.77	272.02	5,657.1	77.1	-2,182.7	2,184.1	1.50	-1.50	0.00
6,200.0	10.27	272.02	5,755.2	77.8	-2,201.8	2,203.2	1.50	-1.50	0.00
6,300.0	8.77	272.02	5,853.9	78.4	-2,218.3	2,219.7	1.50	-1.50	0.00
6,400.0	7.27	272.02	5,952.9	78.9	-2,232.3	2,233.6	1.50	-1.50	0.00
6,500.0	5.77	272.02	6,052.2	79.3	-2,243.6	2,245.0	1.50	-1.50	0.00
6,600.0	4.27	272.02	6,151.8	79.6	-2,252.3	2,253.7	1.50	-1.50	0.00
6,700.0	2.77	272.02	6,251.7	79.8	-2,258.5	2,259.9	1.50	-1.50	0.00
6,800.0	1.27	272.02	6,351.6	79.9	-2,262.0	2,263.4	1.50	-1.50	0.00
6,884.4	0.00	0.00	6,436.0	80.0	-2,262.9	2,264.3	1.50	-1.50	0.00
Start 2960.0 hold at 6884.4 MD									
6,900.0	0.00	0.00	6,451.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,551.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
7,100.0	0.00	0.00	6,651.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
7,200.0	0.00	0.00	6,751.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
7,300.0	0.00	0.00	6,851.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
7,400.0	0.00	0.00	6,951.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
7,500.0	0.00	0.00	7,051.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
7,600.0	0.00	0.00	7,151.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
7,700.0	0.00	0.00	7,251.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
7,800.0	0.00	0.00	7,351.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
7,900.0	0.00	0.00	7,451.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
8,000.0	0.00	0.00	7,551.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
8,100.0	0.00	0.00	7,651.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
8,200.0	0.00	0.00	7,751.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
8,300.0	0.00	0.00	7,851.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
8,400.0	0.00	0.00	7,951.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
8,500.0	0.00	0.00	8,051.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
8,600.0	0.00	0.00	8,151.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
8,700.0	0.00	0.00	8,251.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
8,800.0	0.00	0.00	8,351.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
8,900.0	0.00	0.00	8,451.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
9,000.0	0.00	0.00	8,551.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
9,100.0	0.00	0.00	8,651.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
9,200.0	0.00	0.00	8,751.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
9,300.0	0.00	0.00	8,851.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
9,400.0	0.00	0.00	8,951.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
9,500.0	0.00	0.00	9,051.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
9,600.0	0.00	0.00	9,151.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
9,700.0	0.00	0.00	9,251.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
9,800.0	0.00	0.00	9,351.6	80.0	-2,262.9	2,264.3	0.00	0.00	0.00
9,844.4	0.00	0.00	9,396.0	80.0	-2,262.9	2,264.3	0.00	0.00	0.00

<b>Database:</b>	NN	<b>Local Co-ordinate Reference:</b>	Well TR 312-28-597 - Slot TR 312-28-597
<b>Company:</b>	Terra Energy Partners, LLP	<b>TVD Reference:</b>	RKB @ 30' @ 8513.0ft
<b>Project:</b>	Garfield County, CO (Nad 83)	<b>MD Reference:</b>	RKB @ 30' @ 8513.0ft
<b>Site:</b>	TR 312-28-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 312-28-597	<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)
TD at 9844.4									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TR 312-28-597 VP - hit/miss target - Shape	0.00	0.00	6,436.0	80.0	-2,262.9	1,650,858.500	2,213,793.800	39.587252	-108.290040
TR 312-28-597 BHL - plan hits target center - Circle (radius 50.0)	0.00	0.00	9,396.0	80.0	-2,262.9	1,650,858.500	2,213,793.800	39.587252	-108.290040

Casing Points							
Measured Depth (ft)	Vertical Depth (ft)	Name				Casing Diameter (")	Hole Diameter (")
3,169.5	2,953.0	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		
2,785.9	2,603.0	U WSCH		0.00		
4,577.0	4,237.0	G SAND		0.00		
4,773.2	4,416.0	FRUN		0.00		
5,968.7	5,529.0	OCRK		0.00		
6,567.1	6,119.0	UMVRD		0.00		
6,884.4	6,436.0	TOPGAS		0.00		
8,693.4	8,245.0	CME0		0.00		
8,963.4	8,515.0	RLNS		0.00		
9,150.4	8,702.0	CZZT		0.00		
9,378.4	8,930.0	CRCN		0.00		
9,528.4	9,080.0	SEGO		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
165.0	165.0	0.0	0.0	Start Build 3.00	
970.9	947.2	5.9	-167.4	Start 4301.8 hold at 970.9 MD	
5,272.7	4,871.6	68.1	-1,928.1	Start Drop -1.50	
6,884.4	6,436.0	80.0	-2,262.9	Start 2960.0 hold at 6884.4 MD	
9,844.4	9,396.0	80.0	-2,262.9	TD at 9844.4	