



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well TR 12-28-597 - Slot TR 12-28-597, True North
Vertical (TVD) Reference: RKB @ 30' @ 8513.0ft
Section (VS) Reference: Slot - TR 12-28-597(0.0N, 0.0E)
Measured Depth Reference: RKB @ 30' @ 8513.0ft
Calculation Method: Minimum Curvature

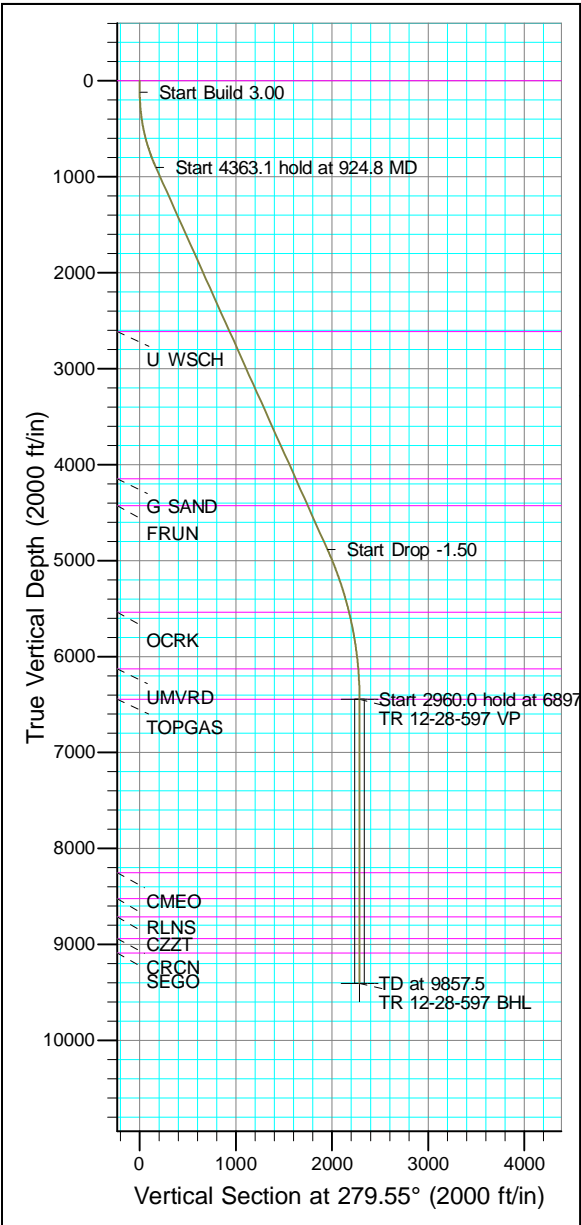


Project: Garfield County, CO (Nad 83)
Site: TR 32-28-597 Pad
Well: TR 12-28-597
Wellbore: OWB
Design: Plan

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 12-28-597						
	Ground Level:	8483.0				
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	SL
0/0	0.0	1650716.100	2216042.700	39.587050	-108.282049	TR 12-28-597

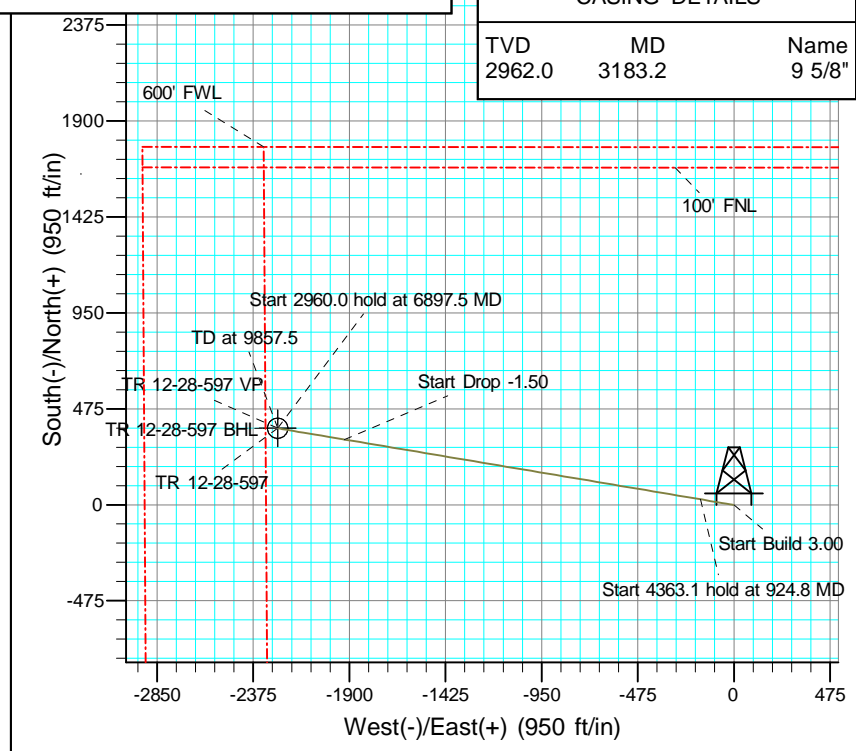
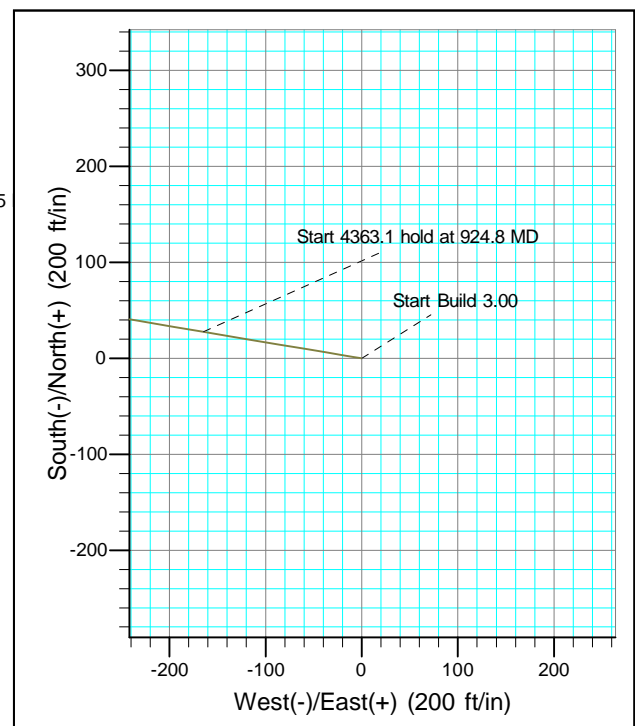


ANNOTATIONS									
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation	
120.0	120.0	0.00	0.00	0.0	0.0	0.0	0.0	Start Build 3.00	
901.2	924.8	24.14	279.55	27.7	-164.8	167.1	167.1	Start 4363.1 hold at 924.8	
4882.6	5287.9	24.14	279.55	323.8	-1924.7	1951.7	1951.7	Start Drop -1.50	
6445.0	6897.5	0.00	0.00	379.3	-2254.2	2285.9	2285.9	Start 2960.0 hold at 6897.5	
9405.0	9857.5	0.00	0.00	379.3	-2254.2	2285.9	2285.9	TD at 9857.5	

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
0.0	0.0	GRRV
2612.0	2799.6	U WSCH
4146.0	4480.7	G SAND
4425.0	4786.4	FRUN
5538.0	5981.8	OCKR
6128.0	6580.1	UMVRD
6445.0	6897.5	TOPGAS
8254.0	8706.5	CMEQ
8524.0	8976.5	RLNS
8711.0	9163.5	CZZT
8939.0	9391.5	CRCN
9089.0	9541.5	SEGO

DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
VP	6445.0	379.3	-2254.2	1651164.200	2213801.200	39.588091	-108.290047	Point	
- plan hits target center									
BHL	9405.0	379.3	-2254.2	1651164.200	2213801.200	39.588091	-108.290047	Circle (Radius: 50.0)	
- plan hits target center									

CASING DETAILS		
TVD	MD	Name
2962.0	3183.2	9 5/8"





Terra Energy Partners, LLP

Garfield County, CO (Nad 83)

TR 32-28-597 Pad

TR 12-28-597 - Slot TR 12-28-597

OWB

Plan: Plan

Standard Planning Report

13 June, 2023



Database:	NN	Local Co-ordinate Reference:	Well TR 12-28-597 - Slot TR 12-28-597
Company:	Terra Energy Partners, LLP	TVD Reference:	RKB @ 30' @ 8513.0ft
Project:	Garfield County, CO (Nad 83)	MD Reference:	RKB @ 30' @ 8513.0ft
Site:	TR 32-28-597 Pad	North Reference:	True
Well:	TR 12-28-597	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	Plan		

Project	Garfield County, CO (Nad 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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 12-28-597 - Slot TR 12-28-597					
Well Position	+N/-S	6.5 ft	Northing:	1,650,716.100 usft	Latitude:	39.587050
	+E/-W	-10.7 ft	Easting:	2,216,042.700 usft	Longitude:	-108.282049
Position Uncertainty		0.0 ft	Wellhead Elevation:	8,513.0 ft	Ground Level:	8,483.0 ft

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	6/5/2023	9.23	65.58	51,012

Design	Plan			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	279.55

Plan Sections										
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	
924.8	24.14	279.55	901.2	27.7	-164.8	3.00	3.00	0.00	279.55	
5,287.9	24.14	279.55	4,882.6	323.8	-1,924.7	0.00	0.00	0.00	0.00	
6,897.5	0.00	0.00	6,445.0	379.3	-2,254.2	1.50	-1.50	0.00	180.00	
9,857.5	0.00	0.00	9,405.0	379.3	-2,254.2	0.00	0.00	0.00	0.00	TR 12-28-597 BHL

Database:	NN	Local Co-ordinate Reference:	Well TR 12-28-597 - Slot TR 12-28-597
Company:	Terra Energy Partners, LLP	TVD Reference:	RKB @ 30' @ 8513.0ft
Project:	Garfield County, CO (Nad 83)	MD Reference:	RKB @ 30' @ 8513.0ft
Site:	TR 32-28-597 Pad	North Reference:	True
Well:	TR 12-28-597	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	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
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 3.00									
200.0	2.40	279.55	200.0	0.3	-1.7	1.7	3.00	3.00	0.00
300.0	5.40	279.55	299.7	1.4	-8.4	8.5	3.00	3.00	0.00
400.0	8.40	279.55	399.0	3.4	-20.2	20.5	3.00	3.00	0.00
500.0	11.40	279.55	497.5	6.3	-37.2	37.7	3.00	3.00	0.00
600.0	14.40	279.55	595.0	10.0	-59.2	60.0	3.00	3.00	0.00
700.0	17.40	279.55	691.1	14.5	-86.2	87.4	3.00	3.00	0.00
800.0	20.40	279.55	785.7	19.9	-118.1	119.8	3.00	3.00	0.00
900.0	23.40	279.55	878.5	26.1	-154.9	157.1	3.00	3.00	0.00
924.8	24.14	279.55	901.2	27.7	-164.8	167.1	3.00	3.00	0.00
Start 4363.1 hold at 924.8 MD									
1,000.0	24.14	279.55	969.8	32.8	-195.1	197.8	0.00	0.00	0.00
1,100.0	24.14	279.55	1,061.1	39.6	-235.4	238.7	0.00	0.00	0.00
1,200.0	24.14	279.55	1,152.3	46.4	-275.8	279.6	0.00	0.00	0.00
1,300.0	24.14	279.55	1,243.6	53.2	-316.1	320.5	0.00	0.00	0.00
1,400.0	24.14	279.55	1,334.8	60.0	-356.4	361.4	0.00	0.00	0.00
1,500.0	24.14	279.55	1,426.1	66.8	-396.8	402.3	0.00	0.00	0.00
1,600.0	24.14	279.55	1,517.3	73.5	-437.1	443.2	0.00	0.00	0.00
1,700.0	24.14	279.55	1,608.6	80.3	-477.4	484.2	0.00	0.00	0.00
1,800.0	24.14	279.55	1,699.8	87.1	-517.8	525.1	0.00	0.00	0.00
1,900.0	24.14	279.55	1,791.1	93.9	-558.1	566.0	0.00	0.00	0.00
2,000.0	24.14	279.55	1,882.3	100.7	-598.5	606.9	0.00	0.00	0.00
2,100.0	24.14	279.55	1,973.6	107.5	-638.8	647.8	0.00	0.00	0.00
2,200.0	24.14	279.55	2,064.8	114.3	-679.1	688.7	0.00	0.00	0.00
2,300.0	24.14	279.55	2,156.1	121.0	-719.5	729.6	0.00	0.00	0.00
2,400.0	24.14	279.55	2,247.3	127.8	-759.8	770.5	0.00	0.00	0.00
2,500.0	24.14	279.55	2,338.6	134.6	-800.1	811.4	0.00	0.00	0.00
2,600.0	24.14	279.55	2,429.8	141.4	-840.5	852.3	0.00	0.00	0.00
2,700.0	24.14	279.55	2,521.1	148.2	-880.8	893.2	0.00	0.00	0.00
2,800.0	24.14	279.55	2,612.4	155.0	-921.1	934.1	0.00	0.00	0.00
2,900.0	24.14	279.55	2,703.6	161.8	-961.5	975.0	0.00	0.00	0.00
3,000.0	24.14	279.55	2,794.9	168.6	-1,001.8	1,015.9	0.00	0.00	0.00
3,100.0	24.14	279.55	2,886.1	175.3	-1,042.1	1,056.8	0.00	0.00	0.00
3,200.0	24.14	279.55	2,977.4	182.1	-1,082.5	1,097.7	0.00	0.00	0.00
3,300.0	24.14	279.55	3,068.6	188.9	-1,122.8	1,138.6	0.00	0.00	0.00
3,400.0	24.14	279.55	3,159.9	195.7	-1,163.2	1,179.5	0.00	0.00	0.00
3,500.0	24.14	279.55	3,251.1	202.5	-1,203.5	1,220.4	0.00	0.00	0.00
3,600.0	24.14	279.55	3,342.4	209.3	-1,243.8	1,261.3	0.00	0.00	0.00
3,700.0	24.14	279.55	3,433.6	216.1	-1,284.2	1,302.2	0.00	0.00	0.00
3,800.0	24.14	279.55	3,524.9	222.8	-1,324.5	1,343.1	0.00	0.00	0.00
3,900.0	24.14	279.55	3,616.1	229.6	-1,364.8	1,384.0	0.00	0.00	0.00
4,000.0	24.14	279.55	3,707.4	236.4	-1,405.2	1,424.9	0.00	0.00	0.00
4,100.0	24.14	279.55	3,798.6	243.2	-1,445.5	1,465.8	0.00	0.00	0.00
4,200.0	24.14	279.55	3,889.9	250.0	-1,485.8	1,506.7	0.00	0.00	0.00
4,300.0	24.14	279.55	3,981.1	256.8	-1,526.2	1,547.6	0.00	0.00	0.00
4,400.0	24.14	279.55	4,072.4	263.6	-1,566.5	1,588.5	0.00	0.00	0.00
4,500.0	24.14	279.55	4,163.6	270.3	-1,606.9	1,629.4	0.00	0.00	0.00
4,600.0	24.14	279.55	4,254.9	277.1	-1,647.2	1,670.3	0.00	0.00	0.00
4,700.0	24.14	279.55	4,346.1	283.9	-1,687.5	1,711.2	0.00	0.00	0.00
4,800.0	24.14	279.55	4,437.4	290.7	-1,727.9	1,752.1	0.00	0.00	0.00
4,900.0	24.14	279.55	4,528.6	297.5	-1,768.2	1,793.0	0.00	0.00	0.00

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Site:	TR 32-28-597 Pad	North Reference:	True
Well:	TR 12-28-597	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	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	24.14	279.55	4,619.9	304.3	-1,808.5	1,833.9	0.00	0.00	0.00
5,100.0	24.14	279.55	4,711.2	311.1	-1,848.9	1,874.9	0.00	0.00	0.00
5,200.0	24.14	279.55	4,802.4	317.9	-1,889.2	1,915.8	0.00	0.00	0.00
5,287.9	24.14	279.55	4,882.6	323.8	-1,924.7	1,951.7	0.00	0.00	0.00
Start Drop -1.50									
5,300.0	23.96	279.55	4,893.7	324.6	-1,929.5	1,956.6	1.50	-1.50	0.00
5,400.0	22.46	279.55	4,985.6	331.2	-1,968.4	1,996.1	1.50	-1.50	0.00
5,500.0	20.96	279.55	5,078.5	337.3	-2,004.9	2,033.0	1.50	-1.50	0.00
5,600.0	19.46	279.55	5,172.3	343.0	-2,038.9	2,067.6	1.50	-1.50	0.00
5,700.0	17.96	279.55	5,267.0	348.4	-2,070.6	2,099.7	1.50	-1.50	0.00
5,800.0	16.46	279.55	5,362.5	353.3	-2,099.8	2,129.3	1.50	-1.50	0.00
5,900.0	14.96	279.55	5,458.8	357.8	-2,126.5	2,156.3	1.50	-1.50	0.00
6,000.0	13.46	279.55	5,555.7	361.8	-2,150.7	2,180.9	1.50	-1.50	0.00
6,100.0	11.96	279.55	5,653.3	365.5	-2,172.4	2,202.9	1.50	-1.50	0.00
6,200.0	10.46	279.55	5,751.4	368.7	-2,191.5	2,222.3	1.50	-1.50	0.00
6,300.0	8.96	279.55	5,849.9	371.5	-2,208.2	2,239.2	1.50	-1.50	0.00
6,400.0	7.46	279.55	5,948.9	373.9	-2,222.3	2,253.5	1.50	-1.50	0.00
6,500.0	5.96	279.55	6,048.2	375.8	-2,233.8	2,265.2	1.50	-1.50	0.00
6,600.0	4.46	279.55	6,147.8	377.3	-2,242.8	2,274.3	1.50	-1.50	0.00
6,700.0	2.96	279.55	6,247.6	378.4	-2,249.1	2,280.8	1.50	-1.50	0.00
6,800.0	1.46	279.55	6,347.5	379.1	-2,252.9	2,284.6	1.50	-1.50	0.00
6,897.5	0.00	0.00	6,445.0	379.3	-2,254.2	2,285.9	1.50	-1.50	0.00
Start 2960.0 hold at 6897.5 MD									
6,900.0	0.00	0.00	6,447.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
7,000.0	0.00	0.00	6,547.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
7,100.0	0.00	0.00	6,647.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
7,200.0	0.00	0.00	6,747.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
7,300.0	0.00	0.00	6,847.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
7,400.0	0.00	0.00	6,947.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
7,500.0	0.00	0.00	7,047.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
7,600.0	0.00	0.00	7,147.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
7,700.0	0.00	0.00	7,247.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
7,800.0	0.00	0.00	7,347.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
7,900.0	0.00	0.00	7,447.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
8,000.0	0.00	0.00	7,547.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
8,100.0	0.00	0.00	7,647.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
8,200.0	0.00	0.00	7,747.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
8,300.0	0.00	0.00	7,847.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
8,400.0	0.00	0.00	7,947.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
8,500.0	0.00	0.00	8,047.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
8,600.0	0.00	0.00	8,147.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
8,700.0	0.00	0.00	8,247.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
8,800.0	0.00	0.00	8,347.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
8,900.0	0.00	0.00	8,447.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
9,000.0	0.00	0.00	8,547.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
9,100.0	0.00	0.00	8,647.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
9,200.0	0.00	0.00	8,747.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
9,300.0	0.00	0.00	8,847.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
9,400.0	0.00	0.00	8,947.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
9,500.0	0.00	0.00	9,047.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
9,600.0	0.00	0.00	9,147.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
9,700.0	0.00	0.00	9,247.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
9,800.0	0.00	0.00	9,347.5	379.3	-2,254.2	2,285.9	0.00	0.00	0.00
9,857.5	0.00	0.00	9,405.0	379.3	-2,254.2	2,285.9	0.00	0.00	0.00

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Company:	Terra Energy Partners, LLP	TVD Reference:	RKB @ 30' @ 8513.0ft
Project:	Garfield County, CO (Nad 83)	MD Reference:	RKB @ 30' @ 8513.0ft
Site:	TR 32-28-597 Pad	North Reference:	True
Well:	TR 12-28-597	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	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 9857.5									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TR 12-28-597 VP	0.00	0.00	6,445.0	379.3	-2,254.2	1,651,164.200	2,213,801.200	39.588091	-108.290047
- plan hits target center									
- Point									
TR 12-28-597 BHL	0.00	0.00	9,405.0	379.3	-2,254.2	1,651,164.200	2,213,801.200	39.588091	-108.290047
- plan hits target center									
- Circle (radius 50.0)									

Casing Points							
Measured Depth (ft)	Vertical Depth (ft)	Name				Casing Diameter (")	Hole Diameter (")
3,183.2	2,962.0	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		
2,799.6	2,612.0	U WSCH		0.00		
4,480.7	4,146.0	G SAND		0.00		
4,786.4	4,425.0	FRUN		0.00		
5,981.8	5,538.0	OCRK		0.00		
6,580.1	6,128.0	UMVRD		0.00		
6,897.5	6,445.0	TOPGAS		0.00		
8,706.5	8,254.0	CME0		0.00		
8,976.5	8,524.0	RLNS		0.00		
9,163.5	8,711.0	CZZT		0.00		
9,391.5	8,939.0	CRCN		0.00		
9,541.5	9,089.0	SEGO		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
120.0	120.0	0.0	0.0	Start Build 3.00	
924.8	901.2	27.7	-164.8	Start 4363.1 hold at 924.8 MD	
5,287.9	4,882.6	323.8	-1,924.7	Start Drop -1.50	
6,897.5	6,445.0	379.3	-2,254.2	Start 2960.0 hold at 6897.5 MD	
9,857.5	9,405.0	379.3	-2,254.2	TD at 9857.5	