

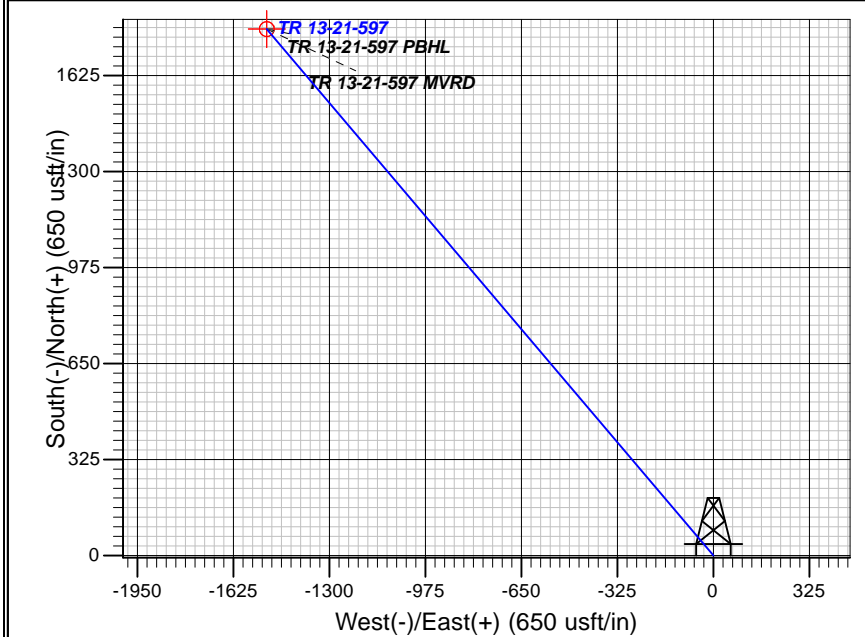
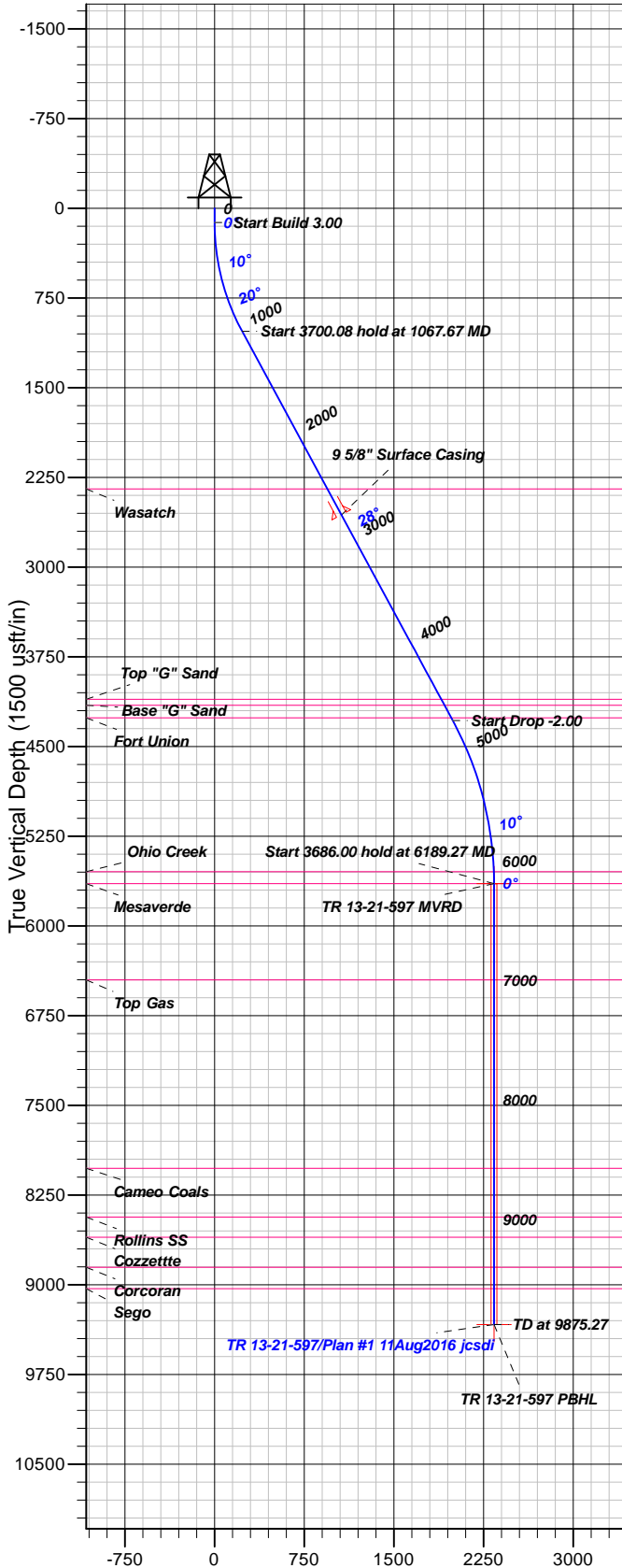
## Well Details: TR 13-21-597

GL 8292' & RKB 24' @ 8316.00usft (H&P 318)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1653228.50	2215064.10	39.5938619	-108.2857927	A4

**T M** Azimuths to True North  
Magnetic North: 9.83°

Magnetic Field  
Strength: 51638.4snT  
Dip Angle: 65.67°  
Date: 8/11/2016  
Model: BGGM2016



### FORMATION TOP DETAILS

TVDP	MD	Formation
2346.00	2564.99	Wasatch
4106.00	4566.36	Top "G" Sand
4156.00	4623.22	Base "G" Sand
4260.00	4741.48	Fort Union
5547.00	6089.25	Ohio Creek
5647.00	6189.27	Mesaverde
6452.00	6994.27	Top Gas
8027.00	8569.27	Cameo Coals
8435.00	8977.27	Rollins SS
8603.00	9145.27	Cozzettite
8855.00	9397.27	Corcoran
9033.00	9575.27	Sego

Plan: Plan #1 11Aug2016 jcsdi

17:44, August 18 2016  
Created By: Janie Collins

PROJECT DETAILS: Garfield County, CO NAD83

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

System Datum: Mean Sea Level

### CASING DETAILS

TVD	MD	Name	Size
2564.98	2814.09	5/8" Surface Casing	9.62

### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	
3	1067.67	28.43	319.69	1029.26	175.64	-149.01	3.00	319.69	230.33	
4	4767.76	28.43	319.69	4283.11	1518.90	-1288.65	0.00	0.00	1991.90	
5	6189.27	0.00	0.00	5647.00	1782.36	-1512.17	2.00	180.00	2337.40	TR 13-21-597 MVRD
6	9875.27	0.00	0.00	9333.00	1782.36	-1512.17	0.00	0.00	2337.40	TR 13-21-597 PBHL

### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
TR 13-21-597 MVRD	5647.00	1782.36	-1512.17	1655056.38	2213607.29	39.5987550	-108.2911590	Circle (Radius: 25.00)
- plan hits target center								
TR 13-21-597 PBHL	9333.00	1782.36	-1512.17	1655056.38	2213607.29	39.5987550	-108.2911590	Point
- plan hits target center								



# **Terra Energy Partners**

**Garfield County, CO NAD83**

**TR 24-21-597 Pad**

**TR 13-21-597 - Slot A4**

**OH**

**Plan: Plan #1 11Aug2016 jcsdi**

## **Standard Planning Report**

**18 August, 2016**



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well TR 13-21-597 - Slot A4
<b>Company:</b>	Terra Energy Partners	<b>TVD Reference:</b>	GL 8292' & RKB 24' @ 8316.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 8292' & RKB 24' @ 8316.00usft (H&P 318)
<b>Site:</b>	TR 24-21-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 13-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 11Aug2016 jcsdi		

<b>Project</b>	Garfield County, CO NAD83		
<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>	TR 24-21-597 Pad			
<b>Site Position:</b>		<b>Northing:</b>	1,653,248.80 usft	<b>Latitude:</b> 39.5939185
<b>From:</b> Map		<b>Easting:</b>	2,215,073.70 usft	<b>Longitude:</b> -108.2857609
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.20 in	<b>Grid Convergence:</b> -1.76 °

<b>Well</b>	TR 13-21-597 - Slot A4			
<b>Well Position</b>	<b>+N/-S</b>	-20.59 usft	<b>Northing:</b>	1,653,228.49 usft
	<b>+E/-W</b>	-8.98 usft	<b>Easting:</b>	2,215,064.10 usft
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft
			<b>Ground Level:</b>	8,292.00 usft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2016	8/11/2016	9.83	65.67	51,638

<b>Design</b>	Plan #1 11Aug2016 jcsdi			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	319.69

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,067.67	28.43	319.69	1,029.26	175.64	-149.01	3.00	3.00	0.00	319.69	
4,767.76	28.43	319.69	4,283.11	1,518.90	-1,288.65	0.00	0.00	0.00	0.00	
6,189.27	0.00	0.00	5,647.00	1,782.36	-1,512.17	2.00	-2.00	0.00	180.00	TR 13-21-597 MVRD
9,875.27	0.00	0.00	9,333.00	1,782.36	-1,512.17	0.00	0.00	0.00	0.00	TR 13-21-597 PBHL

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well TR 13-21-597 - Slot A4
<b>Company:</b>	Terra Energy Partners	<b>TVD Reference:</b>	GL 8292' & RKB 24' @ 8316.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 8292' & RKB 24' @ 8316.00usft (H&P 318)
<b>Site:</b>	TR 24-21-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 13-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 11Aug2016 jcsdi		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
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	
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	2.40	319.69	199.98	1.28	-1.08	1.68	3.00	3.00	0.00	
300.00	5.40	319.69	299.73	6.46	-5.48	8.48	3.00	3.00	0.00	
400.00	8.40	319.69	399.00	15.62	-13.25	20.49	3.00	3.00	0.00	
500.00	11.40	319.69	497.50	28.73	-24.38	37.68	3.00	3.00	0.00	
600.00	14.40	319.69	594.96	45.75	-38.82	60.00	3.00	3.00	0.00	
700.00	17.40	319.69	691.13	66.64	-56.54	87.39	3.00	3.00	0.00	
800.00	20.40	319.69	785.72	91.34	-77.49	119.78	3.00	3.00	0.00	
900.00	23.40	319.69	878.50	119.78	-101.62	157.08	3.00	3.00	0.00	
1,000.00	26.40	319.69	969.19	151.88	-128.86	199.18	3.00	3.00	0.00	
1,067.67	28.43	319.69	1,029.26	175.64	-149.01	230.33	3.00	3.00	0.00	
1,100.00	28.43	319.69	1,057.69	187.37	-158.97	245.72	0.00	0.00	0.00	
1,200.00	28.43	319.69	1,145.63	223.68	-189.77	293.33	0.00	0.00	0.00	
1,300.00	28.43	319.69	1,233.57	259.98	-220.57	340.94	0.00	0.00	0.00	
1,400.00	28.43	319.69	1,321.51	296.28	-251.37	388.55	0.00	0.00	0.00	
1,500.00	28.43	319.69	1,409.45	332.59	-282.17	436.16	0.00	0.00	0.00	
1,600.00	28.43	319.69	1,497.39	368.89	-312.97	483.77	0.00	0.00	0.00	
1,700.00	28.43	319.69	1,585.33	405.20	-343.77	531.38	0.00	0.00	0.00	
1,800.00	28.43	319.69	1,673.27	441.50	-374.57	578.99	0.00	0.00	0.00	
1,900.00	28.43	319.69	1,761.21	477.80	-405.37	626.59	0.00	0.00	0.00	
2,000.00	28.43	319.69	1,849.15	514.11	-436.17	674.20	0.00	0.00	0.00	
2,100.00	28.43	319.69	1,937.09	550.41	-466.97	721.81	0.00	0.00	0.00	
2,200.00	28.43	319.69	2,025.03	586.71	-497.77	769.42	0.00	0.00	0.00	
2,300.00	28.43	319.69	2,112.97	623.02	-528.57	817.03	0.00	0.00	0.00	
2,400.00	28.43	319.69	2,200.91	659.32	-559.37	864.64	0.00	0.00	0.00	
2,500.00	28.43	319.69	2,288.85	695.62	-590.17	912.25	0.00	0.00	0.00	
2,564.99	28.43	319.69	2,346.00	719.22	-610.19	943.19	0.00	0.00	0.00	
<b>Wasatch</b>										
2,600.00	28.43	319.69	2,376.78	731.93	-620.97	959.86	0.00	0.00	0.00	
2,700.00	28.43	319.69	2,464.72	768.23	-651.77	1,007.47	0.00	0.00	0.00	
2,800.00	28.43	319.69	2,552.66	804.53	-682.57	1,055.07	0.00	0.00	0.00	
2,814.00	28.43	319.69	2,564.98	809.62	-686.89	1,061.74	0.00	0.00	0.00	
<b>9 5/8" Surface Casing</b>										
2,900.00	28.43	319.69	2,640.60	840.84	-713.37	1,102.68	0.00	0.00	0.00	
3,000.00	28.43	319.69	2,728.54	877.14	-744.17	1,150.29	0.00	0.00	0.00	
3,100.00	28.43	319.69	2,816.48	913.44	-774.97	1,197.90	0.00	0.00	0.00	
3,200.00	28.43	319.69	2,904.42	949.75	-805.77	1,245.51	0.00	0.00	0.00	
3,300.00	28.43	319.69	2,992.36	986.05	-836.57	1,293.12	0.00	0.00	0.00	
3,400.00	28.43	319.69	3,080.30	1,022.36	-867.37	1,340.73	0.00	0.00	0.00	
3,500.00	28.43	319.69	3,168.24	1,058.66	-898.17	1,388.34	0.00	0.00	0.00	
3,600.00	28.43	319.69	3,256.18	1,094.96	-928.97	1,435.94	0.00	0.00	0.00	
3,700.00	28.43	319.69	3,344.12	1,131.27	-959.78	1,483.55	0.00	0.00	0.00	
3,800.00	28.43	319.69	3,432.06	1,167.57	-990.58	1,531.16	0.00	0.00	0.00	
3,900.00	28.43	319.69	3,520.00	1,203.87	-1,021.38	1,578.77	0.00	0.00	0.00	
4,000.00	28.43	319.69	3,607.94	1,240.18	-1,052.18	1,626.38	0.00	0.00	0.00	
4,100.00	28.43	319.69	3,695.88	1,276.48	-1,082.98	1,673.99	0.00	0.00	0.00	
4,200.00	28.43	319.69	3,783.82	1,312.78	-1,113.78	1,721.60	0.00	0.00	0.00	
4,300.00	28.43	319.69	3,871.76	1,349.09	-1,144.58	1,769.21	0.00	0.00	0.00	
4,400.00	28.43	319.69	3,959.70	1,385.39	-1,175.38	1,816.82	0.00	0.00	0.00	
4,500.00	28.43	319.69	4,047.64	1,421.69	-1,206.18	1,864.42	0.00	0.00	0.00	

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well TR 13-21-597 - Slot A4
<b>Company:</b>	Terra Energy Partners	<b>TVD Reference:</b>	GL 8292' & RKB 24' @ 8316.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 8292' & RKB 24' @ 8316.00usft (H&P 318)
<b>Site:</b>	TR 24-21-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 13-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 11Aug2016 jcsdi		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,566.36	28.43	319.69	4,106.00	1,445.79	-1,226.62	1,896.02	0.00	0.00	0.00
<b>Top "G" Sand</b>									
4,600.00	28.43	319.69	4,135.58	1,458.00	-1,236.98	1,912.03	0.00	0.00	0.00
4,623.22	28.43	319.69	4,156.00	1,466.43	-1,244.13	1,923.09	0.00	0.00	0.00
<b>Base "G" Sand</b>									
4,700.00	28.43	319.69	4,223.52	1,494.30	-1,267.78	1,959.64	0.00	0.00	0.00
4,741.48	28.43	319.69	4,260.00	1,509.36	-1,280.55	1,979.39	0.00	0.00	0.00
<b>Fort Union</b>									
4,767.76	28.43	319.69	4,283.11	1,518.90	-1,288.65	1,991.90	0.00	0.00	0.00
4,800.00	27.79	319.69	4,311.54	1,530.48	-1,298.47	2,007.09	2.00	-2.00	0.00
4,900.00	25.79	319.69	4,400.81	1,564.85	-1,327.63	2,052.15	2.00	-2.00	0.00
5,000.00	23.79	319.69	4,491.59	1,596.81	-1,354.75	2,094.07	2.00	-2.00	0.00
5,100.00	21.79	319.69	4,583.79	1,626.34	-1,379.80	2,132.80	2.00	-2.00	0.00
5,200.00	19.79	319.69	4,677.27	1,653.40	-1,402.76	2,168.29	2.00	-2.00	0.00
5,300.00	17.79	319.69	4,771.94	1,677.95	-1,423.59	2,200.49	2.00	-2.00	0.00
5,400.00	15.79	319.69	4,867.68	1,699.97	-1,442.27	2,229.36	2.00	-2.00	0.00
5,500.00	13.79	319.69	4,964.36	1,719.43	-1,458.78	2,254.88	2.00	-2.00	0.00
5,600.00	11.79	319.69	5,061.87	1,736.31	-1,473.10	2,277.01	2.00	-2.00	0.00
5,700.00	9.79	319.69	5,160.10	1,750.58	-1,485.20	2,295.72	2.00	-2.00	0.00
5,800.00	7.79	319.69	5,258.93	1,762.22	-1,495.08	2,311.00	2.00	-2.00	0.00
5,900.00	5.79	319.69	5,358.22	1,771.23	-1,502.73	2,322.81	2.00	-2.00	0.00
6,000.00	3.79	319.69	5,457.87	1,777.59	-1,508.12	2,331.15	2.00	-2.00	0.00
6,089.25	2.00	319.69	5,547.00	1,781.03	-1,511.04	2,335.66	2.00	-2.00	0.00
<b>Ohio Creek</b>									
6,100.00	1.79	319.69	5,557.74	1,781.30	-1,511.27	2,336.01	2.00	-2.00	0.00
6,189.27	0.00	0.00	5,647.00	1,782.36	-1,512.17	2,337.40	2.00	-2.00	0.00
<b>Mesaverde - TR 13-21-597 MVRD</b>									
6,200.00	0.00	0.00	5,657.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
6,300.00	0.00	0.00	5,757.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
6,400.00	0.00	0.00	5,857.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
6,500.00	0.00	0.00	5,957.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
6,600.00	0.00	0.00	6,057.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
6,700.00	0.00	0.00	6,157.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
6,800.00	0.00	0.00	6,257.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
6,900.00	0.00	0.00	6,357.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
6,994.27	0.00	0.00	6,452.00	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
<b>Top Gas</b>									
7,000.00	0.00	0.00	6,457.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
7,100.00	0.00	0.00	6,557.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
7,200.00	0.00	0.00	6,657.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
7,300.00	0.00	0.00	6,757.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
7,400.00	0.00	0.00	6,857.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
7,500.00	0.00	0.00	6,957.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
7,600.00	0.00	0.00	7,057.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
7,700.00	0.00	0.00	7,157.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
7,800.00	0.00	0.00	7,257.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
7,900.00	0.00	0.00	7,357.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
8,000.00	0.00	0.00	7,457.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
8,100.00	0.00	0.00	7,557.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
8,200.00	0.00	0.00	7,657.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00
8,300.00	0.00	0.00	7,757.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00

<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well TR 13-21-597 - Slot A4
<b>Company:</b>	Terra Energy Partners	<b>TVD Reference:</b>	GL 8292' & RKB 24' @ 8316.00usft (H&P 318)
<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 8292' & RKB 24' @ 8316.00usft (H&P 318)
<b>Site:</b>	TR 24-21-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 13-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 11Aug2016 jcsdi		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,400.00	0.00	0.00	7,857.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
8,500.00	0.00	0.00	7,957.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
8,569.27	0.00	0.00	8,027.00	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
<b>Cameo Coals</b>										
8,600.00	0.00	0.00	8,057.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,157.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,257.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,357.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
8,977.27	0.00	0.00	8,435.00	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
<b>Rollins SS</b>										
9,000.00	0.00	0.00	8,457.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,557.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
9,145.27	0.00	0.00	8,603.00	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
<b>Cozzettte</b>										
9,200.00	0.00	0.00	8,657.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
9,300.00	0.00	0.00	8,757.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
9,397.27	0.00	0.00	8,855.00	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
<b>Corcoran</b>										
9,400.00	0.00	0.00	8,857.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
9,500.00	0.00	0.00	8,957.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
9,575.27	0.00	0.00	9,033.00	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
<b>Sego</b>										
9,600.00	0.00	0.00	9,057.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,157.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,257.73	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
9,875.27	0.00	0.00	9,333.00	1,782.36	-1,512.17	2,337.40	0.00	0.00	0.00	
<b>TR 13-21-597 PBHL</b>										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
TR 13-21-597 MVRD	0.00	0.00	5,647.00	1,782.36	-1,512.17	1,655,056.38	2,213,607.29	39.5987550	-108.2911590
- hit/miss target									
- Shape									
- plan hits target center									
- Circle (radius 25.00)									
TR 13-21-597 PBHL	0.00	0.00	9,333.00	1,782.36	-1,512.17	1,655,056.38	2,213,607.29	39.5987550	-108.2911590
- plan hits target center									
- Point									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,814.00	2,564.98	9 5/8" Surface Casing	9.62	13.50	

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<b>Project:</b>	Garfield County, CO NAD83	<b>MD Reference:</b>	GL 8292' & RKB 24' @ 8316.00usft (H&P 318)
<b>Site:</b>	TR 24-21-597 Pad	<b>North Reference:</b>	True
<b>Well:</b>	TR 13-21-597	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #1 11Aug2016 jcsdi		

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	2,564.99	2,346.00	Wasatch		0.00	0.00
	4,566.36	4,106.00	Top "G" Sand		0.00	0.00
	4,623.22	4,156.00	Base "G" Sand		0.00	0.00
	4,741.48	4,260.00	Fort Union		0.00	0.00
	6,089.25	5,547.00	Ohio Creek		0.00	0.00
	6,189.27	5,647.00	Mesaverde		0.00	0.00
	6,994.27	6,452.00	Top Gas		0.00	0.00
	8,569.27	8,027.00	Cameo Coals		0.00	0.00
	8,977.27	8,435.00	Rollins SS		0.00	0.00
	9,145.27	8,603.00	Cozzette		0.00	0.00
	9,397.27	8,855.00	Corcoran		0.00	0.00
	9,575.27	9,033.00	Sego		0.00	0.00