

PROJECT DETAILS: Rio Blanco County, CO

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

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well FED RGU 21-12-298 - Slot FED RGU 21-12-298, True North
 Vertical (TVD) Reference: KB=30' @ 6308.00usft (H&P #329)
 Section (VS) Reference: Slot - FED RGU 21-12-298(0.00N, 0.00E)
 Measured Depth Reference: KB=30' @ 6308.00usft (H&P #329)
 Calculation Method: Minimum Curvature

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
FED RGU 21-12-298 - VP	8196.00	-800.86	-1657.03	1764756.20	2202672.89	39.898829	-108.342121	Circle (Radius: 50.00)
FED RGU 21-12-298 - PBHL	11976.00	-800.86	-1657.03	1764756.20	2202672.89	39.898829	-108.342121	Point

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	Start Build 3.50
234.29	4.00	20.00	234.19	3.75	1.36	-2.86	3.99	Start DLS 3.00 TFO -144.33
878.81	16.25	243.63	871.12	-15.36	-72.43	71.90	89.94	Start 5775.84 hold at 878.81 MD
6654.64	16.25	243.63	6416.27	-733.11	-1520.34	1687.86	1705.98	Start Drop -1.50
7737.84	0.00	0.00	7485.00	-800.86	-1657.03	1840.41	1858.54	Start 4491.00 hold at 7737.84 MD
12228.84	0.00	0.00	11976.00	-800.86	-1657.03	1840.41	1858.54	TD at 12228.84

WELL DETAILS: FED RGU 21-12-298

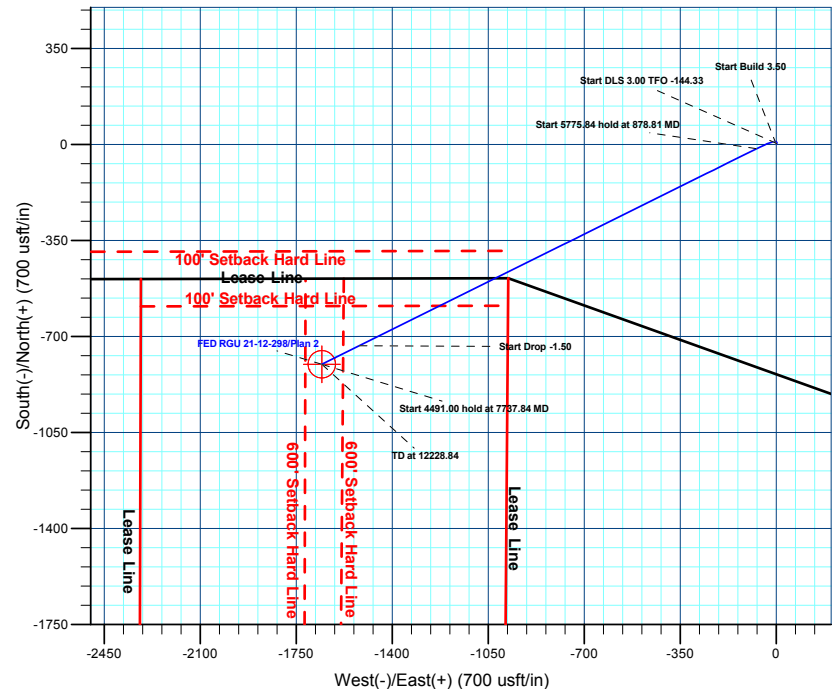
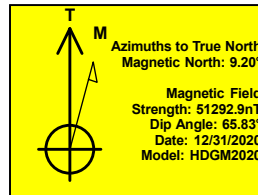
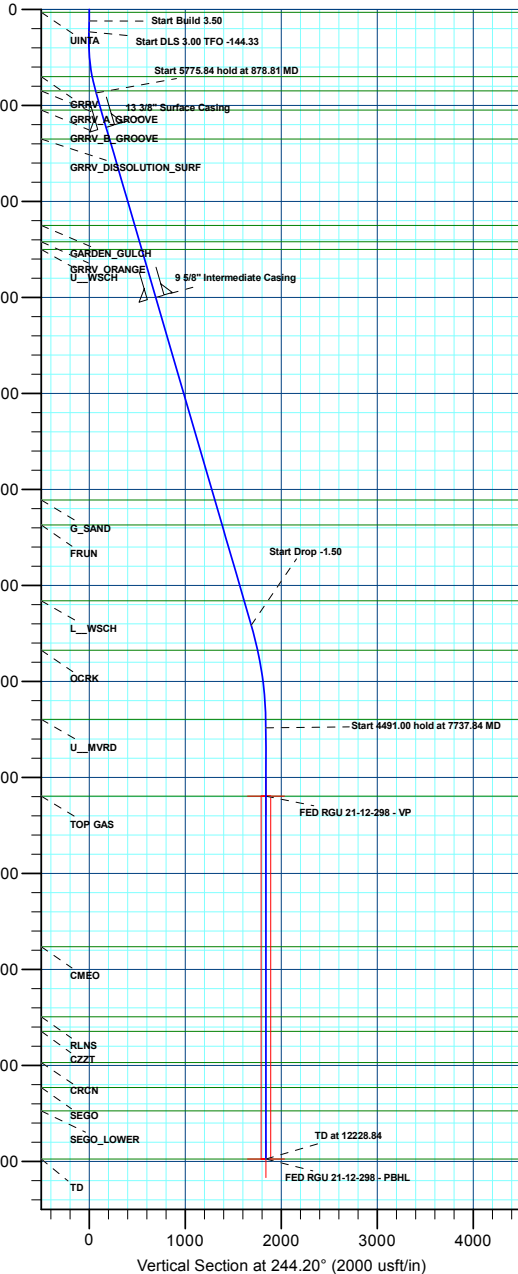
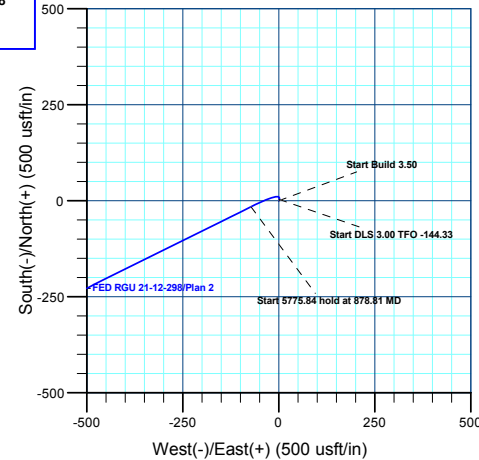
+N/-S	+E/-W	Northing	Ground Elev.	Latitude	Longitude	Slot
0.00	0.00	1765504.95	6278.00	39.901028	-108.336215	FED RGU 21-12-298

CASING DETAILS

TVD	MD	Name	Size
1230.00	1252.62	13 3/8" Surface Casing	13-3/8
3000.00	3096.26	5/8" Intermediate Casing	9-5/8

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
30.00	30.00	UINTA
700.00	702.66	GRRV
850.00	856.85	GRRV_A_GROOVE
1050.00	1065.13	GRRV_B_GROOVE
1350.00	1377.61	GRRV DISSOLUTION_SURF
2250.00	2315.06	GARDEN_GULCH
2420.00	2492.13	GRRV_ORANGE
2500.00	2575.46	U_WSCH
5110.00	5294.04	G_SAND
5370.00	5564.85	FRUN
6160.00	6387.72	L_WSCH
6676.00	6922.67	OCRK
7396.00	7648.83	U_MVRD
8196.00	8448.84	TOP GAS
9766.00	10018.84	CMEO
10496.00	10748.84	RLNS
10646.00	10898.84	CZZT
10971.00	11223.84	CRCN
11231.00	11483.84	SEGO
11476.00	11728.84	SEGO_LOWER



Plan: Plan 2 (FED RGU 21-12-298/Wellbore #1)

Created By: Chase Chambers Date: 13:17, May 11 2022



Terra Energy Partners, LLP

Rio Blanco County, CO

RGU 44-1-298

FED RGU 21-12-298 - Slot FED RGU 21-12-298

Wellbore #1

Plan: Plan 2

KLX Well Planning Report

11 May, 2022



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well FED RGU 21-12-298 - Slot FED RGU 21-12-298
Company:	Terra Energy Partners, LLP	TVD Reference:	KB=30' @ 6308.00usft (H&P #329)
Project:	Rio Blanco County, CO	MD Reference:	KB=30' @ 6308.00usft (H&P #329)
Site:	RGU 44-1-298	North Reference:	True
Well:	FED RGU 21-12-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 2		

Project	Rio Blanco County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site	RGU 44-1-298				
Site Position:	Northing:	1,765,503.75 usft	Latitude:	39.901031	
From: Map	Easting:	2,204,429.08 usft	Longitude:	-108.335948	
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.79 °

Well	FED RGU 21-12-298 - Slot FED RGU 21-12-298					
Well Position	+N/-S	-1.14 usft	Northing:	1,765,504.95 usft	Latitude:	39.901028
	+E/-W	-74.97 usft	Easting:	2,204,354.11 usft	Longitude:	-108.336215
Position Uncertainty	0.00 usft	Wellhead Elevation:		Ground Level:	6,278.00 usft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2020	12/31/2020	9.20	65.83	51,292.90000000

Design	Plan 2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	244.20

Plan Sections										
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	
234.29	4.00	20.00	234.19	3.75	1.36	3.50	3.50	0.00	20.00	
878.81	16.25	243.63	871.12	-15.36	-72.43	3.00	1.90	-21.16	-144.33	
6,654.65	16.25	243.63	6,416.27	-733.11	-1,520.34	0.00	0.00	0.00	0.00	
7,737.84	0.00	0.00	7,485.00	-800.86	-1,657.03	1.50	-1.50	0.00	180.00	
12,228.84	0.00	0.00	11,976.00	-800.86	-1,657.03	0.00	0.00	0.00	0.00	FED RGU 21-12-298

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Project:	Rio Blanco County, CO	MD Reference:	KB=30' @ 6308.00usft (H&P #329)
Site:	RGU 44-1-298	North Reference:	True
Well:	FED RGU 21-12-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 2		

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
UINTA									
30.00	0.00	0.00	30.00	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
Start Build 3.50									
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	2.80	20.00	199.97	1.84	0.67	-1.40	3.50	3.50	0.00
Start DLS 3.00 TFO -144.33									
234.29	4.00	20.00	234.19	3.75	1.36	-2.86	3.50	3.50	0.00
300.00	2.66	354.38	299.80	7.42	2.00	-5.03	3.00	-2.04	-38.98
400.00	2.90	289.16	399.70	10.56	-0.62	-4.04	3.00	0.24	-65.22
500.00	5.26	261.83	499.45	10.73	-7.54	2.12	3.00	2.37	-27.34
600.00	8.06	252.30	598.77	7.95	-18.77	13.44	3.00	2.80	-9.52
700.00	10.97	247.73	697.38	2.21	-34.25	29.88	3.00	2.91	-4.58
GRRV									
702.66	11.05	247.64	700.00	2.02	-34.72	30.39	3.00	2.93	-3.35
800.00	13.91	245.06	795.03	-6.46	-53.96	51.40	3.00	2.95	-2.65
GRRV_A_GROOVE									
856.85	15.60	243.99	850.00	-12.70	-67.03	65.88	3.00	2.96	-1.89
Start 5775.84 hold at 878.81 MD									
878.81	16.25	243.63	871.12	-15.36	-72.43	71.90	3.00	2.97	-1.62
900.00	16.25	243.63	891.46	-17.99	-77.75	77.83	0.00	0.00	0.00
1,000.00	16.25	243.63	987.47	-30.42	-102.82	105.81	0.00	0.00	0.00
GRRV_B_GROOVE									
1,065.13	16.25	243.63	1,050.00	-38.51	-119.14	124.03	0.00	0.00	0.00
1,100.00	16.25	243.63	1,083.47	-42.84	-127.88	133.78	0.00	0.00	0.00
1,200.00	16.25	243.63	1,179.48	-55.27	-152.95	161.76	0.00	0.00	0.00
13 3/8" Surface Casing									
1,252.62	16.25	243.63	1,230.00	-61.81	-166.14	176.49	0.00	0.00	0.00
1,300.00	16.25	243.63	1,275.49	-67.70	-178.02	189.74	0.00	0.00	0.00
GRRV DISSOLUTION SURF									
1,377.61	16.25	243.63	1,350.00	-77.34	-197.48	211.46	0.00	0.00	0.00
1,400.00	16.25	243.63	1,371.49	-80.12	-203.09	217.72	0.00	0.00	0.00
1,500.00	16.25	243.63	1,467.50	-92.55	-228.16	245.70	0.00	0.00	0.00
1,600.00	16.25	243.63	1,563.50	-104.98	-253.23	273.67	0.00	0.00	0.00
1,700.00	16.25	243.63	1,659.51	-117.40	-278.29	301.65	0.00	0.00	0.00
1,800.00	16.25	243.63	1,755.52	-129.83	-303.36	329.63	0.00	0.00	0.00
1,900.00	16.25	243.63	1,851.52	-142.26	-328.43	357.61	0.00	0.00	0.00
2,000.00	16.25	243.63	1,947.53	-154.68	-353.50	385.59	0.00	0.00	0.00
2,100.00	16.25	243.63	2,043.53	-167.11	-378.57	413.56	0.00	0.00	0.00
2,200.00	16.25	243.63	2,139.54	-179.54	-403.64	441.54	0.00	0.00	0.00
2,300.00	16.25	243.63	2,235.55	-191.97	-428.70	469.52	0.00	0.00	0.00
GARDEN_GULCH									
2,315.06	16.25	243.63	2,250.00	-193.84	-432.48	473.73	0.00	0.00	0.00
2,400.00	16.25	243.63	2,331.55	-204.39	-453.77	497.50	0.00	0.00	0.00
GRRV_ORANGE									
2,492.13	16.25	243.63	2,420.00	-215.84	-476.87	523.27	0.00	0.00	0.00
2,500.00	16.25	243.63	2,427.56	-216.82	-478.84	525.48	0.00	0.00	0.00
U_WSCH									
2,575.46	16.25	243.63	2,500.00	-226.20	-497.76	546.59	0.00	0.00	0.00
2,600.00	16.25	243.63	2,523.56	-229.25	-503.91	553.45	0.00	0.00	0.00
2,700.00	16.25	243.63	2,619.57	-241.67	-528.98	581.43	0.00	0.00	0.00

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Project:	Rio Blanco County, CO	MD Reference:	KB=30' @ 6308.00usft (H&P #329)
Site:	RGU 44-1-298	North Reference:	True
Well:	FED RGU 21-12-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 2		

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)
2,800.00	16.25	243.63	2,715.58	-254.10	-554.05	609.41	0.00	0.00	0.00
2,900.00	16.25	243.63	2,811.58	-266.53	-579.11	637.39	0.00	0.00	0.00
3,000.00	16.25	243.63	2,907.59	-278.95	-604.18	665.37	0.00	0.00	0.00
9 5/8" Intermediate Casing									
3,096.26	16.25	243.63	3,000.00	-290.91	-628.31	692.30	0.00	0.00	0.00
3,100.00	16.25	243.63	3,003.59	-291.38	-629.25	693.34	0.00	0.00	0.00
3,200.00	16.25	243.63	3,099.60	-303.81	-654.32	721.32	0.00	0.00	0.00
3,300.00	16.25	243.63	3,195.61	-316.23	-679.39	749.30	0.00	0.00	0.00
3,400.00	16.25	243.63	3,291.61	-328.66	-704.46	777.28	0.00	0.00	0.00
3,500.00	16.25	243.63	3,387.62	-341.09	-729.52	805.26	0.00	0.00	0.00
3,600.00	16.25	243.63	3,483.62	-353.51	-754.59	833.23	0.00	0.00	0.00
3,700.00	16.25	243.63	3,579.63	-365.94	-779.66	861.21	0.00	0.00	0.00
3,800.00	16.25	243.63	3,675.64	-378.37	-804.73	889.19	0.00	0.00	0.00
3,900.00	16.25	243.63	3,771.64	-390.79	-829.80	917.17	0.00	0.00	0.00
4,000.00	16.25	243.63	3,867.65	-403.22	-854.87	945.15	0.00	0.00	0.00
4,100.00	16.25	243.63	3,963.65	-415.65	-879.93	973.12	0.00	0.00	0.00
4,200.00	16.25	243.63	4,059.66	-428.07	-905.00	1,001.10	0.00	0.00	0.00
4,300.00	16.25	243.63	4,155.67	-440.50	-930.07	1,029.08	0.00	0.00	0.00
4,400.00	16.25	243.63	4,251.67	-452.93	-955.14	1,057.06	0.00	0.00	0.00
4,500.00	16.25	243.63	4,347.68	-465.35	-980.21	1,085.04	0.00	0.00	0.00
4,600.00	16.25	243.63	4,443.68	-477.78	-1,005.28	1,113.01	0.00	0.00	0.00
4,700.00	16.25	243.63	4,539.69	-490.21	-1,030.34	1,140.99	0.00	0.00	0.00
4,800.00	16.25	243.63	4,635.70	-502.63	-1,055.41	1,168.97	0.00	0.00	0.00
4,900.00	16.25	243.63	4,731.70	-515.06	-1,080.48	1,196.95	0.00	0.00	0.00
5,000.00	16.25	243.63	4,827.71	-527.49	-1,105.55	1,224.93	0.00	0.00	0.00
5,100.00	16.25	243.63	4,923.71	-539.91	-1,130.62	1,252.90	0.00	0.00	0.00
5,200.00	16.25	243.63	5,019.72	-552.34	-1,155.69	1,280.88	0.00	0.00	0.00
G_SAND									
5,294.04	16.25	243.63	5,110.00	-564.03	-1,179.26	1,307.19	0.00	0.00	0.00
5,300.00	16.25	243.63	5,115.73	-564.77	-1,180.75	1,308.86	0.00	0.00	0.00
5,400.00	16.25	243.63	5,211.73	-577.19	-1,205.82	1,336.84	0.00	0.00	0.00
5,500.00	16.25	243.63	5,307.74	-589.62	-1,230.89	1,364.82	0.00	0.00	0.00
FRUN									
5,564.85	16.25	243.63	5,370.00	-597.68	-1,247.15	1,382.96	0.00	0.00	0.00
5,600.00	16.25	243.63	5,403.74	-602.05	-1,255.96	1,392.79	0.00	0.00	0.00
5,700.00	16.25	243.63	5,499.75	-614.48	-1,281.03	1,420.77	0.00	0.00	0.00
5,800.00	16.25	243.63	5,595.76	-626.90	-1,306.10	1,448.75	0.00	0.00	0.00
5,900.00	16.25	243.63	5,691.76	-639.33	-1,331.16	1,476.73	0.00	0.00	0.00
6,000.00	16.25	243.63	5,787.77	-651.76	-1,356.23	1,504.71	0.00	0.00	0.00
6,100.00	16.25	243.63	5,883.77	-664.18	-1,381.30	1,532.68	0.00	0.00	0.00
6,200.00	16.25	243.63	5,979.78	-676.61	-1,406.37	1,560.66	0.00	0.00	0.00
6,300.00	16.25	243.63	6,075.79	-689.04	-1,431.44	1,588.64	0.00	0.00	0.00
L_WSCH									
6,387.72	16.25	243.63	6,160.00	-699.94	-1,453.43	1,613.18	0.00	0.00	0.00
6,400.00	16.25	243.63	6,171.79	-701.46	-1,456.51	1,616.62	0.00	0.00	0.00
6,500.00	16.25	243.63	6,267.80	-713.89	-1,481.58	1,644.60	0.00	0.00	0.00
6,600.00	16.25	243.63	6,363.80	-726.32	-1,506.64	1,672.57	0.00	0.00	0.00
Start Drop -1.50									
6,654.65	16.25	243.63	6,416.27	-733.11	-1,520.34	1,687.86	0.00	0.00	0.00
6,700.00	15.57	243.63	6,459.88	-738.63	-1,531.48	1,700.29	1.50	-1.50	0.00
6,800.00	14.07	243.63	6,556.56	-749.99	-1,554.39	1,725.87	1.50	-1.50	0.00
6,900.00	12.57	243.63	6,653.86	-760.22	-1,575.03	1,748.90	1.50	-1.50	0.00

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Design:	Plan 2		

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)
OCRK									
6,922.67	12.23	243.63	6,676.00	-762.38	-1,579.39	1,753.77	1.50	-1.50	0.00
7,000.00	11.07	243.63	6,751.74	-769.31	-1,593.38	1,769.38	1.50	-1.50	0.00
7,100.00	9.57	243.63	6,850.12	-777.27	-1,609.43	1,787.29	1.50	-1.50	0.00
7,200.00	8.07	243.63	6,948.94	-784.07	-1,623.16	1,802.61	1.50	-1.50	0.00
7,300.00	6.57	243.63	7,048.12	-789.73	-1,634.57	1,815.35	1.50	-1.50	0.00
7,400.00	5.07	243.63	7,147.60	-794.23	-1,643.65	1,825.49	1.50	-1.50	0.00
7,500.00	3.57	243.63	7,247.31	-797.58	-1,650.40	1,833.01	1.50	-1.50	0.00
7,600.00	2.07	243.63	7,347.19	-799.76	-1,654.80	1,837.93	1.50	-1.50	0.00
U_MVRD									
7,648.83	1.34	243.63	7,396.00	-800.40	-1,656.10	1,839.38	1.50	-1.50	0.00
7,700.00	0.57	243.63	7,447.16	-800.78	-1,656.86	1,840.23	1.50	-1.50	0.00
Start 4491.00 hold at 7737.84 MD									
7,737.84	0.00	0.00	7,485.00	-800.86	-1,657.03	1,840.42	1.50	-1.50	0.00
7,800.00	0.00	0.00	7,547.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
7,900.00	0.00	0.00	7,647.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
8,000.00	0.00	0.00	7,747.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
8,100.00	0.00	0.00	7,847.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
8,200.00	0.00	0.00	7,947.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
8,300.00	0.00	0.00	8,047.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
8,400.00	0.00	0.00	8,147.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
TOP GAS									
8,448.84	0.00	0.00	8,196.00	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
8,500.00	0.00	0.00	8,247.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
8,600.00	0.00	0.00	8,347.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
8,700.00	0.00	0.00	8,447.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
8,800.00	0.00	0.00	8,547.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
8,900.00	0.00	0.00	8,647.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
9,000.00	0.00	0.00	8,747.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
9,100.00	0.00	0.00	8,847.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
9,200.00	0.00	0.00	8,947.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
9,300.00	0.00	0.00	9,047.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
9,400.00	0.00	0.00	9,147.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
9,500.00	0.00	0.00	9,247.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
9,600.00	0.00	0.00	9,347.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
9,700.00	0.00	0.00	9,447.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
9,800.00	0.00	0.00	9,547.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
9,900.00	0.00	0.00	9,647.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
10,000.00	0.00	0.00	9,747.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
CMEO									
10,018.84	0.00	0.00	9,766.00	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
10,100.00	0.00	0.00	9,847.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
10,200.00	0.00	0.00	9,947.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
10,300.00	0.00	0.00	10,047.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
10,400.00	0.00	0.00	10,147.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
10,500.00	0.00	0.00	10,247.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
10,600.00	0.00	0.00	10,347.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
10,700.00	0.00	0.00	10,447.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
RLNS									
10,748.84	0.00	0.00	10,496.00	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
10,800.00	0.00	0.00	10,547.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00
CZZT									

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well FED RGU 21-12-298 - Slot FED RGU 21-12-298
Company:	Terra Energy Partners, LLP	TVD Reference:	KB=30' @ 6308.00usft (H&P #329)
Project:	Rio Blanco County, CO	MD Reference:	KB=30' @ 6308.00usft (H&P #329)
Site:	RGU 44-1-298	North Reference:	True
Well:	FED RGU 21-12-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 2		

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)	
10,898.84	0.00	0.00	10,646.00	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
10,900.00	0.00	0.00	10,647.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
11,000.00	0.00	0.00	10,747.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
11,100.00	0.00	0.00	10,847.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
11,200.00	0.00	0.00	10,947.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
CRCN										
11,223.84	0.00	0.00	10,971.00	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
11,300.00	0.00	0.00	11,047.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
11,400.00	0.00	0.00	11,147.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
SEGO										
11,483.84	0.00	0.00	11,231.00	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
11,500.00	0.00	0.00	11,247.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
11,600.00	0.00	0.00	11,347.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
11,700.00	0.00	0.00	11,447.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
SEGO_LOWER										
11,728.84	0.00	0.00	11,476.00	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
11,800.00	0.00	0.00	11,547.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
11,900.00	0.00	0.00	11,647.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
12,000.00	0.00	0.00	11,747.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
12,100.00	0.00	0.00	11,847.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
12,200.00	0.00	0.00	11,947.16	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	
TD at 12228.84										
12,228.84	0.00	0.00	11,976.00	-800.86	-1,657.03	1,840.42	0.00	0.00	0.00	

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
FED RGU 21-12-298 - V - plan hits target center - Circle (radius 50.00)	0.00	0.00	8,196.00	-800.86	-1,657.03	1,764,756.20	2,202,672.89	39.898829	-108.342121	
FED RGU 21-12-298 - P - plan hits target center - Point	0.00	0.00	11,976.00	-800.86	-1,657.03	1,764,756.20	2,202,672.89	39.898829	-108.342121	

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")		
1,252.62	1,230.00	13 3/8" Surface Casing	13-3/8	17-1/2		
3,096.26	3,000.00	9 5/8" Intermediate Casing	9-5/8	12-1/4		

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well FED RGU 21-12-298 - Slot FED RGU 21-12-298
Company:	Terra Energy Partners, LLP	TVD Reference:	KB=30' @ 6308.00usft (H&P #329)
Project:	Rio Blanco County, CO	MD Reference:	KB=30' @ 6308.00usft (H&P #329)
Site:	RGU 44-1-298	North Reference:	True
Well:	FED RGU 21-12-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 2		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
30.00	30.00	UINTA				
702.66	700.00	GRRV				
856.85	850.00	GRRV_A_GROOVE				
1,065.13	1,050.00	GRRV_B_GROOVE				
1,377.61	1,350.00	GRRV DISSOLUTION_SURF				
2,315.06	2,250.00	GARDEN_GULCH				
2,492.13	2,420.00	GRRV_ORANGE				
2,575.46	2,500.00	U_WSCH				
5,294.04	5,110.00	G_SAND				
5,564.85	5,370.00	FRUN				
6,387.72	6,160.00	L_WSCH				
6,922.67	6,676.00	OCRK				
7,648.83	7,396.00	U_MVRD				
8,448.84	8,196.00	TOP GAS				
10,018.84	9,766.00	CMEO				
10,748.84	10,496.00	RLNS				
10,898.84	10,646.00	CZZT				
11,223.84	10,971.00	CRCN				
11,483.84	11,231.00	SEGO				
11,728.84	11,476.00	SEGO_LOWER				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
120.00	120.00	0.00	0.00	Start Build 3.50	
234.29	234.19	3.75	1.36	Start DLS 3.00 TFO -144.33	
878.81	871.12	-15.36	-72.43	Start 5775.84 hold at 878.81 MD	
6,654.65	6,416.27	-733.11	-1,520.34	Start Drop -1.50	
7,737.84	7,485.00	-800.86	-1,657.03	Start 4491.00 hold at 7737.84 MD	
12,228.84	11,976.00	-800.86	-1,657.03	TD at 12228.84	