

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

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

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
FED RGU 323-1-298 - VP	8266.00	989.29	-2192.38	1766561.71	2202223.67	39.903744	-108.343922	Circle (Radius: 100.00)
FED RGU 323-1-298 - PBHL	12046.00	989.29	-2192.38	1766561.71	2202223.67	39.903744	-108.343922	Point

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well FED RGU 323-1-298 - Slot FED RGU 323-1-298, True North
 Vertical (TVD) Reference: KB=30' @ 6308.00usft (H&P #329)
 Section (VS) Reference: Slot - FED RGU 323-1-298(0.00N, 0.00E)
 Measured Depth Reference: KB=30' @ 6308.00usft (H&P #329)
 Calculation Method: Minimum Curvature

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 3.00
186.67	2.00	350.00	186.65	1.15	-0.20	0.66	1.16	Start 150.00 hold at 186.67 MD
336.67	2.00	350.00	336.56	6.30	-1.11	3.60	6.40	Start DLS 1.50 TFO -61.16
1588.38	19.82	293.72	1561.82	114.13	-200.93	230.09	235.26	Start 5749.78 hold at 1588.38 MD
7338.16	19.82	293.72	6971.16	898.30	-1985.33	2179.10	2184.37	Start Drop -1.50
8659.17	0.00	0.00	8266.00	989.29	-2192.38	2405.25	2410.53	Start 3780.00 hold at 8659.17 MD
12439.17	0.00	0.00	12046.00	989.29	-2192.38	2405.25	2410.53	TD at 12439.17

WELL DETAILS: FED RGU 323-1-298

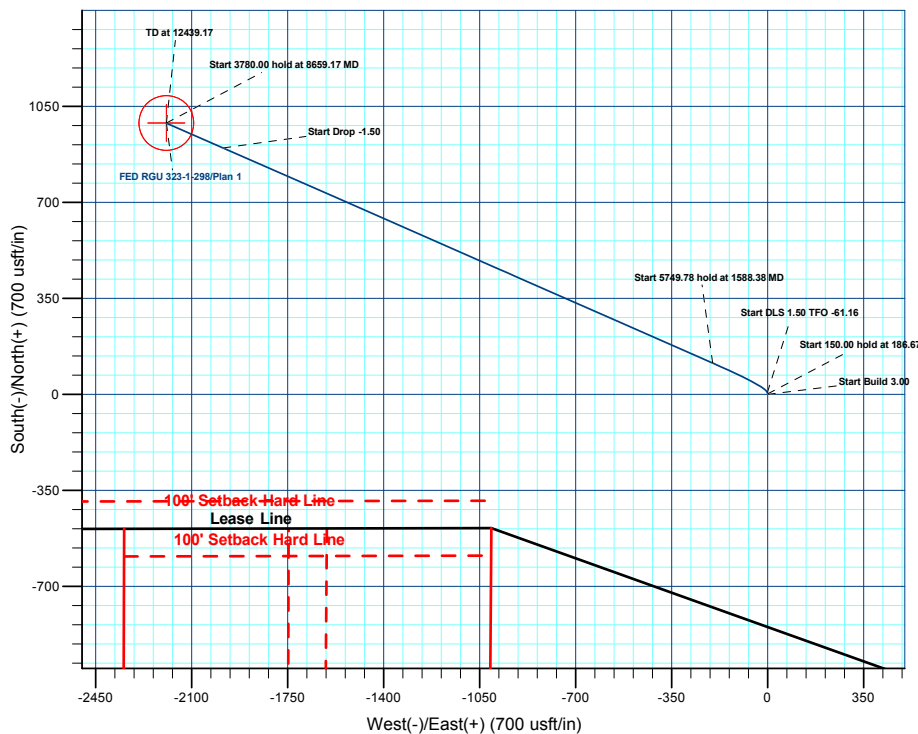
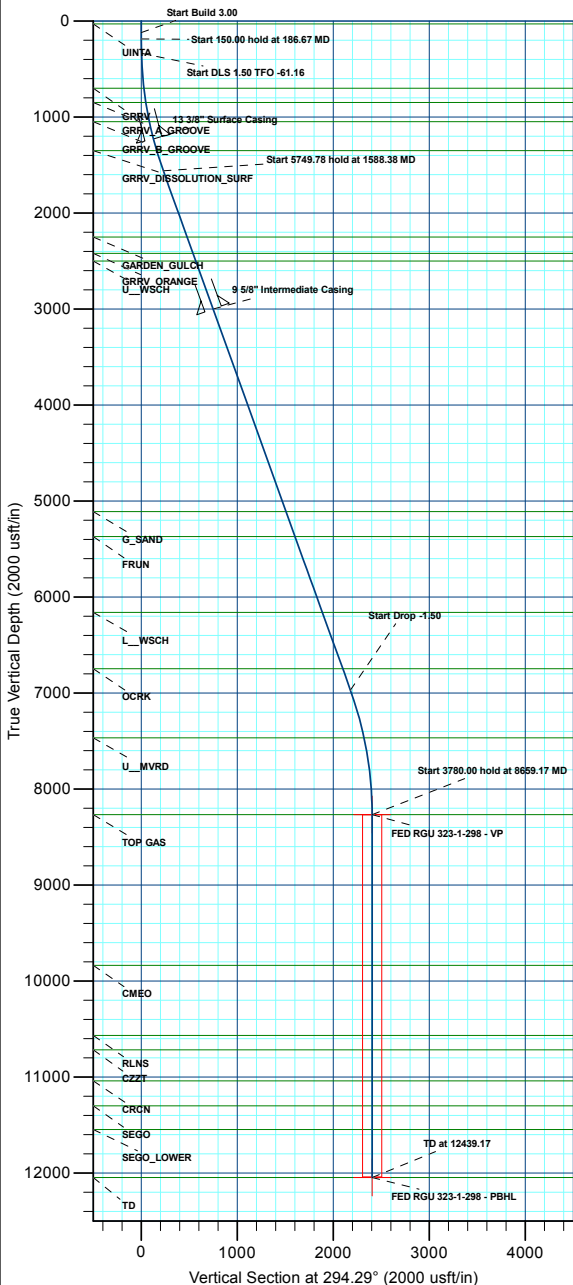
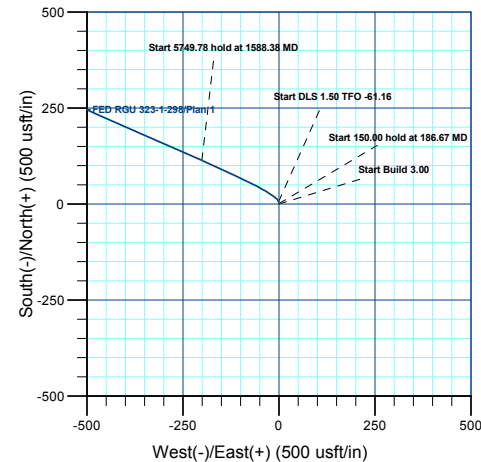
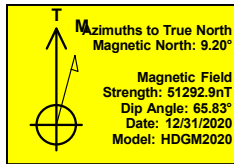
+N/-S	+E/-W	Northing	Ground Elev:	Latitude	Longitude	Slot
0.00	0.00	1765504.47	6278.00	39.901029	-108.336108	FED RGU 323-1-298

CASING DETAILS

TVD	MD	Name	Size
1230.00	1240.86	13 3/8" Surface Casing	13-3/8
3000.00	3117.079	5/8" Intermediate Casing	9-5/8

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
30.00	30.00	UINTA
700.00	701.17	GRRV
850.00	852.57	GRRV_A_GROOVE
1050.00	1055.92	GRRV_B_GROOVE
1350.00	1365.43	GRRV_DISSOLUTION_SURF
2250.00	2319.87	GARDEN_GULCH
2420.00	2500.57	GRRV_ORANGE
2500.00	2585.60	U_WSCH
5110.00	5359.86	G_SAND
5370.00	5636.23	FRUN
6160.00	6475.95	L_WSCH
6746.00	7098.83	OCRK
7466.00	7853.21	U_MVRD
8266.00	8659.17	TOP GAS
9836.00	10229.17	CMEO
10566.00	10959.17	RLNS
10716.00	11109.17	CZTZ
11041.00	11434.17	CRCN
11301.00	11694.17	SEGO
11546.00	11939.17	SEGO_LOWER
12046.00	12439.17	TD





Terra Energy Partners, LLP

Rio Blanco County, CO

RGU 44-1-298

FED RGU 323-1-298 - Slot FED RGU 323-1-298

Wellbore #1

Plan: Plan 1

KLX Well Planning Report

05 May, 2022



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well FED RGU 323-1-298 - Slot FED RGU 323-1-298
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 323-1-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

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 323-1-298 - Slot FED RGU 323-1-298					
Well Position	+N/-S	-0.68 usft	Northing:	1,765,504.47 usft	Latitude:	39.901029
	+E/-W	-44.98 usft	Easting:	2,204,384.10 usft	Longitude:	-108.336109
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 1				
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	294.29	

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	
186.67	2.00	350.00	186.65	1.15	-0.20	3.00	3.00	0.00	350.00	
336.67	2.00	350.00	336.56	6.30	-1.11	0.00	0.00	0.00	0.00	
1,588.38	19.82	293.72	1,561.82	114.13	-200.93	1.50	1.42	-4.50	-61.16	
7,338.16	19.82	293.72	6,971.16	898.30	-1,985.33	0.00	0.00	0.00	0.00	
8,659.17	0.00	0.00	8,266.00	989.29	-2,192.38	1.50	-1.50	0.00	180.00	FED RGU 323-1-298
12,439.17	0.00	0.00	12,046.00	989.29	-2,192.38	0.00	0.00	0.00	0.00	FED RGU 323-1-298

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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 323-1-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

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 3.00									
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00
Start 150.00 hold at 186.67 MD									
186.67	2.00	350.00	186.65	1.15	-0.20	0.66	3.00	3.00	0.00
200.00	2.00	350.00	199.98	1.60	-0.28	0.92	0.00	0.00	0.00
300.00	2.00	350.00	299.92	5.04	-0.89	2.88	0.00	0.00	0.00
Start DLS 1.50 TFO -61.16									
336.67	2.00	350.00	336.56	6.30	-1.11	3.60	0.00	0.00	0.00
400.00	2.60	331.29	399.84	8.65	-1.99	5.37	1.50	0.94	-29.54
500.00	3.84	315.98	499.69	13.04	-5.40	10.29	1.50	1.24	-15.31
600.00	5.22	308.42	599.37	18.27	-11.29	17.81	1.50	1.38	-7.56
700.00	6.65	304.07	698.84	24.34	-19.65	27.92	1.50	1.43	-4.36
GRRV									
701.17	6.67	304.03	700.00	24.42	-19.76	28.06	1.50	1.45	-3.41
800.00	8.11	301.26	798.01	31.24	-30.47	40.63	1.50	1.46	-2.80
GRRV_A_GROOVE									
852.57	8.88	300.15	850.00	35.20	-37.15	48.34	1.50	1.47	-2.11
900.00	9.58	299.30	896.82	38.97	-43.75	55.91	1.50	1.47	-1.79
1,000.00	11.05	297.86	995.20	47.52	-59.48	73.76	1.50	1.48	-1.44
GRRV_B_GROOVE									
1,055.92	11.88	297.21	1,050.00	52.66	-69.34	84.86	1.50	1.48	-1.16
1,100.00	12.54	296.76	1,093.08	56.89	-77.65	94.17	1.50	1.48	-1.03
1,200.00	14.02	295.89	1,190.41	67.06	-98.24	117.13	1.50	1.49	-0.87
13 3/8" Surface Casing									
1,240.86	14.63	295.58	1,230.00	71.45	-107.35	127.24	1.50	1.49	-0.75
1,300.00	15.51	295.18	1,287.10	78.04	-121.24	142.61	1.50	1.49	-0.68
GRRV DISSOLUTION SURF									
1,365.43	16.49	294.79	1,350.00	85.66	-137.59	160.65	1.50	1.49	-0.60
1,400.00	17.00	294.59	1,383.10	89.82	-146.64	170.60	1.50	1.49	-0.55
1,500.00	18.50	294.10	1,478.34	102.38	-174.41	201.09	1.50	1.49	-0.49
Start 5749.78 hold at 1588.38 MD									
1,588.38	19.82	293.72	1,561.82	114.13	-200.93	230.09	1.50	1.49	-0.43
1,600.00	19.82	293.72	1,572.75	115.72	-204.53	234.03	0.00	0.00	0.00
1,700.00	19.82	293.72	1,666.83	129.36	-235.57	267.92	0.00	0.00	0.00
1,800.00	19.82	293.72	1,760.91	142.99	-266.60	301.82	0.00	0.00	0.00
1,900.00	19.82	293.72	1,854.99	156.63	-297.63	335.72	0.00	0.00	0.00
2,000.00	19.82	293.72	1,949.07	170.27	-328.67	369.61	0.00	0.00	0.00
2,100.00	19.82	293.72	2,043.15	183.91	-359.70	403.51	0.00	0.00	0.00
2,200.00	19.82	293.72	2,137.23	197.55	-390.74	437.41	0.00	0.00	0.00
2,300.00	19.82	293.72	2,231.31	211.19	-421.77	471.31	0.00	0.00	0.00
GARDEN_GULCH									
2,319.87	19.82	293.72	2,250.00	213.90	-427.94	478.04	0.00	0.00	0.00
2,400.00	19.82	293.72	2,325.39	224.82	-452.81	505.20	0.00	0.00	0.00
2,500.00	19.82	293.72	2,419.47	238.46	-483.84	539.10	0.00	0.00	0.00
GRRV_ORANGE									
2,500.57	19.82	293.72	2,420.00	238.54	-484.02	539.29	0.00	0.00	0.00
U_WSCH									
2,585.60	19.82	293.72	2,500.00	250.14	-510.41	568.12	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 323-1-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

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)	
2,600.00	19.82	293.72	2,513.54	252.10	-514.87	573.00	0.00	0.00	0.00	
2,700.00	19.82	293.72	2,607.62	265.74	-545.91	606.89	0.00	0.00	0.00	
2,800.00	19.82	293.72	2,701.70	279.38	-576.94	640.79	0.00	0.00	0.00	
2,900.00	19.82	293.72	2,795.78	293.01	-607.98	674.69	0.00	0.00	0.00	
3,000.00	19.82	293.72	2,889.86	306.65	-639.01	708.58	0.00	0.00	0.00	
3,100.00	19.82	293.72	2,983.94	320.29	-670.05	742.48	0.00	0.00	0.00	
9 5/8" Intermediate Casing										
3,117.07	19.82	293.72	3,000.00	322.62	-675.34	748.27	0.00	0.00	0.00	
3,200.00	19.82	293.72	3,078.02	333.93	-701.08	776.38	0.00	0.00	0.00	
3,300.00	19.82	293.72	3,172.10	347.57	-732.11	810.28	0.00	0.00	0.00	
3,400.00	19.82	293.72	3,266.18	361.21	-763.15	844.17	0.00	0.00	0.00	
3,500.00	19.82	293.72	3,360.26	374.84	-794.18	878.07	0.00	0.00	0.00	
3,600.00	19.82	293.72	3,454.34	388.48	-825.22	911.97	0.00	0.00	0.00	
3,700.00	19.82	293.72	3,548.41	402.12	-856.25	945.86	0.00	0.00	0.00	
3,800.00	19.82	293.72	3,642.49	415.76	-887.28	979.76	0.00	0.00	0.00	
3,900.00	19.82	293.72	3,736.57	429.40	-918.32	1,013.66	0.00	0.00	0.00	
4,000.00	19.82	293.72	3,830.65	443.04	-949.35	1,047.56	0.00	0.00	0.00	
4,100.00	19.82	293.72	3,924.73	456.67	-980.39	1,081.45	0.00	0.00	0.00	
4,200.00	19.82	293.72	4,018.81	470.31	-1,011.42	1,115.35	0.00	0.00	0.00	
4,300.00	19.82	293.72	4,112.89	483.95	-1,042.46	1,149.25	0.00	0.00	0.00	
4,400.00	19.82	293.72	4,206.97	497.59	-1,073.49	1,183.14	0.00	0.00	0.00	
4,500.00	19.82	293.72	4,301.05	511.23	-1,104.52	1,217.04	0.00	0.00	0.00	
4,600.00	19.82	293.72	4,395.13	524.86	-1,135.56	1,250.94	0.00	0.00	0.00	
4,700.00	19.82	293.72	4,489.21	538.50	-1,166.59	1,284.84	0.00	0.00	0.00	
4,800.00	19.82	293.72	4,583.28	552.14	-1,197.63	1,318.73	0.00	0.00	0.00	
4,900.00	19.82	293.72	4,677.36	565.78	-1,228.66	1,352.63	0.00	0.00	0.00	
5,000.00	19.82	293.72	4,771.44	579.42	-1,259.70	1,386.53	0.00	0.00	0.00	
5,100.00	19.82	293.72	4,865.52	593.06	-1,290.73	1,420.42	0.00	0.00	0.00	
5,200.00	19.82	293.72	4,959.60	606.69	-1,321.76	1,454.32	0.00	0.00	0.00	
5,300.00	19.82	293.72	5,053.68	620.33	-1,352.80	1,488.22	0.00	0.00	0.00	
G_SAND										
5,359.86	19.82	293.72	5,110.00	628.50	-1,371.38	1,508.51	0.00	0.00	0.00	
5,400.00	19.82	293.72	5,147.76	633.97	-1,383.83	1,522.12	0.00	0.00	0.00	
5,500.00	19.82	293.72	5,241.84	647.61	-1,414.87	1,556.01	0.00	0.00	0.00	
5,600.00	19.82	293.72	5,335.92	661.25	-1,445.90	1,589.91	0.00	0.00	0.00	
FRUN										
5,636.23	19.82	293.72	5,370.00	666.19	-1,457.14	1,602.19	0.00	0.00	0.00	
5,700.00	19.82	293.72	5,430.00	674.88	-1,476.94	1,623.81	0.00	0.00	0.00	
5,800.00	19.82	293.72	5,524.08	688.52	-1,507.97	1,657.70	0.00	0.00	0.00	
5,900.00	19.82	293.72	5,618.15	702.16	-1,539.00	1,691.60	0.00	0.00	0.00	
6,000.00	19.82	293.72	5,712.23	715.80	-1,570.04	1,725.50	0.00	0.00	0.00	
6,100.00	19.82	293.72	5,806.31	729.44	-1,601.07	1,759.40	0.00	0.00	0.00	
6,200.00	19.82	293.72	5,900.39	743.08	-1,632.11	1,793.29	0.00	0.00	0.00	
6,300.00	19.82	293.72	5,994.47	756.71	-1,663.14	1,827.19	0.00	0.00	0.00	
6,400.00	19.82	293.72	6,088.55	770.35	-1,694.18	1,861.09	0.00	0.00	0.00	
L_WSCH										
6,475.95	19.82	293.72	6,160.00	780.71	-1,717.74	1,886.83	0.00	0.00	0.00	
6,500.00	19.82	293.72	6,182.63	783.99	-1,725.21	1,894.98	0.00	0.00	0.00	
6,600.00	19.82	293.72	6,276.71	797.63	-1,756.24	1,928.88	0.00	0.00	0.00	
6,700.00	19.82	293.72	6,370.79	811.27	-1,787.28	1,962.78	0.00	0.00	0.00	
6,800.00	19.82	293.72	6,464.87	824.90	-1,818.31	1,996.68	0.00	0.00	0.00	
6,900.00	19.82	293.72	6,558.95	838.54	-1,849.35	2,030.57	0.00	0.00	0.00	

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Site:	RGU 44-1-298	North Reference:	True
Well:	FED RGU 323-1-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey										
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7,000.00	19.82	293.72	6,653.02	852.18	-1,880.38	2,064.47	0.00	0.00	0.00	
OCRK										
7,098.83	19.82	293.72	6,746.00	865.66	-1,911.05	2,097.97	0.00	0.00	0.00	
7,100.00	19.82	293.72	6,747.10	865.82	-1,911.42	2,098.37	0.00	0.00	0.00	
7,200.00	19.82	293.72	6,841.18	879.46	-1,942.45	2,132.26	0.00	0.00	0.00	
7,300.00	19.82	293.72	6,935.26	893.10	-1,973.48	2,166.16	0.00	0.00	0.00	
Start Drop -1.50										
7,338.16	19.82	293.72	6,971.16	898.30	-1,985.33	2,179.10	0.00	0.00	0.00	
7,400.00	18.89	293.72	7,029.51	906.54	-2,004.09	2,199.59	1.50	-1.50	0.00	
7,500.00	17.39	293.72	7,124.54	919.07	-2,032.58	2,230.71	1.50	-1.50	0.00	
7,600.00	15.89	293.72	7,220.35	930.59	-2,058.80	2,259.34	1.50	-1.50	0.00	
7,700.00	14.39	293.72	7,316.87	941.09	-2,082.70	2,285.45	1.50	-1.50	0.00	
7,800.00	12.89	293.72	7,414.05	950.58	-2,104.29	2,309.03	1.50	-1.50	0.00	
U_MVRD										
7,853.21	12.09	293.72	7,466.00	955.21	-2,114.82	2,320.54	1.50	-1.50	0.00	
7,900.00	11.39	293.72	7,511.81	959.04	-2,123.54	2,330.06	1.50	-1.50	0.00	
8,000.00	9.89	293.72	7,610.09	966.46	-2,140.44	2,348.51	1.50	-1.50	0.00	
8,100.00	8.39	293.72	7,708.82	972.85	-2,154.97	2,364.39	1.50	-1.50	0.00	
8,200.00	6.89	293.72	7,807.93	978.20	-2,167.14	2,377.68	1.50	-1.50	0.00	
8,300.00	5.39	293.72	7,907.36	982.50	-2,176.93	2,388.37	1.50	-1.50	0.00	
8,400.00	3.89	293.72	8,007.02	985.75	-2,184.33	2,396.46	1.50	-1.50	0.00	
8,500.00	2.39	293.72	8,106.87	987.96	-2,189.34	2,401.93	1.50	-1.50	0.00	
8,600.00	0.89	293.72	8,206.83	989.11	-2,191.96	2,404.79	1.50	-1.50	0.00	
Start 3780.00 hold at 8659.17 MD - TOP GAS										
8,659.17	0.00	0.00	8,266.00	989.29	-2,192.38	2,405.25	1.50	-1.50	0.00	
8,700.00	0.00	0.00	8,306.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,406.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,506.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,606.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,706.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
9,200.00	0.00	0.00	8,806.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
9,300.00	0.00	0.00	8,906.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
9,400.00	0.00	0.00	9,006.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,106.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,206.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,306.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,406.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,506.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,606.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
10,100.00	0.00	0.00	9,706.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
10,200.00	0.00	0.00	9,806.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
CME0										
10,229.17	0.00	0.00	9,836.00	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
10,300.00	0.00	0.00	9,906.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
10,400.00	0.00	0.00	10,006.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
10,500.00	0.00	0.00	10,106.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
10,600.00	0.00	0.00	10,206.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
10,700.00	0.00	0.00	10,306.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
10,800.00	0.00	0.00	10,406.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
10,900.00	0.00	0.00	10,506.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
RLNS										
10,959.17	0.00	0.00	10,566.00	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well FED RGU 323-1-298 - Slot FED RGU 323-1-298
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 323-1-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

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)	
11,000.00	0.00	0.00	10,606.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
11,100.00	0.00	0.00	10,706.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
CZZT										
11,109.17	0.00	0.00	10,716.00	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
11,200.00	0.00	0.00	10,806.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
11,300.00	0.00	0.00	10,906.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
11,400.00	0.00	0.00	11,006.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
CRCN										
11,434.17	0.00	0.00	11,041.00	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
11,500.00	0.00	0.00	11,106.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
11,600.00	0.00	0.00	11,206.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
SEGO										
11,694.17	0.00	0.00	11,301.00	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
11,700.00	0.00	0.00	11,306.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
11,800.00	0.00	0.00	11,406.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
11,900.00	0.00	0.00	11,506.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
SEGO_LOWER										
11,939.17	0.00	0.00	11,546.00	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
12,000.00	0.00	0.00	11,606.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
12,100.00	0.00	0.00	11,706.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
12,200.00	0.00	0.00	11,806.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
12,300.00	0.00	0.00	11,906.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
12,400.00	0.00	0.00	12,006.83	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	
TD at 12439.17 - TD										
12,439.17	0.00	0.00	12,046.00	989.29	-2,192.38	2,405.25	0.00	0.00	0.00	

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
FED RGU 323-1-298 - V - hit/miss target - Shape - plan hits target center - Circle (radius 100.00)	0.00	0.00	8,266.00	989.29	-2,192.38	1,766,561.71	2,202,223.67	39.903744	-108.343923	
FED RGU 323-1-298 - F - plan hits target center - Point	0.00	0.00	12,046.00	989.29	-2,192.38	1,766,561.71	2,202,223.67	39.903744	-108.343923	

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,240.86	1,230.00	13 3/8" Surface Casing	13-3/8	17-1/2	
3,117.07	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 323-1-298 - Slot FED RGU 323-1-298
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 323-1-298	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
30.00	30.00	UINTA				
701.17	700.00	GRRV				
852.57	850.00	GRRV_A_GROOVE				
1,055.92	1,050.00	GRRV_B_GROOVE				
1,365.43	1,350.00	GRRV DISSOLUTION_SURF				
2,319.87	2,250.00	GARDEN_GULCH				
2,500.57	2,420.00	GRRV_ORANGE				
2,585.60	2,500.00	U_WSCH				
5,359.86	5,110.00	G_SAND				
5,636.23	5,370.00	FRUN				
6,475.95	6,160.00	L_WSCH				
7,098.83	6,746.00	OCRK				
7,853.21	7,466.00	U_MVRD				
8,659.17	8,266.00	TOP GAS				
10,229.17	9,836.00	CMEO				
10,959.17	10,566.00	RLNS				
11,109.17	10,716.00	CZZT				
11,434.17	11,041.00	CRCN				
11,694.17	11,301.00	SEGO				
11,939.17	11,546.00	SEGO_LOWER				
12,439.17	12,046.00	TD				

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 3.00	
186.67	186.65	1.15	-0.20	Start 150.00 hold at 186.67 MD	
336.67	336.56	6.30	-1.11	Start DLS 1.50 TFO -61.16	
1,588.38	1,561.82	114.13	-200.93	Start 5749.78 hold at 1588.38 MD	
7,338.16	6,971.16	898.30	-1,985.33	Start Drop -1.50	
8,659.17	8,266.00	989.29	-2,192.38	Start 3780.00 hold at 8659.17 MD	
12,439.17	12,046.00	989.29	-2,192.38	TD at 12439.17	