



Project: Rio Blanco County, CO
 Site: RGU 44-1-298
 Well: FED RGU 521-12-298
 Wellbore: Wellbore #1
 Design: Plan 2
 Latitude: 39.901030
 Longitude: -108.336028
 Ground Level: 6278.00
 KB=30' @ 6308.00usft (H&P #329)



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 521-12-298 - VP	8136.00	-1876.71	-1711.47	1763681.73	2202637.38	39.895878	-108.342127	Circle (Radius: 50.00)
FED RGU 521-12-298 - PBHL	11916.00	-1876.71	-1711.47	1763681.73	2202637.38	39.895878	-108.342127	Point

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well FED RGU 521-12-298 - Slot FED RGU 521-12-298, True North
 Vertical (TVD) Reference: KB=30' @ 6308.00usft (H&P #329)
 Section (VS) Reference: Slot - FED RGU 521-12-298(0.00N, 0.00E)
 Measured Depth Reference: KB=30' @ 6308.00usft (H&P #329)
 Calculation Method: Minimum Curvature

ANNOTATIONS

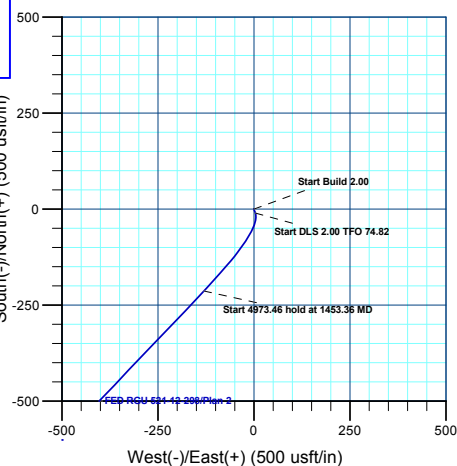
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	Start Build 2.00
370.00	5.00	160.00	369.68	-10.24	3.73	5.06	10.90	Start DLS 2.00 TFO 74.82
1453.36	23.45	223.55	1418.76	-213.29	-130.26	245.37	260.18	Start 4973.46 hold at 1453.36 MD
6426.82	23.45	223.55	5981.33	-1647.99	-1494.05	2224.41	2239.65	Start Drop -1.50
7990.39	0.00	0.00	7501.60	-1876.71	-1711.47	2539.92	2555.22	Start 4414.40 hold at 7990.39 MD
12404.79	0.00	0.00	11916.00	-1876.71	-1711.47	2539.92	2555.22	TD at 12404.79

WELL DETAILS: FED RGU 521-12-298

+N/-S	+E/-W	Northing	Ground Elev.	Latitude	Longitude	Slot
0.00	0.00	1765504.11	6278.00	39.901030	-108.336028	FED RGU 521-12-298

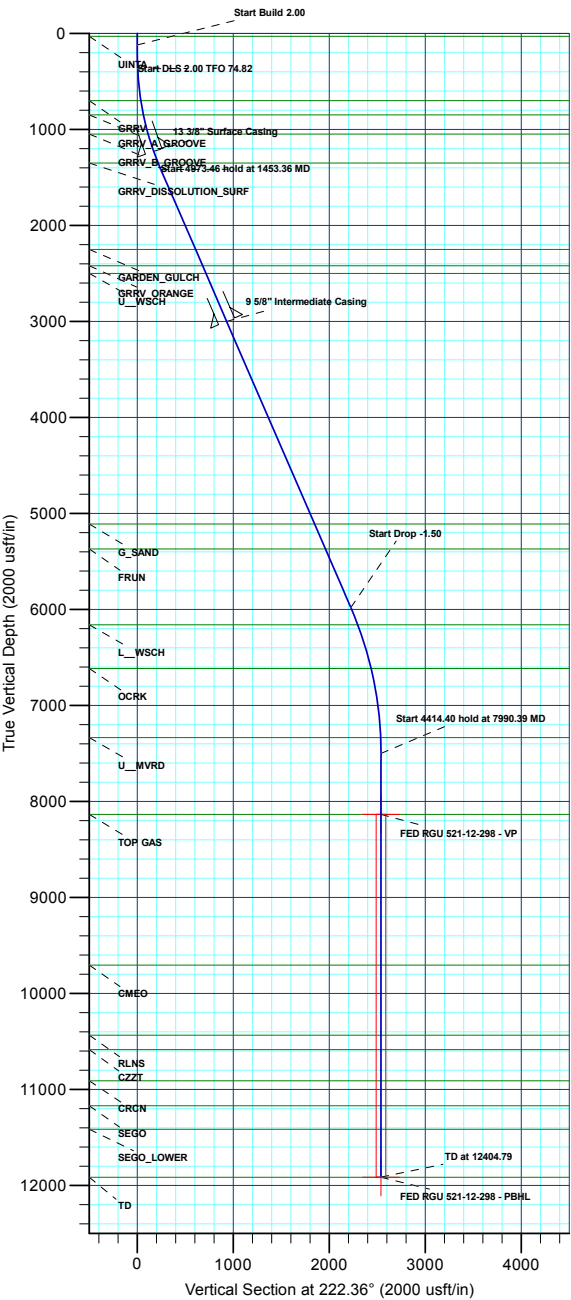
CASING DETAILS

TVD	MD	Name	Size
1230.00	1250.47	13 3/8" Surface Casing	13-3/8
3000.00	3177.00	5/8" Intermediate Casing	9-5/8

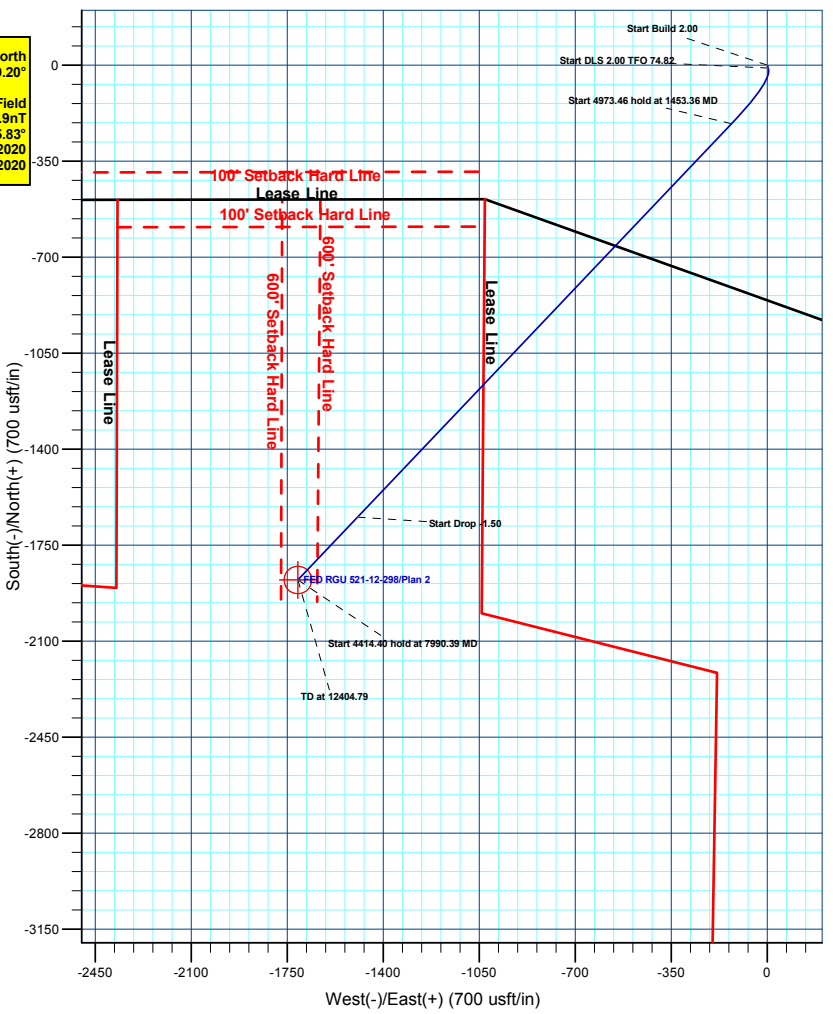


FORMATION TOP DETAILS

TVDPath	MDPath	Formation
30.00	30.00	UINTA
700.00	702.77	GRRV
850.00	855.41	GRRV_A_GROOVE
1050.00	1061.51	GRRV_B_GROOVE
1350.00	1378.81	GRRV DISSOLUTION_SURF
2250.00	2359.46	GARDEN_GULCH
2420.00	2544.77	GRRV_ORANGE
2500.00	2631.97	U_WSCH
5110.00	5477.02	G_SAND
5370.00	5760.43	FRUN
6160.00	6619.55	L_WSCH
6616.00	7096.66	OCRK
7336.00	7824.74	U_MVRD
8136.00	8624.79	TOP GAS
9706.00	10194.79	CMEO
10436.00	10924.79	RLNS
10586.00	11074.79	CZTZ
10911.00	11399.79	CRCN
11171.00	11659.79	SEGO
11416.00	11904.79	SEGO_LOWER



M Azimuths to True North
 Magnetic North: 9.20°
 Magnetic Field Strength: 51292.9nT
 Dip Angle: 65.83°
 Date: 12/31/2020
 Model: HDGM2020





Terra Energy Partners, LLP

Rio Blanco County, CO

RGU 44-1-298

FED RGU 521-12-298 - Slot FED RGU 521-12-298

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 521-12-298 - Slot FED RGU 521-12-298
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 521-12-298	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 521-12-298 - Slot FED RGU 521-12-298					
Well Position	+N/-S	-0.34 usft	Northing:	1,765,504.11 usft	Latitude:	39.901030
	+E/-W	-22.49 usft	Easting:	2,204,406.59 usft	Longitude:	-108.336028
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	222.36

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	
370.00	5.00	160.00	369.68	-10.24	3.73	2.00	2.00	0.00	160.00	
1,453.36	23.45	223.55	1,418.76	-213.29	-130.26	2.00	1.70	5.87	74.82	
6,426.82	23.45	223.55	5,981.33	-1,647.99	-1,494.05	0.00	0.00	0.00	0.00	
7,990.39	0.00	0.00	7,501.60	-1,876.71	-1,711.47	1.50	-1.50	0.00	180.00	
12,404.79	0.00	0.00	11,916.00	-1,876.71	-1,711.47	0.00	0.00	0.00	0.00	FED RGU 521-12-298

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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 521-12-298	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 2.00									
120.00	0.00	0.00	120.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	1.60	160.00	199.99	-1.05	0.38	0.52	2.00	2.00	0.00
300.00	3.60	160.00	299.88	-5.31	1.93	2.62	2.00	2.00	0.00
Start DLS 2.00 TFO 74.82									
370.00	5.00	160.00	369.68	-10.24	3.73	5.06	2.00	2.00	0.00
400.00	5.19	166.42	399.56	-12.79	4.49	6.42	2.00	0.63	21.39
500.00	6.21	183.88	499.08	-22.58	5.19	13.19	2.00	1.02	17.46
600.00	7.63	195.68	598.35	-34.37	3.03	23.35	2.00	1.42	11.80
700.00	9.26	203.58	697.27	-48.13	-1.98	36.90	2.00	1.63	7.90
GRRV									
702.77	9.31	203.76	700.00	-48.54	-2.16	37.32	2.00	1.71	6.47
800.00	11.01	209.06	795.70	-63.85	-9.84	53.81	2.00	1.76	5.45
GRRV_A_GROOVE									
855.41	12.02	211.41	850.00	-73.41	-15.42	64.63	2.00	1.81	4.23
900.00	12.84	213.03	893.54	-81.52	-20.54	74.07	2.00	1.84	3.64
1,000.00	14.71	216.01	990.66	-101.11	-34.06	97.66	2.00	1.87	2.98
GRRV_B_GROOVE									
1,061.51	15.88	217.50	1,050.00	-114.10	-43.77	113.80	2.00	1.90	2.42
1,100.00	16.61	218.33	1,086.95	-122.59	-50.39	124.54	2.00	1.91	2.15
1,200.00	18.53	220.18	1,182.28	-145.95	-69.51	154.67	2.00	1.92	1.85
13 3/8" Surface Casing									
1,250.47	19.51	220.98	1,230.00	-158.44	-80.21	171.11	2.00	1.93	1.59
1,300.00	20.47	221.70	1,276.54	-171.14	-91.39	188.04	2.00	1.94	1.44
GRRV DISSOLUTION SURF									
1,378.81	22.00	222.71	1,350.00	-192.28	-110.57	216.58	2.00	1.95	1.28
1,400.00	22.41	222.96	1,369.62	-198.15	-116.01	224.58	2.00	1.95	1.18
Start 4973.46 hold at 1453.36 MD									
1,453.36	23.45	223.55	1,418.76	-213.29	-130.26	245.37	2.00	1.95	1.11
1,500.00	23.45	223.55	1,461.55	-226.75	-143.05	263.93	0.00	0.00	0.00
1,600.00	23.45	223.55	1,553.29	-255.59	-170.47	303.72	0.00	0.00	0.00
1,700.00	23.45	223.55	1,645.03	-284.44	-197.89	343.51	0.00	0.00	0.00
1,800.00	23.45	223.55	1,736.76	-313.29	-225.31	383.31	0.00	0.00	0.00
1,900.00	23.45	223.55	1,828.50	-342.13	-252.73	423.10	0.00	0.00	0.00
2,000.00	23.45	223.55	1,920.24	-370.98	-280.16	462.89	0.00	0.00	0.00
2,100.00	23.45	223.55	2,011.98	-399.83	-307.58	502.68	0.00	0.00	0.00
2,200.00	23.45	223.55	2,103.72	-428.68	-335.00	542.47	0.00	0.00	0.00
2,300.00	23.45	223.55	2,195.46	-457.52	-362.42	582.27	0.00	0.00	0.00
GARDEN_GULCH									
2,359.46	23.45	223.55	2,250.00	-474.67	-378.72	605.93	0.00	0.00	0.00
2,400.00	23.45	223.55	2,287.19	-486.37	-389.84	622.06	0.00	0.00	0.00
2,500.00	23.45	223.55	2,378.93	-515.22	-417.26	661.85	0.00	0.00	0.00
GRRV_ORANGE									
2,544.77	23.45	223.55	2,420.00	-528.13	-429.54	679.66	0.00	0.00	0.00
2,600.00	23.45	223.55	2,470.67	-544.06	-444.68	701.64	0.00	0.00	0.00
U_WSCH									
2,631.97	23.45	223.55	2,500.00	-553.29	-453.45	714.36	0.00	0.00	0.00
2,700.00	23.45	223.55	2,562.41	-572.91	-472.11	741.43	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 521-12-298	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	23.45	223.55	2,654.15	-601.76	-499.53	781.23	0.00	0.00	0.00
2,900.00	23.45	223.55	2,745.89	-630.60	-526.95	821.02	0.00	0.00	0.00
3,000.00	23.45	223.55	2,837.62	-659.45	-554.37	860.81	0.00	0.00	0.00
3,100.00	23.45	223.55	2,929.36	-688.30	-581.79	900.60	0.00	0.00	0.00
9 5/8" Intermediate Casing									
3,177.00	23.45	223.55	3,000.00	-710.51	-602.90	931.24	0.00	0.00	0.00
3,200.00	23.45	223.55	3,021.10	-717.15	-609.21	940.39	0.00	0.00	0.00
3,300.00	23.45	223.55	3,112.84	-745.99	-636.63	980.19	0.00	0.00	0.00
3,400.00	23.45	223.55	3,204.58	-774.84	-664.05	1,019.98	0.00	0.00	0.00
3,500.00	23.45	223.55	3,296.32	-803.69	-691.48	1,059.77	0.00	0.00	0.00
3,600.00	23.45	223.55	3,388.05	-832.53	-718.90	1,099.56	0.00	0.00	0.00
3,700.00	23.45	223.55	3,479.79	-861.38	-746.32	1,139.35	0.00	0.00	0.00
3,800.00	23.45	223.55	3,571.53	-890.23	-773.74	1,179.15	0.00	0.00	0.00
3,900.00	23.45	223.55	3,663.27	-919.08	-801.16	1,218.94	0.00	0.00	0.00
4,000.00	23.45	223.55	3,755.01	-947.92	-828.58	1,258.73	0.00	0.00	0.00
4,100.00	23.45	223.55	3,846.75	-976.77	-856.00	1,298.52	0.00	0.00	0.00
4,200.00	23.45	223.55	3,938.48	-1,005.62	-883.42	1,338.31	0.00	0.00	0.00
4,300.00	23.45	223.55	4,030.22	-1,034.46	-910.85	1,378.11	0.00	0.00	0.00
4,400.00	23.45	223.55	4,121.96	-1,063.31	-938.27	1,417.90	0.00	0.00	0.00
4,500.00	23.45	223.55	4,213.70	-1,092.16	-965.69	1,457.69	0.00	0.00	0.00
4,600.00	23.45	223.55	4,305.44	-1,121.01	-993.11	1,497.48	0.00	0.00	0.00
4,700.00	23.45	223.55	4,397.18	-1,149.85	-1,020.53	1,537.27	0.00	0.00	0.00
4,800.00	23.45	223.55	4,488.91	-1,178.70	-1,047.95	1,577.07	0.00	0.00	0.00
4,900.00	23.45	223.55	4,580.65	-1,207.55	-1,075.37	1,616.86	0.00	0.00	0.00
5,000.00	23.45	223.55	4,672.39	-1,236.39	-1,102.79	1,656.65	0.00	0.00	0.00
5,100.00	23.45	223.55	4,764.13	-1,265.24	-1,130.22	1,696.44	0.00	0.00	0.00
5,200.00	23.45	223.55	4,855.87	-1,294.09	-1,157.64	1,736.23	0.00	0.00	0.00
5,300.00	23.45	223.55	4,947.61	-1,322.93	-1,185.06	1,776.03	0.00	0.00	0.00
5,400.00	23.45	223.55	5,039.34	-1,351.78	-1,212.48	1,815.82	0.00	0.00	0.00
G_SAND									
5,477.02	23.45	223.55	5,110.00	-1,374.00	-1,233.60	1,846.47	0.00	0.00	0.00
5,500.00	23.45	223.55	5,131.08	-1,380.63	-1,239.90	1,855.61	0.00	0.00	0.00
5,600.00	23.45	223.55	5,222.82	-1,409.48	-1,267.32	1,895.40	0.00	0.00	0.00
5,700.00	23.45	223.55	5,314.56	-1,438.32	-1,294.74	1,935.19	0.00	0.00	0.00
FRUN									
5,760.43	23.45	223.55	5,370.00	-1,455.76	-1,311.31	1,959.24	0.00	0.00	0.00
5,800.00	23.45	223.55	5,406.30	-1,467.17	-1,322.16	1,974.99	0.00	0.00	0.00
5,900.00	23.45	223.55	5,498.04	-1,496.02	-1,349.59	2,014.78	0.00	0.00	0.00
6,000.00	23.45	223.55	5,589.77	-1,524.86	-1,377.01	2,054.57	0.00	0.00	0.00
6,100.00	23.45	223.55	5,681.51	-1,553.71	-1,404.43	2,094.36	0.00	0.00	0.00
6,200.00	23.45	223.55	5,773.25	-1,582.56	-1,431.85	2,134.15	0.00	0.00	0.00
6,300.00	23.45	223.55	5,864.99	-1,611.41	-1,459.27	2,173.95	0.00	0.00	0.00
6,400.00	23.45	223.55	5,956.73	-1,640.25	-1,486.69	2,213.74	0.00	0.00	0.00
Start Drop -1.50									
6,426.82	23.45	223.55	5,981.33	-1,647.99	-1,494.05	2,224.41	0.00	0.00	0.00
6,500.00	22.36	223.55	6,048.74	-1,668.63	-1,513.67	2,252.88	1.50	-1.50	0.00
6,600.00	20.86	223.55	6,141.71	-1,695.32	-1,539.04	2,289.70	1.50	-1.50	0.00
L_WSCH									
6,619.55	20.56	223.55	6,160.00	-1,700.33	-1,543.80	2,296.61	1.50	-1.50	0.00
6,700.00	19.36	223.55	6,235.61	-1,720.23	-1,562.72	2,324.07	1.50	-1.50	0.00
6,800.00	17.86	223.55	6,330.39	-1,743.36	-1,584.70	2,355.96	1.50	-1.50	0.00
6,900.00	16.36	223.55	6,425.96	-1,764.68	-1,604.97	2,385.37	1.50	-1.50	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 521-12-298	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)	
7,000.00	14.86	223.55	6,522.27	-1,784.17	-1,623.50	2,412.27	1.50	-1.50	0.00	
OCRK										
7,096.66	13.41	223.55	6,616.00	-1,801.28	-1,639.76	2,435.86	1.50	-1.50	0.00	
7,100.00	13.36	223.55	6,619.25	-1,801.84	-1,640.29	2,436.63	1.50	-1.50	0.00	
7,200.00	11.86	223.55	6,716.84	-1,817.66	-1,655.33	2,458.45	1.50	-1.50	0.00	
7,300.00	10.36	223.55	6,814.96	-1,831.62	-1,668.60	2,477.71	1.50	-1.50	0.00	
7,400.00	8.86	223.55	6,913.56	-1,843.71	-1,680.09	2,494.39	1.50	-1.50	0.00	
7,500.00	7.36	223.55	7,012.56	-1,853.93	-1,689.81	2,508.49	1.50	-1.50	0.00	
7,600.00	5.86	223.55	7,111.89	-1,862.27	-1,697.73	2,519.99	1.50	-1.50	0.00	
7,700.00	4.36	223.55	7,211.49	-1,868.72	-1,703.87	2,528.89	1.50	-1.50	0.00	
7,800.00	2.86	223.55	7,311.29	-1,873.28	-1,708.20	2,535.17	1.50	-1.50	0.00	
U_MVRD										
7,824.74	2.48	223.55	7,336.00	-1,874.11	-1,708.99	2,536.33	1.50	-1.50	0.00	
7,900.00	1.36	223.55	7,411.22	-1,875.94	-1,710.73	2,538.85	1.50	-1.50	0.00	
Start 4414.40 hold at 7990.39 MD										
7,990.39	0.00	0.00	7,501.60	-1,876.71	-1,711.47	2,539.92	1.50	-1.50	0.00	
8,000.00	0.00	0.00	7,511.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
8,100.00	0.00	0.00	7,611.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
8,200.00	0.00	0.00	7,711.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
8,300.00	0.00	0.00	7,811.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
8,400.00	0.00	0.00	7,911.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,011.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
8,600.00	0.00	0.00	8,111.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
TOP GAS										
8,624.79	0.00	0.00	8,136.00	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
8,700.00	0.00	0.00	8,211.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
8,800.00	0.00	0.00	8,311.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,411.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,511.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
9,100.00	0.00	0.00	8,611.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
9,200.00	0.00	0.00	8,711.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
9,300.00	0.00	0.00	8,811.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
9,400.00	0.00	0.00	8,911.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
9,500.00	0.00	0.00	9,011.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
9,600.00	0.00	0.00	9,111.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
9,700.00	0.00	0.00	9,211.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
9,800.00	0.00	0.00	9,311.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
9,900.00	0.00	0.00	9,411.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
10,000.00	0.00	0.00	9,511.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
10,100.00	0.00	0.00	9,611.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
CME0										
10,194.79	0.00	0.00	9,706.00	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
10,200.00	0.00	0.00	9,711.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
10,300.00	0.00	0.00	9,811.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
10,400.00	0.00	0.00	9,911.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
10,500.00	0.00	0.00	10,011.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
10,600.00	0.00	0.00	10,111.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
10,700.00	0.00	0.00	10,211.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
10,800.00	0.00	0.00	10,311.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
10,900.00	0.00	0.00	10,411.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
RLNS										
10,924.79	0.00	0.00	10,436.00	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well FED RGU 521-12-298 - Slot FED RGU 521-12-298
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 521-12-298	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)	
11,000.00	0.00	0.00	10,511.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
CZZT										
11,074.79	0.00	0.00	10,586.00	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
11,100.00	0.00	0.00	10,611.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
11,200.00	0.00	0.00	10,711.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
11,300.00	0.00	0.00	10,811.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
CRCN										
11,399.79	0.00	0.00	10,911.00	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
11,400.00	0.00	0.00	10,911.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
11,500.00	0.00	0.00	11,011.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
11,600.00	0.00	0.00	11,111.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
SEGO										
11,659.79	0.00	0.00	11,171.00	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
11,700.00	0.00	0.00	11,211.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
11,800.00	0.00	0.00	11,311.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
11,900.00	0.00	0.00	11,411.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
SEGO_LOWER										
11,904.79	0.00	0.00	11,416.00	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
12,000.00	0.00	0.00	11,511.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
12,100.00	0.00	0.00	11,611.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
12,200.00	0.00	0.00	11,711.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
12,300.00	0.00	0.00	11,811.21	-1,876.71	-1,711.47	2,539.92	0.00	0.00	0.00	
TD at 12404.79										
12,404.79	0.00	0.00	11,916.00	-1,876.71	-1,711.47	2,539.92	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 521-12-298 - - hit/miss target - Shape	0.00	0.00	8,136.00	-1,876.71	-1,711.47	1,763,681.73	2,202,637.38	39.895878	-108.342128
FED RGU 521-12-298 - - plan hits target center - Circle (radius 50.00)									
FED RGU 521-12-298 - - plan hits target center - Point	0.00	0.00	11,916.00	-1,876.71	-1,711.47	1,763,681.73	2,202,637.38	39.895878	-108.342128

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,250.47	1,230.00	13 3/8" Surface Casing	13-3/8	17-1/2	
3,177.00	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 521-12-298 - Slot FED RGU 521-12-298
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 521-12-298	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				
702.77	700.00	GRRV				
855.41	850.00	GRRV_A_GROOVE				
1,061.51	1,050.00	GRRV_B_GROOVE				
1,378.81	1,350.00	GRRV DISSOLUTION_SURF				
2,359.46	2,250.00	GARDEN_GULCH				
2,544.77	2,420.00	GRRV_ORANGE				
2,631.97	2,500.00	U_WSCH				
5,477.02	5,110.00	G_SAND				
5,760.43	5,370.00	FRUN				
6,619.55	6,160.00	L_WSCH				
7,096.66	6,616.00	OCRK				
7,824.74	7,336.00	U_MVRD				
8,624.79	8,136.00	TOP GAS				
10,194.79	9,706.00	CMEO				
10,924.79	10,436.00	RLNS				
11,074.79	10,586.00	CZZT				
11,399.79	10,911.00	CRCN				
11,659.79	11,171.00	SEGO				
11,904.79	11,416.00	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 2.00	
370.00	369.68	-10.24	3.73	Start DLS 2.00 TFO 74.82	
1,453.36	1,418.76	-213.29	-130.26	Start 4973.46 hold at 1453.36 MD	
6,426.82	5,981.33	-1,647.99	-1,494.05	Start Drop -1.50	
7,990.39	7,501.60	-1,876.71	-1,711.47	Start 4414.40 hold at 7990.39 MD	
12,404.79	11,916.00	-1,876.71	-1,711.47	TD at 12404.79	