



Terra Energy Partners, LLP

Rio Blanco County, CO

Sec 18, T2S, R97W

RG 43-7-297

Wellbore #1

Design: Wellbore #1

KLX Survey Report

09 July, 2021



Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well RG 43-7-297
Project:	Rio Blanco County, CO	TVD Reference:	KB=30' @ 6650.90usft (H&P #329)
Site:	Sec 18, T2S, R97W	MD Reference:	KB=30' @ 6650.90usft (H&P #329)
Well:	RG 43-7-297	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

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	Sec 18, T2S, R97W				
Site Position:		Northing:	1,758,376.00 usft	Latitude:	39.881773
From:	Map	Easting:	2,207,919.90 usft	Longitude:	-108.322723
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.78 °

Well	RG 43-7-297					
Well Position	+N/-S	0.00 usft	Northing:	1,758,407.36 usft	Latitude:	39.881859
	+E/-W	0.00 usft	Easting:	2,207,924.57 usft	Longitude:	-108.322710
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	6,620.90 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2021	6/30/2021	9.27	65.87	51,209.60000000

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	24.25	

Survey Program	Date	7/9/2021			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
207.00	12,903.00	KLX MWD Surveys (Wellbore #1)	OWSG (REV5) MWD HDGM	OWSG MWD - Standard	

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
First MWD Survey @ 207.00' MD / 206.90' TVD									
207.00	3.07	25.47	206.90	5.01	2.38	5.54	1.48	1.48	0.00
301.00	4.88	26.53	300.67	10.86	5.25	12.06	1.93	1.93	1.13
394.00	7.16	25.56	393.15	19.62	9.52	21.80	2.45	2.45	-1.04
488.00	8.57	15.63	486.27	31.66	13.94	34.59	2.08	1.50	-10.56
582.00	9.67	7.10	579.08	46.24	16.80	49.06	1.85	1.17	-9.07
675.00	11.34	8.95	670.52	63.02	19.19	65.34	1.83	1.80	1.99
768.00	13.01	16.77	761.43	82.08	23.63	84.54	2.52	1.80	8.41
862.00	14.33	20.37	852.77	103.11	30.73	106.64	1.67	1.40	3.83
956.00	16.92	20.81	943.29	126.81	39.64	131.90	2.76	2.76	0.47

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Survey									
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1,049.00	21.18	24.07	1,031.18	154.81	51.31	162.23	4.72	4.58	3.51
1,143.00	22.59	25.82	1,118.40	186.57	66.10	197.26	1.65	1.50	1.86
1,238.00	20.79	20.81	1,206.68	218.76	80.04	232.33	2.72	-1.89	-5.27
1,332.00	20.92	17.47	1,294.53	250.37	91.00	265.65	1.27	0.14	-3.55
1,426.00	21.66	19.58	1,382.11	282.72	101.86	299.61	1.13	0.79	2.24
1,520.00	25.84	25.56	1,468.14	317.56	116.52	337.40	5.13	4.45	6.36
1,615.00	28.78	26.61	1,552.55	356.70	135.70	380.96	3.14	3.09	1.11
1,709.00	28.78	26.88	1,634.93	397.11	156.06	426.17	0.14	0.00	0.29
1,803.00	28.74	27.05	1,717.34	437.42	176.57	471.35	0.10	-0.04	0.18
1,897.00	28.21	28.19	1,799.97	477.13	197.34	516.08	0.81	-0.56	1.21
1,991.00	27.38	29.16	1,883.12	515.59	218.37	559.78	1.01	-0.88	1.03
2,085.00	26.06	30.21	1,967.08	552.31	239.29	601.86	1.49	-1.40	1.12
2,177.00	25.88	31.54	2,049.79	586.89	259.96	641.87	0.66	-0.20	1.45
2,268.00	24.70	32.42	2,132.07	619.86	280.55	680.39	1.36	-1.30	0.97
2,358.00	24.48	32.42	2,213.91	651.48	300.63	717.47	0.24	-0.24	0.00
2,449.00	24.21	33.38	2,296.82	682.97	321.00	754.55	0.53	-0.30	1.05
2,538.00	22.59	32.50	2,378.49	712.63	340.23	789.49	1.86	-1.82	-0.99
2,630.00	19.07	30.39	2,464.47	740.51	357.33	821.93	3.91	-3.83	-2.29
2,720.00	18.59	27.58	2,549.65	765.91	371.41	850.87	1.14	-0.53	-3.12
2,810.00	18.94	23.54	2,634.87	792.01	383.88	879.80	1.50	0.39	-4.49
2,900.00	20.00	21.52	2,719.73	819.72	395.36	909.78	1.40	1.18	-2.24
2,992.00	21.84	21.87	2,805.66	850.24	407.51	942.59	2.00	2.00	0.38
3,083.00	22.76	20.90	2,889.85	882.40	420.10	977.08	1.09	1.01	-1.07
3,173.00	21.62	20.99	2,973.18	914.14	432.25	1,011.01	1.27	-1.27	0.10
3,263.00	20.39	20.29	3,057.20	944.33	443.62	1,043.21	1.39	-1.37	-0.78
3,352.00	17.14	18.18	3,141.46	971.34	453.09	1,071.72	3.73	-3.65	-2.37
3,430.00	12.79	15.19	3,216.80	990.60	458.94	1,091.69	5.66	-5.58	-3.83
3,533.00	9.10	12.87	3,317.91	1,009.55	463.75	1,110.94	3.61	-3.58	-2.25
3,628.00	10.63	22.19	3,411.51	1,024.99	468.73	1,127.06	2.32	1.61	9.81
3,722.00	11.21	31.33	3,503.81	1,040.82	476.76	1,144.80	1.94	0.62	9.72
3,816.00	14.63	36.07	3,595.42	1,058.23	488.50	1,165.49	3.81	3.64	5.04
3,910.00	16.39	29.48	3,686.00	1,079.37	502.02	1,190.32	2.65	1.87	-7.01
4,004.00	18.59	29.40	3,775.65	1,103.97	515.90	1,218.45	2.34	2.34	-0.09
4,098.00	20.26	25.71	3,864.30	1,131.69	530.32	1,249.65	2.20	1.78	-3.93
4,192.00	21.18	24.21	3,952.22	1,161.85	544.35	1,282.90	1.13	0.98	-1.60
4,286.00	21.31	23.51	4,039.83	1,193.00	558.12	1,316.96	0.30	0.14	-0.74
4,380.00	21.97	23.95	4,127.21	1,224.73	572.07	1,351.62	0.72	0.70	0.47
4,474.00	24.35	26.15	4,213.63	1,258.20	587.76	1,388.58	2.69	2.53	2.34
4,568.00	26.02	23.60	4,298.69	1,294.49	604.55	1,428.57	2.12	1.78	-2.71
4,662.00	26.81	24.56	4,382.88	1,332.67	621.62	1,470.39	0.96	0.84	1.02
4,756.00	27.60	23.42	4,466.48	1,371.93	639.08	1,513.36	1.01	0.84	-1.21
4,850.00	28.21	23.86	4,549.55	1,412.23	656.73	1,557.35	0.68	0.65	0.47
4,945.00	28.56	22.89	4,633.13	1,453.69	674.64	1,602.50	0.61	0.37	-1.02

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5,039.00	29.53	23.68	4,715.30	1,495.60	692.69	1,648.13	1.11	1.03	0.84
5,132.00	29.09	22.89	4,796.40	1,537.42	710.68	1,693.65	0.63	-0.47	-0.85
5,227.00	29.31	25.09	4,879.33	1,579.75	729.53	1,739.99	1.15	0.23	2.32
5,321.00	30.37	26.94	4,960.87	1,621.78	750.05	1,786.73	1.49	1.13	1.97
5,415.00	30.63	27.38	5,041.86	1,664.22	771.83	1,834.38	0.36	0.28	0.47
5,509.00	29.58	25.79	5,123.18	1,706.38	792.94	1,881.49	1.40	-1.12	-1.69
5,604.00	28.65	25.35	5,206.17	1,748.07	812.89	1,927.70	1.00	-0.98	-0.46
5,698.00	30.15	25.97	5,288.07	1,789.66	832.88	1,973.82	1.63	1.60	0.66
5,792.00	29.49	24.83	5,369.62	1,831.89	852.93	2,020.56	0.93	-0.70	-1.21
5,886.00	29.09	27.29	5,451.61	1,873.19	873.12	2,066.51	1.35	-0.43	2.62
5,981.00	28.30	29.05	5,534.94	1,913.40	894.65	2,112.02	1.22	-0.83	1.85
6,075.00	27.07	24.65	5,618.19	1,952.33	914.39	2,155.61	2.54	-1.31	-4.68
6,169.00	27.42	25.35	5,701.76	1,991.33	932.58	2,198.64	0.50	0.37	0.74
6,263.00	26.85	25.09	5,785.41	2,030.11	950.85	2,241.51	0.62	-0.61	-0.28
6,357.00	26.54	26.32	5,869.39	2,068.16	969.16	2,283.72	0.67	-0.33	1.31
6,452.00	28.04	25.44	5,953.82	2,107.35	988.16	2,327.26	1.64	1.58	-0.93
6,546.00	31.86	27.73	6,035.25	2,149.28	1,009.21	2,374.13	4.24	4.06	2.44
6,641.00	31.55	27.29	6,116.07	2,193.56	1,032.27	2,423.98	0.41	-0.33	-0.46
6,735.00	31.99	27.38	6,195.99	2,237.53	1,054.99	2,473.40	0.47	0.47	0.10
6,829.00	31.64	26.76	6,275.87	2,281.65	1,077.55	2,522.89	0.51	-0.37	-0.66
6,924.00	32.17	26.41	6,356.51	2,326.55	1,100.01	2,573.06	0.59	0.56	-0.37
7,018.00	31.51	26.76	6,436.37	2,370.90	1,122.21	2,622.60	0.73	-0.70	0.37
7,112.00	31.86	28.34	6,516.36	2,414.67	1,145.04	2,671.89	0.96	0.37	1.68
7,206.00	31.46	28.78	6,596.37	2,458.00	1,168.63	2,721.09	0.49	-0.43	0.47
7,301.00	29.66	27.81	6,678.17	2,500.52	1,191.53	2,769.27	1.96	-1.89	-1.02
7,395.00	27.07	28.61	6,760.88	2,539.88	1,212.63	2,813.81	2.78	-2.76	0.85
7,489.00	26.81	26.85	6,844.68	2,577.57	1,232.45	2,856.32	0.89	-0.28	-1.87
7,584.00	27.11	26.50	6,929.35	2,616.06	1,251.78	2,899.35	0.36	0.32	-0.37
7,678.00	25.22	26.23	7,013.72	2,653.19	1,270.19	2,940.77	2.01	-2.01	-0.29
7,772.00	23.99	28.08	7,099.18	2,688.02	1,288.04	2,979.85	1.54	-1.31	1.97
7,866.00	22.85	28.25	7,185.44	2,720.96	1,305.67	3,017.13	1.21	-1.21	0.18
7,961.00	22.50	27.73	7,273.09	2,753.30	1,322.86	3,053.67	0.42	-0.37	-0.55
8,055.00	21.36	28.87	7,360.29	2,784.21	1,339.49	3,088.69	1.29	-1.21	1.21
8,149.00	19.73	28.69	7,448.31	2,813.12	1,355.38	3,121.57	1.74	-1.73	-0.19
8,243.00	18.54	27.90	7,537.11	2,840.25	1,369.99	3,152.31	1.30	-1.27	-0.84
8,338.00	17.93	28.34	7,627.34	2,866.47	1,384.00	3,181.97	0.66	-0.64	0.46
8,432.00	17.36	28.43	7,716.92	2,891.53	1,397.54	3,210.38	0.61	-0.61	0.10
8,526.00	16.39	27.81	7,806.87	2,915.60	1,410.41	3,237.61	1.05	-1.03	-0.66
8,620.00	15.56	28.51	7,897.24	2,938.41	1,422.61	3,263.42	0.91	-0.88	0.74
8,714.00	14.46	28.34	7,988.03	2,959.81	1,434.20	3,287.70	1.17	-1.17	-0.18
8,808.00	13.54	29.04	8,079.24	2,979.77	1,445.11	3,310.37	1.00	-0.98	0.74
8,902.00	12.78	28.86	8,170.77	2,998.49	1,455.47	3,331.70	0.81	-0.81	-0.19
8,996.00	11.25	24.56	8,262.71	3,015.94	1,464.30	3,351.23	1.88	-1.63	-4.57

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9,091.00	10.24	24.65	8,356.04	3,032.04	1,471.68	3,368.94	1.06	-1.06	0.09
9,184.00	9.36	23.77	8,447.69	3,046.48	1,478.17	3,384.77	0.96	-0.95	-0.95
9,279.00	8.44	24.74	8,541.54	3,059.88	1,484.21	3,399.47	0.98	-0.97	1.02
9,373.00	7.65	25.79	8,634.62	3,071.78	1,489.82	3,412.62	0.85	-0.84	1.12
9,467.00	7.03	25.27	8,727.84	3,082.61	1,494.99	3,424.63	0.66	-0.66	-0.55
9,561.00	6.77	14.19	8,821.17	3,093.19	1,498.81	3,435.84	1.44	-0.28	-11.79
9,656.00	6.24	12.35	8,915.56	3,103.66	1,501.28	3,446.40	0.60	-0.56	-1.94
9,750.00	4.66	0.83	9,009.13	3,112.47	1,502.43	3,454.90	2.04	-1.68	-12.26
9,844.00	3.25	339.48	9,102.91	3,118.78	1,501.55	3,460.30	2.14	-1.50	-22.71
9,938.00	2.90	333.23	9,196.77	3,123.40	1,499.55	3,463.69	0.52	-0.37	-6.65
10,032.00	2.68	337.01	9,290.66	3,127.55	1,497.62	3,466.68	0.30	-0.23	4.02
10,126.00	2.20	323.57	9,384.58	3,131.02	1,495.69	3,469.05	0.79	-0.51	-14.30
10,221.00	2.15	312.05	9,479.51	3,133.68	1,493.28	3,470.49	0.46	-0.05	-12.13
10,315.00	2.02	304.32	9,573.45	3,135.80	1,490.61	3,471.32	0.33	-0.14	-8.22
10,410.00	2.29	289.64	9,668.38	3,137.38	1,487.43	3,471.46	0.64	0.28	-15.45
10,504.00	1.89	279.27	9,762.32	3,138.26	1,484.14	3,470.91	0.58	-0.43	-11.03
10,598.00	2.20	272.77	9,856.26	3,138.60	1,480.80	3,469.85	0.41	0.33	-6.91
10,691.00	1.93	271.62	9,949.20	3,138.73	1,477.46	3,468.59	0.29	-0.29	-1.24
10,785.00	2.15	261.96	10,043.14	3,138.53	1,474.13	3,467.04	0.43	0.23	-10.28
10,879.00	2.02	254.48	10,137.08	3,137.84	1,470.79	3,465.04	0.32	-0.14	-7.96
10,973.00	2.11	248.60	10,231.02	3,136.76	1,467.58	3,462.74	0.24	0.10	-6.26
11,067.00	2.50	247.98	10,324.94	3,135.36	1,464.07	3,460.02	0.42	0.41	-0.66
11,161.00	2.55	240.33	10,418.85	3,133.56	1,460.35	3,456.85	0.36	0.05	-8.14
11,255.00	2.64	242.44	10,512.75	3,131.52	1,456.61	3,453.46	0.14	0.10	2.24
11,349.00	2.15	241.56	10,606.67	3,129.68	1,453.14	3,450.35	0.52	-0.52	-0.94
11,443.00	2.20	236.29	10,700.60	3,127.84	1,450.09	3,447.42	0.22	0.05	-5.61
11,537.00	2.37	236.99	10,794.53	3,125.78	1,446.96	3,444.26	0.18	0.18	0.74
11,631.00	2.15	226.01	10,888.46	3,123.49	1,444.06	3,440.99	0.52	-0.23	-11.68
11,725.00	2.24	228.12	10,982.39	3,121.04	1,441.43	3,437.67	0.13	0.10	2.24
11,819.00	2.20	227.33	11,076.32	3,118.59	1,438.73	3,434.33	0.05	-0.04	-0.84
11,913.00	2.64	231.19	11,170.23	3,116.01	1,435.72	3,430.74	0.50	0.47	4.11
12,007.00	2.86	230.75	11,264.12	3,113.17	1,432.22	3,426.71	0.24	0.23	-0.47
12,101.00	2.77	237.35	11,358.01	3,110.46	1,428.49	3,422.71	0.36	-0.10	7.02
12,195.00	3.08	231.72	11,451.89	3,107.67	1,424.59	3,418.57	0.45	0.33	-5.99
12,289.00	3.87	236.91	11,545.71	3,104.38	1,419.95	3,413.65	0.90	0.84	5.52
12,383.00	3.91	234.53	11,639.50	3,100.79	1,414.68	3,408.22	0.18	0.04	-2.53
12,478.00	3.56	241.21	11,734.30	3,097.49	1,409.46	3,403.06	0.59	-0.37	7.03
12,572.00	3.78	239.81	11,828.10	3,094.52	1,404.23	3,398.21	0.25	0.23	-1.49
12,666.00	3.74	234.01	11,921.90	3,091.16	1,399.07	3,393.03	0.41	-0.04	-6.17
12,761.00	3.25	228.29	12,016.73	3,087.55	1,394.55	3,387.88	0.63	-0.52	-6.02
12,842.00	3.65	227.41	12,097.58	3,084.28	1,390.94	3,383.41	0.50	0.49	-1.09
TD @ 12903.00' MD / 12158.45' TVD									
12,903.00	3.65	227.41	12,158.45	3,081.65	1,388.08	3,379.84	0.00	0.00	0.00

Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well RG 43-7-297
Project:	Rio Blanco County, CO	TVD Reference:	KB=30' @ 6650.90usft (H&P #329)
Site:	Sec 18, T2S, R97W	MD Reference:	KB=30' @ 6650.90usft (H&P #329)
Well:	RG 43-7-297	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
207.00	206.90	5.01	2.38	First MWD Survey @ 207.00' MD / 206.90' TVD
12,903.00	12,158.45	3,081.65	1,388.08	TD @ 12903.00' MD / 12158.45' TVD

Checked By: _____ Approved By: _____ Date: _____