



Terra Energy Partners, LLP

Garfield County, CO (Nad 83)

Sec 3, T6S, R94W

NR 443-4 - Slot NR 443-4

Wellbore #1

Design: Wellbore #1

KLX Survey Certification Report

08 April, 2022



KLX Directional Drilling, INC.

11390 FM 830
Willis, TX 77318
Phone: (936) 856-4332
Fax: (936) 856-8678

**Survey Certification Sheet**

Company	Job Number	Date
TEP Rocky Mountain LLC	RM-220202	04/08/2022

Lease	Well Name	County & State
NWSW 3 6S94W 6	Federal #NR 443-4	Garfield County, CO

API No.	Survey Depth Range	Survey Type
05-045-24476	298 feet to 10954 feet MD	MWD

Sidetrack Information	Directional Supervisor/Surveyor
Click here to enter text.	Robert Cuevas

Certification Statement

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by KLX Directional Drilling. This report represents a true and correct directional survey of this well based on the original data obtained at the well site. Wellbore coordinates are calculated using minimum curvature.

Kristopher Ray
Regulatory Compliance Manager
KLX Directional Drilling, Inc.

Company:	Terra Energy Partners, LLP	Local Co-ordinate Reference:	Well NR 443-4 - Slot NR 443-4
Project:	Garfield County, CO (Nad 83)	TVD Reference:	KB=30' @ 6760.00usft (H&P #329)
Site:	Sec 3, T6S, R94W	MD Reference:	KB=30' @ 6760.00usft (H&P #329)
Well:	NR 443-4	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Project	Garfield County, CO (Nad 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Central Zone		

Site		Sec 3, T6S, R94W			
Site Position:		Northing:	1,635,500.80 usft	Latitude:	39.554125
From:	Map	Easting:	2,329,283.20 usft	Longitude:	-107.878975
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.50 °

Well	NR 443-4 - Slot NR 443-4					
Well Position	+N/-S	0.00 usft	Northing:	1,635,500.50 usft	Latitude:	39.554123
	+E/-W	0.00 usft	Easting:	2,329,270.70 usft	Longitude:	-107.879019
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	6,730.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2022	3/25/2022	9.12	65.57	51,165.90000000

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	241.19	

Survey Program	Date	4/8/2022			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
298.00	10,954.00	KLX MWD Surveys (Wellbore #1)	OWSG (REV5) MWD HDGM	OWSG MWD - Standard	

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
298.00	6.46	223.66	297.37	-12.14	-11.59	16.78	223.66	
First MWD Survey @ 298.00' MD / 297.37' TVD								
392.00	9.54	227.09	390.44	-21.27	-20.94	29.85	224.55	
485.00	11.56	232.80	481.87	-32.15	-34.01	46.81	226.61	
579.00	13.97	239.83	573.54	-43.55	-51.33	67.32	229.68	
672.00	16.83	243.96	663.20	-55.11	-73.13	91.57	233.00	
766.00	19.60	245.02	752.48	-67.74	-99.66	120.50	235.79	
860.00	22.19	243.61	840.29	-82.29	-129.86	153.74	237.64	
955.00	24.74	242.73	927.43	-99.38	-163.60	191.42	238.72	
1,049.00	28.34	241.77	1,011.51	-118.95	-200.75	233.35	239.35	
1,173.00	29.05	240.54	1,120.28	-147.68	-252.90	292.86	239.72	

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	
1,268.00	30.10	240.54	1,202.90	-170.74	-293.72	339.74	239.83	
1,362.00	31.55	241.44	1,283.62	-194.09	-335.85	387.90	239.98	
1,456.00	34.58	242.65	1,362.39	-218.11	-381.15	439.15	240.22	
1,550.00	36.61	244.67	1,438.83	-242.36	-430.19	493.76	240.60	
1,643.00	39.02	245.55	1,512.29	-266.34	-481.91	550.62	241.07	
1,738.00	38.32	244.32	1,586.46	-291.49	-535.68	609.85	241.45	
1,832.00	40.03	245.02	1,659.33	-316.88	-589.35	669.14	241.73	
1,926.00	39.16	244.67	1,731.76	-342.35	-643.58	728.97	241.99	
2,017.00	38.58	243.61	1,802.61	-367.25	-694.97	786.04	242.15	
2,109.00	39.24	244.32	1,874.20	-392.61	-746.89	843.80	242.27	
2,200.00	37.49	243.70	1,945.55	-417.36	-797.66	900.25	242.38	
2,290.00	38.50	241.94	2,016.48	-442.67	-846.94	955.65	242.41	
2,382.00	39.46	241.85	2,087.99	-469.93	-897.98	1,013.51	242.38	
2,473.00	38.58	242.47	2,158.69	-496.69	-948.64	1,070.81	242.36	
2,564.00	39.38	241.68	2,229.43	-523.50	-999.22	1,128.05	242.35	
2,655.00	39.16	240.71	2,299.88	-551.25	-1,049.69	1,185.64	242.29	
2,746.00	38.72	240.80	2,370.66	-579.20	-1,099.59	1,242.81	242.22	
2,835.00	38.23	239.04	2,440.34	-606.94	-1,147.51	1,298.14	242.12	
2,927.00	39.33	239.13	2,512.06	-636.55	-1,196.94	1,355.68	242.00	
3,017.00	39.42	237.37	2,581.63	-666.59	-1,245.49	1,412.65	241.84	
3,109.00	39.20	239.83	2,652.82	-696.95	-1,295.23	1,470.84	241.72	
3,200.00	40.74	241.94	2,722.56	-725.38	-1,346.30	1,529.28	241.68	
3,292.00	40.08	241.59	2,792.61	-753.59	-1,398.84	1,588.92	241.69	
3,384.00	40.17	243.00	2,862.96	-781.15	-1,451.33	1,648.20	241.71	
3,476.00	39.86	242.82	2,933.42	-808.09	-1,504.00	1,707.34	241.75	
3,567.00	39.38	241.77	3,003.52	-835.07	-1,555.38	1,765.37	241.77	
3,659.00	39.77	244.14	3,074.44	-861.71	-1,607.57	1,823.96	241.81	
3,751.00	38.85	241.85	3,145.62	-888.16	-1,659.50	1,882.22	241.84	
3,843.00	38.23	241.59	3,217.58	-915.32	-1,709.98	1,939.54	241.84	
3,934.00	37.66	240.98	3,289.35	-942.20	-1,759.05	1,995.50	241.83	
4,026.00	37.27	241.50	3,362.37	-969.12	-1,808.11	2,051.45	241.81	
4,117.00	36.83	242.21	3,435.00	-994.99	-1,856.45	2,106.28	241.81	
4,209.00	36.65	243.08	3,508.72	-1,020.28	-1,905.33	2,161.31	241.83	
4,302.00	39.11	243.52	3,582.12	-1,045.93	-1,956.34	2,218.39	241.87	
4,394.00	40.25	243.61	3,652.93	-1,072.08	-2,008.94	2,277.10	241.91	
4,485.00	39.24	243.35	3,722.89	-1,098.05	-2,061.00	2,335.26	241.95	
4,576.00	39.42	243.26	3,793.28	-1,123.96	-2,112.53	2,392.92	241.98	
4,668.00	40.12	243.26	3,864.00	-1,150.44	-2,165.09	2,451.76	242.02	
4,758.00	39.51	243.44	3,933.13	-1,176.29	-2,216.59	2,509.37	242.05	
4,850.00	39.77	244.23	4,003.97	-1,202.17	-2,269.27	2,568.04	242.09	
4,941.00	38.85	242.82	4,074.38	-1,227.86	-2,320.88	2,625.67	242.12	
5,033.00	38.72	243.70	4,146.10	-1,253.79	-2,372.34	2,683.28	242.14	
5,124.00	37.97	243.00	4,217.47	-1,279.11	-2,422.80	2,739.72	242.17	
5,215.00	37.09	242.65	4,289.63	-1,304.43	-2,472.11	2,795.15	242.18	

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Distance (usft)	Closure Azimuth (°)	
5,306.00	37.05	242.82	4,362.24	-1,329.56	-2,520.87	2,850.01	242.19	
5,398.00	36.87	242.21	4,435.76	-1,355.09	-2,569.95	2,905.32	242.20	
5,488.00	35.20	242.47	4,508.53	-1,379.67	-2,616.84	2,958.26	242.20	
5,579.00	34.98	241.94	4,582.99	-1,404.06	-2,663.11	3,010.58	242.20	
5,670.00	32.91	241.77	4,658.48	-1,428.03	-2,707.92	3,061.39	242.19	
5,761.00	32.30	241.50	4,735.14	-1,451.32	-2,751.07	3,110.42	242.19	
5,852.00	30.76	243.08	4,812.70	-1,473.46	-2,793.19	3,158.00	242.19	
5,944.00	29.18	243.26	4,892.40	-1,494.20	-2,834.19	3,203.95	242.20	
6,036.00	28.30	243.08	4,973.06	-1,514.17	-2,873.67	3,248.18	242.21	
6,127.00	28.17	242.73	5,053.24	-1,533.78	-2,912.00	3,291.23	242.22	
6,219.00	26.63	241.68	5,134.91	-1,553.51	-2,949.45	3,333.56	242.22	
6,311.00	26.63	242.21	5,217.15	-1,572.90	-2,985.84	3,374.80	242.22	
6,403.00	25.09	241.41	5,299.94	-1,591.85	-3,021.21	3,414.93	242.22	
6,494.00	24.43	242.38	5,382.57	-1,609.81	-3,054.83	3,453.04	242.21	
6,585.00	22.59	242.12	5,466.02	-1,626.71	-3,086.95	3,489.33	242.21	
6,676.00	22.85	241.68	5,549.96	-1,643.26	-3,117.96	3,524.48	242.21	
6,768.00	21.80	241.15	5,635.06	-1,659.98	-3,148.64	3,559.42	242.20	
6,858.00	20.57	242.65	5,718.98	-1,675.31	-3,177.33	3,591.94	242.20	
6,949.00	19.25	239.57	5,804.54	-1,690.25	-3,204.46	3,622.92	242.19	
7,041.00	17.40	237.55	5,891.87	-1,705.32	-3,229.15	3,651.78	242.16	
7,131.00	17.09	238.78	5,977.82	-1,719.39	-3,251.82	3,678.40	242.13	
7,223.00	17.31	245.19	6,065.72	-1,732.14	-3,275.80	3,705.56	242.13	
7,315.00	16.57	243.35	6,153.72	-1,743.77	-3,299.95	3,732.35	242.15	
7,404.00	13.93	243.00	6,239.58	-1,754.33	-3,320.84	3,755.75	242.15	
7,496.00	13.23	244.23	6,329.01	-1,763.93	-3,340.19	3,777.34	242.16	
7,587.00	12.35	243.61	6,417.75	-1,772.78	-3,358.29	3,797.48	242.17	
7,679.00	10.55	240.18	6,507.92	-1,781.35	-3,374.41	3,815.73	242.17	
7,770.00	9.40	239.92	6,597.54	-1,789.21	-3,388.07	3,831.48	242.16	
7,862.00	8.70	240.18	6,688.39	-1,796.44	-3,400.60	3,845.95	242.15	
7,954.00	6.42	236.23	6,779.59	-1,802.76	-3,410.92	3,858.02	242.14	
8,045.00	5.54	227.88	6,870.10	-1,808.53	-3,418.41	3,867.34	242.12	
8,135.00	5.49	229.73	6,959.68	-1,814.23	-3,424.91	3,875.75	242.09	
8,226.00	5.05	240.54	7,050.30	-1,819.01	-3,431.72	3,884.01	242.07	
8,317.00	2.90	259.26	7,141.08	-1,821.41	-3,437.47	3,890.21	242.08	
8,409.00	1.45	281.23	7,233.01	-1,821.62	-3,440.90	3,893.34	242.10	
8,499.00	0.83	274.64	7,322.99	-1,821.35	-3,442.67	3,894.77	242.12	
8,590.00	0.92	239.83	7,413.98	-1,821.66	-3,443.96	3,896.06	242.12	
8,682.00	0.53	255.83	7,505.97	-1,822.13	-3,445.01	3,897.21	242.12	
8,773.00	0.66	241.06	7,596.97	-1,822.49	-3,445.87	3,898.14	242.13	
8,865.00	0.92	208.37	7,688.96	-1,823.40	-3,446.69	3,899.29	242.12	
8,956.00	1.49	180.16	7,779.94	-1,825.22	-3,447.04	3,900.45	242.10	
9,047.00	1.23	196.41	7,870.91	-1,827.34	-3,447.32	3,901.69	242.07	
9,139.00	0.23	188.86	7,962.91	-1,828.47	-3,447.62	3,902.49	242.06	
9,230.00	0.35	160.73	8,053.90	-1,828.92	-3,447.56	3,902.64	242.05	
9,322.00	0.66	154.93	8,145.90	-1,829.66	-3,447.24	3,902.71	242.04	

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	EDM 5000.1 Single User Db

Survey								
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9,414.00	0.97	176.20	8,237.89	-1,830.92	-3,446.97	3,903.06	242.02	
9,505.00	2.06	190.61	8,328.86	-1,833.29	-3,447.22	3,904.39	242.00	
9,597.00	1.36	152.91	8,420.82	-1,835.89	-3,447.03	3,905.44	241.96	
9,688.00	0.97	104.57	8,511.80	-1,837.05	-3,445.79	3,904.89	241.94	
9,779.00	0.83	143.15	8,602.79	-1,837.77	-3,444.65	3,904.23	241.92	
9,871.00	0.92	139.29	8,694.78	-1,838.86	-3,443.77	3,903.96	241.90	
9,962.00	1.80	144.03	8,785.76	-1,840.57	-3,442.45	3,903.61	241.87	
10,053.00	1.85	135.24	8,876.71	-1,842.77	-3,440.58	3,903.00	241.83	
10,144.00	1.01	153.96	8,967.68	-1,844.54	-3,439.19	3,902.61	241.79	
10,233.00	1.10	222.61	9,056.67	-1,845.87	-3,439.42	3,903.44	241.78	
10,325.00	1.41	253.46	9,148.65	-1,846.84	-3,441.11	3,905.39	241.78	
10,417.00	2.15	216.54	9,240.61	-1,848.55	-3,443.22	3,908.06	241.77	
10,506.00	2.15	169.17	9,329.55	-1,851.53	-3,443.90	3,910.07	241.74	
10,595.00	2.64	149.04	9,418.47	-1,854.93	-3,442.53	3,910.47	241.68	
10,687.00	4.53	140.60	9,510.29	-1,859.55	-3,439.13	3,909.68	241.60	
10,777.00	5.41	138.23	9,599.95	-1,865.46	-3,434.05	3,908.03	241.49	
10,868.00	6.72	142.19	9,690.44	-1,872.87	-3,427.93	3,906.19	241.35	
10,890.00	7.16	144.65	9,712.28	-1,875.01	-3,426.35	3,905.83	241.31	
10,954.00	7.16	144.65	9,775.78	-1,881.51	-3,421.73	3,904.91	241.19	
TD @ 10954.00' MD / 9775.78' TVD								

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
298.00	297.37	-12.14	-11.59	First MWD Survey @ 298.00' MD / 297.37' TVD	
10,954.00	9,775.78	-1,881.51	-3,421.73	TD @ 10954.00' MD / 9775.78' TVD	

Checked By: _____ Approved By: _____ Date: _____