



Laramie Energy, LLC

Mesa County, CO

Currier 0993-16-07 Pad

Currier BCU 0993-16-14W - Slot A-4

OH

Plan: Design #1

KLX Well Planning Report

13 July, 2023





Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Currier BCU 0993-16-14W - Slot A-4
Company:	Laramie Energy, LLC	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Project:	Mesa County, CO	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site:	Currier 0993-16-07 Pad	North Reference:	True
Well:	Currier BCU 0993-16-14W	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Project	Mesa 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	Currier 0993-16-07 Pad				
Site Position:		Northing:	1,534,122.03 usft	Latitude:	39.277839
From:	Lat/Long	Easting:	2,356,438.51 usft	Longitude:	-107.773701
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.43 °

Well	Currier BCU 0993-16-14W - Slot A-4					
Well Position	+N/-S	17.5 usft	Northing:	1,534,139.08 usft	Latitude:	39.277837
	+E/-W	16.7 usft	Easting:	2,356,455.61 usft	Longitude:	-107.773642
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	7,457.0 usft

Wellbore	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM2023	7/13/2023	8.68	65.13	50,856.90000000

Design	Design #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	203.66

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,342.4	28.56	178.00	1,295.7	-278.7	9.7	2.50	2.50	0.00	178.00	
1,924.9	28.56	208.75	1,810.1	-541.4	-52.7	2.50	0.00	5.28	103.58	
5,330.6	28.56	208.75	4,801.3	-1,968.8	-835.8	0.00	0.00	0.00	0.00	
6,472.9	0.00	0.00	5,897.0	-2,213.3	-969.9	2.50	-2.50	0.00	180.00	
8,412.9	0.00	0.00	7,837.0	-2,213.3	-969.9	0.00	0.00	0.00	0.00	PBHL - Currier 16-1



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Currier BCU 0993-16-14W - Slot A-4
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Project:	Mesa County, CO	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site:	Currier 0993-16-07 Pad	North Reference:	True
Well:	Currier BCU 0993-16-14W	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP (Build 2.5° / 100)									
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	2.50	178.00	300.0	-2.2	0.1	2.0	2.50	2.50	0.00
400.0	5.00	178.00	399.7	-8.7	0.3	7.9	2.50	2.50	0.00
500.0	7.50	178.00	499.1	-19.6	0.7	17.7	2.50	2.50	0.00
600.0	10.00	178.00	598.0	-34.8	1.2	31.4	2.50	2.50	0.00
700.0	12.50	178.00	696.0	-54.3	1.9	49.0	2.50	2.50	0.00
800.0	15.00	178.00	793.2	-78.0	2.7	70.4	2.50	2.50	0.00
900.0	17.50	178.00	889.2	-106.0	3.7	95.6	2.50	2.50	0.00
1,000.0	20.00	178.00	983.9	-138.1	4.8	124.6	2.50	2.50	0.00
1,100.0	22.50	178.00	1,077.0	-174.3	6.1	157.2	2.50	2.50	0.00
1,200.0	25.00	178.00	1,168.6	-214.6	7.5	193.5	2.50	2.50	0.00
1,300.0	27.50	178.00	1,258.2	-258.8	9.0	233.4	2.50	2.50	0.00
EOB @ 28.23° Inc. / 185.00° Azm									
1,329.2	28.23	178.00	1,284.1	-272.4	9.5	245.7	2.50	2.50	0.00
1,342.4	28.56	178.00	1,295.7	-278.7	9.7	251.4	2.50	2.50	0.00
1,400.0	28.25	180.96	1,346.3	-306.1	10.0	276.4	2.50	-0.53	5.14
8 5/8"									
1,500.0	27.88	186.21	1,434.6	-353.0	7.1	320.5	2.50	-0.38	5.25
1,600.0	27.70	191.56	1,523.1	-399.0	-0.1	365.5	2.50	-0.17	5.35
1,700.0	27.74	196.94	1,611.6	-444.1	-11.6	411.4	2.50	0.03	5.38
EOT @ 206.95° Azm									
1,742.5	27.81	199.21	1,649.2	-462.9	-17.7	431.1	2.50	0.18	5.35
1,800.0	27.98	202.27	1,700.0	-488.1	-27.2	458.0	2.50	0.28	5.31
1,900.0	28.42	207.47	1,788.2	-530.9	-47.1	505.2	2.50	0.44	5.21
1,924.9	28.56	208.75	1,810.1	-541.4	-52.7	517.0	2.50	0.56	5.11
2,000.0	28.56	208.75	1,876.0	-572.8	-70.0	552.8	0.00	0.00	0.00
2,100.0	28.56	208.75	1,963.9	-614.7	-93.0	600.4	0.00	0.00	0.00
2,200.0	28.56	208.75	2,051.7	-656.7	-116.0	648.0	0.00	0.00	0.00
2,300.0	28.56	208.75	2,139.5	-698.6	-139.0	695.6	0.00	0.00	0.00
2,400.0	28.56	208.75	2,227.4	-740.5	-161.9	743.2	0.00	0.00	0.00
2,500.0	28.56	208.75	2,315.2	-782.4	-184.9	790.8	0.00	0.00	0.00
2,600.0	28.56	208.75	2,403.0	-824.3	-207.9	838.5	0.00	0.00	0.00
2,700.0	28.56	208.75	2,490.9	-866.2	-230.9	886.1	0.00	0.00	0.00
2,800.0	28.56	208.75	2,578.7	-908.2	-253.9	933.7	0.00	0.00	0.00
2,900.0	28.56	208.75	2,666.5	-950.1	-276.9	981.3	0.00	0.00	0.00
3,000.0	28.56	208.75	2,754.4	-992.0	-299.9	1,028.9	0.00	0.00	0.00
Wasatch 'G' Sand									
3,001.9	28.56	208.75	2,756.0	-992.8	-300.3	1,029.8	0.00	0.00	0.00
3,100.0	28.56	208.75	2,842.2	-1,033.9	-322.9	1,076.6	0.00	0.00	0.00
3,200.0	28.56	208.75	2,930.0	-1,075.8	-345.9	1,124.2	0.00	0.00	0.00
3,300.0	28.56	208.75	3,017.9	-1,117.7	-368.9	1,171.8	0.00	0.00	0.00
3,400.0	28.56	208.75	3,105.7	-1,159.6	-391.9	1,219.4	0.00	0.00	0.00
3,500.0	28.56	208.75	3,193.5	-1,201.6	-414.9	1,267.0	0.00	0.00	0.00
Fort Union									
3,513.1	28.56	208.75	3,205.0	-1,207.0	-417.9	1,273.3	0.00	0.00	0.00
3,600.0	28.56	208.75	3,281.3	-1,243.5	-437.9	1,314.7	0.00	0.00	0.00
3,700.0	28.56	208.75	3,369.2	-1,285.4	-460.8	1,362.3	0.00	0.00	0.00
3,800.0	28.56	208.75	3,457.0	-1,327.3	-483.8	1,409.9	0.00	0.00	0.00
3,900.0	28.56	208.75	3,544.8	-1,369.2	-506.8	1,457.5	0.00	0.00	0.00
4,000.0	28.56	208.75	3,632.7	-1,411.1	-529.8	1,505.1	0.00	0.00	0.00



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Well:	Currier BCU 0993-16-14W	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #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)	
4,100.0	28.56	208.75	3,720.5	-1,453.0	-552.8	1,552.7	0.00	0.00	0.00	
4,200.0	28.56	208.75	3,808.3	-1,495.0	-575.8	1,600.4	0.00	0.00	0.00	
4,300.0	28.56	208.75	3,896.2	-1,536.9	-598.8	1,648.0	0.00	0.00	0.00	
4,400.0	28.56	208.75	3,984.0	-1,578.8	-621.8	1,695.6	0.00	0.00	0.00	
4,500.0	28.56	208.75	4,071.8	-1,620.7	-644.8	1,743.2	0.00	0.00	0.00	
4,600.0	28.56	208.75	4,159.7	-1,662.6	-667.8	1,790.8	0.00	0.00	0.00	
Lower Wasatch										
4,625.4	28.56	208.75	4,182.0	-1,673.3	-673.6	1,802.9	0.00	0.00	0.00	
4,700.0	28.56	208.75	4,247.5	-1,704.5	-690.8	1,838.5	0.00	0.00	0.00	
4,800.0	28.56	208.75	4,335.3	-1,746.4	-713.8	1,886.1	0.00	0.00	0.00	
4,900.0	28.56	208.75	4,423.2	-1,788.4	-736.8	1,933.7	0.00	0.00	0.00	
5,000.0	28.56	208.75	4,511.0	-1,830.3	-759.7	1,981.3	0.00	0.00	0.00	
5,100.0	28.56	208.75	4,598.8	-1,872.2	-782.7	2,028.9	0.00	0.00	0.00	
5,200.0	28.56	208.75	4,686.7	-1,914.1	-805.7	2,076.6	0.00	0.00	0.00	
5,300.0	28.56	208.75	4,774.5	-1,956.0	-828.7	2,124.2	0.00	0.00	0.00	
5,330.6	28.56	208.75	4,801.3	-1,968.8	-835.8	2,138.7	0.00	0.00	0.00	
Drop 2.5° /100'										
5,333.4	28.49	208.75	4,803.8	-1,970.0	-836.4	2,140.1	2.50	-2.50	0.00	
5,400.0	26.82	208.75	4,862.8	-1,997.1	-851.3	2,170.9	2.50	-2.50	0.00	
Ohio Creek										
5,450.3	25.56	208.75	4,908.0	-2,016.6	-862.0	2,193.0	2.50	-2.50	0.00	
5,500.0	24.32	208.75	4,953.0	-2,035.0	-872.0	2,213.9	2.50	-2.50	0.00	
5,600.0	21.82	208.75	5,045.0	-2,069.3	-890.9	2,252.9	2.50	-2.50	0.00	
Williams Fork										
5,673.9	19.98	208.75	5,114.0	-2,092.4	-903.5	2,279.1	2.50	-2.50	0.00	
5,700.0	19.32	208.75	5,138.6	-2,100.1	-907.8	2,287.9	2.50	-2.50	0.00	
5,800.0	16.82	208.75	5,233.7	-2,127.3	-922.7	2,318.8	2.50	-2.50	0.00	
5,900.0	14.32	208.75	5,330.0	-2,150.9	-935.6	2,345.5	2.50	-2.50	0.00	
6,000.0	11.82	208.75	5,427.4	-2,170.7	-946.5	2,368.1	2.50	-2.50	0.00	
6,100.0	9.32	208.75	5,525.7	-2,186.8	-955.3	2,386.3	2.50	-2.50	0.00	
6,200.0	6.82	208.75	5,624.7	-2,199.1	-962.1	2,400.3	2.50	-2.50	0.00	
6,300.0	4.32	208.75	5,724.2	-2,207.6	-966.7	2,410.0	2.50	-2.50	0.00	
6,400.0	1.82	208.75	5,824.1	-2,212.3	-969.3	2,415.3	2.50	-2.50	0.00	
EOD @ Vertical										
6,462.4	0.26	208.75	5,886.4	-2,213.3	-969.9	2,416.5	2.50	-2.50	0.00	
TOG										
6,472.9	0.00	0.00	5,897.0	-2,213.3	-969.9	2,416.5	2.50	-2.50	0.00	
6,500.0	0.00	0.00	5,924.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
6,600.0	0.00	0.00	6,024.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,124.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,224.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,324.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
7,000.0	0.00	0.00	6,424.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
7,100.0	0.00	0.00	6,524.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
7,200.0	0.00	0.00	6,624.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
7,300.0	0.00	0.00	6,724.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
7,400.0	0.00	0.00	6,824.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
7,500.0	0.00	0.00	6,924.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
7,600.0	0.00	0.00	7,024.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
7,700.0	0.00	0.00	7,124.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
Cameo										
7,736.9	0.00	0.00	7,161.0	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
7,800.0	0.00	0.00	7,224.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	



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Wellbore:	OH		
Design:	Design #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)	
7,900.0	0.00	0.00	7,324.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
8,000.0	0.00	0.00	7,424.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
8,100.0	0.00	0.00	7,524.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
8,200.0	0.00	0.00	7,624.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
Rollins										
8,212.9	0.00	0.00	7,637.0	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
8,300.0	0.00	0.00	7,724.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
8,400.0	0.00	0.00	7,824.1	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
TD @ 8402.4' MD / 7837.0' TVD										
8,402.4	0.00	0.00	7,826.4	-2,213.3	-969.9	2,416.5	0.00	0.00	0.00	
8,412.9	0.00	0.00	7,837.0	-2,213.3	-969.9	2,416.5	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	
PBHL - Currier 16-14V	0.00	0.00	7,837.0	-2,213.3	-969.9	1,531,950.72	2,355,430.66	39.271760	-107.777068	
- hit/miss target										
- Shape										
- plan hits target center										
- Circle (radius 50.0)										

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")		
1,500.0	1,434.6	8 5/8"	8-5/8	11		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,001.9	2,756.0	Wasatch 'G' Sand				
3,513.1	3,205.0	Fort Union				
4,625.4	4,182.0	Lower Wasatch				
5,450.3	4,908.0	Ohio Creek				
5,673.9	5,114.0	Williams Fork				
6,472.9	5,897.0	TOG				
7,736.9	7,161.0	Cameo				
8,212.9	7,637.0	Rollins				



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Well:	Currier BCU 0993-16-14W	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Design #1		

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
200.0	200.0	0.0	0.0	KOP (Build 2.5° / 100)
1,329.2	1,284.1	-272.4	9.5	EOB @ 28.23° Inc. / 185.00° Azm
1,742.5	1,649.2	-462.9	-17.7	EOT @ 206.95° Azm
5,333.4	4,803.8	-1,970.0	-836.4	Drop 2.5° / 100'
6,462.4	5,886.4	-2,213.3	-969.9	EOD @ Vertical
8,402.4	7,826.4	-2,213.3	-969.9	TD @ 8402.4' MD / 7837.0' TVD