



# **Laramie Energy, LLC**

**Mesa County, CO**

**Currier 0993-16-07 Pad**

**Currier BCU 0993-16-15W - Slot A-5**

**OH**

**Plan: Design #1**

## **KLX Well Planning Report**

**13 July, 2023**





<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well Currier BCU 0993-16-15W - Slot A-5
<b>Company:</b>	Laramie Energy, LLC	<b>TVD Reference:</b>	RKB=30' @ 7487.0usft (TBD)
<b>Project:</b>	Mesa County, CO	<b>MD Reference:</b>	RKB=30' @ 7487.0usft (TBD)
<b>Site:</b>	Currier 0993-16-07 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Currier BCU 0993-16-15W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Design #1		

<b>Project</b>	Mesa County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		

<b>Site</b>	Currier 0993-16-07 Pad				
<b>Site Position:</b>		<b>Northing:</b>	1,534,122.03 usft	<b>Latitude:</b>	39.277789
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,356,438.51 usft	<b>Longitude:</b>	-107.773701
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	-1.43 °

<b>Well</b>	Currier BCU 0993-16-15W - Slot A-5					
<b>Well Position</b>	<b>+N/-S</b>	23.2 usft	<b>Northing:</b>	1,534,144.72 usft	<b>Latitude:</b>	39.277853
	<b>+E/-W</b>	22.2 usft	<b>Easting:</b>	2,356,461.30 usft	<b>Longitude:</b>	-107.773623
<b>Position Uncertainty</b>		0.0 usft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	7,457.0 usft

<b>Wellbore</b>	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

<b>Design</b>	Design #1
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<b>Audit Notes:</b>	
<b>Version:</b>	<b>Phase:</b> PLAN <b>Tie On Depth:</b> 0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b> <b>+N/-S (usft)</b> <b>+E/-W (usft)</b> <b>Direction (°)</b>
	0.0 0.0 0.0 200.89

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	
375.0	0.00	0.00	375.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,725.4	33.76	179.00	1,648.6	-386.4	6.7	2.50	2.50	0.00	179.00	
2,327.7	33.76	206.27	2,152.2	-705.6	-64.8	2.50	0.00	4.53	101.42	
5,296.5	33.76	206.27	4,620.5	-2,184.8	-795.1	0.00	0.00	0.00	0.00	
6,646.7	0.00	0.00	5,894.0	-2,531.2	-966.1	2.50	-2.50	0.00	180.00	
8,586.7	0.00	0.00	7,834.0	-2,531.2	-966.1	0.00	0.00	0.00	0.00	0.00 PBHL - Currier 16-1



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<b>Project:</b>	Mesa County, CO	<b>MD Reference:</b>	RKB=30' @ 7487.0usft (TBD)
<b>Site:</b>	Currier 0993-16-07 Pad	<b>North Reference:</b>	True
<b>Well:</b>	Currier BCU 0993-16-15W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP (Build 2.5° / 100)</b>									
375.0	0.00	0.00	375.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.63	179.00	400.0	-0.1	0.0	0.1	2.50	2.50	0.00
500.0	3.13	179.00	499.9	-3.4	0.1	3.2	2.50	2.50	0.00
600.0	5.63	179.00	599.6	-11.0	0.2	10.2	2.50	2.50	0.00
700.0	8.13	179.00	698.9	-23.0	0.4	21.3	2.50	2.50	0.00
800.0	10.63	179.00	797.6	-39.3	0.7	36.5	2.50	2.50	0.00
900.0	13.13	179.00	895.4	-59.9	1.0	55.6	2.50	2.50	0.00
1,000.0	15.63	179.00	992.3	-84.7	1.5	78.6	2.50	2.50	0.00
1,100.0	18.13	179.00	1,088.0	-113.7	2.0	105.5	2.50	2.50	0.00
1,200.0	20.63	179.00	1,182.3	-146.9	2.6	136.3	2.50	2.50	0.00
1,300.0	23.13	179.00	1,275.1	-184.1	3.2	170.9	2.50	2.50	0.00
1,400.0	25.63	179.00	1,366.2	-225.4	3.9	209.2	2.50	2.50	0.00
<b>8 5/8"</b>									
1,500.0	28.13	179.00	1,455.4	-270.6	4.7	251.1	2.50	2.50	0.00
1,600.0	30.63	179.00	1,542.5	-319.6	5.6	296.6	2.50	2.50	0.00
1,700.0	33.13	179.00	1,627.4	-372.4	6.5	345.6	2.50	2.50	0.00
<b>EOB @ 33.76° Inc. / 179.00° Azm</b>									
1,725.4	33.76	179.00	1,648.6	-386.4	6.7	358.6	2.50	2.50	0.00
1,800.0	33.43	182.32	1,710.7	-427.7	6.3	397.3	2.50	-0.44	4.45
1,900.0	33.14	186.84	1,794.4	-482.3	1.9	450.0	2.50	-0.29	4.52
2,000.0	33.01	191.42	1,878.2	-536.2	-6.7	503.4	2.50	-0.13	4.58
2,100.0	33.05	196.01	1,962.0	-589.1	-19.7	557.4	2.50	0.04	4.59
2,200.0	33.26	200.56	2,045.7	-641.0	-36.8	612.0	2.50	0.21	4.56
2,300.0	33.63	205.05	2,129.2	-691.8	-58.2	667.0	2.50	0.37	4.49
<b>EOt @ 206.27° Azm</b>									
2,327.7	33.76	206.27	2,152.2	-705.6	-64.8	682.3	2.50	0.47	4.43
2,400.0	33.76	206.27	2,212.4	-741.6	-82.6	722.3	0.00	0.00	0.00
2,500.0	33.76	206.27	2,295.5	-791.5	-107.2	777.7	0.00	0.00	0.00
2,600.0	33.76	206.27	2,378.7	-841.3	-131.8	833.0	0.00	0.00	0.00
2,700.0	33.76	206.27	2,461.8	-891.1	-156.4	888.3	0.00	0.00	0.00
2,800.0	33.76	206.27	2,544.9	-940.9	-181.0	943.6	0.00	0.00	0.00
2,900.0	33.76	206.27	2,628.1	-990.8	-205.6	998.9	0.00	0.00	0.00
3,000.0	33.76	206.27	2,711.2	-1,040.6	-230.2	1,054.3	0.00	0.00	0.00
<b>Wasatch 'G' Sand</b>									
3,050.3	33.76	206.27	2,753.0	-1,065.6	-242.6	1,082.1	0.00	0.00	0.00
3,100.0	33.76	206.27	2,794.4	-1,090.4	-254.8	1,109.6	0.00	0.00	0.00
3,200.0	33.76	206.27	2,877.5	-1,140.2	-279.4	1,164.9	0.00	0.00	0.00
3,300.0	33.76	206.27	2,960.6	-1,190.1	-304.0	1,220.2	0.00	0.00	0.00
3,400.0	33.76	206.27	3,043.8	-1,239.9	-328.6	1,275.5	0.00	0.00	0.00
3,500.0	33.76	206.27	3,126.9	-1,289.7	-353.2	1,330.9	0.00	0.00	0.00
<b>Fort Union</b>									
3,590.3	33.76	206.27	3,202.0	-1,334.7	-375.4	1,380.8	0.00	0.00	0.00
3,600.0	33.76	206.27	3,210.1	-1,339.5	-377.8	1,386.2	0.00	0.00	0.00
3,700.0	33.76	206.27	3,293.2	-1,389.4	-402.4	1,441.5	0.00	0.00	0.00
3,800.0	33.76	206.27	3,376.3	-1,439.2	-427.0	1,496.8	0.00	0.00	0.00
3,900.0	33.76	206.27	3,459.5	-1,489.0	-451.6	1,552.1	0.00	0.00	0.00
4,000.0	33.76	206.27	3,542.6	-1,538.8	-476.2	1,607.5	0.00	0.00	0.00
4,100.0	33.76	206.27	3,625.8	-1,588.7	-500.8	1,662.8	0.00	0.00	0.00



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<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
4,200.0	33.76	206.27	3,708.9	-1,638.5	-525.4	1,718.1	0.00	0.00	0.00
4,300.0	33.76	206.27	3,792.1	-1,688.3	-550.0	1,773.4	0.00	0.00	0.00
4,400.0	33.76	206.27	3,875.2	-1,738.1	-574.5	1,828.7	0.00	0.00	0.00
4,500.0	33.76	206.27	3,958.3	-1,788.0	-599.1	1,884.1	0.00	0.00	0.00
4,600.0	33.76	206.27	4,041.5	-1,837.8	-623.7	1,939.4	0.00	0.00	0.00
4,700.0	33.76	206.27	4,124.6	-1,887.6	-648.3	1,994.7	0.00	0.00	0.00
<b>Lower Wasatch</b>									
4,765.4	33.76	206.27	4,179.0	-1,920.2	-664.4	2,030.9	0.00	0.00	0.00
4,800.0	33.76	206.27	4,207.8	-1,937.4	-672.9	2,050.0	0.00	0.00	0.00
4,900.0	33.76	206.27	4,290.9	-1,987.2	-697.5	2,105.3	0.00	0.00	0.00
5,000.0	33.76	206.27	4,374.0	-2,037.1	-722.1	2,160.7	0.00	0.00	0.00
5,100.0	33.76	206.27	4,457.2	-2,086.9	-746.7	2,216.0	0.00	0.00	0.00
5,200.0	33.76	206.27	4,540.3	-2,136.7	-771.3	2,271.3	0.00	0.00	0.00
<b>Drop 2.5° /100'</b>									
5,296.5	33.76	206.27	4,620.5	-2,184.8	-795.1	2,324.7	0.00	0.00	0.00
5,300.0	33.67	206.27	4,623.5	-2,186.5	-795.9	2,326.6	2.50	-2.50	0.00
5,400.0	31.17	206.27	4,707.9	-2,234.6	-819.7	2,380.0	2.50	-2.50	0.00
5,500.0	28.67	206.27	4,794.6	-2,279.3	-841.7	2,429.6	2.50	-2.50	0.00
5,600.0	26.17	206.27	4,883.3	-2,320.6	-862.1	2,475.5	2.50	-2.50	0.00
<b>Ohio Creek</b>									
5,624.1	25.56	206.27	4,905.0	-2,330.0	-866.8	2,485.9	2.50	-2.50	0.00
5,700.0	23.67	206.27	4,974.0	-2,358.4	-880.8	2,517.4	2.50	-2.50	0.00
5,800.0	21.17	206.27	5,066.4	-2,392.6	-897.6	2,555.4	2.50	-2.50	0.00
<b>Williams Fork</b>									
5,847.6	19.98	206.27	5,111.0	-2,407.6	-905.0	2,572.0	2.50	-2.50	0.00
5,900.0	18.67	206.27	5,160.4	-2,423.1	-912.7	2,589.3	2.50	-2.50	0.00
6,000.0	16.17	206.27	5,255.9	-2,450.0	-926.0	2,619.1	2.50	-2.50	0.00
6,100.0	13.67	206.27	5,352.5	-2,473.0	-937.4	2,644.7	2.50	-2.50	0.00
6,200.0	11.17	206.27	5,450.1	-2,492.3	-946.9	2,666.1	2.50	-2.50	0.00
6,300.0	8.67	206.27	5,548.6	-2,507.8	-954.5	2,683.3	2.50	-2.50	0.00
6,400.0	6.17	206.27	5,647.8	-2,519.3	-960.2	2,696.1	2.50	-2.50	0.00
6,500.0	3.67	206.27	5,747.4	-2,527.0	-964.0	2,704.7	2.50	-2.50	0.00
6,600.0	1.17	206.27	5,847.3	-2,530.8	-965.9	2,708.9	2.50	-2.50	0.00
<b>EOD @ Vertical - TOG</b>									
6,646.7	0.00	0.00	5,894.0	-2,531.2	-966.1	2,709.3	2.50	-2.50	0.00
6,700.0	0.00	0.00	5,947.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
6,800.0	0.00	0.00	6,047.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
6,900.0	0.00	0.00	6,147.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
7,000.0	0.00	0.00	6,247.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
7,100.0	0.00	0.00	6,347.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
7,200.0	0.00	0.00	6,447.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
7,300.0	0.00	0.00	6,547.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
7,400.0	0.00	0.00	6,647.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
7,500.0	0.00	0.00	6,747.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
7,600.0	0.00	0.00	6,847.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
7,700.0	0.00	0.00	6,947.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
7,800.0	0.00	0.00	7,047.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
7,900.0	0.00	0.00	7,147.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
<b>Cameo</b>									
7,910.7	0.00	0.00	7,158.0	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
8,000.0	0.00	0.00	7,247.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
8,100.0	0.00	0.00	7,347.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
8,200.0	0.00	0.00	7,447.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00



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<b>Well:</b>	Currier BCU 0993-16-15W	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
8,300.0	0.00	0.00	7,547.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
<b>Rollins</b>									
8,386.7	0.00	0.00	7,634.0	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
8,400.0	0.00	0.00	7,647.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
8,500.0	0.00	0.00	7,747.3	-2,531.2	-966.1	2,709.3	0.00	0.00	0.00
<b>TD @ 8586.7' MD / 7834.0' TVD</b>									
8,586.7	0.00	0.00	7,834.0	-2,531.2	-966.1	2,709.3	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 16-15W - hit/miss target - Shape - plan hits target center - Circle (radius 50.0)	0.00	0.00	7,834.0	-2,531.2	-966.1	1,531,638.44	2,355,432.17	39.270903	-107.777035

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")		
1,500.0	1,455.4	8 5/8"	8-5/8	11		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,050.3	2,753.0	Wasatch 'G' Sand				
3,590.3	3,202.0	Fort Union				
4,765.4	4,179.0	Lower Wasatch				
5,624.1	4,905.0	Ohio Creek				
5,847.6	5,111.0	Williams Fork				
6,646.7	5,894.0	TOG				
7,910.7	7,158.0	Cameo				
8,386.7	7,634.0	Rollins				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment	
375.0	375.0	0.0	0.0	KOP (Build 2.5° / 100)	
1,725.4	1,648.6	-386.4	6.7	EOB @ 33.76° Inc. / 179.00° Azm	
2,327.7	2,152.2	-705.6	-64.8	EOT @ 206.27° Azm	
5,296.5	4,620.5	-2,184.8	-795.1	Drop 2.5° / 100'	
6,646.7	5,894.0	-2,531.2	-966.1	EOD @ Vertical	
8,586.7	7,834.0	-2,531.2	-966.1	TD @ 8586.7' MD / 7834.0' TVD	