



Laramie Energy, LLC

**Mesa County, CO
Currier 0993-16-07 Pad
Currier BCU 0993-16-08M**

**OH
Design #3**

KLX Anticollision Report

23 September, 2025





Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Reference	Design #3		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 1,000.0 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	9/23/2025		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	8,725.8	Design #3 (OH)	OWSG (REV5) MWD HD	OWSG MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Currier 0993-16-07 Pad						
(Offset) Buzzard Creek 15-12 - Wellbore #1 - Wellbore #	2,979.2	2,750.6	2,714.4	2,697.8	162.680	CC
(Offset) Buzzard Creek 15-12 - Wellbore #1 - Wellbore #	3,200.0	2,964.1	2,714.9	2,697.2	153.323	ES
(Offset) Buzzard Creek 15-12 - Wellbore #1 - Wellbore #	8,725.8	8,610.0	3,289.7	3,241.0	67.538	SF
(Offset) Buzzard Creek 16-1 - Wellbore #1 - Wellbore #1	1,006.4	1,002.0	2,048.1	2,029.1	107.336	CC, ES
(Offset) Buzzard Creek 16-1 - Wellbore #1 - Wellbore #1	8,600.0	8,590.0	2,692.7	2,643.9	55.252	SF
(Offset) Buzzard Creek 16-10 - Wellbore #1 - Wellbore #	8,599.9	8,743.0	847.7	792.3	15.286	CC, ES, SF
(Offset) Buzzard Creek 16-12 - Wellbore #1 - Wellbore #	8,537.7	8,325.0	2,072.6	2,012.8	34.663	CC, ES
(Offset) Buzzard Creek 16-12 - Wellbore #1 - Wellbore #	8,600.0	8,325.0	2,073.5	2,013.7	34.643	SF
(Offset) Buzzard Creek 16-8 - Wellbore #1 - Wellbore #1	7,800.0	7,820.0	1,930.1	1,885.8	43.537	SF
(Offset) Buzzard Creek 16-8 - Wellbore #1 - Wellbore #1	7,818.0	7,820.0	1,930.0	1,885.7	43.554	CC, ES
(Offset) Buzzard Creek 21-1 - Wellbore #1 - Wellbore #1	140.0	0.0	2,698.5	2,697.5	2,591.965	CC
(Offset) Buzzard Creek 21-1 - Wellbore #1 - Wellbore #1	300.0	130.0	2,698.9	2,696.3	1,040.877	ES
(Offset) Buzzard Creek 21-1 - Wellbore #1 - Wellbore #1	8,725.8	8,660.0	3,764.6	3,712.3	72.022	SF
(Offset) Currier 9-15 - Wellbore #1 - Wellbore #1	0.0	0.0	1,250.3			
(Offset) Currier 9-15 - Wellbore #1 - Wellbore #1	1,045.7	1,058.4	1,253.4	1,244.2	136.397	ES
(Offset) Currier 9-15 - Wellbore #1 - Wellbore #1	8,725.8	8,919.6	3,335.6	3,286.3	67.661	SF
(Offset) Currier Family 16-3 - Wellbore #1 - Wellbore #1	0.0	0.0	1,238.4			
(Offset) Currier Family 16-3 - Wellbore #1 - Wellbore #1	400.0	386.3	1,239.5	1,235.1	282.204	ES
(Offset) Currier Family 16-3 - Wellbore #1 - Wellbore #1	8,700.0	8,650.0	2,148.6	2,091.5	37.604	SF
Currier 0993-16-01M - OH - Design #3	200.0	200.0	79.9	77.1	28.247	CC, ES
Currier 0993-16-01M - OH - Design #3	600.0	589.1	102.6	95.1	13.754	SF
Currier 0993-16-03M - OH - Design #2	208.3	208.3	69.9	67.0	24.133	CC
Currier 0993-16-03M - OH - Design #2	300.0	299.7	70.0	66.4	19.468	ES
Currier 0993-16-03M - OH - Design #2	700.0	691.5	90.3	82.8	11.984	SF
Currier 0993-16-04M - OH - Design #4	210.0	210.0	59.9	57.0	20.628	CC
Currier 0993-16-04M - OH - Design #4	400.0	399.3	60.6	56.3	14.164	ES
Currier 0993-16-04M - OH - Design #4	700.0	693.4	75.6	68.8	11.088	SF
Currier BCU 0993-16-05M - OH - Design #2	608.3	608.3	39.9	34.2	6.997	CC
Currier BCU 0993-16-05M - OH - Design #2	700.0	699.9	40.0	33.9	6.546	ES
Currier BCU 0993-16-05M - OH - Design #2	900.0	898.2	44.3	36.9	5.994	SF
Currier BCU 0993-16-06W - OH - Design #3	743.5	744.0	26.4	20.2	4.233	CC, ES
Currier BCU 0993-16-06W - OH - Design #3	800.0	800.0	27.1	20.5	4.090	SF
Currier BCU 0993-16-07M - OH - Design #2	706.6	707.2	14.2	8.1	2.314	Level 1, CC, ES
Currier BCU 0993-16-07M - OH - Design #2	800.0	800.2	16.5	9.2	2.239	Level 1, SF
Currier BCU 0993-16-09M - OH - Design #2	539.2	539.6	18.3	13.1	3.566	CC, ES
Currier BCU 0993-16-09M - OH - Design #2	600.0	600.0	19.3	13.6	3.372	SF
Currier BCU 0993-16-11E - OH - Design #3	200.0	200.0	80.6	77.8	28.497	CC

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



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Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Currier 0993-16-07 Pad						
Currier BCU 0993-16-11E - OH - Design #3	300.0	298.9	81.3	77.5	21.726	ES
Currier BCU 0993-16-11E - OH - Design #3	800.0	787.1	117.9	109.4	13.898	SF
Currier BCU 0993-16-13E - OH - Design #3	210.0	210.0	70.6	67.7	24.372	CC
Currier BCU 0993-16-13E - OH - Design #3	400.0	399.3	71.3	67.0	16.788	ES
Currier BCU 0993-16-13E - OH - Design #3	800.0	788.2	100.6	91.8	11.382	SF
Currier BCU 0993-16-13W - OH - Design #2	400.0	400.1	12.6	8.4	2.990	CC
Currier BCU 0993-16-13W - OH - Design #2	404.4	404.6	12.6	8.4	2.969	ES
Currier BCU 0993-16-13W - OH - Design #2	500.0	499.5	15.7	9.9	2.708	SF
Currier BCU 0993-16-14E - OH - Design #2	314.9	315.0	60.6	56.9	16.264	CC
Currier BCU 0993-16-14E - OH - Design #2	400.0	399.7	60.9	56.6	13.901	ES
Currier BCU 0993-16-14E - OH - Design #2	700.0	692.2	81.4	73.2	9.923	SF
Currier BCU 0993-16-14W - OH - Design #3	437.0	437.4	29.0	24.4	6.328	CC, ES
Currier BCU 0993-16-14W - OH - Design #3	600.0	599.0	35.2	28.6	5.319	SF
Currier BCU 0993-16-15E - OH - Design #3	349.4	349.5	50.7	46.6	12.560	CC
Currier BCU 0993-16-15E - OH - Design #3	400.0	400.0	50.8	46.4	11.560	ES
Currier BCU 0993-16-15E - OH - Design #3	700.0	693.3	70.6	62.3	8.535	SF
Currier BCU 0993-16-15W - OH - Design #2	390.2	390.5	40.2	35.7	8.960	CC
Currier BCU 0993-16-15W - OH - Design #2	400.0	400.2	40.2	35.6	8.832	ES
Currier BCU 0993-16-15W - OH - Design #2	700.0	697.1	56.8	48.4	6.751	SF
Currier BCU Fed 0993-16-12W - OH - Design #3	292.5	292.5	9.7	6.0	2.581	CC
Currier BCU Fed 0993-16-12W - OH - Design #3	300.0	300.0	9.7	5.9	2.532	ES
Currier BCU Fed 0993-16-12W - OH - Design #3	400.0	399.8	11.3	6.4	2.307	Level 1, SF

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 219-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	133.38	-1,873.0	1,982.2	2,730.8				
100.0	100.0	0.0	0.0	0.8	0.0	133.38	-1,873.0	1,982.2	2,727.5	2,726.7	3,440.696		
147.7	147.7	7.3	7.3	1.1	0.1	133.38	-1,873.0	1,982.2	2,727.2	2,726.0	2,382.511		
200.0	200.0	56.8	56.8	1.4	0.4	133.38	-1,873.1	1,982.2	2,727.2	2,725.4	1,479.247		
300.0	300.0	151.3	151.3	1.9	1.1	133.38	-1,873.3	1,982.3	2,727.4	2,724.4	905.568		
400.0	400.0	239.4	239.4	2.2	1.8	133.38	-1,873.7	1,982.5	2,727.9	2,723.9	683.854		
500.0	500.0	312.2	312.2	2.6	2.2	133.38	-1,874.2	1,983.3	2,729.2	2,724.5	588.701		
600.0	600.0	489.9	489.9	2.8	2.9	133.34	-1,872.3	1,984.1	2,728.2	2,722.6	488.434		
670.8	670.8	530.8	530.8	3.0	3.0	133.33	-1,871.7	1,984.3	2,727.8	2,721.9	459.832		
700.0	700.0	546.8	546.7	3.1	3.0	133.32	-1,871.5	1,984.6	2,727.9	2,721.8	448.790		
800.0	800.0	625.6	625.5	3.3	3.4	133.28	-1,870.6	1,986.8	2,729.1	2,722.3	405.084		
900.0	900.0	735.4	735.2	3.6	3.9	133.17	-1,867.7	1,990.8	2,729.9	2,722.5	367.072		
1,000.0	1,000.0	816.1	815.8	3.8	4.1	133.08	-1,865.1	1,994.6	2,731.1	2,723.3	349.058		
1,100.0	1,100.0	903.3	902.9	4.1	4.2	-107.01	-1,862.5	1,999.4	2,733.6	2,725.4	334.351		
1,200.0	1,199.8	1,009.0	1,008.2	4.8	4.4	-107.21	-1,858.4	2,006.0	2,737.1	2,728.5	317.280		
1,300.0	1,299.5	1,108.5	1,107.5	5.0	4.7	-97.15	-1,854.4	2,012.2	2,741.1	2,732.1	305.873		
1,400.0	1,399.0	1,205.1	1,203.8	5.3	5.0	-81.47	-1,850.6	2,018.2	2,742.8	2,733.3	287.227		
1,500.0	1,498.2	1,325.1	1,323.4	5.7	5.4	-71.30	-1,845.3	2,025.8	2,741.6	2,731.3	266.200		
1,600.0	1,597.2	1,439.5	1,437.4	6.0	5.9	-71.66	-1,838.1	2,033.3	2,737.8	2,727.0	252.980		
1,700.0	1,696.2	1,524.9	1,522.5	6.2	6.2	-72.05	-1,833.1	2,038.8	2,734.5	2,723.3	244.369		
1,800.0	1,795.2	1,631.6	1,628.7	6.5	6.7	-72.53	-1,826.8	2,045.7	2,731.3	2,719.7	235.068		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



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Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 219-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
1,900.0	1,894.3	1,731.4	1,728.2	6.8	7.1	-73.00	-1,820.6	2,052.1	2,728.1	2,716.1	226.716		
2,000.0	1,993.3	1,823.4	1,819.7	7.1	7.4	-73.42	-1,814.8	2,058.1	2,725.1	2,712.7	219.160		
2,100.0	2,092.3	1,913.2	1,909.2	7.4	7.8	-73.84	-1,809.4	2,064.1	2,722.6	2,709.7	212.099		
2,200.0	2,191.3	2,008.4	2,003.9	7.7	8.2	-74.29	-1,803.7	2,070.7	2,720.4	2,707.1	205.207		
2,300.0	2,290.4	2,094.7	2,089.9	8.0	8.5	-74.70	-1,798.6	2,076.9	2,718.6	2,705.0	199.003		
2,400.0	2,389.4	2,184.3	2,179.1	8.4	8.9	-75.12	-1,793.6	2,083.4	2,717.4	2,703.4	193.019		
2,500.0	2,488.4	2,276.9	2,271.3	8.7	9.2	-75.55	-1,788.7	2,090.3	2,716.6	2,702.1	187.237		
2,600.0	2,587.4	2,363.0	2,357.1	9.1	9.6	-75.95	-1,784.3	2,096.9	2,716.2	2,701.3	181.936		
2,700.0	2,686.5	2,480.9	2,474.5	9.5	10.0	-76.50	-1,778.2	2,105.9	2,716.1	2,700.6	176.043		
2,800.0	2,785.5	2,587.8	2,580.9	9.8	10.5	-77.00	-1,771.9	2,113.6	2,715.3	2,699.4	170.771		
2,900.0	2,884.5	2,681.4	2,674.1	10.2	10.8	-77.45	-1,766.3	2,120.4	2,714.6	2,698.3	166.099		
2,979.2	2,962.9	2,750.6	2,743.0	10.5	11.1	-77.78	-1,762.1	2,125.6	2,714.4	2,697.8	162.680	CC	
3,000.0	2,983.5	2,770.2	2,762.5	10.6	11.2	-77.87	-1,760.9	2,127.1	2,714.5	2,697.7	161.771		
3,100.0	3,082.6	2,870.3	2,862.1	11.0	11.6	-78.35	-1,754.9	2,134.8	2,714.6	2,697.3	157.388		
3,200.0	3,181.6	2,964.1	2,955.4	11.4	12.0	-78.81	-1,749.2	2,142.1	2,714.9	2,697.2	153.323	ES	
3,300.0	3,280.6	3,061.4	3,052.2	11.8	12.4	-79.29	-1,742.9	2,150.1	2,715.5	2,697.3	149.517		
3,400.0	3,379.6	3,155.8	3,146.0	12.2	12.7	-79.77	-1,736.1	2,158.1	2,716.3	2,697.7	146.038		
3,500.0	3,478.7	3,242.6	3,232.2	12.6	13.1	-80.23	-1,729.2	2,166.3	2,717.5	2,698.5	142.680		
3,600.0	3,577.7	3,328.7	3,317.5	13.0	13.4	-80.70	-1,722.2	2,174.8	2,719.4	2,699.9	139.394		
3,700.0	3,676.7	3,428.2	3,416.1	13.4	13.8	-81.25	-1,713.6	2,185.3	2,721.7	2,701.7	136.114		
3,800.0	3,775.8	3,527.4	3,514.2	13.8	14.2	-81.83	-1,703.8	2,195.9	2,723.9	2,703.5	132.953		
3,900.0	3,874.8	3,598.0	3,583.9	14.2	14.6	-82.26	-1,696.2	2,204.5	2,727.2	2,706.2	130.332		
4,000.0	3,973.8	3,666.5	3,651.3	14.6	14.9	-82.70	-1,688.1	2,214.0	2,731.6	2,710.2	127.737		
4,100.0	4,072.8	3,730.6	3,714.1	15.0	15.3	-83.13	-1,679.7	2,223.9	2,737.2	2,715.4	125.280		
4,200.0	4,171.9	3,784.0	3,766.1	15.4	15.5	-83.60	-1,672.3	2,233.1	2,744.5	2,722.3	123.404		
4,300.0	4,271.4	3,839.5	3,820.0	15.9	15.9	-84.16	-1,664.3	2,243.8	2,753.9	2,731.2	121.511		
4,400.0	4,371.2	3,877.0	3,856.3	16.4	16.1	-84.62	-1,658.9	2,251.5	2,765.6	2,742.6	120.430		
4,500.0	4,471.2	3,970.0	3,945.7	16.8	16.6	-85.41	-1,644.8	2,272.8	2,779.0	2,755.5	118.151		
4,600.0	4,571.2	4,014.8	3,988.5	16.9	16.8	-86.85	-1,637.6	2,284.0	2,794.1	2,770.4	117.834		
4,700.0	4,671.2	4,104.6	4,073.9	16.9	17.2	-87.35	-1,622.3	2,307.3	2,810.3	2,786.1	116.275		
4,800.0	4,771.2	4,178.9	4,144.0	16.9	17.6	-87.91	-1,608.3	2,327.3	2,827.0	2,802.4	115.004		
4,900.0	4,871.2	4,252.0	4,212.5	17.0	18.0	-88.45	-1,593.5	2,348.2	2,844.7	2,819.7	113.732		
5,000.0	4,971.2	4,331.7	4,287.1	17.0	18.4	-89.05	-1,577.5	2,371.4	2,863.4	2,837.9	112.279		
5,100.0	5,071.2	4,420.7	4,370.3	17.1	18.9	-89.65	-1,559.7	2,397.5	2,882.6	2,856.6	110.640		
5,200.0	5,171.2	4,527.8	4,470.3	17.1	19.4	-90.25	-1,538.1	2,428.9	2,902.1	2,875.4	108.576		
5,300.0	5,271.2	4,642.6	4,577.3	17.1	20.0	-90.85	-1,513.5	2,462.3	2,921.2	2,893.7	106.352		
5,400.0	5,371.2	4,737.7	4,665.9	17.2	20.5	-91.45	-1,492.0	2,489.8	2,940.2	2,912.1	104.674		
5,500.0	5,471.2	4,811.9	4,734.8	17.2	20.8	-92.05	-1,475.4	2,511.5	2,959.9	2,931.3	103.573		
5,600.0	5,571.2	4,876.9	4,795.2	17.2	21.2	-92.65	-1,461.2	2,530.9	2,980.6	2,951.6	102.726		
5,700.0	5,671.2	4,936.8	4,850.8	17.3	21.5	-93.25	-1,448.5	2,549.4	3,002.6	2,973.1	102.056		
5,800.0	5,771.2	5,023.5	4,931.1	17.3	21.9	-93.85	-1,430.7	2,576.6	3,025.6	2,995.6	100.778		
5,900.0	5,871.2	5,118.9	5,019.6	17.4	22.4	-94.45	-1,411.0	2,606.4	3,048.8	3,018.1	99.353		
6,000.0	5,971.2	5,206.0	5,100.2	17.4	22.8	-95.05	-1,392.7	2,633.8	3,072.4	3,041.1	98.200		
6,100.0	6,071.2	5,372.4	5,254.2	17.4	23.7	-95.65	-1,355.7	2,685.0	3,095.4	3,062.9	95.339		
6,200.0	6,171.2	5,499.8	5,372.4	17.5	24.3	-96.25	-1,325.8	2,721.9	3,116.6	3,083.2	93.427		
6,300.0	6,271.2	5,587.9	5,453.9	17.5	24.8	-96.85	-1,304.6	2,747.4	3,138.0	3,104.0	92.366		
6,400.0	6,371.2	5,691.4	5,550.2	17.6	25.3	-97.45	-1,280.7	2,777.0	3,159.5	3,124.8	91.053		
6,500.0	6,471.2	5,811.9	5,663.2	17.6	26.0	-98.05	-1,255.1	2,810.2	3,180.8	3,145.3	89.517		
6,600.0	6,571.2	5,969.1	5,812.1	17.6	26.9	-98.65	-1,225.3	2,850.6	3,201.1	3,164.4	87.389		
6,700.0	6,671.2	6,105.3	5,942.5	17.7	27.6	-99.25	-1,202.6	2,882.6	3,220.0	3,182.5	85.962		
6,800.0	6,771.2	6,296.5	6,127.6	17.7	28.6	-99.85	-1,175.6	2,922.4	3,236.9	3,198.4	84.076		
6,900.0	6,871.2	6,480.8	6,307.1	17.8	29.5	-100.45	-1,149.9	2,955.7	3,251.4	3,212.0	82.481		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Currier 0993-16-07 Pad - (Offset) Buzzard Creek 15-12 - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 usft
Survey Program: 219-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
7,000.0	6,971.2	6,650.4	6,473.5	17.8	30.2	103.16	-1,129.7	2,980.9	3,263.1	3,222.9	81.241		
7,100.0	7,071.2	6,845.2	6,665.8	17.9	31.1	102.71	-1,109.3	3,004.8	3,273.0	3,232.1	80.006		
7,200.0	7,171.2	7,017.6	6,836.6	17.9	31.9	102.37	-1,092.8	3,020.6	3,279.8	3,238.3	78.959		
7,300.0	7,271.2	7,157.1	6,975.2	17.9	32.6	102.11	-1,079.8	3,030.9	3,285.0	3,242.9	77.979		
7,400.0	7,371.2	7,287.7	7,105.2	18.0	33.3	101.91	-1,069.6	3,038.8	3,289.3	3,246.6	76.997		
7,500.0	7,471.2	7,420.7	7,237.7	18.0	34.0	101.74	-1,061.4	3,045.1	3,292.7	3,249.4	76.032		
7,600.0	7,571.2	7,573.2	7,389.9	18.1	34.7	101.59	-1,053.5	3,049.9	3,294.7	3,250.9	75.067		
7,700.0	7,671.2	7,725.8	7,542.4	18.1	35.5	101.47	-1,046.8	3,052.0	3,295.2	3,250.7	74.106		
7,800.0	7,771.2	7,838.8	7,655.3	18.2	35.9	101.40	-1,042.6	3,052.1	3,294.5	3,249.8	73.556		
7,900.0	7,871.2	7,942.5	7,759.0	18.2	36.3	101.35	-1,039.8	3,051.8	3,293.8	3,248.7	73.110		
8,000.0	7,971.2	8,046.2	7,862.7	18.3	36.6	101.32	-1,037.9	3,051.2	3,292.9	3,247.5	72.670		
8,100.0	8,071.2	8,147.4	7,963.9	18.3	37.1	101.31	-1,036.8	3,050.4	3,291.9	3,246.1	71.891		
8,200.0	8,171.2	8,247.4	8,063.8	18.3	37.6	101.29	-1,035.8	3,049.6	3,290.9	3,244.5	70.966		
8,300.0	8,271.2	8,347.4	8,163.8	18.4	38.2	101.28	-1,034.8	3,048.8	3,289.9	3,242.9	70.065		
8,400.0	8,371.2	8,447.4	8,263.8	18.4	38.7	101.26	-1,033.8	3,048.0	3,288.9	3,241.4	69.187		
8,500.0	8,471.2	8,547.4	8,363.8	18.5	39.3	101.25	-1,032.7	3,047.2	3,287.9	3,239.8	68.330		
8,595.2	8,566.4	8,610.0	8,426.4	18.5	39.7	101.24	-1,032.1	3,046.7	3,287.1	3,238.6	67.728		
8,600.0	8,571.2	8,610.0	8,426.4	18.5	39.7	101.24	-1,032.1	3,046.7	3,287.1	3,238.6	67.718		
8,700.0	8,671.2	8,610.0	8,426.4	18.6	39.7	101.24	-1,032.1	3,046.7	3,288.8	3,240.1	67.552		
8,725.8	8,697.0	8,610.0	8,426.4	18.6	39.7	101.24	-1,032.1	3,046.7	3,289.7	3,241.0	67.538	SF	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 200-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	66.35	822.2	1,877.3	2,049.5				
100.0	100.0	91.8	91.8	0.8	0.7	66.35	822.3	1,877.2	2,049.4	2,048.0	1,421.417		
200.0	200.0	192.7	192.7	1.4	1.4	66.34	822.5	1,877.1	2,049.4	2,046.6	737.621		
300.0	300.0	292.8	292.8	1.9	2.3	66.33	822.9	1,876.8	2,049.3	2,045.1	490.006		
400.0	400.0	392.8	392.8	2.2	3.4	66.31	823.2	1,876.6	2,049.2	2,043.6	369.410		
500.0	500.0	493.4	493.4	2.6	5.4	66.30	823.7	1,876.3	2,049.1	2,041.2	258.392		
600.0	600.0	594.0	594.0	2.8	7.5	66.28	824.2	1,875.9	2,049.0	2,038.7	199.316		
700.0	700.0	694.6	694.6	3.1	9.6	66.26	824.9	1,875.4	2,048.8	2,036.2	162.529		
800.0	800.0	795.2	795.2	3.3	11.7	66.23	825.7	1,874.9	2,048.6	2,033.7	137.368		
900.0	900.0	895.8	895.8	3.6	13.7	66.20	826.6	1,874.2	2,048.4	2,031.2	119.050		
1,000.0	1,000.0	995.7	995.7	3.8	15.4	66.17	827.6	1,873.5	2,048.2	2,029.1	107.501		
1,006.4	1,006.4	1,002.0	1,002.0	3.8	15.4	-173.84	827.7	1,873.4	2,048.1	2,029.1	107.336	CC, ES	
1,100.0	1,100.0	1,093.3	1,093.3	4.1	15.6	-173.86	828.3	1,873.0	2,049.7	2,030.2	104.929		
1,200.0	1,199.8	1,188.6	1,188.6	4.8	15.8	-173.88	829.0	1,872.7	2,054.9	2,034.5	100.500		
1,300.0	1,299.5	1,283.6	1,283.6	5.0	16.0	-163.52	829.8	1,872.6	2,063.4	2,042.6	99.169		
1,400.0	1,399.0	1,383.9	1,383.9	5.3	16.2	-147.47	830.9	1,872.5	2,073.1	2,051.8	97.367		
1,500.0	1,498.2	1,489.3	1,489.3	5.7	16.5	-136.86	832.1	1,872.1	2,083.1	2,061.1	94.720		
1,600.0	1,597.2	1,593.7	1,593.7	6.0	16.8	-136.99	833.4	1,871.4	2,093.1	2,070.6	92.810		
1,700.0	1,696.2	1,691.7	1,691.7	6.2	17.1	-137.29	834.7	1,870.5	2,103.1	2,080.1	91.306		
1,800.0	1,795.2	1,789.7	1,789.6	6.5	17.4	-137.59	836.1	1,869.6	2,113.3	2,089.7	89.816		
1,900.0	1,894.3	1,887.7	1,887.6	6.8	17.7	-137.88	837.6	1,868.8	2,123.5	2,099.4	88.368		
2,000.0	1,993.3	1,985.6	1,985.5	7.1	18.0	-138.18	839.3	1,867.9	2,133.8	2,109.3	86.962		
2,100.0	2,092.3	2,083.5	2,083.4	7.4	18.3	-138.48	841.2	1,866.9	2,144.2	2,119.2	85.585		
2,200.0	2,191.3	2,180.2	2,180.1	7.7	18.6	-138.78	843.2	1,866.0	2,154.8	2,129.2	84.276		
2,300.0	2,290.4	2,276.9	2,276.7	8.0	18.9	-139.08	845.4	1,865.0	2,165.5	2,139.4	83.001		
2,400.0	2,389.4	2,373.1	2,372.9	8.4	19.1	-139.38	847.8	1,864.1	2,176.3	2,149.7	81.771		
2,500.0	2,488.4	2,468.7	2,468.5	8.7	19.4	-139.67	850.0	1,863.4	2,187.4	2,160.2	80.591		
2,600.0	2,587.4	2,564.4	2,564.1	9.1	19.7	-139.95	852.2	1,862.9	2,198.6	2,171.0	79.446		
2,700.0	2,686.5	2,660.6	2,660.3	9.5	20.0	-140.23	854.4	1,862.6	2,210.1	2,181.8	78.322		
2,800.0	2,785.5	2,757.0	2,756.7	9.8	20.3	-140.51	856.5	1,862.3	2,221.7	2,192.9	77.229		
2,900.0	2,884.5	2,854.3	2,853.9	10.2	20.6	-140.78	858.7	1,862.2	2,233.4	2,204.1	76.185		
3,000.0	2,983.5	2,955.9	2,955.5	10.6	20.8	-141.06	860.9	1,862.0	2,245.2	2,215.3	75.247		
3,100.0	3,082.6	3,056.9	3,056.5	11.0	21.1	-141.33	862.9	1,861.8	2,256.9	2,226.5	74.345		
3,200.0	3,181.6	3,146.9	3,146.5	11.4	21.2	-141.59	865.4	1,861.4	2,268.7	2,238.0	73.754		
3,300.0	3,280.6	3,227.3	3,226.7	11.8	21.4	-141.87	869.3	1,860.6	2,281.2	2,250.1	73.237		
3,400.0	3,379.6	3,304.0	3,303.2	12.2	21.6	-142.18	875.3	1,859.3	2,294.7	2,263.1	72.755		
3,500.0	3,478.7	3,381.8	3,380.5	12.6	21.8	-142.55	883.8	1,857.5	2,309.2	2,277.2	72.295		
3,600.0	3,577.7	3,458.2	3,456.2	13.0	22.0	-142.96	894.2	1,855.1	2,324.6	2,292.2	71.867		
3,700.0	3,676.7	3,531.0	3,528.0	13.4	22.2	-143.39	905.7	1,852.8	2,341.3	2,308.5	71.495		
3,800.0	3,775.8	3,597.5	3,593.4	13.8	22.4	-143.80	917.6	1,850.8	2,359.2	2,326.1	71.189		
3,900.0	3,874.8	3,670.6	3,665.0	14.2	22.6	-144.28	932.1	1,848.4	2,378.4	2,344.8	70.869		
4,000.0	3,973.8	3,747.1	3,739.4	14.6	22.9	-144.83	949.6	1,845.2	2,398.7	2,364.7	70.542		
4,100.0	4,072.8	3,828.6	3,818.2	15.0	23.1	-145.45	970.0	1,841.0	2,419.8	2,385.3	70.189		
4,200.0	4,171.9	3,905.0	3,891.7	15.4	23.4	-146.20	990.3	1,836.8	2,441.3	2,406.4	69.933		
4,300.0	4,271.4	3,979.2	3,962.8	15.9	23.6	-146.99	1,011.4	1,832.5	2,461.2	2,425.8	69.497		
4,400.0	4,371.2	4,051.8	4,031.8	16.4	23.8	-147.73	1,033.1	1,828.1	2,479.3	2,443.4	69.015		
4,500.0	4,471.2	4,131.4	4,107.3	16.8	24.0	-148.47	1,058.0	1,823.3	2,495.7	2,459.3	68.532		
4,600.0	4,571.2	4,218.6	4,189.8	16.9	24.2	53.48	1,085.9	1,817.8	2,510.4	2,473.8	68.522		
4,700.0	4,671.2	4,304.0	4,270.2	16.9	24.5	52.89	1,113.8	1,812.4	2,525.6	2,488.8	68.540		
4,800.0	4,771.2	4,438.6	4,397.2	16.9	24.9	51.98	1,157.6	1,803.6	2,541.1	2,503.8	68.060		
4,900.0	4,871.2	4,520.1	4,474.3	17.0	25.1	51.43	1,183.5	1,797.4	2,555.5	2,517.9	67.996		
5,000.0	4,971.2	4,588.5	4,539.0	17.0	25.3	50.98	1,205.5	1,793.2	2,571.5	2,533.7	68.101		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 200-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	5,071.2	4,696.5	4,640.7	17.1	25.7	50.26	1,240.7	1,786.1	2,587.8	2,549.7	67.842		
5,200.0	5,171.2	4,802.2	4,740.4	17.1	26.0	49.56	1,275.2	1,778.5	2,604.1	2,565.5	67.578		
5,300.0	5,271.2	4,907.5	4,839.7	17.1	26.4	48.87	1,309.5	1,770.4	2,620.2	2,581.3	67.297		
5,400.0	5,371.2	5,014.1	4,940.0	17.2	26.7	48.17	1,344.1	1,761.6	2,636.3	2,597.0	66.983		
5,500.0	5,471.2	5,143.4	5,062.4	17.2	27.2	47.36	1,384.4	1,751.2	2,652.0	2,612.1	66.439		
5,600.0	5,571.2	5,281.9	5,195.4	17.2	27.7	46.63	1,422.2	1,742.4	2,666.4	2,625.9	65.816		
5,700.0	5,671.2	5,513.3	5,421.3	17.3	28.7	45.71	1,470.9	1,731.9	2,678.0	2,636.5	64.551		
5,800.0	5,771.2	5,660.8	5,567.1	17.3	29.2	45.30	1,492.7	1,726.8	2,685.9	2,643.9	64.013		
5,900.0	5,871.2	5,752.8	5,658.3	17.4	29.5	45.08	1,504.8	1,724.5	2,693.4	2,651.2	63.821		
6,000.0	5,971.2	5,861.5	5,766.2	17.4	29.8	44.87	1,517.6	1,723.1	2,700.9	2,658.4	63.560		
6,100.0	6,071.2	6,013.8	5,917.9	17.4	30.3	44.66	1,531.5	1,722.7	2,707.2	2,664.3	63.097		
6,200.0	6,171.2	6,226.0	6,129.8	17.5	30.8	44.55	1,539.8	1,723.5	2,710.0	2,666.6	62.485		
6,300.0	6,271.2	6,315.6	6,219.4	17.5	31.0	44.51	1,541.7	1,723.2	2,711.3	2,667.8	62.298		
6,400.0	6,371.2	6,406.1	6,309.9	17.6	31.2	44.48	1,543.9	1,723.4	2,713.2	2,669.5	62.085		
6,500.0	6,471.2	6,523.7	6,427.5	17.6	31.6	44.44	1,546.7	1,723.2	2,714.8	2,670.8	61.679		
6,600.0	6,571.2	6,641.3	6,545.0	17.6	31.9	44.37	1,549.7	1,721.7	2,715.7	2,671.4	61.261		
6,700.0	6,671.2	6,753.8	6,657.5	17.7	32.3	44.29	1,552.7	1,719.3	2,716.1	2,671.5	60.899		
6,800.0	6,771.2	6,860.4	6,764.0	17.7	32.6	44.21	1,555.3	1,716.7	2,716.1	2,671.3	60.612		
6,900.0	6,871.2	6,962.4	6,865.9	17.8	32.9	44.14	1,557.6	1,714.2	2,716.0	2,671.0	60.343		
7,000.0	6,971.2	7,062.7	6,966.2	17.8	33.1	44.09	1,559.3	1,712.2	2,715.9	2,670.7	60.087		
7,100.0	7,071.2	7,179.2	7,082.7	17.9	33.4	44.04	1,560.5	1,710.5	2,715.6	2,670.3	59.895		
7,200.0	7,171.2	7,328.8	7,232.3	17.9	33.5	44.04	1,559.0	1,708.4	2,713.9	2,668.6	59.814		
7,300.0	7,271.2	7,412.6	7,316.1	17.9	33.8	44.03	1,557.9	1,706.8	2,711.7	2,666.1	59.441		
7,400.0	7,371.2	7,497.2	7,400.6	18.0	34.1	43.98	1,558.5	1,704.1	2,710.0	2,664.1	59.080		
7,500.0	7,471.2	7,608.2	7,511.4	18.0	34.5	43.86	1,561.1	1,699.3	2,708.6	2,662.3	58.505		
7,600.0	7,571.2	7,755.5	7,658.5	18.1	35.0	43.73	1,562.6	1,692.0	2,705.9	2,659.0	57.633		
7,700.0	7,671.2	7,843.8	7,746.8	18.1	35.2	43.66	1,562.7	1,687.5	2,702.5	2,655.4	57.368		
7,800.0	7,771.2	7,927.7	7,830.5	18.2	35.4	43.59	1,563.2	1,683.5	2,699.7	2,652.5	57.165		
7,900.0	7,871.2	8,013.1	7,915.8	18.2	35.5	43.52	1,564.2	1,679.7	2,697.5	2,650.1	56.971		
8,000.0	7,971.2	8,102.5	8,005.2	18.3	35.7	43.45	1,565.2	1,676.3	2,695.7	2,648.2	56.771		
8,100.0	8,071.2	8,201.0	8,103.6	18.3	36.0	43.39	1,566.4	1,673.1	2,694.3	2,646.7	56.577		
8,200.0	8,171.2	8,284.0	8,186.6	18.3	36.2	43.33	1,567.4	1,670.7	2,693.2	2,645.3	56.256		
8,300.0	8,271.2	8,376.4	8,278.9	18.4	36.6	43.27	1,569.1	1,668.0	2,692.4	2,644.3	55.920		
8,400.0	8,371.2	8,468.7	8,371.2	18.4	36.9	43.19	1,571.2	1,665.1	2,692.0	2,643.5	55.593		
8,500.0	8,471.2	8,562.1	8,464.5	18.5	37.2	43.11	1,573.7	1,662.1	2,691.8	2,643.1	55.300		
8,530.2	8,501.4	8,590.0	8,492.4	18.5	37.3	43.08	1,574.5	1,661.2	2,691.8	2,643.0	55.262		
8,600.0	8,571.2	8,590.0	8,492.4	18.5	37.3	43.08	1,574.5	1,661.2	2,692.7	2,643.9	55.252 SF		
8,700.0	8,671.2	8,590.0	8,492.4	18.6	37.3	43.08	1,574.5	1,661.2	2,697.1	2,648.4	55.338		
8,725.8	8,697.0	8,590.0	8,492.4	18.6	37.3	43.08	1,574.5	1,661.2	2,698.9	2,650.1	55.388		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 157-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	133.66	-1,873.0	1,962.4	2,716.4				
100.0	100.0	0.0	0.0	0.8	0.0	133.66	-1,873.0	1,962.4	2,713.1	2,712.3	3,422.536		
156.7	156.7	17.0	17.0	1.1	0.1	133.67	-1,873.0	1,962.4	2,712.8	2,711.6	2,171.833		
200.0	200.0	61.3	61.3	1.4	0.4	133.67	-1,873.1	1,962.4	2,712.8	2,711.0	1,515.671		
300.0	300.0	163.2	163.2	1.9	1.0	133.68	-1,873.4	1,961.9	2,712.7	2,709.8	946.641		
400.0	400.0	275.4	275.4	2.2	1.6	133.69	-1,873.7	1,961.4	2,712.6	2,708.7	707.324		
500.0	500.0	409.8	409.8	2.6	2.2	133.72	-1,873.3	1,959.1	2,711.0	2,706.4	583.455		
600.0	600.0	529.3	529.2	2.8	2.6	133.76	-1,873.0	1,955.8	2,708.9	2,703.6	508.144		
700.0	700.0	664.6	664.5	3.1	3.1	133.80	-1,871.2	1,951.3	2,705.5	2,699.5	448.662		
800.0	800.0	786.6	786.4	3.3	3.5	133.83	-1,868.6	1,946.6	2,701.3	2,694.6	404.505		
900.0	900.0	917.1	916.7	3.6	3.9	133.86	-1,864.8	1,940.9	2,696.1	2,688.8	367.124		
1,000.0	1,000.0	1,075.3	1,074.4	3.8	4.6	133.92	-1,859.6	1,930.9	2,689.4	2,681.2	328.894		
1,100.0	1,100.0	1,267.4	1,265.5	4.1	5.4	-106.18	-1,851.8	1,913.1	2,680.5	2,671.3	292.713		
1,200.0	1,199.8	1,411.7	1,408.6	4.8	6.1	-106.41	-1,843.9	1,896.2	2,669.7	2,659.7	267.294		
1,300.0	1,299.5	1,521.0	1,516.8	5.0	6.5	-96.37	-1,836.7	1,882.6	2,658.1	2,647.6	251.670		
1,400.0	1,399.0	1,603.3	1,598.4	5.3	6.9	-80.61	-1,831.8	1,872.4	2,644.5	2,633.2	233.205		
1,500.0	1,498.2	1,751.8	1,745.2	5.7	7.5	-70.37	-1,823.0	1,852.8	2,627.6	2,615.2	211.647		
1,600.0	1,597.2	1,959.7	1,949.9	6.0	8.5	-70.60	-1,805.7	1,820.6	2,605.7	2,592.1	192.136		
1,700.0	1,696.2	2,201.8	2,185.9	6.2	9.7	-71.08	-1,777.7	1,774.4	2,579.0	2,564.1	173.389		
1,800.0	1,795.2	2,387.2	2,364.5	6.5	10.6	-71.44	-1,751.6	1,732.3	2,548.2	2,532.3	160.080		
1,900.0	1,894.3	2,598.1	2,565.4	6.8	11.7	-71.86	-1,716.8	1,678.5	2,514.0	2,496.9	147.185		
2,000.0	1,993.3	2,790.4	2,745.8	7.1	12.7	-72.21	-1,681.4	1,622.0	2,475.7	2,457.5	135.993		
2,100.0	2,092.3	2,961.9	2,904.1	7.4	13.6	-72.49	-1,647.0	1,565.8	2,433.6	2,414.3	126.529		
2,200.0	2,191.3	3,063.2	2,996.8	7.7	14.1	-72.63	-1,626.3	1,530.5	2,389.9	2,370.0	119.797		
2,300.0	2,290.4	3,159.0	3,084.3	8.0	14.5	-72.76	-1,606.9	1,496.8	2,346.1	2,325.5	113.614		
2,400.0	2,389.4	3,256.6	3,173.4	8.4	15.0	-72.90	-1,587.0	1,462.2	2,302.0	2,280.6	107.753		
2,500.0	2,488.4	3,343.4	3,252.6	8.7	15.5	-73.03	-1,569.1	1,431.5	2,257.8	2,235.8	102.403		
2,600.0	2,587.4	3,424.2	3,326.3	9.1	15.9	-73.14	-1,553.0	1,402.6	2,213.8	2,191.1	97.445		
2,700.0	2,686.5	3,511.9	3,406.4	9.5	16.3	-73.24	-1,536.2	1,371.0	2,170.2	2,146.8	92.671		
2,800.0	2,785.5	3,609.3	3,495.2	9.8	16.8	-73.34	-1,518.1	1,335.4	2,126.4	2,102.3	88.034		
2,900.0	2,884.5	3,715.2	3,591.5	10.2	17.3	-73.44	-1,498.3	1,296.0	2,082.1	2,057.2	83.541		
3,000.0	2,983.5	3,804.7	3,672.7	10.6	17.8	-73.53	-1,481.1	1,262.5	2,037.4	2,011.8	79.444		
3,100.0	3,082.6	3,895.1	3,754.7	11.0	18.2	-73.62	-1,464.0	1,228.5	1,992.7	1,966.4	75.554		
3,200.0	3,181.6	3,987.3	3,838.2	11.4	18.7	-73.70	-1,447.0	1,193.5	1,948.0	1,920.9	71.844		
3,300.0	3,280.6	4,070.1	3,913.3	11.8	19.1	-73.76	-1,431.8	1,161.9	1,903.3	1,875.4	68.390		
3,400.0	3,379.6	4,158.8	3,993.8	12.2	19.6	-73.83	-1,415.9	1,128.2	1,858.9	1,830.3	65.074		
3,500.0	3,478.7	4,252.3	4,078.5	12.6	20.1	-73.90	-1,399.0	1,092.4	1,814.3	1,784.9	61.887		
3,600.0	3,577.7	4,343.6	4,161.2	13.0	20.6	-73.97	-1,382.6	1,057.3	1,769.5	1,739.5	58.822		
3,700.0	3,676.7	4,425.2	4,235.0	13.4	21.1	-74.02	-1,368.3	1,025.8	1,724.9	1,694.1	55.995		
3,800.0	3,775.8	4,481.0	4,285.7	13.8	21.5	-74.05	-1,359.0	1,004.3	1,681.1	1,649.6	53.423		
3,900.0	3,874.8	4,554.3	4,352.6	14.2	22.1	-74.07	-1,347.7	976.5	1,638.5	1,606.3	50.898		
4,000.0	3,973.8	4,632.6	4,424.6	14.6	22.6	-74.08	-1,336.8	947.7	1,597.5	1,564.5	48.513		
4,100.0	4,072.8	4,718.8	4,504.0	15.0	23.2	-74.11	-1,324.5	916.5	1,556.7	1,523.0	46.223		
4,200.0	4,171.9	4,807.4	4,585.9	15.4	23.9	-73.63	-1,310.9	885.5	1,516.5	1,482.1	44.097		
4,300.0	4,271.4	4,897.6	4,669.4	15.9	24.5	-72.81	-1,296.2	854.8	1,477.1	1,442.0	42.065		
4,400.0	4,371.2	4,986.2	4,751.6	16.4	25.1	-71.91	-1,281.2	825.3	1,438.9	1,403.1	40.172		
4,500.0	4,471.2	5,078.3	4,837.1	16.8	25.7	-70.93	-1,265.0	795.3	1,402.0	1,365.5	38.410		
4,600.0	4,571.2	5,167.3	4,919.8	16.9	26.3	132.29	-1,249.7	766.1	1,365.8	1,328.8	36.845		
4,700.0	4,671.2	5,248.2	4,995.2	16.9	26.9	132.61	-1,235.7	740.3	1,330.5	1,292.9	35.351		
4,800.0	4,771.2	5,332.9	5,074.5	16.9	27.4	132.93	-1,221.0	714.3	1,296.0	1,257.8	33.915		
4,900.0	4,871.2	5,424.5	5,160.3	17.0	28.0	133.26	-1,204.7	686.9	1,261.9	1,223.1	32.522		
5,000.0	4,971.2	5,518.7	5,248.7	17.0	28.6	133.59	-1,187.7	659.0	1,227.9	1,188.5	31.167		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 157-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
5,100.0	5,071.2	5,610.1	5,334.4	17.1	29.2	133.91	-1,170.9	632.3	1,194.0	1,154.1	29.860	
5,200.0	5,171.2	5,703.2	5,421.9	17.1	29.7	134.29	-1,154.4	604.7	1,160.3	1,119.7	28.588	
5,300.0	5,271.2	5,784.0	5,497.6	17.1	30.3	134.67	-1,140.6	580.4	1,126.8	1,085.6	27.371	
5,400.0	5,371.2	5,866.2	5,575.0	17.2	30.8	135.09	-1,127.3	556.1	1,094.4	1,052.6	26.210	
5,500.0	5,471.2	5,935.1	5,640.4	17.2	31.2	135.45	-1,117.1	536.9	1,064.1	1,021.8	25.147	
5,600.0	5,571.2	6,008.0	5,710.2	17.2	31.5	135.78	-1,106.6	518.6	1,036.2	993.3	24.165	
5,700.0	5,671.2	6,091.0	5,790.1	17.3	32.0	136.16	-1,095.8	498.9	1,010.2	966.7	23.230	
5,800.0	5,771.2	6,170.0	5,866.4	17.3	32.3	136.55	-1,086.5	480.9	985.7	941.7	22.404	
5,900.0	5,871.2	6,242.1	5,936.4	17.4	32.6	136.91	-1,078.6	465.4	963.0	918.6	21.661	
6,000.0	5,971.2	6,316.5	6,009.1	17.4	32.9	137.23	-1,071.4	451.4	943.1	898.1	20.997	
6,100.0	6,071.2	6,394.2	6,085.5	17.4	33.2	137.51	-1,064.1	438.9	925.2	879.9	20.398	
6,200.0	6,171.2	6,464.0	6,154.3	17.5	33.4	137.71	-1,058.3	429.2	909.8	864.1	19.912	
6,300.0	6,271.2	6,542.9	6,232.5	17.5	33.5	137.92	-1,053.0	420.0	897.1	851.0	19.479	
6,400.0	6,371.2	6,622.6	6,311.8	17.6	33.7	138.12	-1,049.1	412.3	887.0	840.6	19.128	
6,500.0	6,471.2	6,700.3	6,389.2	17.6	33.8	138.27	-1,046.1	406.4	879.1	832.4	18.857	
6,600.0	6,571.2	6,775.9	6,464.6	17.6	33.9	138.38	-1,044.2	402.6	873.8	827.1	18.686	
6,700.0	6,671.2	6,855.0	6,543.7	17.7	34.0	138.51	-1,044.1	399.9	871.4	824.5	18.595	
6,800.0	6,771.2	6,948.9	6,637.6	17.7	34.1	138.63	-1,044.6	397.8	870.3	823.3	18.504	
6,900.0	6,871.2	7,044.8	6,733.4	17.8	34.2	138.73	-1,045.3	396.4	869.9	822.7	18.423	
7,000.0	6,971.2	7,147.5	6,836.1	17.8	34.5	138.87	-1,046.4	394.5	869.5	822.0	18.315	
7,100.0	7,071.2	7,250.1	6,938.7	17.9	34.7	139.09	-1,048.0	391.5	868.8	821.0	18.202	
7,200.0	7,171.2	7,347.2	7,035.7	17.9	34.9	139.33	-1,049.8	388.3	868.0	820.1	18.119	
7,300.0	7,271.2	7,443.7	7,132.1	17.9	35.2	139.54	-1,051.7	385.7	867.7	819.7	18.051	
7,400.0	7,371.2	7,548.1	7,236.5	18.0	35.5	139.74	-1,053.4	383.1	867.4	819.0	17.913	
7,500.0	7,471.2	7,653.3	7,341.6	18.0	35.9	139.93	-1,054.5	380.3	866.5	817.7	17.761	
7,600.0	7,571.2	7,758.4	7,446.7	18.1	36.2	140.11	-1,055.1	377.2	865.0	815.8	17.601	
7,700.0	7,671.2	7,857.9	7,546.1	18.1	36.6	140.27	-1,055.2	374.3	863.2	813.6	17.413	
7,800.0	7,771.2	7,957.0	7,645.2	18.2	37.0	140.41	-1,055.3	371.6	861.5	811.5	17.231	
7,900.0	7,871.2	8,056.1	7,744.3	18.2	37.5	140.54	-1,055.3	369.1	859.9	809.5	17.056	
8,000.0	7,971.2	8,156.4	7,844.6	18.3	38.1	140.66	-1,055.3	366.7	858.4	807.3	16.776	
8,100.0	8,071.2	8,257.1	7,945.2	18.3	38.9	140.76	-1,054.9	364.6	856.8	804.8	16.478	
8,200.0	8,171.2	8,357.8	8,045.9	18.3	39.6	140.84	-1,054.4	362.6	855.1	802.4	16.204	
8,300.0	8,271.2	8,458.5	8,146.7	18.4	40.4	140.90	-1,053.6	360.7	853.4	799.8	15.932	
8,400.0	8,371.2	8,559.3	8,247.4	18.4	41.1	140.94	-1,052.6	359.0	851.5	797.1	15.654	
8,500.0	8,471.2	8,660.0	8,348.1	18.5	41.9	140.97	-1,051.3	357.5	849.6	794.3	15.372	
8,599.9	8,571.1	8,743.0	8,431.1	18.5	42.1	140.98	-1,050.1	356.3	847.7	792.3	15.286	CC, ES, SF
8,600.0	8,571.2	8,743.0	8,431.1	18.5	42.1	140.98	-1,050.1	356.3	847.7	792.3	15.286	
8,700.0	8,671.2	8,743.0	8,431.1	18.6	42.1	140.98	-1,050.1	356.3	853.6	799.1	15.666	
8,725.8	8,697.0	8,743.0	8,431.1	18.6	42.1	140.98	-1,050.1	356.3	857.0	802.9	15.823	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Currier 0993-16-07 Pad - (Offset) Buzzard Creek 16-12 - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 usft
Survey Program: 920-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-107.40	-754.8	-2,408.5	2,533.0				
100.0	100.0	0.0	0.0	0.8	0.0	-107.40	-754.8	-2,408.5	2,526.5	2,525.7	3,166.295		
200.0	200.0	0.0	0.0	1.4	0.0	-107.40	-754.8	-2,408.5	2,524.0	2,522.6	1,784.212		
213.0	213.0	0.0	0.0	1.5	0.0	-107.40	-754.8	-2,408.5	2,524.0	2,522.5	1,712.899		
300.0	300.0	0.0	0.0	1.9	0.0	-107.40	-754.8	-2,408.5	2,525.5	2,523.6	1,351.723		
340.1	340.1	99.7	99.7	2.0	2.7	-107.40	-755.1	-2,409.0	2,524.7	2,520.0	534.137		
400.0	400.0	146.6	146.6	2.2	4.0	-107.41	-755.4	-2,409.5	2,525.5	2,519.3	405.657		
500.0	500.0	225.0	225.0	2.6	6.1	-107.41	-756.0	-2,411.0	2,527.5	2,518.8	291.181		
600.0	600.0	303.4	303.3	2.8	8.3	-107.42	-757.0	-2,413.0	2,530.4	2,519.3	227.899		
700.0	700.0	381.7	381.6	3.1	10.4	-107.43	-758.3	-2,415.7	2,534.1	2,520.6	187.676		
800.0	800.0	460.0	459.8	3.3	12.5	-107.44	-759.8	-2,419.0	2,538.7	2,522.8	159.834		
900.0	900.0	538.2	537.8	3.6	14.7	-107.45	-761.7	-2,422.9	2,544.1	2,525.9	139.417		
1,000.0	1,000.0	616.3	615.8	3.8	16.8	-107.47	-763.8	-2,427.4	2,550.4	2,529.8	123.810		
1,100.0	1,100.0	694.4	693.7	4.1	18.9	12.50	-766.2	-2,432.4	2,555.9	2,532.8	110.995		
1,200.0	1,199.8	772.5	771.6	4.8	21.1	12.49	-768.9	-2,438.1	2,558.8	2,532.9	98.837		
1,300.0	1,299.5	920.0	918.4	5.0	25.1	22.85	-774.7	-2,450.5	2,560.7	2,530.6	85.078		
1,355.3	1,354.5	920.0	918.4	5.2	25.1	32.47	-774.7	-2,450.5	2,560.1	2,529.9	84.600		
1,400.0	1,399.0	931.1	929.5	5.3	25.1	38.88	-775.2	-2,451.5	2,560.5	2,530.0	84.128		
1,500.0	1,498.2	1,029.6	1,027.4	5.7	25.7	49.63	-782.3	-2,459.7	2,561.6	2,530.3	81.903		
1,600.0	1,597.2	1,137.6	1,134.5	6.0	25.9	49.89	-793.2	-2,467.5	2,562.5	2,530.8	80.854		
1,700.0	1,696.2	1,238.5	1,234.7	6.2	25.9	49.97	-803.0	-2,474.7	2,563.3	2,531.4	80.176		
1,800.0	1,795.2	1,351.4	1,346.8	6.5	25.9	50.06	-813.9	-2,482.5	2,563.9	2,531.6	79.437		
1,900.0	1,894.3	1,459.3	1,453.9	6.8	26.0	50.14	-824.3	-2,489.4	2,563.9	2,531.3	78.670		
2,000.0	1,993.3	1,593.0	1,586.8	7.1	26.0	50.23	-837.2	-2,497.1	2,563.3	2,530.4	77.831		
2,100.0	2,092.3	1,718.2	1,711.2	7.4	26.1	50.29	-850.1	-2,502.3	2,561.4	2,528.1	76.988		
2,200.0	2,191.3	1,842.7	1,834.9	7.7	26.2	50.32	-864.0	-2,506.0	2,558.6	2,525.0	76.127		
2,300.0	2,290.4	2,004.7	1,995.8	8.0	26.3	50.31	-882.9	-2,507.2	2,553.7	2,519.8	75.202		
2,400.0	2,389.4	2,158.4	2,148.4	8.4	26.5	50.28	-900.9	-2,505.2	2,547.1	2,512.8	74.326		
2,500.0	2,488.4	2,291.8	2,280.8	8.7	26.6	50.23	-916.7	-2,500.7	2,538.4	2,503.8	73.421		
2,600.0	2,587.4	2,434.5	2,422.5	9.1	26.8	50.19	-932.5	-2,494.1	2,528.3	2,493.5	72.546		
2,700.0	2,686.5	2,551.4	2,538.6	9.5	26.9	50.18	-944.0	-2,487.8	2,517.2	2,482.1	71.623		
2,800.0	2,785.5	2,682.7	2,669.2	9.8	27.0	50.19	-955.7	-2,479.7	2,505.1	2,469.6	70.739		
2,900.0	2,884.5	2,820.2	2,805.8	10.2	27.2	50.21	-967.0	-2,469.4	2,491.4	2,455.8	69.878		
3,000.0	2,983.5	2,936.8	2,921.7	10.6	27.3	50.24	-975.6	-2,459.5	2,476.6	2,440.7	68.937		
3,100.0	3,082.6	3,047.6	3,031.8	11.0	27.4	50.28	-983.2	-2,449.7	2,461.4	2,425.1	67.978		
3,200.0	3,181.6	3,151.5	3,135.0	11.4	27.5	50.32	-990.3	-2,440.1	2,445.7	2,409.2	66.992		
3,300.0	3,280.6	3,248.0	3,230.9	11.8	27.6	50.36	-996.6	-2,431.3	2,430.0	2,393.2	65.986		
3,400.0	3,379.6	3,360.3	3,342.6	12.2	27.7	50.43	-1,002.9	-2,421.1	2,414.1	2,377.0	65.053		
3,500.0	3,478.7	3,469.9	3,451.5	12.6	27.8	50.53	-1,007.7	-2,410.8	2,397.6	2,360.1	64.096		
3,600.0	3,577.7	3,559.9	3,541.1	13.0	27.9	50.62	-1,011.4	-2,402.5	2,381.1	2,343.3	63.053		
3,700.0	3,676.7	3,666.4	3,647.1	13.4	28.0	50.73	-1,015.7	-2,392.8	2,364.8	2,326.7	62.093		
3,800.0	3,775.8	3,768.9	3,749.0	13.8	28.1	50.85	-1,019.0	-2,383.3	2,348.0	2,309.6	61.126		
3,900.0	3,874.8	3,861.8	3,841.5	14.2	28.2	50.97	-1,021.9	-2,374.8	2,331.3	2,292.6	60.143		
4,000.0	3,973.8	3,955.8	3,935.1	14.6	28.4	51.10	-1,024.6	-2,366.4	2,314.9	2,275.8	59.179		
4,100.0	4,072.8	4,076.0	4,054.8	15.0	28.5	51.29	-1,027.4	-2,355.6	2,298.2	2,258.8	58.332		
4,200.0	4,171.9	4,170.9	4,149.2	15.4	28.6	51.26	-1,029.2	-2,346.9	2,281.6	2,241.9	57.456		
4,300.0	4,271.4	4,282.1	4,259.9	15.9	28.7	51.13	-1,030.7	-2,336.2	2,266.6	2,226.6	56.615		
4,400.0	4,371.2	4,374.7	4,352.1	16.4	28.8	50.95	-1,032.2	-2,327.5	2,253.9	2,213.5	55.778		
4,500.0	4,471.2	4,493.6	4,470.5	16.8	28.9	50.73	-1,033.5	-2,315.7	2,242.9	2,202.2	55.142		
4,600.0	4,571.2	4,592.1	4,568.4	16.9	29.0	-106.80	-1,034.0	-2,305.9	2,233.3	2,192.5	54.778		
4,700.0	4,671.2	4,689.9	4,665.7	16.9	29.0	-106.88	-1,034.3	-2,296.2	2,223.9	2,183.0	54.410		
4,800.0	4,771.2	4,780.0	4,755.4	16.9	29.1	-106.94	-1,034.3	-2,287.6	2,214.7	2,173.7	54.015		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 920-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
4,900.0	4,871.2	4,884.9	4,859.9	17.0	29.2	-107.01	-1,034.2	-2,277.8	2,205.8	2,164.7	53.669		
5,000.0	4,971.2	4,990.9	4,965.4	17.0	29.4	-107.10	-1,034.5	-2,267.4	2,196.5	2,155.3	53.308		
5,100.0	5,071.2	5,080.2	5,054.2	17.1	29.4	-107.17	-1,034.7	-2,258.8	2,187.3	2,145.9	52.895		
5,200.0	5,171.2	5,171.3	5,144.9	17.1	29.6	-107.24	-1,034.8	-2,250.4	2,178.5	2,137.0	52.500		
5,300.0	5,271.2	5,259.9	5,233.2	17.1	29.7	-107.31	-1,034.9	-2,242.6	2,170.2	2,128.6	52.111		
5,400.0	5,371.2	5,362.3	5,335.2	17.2	29.8	-107.38	-1,035.1	-2,233.9	2,162.1	2,120.3	51.754		
5,500.0	5,471.2	5,467.4	5,440.0	17.2	29.9	-107.46	-1,035.3	-2,224.7	2,153.8	2,111.9	51.395		
5,600.0	5,571.2	5,554.9	5,527.2	17.2	30.0	-107.53	-1,035.6	-2,217.1	2,145.6	2,103.6	50.997		
5,700.0	5,671.2	5,625.7	5,597.7	17.3	30.1	-107.57	-1,035.6	-2,211.7	2,138.4	2,096.1	50.587		
5,800.0	5,771.2	5,715.5	5,687.3	17.3	30.2	-107.62	-1,035.8	-2,205.9	2,132.3	2,089.9	50.246		
5,900.0	5,871.2	5,802.7	5,774.3	17.4	30.3	-107.67	-1,035.9	-2,200.5	2,126.4	2,083.8	49.917		
6,000.0	5,971.2	5,887.7	5,859.2	17.4	30.4	-107.71	-1,036.0	-2,195.9	2,121.3	2,078.6	49.609		
6,100.0	6,071.2	5,974.2	5,945.7	17.4	30.6	-107.74	-1,035.8	-2,191.9	2,116.9	2,074.0	49.309		
6,200.0	6,171.2	6,067.0	6,038.4	17.5	30.7	-107.76	-1,035.4	-2,188.4	2,113.1	2,070.0	49.028		
6,300.0	6,271.2	6,152.6	6,123.9	17.5	30.8	-107.77	-1,035.1	-2,185.5	2,109.8	2,066.5	48.754		
6,400.0	6,371.2	6,250.3	6,221.6	17.6	30.9	-107.78	-1,034.6	-2,182.6	2,106.8	2,063.4	48.508		
6,500.0	6,471.2	6,350.0	6,321.3	17.6	31.0	-107.80	-1,034.3	-2,179.5	2,103.8	2,060.2	48.269		
6,600.0	6,571.2	6,443.5	6,414.7	17.6	31.1	-107.82	-1,034.1	-2,176.8	2,100.9	2,057.1	48.025		
6,700.0	6,671.2	6,528.7	6,499.8	17.7	31.2	-107.83	-1,034.0	-2,174.7	2,098.5	2,054.6	47.799		
6,800.0	6,771.2	6,626.4	6,597.5	17.7	31.4	-107.85	-1,033.9	-2,172.8	2,096.7	2,052.5	47.537		
6,900.0	6,871.2	6,727.7	6,698.8	17.8	31.6	-107.85	-1,033.5	-2,170.9	2,094.7	2,050.4	47.192		
7,000.0	6,971.2	6,829.0	6,800.1	17.8	31.8	-107.85	-1,032.8	-2,169.0	2,092.8	2,048.1	46.849		
7,100.0	7,071.2	6,930.3	6,901.4	17.9	32.0	-107.83	-1,031.7	-2,167.2	2,090.7	2,045.8	46.509		
7,200.0	7,171.2	7,028.4	6,999.5	17.9	33.0	-107.82	-1,030.5	-2,165.5	2,088.7	2,042.6	45.309		
7,300.0	7,271.2	7,126.1	7,097.2	17.9	34.1	-107.80	-1,029.4	-2,163.9	2,086.8	2,039.5	44.087		
7,400.0	7,371.2	7,223.9	7,194.9	18.0	35.2	-107.79	-1,028.4	-2,162.3	2,085.0	2,036.4	42.932		
7,500.0	7,471.2	7,321.7	7,292.7	18.0	36.3	-107.78	-1,027.6	-2,160.9	2,083.3	2,033.5	41.838		
7,600.0	7,571.2	7,419.4	7,390.4	18.1	37.4	-107.77	-1,026.8	-2,159.5	2,081.7	2,030.6	40.799		
7,700.0	7,671.2	7,517.2	7,488.2	18.1	38.5	-107.77	-1,026.2	-2,158.1	2,080.2	2,027.9	39.813		
7,800.0	7,771.2	7,615.0	7,585.9	18.2	39.6	-107.77	-1,025.7	-2,156.8	2,078.8	2,025.3	38.875		
7,900.0	7,871.2	7,712.3	7,683.2	18.2	40.5	-107.77	-1,025.3	-2,155.7	2,077.5	2,023.0	38.131		
8,000.0	7,971.2	7,809.4	7,780.4	18.3	41.3	-107.76	-1,024.7	-2,154.7	2,076.4	2,020.9	37.463		
8,100.0	8,071.2	7,906.6	7,877.5	18.3	42.1	-107.75	-1,024.0	-2,153.9	2,075.4	2,019.0	36.821		
8,200.0	8,171.2	8,003.7	7,974.7	18.3	42.9	-107.73	-1,023.2	-2,153.3	2,074.5	2,017.2	36.204		
8,300.0	8,271.2	8,100.9	8,071.8	18.4	43.8	-107.71	-1,022.2	-2,152.9	2,073.8	2,015.5	35.609		
8,400.0	8,371.2	8,198.0	8,168.9	18.4	44.6	-107.68	-1,021.1	-2,152.6	2,073.2	2,014.0	35.037		
8,500.0	8,471.2	8,296.4	8,267.3	18.5	45.1	-107.65	-1,019.8	-2,152.6	2,072.7	2,013.0	34.691		
8,537.7	8,508.9	8,325.0	8,295.9	18.5	45.1	-107.64	-1,019.4	-2,152.5	2,072.6	2,012.8	34.663	CC, ES	
8,600.0	8,571.2	8,325.0	8,295.9	18.5	45.1	-107.64	-1,019.4	-2,152.5	2,073.5	2,013.7	34.643	SF	
8,700.0	8,671.2	8,325.0	8,295.9	18.6	45.1	-107.64	-1,019.4	-2,152.5	2,078.9	2,019.0	34.721		
8,725.8	8,697.0	8,325.0	8,295.9	18.6	45.1	-107.64	-1,019.4	-2,152.5	2,081.1	2,021.2	34.767		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 184-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	66.88	804.0	1,883.0	2,047.4				
100.0	100.0	94.3	94.3	0.8	0.6	66.88	803.9	1,882.9	2,047.3	2,045.9	1,433.188		
200.0	200.0	197.1	197.1	1.4	1.3	66.88	803.7	1,882.7	2,047.1	2,044.3	742.570		
300.0	300.0	294.5	294.5	1.9	2.1	66.89	803.3	1,882.6	2,046.9	2,042.9	517.355		
400.0	400.0	398.3	398.3	2.2	2.7	66.91	802.7	1,882.7	2,046.7	2,041.7	417.121		
500.0	500.0	505.6	505.6	2.6	3.2	66.91	802.4	1,882.2	2,046.1	2,040.4	359.391		
600.0	600.0	608.7	608.7	2.8	3.6	66.92	801.7	1,881.5	2,045.3	2,038.9	318.017		
700.0	700.0	705.4	705.4	3.1	4.0	66.94	800.8	1,881.1	2,044.5	2,037.4	288.039		
800.0	800.0	799.6	799.6	3.3	4.4	66.95	800.2	1,880.7	2,043.9	2,036.2	264.551		
900.0	900.0	898.1	898.1	3.6	4.8	66.96	799.9	1,880.5	2,043.5	2,035.2	244.817		
1,000.0	1,000.0	996.8	996.8	3.8	5.2	66.95	799.9	1,880.1	2,043.2	2,034.3	228.557		
1,008.3	1,008.3	1,005.2	1,005.2	3.8	5.2	-173.05	799.9	1,880.1	2,043.2	2,034.2	227.424		
1,100.0	1,100.0	1,097.4	1,097.4	4.1	5.5	-173.05	799.9	1,879.8	2,044.7	2,035.2	215.167		
1,200.0	1,199.8	1,212.9	1,212.9	4.8	5.7	-173.06	799.4	1,879.2	2,049.2	2,038.8	195.965		
1,300.0	1,299.5	1,342.0	1,341.9	5.0	5.9	-162.67	797.0	1,877.6	2,055.6	2,044.7	188.653		
1,400.0	1,399.0	1,479.4	1,479.2	5.3	6.3	-146.61	791.6	1,875.0	2,061.6	2,050.1	180.133		
1,500.0	1,498.2	1,601.9	1,601.5	5.7	6.6	-135.97	784.6	1,871.3	2,066.3	2,054.1	169.979		
1,600.0	1,597.2	1,723.6	1,722.8	6.0	6.9	-135.93	775.6	1,867.6	2,070.6	2,057.9	162.467		
1,700.0	1,696.2	1,854.2	1,852.7	6.2	7.4	-136.03	763.6	1,862.4	2,073.3	2,060.0	155.757		
1,800.0	1,795.2	1,978.0	1,975.6	6.5	7.8	-136.10	750.5	1,856.4	2,074.7	2,060.8	149.409		
1,900.0	1,894.3	2,103.5	2,100.0	6.8	8.2	-136.09	734.4	1,850.3	2,075.2	2,060.7	143.314		
2,000.0	1,993.3	2,214.7	2,209.9	7.1	8.7	-136.06	718.7	1,844.1	2,074.5	2,059.4	137.715		
2,100.0	2,092.3	2,330.7	2,324.4	7.4	9.1	-136.00	701.3	1,837.3	2,073.1	2,057.4	132.207		
2,200.0	2,191.3	2,420.9	2,413.3	7.7	9.4	-135.94	687.1	1,832.3	2,071.7	2,055.5	127.579		
2,300.0	2,290.4	2,512.0	2,503.1	8.0	9.8	-135.86	672.5	1,827.8	2,070.8	2,054.0	123.296		
2,400.0	2,389.4	2,611.7	2,604.0	8.4	10.2	-135.77	656.6	1,823.0	2,070.1	2,052.7	119.099		
2,500.0	2,488.4	2,706.1	2,694.5	8.7	10.5	-135.69	641.6	1,818.6	2,069.5	2,051.5	115.219		
2,600.0	2,587.4	2,801.2	2,788.4	9.1	10.9	-135.62	627.0	1,814.2	2,069.2	2,050.6	111.540		
2,700.0	2,686.5	2,899.4	2,885.3	9.5	11.3	-135.55	611.8	1,810.0	2,069.1	2,049.9	108.028		
2,800.0	2,785.5	2,999.7	2,984.3	9.8	11.7	-135.47	596.2	1,805.5	2,068.9	2,049.1	104.658		
2,818.7	2,804.0	3,015.9	3,000.3	9.9	11.7	-135.46	593.7	1,804.8	2,068.8	2,049.0	104.085		
2,900.0	2,884.5	3,091.2	3,074.6	10.2	12.0	-135.40	582.4	1,801.6	2,069.0	2,048.7	101.609		
3,000.0	2,983.5	3,192.6	3,174.8	10.6	12.4	-135.34	567.4	1,797.3	2,069.3	2,048.3	98.590		
3,100.0	3,082.6	3,295.4	3,276.5	11.0	12.8	-135.30	552.8	1,792.7	2,069.5	2,047.8	95.689		
3,200.0	3,181.6	3,388.3	3,368.3	11.4	13.2	-135.25	539.3	1,788.4	2,069.6	2,047.4	93.058		
3,300.0	3,280.6	3,480.3	3,459.3	11.8	13.6	-135.20	526.1	1,784.8	2,070.3	2,047.5	90.611		
3,400.0	3,379.6	3,580.2	3,558.1	12.2	14.0	-135.15	511.8	1,781.0	2,071.1	2,047.7	88.207		
3,500.0	3,478.7	3,673.6	3,650.6	12.6	14.3	-135.11	499.0	1,777.3	2,072.1	2,048.0	85.986		
3,600.0	3,577.7	3,771.8	3,747.9	13.0	14.7	-135.10	486.5	1,773.3	2,073.4	2,048.6	83.829		
3,700.0	3,676.7	3,873.2	3,848.3	13.4	15.1	-135.09	473.5	1,769.2	2,074.5	2,049.2	81.738		
3,800.0	3,775.8	3,975.3	3,949.5	13.8	15.6	-135.07	460.1	1,765.1	2,075.7	2,049.6	79.734		
3,900.0	3,874.8	4,080.0	4,053.2	14.2	16.0	-135.05	446.3	1,760.7	2,076.6	2,049.9	77.784		
4,000.0	3,973.8	4,196.6	4,168.6	14.6	16.5	-135.03	430.9	1,755.0	2,077.0	2,049.6	75.769		
4,100.0	4,072.8	4,295.6	4,266.5	15.0	16.9	-135.01	417.6	1,750.0	2,077.0	2,048.9	73.974		
4,200.0	4,171.9	4,382.2	4,352.2	15.4	17.2	-134.96	405.5	1,746.1	2,076.8	2,048.1	72.453		
4,300.0	4,271.4	4,462.0	4,431.3	15.9	17.6	-134.85	394.7	1,743.2	2,075.3	2,046.0	70.923		
4,400.0	4,371.2	4,570.4	4,538.5	16.4	18.0	-134.59	379.8	1,739.2	2,071.2	2,041.3	69.220		
4,500.0	4,471.2	4,649.0	4,616.4	16.8	18.3	-134.32	369.5	1,736.7	2,065.4	2,035.0	67.897		
4,600.0	4,571.2	4,761.0	4,727.4	16.9	18.8	68.68	354.3	1,733.3	2,057.7	2,027.0	66.942		
4,700.0	4,671.2	4,858.3	4,823.6	16.9	19.2	69.00	340.8	1,730.3	2,049.7	2,018.7	66.104		
4,800.0	4,771.2	4,966.8	4,931.1	16.9	19.6	69.34	326.5	1,726.6	2,041.8	2,010.5	65.192		
4,900.0	4,871.2	5,079.6	5,043.0	17.0	20.1	69.65	312.7	1,721.3	2,033.2	2,001.5	64.197		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 184-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,000.0	4,971.2	5,171.8	5,134.5	17.0	20.5	69.85	303.4	1,716.2	2,024.4	1,992.4	63.316		
5,100.0	5,071.2	5,229.7	5,192.2	17.1	20.7	69.95	298.7	1,713.1	2,016.7	1,984.6	62.705		
5,200.0	5,171.2	5,286.9	5,249.3	17.1	21.0	70.01	295.6	1,711.1	2,011.5	1,979.2	62.187		
5,300.0	5,271.2	5,387.6	5,349.7	17.1	21.4	70.13	290.1	1,708.5	2,007.2	1,974.4	61.319		
5,400.0	5,371.2	5,485.0	5,447.0	17.2	22.1	70.26	284.4	1,706.1	2,002.9	1,969.4	59.853		
5,500.0	5,471.2	5,582.5	5,544.2	17.2	22.9	70.38	279.1	1,703.7	1,998.7	1,964.5	58.445		
5,600.0	5,571.2	5,680.0	5,641.6	17.2	23.6	70.49	274.2	1,701.2	1,994.7	1,959.7	57.092		
5,700.0	5,671.2	5,777.5	5,739.0	17.3	24.3	70.59	269.7	1,698.8	1,990.7	1,955.1	55.792		
5,800.0	5,771.2	5,867.0	5,828.4	17.3	25.0	70.67	265.9	1,696.5	1,987.0	1,950.6	54.643		
5,900.0	5,871.2	5,960.4	5,921.7	17.4	25.5	70.74	262.6	1,694.3	1,983.6	1,946.7	53.684		
6,000.0	5,971.2	6,046.8	6,008.1	17.4	26.0	70.78	260.5	1,692.6	1,980.9	1,943.5	52.837		
6,100.0	6,071.2	6,133.2	6,094.5	17.4	26.5	70.80	259.2	1,691.3	1,979.0	1,940.9	52.027		
6,200.0	6,171.2	6,231.4	6,192.6	17.5	27.0	70.81	258.6	1,690.0	1,977.5	1,939.0	51.279		
6,300.0	6,271.2	6,340.1	6,301.3	17.5	27.4	70.82	257.6	1,688.3	1,975.8	1,936.7	50.572		
6,400.0	6,371.2	6,448.7	6,409.9	17.6	27.8	70.84	256.0	1,686.3	1,973.6	1,934.0	49.875		
6,500.0	6,471.2	6,536.9	6,498.0	17.6	28.0	70.86	254.9	1,684.7	1,971.4	1,931.6	49.526		
6,600.0	6,571.2	6,623.6	6,584.8	17.6	28.1	70.85	254.7	1,683.4	1,969.9	1,929.9	49.217		
6,700.0	6,671.2	6,710.4	6,671.5	17.7	28.3	70.82	255.4	1,682.4	1,969.1	1,928.9	48.923		
6,800.0	6,771.2	6,825.6	6,786.8	17.7	28.4	70.76	257.0	1,681.0	1,968.4	1,927.9	48.490		
6,900.0	6,871.2	6,951.0	6,912.0	17.8	28.5	70.69	258.5	1,678.0	1,966.6	1,925.6	47.988		
7,000.0	6,971.2	7,072.3	7,033.3	17.8	28.8	70.62	259.6	1,673.6	1,963.5	1,922.0	47.388		
7,100.0	7,071.2	7,192.5	7,153.4	17.9	29.0	70.56	260.0	1,668.2	1,959.3	1,917.4	46.758		
7,200.0	7,171.2	7,297.2	7,257.9	17.9	29.4	70.51	259.9	1,662.8	1,954.4	1,912.1	46.143		
7,300.0	7,271.2	7,396.1	7,356.7	17.9	29.7	70.48	259.3	1,657.9	1,949.6	1,906.8	45.549		
7,400.0	7,371.2	7,495.0	7,455.5	18.0	30.0	70.46	258.3	1,653.2	1,944.7	1,901.5	44.972		
7,500.0	7,471.2	7,585.0	7,545.4	18.0	30.3	70.44	257.4	1,649.1	1,940.2	1,896.6	44.517		
7,600.0	7,571.2	7,673.5	7,633.8	18.1	30.5	70.39	257.8	1,645.3	1,936.2	1,892.2	44.093		
7,700.0	7,671.2	7,762.0	7,722.2	18.1	30.7	70.31	259.3	1,641.5	1,932.8	1,888.5	43.683		
7,800.0	7,771.2	7,820.0	7,780.1	18.2	30.7	70.25	260.7	1,639.1	1,930.1	1,885.8	43.537	SF	
7,818.0	7,789.2	7,820.0	7,780.1	18.2	30.7	70.25	260.7	1,639.1	1,930.0	1,885.7	43.554	CC, ES	
7,900.0	7,871.2	7,820.0	7,780.1	18.2	30.7	70.25	260.7	1,639.1	1,931.8	1,887.6	43.711		
8,000.0	7,971.2	7,820.0	7,780.1	18.3	30.7	70.25	260.7	1,639.1	1,938.6	1,894.6	44.071		
8,100.0	8,071.2	7,820.0	7,780.1	18.3	30.7	70.25	260.7	1,639.1	1,950.5	1,906.8	44.615		
8,200.0	8,171.2	7,820.0	7,780.1	18.3	30.7	70.25	260.7	1,639.1	1,967.5	1,924.1	45.335		
8,300.0	8,271.2	7,820.0	7,780.1	18.4	30.7	70.25	260.7	1,639.1	1,989.3	1,946.3	46.227		
8,400.0	8,371.2	7,820.0	7,780.1	18.4	30.7	70.25	260.7	1,639.1	2,015.9	1,973.2	47.280		
8,500.0	8,471.2	7,820.0	7,780.1	18.5	30.7	70.25	260.7	1,639.1	2,047.0	2,004.8	48.488		
8,600.0	8,571.2	7,820.0	7,780.1	18.5	30.7	70.25	260.7	1,639.1	2,082.4	2,040.7	49.838		
8,700.0	8,671.2	7,820.0	7,780.1	18.6	30.7	70.25	260.7	1,639.1	2,122.0	2,080.7	51.321		
8,725.8	8,697.0	7,820.0	7,780.1	18.6	30.7	70.25	260.7	1,639.1	2,132.9	2,091.7	51.734		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 130-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	133.96	-1,873.1	1,942.6	2,702.2				
100.0	100.0	0.0	0.0	0.8	0.0	133.96	-1,873.1	1,942.6	2,698.8	2,698.0	3,404.486		
140.0	140.0	0.0	0.0	1.0	0.0	133.96	-1,873.1	1,942.6	2,698.5	2,697.5	2,591.965	CC	
200.0	200.0	56.4	56.4	1.4	0.3	133.96	-1,873.1	1,942.6	2,698.6	2,696.8	1,560.509		
300.0	300.0	130.0	130.0	1.9	0.7	133.96	-1,873.5	1,942.5	2,698.9	2,696.3	1,040.877	ES	
400.0	400.0	219.0	219.0	2.2	1.5	133.99	-1,875.0	1,942.5	2,700.1	2,696.5	740.824		
500.0	500.0	295.8	295.7	2.6	2.0	134.03	-1,877.6	1,942.4	2,702.3	2,697.9	621.439		
600.0	600.0	359.8	359.7	2.8	2.3	134.08	-1,880.6	1,942.1	2,705.3	2,700.3	549.812		
700.0	700.0	424.6	424.3	3.1	2.6	134.14	-1,884.5	1,942.3	2,709.7	2,704.2	496.150		
800.0	800.0	490.0	489.6	3.3	3.0	134.20	-1,889.3	1,942.7	2,715.2	2,709.2	454.420		
900.0	900.0	582.0	581.2	3.6	3.4	134.32	-1,897.5	1,942.9	2,721.6	2,715.1	414.166		
1,000.0	1,000.0	653.7	652.5	3.8	3.7	134.44	-1,905.2	1,942.7	2,728.9	2,721.8	386.768		
1,100.0	1,100.0	732.7	731.0	4.1	4.1	-105.28	-1,914.6	1,942.2	2,737.3	2,729.8	363.843		
1,200.0	1,199.8	809.3	806.9	4.8	4.5	-105.00	-1,924.8	1,941.6	2,747.4	2,739.4	342.165		
1,300.0	1,299.5	883.5	880.3	5.0	4.8	-94.46	-1,935.7	1,940.8	2,758.9	2,750.5	327.764		
1,400.0	1,399.0	958.7	954.4	5.3	5.2	-78.32	-1,947.9	1,939.8	2,768.8	2,759.6	303.351		
1,500.0	1,498.2	1,067.3	1,061.3	5.7	5.7	-67.53	-1,966.7	1,937.6	2,775.8	2,765.7	276.735		
1,600.0	1,597.2	1,150.8	1,143.4	6.0	6.1	-67.31	-1,982.0	1,935.1	2,781.4	2,770.8	262.871		
1,700.0	1,696.2	1,231.0	1,222.0	6.2	6.4	-67.25	-1,997.9	1,932.5	2,787.8	2,776.8	252.327		
1,800.0	1,795.2	1,304.8	1,294.0	6.5	6.8	-67.18	-2,013.7	1,929.7	2,795.1	2,783.5	242.499		
1,900.0	1,894.3	1,385.5	1,372.5	6.8	7.2	-67.08	-2,031.9	1,926.5	2,803.0	2,791.0	232.843		
2,000.0	1,993.3	1,480.7	1,465.1	7.1	7.6	-66.95	-2,054.1	1,922.7	2,811.5	2,798.9	223.183		
2,100.0	2,092.3	1,572.0	1,553.9	7.4	8.0	-66.85	-2,074.8	1,919.6	2,820.0	2,806.9	214.288		
2,200.0	2,191.3	1,666.3	1,645.6	7.7	8.4	-66.74	-2,096.5	1,916.5	2,828.8	2,815.1	205.574		
2,300.0	2,290.4	1,773.7	1,750.1	8.0	8.9	-66.61	-2,121.2	1,912.8	2,837.5	2,823.1	196.619		
2,400.0	2,389.4	1,853.0	1,827.1	8.4	9.3	-66.51	-2,139.9	1,910.1	2,846.7	2,831.7	189.946		
2,500.0	2,488.4	1,921.5	1,893.5	8.7	9.6	-66.41	-2,156.9	1,907.7	2,856.7	2,841.1	184.094		
2,600.0	2,587.4	2,004.1	1,973.1	9.1	10.0	-66.28	-2,178.5	1,904.7	2,867.5	2,851.4	177.784		
2,700.0	2,686.5	2,086.6	2,052.6	9.5	10.4	-66.14	-2,200.5	1,901.7	2,878.9	2,862.1	171.906		
2,800.0	2,785.5	2,162.5	2,125.5	9.8	10.8	-66.00	-2,221.3	1,899.0	2,890.9	2,873.6	166.696		
2,900.0	2,884.5	2,237.7	2,197.5	10.2	11.1	-65.85	-2,243.0	1,896.2	2,903.9	2,885.9	161.756		
3,000.0	2,983.5	2,331.1	2,286.5	10.6	11.6	-65.64	-2,270.8	1,892.4	2,917.2	2,898.6	156.207		
3,100.0	3,082.6	2,410.0	2,361.6	11.0	12.0	-65.46	-2,294.9	1,888.9	2,931.1	2,911.8	151.696		
3,200.0	3,181.6	2,494.9	2,442.1	11.4	12.4	-65.25	-2,321.6	1,885.0	2,945.6	2,925.5	147.146		
3,300.0	3,280.6	2,564.4	2,507.7	11.8	12.8	-65.07	-2,344.4	1,881.5	2,960.8	2,940.1	143.435		
3,400.0	3,379.6	2,638.5	2,577.2	12.2	13.1	-64.86	-2,369.5	1,877.8	2,977.0	2,955.7	139.734		
3,500.0	3,478.7	2,720.0	2,653.6	12.6	13.6	-64.62	-2,397.8	1,873.8	2,993.9	2,971.8	135.941		
3,600.0	3,577.7	2,805.8	2,733.8	13.0	14.0	-64.37	-2,427.9	1,869.7	3,011.3	2,988.5	132.221		
3,700.0	3,676.7	2,900.5	2,822.1	13.4	14.5	-64.09	-2,461.9	1,864.8	3,029.1	3,005.5	128.377		
3,800.0	3,775.8	3,003.5	2,918.2	13.8	15.0	-63.78	-2,498.6	1,859.3	3,046.6	3,022.2	124.474		
3,900.0	3,874.8	3,087.6	2,996.6	14.2	15.4	-63.53	-2,528.6	1,855.0	3,064.6	3,039.3	121.442		
4,000.0	3,973.8	3,171.9	3,075.2	14.6	15.8	-63.29	-2,558.9	1,851.0	3,082.9	3,056.9	118.572		
4,100.0	4,072.8	3,256.7	3,154.1	15.0	16.3	-63.05	-2,589.6	1,847.5	3,101.9	3,075.1	115.860		
4,200.0	4,171.9	3,405.2	3,292.7	15.4	17.0	-62.84	-2,642.5	1,840.6	3,120.5	3,092.6	111.656		
4,300.0	4,271.4	3,519.3	3,399.8	15.9	17.6	-62.82	-2,681.7	1,835.2	3,139.6	3,110.7	108.621		
4,400.0	4,371.2	3,592.1	3,468.2	16.4	18.0	-62.94	-2,706.3	1,832.3	3,160.4	3,130.9	106.881		
4,500.0	4,471.2	3,678.6	3,549.6	16.8	18.4	-63.01	-2,735.5	1,829.8	3,183.5	3,153.3	105.108		
4,600.0	4,571.2	3,773.2	3,638.6	16.9	18.9	139.85	-2,767.5	1,827.1	3,208.1	3,177.2	103.818		
4,700.0	4,671.2	3,850.0	3,710.8	16.9	19.3	140.19	-2,793.6	1,824.9	3,233.1	3,201.6	102.954		
4,800.0	4,771.2	3,939.4	3,794.6	16.9	19.7	140.58	-2,824.5	1,822.6	3,258.8	3,226.8	101.850		
4,900.0	4,871.2	4,043.7	3,892.6	17.0	20.3	141.02	-2,860.0	1,819.9	3,284.3	3,251.6	100.474		
5,000.0	4,971.2	4,138.7	3,981.9	17.0	20.8	141.42	-2,892.4	1,817.4	3,309.9	3,276.6	99.351		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 130-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	5,071.2	4,264.5	4,100.3	17.1	21.4	141.94	-2,934.7	1,813.9	3,335.3	3,301.1	97.678		
5,200.0	5,171.2	4,345.5	4,176.7	17.1	21.8	142.26	-2,961.7	1,811.7	3,360.5	3,325.8	96.914		
5,300.0	5,271.2	4,445.8	4,271.3	17.1	22.3	142.65	-2,994.7	1,809.6	3,385.9	3,350.6	95.851		
5,400.0	5,371.2	4,589.3	4,407.3	17.2	23.1	143.18	-3,040.6	1,806.1	3,410.5	3,374.2	94.105		
5,500.0	5,471.2	4,721.1	4,532.9	17.2	23.7	143.63	-3,080.6	1,803.2	3,433.9	3,396.9	92.635		
5,600.0	5,571.2	4,786.5	4,595.3	17.2	24.1	143.83	-3,099.8	1,802.4	3,457.3	3,419.8	92.208		
5,700.0	5,671.2	4,837.8	4,644.1	17.3	24.4	144.00	-3,115.5	1,802.1	3,482.2	3,444.4	92.042		
5,800.0	5,771.2	4,913.0	4,715.3	17.3	24.8	144.25	-3,139.8	1,801.3	3,508.2	3,469.8	91.515		
5,900.0	5,871.2	5,018.9	4,815.3	17.4	25.4	144.62	-3,174.6	1,799.2	3,534.3	3,495.3	90.556		
6,000.0	5,971.2	5,101.2	4,893.0	17.4	25.8	144.90	-3,201.7	1,797.4	3,560.5	3,520.9	89.997		
6,100.0	6,071.2	5,221.6	5,006.7	17.4	26.4	145.32	-3,241.1	1,794.3	3,586.4	3,546.1	88.908		
6,200.0	6,171.2	5,315.7	5,095.7	17.5	26.9	145.64	-3,271.7	1,791.7	3,612.3	3,571.3	88.219		
6,300.0	6,271.2	5,407.7	5,182.7	17.5	27.3	145.94	-3,301.4	1,789.7	3,638.3	3,596.7	87.590		
6,400.0	6,371.2	5,510.5	5,280.0	17.6	27.9	146.27	-3,334.6	1,787.5	3,664.4	3,622.2	86.842		
6,500.0	6,471.2	5,609.8	5,374.1	17.6	28.4	146.59	-3,366.4	1,785.0	3,690.2	3,647.3	86.156		
6,600.0	6,571.2	5,692.1	5,451.9	17.6	28.8	146.85	-3,393.0	1,782.9	3,716.3	3,673.0	85.704		
6,700.0	6,671.2	5,787.5	5,542.0	17.7	29.3	147.15	-3,424.1	1,780.4	3,742.8	3,698.8	85.107		
6,800.0	6,771.2	5,944.9	5,691.0	17.7	30.1	147.66	-3,474.9	1,775.0	3,768.7	3,723.7	83.799		
6,900.0	6,871.2	6,967.5	6,691.1	17.8	34.9	149.75	-3,661.3	1,729.5	3,785.5	3,736.9	77.913		
7,000.0	6,971.2	7,086.6	6,810.2	17.8	35.3	149.81	-3,663.8	1,726.7	3,786.1	3,737.3	77.635		
7,100.0	7,071.2	7,185.5	6,909.1	17.9	35.5	149.84	-3,665.5	1,724.9	3,786.7	3,737.7	77.331		
7,200.0	7,171.2	7,285.4	7,008.9	17.9	35.9	149.88	-3,667.2	1,723.3	3,787.3	3,738.0	76.877		
7,300.0	7,271.2	7,385.9	7,109.4	17.9	36.4	149.92	-3,669.0	1,721.3	3,787.8	3,738.2	76.316		
7,400.0	7,371.2	7,486.5	7,209.9	18.0	36.8	149.96	-3,671.0	1,718.9	3,788.4	3,738.4	75.766		
7,500.0	7,471.2	7,586.9	7,310.3	18.0	37.3	150.02	-3,673.3	1,716.1	3,789.0	3,738.6	75.226		
7,600.0	7,571.2	7,720.2	7,443.5	18.1	37.8	150.09	-3,676.0	1,711.9	3,789.2	3,738.5	74.750		
7,700.0	7,671.2	7,860.6	7,583.8	18.1	38.3	150.16	-3,677.2	1,707.3	3,788.3	3,737.3	74.285		
7,800.0	7,771.2	8,001.8	7,724.9	18.2	38.8	150.22	-3,676.9	1,702.5	3,786.4	3,735.2	73.945		
7,900.0	7,871.2	8,144.3	7,867.3	18.2	39.0	150.27	-3,674.7	1,697.5	3,783.3	3,732.1	73.841		
8,000.0	7,971.2	8,286.7	8,009.6	18.3	39.3	150.31	-3,670.8	1,692.5	3,779.2	3,727.9	73.724		
8,100.0	8,071.2	8,368.0	8,090.8	18.3	39.4	150.33	-3,668.3	1,689.7	3,774.8	3,723.4	73.482		
8,200.0	8,171.2	8,456.1	8,178.8	18.3	39.5	150.35	-3,665.9	1,686.7	3,770.7	3,719.3	73.262		
8,300.0	8,271.2	8,544.2	8,266.8	18.4	39.6	150.37	-3,663.8	1,683.7	3,767.0	3,715.4	73.052		
8,400.0	8,371.2	8,638.6	8,361.2	18.4	39.7	150.40	-3,661.8	1,680.5	3,763.5	3,711.9	72.985		
8,500.0	8,471.2	8,660.0	8,382.5	18.5	39.7	150.40	-3,661.3	1,679.8	3,760.9	3,709.1	72.666		
8,551.3	8,522.5	8,660.0	8,382.5	18.5	39.7	150.40	-3,661.3	1,679.8	3,760.5	3,708.6	72.479		
8,600.0	8,571.2	8,660.0	8,382.5	18.5	39.7	150.40	-3,661.3	1,679.8	3,760.8	3,708.8	72.323		
8,700.0	8,671.2	8,660.0	8,382.5	18.6	39.7	150.40	-3,661.3	1,679.8	3,763.4	3,711.2	72.063		
8,725.8	8,697.0	8,660.0	8,382.5	18.6	39.7	150.40	-3,661.3	1,679.8	3,764.6	3,712.3	72.022	SF	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 162-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	5.48	1,244.6	119.5	1,250.3				
100.0	100.0	99.3	99.3	0.8	0.6	5.48	1,244.7	119.4	1,250.4	1,249.0	896.628		
200.0	200.0	198.3	198.3	1.4	1.3	5.47	1,244.9	119.2	1,250.6	1,247.8	454.988		
300.0	300.0	298.6	298.6	1.9	2.3	5.45	1,245.2	118.7	1,250.8	1,246.6	299.836		
400.0	400.0	397.4	397.4	2.2	3.1	5.41	1,245.4	118.0	1,251.0	1,245.7	235.844		
500.0	500.0	495.2	495.2	2.6	3.8	5.35	1,245.9	116.7	1,251.4	1,245.1	200.199		
600.0	600.0	590.9	590.9	2.8	4.3	5.27	1,246.7	115.0	1,252.0	1,245.0	177.665		
700.0	700.0	685.8	685.7	3.1	4.8	5.19	1,247.8	113.3	1,253.0	1,245.2	161.160		
800.0	800.0	791.1	791.0	3.3	5.1	5.12	1,249.1	111.8	1,254.1	1,245.8	151.421		
900.0	900.0	905.2	905.1	3.6	5.3	5.12	1,249.3	111.9	1,254.3	1,245.7	144.614		
1,000.0	1,000.0	1,012.8	1,012.7	3.8	5.4	5.24	1,248.3	114.5	1,253.6	1,244.5	138.357		
1,045.7	1,045.7	1,058.4	1,058.3	3.9	5.4	125.33	1,247.7	116.0	1,253.4	1,244.2	136.397	ES	
1,100.0	1,100.0	1,113.6	1,113.4	4.1	5.5	125.48	1,247.0	118.2	1,253.7	1,244.3	134.132		
1,200.0	1,199.8	1,215.6	1,215.3	4.8	5.6	125.86	1,245.5	122.7	1,255.7	1,245.8	127.483		
1,300.0	1,299.5	1,312.6	1,312.2	5.0	5.7	136.66	1,243.9	127.2	1,259.8	1,249.7	124.800		
1,400.0	1,399.0	1,404.6	1,404.1	5.3	5.8	153.10	1,243.0	130.1	1,267.6	1,257.1	120.725		
1,500.0	1,498.2	1,486.9	1,486.4	5.7	5.9	164.13	1,242.8	132.2	1,279.6	1,268.5	115.631		
1,600.0	1,597.2	1,564.0	1,563.5	6.0	6.0	164.54	1,244.0	134.6	1,294.8	1,283.3	112.715		
1,700.0	1,696.2	1,631.1	1,630.5	6.2	6.0	164.74	1,246.1	136.7	1,311.9	1,300.1	111.395		
1,800.0	1,795.2	1,695.2	1,694.5	6.5	6.0	164.92	1,249.8	139.2	1,331.6	1,319.5	110.125		
1,900.0	1,894.3	1,752.0	1,751.0	6.8	6.1	165.09	1,254.6	141.6	1,353.9	1,341.5	109.084		
2,000.0	1,993.3	1,816.0	1,814.5	7.1	6.2	165.26	1,262.0	144.3	1,379.1	1,366.3	107.986		
2,100.0	2,092.3	1,875.1	1,873.0	7.4	6.3	165.38	1,270.5	146.4	1,407.0	1,393.8	107.197		
2,200.0	2,191.3	1,944.0	1,940.9	7.7	6.4	165.50	1,281.6	148.4	1,436.5	1,423.0	106.277		
2,300.0	2,290.4	2,008.0	2,003.8	8.0	6.5	165.59	1,293.5	150.0	1,468.3	1,454.4	105.474		
2,400.0	2,389.4	2,045.4	2,040.2	8.4	6.9	165.61	1,301.6	150.6	1,502.9	1,488.4	103.772		
2,500.0	2,488.4	2,104.0	2,096.9	8.7	7.4	165.62	1,316.7	151.0	1,540.9	1,525.5	100.421		
2,600.0	2,587.4	2,133.5	2,125.1	9.1	7.8	165.61	1,325.2	151.1	1,581.4	1,565.4	99.251		
2,700.0	2,686.5	2,200.0	2,188.3	9.5	8.6	165.58	1,346.1	151.1	1,624.7	1,607.5	94.806		
2,800.0	2,785.5	2,231.4	2,217.9	9.8	8.9	165.56	1,356.7	151.1	1,669.9	1,652.3	95.072		
2,900.0	2,884.5	2,296.0	2,278.2	10.2	9.3	165.53	1,379.7	151.5	1,717.5	1,699.1	93.585		
3,000.0	2,983.5	2,328.0	2,307.8	10.6	9.4	165.52	1,391.8	151.8	1,766.7	1,748.1	94.933		
3,100.0	3,082.6	2,377.6	2,353.4	11.0	9.5	165.50	1,411.2	152.4	1,817.9	1,798.9	95.891		
3,200.0	3,181.6	2,424.0	2,395.7	11.4	9.7	165.50	1,430.3	153.8	1,870.9	1,851.7	96.990		
3,300.0	3,280.6	2,510.9	2,474.5	11.8	9.9	165.57	1,466.6	158.2	1,924.9	1,905.0	96.756		
3,400.0	3,379.6	2,598.4	2,554.0	12.2	10.1	165.64	1,503.0	162.9	1,978.7	1,958.1	96.405		
3,500.0	3,478.7	2,680.0	2,628.2	12.6	10.4	165.70	1,536.6	167.2	2,032.2	2,011.0	96.164		
3,600.0	3,577.7	2,755.2	2,696.3	13.0	10.6	165.76	1,568.2	171.2	2,086.3	2,064.6	96.057		
3,700.0	3,676.7	2,891.7	2,820.7	13.4	11.1	165.85	1,624.0	178.2	2,139.5	2,116.6	93.732		
3,800.0	3,775.8	2,985.1	2,906.3	13.8	11.5	165.89	1,661.1	182.2	2,191.4	2,167.8	92.723		
3,900.0	3,874.8	3,078.0	2,991.6	14.2	11.9	165.91	1,697.8	185.5	2,243.0	2,218.6	91.738		
4,000.0	3,973.8	3,133.7	3,042.5	14.6	12.1	165.92	1,720.1	187.5	2,295.1	2,270.2	91.895		
4,100.0	4,072.8	3,200.6	3,103.5	15.0	12.4	165.95	1,747.5	190.5	2,348.2	2,322.6	91.758		
4,200.0	4,171.9	3,293.8	3,188.4	15.4	12.8	166.21	1,785.6	196.4	2,400.9	2,374.5	90.946		
4,300.0	4,271.4	3,392.1	3,278.3	15.9	13.2	166.53	1,824.9	202.3	2,450.0	2,422.6	89.658		
4,400.0	4,371.2	3,455.0	3,335.6	16.4	13.5	166.80	1,850.4	206.5	2,496.7	2,468.7	89.212		
4,500.0	4,471.2	3,600.6	3,469.3	16.8	14.3	167.04	1,907.5	216.2	2,538.7	2,509.3	86.366		
4,600.0	4,571.2	3,665.2	3,528.4	16.9	14.6	9.71	1,933.0	220.5	2,578.9	2,549.2	86.771		
4,700.0	4,671.2	3,743.0	3,599.5	16.9	14.9	9.70	1,964.3	225.4	2,619.7	2,589.5	86.979		
4,800.0	4,771.2	3,837.5	3,685.7	16.9	15.4	9.69	2,002.5	231.5	2,660.6	2,629.9	86.806		
4,900.0	4,871.2	3,928.9	3,769.1	17.0	15.8	9.69	2,039.3	237.7	2,701.4	2,670.2	86.695		
5,000.0	4,971.2	3,989.4	3,824.2	17.0	16.1	9.68	2,064.0	241.6	2,742.7	2,711.3	87.254		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 162-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	5,071.2	4,129.7	3,951.8	17.1	17.0	9.65	2,121.8	250.0	2,784.7	2,752.3	85.923		
5,200.0	5,171.2	4,196.5	4,012.8	17.1	17.4	9.63	2,148.8	253.5	2,825.4	2,792.6	86.276		
5,300.0	5,271.2	4,302.0	4,109.0	17.1	18.1	9.58	2,191.8	258.4	2,866.4	2,833.0	85.841		
5,400.0	5,371.2	4,366.0	4,167.5	17.2	18.5	9.55	2,217.8	261.6	2,907.3	2,873.6	86.242		
5,500.0	5,471.2	4,471.4	4,263.2	17.2	19.2	9.52	2,261.3	267.5	2,949.1	2,914.7	85.764		
5,600.0	5,571.2	4,653.4	4,430.4	17.2	20.3	9.48	2,332.5	277.3	2,988.3	2,952.7	83.834		
5,700.0	5,671.2	4,807.1	4,573.1	17.3	21.2	9.45	2,389.1	285.4	3,025.5	2,988.8	82.568		
5,800.0	5,771.2	4,874.4	4,635.7	17.3	21.6	9.44	2,413.5	289.0	3,062.2	3,025.2	82.765		
5,900.0	5,871.2	4,922.2	4,680.0	17.4	21.9	9.43	2,431.4	291.5	3,099.9	3,062.7	83.273		
6,000.0	5,971.2	4,985.0	4,737.6	17.4	22.3	9.42	2,456.0	295.0	3,139.3	3,101.7	83.539		
6,100.0	6,071.2	5,025.8	4,774.9	17.4	22.6	9.41	2,472.4	297.3	3,179.6	3,141.9	84.209		
6,200.0	6,171.2	5,152.8	4,891.2	17.5	23.4	9.39	2,523.1	304.4	3,219.9	3,181.3	83.378		
6,300.0	6,271.2	5,349.6	5,073.1	17.5	24.6	9.31	2,597.5	312.5	3,257.5	3,217.6	81.541		
6,400.0	6,371.2	5,690.3	5,393.6	17.6	26.5	9.25	2,711.8	327.9	3,292.9	3,250.7	77.959		
6,500.0	6,471.2	5,771.8	5,471.3	17.6	26.9	9.27	2,735.6	333.0	3,322.7	3,280.0	77.794		
6,600.0	6,571.2	6,666.5	6,347.9	17.6	29.8	9.13	2,899.4	351.6	3,340.6	3,293.7	71.131		
6,700.0	6,671.2	6,977.8	6,659.0	17.7	30.2	9.10	2,911.3	351.7	3,344.9	3,297.4	70.416		
6,800.0	6,771.2	7,069.9	6,751.0	17.7	30.3	9.08	2,911.7	350.5	3,345.1	3,297.4	70.159		
6,900.0	6,871.2	7,129.7	6,810.9	17.8	30.4	9.07	2,912.4	350.3	3,346.3	3,298.4	69.828		
7,000.0	6,971.2	7,187.0	6,868.1	17.8	30.5	9.08	2,913.8	350.6	3,348.8	3,300.6	69.489		
7,100.0	7,071.2	7,254.6	6,935.6	17.9	30.7	9.08	2,916.1	351.4	3,352.4	3,303.9	69.121		
7,200.0	7,171.2	7,668.0	7,348.5	17.9	31.1	9.02	2,916.3	347.5	3,353.8	3,305.6	69.587		
7,300.0	7,271.2	7,731.3	7,411.6	17.9	31.1	8.96	2,913.2	343.7	3,348.4	3,300.1	69.379		
7,400.0	7,371.2	7,764.0	7,444.3	18.0	31.0	8.94	2,912.3	342.5	3,345.2	3,296.7	69.061		
7,500.0	7,471.2	7,827.2	7,507.5	18.0	31.0	8.91	2,911.5	340.4	3,343.5	3,294.9	68.872		
7,600.0	7,571.2	7,894.5	7,574.7	18.1	31.1	8.87	2,911.6	338.0	3,343.0	3,294.3	68.693		
7,700.0	7,671.2	8,122.4	7,802.3	18.1	31.3	8.72	2,907.9	328.7	3,340.5	3,292.2	69.218		
7,800.0	7,771.2	8,226.8	7,906.6	18.2	31.2	8.67	2,904.4	325.3	3,336.7	3,288.6	69.385		
7,900.0	7,871.2	8,304.2	7,984.0	18.2	31.2	8.64	2,901.8	323.0	3,332.9	3,284.9	69.390		
8,000.0	7,971.2	8,402.9	8,082.6	18.3	31.1	8.64	2,898.7	322.4	3,329.8	3,281.9	69.565		
8,100.0	8,071.2	8,471.9	8,151.6	18.3	31.1	8.63	2,896.6	321.8	3,326.7	3,278.9	69.523		
8,200.0	8,171.2	8,527.0	8,206.7	18.3	31.1	8.63	2,895.8	321.4	3,325.0	3,277.1	69.412		
8,263.2	8,234.4	8,554.0	8,233.7	18.4	31.1	8.63	2,895.7	321.3	3,324.7	3,276.7	69.224		
8,300.0	8,271.2	8,571.0	8,250.6	18.4	31.1	8.63	2,895.7	321.2	3,324.9	3,276.8	69.126		
8,400.0	8,371.2	8,622.0	8,301.7	18.4	31.2	8.63	2,896.5	321.4	3,326.3	3,278.1	68.902		
8,500.0	8,471.2	8,705.0	8,384.6	18.5	31.3	8.63	2,898.6	321.8	3,328.9	3,280.3	68.528		
8,600.0	8,571.2	8,791.4	8,471.0	18.5	31.4	8.63	2,901.1	322.4	3,331.8	3,282.9	68.144		
8,700.0	8,671.2	8,892.7	8,572.3	18.6	31.6	8.64	2,904.1	323.1	3,334.9	3,285.7	67.752		
8,725.8	8,697.0	8,919.6	8,599.2	18.6	31.6	8.64	2,904.9	323.2	3,335.6	3,286.3	67.661 SF		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 130-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	5.01	1,233.7	108.1	1,238.4				
100.0	100.0	99.0	99.0	0.8	0.6	5.01	1,233.7	108.2	1,238.4	1,237.1	921.536		
200.0	200.0	198.8	198.8	1.4	1.2	5.02	1,233.8	108.3	1,238.6	1,236.0	477.871		
300.0	300.0	294.7	294.7	1.9	1.7	5.01	1,234.0	108.1	1,238.8	1,235.3	350.969		
400.0	400.0	386.3	386.3	2.2	2.2	4.93	1,234.9	106.4	1,239.5	1,235.1	282.204	ES	
500.0	500.0	478.3	478.2	2.6	2.6	4.76	1,236.5	102.9	1,241.0	1,235.9	246.233		
600.0	600.0	573.8	573.6	2.8	3.0	4.52	1,238.8	97.9	1,242.9	1,237.3	222.010		
700.0	700.0	667.9	667.3	3.1	3.5	4.18	1,241.6	90.7	1,245.3	1,239.2	203.249		
800.0	800.0	756.8	755.8	3.3	4.0	3.78	1,244.9	82.2	1,248.4	1,241.7	188.512		
900.0	900.0	848.1	846.3	3.6	4.5	3.28	1,249.1	71.5	1,252.3	1,245.2	176.462		
1,000.0	1,000.0	949.9	946.9	3.8	5.1	2.59	1,254.2	56.8	1,256.6	1,248.9	164.481		
1,100.0	1,100.0	1,038.8	1,034.4	4.1	5.6	121.87	1,258.8	41.8	1,262.2	1,254.1	155.919		
1,200.0	1,199.8	1,127.4	1,121.3	4.8	6.0	121.15	1,264.3	25.5	1,270.6	1,261.9	145.609		
1,300.0	1,299.5	1,213.8	1,205.9	5.0	6.3	130.93	1,270.3	8.9	1,282.0	1,272.9	140.443		
1,400.0	1,399.0	1,310.2	1,300.3	5.3	6.6	146.46	1,277.7	-9.6	1,297.3	1,287.6	132.816		
1,500.0	1,498.2	1,405.0	1,393.0	5.7	7.0	156.67	1,285.0	-27.6	1,316.1	1,305.6	124.743		
1,600.0	1,597.2	1,492.0	1,478.1	6.0	7.3	156.34	1,292.1	-44.1	1,337.2	1,326.0	119.629		
1,700.0	1,696.2	1,592.9	1,576.9	6.2	7.7	155.79	1,300.8	-62.6	1,358.9	1,347.1	115.333		
1,800.0	1,795.2	1,714.8	1,696.6	6.5	8.2	155.16	1,309.9	-84.3	1,379.5	1,367.0	110.267		
1,900.0	1,894.3	1,828.1	1,807.7	6.8	8.7	154.58	1,316.1	-105.1	1,398.3	1,385.1	105.625		
2,000.0	1,993.3	1,914.0	1,892.2	7.1	9.1	154.18	1,321.2	-120.0	1,417.6	1,403.8	102.509		
2,100.0	2,092.3	2,032.4	2,008.7	7.4	9.6	153.68	1,328.2	-140.0	1,437.0	1,422.4	98.666		
2,200.0	2,191.3	2,135.2	2,109.8	7.7	10.0	153.21	1,332.3	-158.2	1,454.6	1,439.3	95.189		
2,300.0	2,290.4	2,215.6	2,188.7	8.0	10.3	152.84	1,336.3	-172.9	1,473.2	1,457.3	92.744		
2,400.0	2,389.4	2,317.2	2,288.6	8.4	10.8	152.40	1,342.2	-190.9	1,492.8	1,476.2	90.073		
2,500.0	2,488.4	2,425.9	2,395.3	8.7	11.2	151.92	1,347.2	-210.7	1,511.3	1,493.9	87.319		
2,600.0	2,587.4	2,515.9	2,483.7	9.1	11.6	151.55	1,351.4	-226.9	1,529.9	1,511.9	85.232		
2,700.0	2,686.5	2,616.9	2,583.1	9.5	12.1	151.16	1,356.6	-244.5	1,549.0	1,530.3	83.130		
2,800.0	2,785.5	2,737.0	2,701.0	9.8	12.6	150.65	1,361.5	-266.7	1,567.2	1,547.8	80.719		
2,900.0	2,884.5	2,833.3	2,795.4	10.2	13.0	150.23	1,364.6	-285.1	1,584.8	1,564.7	78.825		
3,000.0	2,983.5	2,919.0	2,879.7	10.6	13.4	149.90	1,368.0	-300.6	1,603.0	1,582.3	77.299		
3,100.0	3,082.6	3,028.4	2,987.2	11.0	13.9	149.49	1,372.4	-320.3	1,621.3	1,599.9	75.532		
3,200.0	3,181.6	3,123.1	3,080.3	11.4	14.3	149.13	1,375.6	-337.6	1,639.1	1,617.0	74.023		
3,300.0	3,280.6	3,196.0	3,151.9	11.8	14.6	148.87	1,378.9	-350.7	1,658.1	1,635.4	72.876		
3,400.0	3,379.6	3,289.0	3,243.2	12.2	15.0	148.54	1,383.9	-367.7	1,678.0	1,654.5	71.519		
3,500.0	3,478.7	3,364.5	3,317.3	12.6	15.4	148.29	1,388.4	-381.3	1,698.4	1,674.3	70.505		
3,600.0	3,577.7	3,437.9	3,389.4	13.0	15.7	148.07	1,394.0	-393.9	1,720.4	1,695.7	69.590		
3,700.0	3,676.7	3,530.3	3,480.2	13.4	16.1	147.84	1,402.3	-408.9	1,743.5	1,718.1	68.521		
3,800.0	3,775.8	3,637.3	3,585.2	13.8	16.6	147.55	1,411.1	-427.1	1,766.2	1,740.0	67.357		
3,900.0	3,874.8	3,742.7	3,688.7	14.2	17.1	147.25	1,419.3	-445.7	1,788.4	1,761.5	66.274		
4,000.0	3,973.8	3,828.8	3,773.1	14.6	17.4	147.00	1,425.9	-461.2	1,810.7	1,783.1	65.467		
4,100.0	4,072.8	3,960.7	3,902.2	15.0	18.0	146.57	1,434.7	-486.4	1,832.4	1,803.8	64.047		
4,200.0	4,171.9	4,030.0	3,970.1	15.4	18.4	146.48	1,439.1	-500.1	1,853.3	1,824.1	63.438		
4,300.0	4,271.4	4,123.0	4,061.0	15.9	18.8	146.34	1,446.0	-518.1	1,872.5	1,842.5	62.442		
4,400.0	4,371.2	4,218.4	4,154.3	16.4	19.2	146.10	1,453.3	-537.1	1,889.3	1,858.5	61.390		
4,500.0	4,471.2	4,310.0	4,243.7	16.8	19.7	145.81	1,460.4	-555.3	1,903.5	1,872.0	60.456		
4,600.0	4,571.2	4,427.0	4,358.2	16.9	20.2	-12.15	1,469.1	-577.9	1,915.1	1,883.0	59.813		
4,700.0	4,671.2	4,550.7	4,479.4	16.9	20.8	-12.77	1,477.6	-601.0	1,926.1	1,893.5	59.154		
4,800.0	4,771.2	4,671.4	4,598.1	16.9	21.3	-13.34	1,484.0	-622.1	1,935.2	1,902.1	58.525		
4,900.0	4,871.2	4,754.7	4,680.1	17.0	21.7	-13.73	1,488.4	-636.5	1,944.5	1,911.1	58.220		
5,000.0	4,971.2	4,845.2	4,768.9	17.0	22.1	-14.15	1,493.7	-652.7	1,954.7	1,920.9	57.872		
5,100.0	5,071.2	4,936.4	4,858.5	17.1	22.6	-14.58	1,499.3	-669.2	1,965.3	1,931.1	57.527		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 130-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,200.0	5,171.2	5,030.4	4,950.7	17.1	23.0	-15.00	1,505.6	-685.5	1,976.3	1,941.7	57.177		
5,300.0	5,271.2	5,136.1	5,054.6	17.1	23.5	-15.45	1,512.7	-703.8	1,987.4	1,952.3	56.744		
5,400.0	5,371.2	5,225.1	5,142.2	17.2	23.9	-15.82	1,518.7	-718.7	1,998.5	1,963.1	56.451		
5,500.0	5,471.2	5,327.5	5,243.0	17.2	24.3	-16.21	1,526.1	-735.0	2,010.0	1,974.1	56.072		
5,600.0	5,571.2	5,433.1	5,347.2	17.2	24.8	-16.58	1,533.7	-750.7	2,021.1	1,984.8	55.682		
5,700.0	5,671.2	5,523.9	5,436.6	17.3	25.2	-16.92	1,540.1	-764.8	2,032.5	1,995.8	55.400		
5,800.0	5,771.2	5,618.9	5,530.0	17.3	25.6	-17.30	1,546.7	-781.0	2,044.2	2,007.1	55.088		
5,900.0	5,871.2	5,761.3	5,670.1	17.4	26.3	-17.88	1,554.5	-805.1	2,054.5	2,016.8	54.449		
6,000.0	5,971.2	5,862.5	5,769.7	17.4	26.7	-18.29	1,559.2	-822.2	2,064.3	2,026.1	54.088		
6,100.0	6,071.2	5,957.8	5,863.5	17.4	27.2	-18.69	1,563.4	-838.7	2,074.1	2,035.6	53.768		
6,200.0	6,171.2	6,074.7	5,978.8	17.5	27.7	-19.13	1,569.0	-857.3	2,083.9	2,044.8	53.332		
6,300.0	6,271.2	6,209.9	6,112.8	17.5	28.3	-19.50	1,574.9	-873.9	2,092.0	2,052.4	52.811		
6,400.0	6,371.2	6,343.0	6,245.3	17.6	28.9	-19.77	1,580.4	-886.0	2,099.1	2,059.0	52.362		
6,500.0	6,471.2	6,520.9	6,422.9	17.6	29.6	-19.97	1,583.6	-895.1	2,101.9	2,061.4	51.821		
6,600.0	6,571.2	6,617.0	6,518.9	17.6	29.9	-20.05	1,584.7	-898.5	2,104.3	2,063.4	51.485		
6,700.0	6,671.2	6,717.0	6,618.9	17.7	30.3	-20.11	1,586.3	-901.7	2,106.9	2,065.7	51.149		
6,800.0	6,771.2	6,830.4	6,732.2	17.7	30.8	-20.18	1,587.9	-904.9	2,109.2	2,067.5	50.637		
6,900.0	6,871.2	6,948.7	6,850.5	17.8	31.3	-20.25	1,588.6	-907.7	2,110.6	2,068.5	50.101		
7,000.0	6,971.2	7,067.0	6,968.8	17.8	31.9	-20.30	1,588.5	-910.0	2,111.1	2,068.5	49.558		
7,100.0	7,071.2	7,159.1	7,060.8	17.9	32.5	-20.35	1,588.2	-911.6	2,111.4	2,068.1	48.766		
7,200.0	7,171.2	7,249.7	7,151.4	17.9	33.2	-20.40	1,588.2	-913.4	2,112.1	2,068.1	47.996		
7,300.0	7,271.2	7,340.4	7,242.1	17.9	33.9	-20.44	1,588.5	-915.5	2,113.3	2,068.6	47.259		
7,400.0	7,371.2	7,431.0	7,332.6	18.0	34.6	-20.50	1,589.2	-917.8	2,114.9	2,069.4	46.554		
7,500.0	7,471.2	7,521.6	7,423.2	18.0	35.3	-20.55	1,590.2	-920.3	2,116.9	2,070.8	45.881		
7,600.0	7,571.2	7,614.9	7,516.5	18.1	36.0	-20.61	1,591.6	-923.2	2,119.4	2,072.5	45.191		
7,700.0	7,671.2	7,714.7	7,616.2	18.1	36.8	-20.66	1,593.4	-925.9	2,122.0	2,074.2	44.423		
7,800.0	7,771.2	7,814.5	7,716.0	18.2	37.5	-20.70	1,595.3	-928.2	2,124.6	2,075.9	43.683		
7,900.0	7,871.2	7,914.3	7,815.7	18.2	38.3	-20.73	1,597.4	-930.0	2,127.2	2,077.7	42.969		
8,000.0	7,971.2	8,014.1	7,915.5	18.3	39.1	-20.74	1,599.6	-931.4	2,129.8	2,079.4	42.279		
8,100.0	8,071.2	8,114.3	8,015.6	18.3	39.9	-20.74	1,602.1	-932.3	2,132.4	2,081.1	41.534		
8,200.0	8,171.2	8,214.8	8,116.1	18.3	40.8	-20.75	1,604.4	-933.4	2,135.0	2,082.6	40.733		
8,300.0	8,271.2	8,315.3	8,216.6	18.4	41.8	-20.75	1,606.8	-934.5	2,137.6	2,084.1	39.962		
8,400.0	8,371.2	8,415.8	8,317.0	18.4	42.7	-20.76	1,609.0	-935.9	2,140.1	2,085.5	39.220		
8,500.0	8,471.2	8,516.3	8,417.5	18.5	43.7	-20.78	1,611.2	-937.3	2,142.6	2,087.0	38.506		
8,600.0	8,571.2	8,616.8	8,518.0	18.5	44.6	-20.80	1,613.2	-938.9	2,145.1	2,088.4	37.817		
8,700.0	8,671.2	8,650.0	8,551.2	18.6	44.9	-20.81	1,613.9	-939.4	2,148.6	2,091.5	37.604 SF		
8,725.8	8,697.0	8,650.0	8,551.2	18.6	44.9	-20.81	1,613.9	-939.4	2,150.2	2,093.1	37.629		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	43.69	57.8	55.2	79.9				
100.0	100.0	100.0	100.0	0.8	0.8	43.69	57.8	55.2	79.9	78.3	50.448		
200.0	200.0	200.0	200.0	1.4	1.4	43.69	57.8	55.2	79.9	77.1	28.247	CC, ES	
300.0	300.0	297.8	297.8	1.9	2.3	42.95	59.5	55.3	81.3	77.3	20.343		
400.0	400.0	395.4	395.3	2.2	3.4	40.89	64.4	55.8	85.4	80.1	16.128		
500.0	500.0	492.6	492.1	2.6	4.3	37.87	72.7	56.5	92.4	86.0	14.393		
600.0	600.0	589.1	587.9	2.8	5.1	34.37	84.1	57.5	102.6	95.1	13.754	SF	
700.0	700.0	685.4	683.1	3.1	5.7	30.60	98.6	58.3	115.8	107.4	13.758		
800.0	800.0	780.7	776.8	3.3	6.3	26.67	116.0	58.3	131.9	122.6	14.168		
900.0	900.0	874.8	868.7	3.6	6.9	22.85	136.2	57.4	151.0	140.9	14.868		
1,000.0	1,000.0	967.6	958.6	3.8	7.5	19.32	158.8	55.7	173.3	162.4	15.805		
1,100.0	1,100.0	1,058.5	1,046.0	4.1	8.0	136.11	183.8	53.2	200.0	188.3	17.067		
1,200.0	1,199.8	1,147.2	1,130.5	4.8	8.5	133.71	210.7	50.1	232.0	219.3	18.301		
1,300.0	1,299.5	1,233.3	1,211.7	5.0	9.0	142.64	239.1	46.3	269.0	255.7	20.245		
1,400.0	1,399.0	1,316.2	1,289.0	5.3	9.5	157.66	268.8	42.1	311.3	297.3	22.256		
1,500.0	1,498.2	1,400.0	1,366.2	5.7	9.9	167.23	300.9	37.1	358.8	344.0	24.158		
1,600.0	1,597.2	1,472.9	1,432.6	6.0	10.2	166.11	330.5	32.2	410.1	394.7	26.649		
1,700.0	1,696.2	1,556.1	1,508.0	6.2	10.5	164.86	365.4	26.4	462.7	446.8	29.067		
1,800.0	1,795.2	1,640.8	1,584.6	6.5	10.8	163.85	400.8	20.5	515.4	498.9	31.240		
1,900.0	1,894.3	1,725.5	1,661.3	6.8	11.2	162.02	436.2	14.6	568.1	551.0	33.220		
2,000.0	1,993.3	1,810.1	1,738.0	7.1	11.5	162.33	471.6	8.7	621.0	603.3	35.031		
2,100.0	2,092.3	1,894.8	1,814.7	7.4	11.8	161.75	507.1	2.8	673.9	655.5	36.682		
2,200.0	2,191.3	1,979.5	1,891.4	7.7	12.2	161.26	542.5	-3.1	726.9	707.8	38.188		
2,300.0	2,290.4	2,064.2	1,968.1	8.0	12.5	160.83	577.9	-9.0	779.8	760.1	39.564		
2,400.0	2,389.4	2,148.8	2,044.7	8.4	12.9	160.45	613.3	-15.0	832.9	812.5	40.824		
2,500.0	2,488.4	2,233.5	2,121.4	8.7	13.3	160.12	648.8	-20.9	885.9	864.8	41.977		
2,600.0	2,587.4	2,318.2	2,198.1	9.1	13.6	159.83	684.2	-26.8	938.9	917.1	43.035		
2,700.0	2,686.5	2,402.8	2,274.8	9.5	14.0	159.57	719.6	-32.7	992.0	969.5	44.007		
2,800.0	2,785.5	2,487.5	2,351.5	9.8	14.4	159.33	755.0	-38.6	1,045.1	1,021.8	44.900		
2,900.0	2,884.5	2,572.2	2,428.1	10.2	14.8	159.12	790.4	-44.5	1,098.2	1,074.2	45.723		
3,000.0	2,983.5	2,656.9	2,504.8	10.6	15.2	158.93	825.9	-50.4	1,151.3	1,126.5	46.483		
3,100.0	3,082.6	2,741.5	2,581.5	11.0	15.7	158.75	861.3	-56.4	1,204.4	1,178.9	47.186		
3,200.0	3,181.6	2,826.2	2,658.2	11.4	16.1	158.59	896.7	-62.3	1,257.5	1,231.2	47.837		
3,300.0	3,280.6	2,910.9	2,734.9	11.8	16.6	158.45	932.1	-68.2	1,310.7	1,283.6	48.441		
3,400.0	3,379.6	2,995.6	2,811.5	12.2	17.1	158.31	967.6	-74.1	1,363.8	1,336.0	49.002		
3,500.0	3,478.7	3,080.2	2,888.2	12.6	17.6	158.18	1,003.0	-80.0	1,416.9	1,388.3	49.524		
3,600.0	3,577.7	3,164.9	2,964.9	13.0	18.2	158.07	1,038.4	-85.9	1,470.1	1,440.7	50.010		
3,700.0	3,676.7	3,249.6	3,041.6	13.4	18.8	157.96	1,073.8	-91.8	1,523.2	1,493.0	50.465		
3,800.0	3,775.8	3,334.3	3,118.3	13.8	19.3	157.86	1,109.2	-97.7	1,576.4	1,545.4	50.890		
3,900.0	3,874.8	3,418.9	3,194.9	14.2	19.9	157.76	1,144.7	-103.7	1,629.5	1,597.7	51.288		
4,000.0	3,973.8	3,503.6	3,271.6	14.6	20.5	157.67	1,180.1	-109.6	1,682.7	1,650.1	51.661		
4,100.0	4,072.8	3,588.3	3,348.3	15.0	21.1	157.59	1,215.5	-115.5	1,735.8	1,702.5	52.011		
4,200.0	4,171.9	3,673.3	3,425.3	15.4	21.7	157.80	1,251.1	-121.4	1,788.4	1,754.3	52.353		
4,300.0	4,271.4	3,759.8	3,503.7	15.9	22.3	158.10	1,287.3	-127.5	1,838.4	1,803.4	52.477		
4,400.0	4,371.2	3,847.9	3,583.4	16.4	22.9	158.33	1,324.1	-133.6	1,885.6	1,849.7	52.482		
4,500.0	4,471.2	3,937.3	3,664.4	16.8	23.6	158.50	1,361.5	-139.9	1,929.9	1,893.1	52.465		
4,600.0	4,571.2	4,027.8	3,746.3	16.9	24.2	1.00	1,399.4	-146.2	1,971.9	1,934.6	52.821		
4,700.0	4,671.2	4,118.3	3,828.3	16.9	24.9	0.78	1,437.3	-152.5	2,013.8	1,975.9	53.173		
4,800.0	4,771.2	4,208.9	3,910.3	16.9	25.5	0.57	1,475.1	-158.8	2,055.6	2,017.2	53.507		
4,900.0	4,871.2	4,299.5	3,992.4	17.0	26.1	0.37	1,513.0	-165.1	2,097.5	2,058.5	53.829		
5,000.0	4,971.2	4,390.0	4,074.4	17.0	26.8	0.17	1,550.9	-171.5	2,139.4	2,099.9	54.139		
5,100.0	5,071.2	4,480.6	4,156.4	17.1	27.4	-0.01	1,588.8	-177.8	2,181.3	2,141.3	54.438		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,200.0	5,171.2	4,571.1	4,238.4	17.1	28.1	-0.19	1,626.7	-184.1	2,223.3	2,182.7	54.726		
5,300.0	5,271.2	4,661.7	4,320.4	17.1	28.7	-0.36	1,664.6	-190.4	2,265.3	2,224.1	55.005		
5,400.0	5,371.2	4,752.3	4,402.4	17.2	29.4	-0.53	1,702.5	-196.8	2,307.2	2,265.5	55.273		
5,500.0	5,471.2	4,842.8	4,484.4	17.2	30.0	-0.69	1,740.3	-203.1	2,349.2	2,306.9	55.532		
5,600.0	5,571.2	4,933.4	4,566.4	17.2	30.7	-0.85	1,778.2	-209.4	2,391.2	2,348.4	55.782		
5,700.0	5,671.2	5,079.6	4,699.2	17.3	31.7	-1.08	1,838.7	-219.5	2,433.1	2,389.2	55.406		
5,800.0	5,771.2	5,704.0	5,293.4	17.3	34.9	-1.73	2,023.8	-250.4	2,463.2	2,415.0	51.124		
5,900.0	5,871.2	6,285.4	5,871.2	17.4	35.9	-1.90	2,078.5	-259.5	2,471.3	2,421.8	49.919		
6,000.0	5,971.2	6,385.4	5,971.2	17.4	35.9	-1.90	2,078.5	-259.5	2,471.3	2,421.7	49.847		
6,100.0	6,071.2	6,485.4	6,071.2	17.4	36.0	-1.90	2,078.5	-259.5	2,471.3	2,421.6	49.770		
6,200.0	6,171.2	6,585.4	6,171.2	17.5	36.0	-1.90	2,078.5	-259.5	2,471.3	2,421.6	49.694		
6,300.0	6,271.2	6,685.4	6,271.2	17.5	36.0	-1.90	2,078.5	-259.5	2,471.3	2,421.5	49.616		
6,400.0	6,371.2	6,785.4	6,371.2	17.6	36.0	-1.90	2,078.5	-259.5	2,471.3	2,421.4	49.539		
6,500.0	6,471.2	6,885.4	6,471.2	17.6	36.1	-1.90	2,078.5	-259.5	2,471.3	2,421.3	49.462		
6,600.0	6,571.2	6,985.4	6,571.2	17.6	36.1	-1.90	2,078.5	-259.5	2,471.3	2,421.2	49.384		
6,700.0	6,671.2	7,085.4	6,671.2	17.7	36.1	-1.90	2,078.5	-259.5	2,471.3	2,421.2	49.306		
6,800.0	6,771.2	7,185.4	6,771.2	17.7	36.1	-1.90	2,078.5	-259.5	2,471.3	2,421.1	49.228		
6,900.0	6,871.2	7,285.4	6,871.2	17.8	36.2	-1.90	2,078.5	-259.5	2,471.3	2,421.0	49.150		
7,000.0	6,971.2	7,385.4	6,971.2	17.8	36.2	-1.90	2,078.5	-259.5	2,471.3	2,420.9	49.071		
7,100.0	7,071.2	7,485.4	7,071.2	17.9	36.2	-1.90	2,078.5	-259.5	2,471.3	2,420.8	48.993		
7,200.0	7,171.2	7,585.4	7,171.2	17.9	36.3	-1.90	2,078.5	-259.5	2,471.3	2,420.8	48.914		
7,300.0	7,271.2	7,685.4	7,271.2	17.9	36.3	-1.90	2,078.5	-259.5	2,471.3	2,420.7	48.835		
7,400.0	7,371.2	7,785.4	7,371.2	18.0	36.3	-1.90	2,078.5	-259.5	2,471.3	2,420.6	48.756		
7,500.0	7,471.2	7,885.4	7,471.2	18.0	36.3	-1.90	2,078.5	-259.5	2,471.3	2,420.5	48.676		
7,600.0	7,571.2	7,985.4	7,571.2	18.1	36.4	-1.90	2,078.5	-259.5	2,471.3	2,420.4	48.597		
7,700.0	7,671.2	8,085.4	7,671.2	18.1	36.4	-1.90	2,078.5	-259.5	2,471.3	2,420.4	48.517		
7,800.0	7,771.2	8,185.4	7,771.2	18.2	36.4	-1.90	2,078.5	-259.5	2,471.3	2,420.3	48.438		
7,900.0	7,871.2	8,285.4	7,871.2	18.2	36.4	-1.90	2,078.5	-259.5	2,471.3	2,420.2	48.358		
8,000.0	7,971.2	8,385.4	7,971.2	18.3	36.5	-1.90	2,078.5	-259.5	2,471.3	2,420.1	48.278		
8,100.0	8,071.2	8,485.4	8,071.2	18.3	36.5	-1.90	2,078.5	-259.5	2,471.3	2,420.0	48.198		
8,200.0	8,171.2	8,585.4	8,171.2	18.3	36.5	-1.90	2,078.5	-259.5	2,471.3	2,419.9	48.118		
8,300.0	8,271.2	8,685.4	8,271.2	18.4	36.6	-1.90	2,078.5	-259.5	2,471.3	2,419.8	48.038		
8,400.0	8,371.2	8,785.4	8,371.2	18.4	36.6	-1.90	2,078.5	-259.5	2,471.3	2,419.8	47.957		
8,500.0	8,471.2	8,885.4	8,471.2	18.5	36.6	-1.90	2,078.5	-259.5	2,471.3	2,419.7	47.877		
8,600.0	8,571.2	8,985.4	8,571.2	18.5	36.6	-1.90	2,078.5	-259.5	2,471.3	2,419.6	47.796		
8,609.3	8,580.4	8,994.7	8,580.4	18.5	36.6	-1.90	2,078.5	-259.5	2,471.3	2,419.6	47.789		
8,700.0	8,671.2	9,067.2	8,653.0	18.6	36.7	-1.90	2,078.5	-259.5	2,471.4	2,419.5	47.666		
8,725.8	8,697.0	9,067.2	8,653.0	18.6	36.7	-1.90	2,078.5	-259.5	2,471.7	2,419.7	47.583		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft	
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	43.68	50.6	48.3	69.9					
100.0	100.0	100.0	100.0	0.8	0.8	43.68	50.6	48.3	69.9	68.3	44.139			
200.0	200.0	200.0	200.0	1.4	1.4	43.68	50.6	48.3	69.9	67.1	24.715			
208.3	208.3	208.3	208.3	1.5	1.4	43.68	50.6	48.3	69.9	67.0	24.133	CC		
300.0	300.0	299.7	299.7	1.9	1.7	43.64	50.6	48.3	70.0	66.4	19.468	ES		
400.0	400.0	398.3	398.3	2.2	2.5	42.05	53.0	47.8	71.3	66.8	15.872			
500.0	500.0	496.6	496.4	2.6	3.6	38.46	58.6	46.5	74.9	69.4	13.582			
600.0	600.0	594.4	593.8	2.8	4.5	33.47	67.4	44.6	81.0	74.5	12.431			
700.0	700.0	691.5	690.1	3.1	5.2	27.82	79.4	41.9	90.3	82.8	11.984	SF		
800.0	800.0	787.7	785.0	3.3	5.9	22.22	94.4	38.6	103.0	94.5	12.065			
900.0	900.0	882.6	878.2	3.6	6.5	17.13	112.2	34.6	119.4	109.9	12.566			
1,000.0	1,000.0	976.3	969.5	3.8	7.1	12.74	132.8	30.0	139.5	129.1	13.399			
1,100.0	1,100.0	1,070.3	1,060.4	4.1	7.5	129.13	156.1	24.8	164.0	153.0	14.887			
1,200.0	1,199.8	1,166.3	1,153.1	4.8	7.8	127.01	180.4	19.4	191.4	179.7	16.290			
1,300.0	1,299.5	1,261.8	1,245.3	5.0	8.1	136.58	204.6	14.0	221.1	208.8	18.087			
1,400.0	1,399.0	1,356.3	1,336.6	5.3	8.4	152.19	228.5	8.7	253.7	240.9	19.731			
1,500.0	1,498.2	1,449.6	1,426.7	5.7	8.7	162.39	252.1	3.5	289.5	275.8	21.218			
1,600.0	1,597.2	1,542.3	1,516.2	6.0	9.1	161.88	275.6	-1.8	326.9	312.6	22.829			
1,700.0	1,696.2	1,635.0	1,605.7	6.2	9.4	161.34	299.1	-7.0	364.3	349.4	24.401			
1,800.0	1,795.2	1,727.6	1,695.2	6.5	9.8	160.89	322.5	-12.2	401.7	386.2	25.812			
1,900.0	1,894.3	1,820.3	1,784.7	6.8	10.2	160.52	346.0	-17.4	439.2	423.0	27.078			
2,000.0	1,993.3	1,913.0	1,874.2	7.1	10.5	160.21	369.5	-22.6	476.7	459.8	28.216			
2,100.0	2,092.3	2,005.7	1,963.7	7.4	10.9	159.95	392.9	-27.9	514.2	496.6	29.239			
2,200.0	2,191.3	2,098.4	2,053.2	7.7	11.3	159.72	416.4	-33.1	551.7	533.4	30.161			
2,300.0	2,290.4	2,191.0	2,142.8	8.0	11.7	159.52	439.9	-38.3	589.2	570.2	30.993			
2,400.0	2,389.4	2,283.7	2,232.3	8.4	12.1	159.34	463.4	-43.5	626.7	607.0	31.746			
2,500.0	2,488.4	2,376.4	2,321.8	8.7	12.5	159.18	486.8	-48.7	664.2	643.7	32.428			
2,600.0	2,587.4	2,469.1	2,411.3	9.1	12.9	159.04	510.3	-54.0	701.7	680.5	33.049			
2,700.0	2,686.5	2,561.8	2,500.8	9.5	13.3	158.92	533.8	-59.2	739.3	717.3	33.615			
2,800.0	2,785.5	2,654.5	2,590.3	9.8	13.8	158.80	557.2	-64.4	776.8	754.0	34.133			
2,900.0	2,884.5	2,747.1	2,679.8	10.2	14.2	158.70	580.7	-69.6	814.3	790.8	34.606			
3,000.0	2,983.5	2,839.8	2,769.3	10.6	14.6	158.61	604.2	-74.8	851.9	827.5	35.041			
3,100.0	3,082.6	2,932.5	2,858.8	11.0	15.0	158.52	627.6	-80.1	889.4	864.3	35.441			
3,200.0	3,181.6	3,025.2	2,948.3	11.4	15.4	158.44	651.1	-85.3	926.9	901.0	35.810			
3,300.0	3,280.6	3,117.9	3,037.8	11.8	15.9	158.37	674.6	-90.5	964.5	937.8	36.151			
3,400.0	3,379.6	3,210.5	3,127.3	12.2	16.3	158.30	698.1	-95.7	1,002.0	974.5	36.467			
3,500.0	3,478.7	3,303.2	3,216.9	12.6	16.7	158.24	721.5	-100.9	1,039.5	1,011.3	36.760			
3,600.0	3,577.7	3,395.9	3,306.4	13.0	17.2	158.18	745.0	-106.2	1,077.1	1,048.0	37.032			
3,700.0	3,676.7	3,488.6	3,395.9	13.4	17.6	158.12	768.5	-111.4	1,114.6	1,084.7	37.285			
3,800.0	3,775.8	3,581.3	3,485.4	13.8	18.0	158.07	791.9	-116.6	1,152.1	1,121.4	37.522			
3,900.0	3,874.8	3,673.9	3,574.9	14.2	18.5	158.03	815.4	-121.8	1,189.7	1,158.2	37.743			
4,000.0	3,973.8	3,766.6	3,664.4	14.6	18.9	157.98	838.9	-127.0	1,227.2	1,194.9	37.950			
4,100.0	4,072.8	3,859.3	3,753.9	15.0	19.3	157.94	862.4	-132.3	1,264.8	1,231.6	38.144			
4,200.0	4,171.9	3,952.2	3,843.6	15.4	19.8	158.08	885.9	-137.5	1,301.7	1,267.7	38.332			
4,300.0	4,271.4	4,046.2	3,934.4	15.9	20.2	158.24	909.7	-142.8	1,335.8	1,300.9	38.332			
4,400.0	4,371.2	4,141.2	4,026.1	16.4	20.7	158.32	933.7	-148.1	1,366.8	1,331.1	38.227			
4,500.0	4,471.2	4,237.1	4,118.8	16.8	21.1	158.33	958.0	-153.5	1,394.7	1,358.1	38.095			
4,600.0	4,571.2	4,333.6	4,212.0	16.9	21.6	0.77	982.5	-159.0	1,420.2	1,383.1	38.248			
4,700.0	4,671.2	4,430.2	4,305.2	16.9	22.1	0.53	1,006.9	-164.4	1,445.5	1,407.9	38.404			
4,800.0	4,771.2	4,526.8	4,398.5	16.9	22.5	0.30	1,031.4	-169.9	1,470.9	1,432.7	38.551			
4,900.0	4,871.2	4,623.4	4,491.8	17.0	23.0	0.08	1,055.8	-175.3	1,496.2	1,457.5	38.693			
5,000.0	4,971.2	4,719.9	4,585.1	17.0	23.5	-0.13	1,080.3	-180.7	1,521.6	1,482.4	38.830			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	5,071.2	4,816.5	4,678.3	17.1	23.9	-0.34	1,104.8	-186.2	1,547.0	1,507.3	38.963		
5,200.0	5,171.2	4,913.1	4,771.6	17.1	24.4	-0.54	1,129.2	-191.6	1,572.4	1,532.1	39.091		
5,300.0	5,271.2	5,009.7	4,864.9	17.1	24.9	-0.73	1,153.7	-197.1	1,597.8	1,557.0	39.216		
5,400.0	5,371.2	5,106.2	4,958.1	17.2	25.3	-0.92	1,178.1	-202.5	1,623.2	1,582.0	39.336		
5,500.0	5,471.2	5,202.8	5,051.4	17.2	25.8	-1.10	1,202.6	-207.9	1,648.7	1,606.9	39.453		
5,600.0	5,571.2	5,346.6	5,190.6	17.2	26.5	-1.35	1,237.9	-215.8	1,673.6	1,631.0	39.225		
5,700.0	5,671.2	5,578.7	5,418.3	17.3	27.7	-1.65	1,281.4	-225.5	1,692.5	1,648.4	38.340		
5,800.0	5,771.2	5,816.7	5,654.8	17.3	28.9	-1.81	1,307.1	-231.2	1,703.4	1,658.1	37.616		
5,900.0	5,871.2	6,033.3	5,871.2	17.4	29.6	-1.86	1,313.9	-232.7	1,706.3	1,660.5	37.248		
6,000.0	5,971.2	6,133.3	5,971.2	17.4	29.7	-1.86	1,313.9	-232.7	1,706.3	1,660.4	37.183		
6,100.0	6,071.2	6,233.3	6,071.2	17.4	29.7	-1.86	1,313.9	-232.7	1,706.3	1,660.3	37.118		
6,200.0	6,171.2	6,333.3	6,171.2	17.5	29.7	-1.86	1,313.9	-232.7	1,706.3	1,660.2	37.052		
6,300.0	6,271.2	6,433.3	6,271.2	17.5	29.8	-1.86	1,313.9	-232.7	1,706.3	1,660.1	36.987		
6,400.0	6,371.2	6,533.3	6,371.2	17.6	29.8	-1.86	1,313.9	-232.7	1,706.3	1,660.0	36.921		
6,500.0	6,471.2	6,633.3	6,471.2	17.6	29.8	-1.86	1,313.9	-232.7	1,706.3	1,660.0	36.855		
6,600.0	6,571.2	6,733.3	6,571.2	17.6	29.9	-1.86	1,313.9	-232.7	1,706.3	1,659.9	36.788		
6,700.0	6,671.2	6,833.3	6,671.2	17.7	29.9	-1.86	1,313.9	-232.7	1,706.3	1,659.8	36.722		
6,800.0	6,771.2	6,933.3	6,771.2	17.7	30.0	-1.86	1,313.9	-232.7	1,706.3	1,659.7	36.656		
6,900.0	6,871.2	7,033.3	6,871.2	17.8	30.0	-1.86	1,313.9	-232.7	1,706.3	1,659.6	36.589		
7,000.0	6,971.2	7,133.3	6,971.2	17.8	30.0	-1.86	1,313.9	-232.7	1,706.3	1,659.5	36.523		
7,100.0	7,071.2	7,233.3	7,071.2	17.9	30.1	-1.86	1,313.9	-232.7	1,706.3	1,659.5	36.456		
7,200.0	7,171.2	7,333.3	7,171.2	17.9	30.1	-1.86	1,313.9	-232.7	1,706.3	1,659.4	36.389		
7,300.0	7,271.2	7,433.3	7,271.2	17.9	30.2	-1.86	1,313.9	-232.7	1,706.3	1,659.3	36.322		
7,400.0	7,371.2	7,533.3	7,371.2	18.0	30.2	-1.86	1,313.9	-232.7	1,706.3	1,659.2	36.255		
7,500.0	7,471.2	7,633.3	7,471.2	18.0	30.2	-1.86	1,313.9	-232.7	1,706.3	1,659.1	36.188		
7,600.0	7,571.2	7,733.3	7,571.2	18.1	30.3	-1.86	1,313.9	-232.7	1,706.3	1,659.0	36.121		
7,700.0	7,671.2	7,833.3	7,671.2	18.1	30.3	-1.86	1,313.9	-232.7	1,706.3	1,658.9	36.054		
7,800.0	7,771.2	7,933.3	7,771.2	18.2	30.3	-1.86	1,313.9	-232.7	1,706.3	1,658.9	35.990		
7,900.0	7,871.2	7,952.1	7,790.0	18.2	30.4	-1.86	1,313.9	-232.7	1,708.2	1,660.5	35.853		
8,000.0	7,971.2	7,952.1	7,790.0	18.3	30.4	-1.86	1,313.9	-232.7	1,715.9	1,668.0	35.880		
8,100.0	8,071.2	7,952.1	7,790.0	18.3	30.4	-1.86	1,313.9	-232.7	1,729.3	1,681.4	36.102		
8,200.0	8,171.2	7,952.1	7,790.0	18.3	30.4	-1.86	1,313.9	-232.7	1,748.3	1,700.4	36.511		
8,300.0	8,271.2	7,952.1	7,790.0	18.4	30.4	-1.86	1,313.9	-232.7	1,772.8	1,725.0	37.096		
8,400.0	8,371.2	7,952.1	7,790.0	18.4	30.4	-1.86	1,313.9	-232.7	1,802.5	1,754.9	37.848		
8,500.0	8,471.2	7,952.1	7,790.0	18.5	30.4	-1.86	1,313.9	-232.7	1,837.2	1,789.8	38.754		
8,600.0	8,571.2	7,952.1	7,790.0	18.5	30.4	-1.86	1,313.9	-232.7	1,876.6	1,829.4	39.804		
8,700.0	8,671.2	7,952.1	7,790.0	18.6	30.4	-1.86	1,313.9	-232.7	1,920.4	1,873.5	40.984		
8,725.8	8,697.0	7,952.1	7,790.0	18.6	30.4	-1.86	1,313.9	-232.7	1,932.3	1,885.6	41.314		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	43.66	43.3	41.4	59.9				
100.0	100.0	100.0	100.0	0.8	0.8	43.66	43.3	41.4	59.9	58.3	37.818		
200.0	200.0	200.0	200.0	1.4	1.4	43.66	43.3	41.4	59.9	57.1	21.176		
210.0	210.0	210.0	210.0	1.5	1.4	43.66	43.3	41.4	59.9	57.0	20.628	CC	
300.0	300.0	299.9	299.9	1.9	1.7	43.46	43.5	41.2	60.0	56.4	17.012		
400.0	400.0	399.3	399.3	2.2	2.5	40.74	45.9	39.6	60.6	56.3	14.164	ES	
500.0	500.0	498.5	498.3	2.6	3.6	35.07	51.1	35.9	62.5	57.4	12.280		
600.0	600.0	596.4	595.7	2.8	4.0	27.62	59.2	31.0	67.0	61.2	11.473		
700.0	700.0	693.4	691.9	3.1	4.7	20.21	70.5	26.0	75.6	68.8	11.088	SF	
800.0	800.0	789.5	786.8	3.3	5.3	13.81	84.9	20.9	88.5	80.6	11.247		
900.0	900.0	884.6	880.1	3.6	6.0	8.74	102.3	15.7	105.4	96.5	11.790		
1,000.0	1,000.0	981.4	974.7	3.8	6.5	4.86	122.3	10.4	125.3	115.5	12.822		
1,100.0	1,100.0	1,079.0	1,070.0	4.1	6.9	122.24	142.4	5.0	146.6	136.2	14.158		
1,200.0	1,199.8	1,176.2	1,165.0	4.8	7.2	121.19	162.6	-0.3	169.8	158.7	15.370		
1,300.0	1,299.5	1,273.0	1,259.5	5.0	7.5	131.64	182.6	-5.6	194.9	183.4	16.927		
1,400.0	1,399.0	1,368.9	1,353.2	5.3	7.9	147.89	202.4	-10.9	223.2	211.0	18.327		
1,500.0	1,498.2	1,463.8	1,445.9	5.7	8.2	158.59	222.1	-16.1	254.6	241.6	19.613		
1,600.0	1,597.2	1,558.2	1,538.1	6.0	8.6	158.55	241.6	-21.3	287.7	274.0	21.050		
1,700.0	1,696.2	1,652.6	1,630.3	6.2	8.9	158.37	261.1	-26.5	320.8	306.5	22.455		
1,800.0	1,795.2	1,746.9	1,722.5	6.5	9.3	158.22	280.7	-31.7	353.8	338.9	23.706		
1,900.0	1,894.3	1,841.3	1,814.6	6.8	9.7	158.10	300.2	-36.9	386.9	371.3	24.822		
2,000.0	1,993.3	1,935.7	1,906.8	7.1	10.1	158.00	319.7	-42.1	420.0	403.8	25.818		
2,100.0	2,092.3	2,030.0	1,999.0	7.4	10.5	157.91	339.3	-47.3	453.1	436.2	26.710		
2,200.0	2,191.3	2,124.4	2,091.2	7.7	10.9	157.84	358.8	-52.5	486.2	468.5	27.510		
2,300.0	2,290.4	2,218.8	2,183.3	8.0	11.3	157.77	378.3	-57.7	519.3	500.9	28.229		
2,400.0	2,389.4	2,313.1	2,275.5	8.4	11.7	157.72	397.8	-62.9	552.4	533.3	28.878		
2,500.0	2,488.4	2,407.5	2,367.7	8.7	12.1	157.66	417.4	-68.1	585.5	565.6	29.465		
2,600.0	2,587.4	2,501.8	2,459.9	9.1	12.5	157.62	436.9	-73.3	618.6	598.0	29.997		
2,700.0	2,686.5	2,596.2	2,552.0	9.5	12.9	157.58	456.4	-78.4	651.7	630.3	30.480		
2,800.0	2,785.5	2,690.6	2,644.2	9.8	13.3	157.54	476.0	-83.6	684.8	662.6	30.921		
2,900.0	2,884.5	2,784.9	2,736.4	10.2	13.7	157.51	495.5	-88.8	717.9	695.0	31.324		
3,000.0	2,983.5	2,879.3	2,828.6	10.6	14.2	157.48	515.0	-94.0	751.0	727.3	31.694		
3,100.0	3,082.6	2,973.7	2,920.7	11.0	14.6	157.45	534.5	-99.2	784.1	759.6	32.034		
3,200.0	3,181.6	3,068.0	3,012.9	11.4	15.0	157.42	554.1	-104.4	817.2	791.9	32.346		
3,300.0	3,280.6	3,162.4	3,105.1	11.8	15.4	157.40	573.6	-109.6	850.3	824.2	32.635		
3,400.0	3,379.6	3,256.7	3,197.3	12.2	15.9	157.38	593.1	-114.8	883.4	856.5	32.902		
3,500.0	3,478.7	3,351.1	3,289.4	12.6	16.3	157.36	612.7	-120.0	916.5	888.8	33.150		
3,600.0	3,577.7	3,445.5	3,381.6	13.0	16.7	157.34	632.2	-125.2	949.6	921.1	33.380		
3,700.0	3,676.7	3,539.8	3,473.8	13.4	17.2	157.32	651.7	-130.4	982.7	953.4	33.595		
3,800.0	3,775.8	3,634.2	3,565.9	13.8	17.6	157.30	671.2	-135.6	1,015.8	985.7	33.795		
3,900.0	3,874.8	3,728.6	3,658.1	14.2	18.0	157.29	690.8	-140.8	1,048.9	1,018.0	33.982		
4,000.0	3,973.8	3,822.9	3,750.3	14.6	18.5	157.27	710.3	-145.9	1,082.0	1,050.3	34.157		
4,100.0	4,072.8	3,917.3	3,842.5	15.0	18.9	157.26	729.8	-151.1	1,115.1	1,082.6	34.321		
4,200.0	4,171.9	4,011.9	3,934.9	15.4	19.3	157.40	749.4	-156.3	1,147.5	1,114.3	34.479		
4,300.0	4,271.4	4,107.4	4,028.1	15.9	19.8	157.55	769.2	-161.6	1,177.1	1,143.0	34.456		
4,400.0	4,371.2	4,203.7	4,122.3	16.4	20.2	157.60	789.1	-166.9	1,203.6	1,168.6	34.328		
4,500.0	4,471.2	4,300.9	4,217.1	16.8	20.7	157.58	809.2	-172.2	1,227.0	1,191.1	34.170		
4,600.0	4,571.2	4,398.5	4,312.5	16.9	21.1	-0.01	829.4	-177.6	1,248.0	1,211.5	34.270		
4,700.0	4,671.2	4,496.2	4,407.9	16.9	21.6	-0.26	849.6	-183.0	1,268.7	1,231.8	34.373		
4,800.0	4,771.2	4,593.9	4,503.3	16.9	22.0	-0.50	869.8	-188.4	1,289.5	1,252.1	34.470		
4,900.0	4,871.2	4,691.5	4,598.8	17.0	22.5	-0.73	890.0	-193.7	1,310.2	1,272.3	34.564		
5,000.0	4,971.2	4,789.2	4,694.2	17.0	22.9	-0.96	910.3	-199.1	1,331.0	1,292.6	34.655		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	5,071.2	4,886.9	4,789.6	17.1	23.4	-1.17	930.5	-204.5	1,351.9	1,313.0	34.743		
5,200.0	5,171.2	4,984.6	4,885.0	17.1	23.8	-1.39	950.7	-209.9	1,372.7	1,333.3	34.828		
5,300.0	5,271.2	5,082.3	4,980.4	17.1	24.3	-1.59	970.9	-215.2	1,393.6	1,353.6	34.910		
5,400.0	5,371.2	5,179.9	5,075.8	17.2	24.8	-1.79	991.1	-220.6	1,414.4	1,374.0	34.990		
5,500.0	5,471.2	5,277.6	5,171.3	17.2	25.2	-1.98	1,011.3	-226.0	1,435.3	1,394.4	35.068		
5,600.0	5,571.2	5,397.6	5,288.5	17.2	25.8	-2.21	1,035.8	-232.5	1,456.0	1,414.5	35.012		
5,700.0	5,671.2	5,594.6	5,482.8	17.3	26.8	-2.49	1,067.2	-240.8	1,472.2	1,429.4	34.400		
5,800.0	5,771.2	5,795.2	5,682.4	17.3	27.7	-2.65	1,085.9	-245.8	1,481.6	1,437.8	33.839		
5,900.0	5,871.2	5,984.1	5,871.2	17.4	28.3	-2.70	1,091.1	-247.2	1,484.2	1,439.9	33.542		
6,000.0	5,971.2	6,084.1	5,971.2	17.4	28.3	-2.70	1,091.1	-247.2	1,484.2	1,439.9	33.484		
6,100.0	6,071.2	6,184.1	6,071.2	17.4	28.4	-2.70	1,091.1	-247.2	1,484.2	1,439.8	33.422		
6,200.0	6,171.2	6,284.1	6,171.2	17.5	28.4	-2.70	1,091.1	-247.2	1,484.2	1,439.7	33.359		
6,300.0	6,271.2	6,384.1	6,271.2	17.5	28.5	-2.70	1,091.1	-247.2	1,484.2	1,439.6	33.296		
6,400.0	6,371.2	6,484.1	6,371.2	17.6	28.5	-2.70	1,091.1	-247.2	1,484.2	1,439.5	33.233		
6,500.0	6,471.2	6,584.1	6,471.2	17.6	28.5	-2.70	1,091.1	-247.2	1,484.2	1,439.4	33.170		
6,600.0	6,571.2	6,684.1	6,571.2	17.6	28.6	-2.70	1,091.1	-247.2	1,484.2	1,439.4	33.107		
6,700.0	6,671.2	6,784.1	6,671.2	17.7	28.6	-2.70	1,091.1	-247.2	1,484.2	1,439.3	33.044		
6,800.0	6,771.2	6,884.1	6,771.2	17.7	28.7	-2.70	1,091.1	-247.2	1,484.2	1,439.2	32.980		
6,900.0	6,871.2	6,984.1	6,871.2	17.8	28.7	-2.70	1,091.1	-247.2	1,484.2	1,439.1	32.917		
7,000.0	6,971.2	7,084.1	6,971.2	17.8	28.7	-2.70	1,091.1	-247.2	1,484.2	1,439.0	32.853		
7,100.0	7,071.2	7,184.1	7,071.2	17.9	28.8	-2.70	1,091.1	-247.2	1,484.2	1,438.9	32.790		
7,200.0	7,171.2	7,284.1	7,171.2	17.9	28.8	-2.70	1,091.1	-247.2	1,484.2	1,438.8	32.726		
7,300.0	7,271.2	7,384.1	7,271.2	17.9	28.9	-2.70	1,091.1	-247.2	1,484.2	1,438.7	32.662		
7,400.0	7,371.2	7,484.1	7,371.2	18.0	28.9	-2.70	1,091.1	-247.2	1,484.2	1,438.7	32.598		
7,500.0	7,471.2	7,584.1	7,471.2	18.0	28.9	-2.70	1,091.1	-247.2	1,484.2	1,438.6	32.534		
7,600.0	7,571.2	7,684.1	7,571.2	18.1	29.0	-2.70	1,091.1	-247.2	1,484.2	1,438.5	32.471		
7,700.0	7,671.2	7,784.1	7,671.2	18.1	29.0	-2.70	1,091.1	-247.2	1,484.2	1,438.4	32.407		
7,800.0	7,771.2	7,884.1	7,771.2	18.2	29.1	-2.70	1,091.1	-247.2	1,484.2	1,438.3	32.343		
7,900.0	7,871.2	7,984.1	7,871.2	18.2	29.1	-2.70	1,091.1	-247.2	1,484.2	1,438.2	32.278		
8,000.0	7,971.2	8,084.1	7,971.2	18.3	29.2	-2.70	1,091.1	-247.2	1,484.2	1,438.1	32.214		
8,100.0	8,071.2	8,184.1	8,071.2	18.3	29.2	-2.70	1,091.1	-247.2	1,484.2	1,438.0	32.150		
8,200.0	8,171.2	8,284.1	8,171.2	18.3	29.2	-2.70	1,091.1	-247.2	1,484.2	1,437.9	32.086		
8,300.0	8,271.2	8,384.1	8,271.2	18.4	29.3	-2.70	1,091.1	-247.2	1,484.2	1,437.8	32.022		
8,400.0	8,371.2	8,484.1	8,371.2	18.4	29.3	-2.70	1,091.1	-247.2	1,484.2	1,437.7	31.958		
8,500.0	8,471.2	8,584.1	8,471.2	18.5	29.4	-2.70	1,091.1	-247.2	1,484.2	1,437.6	31.893		
8,600.0	8,571.2	8,684.1	8,571.2	18.5	29.4	-2.70	1,091.1	-247.2	1,484.2	1,437.6	31.829		
8,611.2	8,582.3	8,695.2	8,582.3	18.5	29.4	-2.70	1,091.1	-247.2	1,484.2	1,437.5	31.822		
8,700.0	8,671.2	8,769.9	8,657.0	18.6	29.4	-2.70	1,091.1	-247.2	1,484.2	1,437.5	31.754		
8,725.8	8,697.0	8,769.9	8,657.0	18.6	29.4	-2.70	1,091.1	-247.2	1,484.2	1,437.9	31.727		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	43.62	28.9	27.5	39.9				
100.0	100.0	100.0	100.0	0.8	0.8	43.62	28.9	27.5	39.9	38.3	25.203		
200.0	200.0	200.0	200.0	1.4	1.4	43.62	28.9	27.5	39.9	37.1	14.112		
300.0	300.0	300.0	300.0	1.9	1.9	43.62	28.9	27.5	39.9	36.2	10.688		
400.0	400.0	400.0	400.0	2.2	2.2	43.62	28.9	27.5	39.9	35.5	8.937		
500.0	500.0	500.0	500.0	2.6	2.6	43.62	28.9	27.5	39.9	34.8	7.828		
600.0	600.0	600.0	600.0	2.8	2.8	43.62	28.9	27.5	39.9	34.3	7.045		
608.3	608.3	608.3	608.3	2.9	2.9	43.62	28.9	27.5	39.9	34.2	6.997	CC	
700.0	700.0	699.9	699.9	3.1	3.0	43.53	29.0	27.5	40.0	33.9	6.546	ES	
800.0	800.0	799.2	799.2	3.3	3.5	40.52	31.2	26.7	41.1	34.4	6.167		
900.0	900.0	898.2	898.0	3.6	4.4	33.94	36.7	24.7	44.3	36.9	5.994	SF	
1,000.0	1,000.0	996.7	996.1	3.8	5.1	25.45	45.3	21.6	50.4	42.1	6.107		
1,100.0	1,100.0	1,094.4	1,093.0	4.1	5.8	137.86	57.0	17.3	61.3	52.2	6.717		
1,200.0	1,199.8	1,193.1	1,190.6	4.8	6.2	133.63	70.5	12.5	76.8	66.6	7.569		
1,300.0	1,299.5	1,291.4	1,287.9	5.0	6.5	142.54	83.8	7.6	94.9	84.3	8.976		
1,400.0	1,399.0	1,389.1	1,384.5	5.3	6.8	157.32	97.1	2.8	116.1	104.9	10.424		
1,500.0	1,498.2	1,486.0	1,480.5	5.7	7.0	166.62	110.3	-2.0	140.3	128.5	11.829		
1,600.0	1,597.2	1,582.5	1,575.9	6.0	7.3	165.43	123.5	-6.8	166.3	153.8	13.313		
1,700.0	1,696.2	1,679.0	1,671.4	6.2	7.7	164.43	136.6	-11.5	192.4	179.3	14.737		
1,800.0	1,795.2	1,775.5	1,766.9	6.5	8.0	163.67	149.7	-16.3	218.5	204.9	16.019		
1,900.0	1,894.3	1,872.0	1,862.4	6.8	8.3	163.08	162.8	-21.1	244.6	230.4	17.172		
2,000.0	1,993.3	1,968.5	1,957.9	7.1	8.6	162.59	176.0	-25.8	270.8	255.9	18.209		
2,100.0	2,092.3	2,065.0	2,053.4	7.4	9.0	162.20	189.1	-30.6	296.9	281.4	19.143		
2,200.0	2,191.3	2,161.5	2,148.8	7.7	9.3	161.86	202.2	-35.4	323.1	307.0	19.984		
2,300.0	2,290.4	2,258.0	2,244.3	8.0	9.7	161.58	215.4	-40.1	349.3	332.5	20.744		
2,400.0	2,389.4	2,354.5	2,339.8	8.4	10.0	161.34	228.5	-44.9	375.5	358.0	21.432		
2,500.0	2,488.4	2,451.0	2,435.3	8.7	10.4	161.12	241.6	-49.6	401.7	383.5	22.055		
2,600.0	2,587.4	2,547.5	2,530.8	9.1	10.8	160.94	254.8	-54.4	427.9	409.0	22.622		
2,700.0	2,686.5	2,644.0	2,626.2	9.5	11.2	160.77	267.9	-59.2	454.1	434.5	23.138		
2,800.0	2,785.5	2,740.5	2,721.7	9.8	11.5	160.63	281.0	-63.9	480.3	460.0	23.610		
2,900.0	2,884.5	2,837.0	2,817.2	10.2	11.9	160.50	294.2	-68.7	506.5	485.5	24.041		
3,000.0	2,983.5	2,933.5	2,912.7	10.6	12.3	160.38	307.3	-73.5	532.7	510.9	24.438		
3,100.0	3,082.6	3,030.0	3,008.2	11.0	12.7	160.27	320.4	-78.2	558.9	536.4	24.802		
3,200.0	3,181.6	3,126.5	3,103.6	11.4	13.1	160.17	333.6	-83.0	585.2	561.9	25.138		
3,300.0	3,280.6	3,223.0	3,199.1	11.8	13.5	160.08	346.7	-87.8	611.4	587.4	25.449		
3,400.0	3,379.6	3,319.5	3,294.6	12.2	13.8	160.00	359.8	-92.5	637.6	612.8	25.736		
3,500.0	3,478.7	3,416.0	3,390.1	12.6	14.2	159.93	372.9	-97.3	663.8	638.3	26.003		
3,600.0	3,577.7	3,512.5	3,485.6	13.0	14.6	159.86	386.1	-102.1	690.0	663.8	26.251		
3,700.0	3,676.7	3,609.0	3,581.1	13.4	15.0	159.79	399.2	-106.8	716.3	689.2	26.482		
3,800.0	3,775.8	3,705.5	3,676.5	13.8	15.4	159.73	412.3	-111.6	742.5	714.7	26.698		
3,900.0	3,874.8	3,802.0	3,772.0	14.2	15.8	159.68	425.5	-116.4	768.7	740.1	26.900		
4,000.0	3,973.8	3,898.5	3,867.5	14.6	16.2	159.62	438.6	-121.1	794.9	765.6	27.088		
4,100.0	4,072.8	3,995.0	3,963.0	15.0	16.6	159.57	451.7	-125.9	821.2	791.0	27.265		
4,200.0	4,171.9	4,091.6	4,058.6	15.4	17.0	159.53	464.9	-130.7	846.7	815.9	27.431		
4,300.0	4,271.4	4,189.0	4,155.0	15.9	17.4	159.55	478.1	-135.5	869.3	837.6	27.414		
4,400.0	4,371.2	4,287.1	4,252.0	16.4	17.8	159.58	491.5	-140.3	888.7	856.2	27.285		
4,500.0	4,471.2	4,385.7	4,349.5	16.8	18.3	159.41	504.9	-145.2	904.9	871.6	27.113		
4,600.0	4,571.2	4,484.6	4,447.4	16.9	18.7	1.72	518.4	-150.1	918.6	884.8	27.153		
4,700.0	4,671.2	4,583.5	4,545.3	16.9	19.1	1.39	531.8	-154.9	932.1	897.8	27.198		
4,800.0	4,771.2	4,682.5	4,643.2	16.9	19.5	1.07	545.3	-159.8	945.6	910.9	27.239		
4,900.0	4,871.2	4,781.4	4,741.1	17.0	19.9	0.76	558.8	-164.7	959.1	924.0	27.278		
5,000.0	4,971.2	4,880.4	4,839.0	17.0	20.3	0.46	572.2	-169.6	972.7	937.1	27.315		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Currier 0993-16-07 Pad - Currier BCU 0993-16-05M - OH - Design #2	Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning		
5,100.0	5,071.2	4,979.3	4,936.9	17.1	20.8	0.17	585.7	-174.5	986.3	950.3	27.352			
5,200.0	5,171.2	5,078.3	5,034.8	17.1	21.2	-0.11	599.1	-179.4	999.9	963.4	27.387			
5,300.0	5,271.2	5,177.2	5,132.8	17.1	21.6	-0.39	612.6	-184.3	1,013.6	976.6	27.420			
5,400.0	5,371.2	5,276.1	5,230.7	17.2	22.0	-0.66	626.1	-189.1	1,027.3	989.8	27.453			
5,500.0	5,471.2	5,375.1	5,328.6	17.2	22.4	-0.92	639.5	-194.0	1,040.9	1,003.1	27.484			
5,600.0	5,571.2	5,474.0	5,426.5	17.2	22.9	-1.18	653.0	-198.9	1,054.7	1,016.3	27.514			
5,700.0	5,671.2	5,614.0	5,565.2	17.3	23.6	-1.49	669.9	-205.0	1,067.0	1,027.8	27.224			
5,800.0	5,771.2	5,768.5	5,719.3	17.3	24.3	-1.69	681.2	-209.1	1,074.3	1,034.4	26.868			
5,900.0	5,871.2	5,920.5	5,871.2	17.4	24.9	-1.76	684.6	-210.4	1,076.6	1,036.1	26.583			
6,000.0	5,971.2	6,020.5	5,971.2	17.4	24.9	-1.76	684.6	-210.4	1,076.6	1,036.0	26.524			
6,100.0	6,071.2	6,120.5	6,071.2	17.4	24.9	-1.76	684.6	-210.4	1,076.6	1,035.9	26.466			
6,200.0	6,171.2	6,220.5	6,171.2	17.5	25.0	-1.76	684.6	-210.4	1,076.6	1,035.8	26.408			
6,300.0	6,271.2	6,320.5	6,271.2	17.5	25.0	-1.76	684.6	-210.4	1,076.6	1,035.7	26.350			
6,400.0	6,371.2	6,420.5	6,371.2	17.6	25.1	-1.76	684.6	-210.4	1,076.6	1,035.7	26.292			
6,500.0	6,471.2	6,520.5	6,471.2	17.6	25.1	-1.76	684.6	-210.4	1,076.6	1,035.6	26.233			
6,600.0	6,571.2	6,620.5	6,571.2	17.6	25.2	-1.76	684.6	-210.4	1,076.6	1,035.5	26.175			
6,700.0	6,671.2	6,720.5	6,671.2	17.7	25.2	-1.76	684.6	-210.4	1,076.6	1,035.4	26.117			
6,800.0	6,771.2	6,820.5	6,771.2	17.7	25.3	-1.76	684.6	-210.4	1,076.6	1,035.3	26.058			
6,900.0	6,871.2	6,920.5	6,871.2	17.8	25.3	-1.76	684.6	-210.4	1,076.6	1,035.2	26.000			
7,000.0	6,971.2	7,020.5	6,971.2	17.8	25.3	-1.76	684.6	-210.4	1,076.6	1,035.1	25.941			
7,100.0	7,071.2	7,120.5	7,071.2	17.9	25.4	-1.76	684.6	-210.4	1,076.6	1,035.0	25.883			
7,200.0	7,171.2	7,220.5	7,171.2	17.9	25.4	-1.76	684.6	-210.4	1,076.6	1,034.9	25.824			
7,300.0	7,271.2	7,320.5	7,271.2	17.9	25.5	-1.76	684.6	-210.4	1,076.6	1,034.8	25.766			
7,400.0	7,371.2	7,420.5	7,371.2	18.0	25.5	-1.76	684.6	-210.4	1,076.6	1,034.7	25.707			
7,500.0	7,471.2	7,520.5	7,471.2	18.0	25.6	-1.76	684.6	-210.4	1,076.6	1,034.6	25.649			
7,600.0	7,571.2	7,620.5	7,571.2	18.1	25.6	-1.76	684.6	-210.4	1,076.6	1,034.5	25.590			
7,700.0	7,671.2	7,720.5	7,671.2	18.1	25.7	-1.76	684.6	-210.4	1,076.6	1,034.4	25.532			
7,800.0	7,771.2	7,820.5	7,771.2	18.2	25.7	-1.76	684.6	-210.4	1,076.6	1,034.3	25.475			
7,900.0	7,871.2	7,851.3	7,802.0	18.2	25.7	-1.76	684.6	-210.4	1,078.8	1,036.5	25.472			
8,000.0	7,971.2	7,851.3	7,802.0	18.3	25.7	-1.76	684.6	-210.4	1,089.8	1,047.5	25.780			
8,100.0	8,071.2	7,851.3	7,802.0	18.3	25.7	-1.76	684.6	-210.4	1,109.7	1,067.7	26.415			
8,200.0	8,171.2	7,851.3	7,802.0	18.3	25.7	-1.76	684.6	-210.4	1,138.1	1,096.5	27.355			
8,300.0	8,271.2	7,851.3	7,802.0	18.4	25.7	-1.76	684.6	-210.4	1,174.4	1,133.3	28.573			
8,400.0	8,371.2	7,851.3	7,802.0	18.4	25.7	-1.76	684.6	-210.4	1,217.8	1,177.3	30.040			
8,500.0	8,471.2	7,851.3	7,802.0	18.5	25.7	-1.76	684.6	-210.4	1,267.6	1,227.7	31.724			
8,600.0	8,571.2	7,851.3	7,802.0	18.5	25.7	-1.76	684.6	-210.4	1,323.1	1,283.8	33.592			
8,700.0	8,671.2	7,851.3	7,802.0	18.6	25.7	-1.76	684.6	-210.4	1,383.7	1,344.8	35.614			
8,725.8	8,697.0	7,851.3	7,802.0	18.6	25.7	-1.76	684.6	-210.4	1,400.0	1,361.3	36.162			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	43.55	21.7	20.6	29.9				
100.0	100.0	100.0	100.0	0.8	0.8	43.55	21.7	20.6	29.9	28.3	18.882		
200.0	200.0	200.0	200.0	1.4	1.4	43.55	21.7	20.6	29.9	27.1	10.573		
300.0	300.0	300.0	300.0	1.9	1.9	43.55	21.7	20.6	29.9	26.2	8.008		
400.0	400.0	400.0	400.0	2.2	2.2	43.55	21.7	20.6	29.9	25.4	6.696		
500.0	500.0	500.2	500.2	2.6	2.4	43.07	21.8	20.3	29.8	24.8	6.031		
600.0	600.0	600.6	600.5	2.8	3.1	37.41	22.6	17.3	28.5	22.9	5.128		
700.0	700.0	700.6	700.3	3.1	4.1	24.05	24.4	10.9	26.7	20.7	4.416		
743.5	743.5	744.0	743.6	3.2	4.4	15.50	25.4	7.1	26.4	20.2	4.233	CC, ES	
800.0	800.0	800.0	799.2	3.3	4.9	2.52	27.1	1.2	27.1	20.5	4.090	SF	
900.0	900.0	898.7	897.0	3.6	5.6	-20.90	30.6	-11.7	32.9	25.0	4.174		
1,000.0	1,000.0	996.3	993.2	3.8	6.2	-38.24	35.1	-27.6	45.1	35.9	4.874		
1,100.0	1,100.0	1,094.3	1,089.3	4.1	6.5	72.38	40.1	-45.9	61.4	51.4	6.143		
1,200.0	1,199.8	1,192.9	1,186.0	4.8	6.8	69.20	45.3	-64.5	77.4	66.7	7.287		
1,300.0	1,299.5	1,291.7	1,282.9	5.0	7.1	79.33	50.4	-83.1	92.7	81.7	8.404		
1,400.0	1,399.0	1,390.1	1,379.5	5.3	7.4	96.34	55.6	-101.6	110.3	98.6	9.410		
1,500.0	1,498.2	1,488.0	1,475.4	5.7	7.7	108.55	60.7	-120.0	130.8	118.3	10.473		
1,600.0	1,597.2	1,585.4	1,571.0	6.0	8.1	110.39	65.7	-138.3	152.8	139.8	11.739		
1,700.0	1,696.2	1,682.9	1,666.6	6.2	8.4	111.64	70.8	-156.7	174.9	161.5	12.974		
1,800.0	1,795.2	1,780.3	1,762.1	6.5	8.8	112.60	75.9	-175.0	197.1	183.2	14.100		
1,900.0	1,894.3	1,877.8	1,857.7	6.8	9.2	113.37	81.0	-193.3	219.4	204.9	15.126		
2,000.0	1,993.3	1,975.2	1,953.3	7.1	9.6	114.00	86.1	-211.7	241.7	226.6	16.062		
2,100.0	2,092.3	2,072.7	2,048.9	7.4	9.9	114.53	91.2	-230.0	263.9	248.3	16.914		
2,200.0	2,191.3	2,170.2	2,144.5	7.7	10.3	114.97	96.2	-248.3	286.3	270.1	17.692		
2,300.0	2,290.4	2,267.6	2,240.0	8.0	10.7	115.35	101.3	-266.7	308.6	291.8	18.402		
2,400.0	2,389.4	2,365.1	2,335.6	8.4	11.1	115.67	106.4	-285.0	330.9	313.6	19.052		
2,500.0	2,488.4	2,462.5	2,431.2	8.7	11.5	115.96	111.5	-303.3	353.3	335.3	19.647		
2,600.0	2,587.4	2,560.0	2,526.8	9.1	11.9	116.21	116.6	-321.7	375.6	357.0	20.193		
2,700.0	2,686.5	2,657.4	2,622.4	9.5	12.4	116.43	121.7	-340.0	398.0	378.8	20.696		
2,800.0	2,785.5	2,754.9	2,718.0	9.8	12.8	116.63	126.7	-358.3	420.4	400.5	21.159		
2,900.0	2,884.5	2,852.4	2,813.5	10.2	13.2	116.81	131.8	-376.7	442.7	422.2	21.586		
3,000.0	2,983.5	2,949.8	2,909.1	10.6	13.6	116.97	136.9	-395.0	465.1	443.9	21.981		
3,100.0	3,082.6	3,047.3	3,004.7	11.0	14.0	117.12	142.0	-413.3	487.5	465.7	22.348		
3,200.0	3,181.6	3,144.7	3,100.3	11.4	14.5	117.25	147.1	-431.7	509.9	487.4	22.688		
3,300.0	3,280.6	3,242.2	3,195.9	11.8	14.9	117.38	152.2	-450.0	532.2	509.1	23.004		
3,400.0	3,379.6	3,339.6	3,291.4	12.2	15.3	117.49	157.2	-468.4	554.6	530.8	23.298		
3,500.0	3,478.7	3,437.1	3,387.0	12.6	15.8	117.59	162.3	-486.7	577.0	552.5	23.573		
3,600.0	3,577.7	3,534.6	3,482.6	13.0	16.2	117.69	167.4	-505.0	599.4	574.2	23.830		
3,700.0	3,676.7	3,632.0	3,578.2	13.4	16.6	117.78	172.5	-523.4	621.8	596.0	24.071		
3,800.0	3,775.8	3,729.5	3,673.8	13.8	17.0	117.86	177.6	-541.7	644.2	617.7	24.297		
3,900.0	3,874.8	3,826.9	3,769.4	14.2	17.5	117.94	182.7	-560.0	666.6	639.4	24.509		
4,000.0	3,973.8	3,924.4	3,864.9	14.6	17.9	118.01	187.7	-578.4	689.0	661.1	24.708		
4,100.0	4,072.8	4,021.8	3,960.5	15.0	18.4	118.08	192.8	-596.7	711.4	682.8	24.896		
4,200.0	4,171.9	4,119.4	4,056.2	15.4	18.8	118.35	197.9	-615.0	733.4	704.2	25.093		
4,300.0	4,271.4	4,217.2	4,152.1	15.9	19.2	118.51	203.0	-633.4	754.0	724.1	25.204		
4,400.0	4,371.2	4,315.2	4,248.2	16.4	19.7	118.41	208.1	-651.9	772.9	742.3	25.269		
4,500.0	4,471.2	4,413.3	4,344.5	16.8	20.1	118.09	213.2	-670.3	790.3	759.1	25.317		
4,600.0	4,571.2	4,511.4	4,440.7	16.9	20.6	-39.98	218.4	-688.8	806.5	774.8	25.462		
4,700.0	4,671.2	4,609.5	4,536.8	16.9	21.0	-40.75	223.5	-707.2	822.8	790.6	25.592		
4,800.0	4,771.2	4,707.5	4,633.0	16.9	21.5	-41.49	228.6	-725.7	839.2	806.5	25.716		
4,900.0	4,871.2	4,805.6	4,729.2	17.0	21.9	-42.19	233.7	-744.1	855.7	822.6	25.838		
5,000.0	4,971.2	4,903.7	4,825.4	17.0	22.4	-42.88	238.8	-762.6	872.3	838.7	25.957		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	5,071.2	5,001.8	4,921.6	17.1	22.8	-43.53	243.9	-781.0	889.1	855.0	26.074		
5,200.0	5,171.2	5,099.8	5,017.8	17.1	23.2	-44.16	249.1	-799.5	906.0	871.4	26.188		
5,300.0	5,271.2	5,197.9	5,114.0	17.1	23.7	-44.77	254.2	-817.9	923.0	887.9	26.300		
5,400.0	5,371.2	5,296.0	5,210.2	17.2	24.1	-45.36	259.3	-836.4	940.0	904.4	26.410		
5,500.0	5,471.2	5,394.1	5,306.4	17.2	24.6	-45.93	264.4	-854.8	957.2	921.1	26.519		
5,600.0	5,571.2	5,533.8	5,444.0	17.2	25.3	-46.61	270.8	-878.0	972.4	935.5	26.354		
5,700.0	5,671.2	5,676.1	5,585.2	17.3	26.0	-47.09	275.5	-894.8	983.3	945.7	26.141		
5,800.0	5,771.2	5,819.9	5,728.6	17.3	26.7	-47.37	278.3	-905.0	989.9	951.6	25.907		
5,900.0	5,871.2	5,964.4	5,873.0	17.4	27.1	-47.46	279.2	-908.2	991.9	953.4	25.762		
5,932.0	5,903.2	5,994.5	5,903.2	17.4	27.1	-47.46	279.2	-908.2	991.9	953.4	25.748		
6,000.0	5,971.2	6,062.5	5,971.2	17.4	27.1	-47.46	279.2	-908.2	991.9	953.3	25.711		
6,100.0	6,071.2	6,162.5	6,071.2	17.4	27.2	-47.46	279.2	-908.2	991.9	953.3	25.653		
6,200.0	6,171.2	6,262.5	6,171.2	17.5	27.2	-47.46	279.2	-908.2	991.9	953.2	25.595		
6,300.0	6,271.2	6,362.5	6,271.2	17.5	27.2	-47.46	279.2	-908.2	991.9	953.1	25.537		
6,400.0	6,371.2	6,462.5	6,371.2	17.6	27.3	-47.46	279.2	-908.2	991.9	953.0	25.478		
6,500.0	6,471.2	6,562.5	6,471.2	17.6	27.3	-47.46	279.2	-908.2	991.9	952.9	25.420		
6,600.0	6,571.2	6,662.5	6,571.2	17.6	27.3	-47.46	279.2	-908.2	991.9	952.8	25.361		
6,700.0	6,671.2	6,762.5	6,671.2	17.7	27.4	-47.46	279.2	-908.2	991.9	952.7	25.303		
6,800.0	6,771.2	6,862.5	6,771.2	17.7	27.4	-47.46	279.2	-908.2	991.9	952.6	25.244		
6,900.0	6,871.2	6,962.5	6,871.2	17.8	27.4	-47.46	279.2	-908.2	991.9	952.5	25.186		
7,000.0	6,971.2	7,062.5	6,971.2	17.8	27.5	-47.46	279.2	-908.2	991.9	952.4	25.127		
7,100.0	7,071.2	7,162.5	7,071.2	17.9	27.5	-47.46	279.2	-908.2	991.9	952.3	25.068		
7,200.0	7,171.2	7,262.5	7,171.2	17.9	27.5	-47.46	279.2	-908.2	991.9	952.3	25.010		
7,300.0	7,271.2	7,362.5	7,271.2	17.9	27.6	-47.46	279.2	-908.2	991.9	952.2	24.951		
7,400.0	7,371.2	7,462.5	7,371.2	18.0	27.6	-47.46	279.2	-908.2	991.9	952.1	24.892		
7,500.0	7,471.2	7,562.5	7,471.2	18.0	27.6	-47.46	279.2	-908.2	991.9	952.0	24.833		
7,600.0	7,571.2	7,662.5	7,571.2	18.1	27.7	-47.46	279.2	-908.2	991.9	951.9	24.775		
7,700.0	7,671.2	7,762.5	7,671.2	18.1	27.7	-47.46	279.2	-908.2	991.9	951.8	24.716		
7,800.0	7,771.2	7,862.5	7,771.2	18.2	27.7	-47.46	279.2	-908.2	991.9	951.7	24.657		
7,900.0	7,871.2	7,962.5	7,871.2	18.2	27.8	-47.46	279.2	-908.2	991.9	951.6	24.598		
8,000.0	7,971.2	8,062.5	7,971.2	18.3	27.8	-47.46	279.2	-908.2	991.9	951.5	24.540		
8,100.0	8,071.2	8,162.5	8,071.2	18.3	27.8	-47.46	279.2	-908.2	991.9	951.4	24.481		
8,200.0	8,171.2	8,262.5	8,171.2	18.3	27.9	-47.46	279.2	-908.2	991.9	951.3	24.422		
8,300.0	8,271.2	8,362.5	8,271.2	18.4	27.9	-47.46	279.2	-908.2	991.9	951.2	24.363		
8,400.0	8,371.2	8,462.5	8,371.2	18.4	28.0	-47.46	279.2	-908.2	991.9	951.1	24.305		
8,500.0	8,471.2	8,562.5	8,471.2	18.5	28.0	-47.46	279.2	-908.2	991.9	951.0	24.246		
8,600.0	8,571.2	8,662.5	8,571.2	18.5	28.0	-47.46	279.2	-908.2	991.9	950.9	24.188		
8,614.8	8,586.0	8,677.4	8,586.0	18.5	28.0	-47.46	279.2	-908.2	991.9	950.9	24.179		
8,700.0	8,671.2	8,757.4	8,666.0	18.6	28.1	-47.46	279.2	-908.2	991.9	950.8	24.125		
8,725.8	8,697.0	8,757.4	8,666.0	18.6	28.1	-47.46	279.2	-908.2	992.4	951.2	24.088		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	43.46	14.5	13.7	19.9				
100.0	100.0	100.0	100.0	0.8	0.8	43.46	14.5	13.7	19.9	18.3	12.574		
200.0	200.0	200.0	200.0	1.4	1.4	43.46	14.5	13.7	19.9	17.1	7.041		
300.0	300.0	300.0	300.0	1.9	1.9	43.46	14.5	13.7	19.9	16.2	5.333		
400.0	400.0	400.0	400.0	2.2	2.2	43.46	14.5	13.7	19.9	15.5	4.459		
500.0	500.0	500.4	500.4	2.6	2.8	39.56	14.5	11.9	18.8	13.6	3.667		
600.0	600.0	600.6	600.5	2.8	3.8	24.80	14.5	6.7	15.9	10.1	2.752		
700.0	700.0	700.6	700.0	3.1	4.1	-7.41	14.1	-1.8	14.2	8.1	2.343	Level 1	
706.6	706.6	707.2	706.6	3.1	4.1	-10.02	14.0	-2.5	14.2	8.1	2.314	Level 1, CC, ES	
800.0	800.0	800.2	799.1	3.3	4.4	-47.97	11.1	-12.3	16.5	9.2	2.239	Level 1, SF	
900.0	900.0	899.3	897.3	3.6	4.7	-77.58	5.3	-24.2	25.0	16.8	3.041		
1,000.0	1,000.0	998.4	995.4	3.8	5.0	-91.45	-0.9	-36.5	36.8	28.1	4.213		
1,100.0	1,100.0	1,097.6	1,093.7	4.1	5.3	22.29	-7.2	-48.8	48.1	38.8	5.157		
1,200.0	1,199.8	1,197.2	1,192.3	4.8	5.6	19.57	-13.5	-61.2	56.5	46.2	5.459		
1,300.0	1,299.5	1,297.1	1,291.2	5.0	6.0	29.10	-19.8	-73.5	62.1	51.2	5.703		
1,400.0	1,399.0	1,396.9	1,390.0	5.3	6.3	47.11	-26.1	-85.9	67.5	56.0	5.848		
1,500.0	1,498.2	1,496.5	1,488.7	5.7	6.7	62.17	-32.4	-98.3	73.5	61.2	5.960		
1,600.0	1,597.2	1,596.1	1,587.3	6.0	7.1	67.40	-38.7	-110.6	80.3	67.4	6.232		
1,700.0	1,696.2	1,695.6	1,685.8	6.2	7.4	71.65	-45.0	-122.9	87.6	74.3	6.578		
1,800.0	1,795.2	1,795.2	1,784.4	6.5	7.8	75.23	-51.3	-135.3	95.3	81.6	6.937		
1,900.0	1,894.3	1,894.7	1,883.0	6.8	8.2	78.26	-57.6	-147.6	103.3	89.2	7.300		
2,000.0	1,993.3	1,994.2	1,981.6	7.1	8.6	80.86	-63.9	-160.0	111.6	97.0	7.658		
2,100.0	2,092.3	2,096.3	2,082.8	7.4	9.1	83.55	-69.8	-171.5	119.2	104.2	7.943		
2,200.0	2,191.3	2,199.0	2,185.0	7.7	9.7	87.11	-74.1	-180.0	124.6	109.2	8.073		
2,300.0	2,290.4	2,301.4	2,287.3	8.0	10.2	91.61	-76.7	-185.1	128.2	112.5	8.152		
2,400.0	2,389.4	2,403.3	2,389.2	8.4	10.7	97.12	-77.7	-187.0	130.5	114.7	8.246		
2,500.0	2,488.4	2,502.6	2,488.4	8.7	10.8	103.04	-77.7	-187.0	133.0	117.2	8.450		
2,600.0	2,587.4	2,601.6	2,587.4	9.1	10.9	108.68	-77.7	-187.0	136.8	121.1	8.696		
2,700.0	2,686.5	2,700.6	2,686.5	9.5	10.9	113.97	-77.7	-187.0	141.9	126.1	8.958		
2,800.0	2,785.5	2,799.6	2,785.5	9.8	11.0	118.86	-77.7	-187.0	148.2	132.1	9.223		
2,900.0	2,884.5	2,898.7	2,884.5	10.2	11.1	123.33	-77.7	-187.0	155.4	139.0	9.483		
3,000.0	2,983.5	2,997.7	2,983.5	10.6	11.1	127.38	-77.7	-187.0	163.5	146.7	9.735		
3,100.0	3,082.6	3,096.7	3,082.6	11.0	11.2	131.04	-77.7	-187.0	172.4	155.1	9.979		
3,200.0	3,181.6	3,195.7	3,181.6	11.4	11.3	134.33	-77.7	-187.0	181.9	164.1	10.219		
3,300.0	3,280.6	3,294.8	3,280.6	11.8	11.3	137.30	-77.7	-187.0	191.9	173.6	10.455		
3,400.0	3,379.6	3,393.8	3,379.6	12.2	11.4	139.96	-77.7	-187.0	202.4	183.5	10.688		
3,500.0	3,478.7	3,492.8	3,478.7	12.6	11.5	142.36	-77.7	-187.0	213.3	193.8	10.921		
3,600.0	3,577.7	3,591.9	3,577.7	13.0	11.5	144.52	-77.7	-187.0	224.5	204.4	11.152		
3,700.0	3,676.7	3,690.9	3,676.7	13.4	11.6	146.48	-77.7	-187.0	236.1	215.3	11.383		
3,800.0	3,775.8	3,789.9	3,775.8	13.8	11.7	148.25	-77.7	-187.0	247.8	226.5	11.611		
3,900.0	3,874.8	3,888.9	3,874.8	14.2	11.7	149.86	-77.7	-187.0	259.8	237.8	11.839		
4,000.0	3,973.8	3,988.0	3,973.8	14.6	11.8	151.33	-77.7	-187.0	271.9	249.4	12.063		
4,100.0	4,072.8	4,087.0	4,072.8	15.0	11.9	152.68	-77.7	-187.0	284.3	261.1	12.286		
4,200.0	4,171.9	4,186.1	4,171.9	15.4	11.9	153.91	-77.7	-187.0	296.1	272.4	12.494		
4,300.0	4,271.4	4,285.6	4,271.4	15.9	12.0	154.81	-77.7	-187.0	305.1	280.8	12.548		
4,400.0	4,371.2	4,385.4	4,371.2	16.4	12.1	155.37	-77.7	-187.0	311.0	286.0	12.482		
4,500.0	4,471.2	4,485.3	4,471.2	16.8	12.2	155.62	-77.7	-187.0	313.7	288.3	12.339		
4,600.0	4,571.2	4,585.3	4,571.2	16.9	12.2	-1.76	-77.7	-187.0	313.9	288.3	12.278		
4,700.0	4,671.2	4,685.3	4,671.2	16.9	12.3	-1.76	-77.7	-187.0	313.9	288.2	12.218		
4,800.0	4,771.2	4,785.3	4,771.2	16.9	12.4	-1.76	-77.7	-187.0	313.9	288.1	12.157		
4,900.0	4,871.2	4,885.3	4,871.2	17.0	12.4	-1.76	-77.7	-187.0	313.9	287.9	12.097		
5,000.0	4,971.2	4,985.3	4,971.2	17.0	12.5	-1.76	-77.7	-187.0	313.9	287.8	12.037		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design											Currier 0993-16-07 Pad - Currier BCU 0993-16-07M - OH - Design #2	Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	5,071.2	5,085.3	5,071.2	17.1	12.6	-1.76	-77.7	-187.0	313.9	287.7	11.978		
5,200.0	5,171.2	5,185.3	5,171.2	17.1	12.6	-1.76	-77.7	-187.0	313.9	287.6	11.919		
5,300.0	5,271.2	5,285.3	5,271.2	17.1	12.7	-1.76	-77.7	-187.0	313.9	287.4	11.860		
5,400.0	5,371.2	5,385.3	5,371.2	17.2	12.8	-1.76	-77.7	-187.0	313.9	287.3	11.802		
5,500.0	5,471.2	5,485.3	5,471.2	17.2	12.9	-1.76	-77.7	-187.0	313.9	287.2	11.745		
5,600.0	5,571.2	5,585.3	5,571.2	17.2	12.9	-1.76	-77.7	-187.0	313.9	287.0	11.688		
5,700.0	5,671.2	5,685.3	5,671.2	17.3	13.0	-1.76	-77.7	-187.0	313.9	286.9	11.632		
5,800.0	5,771.2	5,785.3	5,771.2	17.3	13.1	-1.76	-77.7	-187.0	313.9	286.8	11.576		
5,900.0	5,871.2	5,885.3	5,871.2	17.4	13.1	-1.76	-77.7	-187.0	313.9	286.6	11.520		
6,000.0	5,971.2	5,985.3	5,971.2	17.4	13.2	-1.76	-77.7	-187.0	313.9	286.5	11.465		
6,100.0	6,071.2	6,085.3	6,071.2	17.4	13.3	-1.76	-77.7	-187.0	313.9	286.4	11.410		
6,200.0	6,171.2	6,185.3	6,171.2	17.5	13.4	-1.76	-77.7	-187.0	313.9	286.2	11.356		
6,300.0	6,271.2	6,285.3	6,271.2	17.5	13.4	-1.76	-77.7	-187.0	313.9	286.1	11.302		
6,400.0	6,371.2	6,385.3	6,371.2	17.6	13.5	-1.76	-77.7	-187.0	313.9	286.0	11.249		
6,500.0	6,471.2	6,485.3	6,471.2	17.6	13.6	-1.76	-77.7	-187.0	313.9	285.9	11.196		
6,600.0	6,571.2	6,585.3	6,571.2	17.6	13.6	-1.76	-77.7	-187.0	313.9	285.7	11.144		
6,700.0	6,671.2	6,685.3	6,671.2	17.7	13.7	-1.76	-77.7	-187.0	313.9	285.6	11.092		
6,800.0	6,771.2	6,785.3	6,771.2	17.7	13.8	-1.76	-77.7	-187.0	313.9	285.5	11.040		
6,900.0	6,871.2	6,885.3	6,871.2	17.8	13.9	-1.76	-77.7	-187.0	313.9	285.3	10.989		
7,000.0	6,971.2	6,985.3	6,971.2	17.8	13.9	-1.76	-77.7	-187.0	313.9	285.2	10.938		
7,100.0	7,071.2	7,085.3	7,071.2	17.9	14.0	-1.76	-77.7	-187.0	313.9	285.1	10.887		
7,200.0	7,171.2	7,185.3	7,171.2	17.9	14.1	-1.76	-77.7	-187.0	313.9	284.9	10.837		
7,300.0	7,271.2	7,285.3	7,271.2	17.9	14.1	-1.76	-77.7	-187.0	313.9	284.8	10.788		
7,400.0	7,371.2	7,385.3	7,371.2	18.0	14.2	-1.76	-77.7	-187.0	313.9	284.7	10.738		
7,500.0	7,471.2	7,485.3	7,471.2	18.0	14.3	-1.76	-77.7	-187.0	313.9	284.5	10.689		
7,600.0	7,571.2	7,585.3	7,571.2	18.1	14.4	-1.76	-77.7	-187.0	313.9	284.4	10.641		
7,700.0	7,671.2	7,685.3	7,671.2	18.1	14.4	-1.76	-77.7	-187.0	313.9	284.3	10.593		
7,800.0	7,771.2	7,785.3	7,771.2	18.2	14.5	-1.76	-77.7	-187.0	313.9	284.1	10.545		
7,810.0	7,781.2	7,795.3	7,781.2	18.2	14.5	-1.76	-77.7	-187.0	313.9	284.1	10.540		
7,900.0	7,871.2	7,838.2	7,824.0	18.2	14.5	-1.76	-77.7	-187.0	317.4	287.9	10.737		
8,000.0	7,971.2	7,838.2	7,824.0	18.3	14.5	-1.76	-77.7	-187.0	346.7	317.9	12.045		
8,100.0	8,071.2	7,838.2	7,824.0	18.3	14.5	-1.76	-77.7	-187.0	399.5	371.4	14.220		
8,200.0	8,171.2	7,838.2	7,824.0	18.3	14.5	-1.76	-77.7	-187.0	468.0	440.3	16.895		
8,300.0	8,271.2	7,838.2	7,824.0	18.4	14.5	-1.76	-77.7	-187.0	546.3	518.8	19.819		
8,400.0	8,371.2	7,838.2	7,824.0	18.4	14.5	-1.76	-77.7	-187.0	630.8	603.2	22.857		
8,500.0	8,471.2	7,838.2	7,824.0	18.5	14.5	-1.76	-77.7	-187.0	719.3	691.6	25.937		
8,600.0	8,571.2	7,838.2	7,824.0	18.5	14.5	-1.76	-77.7	-187.0	810.4	782.5	29.021		
8,700.0	8,671.2	7,838.2	7,824.0	18.6	14.5	-1.76	-77.7	-187.0	903.5	875.3	32.087		
8,725.8	8,697.0	7,838.2	7,824.0	18.6	14.5	-1.76	-77.7	-187.0	927.7	899.5	32.876		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	70.18	7.5	20.9	22.2				
100.0	100.0	100.0	100.0	0.8	0.8	70.18	7.5	20.9	22.2	20.7	14.038		
200.0	200.0	200.0	200.0	1.4	1.4	70.18	7.5	20.9	22.2	19.4	7.860		
300.0	300.0	300.1	300.1	1.9	1.7	70.51	7.4	20.9	22.1	18.6	6.261		
400.0	400.0	400.5	400.4	2.2	2.5	76.95	4.7	20.2	20.7	16.3	4.748		
500.0	500.0	500.5	500.3	2.6	3.6	94.37	-1.4	18.5	18.6	13.6	3.758		
539.2	539.2	539.6	539.2	2.7	4.0	104.92	-4.7	17.7	18.3	13.1	3.566	CC, ES	
600.0	600.0	600.0	599.3	2.8	4.5	123.97	-10.8	16.0	19.3	13.6	3.372	SF	
700.0	700.0	698.9	697.3	3.1	4.9	151.35	-23.3	12.7	26.7	19.5	3.739		
800.0	800.0	797.9	795.4	3.3	5.1	165.90	-36.5	9.2	38.0	29.9	4.706		
900.0	900.0	897.0	893.5	3.6	5.4	173.54	-49.8	5.6	50.6	41.8	5.766		
1,000.0	1,000.0	996.0	991.5	3.8	5.8	178.09	-63.1	2.1	63.7	54.3	6.787		
1,100.0	1,100.0	1,095.2	1,089.8	4.1	6.1	-59.84	-76.4	-1.4	76.2	66.3	7.688		
1,200.0	1,199.8	1,194.6	1,188.2	4.8	6.4	-60.30	-89.7	-5.0	87.0	76.4	8.230		
1,300.0	1,299.5	1,294.1	1,286.8	5.0	6.8	-51.95	-103.0	-8.5	95.9	85.0	8.738		
1,400.0	1,399.0	1,393.9	1,385.6	5.3	7.2	-37.57	-116.4	-12.1	101.8	90.2	8.761		
1,500.0	1,498.2	1,493.8	1,484.6	5.7	7.5	-28.04	-129.8	-15.7	104.3	91.9	8.396		
1,600.0	1,597.2	1,593.8	1,583.6	6.0	7.9	-28.80	-143.2	-19.2	105.0	91.9	8.026		
1,700.0	1,696.2	1,693.8	1,682.6	6.2	8.3	-29.73	-156.6	-22.8	105.7	92.1	7.739		
1,800.0	1,795.2	1,793.8	1,781.6	6.5	8.7	-30.64	-170.0	-26.4	106.5	92.3	7.469		
1,900.0	1,894.3	1,893.8	1,880.7	6.8	9.1	-31.54	-183.4	-29.9	107.3	92.4	7.216		
2,000.0	1,993.3	1,993.8	1,979.7	7.1	9.5	-32.43	-196.8	-33.5	108.2	92.7	6.981		
2,100.0	2,092.3	2,093.7	2,078.7	7.4	9.9	-33.30	-210.2	-37.1	109.0	92.9	6.763		
2,200.0	2,191.3	2,193.7	2,177.7	7.7	10.3	-34.16	-223.6	-40.7	109.9	93.1	6.561		
2,300.0	2,290.4	2,293.7	2,276.7	8.0	10.7	-35.01	-237.0	-44.2	110.8	93.4	6.374		
2,400.0	2,389.4	2,393.7	2,375.7	8.4	11.1	-35.84	-250.4	-47.8	111.7	93.7	6.200		
2,500.0	2,488.4	2,493.7	2,474.8	8.7	11.5	-36.66	-263.8	-51.4	112.7	94.0	6.040		
2,600.0	2,587.4	2,593.7	2,573.8	9.1	11.9	-37.47	-277.2	-54.9	113.6	94.4	5.891		
2,700.0	2,686.5	2,693.6	2,672.8	9.5	12.3	-38.26	-290.6	-58.5	114.6	94.7	5.753		
2,800.0	2,785.5	2,793.6	2,771.8	9.8	12.7	-39.03	-304.0	-62.1	115.7	95.1	5.625		
2,900.0	2,884.5	2,893.6	2,870.8	10.2	13.1	-39.80	-317.4	-65.6	116.7	95.5	5.507		
3,000.0	2,983.5	2,993.6	2,969.8	10.6	13.5	-40.55	-330.8	-69.2	117.8	95.9	5.397		
3,100.0	3,082.6	3,093.6	3,068.9	11.0	14.0	-41.28	-344.2	-72.8	118.8	96.4	5.294		
3,200.0	3,181.6	3,193.6	3,167.9	11.4	14.4	-42.01	-357.6	-76.3	119.9	96.9	5.199		
3,300.0	3,280.6	3,293.5	3,266.9	11.8	14.8	-42.72	-371.0	-79.9	121.1	97.4	5.110		
3,400.0	3,379.6	3,393.5	3,365.9	12.2	15.2	-43.41	-384.4	-83.5	122.2	97.9	5.028		
3,500.0	3,478.7	3,493.5	3,464.9	12.6	15.6	-44.10	-397.8	-87.1	123.3	98.4	4.951		
3,600.0	3,577.7	3,593.5	3,563.9	13.0	16.1	-44.77	-411.2	-90.6	124.5	99.0	4.879		
3,700.0	3,676.7	3,693.5	3,663.0	13.4	16.5	-45.42	-424.6	-94.2	125.7	99.6	4.812		
3,800.0	3,775.8	3,793.5	3,762.0	13.8	16.9	-46.07	-438.0	-97.8	126.9	100.2	4.749		
3,900.0	3,874.8	3,893.4	3,861.0	14.2	17.3	-46.70	-451.4	-101.3	128.1	100.8	4.690		
4,000.0	3,973.8	3,993.4	3,960.0	14.6	17.7	-47.33	-464.8	-104.9	129.4	101.4	4.635		
4,100.0	4,072.8	4,093.4	4,059.0	15.0	18.2	-47.94	-478.2	-108.5	130.6	102.1	4.583		
4,200.0	4,171.9	4,193.4	4,158.0	15.4	18.6	-48.52	-491.5	-112.0	132.3	103.3	4.550		
4,300.0	4,271.4	4,293.3	4,257.0	15.9	19.0	-47.70	-504.9	-115.6	136.3	106.3	4.553		
4,400.0	4,371.2	4,393.0	4,355.7	16.4	19.4	-46.12	-518.3	-119.2	142.6	111.6	4.605		
4,500.0	4,471.2	4,492.4	4,454.2	16.8	19.9	-43.80	-531.6	-122.7	151.6	119.4	4.716		
4,600.0	4,571.2	4,591.5	4,552.3	16.9	20.3	161.57	-544.9	-126.3	162.8	129.7	4.916		
4,700.0	4,671.2	4,690.5	4,650.3	16.9	20.7	164.06	-558.2	-129.8	174.6	140.6	5.131		
4,800.0	4,771.2	4,789.5	4,748.4	16.9	21.1	166.24	-571.4	-133.3	186.7	151.8	5.353		
4,900.0	4,871.2	4,888.6	4,846.5	17.0	21.6	168.15	-584.7	-136.9	199.0	163.3	5.580		
5,000.0	4,971.2	4,987.6	4,944.6	17.0	22.0	169.84	-598.0	-140.4	211.5	175.1	5.809		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design											Currier 0993-16-07 Pad - Currier BCU 0993-16-09M - OH - Design #2	Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	5,071.2	5,086.6	5,042.6	17.1	22.4	171.34	-611.2	-143.9	224.1	187.0	6.040		
5,200.0	5,171.2	5,185.7	5,140.7	17.1	22.8	172.68	-624.5	-147.5	236.9	199.2	6.272		
5,300.0	5,271.2	5,284.7	5,238.8	17.1	23.2	173.88	-637.8	-151.0	249.9	211.4	6.503		
5,400.0	5,371.2	5,383.7	5,336.9	17.2	23.7	174.97	-651.1	-154.5	262.9	223.8	6.732		
5,500.0	5,471.2	5,482.8	5,435.0	17.2	24.1	175.95	-664.3	-158.1	275.9	236.3	6.960		
5,600.0	5,571.2	5,584.3	5,535.5	17.2	24.5	176.86	-677.8	-161.7	289.0	248.8	7.183		
5,700.0	5,671.2	5,694.5	5,645.0	17.3	25.0	177.58	-689.6	-164.8	299.6	258.7	7.338		
5,800.0	5,771.2	5,805.4	5,755.7	17.3	25.5	178.03	-697.3	-166.9	306.4	265.1	7.412		
5,900.0	5,871.2	5,916.9	5,867.0	17.4	25.9	178.23	-700.9	-167.8	309.6	268.0	7.429		
6,000.0	5,971.2	6,021.0	5,971.2	17.4	26.0	178.24	-701.2	-167.9	309.9	268.2	7.428		
6,100.0	6,071.2	6,121.0	6,071.2	17.4	26.0	178.24	-701.2	-167.9	309.9	268.1	7.418		
6,200.0	6,171.2	6,221.0	6,171.2	17.5	26.0	178.24	-701.2	-167.9	309.9	268.0	7.407		
6,300.0	6,271.2	6,321.0	6,271.2	17.5	26.0	178.24	-701.2	-167.9	309.9	268.0	7.397		
6,400.0	6,371.2	6,421.0	6,371.2	17.6	26.0	178.24	-701.2	-167.9	309.9	267.9	7.386		
6,500.0	6,471.2	6,521.0	6,471.2	17.6	26.1	178.24	-701.2	-167.9	309.9	267.9	7.375		
6,600.0	6,571.2	6,621.0	6,571.2	17.6	26.1	178.24	-701.2	-167.9	309.9	267.8	7.364		
6,700.0	6,671.2	6,721.0	6,671.2	17.7	26.1	178.24	-701.2	-167.9	309.9	267.7	7.354		
6,800.0	6,771.2	6,821.0	6,771.2	17.7	26.1	178.24	-701.2	-167.9	309.9	267.7	7.343		
6,900.0	6,871.2	6,921.0	6,871.2	17.8	26.1	178.24	-701.2	-167.9	309.9	267.6	7.332		
7,000.0	6,971.2	7,021.0	6,971.2	17.8	26.1	178.24	-701.2	-167.9	309.9	267.6	7.321		
7,100.0	7,071.2	7,121.0	7,071.2	17.9	26.2	178.24	-701.2	-167.9	309.9	267.5	7.310		
7,200.0	7,171.2	7,221.0	7,171.2	17.9	26.2	178.24	-701.2	-167.9	309.9	267.4	7.299		
7,300.0	7,271.2	7,321.0	7,271.2	17.9	26.2	178.24	-701.2	-167.9	309.9	267.4	7.287		
7,400.0	7,371.2	7,421.0	7,371.2	18.0	26.2	178.24	-701.2	-167.9	309.9	267.3	7.276		
7,500.0	7,471.2	7,521.0	7,471.2	18.0	26.2	178.24	-701.2	-167.9	309.9	267.2	7.265		
7,600.0	7,571.2	7,621.0	7,571.2	18.1	26.3	178.24	-701.2	-167.9	309.9	267.2	7.254		
7,700.0	7,671.2	7,721.0	7,671.2	18.1	26.3	178.24	-701.2	-167.9	309.9	267.1	7.242		
7,800.0	7,771.2	7,821.0	7,771.2	18.2	26.3	178.24	-701.2	-167.9	309.9	267.0	7.231		
7,803.6	7,774.8	7,824.6	7,774.8	18.2	26.3	178.24	-701.2	-167.9	309.9	267.0	7.230		
7,900.0	7,871.2	7,892.8	7,843.0	18.2	26.3	178.24	-701.2	-167.9	311.2	268.0	7.207		
8,000.0	7,971.2	7,892.8	7,843.0	18.3	26.3	178.24	-701.2	-167.9	335.3	292.8	7.885		
8,100.0	8,071.2	7,892.8	7,843.0	18.3	26.3	178.24	-701.2	-167.9	384.8	344.4	9.515		
8,200.0	8,171.2	7,892.8	7,843.0	18.3	26.3	178.24	-701.2	-167.9	451.4	413.1	11.809		
8,300.0	8,271.2	7,892.8	7,843.0	18.4	26.3	178.24	-701.2	-167.9	528.6	492.1	14.516		
8,400.0	8,371.2	7,892.8	7,843.0	18.4	26.3	178.24	-701.2	-167.9	612.4	577.3	17.460		
8,500.0	8,471.2	7,892.8	7,843.0	18.5	26.3	178.24	-701.2	-167.9	700.5	666.3	20.528		
8,600.0	8,571.2	7,892.8	7,843.0	18.5	26.3	178.24	-701.2	-167.9	791.4	757.9	23.650		
8,700.0	8,671.2	7,892.8	7,843.0	18.6	26.3	178.24	-701.2	-167.9	884.3	851.2	26.784		
8,725.8	8,697.0	7,892.8	7,843.0	18.6	26.3	178.24	-701.2	-167.9	908.5	875.6	27.592		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	50.89	50.9	62.6	80.6				
100.0	100.0	100.0	100.0	0.8	0.8	50.89	50.9	62.6	80.6	79.0	50.894		
200.0	200.0	200.0	200.0	1.4	1.4	50.89	50.9	62.6	80.6	77.8	28.497	CC	
300.0	300.0	298.9	298.9	1.9	2.2	52.33	49.7	64.3	81.3	77.5	21.726	ES	
400.0	400.0	397.5	397.2	2.2	3.8	56.48	46.1	69.6	83.5	78.8	17.631		
500.0	500.0	495.3	494.5	2.6	4.9	62.81	40.2	78.3	88.2	82.4	15.181		
600.0	600.0	593.9	592.1	2.8	5.2	69.98	32.6	89.6	95.7	89.0	14.432		
700.0	700.0	691.4	688.5	3.1	5.5	76.58	24.2	101.5	105.0	97.6	14.169		
800.0	800.0	787.1	782.5	3.3	6.2	83.55	13.1	115.8	117.9	109.4	13.898	SF	
900.0	900.0	881.1	874.0	3.6	7.0	90.31	-0.7	132.4	134.9	125.3	14.011		
1,000.0	1,000.0	973.3	962.8	3.8	7.7	96.42	-17.0	151.0	156.4	145.7	14.579		
1,100.0	1,100.0	1,063.1	1,048.3	4.1	8.4	-138.29	-35.4	171.4	183.7	171.9	15.594		
1,200.0	1,199.8	1,150.1	1,130.0	4.8	9.0	-134.28	-55.7	193.2	217.4	204.5	16.843		
1,300.0	1,299.5	1,234.2	1,207.9	5.0	9.5	-120.93	-77.5	216.2	256.5	242.8	18.819		
1,400.0	1,399.0	1,316.5	1,283.0	5.3	10.0	-102.67	-100.9	240.5	297.4	282.9	20.587		
1,500.0	1,498.2	1,404.1	1,361.8	5.7	10.3	-90.33	-127.5	267.8	338.8	323.6	22.302		
1,600.0	1,597.2	1,495.4	1,443.9	6.0	10.6	-89.60	-155.3	296.4	379.5	363.7	24.036		
1,700.0	1,696.2	1,586.7	1,526.0	6.2	11.0	-89.17	-183.2	325.0	420.2	403.9	25.729		
1,800.0	1,795.2	1,678.0	1,608.1	6.5	11.3	-88.82	-211.1	353.6	460.9	444.0	27.280		
1,900.0	1,894.3	1,769.3	1,690.2	6.8	11.6	-88.52	-238.9	382.2	501.7	484.2	28.702		
2,000.0	1,993.3	1,860.6	1,772.4	7.1	12.0	-88.26	-266.8	410.8	542.4	524.3	30.005		
2,100.0	2,092.3	1,951.9	1,854.5	7.4	12.4	-88.05	-294.6	439.4	583.1	564.5	31.199		
2,200.0	2,191.3	2,043.2	1,936.6	7.7	12.7	-87.86	-322.5	468.0	623.9	604.6	32.293		
2,300.0	2,290.4	2,134.5	2,018.7	8.0	13.1	-87.69	-350.4	496.6	664.7	644.7	33.298		
2,400.0	2,389.4	2,225.8	2,100.8	8.4	13.6	-87.54	-378.2	525.2	705.4	684.8	34.222		
2,500.0	2,488.4	2,317.1	2,182.9	8.7	14.0	-87.41	-406.1	553.8	746.2	724.9	35.092		
2,600.0	2,587.4	2,408.4	2,265.0	9.1	14.6	-87.29	-434.0	582.4	787.0	765.0	35.837		
2,700.0	2,686.5	2,499.7	2,347.1	9.5	15.2	-87.19	-461.8	611.0	827.7	805.1	36.561		
2,800.0	2,785.5	2,591.0	2,429.2	9.8	15.9	-87.09	-489.7	639.6	868.5	845.2	37.222		
2,900.0	2,884.5	2,682.3	2,511.3	10.2	16.6	-87.01	-517.5	668.2	909.3	885.2	37.835		
3,000.0	2,983.5	2,773.6	2,593.4	10.6	17.3	-86.93	-545.4	696.8	950.1	925.3	38.403		
3,100.0	3,082.6	2,864.9	2,675.5	11.0	18.1	-86.85	-573.3	725.4	990.8	965.4	38.929		
3,200.0	3,181.6	2,956.2	2,757.6	11.4	18.8	-86.78	-601.1	754.0	1,031.6	1,005.4	39.418		
3,300.0	3,280.6	3,047.5	2,839.7	11.8	19.5	-86.72	-629.0	782.6	1,072.4	1,045.5	39.873		
3,400.0	3,379.6	3,138.8	2,921.8	12.2	20.3	-86.66	-656.9	811.2	1,113.2	1,085.6	40.296		
3,500.0	3,478.7	3,230.1	3,004.0	12.6	21.0	-86.61	-684.7	839.8	1,154.0	1,125.6	40.691		
3,600.0	3,577.7	3,321.4	3,086.1	13.0	21.8	-86.56	-712.6	868.4	1,194.7	1,165.7	41.060		
3,700.0	3,676.7	3,412.7	3,168.2	13.4	22.5	-86.51	-740.4	897.0	1,235.5	1,205.7	41.404		
3,800.0	3,775.8	3,504.0	3,250.3	13.8	23.3	-86.47	-768.3	925.6	1,276.3	1,245.7	41.727		
3,900.0	3,874.8	3,595.3	3,332.4	14.2	24.0	-86.43	-796.2	954.2	1,317.1	1,285.8	42.030		
4,000.0	3,973.8	3,686.6	3,414.5	14.6	24.7	-86.39	-824.0	982.8	1,357.9	1,325.8	42.313		
4,100.0	4,072.8	3,777.9	3,496.6	15.0	25.5	-86.35	-851.9	1,011.4	1,398.7	1,365.8	42.580		
4,200.0	4,171.9	3,869.2	3,578.7	15.4	26.2	-86.86	-879.7	1,040.0	1,439.5	1,405.9	42.884		
4,300.0	4,271.4	3,960.2	3,660.6	15.9	27.0	-87.56	-907.5	1,068.5	1,480.5	1,446.2	43.192		
4,400.0	4,371.2	4,051.0	3,742.2	16.4	27.7	-88.13	-935.2	1,097.0	1,521.7	1,486.7	43.538		
4,500.0	4,471.2	4,141.4	3,823.5	16.8	28.5	-88.59	-962.8	1,125.3	1,563.0	1,527.4	43.929		
4,600.0	4,571.2	4,231.4	3,904.4	16.9	29.2	114.23	-990.3	1,153.5	1,604.5	1,568.4	44.420		
4,700.0	4,671.2	4,321.3	3,985.3	16.9	29.9	114.74	-1,017.7	1,181.6	1,646.1	1,609.4	44.875		
4,800.0	4,771.2	4,411.2	4,066.2	16.9	30.7	115.23	-1,045.2	1,209.8	1,687.8	1,650.6	45.312		
4,900.0	4,871.2	4,501.1	4,147.0	17.0	31.4	115.70	-1,072.6	1,238.0	1,729.6	1,691.8	45.735		
5,000.0	4,971.2	4,591.1	4,227.9	17.0	32.2	116.14	-1,100.0	1,266.2	1,771.6	1,733.2	46.145		
5,100.0	5,071.2	4,681.0	4,308.8	17.1	32.9	116.57	-1,127.5	1,294.3	1,813.6	1,774.6	46.542		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design											Currier 0993-16-07 Pad - Currier BCU 0993-16-11E - OH - Design #3	Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,200.0	5,171.2	4,770.9	4,389.6	17.1	33.6	116.98	-1,154.9	1,322.5	1,855.6	1,816.1	46.928		
5,300.0	5,271.2	4,860.9	4,470.5	17.1	34.4	117.37	-1,182.4	1,350.7	1,897.8	1,857.7	47.303		
5,400.0	5,371.2	4,950.8	4,551.4	17.2	35.1	117.74	-1,209.8	1,378.8	1,940.0	1,899.3	47.666		
5,500.0	5,471.2	5,040.7	4,632.3	17.2	35.8	118.09	-1,237.3	1,407.0	1,982.3	1,941.0	48.018		
5,600.0	5,571.2	5,130.7	4,713.1	17.2	36.6	118.44	-1,264.7	1,435.2	2,024.6	1,982.8	48.361		
5,700.0	5,671.2	5,220.6	4,794.0	17.3	37.3	118.76	-1,292.2	1,463.4	2,067.1	2,024.6	48.693		
5,800.0	5,771.2	5,310.5	4,874.9	17.3	38.1	119.08	-1,319.6	1,491.5	2,109.5	2,066.5	49.017		
5,900.0	5,871.2	5,816.7	5,347.2	17.4	41.4	120.37	-1,444.7	1,620.0	2,148.1	2,101.8	46.370		
6,000.0	5,971.2	6,446.9	5,971.2	17.4	42.8	120.84	-1,495.8	1,672.4	2,154.4	2,107.3	45.687		
6,100.0	6,071.2	7,046.9	6,071.2	17.4	42.8	120.84	-1,495.8	1,672.4	2,154.4	2,107.2	45.590		
6,200.0	6,171.2	6,646.9	6,171.2	17.5	42.8	120.84	-1,495.8	1,672.4	2,154.4	2,107.1	45.526		
6,300.0	6,271.2	6,746.9	6,271.2	17.5	42.8	120.84	-1,495.8	1,672.4	2,154.4	2,107.0	45.461		
6,400.0	6,371.2	6,846.9	6,371.2	17.6	42.8	120.84	-1,495.8	1,672.4	2,154.4	2,107.0	45.396		
6,500.0	6,471.2	6,946.9	6,471.2	17.6	42.8	120.84	-1,495.8	1,672.4	2,154.4	2,106.9	45.331		
6,600.0	6,571.2	7,046.9	6,571.2	17.6	42.9	120.84	-1,495.8	1,672.4	2,154.4	2,106.8	45.266		
6,700.0	6,671.2	7,146.9	6,671.2	17.7	42.9	120.84	-1,495.8	1,672.4	2,154.4	2,106.8	45.200		
6,800.0	6,771.2	7,246.9	6,771.2	17.7	42.9	120.84	-1,495.8	1,672.4	2,154.4	2,106.7	45.135		
6,900.0	6,871.2	7,346.9	6,871.2	17.8	42.9	120.84	-1,495.8	1,672.4	2,154.4	2,106.6	45.068		
7,000.0	6,971.2	7,446.9	6,971.2	17.8	42.9	120.84	-1,495.8	1,672.4	2,154.4	2,106.6	45.002		
7,100.0	7,071.2	7,546.9	7,071.2	17.9	42.9	120.84	-1,495.8	1,672.4	2,154.4	2,106.5	44.935		
7,200.0	7,171.2	7,646.9	7,171.2	17.9	42.9	120.84	-1,495.8	1,672.4	2,154.4	2,106.4	44.869		
7,300.0	7,271.2	7,746.9	7,271.2	17.9	43.0	120.84	-1,495.8	1,672.4	2,154.4	2,106.3	44.802		
7,400.0	7,371.2	7,846.9	7,371.2	18.0	43.0	120.84	-1,495.8	1,672.4	2,154.4	2,106.3	44.734		
7,500.0	7,471.2	7,946.9	7,471.2	18.0	43.0	120.84	-1,495.8	1,672.4	2,154.4	2,106.2	44.667		
7,600.0	7,571.2	8,046.9	7,571.2	18.1	43.0	120.84	-1,495.8	1,672.4	2,154.4	2,106.1	44.599		
7,700.0	7,671.2	8,146.9	7,671.2	18.1	43.0	120.84	-1,495.8	1,672.4	2,154.4	2,106.1	44.531		
7,800.0	7,771.2	8,246.9	7,771.2	18.2	43.0	120.84	-1,495.8	1,672.4	2,154.4	2,106.0	44.463		
7,811.6	7,782.8	8,258.5	7,782.8	18.2	43.0	120.84	-1,495.8	1,672.4	2,154.4	2,106.0	44.455		
7,900.0	7,871.2	8,333.7	7,858.0	18.2	43.0	120.84	-1,495.8	1,672.4	2,154.5	2,105.9	44.338		
8,000.0	7,971.2	8,333.7	7,858.0	18.3	43.0	120.84	-1,495.8	1,672.4	2,157.4	2,108.2	43.892		
8,100.0	8,071.2	8,333.7	7,858.0	18.3	43.0	120.84	-1,495.8	1,672.4	2,165.0	2,115.3	43.605		
8,200.0	8,171.2	8,333.7	7,858.0	18.3	43.0	120.84	-1,495.8	1,672.4	2,177.1	2,127.0	43.469		
8,300.0	8,271.2	8,333.7	7,858.0	18.4	43.0	120.84	-1,495.8	1,672.4	2,193.7	2,143.2	43.476		
8,400.0	8,371.2	8,333.7	7,858.0	18.4	43.0	120.84	-1,495.8	1,672.4	2,214.7	2,163.9	43.619		
8,500.0	8,471.2	8,333.7	7,858.0	18.5	43.0	120.84	-1,495.8	1,672.4	2,240.0	2,189.0	43.890		
8,600.0	8,571.2	8,333.7	7,858.0	18.5	43.0	120.84	-1,495.8	1,672.4	2,269.4	2,218.2	44.281		
8,700.0	8,671.2	8,333.7	7,858.0	18.6	43.0	120.84	-1,495.8	1,672.4	2,302.8	2,251.4	44.783		
8,725.8	8,697.0	8,333.7	7,858.0	18.6	43.0	120.84	-1,495.8	1,672.4	2,312.0	2,260.6	44.938		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	51.82	43.7	55.5	70.6				
100.0	100.0	100.0	100.0	0.8	0.8	51.82	43.7	55.5	70.6	69.0	44.578		
200.0	200.0	200.0	200.0	1.4	1.4	51.82	43.7	55.5	70.6	67.8	24.960		
210.0	210.0	210.0	210.0	1.5	1.4	51.82	43.7	55.5	70.6	67.7	24.372 CC		
300.0	300.0	299.8	299.8	1.9	1.6	52.26	43.3	55.9	70.7	67.2	20.268		
400.0	400.0	399.3	399.2	2.2	2.9	55.71	40.2	58.9	71.3	67.0	16.788 ES		
500.0	500.0	498.2	497.8	2.6	4.3	62.34	34.0	64.8	73.2	68.2	14.394		
600.0	600.0	596.3	594.9	2.8	5.3	71.34	24.9	73.6	77.9	71.7	12.665		
700.0	700.0	693.0	690.2	3.1	6.2	81.35	12.9	85.2	86.7	79.2	11.629		
800.0	800.0	788.2	783.2	3.3	7.0	90.92	-1.6	99.2	100.6	91.8	11.382 SF		
900.0	900.0	881.5	873.5	3.6	7.7	99.11	-18.5	115.6	120.0	109.9	11.829		
1,000.0	1,000.0	972.7	960.8	3.8	8.4	105.69	-37.6	134.0	144.6	133.3	12.798		
1,100.0	1,100.0	1,061.5	1,044.6	4.1	9.0	-129.13	-58.6	154.3	175.1	162.8	14.216		
1,200.0	1,199.8	1,147.3	1,124.6	4.8	9.6	-125.60	-81.1	176.0	211.7	198.4	15.892		
1,300.0	1,299.5	1,230.2	1,200.6	5.0	10.1	-112.91	-104.9	198.9	253.2	239.2	18.109		
1,400.0	1,399.0	1,311.2	1,273.7	5.3	10.6	-95.31	-130.0	223.2	296.2	281.4	19.998		
1,500.0	1,498.2	1,390.6	1,344.1	5.7	11.1	-83.53	-156.3	248.6	340.1	324.5	21.683		
1,600.0	1,597.2	1,467.9	1,411.4	6.0	11.4	-83.08	-183.7	275.1	385.9	369.7	23.806		
1,700.0	1,696.2	1,555.1	1,486.5	6.2	11.7	-82.78	-215.6	305.9	433.2	416.5	25.945		
1,800.0	1,795.2	1,643.2	1,562.3	6.5	12.0	-82.53	-247.8	337.0	480.5	463.3	27.905		
1,900.0	1,894.3	1,731.2	1,638.1	6.8	12.3	-82.32	-280.1	368.1	527.9	510.1	29.710		
2,000.0	1,993.3	1,819.3	1,713.9	7.1	12.6	-82.15	-312.3	399.2	575.2	556.9	31.372		
2,100.0	2,092.3	1,907.4	1,789.7	7.4	12.9	-82.01	-344.5	430.4	622.6	603.7	32.902		
2,200.0	2,191.3	1,995.4	1,865.5	7.7	13.2	-81.89	-376.8	461.5	670.0	650.4	34.311		
2,300.0	2,290.4	2,083.5	1,941.4	8.0	13.5	-81.78	-409.0	492.6	717.3	697.2	35.613		
2,400.0	2,389.4	2,171.6	2,017.2	8.4	13.9	-81.69	-441.2	523.7	764.7	743.9	36.832		
2,500.0	2,488.4	2,259.6	2,093.0	8.7	14.5	-81.60	-473.4	554.9	812.0	790.6	37.820		
2,600.0	2,587.4	2,347.7	2,168.8	9.1	15.3	-81.53	-505.7	586.0	859.4	837.3	38.910		
2,700.0	2,686.5	2,435.8	2,244.6	9.5	16.2	-81.46	-537.9	617.1	906.8	884.0	39.857		
2,800.0	2,785.5	2,523.8	2,320.5	9.8	17.0	-81.40	-570.1	648.2	954.1	930.7	40.730		
2,900.0	2,884.5	2,611.9	2,396.3	10.2	17.9	-81.35	-602.3	679.3	1,001.5	977.4	41.538		
3,000.0	2,983.5	2,700.0	2,472.1	10.6	18.7	-81.30	-634.6	710.5	1,048.9	1,024.1	42.286		
3,100.0	3,082.6	2,788.0	2,547.9	11.0	19.6	-81.25	-666.8	741.6	1,096.2	1,070.7	42.977		
3,200.0	3,181.6	2,876.1	2,623.7	11.4	20.4	-81.21	-699.0	772.7	1,143.6	1,117.4	43.620		
3,300.0	3,280.6	2,964.2	2,699.5	11.8	21.3	-81.17	-731.3	803.8	1,191.0	1,164.1	44.231		
3,400.0	3,379.6	3,070.5	2,791.1	12.2	22.4	-81.03	-771.5	839.8	1,237.8	1,209.9	44.474		
3,500.0	3,478.7	3,175.9	2,882.0	12.6	23.4	-80.68	-814.5	871.8	1,283.1	1,254.4	44.673		
3,600.0	3,577.7	3,265.0	2,958.6	13.0	24.2	-80.34	-851.6	897.8	1,328.1	1,298.6	45.085		
3,700.0	3,676.7	3,354.1	3,035.3	13.4	25.1	-80.02	-888.8	923.7	1,373.1	1,342.9	45.462		
3,800.0	3,775.8	3,443.1	3,112.0	13.8	25.9	-79.72	-925.9	949.6	1,418.1	1,387.1	45.812		
3,900.0	3,874.8	3,532.2	3,188.7	14.2	26.7	-79.44	-963.1	975.6	1,463.1	1,431.4	46.140		
4,000.0	3,973.8	3,621.2	3,265.3	14.6	27.6	-79.18	-1,000.2	1,001.5	1,508.2	1,475.7	46.448		
4,100.0	4,072.8	3,710.3	3,342.0	15.0	28.4	-78.93	-1,037.4	1,027.4	1,553.3	1,520.0	46.737		
4,200.0	4,171.9	3,799.3	3,418.6	15.4	29.2	-79.31	-1,074.5	1,053.3	1,598.5	1,564.6	47.066		
4,300.0	4,271.4	3,887.6	3,494.7	15.9	30.1	-79.95	-1,111.3	1,079.1	1,644.3	1,609.6	47.405		
4,400.0	4,371.2	3,975.3	3,570.2	16.4	30.9	-80.51	-1,147.9	1,104.6	1,690.8	1,655.4	47.797		
4,500.0	4,471.2	4,062.2	3,645.0	16.8	31.7	-80.98	-1,184.1	1,129.9	1,737.8	1,701.8	48.249		
4,600.0	4,571.2	4,148.3	3,719.1	16.9	32.5	121.88	-1,220.1	1,155.0	1,785.4	1,748.9	48.827		
4,700.0	4,671.2	4,234.4	3,793.3	16.9	33.3	122.49	-1,256.0	1,180.0	1,833.2	1,796.1	49.371		
4,800.0	4,771.2	4,320.5	3,867.4	16.9	34.2	123.08	-1,291.9	1,205.1	1,881.2	1,843.5	49.894		
4,900.0	4,871.2	4,406.6	3,941.5	17.0	35.0	123.63	-1,327.8	1,230.2	1,929.3	1,891.0	50.403		
5,000.0	4,971.2	4,492.7	4,015.6	17.0	35.8	124.16	-1,363.7	1,255.2	1,977.6	1,938.7	50.896		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design											Currier 0993-16-07 Pad - Currier BCU 0993-16-13E - OH - Design #3	Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	5,071.2	4,578.8	4,089.8	17.1	36.6	124.67	-1,399.6	1,280.3	2,025.9	1,986.5	51.376		
5,200.0	5,171.2	4,664.9	4,163.9	17.1	37.4	125.15	-1,435.6	1,305.4	2,074.4	2,034.4	51.842		
5,300.0	5,271.2	4,751.0	4,238.0	17.1	38.2	125.61	-1,471.5	1,330.4	2,123.1	2,082.5	52.296		
5,400.0	5,371.2	4,837.1	4,312.1	17.2	39.0	126.05	-1,507.4	1,355.5	2,171.8	2,130.6	52.736		
5,500.0	5,471.2	4,923.2	4,386.3	17.2	39.9	126.48	-1,543.3	1,380.6	2,220.6	2,178.8	53.164		
5,600.0	5,571.2	5,009.3	4,460.4	17.2	40.7	126.88	-1,579.2	1,405.6	2,269.5	2,227.1	53.580		
5,700.0	5,671.2	5,095.4	4,534.5	17.3	41.5	127.27	-1,615.1	1,430.7	2,318.5	2,275.5	53.985		
5,800.0	5,771.2	5,181.5	4,608.6	17.3	42.3	127.64	-1,651.0	1,455.8	2,367.5	2,324.0	54.378		
5,900.0	5,871.2	5,267.6	4,682.7	17.4	43.1	128.00	-1,686.9	1,480.8	2,416.7	2,372.5	54.760		
6,000.0	5,971.2	6,622.7	5,971.2	17.4	49.6	130.43	-1,976.6	1,683.0	2,444.1	2,395.5	50.259		
6,100.0	6,071.2	6,722.7	6,071.2	17.4	49.6	130.43	-1,976.6	1,683.0	2,444.1	2,395.4	50.194		
6,200.0	6,171.2	6,822.7	6,171.2	17.5	49.6	130.43	-1,976.6	1,683.0	2,444.1	2,395.3	50.127		
6,300.0	6,271.2	6,922.7	6,271.2	17.5	49.6	130.43	-1,976.6	1,683.0	2,444.1	2,395.3	50.060		
6,400.0	6,371.2	7,022.7	6,371.2	17.6	49.6	130.43	-1,976.6	1,683.0	2,444.1	2,395.2	49.993		
6,500.0	6,471.2	7,122.7	6,471.2	17.6	49.6	130.43	-1,976.6	1,683.0	2,444.1	2,395.1	49.925		
6,600.0	6,571.2	7,222.7	6,571.2	17.6	49.6	130.43	-1,976.6	1,683.0	2,444.1	2,395.1	49.857		
6,700.0	6,671.2	7,322.7	6,671.2	17.7	49.6	130.43	-1,976.6	1,683.0	2,444.1	2,395.0	49.788		
6,800.0	6,771.2	7,422.7	6,771.2	17.7	49.6	130.43	-1,976.6	1,683.0	2,444.1	2,394.9	49.720		
6,900.0	6,871.2	7,522.7	6,871.2	17.8	49.6	130.43	-1,976.6	1,683.0	2,444.1	2,394.9	49.651		
7,000.0	6,971.2	7,622.7	6,971.2	17.8	49.6	130.43	-1,976.6	1,683.0	2,444.1	2,394.8	49.582		
7,100.0	7,071.2	7,722.7	7,071.2	17.9	49.7	130.43	-1,976.6	1,683.0	2,444.1	2,394.7	49.512		
7,200.0	7,171.2	7,822.7	7,171.2	17.9	49.7	130.43	-1,976.6	1,683.0	2,444.1	2,394.7	49.443		
7,300.0	7,271.2	7,922.7	7,271.2	17.9	49.7	130.43	-1,976.6	1,683.0	2,444.1	2,394.6	49.373		
7,400.0	7,371.2	8,022.7	7,371.2	18.0	49.7	130.43	-1,976.6	1,683.0	2,444.1	2,394.5	49.302		
7,500.0	7,471.2	8,122.7	7,471.2	18.0	49.7	130.43	-1,976.6	1,683.0	2,444.1	2,394.4	49.232		
7,600.0	7,571.2	8,222.7	7,571.2	18.1	49.7	130.43	-1,976.6	1,683.0	2,444.1	2,394.4	49.161		
7,700.0	7,671.2	8,322.7	7,671.2	18.1	49.7	130.43	-1,976.6	1,683.0	2,444.1	2,394.3	49.090		
7,800.0	7,771.2	8,422.7	7,771.2	18.2	49.7	130.43	-1,976.6	1,683.0	2,444.1	2,394.2	49.019		
7,900.0	7,871.2	8,522.7	7,871.2	18.2	49.7	130.43	-1,976.6	1,683.0	2,444.1	2,394.2	48.948		
8,000.0	7,971.2	8,622.7	7,971.2	18.3	49.7	130.43	-1,976.6	1,683.0	2,444.1	2,394.1	48.876		
8,100.0	8,071.2	8,722.7	8,071.2	18.3	49.8	130.43	-1,976.6	1,683.0	2,444.1	2,394.0	48.805		
8,200.0	8,171.2	8,822.7	8,171.2	18.3	49.8	130.43	-1,976.6	1,683.0	2,444.1	2,393.9	48.733		
8,300.0	8,271.2	8,922.7	8,271.2	18.4	49.8	130.43	-1,976.6	1,683.0	2,444.1	2,393.9	48.661		
8,400.0	8,371.2	9,022.7	8,371.2	18.4	49.8	130.43	-1,976.6	1,683.0	2,444.1	2,393.8	48.588		
8,500.0	8,471.2	9,122.7	8,471.2	18.5	49.8	130.43	-1,976.6	1,683.0	2,444.1	2,393.7	48.516		
8,600.0	8,571.2	9,222.7	8,571.2	18.5	49.8	130.43	-1,976.6	1,683.0	2,444.1	2,393.6	48.443		
8,700.0	8,671.2	9,322.7	8,671.2	18.6	49.8	130.43	-1,976.6	1,683.0	2,444.1	2,393.6	48.373		
8,725.8	8,697.0	9,348.5	8,697.0	18.6	49.8	130.43	-1,976.6	1,683.0	2,444.1	2,393.6	48.366		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	88.69	0.3	14.0	14.0				
100.0	100.0	100.0	100.0	0.8	0.8	88.69	0.3	14.0	14.0	12.4	8.831		
200.0	200.0	200.0	200.0	1.4	1.4	88.69	0.3	14.0	14.0	11.2	4.944		
300.0	300.0	300.2	300.1	1.9	1.7	92.21	-0.5	13.6	13.6	10.1	3.883		
400.0	400.0	400.1	400.0	2.2	3.2	113.85	-5.1	11.6	12.6	8.4	2.990	CC	
404.4	404.4	404.6	404.4	2.2	3.2	115.32	-5.4	11.4	12.6	8.4	2.969	ES	
500.0	500.0	499.5	498.9	2.6	4.5	150.30	-13.6	7.8	15.7	9.9	2.708	SF	
600.0	600.0	597.9	596.4	2.8	5.5	174.97	-25.9	2.3	26.2	18.4	3.361		
700.0	700.0	694.9	691.9	3.1	6.4	-173.43	-41.7	-4.8	42.7	33.5	4.641		
800.0	800.0	790.4	784.9	3.3	7.1	-167.61	-60.8	-13.4	64.0	53.7	6.208		
900.0	900.0	883.8	875.2	3.6	7.8	-164.33	-83.0	-23.3	89.7	78.4	7.952		
1,000.0	1,000.0	975.2	962.4	3.8	8.5	-162.30	-107.8	-34.4	119.3	107.1	9.830		
1,100.0	1,100.0	1,064.6	1,046.6	4.1	9.1	-40.95	-135.2	-46.7	151.5	138.6	11.727		
1,200.0	1,199.8	1,152.4	1,128.1	4.8	9.7	-40.51	-165.1	-60.0	184.8	170.9	13.260		
1,300.0	1,299.5	1,238.7	1,206.9	5.0	10.2	-30.53	-197.1	-74.4	219.2	204.7	15.098		
1,400.0	1,399.0	1,328.1	1,287.3	5.3	10.5	-14.82	-232.8	-90.3	254.0	238.9	16.808		
1,500.0	1,498.2	1,422.7	1,372.2	5.7	10.8	-4.03	-270.9	-107.4	286.5	270.6	18.050		
1,600.0	1,597.2	1,517.7	1,457.4	6.0	11.1	-3.27	-309.2	-124.5	317.6	301.0	19.170		
1,700.0	1,696.2	1,612.7	1,542.7	6.2	11.4	-2.79	-347.4	-141.6	348.7	331.5	20.261		
1,800.0	1,795.2	1,707.7	1,627.9	6.5	11.8	-2.38	-385.7	-158.7	379.8	361.9	21.235		
1,900.0	1,894.3	1,802.7	1,713.2	6.8	12.1	-2.04	-424.0	-175.9	411.0	392.4	22.107		
2,000.0	1,993.3	1,897.7	1,798.4	7.1	12.5	-1.75	-462.3	-193.0	442.1	422.8	22.885		
2,100.0	2,092.3	1,992.7	1,883.7	7.4	12.9	-1.49	-500.5	-210.1	473.3	453.2	23.582		
2,200.0	2,191.3	2,087.7	1,968.9	7.7	13.2	-1.27	-538.8	-227.2	504.4	483.6	24.206		
2,300.0	2,290.4	2,182.7	2,054.1	8.0	13.6	-1.07	-577.1	-244.4	535.6	514.0	24.766		
2,400.0	2,389.4	2,277.7	2,139.4	8.4	14.0	-0.90	-615.4	-261.5	566.8	544.4	25.269		
2,500.0	2,488.4	2,372.7	2,224.6	8.7	14.4	-0.74	-653.6	-278.6	598.0	574.7	25.723		
2,600.0	2,587.4	2,467.7	2,309.9	9.1	14.8	-0.60	-691.9	-295.7	629.2	605.1	26.133		
2,700.0	2,686.5	2,562.7	2,395.1	9.5	15.2	-0.47	-730.2	-312.9	660.4	635.4	26.510		
2,800.0	2,785.5	2,657.7	2,480.4	9.8	15.9	-0.35	-768.5	-330.0	691.6	665.8	26.815		
2,900.0	2,884.5	2,752.7	2,565.6	10.2	16.6	-0.25	-806.7	-347.1	722.7	696.1	27.137		
3,000.0	2,983.5	2,847.7	2,650.9	10.6	17.3	-0.15	-845.0	-364.2	753.9	726.4	27.415		
3,100.0	3,082.6	2,942.7	2,736.1	11.0	18.0	-0.06	-883.3	-381.4	785.1	756.8	27.669		
3,200.0	3,181.6	3,037.7	2,821.4	11.4	18.8	0.03	-921.6	-398.5	816.3	787.1	27.901		
3,300.0	3,280.6	3,132.7	2,906.6	11.8	19.5	0.10	-959.9	-415.6	847.5	817.4	28.113		
3,400.0	3,379.6	3,227.7	2,991.9	12.2	20.2	0.17	-998.1	-432.7	878.8	847.7	28.307		
3,500.0	3,478.7	3,322.7	3,077.1	12.6	20.9	0.24	-1,036.4	-449.9	910.0	878.0	28.486		
3,600.0	3,577.7	3,417.7	3,162.4	13.0	21.7	0.30	-1,074.7	-467.0	941.2	908.3	28.651		
3,700.0	3,676.7	3,512.7	3,247.6	13.4	22.4	0.36	-1,113.0	-484.1	972.4	938.6	28.804		
3,800.0	3,775.8	3,607.7	3,332.8	13.8	23.1	0.42	-1,151.2	-501.2	1,003.6	968.9	28.945		
3,900.0	3,874.8	3,702.7	3,418.1	14.2	23.9	0.47	-1,189.5	-518.4	1,034.8	999.2	29.075		
4,000.0	3,973.8	3,797.7	3,503.3	14.6	24.6	0.52	-1,227.8	-535.5	1,066.0	1,029.5	29.196		
4,100.0	4,072.8	3,892.7	3,588.6	15.0	25.3	0.56	-1,266.1	-552.6	1,097.2	1,059.8	29.309		
4,200.0	4,171.9	3,987.5	3,673.6	15.4	26.0	0.61	-1,304.2	-569.7	1,129.1	1,090.8	29.449		
4,300.0	4,271.4	4,081.1	3,757.7	15.9	26.8	0.66	-1,342.0	-586.6	1,164.1	1,124.7	29.598		
4,400.0	4,371.2	4,173.5	3,840.6	16.4	27.5	0.70	-1,379.2	-603.2	1,202.3	1,162.0	29.822		
4,500.0	4,471.2	4,264.6	3,922.3	16.8	28.2	0.74	-1,415.9	-619.6	1,243.7	1,202.5	30.166		
4,600.0	4,571.2	4,354.4	4,002.9	16.9	28.9	-156.62	-1,452.1	-635.8	1,287.7	1,245.9	30.810		
4,700.0	4,671.2	4,444.1	4,083.4	16.9	29.6	-156.60	-1,488.2	-652.0	1,331.8	1,289.5	31.458		
4,800.0	4,771.2	4,533.8	4,163.9	16.9	30.2	-156.58	-1,524.4	-668.2	1,375.9	1,333.1	32.087		
4,900.0	4,871.2	4,623.6	4,244.4	17.0	30.9	-156.56	-1,560.5	-684.4	1,420.1	1,376.6	32.698		
5,000.0	4,971.2	4,713.3	4,324.9	17.0	31.6	-156.54	-1,596.7	-700.5	1,464.2	1,420.2	33.292		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	5,071.2	4,803.0	4,405.4	17.1	32.3	-156.52	-1,632.8	-716.7	1,508.3	1,463.8	33.871		
5,200.0	5,171.2	4,892.8	4,486.0	17.1	33.0	-156.50	-1,669.0	-732.9	1,552.5	1,507.4	34.434		
5,300.0	5,271.2	4,982.5	4,566.5	17.1	33.7	-156.48	-1,705.1	-749.1	1,596.6	1,551.0	34.982		
5,400.0	5,371.2	5,072.2	4,647.0	17.2	34.4	-156.47	-1,741.3	-765.2	1,640.8	1,594.6	35.515		
5,500.0	5,471.2	5,162.0	4,727.5	17.2	35.1	-156.45	-1,777.4	-781.4	1,684.9	1,638.1	36.035		
5,600.0	5,571.2	5,251.7	4,808.0	17.2	35.8	-156.44	-1,813.6	-797.6	1,729.0	1,681.7	36.541		
5,700.0	5,671.2	5,414.3	4,954.8	17.3	37.0	-156.41	-1,877.5	-826.2	1,772.7	1,724.2	36.543		
5,800.0	5,771.2	5,770.6	5,290.7	17.3	39.1	-156.38	-1,985.0	-874.3	1,804.4	1,753.4	35.403		
5,900.0	5,871.2	6,320.4	5,833.6	17.4	40.5	-156.36	-2,055.5	-905.8	1,816.9	1,765.1	35.042		
6,000.0	5,971.2	6,458.0	5,971.2	17.4	40.5	-156.36	-2,056.0	-906.0	1,817.0	1,765.3	35.162		
6,100.0	6,071.2	6,558.0	6,071.2	17.4	40.5	-156.36	-2,056.0	-906.0	1,817.0	1,765.3	35.127		
6,200.0	6,171.2	6,658.0	6,171.2	17.5	40.5	-156.36	-2,056.0	-906.0	1,817.0	1,765.2	35.091		
6,300.0	6,271.2	6,758.0	6,271.2	17.5	40.5	-156.36	-2,056.0	-906.0	1,817.0	1,765.2	35.054		
6,400.0	6,371.2	6,858.0	6,371.2	17.6	40.5	-156.36	-2,056.0	-906.0	1,817.0	1,765.1	35.017		
6,500.0	6,471.2	6,958.0	6,471.2	17.6	40.5	-156.36	-2,056.0	-906.0	1,817.0	1,765.1	34.980		
6,600.0	6,571.2	7,058.0	6,571.2	17.6	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,765.0	34.943		
6,700.0	6,671.2	7,158.0	6,671.2	17.7	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,765.0	34.905		
6,800.0	6,771.2	7,258.0	6,771.2	17.7	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,764.9	34.868		
6,900.0	6,871.2	7,358.0	6,871.2	17.8	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,764.8	34.830		
7,000.0	6,971.2	7,458.0	6,971.2	17.8	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,764.8	34.791		
7,100.0	7,071.2	7,558.0	7,071.2	17.9	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,764.7	34.753		
7,200.0	7,171.2	7,658.0	7,171.2	17.9	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,764.7	34.714		
7,300.0	7,271.2	7,758.0	7,271.2	17.9	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,764.6	34.675		
7,400.0	7,371.2	7,858.0	7,371.2	18.0	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,764.6	34.636		
7,500.0	7,471.2	7,958.0	7,471.2	18.0	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,764.5	34.597		
7,600.0	7,571.2	8,058.0	7,571.2	18.1	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,764.4	34.557		
7,700.0	7,671.2	8,158.0	7,671.2	18.1	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,764.4	34.518		
7,800.0	7,771.2	8,258.0	7,771.2	18.2	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,764.3	34.477		
7,810.0	7,781.2	8,268.0	7,781.2	18.2	40.6	-156.36	-2,056.0	-906.0	1,817.0	1,764.3	34.473		
7,900.0	7,871.2	8,304.8	7,818.0	18.2	40.6	-156.36	-2,056.0	-906.0	1,817.8	1,764.7	34.210		
8,000.0	7,971.2	8,304.8	7,818.0	18.3	40.6	-156.36	-2,056.0	-906.0	1,823.5	1,769.7	33.889		
8,100.0	8,071.2	8,304.8	7,818.0	18.3	40.6	-156.36	-2,056.0	-906.0	1,834.6	1,780.2	33.748		
8,200.0	8,171.2	8,304.8	7,818.0	18.3	40.6	-156.36	-2,056.0	-906.0	1,851.0	1,796.2	33.778		
8,300.0	8,271.2	8,304.8	7,818.0	18.4	40.6	-156.36	-2,056.0	-906.0	1,872.7	1,817.5	33.970		
8,400.0	8,371.2	8,304.8	7,818.0	18.4	40.6	-156.36	-2,056.0	-906.0	1,899.4	1,844.0	34.314		
8,500.0	8,471.2	8,304.8	7,818.0	18.5	40.6	-156.36	-2,056.0	-906.0	1,930.9	1,875.4	34.801		
8,600.0	8,571.2	8,304.8	7,818.0	18.5	40.6	-156.36	-2,056.0	-906.0	1,966.9	1,911.4	35.420		
8,700.0	8,671.2	8,304.8	7,818.0	18.6	40.6	-156.36	-2,056.0	-906.0	2,007.4	1,951.8	36.161		
8,725.8	8,697.0	8,304.8	7,818.0	18.6	40.6	-156.36	-2,056.0	-906.0	2,018.5	1,963.0	36.375		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	53.13	36.4	48.6	60.7				
100.0	100.0	100.0	100.0	0.8	0.8	53.13	36.4	48.6	60.7	59.1	38.328		
200.0	200.0	200.0	200.0	1.4	1.2	53.22	36.4	48.6	60.7	58.1	22.905		
300.0	300.0	300.1	300.0	1.9	2.5	56.10	33.8	50.3	60.6	57.0	16.822		
314.9	314.9	315.0	314.9	1.9	2.7	56.89	33.1	50.7	60.6	56.9	16.264	CC	
400.0	400.0	399.7	399.4	2.2	4.0	63.06	27.6	54.3	60.9	56.6	13.901	ES	
500.0	500.0	498.5	497.5	2.6	5.1	73.54	17.9	60.7	63.3	58.0	11.878		
600.0	600.0	596.1	593.8	2.8	6.0	85.96	4.9	69.2	69.6	62.9	10.448		
700.0	700.0	692.2	687.9	3.1	6.8	98.07	-11.3	79.7	81.4	73.2	9.923	SF	
800.0	800.0	786.5	779.5	3.3	7.6	108.25	-30.4	92.2	99.2	89.5	10.264		
900.0	900.0	878.8	868.0	3.6	8.2	116.10	-52.1	106.3	122.7	111.7	11.229		
1,000.0	1,000.0	968.7	953.3	3.8	8.9	121.96	-76.1	122.0	151.2	139.2	12.609		
1,100.0	1,100.0	1,056.2	1,035.0	4.1	9.4	-113.52	-102.1	139.0	185.0	172.1	14.351		
1,200.0	1,199.8	1,140.9	1,113.0	4.8	10.0	-110.62	-129.8	157.1	223.8	210.1	16.324		
1,300.0	1,299.5	1,222.8	1,187.1	5.0	10.5	-98.57	-158.8	176.0	266.7	252.4	18.631		
1,400.0	1,399.0	1,300.0	1,255.9	5.3	11.0	-81.52	-188.2	195.2	310.5	295.4	20.596		
1,500.0	1,498.2	1,381.6	1,327.3	5.7	11.4	-70.08	-221.4	216.8	354.7	338.7	22.176		
1,600.0	1,597.2	1,458.4	1,393.1	6.0	11.9	-69.75	-254.5	238.4	400.4	383.8	24.096		
1,700.0	1,696.2	1,532.6	1,455.4	6.2	12.2	-69.54	-288.2	260.4	449.0	431.9	26.252		
1,800.0	1,795.2	1,610.1	1,519.2	6.5	12.5	-69.28	-325.1	284.5	500.0	482.4	28.476		
1,900.0	1,894.3	1,695.8	1,589.5	6.8	12.8	-69.03	-366.2	311.3	551.4	533.4	30.470		
2,000.0	1,993.3	1,781.5	1,659.8	7.1	13.1	-68.82	-407.2	338.1	602.9	584.3	32.306		
2,100.0	2,092.3	1,867.2	1,730.1	7.4	13.4	-68.64	-448.3	364.9	654.4	635.2	34.001		
2,200.0	2,191.3	1,952.9	1,800.4	7.7	13.7	-68.49	-489.4	391.7	705.9	686.1	35.567		
2,300.0	2,290.4	2,038.6	1,870.7	8.0	14.0	-68.36	-530.4	418.5	757.4	737.0	37.028		
2,400.0	2,389.4	2,124.3	1,941.0	8.4	14.4	-68.25	-571.5	445.3	808.9	787.8	38.295		
2,500.0	2,488.4	2,210.1	2,011.3	8.7	15.3	-68.15	-612.5	472.1	860.4	838.7	39.534		
2,600.0	2,587.4	2,295.8	2,081.6	9.1	16.2	-68.06	-653.6	498.9	912.0	889.5	40.667		
2,700.0	2,686.5	2,381.5	2,151.9	9.5	17.1	-67.98	-694.7	525.7	963.5	940.4	41.706		
2,800.0	2,785.5	2,467.2	2,222.2	9.8	18.0	-67.91	-735.7	552.4	1,015.0	991.2	42.671		
2,900.0	2,884.5	2,552.9	2,292.5	10.2	19.0	-67.85	-776.8	579.2	1,066.5	1,042.0	43.565		
3,000.0	2,983.5	2,638.6	2,362.8	10.6	19.9	-67.79	-817.8	606.0	1,118.0	1,092.8	44.394		
3,100.0	3,082.6	2,724.3	2,433.1	11.0	20.8	-67.73	-858.9	632.8	1,169.5	1,143.6	45.163		
3,200.0	3,181.6	2,810.0	2,503.4	11.4	21.7	-67.69	-900.0	659.6	1,221.0	1,194.4	45.878		
3,300.0	3,280.6	2,895.7	2,573.7	11.8	22.6	-67.64	-941.0	686.4	1,272.6	1,245.2	46.542		
3,400.0	3,379.6	2,981.4	2,644.0	12.2	23.6	-67.60	-982.1	713.2	1,324.1	1,296.0	47.159		
3,500.0	3,478.7	3,067.1	2,714.3	12.6	24.5	-67.56	-1,023.2	740.0	1,375.6	1,346.8	47.735		
3,600.0	3,577.7	3,152.8	2,784.6	13.0	25.4	-67.53	-1,064.2	766.8	1,427.1	1,397.5	48.273		
3,700.0	3,676.7	3,238.5	2,854.9	13.4	26.3	-67.49	-1,105.3	793.6	1,478.6	1,448.3	48.776		
3,800.0	3,775.8	3,324.2	2,925.1	13.8	27.3	-67.46	-1,146.3	820.4	1,530.1	1,499.1	49.248		
3,900.0	3,874.8	3,409.9	2,995.4	14.2	28.2	-67.43	-1,187.4	847.2	1,581.7	1,549.8	49.689		
4,000.0	3,973.8	3,495.6	3,065.7	14.6	29.1	-67.41	-1,228.5	874.0	1,633.2	1,600.6	50.103		
4,100.0	4,072.8	3,581.3	3,136.0	15.0	30.0	-67.38	-1,269.5	900.8	1,684.7	1,651.3	50.491		
4,200.0	4,171.9	3,666.9	3,206.2	15.4	31.0	-68.06	-1,310.5	927.5	1,736.4	1,702.3	50.914		
4,300.0	4,271.4	3,751.7	3,275.8	15.9	31.9	-69.05	-1,351.1	954.1	1,789.2	1,754.4	51.340		
4,400.0	4,371.2	3,835.6	3,344.6	16.4	32.8	-69.98	-1,391.4	980.3	1,843.1	1,807.5	51.821		
4,500.0	4,471.2	3,918.6	3,412.6	16.8	33.7	-70.85	-1,431.1	1,006.2	1,898.0	1,861.8	52.375		
4,600.0	4,571.2	4,000.7	3,480.0	16.9	34.6	131.74	-1,470.4	1,031.9	1,953.8	1,917.0	53.096		
4,700.0	4,671.2	4,082.7	3,547.2	16.9	35.5	132.16	-1,509.7	1,057.5	2,009.7	1,972.3	53.786		
4,800.0	4,771.2	4,164.7	3,614.5	16.9	36.4	132.56	-1,549.0	1,083.2	2,065.6	2,027.7	54.449		
4,900.0	4,871.2	4,246.7	3,681.8	17.0	37.3	132.94	-1,588.3	1,108.8	2,121.7	2,083.2	55.093		
5,000.0	4,971.2	4,328.8	3,749.1	17.0	38.1	133.30	-1,627.6	1,134.5	2,177.8	2,138.7	55.717		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Currier 0993-16-07 Pad - Currier BCU 0993-16-14E - OH - Design #2	Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
5,100.0	5,071.2	4,410.8	3,816.3	17.1	39.0	133.64	-1,666.9	1,160.1	2,233.9	2,194.2	56.322			
5,200.0	5,171.2	4,492.8	3,883.6	17.1	39.9	133.96	-1,706.2	1,185.7	2,290.1	2,249.9	56.909			
5,300.0	5,271.2	4,574.8	3,950.9	17.1	40.8	134.27	-1,745.5	1,211.4	2,346.3	2,305.5	57.477			
5,400.0	5,371.2	4,656.8	4,018.1	17.2	41.7	134.57	-1,784.8	1,237.0	2,402.6	2,361.2	58.029			
5,500.0	5,471.2	4,738.9	4,085.4	17.2	42.6	134.85	-1,824.1	1,262.7	2,459.0	2,417.0	58.564			
5,600.0	5,571.2	4,820.9	4,152.7	17.2	43.5	135.12	-1,863.4	1,288.3	2,515.4	2,472.8	59.083			
5,700.0	5,671.2	4,902.9	4,220.0	17.3	44.4	135.38	-1,902.7	1,314.0	2,571.8	2,528.6	59.586			
5,800.0	5,771.2	4,984.9	4,287.2	17.3	45.3	135.63	-1,942.0	1,339.6	2,628.2	2,584.5	60.074			
5,900.0	5,871.2	5,066.9	4,354.5	17.4	46.2	135.86	-1,981.3	1,365.2	2,684.7	2,640.3	60.547			
6,000.0	5,971.2	5,148.9	4,421.8	17.4	47.0	136.09	-2,020.6	1,390.9	2,741.2	2,696.3	61.007			
6,100.0	6,071.2	6,917.3	6,071.2	17.4	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,724.2	54.851			
6,200.0	6,171.2	7,017.3	6,171.2	17.5	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,724.1	54.783			
6,300.0	6,271.2	7,117.3	6,271.2	17.5	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,724.1	54.715			
6,400.0	6,371.2	7,217.3	6,371.2	17.6	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,724.0	54.646			
6,500.0	6,471.2	7,317.3	6,471.2	17.6	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,723.9	54.577			
6,600.0	6,571.2	7,417.3	6,571.2	17.6	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,723.9	54.508			
6,700.0	6,671.2	7,517.3	6,671.2	17.7	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,723.8	54.438			
6,800.0	6,771.2	7,617.3	6,771.2	17.7	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,723.7	54.368			
6,900.0	6,871.2	7,717.3	6,871.2	17.8	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,723.7	54.298			
7,000.0	6,971.2	7,817.3	6,971.2	17.8	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,723.6	54.228			
7,100.0	7,071.2	7,917.3	7,071.2	17.9	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,723.5	54.157			
7,200.0	7,171.2	8,017.3	7,171.2	17.9	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,723.5	54.086			
7,300.0	7,271.2	8,117.3	7,271.2	17.9	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,723.4	54.014			
7,400.0	7,371.2	8,217.3	7,371.2	18.0	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,723.3	53.943			
7,500.0	7,471.2	8,317.3	7,471.2	18.0	56.7	138.10	-2,456.9	1,675.6	2,774.8	2,723.3	53.871			
7,600.0	7,571.2	8,417.3	7,571.2	18.1	56.8	138.10	-2,456.9	1,675.6	2,774.8	2,723.2	53.798			
7,700.0	7,671.2	8,517.3	7,671.2	18.1	56.8	138.10	-2,456.9	1,675.6	2,774.8	2,723.1	53.726			
7,800.0	7,771.2	8,617.3	7,771.2	18.2	56.8	138.10	-2,456.9	1,675.6	2,774.8	2,723.1	53.655			
7,810.0	7,781.2	8,627.3	7,781.2	18.2	56.8	138.10	-2,456.9	1,675.6	2,774.8	2,723.1	53.648			
7,900.0	7,871.2	8,671.1	7,825.0	18.2	56.8	138.10	-2,456.9	1,675.6	2,775.2	2,723.1	53.304			
8,000.0	7,971.2	8,671.1	7,825.0	18.3	56.8	138.10	-2,456.9	1,675.6	2,778.6	2,725.9	52.716			
8,100.0	8,071.2	8,671.1	7,825.0	18.3	56.8	138.10	-2,456.9	1,675.6	2,785.7	2,732.4	52.253			
8,200.0	8,171.2	8,671.1	7,825.0	18.3	56.8	138.10	-2,456.9	1,675.6	2,796.3	2,742.4	51.908			
8,300.0	8,271.2	8,671.1	7,825.0	18.4	56.8	138.10	-2,456.9	1,675.6	2,810.4	2,756.0	51.677			
8,400.0	8,371.2	8,671.1	7,825.0	18.4	56.8	138.10	-2,456.9	1,675.6	2,828.0	2,773.2	51.553			
8,500.0	8,471.2	8,671.1	7,825.0	18.5	56.8	138.10	-2,456.9	1,675.6	2,849.0	2,793.7	51.532			
8,600.0	8,571.2	8,671.1	7,825.0	18.5	56.8	138.10	-2,456.9	1,675.6	2,873.4	2,817.7	51.607			
8,700.0	8,671.2	8,671.1	7,825.0	18.6	56.8	138.10	-2,456.9	1,675.6	2,900.9	2,844.9	51.774			
8,725.8	8,697.0	8,671.1	7,825.0	18.6	56.8	138.10	-2,456.9	1,675.6	2,908.6	2,852.5	51.840			

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	62.05	14.8	27.8	31.5				
100.0	100.0	100.0	100.0	0.8	0.8	62.05	14.8	27.8	31.5	29.9	19.885		
200.0	200.0	200.0	200.0	1.4	1.4	62.05	14.8	27.8	31.5	28.7	11.134		
300.0	300.0	300.5	300.4	1.9	2.1	65.84	12.6	28.0	30.7	27.0	8.376		
400.0	400.0	400.6	400.3	2.2	3.8	78.10	6.0	28.6	29.2	24.8	6.640		
437.0	437.0	437.4	437.0	2.4	4.1	85.00	2.5	28.9	29.0	24.4	6.328	CC, ES	
500.0	500.0	500.0	499.2	2.6	4.5	99.18	-4.8	29.5	29.9	24.8	5.864		
600.0	600.0	599.0	597.1	2.8	5.0	123.67	-19.4	29.2	35.2	28.6	5.319	SF	
700.0	700.0	696.7	693.0	3.1	5.8	144.35	-37.6	27.0	46.8	38.6	5.686		
800.0	800.0	792.8	786.6	3.3	6.6	158.74	-59.0	22.9	64.7	55.1	6.767		
900.0	900.0	886.9	877.3	3.6	7.3	168.30	-83.3	17.2	88.0	77.4	8.265		
1,000.0	1,000.0	978.8	964.9	3.8	8.0	174.81	-110.2	10.0	116.1	104.5	10.012		
1,100.0	1,100.0	1,068.8	1,049.5	4.1	8.6	-60.55	-139.5	1.3	147.6	135.2	11.907		
1,200.0	1,199.8	1,157.1	1,131.3	4.8	9.2	-57.76	-171.1	-8.7	181.1	167.8	13.614		
1,300.0	1,299.5	1,243.8	1,210.4	5.0	9.7	-46.01	-204.9	-20.0	216.1	202.1	15.473		
1,400.0	1,399.0	1,329.2	1,286.9	5.3	10.3	-28.89	-240.6	-32.6	251.5	236.7	17.019		
1,500.0	1,498.2	1,413.2	1,360.8	5.7	10.8	-16.99	-278.2	-46.2	287.2	271.5	18.293		
1,600.0	1,597.2	1,500.0	1,435.5	6.0	11.3	-15.27	-319.6	-61.7	324.6	308.0	19.584		
1,700.0	1,696.2	1,583.1	1,505.9	6.2	11.5	-13.96	-360.8	-77.4	364.6	347.5	21.387		
1,800.0	1,795.2	1,674.3	1,583.1	6.5	11.9	-12.79	-406.2	-94.7	404.8	387.1	22.879		
1,900.0	1,894.3	1,765.5	1,660.4	6.8	12.2	-11.82	-451.6	-112.1	445.3	426.9	24.232		
2,000.0	1,993.3	1,856.8	1,737.6	7.1	12.5	-11.02	-496.9	-129.4	485.8	466.7	25.460		
2,100.0	2,092.3	1,948.0	1,814.8	7.4	12.9	-10.34	-542.3	-146.7	526.3	506.5	26.574		
2,200.0	2,191.3	2,039.2	1,892.1	7.7	13.3	-9.75	-587.7	-164.0	566.9	546.4	27.573		
2,300.0	2,290.4	2,130.5	1,969.3	8.0	13.8	-9.25	-633.1	-181.4	607.6	586.3	28.489		
2,400.0	2,389.4	2,221.7	2,046.5	8.4	14.3	-8.81	-678.4	-198.7	648.3	626.2	29.320		
2,500.0	2,488.4	2,313.0	2,123.8	8.7	15.0	-8.42	-723.8	-216.0	689.0	666.1	30.076		
2,600.0	2,587.4	2,404.2	2,201.0	9.1	15.7	-8.07	-769.2	-233.3	729.8	706.1	30.764		
2,700.0	2,686.5	2,495.4	2,278.2	9.5	16.5	-7.76	-814.6	-250.7	770.6	746.0	31.392		
2,800.0	2,785.5	2,586.7	2,355.5	9.8	17.3	-7.48	-860.0	-268.0	811.3	786.0	31.965		
2,900.0	2,884.5	2,677.9	2,432.7	10.2	18.1	-7.23	-905.3	-285.3	852.2	825.9	32.490		
3,000.0	2,983.5	2,769.1	2,509.9	10.6	18.9	-7.00	-950.7	-302.6	893.0	865.9	32.972		
3,100.0	3,082.6	2,860.4	2,587.1	11.0	19.7	-6.79	-996.1	-320.0	933.8	905.8	33.415		
3,200.0	3,181.6	2,951.6	2,664.4	11.4	20.6	-6.60	-1,041.5	-337.3	974.6	945.8	33.823		
3,300.0	3,280.6	3,042.8	2,741.6	11.8	21.4	-6.42	-1,086.8	-354.6	1,015.5	985.8	34.199		
3,400.0	3,379.6	3,134.1	2,818.8	12.2	22.2	-6.26	-1,132.2	-371.9	1,056.3	1,025.7	34.547		
3,500.0	3,478.7	3,225.3	2,896.1	12.6	23.1	-6.11	-1,177.6	-389.3	1,097.2	1,065.7	34.870		
3,600.0	3,577.7	3,316.5	2,973.3	13.0	23.9	-5.97	-1,223.0	-406.6	1,138.0	1,105.7	35.169		
3,700.0	3,676.7	3,407.8	3,050.5	13.4	24.7	-5.84	-1,268.3	-423.9	1,178.9	1,145.7	35.447		
3,800.0	3,775.8	3,499.0	3,127.8	13.8	25.6	-5.72	-1,313.7	-441.2	1,219.8	1,185.6	35.706		
3,900.0	3,874.8	3,590.3	3,205.0	14.2	26.4	-5.61	-1,359.1	-458.6	1,260.7	1,225.6	35.947		
4,000.0	3,973.8	3,681.5	3,282.2	14.6	27.2	-5.50	-1,404.5	-475.9	1,301.5	1,265.6	36.172		
4,100.0	4,072.8	3,772.7	3,359.5	15.0	28.1	-5.40	-1,449.9	-493.2	1,342.4	1,305.5	36.383		
4,200.0	4,171.9	3,863.7	3,436.4	15.4	28.9	-5.36	-1,495.1	-510.5	1,384.0	1,346.2	36.618		
4,300.0	4,271.4	3,953.2	3,512.2	15.9	29.7	-5.35	-1,539.6	-527.5	1,428.5	1,389.7	36.847		
4,400.0	4,371.2	4,041.1	3,586.6	16.4	30.6	-5.33	-1,583.3	-544.2	1,476.0	1,436.3	37.148		
4,500.0	4,471.2	4,127.3	3,659.6	16.8	31.4	-5.32	-1,626.2	-560.5	1,526.6	1,486.0	37.579		
4,600.0	4,571.2	4,212.1	3,731.4	16.9	32.1	-162.84	-1,668.4	-576.6	1,579.6	1,538.4	38.349		
4,700.0	4,671.2	4,296.7	3,803.0	16.9	32.9	-162.52	-1,710.5	-592.7	1,632.8	1,591.1	39.125		
4,800.0	4,771.2	4,381.4	3,874.7	16.9	33.7	-162.41	-1,752.6	-608.8	1,686.0	1,643.7	39.875		
4,900.0	4,871.2	4,466.0	3,946.3	17.0	34.5	-162.31	-1,794.7	-624.9	1,739.1	1,696.3	40.605		
5,000.0	4,971.2	4,550.7	4,018.0	17.0	35.3	-162.22	-1,836.8	-640.9	1,792.3	1,748.9	41.314		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	5,071.2	4,635.3	4,089.7	17.1	36.0	-162.13	-1,878.9	-657.0	1,845.5	1,801.6	42.004		
5,200.0	5,171.2	4,720.0	4,161.3	17.1	36.8	-162.04	-1,921.0	-673.1	1,898.7	1,854.2	42.675		
5,300.0	5,271.2	4,804.6	4,233.0	17.1	37.6	-161.96	-1,963.1	-689.2	1,951.9	1,906.8	43.327		
5,400.0	5,371.2	4,889.3	4,304.6	17.2	38.4	-161.89	-2,005.2	-705.2	2,005.1	1,959.5	43.961		
5,500.0	5,471.2	4,973.9	4,376.3	17.2	39.2	-161.81	-2,047.3	-721.3	2,058.3	2,012.1	44.578		
5,600.0	5,571.2	5,058.6	4,447.9	17.2	40.0	-161.75	-2,089.4	-737.4	2,111.5	2,064.7	45.179		
5,700.0	5,671.2	5,143.2	4,519.6	17.3	40.7	-161.68	-2,131.5	-753.5	2,164.6	2,117.3	45.763		
5,800.0	5,771.2	5,227.9	4,591.3	17.3	41.5	-161.62	-2,173.6	-769.5	2,217.8	2,170.0	46.333		
5,900.0	5,871.2	5,312.6	4,663.0	17.4	42.2	-161.55	-2,215.7	-785.5	2,269.9	2,222.1	46.903		
6,000.0	5,971.2	5,397.3	4,734.7	17.4	43.0	-161.49	-2,257.8	-801.5	2,322.0	2,274.2	47.473		
6,100.0	6,071.2	5,482.0	4,806.4	17.4	43.8	-161.43	-2,299.9	-817.5	2,374.1	2,326.3	48.043		
6,200.0	6,171.2	5,566.7	4,878.1	17.5	44.5	-161.37	-2,342.0	-833.5	2,426.2	2,378.4	48.613		
6,300.0	6,271.2	5,651.4	4,949.8	17.5	45.3	-161.31	-2,384.1	-849.5	2,478.3	2,430.5	49.183		
6,400.0	6,371.2	5,736.1	5,021.5	17.6	46.0	-161.25	-2,426.2	-865.5	2,530.4	2,482.6	49.753		
6,500.0	6,471.2	5,820.8	5,093.2	17.6	46.8	-161.19	-2,468.3	-881.5	2,582.5	2,534.7	50.323		
6,600.0	6,571.2	5,905.5	5,164.9	17.6	47.6	-161.13	-2,510.4	-897.5	2,634.6	2,586.8	50.893		
6,700.0	6,671.2	5,990.2	5,236.6	17.7	48.3	-161.07	-2,552.5	-913.5	2,686.7	2,638.9	51.463		
6,800.0	6,771.2	6,074.9	5,308.3	17.7	49.1	-161.01	-2,594.6	-929.5	2,738.8	2,691.0	52.033		
6,900.0	6,871.2	6,159.6	5,380.0	17.8	49.8	-160.95	-2,636.7	-945.5	2,790.9	2,743.1	52.603		
7,000.0	6,971.2	6,244.3	5,451.7	17.8	50.6	-160.89	-2,678.8	-961.5	2,843.0	2,795.2	53.173		
7,100.0	7,071.2	6,329.0	5,523.4	17.9	51.3	-160.83	-2,720.9	-977.5	2,895.1	2,847.3	53.743		
7,200.0	7,171.2	6,413.7	5,595.1	17.9	52.1	-160.77	-2,763.0	-993.5	2,947.2	2,899.4	54.313		
7,300.0	7,271.2	6,498.4	5,666.8	17.9	52.9	-160.71	-2,805.1	-1,009.5	3,000.3	2,951.5	54.883		
7,400.0	7,371.2	6,583.1	5,738.5	18.0	53.6	-160.65	-2,847.2	-1,025.5	3,052.4	3,003.6	55.453		
7,500.0	7,471.2	6,667.8	5,810.2	18.0	54.4	-160.59	-2,889.3	-1,041.5	3,104.5	3,055.7	56.023		
7,600.0	7,571.2	6,752.5	5,881.9	18.1	55.1	-160.53	-2,931.4	-1,057.5	3,156.6	3,107.8	56.593		
7,700.0	7,671.2	6,837.2	5,953.6	18.1	55.9	-160.47	-2,973.5	-1,073.5	3,208.7	3,159.9	57.163		
7,800.0	7,771.2	6,921.9	6,025.3	18.2	56.6	-160.41	-3,015.6	-1,089.5	3,260.8	3,212.0	57.733		
7,900.0	7,871.2	7,006.6	6,097.0	18.2	57.4	-160.35	-3,057.7	-1,105.5	3,312.9	3,264.1	58.303		
8,000.0	7,971.2	7,091.3	6,168.7	18.3	58.1	-160.29	-3,099.8	-1,121.5	3,365.0	3,316.2	58.873		
8,100.0	8,071.2	7,176.0	6,240.4	18.3	58.9	-160.23	-3,141.9	-1,137.5	3,417.1	3,368.3	59.443		
8,200.0	8,171.2	7,260.7	6,312.1	18.3	59.6	-160.17	-3,184.0	-1,153.5	3,469.2	3,420.4	60.013		
8,300.0	8,271.2	7,345.4	6,383.8	18.4	60.4	-160.11	-3,226.1	-1,169.5	3,521.3	3,472.5	60.583		
8,400.0	8,371.2	7,430.1	6,455.5	18.4	61.1	-160.05	-3,268.2	-1,185.5	3,573.4	3,524.6	61.153		
8,500.0	8,471.2	7,514.8	6,527.2	18.5	61.9	-160.00	-3,310.3	-1,201.5	3,625.5	3,576.7	61.723		
8,600.0	8,571.2	7,599.5	6,598.9	18.5	62.6	-159.94	-3,352.4	-1,217.5	3,677.6	3,628.8	62.293		
8,665.9	8,637.1	9,350.7	8,637.1	18.6	48.5	-161.19	-2,536.1	-908.0	2,265.6	2,211.2	41.619		
8,700.0	8,671.2	9,382.6	8,669.0	18.6	48.5	-161.19	-2,536.1	-908.0	2,265.6	2,211.2	41.591		
8,725.8	8,697.0	9,382.6	8,669.0	18.6	48.5	-161.19	-2,536.1	-908.0	2,265.8	2,211.2	41.450		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	54.97	29.2	41.7	50.9				
100.0	100.0	100.0	100.0	0.8	0.8	54.97	29.2	41.7	50.9	49.3	32.122		
200.0	200.0	200.0	200.0	1.4	1.4	54.97	29.2	41.7	50.9	48.1	17.986		
300.0	300.0	300.1	300.1	1.9	2.1	57.43	27.3	42.7	50.7	47.1	13.966		
349.4	349.4	349.5	349.4	2.0	2.9	60.47	25.0	44.1	50.7	46.6	12.560	CC	
400.0	400.0	400.0	399.7	2.2	3.8	64.81	21.6	46.0	50.8	46.4	11.560	ES	
500.0	500.0	498.9	498.1	2.6	4.9	76.54	12.3	51.3	52.7	47.4	9.932		
600.0	600.0	596.8	594.9	2.8	5.9	90.60	-0.6	58.6	58.8	52.1	8.801		
700.0	700.0	693.3	689.5	3.1	6.7	103.94	-16.8	67.7	70.6	62.3	8.535	SF	
800.0	800.0	788.0	781.6	3.3	7.4	114.64	-36.1	78.6	88.5	78.7	9.093		
900.0	900.0	880.7	870.8	3.6	8.1	122.53	-58.1	91.1	112.0	101.0	10.217		
1,000.0	1,000.0	971.2	956.7	3.8	8.7	128.20	-82.6	105.0	140.5	128.5	11.710		
1,100.0	1,100.0	1,059.2	1,039.3	4.1	9.3	-107.56	-109.3	120.1	173.9	161.0	13.529		
1,200.0	1,199.8	1,144.6	1,118.1	4.8	9.9	-105.00	-137.8	136.3	212.1	198.4	15.559		
1,300.0	1,299.5	1,227.3	1,193.2	5.0	10.4	-93.32	-167.8	153.2	253.9	239.7	17.859		
1,400.0	1,399.0	1,308.3	1,265.6	5.3	10.9	-76.55	-199.5	171.2	296.6	281.6	19.723		
1,500.0	1,498.2	1,387.9	1,335.4	5.7	11.3	-65.35	-232.7	190.0	339.6	323.7	21.352		
1,600.0	1,597.2	1,465.6	1,402.2	6.0	11.8	-65.12	-267.2	209.5	384.2	367.6	23.229		
1,700.0	1,696.2	1,540.7	1,465.5	6.2	12.2	-64.98	-302.4	229.5	431.6	414.5	25.275		
1,800.0	1,795.2	1,613.2	1,525.3	6.5	12.6	-64.80	-338.1	249.7	481.7	464.1	27.372		
1,900.0	1,894.3	1,683.1	1,581.8	6.8	12.9	-64.58	-374.0	270.0	534.4	516.3	29.517		
2,000.0	1,993.3	1,750.5	1,634.9	7.1	13.2	-64.34	-410.0	290.4	589.6	571.1	31.824		
2,100.0	2,092.3	1,826.6	1,693.8	7.4	13.5	-64.07	-451.9	314.2	646.6	627.6	34.002		
2,200.0	2,191.3	1,908.5	1,757.2	7.7	13.8	-63.82	-497.1	339.8	703.8	684.2	35.929		
2,300.0	2,290.4	1,990.5	1,820.6	8.0	14.0	-63.60	-542.4	365.4	761.0	740.9	37.707		
2,400.0	2,389.4	2,072.5	1,884.0	8.4	14.3	-63.42	-587.6	391.0	818.2	797.5	39.380		
2,500.0	2,488.4	2,154.5	1,947.4	8.7	14.9	-63.26	-632.9	416.7	875.5	854.0	40.757		
2,600.0	2,587.4	2,236.5	2,010.8	9.1	15.9	-63.12	-678.1	442.3	932.7	910.6	42.259		
2,700.0	2,686.5	2,318.5	2,074.2	9.5	16.9	-62.99	-723.3	467.9	989.9	967.2	43.577		
2,800.0	2,785.5	2,400.5	2,137.6	9.8	17.9	-62.88	-768.6	493.5	1,047.1	1,023.8	44.794		
2,900.0	2,884.5	2,482.5	2,201.0	10.2	18.8	-62.78	-813.8	519.1	1,104.4	1,080.3	45.912		
3,000.0	2,983.5	2,564.5	2,264.4	10.6	19.8	-62.70	-859.0	544.8	1,161.6	1,136.9	46.953		
3,100.0	3,082.6	2,646.5	2,327.8	11.0	20.8	-62.61	-904.3	570.4	1,218.8	1,193.4	47.922		
3,200.0	3,181.6	2,728.5	2,391.2	11.4	21.8	-62.54	-949.5	596.0	1,276.1	1,249.9	48.824		
3,300.0	3,280.6	2,810.5	2,454.6	11.8	22.7	-62.47	-994.8	621.6	1,333.3	1,306.4	49.665		
3,400.0	3,379.6	2,892.4	2,518.0	12.2	23.7	-62.41	-1,040.0	647.3	1,390.5	1,363.0	50.448		
3,500.0	3,478.7	2,974.4	2,581.4	12.6	24.7	-62.36	-1,085.2	672.9	1,447.8	1,419.5	51.176		
3,600.0	3,577.7	3,056.4	2,644.8	13.0	25.7	-62.30	-1,130.5	698.5	1,505.0	1,476.0	51.858		
3,700.0	3,676.7	3,138.4	2,708.2	13.4	26.7	-62.25	-1,175.7	724.1	1,562.2	1,532.5	52.496		
3,800.0	3,775.8	3,220.4	2,771.6	13.8	27.7	-62.21	-1,221.0	749.7	1,619.5	1,589.0	53.095		
3,900.0	3,874.8	3,302.4	2,835.0	14.2	28.6	-62.17	-1,266.2	775.4	1,676.7	1,645.5	53.656		
4,000.0	3,973.8	3,384.4	2,898.4	14.6	29.6	-62.13	-1,311.4	801.0	1,734.0	1,702.0	54.181		
4,100.0	4,072.8	3,466.4	2,961.8	15.0	30.6	-62.09	-1,356.7	826.6	1,791.2	1,758.4	54.674		
4,200.0	4,171.9	3,548.2	3,025.0	15.4	31.6	-62.04	-1,401.8	852.2	1,848.7	1,815.2	55.198		
4,300.0	4,271.4	3,629.0	3,087.5	15.9	32.6	-63.97	-1,446.4	877.4	1,907.5	1,873.2	55.717		
4,400.0	4,371.2	3,708.7	3,149.1	16.4	33.5	-65.06	-1,490.4	902.3	1,967.4	1,932.5	56.293		
4,500.0	4,471.2	3,787.1	3,209.8	16.8	34.5	-66.11	-1,533.6	926.8	2,028.6	1,993.0	56.951		
4,600.0	4,571.2	3,864.5	3,269.6	16.9	35.4	136.40	-1,576.4	951.0	2,090.8	2,054.6	57.808		
4,700.0	4,671.2	3,941.8	3,329.4	16.9	36.3	136.80	-1,619.0	975.2	2,153.1	2,116.3	58.636		
4,800.0	4,771.2	4,019.2	3,389.2	16.9	37.3	137.19	-1,661.7	999.4	2,215.4	2,178.1	59.433		
4,900.0	4,871.2	4,096.5	3,449.0	17.0	38.2	137.55	-1,704.3	1,023.5	2,277.8	2,240.0	60.206		
5,000.0	4,971.2	4,173.8	3,508.8	17.0	39.1	137.89	-1,747.0	1,047.7	2,340.3	2,301.9	60.953		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Currier 0993-16-07 Pad - Currier BCU 0993-16-15E - OH - Design #3	Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
5,100.0	5,071.2	4,251.1	3,568.6	17.1	40.1	138.22	-1,789.7	1,071.9	2,402.8	2,363.8	61.677			
5,200.0	5,171.2	4,328.5	3,628.4	17.1	41.0	138.53	-1,832.3	1,096.0	2,465.4	2,425.8	62.380			
5,300.0	5,271.2	4,405.8	3,688.2	17.1	41.9	138.83	-1,875.0	1,120.2	2,528.0	2,487.9	63.060			
5,400.0	5,371.2	4,483.1	3,748.0	17.2	42.9	139.11	-1,917.7	1,144.4	2,590.6	2,549.9	63.719			
5,500.0	5,471.2	4,560.4	3,807.8	17.2	43.8	139.37	-1,960.3	1,168.5	2,653.3	2,612.0	64.357			
5,600.0	5,571.2	4,637.8	3,867.5	17.2	44.7	139.63	-2,003.0	1,192.7	2,716.0	2,674.2	64.976			
5,700.0	5,671.2	4,715.1	3,927.3	17.3	45.7	139.87	-2,045.7	1,216.8	2,778.7	2,736.3	65.576			
5,800.0	5,771.2	4,792.4	3,987.1	17.3	46.6	140.11	-2,088.3	1,241.0	2,841.5	2,798.5	66.157			
5,900.0	5,871.2	4,869.7	4,046.9	17.4	47.5	140.33	-2,131.0	1,265.2	2,904.3	2,860.8	66.720			
6,000.0	5,971.2	4,947.1	4,106.7	17.4	48.5	140.55	-2,173.7	1,289.3	2,967.1	2,923.0	67.265			
6,100.0	6,071.2	5,024.4	4,166.5	17.4	49.4	140.75	-2,216.3	1,313.5	3,030.0	2,985.3	67.794			
6,200.0	6,171.2	7,226.6	6,171.2	17.5	63.0	143.06	-2,854.9	1,675.2	3,082.3	3,030.7	59.739			
6,300.0	6,271.2	7,326.6	6,271.2	17.5	63.0	143.06	-2,854.9	1,675.2	3,082.3	3,030.7	59.667			
6,400.0	6,371.2	7,426.6	6,371.2	17.6	63.0	143.06	-2,854.9	1,675.2	3,082.3	3,030.6	59.594			
6,500.0	6,471.2	7,526.6	6,471.2	17.6	63.0	143.06	-2,854.9	1,675.2	3,082.3	3,030.5	59.521			
6,600.0	6,571.2	7,626.6	6,571.2	17.6	63.0	143.06	-2,854.9	1,675.2	3,082.3	3,030.5	59.448			
6,700.0	6,671.2	7,726.6	6,671.2	17.7	63.0	143.06	-2,854.9	1,675.2	3,082.3	3,030.4	59.375			
6,800.0	6,771.2	7,826.6	6,771.2	17.7	63.0	143.06	-2,854.9	1,675.2	3,082.3	3,030.3	59.301			
6,900.0	6,871.2	7,926.6	6,871.2	17.8	63.0	143.06	-2,854.9	1,675.2	3,082.3	3,030.3	59.226			
7,000.0	6,971.2	8,026.6	6,971.2	17.8	63.0	143.06	-2,854.9	1,675.2	3,082.3	3,030.2	59.152			
7,100.0	7,071.2	8,126.6	7,071.2	17.9	63.0	143.06	-2,854.9	1,675.2	3,082.3	3,030.1	59.077			
7,200.0	7,171.2	8,226.6	7,171.2	17.9	63.0	143.06	-2,854.9	1,675.2	3,082.3	3,030.1	59.002			
7,300.0	7,271.2	8,326.6	7,271.2	17.9	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,030.0	58.926			
7,400.0	7,371.2	8,426.6	7,371.2	18.0	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.9	58.851			
7,500.0	7,471.2	8,526.6	7,471.2	18.0	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.9	58.775			
7,600.0	7,571.2	8,626.6	7,571.2	18.1	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.8	58.698			
7,700.0	7,671.2	8,726.6	7,671.2	18.1	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.7	58.622			
7,800.0	7,771.2	8,826.6	7,771.2	18.2	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.7	58.545			
7,900.0	7,871.2	8,926.6	7,871.2	18.2	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.6	58.468			
8,000.0	7,971.2	9,026.6	7,971.2	18.3	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.5	58.390			
8,100.0	8,071.2	9,126.6	8,071.2	18.3	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.5	58.313			
8,200.0	8,171.2	9,226.6	8,171.2	18.3	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.4	58.235			
8,300.0	8,271.2	9,326.6	8,271.2	18.4	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.3	58.157			
8,400.0	8,371.2	9,426.6	8,371.2	18.4	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.2	58.078			
8,500.0	8,471.2	9,526.6	8,471.2	18.5	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.2	58.000			
8,600.0	8,571.2	9,626.6	8,571.2	18.5	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.1	57.921			
8,700.0	8,671.2	9,726.6	8,671.2	18.6	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.0	57.846			
8,702.6	8,673.8	9,729.1	8,673.8	18.6	63.1	143.06	-2,854.9	1,675.2	3,082.3	3,029.0	57.845			
8,725.8	8,697.0	9,736.4	8,681.0	18.6	63.1	143.06	-2,854.9	1,675.2	3,082.4	3,029.0	57.730			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	57.69	22.0	34.8	41.1				
100.0	100.0	100.0	100.0	0.8	0.8	57.69	22.0	34.8	41.1	39.5	25.964		
200.0	200.0	200.0	200.0	1.4	1.3	57.72	22.0	34.8	41.1	38.4	15.047		
300.0	300.0	300.3	300.3	1.9	2.5	61.35	19.5	35.7	40.6	36.8	10.548		
390.2	390.2	390.5	390.2	2.2	3.9	69.99	13.7	37.8	40.2	35.7	8.960	CC	
400.0	400.0	400.2	399.9	2.2	4.0	71.23	12.9	38.1	40.2	35.6	8.832	ES	
500.0	500.0	499.3	498.4	2.6	5.1	86.72	2.4	41.9	42.0	36.5	7.670		
600.0	600.0	598.7	596.6	2.8	5.5	104.77	-12.1	45.8	47.5	40.6	6.907		
700.0	700.0	697.1	693.3	3.1	6.1	122.27	-30.1	47.7	56.8	48.4	6.751	SF	
800.0	800.0	794.1	787.9	3.3	6.7	137.21	-51.5	47.6	71.2	61.5	7.355		
900.0	900.0	889.2	879.8	3.6	7.4	148.92	-75.8	45.7	90.8	80.1	8.471		
1,000.0	1,000.0	982.3	968.8	3.8	8.0	157.79	-102.9	42.0	115.5	103.8	9.937		
1,100.0	1,100.0	1,073.5	1,054.9	4.1	8.6	-75.55	-132.5	36.7	144.3	131.9	11.658		
1,200.0	1,199.8	1,163.0	1,138.3	4.8	9.1	-71.18	-164.4	29.8	176.0	162.8	13.370		
1,300.0	1,299.5	1,251.0	1,218.9	5.0	9.7	-58.14	-198.6	21.5	209.7	195.9	15.185		
1,400.0	1,399.0	1,337.7	1,297.1	5.3	10.2	-40.00	-234.8	11.7	243.6	228.9	16.623		
1,500.0	1,498.2	1,423.2	1,372.7	5.7	10.7	-27.26	-273.0	0.7	277.5	261.9	17.798		
1,600.0	1,597.2	1,506.8	1,445.2	6.0	11.2	-25.02	-312.8	-11.5	313.0	296.7	19.126		
1,700.0	1,696.2	1,588.0	1,514.2	6.2	11.6	-23.13	-353.5	-24.7	351.8	334.8	20.639		
1,800.0	1,795.2	1,666.6	1,579.6	6.5	12.1	-21.42	-395.0	-38.6	393.8	376.1	22.232		
1,900.0	1,894.3	1,743.8	1,642.2	6.8	12.4	-19.86	-437.5	-53.4	438.8	420.5	24.024		
2,000.0	1,993.3	1,831.6	1,712.9	7.1	12.7	-18.33	-486.8	-70.8	485.2	466.3	25.640		
2,100.0	2,092.3	1,919.5	1,783.6	7.4	13.1	-17.06	-536.0	-88.2	531.9	512.3	27.122		
2,200.0	2,191.3	2,007.4	1,854.2	7.7	13.5	-16.00	-585.3	-105.5	578.7	558.4	28.478		
2,300.0	2,290.4	2,095.3	1,924.9	8.0	14.1	-15.09	-634.6	-122.9	625.6	604.6	29.719		
2,400.0	2,389.4	2,183.2	1,995.6	8.4	14.7	-14.31	-683.9	-140.3	672.7	650.9	30.856		
2,500.0	2,488.4	2,271.1	2,066.2	8.7	15.4	-13.63	-733.1	-157.7	719.8	697.3	31.898		
2,600.0	2,587.4	2,359.0	2,136.9	9.1	16.2	-13.03	-782.4	-175.1	767.0	743.7	32.855		
2,700.0	2,686.5	2,446.9	2,207.6	9.5	17.0	-12.50	-831.7	-192.5	814.3	790.2	33.734		
2,800.0	2,785.5	2,534.8	2,278.2	9.8	17.8	-12.03	-881.0	-209.8	861.6	836.7	34.542		
2,900.0	2,884.5	2,622.6	2,348.9	10.2	18.7	-11.61	-930.3	-227.2	909.0	883.2	35.287		
3,000.0	2,983.5	2,710.5	2,419.6	10.6	19.5	-11.23	-979.5	-244.6	956.4	929.8	35.974		
3,100.0	3,082.6	2,798.4	2,490.2	11.0	20.4	-10.89	-1,028.8	-262.0	1,003.8	976.4	36.608		
3,200.0	3,181.6	2,886.3	2,560.9	11.4	21.3	-10.57	-1,078.1	-279.4	1,051.2	1,023.0	37.194		
3,300.0	3,280.6	2,974.2	2,631.6	11.8	22.1	-10.29	-1,127.4	-296.8	1,098.7	1,069.6	37.737		
3,400.0	3,379.6	3,062.1	2,702.2	12.2	23.0	-10.02	-1,176.6	-314.1	1,146.2	1,116.2	38.241		
3,500.0	3,478.7	3,150.0	2,772.9	12.6	23.9	-9.78	-1,225.9	-331.5	1,193.7	1,162.9	38.709		
3,600.0	3,577.7	3,237.9	2,843.6	13.0	24.8	-9.56	-1,275.2	-348.9	1,241.2	1,209.5	39.145		
3,700.0	3,676.7	3,325.7	2,914.2	13.4	25.7	-9.35	-1,324.5	-366.3	1,288.8	1,256.2	39.552		
3,800.0	3,775.8	3,413.6	2,984.9	13.8	26.6	-9.16	-1,373.8	-383.7	1,336.3	1,302.8	39.932		
3,900.0	3,874.8	3,501.5	3,055.6	14.2	27.5	-8.98	-1,423.0	-401.1	1,383.9	1,349.5	40.287		
4,000.0	3,973.8	3,589.4	3,126.2	14.6	28.3	-8.81	-1,472.3	-418.4	1,431.4	1,396.2	40.619		
4,100.0	4,072.8	3,677.3	3,196.9	15.0	29.2	-8.66	-1,521.6	-435.8	1,479.0	1,442.9	40.930		
4,200.0	4,171.9	3,764.8	3,267.3	15.4	30.1	-8.61	-1,570.7	-453.1	1,527.2	1,490.2	41.263		
4,300.0	4,271.4	3,850.8	3,336.4	15.9	31.0	-8.63	-1,618.9	-470.1	1,578.2	1,540.3	41.581		
4,400.0	4,371.2	3,934.8	3,404.0	16.4	31.9	-8.65	-1,666.0	-486.8	1,632.2	1,593.3	41.967		
4,500.0	4,471.2	4,017.0	3,470.0	16.8	32.7	-8.67	-1,712.1	-503.0	1,689.1	1,649.3	42.488		
4,600.0	4,571.2	4,097.5	3,534.8	16.9	33.5	-165.96	-1,757.2	-518.9	1,748.2	1,707.9	43.370		
4,700.0	4,671.2	4,177.9	3,599.4	16.9	34.3	-165.78	-1,802.3	-534.8	1,807.5	1,766.6	44.256		
4,800.0	4,771.2	4,258.3	3,664.1	16.9	35.2	-165.62	-1,847.4	-550.7	1,866.8	1,825.4	45.113		
4,900.0	4,871.2	4,338.7	3,728.7	17.0	36.0	-165.46	-1,892.5	-566.6	1,926.1	1,884.1	45.947		
5,000.0	4,971.2	4,419.1	3,793.4	17.0	36.8	-165.32	-1,937.5	-582.5	1,985.4	1,942.9	46.756		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	5,071.2	4,499.5	3,858.0	17.1	37.6	-165.18	-1,982.6	-598.5	2,044.7	2,001.7	47.543		
5,200.0	5,171.2	4,579.9	3,922.7	17.1	38.5	-165.05	-2,027.7	-614.4	2,104.0	2,060.5	48.307		
5,300.0	5,271.2	4,660.4	3,987.3	17.1	39.3	-164.93	-2,072.8	-630.3	2,163.4	2,119.3	49.050		
5,400.0	5,371.2	4,740.8	4,052.0	17.2	40.1	-164.81	-2,117.9	-646.2	2,222.7	2,178.1	49.773		
5,500.0	5,471.2	4,821.2	4,116.6	17.2	40.9	-164.70	-2,163.0	-662.1	2,282.1	2,236.9	50.475		
5,600.0	5,571.2	4,901.6	4,181.3	17.2	41.8	-164.59	-2,208.0	-678.0	2,341.4	2,295.7	51.158		
5,700.0	5,671.2	4,982.0	4,245.9	17.3	42.6	-164.49	-2,253.1	-693.9	2,400.8	2,354.5	51.822		
5,800.0	5,771.2	5,062.4	4,310.6	17.3	43.4	-164.40	-2,298.2	-709.8	2,460.2	2,413.3	52.468		
5,900.0	5,871.2	5,142.8	4,375.2	17.4	44.3	-164.31	-2,343.3	-725.7	2,519.5	2,472.1	53.097		
6,000.0	5,971.2	5,223.2	4,440.0	17.4	45.1	-164.22	-2,388.4	-741.6	2,578.9	2,531.0	53.770		
6,100.0	6,071.2	5,303.6	4,504.4	17.4	45.9	-164.13	-2,433.5	-757.5	2,638.3	2,590.4	54.443		
6,200.0	6,171.2	5,384.0	4,568.8	17.5	46.7	-164.04	-2,478.6	-773.4	2,697.7	2,649.8	55.116		
6,300.0	6,271.2	5,464.4	4,633.2	17.5	47.5	-163.95	-2,523.7	-789.3	2,757.1	2,709.2	55.789		
6,400.0	6,371.2	5,544.8	4,697.6	17.6	48.3	-163.86	-2,568.8	-805.2	2,816.5	2,768.6	56.462		
6,500.0	6,471.2	5,625.2	4,762.0	17.6	49.1	-163.77	-2,613.9	-821.1	2,875.9	2,828.0	57.135		
6,600.0	6,571.2	5,705.6	4,826.4	17.6	49.9	-163.68	-2,659.0	-837.0	2,935.3	2,887.4	57.808		
6,700.0	6,671.2	5,786.0	4,890.8	17.7	50.7	-163.59	-2,704.1	-852.9	2,994.7	2,946.8	58.481		
6,800.0	6,771.2	5,866.4	4,955.2	17.7	51.5	-163.50	-2,749.2	-868.8	3,054.1	3,006.2	59.154		
6,900.0	6,871.2	5,946.8	5,019.6	17.8	52.3	-163.41	-2,794.3	-884.7	3,113.5	3,065.6	59.827		
7,000.0	6,971.2	6,027.2	5,084.0	17.8	53.1	-163.32	-2,839.4	-900.6	3,172.9	3,125.0	60.500		
7,100.0	7,071.2	6,107.6	5,148.4	17.9	53.9	-163.23	-2,884.5	-916.5	3,232.3	3,184.4	61.173		
7,200.0	7,171.2	6,188.0	5,212.8	17.9	54.7	-163.14	-2,929.6	-932.4	3,291.7	3,243.8	61.846		
7,300.0	7,271.2	6,268.4	5,277.2	17.9	55.5	-163.05	-2,974.7	-948.3	3,351.1	3,303.2	62.519		
7,400.0	7,371.2	6,348.8	5,341.6	18.0	56.3	-162.96	-3,019.8	-964.2	3,410.5	3,362.6	63.192		
7,500.0	7,471.2	6,429.2	5,406.0	18.0	57.1	-162.87	-3,064.9	-980.1	3,469.9	3,422.0	63.865		
7,600.0	7,571.2	6,509.6	5,470.4	18.1	57.9	-162.78	-3,110.0	-996.0	3,529.3	3,481.4	64.538		
7,700.0	7,671.2	6,590.0	5,534.8	18.1	58.7	-162.69	-3,155.1	-1,011.9	3,588.7	3,540.8	65.211		
7,800.0	7,771.2	6,670.4	5,599.2	18.2	59.5	-162.60	-3,200.2	-1,027.8	3,648.1	3,600.2	65.884		
7,900.0	7,871.2	6,750.8	5,663.6	18.2	60.3	-162.51	-3,245.3	-1,043.7	3,707.5	3,659.6	66.557		
8,000.0	7,971.2	6,831.2	5,728.0	18.3	61.1	-162.42	-3,290.4	-1,059.6	3,766.9	3,719.0	67.230		
8,100.0	8,071.2	6,911.6	5,792.4	18.3	61.9	-162.33	-3,335.5	-1,075.5	3,826.3	3,778.4	67.903		
8,200.0	8,171.2	6,992.0	5,856.8	18.3	62.7	-162.24	-3,380.6	-1,091.4	3,885.7	3,837.8	68.576		
8,300.0	8,271.2	7,072.4	5,921.2	18.4	63.5	-162.15	-3,425.7	-1,107.3	3,945.1	3,897.2	69.249		
8,400.0	8,371.2	7,152.8	5,985.6	18.4	64.3	-162.06	-3,470.8	-1,123.2	4,004.5	3,956.6	69.922		
8,500.0	8,471.2	7,233.2	6,050.0	18.5	65.1	-161.97	-3,515.9	-1,139.1	4,063.9	4,016.0	70.595		
8,600.0	8,571.2	7,313.6	6,114.4	18.5	65.9	-161.88	-3,561.0	-1,155.0	4,123.3	4,075.4	71.268		
8,700.0	8,671.2	7,394.0	6,178.8	18.6	66.7	-161.79	-3,606.1	-1,170.9	4,182.7	4,134.8	71.941		
8,725.8	8,697.0	7,419.8	6,204.6	18.6	66.7	-161.79	-3,606.1	-1,170.9	4,182.7	4,134.8	71.941		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	134.31	-6.9	7.1	9.9				
100.0	100.0	100.0	100.0	0.8	0.8	134.31	-6.9	7.1	9.9	8.3	6.244		
200.0	200.0	200.0	200.0	1.4	1.3	134.41	-6.9	7.1	9.9	7.2	3.618		
292.5	292.5	292.5	292.5	1.8	2.3	145.00	-8.0	5.6	9.7	6.0	2.581 CC		
300.0	300.0	300.0	300.0	1.9	2.3	146.64	-8.1	5.3	9.7	5.9	2.532 ES		
400.0	400.0	399.8	399.6	2.2	3.5	176.00	-11.3	0.8	11.3	6.4	2.307	Level 1, SF	
500.0	500.0	498.9	498.3	2.6	3.8	-159.32	-16.7	-6.3	17.9	11.9	2.997		
600.0	600.0	597.4	596.1	2.8	4.4	-149.49	-25.0	-14.7	29.3	22.3	4.186		
700.0	700.0	695.0	692.5	3.1	5.1	-146.15	-36.3	-24.4	44.4	36.3	5.521		
800.0	800.0	791.5	787.4	3.3	5.8	-145.19	-50.5	-35.1	62.8	53.8	6.994		
900.0	900.0	886.8	880.4	3.6	6.4	-145.16	-67.4	-46.9	84.5	74.6	8.575		
1,000.0	1,000.0	980.6	971.2	3.8	7.0	-145.51	-86.9	-59.7	109.2	98.6	10.246		
1,100.0	1,100.0	1,073.1	1,060.2	4.1	7.6	-26.07	-108.7	-73.4	135.6	124.1	11.836		
1,200.0	1,199.8	1,164.8	1,147.4	4.8	8.1	-27.12	-133.0	-88.0	162.0	149.4	12.861		
1,300.0	1,299.5	1,255.6	1,232.8	5.0	8.7	-18.28	-159.6	-103.4	188.6	175.4	14.235		
1,400.0	1,399.0	1,348.9	1,319.6	5.3	9.2	-3.33	-189.2	-120.2	215.5	201.5	15.434		
1,500.0	1,498.2	1,445.7	1,409.6	5.7	9.5	7.04	-220.2	-137.8	240.4	225.6	16.233		
1,600.0	1,597.2	1,542.9	1,500.0	6.0	9.9	7.53	-251.3	-155.5	264.0	248.5	16.984		
1,700.0	1,696.2	1,640.0	1,590.3	6.2	10.3	7.80	-282.4	-173.1	287.7	271.5	17.726		
1,800.0	1,795.2	1,737.2	1,680.6	6.5	10.7	8.03	-313.6	-190.7	311.3	294.4	18.377		
1,900.0	1,894.3	1,834.3	1,770.9	6.8	11.1	8.23	-344.7	-208.4	335.0	317.3	18.948		
2,000.0	1,993.3	1,931.5	1,861.3	7.1	11.5	8.40	-375.8	-226.0	358.6	340.2	19.450		
2,100.0	2,092.3	2,028.6	1,951.6	7.4	11.9	8.55	-407.0	-243.6	382.3	363.1	19.892		
2,200.0	2,191.3	2,125.8	2,041.9	7.7	12.3	8.68	-438.1	-261.3	406.0	385.9	20.283		
2,300.0	2,290.4	2,223.0	2,132.2	8.0	12.7	8.80	-469.2	-278.9	429.6	408.8	20.628		
2,400.0	2,389.4	2,320.1	2,222.6	8.4	13.2	8.90	-500.4	-296.6	453.3	431.6	20.935		
2,500.0	2,488.4	2,417.3	2,312.9	8.7	13.6	9.00	-531.5	-314.2	477.0	454.5	21.208		
2,600.0	2,587.4	2,514.4	2,403.2	9.1	14.1	9.08	-562.6	-331.8	500.6	477.3	21.451		
2,700.0	2,686.5	2,611.6	2,493.6	9.5	14.6	9.16	-593.8	-349.5	524.3	500.1	21.669		
2,800.0	2,785.5	2,708.7	2,583.9	9.8	15.0	9.23	-624.9	-367.1	548.0	522.9	21.865		
2,900.0	2,884.5	2,805.9	2,674.2	10.2	15.5	9.30	-656.0	-384.7	571.6	545.7	22.041		
3,000.0	2,983.5	2,903.0	2,764.5	10.6	16.0	9.36	-687.2	-402.4	595.3	568.5	22.200		
3,100.0	3,082.6	3,000.2	2,854.9	11.0	16.5	9.41	-718.3	-420.0	619.0	591.3	22.344		
3,200.0	3,181.6	3,097.4	2,945.2	11.4	17.0	9.46	-749.4	-437.6	642.6	614.0	22.474		
3,300.0	3,280.6	3,194.5	3,035.5	11.8	17.6	9.51	-780.6	-455.3	666.3	636.8	22.593		
3,400.0	3,379.6	3,291.7	3,125.9	12.2	18.1	9.56	-811.7	-472.9	690.0	659.6	22.702		
3,500.0	3,478.7	3,388.8	3,216.2	12.6	18.7	9.60	-842.8	-490.6	713.7	682.4	22.801		
3,600.0	3,577.7	3,486.0	3,306.5	13.0	19.3	9.64	-874.0	-508.2	737.3	705.1	22.885		
3,700.0	3,676.7	3,583.1	3,396.8	13.4	19.9	9.67	-905.1	-525.8	761.0	727.9	22.973		
3,800.0	3,775.8	3,680.3	3,487.2	13.8	20.5	9.71	-936.2	-543.5	784.7	750.6	23.049		
3,900.0	3,874.8	3,777.5	3,577.5	14.2	21.1	9.74	-967.4	-561.1	808.3	773.4	23.120		
4,000.0	3,973.8	3,874.6	3,667.8	14.6	21.7	9.77	-998.5	-578.7	832.0	796.1	23.185		
4,100.0	4,072.8	3,971.8	3,758.2	15.0	22.3	9.80	-1,029.6	-596.4	855.7	818.9	23.245		
4,200.0	4,171.9	4,068.8	3,848.3	15.4	22.9	9.87	-1,060.7	-614.0	880.1	842.3	23.333		
4,300.0	4,271.4	4,164.9	3,937.7	15.9	23.5	9.95	-1,091.5	-631.4	907.5	868.8	23.446		
4,400.0	4,371.2	4,260.0	4,026.2	16.4	24.1	10.01	-1,122.0	-648.7	938.3	898.6	23.636		
4,500.0	4,471.2	4,354.1	4,113.6	16.8	24.7	10.05	-1,152.1	-665.8	972.3	931.7	23.940		
4,600.0	4,571.2	4,447.1	4,200.1	16.9	25.3	-147.41	-1,181.9	-682.7	1,008.9	967.7	24.500		
4,700.0	4,671.2	4,540.1	4,286.5	16.9	25.9	-147.52	-1,211.7	-699.5	1,045.7	1,004.0	25.064		
4,800.0	4,771.2	4,633.1	4,373.0	16.9	26.5	-147.62	-1,241.5	-716.4	1,082.5	1,040.2	25.611		
4,900.0	4,871.2	4,726.0	4,459.4	17.0	27.1	-147.71	-1,271.3	-733.3	1,119.3	1,076.4	26.143		
5,000.0	4,971.2	4,819.0	4,545.8	17.0	27.7	-147.80	-1,301.1	-750.2	1,156.0	1,112.7	26.661		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

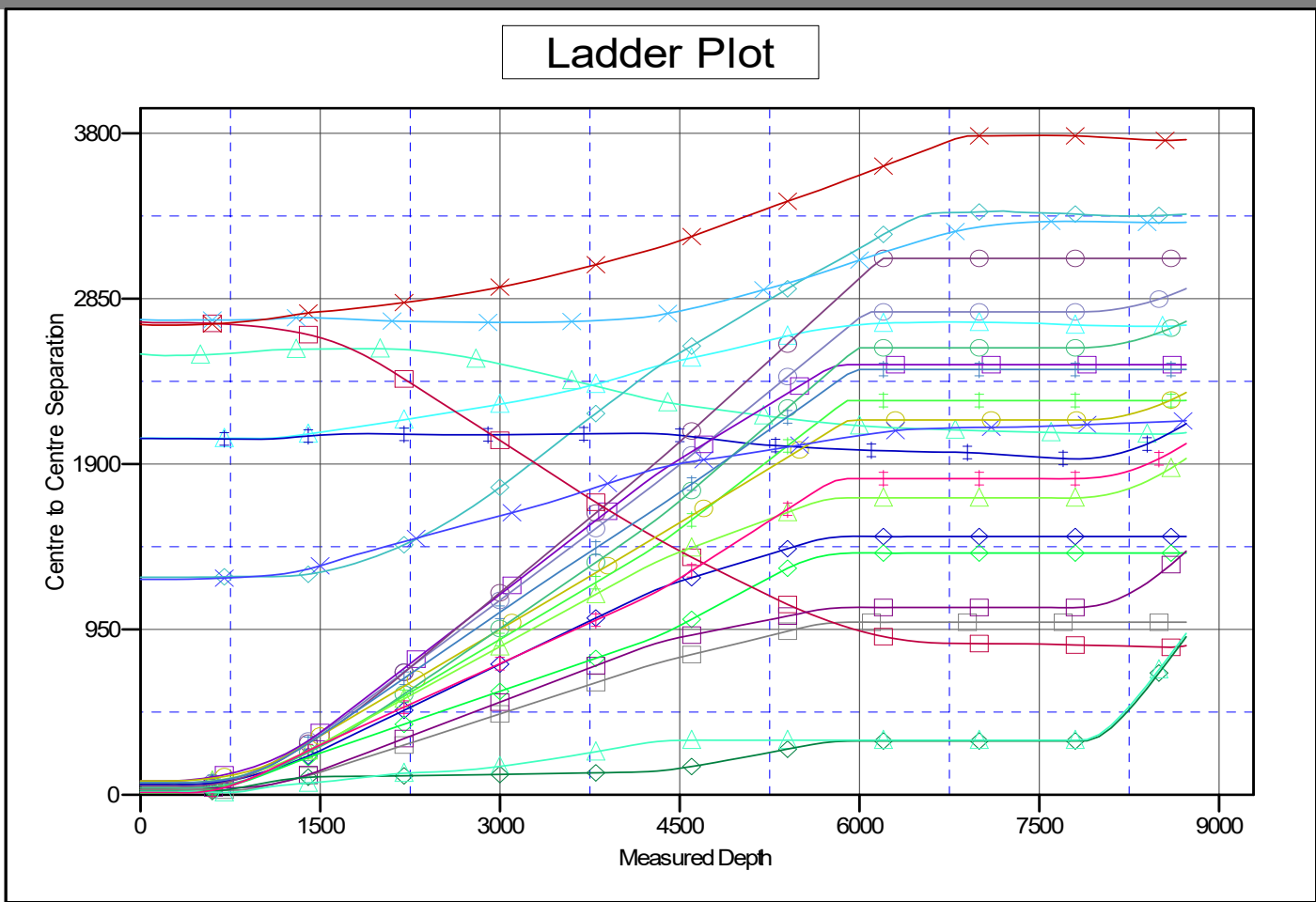
Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	5,071.2	4,912.0	4,632.3	17.1	28.3	-147.88	-1,330.9	-767.0	1,192.8	1,148.9	27.165		
5,200.0	5,171.2	5,004.9	4,718.7	17.1	28.9	-147.96	-1,360.7	-783.9	1,229.6	1,185.2	27.656		
5,300.0	5,271.2	5,097.9	4,805.1	17.1	29.5	-148.03	-1,390.5	-800.8	1,266.4	1,221.4	28.135		
5,400.0	5,371.2	5,244.3	4,942.1	17.2	30.4	-148.14	-1,435.4	-826.3	1,301.9	1,255.9	28.291		
5,500.0	5,471.2	5,420.7	5,110.3	17.2	31.3	-148.23	-1,481.5	-852.4	1,332.0	1,284.8	28.214		
5,600.0	5,571.2	5,603.5	5,287.7	17.2	32.1	-148.31	-1,519.8	-874.0	1,356.0	1,307.8	28.122		
5,700.0	5,671.2	5,791.4	5,472.6	17.3	32.7	-148.36	-1,548.7	-890.4	1,373.7	1,324.7	28.035		
5,800.0	5,771.2	5,982.9	5,662.9	17.3	33.2	-148.39	-1,567.3	-901.0	1,384.8	1,335.3	27.973		
5,900.0	5,871.2	6,176.5	5,856.3	17.4	33.4	-148.41	-1,574.8	-905.2	1,389.3	1,339.8	28.059		
6,000.0	5,971.2	6,291.4	5,971.2	17.4	33.4	-148.41	-1,574.9	-905.3	1,389.4	1,339.9	28.063		
6,100.0	6,071.2	6,391.4	6,071.2	17.4	33.4	-148.41	-1,574.9	-905.3	1,389.4	1,339.8	28.032		
6,200.0	6,171.2	6,491.4	6,171.2	17.5	33.4	-148.41	-1,574.9	-905.3	1,389.4	1,339.8	28.001		
6,300.0	6,271.2	6,591.4	6,271.2	17.5	33.4	-148.41	-1,574.9	-905.3	1,389.4	1,339.7	27.970		
6,400.0	6,371.2	6,691.4	6,371.2	17.6	33.4	-148.41	-1,574.9	-905.3	1,389.4	1,339.7	27.939		
6,500.0	6,471.2	6,791.4	6,471.2	17.6	33.5	-148.41	-1,574.9	-905.3	1,389.4	1,339.6	27.908		
6,600.0	6,571.2	6,891.4	6,571.2	17.6	33.5	-148.41	-1,574.9	-905.3	1,389.4	1,339.5	27.876		
6,700.0	6,671.2	6,991.4	6,671.2	17.7	33.5	-148.41	-1,574.9	-905.3	1,389.4	1,339.5	27.845		
6,800.0	6,771.2	7,091.4	6,771.2	17.7	33.5	-148.41	-1,574.9	-905.3	1,389.4	1,339.4	27.813		
6,900.0	6,871.2	7,191.4	6,871.2	17.8	33.5	-148.41	-1,574.9	-905.3	1,389.4	1,339.4	27.781		
7,000.0	6,971.2	7,291.4	6,971.2	17.8	33.5	-148.41	-1,574.9	-905.3	1,389.4	1,339.3	27.749		
7,100.0	7,071.2	7,391.4	7,071.2	17.9	33.5	-148.41	-1,574.9	-905.3	1,389.4	1,339.3	27.716		
7,200.0	7,171.2	7,491.4	7,171.2	17.9	33.5	-148.41	-1,574.9	-905.3	1,389.4	1,339.2	27.684		
7,300.0	7,271.2	7,591.4	7,271.2	17.9	33.5	-148.41	-1,574.9	-905.3	1,389.4	1,339.1	27.651		
7,400.0	7,371.2	7,691.4	7,371.2	18.0	33.5	-148.41	-1,574.9	-905.3	1,389.4	1,339.1	27.618		
7,500.0	7,471.2	7,791.4	7,471.2	18.0	33.5	-148.41	-1,574.9	-905.3	1,389.4	1,339.0	27.585		
7,600.0	7,571.2	7,891.4	7,571.2	18.1	33.6	-148.41	-1,574.9	-905.3	1,389.4	1,339.0	27.552		
7,700.0	7,671.2	7,991.4	7,671.2	18.1	33.6	-148.41	-1,574.9	-905.3	1,389.4	1,338.9	27.518		
7,800.0	7,771.2	8,091.4	7,771.2	18.2	33.6	-148.41	-1,574.9	-905.3	1,389.4	1,338.8	27.484		
7,900.0	7,871.2	8,191.4	7,871.2	18.2	33.6	-148.41	-1,574.9	-905.3	1,389.4	1,338.8	27.451		
8,000.0	7,971.2	8,291.4	7,971.2	18.3	33.6	-148.41	-1,574.9	-905.3	1,389.4	1,338.7	27.417		
8,100.0	8,071.2	8,391.4	8,071.2	18.3	33.6	-148.41	-1,574.9	-905.3	1,389.4	1,338.6	27.383		
8,200.0	8,171.2	8,491.4	8,171.2	18.3	33.6	-148.41	-1,574.9	-905.3	1,389.4	1,338.6	27.348		
8,300.0	8,271.2	8,591.4	8,271.2	18.4	33.6	-148.41	-1,574.9	-905.3	1,389.4	1,338.5	27.314		
8,400.0	8,371.2	8,691.4	8,371.2	18.4	33.6	-148.41	-1,574.9	-905.3	1,389.4	1,338.4	27.279		
8,500.0	8,471.2	8,791.4	8,471.2	18.5	33.7	-148.41	-1,574.9	-905.3	1,389.4	1,338.4	27.245		
8,600.0	8,571.2	8,891.4	8,571.2	18.5	33.7	-148.41	-1,574.9	-905.3	1,389.4	1,338.3	27.210		
8,700.0	8,671.2	8,991.4	8,671.2	18.6	33.7	-148.41	-1,574.9	-905.3	1,389.4	1,338.2	27.174		
8,702.6	8,673.8	8,994.0	8,673.8	18.6	33.7	-148.41	-1,574.9	-905.3	1,389.4	1,338.2	27.173		
8,725.8	8,697.0	9,007.2	8,687.0	18.6	33.7	-148.41	-1,574.9	-905.3	1,389.4	1,338.2	27.132		

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=30' @ 7487.0usft (TBD) Coordinates are relative to: Currier BCU 0993-16-08M - Slot 16-08M
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Central Zone
 Central Meridian is -105.500000 Grid Convergence at Surface is: -1.43°



LEGEND

- er BCU 0993-16-14W, OH, Design #3 V0
- er Buzzard Creek 16-12, Wellbore #1, Wellbore #1 V0
- er BCU 0993-16-06W, OH, Design #3 V0
- er BCU 0993-16-14E, OH, Design #2 V0
- er 0993-16-04M, OH, Design #4 V0
- er BCU Fed 0993-16-12W, OH, Design #3 V0
- er Buzzard Creek 16-1, Wellbore #1, Wellbore #1 V0
- er Currier 9-15, Wellbore #1, Wellbore #1 V0
- (Offset) Buzzard Creek 16-8, Wellbore #1, Wellbore #1 V0
- Currier 0993-16-01M, OH, Design #3 V0
- Currier BCU 0993-16-15E, OH, Design #3 V0
- (Offset) Buzzard Creek 16-10, Wellbore #1, Wellbore #1 V0
- Currier BCU 0993-16-05M, OH, Design #2 V0
- Currier BCU 0993-16-11E, OH, Design #3 V0
- Currier BCU 0993-16-15W, OH, Design #2 V0
- Currier BCU 0993-16-09M, OH, Design #2 V0
- (Offset) Currier Family 16-3, Wellbore #1, Wellbore #1 V0
- (Offset) Buzzard Creek 15-12, Wellbore #1, Wellbore #1 V0
- (Offset) Buzzard Creek 21-1, Wellbore #1, Wellbore #1 V0
- Currier 0993-16-03M, OH, Design #2 V0
- Currier BCU 0993-16-13E, OH, Design #3 V0
- Currier BCU 0993-16-07M, OH, Design #2 V0
- Currier BCU 0993-16-13W, OH, Design #2 V0

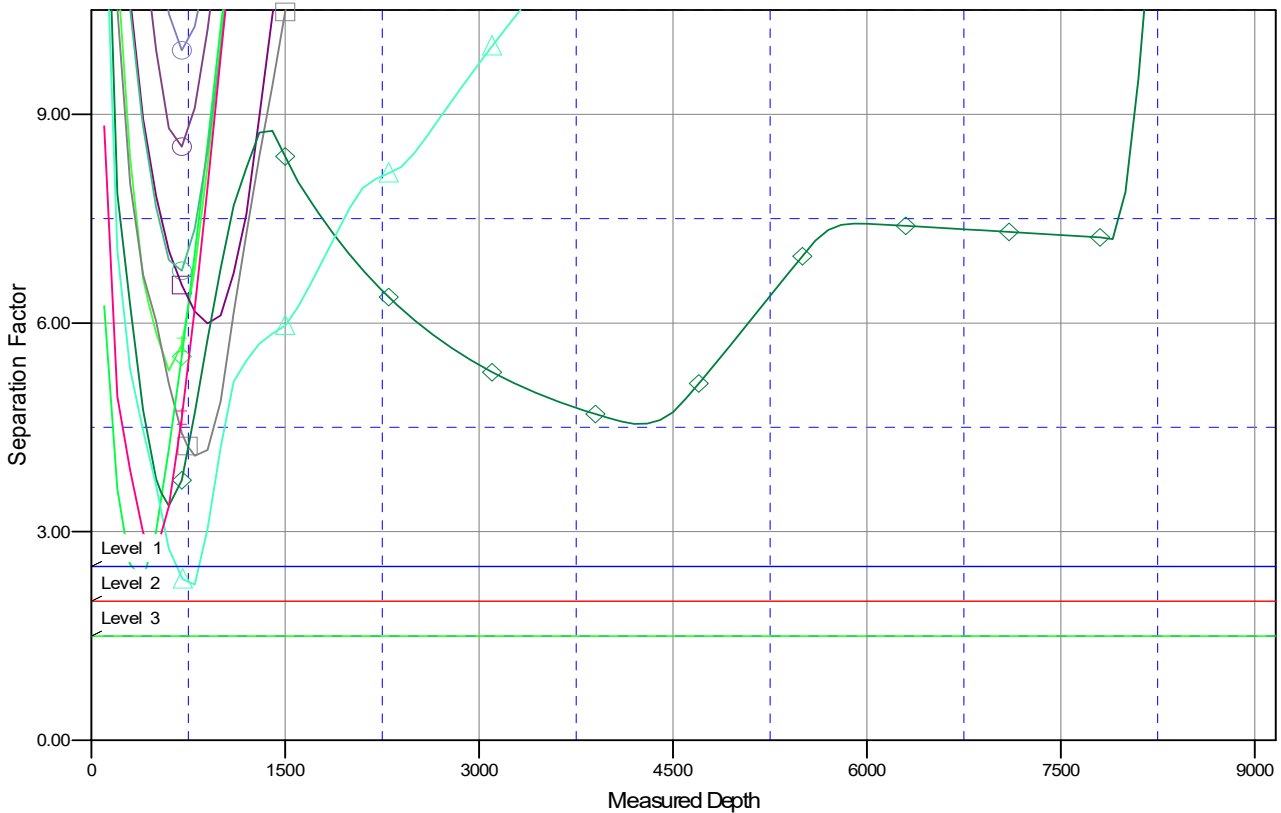


Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Currier BCU 0993-16-08M - Slot 16-08M
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7487.0usft (TBD)
Reference Site:	Currier 0993-16-07 Pad	MD Reference:	RKB=30' @ 7487.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Currier BCU 0993-16-08M	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #3	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=30' @ 7487.0usft (TBD)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000

Coordinates are relative to: Currier BCU 0993-16-08M - Slot 16-08M
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.43°

Separation Factor Plot



LEGEND

er BCU 0993-16-14W, OH, Design #3 V0	◆ (Offset) Buzzard Creek 16-8, Wellbore #1, Wellbore #1 V0	◆ (Offset) Currier Family 16-3, Wellbore #1, Wellbore #1 V0
er BCU 0993-16-06W, OH, Design #3 V0	■ Currier 0993-16-01M, OH, Design #3 V0	△ (Offset) Buzzard Creek 15-12, Wellbore #1, Wellbore #1 V0
er BCU 0993-16-14E, OH, Design #2 V0	○ Currier BCU 0993-16-15E, OH, Design #3 V0	✕ (Offset) Buzzard Creek 21-1, Wellbore #1, Wellbore #1 V0
er 0993-16-04M, OH, Design #4 V0	■ (Offset) Buzzard Creek 16-10, Wellbore #1, Wellbore #1 V0	△ Currier 0993-16-03M, OH, Design #2 V0
er BCU Fed 0993-16-12W, OH, Design #3 V0	■ Currier BCU 0993-16-05M, OH, Design #2 V0	◆ Currier BCU 0993-16-13E, OH, Design #3 V0
er BCU 0993-16-12W, Wellbore #1, Wellbore #1 V0	○ Currier BCU 0993-16-11E, OH, Design #3 V0	△ Currier BCU 0993-16-07M, OH, Design #2 V0
er Currier 9-15, Wellbore #1, Wellbore #1 V0	○ Currier BCU 0993-16-15W, OH, Design #2 V0	✕ Currier BCU 0993-16-13W, OH, Design #2 V0
	◆ Currier BCU 0993-16-09M, OH, Design #2 V0	