



Laramie Energy, LLC

Mesa County, CO

Laramie 0993-29-01

Laramie Fed 0993-21-18W

OH

Design #1

KLX Anticollision Report

23 August, 2023





Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference	Design #1		
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	8/23/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	8,240.0	Design #1 (OH)	OWSG (REV5) MWD HD	OWSG MWD - Standard

Site Name Offset Well - Wellbore - Design	Reference Measured	Offset Measured	Distance		Separation Factor	Warning
	Depth (usft)	Depth (usft)	Between Centres (usft)	Between Ellipses (usft)		
Laramie 0993-29-01						
Laramie 0993-20-11E - OH - Design #1	200.0	200.0	120.1	117.7	48.622	CC, ES
Laramie 0993-20-11E - OH - Design #1	600.0	576.9	166.3	157.5	18.902	SF
Laramie 0993-20-12E - OH - Design #1	200.0	200.0	104.0	101.5	42.085	CC, ES
Laramie 0993-20-12E - OH - Design #1	600.0	580.2	147.7	139.1	17.295	SF
Laramie 0993-20-13E - OH - Design #1	200.0	200.0	88.0	85.5	35.600	CC, ES
Laramie 0993-20-13E - OH - Design #1	600.0	582.4	130.6	121.4	14.053	SF
Laramie 0993-20-14E - OH - Design #1	200.0	200.0	71.8	69.4	29.080	CC, ES
Laramie 0993-20-14E - OH - Design #1	600.0	587.8	107.9	98.8	11.817	SF
Laramie 0993-20-15E - OH - Design #1	200.0	200.0	55.9	53.4	22.626	CC, ES
Laramie 0993-20-15E - OH - Design #1	600.0	592.4	86.4	77.8	10.070	SF
Laramie 0993-20-16E - OH - Design #1	200.0	200.0	40.0	37.5	16.174	CC, ES
Laramie 0993-20-16E - OH - Design #1	500.0	499.1	53.5	46.9	8.083	SF
Laramie 0993-20-17E - OH - Design #1	200.0	200.0	24.0	21.5	9.720	CC, ES
Laramie 0993-20-17E - OH - Design #1	500.0	496.2	44.7	36.8	5.699	SF
Laramie 0993-20-18E - OH - Design #1	200.0	200.0	8.1	5.6	3.266	CC, ES
Laramie 0993-20-18E - OH - Design #1	300.0	299.8	9.9	6.5	2.882	SF
Laramie Fed 0993-21-11W - OH - Design #1	200.0	200.0	112.0	109.6	45.354	CC, ES
Laramie Fed 0993-21-11W - OH - Design #1	700.0	691.6	153.8	146.0	19.817	SF
Laramie Fed 0993-21-12W - OH - Design #1	200.0	200.0	96.0	93.5	38.842	CC, ES
Laramie Fed 0993-21-12W - OH - Design #1	700.0	693.7	134.9	127.2	17.528	SF
Laramie Fed 0993-21-13W - OH - Design #1	200.0	200.0	79.9	77.4	32.349	CC, ES
Laramie Fed 0993-21-13W - OH - Design #1	700.0	699.0	108.4	101.0	14.691	SF
Laramie Fed 0993-21-14W - OH - Design #1	200.0	200.0	64.0	61.5	25.895	CC, ES
Laramie Fed 0993-21-14W - OH - Design #1	700.0	701.1	88.2	80.8	11.879	SF
Laramie Fed 0993-21-15W - OH - Design #1	200.0	200.0	47.8	45.4	19.357	CC, ES
Laramie Fed 0993-21-15W - OH - Design #1	700.0	702.2	68.0	60.3	8.783	SF
Laramie Fed 0993-21-16W - OH - Design #1	200.0	200.0	31.9	29.4	12.905	CC
Laramie Fed 0993-21-16W - OH - Design #1	300.0	300.4	32.7	29.4	9.786	ES
Laramie Fed 0993-21-16W - OH - Design #1	600.0	601.9	41.2	34.1	5.825	SF
Laramie Fed 0993-21-17W - OH - Design #1	200.0	200.0	15.9	13.5	6.451	CC
Laramie Fed 0993-21-17W - OH - Design #1	400.0	400.6	17.8	12.7	3.445	ES
Laramie Fed 0993-21-17W - OH - Design #1	700.0	701.9	24.2	15.4	2.746	SF

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



Anticollision Report



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Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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	-46.75	82.3	-87.5	120.1			
100.0	100.0	100.0	100.0	0.4	0.4	-46.75	82.3	-87.5	120.1	119.3	151.658	
200.0	200.0	200.0	200.0	1.2	1.2	-46.75	82.3	-87.5	120.1	117.7	48.622	CC, ES
300.0	300.0	296.2	296.1	2.3	2.4	-124.16	84.3	-87.7	122.9	119.0	31.619	
400.0	399.7	391.9	391.7	3.9	3.8	-124.50	90.3	-88.2	131.3	125.4	22.336	
500.0	499.1	485.4	484.6	5.0	4.8	-125.27	99.6	-89.9	145.5	138.1	19.596	
600.0	598.0	576.9	575.3	6.0	5.6	-126.64	111.6	-93.9	166.3	157.5	18.902	SF
700.0	696.0	666.0	663.1	6.8	6.3	-128.22	125.9	-100.0	193.6	183.6	19.217	
800.0	793.2	752.2	747.2	7.6	7.0	-129.71	142.3	-108.0	227.3	216.0	20.173	
900.0	889.2	834.9	827.4	8.3	7.6	-130.98	160.3	-117.5	267.2	254.8	21.587	
1,000.0	983.9	913.7	903.1	9.0	8.1	-131.96	179.5	-128.4	313.0	299.6	23.342	
1,100.0	1,077.2	988.7	974.4	9.3	8.6	-133.13	199.6	-140.2	364.2	350.0	25.696	
1,200.0	1,170.4	1,061.0	1,042.3	9.6	9.1	-134.34	220.6	-153.0	418.4	403.5	28.102	
1,300.0	1,263.6	1,130.6	1,107.0	9.9	9.5	-135.15	242.4	-166.7	475.1	459.5	30.480	
1,400.0	1,356.8	1,200.0	1,170.7	10.2	10.0	-135.70	265.7	-181.6	534.1	517.8	32.757	
1,500.0	1,450.0	1,262.3	1,227.1	10.6	10.3	-136.02	287.8	-196.0	595.3	578.3	35.169	
1,600.0	1,543.1	1,324.3	1,282.6	10.9	10.7	-136.21	311.0	-211.3	658.4	640.8	37.477	
1,700.0	1,636.3	1,384.0	1,335.2	11.3	11.1	-136.29	334.3	-227.0	723.4	705.2	39.762	
1,800.0	1,729.5	1,441.3	1,385.0	11.7	11.4	-136.31	357.7	-242.9	790.1	771.3	42.027	
1,900.0	1,822.7	1,500.0	1,435.3	12.1	11.7	-136.26	382.7	-260.0	858.5	839.0	44.129	
2,000.0	1,915.9	1,549.1	1,476.8	12.5	12.0	-136.18	404.2	-274.9	928.4	908.4	46.510	
2,100.0	2,009.1	1,600.0	1,519.2	12.9	12.3	-136.07	427.4	-291.1	999.7	979.2	48.721	
2,200.0	2,102.2	1,648.3	1,558.8	13.3	12.5	-135.95	449.9	-306.9	1,072.5	1,051.4	50.981	
2,300.0	2,195.4	1,695.0	1,596.6	13.7	12.8	-135.81	472.4	-322.8	1,146.5	1,124.9	53.219	
2,400.0	2,288.6	1,761.3	1,649.8	14.2	13.0	-135.61	504.6	-345.7	1,221.1	1,198.9	54.895	
2,500.0	2,381.8	1,827.8	1,703.2	14.6	13.2	-135.43	537.0	-368.6	1,295.8	1,272.8	56.416	
2,600.0	2,475.0	1,894.3	1,756.6	15.1	13.5	-135.27	569.3	-391.5	1,370.4	1,346.7	57.789	
2,700.0	2,568.1	1,960.8	1,809.9	15.5	13.8	-135.13	601.7	-414.4	1,445.1	1,420.6	59.071	
2,800.0	2,661.3	2,027.3	1,863.3	16.0	14.1	-135.00	634.0	-437.4	1,519.8	1,494.5	60.230	
2,900.0	2,754.5	2,093.7	1,916.7	16.5	14.5	-134.89	666.3	-460.3	1,594.5	1,568.4	61.241	
3,000.0	2,847.7	2,160.2	1,970.1	17.1	15.0	-134.78	698.7	-483.2	1,669.1	1,642.3	62.217	
3,100.0	2,940.9	2,226.7	2,023.4	17.8	15.6	-134.69	731.0	-506.2	1,743.8	1,716.2	63.128	
3,200.0	3,034.0	2,293.2	2,076.8	18.4	16.3	-134.60	763.3	-529.1	1,818.5	1,790.1	63.963	
3,300.0	3,127.2	2,359.7	2,130.2	19.1	16.9	-134.52	795.7	-552.0	1,893.2	1,863.9	64.722	
3,400.0	3,220.4	2,426.1	2,183.5	19.8	17.6	-134.44	828.0	-574.9	1,967.8	1,937.8	65.432	
3,500.0	3,313.6	2,492.6	2,236.9	20.4	18.4	-134.37	860.3	-597.9	2,042.5	2,011.6	66.089	
3,600.0	3,406.8	2,559.1	2,290.3	21.1	19.1	-134.31	892.7	-620.8	2,117.2	2,085.5	66.693	
3,700.0	3,500.0	2,625.6	2,343.6	21.8	19.8	-134.25	925.0	-643.7	2,191.9	2,159.3	67.258	
3,800.0	3,593.1	2,692.1	2,397.0	22.4	20.5	-134.19	957.4	-666.7	2,266.6	2,233.2	67.783	
3,900.0	3,686.3	2,758.5	2,450.4	23.1	21.3	-134.14	989.7	-689.6	2,341.3	2,307.0	68.269	
4,000.0	3,779.5	2,825.0	2,503.7	23.8	22.0	-134.09	1,022.0	-712.5	2,416.0	2,380.8	68.724	
4,100.0	3,872.7	2,891.5	2,557.1	24.4	22.8	-134.04	1,054.4	-735.5	2,490.7	2,454.6	69.150	
4,200.0	3,965.9	2,958.0	2,610.5	25.1	23.5	-134.00	1,086.7	-758.4	2,565.4	2,528.5	69.545	
4,300.0	4,059.0	3,024.5	2,663.8	25.8	24.2	-133.96	1,119.0	-781.3	2,640.0	2,602.3	69.917	
4,400.0	4,152.2	3,090.9	2,717.2	26.5	25.0	-133.92	1,151.4	-804.2	2,714.7	2,676.1	70.265	
4,500.0	4,245.4	3,157.4	2,770.6	27.1	25.7	-133.88	1,183.7	-827.2	2,789.4	2,749.9	70.590	
4,600.0	4,338.6	3,223.9	2,824.0	27.8	26.5	-133.85	1,216.1	-850.1	2,864.1	2,823.7	70.897	
4,700.0	4,431.8	3,290.4	2,877.3	28.5	27.2	-133.81	1,248.4	-873.0	2,938.8	2,897.5	71.185	
4,800.0	4,524.9	3,356.9	2,930.7	29.1	28.0	-133.78	1,280.7	-896.0	3,013.5	2,971.3	71.455	
4,900.0	4,618.1	3,423.4	2,984.1	29.8	28.7	-133.75	1,313.1	-918.9	3,088.2	3,045.1	71.710	
5,000.0	4,711.3	3,489.8	3,037.4	30.5	29.5	-133.72	1,345.4	-941.8	3,162.9	3,118.9	71.950	

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



Anticollision Report



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Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 0993-20-11E - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,804.5	3,556.3	3,090.8	31.1	30.2	-133.70	1,377.7	-964.7	3,237.6	3,192.7	72.176		
5,200.0	4,897.7	3,622.8	3,144.2	31.8	31.0	-133.67	1,410.1	-987.7	3,312.3	3,266.5	72.391		
5,300.0	4,990.9	3,689.3	3,197.5	32.5	31.7	-133.64	1,442.4	-1,010.6	3,387.0	3,340.3	72.593		
5,400.0	5,084.0	3,755.8	3,250.9	33.2	32.5	-133.62	1,474.8	-1,033.5	3,461.7	3,414.1	72.783		
5,500.0	5,177.2	3,822.2	3,304.3	33.8	33.2	-133.60	1,507.1	-1,056.5	3,536.4	3,487.9	72.964		
5,600.0	5,270.4	3,888.7	3,357.6	34.5	34.0	-133.58	1,539.4	-1,079.4	3,611.1	3,561.7	73.136		
5,700.0	5,364.1	3,956.0	3,411.7	35.1	34.7	-135.21	1,572.2	-1,102.6	3,685.0	3,634.7	73.290		
5,800.0	5,459.3	4,025.4	3,467.3	35.7	35.5	-136.89	1,605.9	-1,126.5	3,756.8	3,705.6	73.366		
5,900.0	5,555.7	4,096.7	3,524.6	36.2	36.3	-138.35	1,640.6	-1,151.1	3,826.4	3,774.3	73.405		
6,000.0	5,653.2	4,169.8	3,583.3	36.6	37.2	-139.62	1,676.2	-1,176.3	3,893.7	3,840.7	73.418		
6,100.0	5,751.6	4,244.7	3,643.4	36.9	38.0	-140.72	1,712.6	-1,202.2	3,958.5	3,904.6	73.411		
6,200.0	5,850.6	4,321.0	3,704.7	37.1	38.9	-141.66	1,749.7	-1,228.5	4,020.8	3,966.0	73.389		
6,300.0	5,950.2	4,398.8	3,767.1	37.3	39.8	-142.46	1,787.5	-1,255.3	4,080.4	4,024.8	73.360		
6,400.0	6,050.0	4,477.8	3,830.6	37.4	40.7	-143.14	1,826.0	-1,282.6	4,137.3	4,080.9	73.336		
6,500.0	6,150.0	4,557.9	3,894.8	37.5	41.6	-66.10	1,864.9	-1,310.2	4,191.6	4,134.6	73.505		
6,600.0	6,250.0	4,638.2	3,959.3	37.5	42.5	-65.71	1,904.0	-1,337.9	4,245.5	4,187.9	73.703		
6,700.0	6,350.0	4,718.4	4,023.7	37.5	43.4	-65.32	1,943.0	-1,365.6	4,299.6	4,241.4	73.896		
6,800.0	6,450.0	4,798.7	4,088.2	37.5	44.3	-64.95	1,982.1	-1,393.3	4,353.7	4,295.0	74.087		
6,900.0	6,550.0	4,879.0	4,152.6	37.6	45.2	-64.58	2,021.1	-1,420.9	4,408.1	4,348.7	74.276		
7,000.0	6,650.0	4,959.3	4,217.0	37.6	46.1	-64.23	2,060.2	-1,448.6	4,462.5	4,402.6	74.462		
7,100.0	6,750.0	7,712.8	6,750.0	37.6	61.5	-59.13	2,732.1	-1,925.1	4,479.8	4,401.8	57.371		
7,200.0	6,850.0	7,812.8	6,850.0	37.7	61.5	-59.13	2,732.1	-1,925.1	4,479.8	4,401.7	57.336		
7,300.0	6,950.0	7,912.8	6,950.0	37.7	61.5	-59.13	2,732.1	-1,925.1	4,479.8	4,401.7	57.302		
7,400.0	7,050.0	8,012.8	7,050.0	37.7	61.5	-59.13	2,732.1	-1,925.1	4,479.8	4,401.6	57.267		
7,500.0	7,150.0	8,112.8	7,150.0	37.7	61.5	-59.13	2,732.1	-1,925.1	4,479.8	4,401.6	57.232		
7,600.0	7,250.0	8,212.8	7,250.0	37.8	61.5	-59.13	2,732.1	-1,925.1	4,479.8	4,401.5	57.196		
7,700.0	7,350.0	8,312.8	7,350.0	37.8	61.6	-59.13	2,732.1	-1,925.1	4,479.8	4,401.5	57.161		
7,800.0	7,450.0	8,412.8	7,450.0	37.8	61.6	-59.13	2,732.1	-1,925.1	4,479.8	4,401.4	57.125		
7,900.0	7,550.0	8,512.8	7,550.0	37.9	61.6	-59.13	2,732.1	-1,925.1	4,479.8	4,401.4	57.090		
8,000.0	7,650.0	8,612.8	7,650.0	37.9	61.6	-59.13	2,732.1	-1,925.1	4,479.8	4,401.3	57.054		
8,100.0	7,750.0	8,712.8	7,750.0	37.9	61.6	-59.13	2,732.1	-1,925.1	4,479.8	4,401.3	57.017		
8,200.0	7,850.0	8,812.8	7,850.0	38.0	61.6	-59.13	2,732.1	-1,925.1	4,479.8	4,401.2	56.982		
8,240.0	7,890.0	8,821.7	7,859.0	38.0	61.6	-59.13	2,732.1	-1,925.1	4,479.9	4,401.3	56.938		

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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 Centre +N/-S (usft)	+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	-46.64	71.4	-75.6	104.0				
100.0	100.0	100.0	100.0	0.4	0.4	-46.64	71.4	-75.6	104.0	103.2	131.267		
200.0	200.0	200.0	200.0	1.2	1.2	-46.64	71.4	-75.6	104.0	101.5	42.085	CC, ES	
300.0	300.0	299.0	299.0	2.3	1.5	-124.89	71.4	-75.7	105.3	102.0	31.376		
400.0	399.7	394.3	394.2	3.9	2.6	-127.96	72.4	-78.5	112.1	106.8	21.015		
500.0	499.1	488.1	487.8	5.0	3.4	-132.42	74.8	-84.9	126.1	119.0	17.706		
600.0	598.0	580.2	579.3	6.0	3.9	-136.59	79.5	-93.7	147.7	139.1	17.295	SF	
700.0	696.0	669.9	668.1	6.8	4.7	-139.74	87.1	-104.2	176.5	166.3	17.346		
800.0	793.2	756.7	753.5	7.6	5.5	-141.94	97.3	-116.1	212.0	200.3	18.151		
900.0	889.2	840.2	835.0	8.3	6.2	-143.36	109.6	-129.2	253.9	241.0	19.546		
1,000.0	983.9	920.0	912.3	9.0	6.9	-144.19	123.8	-143.1	301.8	287.6	21.331		
1,100.0	1,077.2	1,000.0	989.0	9.3	7.5	-145.02	140.2	-158.5	354.8	339.8	23.635		
1,200.0	1,170.4	1,069.6	1,055.2	9.6	8.0	-145.68	156.4	-173.1	410.4	394.8	26.216		
1,300.0	1,263.6	1,140.9	1,122.1	9.9	8.5	-146.00	174.7	-189.1	468.1	451.7	28.640		
1,400.0	1,356.8	1,209.8	1,186.2	10.2	9.0	-146.06	194.1	-205.6	527.6	510.6	31.023		
1,500.0	1,450.0	1,276.5	1,247.4	10.6	9.4	-145.96	214.4	-222.5	588.9	571.3	33.366		
1,600.0	1,543.1	1,340.8	1,305.7	10.9	9.8	-145.73	235.5	-239.7	651.9	633.7	35.666		
1,700.0	1,636.3	1,400.0	1,358.7	11.3	10.2	-145.45	256.1	-256.3	716.6	697.8	38.024		
1,800.0	1,729.5	1,462.6	1,413.9	11.7	10.6	-145.08	279.1	-274.6	782.8	763.3	40.158		
1,900.0	1,822.7	1,520.1	1,463.9	12.1	11.0	-144.70	301.4	-292.1	850.6	830.5	42.358		
2,000.0	1,915.9	1,575.5	1,511.5	12.5	11.3	-144.30	323.9	-309.6	919.7	899.0	44.531		
2,100.0	2,009.1	1,628.8	1,556.5	12.9	11.6	-143.90	346.5	-326.9	990.2	969.0	46.684		
2,200.0	2,102.2	1,680.0	1,599.2	13.3	11.9	-143.49	369.0	-344.1	1,062.0	1,040.2	48.818		
2,300.0	2,195.4	1,736.7	1,645.8	13.7	12.1	-143.03	394.8	-363.6	1,134.9	1,112.6	50.863		
2,400.0	2,288.6	1,804.5	1,701.3	14.2	12.3	-142.53	425.8	-387.0	1,208.1	1,185.1	52.522		
2,500.0	2,381.8	1,872.3	1,756.8	14.6	12.6	-142.09	456.8	-410.5	1,281.4	1,257.7	54.028		
2,600.0	2,475.0	1,940.0	1,812.3	15.1	12.8	-141.69	487.8	-433.9	1,354.6	1,330.2	55.413		
2,700.0	2,568.1	2,007.8	1,867.9	15.5	13.1	-141.34	518.7	-457.3	1,427.9	1,402.8	56.684		
2,800.0	2,661.3	2,075.6	1,923.4	16.0	13.4	-141.02	549.7	-480.8	1,501.3	1,475.3	57.857		
2,900.0	2,754.5	2,143.3	1,978.9	16.5	13.8	-140.73	580.7	-504.2	1,574.6	1,547.9	58.989		
3,000.0	2,847.7	2,211.1	2,034.5	17.1	14.3	-140.46	611.7	-527.6	1,648.0	1,620.5	59.906		
3,100.0	2,940.9	2,278.9	2,090.0	17.8	15.0	-140.22	642.7	-551.0	1,721.3	1,693.0	60.815		
3,200.0	3,034.0	2,346.6	2,145.5	18.4	15.7	-139.99	673.7	-574.5	1,794.7	1,765.6	61.669		
3,300.0	3,127.2	2,414.4	2,201.0	19.1	16.3	-139.79	704.7	-597.9	1,868.1	1,838.2	62.462		
3,400.0	3,220.4	2,482.2	2,256.6	19.8	17.1	-139.60	735.7	-621.3	1,941.5	1,910.8	63.189		
3,500.0	3,313.6	2,549.9	2,312.1	20.4	17.8	-139.42	766.6	-644.7	2,015.0	1,983.4	63.862		
3,600.0	3,406.8	2,617.7	2,367.6	21.1	18.5	-139.26	797.6	-668.2	2,088.4	2,056.0	64.493		
3,700.0	3,500.0	2,685.5	2,423.2	21.8	19.2	-139.11	828.6	-691.6	2,161.8	2,128.6	65.077		
3,800.0	3,593.1	2,753.2	2,478.7	22.4	19.9	-138.96	859.6	-715.0	2,235.3	2,201.2	65.620		
3,900.0	3,686.3	2,821.0	2,534.2	23.1	20.7	-138.83	890.6	-738.4	2,308.7	2,273.8	66.129		
4,000.0	3,779.5	2,888.8	2,589.7	23.8	21.4	-138.70	921.6	-761.9	2,382.2	2,346.4	66.604		
4,100.0	3,872.7	2,956.6	2,645.3	24.4	22.1	-138.59	952.6	-785.3	2,455.6	2,419.0	67.046		
4,200.0	3,965.9	3,024.3	2,700.8	25.1	22.8	-138.48	983.6	-808.7	2,529.1	2,491.6	67.462		
4,300.0	4,059.0	3,092.1	2,756.3	25.8	23.6	-138.37	1,014.6	-832.2	2,602.6	2,564.2	67.852		
4,400.0	4,152.2	3,159.9	2,811.9	26.5	24.3	-138.27	1,045.5	-855.6	2,676.0	2,636.8	68.216		
4,500.0	4,245.4	3,227.6	2,867.4	27.1	25.0	-138.18	1,076.5	-879.0	2,749.5	2,709.4	68.559		
4,600.0	4,338.6	3,295.4	2,922.9	27.8	25.8	-138.09	1,107.5	-902.4	2,823.0	2,782.0	68.883		
4,700.0	4,431.8	3,363.2	2,978.4	28.5	26.5	-138.00	1,138.5	-925.9	2,896.5	2,854.6	69.185		
4,800.0	4,524.9	3,430.9	3,034.0	29.1	27.2	-137.92	1,169.5	-949.3	2,969.9	2,927.2	69.472		
4,900.0	4,618.1	3,498.7	3,089.5	29.8	28.0	-137.85	1,200.5	-972.7	3,043.4	2,999.8	69.742		
5,000.0	4,711.3	3,566.5	3,145.0	30.5	28.7	-137.77	1,231.5	-996.1	3,116.9	3,072.4	69.996		

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W 0	Survey Calculation Method:	Minimum Curvature
Well Error:	.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 0993-20-12E - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,804.5	3,634.2	3,200.6	31.1	29.4	-137.71	1,262.5	-1,019.6	3,190.4	3,145.0	70.236		
5,200.0	4,897.7	3,702.0	3,256.1	31.8	30.2	-137.64	1,293.4	-1,043.0	3,263.9	3,217.6	70.464		
5,300.0	4,990.9	3,769.8	3,311.6	32.5	30.9	-137.58	1,324.4	-1,066.4	3,337.4	3,290.2	70.679		
5,400.0	5,084.0	3,837.5	3,367.1	33.2	31.6	-137.52	1,355.4	-1,089.9	3,410.9	3,362.8	70.882		
5,500.0	5,177.2	3,905.3	3,422.7	33.8	32.4	-137.46	1,386.4	-1,113.3	3,484.4	3,435.4	71.076		
5,600.0	5,270.4	3,973.1	3,478.2	34.5	33.1	-137.40	1,417.4	-1,136.7	3,557.9	3,508.0	71.258		
5,700.0	5,364.1	4,041.7	3,534.4	35.1	33.9	-138.84	1,448.8	-1,160.4	3,630.6	3,579.7	71.421		
5,800.0	5,459.3	4,112.4	3,592.4	35.7	34.6	-140.31	1,481.1	-1,184.9	3,701.0	3,649.2	71.493		
5,900.0	5,555.7	4,185.1	3,652.0	36.2	35.4	-141.58	1,514.4	-1,210.0	3,769.0	3,716.3	71.520		
6,000.0	5,653.2	4,259.7	3,713.1	36.6	36.2	-142.67	1,548.5	-1,235.8	3,834.5	3,780.8	71.517		
6,100.0	5,751.6	4,336.1	3,775.6	36.9	37.1	-143.61	1,583.4	-1,262.2	3,897.3	3,842.8	71.488		
6,200.0	5,850.6	4,414.0	3,839.5	37.1	37.9	-144.41	1,619.0	-1,289.1	3,957.5	3,902.1	71.440		
6,300.0	5,950.2	4,493.3	3,904.5	37.3	38.8	-145.08	1,655.3	-1,316.6	4,014.9	3,958.7	71.381		
6,400.0	6,050.0	4,574.0	3,970.6	37.4	39.7	-145.63	1,692.2	-1,344.4	4,069.5	4,012.4	71.325		
6,500.0	6,150.0	4,655.7	4,037.5	37.5	40.6	-68.52	1,729.5	-1,372.7	4,121.3	4,063.6	71.470		
6,600.0	6,250.0	4,737.6	4,104.7	37.5	41.5	-68.12	1,767.0	-1,401.0	4,172.6	4,114.4	71.648		
6,700.0	6,350.0	4,819.6	4,171.8	37.5	42.4	-67.74	1,804.5	-1,429.3	4,224.1	4,165.3	71.822		
6,800.0	6,450.0	4,901.5	4,239.0	37.5	43.3	-67.37	1,841.9	-1,457.7	4,275.8	4,216.4	71.993		
6,900.0	6,550.0	4,983.4	4,306.1	37.6	44.2	-67.00	1,879.4	-1,486.0	4,327.5	4,267.6	72.163		
7,000.0	6,650.0	5,065.3	4,373.2	37.6	45.1	-66.63	1,916.9	-1,514.3	4,379.2	4,318.4	72.334		
7,100.0	6,750.0	5,147.2	4,440.3	37.6	46.0	-66.26	1,954.4	-1,542.6	4,430.9	4,369.3	72.505		
7,200.0	6,850.0	5,229.1	4,507.4	37.6	46.9	-65.89	1,991.9	-1,570.9	4,482.6	4,420.2	72.676		
7,300.0	6,950.0	5,311.0	4,574.5	37.7	47.8	-65.52	2,029.4	-1,599.2	4,534.3	4,471.1	72.847		
7,400.0	7,050.0	5,392.9	4,641.6	37.7	48.7	-65.15	2,066.9	-1,627.5	4,586.0	4,522.0	73.018		
7,500.0	7,150.0	5,474.8	4,708.7	37.7	49.6	-64.78	2,104.4	-1,655.8	4,637.7	4,572.9	73.189		
7,600.0	7,250.0	5,556.7	4,775.8	37.8	50.5	-64.41	2,141.9	-1,684.1	4,689.4	4,623.8	73.360		
7,700.0	7,350.0	5,638.6	4,842.9	37.8	51.4	-64.04	2,179.4	-1,712.4	4,741.1	4,674.7	73.531		
7,800.0	7,450.0	5,720.5	4,910.0	37.8	52.3	-63.67	2,216.9	-1,740.7	4,792.8	4,725.6	73.702		
7,900.0	7,550.0	5,802.4	4,977.1	37.9	53.2	-63.30	2,254.4	-1,769.0	4,844.5	4,776.5	73.873		
8,000.0	7,650.0	5,884.3	5,044.2	37.9	54.1	-62.93	2,291.9	-1,797.3	4,896.2	4,827.4	74.044		
8,100.0	7,750.0	5,966.2	5,111.3	37.9	55.0	-62.56	2,329.4	-1,825.6	4,947.9	4,878.3	74.215		
8,200.0	7,850.0	6,048.1	5,178.4	38.0	55.9	-62.19	2,366.9	-1,853.9	5,000.0	4,929.2	74.386		
8,240.0	7,890.0	6,088.1	5,218.4	38.0	56.0	-62.17	2,465.8	-1,929.3	4,353.0	4,275.5	56.187		

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie 2 Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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 Centre +N/-S (usft)	+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	-46.76	60.2	-64.1	88.0				
100.0	100.0	100.0	100.0	0.4	0.4	-46.76	60.2	-64.1	88.0	87.2	111.038		
200.0	200.0	200.0	200.0	1.2	1.2	-46.76	60.2	-64.1	88.0	85.5	35.600	CC, ES	
300.0	300.0	299.6	299.6	2.3	1.6	-125.17	60.3	-64.1	89.2	85.8	25.806		
400.0	399.7	395.7	395.6	3.9	2.5	-128.74	61.0	-66.4	95.5	90.2	18.016		
500.0	499.1	490.2	489.9	5.0	3.9	-133.93	62.9	-72.4	109.1	101.4	14.241		
600.0	598.0	582.4	581.6	6.0	4.5	-139.26	66.0	-81.8	130.6	121.4	14.053	SF	
700.0	696.0	672.5	670.8	6.8	4.9	-143.37	71.3	-93.4	160.0	149.4	15.136		
800.0	793.2	759.7	756.6	7.6	5.5	-146.03	79.2	-106.5	196.4	184.4	16.441		
900.0	889.2	843.5	838.6	8.3	6.2	-147.62	89.4	-120.8	239.2	225.9	18.058		
1,000.0	983.9	923.6	916.3	9.0	6.8	-148.48	101.5	-135.9	287.9	273.5	19.998		
1,100.0	1,077.2	1,000.0	989.8	9.3	7.4	-149.20	115.2	-151.6	341.8	326.6	22.514		
1,200.0	1,170.4	1,073.7	1,060.0	9.6	7.9	-149.78	130.4	-168.1	398.2	382.3	25.084		
1,300.0	1,263.6	1,145.3	1,127.5	9.9	8.4	-149.97	147.0	-185.2	456.4	439.9	27.590		
1,400.0	1,356.8	1,214.6	1,192.1	10.2	8.9	-149.91	164.7	-202.8	516.5	499.3	30.043		
1,500.0	1,450.0	1,281.5	1,253.8	10.6	9.3	-149.69	183.4	-220.8	578.3	560.5	32.448		
1,600.0	1,543.1	1,346.2	1,312.7	10.9	9.7	-149.37	203.0	-239.1	641.7	623.3	34.806		
1,700.0	1,636.3	1,400.0	1,361.1	11.3	10.1	-149.03	220.3	-254.9	706.8	687.9	37.407		
1,800.0	1,729.5	1,468.7	1,422.2	11.7	10.5	-148.54	243.9	-276.0	773.2	753.6	39.397		
1,900.0	1,822.7	1,526.7	1,472.8	12.1	10.8	-148.08	264.9	-294.6	841.2	821.0	41.640		
2,000.0	1,915.9	1,582.5	1,521.0	12.5	11.2	-147.62	286.2	-313.0	910.5	889.8	43.855		
2,100.0	2,009.1	1,636.1	1,566.6	12.9	11.4	-147.15	307.7	-331.3	981.2	960.0	46.217		
2,200.0	2,102.2	1,702.3	1,622.4	13.3	11.6	-146.58	334.9	-354.4	1,052.8	1,030.9	48.209		
2,300.0	2,195.4	1,771.7	1,680.8	13.7	11.9	-146.06	363.5	-378.6	1,124.4	1,101.9	49.933		
2,400.0	2,288.6	1,841.2	1,739.3	14.2	12.1	-145.60	392.1	-402.7	1,196.1	1,172.9	51.516		
2,500.0	2,381.8	1,910.6	1,797.8	14.6	12.4	-145.19	420.6	-426.9	1,267.8	1,243.8	52.967		
2,600.0	2,475.0	1,980.0	1,856.2	15.1	12.7	-144.82	449.2	-451.1	1,339.5	1,314.8	54.298		
2,700.0	2,568.1	2,049.5	1,914.7	15.5	13.0	-144.50	477.8	-475.3	1,411.3	1,385.9	55.532		
2,800.0	2,661.3	2,118.9	1,973.2	16.0	13.4	-144.20	506.4	-499.5	1,483.1	1,456.9	56.681		
2,900.0	2,754.5	2,188.3	2,031.7	16.5	13.9	-143.93	535.0	-523.7	1,554.9	1,527.9	57.673		
3,000.0	2,847.7	2,257.7	2,090.1	17.1	14.4	-143.68	563.5	-547.9	1,626.7	1,598.9	58.631		
3,100.0	2,940.9	2,327.2	2,148.6	17.8	15.1	-143.46	592.1	-572.1	1,698.5	1,670.0	59.529		
3,200.0	3,034.0	2,396.6	2,207.1	18.4	15.7	-143.25	620.7	-596.2	1,770.3	1,741.0	60.357		
3,300.0	3,127.2	2,466.0	2,265.5	19.1	16.4	-143.06	649.3	-620.4	1,842.2	1,812.0	61.113		
3,400.0	3,220.4	2,535.5	2,324.0	19.8	17.0	-142.89	677.9	-644.6	1,914.0	1,883.1	61.820		
3,500.0	3,313.6	2,604.9	2,382.5	20.4	17.7	-142.72	706.4	-668.8	1,985.9	1,954.1	62.480		
3,600.0	3,406.8	2,674.3	2,440.9	21.1	18.4	-142.57	735.0	-693.0	2,057.8	2,025.1	63.087		
3,700.0	3,500.0	2,743.8	2,499.4	21.8	19.1	-142.43	763.6	-717.2	2,129.6	2,096.2	63.655		
3,800.0	3,593.1	2,813.2	2,557.9	22.4	19.8	-142.29	792.2	-741.4	2,201.5	2,167.2	64.187		
3,900.0	3,686.3	2,882.6	2,616.4	23.1	20.5	-142.17	820.7	-765.5	2,273.4	2,238.3	64.682		
4,000.0	3,779.5	2,952.0	2,674.8	23.8	21.2	-142.05	849.3	-789.7	2,345.3	2,309.3	65.144		
4,100.0	3,872.7	3,021.5	2,733.3	24.4	21.9	-141.94	877.9	-813.9	2,417.2	2,380.3	65.579		
4,200.0	3,965.9	3,090.9	2,791.8	25.1	22.6	-141.84	906.5	-838.1	2,489.1	2,451.4	65.985		
4,300.0	4,059.0	3,160.3	2,850.2	25.8	23.3	-141.74	935.1	-862.3	2,561.0	2,522.4	66.366		
4,400.0	4,152.2	3,229.8	2,908.7	26.5	24.0	-141.65	963.6	-886.5	2,632.9	2,593.5	66.724		
4,500.0	4,245.4	3,299.2	2,967.2	27.1	24.7	-141.56	992.2	-910.7	2,704.8	2,664.5	67.062		
4,600.0	4,338.6	3,368.6	3,025.6	27.8	25.4	-141.48	1,020.8	-934.9	2,776.8	2,735.5	67.378		
4,700.0	4,431.8	3,438.0	3,084.1	28.5	26.1	-141.40	1,049.4	-959.0	2,848.7	2,806.6	67.676		
4,800.0	4,524.9	3,507.5	3,142.6	29.1	26.8	-141.33	1,077.9	-983.2	2,920.6	2,877.6	67.958		
4,900.0	4,618.1	3,576.9	3,201.1	29.8	27.5	-141.25	1,106.5	-1,007.4	2,992.5	2,948.7	68.224		
5,000.0	4,711.3	3,646.3	3,259.5	30.5	28.2	-141.19	1,135.1	-1,031.6	3,064.4	3,019.7	68.475		

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Laramie 0993-29-01 - Laramie 0993-20-13E - OH - Design #1												Offset Well Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard														
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning		
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
5,100.0	4,804.5	3,715.8	3,318.0	31.1	28.9	-141.12	1,163.7	-1,055.8	3,136.4	3,090.7	68.712			
5,200.0	4,897.7	3,785.2	3,376.5	31.8	29.6	-141.06	1,192.3	-1,080.0	3,208.3	3,161.8	68.937			
5,300.0	4,990.9	3,854.6	3,434.9	32.5	30.3	-141.00	1,220.8	-1,104.2	3,280.2	3,232.8	69.150			
5,400.0	5,084.0	3,924.1	3,493.4	33.2	31.0	-140.94	1,249.4	-1,128.3	3,352.2	3,303.8	69.352			
5,500.0	5,177.2	3,993.5	3,551.9	33.8	31.7	-140.89	1,278.0	-1,152.5	3,424.1	3,374.9	69.543			
5,600.0	5,270.4	4,062.9	3,610.4	34.5	32.4	-140.84	1,306.6	-1,176.7	3,496.0	3,445.9	69.724			
5,700.0	5,364.1	4,133.2	3,669.5	35.1	33.1	-142.11	1,335.5	-1,201.2	3,567.1	3,516.0	69.882			
5,800.0	5,459.3	4,205.7	3,730.6	35.7	33.9	-143.41	1,365.3	-1,226.5	3,635.7	3,583.7	69.937			
5,900.0	5,555.7	4,280.3	3,793.4	36.2	34.6	-144.53	1,396.1	-1,252.4	3,701.7	3,648.8	69.940			
6,000.0	5,653.2	4,356.8	3,857.9	36.6	35.4	-145.48	1,427.6	-1,279.1	3,765.1	3,711.2	69.906			
6,100.0	5,751.6	4,435.2	3,923.9	36.9	36.2	-146.29	1,459.8	-1,306.4	3,825.7	3,770.9	69.842			
6,200.0	5,850.6	4,515.2	3,991.2	37.1	37.0	-146.97	1,492.7	-1,334.3	3,883.4	3,827.7	69.753			
6,300.0	5,950.2	4,596.7	4,059.9	37.3	37.9	-147.54	1,526.3	-1,362.7	3,938.2	3,881.6	69.649			
6,400.0	6,050.0	4,679.5	4,129.6	37.4	38.7	-147.99	1,560.4	-1,391.5	3,989.9	3,932.5	69.544			
6,500.0	6,150.0	4,763.5	4,200.4	37.5	39.6	-70.83	1,595.0	-1,420.8	4,038.8	3,980.8	69.649			
6,600.0	6,250.0	4,847.7	4,271.3	37.5	40.4	-70.46	1,629.6	-1,450.1	4,087.1	4,028.6	69.791			
6,700.0	6,350.0	4,931.9	4,342.2	37.5	41.3	-70.10	1,664.3	-1,479.4	4,135.6	4,076.5	69.929			
6,800.0	6,450.0	5,016.2	4,413.1	37.5	42.2	-69.74	1,698.9	-1,508.8	4,184.2	4,124.5	70.065			
6,900.0	6,550.0	7,302.1	6,550.0	37.6	53.9	-65.50	2,182.8	-1,918.3	4,218.3	4,142.9	55.994			
7,000.0	6,650.0	7,402.1	6,650.0	37.6	53.9	-65.50	2,182.8	-1,918.3	4,218.3	4,142.9	55.959			
7,100.0	6,750.0	7,502.1	6,750.0	37.6	54.0	-65.50	2,182.8	-1,918.3	4,218.3	4,142.8	55.924			
7,200.0	6,850.0	7,602.1	6,850.0	37.7	54.0	-65.50	2,182.8	-1,918.3	4,218.3	4,142.8	55.888			
7,300.0	6,950.0	7,702.1	6,950.0	37.7	54.0	-65.50	2,182.8	-1,918.3	4,218.3	4,142.7	55.853			
7,400.0	7,050.0	7,802.1	7,050.0	37.7	54.0	-65.50	2,182.8	-1,918.3	4,218.3	4,142.7	55.817			
7,500.0	7,150.0	7,902.1	7,150.0	37.7	54.0	-65.50	2,182.8	-1,918.3	4,218.3	4,142.6	55.781			
7,600.0	7,250.0	8,002.1	7,250.0	37.8	54.1	-65.50	2,182.8	-1,918.3	4,218.3	4,142.6	55.745			
7,700.0	7,350.0	8,102.1	7,350.0	37.8	54.1	-65.50	2,182.8	-1,918.3	4,218.3	4,142.5	55.709			
7,800.0	7,450.0	8,202.1	7,450.0	37.8	54.1	-65.50	2,182.8	-1,918.3	4,218.3	4,142.5	55.672			
7,900.0	7,550.0	8,302.1	7,550.0	37.9	54.1	-65.50	2,182.8	-1,918.3	4,218.3	4,142.4	55.635			
8,000.0	7,650.0	8,402.1	7,650.0	37.9	54.1	-65.50	2,182.8	-1,918.3	4,218.3	4,142.4	55.598			
8,100.0	7,750.0	8,502.1	7,750.0	37.9	54.2	-65.50	2,182.8	-1,918.3	4,218.3	4,142.3	55.561			
8,116.3	7,766.3	8,518.5	7,766.3	37.9	54.2	-65.50	2,182.8	-1,918.3	4,218.3	4,142.3	55.555			
8,200.0	7,850.0	8,601.1	7,849.0	38.0	54.2	-65.50	2,182.8	-1,918.3	4,218.3	4,142.3	55.523			
8,240.0	7,890.0	8,601.1	7,849.0	38.0	54.2	-65.50	2,182.8	-1,918.3	4,218.5	4,142.4	55.484			



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 2Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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 Centre +N/-S (usft)	+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	-46.81	49.2	-52.4	71.8			
100.0	100.0	100.0	100.0	0.4	0.4	-46.81	49.2	-52.4	71.8	71.1	90.702	
200.0	200.0	200.0	200.0	1.2	1.2	-46.81	49.2	-52.4	71.8	69.4	29.080	CC, ES
300.0	300.0	300.0	300.0	2.3	1.7	-125.48	49.2	-52.4	73.1	69.5	20.608	
400.0	399.7	398.4	398.4	3.9	1.9	-129.50	49.2	-52.9	77.5	72.7	16.088	
500.0	499.1	494.2	494.1	5.0	3.1	-135.98	49.6	-56.9	88.6	81.8	12.922	
600.0	598.0	587.8	587.4	6.0	4.3	-142.91	50.2	-64.7	107.9	98.8	11.817	SF
700.0	696.0	678.7	677.6	6.8	4.7	-148.65	51.6	-75.6	135.8	125.3	12.912	
800.0	793.2	767.0	764.9	7.6	5.1	-152.22	55.4	-88.4	171.3	159.5	14.511	
900.0	889.2	852.1	848.5	8.3	5.7	-154.21	61.7	-102.5	213.5	200.4	16.323	
1,000.0	983.9	933.4	928.0	9.0	6.3	-155.20	70.1	-117.8	261.7	247.4	18.345	
1,100.0	1,077.2	1,011.0	1,003.2	9.3	6.8	-155.84	80.3	-133.7	315.2	300.1	20.917	
1,200.0	1,170.4	1,086.1	1,075.4	9.6	7.4	-156.23	92.2	-150.6	371.0	355.3	23.525	
1,300.0	1,263.6	1,159.0	1,144.9	9.9	7.9	-156.24	105.5	-168.3	428.7	412.3	26.074	
1,400.0	1,356.8	1,229.6	1,211.5	10.2	8.3	-156.01	120.2	-186.6	488.2	471.1	28.563	
1,500.0	1,450.0	1,300.0	1,277.1	10.6	8.8	-155.61	136.5	-205.9	549.4	531.6	30.939	
1,600.0	1,543.1	1,364.0	1,336.1	10.9	9.2	-155.16	152.8	-224.5	612.1	593.8	33.388	
1,700.0	1,636.3	1,427.7	1,394.2	11.3	9.6	-154.63	170.4	-243.9	676.5	657.6	35.731	
1,800.0	1,729.5	1,489.2	1,449.6	11.7	10.0	-154.08	188.7	-263.5	742.4	722.8	38.036	
1,900.0	1,822.7	1,548.4	1,502.2	12.1	10.4	-153.51	207.4	-283.1	809.7	789.6	40.305	
2,000.0	1,915.9	1,600.0	1,547.5	12.5	10.7	-153.00	224.7	-300.9	878.4	857.9	42.734	
2,100.0	2,009.1	1,661.8	1,601.0	12.9	10.9	-152.37	246.5	-322.8	948.5	927.4	44.981	
2,200.0	2,102.2	1,732.1	1,661.5	13.3	11.1	-151.70	271.8	-348.1	1,019.1	997.4	46.919	
2,300.0	2,195.4	1,802.4	1,722.0	13.7	11.4	-151.12	297.2	-373.5	1,089.8	1,067.4	48.699	
2,400.0	2,288.6	1,872.7	1,782.5	14.2	11.7	-150.61	322.5	-398.8	1,160.6	1,137.5	50.320	
2,500.0	2,381.8	1,943.0	1,843.0	14.6	12.0	-150.15	347.8	-424.1	1,231.3	1,207.6	51.815	
2,600.0	2,475.0	2,013.3	1,903.5	15.1	12.3	-149.75	373.2	-449.4	1,302.2	1,277.7	53.194	
2,700.0	2,568.1	2,083.7	1,964.0	15.5	12.6	-149.39	398.5	-474.7	1,373.0	1,347.8	54.463	
2,800.0	2,661.3	2,154.0	2,024.5	16.0	13.0	-149.06	423.9	-500.1	1,443.9	1,418.0	55.608	
2,900.0	2,754.5	2,224.3	2,085.0	16.5	13.5	-148.76	449.2	-525.4	1,514.8	1,488.1	56.699	
3,000.0	2,847.7	2,294.6	2,145.5	17.1	14.0	-148.49	474.6	-550.7	1,585.7	1,558.3	57.704	
3,100.0	2,940.9	2,364.9	2,206.0	17.8	14.6	-148.24	499.9	-576.0	1,656.7	1,628.4	58.623	
3,200.0	3,034.0	2,435.2	2,266.5	18.4	15.2	-148.02	525.2	-601.3	1,727.6	1,698.6	59.481	
3,300.0	3,127.2	2,505.5	2,327.0	19.1	15.8	-147.81	550.6	-626.7	1,798.6	1,768.8	60.279	
3,400.0	3,220.4	2,575.8	2,387.5	19.8	16.4	-147.61	575.9	-652.0	1,869.6	1,838.9	61.015	
3,500.0	3,313.6	2,646.1	2,448.0	20.4	17.1	-147.43	601.3	-677.3	1,940.6	1,909.1	61.701	
3,600.0	3,406.8	2,716.4	2,508.5	21.1	17.7	-147.27	626.6	-702.6	2,011.6	1,979.3	62.342	
3,700.0	3,500.0	2,786.7	2,568.9	21.8	18.4	-147.11	652.0	-727.9	2,082.6	2,049.5	62.939	
3,800.0	3,593.1	2,857.0	2,629.4	22.4	19.0	-146.97	677.3	-753.3	2,153.6	2,119.7	63.495	
3,900.0	3,686.3	2,927.4	2,689.9	23.1	19.7	-146.83	702.6	-778.6	2,224.6	2,189.8	64.016	
4,000.0	3,779.5	2,997.7	2,750.4	23.8	20.3	-146.70	728.0	-803.9	2,295.6	2,260.0	64.505	
4,100.0	3,872.7	3,068.0	2,810.9	24.4	21.0	-146.58	753.3	-829.2	2,366.6	2,330.2	64.960	
4,200.0	3,965.9	3,138.3	2,871.4	25.1	21.7	-146.47	778.7	-854.6	2,437.7	2,400.4	65.388	
4,300.0	4,059.0	3,208.6	2,931.9	25.8	22.3	-146.36	804.0	-879.9	2,508.7	2,470.6	65.792	
4,400.0	4,152.2	3,278.9	2,992.4	26.5	23.0	-146.26	829.4	-905.2	2,579.7	2,540.8	66.169	
4,500.0	4,245.4	3,349.2	3,052.9	27.1	23.7	-146.17	854.7	-930.5	2,650.8	2,610.9	66.525	
4,600.0	4,338.6	3,419.5	3,113.4	27.8	24.3	-146.08	880.0	-955.8	2,721.8	2,681.1	66.861	
4,700.0	4,431.8	3,489.8	3,173.9	28.5	25.0	-145.99	905.4	-981.2	2,792.9	2,751.3	67.178	
4,800.0	4,524.9	3,560.1	3,234.4	29.1	25.7	-145.91	930.7	-1,006.5	2,863.9	2,821.5	67.476	
4,900.0	4,618.1	3,630.4	3,294.9	29.8	26.3	-145.83	956.1	-1,031.8	2,935.0	2,891.7	67.759	
5,000.0	4,711.3	3,700.7	3,355.4	30.5	27.0	-145.76	981.4	-1,057.1	3,006.1	2,961.9	68.026	

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 0993-20-14E - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,804.5	3,771.1	3,415.9	31.1	27.7	-145.69	1,006.8	-1,082.4	3,077.1	3,032.1	68.278		
5,200.0	4,897.7	3,841.4	3,476.4	31.8	28.4	-145.62	1,032.1	-1,107.8	3,148.2	3,102.2	68.518		
5,300.0	4,990.9	3,911.7	3,536.9	32.5	29.0	-145.56	1,057.4	-1,133.1	3,219.3	3,172.4	68.745		
5,400.0	5,084.0	3,982.0	3,597.4	33.2	29.7	-145.49	1,082.8	-1,158.4	3,290.3	3,242.6	68.960		
5,500.0	5,177.2	4,052.3	3,657.9	33.8	30.4	-145.43	1,108.1	-1,183.7	3,361.4	3,312.8	69.164		
5,600.0	5,270.4	4,122.6	3,718.4	34.5	31.1	-145.38	1,133.5	-1,209.0	3,432.5	3,383.0	69.358		
5,700.0	5,364.1	4,193.8	3,779.7	35.1	31.8	-146.49	1,159.1	-1,234.7	3,502.6	3,452.2	69.523		
5,800.0	5,459.3	4,267.3	3,842.9	35.7	32.5	-147.61	1,185.7	-1,261.2	3,570.1	3,518.8	69.566		
5,900.0	5,555.7	4,343.1	3,908.1	36.2	33.2	-148.56	1,213.0	-1,288.5	3,634.9	3,582.6	69.547		
6,000.0	5,653.2	4,420.9	3,975.1	36.6	33.9	-149.37	1,241.0	-1,316.5	3,696.8	3,643.6	69.482		
6,100.0	5,751.6	4,500.6	4,043.7	36.9	34.7	-150.05	1,269.8	-1,345.2	3,755.7	3,701.6	69.379		
6,200.0	5,850.6	4,582.1	4,113.8	37.1	35.5	-150.61	1,299.1	-1,374.6	3,811.6	3,756.6	69.245		
6,300.0	5,950.2	4,665.3	4,185.3	37.3	36.3	-151.07	1,329.1	-1,404.5	3,864.4	3,808.5	69.089		
6,400.0	6,050.0	4,749.8	4,258.1	37.4	37.1	-151.43	1,359.6	-1,434.9	3,914.0	3,857.2	68.930		
6,500.0	6,150.0	4,835.6	4,331.9	37.5	38.0	-74.22	1,390.5	-1,465.8	3,960.6	3,903.2	68.997		
6,600.0	6,250.0	4,921.7	4,405.9	37.5	38.8	-73.87	1,421.5	-1,496.8	4,006.6	3,948.6	69.107		
6,700.0	6,350.0	5,007.7	4,480.0	37.5	39.6	-73.54	1,452.5	-1,527.8	4,052.6	3,994.1	69.214		
6,800.0	6,450.0	5,093.7	4,554.0	37.5	40.5	-73.20	1,483.5	-1,558.8	4,098.8	4,039.7	69.319		
6,900.0	6,550.0	7,203.0	6,550.0	37.6	50.2	-69.75	1,853.6	-1,928.5	4,102.3	4,028.9	55.915		
7,000.0	6,650.0	7,303.0	6,650.0	37.6	50.2	-69.75	1,853.6	-1,928.5	4,102.3	4,028.9	55.879		
7,100.0	6,750.0	7,403.0	6,750.0	37.6	50.2	-69.75	1,853.6	-1,928.5	4,102.3	4,028.8	55.842		
7,200.0	6,850.0	7,503.0	6,850.0	37.7	50.2	-69.75	1,853.6	-1,928.5	4,102.3	4,028.8	55.805		
7,300.0	6,950.0	7,603.0	6,950.0	37.7	50.3	-69.75	1,853.6	-1,928.5	4,102.3	4,028.7	55.768		
7,400.0	7,050.0	7,703.0	7,050.0	37.7	50.3	-69.75	1,853.6	-1,928.5	4,102.3	4,028.7	55.730		
7,500.0	7,150.0	7,803.0	7,150.0	37.7	50.3	-69.75	1,853.6	-1,928.5	4,102.3	4,028.6	55.693		
7,600.0	7,250.0	7,903.0	7,250.0	37.8	50.3	-69.75	1,853.6	-1,928.5	4,102.3	4,028.6	55.655		
7,700.0	7,350.0	8,003.0	7,350.0	37.8	50.4	-69.75	1,853.6	-1,928.5	4,102.3	4,028.5	55.617		
7,800.0	7,450.0	8,103.0	7,450.0	37.8	50.4	-69.75	1,853.6	-1,928.5	4,102.3	4,028.5	55.579		
7,900.0	7,550.0	8,203.0	7,550.0	37.9	50.4	-69.75	1,853.6	-1,928.5	4,102.3	4,028.4	55.540		
8,000.0	7,650.0	8,303.0	7,650.0	37.9	50.4	-69.75	1,853.6	-1,928.5	4,102.3	4,028.4	55.502		
8,100.0	7,750.0	8,403.0	7,750.0	37.9	50.4	-69.75	1,853.6	-1,928.5	4,102.3	4,028.3	55.463		
8,200.0	7,850.0	8,503.0	7,850.0	38.0	50.5	-69.75	1,853.6	-1,928.5	4,102.3	4,028.3	55.424		
8,240.0	7,890.0	8,543.0	7,890.0	38.0	50.5	-69.75	1,853.6	-1,928.5	4,102.3	4,028.3	55.412		



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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 Centre +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	-46.84	38.2	-40.8	55.9			
100.0	100.0	100.0	100.0	0.4	0.4	-46.84	38.2	-40.8	55.9	55.1	70.571	
200.0	200.0	200.0	200.0	1.2	1.2	-46.84	38.2	-40.8	55.9	53.4	22.626	CC, ES
300.0	300.0	300.0	300.0	2.3	1.7	-125.90	38.2	-40.8	57.2	53.6	16.097	
400.0	399.7	399.7	399.7	3.9	2.1	-130.78	38.2	-40.8	61.2	56.2	12.141	
500.0	499.1	497.3	497.3	5.0	2.4	-137.91	38.1	-41.9	69.8	63.4	10.897	
600.0	598.0	592.4	592.3	6.0	3.6	-146.12	37.7	-46.9	86.4	77.8	10.070	SF
700.0	696.0	684.7	684.1	6.8	4.1	-153.10	37.0	-55.4	111.9	101.7	10.993	
800.0	793.2	774.4	773.1	7.6	4.5	-157.44	38.1	-66.4	145.5	134.1	12.742	
900.0	889.2	860.8	858.5	8.3	5.1	-159.69	41.6	-79.1	186.1	173.4	14.637	
1,000.0	983.9	943.5	939.8	9.0	5.7	-160.72	47.3	-93.3	233.0	219.1	16.718	
1,100.0	1,077.2	1,022.3	1,016.7	9.3	6.3	-161.24	54.7	-108.6	285.3	270.6	19.318	
1,200.0	1,170.4	1,100.0	1,092.0	9.6	6.9	-161.44	64.1	-125.4	340.2	324.6	21.906	
1,300.0	1,263.6	1,172.5	1,161.7	9.9	7.4	-161.28	74.5	-142.6	396.9	380.7	24.522	
1,400.0	1,356.8	1,244.0	1,229.8	10.2	7.9	-160.91	86.5	-160.9	455.5	438.7	27.038	
1,500.0	1,450.0	1,313.2	1,295.0	10.6	8.3	-160.41	99.6	-179.9	515.9	498.4	29.502	
1,600.0	1,543.1	1,379.9	1,357.2	10.9	8.8	-159.84	113.6	-199.4	578.0	559.9	31.924	
1,700.0	1,636.3	1,444.3	1,416.6	11.3	9.2	-159.24	128.5	-219.4	641.7	623.0	34.307	
1,800.0	1,729.5	1,500.0	1,467.4	11.7	9.6	-158.69	142.5	-237.5	707.1	687.9	36.863	
1,900.0	1,822.7	1,566.0	1,526.9	12.1	10.0	-158.01	160.2	-259.9	774.0	754.1	38.975	
2,000.0	1,915.9	1,623.5	1,578.0	12.5	10.3	-157.40	176.7	-280.4	842.3	822.0	41.378	
2,100.0	2,009.1	1,687.0	1,633.8	12.9	10.5	-156.73	195.9	-303.8	911.9	891.0	43.710	
2,200.0	2,102.2	1,758.2	1,696.3	13.3	10.7	-156.07	217.6	-330.0	981.7	960.2	45.684	
2,300.0	2,195.4	1,829.3	1,758.8	13.7	11.0	-155.50	239.3	-356.3	1,051.6	1,029.5	47.502	
2,400.0	2,288.6	1,900.5	1,821.3	14.2	11.3	-155.00	260.9	-382.6	1,121.5	1,098.7	49.174	
2,500.0	2,381.8	1,971.7	1,883.7	14.6	11.5	-154.55	282.6	-408.9	1,191.5	1,168.0	50.709	
2,600.0	2,475.0	2,042.8	1,946.2	15.1	11.8	-154.16	304.2	-435.2	1,261.5	1,237.3	52.130	
2,700.0	2,568.1	2,114.0	2,008.7	15.5	12.2	-153.80	325.9	-461.5	1,331.5	1,306.6	53.454	
2,800.0	2,661.3	2,185.1	2,071.2	16.0	12.5	-153.49	347.6	-487.8	1,401.6	1,375.9	54.658	
2,900.0	2,754.5	2,256.3	2,133.6	16.5	12.9	-153.20	369.2	-514.1	1,471.6	1,445.2	55.756	
3,000.0	2,847.7	2,327.5	2,196.1	17.1	13.4	-152.94	390.9	-540.4	1,541.7	1,514.6	56.804	
3,100.0	2,940.9	2,398.6	2,258.6	17.8	13.9	-152.70	412.5	-566.7	1,611.8	1,583.9	57.770	
3,200.0	3,034.0	2,469.8	2,321.1	18.4	14.5	-152.48	434.2	-593.0	1,681.9	1,653.3	58.659	
3,300.0	3,127.2	2,540.9	2,383.5	19.1	15.0	-152.27	455.9	-619.3	1,752.1	1,722.6	59.488	
3,400.0	3,220.4	2,612.1	2,446.0	19.8	15.6	-152.09	477.5	-645.6	1,822.2	1,791.9	60.262	
3,500.0	3,313.6	2,683.3	2,508.5	20.4	16.2	-151.92	499.2	-671.9	1,892.3	1,861.3	60.980	
3,600.0	3,406.8	2,754.4	2,571.0	21.1	16.8	-151.76	520.9	-698.2	1,962.5	1,930.7	61.650	
3,700.0	3,500.0	2,825.6	2,633.4	21.8	17.5	-151.61	542.5	-724.5	2,032.6	2,000.0	62.277	
3,800.0	3,593.1	2,896.7	2,695.9	22.4	18.1	-151.47	564.2	-750.8	2,102.8	2,069.4	62.863	
3,900.0	3,686.3	2,967.9	2,758.4	23.1	18.7	-151.34	585.8	-777.1	2,173.0	2,138.7	63.410	
4,000.0	3,779.5	3,039.1	2,820.9	23.8	19.3	-151.21	607.5	-803.4	2,243.2	2,208.1	63.924	
4,100.0	3,872.7	3,110.2	2,883.3	24.4	20.0	-151.10	629.2	-829.6	2,313.3	2,277.4	64.407	
4,200.0	3,965.9	3,181.4	2,945.8	25.1	20.6	-150.99	650.8	-855.9	2,383.5	2,346.8	64.859	
4,300.0	4,059.0	3,252.5	3,008.3	25.8	21.2	-150.89	672.5	-882.2	2,453.7	2,416.1	65.284	
4,400.0	4,152.2	3,323.7	3,070.8	26.5	21.8	-150.79	694.1	-908.5	2,523.9	2,485.5	65.686	
4,500.0	4,245.4	3,394.9	3,133.2	27.1	22.5	-150.70	715.8	-934.8	2,594.1	2,554.9	66.064	
4,600.0	4,338.6	3,466.0	3,195.7	27.8	23.1	-150.61	737.5	-961.1	2,664.3	2,624.2	66.420	
4,700.0	4,431.8	3,537.2	3,258.2	28.5	23.8	-150.53	759.1	-987.4	2,734.5	2,693.6	66.756	
4,800.0	4,524.9	3,608.3	3,320.7	29.1	24.4	-150.46	780.8	-1,013.7	2,804.7	2,762.9	67.075	
4,900.0	4,618.1	3,679.5	3,383.1	29.8	25.0	-150.38	802.4	-1,040.0	2,874.9	2,832.3	67.375	
5,000.0	4,711.3	3,750.7	3,445.6	30.5	25.7	-150.31	824.1	-1,066.3	2,945.2	2,901.6	67.660	

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 0993-20-15E - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,804.5	3,821.8	3,508.1	31.1	26.3	-150.24	845.8	-1,092.6	3,015.4	2,971.0	67.930		
5,200.0	4,897.7	3,893.0	3,570.6	31.8	26.9	-150.18	867.4	-1,118.9	3,085.6	3,040.3	68.186		
5,300.0	4,990.9	3,964.1	3,633.0	32.5	27.6	-150.12	889.1	-1,145.2	3,155.8	3,109.7	68.429		
5,400.0	5,084.0	4,035.3	3,695.5	33.2	28.2	-150.06	910.7	-1,171.5	3,226.0	3,179.0	68.659		
5,500.0	5,177.2	4,106.5	3,758.0	33.8	28.9	-150.00	932.4	-1,197.8	3,296.2	3,248.4	68.879		
5,600.0	5,270.4	4,177.6	3,820.5	34.5	29.5	-149.95	954.1	-1,224.1	3,366.5	3,317.7	69.087		
5,700.0	5,364.1	4,249.7	3,883.8	35.1	30.2	-150.90	976.0	-1,250.7	3,435.7	3,386.1	69.260		
5,800.0	5,459.3	4,324.3	3,949.2	35.7	30.8	-151.85	998.7	-1,278.3	3,502.1	3,451.6	69.294		
5,900.0	5,555.7	4,401.1	4,016.7	36.2	31.5	-152.65	1,022.1	-1,306.7	3,565.7	3,514.2	69.253		
6,000.0	5,653.2	4,480.2	4,086.1	36.6	32.3	-153.33	1,046.2	-1,335.9	3,626.2	3,573.7	69.159		
6,100.0	5,751.6	4,561.2	4,157.3	36.9	33.0	-153.89	1,070.8	-1,365.8	3,683.6	3,630.2	69.018		
6,200.0	5,850.6	4,644.2	4,230.1	37.1	33.7	-154.35	1,096.1	-1,396.5	3,737.7	3,683.4	68.840		
6,300.0	5,950.2	4,728.8	4,304.4	37.3	34.5	-154.71	1,121.8	-1,427.8	3,788.6	3,733.4	68.635		
6,400.0	6,050.0	4,815.0	4,380.1	37.4	35.3	-154.99	1,148.1	-1,459.6	3,836.2	3,780.1	68.421		
6,500.0	6,150.0	4,902.6	4,456.9	37.5	36.1	-77.74	1,174.7	-1,492.0	3,880.5	3,823.8	68.452		
6,600.0	6,250.0	4,990.4	4,534.0	37.5	36.9	-77.43	1,201.4	-1,524.4	3,924.2	3,866.9	68.533		
6,700.0	6,350.0	5,078.2	4,611.1	37.5	37.7	-77.13	1,228.2	-1,556.8	3,968.0	3,910.1	68.609		
6,800.0	6,450.0	7,012.8	6,450.0	37.5	46.5	-74.10	1,527.6	-1,920.3	3,993.3	3,921.9	55.969		
6,900.0	6,550.0	7,112.8	6,550.0	37.6	46.5	-74.10	1,527.6	-1,920.3	3,993.3	3,921.9	55.931		
7,000.0	6,650.0	7,212.8	6,650.0	37.6	46.5	-74.10	1,527.6	-1,920.3	3,993.3	3,921.8	55.892		
7,100.0	6,750.0	7,312.8	6,750.0	37.6	46.5	-74.10	1,527.6	-1,920.3	3,993.3	3,921.8	55.853		
7,200.0	6,850.0	7,412.8	6,850.0	37.7	46.6	-74.10	1,527.6	-1,920.3	3,993.3	3,921.7	55.814		
7,300.0	6,950.0	7,512.8	6,950.0	37.7	46.6	-74.10	1,527.6	-1,920.3	3,993.3	3,921.7	55.775		
7,400.0	7,050.0	7,612.8	7,050.0	37.7	46.6	-74.10	1,527.6	-1,920.3	3,993.3	3,921.6	55.736		
7,500.0	7,150.0	7,712.8	7,150.0	37.7	46.6	-74.10	1,527.6	-1,920.3	3,993.3	3,921.6	55.696		
7,600.0	7,250.0	7,812.8	7,250.0	37.8	46.7	-74.10	1,527.6	-1,920.3	3,993.3	3,921.5	55.657		
7,700.0	7,350.0	7,912.8	7,350.0	37.8	46.7	-74.10	1,527.6	-1,920.3	3,993.3	3,921.5	55.617		
7,800.0	7,450.0	8,012.8	7,450.0	37.8	46.7	-74.10	1,527.6	-1,920.3	3,993.3	3,921.4	55.576		
7,900.0	7,550.0	8,112.8	7,550.0	37.9	46.7	-74.10	1,527.6	-1,920.3	3,993.3	3,921.4	55.536		
8,000.0	7,650.0	8,212.8	7,650.0	37.9	46.8	-74.10	1,527.6	-1,920.3	3,993.3	3,921.3	55.495		
8,100.0	7,750.0	8,312.8	7,750.0	37.9	46.8	-74.10	1,527.6	-1,920.3	3,993.3	3,921.3	55.455		
8,110.3	7,760.3	8,323.1	7,760.3	37.9	46.8	-74.10	1,527.6	-1,920.3	3,993.3	3,921.3	55.451		
8,200.0	7,850.0	8,396.7	7,834.0	38.0	46.8	-74.10	1,527.6	-1,920.3	3,993.3	3,921.2	55.409		
8,240.0	7,890.0	8,396.7	7,834.0	38.0	46.8	-74.10	1,527.6	-1,920.3	3,993.7	3,921.6	55.391		

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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 Centre +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	-46.88	27.3	-29.2	40.0			
100.0	100.0	100.0	100.0	0.4	0.4	-46.88	27.3	-29.2	40.0	39.2	50.449	
200.0	200.0	200.0	200.0	1.2	1.2	-46.88	27.3	-29.2	40.0	37.5	16.174	CC, ES
300.0	300.0	300.0	300.0	2.3	1.7	-126.64	27.3	-29.2	41.2	37.7	11.589	
400.0	399.7	399.7	399.7	3.9	2.1	-133.19	27.3	-29.2	45.4	40.3	8.880	
500.0	499.1	499.1	499.1	5.0	2.4	-141.57	27.3	-29.2	53.5	46.9	8.083	SF
600.0	598.0	595.3	595.3	6.0	3.0	-149.91	27.3	-31.1	68.1	59.7	8.159	
700.0	696.0	688.8	688.6	6.8	4.2	-156.69	27.3	-36.9	91.5	81.0	8.703	
800.0	793.2	778.9	778.2	7.6	5.2	-161.38	27.3	-46.1	123.6	111.3	10.040	
900.0	889.2	865.6	864.1	8.3	5.6	-164.35	27.6	-58.1	163.6	150.2	12.233	
1,000.0	983.9	949.0	946.3	9.0	5.9	-165.73	29.9	-72.0	210.2	195.9	14.663	
1,100.0	1,077.2	1,028.5	1,024.2	9.3	6.4	-166.33	34.0	-87.1	262.3	247.3	17.438	
1,200.0	1,170.4	1,105.4	1,099.1	9.6	6.9	-166.48	39.7	-103.6	316.9	301.2	20.143	
1,300.0	1,263.6	1,180.0	1,171.2	9.9	7.4	-166.25	47.1	-121.3	373.5	357.1	22.774	
1,400.0	1,356.8	1,252.1	1,240.3	10.2	7.9	-165.81	55.8	-140.0	431.9	414.9	25.346	
1,500.0	1,450.0	1,321.9	1,306.5	10.6	8.4	-165.26	65.6	-159.4	492.1	474.5	27.865	
1,600.0	1,543.1	1,389.2	1,369.8	10.9	8.8	-164.64	76.6	-179.6	554.1	535.8	30.339	
1,700.0	1,636.3	1,454.0	1,430.2	11.3	9.2	-163.99	88.3	-200.2	617.7	598.9	32.776	
1,800.0	1,729.5	1,516.5	1,487.7	11.7	9.6	-163.34	100.9	-221.2	683.0	663.5	35.179	
1,900.0	1,822.7	1,576.6	1,542.4	12.1	9.9	-162.68	114.0	-242.4	749.7	729.8	37.556	
2,000.0	1,915.9	1,634.7	1,594.6	12.5	10.2	-162.04	127.7	-263.8	818.0	797.6	40.098	
2,100.0	2,009.1	1,706.3	1,658.6	12.9	10.4	-161.31	145.1	-290.7	887.1	866.1	42.293	
2,200.0	2,102.2	1,778.2	1,722.9	13.3	10.7	-160.67	162.7	-317.8	956.2	934.6	44.299	
2,300.0	2,195.4	1,850.1	1,787.2	13.7	10.9	-160.12	180.2	-344.9	1,025.3	1,003.1	46.153	
2,400.0	2,288.6	1,922.0	1,851.4	14.2	11.2	-159.65	197.7	-371.9	1,094.5	1,071.6	47.870	
2,500.0	2,381.8	1,994.0	1,915.7	14.6	11.5	-159.22	215.2	-399.0	1,163.7	1,140.2	49.459	
2,600.0	2,475.0	2,065.9	1,980.0	15.1	11.7	-158.85	232.8	-426.1	1,233.0	1,208.8	50.926	
2,700.0	2,568.1	2,137.8	2,044.2	15.5	12.0	-158.51	250.3	-453.2	1,302.3	1,277.4	52.288	
2,800.0	2,661.3	2,209.7	2,108.5	16.0	12.4	-158.21	267.8	-480.2	1,371.6	1,346.0	53.550	
2,900.0	2,754.5	2,281.6	2,172.8	16.5	12.7	-157.94	285.3	-507.3	1,440.9	1,414.6	54.711	
3,000.0	2,847.7	2,353.5	2,237.0	17.1	13.1	-157.69	302.9	-534.4	1,510.3	1,483.2	55.801	
3,100.0	2,940.9	2,425.4	2,301.3	17.8	13.5	-157.46	320.4	-561.4	1,579.6	1,551.8	56.813	
3,200.0	3,034.0	2,497.3	2,365.6	18.4	14.0	-157.25	337.9	-588.5	1,649.0	1,620.5	57.755	
3,300.0	3,127.2	2,569.2	2,429.8	19.1	14.5	-157.06	355.4	-615.6	1,718.4	1,689.1	58.628	
3,400.0	3,220.4	2,641.1	2,494.1	19.8	15.0	-156.89	373.0	-642.7	1,787.8	1,757.7	59.445	
3,500.0	3,313.6	2,713.0	2,558.4	20.4	15.6	-156.72	390.5	-669.7	1,857.2	1,826.3	60.208	
3,600.0	3,406.8	2,784.9	2,622.6	21.1	16.1	-156.57	408.0	-696.8	1,926.6	1,895.0	60.920	
3,700.0	3,500.0	2,856.8	2,686.9	21.8	16.7	-156.43	425.5	-723.9	1,996.0	1,963.6	61.586	
3,800.0	3,593.1	2,928.7	2,751.2	22.4	17.3	-156.30	443.1	-750.9	2,065.4	2,032.2	62.210	
3,900.0	3,686.3	3,000.6	2,815.4	23.1	17.8	-156.18	460.6	-778.0	2,134.8	2,100.8	62.797	
4,000.0	3,779.5	3,072.5	2,879.7	23.8	18.4	-156.06	478.1	-805.1	2,204.3	2,169.5	63.346	
4,100.0	3,872.7	3,144.4	2,944.0	24.4	19.0	-155.95	495.7	-832.1	2,273.7	2,238.1	63.862	
4,200.0	3,965.9	3,216.3	3,008.2	25.1	19.6	-155.85	513.2	-859.2	2,343.1	2,306.7	64.349	
4,300.0	4,059.0	3,288.2	3,072.5	25.8	20.2	-155.76	530.7	-886.3	2,412.6	2,375.3	64.807	
4,400.0	4,152.2	3,360.1	3,136.8	26.5	20.8	-155.67	548.2	-913.4	2,482.0	2,444.0	65.238	
4,500.0	4,245.4	3,432.0	3,201.0	27.1	21.4	-155.58	565.8	-940.4	2,551.5	2,512.6	65.646	
4,600.0	4,338.6	3,503.9	3,265.3	27.8	22.0	-155.50	583.3	-967.5	2,620.9	2,581.2	66.031	
4,700.0	4,431.8	3,575.8	3,329.6	28.5	22.6	-155.42	600.8	-994.6	2,690.4	2,649.8	66.395	
4,800.0	4,524.9	3,647.7	3,393.8	29.1	23.2	-155.35	618.3	-1,021.6	2,759.8	2,718.5	66.739	
4,900.0	4,618.1	3,719.6	3,458.1	29.8	23.8	-155.28	635.9	-1,048.7	2,829.3	2,787.1	67.065	
5,000.0	4,711.3	3,791.5	3,522.4	30.5	24.4	-155.21	653.4	-1,075.8	2,898.7	2,855.7	67.375	

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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 Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
5,100.0	4,804.5	3,863.4	3,586.6	31.1	25.0	-155.15	670.9	-1,102.8	2,968.2	2,924.3	67.667			
5,200.0	4,897.7	3,935.3	3,650.9	31.8	25.6	-155.09	688.4	-1,129.9	3,037.6	2,992.9	67.946			
5,300.0	4,990.9	4,007.2	3,715.1	32.5	26.2	-155.03	706.0	-1,157.0	3,107.1	3,061.5	68.211			
5,400.0	5,084.0	4,079.1	3,779.4	33.2	26.8	-154.98	723.5	-1,184.1	3,176.6	3,130.2	68.462			
5,500.0	5,177.2	4,151.0	3,843.7	33.8	27.4	-154.93	741.0	-1,211.1	3,246.0	3,198.8	68.701			
5,600.0	5,270.4	4,223.0	3,907.9	34.5	28.0	-154.88	758.5	-1,238.2	3,315.5	3,267.4	68.929			
5,700.0	5,364.1	4,295.8	3,973.1	35.1	28.7	-155.65	776.3	-1,265.6	3,383.9	3,334.9	69.116			
5,800.0	5,459.3	4,371.3	4,040.5	35.7	29.3	-156.43	794.7	-1,294.0	3,449.4	3,399.5	69.145			
5,900.0	5,555.7	4,449.1	4,110.1	36.2	30.0	-157.09	813.7	-1,323.4	3,511.8	3,460.9	69.088			
6,000.0	5,653.2	4,529.3	4,181.7	36.6	30.6	-157.63	833.2	-1,353.5	3,571.0	3,519.2	68.970			
6,100.0	5,751.6	4,611.5	4,255.3	36.9	31.3	-158.08	853.3	-1,384.5	3,627.0	3,574.3	68.797			
6,200.0	5,850.6	4,695.8	4,330.5	37.1	32.1	-158.44	873.8	-1,416.2	3,679.6	3,625.9	68.580			
6,300.0	5,950.2	4,781.8	4,407.4	37.3	32.8	-158.72	894.8	-1,448.6	3,728.7	3,674.2	68.330			
6,400.0	6,050.0	4,869.5	4,485.8	37.4	33.5	-158.92	916.1	-1,481.6	3,774.4	3,718.9	68.068			
6,500.0	6,150.0	4,958.6	4,565.4	37.5	34.3	-81.65	937.9	-1,515.2	3,816.6	3,760.5	68.068			
6,600.0	6,250.0	5,048.0	4,645.3	37.5	35.0	-81.38	959.6	-1,548.8	3,858.2	3,801.5	68.125			
6,700.0	6,350.0	5,137.3	4,725.2	37.5	35.8	-81.11	981.4	-1,582.5	3,899.8	3,842.6	68.177			
6,800.0	6,450.0	6,935.4	6,450.0	37.5	43.2	-78.76	1,194.7	-1,911.9	3,906.9	3,837.2	56.115			
6,900.0	6,550.0	7,035.4	6,550.0	37.6	43.2	-78.76	1,194.7	-1,911.9	3,906.9	3,837.2	56.074			
7,000.0	6,650.0	7,135.4	6,650.0	37.6	43.2	-78.76	1,194.7	-1,911.9	3,906.9	3,837.1	56.034			
7,100.0	6,750.0	7,235.4	6,750.0	37.6	43.2	-78.76	1,194.7	-1,911.9	3,906.9	3,837.1	55.993			
7,200.0	6,850.0	7,335.4	6,850.0	37.7	43.3	-78.76	1,194.7	-1,911.9	3,906.9	3,837.0	55.952			
7,300.0	6,950.0	7,435.4	6,950.0	37.7	43.3	-78.76	1,194.7	-1,911.9	3,906.9	3,837.0	55.911			
7,400.0	7,050.0	7,535.4	7,050.0	37.7	43.3	-78.76	1,194.7	-1,911.9	3,906.9	3,836.9	55.870			
7,500.0	7,150.0	7,635.4	7,150.0	37.7	43.3	-78.76	1,194.7	-1,911.9	3,906.9	3,836.9	55.828			
7,600.0	7,250.0	7,735.4	7,250.0	37.8	43.4	-78.76	1,194.7	-1,911.9	3,906.9	3,836.8	55.786			
7,700.0	7,350.0	7,835.4	7,350.0	37.8	43.4	-78.76	1,194.7	-1,911.9	3,906.9	3,836.8	55.744			
7,800.0	7,450.0	7,935.4	7,450.0	37.8	43.4	-78.76	1,194.7	-1,911.9	3,906.9	3,836.7	55.702			
7,900.0	7,550.0	8,035.4	7,550.0	37.9	43.5	-78.76	1,194.7	-1,911.9	3,906.9	3,836.7	55.660			
8,000.0	7,650.0	8,135.4	7,650.0	37.9	43.5	-78.76	1,194.7	-1,911.9	3,906.9	3,836.6	55.617			
8,100.0	7,750.0	8,235.4	7,750.0	37.9	43.5	-78.76	1,194.7	-1,911.9	3,906.9	3,836.6	55.574			
8,200.0	7,850.0	8,335.4	7,850.0	38.0	43.5	-78.76	1,194.7	-1,911.9	3,906.9	3,836.5	55.531			
8,240.0	7,890.0	8,375.4	7,890.0	38.0	43.5	-78.76	1,194.7	-1,911.9	3,906.9	3,836.5	55.518			



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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 Centre +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	-46.98	16.4	-17.6	24.0				
100.0	100.0	100.0	100.0	0.4	0.4	-46.98	16.4	-17.6	24.0	23.2	30.318		
200.0	200.0	200.0	200.0	1.2	1.2	-46.98	16.4	-17.6	24.0	21.5	9.720	CC, ES	
300.0	300.0	300.0	300.0	2.3	1.7	-128.32	16.4	-17.6	25.3	21.7	7.083		
400.0	399.7	398.9	398.9	3.9	2.1	-139.30	16.3	-18.7	30.8	25.6	5.889		
500.0	499.1	496.2	496.0	5.0	3.4	-151.86	15.8	-23.9	44.7	36.8	5.699	SF	
600.0	598.0	590.9	590.3	6.0	4.6	-160.33	15.0	-32.9	67.7	57.6	6.675		
700.0	696.0	682.4	681.0	6.8	5.0	-165.17	14.2	-45.2	99.4	88.0	8.720		
800.0	793.2	770.8	768.1	7.6	5.4	-167.16	15.0	-59.9	138.4	125.9	11.042		
900.0	889.2	855.1	850.8	8.3	6.0	-167.72	17.8	-76.4	184.0	170.3	13.427		
1,000.0	983.9	935.0	928.5	9.0	6.5	-167.61	22.1	-94.3	235.8	221.0	15.912		
1,100.0	1,077.2	1,010.4	1,001.3	9.3	7.1	-167.34	27.8	-113.0	292.9	277.4	18.843		
1,200.0	1,170.4	1,082.8	1,070.6	9.6	7.6	-167.01	34.7	-132.8	352.5	336.3	21.772		
1,300.0	1,263.6	1,152.5	1,136.7	9.9	8.1	-166.53	42.6	-153.5	414.1	397.2	24.622		
1,400.0	1,356.8	1,219.6	1,199.7	10.2	8.5	-165.98	51.4	-174.8	477.4	460.0	27.406		
1,500.0	1,450.0	1,284.1	1,259.6	10.6	8.9	-165.40	61.0	-196.7	542.6	524.6	30.141		
1,600.0	1,543.1	1,347.2	1,317.6	10.9	9.2	-164.80	71.4	-219.3	609.4	590.9	33.064		
1,700.0	1,636.3	1,420.9	1,384.9	11.3	9.4	-164.18	84.0	-246.3	676.8	657.9	35.680		
1,800.0	1,729.5	1,494.5	1,452.3	11.7	9.7	-163.67	96.6	-273.3	744.4	724.8	38.093		
1,900.0	1,822.7	1,568.1	1,519.6	12.1	9.9	-163.24	109.2	-300.3	811.9	791.8	40.310		
2,000.0	1,915.9	1,641.7	1,586.9	12.5	10.2	-162.88	121.8	-327.2	879.5	858.7	42.360		
2,100.0	2,009.1	1,715.3	1,654.2	12.9	10.5	-162.57	134.4	-354.2	947.1	925.7	44.256		
2,200.0	2,102.2	1,788.9	1,721.6	13.3	10.8	-162.30	146.9	-381.2	1,014.7	992.6	46.006		
2,300.0	2,195.4	1,862.5	1,788.9	13.7	11.1	-162.07	159.5	-408.2	1,082.3	1,059.6	47.622		
2,400.0	2,288.6	1,936.1	1,856.2	14.2	11.4	-161.86	172.1	-435.1	1,149.9	1,126.5	49.119		
2,500.0	2,381.8	2,009.8	1,923.5	14.6	11.7	-161.68	184.7	-462.1	1,217.5	1,193.4	50.502		
2,600.0	2,475.0	2,083.4	1,990.9	15.1	12.0	-161.51	197.3	-489.1	1,285.2	1,260.3	51.783		
2,700.0	2,568.1	2,157.0	2,058.2	15.5	12.4	-161.36	209.9	-516.1	1,352.8	1,327.2	52.971		
2,800.0	2,661.3	2,230.6	2,125.5	16.0	12.7	-161.23	222.5	-543.1	1,420.4	1,394.2	54.076		
2,900.0	2,754.5	2,304.2	2,192.8	16.5	13.1	-161.11	235.1	-570.0	1,488.1	1,461.1	55.103		
3,000.0	2,847.7	2,377.8	2,260.2	17.1	13.6	-160.99	247.7	-597.0	1,555.7	1,528.0	56.056		
3,100.0	2,940.9	2,451.4	2,327.5	17.8	14.0	-160.89	260.3	-624.0	1,623.4	1,594.9	56.945		
3,200.0	3,034.0	2,525.1	2,394.8	18.4	14.5	-160.80	272.9	-651.0	1,691.0	1,661.8	57.775		
3,300.0	3,127.2	2,598.7	2,462.1	19.1	15.0	-160.71	285.5	-677.9	1,758.7	1,728.6	58.551		
3,400.0	3,220.4	2,672.3	2,529.5	19.8	15.5	-160.63	298.1	-704.9	1,826.3	1,795.5	59.274		
3,500.0	3,313.6	2,745.9	2,596.8	20.4	16.0	-160.56	310.7	-731.9	1,894.0	1,862.4	59.952		
3,600.0	3,406.8	2,819.5	2,664.1	21.1	16.5	-160.49	323.3	-758.9	1,961.7	1,929.3	60.588		
3,700.0	3,500.0	2,893.1	2,731.4	21.8	17.1	-160.42	335.9	-785.8	2,029.3	1,996.2	61.185		
3,800.0	3,593.1	2,966.7	2,798.8	22.4	17.6	-160.36	348.5	-812.8	2,097.0	2,063.0	61.745		
3,900.0	3,686.3	3,040.4	2,866.1	23.1	18.2	-160.30	361.1	-839.8	2,164.7	2,129.9	62.272		
4,000.0	3,779.5	3,114.0	2,933.4	23.8	18.7	-160.25	373.7	-866.8	2,232.3	2,196.8	62.769		
4,100.0	3,872.7	3,187.6	3,000.7	24.4	19.2	-160.20	386.3	-893.8	2,300.0	2,263.6	63.237		
4,200.0	3,965.9	3,261.2	3,068.1	25.1	19.8	-160.15	398.9	-920.7	2,367.7	2,330.5	63.678		
4,300.0	4,059.0	3,334.8	3,135.4	25.8	20.3	-160.11	411.5	-947.7	2,435.3	2,397.3	64.096		
4,400.0	4,152.2	3,408.4	3,202.7	26.5	20.9	-160.07	424.1	-974.7	2,503.0	2,464.2	64.491		
4,500.0	4,245.4	3,482.0	3,270.0	27.1	21.4	-160.03	436.7	-1,001.7	2,570.7	2,531.0	64.864		
4,600.0	4,338.6	3,555.7	3,337.3	27.8	22.0	-159.99	449.3	-1,028.6	2,638.3	2,597.9	65.217		
4,700.0	4,431.8	3,629.3	3,404.7	28.5	22.5	-159.95	461.9	-1,055.6	2,706.0	2,664.7	65.553		
4,800.0	4,524.9	3,702.9	3,472.0	29.1	23.1	-159.92	474.5	-1,082.6	2,773.7	2,731.6	65.871		
4,900.0	4,618.1	3,776.5	3,539.3	29.8	23.7	-159.88	487.1	-1,109.6	2,841.4	2,798.4	66.173		
5,000.0	4,711.3	3,850.1	3,606.6	30.5	24.2	-159.85	499.6	-1,136.5	2,909.0	2,865.3	66.460		

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W 0.0	Survey Calculation Method:	Minimum Curvature
Well Error:	usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 0993-20-17E - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
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 Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	4,804.5	3,923.7	3,674.0	31.1	24.8	-159.82	512.2	-1,163.5	2,976.7	2,932.1	66.734		
5,200.0	4,897.7	3,997.3	3,741.3	31.8	25.3	-159.79	524.8	-1,190.5	3,044.4	2,998.9	66.994		
5,300.0	4,990.9	4,070.9	3,808.6	32.5	25.9	-159.77	537.4	-1,217.5	3,112.0	3,065.8	67.242		
5,400.0	5,084.0	4,144.6	3,875.9	33.2	26.4	-159.74	550.0	-1,244.5	3,179.7	3,132.6	67.478		
5,500.0	5,177.2	4,218.2	3,943.3	33.8	27.0	-159.72	562.6	-1,271.4	3,247.4	3,199.4	67.703		
5,600.0	5,270.4	4,291.8	4,010.6	34.5	27.6	-159.69	575.2	-1,298.4	3,315.1	3,266.3	67.918		
5,700.0	5,364.1	4,366.4	4,078.8	35.1	28.1	-160.31	588.0	-1,325.8	3,381.6	3,332.0	68.089		
5,800.0	5,459.3	4,443.6	4,149.5	35.7	28.7	-160.93	601.2	-1,354.1	3,445.1	3,394.5	68.093		
5,900.0	5,555.7	4,523.3	4,222.3	36.2	29.3	-161.44	614.8	-1,383.3	3,505.3	3,453.7	68.005		
6,000.0	5,653.2	4,605.4	4,297.4	36.6	29.9	-161.87	628.9	-1,413.3	3,562.2	3,509.7	67.851		
6,100.0	5,751.6	4,689.5	4,374.4	36.9	30.6	-162.21	643.3	-1,444.2	3,615.6	3,562.1	67.638		
6,200.0	5,850.6	4,775.8	4,453.2	37.1	31.2	-162.49	658.0	-1,475.8	3,665.5	3,611.1	67.377		
6,300.0	5,950.2	4,863.8	4,533.7	37.3	31.9	-162.70	673.1	-1,508.0	3,711.7	3,656.4	67.080		
6,400.0	6,050.0	4,953.5	4,615.8	37.4	32.6	-162.86	688.5	-1,540.9	3,754.3	3,698.1	66.768		
6,500.0	6,150.0	5,044.7	4,699.2	37.5	33.3	-85.57	704.1	-1,574.3	3,793.3	3,736.5	66.725		
6,600.0	6,250.0	5,136.1	4,782.8	37.5	34.0	-85.36	719.7	-1,607.8	3,831.6	3,774.2	66.744		
6,700.0	6,350.0	5,227.5	4,867.3	37.5	34.7	-85.15	735.3	-1,641.3	3,869.9	3,811.9	66.763		
6,800.0	6,450.0	5,319.0	4,952.8	37.5	35.4	-84.94	751.0	-1,674.8	3,908.2	3,848.6	66.782		
6,900.0	6,550.0	5,410.5	5,038.3	37.5	36.1	-84.73	766.7	-1,708.3	3,946.5	3,885.3	66.801		
7,000.0	6,650.0	5,502.0	5,123.8	37.5	36.8	-84.52	782.4	-1,741.8	3,984.8	3,922.0	66.820		
7,100.0	6,750.0	5,593.5	5,209.3	37.5	37.5	-84.31	798.1	-1,775.3	4,023.1	3,958.5	66.839		
7,200.0	6,850.0	5,685.0	5,294.8	37.5	38.2	-84.10	813.8	-1,808.8	4,061.4	3,994.2	66.858		
7,300.0	6,950.0	5,776.5	5,380.3	37.5	38.9	-83.89	829.5	-1,842.3	4,099.7	4,030.0	66.877		
7,400.0	7,050.0	5,868.0	5,465.8	37.5	39.6	-83.68	845.2	-1,875.8	4,138.0	4,065.7	66.896		
7,500.0	7,150.0	5,959.5	5,551.3	37.5	40.3	-83.47	860.9	-1,909.3	4,176.3	4,101.4	66.915		
7,600.0	7,250.0	6,051.0	5,636.8	37.5	41.0	-83.26	876.6	-1,942.8	4,214.6	4,137.1	66.934		
7,700.0	7,350.0	6,142.5	5,722.3	37.5	41.7	-83.05	892.3	-1,976.3	4,252.9	4,172.8	66.953		
7,800.0	7,450.0	6,234.0	5,807.8	37.5	42.4	-82.84	908.0	-2,009.8	4,291.2	4,208.5	66.972		
7,900.0	7,550.0	6,325.5	5,893.3	37.5	43.1	-82.63	923.7	-2,043.3	4,329.5	4,244.2	66.991		
8,000.0	7,650.0	6,417.0	5,978.8	37.5	43.8	-82.42	939.4	-2,076.8	4,367.8	4,279.9	67.010		
8,100.0	7,750.0	6,508.5	6,064.3	37.5	44.5	-82.21	955.1	-2,110.3	4,406.1	4,315.6	67.029		
8,100.2	7,750.3	6,508.8	6,064.6	37.5	44.5	-82.21	955.1	-2,110.3	4,406.1	4,315.6	67.029		
8,200.0	7,850.0	6,600.0	6,149.8	37.5	45.2	-82.00	970.8	-2,143.8	4,444.4	4,351.3	67.048		
8,240.0	7,890.0	6,641.5	6,185.3	37.5	45.9	-81.79	986.5	-2,177.3	4,482.7	4,387.0	67.067		



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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 Centre +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	-47.39	5.5	-5.9	8.1			
100.0	100.0	100.0	100.0	0.4	0.4	-47.39	5.5	-5.9	8.1	7.3	10.187	
200.0	200.0	200.0	200.0	1.2	1.2	-47.39	5.5	-5.9	8.1	5.6	3.266	CC, ES
300.0	300.0	299.8	299.8	2.3	1.5	-137.69	5.3	-6.5	9.9	6.5	2.882	SF
400.0	399.7	398.7	398.6	3.9	2.9	-159.55	4.5	-10.7	19.4	12.9	3.016	
500.0	499.1	495.6	495.1	5.0	4.2	-169.44	2.7	-18.8	38.2	29.1	4.217	
600.0	598.0	589.6	588.3	6.0	5.2	-173.59	0.2	-30.5	65.6	54.6	5.953	
700.0	696.0	680.5	678.0	6.8	5.6	-175.12	-2.1	-45.2	100.8	88.7	8.315	
800.0	793.2	767.8	763.6	7.6	6.1	-174.96	-2.6	-62.2	142.8	129.6	10.767	
900.0	889.2	850.7	844.4	8.3	6.6	-174.21	-1.3	-80.8	191.2	176.8	13.291	
1,000.0	983.9	928.9	920.0	9.0	7.1	-173.29	1.4	-100.5	245.6	230.2	15.928	
1,100.0	1,077.2	1,000.0	988.2	9.3	7.6	-172.46	5.1	-120.4	305.2	289.2	19.037	
1,200.0	1,170.4	1,072.6	1,057.2	9.6	8.1	-171.67	10.2	-142.4	367.3	350.6	22.018	
1,300.0	1,263.6	1,140.2	1,120.8	9.9	8.5	-170.91	16.0	-164.5	431.2	413.9	24.981	
1,400.0	1,356.8	1,205.0	1,181.2	10.2	8.9	-170.17	22.6	-187.2	496.9	479.1	27.909	
1,500.0	1,450.0	1,277.6	1,248.3	10.6	9.1	-169.42	30.7	-213.6	563.7	545.4	30.847	
1,600.0	1,543.1	1,351.8	1,316.9	10.9	9.4	-168.80	39.0	-240.6	630.6	611.8	33.528	
1,700.0	1,636.3	1,425.9	1,385.5	11.3	9.6	-168.31	47.3	-267.6	697.5	678.1	36.012	
1,800.0	1,729.5	1,500.1	1,454.1	11.7	9.9	-167.90	55.6	-294.5	764.5	744.5	38.313	
1,900.0	1,822.7	1,574.3	1,522.7	12.1	10.2	-167.55	63.9	-321.5	831.4	810.9	40.438	
2,000.0	1,915.9	1,648.5	1,591.3	12.5	10.4	-167.26	72.1	-348.5	898.4	877.2	42.406	
2,100.0	2,009.1	1,722.7	1,659.9	12.9	10.7	-167.01	80.4	-375.5	965.4	943.6	44.231	
2,200.0	2,102.2	1,796.9	1,728.5	13.3	11.0	-166.79	88.7	-402.5	1,032.4	1,009.9	45.921	
2,300.0	2,195.4	1,871.1	1,797.1	13.7	11.4	-166.59	97.0	-429.5	1,099.4	1,076.2	47.483	
2,400.0	2,288.6	1,945.2	1,865.7	14.2	11.7	-166.42	105.3	-456.5	1,166.4	1,142.6	48.933	
2,500.0	2,381.8	2,019.4	1,934.3	14.6	12.0	-166.27	113.6	-483.4	1,233.4	1,208.9	50.279	
2,600.0	2,475.0	2,093.6	2,002.9	15.1	12.3	-166.14	121.9	-510.4	1,300.4	1,275.2	51.530	
2,700.0	2,568.1	2,167.8	2,071.5	15.5	12.7	-166.01	130.2	-537.4	1,367.4	1,341.5	52.690	
2,800.0	2,661.3	2,242.0	2,140.1	16.0	13.1	-165.90	138.4	-564.4	1,434.5	1,407.8	53.772	
2,900.0	2,754.5	2,316.2	2,208.7	16.5	13.5	-165.80	146.7	-591.4	1,501.5	1,474.1	54.780	
3,000.0	2,847.7	2,390.4	2,277.3	17.1	13.9	-165.71	155.0	-618.4	1,568.5	1,540.4	55.721	
3,100.0	2,940.9	2,464.5	2,345.9	17.8	14.3	-165.62	163.3	-645.4	1,635.6	1,606.7	56.598	
3,200.0	3,034.0	2,538.7	2,414.5	18.4	14.7	-165.54	171.6	-672.4	1,702.6	1,672.9	57.419	
3,300.0	3,127.2	2,612.9	2,483.2	19.1	15.2	-165.47	179.9	-699.3	1,769.6	1,739.2	58.188	
3,400.0	3,220.4	2,687.1	2,551.8	19.8	15.7	-165.40	188.2	-726.3	1,836.7	1,805.5	58.909	
3,500.0	3,313.6	2,761.3	2,620.4	20.4	16.1	-165.34	196.4	-753.3	1,903.7	1,871.8	59.585	
3,600.0	3,406.8	2,835.5	2,689.0	21.1	16.6	-165.28	204.7	-780.3	1,970.7	1,938.0	60.220	
3,700.0	3,500.0	2,909.7	2,757.6	21.8	17.1	-165.23	213.0	-807.3	2,037.8	2,004.3	60.818	
3,800.0	3,593.1	2,983.8	2,826.2	22.4	17.6	-165.18	221.3	-834.3	2,104.8	2,070.5	61.381	
3,900.0	3,686.3	3,058.0	2,894.8	23.1	18.1	-165.13	229.6	-861.3	2,171.9	2,136.8	61.911	
4,000.0	3,779.5	3,132.2	2,963.4	23.8	18.6	-165.08	237.9	-888.2	2,238.9	2,203.0	62.412	
4,100.0	3,872.7	3,206.4	3,032.0	24.4	19.2	-165.04	246.2	-915.2	2,306.0	2,269.3	62.885	
4,200.0	3,965.9	3,280.6	3,100.6	25.1	19.7	-165.00	254.5	-942.2	2,373.0	2,335.5	63.331	
4,300.0	4,059.0	3,354.8	3,169.2	25.8	20.2	-164.96	262.7	-969.2	2,440.0	2,401.8	63.754	
4,400.0	4,152.2	3,429.0	3,237.8	26.5	20.7	-164.93	271.0	-996.2	2,507.1	2,468.0	64.155	
4,500.0	4,245.4	3,503.1	3,306.4	27.1	21.2	-164.89	279.3	-1,023.2	2,574.1	2,534.3	64.535	
4,600.0	4,338.6	3,577.3	3,375.0	27.8	21.7	-164.86	287.6	-1,050.2	2,641.2	2,600.5	64.896	
4,700.0	4,431.8	3,651.5	3,443.6	28.5	22.3	-164.83	295.9	-1,077.1	2,708.2	2,666.7	65.238	
4,800.0	4,524.9	3,725.7	3,512.2	29.1	22.8	-164.80	304.2	-1,104.1	2,775.3	2,733.0	65.564	
4,900.0	4,618.1	3,799.9	3,580.8	29.8	23.3	-164.77	312.5	-1,131.1	2,842.3	2,799.2	65.874	
5,000.0	4,711.3	3,874.1	3,649.4	30.5	23.8	-164.75	320.7	-1,158.1	2,909.4	2,865.4	66.168	

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 0993-20-18E - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,804.5	3,948.3	3,718.0	31.1	24.3	-164.72	329.0	-1,185.1	2,976.4	2,931.6	66.449		
5,200.0	4,897.7	4,022.4	3,786.6	31.8	24.9	-164.70	337.3	-1,212.1	3,043.5	2,997.9	66.717		
5,300.0	4,990.9	4,096.6	3,855.2	32.5	25.4	-164.67	345.6	-1,239.1	3,110.5	3,064.1	66.973		
5,400.0	5,084.0	4,170.8	3,923.9	33.2	25.9	-164.65	353.9	-1,266.0	3,177.6	3,130.3	67.216		
5,500.0	5,177.2	4,245.0	3,992.5	33.8	26.4	-164.63	362.2	-1,293.0	3,244.6	3,196.5	67.449		
5,600.0	5,270.4	4,319.2	4,061.1	34.5	27.0	-164.61	370.5	-1,320.0	3,311.7	3,262.7	67.672		
5,700.0	5,364.1	4,394.4	4,130.6	35.1	27.5	-165.07	378.9	-1,347.4	3,377.6	3,327.8	67.848		
5,800.0	5,459.3	4,472.3	4,202.6	35.7	28.1	-165.53	387.6	-1,375.7	3,440.2	3,389.5	67.845		
5,900.0	5,555.7	4,552.7	4,277.0	36.2	28.6	-165.91	396.5	-1,405.0	3,499.6	3,447.9	67.746		
6,000.0	5,653.2	4,635.5	4,353.5	36.6	29.2	-166.23	405.8	-1,435.1	3,555.4	3,502.8	67.575		
6,100.0	5,751.6	4,720.5	4,432.2	36.9	29.8	-166.48	415.3	-1,466.0	3,607.8	3,554.2	67.342		
6,200.0	5,850.6	4,807.6	4,512.7	37.1	30.4	-166.68	425.0	-1,497.7	3,656.5	3,601.9	67.057		
6,300.0	5,950.2	4,896.5	4,595.0	37.3	31.1	-166.83	435.0	-1,530.0	3,701.4	3,645.9	66.733		
6,400.0	6,050.0	4,987.2	4,678.8	37.4	31.7	-166.93	445.1	-1,563.0	3,742.5	3,686.1	66.391		
6,500.0	6,150.0	5,079.4	4,764.1	37.5	32.4	-89.64	455.4	-1,596.5	3,780.0	3,723.0	66.327		
6,600.0	6,250.0	5,171.9	4,849.6	37.5	33.0	-89.48	465.7	-1,630.2	3,816.7	3,759.1	66.329		
6,700.0	6,350.0	6,720.3	6,350.0	37.5	38.8	-88.20	554.0	-1,917.9	3,839.9	3,771.7	56.284		
6,800.0	6,450.0	6,820.3	6,450.0	37.5	38.8	-88.20	554.0	-1,917.9	3,839.9	3,771.6	56.244		
6,900.0	6,550.0	6,920.3	6,550.0	37.6	38.8	-88.20	554.0	-1,917.9	3,839.9	3,771.6	56.203		
7,000.0	6,650.0	7,020.3	6,650.0	37.6	38.8	-88.20	554.0	-1,917.9	3,839.9	3,771.5	56.162		
7,100.0	6,750.0	7,120.3	6,750.0	37.6	38.9	-88.20	554.0	-1,917.9	3,839.9	3,771.5	56.121		
7,200.0	6,850.0	7,220.3	6,850.0	37.7	38.9	-88.20	554.0	-1,917.9	3,839.9	3,771.4	56.080		
7,300.0	6,950.0	7,320.3	6,950.0	37.7	38.9	-88.20	554.0	-1,917.9	3,839.9	3,771.4	56.038		
7,400.0	7,050.0	7,420.3	7,050.0	37.7	39.0	-88.20	554.0	-1,917.9	3,839.9	3,771.3	55.996		
7,500.0	7,150.0	7,520.3	7,150.0	37.7	39.0	-88.20	554.0	-1,917.9	3,839.9	3,771.3	55.954		
7,600.0	7,250.0	7,620.3	7,250.0	37.8	39.0	-88.20	554.0	-1,917.9	3,839.9	3,771.2	55.912		
7,700.0	7,350.0	7,720.3	7,350.0	37.8	39.1	-88.20	554.0	-1,917.9	3,839.9	3,771.2	55.869		
7,800.0	7,450.0	7,820.3	7,450.0	37.8	39.1	-88.20	554.0	-1,917.9	3,839.9	3,771.1	55.827		
7,900.0	7,550.0	7,920.3	7,550.0	37.9	39.1	-88.20	554.0	-1,917.9	3,839.9	3,771.0	55.784		
8,000.0	7,650.0	8,020.3	7,650.0	37.9	39.1	-88.20	554.0	-1,917.9	3,839.9	3,771.0	55.740		
8,100.0	7,750.0	8,120.3	7,750.0	37.9	39.2	-88.20	554.0	-1,917.9	3,839.9	3,770.9	55.697		
8,200.0	7,850.0	8,220.3	7,850.0	38.0	39.2	-88.20	554.0	-1,917.9	3,839.9	3,770.9	55.653		
8,240.0	7,890.0	8,260.2	7,890.0	38.0	39.2	-88.20	554.0	-1,917.9	3,839.9	3,770.9	55.640		

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	LaramieFed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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 Centre +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	-46.70	76.8	-81.5	112.0			
100.0	100.0	100.0	100.0	0.4	0.4	-46.70	76.8	-81.5	112.0	111.3	141.462	
200.0	200.0	200.0	200.0	1.2	1.2	-46.70	76.8	-81.5	112.0	109.6	45.354	CC, ES
300.0	300.0	299.1	299.1	2.3	1.7	-124.26	77.9	-81.0	113.6	110.2	34.116	
400.0	399.7	397.9	397.7	3.9	3.3	-124.24	82.5	-78.3	118.5	113.8	25.031	
500.0	499.1	496.3	495.7	5.0	4.5	-123.88	90.8	-73.6	126.8	121.0	21.632	
600.0	598.0	594.2	592.7	6.0	5.5	-123.27	102.6	-66.9	138.6	131.8	20.243	
700.0	696.0	691.6	688.4	6.8	6.4	-122.47	118.0	-58.2	153.8	146.0	19.817	SF
800.0	793.2	788.1	782.5	7.6	7.2	-121.57	136.7	-47.5	172.3	163.7	19.921	
900.0	889.2	883.7	874.7	8.3	7.9	-120.62	158.6	-35.1	194.1	184.6	20.332	
1,000.0	983.9	978.2	964.7	9.0	8.6	-119.66	183.5	-20.9	219.2	208.7	20.911	
1,100.0	1,077.2	1,071.6	1,052.5	9.3	9.2	-118.92	211.2	-5.1	247.2	235.9	21.883	
1,200.0	1,170.4	1,164.1	1,138.0	9.6	9.8	-117.90	241.8	12.2	276.5	264.3	22.674	
1,300.0	1,263.6	1,255.4	1,221.0	9.9	10.4	-116.40	274.8	31.0	307.1	294.0	23.303	
1,400.0	1,356.8	1,345.3	1,301.2	10.2	10.9	-114.59	310.2	51.1	339.2	325.0	23.828	
1,500.0	1,450.0	1,433.6	1,378.4	10.6	11.4	-112.58	347.5	72.4	373.0	357.6	24.290	
1,600.0	1,543.1	1,520.1	1,452.2	10.9	11.9	-110.47	386.6	94.5	408.5	392.0	24.757	
1,700.0	1,636.3	1,608.1	1,525.9	11.3	12.2	-108.28	428.4	118.4	445.9	428.3	25.245	
1,800.0	1,729.5	1,699.3	1,602.0	11.7	12.5	-106.30	472.2	143.2	484.1	465.2	25.603	
1,900.0	1,822.7	1,790.5	1,678.1	12.1	12.8	-104.61	515.9	168.1	522.6	502.5	25.902	
2,000.0	1,915.9	1,881.7	1,754.2	12.5	13.1	-103.15	559.6	192.9	561.5	540.1	26.170	
2,100.0	2,009.1	1,972.9	1,830.3	12.9	13.4	-101.87	603.3	217.8	600.7	578.0	26.412	
2,200.0	2,102.2	2,064.2	1,906.4	13.3	13.8	-100.75	647.1	242.6	640.1	616.1	26.631	
2,300.0	2,195.4	2,155.4	1,982.5	13.7	14.1	-99.76	690.8	267.5	679.7	654.4	26.829	
2,400.0	2,288.6	2,246.6	2,058.6	14.2	14.5	-98.87	734.5	292.4	719.5	692.9	27.004	
2,500.0	2,381.8	2,337.8	2,134.7	14.6	14.9	-98.08	778.2	317.2	759.4	731.5	27.198	
2,600.0	2,475.0	2,429.0	2,210.8	15.1	15.7	-97.37	821.9	342.1	799.4	770.2	27.350	
2,700.0	2,568.1	2,520.2	2,286.9	15.5	16.5	-96.72	865.7	366.9	839.5	808.9	27.488	
2,800.0	2,661.3	2,611.5	2,362.9	16.0	17.4	-96.13	909.4	391.8	879.6	847.8	27.619	
2,900.0	2,754.5	2,702.7	2,439.0	16.5	18.3	-95.59	953.1	416.7	919.9	886.7	27.740	
3,000.0	2,847.7	2,793.9	2,515.1	17.1	19.1	-95.10	996.8	441.5	960.2	925.7	27.853	
3,100.0	2,940.9	2,885.1	2,591.2	17.8	20.0	-94.65	1,040.6	466.4	1,000.6	964.8	27.958	
3,200.0	3,034.0	2,976.3	2,667.3	18.4	20.8	-94.23	1,084.3	491.2	1,041.0	1,003.9	28.056	
3,300.0	3,127.2	3,067.5	2,743.4	19.1	21.7	-93.84	1,128.0	516.1	1,081.4	1,043.0	28.147	
3,400.0	3,220.4	3,158.7	2,819.5	19.8	22.6	-93.48	1,171.7	540.9	1,121.9	1,082.2	28.233	
3,500.0	3,313.6	3,250.0	2,895.6	20.4	23.4	-93.15	1,215.4	565.8	1,162.4	1,121.4	28.313	
3,600.0	3,406.8	3,341.2	2,971.7	21.1	24.3	-92.84	1,259.2	590.7	1,203.0	1,160.6	28.388	
3,700.0	3,500.0	3,432.4	3,047.8	21.8	25.1	-92.55	1,302.9	615.5	1,243.6	1,199.9	28.458	
3,800.0	3,593.1	3,523.6	3,123.9	22.4	26.0	-92.27	1,346.6	640.4	1,284.2	1,239.2	28.525	
3,900.0	3,686.3	3,614.8	3,200.0	23.1	26.9	-92.02	1,390.3	665.2	1,324.8	1,278.5	28.587	
4,000.0	3,779.5	3,706.0	3,276.1	23.8	27.7	-91.78	1,434.1	690.1	1,365.5	1,317.8	28.646	
4,100.0	3,872.7	3,797.3	3,352.2	24.4	28.6	-91.55	1,477.8	715.0	1,406.2	1,357.2	28.702	
4,200.0	3,965.9	3,888.5	3,428.3	25.1	29.5	-91.33	1,521.5	739.8	1,446.8	1,396.5	28.755	
4,300.0	4,059.0	3,979.7	3,504.4	25.8	30.3	-91.13	1,565.2	764.7	1,487.6	1,435.9	28.805	
4,400.0	4,152.2	4,070.9	3,580.5	26.5	31.2	-90.94	1,609.0	789.5	1,528.3	1,475.3	28.853	
4,500.0	4,245.4	4,162.1	3,656.6	27.1	32.1	-90.76	1,652.7	814.4	1,569.0	1,514.7	28.898	
4,600.0	4,338.6	4,253.3	3,732.7	27.8	32.9	-90.58	1,696.4	839.2	1,609.8	1,554.1	28.940	
4,700.0	4,431.8	4,344.5	3,808.8	28.5	33.8	-90.42	1,740.1	864.1	1,650.5	1,593.6	28.981	
4,800.0	4,524.9	4,435.8	3,884.9	29.1	34.7	-90.26	1,783.8	889.0	1,691.3	1,633.0	29.020	
4,900.0	4,618.1	4,527.0	3,961.0	29.8	35.5	-90.11	1,827.6	913.8	1,732.1	1,672.5	29.057	
5,000.0	4,711.3	4,618.2	4,037.1	30.5	36.4	-89.97	1,871.3	938.7	1,772.9	1,711.9	29.092	

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)				
5,100.0	4,804.5	4,709.4	4,113.2	31.1	37.3	-89.83	1,915.0	963.5	1,813.7	1,751.4	29.126			
5,200.0	4,897.7	4,800.6	4,189.3	31.8	38.1	-89.70	1,958.7	988.4	1,854.5	1,790.9	29.158			
5,300.0	4,990.9	4,891.8	4,265.4	32.5	39.0	-89.58	2,002.5	1,013.3	1,895.3	1,830.4	29.189			
5,400.0	5,084.0	4,983.1	4,341.5	33.2	39.9	-89.46	2,046.2	1,038.1	1,936.1	1,869.8	29.218			
5,500.0	5,177.2	5,074.3	4,417.6	33.8	40.8	-89.35	2,089.9	1,063.0	1,976.9	1,909.3	29.246			
5,600.0	5,270.4	5,165.5	4,493.7	34.5	41.6	-89.24	2,133.6	1,087.8	2,017.8	1,948.8	29.274			
5,700.0	5,364.1	5,256.6	4,569.7	35.1	42.5	-90.05	2,177.3	1,112.7	2,058.6	1,988.4	29.318			
5,800.0	5,459.3	5,347.4	4,645.4	35.7	43.4	-90.89	2,220.8	1,137.4	2,099.5	2,028.1	29.399			
5,900.0	5,555.7	5,437.7	4,720.7	36.2	44.2	-91.62	2,264.1	1,162.0	2,140.4	2,067.9	29.519			
6,000.0	5,653.2	5,527.3	4,795.5	36.6	45.1	-92.25	2,307.0	1,186.4	2,181.3	2,107.8	29.676			
6,100.0	5,751.6	5,680.2	4,924.1	36.9	46.5	-92.36	2,379.0	1,227.3	2,221.8	2,146.4	29.497			
6,200.0	5,850.6	5,994.3	5,203.1	37.1	49.0	-91.59	2,503.8	1,298.3	2,255.6	2,176.8	28.607			
6,300.0	5,950.2	6,274.1	5,466.3	37.3	50.6	-91.19	2,585.9	1,345.0	2,279.6	2,198.6	28.127			
6,400.0	6,050.0	6,702.7	5,886.4	37.4	52.0	-90.66	2,657.0	1,385.4	2,292.7	2,210.1	27.749			
6,500.0	6,150.0	6,966.7	6,150.0	37.5	52.2	-13.34	2,666.5	1,390.8	2,294.9	2,212.3	27.808			
6,600.0	6,250.0	7,066.7	6,250.0	37.5	52.2	-13.34	2,666.5	1,390.8	2,294.9	2,212.3	27.792			
6,700.0	6,350.0	7,166.7	6,350.0	37.5	52.2	-13.34	2,666.5	1,390.8	2,294.9	2,212.2	27.774			
6,800.0	6,450.0	7,266.7	6,450.0	37.5	52.2	-13.34	2,666.5	1,390.8	2,294.9	2,212.2	27.757			
6,900.0	6,550.0	7,366.7	6,550.0	37.6	52.2	-13.34	2,666.5	1,390.8	2,294.9	2,212.1	27.739			
7,000.0	6,650.0	7,466.7	6,650.0	37.6	52.2	-13.34	2,666.5	1,390.8	2,294.9	2,212.1	27.721			
7,100.0	6,750.0	7,566.7	6,750.0	37.6	52.3	-13.34	2,666.5	1,390.8	2,294.9	2,212.0	27.703			
7,200.0	6,850.0	7,666.7	6,850.0	37.7	52.3	-13.34	2,666.5	1,390.8	2,294.9	2,212.0	27.685			
7,300.0	6,950.0	7,766.7	6,950.0	37.7	52.3	-13.34	2,666.5	1,390.8	2,294.9	2,211.9	27.667			
7,400.0	7,050.0	7,866.7	7,050.0	37.7	52.3	-13.34	2,666.5	1,390.8	2,294.9	2,211.9	27.649			
7,500.0	7,150.0	7,966.7	7,150.0	37.7	52.3	-13.34	2,666.5	1,390.8	2,294.9	2,211.8	27.631			
7,600.0	7,250.0	8,066.7	7,250.0	37.8	52.3	-13.34	2,666.5	1,390.8	2,294.9	2,211.8	27.613			
7,700.0	7,350.0	8,166.7	7,350.0	37.8	52.4	-13.34	2,666.5	1,390.8	2,294.9	2,211.7	27.595			
7,800.0	7,450.0	8,266.7	7,450.0	37.8	52.4	-13.34	2,666.5	1,390.8	2,294.9	2,211.7	27.576			
7,900.0	7,550.0	8,366.7	7,550.0	37.9	52.4	-13.34	2,666.5	1,390.8	2,294.9	2,211.6	27.558			
8,000.0	7,650.0	8,466.7	7,650.0	37.9	52.4	-13.34	2,666.5	1,390.8	2,294.9	2,211.5	27.539			
8,100.0	7,750.0	8,566.7	7,750.0	37.9	52.4	-13.34	2,666.5	1,390.8	2,294.9	2,211.5	27.521			
8,200.0	7,850.0	8,666.7	7,850.0	38.0	52.4	-13.34	2,666.5	1,390.8	2,294.9	2,211.4	27.502			
8,240.0	7,890.0	8,706.7	7,890.0	38.0	52.5	-13.34	2,666.5	1,390.8	2,294.9	2,211.4	27.496			

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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 Centre +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	-46.77	65.7	-69.9	96.0				
100.0	100.0	100.0	100.0	0.4	0.4	-46.77	65.7	-69.9	96.0	95.2	121.153		
200.0	200.0	200.0	200.0	1.2	1.2	-46.77	65.7	-69.9	96.0	93.5	38.842	CC, ES	
300.0	300.0	299.3	299.3	2.3	2.4	-123.82	67.5	-68.7	97.5	94.0	27.420		
400.0	399.7	398.5	398.3	3.9	3.9	-123.17	72.8	-65.1	102.2	97.3	20.927		
500.0	499.1	497.4	496.6	5.0	5.0	-122.22	81.6	-59.0	110.0	104.0	18.568		
600.0	598.0	595.9	593.9	6.0	6.0	-121.06	93.9	-50.7	120.9	114.0	17.682		
700.0	696.0	693.7	689.9	6.8	6.8	-119.83	109.5	-40.0	134.9	127.2	17.528	SF	
800.0	793.2	790.9	784.4	7.6	7.5	-118.59	128.3	-27.1	151.9	143.4	17.780		
900.0	889.2	887.3	877.0	8.3	8.2	-117.39	150.1	-12.2	172.0	162.6	18.258		
1,000.0	983.9	982.7	967.6	9.0	8.9	-116.26	175.0	4.8	195.1	184.7	18.850		
1,100.0	1,077.2	1,077.1	1,055.9	9.3	9.5	-115.37	202.6	23.7	220.8	209.6	19.738		
1,200.0	1,170.4	1,170.7	1,141.9	9.6	10.1	-114.14	232.9	44.5	247.8	235.7	20.433		
1,300.0	1,263.6	1,263.1	1,225.4	9.9	10.7	-112.38	265.6	66.9	276.2	263.0	20.972		
1,400.0	1,356.8	1,354.2	1,306.0	10.2	11.2	-110.28	300.6	90.8	306.0	291.7	21.402		
1,500.0	1,450.0	1,445.8	1,385.5	10.6	11.7	-107.99	338.1	116.5	337.4	321.9	21.774		
1,600.0	1,543.1	1,539.7	1,466.7	10.9	12.0	-105.94	377.0	143.1	369.5	352.8	22.078		
1,700.0	1,636.3	1,633.6	1,547.9	11.3	12.3	-104.21	416.0	169.8	402.0	384.0	22.348		
1,800.0	1,729.5	1,727.6	1,629.2	11.7	12.7	-102.74	454.9	196.4	434.8	415.5	22.576		
1,900.0	1,822.7	1,821.5	1,710.4	12.1	13.0	-101.48	493.8	223.1	467.7	447.2	22.773		
2,000.0	1,915.9	1,915.4	1,791.6	12.5	13.3	-100.38	532.8	249.7	500.9	479.1	22.945		
2,100.0	2,009.1	2,009.4	1,872.8	12.9	13.7	-99.41	571.7	276.3	534.2	511.1	23.098		
2,200.0	2,102.2	2,103.3	1,954.1	13.3	14.0	-98.56	610.6	303.0	567.6	543.2	23.234		
2,300.0	2,195.4	2,197.2	2,035.3	13.7	14.4	-97.81	649.6	329.6	601.2	575.4	23.356		
2,400.0	2,288.6	2,291.1	2,116.5	14.2	14.8	-97.13	688.5	356.3	634.8	607.7	23.463		
2,500.0	2,381.8	2,385.1	2,197.7	14.6	15.2	-96.52	727.4	382.9	668.5	640.1	23.558		
2,600.0	2,475.0	2,479.0	2,278.9	15.1	15.7	-95.97	766.4	409.6	702.2	672.5	23.677		
2,700.0	2,568.1	2,572.9	2,360.2	15.5	16.6	-95.47	805.3	436.2	736.0	705.0	23.740		
2,800.0	2,661.3	2,666.9	2,441.4	16.0	17.4	-95.01	844.2	462.9	769.8	737.5	23.813		
2,900.0	2,754.5	2,760.8	2,522.6	16.5	18.2	-94.59	883.2	489.5	803.7	770.1	23.881		
3,000.0	2,847.7	2,854.7	2,603.8	17.1	19.0	-94.21	922.1	516.1	837.6	802.6	23.944		
3,100.0	2,940.9	2,948.7	2,685.1	17.8	19.8	-93.85	961.0	542.8	871.6	835.3	24.003		
3,200.0	3,034.0	3,042.6	2,766.3	18.4	20.6	-93.52	1,000.0	569.4	905.5	867.9	24.057		
3,300.0	3,127.2	3,136.5	2,847.5	19.1	21.4	-93.22	1,038.9	596.1	939.5	900.6	24.107		
3,400.0	3,220.4	3,230.5	2,928.7	19.8	22.2	-92.94	1,077.8	622.7	973.6	933.2	24.154		
3,500.0	3,313.6	3,324.4	3,010.0	20.4	23.1	-92.67	1,116.8	649.4	1,007.6	966.0	24.198		
3,600.0	3,406.8	3,418.3	3,091.2	21.1	23.9	-92.43	1,155.7	676.0	1,041.6	998.7	24.239		
3,700.0	3,500.0	3,512.2	3,172.4	21.8	24.7	-92.19	1,194.6	702.7	1,075.7	1,031.4	24.277		
3,800.0	3,593.1	3,606.2	3,253.6	22.4	25.5	-91.98	1,233.6	729.3	1,109.8	1,064.2	24.312		
3,900.0	3,686.3	3,700.1	3,334.8	23.1	26.3	-91.77	1,272.5	755.9	1,143.9	1,096.9	24.346		
4,000.0	3,779.5	3,794.0	3,416.1	23.8	27.1	-91.58	1,311.4	782.6	1,178.0	1,129.7	24.377		
4,100.0	3,872.7	3,888.0	3,497.3	24.4	28.0	-91.40	1,350.4	809.2	1,212.1	1,162.5	24.407		
4,200.0	3,965.9	3,981.9	3,578.5	25.1	28.8	-91.23	1,389.3	835.9	1,246.3	1,195.3	24.435		
4,300.0	4,059.0	4,075.8	3,659.7	25.8	29.6	-91.06	1,428.2	862.5	1,280.4	1,228.1	24.461		
4,400.0	4,152.2	4,169.8	3,741.0	26.5	30.4	-90.91	1,467.2	889.2	1,314.6	1,260.9	24.486		
4,500.0	4,245.4	4,263.7	3,822.2	27.1	31.2	-90.76	1,506.1	915.8	1,348.7	1,293.7	24.510		
4,600.0	4,338.6	4,357.6	3,903.4	27.8	32.0	-90.62	1,545.1	942.5	1,382.9	1,326.5	24.532		
4,700.0	4,431.8	4,451.5	3,984.6	28.5	32.9	-90.49	1,584.0	969.1	1,417.1	1,359.4	24.553		
4,800.0	4,524.9	4,545.5	4,065.8	29.1	33.7	-90.37	1,622.9	995.7	1,451.2	1,392.2	24.573		
4,900.0	4,618.1	4,639.4	4,147.1	29.8	34.5	-90.25	1,661.9	1,022.4	1,485.4	1,425.0	24.592		
5,000.0	4,711.3	4,733.3	4,228.3	30.5	35.3	-90.13	1,700.8	1,049.0	1,519.6	1,457.9	24.610		

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 Laramie Fed 0993-21-18W - A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Laramie 0993-29-01 - Laramie Fed 0993-21-12W - OH - Design #1												Offset Well Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard														
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning		
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)				
5,100.0	4,804.5	4,827.3	4,309.5	31.1	36.1	-90.02	1,739.7	1,075.7	1,553.8	1,490.7	24.627			
5,200.0	4,897.7	4,921.2	4,390.7	31.8	37.0	-89.91	1,778.7	1,102.3	1,588.0	1,523.6	24.644			
5,300.0	4,990.9	5,015.1	4,472.0	32.5	37.8	-89.81	1,817.6	1,129.0	1,622.2	1,556.4	24.660			
5,400.0	5,084.0	5,109.1	4,553.2	33.2	38.6	-89.72	1,856.5	1,155.6	1,656.4	1,589.3	24.675			
5,500.0	5,177.2	5,203.0	4,634.4	33.8	39.4	-89.62	1,895.5	1,182.3	1,690.7	1,622.2	24.689			
5,600.0	5,270.4	5,296.9	4,715.6	34.5	40.3	-89.54	1,934.4	1,208.9	1,724.9	1,655.0	24.703			
5,700.0	5,364.1	5,390.8	4,796.8	35.1	41.1	-90.18	1,973.3	1,235.5	1,759.1	1,688.0	24.731			
5,800.0	5,459.3	5,484.4	4,877.7	35.7	41.9	-90.81	2,012.1	1,262.1	1,793.3	1,721.0	24.790			
5,900.0	5,555.7	5,577.5	4,958.2	36.2	42.7	-91.31	2,050.7	1,288.5	1,827.6	1,754.1	24.882			
6,000.0	5,653.2	5,773.4	5,131.6	36.6	44.3	-91.23	2,126.0	1,340.0	1,859.3	1,783.5	24.519			
6,100.0	5,751.6	5,981.0	5,323.0	36.9	45.7	-91.13	2,192.1	1,385.2	1,885.6	1,807.6	24.197			
6,200.0	5,850.6	6,196.9	5,529.0	37.1	46.8	-91.05	2,245.4	1,421.7	1,905.9	1,826.3	23.957			
6,300.0	5,950.2	6,419.4	5,746.6	37.3	47.5	-90.98	2,283.3	1,447.7	1,919.9	1,839.2	23.809			
6,400.0	6,050.0	6,646.2	5,971.8	37.4	48.0	-90.96	2,303.9	1,461.7	1,927.3	1,846.2	23.761			
6,500.0	6,150.0	6,824.4	6,150.0	37.5	48.1	-13.68	2,307.4	1,464.1	1,928.6	1,847.5	23.787			
6,600.0	6,250.0	6,924.4	6,250.0	37.5	48.1	-13.68	2,307.4	1,464.1	1,928.6	1,847.4	23.773			
6,700.0	6,350.0	7,024.4	6,350.0	37.5	48.1	-13.68	2,307.4	1,464.1	1,928.6	1,847.4	23.758			
6,800.0	6,450.0	7,124.4	6,450.0	37.5	48.1	-13.68	2,307.4	1,464.1	1,928.6	1,847.3	23.742			
6,900.0	6,550.0	7,224.4	6,550.0	37.6	48.2	-13.68	2,307.4	1,464.1	1,928.6	1,847.3	23.726			
7,000.0	6,650.0	7,324.4	6,650.0	37.6	48.2	-13.68	2,307.4	1,464.1	1,928.6	1,847.2	23.710			
7,100.0	6,750.0	7,424.4	6,750.0	37.6	48.2	-13.68	2,307.4	1,464.1	1,928.6	1,847.2	23.694			
7,200.0	6,850.0	7,524.4	6,850.0	37.7	48.2	-13.68	2,307.4	1,464.1	1,928.6	1,847.1	23.679			
7,300.0	6,950.0	7,624.4	6,950.0	37.7	48.2	-13.68	2,307.4	1,464.1	1,928.6	1,847.1	23.663			
7,400.0	7,050.0	7,724.4	7,050.0	37.7	48.2	-13.68	2,307.4	1,464.1	1,928.6	1,847.0	23.646			
7,500.0	7,150.0	7,824.4	7,150.0	37.7	48.3	-13.68	2,307.4	1,464.1	1,928.6	1,846.9	23.630			
7,600.0	7,250.0	7,924.4	7,250.0	37.8	48.3	-13.68	2,307.4	1,464.1	1,928.6	1,846.9	23.614			
7,700.0	7,350.0	8,024.4	7,350.0	37.8	48.3	-13.68	2,307.4	1,464.1	1,928.6	1,846.8	23.598			
7,800.0	7,450.0	8,124.4	7,450.0	37.8	48.3	-13.68	2,307.4	1,464.1	1,928.6	1,846.8	23.582			
7,900.0	7,550.0	8,224.4	7,550.0	37.9	48.3	-13.68	2,307.4	1,464.1	1,928.6	1,846.7	23.565			
8,000.0	7,650.0	8,324.4	7,650.0	37.9	48.4	-13.68	2,307.4	1,464.1	1,928.6	1,846.7	23.549			
8,100.0	7,750.0	8,424.4	7,750.0	37.9	48.4	-13.68	2,307.4	1,464.1	1,928.6	1,846.6	23.532			
8,200.0	7,850.0	8,524.4	7,850.0	38.0	48.4	-13.68	2,307.4	1,464.1	1,928.6	1,846.5	23.516			
8,205.2	7,855.2	8,529.6	7,855.2	38.0	48.4	-13.68	2,307.4	1,464.1	1,928.6	1,846.5	23.516			
8,240.0	7,890.0	8,560.4	7,886.0	38.0	48.4	-13.68	2,307.4	1,464.1	1,928.6	1,846.5	23.507			



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W 0.0	Survey Calculation Method:	Minimum Curvature
Well Error:	usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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 Centre +N/-S (usft)	+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	-46.88	54.6	-58.3	79.9			
100.0	100.0	100.0	100.0	0.4	0.4	-46.88	54.6	-58.3	79.9	79.1	100.898	
200.0	200.0	200.0	200.0	1.2	1.2	-46.88	54.6	-58.3	79.9	77.4	32.349	CC, ES
300.0	300.0	300.1	300.1	2.3	2.4	-123.86	56.2	-56.8	81.0	77.5	23.080	
400.0	399.7	400.2	399.9	3.9	3.9	-123.04	60.7	-52.1	84.4	79.6	17.624	
500.0	499.1	500.1	499.2	5.0	5.0	-121.79	68.3	-44.3	90.1	84.3	15.625	
600.0	598.0	599.7	597.7	6.0	6.0	-120.29	78.9	-33.4	98.1	91.5	14.859	
700.0	696.0	699.0	695.1	6.8	6.8	-118.66	92.4	-19.6	108.4	101.0	14.691	SF
800.0	793.2	798.0	791.2	7.6	7.6	-117.02	108.8	-2.8	121.0	112.8	14.839	
900.0	889.2	896.4	885.7	8.3	8.3	-115.44	127.9	16.8	135.8	126.9	15.142	
1,000.0	983.9	994.3	978.5	9.0	9.0	-113.96	149.8	39.2	153.0	143.1	15.501	
1,100.0	1,077.2	1,091.6	1,069.3	9.3	9.6	-112.67	174.2	64.3	172.2	161.5	16.068	
1,200.0	1,170.4	1,188.3	1,158.0	9.6	10.2	-110.74	201.1	91.9	192.2	180.5	16.449	
1,300.0	1,263.6	1,284.1	1,244.2	9.9	10.8	-108.10	230.4	121.8	213.2	200.4	16.680	
1,400.0	1,356.8	1,378.8	1,327.5	10.2	11.3	-105.00	261.7	153.9	235.5	221.5	16.822	
1,500.0	1,450.0	1,473.1	1,408.8	10.6	11.7	-101.66	295.1	188.2	259.6	244.3	16.988	
1,600.0	1,543.1	1,568.9	1,491.0	10.9	12.0	-98.69	329.4	223.4	284.6	268.0	17.088	
1,700.0	1,636.3	1,664.7	1,573.2	11.3	12.3	-96.19	363.8	258.7	310.3	292.2	17.179	
1,800.0	1,729.5	1,760.6	1,655.4	11.7	12.6	-94.07	398.2	293.9	336.4	316.9	17.274	
1,900.0	1,822.7	1,856.4	1,737.6	12.1	13.0	-92.26	432.6	329.2	362.9	342.0	17.373	
2,000.0	1,915.9	1,952.2	1,819.8	12.5	13.3	-90.69	467.0	364.4	389.6	367.3	17.475	
2,100.0	2,009.1	2,048.1	1,902.0	12.9	13.7	-89.33	501.3	399.7	416.7	393.0	17.577	
2,200.0	2,102.2	2,143.9	1,984.2	13.3	14.1	-88.12	535.7	435.0	443.9	418.8	17.678	
2,300.0	2,195.4	2,239.7	2,066.4	13.7	14.4	-87.06	570.1	470.2	471.3	444.7	17.756	
2,400.0	2,288.6	2,335.5	2,148.6	14.2	15.1	-86.11	604.5	505.5	498.8	470.9	17.887	
2,500.0	2,381.8	2,431.4	2,230.9	14.6	15.9	-85.26	638.9	540.7	526.4	497.1	17.973	
2,600.0	2,475.0	2,527.2	2,313.1	15.1	16.8	-84.50	673.2	576.0	554.1	523.4	18.061	
2,700.0	2,568.1	2,623.0	2,395.3	15.5	17.7	-83.81	707.6	611.2	581.9	549.9	18.146	
2,800.0	2,661.3	2,718.9	2,477.5	16.0	18.6	-83.18	742.0	646.5	609.8	576.4	18.227	
2,900.0	2,754.5	2,814.7	2,559.7	16.5	19.5	-82.61	776.4	681.7	637.7	602.9	18.304	
3,000.0	2,847.7	2,910.5	2,641.9	17.1	20.3	-82.08	810.8	717.0	665.7	629.5	18.377	
3,100.0	2,940.9	3,006.3	2,724.1	17.8	21.2	-81.60	845.2	752.2	693.8	656.2	18.447	
3,200.0	3,034.0	3,102.2	2,806.3	18.4	22.1	-81.15	879.5	787.5	721.9	682.9	18.513	
3,300.0	3,127.2	3,198.0	2,888.5	19.1	23.0	-80.74	913.9	822.7	750.0	709.6	18.576	
3,400.0	3,220.4	3,293.8	2,970.7	19.8	23.9	-80.35	948.3	858.0	778.1	736.4	18.636	
3,500.0	3,313.6	3,389.7	3,053.0	20.4	24.8	-80.00	982.7	893.2	806.3	763.2	18.693	
3,600.0	3,406.8	3,485.5	3,135.2	21.1	25.7	-79.67	1,017.1	928.5	834.5	790.0	18.747	
3,700.0	3,500.0	3,581.3	3,217.4	21.8	26.5	-79.35	1,051.4	963.7	862.8	816.9	18.798	
3,800.0	3,593.1	3,677.2	3,299.6	22.4	27.4	-79.06	1,085.8	999.0	891.0	843.8	18.847	
3,900.0	3,686.3	3,773.0	3,381.8	23.1	28.3	-78.79	1,120.2	1,034.2	919.3	870.7	18.893	
4,000.0	3,779.5	3,868.8	3,464.0	23.8	29.2	-78.53	1,154.6	1,069.5	947.6	897.6	18.938	
4,100.0	3,872.7	3,964.6	3,546.2	24.4	30.1	-78.29	1,189.0	1,104.7	975.9	924.5	18.980	
4,200.0	3,965.9	4,060.5	3,628.4	25.1	31.0	-78.06	1,223.3	1,140.0	1,004.2	951.4	19.020	
4,300.0	4,059.0	4,156.3	3,710.6	25.8	31.9	-77.85	1,257.7	1,175.3	1,032.6	978.4	19.059	
4,400.0	4,152.2	4,252.1	3,792.8	26.5	32.8	-77.64	1,292.1	1,210.5	1,060.9	1,005.4	19.095	
4,500.0	4,245.4	4,348.0	3,875.1	27.1	33.7	-77.45	1,326.5	1,245.8	1,089.3	1,032.4	19.131	
4,600.0	4,338.6	4,443.8	3,957.3	27.8	34.5	-77.27	1,360.9	1,281.0	1,117.7	1,059.4	19.164	
4,700.0	4,431.8	4,539.6	4,039.5	28.5	35.4	-77.09	1,395.3	1,316.3	1,146.1	1,086.4	19.197	
4,800.0	4,524.9	4,635.4	4,121.7	29.1	36.3	-76.93	1,429.6	1,351.5	1,174.5	1,113.4	19.228	
4,900.0	4,618.1	4,731.3	4,203.9	29.8	37.2	-76.77	1,464.0	1,386.8	1,202.9	1,140.4	19.257	
5,000.0	4,711.3	4,827.1	4,286.1	30.5	38.1	-76.62	1,498.4	1,422.0	1,231.3	1,167.4	19.286	

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie Fed 0993-21-13W - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,804.5	4,922.9	4,368.3	31.1	39.0	-76.47	1,532.8	1,457.3	1,259.7	1,194.5	19.313		
5,200.0	4,897.7	5,018.8	4,450.5	31.8	39.9	-76.33	1,567.2	1,492.5	1,288.1	1,221.5	19.339		
5,300.0	4,990.9	5,114.6	4,532.7	32.5	40.8	-76.20	1,601.5	1,527.8	1,316.6	1,248.6	19.364		
5,400.0	5,084.0	5,210.4	4,614.9	33.2	41.7	-76.07	1,635.9	1,563.0	1,345.0	1,275.6	19.389		
5,500.0	5,177.2	5,306.2	4,697.1	33.8	42.6	-75.95	1,670.3	1,598.3	1,373.4	1,302.7	19.412		
5,600.0	5,270.4	5,402.1	4,779.4	34.5	43.5	-75.84	1,704.7	1,633.5	1,401.9	1,329.8	19.435		
5,700.0	5,364.1	5,497.7	4,861.4	35.1	44.4	-76.29	1,739.0	1,668.7	1,430.7	1,357.3	19.474		
5,800.0	5,459.3	5,598.0	4,947.4	35.7	45.3	-76.69	1,774.9	1,705.6	1,460.6	1,385.8	19.534		
5,900.0	5,555.7	5,769.8	5,098.5	36.2	46.7	-76.72	1,832.1	1,764.2	1,488.6	1,411.7	19.344		
6,000.0	5,653.2	5,947.3	5,260.4	36.6	48.0	-76.74	1,882.7	1,816.1	1,512.7	1,433.8	19.182		
6,100.0	5,751.6	6,129.7	5,432.2	36.9	49.1	-76.75	1,925.5	1,859.9	1,532.4	1,452.0	19.061		
6,200.0	5,850.6	6,316.3	5,612.3	37.1	49.9	-76.76	1,959.2	1,894.5	1,547.6	1,466.1	18.983		
6,300.0	5,950.2	6,506.0	5,799.0	37.3	50.5	-76.76	1,982.9	1,918.8	1,558.1	1,475.9	18.956		
6,400.0	6,050.0	6,697.9	5,989.9	37.4	50.8	-76.75	1,995.8	1,932.0	1,563.7	1,481.3	18.978		
6,500.0	6,150.0	6,858.1	6,150.0	37.5	50.9	0.52	1,998.2	1,934.5	1,564.7	1,482.5	19.026		
6,600.0	6,250.0	6,958.1	6,250.0	37.5	50.9	0.52	1,998.2	1,934.5	1,564.7	1,482.5	19.015		
6,700.0	6,350.0	7,058.1	6,350.0	37.5	50.9	0.52	1,998.2	1,934.5	1,564.7	1,482.4	19.002		
6,800.0	6,450.0	7,158.1	6,450.0	37.5	51.0	0.52	1,998.2	1,934.5	1,564.7	1,482.3	18.990		
6,900.0	6,550.0	7,258.1	6,550.0	37.6	51.0	0.52	1,998.2	1,934.5	1,564.7	1,482.3	18.977		
7,000.0	6,650.0	7,358.1	6,650.0	37.6	51.0	0.52	1,998.2	1,934.5	1,564.7	1,482.2	18.964		
7,100.0	6,750.0	7,458.1	6,750.0	37.6	51.0	0.52	1,998.2	1,934.5	1,564.7	1,482.2	18.951		
7,200.0	6,850.0	7,558.1	6,850.0	37.7	51.0	0.52	1,998.2	1,934.5	1,564.7	1,482.1	18.939		
7,300.0	6,950.0	7,658.1	6,950.0	37.7	51.1	0.52	1,998.2	1,934.5	1,564.7	1,482.1	18.926		
7,400.0	7,050.0	7,758.1	7,050.0	37.7	51.1	0.52	1,998.2	1,934.5	1,564.7	1,482.0	18.913		
7,500.0	7,150.0	7,858.1	7,150.0	37.7	51.1	0.52	1,998.2	1,934.5	1,564.7	1,482.0	18.900		
7,600.0	7,250.0	7,958.1	7,250.0	37.8	51.1	0.52	1,998.2	1,934.5	1,564.7	1,481.9	18.887		
7,700.0	7,350.0	8,058.1	7,350.0	37.8	51.1	0.52	1,998.2	1,934.5	1,564.7	1,481.8	18.874		
7,800.0	7,450.0	8,158.1	7,450.0	37.8	51.2	0.52	1,998.2	1,934.5	1,564.7	1,481.8	18.861		
7,900.0	7,550.0	8,258.1	7,550.0	37.9	51.2	0.52	1,998.2	1,934.5	1,564.7	1,481.7	18.848		
8,000.0	7,650.0	8,358.1	7,650.0	37.9	51.2	0.52	1,998.2	1,934.5	1,564.7	1,481.7	18.835		
8,100.0	7,750.0	8,458.1	7,750.0	37.9	51.2	0.52	1,998.2	1,934.5	1,564.7	1,481.6	18.821		
8,200.0	7,850.0	8,558.1	7,850.0	38.0	51.2	0.52	1,998.2	1,934.5	1,564.7	1,481.5	18.808		
8,240.0	7,890.0	8,598.1	7,890.0	38.0	51.2	0.52	1,998.2	1,934.5	1,564.7	1,481.5	18.804		



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W 0.0	Survey Calculation Method:	Minimum Curvature
Well Error:	usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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 Centre +N/-S (usft)	+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	-46.92	43.7	-46.7	64.0				
100.0	100.0	100.0	100.0	0.4	0.4	-46.92	43.7	-46.7	64.0	63.2	80.767		
200.0	200.0	200.0	200.0	1.2	1.2	-46.92	43.7	-46.7	64.0	61.5	25.895	CC, ES	
300.0	300.0	300.3	300.3	2.3	1.7	-124.69	44.5	-45.8	65.0	61.7	19.589		
400.0	399.7	400.6	400.5	3.9	3.3	-124.59	48.0	-41.5	68.0	63.3	14.512		
500.0	499.1	500.9	500.3	5.0	4.6	-123.88	54.2	-33.9	72.8	67.1	12.667		
600.0	598.0	601.1	599.4	6.0	5.6	-122.70	63.3	-22.9	79.6	72.9	11.991		
700.0	696.0	701.1	697.6	6.8	6.5	-121.23	75.0	-8.7	88.2	80.8	11.879	SF	
800.0	793.2	800.8	794.7	7.6	7.3	-119.63	89.4	8.8	98.8	90.6	12.064		
900.0	889.2	900.2	890.5	8.3	8.0	-117.99	106.4	29.5	111.2	102.3	12.395		
1,000.0	983.9	999.3	984.6	9.0	8.7	-116.40	126.0	53.3	125.6	115.8	12.774		
1,100.0	1,077.2	1,098.0	1,077.0	9.3	9.4	-114.89	148.1	80.1	141.7	131.1	13.338		
1,200.0	1,170.4	1,196.2	1,167.4	9.6	10.0	-112.48	172.5	109.8	158.2	146.7	13.744		
1,300.0	1,263.6	1,293.8	1,255.5	9.9	10.6	-109.16	199.2	142.2	175.3	162.7	13.988		
1,400.0	1,356.8	1,390.5	1,341.0	10.2	11.0	-105.27	227.9	177.2	193.5	179.8	14.161		
1,500.0	1,450.0	1,487.9	1,426.5	10.6	11.3	-101.71	257.5	213.1	212.7	197.8	14.222		
1,600.0	1,543.1	1,585.2	1,512.0	10.9	11.6	-98.74	287.1	249.1	232.6	216.3	14.246		
1,700.0	1,636.3	1,682.6	1,597.5	11.3	12.0	-96.24	316.7	285.0	253.0	235.3	14.270		
1,800.0	1,729.5	1,779.9	1,682.9	11.7	12.3	-94.11	346.2	320.9	273.8	254.7	14.302		
1,900.0	1,822.7	1,877.2	1,768.4	12.1	12.7	-92.28	375.8	356.9	295.0	274.4	14.342		
2,000.0	1,915.9	1,974.6	1,853.9	12.5	13.0	-90.70	405.4	392.8	316.3	294.3	14.388		
2,100.0	2,009.1	2,071.9	1,939.4	12.9	13.4	-89.32	434.9	428.8	337.9	314.5	14.439		
2,200.0	2,102.2	2,169.2	2,024.9	13.3	13.8	-88.10	464.5	464.7	359.6	334.8	14.492		
2,300.0	2,195.4	2,266.6	2,110.4	13.7	14.2	-87.02	494.1	500.6	381.5	355.3	14.546		
2,400.0	2,288.6	2,363.9	2,195.9	14.2	14.7	-86.06	523.7	536.6	403.5	375.9	14.601		
2,500.0	2,381.8	2,461.3	2,281.4	14.6	15.4	-85.19	553.2	572.5	425.6	396.6	14.663		
2,600.0	2,475.0	2,558.6	2,366.9	15.1	16.3	-84.41	582.8	608.5	447.8	417.4	14.715		
2,700.0	2,568.1	2,655.9	2,452.3	15.5	17.1	-83.71	612.4	644.4	470.0	438.2	14.767		
2,800.0	2,661.3	2,753.3	2,537.8	16.0	18.0	-83.07	642.0	680.4	492.3	459.1	14.818		
2,900.0	2,754.5	2,850.6	2,623.3	16.5	18.8	-82.48	671.5	716.3	514.7	480.1	14.867		
3,000.0	2,847.7	2,947.9	2,708.8	17.1	19.6	-81.95	701.1	752.2	537.1	501.1	14.915		
3,100.0	2,940.9	3,045.3	2,794.3	17.8	20.5	-81.45	730.7	788.2	559.6	522.2	14.960		
3,200.0	3,034.0	3,142.6	2,879.8	18.4	21.3	-80.99	760.3	824.1	582.0	543.2	15.004		
3,300.0	3,127.2	3,240.0	2,965.3	19.1	22.2	-80.57	789.8	860.1	604.6	564.4	15.045		
3,400.0	3,220.4	3,337.3	3,050.8	19.8	23.0	-80.18	819.4	896.0	627.1	585.5	15.085		
3,500.0	3,313.6	3,434.6	3,136.2	20.4	23.8	-79.82	849.0	932.0	649.7	606.7	15.124		
3,600.0	3,406.8	3,532.0	3,221.7	21.1	24.7	-79.48	878.6	967.9	672.3	627.9	15.160		
3,700.0	3,500.0	3,629.3	3,307.2	21.8	25.5	-79.16	908.1	1,003.8	694.9	649.2	15.195		
3,800.0	3,593.1	3,726.7	3,392.7	22.4	26.4	-78.86	937.7	1,039.8	717.5	670.4	15.229		
3,900.0	3,686.3	3,824.0	3,478.2	23.1	27.2	-78.58	967.3	1,075.7	740.2	691.7	15.261		
4,000.0	3,779.5	3,921.3	3,563.7	23.8	28.1	-78.32	996.9	1,111.7	762.9	713.0	15.291		
4,100.0	3,872.7	4,018.7	3,649.2	24.4	28.9	-78.07	1,026.4	1,147.6	785.5	734.3	15.321		
4,200.0	3,965.9	4,116.0	3,734.7	25.1	29.8	-77.83	1,056.0	1,183.5	808.2	755.6	15.349		
4,300.0	4,059.0	4,213.3	3,820.1	25.8	30.6	-77.61	1,085.6	1,219.5	831.0	776.9	15.376		
4,400.0	4,152.2	4,310.7	3,905.6	26.5	31.4	-77.40	1,115.2	1,255.4	853.7	798.3	15.401		
4,500.0	4,245.4	4,408.0	3,991.1	27.1	32.3	-77.20	1,144.7	1,291.4	876.4	819.6	15.426		
4,600.0	4,338.6	4,505.4	4,076.6	27.8	33.1	-77.02	1,174.3	1,327.3	899.2	841.0	15.450		
4,700.0	4,431.8	4,602.7	4,162.1	28.5	34.0	-76.84	1,203.9	1,363.3	921.9	862.3	15.473		
4,800.0	4,524.9	4,700.0	4,247.6	29.1	34.8	-76.67	1,233.5	1,399.2	944.7	883.7	15.495		
4,900.0	4,618.1	4,797.4	4,333.1	29.8	35.7	-76.50	1,263.0	1,435.1	967.4	905.1	15.516		
5,000.0	4,711.3	4,894.7	4,418.6	30.5	36.5	-76.35	1,292.6	1,471.1	990.2	926.5	15.536		

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie Fed 0993-21-14W - OH - Design #1													Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard														
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)	Distance Between Ellipses (usft)	Separation Factor	Warning		
5,100.0	4,804.5	4,992.0	4,504.1	31.1	37.4	-76.20	1,322.2	1,507.0	1,013.0	947.9	15.555			
5,200.0	4,897.7	5,089.4	4,589.5	31.8	38.2	-76.06	1,351.8	1,543.0	1,035.8	969.3	15.574			
5,300.0	4,990.9	5,186.7	4,675.0	32.5	39.1	-75.92	1,381.3	1,578.9	1,058.6	990.7	15.592			
5,400.0	5,084.0	5,284.1	4,760.5	33.2	39.9	-75.79	1,410.9	1,614.9	1,081.4	1,012.1	15.610			
5,500.0	5,177.2	5,381.4	4,846.0	33.8	40.8	-75.67	1,440.5	1,650.8	1,104.2	1,033.5	15.627			
5,600.0	5,270.4	5,478.7	4,931.5	34.5	41.6	-75.55	1,470.1	1,686.7	1,127.0	1,054.9	15.643			
5,700.0	5,364.1	5,575.9	5,016.8	35.1	42.5	-75.85	1,499.6	1,722.6	1,150.2	1,076.8	15.675			
5,800.0	5,459.3	5,718.0	5,143.6	35.7	43.6	-76.00	1,540.4	1,772.2	1,172.6	1,097.4	15.587			
5,900.0	5,555.7	5,863.9	5,277.6	36.2	44.6	-76.11	1,577.0	1,816.7	1,192.2	1,115.3	15.506			
6,000.0	5,653.2	6,012.1	5,417.2	36.6	45.5	-76.21	1,608.5	1,855.0	1,208.8	1,130.5	15.442			
6,100.0	5,751.6	6,162.3	5,561.7	36.9	46.2	-76.29	1,634.6	1,886.7	1,222.3	1,142.9	15.398			
6,200.0	5,850.6	6,314.1	5,710.1	37.1	46.8	-76.35	1,654.8	1,911.2	1,232.7	1,152.5	15.373			
6,300.0	5,950.2	6,467.2	5,861.6	37.3	47.1	-76.38	1,668.7	1,928.2	1,239.8	1,159.1	15.368			
6,400.0	6,050.0	6,621.0	6,014.9	37.4	47.4	-76.41	1,676.3	1,937.3	1,243.6	1,162.8	15.382			
6,500.0	6,150.0	6,756.2	6,150.0	37.5	47.4	0.87	1,677.7	1,939.0	1,244.3	1,163.5	15.405			
6,600.0	6,250.0	6,856.2	6,250.0	37.5	47.4	0.87	1,677.7	1,939.0	1,244.3	1,163.5	15.395			
6,700.0	6,350.0	6,956.2	6,350.0	37.5	47.5	0.87	1,677.7	1,939.0	1,244.3	1,163.4	15.385			
6,800.0	6,450.0	7,056.2	6,450.0	37.5	47.5	0.87	1,677.7	1,939.0	1,244.3	1,163.4	15.374			
6,900.0	6,550.0	7,156.2	6,550.0	37.6	47.5	0.87	1,677.7	1,939.0	1,244.3	1,163.3	15.364			
7,000.0	6,650.0	7,256.2	6,650.0	37.6	47.5	0.87	1,677.7	1,939.0	1,244.3	1,163.3	15.353			
7,100.0	6,750.0	7,356.2	6,750.0	37.6	47.5	0.87	1,677.7	1,939.0	1,244.3	1,163.2	15.342			
7,200.0	6,850.0	7,456.2	6,850.0	37.7	47.6	0.87	1,677.7	1,939.0	1,244.3	1,163.2	15.332			
7,300.0	6,950.0	7,556.2	6,950.0	37.7	47.6	0.87	1,677.7	1,939.0	1,244.3	1,163.1	15.321			
7,400.0	7,050.0	7,656.2	7,050.0	37.7	47.6	0.87	1,677.7	1,939.0	1,244.3	1,163.0	15.310			
7,500.0	7,150.0	7,756.2	7,150.0	37.7	47.6	0.87	1,677.7	1,939.0	1,244.3	1,163.0	15.299			
7,600.0	7,250.0	7,856.2	7,250.0	37.8	47.7	0.87	1,677.7	1,939.0	1,244.3	1,162.9	15.288			
7,700.0	7,350.0	7,956.2	7,350.0	37.8	47.7	0.87	1,677.7	1,939.0	1,244.3	1,162.9	15.278			
7,800.0	7,450.0	8,056.2	7,450.0	37.8	47.7	0.87	1,677.7	1,939.0	1,244.3	1,162.8	15.267			
7,900.0	7,550.0	8,156.2	7,550.0	37.9	47.7	0.87	1,677.7	1,939.0	1,244.3	1,162.7	15.256			
8,000.0	7,650.0	8,256.2	7,650.0	37.9	47.7	0.87	1,677.7	1,939.0	1,244.3	1,162.7	15.245			
8,100.0	7,750.0	8,356.2	7,750.0	37.9	47.8	0.87	1,677.7	1,939.0	1,244.3	1,162.6	15.233			
8,200.0	7,850.0	8,456.2	7,850.0	38.0	47.8	0.87	1,677.7	1,939.0	1,244.3	1,162.6	15.222			
8,240.0	7,890.0	8,496.1	7,890.0	38.0	47.8	0.87	1,677.7	1,939.0	1,244.3	1,162.6	15.219			

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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
Laramie 0993-29-01 - Laramie Fed 0993-21-15W - OH - Design #1													
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 Centre +N/-S (usft)	+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	-46.74	32.8	-34.8	47.8				
100.0	100.0	100.0	100.0	0.4	0.4	-46.74	32.8	-34.8	47.8	47.0	60.376		
200.0	200.0	200.0	200.0	1.2	1.2	-46.74	32.8	-34.8	47.8	45.4	19.357	CC, ES	
300.0	300.0	300.3	300.3	2.3	1.6	-125.22	33.2	-34.2	48.9	45.6	14.870		
400.0	399.7	400.8	400.7	3.9	3.0	-125.91	35.9	-30.2	51.5	46.8	10.857		
500.0	499.1	501.3	500.7	5.0	4.4	-125.75	41.1	-22.5	55.6	49.6	9.365		
600.0	598.0	601.8	600.3	6.0	5.5	-124.91	48.7	-11.2	61.1	54.2	8.841		
700.0	696.0	702.2	699.1	6.8	6.4	-123.61	58.7	3.7	68.0	60.3	8.783	SF	
800.0	793.2	802.5	796.8	7.6	7.2	-122.04	71.2	22.1	76.5	68.0	8.981		
900.0	889.2	902.6	893.4	8.3	7.9	-120.35	86.0	44.0	86.4	77.2	9.312		
1,000.0	983.9	1,002.6	988.6	9.0	8.6	-118.64	103.1	69.4	97.9	87.8	9.692		
1,100.0	1,077.2	1,102.3	1,082.1	9.3	9.3	-116.89	122.4	98.1	110.6	99.8	10.229		
1,200.0	1,170.4	1,201.8	1,173.8	9.6	10.0	-113.84	144.0	130.0	123.3	111.7	10.658		
1,300.0	1,263.6	1,300.7	1,263.2	9.9	10.5	-109.59	167.6	165.0	136.1	123.7	10.959		
1,400.0	1,356.8	1,399.2	1,351.6	10.2	10.7	-105.47	191.9	201.1	149.8	136.3	11.093		
1,500.0	1,450.0	1,497.7	1,440.1	10.6	11.1	-102.05	216.2	237.1	164.0	149.3	11.124		
1,600.0	1,543.1	1,596.3	1,528.5	10.9	11.4	-99.18	240.6	273.2	178.8	162.7	11.124		
1,700.0	1,636.3	1,694.8	1,616.9	11.3	11.7	-96.75	264.9	309.3	193.9	176.5	11.118		
1,800.0	1,729.5	1,793.4	1,705.3	11.7	12.1	-94.67	289.2	345.3	209.3	190.5	11.115		
1,900.0	1,822.7	1,891.9	1,793.7	12.1	12.5	-92.88	313.6	381.4	225.0	204.7	11.118		
2,000.0	1,915.9	1,990.4	1,882.1	12.5	12.9	-91.32	337.9	417.4	240.8	219.2	11.128		
2,100.0	2,009.1	2,089.0	1,970.6	12.9	13.2	-89.96	362.2	453.5	256.8	233.7	11.142		
2,200.0	2,102.2	2,187.5	2,059.0	13.3	13.6	-88.75	386.6	489.6	272.9	248.5	11.161		
2,300.0	2,195.4	2,286.1	2,147.4	13.7	14.1	-87.68	410.9	525.6	289.1	263.3	11.182		
2,400.0	2,288.6	2,384.6	2,235.8	14.2	14.5	-86.72	435.2	561.7	305.4	278.2	11.205		
2,500.0	2,381.8	2,483.1	2,324.2	14.6	15.0	-85.86	459.5	597.7	321.8	293.2	11.228		
2,600.0	2,475.0	2,581.7	2,412.6	15.1	15.7	-85.08	483.9	633.8	338.3	308.2	11.260		
2,700.0	2,568.1	2,680.2	2,501.1	15.5	16.5	-84.38	508.2	669.9	354.8	323.3	11.282		
2,800.0	2,661.3	2,778.8	2,589.5	16.0	17.2	-83.74	532.5	705.9	371.3	338.5	11.307		
2,900.0	2,754.5	2,877.3	2,677.9	16.5	18.0	-83.15	556.9	742.0	387.9	353.7	11.332		
3,000.0	2,847.7	2,975.8	2,766.3	17.1	18.8	-82.61	581.2	778.1	404.5	368.9	11.357		
3,100.0	2,940.9	3,074.4	2,854.7	17.8	19.6	-82.11	605.5	814.1	421.2	384.2	11.381		
3,200.0	3,034.0	3,172.9	2,943.2	18.4	20.4	-81.65	629.8	850.2	437.9	399.5	11.405		
3,300.0	3,127.2	3,271.5	3,031.6	19.1	21.2	-81.23	654.2	886.2	454.6	414.8	11.427		
3,400.0	3,220.4	3,370.0	3,120.0	19.8	22.0	-80.83	678.5	922.3	471.3	430.2	11.449		
3,500.0	3,313.6	3,468.5	3,208.4	20.4	22.8	-80.46	702.8	958.4	488.1	445.5	11.471		
3,600.0	3,406.8	3,567.1	3,296.8	21.1	23.6	-80.12	727.2	994.4	504.9	460.9	11.491		
3,700.0	3,500.0	3,665.6	3,385.2	21.8	24.3	-79.80	751.5	1,030.5	521.6	476.3	11.511		
3,800.0	3,593.1	3,764.1	3,473.7	22.4	25.1	-79.50	775.8	1,066.5	538.5	491.8	11.530		
3,900.0	3,686.3	3,862.7	3,562.1	23.1	25.9	-79.21	800.1	1,102.6	555.3	507.2	11.549		
4,000.0	3,779.5	3,961.2	3,650.5	23.8	26.7	-78.95	824.5	1,138.7	572.1	522.6	11.566		
4,100.0	3,872.7	4,059.8	3,738.9	24.4	27.5	-78.70	848.8	1,174.7	588.9	538.1	11.583		
4,200.0	3,965.9	4,158.3	3,827.3	25.1	28.3	-78.46	873.1	1,210.8	605.8	553.6	11.600		
4,300.0	4,059.0	4,256.8	3,915.7	25.8	29.1	-78.23	897.5	1,246.9	622.7	569.1	11.616		
4,400.0	4,152.2	4,355.4	4,004.2	26.5	29.9	-78.02	921.8	1,282.9	639.5	584.5	11.631		
4,500.0	4,245.4	4,453.9	4,092.6	27.1	30.7	-77.82	946.1	1,319.0	656.4	600.0	11.645		
4,600.0	4,338.6	4,552.5	4,181.0	27.8	31.5	-77.63	970.4	1,355.0	673.3	615.6	11.660		
4,700.0	4,431.8	4,651.0	4,269.4	28.5	32.3	-77.45	994.8	1,391.1	690.2	631.1	11.673		
4,800.0	4,524.9	4,749.5	4,357.8	29.1	33.1	-77.27	1,019.1	1,427.2	707.1	646.6	11.686		
4,900.0	4,618.1	4,848.1	4,446.3	29.8	33.9	-77.11	1,043.4	1,463.2	724.0	662.1	11.699		
5,000.0	4,711.3	4,946.6	4,534.7	30.5	34.7	-76.95	1,067.8	1,499.3	740.9	677.7	11.711		

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,804.5	5,045.2	4,623.1	31.1	35.5	-76.80	1,092.1	1,535.3	757.8	693.2	11.723		
5,200.0	4,897.7	5,143.7	4,711.5	31.8	36.2	-76.65	1,116.4	1,571.4	774.8	708.7	11.734		
5,300.0	4,990.9	5,242.2	4,799.9	32.5	37.0	-76.52	1,140.7	1,607.5	791.7	724.3	11.745		
5,400.0	5,084.0	5,340.8	4,888.3	33.2	37.8	-76.38	1,165.1	1,643.5	808.6	739.8	11.756		
5,500.0	5,177.2	5,439.3	4,976.8	33.8	38.6	-76.26	1,189.4	1,679.6	825.6	755.4	11.766		
5,600.0	5,270.4	5,537.9	5,065.2	34.5	39.4	-76.13	1,213.7	1,715.6	842.5	771.0	11.776		
5,700.0	5,364.1	5,650.4	5,166.6	35.1	40.3	-76.29	1,241.0	1,756.1	859.4	786.3	11.763		
5,800.0	5,459.3	5,775.5	5,281.8	35.7	41.2	-76.43	1,268.3	1,796.5	874.6	800.0	11.725		
5,900.0	5,555.7	5,901.7	5,400.5	36.2	41.9	-76.55	1,292.2	1,831.9	887.9	811.9	11.693		
6,000.0	5,653.2	6,028.8	5,522.3	36.6	42.6	-76.65	1,312.5	1,862.1	899.0	822.0	11.671		
6,100.0	5,751.6	6,156.7	5,646.7	36.9	43.1	-76.73	1,329.1	1,886.7	908.1	830.2	11.657		
6,200.0	5,850.6	6,285.3	5,773.2	37.1	43.5	-76.79	1,341.9	1,905.6	915.1	836.5	11.649		
6,300.0	5,950.2	6,414.3	5,901.2	37.3	43.8	-76.82	1,350.7	1,918.7	919.9	840.9	11.648		
6,400.0	6,050.0	6,543.7	6,030.3	37.4	43.9	-76.84	1,355.5	1,925.8	922.4	843.3	11.655		
6,500.0	6,150.0	6,663.4	6,150.0	37.5	44.0	0.44	1,356.4	1,927.1	923.0	843.8	11.664		
6,600.0	6,250.0	6,763.4	6,250.0	37.5	44.0	0.44	1,356.4	1,927.1	923.0	843.8	11.657		
6,700.0	6,350.0	6,863.4	6,350.0	37.5	44.0	0.44	1,356.4	1,927.1	923.0	843.7	11.648		
6,800.0	6,450.0	6,963.4	6,450.0	37.5	44.0	0.44	1,356.4	1,927.1	923.0	843.7	11.640		
6,900.0	6,550.0	7,063.4	6,550.0	37.6	44.1	0.44	1,356.4	1,927.1	923.0	843.6	11.632		
7,000.0	6,650.0	7,163.4	6,650.0	37.6	44.1	0.44	1,356.4	1,927.1	923.0	843.5	11.623		
7,100.0	6,750.0	7,263.4	6,750.0	37.6	44.1	0.44	1,356.4	1,927.1	923.0	843.5	11.615		
7,200.0	6,850.0	7,363.4	6,850.0	37.7	44.1	0.44	1,356.4	1,927.1	923.0	843.4	11.607		
7,300.0	6,950.0	7,463.4	6,950.0	37.7	44.2	0.44	1,356.4	1,927.1	923.0	843.4	11.598		
7,400.0	7,050.0	7,563.4	7,050.0	37.7	44.2	0.44	1,356.4	1,927.1	923.0	843.3	11.590		
7,500.0	7,150.0	7,663.4	7,150.0	37.7	44.2	0.44	1,356.4	1,927.1	923.0	843.3	11.581		
7,600.0	7,250.0	7,763.4	7,250.0	37.8	44.2	0.44	1,356.4	1,927.1	923.0	843.2	11.573		
7,700.0	7,350.0	7,863.4	7,350.0	37.8	44.3	0.44	1,356.4	1,927.1	923.0	843.1	11.564		
7,800.0	7,450.0	7,963.4	7,450.0	37.8	44.3	0.44	1,356.4	1,927.1	923.0	843.1	11.556		
7,900.0	7,550.0	8,063.4	7,550.0	37.9	44.3	0.44	1,356.4	1,927.1	923.0	843.0	11.547		
8,000.0	7,650.0	8,163.4	7,650.0	37.9	44.3	0.44	1,356.4	1,927.1	923.0	843.0	11.538		
8,100.0	7,750.0	8,263.4	7,750.0	37.9	44.4	0.44	1,356.4	1,927.1	923.0	842.9	11.530		
8,200.0	7,850.0	8,363.4	7,850.0	38.0	44.4	0.44	1,356.4	1,927.1	923.0	842.8	11.521		
8,240.0	7,890.0	8,403.4	7,890.0	38.0	44.4	0.44	1,356.4	1,927.1	923.0	842.8	11.518		



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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	-46.73	21.9	-23.2	31.9				
100.0	100.0	100.0	100.0	0.4	0.4	-46.73	21.9	-23.2	31.9	31.1	40.253		
200.0	200.0	200.0	200.0	1.2	1.2	-46.73	21.9	-23.2	31.9	29.4	12.905	CC	
300.0	300.0	300.4	300.3	2.3	1.7	-125.13	22.4	-22.1	32.7	29.4	9.786	ES	
400.0	399.7	400.9	400.7	3.9	3.3	-125.45	25.0	-17.2	34.6	29.7	7.064		
500.0	499.1	501.4	500.7	5.0	4.6	-124.87	29.5	-8.5	37.4	31.3	6.119		
600.0	598.0	601.9	600.2	6.0	5.6	-123.60	36.1	4.2	41.2	34.1	5.825	SF	
700.0	696.0	702.3	698.9	6.8	6.5	-121.90	44.7	20.7	46.1	38.2	5.843		
800.0	793.2	802.8	796.7	7.6	7.3	-119.99	55.3	41.1	51.9	43.3	6.032		
900.0	889.2	903.1	893.3	8.3	8.0	-118.01	67.8	65.1	58.8	49.5	6.309		
1,000.0	983.9	1,003.4	988.5	9.0	8.8	-116.09	82.3	92.9	66.8	56.7	6.612		
1,100.0	1,077.2	1,103.6	1,082.2	9.3	9.4	-114.01	98.6	124.4	75.6	64.8	7.010		
1,200.0	1,170.4	1,203.5	1,174.1	9.6	9.9	-109.90	116.7	159.3	84.1	72.7	7.360		
1,300.0	1,263.6	1,302.9	1,264.8	9.9	10.2	-105.60	135.5	195.3	92.9	80.6	7.548		
1,400.0	1,356.8	1,402.3	1,355.5	10.2	10.5	-102.06	154.2	231.3	102.2	88.7	7.610		
1,500.0	1,450.0	1,501.7	1,446.3	10.6	10.9	-99.11	172.9	267.3	111.7	97.1	7.621		
1,600.0	1,543.1	1,601.1	1,537.0	10.9	11.2	-96.63	191.6	303.3	121.5	105.6	7.613		
1,700.0	1,636.3	1,700.5	1,627.7	11.3	11.6	-94.53	210.4	339.3	131.5	114.2	7.600		
1,800.0	1,729.5	1,799.9	1,718.4	11.7	11.9	-92.72	229.1	375.3	141.7	123.0	7.589		
1,900.0	1,822.7	1,899.2	1,809.2	12.1	12.3	-91.16	247.8	411.3	152.0	131.9	7.581		
2,000.0	1,915.9	1,998.6	1,899.9	12.5	12.7	-89.79	266.5	447.3	162.3	140.9	7.576		
2,100.0	2,009.1	2,098.0	1,990.6	12.9	13.1	-88.59	285.2	483.3	172.8	150.0	7.576		
2,200.0	2,102.2	2,197.4	2,081.4	13.3	13.5	-87.53	304.0	519.3	183.3	159.1	7.577		
2,300.0	2,195.4	2,296.8	2,172.1	13.7	14.0	-86.58	322.7	555.3	193.9	168.3	7.581		
2,400.0	2,288.6	2,396.2	2,262.8	14.2	14.4	-85.73	341.4	591.3	204.5	177.6	7.587		
2,500.0	2,381.8	2,495.6	2,353.5	14.6	14.8	-84.96	360.1	627.3	215.2	186.8	7.594		
2,600.0	2,475.0	2,595.0	2,444.3	15.1	15.3	-84.27	378.8	663.4	225.9	196.2	7.602		
2,700.0	2,568.1	2,694.4	2,535.0	15.5	16.0	-83.64	397.6	699.4	236.6	205.5	7.610		
2,800.0	2,661.3	2,793.8	2,625.7	16.0	16.7	-83.06	416.3	735.4	247.4	214.9	7.619		
2,900.0	2,754.5	2,893.2	2,716.5	16.5	17.4	-82.53	435.0	771.4	258.1	224.3	7.628		
3,000.0	2,847.7	2,992.5	2,807.2	17.1	18.2	-82.05	453.7	807.4	268.9	233.7	7.637		
3,100.0	2,940.9	3,091.9	2,897.9	17.8	18.9	-81.60	472.4	843.4	279.8	243.2	7.646		
3,200.0	3,034.0	3,191.3	2,988.6	18.4	19.6	-81.19	491.2	879.4	290.6	252.6	7.655		
3,300.0	3,127.2	3,290.7	3,079.4	19.1	20.4	-80.80	509.9	915.4	301.4	262.1	7.663		
3,400.0	3,220.4	3,390.1	3,170.1	19.8	21.1	-80.44	528.6	951.4	312.3	271.6	7.672		
3,500.0	3,313.6	3,489.5	3,260.8	20.4	21.9	-80.11	547.3	987.4	323.1	281.1	7.681		
3,600.0	3,406.8	3,588.9	3,351.6	21.1	22.6	-79.80	566.1	1,023.4	334.0	290.6	7.689		
3,700.0	3,500.0	3,688.3	3,442.3	21.8	23.3	-79.50	584.8	1,059.4	344.9	300.1	7.697		
3,800.0	3,593.1	3,787.7	3,533.0	22.4	24.1	-79.23	603.5	1,095.4	355.8	309.6	7.705		
3,900.0	3,686.3	3,887.1	3,623.7	23.1	24.8	-78.97	622.2	1,131.4	366.7	319.2	7.712		
4,000.0	3,779.5	3,986.4	3,714.5	23.8	25.6	-78.73	640.9	1,167.4	377.6	328.7	7.720		
4,100.0	3,872.7	4,085.8	3,805.2	24.4	26.3	-78.50	659.7	1,203.4	388.5	338.2	7.727		
4,200.0	3,965.9	4,185.2	3,895.9	25.1	27.1	-78.28	678.4	1,239.4	399.5	347.8	7.734		
4,300.0	4,059.0	4,284.6	3,986.7	25.8	27.8	-78.08	697.1	1,275.4	410.4	357.4	7.740		
4,400.0	4,152.2	4,384.0	4,077.4	26.5	28.5	-77.88	715.8	1,311.4	421.3	366.9	7.747		
4,500.0	4,245.4	4,483.4	4,168.1	27.1	29.3	-77.69	734.5	1,347.4	432.2	376.5	7.753		
4,600.0	4,338.6	4,582.8	4,258.8	27.8	30.0	-77.52	753.3	1,383.5	443.2	386.1	7.759		
4,700.0	4,431.8	4,682.2	4,349.6	28.5	30.8	-77.35	772.0	1,419.5	454.1	395.6	7.765		
4,800.0	4,524.9	4,781.6	4,440.3	29.1	31.5	-77.19	790.7	1,455.5	465.1	405.2	7.771		
4,900.0	4,618.1	4,881.0	4,531.0	29.8	32.3	-77.04	809.4	1,491.5	476.0	414.8	7.776		
5,000.0	4,711.3	4,980.4	4,621.8	30.5	33.0	-76.89	828.2	1,527.5	487.0	424.4	7.781		

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie Fed 0993-21-16W - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,804.5	5,079.7	4,712.5	31.1	33.7	-76.75	846.9	1,563.5	497.9	434.0	7.787		
5,200.0	4,897.7	5,179.1	4,803.2	31.8	34.5	-76.62	865.6	1,599.5	508.9	443.6	7.791		
5,300.0	4,990.9	5,278.5	4,893.9	32.5	35.2	-76.49	884.3	1,635.5	519.9	453.2	7.796		
5,400.0	5,084.0	5,377.9	4,984.7	33.2	36.0	-76.37	903.0	1,671.5	530.8	462.8	7.801		
5,500.0	5,177.2	5,477.3	5,075.4	33.8	36.7	-76.25	921.8	1,707.5	541.8	472.4	7.805		
5,600.0	5,270.4	5,576.7	5,166.1	34.5	37.5	-76.14	940.5	1,743.5	552.8	482.0	7.810		
5,700.0	5,364.1	5,686.8	5,267.4	35.1	38.2	-76.24	960.4	1,781.8	563.3	491.1	7.800		
5,800.0	5,459.3	5,799.3	5,372.9	35.7	39.0	-76.35	978.4	1,816.5	572.7	499.1	7.786		
5,900.0	5,555.7	5,912.2	5,480.6	36.2	39.6	-76.45	994.1	1,846.6	580.8	506.1	7.777		
6,000.0	5,653.2	6,025.5	5,590.1	36.6	40.1	-76.53	1,007.3	1,872.1	587.6	512.0	7.770		
6,100.0	5,751.6	6,139.0	5,701.2	36.9	40.5	-76.59	1,018.1	1,892.7	593.1	516.7	7.766		
6,200.0	5,850.6	6,252.8	5,813.6	37.1	40.8	-76.64	1,026.3	1,908.5	597.3	520.4	7.765		
6,300.0	5,950.2	6,366.8	5,926.9	37.3	41.0	-76.67	1,031.9	1,919.4	600.2	522.9	7.765		
6,400.0	6,050.0	6,480.8	6,040.7	37.4	41.1	-76.69	1,035.0	1,925.2	601.8	524.3	7.766		
6,500.0	6,150.0	6,590.1	6,150.0	37.5	41.2	0.59	1,035.5	1,926.3	602.1	524.6	7.768		
6,600.0	6,250.0	6,690.1	6,250.0	37.5	41.2	0.59	1,035.5	1,926.3	602.1	524.5	7.763		
6,700.0	6,350.0	6,790.1	6,350.0	37.5	41.2	0.59	1,035.5	1,926.3	602.1	524.5	7.758		
6,800.0	6,450.0	6,890.1	6,450.0	37.5	41.3	0.59	1,035.5	1,926.3	602.1	524.4	7.752		
6,900.0	6,550.0	6,990.1	6,550.0	37.6	41.3	0.59	1,035.5	1,926.3	602.1	524.4	7.746		
7,000.0	6,650.0	7,090.1	6,650.0	37.6	41.3	0.59	1,035.5	1,926.3	602.1	524.3	7.740		
7,100.0	6,750.0	7,190.1	6,750.0	37.6	41.3	0.59	1,035.5	1,926.3	602.1	524.2	7.735		
7,200.0	6,850.0	7,290.1	6,850.0	37.7	41.4	0.59	1,035.5	1,926.3	602.1	524.2	7.729		
7,300.0	6,950.0	7,390.1	6,950.0	37.7	41.4	0.59	1,035.5	1,926.3	602.1	524.1	7.723		
7,400.0	7,050.0	7,490.1	7,050.0	37.7	41.4	0.59	1,035.5	1,926.3	602.1	524.1	7.717		
7,500.0	7,150.0	7,590.1	7,150.0	37.7	41.4	0.59	1,035.5	1,926.3	602.1	524.0	7.711		
7,600.0	7,250.0	7,690.1	7,250.0	37.8	41.5	0.59	1,035.5	1,926.3	602.1	523.9	7.705		
7,700.0	7,350.0	7,790.1	7,350.0	37.8	41.5	0.59	1,035.5	1,926.3	602.1	523.9	7.700		
7,800.0	7,450.0	7,890.1	7,450.0	37.8	41.5	0.59	1,035.5	1,926.3	602.1	523.8	7.694		
7,900.0	7,550.0	7,990.1	7,550.0	37.9	41.5	0.59	1,035.5	1,926.3	602.1	523.8	7.688		
8,000.0	7,650.0	8,090.1	7,650.0	37.9	41.6	0.59	1,035.5	1,926.3	602.1	523.7	7.682		
8,100.0	7,750.0	8,190.1	7,750.0	37.9	41.6	0.59	1,035.5	1,926.3	602.1	523.6	7.676		
8,200.0	7,850.0	8,290.1	7,850.0	38.0	41.6	0.59	1,035.5	1,926.3	602.1	523.6	7.670		
8,240.0	7,890.0	8,330.1	7,890.0	38.0	41.6	0.59	1,035.5	1,926.3	602.1	523.6	7.668		



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	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)	Distance Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-46.75	10.9	-11.6	15.9			
100.0	100.0	100.0	100.0	0.4	0.4	-46.75	10.9	-11.6	15.9	15.1	20.122	
200.0	200.0	200.0	200.0	1.2	1.2	-46.75	10.9	-11.6	15.9	13.5	6.451 CC	
300.0	300.0	300.2	300.2	2.3	1.7	-126.46	11.3	-10.4	16.6	13.2	4.924	
400.0	399.7	400.6	400.4	3.9	3.3	-128.00	13.2	-5.3	17.8	12.7	3.445 ES	
500.0	499.1	501.0	500.4	5.0	4.6	-128.34	16.6	4.0	19.5	12.9	2.931	
600.0	598.0	601.5	599.8	6.0	5.6	-127.73	21.5	17.4	21.7	13.8	2.759	
700.0	696.0	701.9	698.5	6.8	6.5	-126.46	27.8	34.9	24.2	15.4	2.746 SF	
800.0	793.2	802.4	796.3	7.6	7.3	-124.76	35.7	56.4	27.3	17.6	2.823	
900.0	889.2	902.9	893.1	8.3	8.0	-122.85	45.0	81.9	30.8	20.4	2.953	
1,000.0	983.9	1,003.4	988.6	9.0	8.7	-120.87	55.7	111.4	34.8	23.6	3.110	
1,100.0	1,077.2	1,104.0	1,082.6	9.3	9.4	-118.28	67.9	144.8	39.0	27.3	3.332	
1,200.0	1,170.4	1,204.0	1,175.0	9.6	9.7	-113.26	80.9	180.6	42.6	30.7	3.559	
1,300.0	1,263.6	1,303.8	1,267.3	9.9	10.0	-108.97	94.0	216.4	46.5	33.9	3.680	
1,400.0	1,356.8	1,403.7	1,359.7	10.2	10.3	-105.36	107.0	252.2	50.7	37.1	3.735	
1,500.0	1,450.0	1,503.6	1,452.0	10.6	10.6	-102.30	120.0	288.0	55.0	40.3	3.753	
1,600.0	1,543.1	1,603.4	1,544.3	10.9	11.0	-99.69	133.1	323.8	59.4	43.6	3.751	
1,700.0	1,636.3	1,703.3	1,636.6	11.3	11.4	-97.45	146.1	359.6	63.9	46.8	3.741	
1,800.0	1,729.5	1,803.2	1,728.9	11.7	11.7	-95.51	159.1	395.4	68.5	50.2	3.729	
1,900.0	1,822.7	1,903.0	1,821.2	12.1	12.1	-93.81	172.2	431.2	73.2	53.5	3.716	
2,000.0	1,915.9	2,002.9	1,913.6	12.5	12.5	-92.32	185.2	467.0	78.0	56.9	3.706	
2,100.0	2,009.1	2,102.8	2,005.9	12.9	12.9	-91.00	198.2	502.8	82.7	60.4	3.696	
2,200.0	2,102.2	2,202.6	2,098.2	13.3	13.4	-89.83	211.3	538.6	87.6	63.8	3.689	
2,300.0	2,195.4	2,302.5	2,190.5	13.7	13.8	-88.77	224.3	574.4	92.4	67.3	3.683	
2,400.0	2,288.6	2,402.4	2,282.8	14.2	14.2	-87.83	237.3	610.2	97.3	70.9	3.678	
2,500.0	2,381.8	2,502.2	2,375.1	14.6	14.7	-86.97	250.4	646.0	102.2	74.4	3.675	
2,600.0	2,475.0	2,602.1	2,467.4	15.1	15.1	-86.20	263.4	681.8	107.2	78.0	3.673	
2,700.0	2,568.1	2,702.0	2,559.8	15.5	15.6	-85.49	276.4	717.6	112.1	81.6	3.671	
2,800.0	2,661.3	2,801.8	2,652.1	16.0	16.1	-84.84	289.5	753.4	117.1	85.2	3.670	
2,900.0	2,754.5	2,901.7	2,744.4	16.5	16.8	-84.24	302.5	789.2	122.1	88.8	3.670	
3,000.0	2,847.7	3,001.6	2,836.7	17.1	17.5	-83.69	315.5	825.0	127.0	92.4	3.670	
3,100.0	2,940.9	3,101.4	2,929.0	17.8	18.2	-83.19	328.6	860.8	132.1	96.1	3.671	
3,200.0	3,034.0	3,201.3	3,021.3	18.4	18.9	-82.72	341.6	896.6	137.1	99.7	3.672	
3,300.0	3,127.2	3,301.2	3,113.7	19.1	19.6	-82.28	354.7	932.4	142.1	103.4	3.673	
3,400.0	3,220.4	3,401.1	3,206.0	19.8	20.3	-81.87	367.7	968.2	147.1	107.1	3.674	
3,500.0	3,313.6	3,500.9	3,298.3	20.4	21.0	-81.49	380.7	1,004.0	152.1	110.7	3.675	
3,600.0	3,406.8	3,600.8	3,390.6	21.1	21.7	-81.13	393.8	1,039.8	157.2	114.4	3.677	
3,700.0	3,500.0	3,700.7	3,482.9	21.8	22.4	-80.80	406.8	1,075.6	162.2	118.1	3.678	
3,800.0	3,593.1	3,800.5	3,575.2	22.4	23.1	-80.49	419.8	1,111.4	167.3	121.8	3.680	
3,900.0	3,686.3	3,900.4	3,667.5	23.1	23.8	-80.19	432.9	1,147.2	172.3	125.5	3.682	
4,000.0	3,779.5	4,000.3	3,759.9	23.8	24.5	-79.91	445.9	1,183.0	177.4	129.2	3.683	
4,100.0	3,872.7	4,100.1	3,852.2	24.4	25.2	-79.65	458.9	1,218.8	182.5	133.0	3.685	
4,200.0	3,965.9	4,200.0	3,944.5	25.1	25.9	-79.40	472.0	1,254.6	187.5	136.7	3.687	
4,300.0	4,059.0	4,299.9	4,036.8	25.8	26.6	-79.17	485.0	1,290.4	192.6	140.4	3.688	
4,400.0	4,152.2	4,399.7	4,129.1	26.5	27.3	-78.94	498.0	1,326.2	197.7	144.1	3.690	
4,500.0	4,245.4	4,499.6	4,221.4	27.1	28.0	-78.73	511.1	1,362.0	202.8	147.8	3.692	
4,600.0	4,338.6	4,599.5	4,313.8	27.8	28.7	-78.53	524.1	1,397.8	207.8	151.6	3.693	
4,700.0	4,431.8	4,699.3	4,406.1	28.5	29.4	-78.33	537.1	1,433.6	212.9	155.3	3.695	
4,800.0	4,524.9	4,799.2	4,498.4	29.1	30.1	-78.15	550.2	1,469.4	218.0	159.0	3.697	
4,900.0	4,618.1	4,899.1	4,590.7	29.8	30.8	-77.98	563.2	1,505.2	223.1	162.8	3.698	
5,000.0	4,711.3	4,998.9	4,683.0	30.5	31.5	-77.81	576.3	1,541.0	228.2	166.5	3.700	

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 Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	LaramieFed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

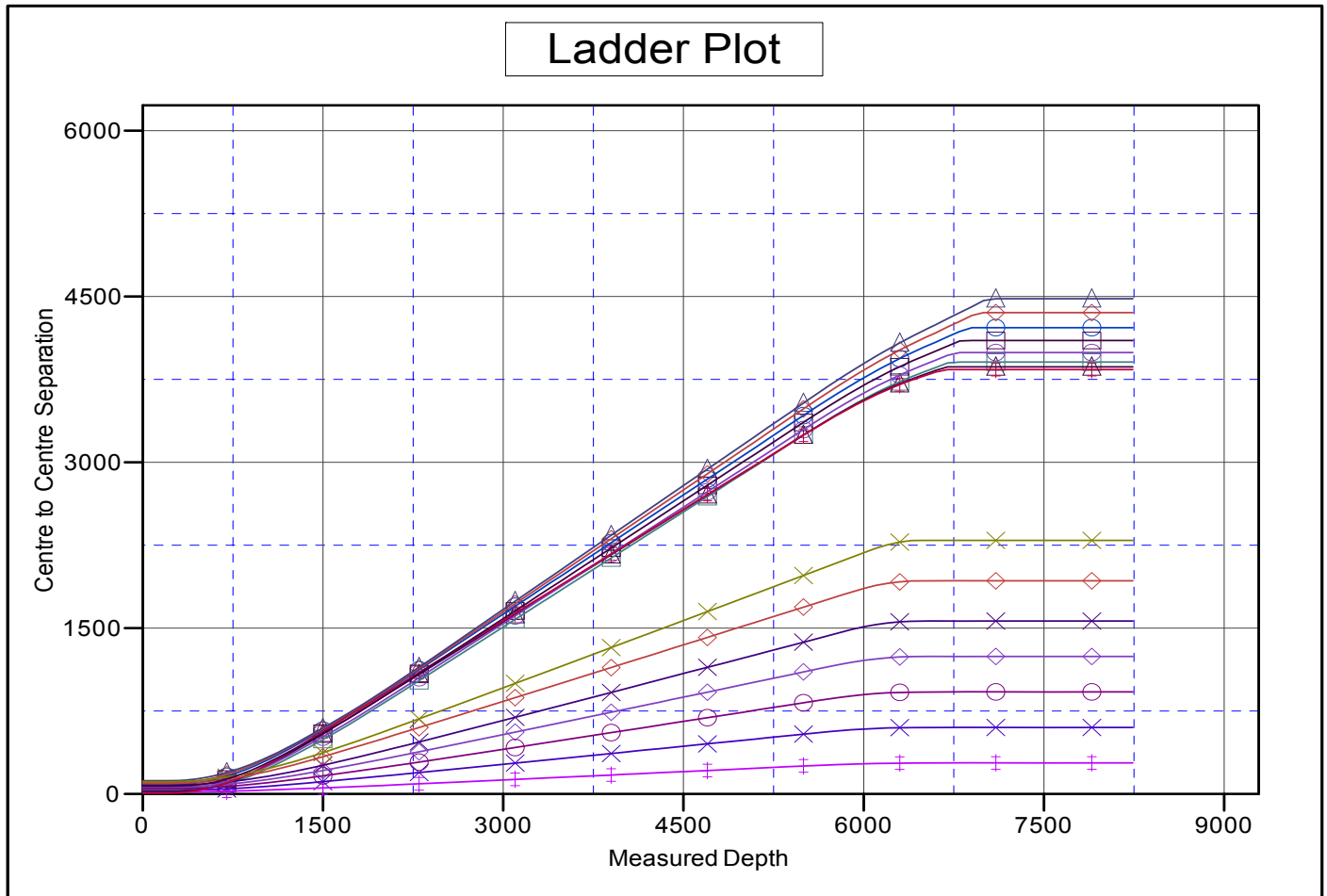
Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie Fed 0993-21-17W - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	4,804.5	5,098.8	4,775.3	31.1	32.2	-77.65	589.3	1,576.8	233.3	170.3	3.701		
5,200.0	4,897.7	5,198.7	4,867.6	31.8	32.9	-77.50	602.3	1,612.6	238.4	174.0	3.703		
5,300.0	4,990.9	5,298.5	4,960.0	32.5	33.6	-77.35	615.4	1,648.4	243.5	177.7	3.704		
5,400.0	5,084.0	5,398.4	5,052.3	33.2	34.3	-77.21	628.4	1,684.2	248.6	181.5	3.706		
5,500.0	5,177.2	5,498.3	5,144.6	33.8	35.0	-77.07	641.4	1,720.0	253.7	185.2	3.707		
5,600.0	5,270.4	5,598.2	5,236.9	34.5	35.7	-76.94	654.5	1,755.8	258.8	189.0	3.709		
5,700.0	5,364.1	5,701.9	5,333.6	35.1	36.4	-77.00	667.3	1,791.1	263.5	192.4	3.706		
5,800.0	5,459.3	5,805.9	5,432.2	35.7	37.0	-77.07	678.7	1,822.3	267.7	195.4	3.703		
5,900.0	5,555.7	5,910.0	5,532.2	36.2	37.5	-77.13	688.5	1,849.3	271.3	198.0	3.701		
6,000.0	5,653.2	6,014.2	5,633.5	36.6	37.9	-77.18	696.8	1,872.1	274.4	200.2	3.700		
6,100.0	5,751.6	6,118.5	5,735.9	36.9	38.3	-77.22	703.5	1,890.5	276.8	202.0	3.700		
6,200.0	5,850.6	6,222.8	5,839.1	37.1	38.5	-77.25	708.6	1,904.5	278.7	203.4	3.699		
6,300.0	5,950.2	6,327.1	5,943.0	37.3	38.7	-77.27	712.1	1,914.0	280.0	204.3	3.699		
6,400.0	6,050.0	6,431.5	6,047.2	37.4	38.8	-77.28	714.0	1,919.2	280.7	204.8	3.699		
6,500.0	6,150.0	6,534.3	6,150.0	37.5	38.9	0.00	714.3	1,920.1	280.8	204.8	3.696		
6,600.0	6,250.0	6,634.3	6,250.0	37.5	38.9	0.00	714.3	1,920.1	280.8	204.8	3.692		
6,700.0	6,350.0	6,734.3	6,350.0	37.5	39.0	0.00	714.3	1,920.1	280.8	204.7	3.689		
6,800.0	6,450.0	6,834.3	6,450.0	37.5	39.0	0.00	714.3	1,920.1	280.8	204.6	3.686		
6,900.0	6,550.0	6,934.3	6,550.0	37.6	39.0	0.00	714.3	1,920.1	280.8	204.6	3.684		
7,000.0	6,650.0	7,034.3	6,650.0	37.6	39.1	0.00	714.3	1,920.1	280.8	204.5	3.681		
7,100.0	6,750.0	7,134.3	6,750.0	37.6	39.1	0.00	714.3	1,920.1	280.8	204.5	3.678		
7,200.0	6,850.0	7,234.3	6,850.0	37.7	39.1	0.00	714.3	1,920.1	280.8	204.4	3.675		
7,300.0	6,950.0	7,334.3	6,950.0	37.7	39.1	0.00	714.3	1,920.1	280.8	204.3	3.672		
7,400.0	7,050.0	7,434.3	7,050.0	37.7	39.2	0.00	714.3	1,920.1	280.8	204.3	3.669		
7,500.0	7,150.0	7,534.3	7,150.0	37.7	39.2	0.00	714.3	1,920.1	280.8	204.2	3.667		
7,600.0	7,250.0	7,634.3	7,250.0	37.8	39.2	0.00	714.3	1,920.1	280.8	204.2	3.664		
7,700.0	7,350.0	7,734.3	7,350.0	37.8	39.3	0.00	714.3	1,920.1	280.8	204.1	3.661		
7,800.0	7,450.0	7,834.3	7,450.0	37.8	39.3	0.00	714.3	1,920.1	280.8	204.0	3.658		
7,900.0	7,550.0	7,934.3	7,550.0	37.9	39.3	0.00	714.3	1,920.1	280.8	204.0	3.655		
8,000.0	7,650.0	8,034.3	7,650.0	37.9	39.4	0.00	714.3	1,920.1	280.8	203.9	3.652		
8,100.0	7,750.0	8,134.3	7,750.0	37.9	39.4	0.00	714.3	1,920.1	280.8	203.9	3.649		
8,200.0	7,850.0	8,234.3	7,850.0	38.0	39.4	0.00	714.3	1,920.1	280.8	203.8	3.646		
8,240.0	7,890.0	8,274.3	7,890.0	38.0	39.4	0.00	714.3	1,920.1	280.8	203.8	3.645		



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=30' @ 7493.0usft (TBD)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000

Coordinates are relative to: Laramie Fed 0993-21-18W - Slot A-16
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.44°



LEGEND

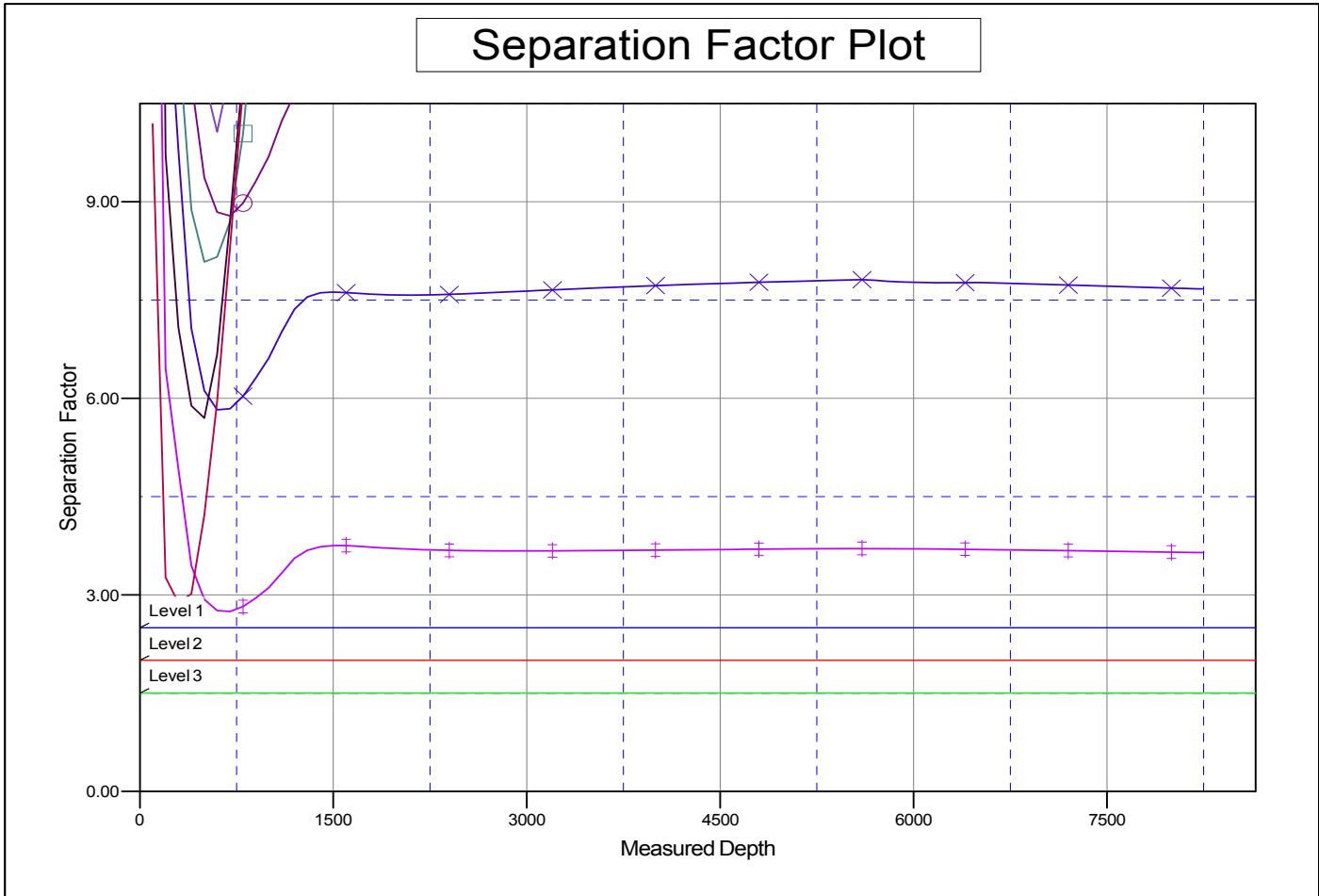
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29-01 0993-20-12E, OH, Design #1 V0	◇ Laramie Fed 0993-21-14W, OH, Design #1 V0	◇ Laramie Fed 0993-21-12W, OH,
29-01 Fed 0993-21-16W, OH, Design #1 V0	✕ Laramie Fed 0993-21-13W, OH, Design #1 V0	✕ Laramie Fed 0993-21-11W, OH,
29-01 Fed 0993-21-17W, OH, Design #1 V0	▲ Laramie 0993-20-17E, OH, Design #1 V0	■ Laramie 0993-20-14E, OH, Desi
29-01 0993-20-16E, OH, Design #1 V0	○ Laramie 0993-20-15E, OH, Design #1 V0	○ Laramie Fed 0993-21-15W, OH,



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie Fed 0993-21-18W - Slot A-16
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=30' @ 7493.0usft (TBD)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000

Coordinates are relative to: Laramie Fed 0993-21-18W - Slot A-16
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.44°



LEGEND

- | | | |
|---|---|---------------------------------|
| 29-01 0993-20-13E, OH, Design #1 V0 | ▲ Laramie 0993-20-11E, OH, Design #1 V0 Laramie | ◆ Laramie 0993-20-18E, OH, Desi |
| 29-01 0993-20-12E, OH, Design #1 V0 | ◆ Fed 0993-21-14W, OH, Design #1 V0 Laramie Fed | ◆ Laramie Fed 0993-21-12W, OH, |
| 29-01 Fed 0993-21-16W, OH, Design #1 V0 | ✕ 0993-21-13W, OH, Design #1 V0 Laramie | ✕ Laramie Fed 0993-21-11W, OH, |
| 29-01 Fed 0993-21-17W, OH, Design #1 V0 | ▲ 0993-20-17E, OH, Design #1 V0 Laramie | ■ Laramie 0993-20-14E, OH, Desi |
| 29-01 0993-20-16E, OH, Design #1 V0 | ○ 0993-20-15E, OH, Design #1 V0 | ○ Laramie Fed 0993-21-15W, OH, |