



Laramie Energy, LLC

Mesa County, CO

Laramie 0993-29-01

Laramie 29-01 Fed 0993-21-14W

OH

Design #1

KLX Anticollision Report

23 August, 2023





Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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	8,496.1	Design #1 (OH)	OWSG (REV5) MWD HD	OWSG MWD - Standard

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Laramie 0993-29-01						
Laramie 29-01 0993-20-11E - OH - Design #1	200.0	200.0	56.2	53.7	22.728	CC, ES
Laramie 29-01 0993-20-11E - OH - Design #1	500.0	492.7	73.2	66.8	11.490	SF
Laramie 29-01 0993-20-12E - OH - Design #1	200.0	200.0	40.0	37.5	16.191	CC
Laramie 29-01 0993-20-12E - OH - Design #1	300.0	299.6	40.3	37.2	13.145	ES
Laramie 29-01 0993-20-12E - OH - Design #1	500.0	494.4	55.7	49.4	8.764	SF
Laramie 29-01 0993-20-13E - OH - Design #1	200.0	200.0	24.0	21.5	9.705	CC
Laramie 29-01 0993-20-13E - OH - Design #1	300.0	299.9	24.2	21.0	7.644	ES
Laramie 29-01 0993-20-13E - OH - Design #1	500.0	496.0	40.1	32.8	5.506	SF
Laramie 29-01 0993-20-14E - OH - Design #1	200.0	200.0	7.9	5.4	3.186	CC
Laramie 29-01 0993-20-14E - OH - Design #1	300.0	300.0	8.1	4.8	2.487	Level 1, ES
Laramie 29-01 0993-20-14E - OH - Design #1	400.0	399.6	11.4	6.8	2.479	Level 1, SF
Laramie 29-01 0993-20-15E - OH - Design #1	282.9	282.8	8.0	4.9	2.558	CC
Laramie 29-01 0993-20-15E - OH - Design #1	300.0	300.0	8.0	4.8	2.464	Level 1, ES
Laramie 29-01 0993-20-15E - OH - Design #1	400.0	399.8	9.7	5.2	2.127	Level 1, SF
Laramie 29-01 0993-20-16E - OH - Design #1	345.1	345.1	23.8	20.2	6.515	CC
Laramie 29-01 0993-20-16E - OH - Design #1	400.0	399.8	24.1	20.0	5.891	ES
Laramie 29-01 0993-20-16E - OH - Design #1	600.0	598.0	36.8	29.4	4.967	SF
Laramie 29-01 0993-20-17E - OH - Design #1	445.5	446.0	38.7	34.3	8.749	CC, ES
Laramie 29-01 0993-20-17E - OH - Design #1	600.0	597.2	49.3	41.8	6.576	SF
Laramie 29-01 0993-20-18E - OH - Design #1	450.8	451.8	52.7	48.3	11.876	CC, ES
Laramie 29-01 0993-20-18E - OH - Design #1	700.0	691.1	86.5	76.4	8.535	SF
Laramie 29-01 Fed 0993-21-11W - OH - Design #1	200.0	200.0	48.1	45.6	19.460	CC
Laramie 29-01 Fed 0993-21-11W - OH - Design #1	300.0	299.6	48.5	45.5	15.948	ES
Laramie 29-01 Fed 0993-21-11W - OH - Design #1	700.0	697.0	65.8	59.5	10.449	SF
Laramie 29-01 Fed 0993-21-12W - OH - Design #1	200.0	200.0	32.0	29.5	12.948	CC
Laramie 29-01 Fed 0993-21-12W - OH - Design #1	300.0	299.8	32.5	29.2	9.899	ES
Laramie 29-01 Fed 0993-21-12W - OH - Design #1	600.0	598.5	41.4	35.7	7.226	SF
Laramie 29-01 Fed 0993-21-13W - OH - Design #1	200.0	200.0	15.9	13.5	6.454	CC
Laramie 29-01 Fed 0993-21-13W - OH - Design #1	400.0	400.0	16.6	12.5	4.077	ES
Laramie 29-01 Fed 0993-21-13W - OH - Design #1	1,300.0	1,297.1	38.6	25.6	2.982	SF
Laramie 29-01 Fed 0993-21-15W - OH - Design #1	266.2	266.1	16.1	13.3	5.672	CC
Laramie 29-01 Fed 0993-21-15W - OH - Design #1	400.0	399.8	16.6	12.7	4.308	ES
Laramie 29-01 Fed 0993-21-15W - OH - Design #1	1,600.0	1,598.9	54.4	37.4	3.199	SF
Laramie 29-01 Fed 0993-21-16W - OH - Design #1	200.0	200.0	32.1	29.6	12.989	CC
Laramie 29-01 Fed 0993-21-16W - OH - Design #1	300.0	299.6	32.3	29.3	10.634	ES
Laramie 29-01 Fed 0993-21-16W - OH - Design #1	700.0	697.6	42.0	35.7	6.622	SF

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



Anticollision Report



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Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie 29-01 Fed 0993-21-14W	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

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Laramie 0993-29-01						
Laramie 29-01 Fed 0993-21-17W - OH - Design #1	200.0	200.0	48.0	45.6	19.443	CC
Laramie 29-01 Fed 0993-21-17W - OH - Design #1	300.0	299.3	48.4	45.4	15.845	ES
Laramie 29-01 Fed 0993-21-17W - OH - Design #1	700.0	695.0	63.8	57.2	9.633	SF
Laramie 29-01 Fed 0993-21-18W - OH - Design #1	200.0	200.0	64.0	61.5	25.895	CC, ES
Laramie 29-01 Fed 0993-21-18W - OH - Design #1	700.0	690.7	87.7	80.4	11.970	SF

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)	Distance Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-46.56	38.6	-40.8	56.2			
100.0	100.0	100.0	100.0	0.4	0.4	-46.56	38.6	-40.8	56.2	55.4	70.891	
200.0	200.0	200.0	200.0	1.2	1.2	-46.56	38.6	-40.8	56.2	53.7	22.728	CC, ES
300.0	300.0	298.2	298.1	1.7	2.4	-96.88	40.7	-41.0	57.9	54.3	15.977	
400.0	399.8	396.1	395.8	3.3	3.9	-97.78	47.0	-41.5	63.4	58.2	12.295	
500.0	499.3	492.7	492.0	4.6	4.9	-100.27	56.8	-43.4	73.2	66.8	11.490	SF
600.0	598.3	588.2	586.4	5.6	5.7	-104.08	69.6	-47.8	88.1	80.6	11.795	
700.0	696.6	681.9	678.6	6.5	6.4	-108.03	85.1	-54.6	108.6	100.0	12.692	
800.0	794.0	773.5	768.0	7.3	7.1	-111.48	103.0	-63.6	134.6	125.0	13.988	
900.0	890.3	862.7	854.2	8.0	7.7	-114.25	123.1	-74.4	166.3	155.6	15.577	
1,000.0	985.3	949.0	936.7	8.7	8.3	-116.34	145.0	-87.0	203.3	191.6	17.380	
1,100.0	1,078.9	1,032.2	1,015.4	9.4	8.9	-117.85	168.3	-101.1	245.5	232.8	19.336	
1,200.0	1,170.9	1,112.1	1,089.9	10.0	9.4	-118.88	192.8	-116.2	292.6	278.9	21.396	
1,300.0	1,261.0	1,188.6	1,160.2	10.7	9.9	-119.49	218.1	-132.3	344.2	329.6	23.519	
1,400.0	1,349.3	1,261.5	1,226.4	11.0	10.3	-120.23	243.8	-149.1	400.1	384.6	25.808	
1,500.0	1,437.1	1,332.0	1,289.3	11.3	10.8	-121.42	270.2	-166.6	458.6	442.2	28.060	
1,600.0	1,525.0	1,400.0	1,349.2	11.7	11.2	-122.16	297.0	-184.6	519.0	501.8	30.214	
1,700.0	1,612.8	1,466.4	1,406.6	12.0	11.5	-122.59	324.6	-203.4	581.3	563.3	32.245	
1,800.0	1,700.6	1,530.3	1,461.0	12.4	11.9	-122.80	352.2	-222.4	645.3	626.4	34.204	
1,900.0	1,788.4	1,600.0	1,519.2	12.7	12.3	-122.84	383.7	-244.3	710.8	691.0	35.820	
2,000.0	1,876.3	1,651.7	1,561.6	13.1	12.5	-122.78	407.9	-261.3	777.8	757.3	37.923	
2,100.0	1,964.1	1,713.2	1,611.2	13.5	12.8	-122.63	437.5	-282.3	846.2	824.9	39.629	
2,200.0	2,051.9	1,785.7	1,669.4	13.9	13.1	-122.45	472.8	-307.3	915.0	892.7	40.934	
2,300.0	2,139.7	1,858.3	1,727.7	14.4	13.4	-122.29	508.1	-332.4	983.8	960.4	42.069	
2,400.0	2,227.6	1,930.8	1,785.9	14.9	13.6	-122.16	543.4	-357.4	1,052.6	1,028.2	43.071	
2,500.0	2,315.4	2,003.4	1,844.1	15.8	14.0	-122.04	578.7	-382.4	1,121.4	1,095.9	43.956	
2,600.0	2,403.2	2,075.9	1,902.4	16.6	14.4	-121.93	614.0	-407.4	1,190.2	1,163.6	44.728	
2,700.0	2,491.0	2,148.5	1,960.6	17.5	14.9	-121.84	649.2	-432.5	1,259.0	1,231.3	45.431	
2,800.0	2,578.9	2,221.0	2,018.9	18.4	15.6	-121.75	684.5	-457.5	1,327.8	1,299.0	46.058	
2,900.0	2,666.7	2,293.6	2,077.1	19.2	16.3	-121.68	719.8	-482.5	1,396.7	1,366.7	46.619	
3,000.0	2,754.5	2,366.1	2,135.3	20.1	17.0	-121.61	755.1	-507.5	1,465.5	1,434.4	47.120	
3,100.0	2,842.3	2,438.7	2,193.6	20.9	17.8	-121.55	790.4	-532.5	1,534.3	1,502.0	47.574	
3,200.0	2,930.2	2,511.2	2,251.8	21.8	18.6	-121.49	825.7	-557.6	1,603.1	1,569.7	47.986	
3,300.0	3,018.0	2,583.8	2,310.1	22.7	19.3	-121.44	861.0	-582.6	1,671.9	1,637.3	48.358	
3,400.0	3,105.8	2,656.3	2,368.3	23.5	20.1	-121.39	896.3	-607.6	1,740.7	1,705.0	48.697	
3,500.0	3,193.6	2,728.9	2,426.5	24.4	20.9	-121.34	931.6	-632.6	1,809.5	1,772.6	49.006	
3,600.0	3,281.5	2,801.4	2,484.8	25.3	21.7	-121.30	966.8	-657.7	1,878.4	1,840.3	49.290	

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
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 0993-20-11E - OH - Design #1													
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)			
3,700.0	3,369.3	2,873.9	2,543.0	26.1	22.6	-121.26	1,002.1	-682.7	1,947.2	1,907.9	49.549		
3,800.0	3,457.1	2,946.5	2,601.3	27.0	23.4	-121.23	1,037.4	-707.7	2,016.0	1,975.5	49.787		
3,900.0	3,545.0	3,019.0	2,659.5	27.9	24.2	-121.19	1,072.7	-732.7	2,084.8	2,043.1	50.007		
4,000.0	3,632.8	3,091.6	2,717.7	28.7	25.0	-121.16	1,108.0	-757.7	2,153.6	2,110.7	50.210		
4,100.0	3,720.6	3,164.1	2,776.0	29.6	25.8	-121.13	1,143.3	-782.8	2,222.5	2,178.4	50.397		
4,200.0	3,808.4	3,236.7	2,834.2	30.5	26.6	-121.11	1,178.6	-807.8	2,291.3	2,246.0	50.571		
4,300.0	3,896.3	3,309.2	2,892.4	31.4	27.4	-121.08	1,213.9	-832.8	2,360.1	2,313.6	50.732		
4,400.0	3,984.1	3,381.8	2,950.7	32.2	28.2	-121.06	1,249.1	-857.8	2,428.9	2,381.2	50.882		
4,500.0	4,071.9	3,454.3	3,008.9	33.1	29.1	-121.03	1,284.4	-882.9	2,497.7	2,448.8	51.022		
4,600.0	4,159.7	3,526.9	3,067.2	34.0	29.9	-121.01	1,319.7	-907.9	2,566.6	2,516.4	51.152		
4,700.0	4,247.6	3,599.4	3,125.4	34.8	30.7	-120.99	1,355.0	-932.9	2,635.4	2,584.0	51.274		
4,800.0	4,335.4	3,672.0	3,183.6	35.7	31.5	-120.97	1,390.3	-957.9	2,704.2	2,651.6	51.388		
4,900.0	4,423.2	3,744.5	3,241.9	36.6	32.3	-120.95	1,425.6	-982.9	2,773.0	2,719.2	51.495		
5,000.0	4,511.0	3,817.1	3,300.1	37.4	33.2	-120.93	1,460.9	-1,008.0	2,841.8	2,786.8	51.595		
5,100.0	4,598.9	3,889.6	3,358.4	38.3	34.0	-120.92	1,496.2	-1,033.0	2,910.7	2,854.4	51.689		
5,200.0	4,686.7	3,962.2	3,416.6	39.2	34.8	-120.90	1,531.5	-1,058.0	2,979.5	2,921.9	51.777		
5,300.0	4,774.5	4,034.7	3,474.8	40.1	35.6	-120.88	1,566.7	-1,083.0	3,048.3	2,989.5	51.861		
5,400.0	4,862.3	4,107.3	3,533.1	40.9	36.5	-120.87	1,602.0	-1,108.0	3,117.1	3,057.1	51.939		
5,500.0	4,950.2	4,179.8	3,591.3	41.8	37.3	-120.86	1,637.3	-1,133.1	3,186.0	3,124.7	52.013		
5,600.0	5,038.0	4,252.4	3,649.6	42.7	38.1	-121.28	1,672.6	-1,158.1	3,254.7	3,192.3	52.087		
5,700.0	5,127.3	4,326.0	3,708.7	43.5	38.9	-123.14	1,708.4	-1,183.5	3,322.4	3,258.7	52.148		
5,800.0	5,218.5	4,400.9	3,768.8	44.2	39.8	-124.80	1,744.9	-1,209.3	3,388.2	3,323.3	52.193		
5,900.0	5,311.3	4,477.0	3,829.9	44.9	40.7	-126.27	1,781.9	-1,235.6	3,452.2	3,386.1	52.233		
6,000.0	5,405.7	4,554.2	3,891.9	45.4	41.5	-127.56	1,819.4	-1,262.2	3,514.2	3,447.0	52.271		
6,100.0	5,501.4	4,632.3	3,954.6	46.0	42.4	-128.69	1,857.4	-1,289.1	3,574.2	3,505.9	52.308		
6,200.0	5,598.3	4,711.1	4,017.9	46.4	43.3	-129.68	1,895.8	-1,316.3	3,632.1	3,562.7	52.346		
6,300.0	5,696.2	4,790.6	4,081.6	46.7	44.2	-130.53	1,934.4	-1,343.7	3,687.9	3,617.5	52.387		
6,400.0	5,794.9	4,870.5	4,145.8	47.0	45.1	-131.26	1,973.3	-1,371.3	3,741.4	3,670.0	52.433		
6,500.0	5,894.2	4,950.7	4,210.2	47.2	46.0	-131.87	2,012.3	-1,399.0	3,792.7	3,720.5	52.488		
6,600.0	5,993.9	5,031.1	4,274.7	47.3	47.0	-132.38	2,051.4	-1,426.7	3,841.8	3,768.7	52.555		
6,700.0	6,093.9	5,111.4	4,339.2	47.4	47.9	-132.79	2,090.5	-1,454.4	3,888.6	3,814.7	52.640		
6,800.0	6,193.9	5,191.7	4,403.7	47.4	48.8	-81.87	2,129.5	-1,482.1	3,934.0	3,859.5	52.806		
6,900.0	6,293.9	5,272.0	4,468.1	47.4	49.7	-81.30	2,168.6	-1,509.8	3,979.7	3,904.5	52.974		
7,000.0	6,393.9	5,356.6	4,532.5	47.5	50.6	-74.74	2,208.4	-1,537.3	4,025.3	3,949.6	53.142		
7,100.0	6,493.9	5,441.1	4,603.9	47.5	51.4	-74.74	2,248.4	-1,565.3	4,075.3	3,994.6	53.310		
7,200.0	6,593.9	5,526.6	4,679.3	47.5	52.2	-74.74	2,288.4	-1,593.3	4,125.3	4,039.6	53.478		
7,300.0	6,693.9	5,612.1	4,754.7	47.5	53.0	-74.74	2,328.4	-1,621.3	4,175.3	4,089.6	53.646		
7,400.0	6,793.9	5,697.6	4,830.1	47.6	53.8	-74.74	2,368.4	-1,649.3	4,225.3	4,139.6	53.814		
7,500.0	6,893.9	5,783.1	4,905.5	47.6	54.6	-74.74	2,408.4	-1,677.3	4,275.3	4,189.6	53.982		
7,600.0	6,993.9	5,868.6	4,980.9	47.6	55.4	-74.74	2,448.4	-1,705.3	4,325.3	4,239.6	54.150		
7,700.0	7,093.9	5,954.1	5,056.3	47.6	56.2	-74.74	2,488.4	-1,733.3	4,375.3	4,289.6	54.318		
7,800.0	7,193.9	6,039.6	5,131.7	47.6	57.0	-74.74	2,528.4	-1,761.3	4,425.3	4,339.6	54.486		
7,900.0	7,293.9	6,125.1	5,207.1	47.7	57.8	-74.74	2,568.4	-1,789.3	4,475.3	4,389.6	54.654		
8,000.0	7,393.9	6,210.6	5,282.5	47.7	58.6	-74.74	2,608.4	-1,817.3	4,525.3	4,439.6	54.822		
8,100.0	7,493.9	6,296.1	5,357.9	47.7	59.4	-74.74	2,648.4	-1,845.3	4,575.3	4,489.6	54.990		
8,200.0	7,593.9	6,381.6	5,433.3	47.7	60.2	-74.74	2,688.4	-1,873.3	4,625.3	4,539.6	55.158		
8,300.0	7,693.9	6,467.1	5,508.7	47.8	61.0	-74.74	2,728.4	-1,901.3	4,675.3	4,589.6	55.326		
8,400.0	7,793.9	6,552.6	5,584.1	47.8	61.8	-74.74	2,768.4	-1,929.3	4,725.3	4,639.6	55.494		
8,400.8	7,794.6	6,553.3	5,584.8	47.8	61.8	-74.74	2,768.4	-1,929.3	4,725.3	4,639.6	55.494		
8,496.1	7,890.0	6,638.7	5,660.1	47.8	61.8	-74.74	2,768.4	-1,929.3	4,725.3	4,639.6	55.494		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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	-46.21	27.7	-28.9	40.0			
100.0	100.0	100.0	100.0	0.4	0.4	-46.21	27.7	-28.9	40.0	39.2	50.502	
200.0	200.0	200.0	200.0	1.2	1.2	-46.21	27.7	-28.9	40.0	37.5	16.191 CC	
200.0	200.0	200.0	200.0	1.2	1.2	-46.21	27.7	-28.9	40.0	37.5	16.190	
300.0	300.0	299.6	299.6	1.7	1.6	-98.54	27.7	-29.0	40.3	37.2	13.145 ES	
400.0	399.8	397.6	397.5	3.3	2.6	-106.79	28.8	-32.0	44.6	39.9	9.601	
500.0	499.3	494.4	494.1	4.6	3.4	-117.74	31.3	-38.7	55.7	49.4	8.764 SF	
600.0	598.3	590.2	589.2	5.6	4.0	-125.84	36.5	-48.1	74.3	66.4	9.488	
700.0	696.6	684.3	682.3	6.5	4.8	-130.55	44.9	-59.3	99.2	89.7	10.501	
800.0	794.0	776.3	772.7	7.3	5.7	-133.11	56.3	-72.3	129.9	119.1	11.997	
900.0	890.3	866.0	860.1	8.0	6.4	-134.39	70.2	-86.8	165.9	153.9	13.800	
1,000.0	985.3	953.0	944.1	8.7	7.1	-134.90	86.6	-102.6	207.0	193.9	15.797	
1,100.0	1,078.9	1,037.1	1,024.4	9.4	7.8	-134.93	104.9	-119.4	252.8	238.7	17.921	
1,200.0	1,170.9	1,118.0	1,100.8	10.0	8.4	-134.63	125.0	-137.1	303.1	288.1	20.130	
1,300.0	1,261.0	1,195.7	1,173.2	10.7	8.9	-134.10	146.3	-155.4	357.7	341.7	22.392	
1,400.0	1,349.3	1,270.1	1,241.6	11.0	9.4	-133.80	168.7	-174.1	416.1	399.4	24.840	
1,500.0	1,437.1	1,342.3	1,307.1	11.3	9.9	-134.02	192.3	-193.4	476.5	459.0	27.240	
1,600.0	1,525.0	1,412.8	1,370.0	11.7	10.3	-133.94	217.0	-213.3	538.2	520.0	29.489	
1,700.0	1,612.8	1,481.4	1,430.4	12.0	10.7	-133.66	242.6	-233.6	601.2	582.1	31.598	
1,800.0	1,700.6	1,548.2	1,488.1	12.4	11.1	-133.25	269.0	-254.2	665.3	645.5	33.580	
1,900.0	1,788.4	1,613.0	1,543.2	12.7	11.5	-132.74	296.0	-275.0	730.7	710.1	35.463	
2,000.0	1,876.3	1,675.8	1,595.7	13.1	11.8	-132.18	323.4	-296.0	797.3	775.9	37.242	
2,100.0	1,964.1	1,742.3	1,650.3	13.5	12.1	-131.54	353.6	-318.8	864.9	842.7	38.888	
2,200.0	2,051.9	1,815.4	1,710.2	13.9	12.4	-130.92	387.1	-344.1	932.8	909.6	40.237	
2,300.0	2,139.7	1,888.5	1,770.1	14.4	12.6	-130.38	420.5	-369.4	1,000.7	976.5	41.422	
2,400.0	2,227.6	1,961.6	1,830.0	14.9	12.9	-129.91	453.9	-394.6	1,068.7	1,043.5	42.469	
2,500.0	2,315.4	2,034.7	1,889.9	15.8	13.2	-129.49	487.3	-419.9	1,136.6	1,110.5	43.406	
2,600.0	2,403.2	2,107.8	1,949.8	16.6	13.6	-129.12	520.8	-445.2	1,204.7	1,177.4	44.244	
2,700.0	2,491.0	2,180.9	2,009.7	17.5	14.1	-128.79	554.2	-470.4	1,272.7	1,244.4	44.994	
2,800.0	2,578.9	2,254.0	2,069.6	18.4	14.7	-128.49	587.6	-495.7	1,340.8	1,311.4	45.667	
2,900.0	2,666.7	2,327.1	2,129.5	19.2	15.5	-128.23	621.0	-521.0	1,408.9	1,378.4	46.272	
3,000.0	2,754.5	2,400.2	2,189.4	20.1	16.2	-127.98	654.4	-546.2	1,477.0	1,445.4	46.819	
3,100.0	2,842.3	2,473.2	2,249.3	20.9	17.0	-127.76	687.9	-571.5	1,545.1	1,512.4	47.312	
3,200.0	2,930.2	2,546.3	2,309.1	21.8	17.7	-127.56	721.3	-596.8	1,613.2	1,579.4	47.760	
3,300.0	3,018.0	2,619.4	2,369.0	22.7	18.5	-127.37	754.7	-622.0	1,681.3	1,646.4	48.168	
3,400.0	3,105.8	2,692.5	2,428.9	23.5	19.3	-127.20	788.1	-647.3	1,749.5	1,713.4	48.540	
3,500.0	3,193.6	2,765.6	2,488.8	24.4	20.1	-127.04	821.6	-672.6	1,817.6	1,780.4	48.879	
3,600.0	3,281.5	2,838.7	2,548.7	25.3	20.8	-126.89	855.0	-697.8	1,885.8	1,847.4	49.190	
3,700.0	3,369.3	2,911.8	2,608.6	26.1	21.6	-126.75	888.4	-723.1	1,953.9	1,914.4	49.476	
3,800.0	3,457.1	2,984.9	2,668.5	27.0	22.4	-126.62	921.8	-748.4	2,022.1	1,981.4	49.739	
3,900.0	3,545.0	3,058.0	2,728.4	27.9	23.2	-126.50	955.3	-773.6	2,090.3	2,048.4	49.981	
4,000.0	3,632.8	3,131.1	2,788.3	28.7	24.0	-126.39	988.7	-798.9	2,158.4	2,115.5	50.205	
4,100.0	3,720.6	3,204.2	2,848.2	29.6	24.8	-126.29	1,022.1	-824.2	2,226.6	2,182.5	50.412	
4,200.0	3,808.4	3,277.3	2,908.1	30.5	25.6	-126.19	1,055.5	-849.4	2,294.8	2,249.5	50.604	
4,300.0	3,896.3	3,350.4	2,968.0	31.4	26.4	-126.09	1,088.9	-874.7	2,363.0	2,316.5	50.782	
4,400.0	3,984.1	3,423.4	3,027.8	32.2	27.2	-126.00	1,122.4	-900.0	2,431.2	2,383.5	50.948	
4,500.0	4,071.9	3,496.5	3,087.7	33.1	27.9	-125.92	1,155.8	-925.3	2,499.4	2,450.5	51.102	
4,600.0	4,159.7	3,569.6	3,147.6	34.0	28.7	-125.84	1,189.2	-950.5	2,567.6	2,517.5	51.246	
4,700.0	4,247.6	3,642.7	3,207.5	34.8	29.5	-125.77	1,222.6	-975.8	2,635.8	2,584.5	51.380	
4,800.0	4,335.4	3,715.8	3,267.4	35.7	30.3	-125.69	1,256.1	-1,001.1	2,704.0	2,651.5	51.506	
4,900.0	4,423.2	3,788.9	3,327.3	36.6	31.1	-125.63	1,289.5	-1,026.3	2,772.2	2,718.5	51.624	

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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		
5,000.0	4,511.0	3,862.0	3,387.2	37.4	31.9	-125.56	1,322.9	-1,051.6	2,840.4	2,785.5	51.735			
5,100.0	4,598.9	3,935.1	3,447.1	38.3	32.7	-125.50	1,356.3	-1,076.9	2,908.6	2,852.5	51.838			
5,200.0	4,686.7	4,008.2	3,507.0	39.2	33.5	-125.44	1,389.7	-1,102.1	2,976.8	2,919.5	51.936			
5,300.0	4,774.5	4,081.3	3,566.9	40.1	34.3	-125.39	1,423.2	-1,127.4	3,045.0	2,986.5	52.028			
5,400.0	4,862.3	4,154.4	3,626.8	40.9	35.1	-125.33	1,456.6	-1,152.7	3,113.2	3,053.5	52.114			
5,500.0	4,950.2	4,227.5	3,686.6	41.8	35.9	-125.28	1,490.0	-1,177.9	3,181.5	3,120.5	52.196			
5,600.0	5,038.0	4,300.6	3,746.6	42.7	36.7	-125.64	1,523.5	-1,203.2	3,249.6	3,187.5	52.277			
5,700.0	5,127.3	4,374.8	3,807.4	43.5	37.5	-127.34	1,557.4	-1,228.9	3,316.5	3,253.1	52.337			
5,800.0	5,218.5	4,450.5	3,869.4	44.2	38.3	-128.84	1,592.0	-1,255.0	3,381.4	3,316.8	52.370			
5,900.0	5,311.3	4,527.4	3,932.4	44.9	39.2	-130.15	1,627.2	-1,281.6	3,444.2	3,378.5	52.391			
6,000.0	5,405.7	4,605.5	3,996.4	45.4	40.0	-131.30	1,662.9	-1,308.6	3,504.8	3,438.0	52.403			
6,100.0	5,501.4	4,684.7	4,061.3	46.0	40.9	-132.29	1,699.1	-1,336.0	3,563.3	3,495.3	52.409			
6,200.0	5,598.3	4,764.6	4,126.8	46.4	41.8	-133.14	1,735.7	-1,363.6	3,619.4	3,550.3	52.410			
6,300.0	5,696.2	4,845.3	4,192.9	46.7	42.6	-133.86	1,772.5	-1,391.5	3,673.1	3,603.1	52.409			
6,400.0	5,794.9	4,926.6	4,259.5	47.0	43.5	-134.46	1,809.7	-1,419.6	3,724.5	3,653.5	52.409			
6,500.0	5,894.2	5,008.2	4,326.4	47.2	44.4	-134.96	1,847.0	-1,447.8	3,773.5	3,701.5	52.413			
6,600.0	5,993.9	5,090.1	4,393.5	47.3	45.3	-135.35	1,884.5	-1,476.1	3,820.0	3,747.2	52.426			
6,700.0	6,093.9	5,172.1	4,460.6	47.4	46.2	-135.66	1,921.9	-1,504.5	3,864.1	3,790.4	52.456			
6,800.0	6,193.9	5,254.0	4,527.8	47.4	47.1	-84.72	1,959.4	-1,532.8	3,906.6	3,832.3	52.576			
6,900.0	6,293.9	7,157.7	6,293.9	47.4	57.7	-78.48	2,422.1	-1,882.6	3,947.8	3,857.6	43.740			
7,000.0	6,393.9	7,257.7	6,393.9	47.5	57.8	-78.48	2,422.1	-1,882.6	3,947.8	3,857.5	43.722			
7,100.0	6,493.9	7,357.7	6,493.9	47.5	57.8	-78.48	2,422.1	-1,882.6	3,947.8	3,857.5	43.704			
7,200.0	6,593.9	7,457.7	6,593.9	47.5	57.8	-78.48	2,422.1	-1,882.6	3,947.8	3,857.4	43.686			
7,300.0	6,693.9	7,557.7	6,693.9	47.5	57.8	-78.48	2,422.1	-1,882.6	3,947.8	3,857.4	43.668			
7,400.0	6,793.9	7,657.7	6,793.9	47.6	57.8	-78.48	2,422.1	-1,882.6	3,947.8	3,857.4	43.650			
7,500.0	6,893.9	7,757.7	6,893.9	47.6	57.9	-78.48	2,422.1	-1,882.6	3,947.8	3,857.3	43.631			
7,600.0	6,993.9	7,857.7	6,993.9	47.6	57.9	-78.48	2,422.1	-1,882.6	3,947.8	3,857.3	43.613			
7,700.0	7,093.9	7,957.7	7,093.9	47.6	57.9	-78.48	2,422.1	-1,882.6	3,947.8	3,857.3	43.594			
7,800.0	7,193.9	8,057.7	7,193.9	47.6	57.9	-78.48	2,422.1	-1,882.6	3,947.8	3,857.2	43.575			
7,900.0	7,293.9	8,157.7	7,293.9	47.7	57.9	-78.48	2,422.1	-1,882.6	3,947.8	3,857.2	43.557			
8,000.0	7,393.9	8,257.7	7,393.9	47.7	57.9	-78.48	2,422.1	-1,882.6	3,947.8	3,857.1	43.538			
8,100.0	7,493.9	8,357.7	7,493.9	47.7	58.0	-78.48	2,422.1	-1,882.6	3,947.8	3,857.1	43.518			
8,200.0	7,593.9	8,457.7	7,593.9	47.7	58.0	-78.48	2,422.1	-1,882.6	3,947.8	3,857.1	43.499			
8,300.0	7,693.9	8,557.7	7,693.9	47.8	58.0	-78.48	2,422.1	-1,882.6	3,947.8	3,857.0	43.480			
8,400.0	7,793.9	8,657.7	7,793.9	47.8	58.0	-78.48	2,422.1	-1,882.6	3,947.8	3,857.0	43.460			
8,496.1	7,890.0	8,753.8	7,890.0	47.8	58.0	-78.48	2,422.1	-1,882.6	3,947.8	3,856.9	43.442			

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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	-46.36	16.5	-17.4	24.0					
100.0	100.0	100.0	100.0	0.4	0.4	-46.36	16.5	-17.4	24.0	23.2	30.272			
200.0	200.0	200.0	200.0	1.2	1.2	-46.36	16.5	-17.4	24.0	21.5	9.705	CC		
200.0	200.0	200.0	200.0	1.2	1.2	-46.36	16.5	-17.4	24.0	21.5	9.705			
300.0	300.0	299.9	299.9	1.7	1.6	-99.80	16.6	-17.4	24.2	21.0	7.644	ES		
400.0	399.8	398.6	398.5	3.3	2.5	-112.60	17.3	-19.8	28.2	23.5	6.014			
500.0	499.3	496.0	495.8	4.6	4.0	-126.91	19.4	-26.2	40.1	32.8	5.506	SF		
600.0	598.3	591.7	590.9	5.6	4.6	-136.22	22.7	-36.2	60.4	51.5	6.818			
700.0	696.6	686.1	684.3	6.5	5.0	-140.52	28.7	-48.6	87.4	77.4	8.673			
800.0	794.0	778.5	775.0	7.3	5.7	-142.13	37.6	-62.9	120.0	108.6	10.535			
900.0	890.3	868.4	862.8	8.0	6.4	-142.49	49.2	-78.6	157.8	145.2	12.548			
1,000.0	985.3	955.6	947.1	8.7	7.1	-142.23	63.3	-95.6	200.4	186.8	14.706			
1,100.0	1,078.9	1,039.8	1,027.8	9.4	7.7	-141.62	79.5	-113.6	247.7	233.1	16.962			
1,200.0	1,170.9	1,120.8	1,104.5	10.0	8.2	-140.81	97.4	-132.5	299.5	284.0	19.283			
1,300.0	1,261.0	1,200.0	1,178.6	10.7	8.8	-139.86	117.1	-152.3	355.5	339.0	21.614			
1,400.0	1,349.3	1,272.8	1,245.8	11.0	9.3	-139.19	137.2	-171.7	415.3	398.1	24.202			
1,500.0	1,437.1	1,345.0	1,311.7	11.3	9.7	-139.07	158.9	-192.0	476.9	459.0	26.707			
1,600.0	1,525.0	1,415.5	1,375.0	11.7	10.2	-138.71	181.8	-212.9	539.6	521.0	29.055			
1,700.0	1,612.8	1,484.2	1,435.7	12.0	10.6	-138.20	205.7	-234.2	603.5	584.2	31.259			
1,800.0	1,700.6	1,551.0	1,493.9	12.4	11.0	-137.59	230.4	-255.8	668.5	648.4	33.328			
1,900.0	1,788.4	1,616.0	1,549.5	12.7	11.3	-136.92	255.8	-277.7	734.6	713.8	35.332			
2,000.0	1,876.3	1,684.8	1,607.6	13.1	11.6	-136.18	284.0	-301.5	801.7	780.1	37.198			
2,100.0	1,964.1	1,758.4	1,669.6	13.5	11.8	-135.48	314.3	-327.2	869.0	846.5	38.739			
2,200.0	2,051.9	1,832.0	1,731.5	13.9	12.1	-134.89	344.6	-352.8	936.3	913.0	40.112			
2,300.0	2,139.7	1,905.6	1,793.5	14.4	12.4	-134.37	374.9	-378.5	1,003.7	979.4	41.338			
2,400.0	2,227.6	1,979.2	1,855.5	14.9	12.7	-133.92	405.2	-404.1	1,071.1	1,045.8	42.426			
2,500.0	2,315.4	2,052.8	1,917.5	15.8	13.0	-133.53	435.5	-429.7	1,138.5	1,112.3	43.400			
2,600.0	2,403.2	2,126.4	1,979.5	16.6	13.5	-133.17	465.8	-455.4	1,206.0	1,178.8	44.273			
2,700.0	2,491.0	2,200.0	2,041.5	17.5	14.0	-132.86	496.1	-481.0	1,273.5	1,245.3	45.074			
2,800.0	2,578.9	2,273.6	2,103.5	18.4	14.6	-132.57	526.4	-506.7	1,341.1	1,311.8	45.786			
2,900.0	2,666.7	2,347.2	2,165.5	19.2	15.2	-132.31	556.7	-532.3	1,408.6	1,378.3	46.427			
3,000.0	2,754.5	2,420.8	2,227.4	20.1	15.9	-132.08	587.0	-558.0	1,476.1	1,444.7	47.010			
3,100.0	2,842.3	2,494.4	2,289.4	20.9	16.6	-131.87	617.3	-583.6	1,543.7	1,511.2	47.540			
3,200.0	2,930.2	2,568.0	2,351.4	21.8	17.3	-131.67	647.6	-609.2	1,611.3	1,577.7	48.020			
3,300.0	3,018.0	2,641.6	2,413.4	22.7	18.1	-131.49	677.9	-634.9	1,678.9	1,644.2	48.460			
3,400.0	3,105.8	2,715.2	2,475.4	23.5	18.8	-131.33	708.1	-660.5	1,746.5	1,710.7	48.862			
3,500.0	3,193.6	2,788.8	2,537.4	24.4	19.5	-131.17	738.4	-686.2	1,814.1	1,777.2	49.231			
3,600.0	3,281.5	2,862.4	2,599.4	25.3	20.3	-131.03	768.7	-711.8	1,881.7	1,843.7	49.568			
3,700.0	3,369.3	2,936.1	2,661.4	26.1	21.0	-130.90	799.0	-737.4	1,949.3	1,910.2	49.880			
3,800.0	3,457.1	3,009.7	2,723.3	27.0	21.7	-130.77	829.3	-763.1	2,016.9	1,976.7	50.167			
3,900.0	3,545.0	3,083.3	2,785.3	27.9	22.5	-130.66	859.6	-788.7	2,084.5	2,043.2	50.432			
4,000.0	3,632.8	3,156.9	2,847.3	28.7	23.2	-130.55	889.9	-814.4	2,152.1	2,109.7	50.678			
4,100.0	3,720.6	3,230.5	2,909.3	29.6	24.0	-130.45	920.2	-840.0	2,219.8	2,176.2	50.906			
4,200.0	3,808.4	3,304.1	2,971.3	30.5	24.7	-130.35	950.5	-865.6	2,287.4	2,242.7	51.118			
4,300.0	3,896.3	3,377.7	3,033.3	31.4	25.4	-130.26	980.8	-891.3	2,355.1	2,309.2	51.314			
4,400.0	3,984.1	3,451.3	3,095.3	32.2	26.2	-130.17	1,011.1	-916.9	2,422.7	2,375.6	51.497			
4,500.0	4,071.9	3,524.9	3,157.3	33.1	26.9	-130.09	1,041.4	-942.6	2,490.3	2,442.1	51.669			
4,600.0	4,159.7	3,598.5	3,219.2	34.0	27.7	-130.02	1,071.7	-968.2	2,558.0	2,508.6	51.829			
4,700.0	4,247.6	3,672.1	3,281.2	34.8	28.4	-129.94	1,102.0	-993.9	2,625.6	2,575.1	51.978			
4,800.0	4,335.4	3,745.7	3,343.2	35.7	29.2	-129.88	1,132.3	-1,019.5	2,693.3	2,641.6	52.119			
4,900.0	4,423.2	3,819.3	3,405.2	36.6	29.9	-129.81	1,162.6	-1,045.1	2,760.9	2,708.1	52.250			

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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)			
5,000.0	4,511.0	3,892.9	3,467.2	37.4	30.7	-129.75	1,192.9	-1,070.8	2,828.6	2,774.6	52.374		
5,100.0	4,598.9	3,966.5	3,529.2	38.3	31.4	-129.69	1,223.2	-1,096.4	2,896.2	2,841.1	52.490		
5,200.0	4,686.7	4,040.1	3,591.2	39.2	32.2	-129.63	1,253.5	-1,122.1	2,963.9	2,907.6	52.600		
5,300.0	4,774.5	4,113.7	3,653.2	40.1	32.9	-129.58	1,283.8	-1,147.7	3,031.6	2,974.0	52.703		
5,400.0	4,862.3	4,187.4	3,715.1	40.9	33.7	-129.53	1,314.1	-1,173.3	3,099.2	3,040.5	52.800		
5,500.0	4,950.2	4,261.0	3,777.1	41.8	34.4	-129.48	1,344.4	-1,199.0	3,166.9	3,107.0	52.892		
5,600.0	5,038.0	4,334.6	3,839.2	42.7	35.2	-129.80	1,374.7	-1,224.6	3,234.5	3,173.5	52.983		
5,700.0	5,127.3	4,409.4	3,902.2	43.5	36.0	-131.38	1,405.5	-1,250.7	3,300.7	3,238.4	53.045		
5,800.0	5,218.5	4,485.9	3,966.6	44.2	36.7	-132.76	1,437.0	-1,277.3	3,364.7	3,301.3	53.067		
5,900.0	5,311.3	4,563.8	4,032.2	44.9	37.5	-133.95	1,469.1	-1,304.5	3,426.4	3,361.8	53.070		
6,000.0	5,405.7	4,643.1	4,098.9	45.4	38.3	-134.98	1,501.7	-1,332.1	3,485.7	3,420.0	53.056		
6,100.0	5,501.4	4,723.5	4,166.6	46.0	39.2	-135.86	1,534.8	-1,360.1	3,542.6	3,475.8	53.029		
6,200.0	5,598.3	4,804.9	4,235.2	46.4	40.0	-136.61	1,568.3	-1,388.5	3,597.1	3,529.2	52.991		
6,300.0	5,696.2	4,887.2	4,304.5	46.7	40.8	-137.23	1,602.2	-1,417.1	3,648.9	3,580.0	52.945		
6,400.0	5,794.9	4,970.2	4,374.4	47.0	41.7	-137.74	1,636.3	-1,446.0	3,698.2	3,628.3	52.894		
6,500.0	5,894.2	5,053.7	4,444.7	47.2	42.6	-138.15	1,670.7	-1,475.1	3,744.8	3,673.9	52.843		
6,600.0	5,993.9	5,137.6	4,515.4	47.3	43.4	-138.46	1,705.2	-1,504.4	3,788.8	3,717.0	52.796		
6,700.0	6,093.9	5,221.8	4,586.3	47.4	44.3	-138.68	1,739.9	-1,533.7	3,830.1	3,757.5	52.764		
6,800.0	6,193.9	5,306.0	4,657.2	47.4	45.1	-87.73	1,774.5	-1,563.0	3,869.7	3,796.5	52.835		
6,900.0	6,293.9	7,046.0	6,293.9	47.4	53.9	-82.54	2,139.1	-1,871.6	3,890.3	3,802.8	44.489		
7,000.0	6,393.9	7,146.0	6,393.9	47.5	53.9	-82.54	2,139.1	-1,871.6	3,890.3	3,802.8	44.469		
7,100.0	6,493.9	7,246.0	6,493.9	47.5	53.9	-82.54	2,139.1	-1,871.6	3,890.3	3,802.7	44.449		
7,200.0	6,593.9	7,346.0	6,593.9	47.5	53.9	-82.54	2,139.1	-1,871.6	3,890.3	3,802.7	44.430		
7,300.0	6,693.9	7,446.0	6,693.9	47.5	54.0	-82.54	2,139.1	-1,871.6	3,890.3	3,802.7	44.410		
7,400.0	6,793.9	7,546.0	6,793.9	47.6	54.0	-82.54	2,139.1	-1,871.6	3,890.3	3,802.6	44.390		
7,500.0	6,893.9	7,646.0	6,893.9	47.6	54.0	-82.54	2,139.1	-1,871.6	3,890.3	3,802.6	44.370		
7,600.0	6,993.9	7,746.0	6,993.9	47.6	54.0	-82.54	2,139.1	-1,871.6	3,890.3	3,802.5	44.350		
7,700.0	7,093.9	7,846.0	7,093.9	47.6	54.0	-82.54	2,139.1	-1,871.6	3,890.3	3,802.5	44.329		
7,800.0	7,193.9	7,946.0	7,193.9	47.6	54.1	-82.54	2,139.1	-1,871.6	3,890.3	3,802.5	44.309		
7,900.0	7,293.9	8,046.0	7,293.9	47.7	54.1	-82.54	2,139.1	-1,871.6	3,890.3	3,802.4	44.288		
8,000.0	7,393.9	8,146.0	7,393.9	47.7	54.1	-82.54	2,139.1	-1,871.6	3,890.3	3,802.4	44.268		
8,100.0	7,493.9	8,246.0	7,493.9	47.7	54.1	-82.54	2,139.1	-1,871.6	3,890.3	3,802.3	44.247		
8,200.0	7,593.9	8,346.0	7,593.9	47.7	54.1	-82.54	2,139.1	-1,871.6	3,890.3	3,802.3	44.226		
8,300.0	7,693.9	8,446.0	7,693.9	47.8	54.2	-82.54	2,139.1	-1,871.6	3,890.3	3,802.2	44.205		
8,400.0	7,793.9	8,546.0	7,793.9	47.8	54.2	-82.54	2,139.1	-1,871.6	3,890.3	3,802.2	44.183		
8,401.8	7,795.7	8,547.8	7,795.7	47.8	54.2	-82.54	2,139.1	-1,871.6	3,890.3	3,802.2	44.183		
8,496.1	7,890.0	8,601.1	7,849.0	47.8	54.2	-82.54	2,139.1	-1,871.6	3,890.5	3,802.4	44.163		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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	-45.98	5.5	-5.7	7.9			
100.0	100.0	100.0	100.0	0.4	0.4	-45.98	5.5	-5.7	7.9	7.1	9.936	
200.0	200.0	200.0	200.0	1.2	1.2	-45.98	5.5	-5.7	7.9	5.4	3.186	CC
201.8	201.8	201.8	201.8	1.2	1.2	-96.53	5.5	-5.7	7.9	5.4	3.165	
300.0	300.0	300.0	300.0	1.7	1.7	-105.17	5.5	-5.7	8.1	4.8	2.487	Level 1, ES
400.0	399.8	399.6	399.6	3.3	1.9	-134.00	5.5	-6.2	11.4	6.8	2.479	Level 1, SF
500.0	499.3	498.0	497.9	4.6	3.1	-151.38	5.9	-10.4	23.6	16.4	3.287	
600.0	598.3	594.4	593.9	5.6	4.4	-156.81	6.6	-18.6	44.4	35.0	4.739	
700.0	696.6	689.2	688.0	6.5	4.7	-158.21	8.2	-30.3	72.5	62.0	6.926	
800.0	794.0	782.4	780.0	7.3	5.2	-157.49	12.7	-44.1	105.7	94.1	9.064	
900.0	890.3	873.2	869.2	8.0	5.8	-156.08	20.0	-59.6	143.9	131.1	11.190	
1,000.0	985.3	961.3	955.1	8.7	6.5	-154.49	29.9	-76.6	187.0	173.0	13.394	
1,100.0	1,078.9	1,046.4	1,037.4	9.4	7.1	-152.88	42.0	-94.8	234.7	219.7	15.700	
1,200.0	1,170.9	1,128.3	1,115.7	10.0	7.6	-151.28	56.0	-114.0	286.9	271.1	18.091	
1,300.0	1,261.0	1,206.7	1,190.0	10.7	8.2	-149.72	71.6	-133.8	343.5	326.8	20.544	
1,400.0	1,349.3	1,281.7	1,260.1	11.0	8.7	-148.49	88.4	-154.1	404.0	386.6	23.210	
1,500.0	1,437.1	1,354.5	1,327.4	11.3	9.1	-147.80	106.6	-175.0	466.2	448.1	25.839	
1,600.0	1,525.0	1,425.6	1,392.4	11.7	9.6	-146.99	126.1	-196.6	529.4	510.7	28.307	
1,700.0	1,612.8	1,495.0	1,454.8	12.0	10.0	-146.10	146.8	-218.7	593.6	574.2	30.634	
1,800.0	1,700.6	1,562.5	1,514.6	12.4	10.4	-145.18	168.4	-241.2	658.9	638.8	32.818	
1,900.0	1,788.4	1,628.1	1,572.0	12.7	10.8	-144.25	190.8	-264.0	725.2	704.4	34.951	
2,000.0	1,876.3	1,697.6	1,631.8	13.1	11.0	-143.27	215.7	-289.0	792.4	770.9	36.931	
2,100.0	1,964.1	1,770.8	1,694.8	13.5	11.3	-142.38	242.1	-315.3	859.8	837.6	38.612	
2,200.0	2,051.9	1,844.0	1,757.8	13.9	11.6	-141.62	268.5	-341.7	927.4	904.3	40.124	
2,300.0	2,139.7	1,917.3	1,820.8	14.4	11.8	-140.96	294.9	-368.1	995.0	971.0	41.487	
2,400.0	2,227.6	1,990.5	1,883.8	14.9	12.2	-140.38	321.2	-394.5	1,062.6	1,037.8	42.713	
2,500.0	2,315.4	2,063.7	1,946.8	15.8	12.5	-139.87	347.6	-420.8	1,130.4	1,104.6	43.806	
2,600.0	2,403.2	2,136.9	2,009.8	16.6	12.9	-139.42	374.0	-447.2	1,198.1	1,171.4	44.807	
2,700.0	2,491.0	2,210.2	2,072.8	17.5	13.4	-139.02	400.4	-473.6	1,265.9	1,238.3	45.716	
2,800.0	2,578.9	2,283.4	2,135.8	18.4	13.9	-138.66	426.8	-499.9	1,333.8	1,305.1	46.533	
2,900.0	2,666.7	2,356.6	2,198.8	19.2	14.5	-138.33	453.2	-526.3	1,401.6	1,372.0	47.272	
3,000.0	2,754.5	2,429.8	2,261.8	20.1	15.1	-138.03	479.6	-552.7	1,469.5	1,438.9	47.946	
3,100.0	2,842.3	2,503.1	2,324.9	20.9	15.8	-137.76	506.0	-579.1	1,537.4	1,505.8	48.562	
3,200.0	2,930.2	2,576.3	2,387.9	21.8	16.4	-137.51	532.4	-605.4	1,605.4	1,572.7	49.122	
3,300.0	3,018.0	2,649.5	2,450.9	22.7	17.1	-137.28	558.8	-631.8	1,673.3	1,639.6	49.636	
3,400.0	3,105.8	2,722.7	2,513.9	23.5	17.8	-137.07	585.2	-658.2	1,741.2	1,706.5	50.108	
3,500.0	3,193.6	2,795.9	2,576.9	24.4	18.5	-136.87	611.6	-684.5	1,809.2	1,773.4	50.542	
3,600.0	3,281.5	2,869.2	2,639.9	25.3	19.1	-136.69	638.0	-710.9	1,877.2	1,840.3	50.941	
3,700.0	3,369.3	2,942.4	2,702.9	26.1	19.8	-136.52	664.4	-737.3	1,945.1	1,907.2	51.309	
3,800.0	3,457.1	3,015.6	2,765.9	27.0	20.5	-136.37	690.8	-763.7	2,013.1	1,974.2	51.650	
3,900.0	3,545.0	3,088.8	2,828.9	27.9	21.2	-136.22	717.2	-790.0	2,081.1	2,041.1	51.965	
4,000.0	3,632.8	3,162.1	2,891.9	28.7	21.9	-136.08	743.5	-816.4	2,149.1	2,108.0	52.258	
4,100.0	3,720.6	3,235.3	2,954.9	29.6	22.6	-135.95	769.9	-842.8	2,217.1	2,174.9	52.529	
4,200.0	3,808.4	3,308.5	3,017.9	30.5	23.3	-135.83	796.3	-869.1	2,285.2	2,241.9	52.783	
4,300.0	3,896.3	3,381.7	3,080.9	31.4	24.0	-135.72	822.7	-895.5	2,353.2	2,308.8	53.018	
4,400.0	3,984.1	3,454.9	3,143.9	32.2	24.7	-135.61	849.1	-921.9	2,421.2	2,375.7	53.238	
4,500.0	4,071.9	3,528.2	3,206.9	33.1	25.4	-135.51	875.5	-948.3	2,489.2	2,442.7	53.444	
4,600.0	4,159.7	3,601.4	3,269.9	34.0	26.1	-135.41	901.9	-974.6	2,557.3	2,509.6	53.637	
4,700.0	4,247.6	3,674.6	3,332.9	34.8	26.8	-135.32	928.3	-1,001.0	2,625.3	2,576.5	53.817	
4,800.0	4,335.4	3,747.8	3,395.9	35.7	27.5	-135.23	954.7	-1,027.4	2,693.4	2,643.5	53.987	
4,900.0	4,423.2	3,821.1	3,458.9	36.6	28.2	-135.15	981.1	-1,053.7	2,761.4	2,710.4	54.146	

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 Laramie 0993-29-01 - Laramie 29-01 0993-20-14E - OH - Design #1												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		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)			
5,000.0	4,511.0	3,894.3	3,521.9	37.4	28.9	-135.07	1,007.5	-1,080.1	2,829.4	2,777.3	54.296		
5,100.0	4,598.9	3,967.5	3,584.9	38.3	29.6	-134.99	1,033.9	-1,106.5	2,897.5	2,844.3	54.437		
5,200.0	4,686.7	4,040.7	3,647.9	39.2	30.3	-134.92	1,060.3	-1,132.8	2,965.5	2,911.2	54.570		
5,300.0	4,774.5	4,114.0	3,710.9	40.1	31.0	-134.85	1,086.7	-1,159.2	3,033.6	2,978.1	54.696		
5,400.0	4,862.3	4,187.2	3,774.0	40.9	31.7	-134.79	1,113.1	-1,185.6	3,101.7	3,045.1	54.814		
5,500.0	4,950.2	4,260.4	3,837.0	41.8	32.4	-134.73	1,139.5	-1,212.0	3,169.7	3,112.0	54.926		
5,600.0	5,038.0	4,333.7	3,900.0	42.7	33.1	-135.02	1,165.9	-1,238.3	3,237.7	3,178.9	55.036		
5,700.0	5,127.3	4,408.3	3,964.2	43.5	33.8	-136.46	1,192.8	-1,265.2	3,304.1	3,244.2	55.106		
5,800.0	5,218.5	4,484.7	4,029.9	44.2	34.6	-137.71	1,220.3	-1,292.7	3,368.2	3,307.1	55.119		
5,900.0	5,311.3	4,562.8	4,097.1	44.9	35.3	-138.78	1,248.4	-1,320.9	3,429.7	3,367.5	55.103		
6,000.0	5,405.7	4,642.3	4,165.6	45.4	36.1	-139.70	1,277.1	-1,349.5	3,488.7	3,425.3	55.061		
6,100.0	5,501.4	4,723.3	4,235.3	46.0	36.9	-140.47	1,306.3	-1,378.7	3,545.0	3,480.6	54.997		
6,200.0	5,598.3	4,805.5	4,306.0	46.4	37.7	-141.12	1,335.9	-1,408.3	3,598.6	3,533.1	54.914		
6,300.0	5,696.2	4,888.7	4,377.6	46.7	38.5	-141.65	1,365.9	-1,438.2	3,649.5	3,582.9	54.816		
6,400.0	5,794.9	4,972.8	4,450.0	47.0	39.3	-142.07	1,396.2	-1,468.5	3,697.5	3,629.9	54.708		
6,500.0	5,894.2	5,057.7	4,523.0	47.2	40.1	-142.39	1,426.8	-1,499.1	3,742.6	3,674.1	54.594		
6,600.0	5,993.9	5,143.1	4,596.5	47.3	40.9	-142.62	1,457.6	-1,529.9	3,784.9	3,715.4	54.479		
6,700.0	6,093.9	5,229.0	4,670.3	47.4	41.8	-142.77	1,488.6	-1,560.8	3,824.2	3,753.9	54.378		
6,800.0	6,193.9	5,315.0	4,744.4	47.4	42.6	-91.83	1,519.6	-1,591.8	3,861.7	3,790.7	54.401		
6,900.0	6,293.9	6,946.8	6,293.9	47.4	50.1	-87.40	1,809.9	-1,881.8	3,871.5	3,787.4	46.032		
7,000.0	6,393.9	7,046.8	6,393.9	47.5	50.1	-87.40	1,809.9	-1,881.8	3,871.5	3,787.4	46.010		
7,100.0	6,493.9	7,146.8	6,493.9	47.5	50.2	-87.40	1,809.9	-1,881.8	3,871.5	3,787.3	45.988		
7,200.0	6,593.9	7,246.8	6,593.9	47.5	50.2	-87.40	1,809.9	-1,881.8	3,871.5	3,787.3	45.966		
7,300.0	6,693.9	7,346.8	6,693.9	47.5	50.2	-87.40	1,809.9	-1,881.8	3,871.5	3,787.3	45.944		
7,400.0	6,793.9	7,446.8	6,793.9	47.6	50.2	-87.40	1,809.9	-1,881.8	3,871.5	3,787.2	45.921		
7,500.0	6,893.9	7,546.8	6,893.9	47.6	50.3	-87.40	1,809.9	-1,881.8	3,871.5	3,787.2	45.898		
7,600.0	6,993.9	7,646.8	6,993.9	47.6	50.3	-87.40	1,809.9	-1,881.8	3,871.5	3,787.1	45.875		
7,700.0	7,093.9	7,746.8	7,093.9	47.6	50.3	-87.40	1,809.9	-1,881.8	3,871.5	3,787.1	45.853		
7,800.0	7,193.9	7,846.8	7,193.9	47.6	50.3	-87.40	1,809.9	-1,881.8	3,871.5	3,787.1	45.829		
7,900.0	7,293.9	7,946.8	7,293.9	47.7	50.3	-87.40	1,809.9	-1,881.8	3,871.5	3,787.0	45.806		
8,000.0	7,393.9	8,046.8	7,393.9	47.7	50.4	-87.40	1,809.9	-1,881.8	3,871.5	3,787.0	45.783		
8,100.0	7,493.9	8,146.8	7,493.9	47.7	50.4	-87.40	1,809.9	-1,881.8	3,871.5	3,786.9	45.759		
8,200.0	7,593.9	8,246.8	7,593.9	47.7	50.4	-87.40	1,809.9	-1,881.8	3,871.5	3,786.9	45.736		
8,300.0	7,693.9	8,346.8	7,693.9	47.8	50.4	-87.40	1,809.9	-1,881.8	3,871.5	3,786.8	45.712		
8,400.0	7,793.9	8,446.8	7,793.9	47.8	50.5	-87.40	1,809.9	-1,881.8	3,871.5	3,786.8	45.688		
8,496.1	7,890.0	8,543.0	7,890.0	47.8	50.5	-87.40	1,809.9	-1,881.8	3,871.5	3,786.8	45.665		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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	132.56	-5.5	5.9	8.1			
100.0	100.0	100.0	100.0	0.4	0.4	132.56	-5.5	5.9	8.1	7.3	10.196	
200.0	200.0	200.0	200.0	1.2	1.2	132.56	-5.5	5.9	8.1	5.6	3.269	
282.9	282.8	282.8	282.8	1.6	1.6	90.00	-5.5	5.9	8.0	4.9	2.558	CC
300.0	300.0	300.0	300.0	1.7	1.7	90.74	-5.5	5.9	8.0	4.8	2.464	Level 1, ES
400.0	399.8	399.8	399.8	3.3	2.1	124.70	-5.5	5.9	9.7	5.2	2.127	Level 1, SF
500.0	499.3	499.1	499.0	4.6	2.4	155.67	-5.6	4.8	17.9	11.3	2.716	
600.0	598.3	596.5	596.4	5.6	3.7	172.88	-6.0	-0.4	35.1	26.4	4.015	
700.0	696.6	691.9	691.3	6.5	4.2	-179.16	-6.7	-9.5	60.8	50.7	5.979	
800.0	794.0	786.2	784.8	7.3	4.6	-173.75	-5.3	-21.3	92.5	81.0	8.095	
900.0	890.3	878.1	875.5	8.0	5.2	-169.55	-1.1	-35.2	129.2	116.5	10.174	
1,000.0	985.3	967.2	963.0	8.7	5.9	-166.13	5.6	-51.0	171.1	157.2	12.320	
1,100.0	1,078.9	1,053.1	1,046.7	9.4	6.5	-163.25	14.5	-68.4	218.0	203.2	14.661	
1,200.0	1,170.9	1,135.6	1,126.3	10.0	7.1	-160.76	25.3	-87.0	269.8	254.0	17.094	
1,300.0	1,261.0	1,214.4	1,201.7	10.7	7.7	-158.54	37.6	-106.4	326.2	309.5	19.606	
1,400.0	1,349.3	1,289.5	1,272.8	11.0	8.2	-156.76	51.2	-126.5	386.7	369.5	22.365	
1,500.0	1,437.1	1,362.4	1,340.9	11.3	8.7	-155.51	66.1	-147.4	449.1	431.2	25.103	
1,600.0	1,525.0	1,433.3	1,406.5	11.7	9.1	-154.27	82.2	-169.2	512.6	494.1	27.687	
1,700.0	1,612.8	1,500.0	1,467.4	12.0	9.6	-153.11	98.8	-190.7	577.1	558.0	30.201	
1,800.0	1,700.6	1,569.5	1,530.0	12.4	10.0	-151.89	117.5	-214.4	642.8	623.0	32.454	
1,900.0	1,788.4	1,634.7	1,587.8	12.7	10.3	-150.75	136.4	-237.7	709.5	689.1	34.747	
2,000.0	1,876.3	1,705.1	1,649.7	13.1	10.6	-149.59	157.7	-263.7	777.2	756.1	36.843	
2,100.0	1,964.1	1,777.8	1,713.5	13.5	10.8	-148.57	179.9	-290.6	845.0	823.1	38.672	
2,200.0	2,051.9	1,850.5	1,777.4	13.9	11.1	-147.70	202.0	-317.4	912.9	890.3	40.327	
2,300.0	2,139.7	1,923.2	1,841.2	14.4	11.3	-146.95	224.1	-344.3	981.0	957.5	41.830	
2,400.0	2,227.6	1,995.9	1,905.1	14.9	11.6	-146.29	246.3	-371.2	1,049.1	1,024.8	43.196	
2,500.0	2,315.4	2,068.6	1,968.9	15.8	12.0	-145.72	268.4	-398.0	1,117.2	1,092.1	44.422	
2,600.0	2,403.2	2,141.4	2,032.7	16.6	12.3	-145.21	290.5	-424.9	1,185.5	1,159.4	45.506	
2,700.0	2,491.0	2,214.1	2,096.6	17.5	12.7	-144.75	312.7	-451.8	1,253.8	1,226.9	46.581	
2,800.0	2,578.9	2,286.8	2,160.4	18.4	13.1	-144.34	334.8	-478.7	1,322.1	1,294.3	47.509	
2,900.0	2,666.7	2,359.5	2,224.2	19.2	13.6	-143.97	356.9	-505.5	1,390.4	1,361.7	48.351	
3,000.0	2,754.5	2,432.2	2,288.1	20.1	14.2	-143.64	379.1	-532.4	1,458.8	1,429.1	49.125	
3,100.0	2,842.3	2,504.9	2,351.9	20.9	14.8	-143.33	401.2	-559.3	1,527.2	1,496.6	49.834	
3,200.0	2,930.2	2,577.6	2,415.7	21.8	15.3	-143.05	423.3	-586.1	1,595.7	1,564.0	50.485	
3,300.0	3,018.0	2,650.3	2,479.6	22.7	16.0	-142.80	445.5	-613.0	1,664.1	1,631.5	51.082	
3,400.0	3,105.8	2,723.0	2,543.4	23.5	16.6	-142.56	467.6	-639.9	1,732.6	1,699.0	51.633	
3,500.0	3,193.6	2,795.8	2,607.3	24.4	17.2	-142.34	489.7	-666.7	1,801.0	1,766.5	52.141	
3,600.0	3,281.5	2,868.5	2,671.1	25.3	17.8	-142.14	511.9	-693.6	1,869.5	1,834.0	52.610	
3,700.0	3,369.3	2,941.2	2,734.9	26.1	18.5	-141.95	534.0	-720.5	1,938.0	1,901.5	53.044	
3,800.0	3,457.1	3,013.9	2,798.8	27.0	19.1	-141.78	556.1	-747.3	2,006.5	1,969.0	53.448	
3,900.0	3,545.0	3,086.6	2,862.6	27.9	19.7	-141.61	578.3	-774.2	2,075.1	2,036.5	53.822	
4,000.0	3,632.8	3,159.3	2,926.4	28.7	20.4	-141.46	600.4	-801.1	2,143.6	2,104.0	54.169	
4,100.0	3,720.6	3,232.0	2,990.3	29.6	21.0	-141.32	622.5	-827.9	2,212.1	2,171.5	54.493	
4,200.0	3,808.4	3,304.7	3,054.1	30.5	21.7	-141.18	644.7	-854.8	2,280.7	2,239.0	54.796	
4,300.0	3,896.3	3,377.4	3,118.0	31.4	22.3	-141.05	666.8	-881.7	2,349.2	2,306.6	55.078	
4,400.0	3,984.1	3,450.2	3,181.8	32.2	23.0	-140.93	688.9	-908.5	2,417.8	2,374.1	55.342	
4,500.0	4,071.9	3,522.9	3,245.6	33.1	23.6	-140.82	711.1	-935.4	2,486.3	2,441.6	55.590	
4,600.0	4,159.7	3,595.6	3,309.5	34.0	24.3	-140.71	733.2	-962.3	2,554.9	2,509.1	55.823	
4,700.0	4,247.6	3,668.3	3,373.3	34.8	24.9	-140.61	755.3	-989.1	2,623.5	2,576.7	56.041	
4,800.0	4,335.4	3,741.0	3,437.1	35.7	25.6	-140.51	777.5	-1,016.0	2,692.0	2,644.2	56.246	
4,900.0	4,423.2	3,813.7	3,501.0	36.6	26.2	-140.42	799.6	-1,042.9	2,760.6	2,711.7	56.439	

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 Laramie 0993-29-01 - Laramie 29-01 0993-20-15E - OH - Design #1												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)			
5,000.0	4,511.0	3,886.4	3,564.8	37.4	26.9	-140.34	821.7	-1,069.7	2,829.2	2,779.2	56.621		
5,100.0	4,598.9	3,959.1	3,628.7	38.3	27.5	-140.25	843.9	-1,096.6	2,897.8	2,846.8	56.793		
5,200.0	4,686.7	4,031.8	3,692.5	39.2	28.2	-140.17	866.0	-1,123.5	2,966.4	2,914.3	56.955		
5,300.0	4,774.5	4,104.6	3,756.3	40.1	28.9	-140.10	888.1	-1,150.4	3,035.0	2,981.8	57.109		
5,400.0	4,862.3	4,177.3	3,820.2	40.9	29.5	-140.02	910.2	-1,177.2	3,103.6	3,049.3	57.254		
5,500.0	4,950.2	4,250.0	3,884.0	41.8	30.2	-139.95	932.4	-1,204.1	3,172.2	3,116.9	57.391		
5,600.0	5,038.0	4,322.7	3,947.9	42.7	30.8	-140.21	954.5	-1,231.0	3,240.7	3,184.4	57.525		
5,700.0	5,127.3	4,397.0	4,013.1	43.5	31.5	-141.52	977.1	-1,258.4	3,307.5	3,250.1	57.607		
5,800.0	5,218.5	4,473.2	4,080.0	44.2	32.2	-142.64	1,000.3	-1,286.6	3,371.8	3,313.3	57.612		
5,900.0	5,311.3	4,551.3	4,148.6	44.9	32.9	-143.60	1,024.1	-1,315.4	3,433.4	3,373.7	57.578		
6,000.0	5,405.7	4,631.2	4,218.7	45.4	33.6	-144.41	1,048.4	-1,344.9	3,492.2	3,431.5	57.507		
6,100.0	5,501.4	4,712.6	4,290.1	46.0	34.4	-145.08	1,073.2	-1,375.0	3,548.2	3,486.4	57.406		
6,200.0	5,598.3	4,795.4	4,362.8	46.4	35.1	-145.64	1,098.4	-1,405.6	3,601.2	3,538.4	57.277		
6,300.0	5,696.2	4,879.4	4,436.6	46.7	35.9	-146.09	1,124.0	-1,436.7	3,651.3	3,587.4	57.126		
6,400.0	5,794.9	4,964.6	4,511.4	47.0	36.7	-146.43	1,149.9	-1,468.1	3,698.4	3,633.4	56.958		
6,500.0	5,894.2	5,050.7	4,587.0	47.2	37.4	-146.69	1,176.1	-1,500.0	3,742.3	3,676.4	56.777		
6,600.0	5,993.9	5,137.5	4,663.2	47.3	38.2	-146.86	1,202.5	-1,532.1	3,783.2	3,716.3	56.592		
6,700.0	6,093.9	5,225.0	4,740.0	47.4	39.0	-146.94	1,229.2	-1,564.4	3,820.9	3,753.2	56.420		
6,800.0	6,193.9	5,312.8	4,817.1	47.4	39.8	-96.02	1,255.9	-1,596.8	3,856.6	3,788.2	56.400		
6,900.0	6,293.9	6,856.6	6,293.9	47.4	46.4	-92.23	1,483.9	-1,873.6	3,862.3	3,781.6	47.886		
7,000.0	6,393.9	6,956.6	6,393.9	47.5	46.5	-92.23	1,483.9	-1,873.6	3,862.3	3,781.6	47.861		
7,100.0	6,493.9	7,056.6	6,493.9	47.5	46.5	-92.23	1,483.9	-1,873.6	3,862.3	3,781.5	47.836		
7,200.0	6,593.9	7,156.6	6,593.9	47.5	46.5	-92.23	1,483.9	-1,873.6	3,862.3	3,781.5	47.810		
7,300.0	6,693.9	7,256.6	6,693.9	47.5	46.5	-92.23	1,483.9	-1,873.6	3,862.3	3,781.4	47.784		
7,400.0	6,793.9	7,356.6	6,793.9	47.6	46.6	-92.23	1,483.9	-1,873.6	3,862.3	3,781.4	47.758		
7,500.0	6,893.9	7,456.6	6,893.9	47.6	46.6	-92.23	1,483.9	-1,873.6	3,862.3	3,781.3	47.732		
7,600.0	6,993.9	7,556.6	6,993.9	47.6	46.6	-92.23	1,483.9	-1,873.6	3,862.3	3,781.3	47.706		
7,700.0	7,093.9	7,656.6	7,093.9	47.6	46.6	-92.23	1,483.9	-1,873.6	3,862.3	3,781.3	47.680		
7,800.0	7,193.9	7,756.6	7,193.9	47.6	46.7	-92.23	1,483.9	-1,873.6	3,862.3	3,781.2	47.653		
7,900.0	7,293.9	7,856.6	7,293.9	47.7	46.7	-92.23	1,483.9	-1,873.6	3,862.3	3,781.2	47.627		
8,000.0	7,393.9	7,956.6	7,393.9	47.7	46.7	-92.23	1,483.9	-1,873.6	3,862.3	3,781.1	47.600		
8,100.0	7,493.9	8,056.6	7,493.9	47.7	46.7	-92.23	1,483.9	-1,873.6	3,862.3	3,781.1	47.573		
8,200.0	7,593.9	8,156.6	7,593.9	47.7	46.8	-92.23	1,483.9	-1,873.6	3,862.3	3,781.0	47.546		
8,300.0	7,693.9	8,256.6	7,693.9	47.8	46.8	-92.23	1,483.9	-1,873.6	3,862.3	3,781.0	47.518		
8,400.0	7,793.9	8,356.6	7,793.9	47.8	46.8	-92.23	1,483.9	-1,873.6	3,862.3	3,780.9	47.491		
8,400.2	7,794.0	8,356.8	7,794.0	47.8	46.8	-92.23	1,483.9	-1,873.6	3,862.3	3,780.9	47.491		
8,496.1	7,890.0	8,396.7	7,834.0	47.8	46.8	-92.23	1,483.9	-1,873.6	3,862.7	3,781.3	47.494		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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	133.02	-16.4	17.6	24.0				
100.0	100.0	100.0	100.0	0.4	0.4	133.02	-16.4	17.6	24.0	23.2	30.318		
200.0	200.0	200.0	200.0	1.2	1.2	133.02	-16.4	17.6	24.0	21.5	9.720		
300.0	300.0	300.0	300.0	1.7	1.7	85.39	-16.4	17.6	23.9	20.6	7.358		
345.1	345.1	345.1	345.1	2.4	1.9	90.00	-16.4	17.6	23.8	20.2	6.515	CC	
400.0	399.8	399.8	399.8	3.3	2.1	98.41	-16.4	17.6	24.1	20.0	5.891	ES	
500.0	499.3	499.3	499.3	4.6	2.5	119.07	-16.4	17.6	27.3	21.8	5.006		
600.0	598.3	598.0	598.0	5.6	3.1	141.87	-16.4	15.5	36.8	29.4	4.967	SF	
700.0	696.6	694.4	694.2	6.5	4.3	159.86	-16.4	9.3	55.5	46.0	5.857		
800.0	794.0	787.7	786.9	7.3	5.3	171.03	-16.4	-0.5	83.7	72.4	7.376		
900.0	890.3	879.1	877.4	8.0	5.6	178.10	-15.8	-13.5	119.9	107.3	9.516		
1,000.0	985.3	968.5	965.5	8.7	6.1	-176.73	-13.0	-28.8	161.7	147.9	11.708		
1,100.0	1,078.9	1,054.7	1,049.7	9.4	6.6	-172.72	-8.0	-45.8	208.8	193.9	13.974		
1,200.0	1,170.9	1,137.2	1,129.9	10.0	7.2	-169.45	-1.0	-64.2	260.9	245.0	16.365		
1,300.0	1,261.0	1,215.9	1,205.7	10.7	7.7	-166.69	7.5	-83.7	317.8	301.0	18.885		
1,400.0	1,349.3	1,290.7	1,277.0	11.0	8.2	-164.43	17.3	-103.8	379.1	361.7	21.692		
1,500.0	1,437.1	1,363.1	1,345.4	11.3	8.6	-162.71	28.5	-124.9	442.3	424.2	24.497		
1,600.0	1,525.0	1,433.6	1,411.3	11.7	9.1	-161.12	40.8	-146.9	506.5	487.9	27.163		
1,700.0	1,612.8	1,500.0	1,472.6	12.0	9.5	-159.70	53.8	-168.8	571.9	552.7	29.767		
1,800.0	1,700.6	1,568.8	1,535.3	12.4	9.9	-158.27	68.5	-192.8	638.3	618.5	32.132		
1,900.0	1,788.4	1,634.7	1,594.6	12.7	10.2	-156.94	84.0	-217.0	705.9	685.5	34.531		
2,000.0	1,876.3	1,705.3	1,657.7	13.1	10.4	-155.66	101.2	-243.6	774.2	753.1	36.739		
2,100.0	1,964.1	1,777.3	1,722.0	13.5	10.7	-154.56	118.7	-270.7	842.6	820.8	38.709		
2,200.0	2,051.9	1,849.3	1,786.4	13.9	10.9	-153.61	136.3	-297.8	911.2	888.7	40.511		
2,300.0	2,139.7	1,921.3	1,850.8	14.4	11.2	-152.80	153.8	-324.9	979.9	956.7	42.164		
2,400.0	2,227.6	1,993.3	1,915.1	14.9	11.5	-152.10	171.4	-352.0	1,048.7	1,024.7	43.679		
2,500.0	2,315.4	2,065.3	1,979.5	15.8	11.7	-151.48	188.9	-379.1	1,117.5	1,092.7	45.054		
2,600.0	2,403.2	2,137.3	2,043.8	16.6	12.0	-150.93	206.5	-406.3	1,186.5	1,160.9	46.313		
2,700.0	2,491.0	2,209.3	2,108.2	17.5	12.4	-150.44	224.0	-433.4	1,255.5	1,229.0	47.482		
2,800.0	2,578.9	2,281.3	2,172.5	18.4	12.7	-150.00	241.6	-460.5	1,324.5	1,297.2	48.573		
2,900.0	2,666.7	2,353.3	2,236.9	19.2	13.1	-149.60	259.1	-487.6	1,393.5	1,365.4	49.533		
3,000.0	2,754.5	2,425.3	2,301.2	20.1	13.5	-149.24	276.7	-514.7	1,462.6	1,433.6	50.428		
3,100.0	2,842.3	2,497.3	2,365.6	20.9	14.0	-148.91	294.2	-541.8	1,531.7	1,501.9	51.255		
3,200.0	2,930.2	2,569.3	2,429.9	21.8	14.5	-148.62	311.8	-568.9	1,600.9	1,570.1	52.018		
3,300.0	3,018.0	2,641.3	2,494.3	22.7	15.0	-148.34	329.3	-596.0	1,670.1	1,638.4	52.722		
3,400.0	3,105.8	2,713.3	2,558.6	23.5	15.6	-148.09	346.9	-623.1	1,739.2	1,706.7	53.374		
3,500.0	3,193.6	2,785.3	2,623.0	24.4	16.1	-147.86	364.4	-650.2	1,808.4	1,774.9	53.977		
3,600.0	3,281.5	2,857.3	2,687.3	25.3	16.7	-147.64	382.0	-677.3	1,877.6	1,843.2	54.537		
3,700.0	3,369.3	2,929.3	2,751.7	26.1	17.3	-147.44	399.5	-704.4	1,946.9	1,911.5	55.057		
3,800.0	3,457.1	3,001.3	2,816.1	27.0	17.9	-147.25	417.1	-731.5	2,016.1	1,979.8	55.542		
3,900.0	3,545.0	3,073.3	2,880.4	27.9	18.4	-147.08	434.6	-758.7	2,085.4	2,048.1	55.993		
4,000.0	3,632.8	3,145.3	2,944.8	28.7	19.0	-146.91	452.2	-785.8	2,154.6	2,116.4	56.413		
4,100.0	3,720.6	3,217.3	3,009.1	29.6	19.6	-146.76	469.7	-812.9	2,223.9	2,184.7	56.807		
4,200.0	3,808.4	3,289.3	3,073.5	30.5	20.2	-146.61	487.3	-840.0	2,293.2	2,253.1	57.175		
4,300.0	3,896.3	3,361.3	3,137.8	31.4	20.8	-146.48	504.8	-867.1	2,362.4	2,321.4	57.520		
4,400.0	3,984.1	3,433.3	3,202.2	32.2	21.4	-146.35	522.4	-894.2	2,431.7	2,389.7	57.843		
4,500.0	4,071.9	3,505.3	3,266.5	33.1	22.0	-146.23	539.9	-921.3	2,501.0	2,458.0	58.147		
4,600.0	4,159.7	3,577.3	3,330.9	34.0	22.6	-146.12	557.5	-948.4	2,570.3	2,526.3	58.432		
4,700.0	4,247.6	3,649.3	3,395.2	34.8	23.2	-146.01	575.0	-975.5	2,639.6	2,594.7	58.701		
4,800.0	4,335.4	3,721.3	3,459.6	35.7	23.8	-145.90	592.6	-1,002.6	2,708.9	2,663.0	58.954		
4,900.0	4,423.2	3,793.3	3,523.9	36.6	24.4	-145.81	610.1	-1,029.7	2,778.3	2,731.3	59.194		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 Laramie 0993-29-01 - Laramie 29-01 0993-20-16E - OH - Design #1												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)			
5,000.0	4,511.0	3,865.3	3,588.3	37.4	25.0	-145.71	627.7	-1,056.8	2,847.6	2,799.6	59.419		
5,100.0	4,598.9	3,937.3	3,652.7	38.3	25.6	-145.62	645.2	-1,083.9	2,916.9	2,868.0	59.632		
5,200.0	4,686.7	4,009.3	3,717.0	39.2	26.2	-145.54	662.8	-1,111.0	2,986.2	2,936.3	59.834		
5,300.0	4,774.5	4,081.3	3,781.4	40.1	26.8	-145.46	680.3	-1,138.2	3,055.5	3,004.6	60.025		
5,400.0	4,862.3	4,153.3	3,845.7	40.9	27.5	-145.38	697.9	-1,165.3	3,124.9	3,073.0	60.206		
5,500.0	4,950.2	4,225.3	3,910.1	41.8	28.1	-145.31	715.4	-1,192.4	3,194.2	3,141.3	60.378		
5,600.0	5,038.0	4,297.4	3,974.5	42.7	28.7	-145.53	733.0	-1,219.5	3,263.5	3,209.6	60.546		
5,700.0	5,127.3	4,371.0	4,040.3	43.5	29.3	-146.69	750.9	-1,247.2	3,330.9	3,276.0	60.645		
5,800.0	5,218.5	4,446.9	4,108.1	44.2	29.9	-147.69	769.4	-1,275.8	3,395.7	3,339.7	60.648		
5,900.0	5,311.3	4,524.9	4,177.8	44.9	30.6	-148.53	788.4	-1,305.2	3,457.6	3,400.5	60.599		
6,000.0	5,405.7	4,604.8	4,249.2	45.4	31.3	-149.23	807.9	-1,335.2	3,516.5	3,458.4	60.504		
6,100.0	5,501.4	4,686.4	4,322.2	46.0	32.0	-149.81	827.8	-1,366.0	3,572.5	3,513.3	60.367		
6,200.0	5,598.3	4,769.7	4,396.6	46.4	32.7	-150.29	848.1	-1,397.3	3,625.3	3,565.1	60.194		
6,300.0	5,696.2	4,854.4	4,472.3	46.7	33.4	-150.66	868.8	-1,429.2	3,675.0	3,613.8	59.990		
6,400.0	5,794.9	4,940.4	4,549.2	47.0	34.1	-150.94	889.7	-1,461.6	3,721.5	3,659.2	59.762		
6,500.0	5,894.2	5,027.5	4,627.1	47.2	34.9	-151.14	911.0	-1,494.4	3,764.7	3,701.4	59.516		
6,600.0	5,993.9	5,115.6	4,705.8	47.3	35.6	-151.26	932.4	-1,527.6	3,804.5	3,740.3	59.261		
6,700.0	6,093.9	5,204.5	4,785.3	47.4	36.4	-151.31	954.1	-1,561.0	3,841.0	3,775.9	59.018		
6,800.0	6,193.9	5,293.9	4,865.1	47.4	37.1	-100.41	975.9	-1,594.7	3,875.3	3,809.6	58.961		
6,900.0	6,293.9	5,383.3	4,944.9	47.4	37.8	-97.15	1,000.0	-1,628.0	3,908.0	3,843.0	58.904		
7,000.0	6,393.9	5,473.3	5,024.7	47.5	38.5	-97.15	1,025.0	-1,661.0	3,940.0	3,875.0	58.847		
7,100.0	6,493.9	5,562.7	5,104.5	47.5	39.2	-97.15	1,050.0	-1,694.0	3,971.0	3,906.0	58.790		
7,200.0	6,593.9	5,652.1	5,185.3	47.5	39.9	-97.15	1,075.0	-1,727.0	4,002.0	3,937.0	58.733		
7,300.0	6,693.9	5,741.5	5,266.1	47.5	40.6	-97.15	1,100.0	-1,760.0	4,033.0	3,968.0	58.676		
7,400.0	6,793.9	5,830.9	5,346.9	47.6	41.3	-97.15	1,125.0	-1,793.0	4,064.0	3,999.0	58.619		
7,500.0	6,893.9	5,920.3	5,427.7	47.6	42.0	-97.15	1,150.0	-1,826.0	4,095.0	4,030.0	58.562		
7,600.0	6,993.9	6,009.7	5,508.5	47.6	42.7	-97.15	1,175.0	-1,859.0	4,126.0	4,061.0	58.505		
7,700.0	7,093.9	6,099.1	5,589.3	47.6	43.4	-97.15	1,200.0	-1,892.0	4,157.0	4,092.0	58.448		
7,800.0	7,193.9	6,188.5	5,670.1	47.6	44.1	-97.15	1,225.0	-1,925.0	4,188.0	4,123.0	58.391		
7,900.0	7,293.9	6,277.9	5,750.9	47.7	44.8	-97.15	1,250.0	-1,958.0	4,219.0	4,154.0	58.334		
8,000.0	7,393.9	6,367.3	5,831.7	47.7	45.5	-97.15	1,275.0	-1,991.0	4,250.0	4,185.0	58.277		
8,100.0	7,493.9	6,456.7	5,912.5	47.7	46.2	-97.15	1,300.0	-2,024.0	4,281.0	4,216.0	58.220		
8,200.0	7,593.9	6,546.1	5,993.3	47.7	46.9	-97.15	1,325.0	-2,057.0	4,312.0	4,247.0	58.163		
8,300.0	7,693.9	6,635.5	6,074.1	47.8	47.6	-97.15	1,350.0	-2,090.0	4,343.0	4,278.0	58.106		
8,400.0	7,793.9	6,724.9	6,154.9	47.8	48.3	-97.15	1,375.0	-2,123.0	4,374.0	4,309.0	58.049		
8,496.1	7,890.0	6,814.3	6,235.7	47.8	49.0	-97.15	1,400.0	-2,156.0	4,405.0	4,340.0	57.992		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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	133.12	-27.3	29.2	40.0			
100.0	100.0	100.0	100.0	0.4	0.4	133.12	-27.3	29.2	40.0	39.2	50.449	
200.0	200.0	200.0	200.0	1.2	1.2	133.12	-27.3	29.2	40.0	37.5	16.174	
300.0	300.0	300.0	300.0	1.7	1.7	84.33	-27.3	29.2	39.8	36.6	12.265	
400.0	399.8	400.5	400.5	3.3	2.1	93.79	-27.4	27.9	39.0	35.1	9.942	
445.5	445.2	446.0	446.0	3.9	2.7	102.10	-27.6	26.0	38.7	34.3	8.749	CC, ES
500.0	499.3	500.0	499.8	4.6	3.5	115.06	-27.9	22.5	39.6	34.4	7.676	
600.0	598.3	597.2	596.6	5.6	4.7	141.23	-28.7	13.1	49.3	41.8	6.576	SF
700.0	696.6	692.3	690.7	6.5	5.0	160.70	-29.5	0.0	71.8	61.9	7.274	
800.0	794.0	785.3	782.4	7.3	5.5	172.99	-28.3	-15.9	103.3	91.6	8.809	
900.0	890.3	875.1	870.2	8.0	6.1	-178.99	-25.0	-34.0	142.2	129.0	10.764	
1,000.0	985.3	961.2	953.9	8.7	6.7	-173.37	-19.8	-53.8	187.5	173.1	12.976	
1,100.0	1,078.9	1,043.3	1,032.9	9.4	7.3	-169.19	-12.9	-75.1	238.7	223.3	15.437	
1,200.0	1,170.9	1,121.2	1,107.1	10.0	7.9	-165.89	-4.8	-97.3	295.3	278.9	18.020	
1,300.0	1,261.0	1,194.6	1,176.3	10.7	8.4	-163.16	4.3	-120.0	356.9	339.6	20.702	
1,400.0	1,349.3	1,263.6	1,240.7	11.0	8.8	-161.02	14.1	-142.9	422.9	405.0	23.649	
1,500.0	1,437.1	1,330.0	1,301.8	11.3	9.1	-159.57	24.7	-166.3	490.8	472.4	26.706	
1,600.0	1,525.0	1,400.9	1,366.7	11.7	9.4	-158.21	36.9	-192.3	559.6	540.7	29.601	
1,700.0	1,612.8	1,472.9	1,432.5	12.0	9.6	-157.12	49.2	-218.7	628.5	609.0	32.233	
1,800.0	1,700.6	1,544.9	1,498.4	12.4	9.8	-156.25	61.5	-245.0	697.5	677.4	34.662	
1,900.0	1,788.4	1,616.9	1,564.2	12.7	10.1	-155.53	73.8	-271.4	766.6	745.8	36.899	
2,000.0	1,876.3	1,688.9	1,630.0	13.1	10.4	-154.93	86.1	-297.8	835.7	814.3	38.955	
2,100.0	1,964.1	1,760.8	1,695.9	13.5	10.7	-154.43	98.4	-324.2	904.9	882.8	40.840	
2,200.0	2,051.9	1,832.8	1,761.7	13.9	10.9	-153.99	110.8	-350.6	974.1	951.3	42.575	
2,300.0	2,139.7	1,904.8	1,827.6	14.4	11.2	-153.61	123.1	-376.9	1,043.4	1,019.8	44.173	
2,400.0	2,227.6	1,976.8	1,893.4	14.9	11.6	-153.28	135.4	-403.3	1,112.7	1,088.3	45.626	
2,500.0	2,315.4	2,048.8	1,959.2	15.8	11.9	-152.99	147.7	-429.7	1,181.9	1,156.8	47.014	
2,600.0	2,403.2	2,120.8	2,025.1	16.6	12.2	-152.73	160.0	-456.1	1,251.2	1,225.3	48.242	
2,700.0	2,491.0	2,192.8	2,090.9	17.5	12.6	-152.49	172.4	-482.5	1,320.5	1,293.8	49.390	
2,800.0	2,578.9	2,264.8	2,156.8	18.4	12.9	-152.28	184.7	-508.9	1,389.8	1,362.3	50.449	
2,900.0	2,666.7	2,336.8	2,222.6	19.2	13.3	-152.09	197.0	-535.2	1,459.2	1,430.8	51.430	
3,000.0	2,754.5	2,408.7	2,288.4	20.1	13.7	-151.92	209.3	-561.6	1,528.5	1,499.3	52.338	
3,100.0	2,842.3	2,480.7	2,354.3	20.9	14.2	-151.76	221.6	-588.0	1,597.8	1,567.8	53.180	
3,200.0	2,930.2	2,552.7	2,420.1	21.8	14.7	-151.62	233.9	-614.4	1,667.2	1,636.3	53.962	
3,300.0	3,018.0	2,624.7	2,485.9	22.7	15.2	-151.48	246.3	-640.8	1,736.5	1,704.8	54.689	
3,400.0	3,105.8	2,696.7	2,551.8	23.5	15.7	-151.36	258.6	-667.1	1,805.9	1,773.3	55.367	
3,500.0	3,193.6	2,768.7	2,617.6	24.4	16.2	-151.25	270.9	-693.5	1,875.2	1,841.8	55.998	
3,600.0	3,281.5	2,840.7	2,683.5	25.3	16.7	-151.14	283.2	-719.9	1,944.6	1,910.2	56.587	
3,700.0	3,369.3	2,912.7	2,749.3	26.1	17.2	-151.04	295.5	-746.3	2,014.0	1,978.7	57.139	
3,800.0	3,457.1	2,984.7	2,815.1	27.0	17.7	-150.95	307.9	-772.7	2,083.3	2,047.2	57.655	
3,900.0	3,545.0	3,056.7	2,881.0	27.9	18.3	-150.86	320.2	-799.0	2,152.7	2,115.7	58.139	
4,000.0	3,632.8	3,128.6	2,946.8	28.7	18.8	-150.78	332.5	-825.4	2,222.1	2,184.2	58.594	
4,100.0	3,720.6	3,200.6	3,012.7	29.6	19.3	-150.71	344.8	-851.8	2,291.5	2,252.6	59.021	
4,200.0	3,808.4	3,272.6	3,078.5	30.5	19.9	-150.63	357.1	-878.2	2,360.8	2,321.1	59.423	
4,300.0	3,896.3	3,344.6	3,144.3	31.4	20.4	-150.57	369.4	-904.6	2,430.2	2,389.6	59.801	
4,400.0	3,984.1	3,416.6	3,210.2	32.2	21.0	-150.50	381.8	-931.0	2,499.6	2,458.0	60.158	
4,500.0	4,071.9	3,488.6	3,276.0	33.1	21.5	-150.44	394.1	-957.3	2,569.0	2,526.5	60.495	
4,600.0	4,159.7	3,560.6	3,341.9	34.0	22.0	-150.39	406.4	-983.7	2,638.4	2,595.0	60.814	
4,700.0	4,247.6	3,632.6	3,407.7	34.8	22.6	-150.33	418.7	-1,010.1	2,707.7	2,663.4	61.115	
4,800.0	4,335.4	3,704.6	3,473.5	35.7	23.1	-150.28	431.0	-1,036.5	2,777.1	2,731.9	61.401	
4,900.0	4,423.2	3,776.5	3,539.4	36.6	23.7	-150.23	443.4	-1,062.9	2,846.5	2,800.4	61.671	

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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		
5,000.0	4,511.0	3,848.5	3,605.2	37.4	24.2	-150.19	455.7	-1,089.2	2,915.9	2,868.8	61.928			
5,100.0	4,598.9	3,920.5	3,671.0	38.3	24.7	-150.14	468.0	-1,115.6	2,985.3	2,937.3	62.172			
5,200.0	4,686.7	3,992.5	3,736.9	39.2	25.3	-150.10	480.3	-1,142.0	3,054.7	3,005.7	62.403			
5,300.0	4,774.5	4,064.5	3,802.7	40.1	25.8	-150.06	492.6	-1,168.4	3,124.1	3,074.2	62.624			
5,400.0	4,862.3	4,136.5	3,868.6	40.9	26.4	-150.02	505.0	-1,194.8	3,193.5	3,142.6	62.833			
5,500.0	4,950.2	4,208.5	3,934.4	41.8	26.9	-149.98	517.3	-1,221.2	3,262.9	3,211.1	63.033			
5,600.0	5,038.0	4,280.5	4,000.3	42.7	27.5	-150.20	529.6	-1,247.6	3,332.2	3,279.5	63.228			
5,700.0	5,127.3	4,354.3	4,067.8	43.5	28.0	-151.25	542.2	-1,274.6	3,399.6	3,345.9	63.343			
5,800.0	5,218.5	4,430.5	4,137.5	44.2	28.6	-152.14	555.3	-1,302.5	3,464.1	3,409.5	63.344			
5,900.0	5,311.3	4,509.0	4,209.2	44.9	29.2	-152.89	568.7	-1,331.3	3,525.7	3,470.0	63.282			
6,000.0	5,405.7	4,589.5	4,282.9	45.4	29.8	-153.52	582.5	-1,360.8	3,584.2	3,527.4	63.164			
6,100.0	5,501.4	4,672.1	4,358.4	46.0	30.4	-154.03	596.6	-1,391.0	3,639.5	3,581.7	62.996			
6,200.0	5,598.3	4,756.4	4,435.5	46.4	31.1	-154.45	611.0	-1,421.9	3,691.5	3,632.7	62.784			
6,300.0	5,696.2	4,842.4	4,514.1	46.7	31.7	-154.78	625.7	-1,453.5	3,740.2	3,680.4	62.534			
6,400.0	5,794.9	4,929.8	4,594.1	47.0	32.4	-155.03	640.7	-1,485.5	3,785.5	3,724.6	62.252			
6,500.0	5,894.2	5,018.6	4,675.3	47.2	33.1	-155.20	655.9	-1,518.0	3,827.3	3,765.5	61.946			
6,600.0	5,993.9	5,108.5	4,757.5	47.3	33.8	-155.30	671.3	-1,551.0	3,865.5	3,802.8	61.627			
6,700.0	6,093.9	5,199.3	4,840.6	47.4	34.5	-155.33	686.8	-1,584.3	3,900.3	3,836.7	61.319			
6,800.0	6,193.9	5,290.8	4,924.2	47.4	35.2	-104.49	702.5	-1,617.8	3,932.6	3,868.3	61.228			
6,900.0	6,293.9	5,382.6	5,008.1	47.4	35.9	-101.90	718.7	-1,651.7	3,964.1	3,899.4	61.137			
7,000.0	6,393.9	5,475.6	5,091.4	47.5	36.6	-101.90	735.0	-1,686.0	3,995.1	3,930.1	61.046			
7,100.0	6,493.9	5,568.6	5,174.7	47.5	37.3	-101.90	751.3	-1,720.7	4,025.6	3,960.6	60.955			
7,200.0	6,593.9	5,661.6	5,258.0	47.5	38.0	-101.90	767.7	-1,755.9	4,055.6	3,990.6	60.864			
7,300.0	6,693.9	5,754.6	5,341.3	47.5	38.7	-101.90	784.1	-1,791.6	4,085.1	4,020.1	60.773			
7,400.0	6,793.9	5,847.6	5,424.6	47.6	39.4	-101.90	800.5	-1,827.7	4,114.1	4,049.1	60.682			
7,500.0	6,893.9	5,940.6	5,507.9	47.6	40.1	-101.90	817.0	-1,864.2	4,142.6	4,077.6	60.591			
7,600.0	6,993.9	6,033.6	5,591.2	47.6	40.8	-101.90	833.5	-1,901.1	4,170.6	4,105.6	60.500			
7,700.0	7,093.9	6,126.6	5,674.5	47.6	41.5	-101.90	850.0	-1,938.4	4,198.1	4,133.1	60.409			
7,800.0	7,193.9	6,219.6	5,757.8	47.6	42.2	-101.90	866.5	-1,976.1	4,225.1	4,160.1	60.318			
7,900.0	7,293.9	6,312.6	5,841.1	47.7	42.9	-101.90	883.0	-2,014.2	4,251.6	4,186.6	60.227			
8,000.0	7,393.9	6,405.6	5,924.4	47.7	43.6	-101.90	900.0	-2,052.7	4,277.6	4,212.6	60.136			
8,100.0	7,493.9	6,498.6	6,007.7	47.7	44.3	-101.90	917.0	-2,091.6	4,303.1	4,238.1	60.045			
8,200.0	7,593.9	6,591.6	6,091.0	47.7	45.0	-101.90	934.0	-2,130.9	4,328.1	4,263.1	59.954			
8,300.0	7,693.9	6,684.6	6,174.3	47.8	45.7	-101.90	951.0	-2,170.6	4,352.6	4,287.6	59.863			
8,400.0	7,793.9	6,777.6	6,257.6	47.8	46.4	-101.90	968.0	-2,210.7	4,376.6	4,311.6	59.772			
8,496.1	7,890.0	6,868.7	6,340.9	47.8	47.1	-101.90	985.0	-2,251.2	4,400.1	4,335.1	59.681			

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 0993-20-18E - 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)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	133.15	-38.2	40.8	55.9					
100.0	100.0	100.0	100.0	0.4	0.4	133.15	-38.2	40.8	55.9	55.1	70.580			
200.0	200.0	200.0	200.0	1.2	1.2	133.15	-38.2	40.8	55.9	53.4	22.629			
300.0	300.0	300.7	300.7	1.7	1.5	84.36	-38.4	40.2	55.5	52.5	18.465			
400.0	399.8	401.3	401.2	3.3	2.9	94.31	-39.3	35.9	53.3	49.3	13.329			
450.8	450.4	451.8	451.6	3.9	3.6	103.00	-40.1	32.1	52.7	48.3	11.876	CC, ES		
500.0	499.3	500.2	499.7	4.6	4.3	113.42	-41.1	27.4	53.6	48.6	10.647			
600.0	598.3	596.4	595.1	5.6	5.3	136.32	-43.7	15.2	63.8	56.3	8.555			
700.0	696.6	691.1	688.5	6.5	5.6	154.91	-46.0	-0.4	86.5	76.4	8.535	SF		
800.0	794.0	783.0	778.5	7.3	6.2	167.59	-46.1	-18.7	118.9	106.7	9.693			
900.0	890.3	871.2	864.3	8.0	6.7	176.19	-44.4	-39.0	159.5	145.6	11.522			
1,000.0	985.3	955.4	945.5	8.7	7.3	-177.73	-41.0	-61.0	207.0	191.9	13.720			
1,100.0	1,078.9	1,035.2	1,021.7	9.4	7.8	-173.21	-36.3	-84.1	260.6	244.5	16.160			
1,200.0	1,170.9	1,110.4	1,092.8	10.0	8.3	-169.67	-30.4	-107.9	319.8	302.8	18.768			
1,300.0	1,261.0	1,180.9	1,158.7	10.7	8.8	-166.77	-23.7	-131.9	384.1	366.2	21.509			
1,400.0	1,349.3	1,250.0	1,222.7	11.0	9.0	-164.45	-16.1	-156.8	452.7	434.3	24.603			
1,500.0	1,437.1	1,321.1	1,288.5	11.3	9.3	-162.95	-8.1	-182.7	522.3	503.4	27.639			
1,600.0	1,525.0	1,392.3	1,354.4	11.7	9.5	-161.79	-0.2	-208.6	592.1	572.6	30.458			
1,700.0	1,612.8	1,463.5	1,420.2	12.0	9.8	-160.88	7.8	-234.5	662.0	641.9	33.074			
1,800.0	1,700.6	1,534.7	1,486.0	12.4	10.0	-160.14	15.7	-260.4	731.9	711.3	35.506			
1,900.0	1,788.4	1,605.9	1,551.8	12.7	10.3	-159.53	23.7	-286.3	801.9	780.7	37.761			
2,000.0	1,876.3	1,677.0	1,617.7	13.1	10.6	-159.02	31.6	-312.2	871.9	850.0	39.845			
2,100.0	1,964.1	1,748.2	1,683.5	13.5	10.8	-158.58	39.6	-338.1	942.0	919.4	41.775			
2,200.0	2,051.9	1,819.4	1,749.3	13.9	11.1	-158.21	47.5	-364.0	1,012.1	988.8	43.563			
2,300.0	2,139.7	1,890.6	1,815.2	14.4	11.4	-157.88	55.5	-389.9	1,082.2	1,058.2	45.217			
2,400.0	2,227.6	1,961.8	1,881.0	14.9	11.7	-157.59	63.4	-415.7	1,152.3	1,127.7	46.747			
2,500.0	2,315.4	2,032.9	1,946.8	15.8	12.1	-157.34	71.4	-441.6	1,222.4	1,197.1	48.166			
2,600.0	2,403.2	2,104.1	2,012.6	16.6	12.4	-157.11	79.3	-467.5	1,292.6	1,266.5	49.483			
2,700.0	2,491.0	2,175.3	2,078.5	17.5	12.7	-156.90	87.3	-493.4	1,362.7	1,335.9	50.703			
2,800.0	2,578.9	2,246.5	2,144.3	18.4	13.1	-156.72	95.2	-519.3	1,432.9	1,405.3	51.837			
2,900.0	2,666.7	2,317.7	2,210.1	19.2	13.5	-156.55	103.2	-545.2	1,503.1	1,474.7	52.893			
3,000.0	2,754.5	2,388.8	2,275.9	20.1	13.9	-156.40	111.1	-571.1	1,573.3	1,544.1	53.876			
3,100.0	2,842.3	2,460.0	2,341.8	20.9	14.3	-156.26	119.1	-597.0	1,643.4	1,613.4	54.791			
3,200.0	2,930.2	2,531.2	2,407.6	21.8	14.7	-156.13	127.0	-622.9	1,713.6	1,682.8	55.647			
3,300.0	3,018.0	2,602.4	2,473.4	22.7	15.1	-156.01	135.0	-648.8	1,783.8	1,752.2	56.446			
3,400.0	3,105.8	2,673.6	2,539.2	23.5	15.6	-155.91	142.9	-674.7	1,854.0	1,821.6	57.193			
3,500.0	3,193.6	2,744.7	2,605.1	24.4	16.0	-155.80	150.9	-700.6	1,924.2	1,891.0	57.894			
3,600.0	3,281.5	2,815.9	2,670.9	25.3	16.5	-155.71	158.8	-726.5	1,994.4	1,960.3	58.551			
3,700.0	3,369.3	2,887.1	2,736.7	26.1	17.0	-155.62	166.8	-752.4	2,064.6	2,029.7	59.168			
3,800.0	3,457.1	2,958.3	2,802.5	27.0	17.5	-155.54	174.7	-778.2	2,134.8	2,099.1	59.747			
3,900.0	3,545.0	3,029.5	2,868.4	27.9	17.9	-155.46	182.7	-804.1	2,205.0	2,168.4	60.293			
4,000.0	3,632.8	3,100.6	2,934.2	28.7	18.4	-155.39	190.6	-830.0	2,275.2	2,237.8	60.808			
4,100.0	3,720.6	3,171.8	3,000.0	29.6	18.9	-155.33	198.6	-855.9	2,345.4	2,307.2	61.292			
4,200.0	3,808.4	3,243.0	3,065.8	30.5	19.4	-155.26	206.6	-881.8	2,415.7	2,376.5	61.750			
4,300.0	3,896.3	3,314.2	3,131.7	31.4	19.9	-155.20	214.5	-907.7	2,485.9	2,445.9	62.183			
4,400.0	3,984.1	3,385.4	3,197.5	32.2	20.4	-155.15	222.5	-933.6	2,556.1	2,515.2	62.593			
4,500.0	4,071.9	3,456.5	3,263.3	33.1	20.9	-155.09	230.4	-959.5	2,626.3	2,584.6	62.980			
4,600.0	4,159.7	3,527.7	3,329.1	34.0	21.4	-155.04	238.4	-985.4	2,696.5	2,654.0	63.348			
4,700.0	4,247.6	3,598.9	3,395.0	34.8	21.9	-154.99	246.3	-1,011.3	2,766.7	2,723.3	63.696			
4,800.0	4,335.4	3,670.1	3,460.8	35.7	22.4	-154.95	254.3	-1,037.2	2,837.0	2,792.6	64.027			
4,900.0	4,423.2	3,741.3	3,526.6	36.6	22.9	-154.90	262.2	-1,063.1	2,907.2	2,862.0	64.342			

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 Laramie 0993-29-01 - Laramie 29-01 0993-20-18E - OH - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
5,000.0	4,511.0	3,812.4	3,592.4	37.4	23.4	-154.86	270.2	-1,089.0	2,977.4	2,931.3	64.641		
5,100.0	4,598.9	3,883.6	3,658.3	38.3	23.9	-154.82	278.1	-1,114.9	3,047.6	3,000.7	64.926		
5,200.0	4,686.7	3,954.8	3,724.1	39.2	24.4	-154.78	286.1	-1,140.7	3,117.8	3,070.0	65.197		
5,300.0	4,774.5	4,026.0	3,789.9	40.1	24.9	-154.75	294.0	-1,166.6	3,188.1	3,139.4	65.456		
5,400.0	4,862.3	4,097.2	3,855.7	40.9	25.4	-154.71	302.0	-1,192.5	3,258.3	3,208.7	65.702		
5,500.0	4,950.2	4,168.4	3,921.6	41.8	25.9	-154.68	309.9	-1,218.4	3,328.5	3,278.0	65.938		
5,600.0	5,038.0	4,239.6	3,987.5	42.7	26.4	-154.64	317.9	-1,244.3	3,398.7	3,347.3	66.167		
5,700.0	5,127.3	4,312.7	4,055.1	43.5	26.9	-154.60	326.0	-1,270.9	3,466.9	3,414.6	66.305		
5,800.0	5,218.5	4,388.4	4,125.0	44.2	27.5	-154.55	334.5	-1,298.5	3,532.1	3,478.8	66.310		
5,900.0	5,311.3	4,466.4	4,197.2	44.9	28.0	-154.50	343.2	-1,326.9	3,594.2	3,540.0	66.243		
6,000.0	5,405.7	4,546.8	4,271.5	45.4	28.6	-154.45	352.2	-1,356.1	3,653.2	3,597.9	66.111		
6,100.0	5,501.4	4,629.3	4,347.8	46.0	29.2	-154.40	361.4	-1,386.1	3,708.8	3,652.6	65.920		
6,200.0	5,598.3	4,713.7	4,425.9	46.4	29.8	-154.35	370.8	-1,416.8	3,761.1	3,703.9	65.678		
6,300.0	5,696.2	4,799.9	4,505.6	46.7	30.4	-154.30	380.5	-1,448.2	3,810.0	3,751.7	65.391		
6,400.0	5,794.9	4,887.8	4,586.9	47.0	31.0	-154.25	390.3	-1,480.1	3,855.3	3,796.0	65.066		
6,500.0	5,894.2	4,977.2	4,669.5	47.2	31.6	-154.20	400.3	-1,512.6	3,897.0	3,836.7	64.713		
6,600.0	5,993.9	5,067.8	4,753.4	47.3	32.3	-154.15	410.4	-1,545.6	3,935.0	3,873.8	64.342		
6,700.0	6,093.9	5,159.6	4,838.2	47.4	32.9	-154.10	420.6	-1,579.0	3,969.3	3,907.3	63.984		
6,800.0	6,193.9	5,252.0	4,923.7	47.4	33.6	-108.49	431.0	-1,612.6	4,001.1	3,938.4	63.876		
6,900.0	6,293.9	5,346.1	5,009.9	47.4	34.3	-108.48	441.0	-1,646.1	4,031.1	3,963.9	63.803		
7,000.0	6,393.9	5,441.1	5,096.9	47.5	35.0	-108.47	450.0	-1,680.1	4,059.0	3,983.9	63.767		
7,100.0	6,493.9	5,536.1	5,183.9	47.5	35.7	-108.46	459.0	-1,714.1	4,085.0	3,998.8	63.731		
7,200.0	6,593.9	5,631.1	5,270.9	47.5	36.4	-108.45	468.0	-1,748.1	4,109.0	4,008.8	63.695		
7,300.0	6,693.9	5,726.1	5,357.9	47.5	37.1	-108.44	477.0	-1,782.1	4,131.0	4,013.7	63.658		
7,400.0	6,793.9	5,821.1	5,444.9	47.6	37.8	-108.43	486.0	-1,816.1	4,151.0	4,017.2	63.622		
7,500.0	6,893.9	5,916.1	5,531.9	47.6	38.5	-108.42	495.0	-1,850.1	4,169.0	4,019.2	63.585		
7,600.0	6,993.9	6,011.1	5,618.9	47.6	39.2	-108.41	504.0	-1,884.1	4,185.0	4,020.2	63.548		
7,700.0	7,093.9	6,106.1	5,705.9	47.6	39.9	-108.40	513.0	-1,918.1	4,199.0	4,019.2	63.511		
7,800.0	7,193.9	6,201.1	5,792.9	47.6	40.6	-108.39	522.0	-1,952.1	4,211.0	4,017.2	63.473		
7,900.0	7,293.9	6,296.1	5,879.9	47.7	41.3	-108.38	531.0	-1,986.1	4,221.0	4,014.2	63.436		
8,000.0	7,393.9	6,391.1	5,966.9	47.7	42.0	-108.37	540.0	-2,020.1	4,229.0	4,010.2	63.398		
8,100.0	7,493.9	6,486.1	6,053.9	47.7	42.7	-108.36	549.0	-2,054.1	4,235.0	4,005.2	63.360		
8,200.0	7,593.9	6,581.1	6,140.9	47.7	43.4	-108.35	558.0	-2,088.1	4,239.0	4,000.2	63.322		
8,300.0	7,693.9	6,676.1	6,227.9	47.8	44.1	-108.34	567.0	-2,122.1	4,241.0	3,994.2	63.284		
8,400.0	7,793.9	6,771.1	6,314.9	47.8	44.8	-108.33	576.0	-2,156.1	4,241.0	3,987.2	63.245		
8,496.1	7,890.0	6,862.0	6,396.0	47.8	45.5	-108.32	585.0	-2,190.1	4,239.0	3,979.2	63.207		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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	-46.42	33.1	-34.8	48.1			
100.0	100.0	100.0	100.0	0.4	0.4	-46.42	33.1	-34.8	48.1	47.3	60.696	
200.0	200.0	200.0	200.0	1.2	1.2	-46.42	33.1	-34.8	48.1	45.6	19.460	CC
300.0	300.0	299.6	299.6	1.7	1.7	-96.99	34.2	-34.2	48.5	45.5	15.948	ES
400.0	399.8	399.1	398.9	3.3	3.3	-97.11	38.9	-31.6	50.5	46.5	12.704	
500.0	499.3	498.5	497.8	4.6	4.6	-97.30	47.3	-26.8	54.0	49.2	11.230	
600.0	598.3	597.8	596.2	5.6	5.6	-97.52	59.4	-19.9	59.1	53.6	10.625	
700.0	696.6	697.0	693.6	6.5	6.5	-97.73	75.2	-10.9	65.8	59.5	10.449	SF
800.0	794.0	796.0	790.1	7.3	7.3	-97.93	94.7	0.1	74.0	67.0	10.499	
900.0	890.3	894.8	885.3	8.0	8.0	-98.08	117.6	13.2	83.7	75.9	10.660	
1,000.0	985.3	993.4	979.1	8.7	8.7	-98.19	144.1	28.2	94.9	86.2	10.862	
1,100.0	1,078.9	1,091.7	1,071.2	9.4	9.3	-98.25	173.9	45.2	107.6	97.9	11.060	
1,200.0	1,170.9	1,189.8	1,161.5	10.0	10.0	-98.26	207.1	64.1	121.8	111.0	11.232	
1,300.0	1,261.0	1,287.5	1,249.9	10.7	10.6	-98.23	243.4	84.7	137.4	125.3	11.365	
1,400.0	1,349.3	1,385.0	1,336.1	11.0	11.2	-98.21	282.9	107.2	154.3	140.9	11.504	
1,500.0	1,437.1	1,482.1	1,420.0	11.3	11.7	-97.38	325.4	131.3	172.1	157.2	11.572	
1,600.0	1,525.0	1,578.8	1,501.5	11.7	12.1	-95.50	370.7	157.1	190.8	174.4	11.635	
1,700.0	1,612.8	1,676.7	1,583.1	12.0	12.4	-93.54	417.6	183.8	210.1	192.1	11.654	
1,800.0	1,700.6	1,774.6	1,664.8	12.4	12.8	-91.91	464.6	210.5	229.6	209.9	11.659	
1,900.0	1,788.4	1,872.5	1,746.5	12.7	13.1	-90.54	511.5	237.1	249.2	227.8	11.662	
2,000.0	1,876.3	1,970.4	1,828.1	13.1	13.4	-89.36	558.4	263.8	268.9	245.9	11.666	
2,100.0	1,964.1	2,068.3	1,909.8	13.5	13.8	-88.35	605.3	290.5	288.7	264.0	11.672	
2,200.0	2,051.9	2,166.2	1,991.5	13.9	14.2	-87.46	652.3	317.2	308.6	282.2	11.678	
2,300.0	2,139.7	2,264.1	2,073.1	14.4	14.6	-86.69	699.2	343.9	328.6	300.5	11.682	
2,400.0	2,227.6	2,362.0	2,154.8	14.9	15.0	-86.00	746.1	370.5	348.6	318.9	11.715	
2,500.0	2,315.4	2,459.9	2,236.5	15.8	16.0	-85.38	793.0	397.2	368.7	337.2	11.710	
2,600.0	2,403.2	2,557.8	2,318.2	16.6	16.9	-84.83	840.0	423.9	388.8	355.6	11.717	
2,700.0	2,491.0	2,655.7	2,399.8	17.5	17.8	-84.34	886.9	450.6	408.9	374.0	11.725	
2,800.0	2,578.9	2,753.5	2,481.5	18.4	18.7	-83.89	933.8	477.2	429.0	392.5	11.734	
2,900.0	2,666.7	2,851.4	2,563.2	19.2	19.7	-83.48	980.7	503.9	449.2	411.0	11.742	
3,000.0	2,754.5	2,949.3	2,644.8	20.1	20.6	-83.10	1,027.7	530.6	469.4	429.5	11.750	
3,100.0	2,842.3	3,047.2	2,726.5	20.9	21.5	-82.76	1,074.6	557.3	489.6	448.0	11.758	
3,200.0	2,930.2	3,145.1	2,808.2	21.8	22.4	-82.45	1,121.5	584.0	509.8	466.5	11.766	
3,300.0	3,018.0	3,243.0	2,889.8	22.7	23.4	-82.15	1,168.4	610.6	530.1	485.1	11.773	
3,400.0	3,105.8	3,340.9	2,971.5	23.5	24.3	-81.88	1,215.4	637.3	550.3	503.6	11.780	
3,500.0	3,193.6	3,438.8	3,053.2	24.4	25.2	-81.63	1,262.3	664.0	570.6	522.2	11.787	
3,600.0	3,281.5	3,536.7	3,134.8	25.3	26.1	-81.40	1,309.2	690.7	590.9	540.8	11.793	
3,700.0	3,369.3	3,634.6	3,216.5	26.1	27.1	-81.18	1,356.1	717.4	611.2	559.4	11.799	
3,800.0	3,457.1	3,732.5	3,298.2	27.0	28.0	-80.97	1,403.0	744.0	631.5	578.0	11.805	
3,900.0	3,545.0	3,830.4	3,379.9	27.9	28.9	-80.78	1,450.0	770.7	651.8	596.6	11.811	
4,000.0	3,632.8	3,928.3	3,461.5	28.7	29.8	-80.60	1,496.9	797.4	672.1	615.2	11.816	
4,100.0	3,720.6	4,026.2	3,543.2	29.6	30.8	-80.43	1,543.8	824.1	692.4	633.8	11.821	
4,200.0	3,808.4	4,124.1	3,624.9	30.5	31.7	-80.27	1,590.7	850.7	712.7	652.4	11.826	
4,300.0	3,896.3	4,222.0	3,706.5	31.4	32.6	-80.12	1,637.7	877.4	733.0	671.1	11.830	
4,400.0	3,984.1	4,319.9	3,788.2	32.2	33.6	-79.98	1,684.6	904.1	753.3	689.7	11.835	
4,500.0	4,071.9	4,417.8	3,869.9	33.1	34.5	-79.84	1,731.5	930.8	773.7	708.3	11.839	
4,600.0	4,159.7	4,515.7	3,951.5	34.0	35.4	-79.72	1,778.4	957.5	794.0	727.0	11.843	
4,700.0	4,247.6	4,613.6	4,033.2	34.8	36.4	-79.59	1,825.4	984.1	814.3	745.6	11.847	
4,800.0	4,335.4	4,711.5	4,114.9	35.7	37.3	-79.48	1,872.3	1,010.8	834.7	764.3	11.851	
4,900.0	4,423.2	4,809.4	4,196.6	36.6	38.2	-79.37	1,919.2	1,037.5	855.0	782.9	11.854	
5,000.0	4,511.0	4,907.2	4,278.2	37.4	39.2	-79.26	1,966.1	1,064.2	875.4	801.6	11.858	

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 Fed 0993-21-11W - 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	4,598.9	5,005.1	4,359.9	38.3	40.1	-79.16	2,013.1	1,090.9	895.7	820.2	11.861			
5,200.0	4,686.7	5,103.0	4,441.6	39.2	41.0	-79.06	2,060.0	1,117.5	916.1	838.9	11.864			
5,300.0	4,774.5	5,200.9	4,523.2	40.1	42.0	-78.97	2,106.9	1,144.2	936.4	857.5	11.867			
5,400.0	4,862.3	5,298.8	4,604.9	40.9	42.9	-78.88	2,153.8	1,170.9	956.8	876.2	11.870			
5,500.0	4,950.2	5,396.7	4,686.6	41.8	43.8	-78.80	2,200.8	1,197.6	977.2	894.9	11.873			
5,600.0	5,038.0	5,494.6	4,768.2	42.7	44.8	-78.82	2,247.7	1,224.2	997.5	913.6	11.877			
5,700.0	5,127.3	5,593.4	4,850.7	43.5	45.7	-79.09	2,295.0	1,251.2	1,018.5	932.9	11.897			
5,800.0	5,218.5	5,719.2	4,957.6	44.2	46.8	-79.16	2,352.6	1,283.9	1,038.9	951.3	11.864			
5,900.0	5,311.3	5,846.5	5,069.4	44.9	47.9	-79.23	2,405.6	1,314.0	1,057.4	968.0	11.832			
6,000.0	5,405.7	5,975.3	5,185.7	45.4	48.8	-79.29	2,453.6	1,341.3	1,073.9	983.0	11.806			
6,100.0	5,501.4	6,105.5	5,306.2	46.0	49.7	-79.35	2,496.2	1,365.6	1,088.5	996.1	11.785			
6,200.0	5,598.3	6,236.8	5,430.5	46.4	50.4	-79.40	2,533.2	1,386.6	1,101.0	1,007.4	11.771			
6,300.0	5,696.2	6,369.1	5,557.9	46.7	51.0	-79.44	2,564.1	1,404.1	1,111.3	1,016.8	11.762			
6,400.0	5,794.9	6,502.3	5,688.1	47.0	51.5	-79.48	2,588.7	1,418.1	1,119.5	1,024.3	11.757			
6,500.0	5,894.2	6,636.2	5,820.2	47.2	51.8	-79.51	2,606.8	1,428.4	1,125.4	1,029.7	11.760			
6,600.0	5,993.9	6,770.5	5,953.9	47.3	52.1	-79.54	2,618.1	1,434.9	1,129.1	1,033.2	11.768			
6,700.0	6,093.9	6,905.0	6,088.3	47.4	52.2	-79.55	2,622.7	1,437.5	1,130.6	1,034.6	11.782			
6,800.0	6,193.9	7,010.6	6,193.9	47.4	52.2	-29.01	2,622.8	1,437.5	1,130.6	1,034.7	11.782			
6,900.0	6,293.9	7,110.6	6,293.9	47.4	52.2	-29.01	2,622.8	1,437.5	1,130.6	1,034.6	11.777			
7,000.0	6,393.9	7,210.6	6,393.9	47.5	52.2	-29.01	2,622.8	1,437.5	1,130.6	1,034.6	11.772			
7,100.0	6,493.9	7,310.6	6,493.9	47.5	52.2	-29.01	2,622.8	1,437.5	1,130.6	1,034.5	11.767			
7,200.0	6,593.9	7,410.6	6,593.9	47.5	52.2	-29.01	2,622.8	1,437.5	1,130.6	1,034.5	11.762			
7,300.0	6,693.9	7,510.6	6,693.9	47.5	52.3	-29.01	2,622.8	1,437.5	1,130.6	1,034.5	11.756			
7,400.0	6,793.9	7,610.6	6,793.9	47.6	52.3	-29.01	2,622.8	1,437.5	1,130.6	1,034.4	11.751			
7,500.0	6,893.9	7,710.6	6,893.9	47.6	52.3	-29.01	2,622.8	1,437.5	1,130.6	1,034.4	11.745			
7,600.0	6,993.9	7,810.6	6,993.9	47.6	52.3	-29.01	2,622.8	1,437.5	1,130.6	1,034.3	11.740			
7,700.0	7,093.9	7,910.6	7,093.9	47.6	52.3	-29.01	2,622.8	1,437.5	1,130.6	1,034.3	11.734			
7,800.0	7,193.9	8,010.6	7,193.9	47.6	52.3	-29.01	2,622.8	1,437.5	1,130.6	1,034.2	11.729			
7,900.0	7,293.9	8,110.6	7,293.9	47.7	52.4	-29.01	2,622.8	1,437.5	1,130.6	1,034.2	11.723			
8,000.0	7,393.9	8,210.6	7,393.9	47.7	52.4	-29.01	2,622.8	1,437.5	1,130.6	1,034.1	11.718			
8,100.0	7,493.9	8,310.6	7,493.9	47.7	52.4	-29.01	2,622.8	1,437.5	1,130.6	1,034.1	11.712			
8,200.0	7,593.9	8,410.6	7,593.9	47.7	52.4	-29.01	2,622.8	1,437.5	1,130.6	1,034.0	11.707			
8,300.0	7,693.9	8,510.6	7,693.9	47.8	52.4	-29.01	2,622.8	1,437.5	1,130.6	1,034.0	11.701			
8,400.0	7,793.9	8,610.6	7,793.9	47.8	52.4	-29.01	2,622.8	1,437.5	1,130.6	1,034.0	11.696			
8,496.1	7,890.0	8,706.7	7,890.0	47.8	52.5	-29.01	2,622.8	1,437.5	1,130.6	1,033.9	11.690			

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 Fed 0993-21-12W - 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)	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	-46.47	22.0	-23.2	32.0				
100.0	100.0	100.0	100.0	0.4	0.4	-46.47	22.0	-23.2	32.0	31.2	40.387		
200.0	200.0	200.0	200.0	1.2	1.2	-46.47	22.0	-23.2	32.0	29.5	12.948	CC	
300.0	300.0	299.8	299.7	1.7	2.4	-95.37	23.8	-22.0	32.5	29.2	9.899	ES	
400.0	399.8	399.4	399.2	3.3	3.9	-93.69	29.2	-18.3	34.2	30.1	8.195		
500.0	499.3	499.0	498.2	4.6	5.0	-92.35	38.1	-12.2	37.2	32.2	7.472		
600.0	598.3	598.5	596.5	5.6	6.0	-91.40	50.6	-3.7	41.4	35.7	7.226	SF	
700.0	696.6	697.9	694.0	6.5	6.8	-90.80	66.5	7.2	46.8	40.4	7.236		
800.0	794.0	797.1	790.4	7.3	7.6	-90.47	85.9	20.5	53.4	46.2	7.387		
900.0	890.3	896.2	885.5	8.0	8.3	-90.33	108.6	36.1	61.2	53.1	7.606		
1,000.0	985.3	995.0	979.2	8.7	9.0	-90.33	134.7	53.9	70.1	61.1	7.845		
1,100.0	1,078.9	1,093.7	1,071.2	9.4	9.6	-90.39	164.0	74.0	80.1	70.2	8.071		
1,200.0	1,170.9	1,192.2	1,161.5	10.0	10.2	-90.50	196.5	96.2	91.2	80.2	8.265		
1,300.0	1,261.0	1,290.4	1,249.7	10.7	10.8	-90.62	232.1	120.6	103.5	91.2	8.418		
1,400.0	1,349.3	1,388.4	1,335.9	11.0	11.4	-90.73	270.7	147.0	116.8	103.1	8.551		
1,500.0	1,437.1	1,487.2	1,421.3	11.3	11.9	-90.24	311.6	175.0	130.7	115.6	8.622		
1,600.0	1,525.0	1,586.2	1,507.0	11.7	12.2	-89.81	352.6	203.0	144.7	128.0	8.656		
1,700.0	1,612.8	1,685.2	1,592.6	12.0	12.5	-89.46	393.7	231.1	158.7	140.4	8.672		
1,800.0	1,700.6	1,784.3	1,678.2	12.4	12.9	-89.17	434.7	259.2	172.7	152.8	8.676		
1,900.0	1,788.4	1,883.3	1,763.8	12.7	13.2	-88.92	475.7	287.3	186.7	165.2	8.674		
2,000.0	1,876.3	1,982.3	1,849.4	13.1	13.6	-88.70	516.8	315.4	200.7	177.5	8.667		
2,100.0	1,964.1	2,081.3	1,935.0	13.5	13.9	-88.51	557.8	343.5	214.7	189.9	8.657		
2,200.0	2,051.9	2,180.3	2,020.7	13.9	14.3	-88.35	598.9	371.6	228.7	202.2	8.646		
2,300.0	2,139.7	2,279.3	2,106.3	14.4	14.7	-88.20	639.9	399.6	242.7	214.6	8.634		
2,400.0	2,227.6	2,378.3	2,191.9	14.9	15.1	-88.08	680.9	427.7	256.7	226.9	8.620		
2,500.0	2,315.4	2,477.3	2,277.5	15.8	15.7	-87.96	722.0	455.8	270.7	239.3	8.623		
2,600.0	2,403.2	2,576.4	2,363.1	16.6	16.6	-87.85	763.0	483.9	284.7	251.6	8.601		
2,700.0	2,491.0	2,675.4	2,448.7	17.5	17.4	-87.76	804.1	512.0	298.7	264.0	8.589		
2,800.0	2,578.9	2,774.4	2,534.4	18.4	18.3	-87.67	845.1	540.1	312.8	276.3	8.577		
2,900.0	2,666.7	2,873.4	2,620.0	19.2	19.1	-87.59	886.1	568.2	326.8	288.6	8.566		
3,000.0	2,754.5	2,972.4	2,705.6	20.1	20.0	-87.52	927.2	596.2	340.8	301.0	8.555		
3,100.0	2,842.3	3,071.4	2,791.2	20.9	20.9	-87.46	968.2	624.3	354.8	313.3	8.545		
3,200.0	2,930.2	3,170.4	2,876.8	21.8	21.7	-87.39	1,009.3	652.4	368.8	325.6	8.535		
3,300.0	3,018.0	3,269.4	2,962.4	22.7	22.6	-87.34	1,050.3	680.5	382.8	337.9	8.526		
3,400.0	3,105.8	3,368.5	3,048.1	23.5	23.4	-87.28	1,091.3	708.6	396.9	350.3	8.517		
3,500.0	3,193.6	3,467.5	3,133.7	24.4	24.3	-87.23	1,132.4	736.7	410.9	362.6	8.508		
3,600.0	3,281.5	3,566.5	3,219.3	25.3	25.2	-87.19	1,173.4	764.8	424.9	374.9	8.500		
3,700.0	3,369.3	3,665.5	3,304.9	26.1	26.0	-87.14	1,214.5	792.8	438.9	387.2	8.492		
3,800.0	3,457.1	3,764.5	3,390.5	27.0	26.9	-87.10	1,255.5	820.9	452.9	399.5	8.485		
3,900.0	3,545.0	3,863.5	3,476.1	27.9	27.7	-87.07	1,296.6	849.0	466.9	411.9	8.478		
4,000.0	3,632.8	3,962.5	3,561.8	28.7	28.6	-87.03	1,337.6	877.1	481.0	424.2	8.471		
4,100.0	3,720.6	4,061.5	3,647.4	29.6	29.5	-87.00	1,378.6	905.2	495.0	436.5	8.464		
4,200.0	3,808.4	4,160.6	3,733.0	30.5	30.3	-86.96	1,419.7	933.3	509.0	448.8	8.458		
4,300.0	3,896.3	4,259.6	3,818.6	31.4	31.2	-86.93	1,460.7	961.4	523.0	461.1	8.452		
4,400.0	3,984.1	4,358.6	3,904.2	32.2	32.1	-86.90	1,501.8	989.4	537.0	473.4	8.446		
4,500.0	4,071.9	4,457.6	3,989.9	33.1	32.9	-86.88	1,542.8	1,017.5	551.0	485.8	8.441		
4,600.0	4,159.7	4,556.6	4,075.5	34.0	33.8	-86.85	1,583.8	1,045.6	565.1	498.1	8.435		
4,700.0	4,247.6	4,655.6	4,161.1	34.8	34.6	-86.83	1,624.9	1,073.7	579.1	510.4	8.430		
4,800.0	4,335.4	4,754.6	4,246.7	35.7	35.5	-86.80	1,665.9	1,101.8	593.1	522.7	8.425		
4,900.0	4,423.2	4,853.6	4,332.3	36.6	36.4	-86.78	1,707.0	1,129.9	607.1	535.0	8.420		
5,000.0	4,511.0	4,952.7	4,417.9	37.4	37.2	-86.76	1,748.0	1,158.0	621.1	547.3	8.416		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 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	4,598.9	5,051.7	4,503.6	38.3	38.1	-86.74	1,789.0	1,186.1	635.2	559.6	8.411			
5,200.0	4,686.7	5,150.7	4,589.2	39.2	39.0	-86.72	1,830.1	1,214.1	649.2	572.0	8.407			
5,300.0	4,774.5	5,249.7	4,674.8	40.1	39.8	-86.70	1,871.1	1,242.2	663.2	584.3	8.403			
5,400.0	4,862.3	5,348.7	4,760.4	40.9	40.7	-86.68	1,912.2	1,270.3	677.2	596.6	8.399			
5,500.0	4,950.2	5,447.7	4,846.0	41.8	41.6	-86.67	1,953.2	1,298.4	691.2	608.9	8.395			
5,600.0	5,038.0	5,546.7	4,931.6	42.7	42.4	-86.72	1,994.2	1,326.5	705.3	621.2	8.393			
5,700.0	5,127.3	5,652.6	5,023.8	43.5	43.3	-86.87	2,037.3	1,355.9	719.1	633.4	8.386			
5,800.0	5,218.5	5,762.4	5,121.6	44.2	44.2	-86.98	2,078.3	1,384.0	731.9	644.5	8.374			
5,900.0	5,311.3	5,872.6	5,222.2	44.9	45.0	-87.09	2,115.6	1,409.5	743.4	654.6	8.364			
6,000.0	5,405.7	5,983.3	5,325.2	45.4	45.7	-87.19	2,149.0	1,432.4	753.7	663.5	8.356			
6,100.0	5,501.4	6,094.4	5,430.4	46.0	46.3	-87.27	2,178.3	1,452.5	762.7	671.4	8.350			
6,200.0	5,598.3	6,205.8	5,537.5	46.4	46.8	-87.35	2,203.5	1,469.7	770.4	678.1	8.346			
6,300.0	5,696.2	6,317.5	5,646.3	46.7	47.2	-87.42	2,224.4	1,484.0	776.8	683.7	8.343			
6,400.0	5,794.9	6,429.4	5,756.5	47.0	47.6	-87.47	2,240.9	1,495.3	781.8	688.1	8.341			
6,500.0	5,894.2	6,541.6	5,867.6	47.2	47.8	-87.52	2,253.0	1,503.5	785.5	691.3	8.340			
6,600.0	5,993.9	6,653.8	5,979.5	47.3	48.0	-87.55	2,260.5	1,508.7	787.8	693.3	8.340			
6,700.0	6,093.9	6,766.1	6,091.7	47.4	48.1	-87.57	2,263.6	1,510.8	788.7	694.1	8.340			
6,800.0	6,193.9	6,868.3	6,193.9	47.4	48.1	-37.02	2,263.7	1,510.9	788.7	694.1	8.337			
6,900.0	6,293.9	6,968.3	6,293.9	47.4	48.1	-37.02	2,263.7	1,510.9	788.7	694.1	8.334			
7,000.0	6,393.9	7,068.3	6,393.9	47.5	48.1	-37.02	2,263.7	1,510.9	788.7	694.0	8.330			
7,100.0	6,493.9	7,168.3	6,493.9	47.5	48.1	-37.02	2,263.7	1,510.9	788.7	694.0	8.326			
7,200.0	6,593.9	7,268.3	6,593.9	47.5	48.2	-37.02	2,263.7	1,510.9	788.7	693.9	8.322			
7,300.0	6,693.9	7,368.3	6,693.9	47.5	48.2	-37.02	2,263.7	1,510.9	788.7	693.9	8.319			
7,400.0	6,793.9	7,468.3	6,793.9	47.6	48.2	-37.02	2,263.7	1,510.9	788.7	693.8	8.315			
7,500.0	6,893.9	7,568.3	6,893.9	47.6	48.2	-37.02	2,263.7	1,510.9	788.7	693.8	8.311			
7,600.0	6,993.9	7,668.3	6,993.9	47.6	48.2	-37.02	2,263.7	1,510.9	788.7	693.7	8.307			
7,700.0	7,093.9	7,768.3	7,093.9	47.6	48.3	-37.02	2,263.7	1,510.9	788.7	693.7	8.303			
7,800.0	7,193.9	7,868.3	7,193.9	47.6	48.3	-37.02	2,263.7	1,510.9	788.7	693.7	8.299			
7,900.0	7,293.9	7,968.3	7,293.9	47.7	48.3	-37.02	2,263.7	1,510.9	788.7	693.6	8.296			
8,000.0	7,393.9	8,068.3	7,393.9	47.7	48.3	-37.02	2,263.7	1,510.9	788.7	693.6	8.292			
8,100.0	7,493.9	8,168.3	7,493.9	47.7	48.3	-37.02	2,263.7	1,510.9	788.7	693.5	8.288			
8,200.0	7,593.9	8,268.3	7,593.9	47.7	48.4	-37.02	2,263.7	1,510.9	788.7	693.5	8.284			
8,300.0	7,693.9	8,368.3	7,693.9	47.8	48.4	-37.02	2,263.7	1,510.9	788.7	693.4	8.280			
8,400.0	7,793.9	8,468.3	7,793.9	47.8	48.4	-37.02	2,263.7	1,510.9	788.7	693.4	8.276			
8,462.7	7,856.6	8,531.0	7,856.6	47.8	48.4	-37.02	2,263.7	1,510.9	788.7	693.4	8.274			
8,496.1	7,890.0	8,560.4	7,886.0	47.8	48.4	-37.02	2,263.7	1,510.9	788.7	693.3	8.271			

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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	-46.72	10.9	-11.6	15.9			
100.0	100.0	100.0	100.0	0.4	0.4	-46.72	10.9	-11.6	15.9	15.2	20.131	
200.0	200.0	200.0	200.0	1.2	1.2	-46.72	10.9	-11.6	15.9	13.5	6.454	CC
200.5	200.5	200.5	200.5	1.2	1.2	-97.27	10.9	-11.6	15.9	13.5	6.439	
300.0	300.0	300.0	300.0	1.7	2.3	-93.83	12.5	-10.0	16.0	12.8	4.962	
400.0	399.8	400.0	399.7	3.3	3.9	-90.00	17.0	-5.4	16.6	12.5	4.077	ES
500.0	499.3	499.9	499.0	4.6	5.0	-86.54	24.6	2.4	17.5	12.6	3.607	
600.0	598.3	599.7	597.7	5.6	6.0	-83.63	35.2	13.3	18.9	13.2	3.328	
700.0	696.6	699.5	695.6	6.5	6.8	-81.32	48.8	27.2	20.6	14.1	3.158	
800.0	794.0	799.3	792.5	7.3	7.6	-79.59	65.3	44.2	22.8	15.3	3.060	
900.0	890.3	898.9	888.2	8.0	8.3	-78.37	84.8	64.1	25.3	16.9	3.009	
1,000.0	985.3	998.6	982.5	8.7	9.0	-77.56	107.1	87.0	28.1	18.7	2.988	
1,100.0	1,078.9	1,098.1	1,075.3	9.4	9.6	-77.08	132.2	112.8	31.3	20.8	2.983	
1,200.0	1,170.9	1,197.6	1,166.4	10.0	10.3	-76.86	160.2	141.4	34.8	23.1	2.983	
1,300.0	1,261.0	1,297.1	1,255.7	10.7	10.9	-76.82	190.8	172.8	38.6	25.6	2.982	SF
1,400.0	1,349.3	1,396.5	1,342.9	11.0	11.4	-76.65	224.1	206.9	42.7	28.4	2.988	
1,500.0	1,437.1	1,496.1	1,428.5	11.3	11.8	-73.66	259.6	243.4	47.8	31.8	2.986	
1,600.0	1,525.0	1,595.9	1,514.1	11.7	12.1	-70.89	295.4	280.1	53.2	35.4	2.989	
1,700.0	1,612.8	1,695.7	1,599.8	12.0	12.4	-68.63	331.2	316.8	58.6	39.1	3.004	
1,800.0	1,700.6	1,795.6	1,685.4	12.4	12.8	-66.76	367.1	353.5	64.1	42.9	3.026	
1,900.0	1,788.4	1,895.4	1,771.1	12.7	13.1	-65.18	402.9	390.3	69.7	46.8	3.052	
2,000.0	1,876.3	1,995.2	1,856.7	13.1	13.5	-63.84	438.7	427.0	75.3	50.8	3.079	
2,100.0	1,964.1	2,095.1	1,942.3	13.5	13.9	-62.68	474.5	463.7	80.9	54.9	3.107	
2,200.0	2,051.9	2,194.9	2,028.0	13.9	14.3	-61.67	510.3	500.4	86.6	59.0	3.134	
2,300.0	2,139.7	2,294.7	2,113.6	14.4	14.7	-60.79	546.1	537.2	92.3	63.1	3.160	
2,400.0	2,227.6	2,394.5	2,199.3	14.9	15.6	-60.01	582.0	573.9	98.0	67.2	3.186	
2,500.0	2,315.4	2,494.4	2,284.9	15.8	16.5	-59.32	617.8	610.6	103.7	71.4	3.210	
2,600.0	2,403.2	2,594.2	2,370.5	16.6	17.4	-58.70	653.6	647.3	109.5	75.6	3.232	
2,700.0	2,491.0	2,694.0	2,456.2	17.5	18.3	-58.14	689.4	684.1	115.2	79.8	3.253	
2,800.0	2,578.9	2,793.9	2,541.8	18.4	19.3	-57.64	725.2	720.8	121.0	84.0	3.273	
2,900.0	2,666.7	2,893.7	2,627.5	19.2	20.2	-57.18	761.0	757.5	126.8	88.3	3.292	
3,000.0	2,754.5	2,993.5	2,713.1	20.1	21.1	-56.76	796.8	794.2	132.5	92.5	3.309	
3,100.0	2,842.3	3,093.3	2,798.7	20.9	22.0	-56.38	832.7	830.9	138.3	96.7	3.326	
3,200.0	2,930.2	3,193.2	2,884.4	21.8	22.9	-56.02	868.5	867.7	144.1	101.0	3.341	
3,300.0	3,018.0	3,293.0	2,970.0	22.7	23.9	-55.70	904.3	904.4	149.9	105.2	3.356	
3,400.0	3,105.8	3,392.8	3,055.7	23.5	24.8	-55.40	940.1	941.1	155.7	109.5	3.369	
3,500.0	3,193.6	3,492.6	3,141.3	24.4	25.7	-55.12	975.9	977.8	161.5	113.8	3.382	
3,600.0	3,281.5	3,592.5	3,226.9	25.3	26.6	-54.86	1,011.7	1,014.6	167.3	118.0	3.394	
3,700.0	3,369.3	3,692.3	3,312.6	26.1	27.6	-54.61	1,047.6	1,051.3	173.2	122.3	3.406	
3,800.0	3,457.1	3,792.1	3,398.2	27.0	28.5	-54.38	1,083.4	1,088.0	179.0	126.6	3.416	
3,900.0	3,545.0	3,892.0	3,483.9	27.9	29.4	-54.17	1,119.2	1,124.7	184.8	130.9	3.427	
4,000.0	3,632.8	3,991.8	3,569.5	28.7	30.3	-53.97	1,155.0	1,161.5	190.6	135.1	3.436	
4,100.0	3,720.6	4,091.6	3,655.1	29.6	31.3	-53.78	1,190.8	1,198.2	196.4	139.4	3.446	
4,200.0	3,808.4	4,191.4	3,740.8	30.5	32.2	-53.61	1,226.6	1,234.9	202.3	143.7	3.454	
4,300.0	3,896.3	4,291.3	3,826.4	31.4	33.1	-53.44	1,262.5	1,271.6	208.1	148.0	3.463	
4,400.0	3,984.1	4,391.1	3,912.1	32.2	34.1	-53.28	1,298.3	1,308.4	213.9	152.3	3.470	
4,500.0	4,071.9	4,490.9	3,997.7	33.1	35.0	-53.13	1,334.1	1,345.1	219.8	156.6	3.478	
4,600.0	4,159.7	4,590.8	4,083.3	34.0	35.9	-52.99	1,369.9	1,381.8	225.6	160.9	3.485	
4,700.0	4,247.6	4,690.6	4,169.0	34.8	36.8	-52.85	1,405.7	1,418.5	231.4	165.2	3.492	
4,800.0	4,335.4	4,790.4	4,254.6	35.7	37.8	-52.73	1,441.5	1,455.2	237.3	169.4	3.498	
4,900.0	4,423.2	4,890.2	4,340.3	36.6	38.7	-52.60	1,477.4	1,492.0	243.1	173.7	3.504	

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 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)			
5,000.0	4,511.0	4,990.1	4,425.9	37.4	39.6	-52.49	1,513.2	1,528.7	248.9	178.0	3.510		
5,100.0	4,598.9	5,089.9	4,511.5	38.3	40.6	-52.38	1,549.0	1,565.4	254.8	182.3	3.516		
5,200.0	4,686.7	5,189.7	4,597.2	39.2	41.5	-52.27	1,584.8	1,602.1	260.6	186.6	3.521		
5,300.0	4,774.5	5,289.6	4,682.8	40.1	42.4	-52.17	1,620.6	1,638.9	266.5	190.9	3.527		
5,400.0	4,862.3	5,389.4	4,768.5	40.9	43.3	-52.07	1,656.4	1,675.6	272.3	195.2	3.532		
5,500.0	4,950.2	5,489.2	4,854.1	41.8	44.3	-51.98	1,692.2	1,712.3	278.1	199.5	3.536		
5,600.0	5,038.0	5,589.3	4,940.0	42.7	45.2	-51.90	1,728.2	1,749.1	284.0	203.9	3.542		
5,700.0	5,127.3	5,698.3	5,034.9	43.5	46.2	-51.80	1,765.6	1,787.5	290.1	208.3	3.546		
5,800.0	5,218.5	5,807.6	5,132.5	44.2	47.0	-51.71	1,800.0	1,822.8	295.7	212.3	3.548		
5,900.0	5,311.3	5,917.2	5,232.5	44.9	47.8	-51.63	1,831.1	1,854.7	300.7	216.0	3.550		
6,000.0	5,405.7	6,027.0	5,334.8	45.4	48.5	-51.57	1,858.9	1,883.2	305.2	219.3	3.554		
6,100.0	5,501.4	6,137.0	5,439.1	46.0	49.1	-51.51	1,883.3	1,908.2	309.1	222.3	3.559		
6,200.0	5,598.3	6,247.1	5,545.1	46.4	49.6	-51.47	1,904.2	1,929.6	312.5	224.8	3.564		
6,300.0	5,696.2	6,357.4	5,652.6	46.7	50.1	-51.43	1,921.6	1,947.4	315.3	227.0	3.570		
6,400.0	5,794.9	6,467.9	5,761.2	47.0	50.4	-51.40	1,935.3	1,961.5	317.5	228.7	3.577		
6,500.0	5,894.2	6,578.4	5,870.8	47.2	50.7	-51.38	1,945.4	1,971.8	319.1	230.1	3.585		
6,600.0	5,993.9	6,689.0	5,981.0	47.3	50.8	-51.37	1,951.7	1,978.4	320.1	231.0	3.594		
6,700.0	6,093.9	6,799.7	6,091.6	47.4	50.9	-51.37	1,954.4	1,981.1	320.5	231.6	3.604		
6,800.0	6,193.9	6,901.9	6,193.9	47.4	50.9	-0.81	1,954.5	1,981.2	320.5	231.7	3.607		
6,900.0	6,293.9	7,001.9	6,293.9	47.4	50.9	-0.81	1,954.5	1,981.2	320.5	231.6	3.605		
7,000.0	6,393.9	7,101.9	6,393.9	47.5	51.0	-0.81	1,954.5	1,981.2	320.5	231.6	3.603		
7,100.0	6,493.9	7,201.9	6,493.9	47.5	51.0	-0.81	1,954.5	1,981.2	320.5	231.5	3.601		
7,200.0	6,593.9	7,301.9	6,593.9	47.5	51.0	-0.81	1,954.5	1,981.2	320.5	231.5	3.598		
7,300.0	6,693.9	7,401.9	6,693.9	47.5	51.0	-0.81	1,954.5	1,981.2	320.5	231.4	3.596		
7,400.0	6,793.9	7,501.9	6,793.9	47.6	51.0	-0.81	1,954.5	1,981.2	320.5	231.4	3.594		
7,500.0	6,893.9	7,601.9	6,893.9	47.6	51.0	-0.81	1,954.5	1,981.2	320.5	231.3	3.592		
7,600.0	6,993.9	7,701.9	6,993.9	47.6	51.1	-0.81	1,954.5	1,981.2	320.5	231.3	3.590		
7,700.0	7,093.9	7,801.9	7,093.9	47.6	51.1	-0.81	1,954.5	1,981.2	320.5	231.2	3.588		
7,800.0	7,193.9	7,901.9	7,193.9	47.6	51.1	-0.81	1,954.5	1,981.2	320.5	231.1	3.586		
7,900.0	7,293.9	8,001.9	7,293.9	47.7	51.1	-0.81	1,954.5	1,981.2	320.5	231.1	3.583		
8,000.0	7,393.9	8,101.9	7,393.9	47.7	51.1	-0.81	1,954.5	1,981.2	320.5	231.0	3.581		
8,100.0	7,493.9	8,201.9	7,493.9	47.7	51.2	-0.81	1,954.5	1,981.2	320.5	231.0	3.579		
8,200.0	7,593.9	8,301.9	7,593.9	47.7	51.2	-0.81	1,954.5	1,981.2	320.5	230.9	3.577		
8,300.0	7,693.9	8,401.9	7,693.9	47.8	51.2	-0.81	1,954.5	1,981.2	320.5	230.9	3.575		
8,400.0	7,793.9	8,501.9	7,793.9	47.8	51.2	-0.81	1,954.5	1,981.2	320.5	230.8	3.572		
8,496.1	7,890.0	8,598.1	7,890.0	47.8	51.2	-0.81	1,954.5	1,981.2	320.5	230.8	3.570		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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	132.56	-10.9	11.9	16.2				
100.0	100.0	100.0	100.0	0.4	0.4	132.56	-10.9	11.9	16.2	15.4	20.393		
200.0	200.0	200.0	200.0	1.2	1.2	132.56	-10.9	11.9	16.2	13.7	6.538		
266.2	266.1	266.1	266.1	1.5	1.4	84.01	-10.8	12.0	16.1	13.3	5.672	CC	
300.0	300.0	299.9	299.9	1.7	1.6	83.61	-10.5	12.5	16.2	13.2	5.414		
400.0	399.8	399.8	399.6	3.3	3.0	86.12	-7.8	16.5	16.6	12.7	4.308	ES	
500.0	499.3	499.7	499.1	4.6	4.4	88.62	-2.7	24.1	17.4	12.8	3.795		
600.0	598.3	599.6	598.1	5.6	5.4	90.92	4.8	35.2	18.7	13.4	3.557		
700.0	696.6	699.5	696.4	6.5	6.3	92.92	14.8	50.0	20.4	14.5	3.440		
800.0	794.0	799.5	793.9	7.3	7.2	94.57	27.1	68.2	22.5	15.9	3.382		
900.0	890.3	899.4	890.4	8.0	7.9	95.86	41.8	90.0	25.1	17.6	3.352		
1,000.0	985.3	999.4	985.6	8.7	8.6	96.83	58.8	115.2	28.0	19.6	3.334		
1,100.0	1,078.9	1,099.4	1,079.4	9.4	9.3	97.54	78.1	143.9	31.4	21.9	3.318		
1,200.0	1,170.9	1,199.4	1,171.6	10.0	9.9	98.03	99.8	175.9	35.1	24.5	3.300		
1,300.0	1,261.0	1,299.4	1,262.1	10.7	10.5	98.38	123.6	211.3	39.3	27.3	3.284		
1,400.0	1,349.3	1,399.2	1,351.7	11.0	10.7	101.79	148.2	247.8	44.0	30.4	3.251		
1,500.0	1,437.1	1,499.1	1,441.2	11.3	11.1	105.72	172.9	284.3	49.1	33.8	3.214		
1,600.0	1,525.0	1,598.9	1,530.8	11.7	11.4	108.90	197.5	320.9	54.4	37.4	3.199	SF	
1,700.0	1,612.8	1,698.7	1,620.4	12.0	11.7	111.50	222.2	357.4	59.8	41.1	3.201		
1,800.0	1,700.6	1,798.5	1,709.9	12.4	12.1	113.68	246.8	393.9	65.3	45.0	3.214		
1,900.0	1,788.4	1,898.3	1,799.5	12.7	12.5	115.51	271.5	430.5	70.9	49.0	3.234		
2,000.0	1,876.3	1,998.2	1,889.1	13.1	12.9	117.07	296.1	467.0	76.6	53.1	3.258		
2,100.0	1,964.1	2,098.0	1,978.6	13.5	13.3	118.41	320.7	503.5	82.3	57.2	3.283		
2,200.0	2,051.9	2,197.8	2,068.2	13.9	13.7	119.59	345.4	540.0	88.0	61.4	3.310		
2,300.0	2,139.7	2,297.6	2,157.8	14.4	14.1	120.61	370.0	576.6	93.8	65.7	3.336		
2,400.0	2,227.6	2,397.4	2,247.3	14.9	14.5	121.52	394.7	613.1	99.6	70.0	3.362		
2,500.0	2,315.4	2,497.3	2,336.9	15.8	15.1	122.33	419.3	649.6	105.5	74.3	3.387		
2,600.0	2,403.2	2,597.1	2,426.5	16.6	15.8	123.05	444.0	686.2	111.3	78.7	3.412		
2,700.0	2,491.0	2,696.9	2,516.0	17.5	16.6	123.70	468.6	722.7	117.2	83.1	3.434		
2,800.0	2,578.9	2,796.7	2,605.6	18.4	17.4	124.29	493.3	759.2	123.1	87.5	3.456		
2,900.0	2,666.7	2,896.5	2,695.2	19.2	18.2	124.82	517.9	795.8	129.0	91.9	3.477		
3,000.0	2,754.5	2,996.4	2,784.7	20.1	19.0	125.31	542.5	832.3	134.9	96.3	3.497		
3,100.0	2,842.3	3,096.2	2,874.3	20.9	19.8	125.75	567.2	868.8	140.8	100.7	3.515		
3,200.0	2,930.2	3,196.0	2,963.9	21.8	20.6	126.16	591.8	905.3	146.7	105.2	3.533		
3,300.0	3,018.0	3,295.8	3,053.4	22.7	21.4	126.54	616.5	941.9	152.6	109.6	3.549		
3,400.0	3,105.8	3,395.6	3,143.0	23.5	22.2	126.89	641.1	978.4	158.6	114.1	3.565		
3,500.0	3,193.6	3,495.4	3,232.6	24.4	23.0	127.22	665.8	1,014.9	164.5	118.6	3.580		
3,600.0	3,281.5	3,595.3	3,322.1	25.3	23.8	127.52	690.4	1,051.5	170.5	123.0	3.594		
3,700.0	3,369.3	3,695.1	3,411.7	26.1	24.6	127.80	715.1	1,088.0	176.4	127.5	3.608		
3,800.0	3,457.1	3,794.9	3,501.3	27.0	25.4	128.07	739.7	1,124.5	182.4	132.0	3.621		
3,900.0	3,545.0	3,894.7	3,590.8	27.9	26.2	128.31	764.4	1,161.1	188.3	136.5	3.633		
4,000.0	3,632.8	3,994.5	3,680.4	28.7	27.0	128.54	789.0	1,197.6	194.3	141.0	3.644		
4,100.0	3,720.6	4,094.4	3,770.0	29.6	27.8	128.76	813.6	1,234.1	200.2	145.5	3.655		
4,200.0	3,808.4	4,194.2	3,859.5	30.5	28.6	128.97	838.3	1,270.6	206.2	150.0	3.666		
4,300.0	3,896.3	4,294.0	3,949.1	31.4	29.4	129.16	862.9	1,307.2	212.2	154.5	3.675		
4,400.0	3,984.1	4,393.8	4,038.7	32.2	30.2	129.35	887.6	1,343.7	218.1	158.9	3.685		
4,500.0	4,071.9	4,493.6	4,128.2	33.1	31.0	129.52	912.2	1,380.2	224.1	163.5	3.694		
4,600.0	4,159.7	4,593.5	4,217.8	34.0	31.8	129.68	936.9	1,416.8	230.1	168.0	3.703		
4,700.0	4,247.6	4,693.3	4,307.4	34.8	32.6	129.84	961.5	1,453.3	236.1	172.5	3.711		
4,800.0	4,335.4	4,793.1	4,396.9	35.7	33.4	129.99	986.2	1,489.8	242.1	177.0	3.719		
4,900.0	4,423.2	4,892.9	4,486.5	36.6	34.2	130.13	1,010.8	1,526.3	248.0	181.5	3.726		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 Fed 0993-21-15W - 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)				
5,000.0	4,511.0	4,992.7	4,576.1	37.4	35.0	130.26	1,035.4	1,562.9	254.0	186.0	3.734			
5,100.0	4,598.9	5,092.6	4,665.6	38.3	35.8	130.39	1,060.1	1,599.4	260.0	190.5	3.741			
5,200.0	4,686.7	5,192.4	4,755.2	39.2	36.6	130.51	1,084.7	1,635.9	266.0	195.0	3.747			
5,300.0	4,774.5	5,292.2	4,844.8	40.1	37.4	130.63	1,109.4	1,672.5	272.0	199.5	3.754			
5,400.0	4,862.3	5,392.0	4,934.3	40.9	38.2	130.74	1,134.0	1,709.0	277.9	204.0	3.760			
5,500.0	4,950.2	5,491.8	5,023.9	41.8	39.1	130.85	1,158.7	1,745.5	283.9	208.5	3.766			
5,600.0	5,038.0	5,591.0	5,112.9	42.7	39.9	130.97	1,183.2	1,781.8	289.9	213.0	3.771			
5,700.0	5,127.3	5,683.9	5,197.2	43.5	40.6	131.08	1,205.0	1,814.1	295.2	217.0	3.774			
5,800.0	5,218.5	5,776.7	5,282.9	44.2	41.2	131.19	1,224.8	1,843.6	300.1	220.6	3.775			
5,900.0	5,311.3	5,869.4	5,369.9	44.9	41.8	131.28	1,242.7	1,870.1	304.5	223.8	3.776			
6,000.0	5,405.7	5,962.0	5,458.0	45.4	42.3	131.35	1,258.6	1,893.6	308.4	226.7	3.777			
6,100.0	5,501.4	6,054.5	5,547.2	46.0	42.7	131.42	1,272.5	1,914.2	311.8	229.3	3.779			
6,200.0	5,598.3	6,147.0	5,637.2	46.4	43.1	131.47	1,284.3	1,931.8	314.7	231.4	3.781			
6,300.0	5,696.2	6,239.5	5,728.0	46.7	43.4	131.51	1,294.1	1,946.3	317.1	233.2	3.783			
6,400.0	5,794.9	6,331.9	5,819.3	47.0	43.6	131.54	1,301.9	1,957.8	318.9	234.7	3.785			
6,500.0	5,894.2	6,424.3	5,911.2	47.2	43.8	131.56	1,307.5	1,966.2	320.3	235.7	3.787			
6,600.0	5,993.9	6,516.6	6,003.3	47.3	43.9	131.57	1,311.1	1,971.5	321.1	236.4	3.790			
6,700.0	6,093.9	6,609.0	6,095.6	47.4	44.0	131.57	1,312.7	1,973.8	321.5	236.7	3.794			
6,800.0	6,193.9	6,707.2	6,193.9	47.4	44.0	-177.88	1,312.7	1,973.9	321.5	236.8	3.795			
6,900.0	6,293.9	6,807.2	6,293.9	47.4	44.0	-177.88	1,312.7	1,973.9	321.5	236.7	3.793			
7,000.0	6,393.9	6,907.2	6,393.9	47.5	44.0	-177.88	1,312.7	1,973.9	321.5	236.7	3.791			
7,100.0	6,493.9	7,007.2	6,493.9	47.5	44.1	-177.88	1,312.7	1,973.9	321.5	236.6	3.788			
7,200.0	6,593.9	7,107.2	6,593.9	47.5	44.1	-177.88	1,312.7	1,973.9	321.5	236.5	3.786			
7,300.0	6,693.9	7,207.2	6,693.9	47.5	44.1	-177.88	1,312.7	1,973.9	321.5	236.5	3.783			
7,400.0	6,793.9	7,307.2	6,793.9	47.6	44.1	-177.88	1,312.7	1,973.9	321.5	236.4	3.781			
7,500.0	6,893.9	7,407.2	6,893.9	47.6	44.2	-177.88	1,312.7	1,973.9	321.5	236.4	3.778			
7,600.0	6,993.9	7,507.2	6,993.9	47.6	44.2	-177.88	1,312.7	1,973.9	321.5	236.3	3.776			
7,700.0	7,093.9	7,607.2	7,093.9	47.6	44.2	-177.88	1,312.7	1,973.9	321.5	236.3	3.773			
7,800.0	7,193.9	7,707.2	7,193.9	47.6	44.2	-177.88	1,312.7	1,973.9	321.5	236.2	3.771			
7,900.0	7,293.9	7,807.2	7,293.9	47.7	44.3	-177.88	1,312.7	1,973.9	321.5	236.2	3.768			
8,000.0	7,393.9	7,907.2	7,393.9	47.7	44.3	-177.88	1,312.7	1,973.9	321.5	236.1	3.766			
8,100.0	7,493.9	8,007.2	7,493.9	47.7	44.3	-177.88	1,312.7	1,973.9	321.5	236.0	3.763			
8,200.0	7,593.9	8,107.2	7,593.9	47.7	44.3	-177.88	1,312.7	1,973.9	321.5	236.0	3.761			
8,300.0	7,693.9	8,207.2	7,693.9	47.8	44.4	-177.88	1,312.7	1,973.9	321.5	235.9	3.758			
8,400.0	7,793.9	8,307.2	7,793.9	47.8	44.4	-177.88	1,312.7	1,973.9	321.5	235.9	3.756			
8,496.1	7,890.0	8,403.4	7,890.0	47.8	44.4	-177.88	1,312.7	1,973.9	321.5	235.8	3.753			

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 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)	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)				
0.0	0.0	0.0	0.0	0.0	0.0	132.90	-21.8	23.5	32.1					
100.0	100.0	100.0	100.0	0.4	0.4	132.90	-21.8	23.5	32.1	31.3	40.514			
200.0	200.0	200.0	200.0	1.2	1.2	132.90	-21.8	23.5	32.1	29.6	12.989	CC		
300.0	300.0	299.6	299.6	1.7	1.7	82.46	-21.3	24.6	32.3	29.3	10.634	ES		
400.0	399.8	399.2	399.0	3.3	3.3	82.93	-18.8	29.4	33.4	29.4	8.265			
500.0	499.3	498.7	498.0	4.6	4.5	83.70	-14.3	38.0	35.4	30.5	7.204			
600.0	598.3	598.1	596.5	5.6	5.6	84.66	-7.9	50.4	38.3	32.6	6.766			
700.0	696.6	697.6	694.2	6.5	6.5	85.70	0.6	66.6	42.0	35.7	6.622	SF		
800.0	794.0	797.0	791.0	7.3	7.3	86.75	10.9	86.5	46.7	39.6	6.624			
900.0	890.3	896.3	886.7	8.0	8.0	87.74	23.2	110.1	52.2	44.4	6.690			
1,000.0	985.3	995.5	981.1	8.7	8.7	88.63	37.3	137.3	58.6	49.9	6.770			
1,100.0	1,078.9	1,094.7	1,074.0	9.4	9.4	89.41	53.4	168.2	65.8	56.2	6.835			
1,200.0	1,170.9	1,193.8	1,165.2	10.0	9.9	90.08	71.2	202.5	73.9	63.2	6.889			
1,300.0	1,261.0	1,293.4	1,256.1	10.7	10.2	92.28	90.0	238.6	82.5	70.5	6.912			
1,400.0	1,349.3	1,392.7	1,346.8	11.0	10.5	96.66	108.7	274.5	91.5	78.2	6.886			
1,500.0	1,437.1	1,492.0	1,437.4	11.3	10.8	100.92	127.4	310.5	101.3	86.4	6.815			
1,600.0	1,525.0	1,591.2	1,528.0	11.7	11.2	104.41	146.1	346.5	111.4	94.9	6.760			
1,700.0	1,612.8	1,690.5	1,618.6	12.0	11.5	107.32	164.8	382.4	121.9	103.8	6.734			
1,800.0	1,700.6	1,789.8	1,709.3	12.4	11.9	109.76	183.5	418.4	132.7	113.0	6.730			
1,900.0	1,788.4	1,889.1	1,799.9	12.7	12.3	111.83	202.2	454.3	143.7	122.4	6.744			
2,000.0	1,876.3	1,988.3	1,890.5	13.1	12.7	113.61	220.9	490.3	154.8	132.0	6.769			
2,100.0	1,964.1	2,087.6	1,981.1	13.5	13.1	115.15	239.6	526.3	166.1	141.7	6.801			
2,200.0	2,051.9	2,186.9	2,071.7	13.9	13.5	116.49	258.3	562.2	177.5	151.5	6.838			
2,300.0	2,139.7	2,286.1	2,162.3	14.4	13.9	117.67	277.0	598.2	188.9	161.5	6.878			
2,400.0	2,227.6	2,385.4	2,253.0	14.9	14.3	118.72	295.7	634.2	200.5	171.5	6.918			
2,500.0	2,315.4	2,484.7	2,343.6	15.8	14.8	119.65	314.4	670.1	212.0	181.6	6.959			
2,600.0	2,403.2	2,584.0	2,434.2	16.6	15.3	120.48	333.1	706.1	223.7	191.7	7.000			
2,700.0	2,491.0	2,683.2	2,524.8	17.5	15.9	121.23	351.8	742.0	235.4	201.9	7.040			
2,800.0	2,578.9	2,782.5	2,615.4	18.4	16.6	121.91	370.5	778.0	247.1	212.2	7.078			
2,900.0	2,666.7	2,881.8	2,706.1	19.2	17.3	122.53	389.2	814.0	258.8	222.4	7.115			
3,000.0	2,754.5	2,981.0	2,796.7	20.1	18.1	123.10	407.9	849.9	270.6	232.7	7.150			
3,100.0	2,842.3	3,080.3	2,887.3	20.9	18.8	123.62	426.6	885.9	282.4	243.1	7.184			
3,200.0	2,930.2	3,179.6	2,977.9	21.8	19.6	124.09	445.3	921.9	294.2	253.4	7.217			
3,300.0	3,018.0	3,278.9	3,068.5	22.7	20.3	124.53	464.0	957.8	306.0	263.8	7.248			
3,400.0	3,105.8	3,378.1	3,159.2	23.5	21.0	124.94	482.7	993.8	317.9	274.2	7.278			
3,500.0	3,193.6	3,477.4	3,249.8	24.4	21.8	125.32	501.4	1,029.7	329.7	284.6	7.306			
3,600.0	3,281.5	3,576.7	3,340.4	25.3	22.5	125.67	520.1	1,065.7	341.6	295.0	7.333			
3,700.0	3,369.3	3,675.9	3,431.0	26.1	23.2	126.00	538.8	1,101.7	353.5	305.5	7.359			
3,800.0	3,457.1	3,775.2	3,521.6	27.0	24.0	126.30	557.5	1,137.6	365.4	315.9	7.384			
3,900.0	3,545.0	3,874.5	3,612.3	27.9	24.7	126.59	576.2	1,173.6	377.3	326.4	7.407			
4,000.0	3,632.8	3,973.7	3,702.9	28.7	25.5	126.86	594.9	1,209.5	389.2	336.8	7.430			
4,100.0	3,720.6	4,073.0	3,793.5	29.6	26.2	127.11	613.5	1,245.5	401.2	347.3	7.451			
4,200.0	3,808.4	4,172.3	3,884.1	30.5	27.0	127.35	632.2	1,281.5	413.1	357.8	7.472			
4,300.0	3,896.3	4,271.6	3,974.7	31.4	27.7	127.58	650.9	1,317.4	425.0	368.3	7.492			
4,400.0	3,984.1	4,370.8	4,065.4	32.2	28.4	127.79	669.6	1,353.4	437.0	378.8	7.510			
4,500.0	4,071.9	4,470.1	4,156.0	33.1	29.2	127.99	688.3	1,389.4	448.9	389.3	7.528			
4,600.0	4,159.7	4,569.4	4,246.6	34.0	29.9	128.19	707.0	1,425.3	460.9	399.8	7.546			
4,700.0	4,247.6	4,668.6	4,337.2	34.8	30.7	128.37	725.7	1,461.3	472.9	410.3	7.562			
4,800.0	4,335.4	4,767.9	4,427.8	35.7	31.4	128.54	744.4	1,497.2	484.8	420.8	7.578			
4,900.0	4,423.2	4,867.2	4,518.4	36.6	32.2	128.70	763.1	1,533.2	496.8	431.4	7.594			
5,000.0	4,511.0	4,966.5	4,609.1	37.4	32.9	128.86	781.8	1,569.2	508.8	441.9	7.608			

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 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 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	4,598.9	5,065.7	4,699.7	38.3	33.6	129.01	800.5	1,605.1	520.7	452.4	7.622		
5,200.0	4,686.7	5,165.0	4,790.3	39.2	34.4	129.15	819.2	1,641.1	532.7	463.0	7.636		
5,300.0	4,774.5	5,264.3	4,880.9	40.1	35.1	129.29	837.9	1,677.0	544.7	473.5	7.649		
5,400.0	4,862.3	5,363.5	4,971.5	40.9	35.9	129.42	856.6	1,713.0	556.7	484.0	7.662		
5,500.0	4,950.2	5,462.8	5,062.2	41.8	36.6	129.55	875.3	1,749.0	568.7	494.6	7.674		
5,600.0	5,038.0	5,562.1	5,152.8	42.7	37.4	129.71	894.0	1,784.9	580.6	505.1	7.685		
5,700.0	5,127.3	5,653.9	5,236.9	43.5	38.0	129.87	911.0	1,817.5	591.1	514.2	7.688		
5,800.0	5,218.5	5,742.3	5,319.2	44.2	38.6	130.01	925.9	1,846.2	600.5	522.4	7.688		
5,900.0	5,311.3	5,830.7	5,402.7	44.9	39.1	130.13	939.3	1,872.0	609.1	529.8	7.688		
6,000.0	5,405.7	5,919.0	5,487.1	45.4	39.6	130.24	951.3	1,895.0	616.6	536.4	7.689		
6,100.0	5,501.4	6,007.3	5,572.5	46.0	40.0	130.33	961.7	1,915.0	623.2	542.2	7.689		
6,200.0	5,598.3	6,100.0	5,662.9	46.4	40.3	130.41	971.0	1,932.9	628.9	547.0	7.683		
6,300.0	5,696.2	6,183.8	5,745.4	46.7	40.6	130.47	977.9	1,946.3	633.5	551.1	7.692		
6,400.0	5,794.9	6,272.0	5,832.7	47.0	40.8	130.52	983.7	1,957.4	637.2	554.3	7.693		
6,500.0	5,894.2	6,360.2	5,920.4	47.2	41.0	130.55	988.0	1,965.6	639.8	556.7	7.694		
6,600.0	5,993.9	6,448.4	6,008.3	47.3	41.1	130.58	990.7	1,970.8	641.5	558.2	7.695		
6,700.0	6,093.9	6,536.6	6,096.5	47.4	41.2	130.58	991.8	1,973.0	642.2	558.8	7.698		
6,800.0	6,193.9	6,633.9	6,193.9	47.4	41.2	-178.87	991.8	1,973.0	642.2	558.8	7.698		
6,900.0	6,293.9	6,733.9	6,293.9	47.4	41.2	-178.87	991.8	1,973.0	642.2	558.8	7.693		
7,000.0	6,393.9	6,833.9	6,393.9	47.5	41.2	-178.87	991.8	1,973.0	642.2	558.7	7.688		
7,100.0	6,493.9	6,933.9	6,493.9	47.5	41.3	-178.87	991.8	1,973.0	642.2	558.7	7.683		
7,200.0	6,593.9	7,033.9	6,593.9	47.5	41.3	-178.87	991.8	1,973.0	642.2	558.6	7.678		
7,300.0	6,693.9	7,133.9	6,693.9	47.5	41.3	-178.87	991.8	1,973.0	642.2	558.5	7.673		
7,400.0	6,793.9	7,233.9	6,793.9	47.6	41.3	-178.87	991.8	1,973.0	642.2	558.5	7.668		
7,500.0	6,893.9	7,333.9	6,893.9	47.6	41.4	-178.87	991.8	1,973.0	642.2	558.4	7.663		
7,600.0	6,993.9	7,433.9	6,993.9	47.6	41.4	-178.87	991.8	1,973.0	642.2	558.4	7.658		
7,700.0	7,093.9	7,533.9	7,093.9	47.6	41.4	-178.87	991.8	1,973.0	642.2	558.3	7.652		
7,800.0	7,193.9	7,633.9	7,193.9	47.6	41.4	-178.87	991.8	1,973.0	642.2	558.3	7.647		
7,900.0	7,293.9	7,733.9	7,293.9	47.7	41.5	-178.87	991.8	1,973.0	642.2	558.2	7.642		
8,000.0	7,393.9	7,833.9	7,393.9	47.7	41.5	-178.87	991.8	1,973.0	642.2	558.1	7.637		
8,100.0	7,493.9	7,933.9	7,493.9	47.7	41.5	-178.87	991.8	1,973.0	642.2	558.1	7.631		
8,200.0	7,593.9	8,033.9	7,593.9	47.7	41.6	-178.87	991.8	1,973.0	642.2	558.0	7.626		
8,300.0	7,693.9	8,133.9	7,693.9	47.8	41.6	-178.87	991.8	1,973.0	642.2	558.0	7.621		
8,400.0	7,793.9	8,233.9	7,793.9	47.8	41.6	-178.87	991.8	1,973.0	642.2	557.9	7.616		
8,496.1	7,890.0	8,330.1	7,890.0	47.8	41.6	-178.87	991.8	1,973.0	642.2	557.9	7.611		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 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		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)			
0.0	0.0	0.0	0.0	0.0	0.0	133.03	-32.8	35.1	48.0				
100.0	100.0	100.0	100.0	0.4	0.4	133.03	-32.8	35.1	48.0	47.2	60.645		
200.0	200.0	200.0	200.0	1.2	1.2	133.03	-32.8	35.1	48.0	45.6	19.443 CC		
300.0	300.0	299.3	299.3	1.7	1.7	82.62	-32.4	36.2	48.4	45.4	15.845 ES		
400.0	399.8	398.3	398.2	3.3	3.3	83.25	-30.5	41.3	50.2	46.0	12.012		
500.0	499.3	497.3	496.7	4.6	4.5	84.26	-27.2	50.3	53.3	48.2	10.388		
600.0	598.3	596.2	594.6	5.6	5.5	85.51	-22.5	63.3	57.9	51.9	9.778		
700.0	696.6	695.0	691.7	6.5	6.4	86.87	-16.3	80.2	63.8	57.2	9.633 SF		
800.0	794.0	793.6	787.8	7.3	7.2	88.21	-8.8	101.1	71.3	63.9	9.722		
900.0	890.3	892.1	882.8	8.0	8.0	89.45	0.2	125.7	80.1	72.0	9.915		
1,000.0	985.3	990.4	976.3	8.7	8.7	90.55	10.6	154.1	90.3	81.4	10.132		
1,100.0	1,078.9	1,088.5	1,068.2	9.4	9.3	91.50	22.2	186.2	101.9	92.1	10.326		
1,200.0	1,170.9	1,187.2	1,159.6	10.0	9.6	92.75	35.0	221.3	114.7	103.8	10.553		
1,300.0	1,261.0	1,286.1	1,251.0	10.7	9.9	95.53	47.9	256.8	127.9	115.9	10.634		
1,400.0	1,349.3	1,384.6	1,342.0	11.0	10.2	99.46	60.8	292.1	142.1	128.8	10.650		
1,500.0	1,437.1	1,483.0	1,433.0	11.3	10.6	103.22	73.6	327.4	157.1	142.3	10.605		
1,600.0	1,525.0	1,581.4	1,523.9	11.7	10.9	106.32	86.5	362.6	172.7	156.3	10.569		
1,700.0	1,612.8	1,679.8	1,614.9	12.0	11.3	108.91	99.3	397.9	188.7	170.8	10.558		
1,800.0	1,700.6	1,778.2	1,705.8	12.4	11.6	111.09	112.2	433.2	204.9	185.6	10.570		
1,900.0	1,788.4	1,876.6	1,796.8	12.7	12.0	112.94	125.0	468.4	221.5	200.6	10.599		
2,000.0	1,876.3	1,974.9	1,887.7	13.1	12.4	114.54	137.8	503.7	238.2	215.8	10.639		
2,100.0	1,964.1	2,073.3	1,978.7	13.5	12.8	115.93	150.7	539.0	255.1	231.2	10.686		
2,200.0	2,051.9	2,171.7	2,069.6	13.9	13.2	117.15	163.5	574.3	272.1	246.8	10.737		
2,300.0	2,139.7	2,270.1	2,160.6	14.4	13.6	118.22	176.4	609.5	289.3	262.5	10.791		
2,400.0	2,227.6	2,368.5	2,251.5	14.9	14.1	119.17	189.2	644.8	306.5	278.2	10.845		
2,500.0	2,315.4	2,466.9	2,342.4	15.8	14.5	120.03	202.1	680.1	323.8	294.1	10.899		
2,600.0	2,403.2	2,565.3	2,433.4	16.6	15.0	120.79	214.9	715.3	341.1	310.0	10.952		
2,700.0	2,491.0	2,663.6	2,524.3	17.5	15.4	121.48	227.7	750.6	358.5	325.9	11.003		
2,800.0	2,578.9	2,762.0	2,615.3	18.4	15.9	122.11	240.6	785.9	376.0	342.0	11.052		
2,900.0	2,666.7	2,860.4	2,706.2	19.2	16.5	122.68	253.4	821.1	393.5	358.0	11.099		
3,000.0	2,754.5	2,958.8	2,797.2	20.1	17.2	123.21	266.3	856.4	411.0	374.1	11.146		
3,100.0	2,842.3	3,057.2	2,888.1	20.9	17.9	123.69	279.1	891.7	428.5	390.2	11.190		
3,200.0	2,930.2	3,155.6	2,979.1	21.8	18.6	124.13	292.0	926.9	446.1	406.4	11.232		
3,300.0	3,018.0	3,254.0	3,070.0	22.7	19.2	124.54	304.8	962.2	463.7	422.6	11.271		
3,400.0	3,105.8	3,352.3	3,160.9	23.5	19.9	124.92	317.6	997.5	481.4	438.8	11.309		
3,500.0	3,193.6	3,450.7	3,251.9	24.4	20.6	125.27	330.5	1,032.7	499.0	455.0	11.346		
3,600.0	3,281.5	3,549.1	3,342.8	25.3	21.3	125.60	343.3	1,068.0	516.7	471.3	11.380		
3,700.0	3,369.3	3,647.5	3,433.8	26.1	22.0	125.91	356.2	1,103.3	534.3	487.5	11.413		
3,800.0	3,457.1	3,745.9	3,524.7	27.0	22.7	126.19	369.0	1,138.5	552.0	503.8	11.445		
3,900.0	3,545.0	3,844.3	3,615.7	27.9	23.4	126.46	381.8	1,173.8	569.7	520.1	11.475		
4,000.0	3,632.8	3,942.7	3,706.6	28.7	24.1	126.71	394.7	1,209.1	587.5	536.4	11.504		
4,100.0	3,720.6	4,041.1	3,797.6	29.6	24.7	126.95	407.5	1,244.3	605.2	552.7	11.531		
4,200.0	3,808.4	4,139.4	3,888.5	30.5	25.4	127.18	420.4	1,279.6	622.9	569.0	11.557		
4,300.0	3,896.3	4,237.8	3,979.5	31.4	26.1	127.39	433.2	1,314.9	640.7	585.4	11.582		
4,400.0	3,984.1	4,336.2	4,070.4	32.2	26.8	127.59	446.1	1,350.1	658.4	601.7	11.606		
4,500.0	4,071.9	4,434.6	4,161.3	33.1	27.5	127.78	458.9	1,385.4	676.2	618.0	11.629		
4,600.0	4,159.7	4,533.0	4,252.3	34.0	28.2	127.96	471.7	1,420.7	693.9	634.4	11.651		
4,700.0	4,247.6	4,631.4	4,343.2	34.8	28.9	128.13	484.6	1,455.9	711.7	650.7	11.673		
4,800.0	4,335.4	4,729.8	4,434.2	35.7	29.6	128.29	497.4	1,491.2	729.5	667.1	11.693		
4,900.0	4,423.2	4,828.1	4,525.1	36.6	30.3	128.45	510.3	1,526.5	747.3	683.5	11.712		
5,000.0	4,511.0	4,926.5	4,616.1	37.4	31.0	128.60	523.1	1,561.8	765.1	699.9	11.731		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 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 +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
5,100.0	4,598.9	5,024.9	4,707.0	38.3	31.6	128.74	535.9	1,597.0	782.9	716.2	11.749		
5,200.0	4,686.7	5,123.3	4,798.0	39.2	32.3	128.87	548.8	1,632.3	800.7	732.6	11.766		
5,300.0	4,774.5	5,221.7	4,888.9	40.1	33.0	129.00	561.6	1,667.6	818.5	749.0	11.783		
5,400.0	4,862.3	5,320.1	4,979.9	40.9	33.7	129.13	574.5	1,702.8	836.3	765.4	11.799		
5,500.0	4,950.2	5,418.5	5,070.8	41.8	34.4	129.25	587.3	1,738.1	854.1	781.8	11.814		
5,600.0	5,038.0	5,516.9	5,161.8	42.7	35.1	129.43	600.2	1,773.4	871.8	798.1	11.829		
5,700.0	5,127.3	5,613.9	5,251.5	43.5	35.8	129.69	612.8	1,808.1	887.7	812.6	11.820		
5,800.0	5,218.5	5,700.0	5,331.8	44.2	36.4	129.86	623.4	1,837.2	901.7	825.4	11.816		
5,900.0	5,311.3	5,786.9	5,414.1	44.9	36.9	130.01	633.0	1,863.7	914.3	836.9	11.811		
6,000.0	5,405.7	5,873.6	5,497.0	45.4	37.3	130.14	641.6	1,887.1	925.5	847.1	11.807		
6,100.0	5,501.4	5,960.2	5,580.9	46.0	37.7	130.25	649.0	1,907.5	935.3	856.0	11.803		
6,200.0	5,598.3	6,046.9	5,665.6	46.4	38.0	130.35	655.4	1,925.0	943.6	863.6	11.799		
6,300.0	5,696.2	6,133.7	5,750.9	46.7	38.3	130.43	660.6	1,939.5	950.5	869.9	11.794		
6,400.0	5,794.9	6,220.4	5,836.9	47.0	38.5	130.49	664.8	1,950.9	956.0	874.9	11.789		
6,500.0	5,894.2	6,307.3	5,923.2	47.2	38.7	130.53	667.9	1,959.3	959.9	878.5	11.784		
6,600.0	5,993.9	6,400.0	6,015.7	47.3	38.8	130.56	669.9	1,964.8	962.5	880.7	11.767		
6,700.0	6,093.9	6,480.9	6,096.6	47.4	38.9	130.57	670.6	1,966.8	963.5	881.7	11.772		
6,800.0	6,193.9	6,578.1	6,193.9	47.4	38.9	-178.88	670.6	1,966.8	963.5	881.6	11.763		
6,900.0	6,293.9	6,678.1	6,293.9	47.4	39.0	-178.88	670.6	1,966.8	963.5	881.6	11.754		
7,000.0	6,393.9	6,778.1	6,393.9	47.5	39.0	-178.88	670.6	1,966.8	963.5	881.5	11.746		
7,100.0	6,493.9	6,878.1	6,493.9	47.5	39.0	-178.88	670.6	1,966.8	963.5	881.5	11.738		
7,200.0	6,593.9	6,978.1	6,593.9	47.5	39.0	-178.88	670.6	1,966.8	963.5	881.4	11.730		
7,300.0	6,693.9	7,078.1	6,693.9	47.5	39.1	-178.88	670.6	1,966.8	963.5	881.3	11.722		
7,400.0	6,793.9	7,178.1	6,793.9	47.6	39.1	-178.88	670.6	1,966.8	963.5	881.3	11.714		
7,500.0	6,893.9	7,278.1	6,893.9	47.6	39.1	-178.88	670.6	1,966.8	963.5	881.2	11.706		
7,600.0	6,993.9	7,378.1	6,993.9	47.6	39.2	-178.88	670.6	1,966.8	963.5	881.2	11.698		
7,700.0	7,093.9	7,478.1	7,093.9	47.6	39.2	-178.88	670.6	1,966.8	963.5	881.1	11.690		
7,800.0	7,193.9	7,578.1	7,193.9	47.6	39.2	-178.88	670.6	1,966.8	963.5	881.1	11.682		
7,900.0	7,293.9	7,678.1	7,293.9	47.7	39.2	-178.88	670.6	1,966.8	963.5	881.0	11.673		
8,000.0	7,393.9	7,778.1	7,393.9	47.7	39.3	-178.88	670.6	1,966.8	963.5	880.9	11.665		
8,100.0	7,493.9	7,878.1	7,493.9	47.7	39.3	-178.88	670.6	1,966.8	963.5	880.9	11.657		
8,200.0	7,593.9	7,978.1	7,593.9	47.7	39.3	-178.88	670.6	1,966.8	963.5	880.8	11.649		
8,300.0	7,693.9	8,078.1	7,693.9	47.8	39.4	-178.88	670.6	1,966.8	963.5	880.8	11.640		
8,400.0	7,793.9	8,178.1	7,793.9	47.8	39.4	-178.88	670.6	1,966.8	963.5	880.7	11.632		
8,496.1	7,890.0	8,274.3	7,890.0	47.8	39.4	-178.88	670.6	1,966.8	963.5	880.6	11.624		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 Fed 0993-21-18W - 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	
0.0	0.0	0.0	0.0	0.0	0.0	133.08	-43.7	46.7	64.0				
100.0	100.0	100.0	100.0	0.4	0.4	133.08	-43.7	46.7	64.0	63.2	80.767		
200.0	200.0	200.0	200.0	1.2	1.2	133.08	-43.7	46.7	64.0	61.5	25.895	CC, ES	
300.0	300.0	298.4	298.4	1.7	2.2	82.02	-43.2	48.8	65.0	61.7	19.633		
400.0	399.8	396.8	396.5	3.3	3.8	82.04	-41.8	55.0	67.9	63.3	14.606		
500.0	499.3	495.0	494.1	4.6	4.9	82.62	-39.5	65.2	72.7	67.0	12.745		
600.0	598.3	592.9	591.0	5.6	5.9	83.61	-36.3	79.5	79.3	72.7	12.071		
700.0	696.6	690.7	686.9	6.5	6.7	84.83	-32.2	97.8	87.7	80.4	11.970	SF	
800.0	794.0	788.1	781.7	7.3	7.5	86.16	-27.2	119.9	98.0	90.0	12.174		
900.0	890.3	885.2	875.0	8.0	8.2	87.46	-21.3	145.9	110.2	101.4	12.529		
1,000.0	985.3	981.9	966.8	8.7	8.9	88.68	-14.6	175.6	124.3	114.7	12.933		
1,100.0	1,078.9	1,078.8	1,057.5	9.4	9.2	89.84	-7.1	208.9	140.1	129.7	13.475		
1,200.0	1,170.9	1,177.3	1,149.2	10.0	9.5	91.94	0.8	243.8	156.6	145.3	13.862		
1,300.0	1,261.0	1,275.3	1,240.6	10.7	9.8	94.99	8.6	278.5	173.6	161.3	14.056		
1,400.0	1,349.3	1,372.8	1,331.4	11.0	10.1	98.74	16.4	313.0	191.8	178.2	14.158		
1,500.0	1,437.1	1,470.1	1,422.1	11.3	10.5	102.36	24.2	347.5	211.0	196.1	14.160		
1,600.0	1,525.0	1,567.5	1,512.8	11.7	10.8	105.38	32.0	381.9	230.8	214.5	14.145		
1,700.0	1,612.8	1,664.8	1,603.5	12.0	11.2	107.92	39.8	416.4	251.2	233.4	14.145		
1,800.0	1,700.6	1,762.1	1,694.2	12.4	11.5	110.08	47.5	450.8	271.9	252.7	14.163		
1,900.0	1,788.4	1,859.5	1,784.9	12.7	11.9	111.93	55.3	485.3	293.0	272.4	14.194		
2,000.0	1,876.3	1,956.8	1,875.6	13.1	12.3	113.53	63.1	519.8	314.4	292.3	14.237		
2,100.0	1,964.1	2,054.1	1,966.3	13.5	12.7	114.93	70.9	554.2	336.0	312.4	14.287		
2,200.0	2,051.9	2,151.5	2,057.0	13.9	13.1	116.16	78.7	588.7	357.7	332.7	14.342		
2,300.0	2,139.7	2,248.8	2,147.7	14.4	13.5	117.25	86.4	623.1	379.5	353.2	14.399		
2,400.0	2,227.6	2,346.2	2,238.4	14.9	13.9	118.23	94.2	657.6	401.5	373.8	14.458		
2,500.0	2,315.4	2,443.5	2,329.1	15.8	14.4	119.10	102.0	692.1	423.6	394.4	14.517		
2,600.0	2,403.2	2,540.8	2,419.8	16.6	14.8	119.88	109.8	726.5	445.8	415.2	14.575		
2,700.0	2,491.0	2,638.2	2,510.5	17.5	15.3	120.59	117.6	761.0	468.0	436.0	14.631		
2,800.0	2,578.9	2,735.5	2,601.2	18.4	15.7	121.24	125.3	795.4	490.3	456.9	14.687		
2,900.0	2,666.7	2,832.9	2,691.9	19.2	16.2	121.83	133.1	829.9	512.7	477.9	14.740		
3,000.0	2,754.5	2,930.2	2,782.6	20.1	16.7	122.37	140.9	864.4	535.1	498.9	14.791		
3,100.0	2,842.3	3,027.5	2,873.3	20.9	17.3	122.87	148.7	898.8	557.5	520.0	14.841		
3,200.0	2,930.2	3,124.9	2,964.0	21.8	17.9	123.33	156.5	933.3	580.0	541.1	14.888		
3,300.0	3,018.0	3,222.2	3,054.7	22.7	18.6	123.75	164.2	967.7	602.5	562.2	14.934		
3,400.0	3,105.8	3,319.5	3,145.4	23.5	19.2	124.15	172.0	1,002.2	625.1	583.3	14.977		
3,500.0	3,193.6	3,416.9	3,236.1	24.4	19.9	124.52	179.8	1,036.7	647.7	604.5	15.018		
3,600.0	3,281.5	3,514.2	3,326.8	25.3	20.5	124.86	187.6	1,071.1	670.2	625.7	15.058		
3,700.0	3,369.3	3,611.6	3,417.5	26.1	21.2	125.18	195.4	1,105.6	692.9	647.0	15.096		
3,800.0	3,457.1	3,708.9	3,508.2	27.0	21.8	125.48	203.1	1,140.1	715.5	668.2	15.132		
3,900.0	3,545.0	3,806.2	3,598.9	27.9	22.5	125.76	210.9	1,174.5	738.2	689.5	15.167		
4,000.0	3,632.8	3,903.6	3,689.6	28.7	23.1	126.02	218.7	1,209.0	760.8	710.8	15.200		
4,100.0	3,720.6	4,000.9	3,780.3	29.6	23.8	126.27	226.5	1,243.4	783.5	732.1	15.232		
4,200.0	3,808.4	4,098.3	3,871.0	30.5	24.4	126.51	234.2	1,277.9	806.2	753.4	15.263		
4,300.0	3,896.3	4,195.6	3,961.7	31.4	25.1	126.73	242.0	1,312.4	828.9	774.7	15.292		
4,400.0	3,984.1	4,292.9	4,052.4	32.2	25.7	126.94	249.8	1,346.8	851.6	796.0	15.320		
4,500.0	4,071.9	4,390.3	4,143.1	33.1	26.4	127.14	257.6	1,381.3	874.4	817.4	15.347		
4,600.0	4,159.7	4,487.6	4,233.9	34.0	27.0	127.33	265.4	1,415.7	897.1	838.7	15.373		
4,700.0	4,247.6	4,584.9	4,324.6	34.8	27.7	127.51	273.1	1,450.2	919.9	860.1	15.397		
4,800.0	4,335.4	4,682.3	4,415.3	35.7	28.3	127.68	280.9	1,484.7	942.6	881.5	15.421		
4,900.0	4,423.2	4,779.6	4,506.0	36.6	29.0	127.85	288.7	1,519.1	965.4	902.9	15.444		
5,000.0	4,511.0	4,877.0	4,596.7	37.4	29.6	128.00	296.5	1,553.6	988.1	924.3	15.466		

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 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 Fed 0993-21-18W - 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	4,598.9	4,974.3	4,687.4	38.3	30.3	128.15	304.3	1,588.0	1,010.9	945.7	15.487		
5,200.0	4,686.7	5,071.6	4,778.1	39.2	31.0	128.29	312.0	1,622.5	1,033.7	967.1	15.508		
5,300.0	4,774.5	5,169.0	4,868.8	40.1	31.6	128.43	319.8	1,657.0	1,056.5	988.5	15.527		
5,400.0	4,862.3	5,266.3	4,959.5	40.9	32.3	128.56	327.6	1,691.4	1,079.3	1,009.9	15.546		
5,500.0	4,950.2	5,363.6	5,050.2	41.8	32.9	128.68	335.4	1,725.9	1,102.1	1,031.3	15.564		
5,600.0	5,038.0	5,461.0	5,140.9	42.7	33.6	128.90	343.2	1,760.3	1,124.8	1,052.7	15.582		
5,700.0	5,127.3	5,558.8	5,232.0	43.5	34.2	129.30	351.0	1,795.0	1,145.7	1,072.2	15.574		
5,800.0	5,218.5	5,652.2	5,319.1	44.2	34.8	129.51	358.4	1,827.7	1,164.0	1,089.1	15.547		
5,900.0	5,311.3	5,739.7	5,401.8	44.9	35.4	129.68	364.7	1,855.8	1,180.4	1,104.4	15.531		
6,000.0	5,405.7	5,827.4	5,485.7	45.4	35.8	129.83	370.4	1,880.9	1,194.9	1,117.9	15.515		
6,100.0	5,501.4	5,915.4	5,570.7	46.0	36.2	129.95	375.4	1,902.9	1,207.6	1,129.7	15.499		
6,200.0	5,598.3	6,000.0	5,653.2	46.4	36.6	130.07	379.4	1,921.0	1,218.4	1,139.8	15.491		
6,300.0	5,696.2	6,091.9	5,743.6	46.7	36.9	130.15	383.1	1,937.3	1,227.4	1,148.0	15.468		
6,400.0	5,794.9	6,180.4	5,831.1	47.0	37.1	130.22	385.9	1,949.6	1,234.5	1,154.6	15.454		
6,500.0	5,894.2	6,268.9	5,919.2	47.2	37.3	130.27	387.9	1,958.7	1,239.6	1,159.3	15.438		
6,600.0	5,993.9	6,357.5	6,007.6	47.3	37.4	130.30	389.2	1,964.4	1,242.9	1,162.3	15.423		
6,700.0	6,093.9	6,446.2	6,096.2	47.4	37.4	130.32	389.8	1,966.8	1,244.3	1,163.5	15.408		
6,800.0	6,193.9	6,543.8	6,193.9	47.4	37.5	-179.13	389.8	1,966.9	1,244.3	1,163.5	15.401		
6,900.0	6,293.9	6,643.8	6,293.9	47.4	37.5	-179.13	389.8	1,966.9	1,244.3	1,163.5	15.391		
7,000.0	6,393.9	6,743.8	6,393.9	47.5	37.5	-179.13	389.8	1,966.9	1,244.3	1,163.4	15.380		
7,100.0	6,493.9	6,843.8	6,493.9	47.5	37.6	-179.13	389.8	1,966.9	1,244.3	1,163.4	15.370		
7,200.0	6,593.9	6,943.8	6,593.9	47.5	37.6	-179.13	389.8	1,966.9	1,244.3	1,163.3	15.359		
7,300.0	6,693.9	7,043.8	6,693.9	47.5	37.6	-179.13	389.8	1,966.9	1,244.3	1,163.2	15.348		
7,400.0	6,793.9	7,143.8	6,793.9	47.6	37.6	-179.13	389.8	1,966.9	1,244.3	1,163.2	15.338		
7,500.0	6,893.9	7,243.8	6,893.9	47.6	37.7	-179.13	389.8	1,966.9	1,244.3	1,163.1	15.327		
7,600.0	6,993.9	7,343.8	6,993.9	47.6	37.7	-179.13	389.8	1,966.9	1,244.3	1,163.1	15.316		
7,700.0	7,093.9	7,443.8	7,093.9	47.6	37.7	-179.13	389.8	1,966.9	1,244.3	1,163.0	15.305		
7,800.0	7,193.9	7,543.8	7,193.9	47.6	37.8	-179.13	389.8	1,966.9	1,244.3	1,163.0	15.295		
7,900.0	7,293.9	7,643.8	7,293.9	47.7	37.8	-179.13	389.8	1,966.9	1,244.3	1,162.9	15.284		
8,000.0	7,393.9	7,743.8	7,393.9	47.7	37.8	-179.13	389.8	1,966.9	1,244.3	1,162.8	15.273		
8,100.0	7,493.9	7,843.8	7,493.9	47.7	37.8	-179.13	389.8	1,966.9	1,244.3	1,162.8	15.262		
8,200.0	7,593.9	7,943.8	7,593.9	47.7	37.9	-179.13	389.8	1,966.9	1,244.3	1,162.7	15.251		
8,300.0	7,693.9	8,043.8	7,693.9	47.8	37.9	-179.13	389.8	1,966.9	1,244.3	1,162.7	15.240		
8,400.0	7,793.9	8,143.8	7,793.9	47.8	37.9	-179.13	389.8	1,966.9	1,244.3	1,162.6	15.229		
8,496.1	7,890.0	8,240.0	7,890.0	47.8	38.0	-179.13	389.8	1,966.9	1,244.3	1,162.6	15.219		

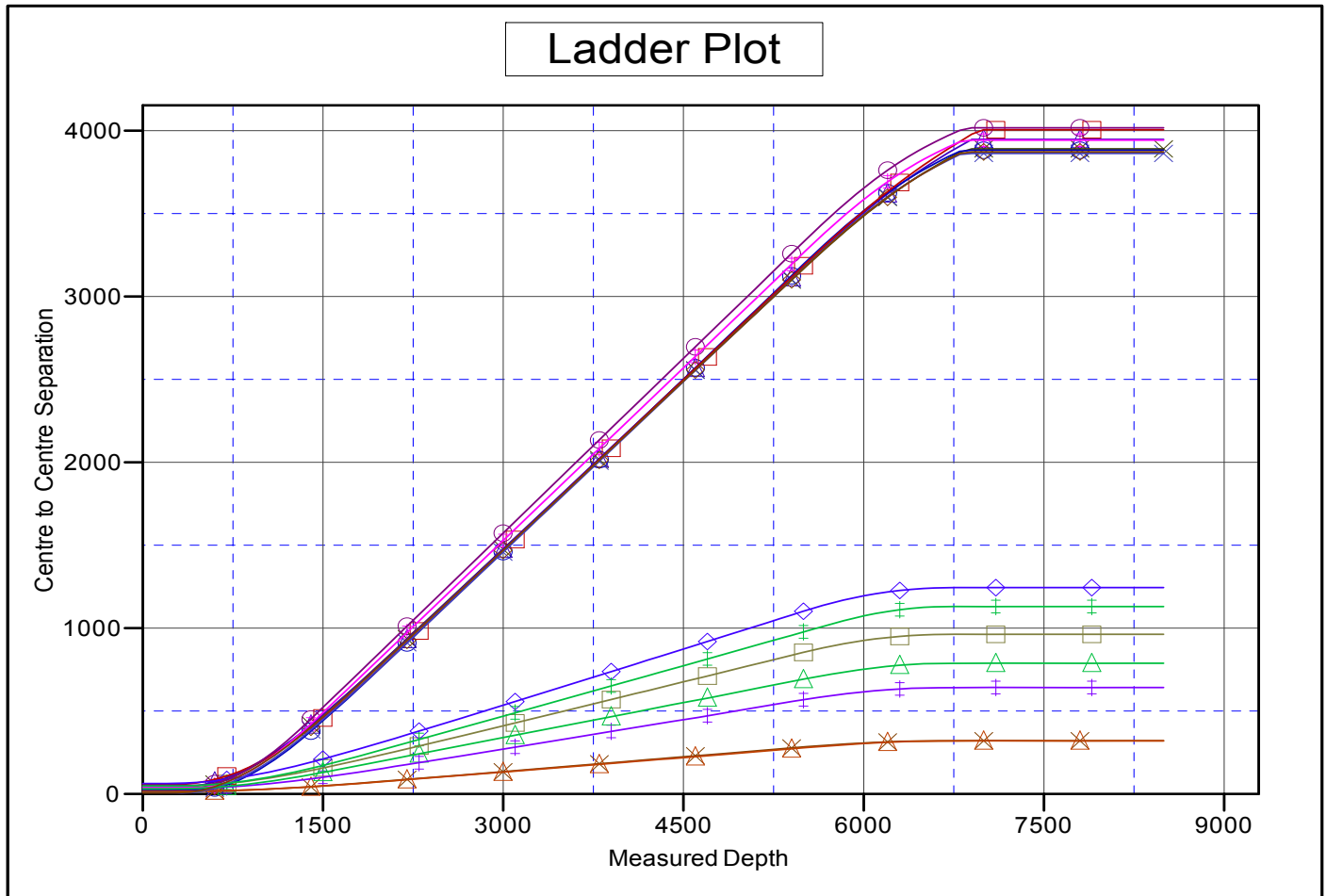
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 Fed 0993-21-14W - Slot A-8
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.44°



LEGEND

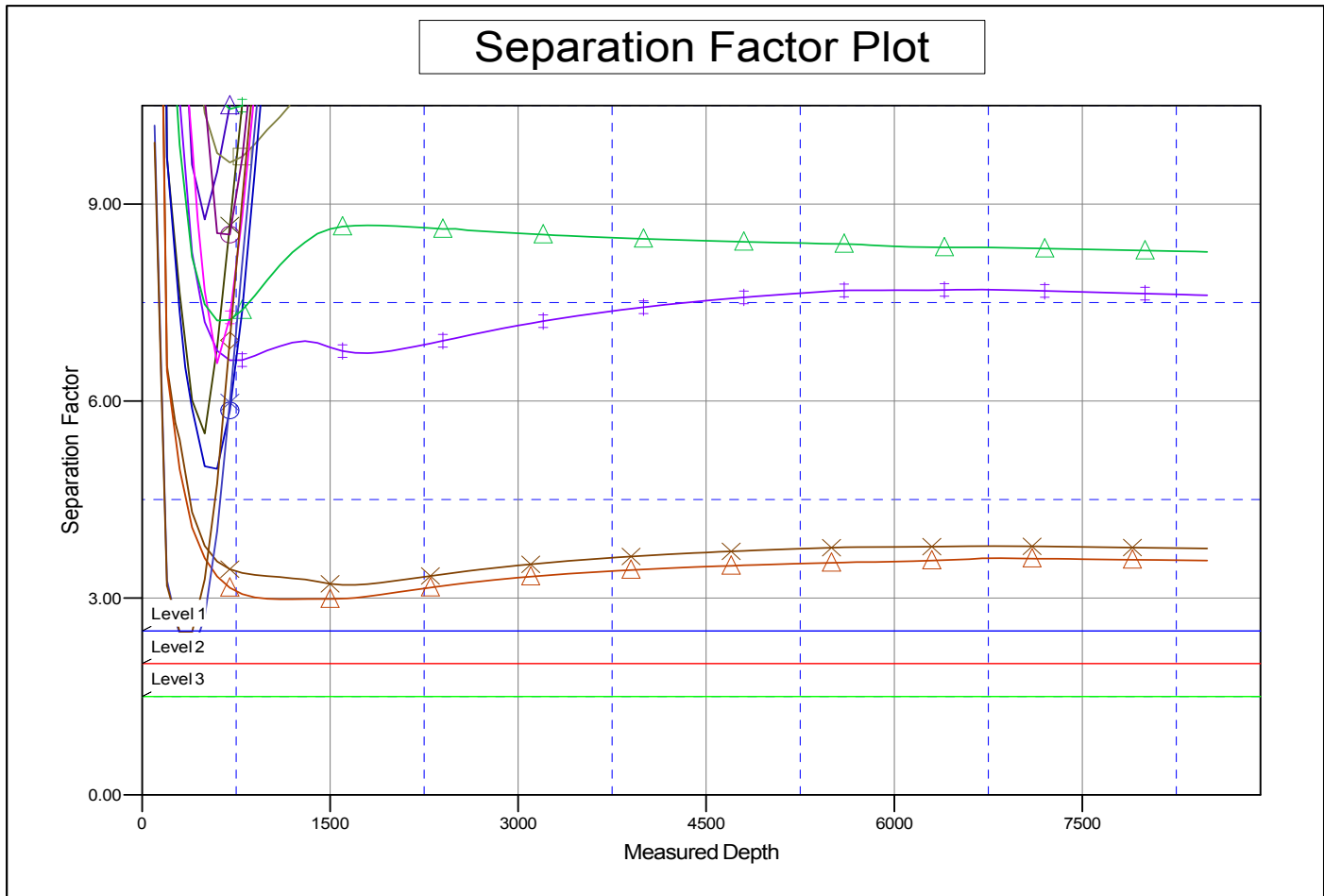
- | | | |
|---|---|---|
| 29-01 0993-20-13E, OH, Design #1 V0 | Laramie 29-01 0993-20-11E, OH, Design #1 V0 | Laramie 29-01 0993-20-15E, OH, Design #1 V0 |
| 29-01 0993-20-12E, OH, Design #1 V0 | Laramie 29-01 Fed 0993-21-15W, OH, Design #1 V0 | Laramie 29-01 0993-20-18E, OH, Design #1 V0 |
| 29-01 Fed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



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-14W - Slot A-8
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 29-01 Fed 0993-21-14W	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 29-01 Fed 0993-21-14W - Slot A-8
 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 29-01 0993-20-11E, OH, Design #1 V0 | Laramie 29-01 0993-20-15E, OH, Design #1 V0 |
| 29-01 0993-20-12E, OH, Design #1 V0 | Laramie 29-01 Fed 0993-21-15W, OH, Design #1 V0 | Laramie 29-01 0993-20-18E, OH, Design #1 V0 |
| 29-01 Fed 0993-21-16W, OH, Design #1 V0 | Laramie 29-01 Fed 0993-21-13W, OH, Design #1 V0 | Laramie 29-01 Fed 0993-21-12W, OH, Design #1 V0 |
| 29-01 Fed 0993-21-17W, OH, Design #1 V0 | Laramie 29-01 0993-20-17E, OH, Design #1 V0 | Laramie 29-01 Fed 0993-21-11W, OH, Design #1 V0 |
| 29-01 0993-20-16E, OH, Design #1 V0 | Laramie 29-01 Fed 0993-21-18W, OH, Design #1 V0 | Laramie 29-01 0993-20-14E, OH, Design #1 V0 |