



Laramie Energy, LLC

Mesa County, CO

Laramie 0993-29-01

Laramie 29-01 Fed 0993-21-16W

OH

Design #1

KLX Anticollision Report

23 August, 2023





Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-16W - Slot A-12
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 0993-21-16W	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	8,331.1	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	88.2	85.8	35.717	CC, ES
Laramie 29-01 0993-20-11E - OH - Design #1	600.0	582.8	125.7	117.7	15.859	SF
Laramie 29-01 0993-20-12E - OH - Design #1	200.0	200.0	72.1	69.6	29.179	CC
Laramie 29-01 0993-20-12E - OH - Design #1	300.0	299.3	72.6	69.5	23.576	ES
Laramie 29-01 0993-20-12E - OH - Design #1	600.0	585.5	108.5	100.6	13.761	SF
Laramie 29-01 0993-20-13E - OH - Design #1	200.0	200.0	56.1	53.6	22.694	CC
Laramie 29-01 0993-20-13E - OH - Design #1	300.0	299.8	56.5	53.3	17.778	ES
Laramie 29-01 0993-20-13E - OH - Design #1	500.0	493.3	72.6	65.5	10.231	SF
Laramie 29-01 0993-20-14E - OH - Design #1	200.0	200.0	40.0	37.5	16.174	CC
Laramie 29-01 0993-20-14E - OH - Design #1	300.0	300.0	40.4	37.1	12.363	ES
Laramie 29-01 0993-20-14E - OH - Design #1	600.0	591.4	70.8	61.9	7.965	SF
Laramie 29-01 0993-20-15E - OH - Design #1	200.0	200.0	24.0	21.5	9.720	CC
Laramie 29-01 0993-20-15E - OH - Design #1	300.0	300.0	24.5	21.2	7.479	ES
Laramie 29-01 0993-20-15E - OH - Design #1	500.0	498.3	34.5	28.4	5.632	SF
Laramie 29-01 0993-20-16E - OH - Design #1	200.0	200.0	8.1	5.6	3.269	CC
Laramie 29-01 0993-20-16E - OH - Design #1	300.0	300.0	8.6	5.3	2.610	ES
Laramie 29-01 0993-20-16E - OH - Design #1	400.0	399.8	12.1	7.2	2.451	Level 1, SF
Laramie 29-01 0993-20-17E - OH - Design #1	337.3	337.2	7.5	4.0	2.137	Level 1, CC, ES
Laramie 29-01 0993-20-17E - OH - Design #1	400.0	399.8	8.8	4.3	1.972	Level 2, SF
Laramie 29-01 0993-20-18E - OH - Design #1	392.8	392.9	21.5	17.7	5.669	CC
Laramie 29-01 0993-20-18E - OH - Design #1	400.0	400.1	21.5	17.7	5.587	ES
Laramie 29-01 0993-20-18E - OH - Design #1	500.0	498.1	28.8	22.1	4.281	SF
Laramie 29-01 Fed 0993-21-11W - OH - Design #1	200.0	200.0	80.2	77.7	32.448	CC, ES
Laramie 29-01 Fed 0993-21-11W - OH - Design #1	800.0	792.5	120.5	113.0	15.929	SF
Laramie 29-01 Fed 0993-21-12W - OH - Design #1	200.0	200.0	64.1	61.6	25.937	CC
Laramie 29-01 Fed 0993-21-12W - OH - Design #1	300.0	299.5	64.8	61.5	19.704	ES
Laramie 29-01 Fed 0993-21-12W - OH - Design #1	700.0	696.1	88.9	82.1	13.212	SF
Laramie 29-01 Fed 0993-21-13W - OH - Design #1	200.0	200.0	48.0	45.6	19.443	CC
Laramie 29-01 Fed 0993-21-13W - OH - Design #1	300.0	300.1	48.4	45.1	14.920	ES
Laramie 29-01 Fed 0993-21-13W - OH - Design #1	800.0	798.9	69.1	62.0	9.742	SF
Laramie 29-01 Fed 0993-21-14W - OH - Design #1	200.0	200.0	32.1	29.6	12.989	CC
Laramie 29-01 Fed 0993-21-14W - OH - Design #1	300.0	300.1	32.3	29.3	10.628	ES
Laramie 29-01 Fed 0993-21-14W - OH - Design #1	800.0	800.7	46.8	39.7	6.602	SF
Laramie 29-01 Fed 0993-21-15W - OH - Design #1	200.0	200.0	15.9	13.5	6.451	CC
Laramie 29-01 Fed 0993-21-15W - OH - Design #1	400.0	400.3	16.9	12.8	4.086	ES
Laramie 29-01 Fed 0993-21-15W - OH - Design #1	700.0	700.9	22.0	15.0	3.127	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 0993-21-16W	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	15.9	13.5	6.454	CC
Laramie 29-01 Fed 0993-21-17W - OH - Design #1	400.0	399.5	16.7	12.4	3.886	ES
Laramie 29-01 Fed 0993-21-17W - OH - Design #1	600.0	598.8	19.6	13.5	3.222	SF
Laramie 29-01 Fed 0993-21-18W - OH - Design #1	200.0	200.0	31.9	29.4	12.905	CC
Laramie 29-01 Fed 0993-21-18W - OH - Design #1	300.0	299.2	32.7	29.4	9.801	ES
Laramie 29-01 Fed 0993-21-18W - OH - Design #1	600.0	596.4	41.1	34.1	5.848	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 Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-46.76	60.5	-64.3	88.2			
100.0	100.0	100.0	100.0	0.4	0.4	-46.76	60.5	-64.3	88.2	87.4	111.404	
200.0	200.0	200.0	200.0	1.2	1.2	-46.76	60.5	-64.3	88.2	85.8	35.717	CC, ES
300.0	300.0	297.2	297.1	1.7	2.4	-109.08	62.5	-64.5	90.2	86.6	24.872	
400.0	399.8	394.0	393.8	3.3	3.9	-109.47	68.6	-65.0	96.8	91.5	18.267	
500.0	499.3	489.1	488.4	4.6	4.9	-110.80	78.2	-66.8	108.3	101.7	16.226	
600.0	598.3	582.8	581.1	5.6	5.6	-113.13	90.6	-71.0	125.7	117.7	15.859	SF
700.0	696.6	674.4	671.3	6.5	6.4	-115.75	105.6	-77.5	148.9	139.8	16.333	
800.0	794.0	763.5	758.3	7.3	7.0	-118.20	122.8	-86.0	178.1	167.8	17.358	
900.0	890.3	849.8	841.8	8.0	7.7	-120.28	141.9	-96.2	213.1	201.8	18.778	
1,000.0	985.3	932.7	921.2	8.7	8.2	-121.92	162.5	-108.0	253.9	241.5	20.494	
1,100.0	1,078.9	1,012.1	996.4	9.4	8.8	-123.12	184.3	-121.0	300.0	286.7	22.429	
1,200.0	1,170.9	1,087.7	1,067.2	9.9	9.3	-124.07	207.0	-134.9	351.3	337.0	24.614	
1,300.0	1,262.2	1,160.4	1,134.4	10.2	9.7	-125.60	230.4	-149.7	406.1	391.0	27.006	
1,400.0	1,353.4	1,230.6	1,198.5	10.5	10.2	-126.61	254.5	-165.3	463.3	447.5	29.333	
1,500.0	1,444.7	1,300.0	1,260.9	10.9	10.6	-127.26	279.9	-182.0	522.6	506.1	31.556	
1,600.0	1,536.0	1,363.9	1,317.6	11.2	10.9	-127.63	304.5	-198.4	584.0	566.7	33.821	
1,700.0	1,627.3	1,427.0	1,372.7	11.6	11.3	-127.83	329.9	-215.6	647.3	629.3	35.984	
1,800.0	1,718.6	1,487.8	1,424.9	11.9	11.7	-127.90	355.5	-233.2	712.3	693.6	38.101	
1,900.0	1,809.9	1,546.3	1,474.4	12.3	12.0	-127.88	381.2	-250.9	778.9	759.5	40.171	
2,000.0	1,901.1	1,600.0	1,519.2	12.7	12.3	-127.79	405.5	-267.8	847.1	827.1	42.313	
2,100.0	1,992.4	1,656.6	1,565.6	13.1	12.6	-127.65	432.1	-286.5	916.8	896.1	44.249	
2,200.0	2,083.7	1,713.6	1,611.5	13.5	12.8	-127.47	459.6	-306.0	987.9	966.5	46.153	
2,300.0	2,175.0	1,783.5	1,667.7	14.0	13.1	-127.25	493.6	-330.1	1,059.3	1,037.0	47.621	
2,400.0	2,266.3	1,853.5	1,723.8	14.4	13.3	-127.06	527.6	-354.2	1,130.7	1,107.6	48.931	
2,500.0	2,357.6	1,923.4	1,780.0	14.9	13.6	-126.89	561.6	-378.4	1,202.1	1,178.1	50.108	
2,600.0	2,448.9	1,993.4	1,836.1	15.4	13.9	-126.75	595.7	-402.5	1,273.6	1,248.7	51.158	
2,700.0	2,540.1	2,063.3	1,892.3	16.0	14.3	-126.61	629.7	-426.6	1,345.0	1,319.2	52.072	
2,800.0	2,631.4	2,133.3	1,948.4	16.7	14.8	-126.49	663.7	-450.7	1,416.4	1,389.7	52.956	
2,900.0	2,722.7	2,203.2	2,004.6	17.5	15.4	-126.39	697.7	-474.9	1,487.9	1,460.2	53.752	
3,000.0	2,814.0	2,273.2	2,060.7	18.2	16.1	-126.29	731.8	-499.0	1,559.3	1,530.7	54.458	
3,100.0	2,905.3	2,343.1	2,116.9	19.0	16.8	-126.20	765.8	-523.1	1,630.7	1,601.2	55.106	
3,200.0	2,996.6	2,413.1	2,173.0	19.7	17.5	-126.12	799.8	-547.2	1,702.2	1,671.6	55.702	
3,300.0	3,087.8	2,483.0	2,229.2	20.4	18.3	-126.04	833.8	-571.4	1,773.6	1,742.1	56.243	
3,400.0	3,179.1	2,553.0	2,285.4	21.2	19.0	-125.97	867.9	-595.5	1,845.1	1,812.6	56.738	
3,500.0	3,270.4	2,622.9	2,341.5	21.9	19.8	-125.91	901.9	-619.6	1,916.5	1,883.0	57.196	

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 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	
3,600.0	3,361.7	2,692.9	2,397.7	22.7	20.5	-125.85	935.9	-643.7	1,988.0	1,953.5	57.617		
3,700.0	3,453.0	2,762.8	2,453.8	23.4	21.3	-125.80	969.9	-667.9	2,059.4	2,023.9	58.003		
3,800.0	3,544.3	2,832.8	2,510.0	24.2	22.1	-125.74	1,004.0	-692.0	2,130.9	2,094.4	58.362		
3,900.0	3,635.6	2,902.7	2,566.1	24.9	22.9	-125.70	1,038.0	-716.1	2,202.3	2,164.8	58.695		
4,000.0	3,726.8	2,972.7	2,622.3	25.7	23.7	-125.65	1,072.0	-740.2	2,273.8	2,235.3	59.001		
4,100.0	3,818.1	3,042.6	2,678.4	26.4	24.4	-125.61	1,106.0	-764.4	2,345.2	2,305.7	59.287		
4,200.0	3,909.4	3,112.6	2,734.6	27.2	25.2	-125.57	1,140.0	-788.5	2,416.7	2,376.1	59.554		
4,300.0	4,000.7	3,182.5	2,790.7	27.9	26.0	-125.53	1,174.1	-812.6	2,488.2	2,446.6	59.801		
4,400.0	4,092.0	3,252.5	2,846.9	28.7	26.8	-125.50	1,208.1	-836.7	2,559.6	2,517.0	60.032		
4,500.0	4,183.3	3,322.4	2,903.0	29.4	27.6	-125.46	1,242.1	-860.9	2,631.1	2,587.4	60.248		
4,600.0	4,274.5	3,392.4	2,959.2	30.2	28.4	-125.43	1,276.1	-885.0	2,702.5	2,657.8	60.451		
4,700.0	4,365.8	3,462.3	3,015.3	30.9	29.2	-125.40	1,310.2	-909.1	2,774.0	2,728.2	60.640		
4,800.0	4,457.1	3,532.3	3,071.5	31.7	29.9	-125.37	1,344.2	-933.2	2,845.4	2,798.7	60.818		
4,900.0	4,548.4	3,602.2	3,127.6	32.4	30.7	-125.34	1,378.2	-957.4	2,916.9	2,869.1	60.985		
5,000.0	4,639.7	3,672.2	3,183.8	33.1	31.5	-125.32	1,412.2	-981.5	2,988.4	2,939.5	61.141		
5,100.0	4,731.0	3,742.1	3,240.0	33.9	32.3	-125.29	1,446.3	-1,005.6	3,059.8	3,009.9	61.289		
5,200.0	4,822.3	3,812.1	3,296.1	34.6	33.1	-125.27	1,480.3	-1,029.7	3,131.3	3,080.3	61.428		
5,300.0	4,913.5	3,882.0	3,352.3	35.4	33.9	-125.25	1,514.3	-1,053.9	3,202.7	3,150.7	61.559		
5,400.0	5,004.8	3,952.0	3,408.4	36.1	34.7	-125.22	1,548.3	-1,078.0	3,274.2	3,221.1	61.683		
5,500.0	5,096.1	4,021.9	3,464.6	36.9	35.5	-125.20	1,582.4	-1,102.1	3,345.7	3,291.5	61.800		
5,600.0	5,187.4	4,091.9	3,520.7	37.6	36.3	-125.35	1,616.4	-1,126.2	3,417.1	3,361.9	61.913		
5,700.0	5,279.7	4,162.8	3,577.7	38.3	37.1	-127.28	1,650.9	-1,150.7	3,487.5	3,431.3	62.010		
5,800.0	5,373.5	4,235.3	3,635.9	39.0	37.9	-128.99	1,686.2	-1,175.7	3,556.1	3,498.8	62.075		
5,900.0	5,468.8	4,309.4	3,695.3	39.5	38.7	-130.49	1,722.2	-1,201.3	3,622.6	3,564.3	62.130		
6,000.0	5,565.3	4,384.7	3,755.8	40.0	39.6	-131.81	1,758.8	-1,227.2	3,687.0	3,627.7	62.180		
6,100.0	5,662.9	4,461.2	3,817.2	40.3	40.5	-132.97	1,796.1	-1,253.6	3,749.2	3,689.0	62.225		
6,200.0	5,761.3	4,538.8	3,879.5	40.7	41.4	-133.96	1,833.8	-1,280.4	3,809.2	3,748.0	62.270		
6,300.0	5,860.4	4,617.3	3,942.5	40.9	42.2	-134.82	1,872.0	-1,307.5	3,866.8	3,804.7	62.316		
6,400.0	5,960.0	4,696.5	4,006.1	41.1	43.1	-135.56	1,910.5	-1,334.8	3,922.0	3,859.1	62.370		
6,500.0	6,059.9	4,776.3	4,070.2	41.1	44.1	-136.17	1,949.3	-1,362.3	3,974.8	3,911.2	62.437		
6,600.0	6,159.9	4,856.5	4,134.6	41.2	45.0	-73.73	1,988.3	-1,390.0	4,025.5	3,961.2	62.628		
6,700.0	6,259.9	4,936.8	4,199.0	41.2	45.9	-73.25	2,027.4	-1,417.7	4,075.9	4,011.0	62.832		
6,800.0	6,359.9	5,017.1	4,263.5	41.2	46.8	-72.77	2,066.4	-1,445.4	4,126.6	4,061.1	63.034		
6,900.0	6,459.9	5,097.4	4,327.9	41.3	47.7	-72.31	2,105.5	-1,473.0	4,177.5	4,111.4	63.237		
7,000.0	6,559.9	5,177.7	4,392.3	41.3	48.6	-71.84	2,144.6	-1,500.7	4,228.4	4,161.5	63.440		
7,100.0	6,659.9	5,258.0	4,456.7	41.3	49.5	-71.37	2,183.7	-1,528.4	4,279.3	4,211.6	63.643		
7,200.0	6,759.9	5,338.3	4,521.1	41.3	50.4	-70.90	2,222.8	-1,556.1	4,330.2	4,261.7	63.846		
7,300.0	6,859.9	5,418.6	4,585.5	41.4	51.3	-70.43	2,261.9	-1,583.8	4,381.1	4,311.8	64.049		
7,400.0	6,959.9	5,498.9	4,650.0	41.4	52.2	-69.96	2,301.0	-1,611.5	4,432.0	4,361.9	64.252		
7,500.0	7,059.9	5,579.2	4,714.4	41.4	53.1	-69.49	2,340.1	-1,639.2	4,482.9	4,412.0	64.455		
7,600.0	7,159.9	5,659.5	4,778.8	41.4	54.0	-69.02	2,379.2	-1,666.9	4,533.8	4,462.1	64.658		
7,700.0	7,259.9	5,739.8	4,843.2	41.5	54.9	-68.55	2,418.3	-1,694.6	4,584.7	4,512.2	64.861		
7,800.0	7,359.9	5,820.1	4,907.6	41.5	55.8	-68.08	2,457.4	-1,722.3	4,635.6	4,562.3	65.064		
7,900.0	7,459.9	5,900.4	4,972.0	41.5	56.7	-67.61	2,496.5	-1,750.0	4,686.5	4,612.4	65.267		
8,000.0	7,559.9	5,980.7	5,036.4	41.5	57.6	-67.14	2,535.6	-1,777.7	4,737.4	4,662.5	65.470		
8,100.0	7,659.9	6,061.0	5,100.8	41.6	58.5	-66.67	2,574.7	-1,805.4	4,788.3	4,712.6	65.673		
8,200.0	7,759.9	6,141.3	5,165.2	41.6	59.4	-66.20	2,613.8	-1,833.1	4,839.2	4,762.7	65.876		
8,216.4	7,776.3	6,161.6	5,185.6	41.6	59.4	-66.20	2,613.8	-1,833.1	4,839.2	4,762.7	65.876		
8,300.0	7,859.9	6,221.6	5,250.0	41.6	60.3	-65.73	2,652.9	-1,860.8	4,890.1	4,812.8	66.079		
8,331.1	7,891.0	6,241.9	5,270.4	41.6	60.3	-65.73	2,652.9	-1,860.8	4,890.1	4,812.8	66.079		

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 0993-21-16W - Slot A-12
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 0993-21-16W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-46.60	49.5	-52.4	72.1				
100.0	100.0	100.0	100.0	0.4	0.4	-46.60	49.5	-52.4	72.1	71.3	91.013		
200.0	200.0	200.0	200.0	1.2	1.2	-46.60	49.5	-52.4	72.1	69.6	29.179	CC	
200.0	200.0	200.0	200.0	1.2	1.2	-46.60	49.5	-52.4	72.1	69.6	29.176		
300.0	300.0	299.3	299.3	1.7	1.6	-110.06	49.6	-52.5	72.6	69.5	23.576	ES	
400.0	399.8	396.0	395.9	3.3	2.6	-114.47	50.6	-55.4	77.7	72.9	16.382		
500.0	499.3	491.4	491.1	4.6	3.4	-121.11	53.1	-62.0	89.4	83.0	13.871		
600.0	598.3	585.5	584.6	5.6	3.9	-127.10	58.0	-71.0	108.5	100.6	13.761	SF	
700.0	696.6	677.5	675.6	6.5	4.8	-131.40	66.1	-81.9	134.4	124.9	14.076		
800.0	794.0	767.2	763.8	7.3	5.6	-134.24	76.8	-94.4	166.8	155.7	15.106		
900.0	890.3	854.1	848.5	8.0	6.3	-136.00	90.1	-108.3	205.1	192.8	16.634		
1,000.0	985.3	937.8	929.4	8.7	7.0	-136.99	105.4	-123.2	249.0	235.5	18.479		
1,100.0	1,078.9	1,018.1	1,006.3	9.4	7.6	-137.44	122.4	-139.0	298.1	283.6	20.539		
1,200.0	1,170.9	1,094.7	1,078.9	9.9	8.2	-137.62	140.8	-155.4	352.1	336.7	22.850		
1,300.0	1,262.2	1,168.7	1,148.1	10.2	8.7	-138.31	160.5	-172.4	409.0	392.9	25.384		
1,400.0	1,353.4	1,240.7	1,214.6	10.5	9.2	-138.57	181.5	-190.1	467.6	450.8	27.816		
1,500.0	1,444.7	1,310.5	1,278.3	10.9	9.7	-138.55	203.5	-208.3	527.9	510.4	30.162		
1,600.0	1,536.0	1,378.2	1,339.3	11.2	10.1	-138.35	226.5	-226.9	589.8	571.6	32.420		
1,700.0	1,627.3	1,443.8	1,397.4	11.6	10.5	-138.01	250.2	-245.8	653.1	634.2	34.597		
1,800.0	1,718.6	1,500.0	1,446.5	11.9	10.8	-137.65	271.6	-262.7	717.9	698.5	36.946		
1,900.0	1,809.9	1,568.6	1,505.5	12.3	11.2	-137.14	299.2	-284.1	784.1	763.9	38.749		
2,000.0	1,901.1	1,627.7	1,555.6	12.7	11.6	-136.64	324.2	-303.3	851.7	830.8	40.739		
2,100.0	1,992.4	1,684.8	1,603.2	13.1	11.9	-136.12	349.3	-322.5	920.5	899.0	42.683		
2,200.0	2,083.7	1,748.7	1,655.6	13.5	12.1	-135.54	378.4	-344.5	990.5	968.2	44.478		
2,300.0	2,175.0	1,819.6	1,713.7	14.0	12.4	-134.96	410.8	-369.0	1,060.6	1,037.6	45.963		
2,400.0	2,266.3	1,890.5	1,771.8	14.4	12.6	-134.45	443.2	-393.6	1,130.8	1,106.9	47.293		
2,500.0	2,357.6	1,961.4	1,829.8	14.9	12.9	-134.00	475.7	-418.1	1,201.0	1,176.3	48.495		
2,600.0	2,448.9	2,032.3	1,887.9	15.4	13.2	-133.60	508.1	-442.6	1,271.3	1,245.7	49.588		
2,700.0	2,540.1	2,103.2	1,946.0	16.0	13.6	-133.24	540.5	-467.1	1,341.6	1,315.1	50.580		
2,800.0	2,631.4	2,174.0	2,004.1	16.7	14.0	-132.92	572.9	-491.6	1,411.9	1,384.5	51.475		
2,900.0	2,722.7	2,244.9	2,062.2	17.5	14.6	-132.63	605.3	-516.1	1,482.3	1,453.9	52.280		
3,000.0	2,814.0	2,315.8	2,120.3	18.2	15.3	-132.36	637.7	-540.6	1,552.6	1,523.3	53.039		
3,100.0	2,905.3	2,386.7	2,178.3	19.0	16.1	-132.12	670.1	-565.1	1,623.0	1,592.8	53.724		
3,200.0	2,996.6	2,457.6	2,236.4	19.7	16.8	-131.89	702.6	-589.6	1,693.4	1,662.2	54.350		
3,300.0	3,087.8	2,528.5	2,294.5	20.4	17.5	-131.69	735.0	-614.1	1,763.8	1,731.6	54.927		
3,400.0	3,179.1	2,599.4	2,352.6	21.2	18.3	-131.50	767.4	-638.6	1,834.2	1,801.1	55.460		
3,500.0	3,270.4	2,670.3	2,410.7	21.9	19.0	-131.32	799.8	-663.1	1,904.6	1,870.5	55.945		
3,600.0	3,361.7	2,741.1	2,468.8	22.7	19.8	-131.16	832.2	-687.6	1,975.0	1,940.0	56.395		
3,700.0	3,453.0	2,812.0	2,526.9	23.4	20.6	-131.01	864.6	-712.1	2,045.4	2,009.4	56.813		
3,800.0	3,544.3	2,882.9	2,584.9	24.2	21.3	-130.87	897.1	-736.6	2,115.9	2,078.9	57.199		
3,900.0	3,635.6	2,953.8	2,643.0	24.9	22.1	-130.73	929.5	-761.1	2,186.3	2,148.3	57.556		
4,000.0	3,726.8	3,024.7	2,701.1	25.7	22.8	-130.61	961.9	-785.6	2,256.8	2,217.8	57.889		
4,100.0	3,818.1	3,095.6	2,759.2	26.4	23.6	-130.49	994.3	-810.1	2,327.2	2,287.2	58.199		
4,200.0	3,909.4	3,166.5	2,817.3	27.2	24.4	-130.38	1,026.7	-834.7	2,397.7	2,356.7	58.486		
4,300.0	4,000.7	3,237.4	2,875.4	27.9	25.1	-130.28	1,059.1	-859.2	2,468.1	2,426.1	58.755		
4,400.0	4,092.0	3,308.2	2,933.5	28.7	25.9	-130.18	1,091.5	-883.7	2,538.6	2,495.6	59.007		
4,500.0	4,183.3	3,379.1	2,991.5	29.4	26.7	-130.09	1,124.0	-908.2	2,609.1	2,565.0	59.242		
4,600.0	4,274.5	3,450.0	3,049.6	30.2	27.4	-130.00	1,156.4	-932.7	2,679.6	2,634.5	59.462		
4,700.0	4,365.8	3,520.9	3,107.7	30.9	28.2	-129.92	1,188.8	-957.2	2,750.0	2,703.9	59.670		
4,800.0	4,457.1	3,591.8	3,165.8	31.7	29.0	-129.84	1,221.2	-981.7	2,820.5	2,773.4	59.864		
4,900.0	4,548.4	3,662.7	3,223.9	32.4	29.7	-129.76	1,253.6	-1,006.2	2,891.0	2,842.8	60.046		

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 0993-21-16W - Slot A-12
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 0993-21-16W	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 0993-20-12E - OH - Design #1												Offset Well Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard														
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning		
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)				
5,000.0	4,639.7	3,733.6	3,282.0	33.1	30.5	-129.69	1,286.0	-1,030.7	2,961.5	2,912.3	60.218			
5,100.0	4,731.0	3,804.5	3,340.0	33.9	31.3	-129.62	1,318.4	-1,055.2	3,032.0	2,981.8	60.380			
5,200.0	4,822.3	3,875.4	3,398.1	34.6	32.1	-129.56	1,350.9	-1,079.7	3,102.5	3,051.2	60.533			
5,300.0	4,913.5	3,946.2	3,456.2	35.4	32.8	-129.50	1,383.3	-1,104.2	3,172.9	3,120.7	60.677			
5,400.0	5,004.8	4,017.1	3,514.3	36.1	33.6	-129.44	1,415.7	-1,128.7	3,243.4	3,190.1	60.813			
5,500.0	5,096.1	4,088.0	3,572.4	36.9	34.4	-129.38	1,448.1	-1,153.2	3,313.9	3,259.6	60.942			
5,600.0	5,187.4	4,158.9	3,630.5	37.6	35.1	-129.47	1,480.5	-1,177.7	3,384.4	3,329.0	61.066			
5,700.0	5,279.7	4,230.8	3,689.4	38.3	35.9	-131.21	1,513.4	-1,202.6	3,453.8	3,397.3	61.168			
5,800.0	5,373.5	4,304.5	3,749.7	39.0	36.7	-132.73	1,547.1	-1,228.0	3,521.0	3,463.5	61.224			
5,900.0	5,468.8	4,379.6	3,811.3	39.5	37.6	-134.06	1,581.4	-1,254.0	3,586.1	3,527.5	61.264			
6,000.0	5,565.3	4,456.2	3,874.1	40.0	38.4	-135.22	1,616.5	-1,280.5	3,648.8	3,589.3	61.291			
6,100.0	5,662.9	4,534.0	3,937.9	40.3	39.2	-136.22	1,652.1	-1,307.4	3,709.2	3,648.7	61.308			
6,200.0	5,761.3	4,613.0	4,002.6	40.7	40.1	-137.07	1,688.2	-1,334.7	3,767.2	3,705.7	61.318			
6,300.0	5,860.4	4,692.9	4,068.1	40.9	41.0	-137.79	1,724.7	-1,362.3	3,822.6	3,760.3	61.326			
6,400.0	5,960.0	4,773.7	4,134.2	41.1	41.9	-138.40	1,761.6	-1,390.3	3,875.5	3,812.3	61.336			
6,500.0	6,059.9	4,855.1	4,200.9	41.1	42.7	-138.89	1,798.9	-1,418.4	3,925.8	3,861.8	61.358			
6,600.0	6,159.9	4,937.0	4,268.0	41.2	43.6	-76.38	1,836.3	-1,446.7	3,973.7	3,909.1	61.512			
6,700.0	6,259.9	5,018.9	4,335.1	41.2	44.5	-75.90	1,873.8	-1,475.0	4,021.5	3,956.3	61.683			
6,800.0	6,359.9	5,100.8	4,402.3	41.2	45.4	-75.43	1,911.2	-1,503.4	4,069.4	4,003.6	61.853			
6,900.0	6,459.9	7,323.7	6,459.9	41.3	57.8	-69.65	2,444.0	-1,906.1	4,112.4	4,030.1	49.971			
7,000.0	6,559.9	7,423.7	6,559.9	41.3	57.8	-69.65	2,444.0	-1,906.1	4,112.4	4,030.0	49.945			
7,100.0	6,659.9	7,523.7	6,659.9	41.3	57.8	-69.65	2,444.0	-1,906.1	4,112.4	4,030.0	49.919			
7,200.0	6,759.9	7,623.7	6,759.9	41.3	57.8	-69.65	2,444.0	-1,906.1	4,112.4	4,030.0	49.893			
7,300.0	6,859.9	7,723.7	6,859.9	41.4	57.8	-69.65	2,444.0	-1,906.1	4,112.4	4,029.9	49.867			
7,400.0	6,959.9	7,823.7	6,959.9	41.4	57.9	-69.65	2,444.0	-1,906.1	4,112.4	4,029.9	49.840			
7,500.0	7,059.9	7,923.7	7,059.9	41.4	57.9	-69.65	2,444.0	-1,906.1	4,112.4	4,029.8	49.814			
7,600.0	7,159.9	8,023.7	7,159.9	41.4	57.9	-69.65	2,444.0	-1,906.1	4,112.4	4,029.8	49.787			
7,700.0	7,259.9	8,123.7	7,259.9	41.5	57.9	-69.65	2,444.0	-1,906.1	4,112.4	4,029.7	49.760			
7,800.0	7,359.9	8,223.7	7,359.9	41.5	57.9	-69.65	2,444.0	-1,906.1	4,112.4	4,029.7	49.733			
7,900.0	7,459.9	8,323.7	7,459.9	41.5	58.0	-69.65	2,444.0	-1,906.1	4,112.4	4,029.6	49.706			
8,000.0	7,559.9	8,423.7	7,559.9	41.5	58.0	-69.65	2,444.0	-1,906.1	4,112.4	4,029.6	49.678			
8,100.0	7,659.9	8,523.7	7,659.9	41.6	58.0	-69.65	2,444.0	-1,906.1	4,112.4	4,029.6	49.651			
8,200.0	7,759.9	8,623.7	7,759.9	41.6	58.0	-69.65	2,444.0	-1,906.1	4,112.4	4,029.5	49.623			
8,300.0	7,859.9	8,723.7	7,859.9	41.6	58.0	-69.65	2,444.0	-1,906.1	4,112.4	4,029.5	49.595			
8,331.1	7,891.0	8,754.8	7,891.0	41.6	58.0	-69.65	2,444.0	-1,906.1	4,112.4	4,029.5	49.589			

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 0993-21-16W - Slot A-12
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 0993-21-16W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-46.78	38.4	-40.9	56.1			
100.0	100.0	100.0	100.0	0.4	0.4	-46.78	38.4	-40.9	56.1	55.3	70.785	
200.0	200.0	200.0	200.0	1.2	1.2	-46.78	38.4	-40.9	56.1	53.6	22.694	CC
200.0	200.0	200.0	200.0	1.2	1.2	-46.78	38.4	-40.9	56.1	53.6	22.694	
300.0	300.0	299.8	299.8	1.7	1.6	-110.47	38.4	-40.9	56.5	53.3	17.778	ES
400.0	399.8	397.2	397.1	3.3	2.5	-116.01	39.2	-43.2	61.0	56.3	12.959	
500.0	499.3	493.3	493.0	4.6	3.9	-124.17	41.2	-49.4	72.6	65.5	10.231	SF
600.0	598.3	587.4	586.5	5.6	4.5	-131.92	44.4	-59.2	92.2	83.5	10.549	
700.0	696.6	679.8	678.0	6.5	5.0	-137.22	50.0	-71.2	119.4	109.4	11.881	
800.0	794.0	769.8	766.5	7.3	5.6	-140.27	58.5	-84.9	153.2	141.8	13.379	
900.0	890.3	856.9	851.6	8.0	6.3	-141.91	69.4	-100.0	193.0	180.2	15.151	
1,000.0	985.3	940.8	932.9	8.7	6.9	-142.67	82.6	-116.1	238.2	224.3	17.174	
1,100.0	1,078.9	1,021.3	1,010.1	9.4	7.5	-142.86	97.6	-133.1	288.6	273.7	19.376	
1,200.0	1,170.9	1,100.0	1,084.9	9.9	8.1	-142.79	114.4	-151.0	343.8	328.0	21.756	
1,300.0	1,262.2	1,172.1	1,152.6	10.2	8.6	-143.18	131.8	-168.7	401.8	385.4	24.443	
1,400.0	1,353.4	1,244.2	1,219.6	10.5	9.1	-143.20	151.0	-187.4	461.4	444.3	26.969	
1,500.0	1,444.7	1,314.3	1,283.7	10.9	9.5	-142.97	171.3	-206.7	522.5	504.7	29.399	
1,600.0	1,536.0	1,382.2	1,345.2	11.2	9.9	-142.58	192.6	-226.4	585.0	566.6	31.735	
1,700.0	1,627.3	1,448.0	1,403.9	11.6	10.4	-142.10	214.7	-246.4	649.0	629.9	33.984	
1,800.0	1,718.6	1,511.7	1,459.8	11.9	10.7	-141.55	237.5	-266.5	714.3	694.5	36.161	
1,900.0	1,809.9	1,573.3	1,513.1	12.3	11.1	-140.97	260.8	-286.7	780.9	760.5	38.264	
2,000.0	1,901.1	1,632.8	1,563.8	12.7	11.4	-140.37	284.5	-307.0	848.9	827.9	40.429	
2,100.0	1,992.4	1,701.6	1,621.8	13.1	11.6	-139.68	312.8	-330.9	917.8	896.1	42.315	
2,200.0	2,083.7	1,773.6	1,682.4	13.5	11.9	-139.06	342.4	-356.0	986.8	964.3	43.924	
2,300.0	2,175.0	1,845.6	1,743.0	14.0	12.1	-138.51	372.0	-381.1	1,055.8	1,032.5	45.381	
2,400.0	2,266.3	1,917.6	1,803.7	14.4	12.4	-138.03	401.7	-406.2	1,124.9	1,100.8	46.702	
2,500.0	2,357.6	1,989.6	1,864.3	14.9	12.7	-137.61	431.3	-431.3	1,194.0	1,169.0	47.899	
2,600.0	2,448.9	2,061.6	1,925.0	15.4	13.1	-137.24	461.0	-456.3	1,263.1	1,237.3	48.988	
2,700.0	2,540.1	2,133.7	1,985.6	16.0	13.5	-136.90	490.6	-481.4	1,332.3	1,305.6	49.986	
2,800.0	2,631.4	2,205.7	2,046.3	16.7	14.0	-136.59	520.2	-506.5	1,401.5	1,373.9	50.877	
2,900.0	2,722.7	2,277.7	2,106.9	17.5	14.6	-136.32	549.9	-531.6	1,470.7	1,442.2	51.697	
3,000.0	2,814.0	2,349.7	2,167.5	18.2	15.3	-136.07	579.5	-556.7	1,539.9	1,510.5	52.452	
3,100.0	2,905.3	2,421.7	2,228.2	19.0	15.9	-135.84	609.2	-581.8	1,609.1	1,578.9	53.146	
3,200.0	2,996.6	2,493.7	2,288.8	19.7	16.6	-135.62	638.8	-606.8	1,678.4	1,647.2	53.782	
3,300.0	3,087.8	2,565.7	2,349.5	20.4	17.3	-135.43	668.4	-631.9	1,747.6	1,715.5	54.363	
3,400.0	3,179.1	2,637.7	2,410.1	21.2	18.0	-135.25	698.1	-657.0	1,816.9	1,783.8	54.902	
3,500.0	3,270.4	2,709.7	2,470.8	21.9	18.7	-135.08	727.7	-682.1	1,886.2	1,852.2	55.400	
3,600.0	3,361.7	2,781.7	2,531.4	22.7	19.5	-134.93	757.4	-707.2	1,955.5	1,920.5	55.858	
3,700.0	3,453.0	2,853.7	2,592.0	23.4	20.2	-134.79	787.0	-732.3	2,024.8	1,988.8	56.283	
3,800.0	3,544.3	2,925.8	2,652.7	24.2	20.9	-134.65	816.6	-757.4	2,094.1	2,057.1	56.678	
3,900.0	3,635.6	2,997.8	2,713.3	24.9	21.6	-134.53	846.3	-782.4	2,163.4	2,125.5	57.045	
4,000.0	3,726.8	3,069.8	2,774.0	25.7	22.3	-134.41	875.9	-807.5	2,232.7	2,193.8	57.385	
4,100.0	3,818.1	3,141.8	2,834.6	26.4	23.1	-134.30	905.6	-832.6	2,302.0	2,262.1	57.703	
4,200.0	3,909.4	3,213.8	2,895.3	27.2	23.8	-134.19	935.2	-857.7	2,371.3	2,330.4	58.001	
4,300.0	4,000.7	3,285.8	2,955.9	27.9	24.5	-134.09	964.8	-882.8	2,440.7	2,398.8	58.278	
4,400.0	4,092.0	3,357.8	3,016.5	28.7	25.2	-134.00	994.5	-907.9	2,510.0	2,467.1	58.537	
4,500.0	4,183.3	3,429.8	3,077.2	29.4	26.0	-133.91	1,024.1	-933.0	2,579.3	2,535.4	58.780	
4,600.0	4,274.5	3,501.8	3,137.8	30.2	26.7	-133.83	1,053.8	-958.0	2,648.6	2,603.8	59.009	
4,700.0	4,365.8	3,573.8	3,198.5	30.9	27.4	-133.75	1,083.4	-983.1	2,718.0	2,672.1	59.223	
4,800.0	4,457.1	3,645.8	3,259.1	31.7	28.2	-133.67	1,113.0	-1,008.2	2,787.3	2,740.4	59.424	
4,900.0	4,548.4	3,717.9	3,319.8	32.4	28.9	-133.60	1,142.7	-1,033.3	2,856.7	2,808.7	59.614	

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 0993-21-16W - Slot A-12
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 0993-21-16W	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 0993-20-13E - OH - Design #1												Offset Well Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard														
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +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	4,639.7	3,789.9	3,380.4	33.1	29.6	-133.53	1,172.3	-1,058.4	2,926.0	2,877.1	59.793			
5,100.0	4,731.0	3,861.9	3,441.0	33.9	30.4	-133.47	1,202.0	-1,083.5	2,995.3	2,945.4	59.961			
5,200.0	4,822.3	3,933.9	3,501.7	34.6	31.1	-133.41	1,231.6	-1,108.5	3,064.7	3,013.7	60.121			
5,300.0	4,913.5	4,005.9	3,562.3	35.4	31.8	-133.35	1,261.2	-1,133.6	3,134.0	3,082.0	60.271			
5,400.0	5,004.8	4,077.9	3,623.0	36.1	32.6	-133.29	1,290.9	-1,158.7	3,203.4	3,150.4	60.414			
5,500.0	5,096.1	4,149.9	3,683.6	36.9	33.3	-133.24	1,320.5	-1,183.8	3,272.7	3,218.7	60.548			
5,600.0	5,187.4	4,221.9	3,744.3	37.6	34.0	-133.32	1,350.2	-1,208.9	3,342.1	3,287.0	60.678			
5,700.0	5,279.7	4,295.0	3,805.8	38.3	34.8	-134.90	1,380.3	-1,234.4	3,410.2	3,354.1	60.779			
5,800.0	5,373.5	4,370.0	3,869.0	39.0	35.6	-136.27	1,411.1	-1,260.5	3,476.0	3,418.8	60.820			
5,900.0	5,468.8	4,446.6	3,933.5	39.5	36.3	-137.46	1,442.7	-1,287.2	3,539.4	3,481.2	60.838			
6,000.0	5,565.3	4,524.8	3,999.3	40.0	37.1	-138.48	1,474.8	-1,314.4	3,600.4	3,541.2	60.835			
6,100.0	5,662.9	4,604.3	4,066.3	40.3	38.0	-139.36	1,507.6	-1,342.1	3,658.7	3,598.6	60.816			
6,200.0	5,761.3	4,685.1	4,134.4	40.7	38.8	-140.10	1,540.8	-1,370.3	3,714.5	3,653.4	60.783			
6,300.0	5,860.4	4,767.0	4,203.3	40.9	39.6	-140.71	1,574.5	-1,398.8	3,767.6	3,705.6	60.743			
6,400.0	5,960.0	4,849.8	4,273.0	41.1	40.5	-141.21	1,608.6	-1,427.6	3,817.9	3,755.0	60.700			
6,500.0	6,059.9	4,933.4	4,343.4	41.1	41.3	-141.61	1,643.0	-1,456.7	3,865.4	3,801.7	60.664			
6,600.0	6,159.9	5,017.5	4,414.3	41.2	42.2	-79.06	1,677.6	-1,486.0	3,910.4	3,846.1	60.772			
6,700.0	6,259.9	5,101.7	4,485.2	41.2	43.0	-78.60	1,712.3	-1,515.4	3,955.2	3,890.2	60.900			
6,800.0	6,359.9	5,185.9	4,556.1	41.2	43.9	-78.15	1,747.0	-1,544.7	4,000.1	3,934.6	61.028			
6,900.0	6,459.9	5,212.0	4,625.9	41.3	53.9	-73.38	2,161.0	-1,895.1	4,012.2	3,931.9	50.004			
7,000.0	6,559.9	5,212.0	4,625.9	41.3	53.9	-73.38	2,161.0	-1,895.1	4,012.2	3,931.9	49.977			
7,100.0	6,659.9	5,212.0	4,625.9	41.3	54.0	-73.38	2,161.0	-1,895.1	4,012.2	3,931.8	49.949			
7,200.0	6,759.9	5,212.0	4,625.9	41.3	54.0	-73.38	2,161.0	-1,895.1	4,012.2	3,931.8	49.922			
7,300.0	6,859.9	5,212.0	4,625.9	41.4	54.0	-73.38	2,161.0	-1,895.1	4,012.2	3,931.7	49.894			
7,400.0	6,959.9	5,212.0	4,625.9	41.4	54.0	-73.38	2,161.0	-1,895.1	4,012.2	3,931.7	49.866			
7,500.0	7,059.9	5,212.0	4,625.9	41.4	54.0	-73.38	2,161.0	-1,895.1	4,012.2	3,931.7	49.838			
7,600.0	7,159.9	5,212.0	4,625.9	41.4	54.0	-73.38	2,161.0	-1,895.1	4,012.2	3,931.6	49.810			
7,700.0	7,259.9	5,212.0	4,625.9	41.5	54.1	-73.38	2,161.0	-1,895.1	4,012.2	3,931.6	49.782			
7,800.0	7,359.9	5,212.0	4,625.9	41.5	54.1	-73.38	2,161.0	-1,895.1	4,012.2	3,931.5	49.754			
7,900.0	7,459.9	5,212.0	4,625.9	41.5	54.1	-73.38	2,161.0	-1,895.1	4,012.2	3,931.5	49.725			
8,000.0	7,559.9	5,212.0	4,625.9	41.5	54.1	-73.38	2,161.0	-1,895.1	4,012.2	3,931.4	49.696			
8,100.0	7,659.9	5,212.0	4,625.9	41.6	54.1	-73.38	2,161.0	-1,895.1	4,012.2	3,931.4	49.667			
8,200.0	7,759.9	5,212.0	4,625.9	41.6	54.2	-73.38	2,161.0	-1,895.1	4,012.2	3,931.3	49.638			
8,212.6	7,772.5	5,212.0	4,625.9	41.6	54.2	-73.38	2,161.0	-1,895.1	4,012.2	3,931.3	49.635			
8,300.0	7,859.9	5,212.0	4,625.9	41.6	54.2	-73.38	2,161.0	-1,895.1	4,012.2	3,931.3	49.604			
8,331.1	7,891.0	5,212.0	4,625.9	41.6	54.2	-73.38	2,161.0	-1,895.1	4,012.4	3,931.5	49.586			



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-16W - Slot A-12
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 0993-21-16W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-46.88	27.3	-29.2	40.0			
100.0	100.0	100.0	100.0	0.4	0.4	-46.88	27.3	-29.2	40.0	39.2	50.449	
200.0	200.0	200.0	200.0	1.2	1.2	-46.88	27.3	-29.2	40.0	37.5	16.174	CC
300.0	300.0	300.0	300.0	1.7	1.7	-111.04	27.3	-29.2	40.4	37.1	12.363	ES
400.0	399.8	399.0	399.0	3.3	1.9	-118.10	27.4	-29.7	43.1	38.9	10.195	
500.0	499.3	496.2	496.1	4.6	3.1	-129.44	27.7	-33.8	52.5	46.1	8.190	
600.0	598.3	591.4	590.9	5.6	4.3	-139.80	28.4	-41.8	70.8	61.9	7.965	SF
700.0	696.6	684.4	683.2	6.5	4.7	-146.76	29.9	-53.2	97.9	87.6	9.539	
800.0	794.0	775.3	773.1	7.3	5.2	-150.17	34.1	-66.5	131.8	120.3	11.416	
900.0	890.3	863.5	859.7	8.0	5.8	-151.60	40.9	-81.4	171.7	158.9	13.403	
1,000.0	985.3	948.5	942.7	8.7	6.4	-151.99	50.1	-97.5	217.1	203.2	15.532	
1,100.0	1,078.9	1,030.0	1,021.6	9.4	7.0	-151.79	61.3	-114.7	267.7	252.7	17.814	
1,200.0	1,170.9	1,107.8	1,096.2	9.9	7.5	-151.34	74.1	-132.5	323.2	307.3	20.323	
1,300.0	1,262.2	1,182.9	1,167.5	10.2	8.0	-151.26	88.4	-151.1	381.3	364.8	23.055	
1,400.0	1,353.4	1,256.0	1,236.2	10.5	8.5	-150.88	104.3	-170.5	440.9	423.8	25.666	
1,500.0	1,444.7	1,327.1	1,302.2	10.9	9.0	-150.32	121.4	-190.5	501.9	484.1	28.173	
1,600.0	1,536.0	1,400.0	1,369.1	11.2	9.4	-149.62	140.8	-212.2	564.3	545.8	30.481	
1,700.0	1,627.3	1,462.9	1,426.0	11.6	9.8	-148.93	158.9	-231.8	628.1	609.0	32.906	
1,800.0	1,718.6	1,527.7	1,483.9	11.9	10.2	-148.18	178.9	-253.0	693.1	673.4	35.148	
1,900.0	1,809.9	1,590.3	1,539.0	12.3	10.6	-147.41	199.5	-274.3	759.5	739.2	37.321	
2,000.0	1,901.1	1,655.3	1,595.4	12.7	10.9	-146.59	222.3	-297.3	827.2	806.2	39.462	
2,100.0	1,992.4	1,722.1	1,652.9	13.1	11.1	-145.80	246.4	-321.3	895.6	874.0	41.501	
2,200.0	2,083.7	1,794.4	1,715.1	13.5	11.4	-145.06	272.4	-347.4	964.1	941.8	43.214	
2,300.0	2,175.0	1,866.7	1,777.3	14.0	11.6	-144.41	298.5	-373.4	1,032.7	1,009.7	44.757	
2,400.0	2,266.3	1,939.0	1,839.5	14.4	11.9	-143.85	324.5	-399.4	1,101.4	1,077.6	46.167	
2,500.0	2,357.6	2,011.3	1,901.7	14.9	12.3	-143.35	350.6	-425.5	1,170.1	1,145.5	47.454	
2,600.0	2,448.9	2,083.6	1,963.9	15.4	12.6	-142.90	376.6	-451.5	1,238.9	1,213.4	48.625	
2,700.0	2,540.1	2,155.9	2,026.1	16.0	13.0	-142.50	402.7	-477.5	1,307.7	1,281.4	49.691	
2,800.0	2,631.4	2,228.1	2,088.3	16.7	13.5	-142.14	428.8	-503.6	1,376.5	1,349.3	50.672	
2,900.0	2,722.7	2,300.4	2,150.5	17.5	14.1	-141.82	454.8	-529.6	1,445.4	1,417.3	51.573	
3,000.0	2,814.0	2,372.7	2,212.7	18.2	14.7	-141.52	480.9	-555.6	1,514.2	1,485.3	52.392	
3,100.0	2,905.3	2,445.0	2,274.9	19.0	15.3	-141.25	506.9	-581.7	1,583.1	1,553.3	53.148	
3,200.0	2,996.6	2,517.3	2,337.1	19.7	15.9	-141.01	533.0	-607.7	1,652.0	1,621.4	53.845	
3,300.0	3,087.8	2,589.6	2,399.3	20.4	16.6	-140.78	559.0	-633.7	1,721.0	1,689.4	54.488	
3,400.0	3,179.1	2,661.9	2,461.5	21.2	17.2	-140.57	585.1	-659.8	1,789.9	1,757.4	55.079	
3,500.0	3,270.4	2,734.2	2,523.7	21.9	17.9	-140.37	611.2	-685.8	1,858.8	1,825.4	55.627	
3,600.0	3,361.7	2,806.5	2,585.9	22.7	18.6	-140.19	637.2	-711.8	1,927.8	1,893.5	56.136	
3,700.0	3,453.0	2,878.7	2,648.1	23.4	19.2	-140.02	663.3	-737.9	1,996.8	1,961.5	56.607	
3,800.0	3,544.3	2,951.0	2,710.3	24.2	19.9	-139.87	689.3	-763.9	2,065.8	2,029.5	57.044	
3,900.0	3,635.6	3,023.3	2,772.5	24.9	20.6	-139.72	715.4	-789.9	2,134.7	2,097.6	57.453	
4,000.0	3,726.8	3,095.6	2,834.7	25.7	21.3	-139.58	741.4	-816.0	2,203.7	2,165.6	57.833	
4,100.0	3,818.1	3,167.9	2,896.9	26.4	21.9	-139.45	767.5	-842.0	2,272.7	2,233.7	58.187	
4,200.0	3,909.4	3,240.2	2,959.1	27.2	22.6	-139.33	793.6	-868.0	2,341.7	2,301.7	58.519	
4,300.0	4,000.7	3,312.5	3,021.3	27.9	23.3	-139.21	819.6	-894.1	2,410.7	2,369.8	58.830	
4,400.0	4,092.0	3,384.8	3,083.5	28.7	24.0	-139.11	845.7	-920.1	2,479.8	2,437.8	59.120	
4,500.0	4,183.3	3,457.1	3,145.7	29.4	24.7	-139.00	871.7	-946.1	2,548.8	2,505.9	59.393	
4,600.0	4,274.5	3,529.3	3,207.9	30.2	25.4	-138.91	897.8	-972.2	2,617.8	2,573.9	59.650	
4,700.0	4,365.8	3,601.6	3,270.1	30.9	26.1	-138.81	923.8	-998.2	2,686.8	2,642.0	59.891	
4,800.0	4,457.1	3,673.9	3,332.3	31.7	26.8	-138.73	949.9	-1,024.2	2,755.9	2,710.0	60.118	
4,900.0	4,548.4	3,746.2	3,394.5	32.4	27.5	-138.64	976.0	-1,050.3	2,824.9	2,778.1	60.332	
5,000.0	4,639.7	3,818.5	3,456.7	33.1	28.1	-138.56	1,002.0	-1,076.3	2,893.9	2,846.1	60.534	

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 0993-21-16W - Slot A-12
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 0993-21-16W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference	Offset		Semi Major Axis		Highside	Offset Wellbore	Centre	Distance		Separation	Warning		
Measured	Vertical	Measured	Vertical	Reference				Offset	Between			Between	Factor
Depth	Depth	Depth	Depth	(usft)	(usft)	Toolface	+N/-S	+E/-W	Centres	Ellipses			
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)	(usft)			
5,100.0	4,731.0	3,890.8	3,518.9	33.9	28.8	-138.49	1,028.1	-1,102.3	2,963.0	2,914.2	60.725		
5,200.0	4,822.3	3,963.1	3,581.1	34.6	29.5	-138.41	1,054.1	-1,128.4	3,032.0	2,982.2	60.905		
5,300.0	4,913.5	4,035.4	3,643.3	35.4	30.2	-138.35	1,080.2	-1,154.4	3,101.1	3,050.3	61.075		
5,400.0	5,004.8	4,107.6	3,705.5	36.1	30.9	-138.28	1,106.2	-1,180.5	3,170.1	3,118.3	61.237		
5,500.0	5,096.1	4,179.9	3,767.7	36.9	31.6	-138.22	1,132.3	-1,206.5	3,239.2	3,186.4	61.390		
5,600.0	5,187.4	4,252.2	3,829.9	37.6	32.3	-138.28	1,158.4	-1,232.5	3,308.2	3,254.4	61.538		
5,700.0	5,279.7	4,325.7	3,893.2	38.3	33.0	-139.69	1,184.8	-1,259.0	3,375.9	3,321.1	61.646		
5,800.0	5,373.5	4,401.2	3,958.1	39.0	33.8	-140.91	1,212.1	-1,286.2	3,441.1	3,385.3	61.676		
5,900.0	5,468.8	4,478.6	4,024.7	39.5	34.5	-141.95	1,239.9	-1,314.0	3,503.7	3,446.9	61.672		
6,000.0	5,565.3	4,557.6	4,092.7	40.0	35.3	-142.84	1,268.4	-1,342.5	3,563.6	3,505.8	61.638		
6,100.0	5,662.9	4,638.2	4,162.0	40.3	36.0	-143.59	1,297.5	-1,371.5	3,620.8	3,562.0	61.578		
6,200.0	5,761.3	4,720.2	4,232.6	40.7	36.8	-144.22	1,327.0	-1,401.1	3,675.1	3,615.3	61.498		
6,300.0	5,860.4	4,803.4	4,304.2	40.9	37.6	-144.73	1,357.0	-1,431.0	3,726.5	3,665.8	61.402		
6,400.0	5,960.0	4,887.7	4,376.7	41.1	38.5	-145.13	1,387.4	-1,461.4	3,775.0	3,713.4	61.298		
6,500.0	6,059.9	4,973.0	4,450.1	41.1	39.3	-145.44	1,418.1	-1,492.1	3,820.5	3,758.0	61.199		
6,600.0	6,159.9	5,058.9	4,524.0	41.2	40.1	-82.85	1,449.1	-1,523.0	3,863.2	3,800.2	61.263		
6,700.0	6,259.9	5,144.9	4,598.1	41.2	40.9	-82.42	1,480.1	-1,554.0	3,905.7	3,842.0	61.352		
6,800.0	6,359.9	7,012.9	6,359.9	41.2	50.1	-78.02	1,831.7	-1,905.3	3,940.7	3,863.0	50.734		
6,900.0	6,459.9	7,112.9	6,459.9	41.3	50.2	-78.02	1,831.7	-1,905.3	3,940.7	3,863.0	50.705		
7,000.0	6,559.9	7,212.9	6,559.9	41.3	50.2	-78.02	1,831.7	-1,905.3	3,940.7	3,862.9	50.676		
7,100.0	6,659.9	7,312.9	6,659.9	41.3	50.2	-78.02	1,831.7	-1,905.3	3,940.7	3,862.9	50.646		
7,200.0	6,759.9	7,412.9	6,759.9	41.3	50.2	-78.02	1,831.7	-1,905.3	3,940.7	3,862.8	50.617		
7,300.0	6,859.9	7,512.9	6,859.9	41.4	50.2	-78.02	1,831.7	-1,905.3	3,940.7	3,862.8	50.587		
7,400.0	6,959.9	7,612.9	6,959.9	41.4	50.3	-78.02	1,831.7	-1,905.3	3,940.7	3,862.7	50.557		
7,500.0	7,059.9	7,712.9	7,059.9	41.4	50.3	-78.02	1,831.7	-1,905.3	3,940.7	3,862.7	50.527		
7,600.0	7,159.9	7,812.9	7,159.9	41.4	50.3	-78.02	1,831.7	-1,905.3	3,940.7	3,862.6	50.496		
7,700.0	7,259.9	7,912.9	7,259.9	41.5	50.3	-78.02	1,831.7	-1,905.3	3,940.7	3,862.6	50.466		
7,800.0	7,359.9	8,012.9	7,359.9	41.5	50.4	-78.02	1,831.7	-1,905.3	3,940.7	3,862.5	50.435		
7,900.0	7,459.9	8,112.9	7,459.9	41.5	50.4	-78.02	1,831.7	-1,905.3	3,940.7	3,862.5	50.404		
8,000.0	7,559.9	8,212.9	7,559.9	41.5	50.4	-78.02	1,831.7	-1,905.3	3,940.7	3,862.5	50.373		
8,100.0	7,659.9	8,312.9	7,659.9	41.6	50.4	-78.02	1,831.7	-1,905.3	3,940.7	3,862.4	50.342		
8,200.0	7,759.9	8,412.9	7,759.9	41.6	50.4	-78.02	1,831.7	-1,905.3	3,940.7	3,862.4	50.311		
8,300.0	7,859.9	8,512.9	7,859.9	41.6	50.5	-78.02	1,831.7	-1,905.3	3,940.7	3,862.3	50.279		
8,331.1	7,891.0	8,544.0	7,891.0	41.6	50.5	-78.02	1,831.7	-1,905.3	3,940.7	3,862.3	50.272		

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 0993-21-16W - Slot A-12
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 0993-21-16W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-46.98	16.4	-17.6	24.0			
100.0	100.0	100.0	100.0	0.4	0.4	-46.98	16.4	-17.6	24.0	23.2	30.318	
200.0	200.0	200.0	200.0	1.2	1.2	-46.98	16.4	-17.6	24.0	21.5	9.720	CC
300.0	300.0	300.0	300.0	1.7	1.7	-112.21	16.4	-17.6	24.5	21.2	7.479	ES
400.0	399.8	399.8	399.8	3.3	2.1	-122.92	16.4	-17.6	27.0	22.5	5.970	
500.0	499.3	498.3	498.3	4.6	2.4	-137.59	16.3	-18.7	34.5	28.4	5.632	SF
600.0	598.3	594.7	594.6	5.6	3.6	-149.92	15.8	-23.8	51.1	42.5	5.938	
700.0	696.6	688.7	688.1	6.5	4.2	-157.17	15.2	-32.6	77.0	66.8	7.578	
800.0	794.0	780.8	779.5	7.3	4.5	-160.11	16.4	-44.1	109.9	98.6	9.698	
900.0	890.3	870.2	867.8	8.0	5.2	-160.78	20.3	-57.5	148.9	136.3	11.814	
1,000.0	985.3	956.4	952.4	8.7	5.8	-160.48	26.5	-72.5	193.4	179.6	14.001	
1,100.0	1,078.9	1,038.9	1,032.9	9.4	6.4	-159.72	34.7	-88.9	243.3	228.4	16.360	
1,200.0	1,170.9	1,117.5	1,108.9	9.9	7.0	-158.81	44.6	-106.2	298.2	282.5	18.938	
1,300.0	1,262.2	1,193.3	1,181.6	10.2	7.5	-158.23	56.0	-124.5	356.0	339.6	21.740	
1,400.0	1,353.4	1,267.0	1,251.5	10.5	8.0	-157.46	68.8	-143.8	415.2	398.2	24.421	
1,500.0	1,444.7	1,338.5	1,318.7	10.9	8.5	-156.60	82.9	-163.9	475.9	458.3	26.999	
1,600.0	1,536.0	1,407.8	1,383.0	11.2	9.0	-155.70	98.1	-184.7	538.0	519.8	29.486	
1,700.0	1,627.3	1,474.9	1,444.6	11.6	9.4	-154.78	114.2	-206.0	601.6	582.7	31.888	
1,800.0	1,718.6	1,539.8	1,503.4	11.9	9.8	-153.87	131.2	-227.7	666.5	647.1	34.214	
1,900.0	1,809.9	1,600.0	1,557.2	12.3	10.2	-153.02	148.0	-248.7	732.9	712.8	36.555	
2,000.0	1,901.1	1,665.5	1,615.0	12.7	10.4	-152.09	167.6	-272.6	800.5	779.9	38.845	
2,100.0	1,992.4	1,738.0	1,678.6	13.1	10.7	-151.16	189.6	-299.4	868.7	847.4	40.823	
2,200.0	2,083.7	1,810.5	1,742.3	13.5	10.9	-150.37	211.7	-326.2	937.0	915.0	42.632	
2,300.0	2,175.0	1,883.0	1,805.9	14.0	11.2	-149.68	233.8	-353.0	1,005.3	982.6	44.271	
2,400.0	2,266.3	1,955.5	1,869.6	14.4	11.5	-149.09	255.8	-379.7	1,073.7	1,050.3	45.769	
2,500.0	2,357.6	2,028.0	1,933.2	14.9	11.8	-148.56	277.9	-406.5	1,142.2	1,118.0	47.144	
2,600.0	2,448.9	2,100.5	1,996.8	15.4	12.1	-148.09	300.0	-433.3	1,210.7	1,185.7	48.407	
2,700.0	2,540.1	2,173.0	2,060.5	16.0	12.5	-147.67	322.0	-460.1	1,279.3	1,253.5	49.551	
2,800.0	2,631.4	2,245.5	2,124.1	16.7	12.9	-147.29	344.1	-486.9	1,347.9	1,321.3	50.619	
2,900.0	2,722.7	2,318.0	2,187.8	17.5	13.3	-146.95	366.1	-513.7	1,416.5	1,389.1	51.590	
3,000.0	2,814.0	2,390.5	2,251.4	18.2	13.9	-146.64	388.2	-540.5	1,485.2	1,456.9	52.486	
3,100.0	2,905.3	2,462.9	2,315.1	19.0	14.4	-146.36	410.3	-567.3	1,553.8	1,524.7	53.310	
3,200.0	2,996.6	2,535.4	2,378.7	19.7	15.0	-146.10	432.3	-594.0	1,622.5	1,592.5	54.072	
3,300.0	3,087.8	2,607.9	2,442.4	20.4	15.6	-145.86	454.4	-620.8	1,691.2	1,660.4	54.777	
3,400.0	3,179.1	2,680.4	2,506.0	21.2	16.2	-145.64	476.5	-647.6	1,759.9	1,728.2	55.428	
3,500.0	3,270.4	2,752.9	2,569.6	21.9	16.8	-145.44	498.5	-674.4	1,828.7	1,796.0	56.032	
3,600.0	3,361.7	2,825.4	2,633.3	22.7	17.5	-145.25	520.6	-701.2	1,897.4	1,863.9	56.594	
3,700.0	3,453.0	2,897.9	2,696.9	23.4	18.1	-145.08	542.7	-728.0	1,966.2	1,931.7	57.118	
3,800.0	3,544.3	2,970.4	2,760.6	24.2	18.7	-144.91	564.7	-754.8	2,034.9	1,999.6	57.603	
3,900.0	3,635.6	3,042.9	2,824.2	24.9	19.4	-144.76	586.8	-781.6	2,103.7	2,067.5	58.057	
4,000.0	3,726.8	3,115.4	2,887.9	25.7	20.0	-144.62	608.9	-808.3	2,172.5	2,135.3	58.481	
4,100.0	3,818.1	3,187.9	2,951.5	26.4	20.6	-144.48	630.9	-835.1	2,241.2	2,203.2	58.877	
4,200.0	3,909.4	3,260.4	3,015.2	27.2	21.3	-144.36	653.0	-861.9	2,310.0	2,271.0	59.248	
4,300.0	4,000.7	3,332.8	3,078.8	27.9	21.9	-144.24	675.1	-888.7	2,378.8	2,338.9	59.596	
4,400.0	4,092.0	3,405.3	3,142.4	28.7	22.6	-144.13	697.1	-915.5	2,447.6	2,406.8	59.923	
4,500.0	4,183.3	3,477.8	3,206.1	29.4	23.2	-144.02	719.2	-942.3	2,516.4	2,474.6	60.230	
4,600.0	4,274.5	3,550.3	3,269.7	30.2	23.9	-143.92	741.3	-969.1	2,585.2	2,542.5	60.519	
4,700.0	4,365.8	3,622.8	3,333.4	30.9	24.5	-143.83	763.3	-995.8	2,654.0	2,610.4	60.791	
4,800.0	4,457.1	3,695.3	3,397.0	31.7	25.2	-143.74	785.4	-1,022.6	2,722.9	2,678.3	61.048	
4,900.0	4,548.4	3,767.8	3,460.7	32.4	25.8	-143.65	807.5	-1,049.4	2,791.7	2,746.1	61.290	
5,000.0	4,639.7	3,840.3	3,524.3	33.1	26.5	-143.57	829.5	-1,076.2	2,860.5	2,814.0	61.519	

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 0993-21-16W - Slot A-12
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 0993-21-16W	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 0993-20-15E - OH - Design #1												Offset Well Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard														
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning		
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)				
5,100.0	4,731.0	3,912.8	3,587.9	33.9	27.1	-143.49	851.6	-1,103.0	2,929.3	2,881.9	61.736			
5,200.0	4,822.3	3,985.3	3,651.6	34.6	27.8	-143.41	873.7	-1,129.8	2,998.2	2,949.7	61.941			
5,300.0	4,913.5	4,057.8	3,715.2	35.4	28.4	-143.34	895.7	-1,156.6	3,067.0	3,017.6	62.135			
5,400.0	5,004.8	4,130.2	3,778.9	36.1	29.1	-143.28	917.8	-1,183.4	3,135.8	3,085.5	62.320			
5,500.0	5,096.1	4,202.7	3,842.5	36.9	29.7	-143.21	939.8	-1,210.1	3,204.6	3,153.4	62.495			
5,600.0	5,187.4	4,275.2	3,906.2	37.6	30.4	-143.26	961.9	-1,236.9	3,273.5	3,221.2	62.663			
5,700.0	5,279.7	4,349.0	3,971.0	38.3	31.1	-144.51	984.4	-1,264.2	3,340.8	3,287.6	62.782			
5,800.0	5,373.5	4,425.0	4,037.7	39.0	31.8	-145.58	1,007.5	-1,292.3	3,405.5	3,351.3	62.801			
5,900.0	5,468.8	4,503.0	4,106.1	39.5	32.5	-146.48	1,031.2	-1,321.1	3,467.4	3,412.2	62.776			
6,000.0	5,565.3	4,582.8	4,176.2	40.0	33.2	-147.25	1,055.5	-1,350.6	3,526.5	3,470.3	62.711			
6,100.0	5,662.9	4,664.4	4,247.8	40.3	33.9	-147.89	1,080.4	-1,380.7	3,582.6	3,525.4	62.611			
6,200.0	5,761.3	4,747.5	4,320.8	40.7	34.7	-148.41	1,105.7	-1,411.4	3,635.7	3,577.5	62.482			
6,300.0	5,860.4	4,832.0	4,395.0	40.9	35.5	-148.83	1,131.4	-1,442.7	3,685.7	3,626.5	62.330			
6,400.0	5,960.0	4,917.7	4,470.3	41.1	36.2	-149.15	1,157.5	-1,474.3	3,732.5	3,672.4	62.165			
6,500.0	6,059.9	5,004.6	4,546.5	41.1	37.0	-149.38	1,183.9	-1,506.4	3,776.1	3,715.2	62.000			
6,600.0	6,159.9	5,092.2	4,623.4	41.2	37.8	-86.77	1,210.6	-1,538.8	3,816.8	3,755.3	62.022			
6,700.0	6,259.9	5,180.0	4,700.5	41.2	38.6	-86.37	1,237.3	-1,571.3	3,857.2	3,795.0	62.075			
6,800.0	6,359.9	5,267.6	4,779.7	41.2	39.4	-85.97	1,264.0	-1,604.0	3,897.6	3,834.8	62.128			
6,900.0	6,459.9	5,355.2	4,858.9	41.3	40.2	-85.57	1,290.7	-1,636.7	3,937.9	3,874.9	62.181			
7,000.0	6,559.9	5,442.8	4,938.1	41.3	41.0	-85.17	1,317.4	-1,669.4	3,978.2	3,915.0	62.234			
7,100.0	6,659.9	5,526.4	5,017.3	41.3	41.8	-84.77	1,344.1	-1,702.1	4,018.4	3,955.1	62.287			
7,200.0	6,759.9	5,610.0	5,096.5	41.3	42.6	-84.37	1,370.8	-1,734.8	4,058.6	3,995.2	62.340			
7,300.0	6,859.9	5,693.6	5,175.7	41.4	43.4	-83.97	1,397.5	-1,767.5	4,098.7	4,035.3	62.393			
7,400.0	6,959.9	5,777.2	5,254.9	41.4	44.2	-83.57	1,424.2	-1,800.2	4,138.8	4,075.4	62.446			
7,500.0	7,059.9	5,860.8	5,334.1	41.4	45.0	-83.17	1,450.9	-1,832.9	4,178.9	4,115.5	62.499			
7,600.0	7,159.9	5,944.4	5,413.3	41.4	45.8	-82.77	1,477.6	-1,865.6	4,219.0	4,155.6	62.552			
7,700.0	7,259.9	6,028.0	5,492.5	41.5	46.6	-82.37	1,504.3	-1,898.3	4,259.1	4,195.7	62.605			
7,800.0	7,359.9	6,111.6	5,571.7	41.5	47.4	-81.97	1,531.0	-1,931.0	4,299.2	4,235.8	62.658			
7,900.0	7,459.9	6,195.2	5,650.9	41.5	48.2	-81.57	1,557.7	-1,963.7	4,339.3	4,275.9	62.711			
8,000.0	7,559.9	6,279.8	5,730.1	41.5	49.0	-81.17	1,584.4	-1,996.4	4,379.4	4,316.0	62.764			
8,100.0	7,659.9	6,363.4	5,809.3	41.6	49.8	-80.77	1,611.1	-2,029.1	4,419.5	4,356.1	62.817			
8,200.0	7,759.9	6,447.0	5,888.5	41.6	50.6	-80.37	1,637.8	-2,061.8	4,459.6	4,396.2	62.870			
8,205.0	7,764.9	6,452.0	5,893.5	41.6	50.7	-80.35	1,641.1	-2,064.1	4,463.9	4,399.5	62.875			
8,300.0	7,859.9	6,530.6	5,962.7	41.6	51.4	-80.35	1,667.8	-2,096.8	4,499.0	4,439.6	62.928			
8,331.1	7,891.0	6,562.7	5,994.8	41.6	51.8	-80.35	1,694.5	-2,129.5	4,534.1	4,479.7	62.981			

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 0993-21-16W - Slot A-12
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 0993-21-16W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-47.44	5.5	-5.9	8.1			
100.0	100.0	100.0	100.0	0.4	0.4	-47.44	5.5	-5.9	8.1	7.3	10.196	
200.0	200.0	200.0	200.0	1.2	1.2	-47.44	5.5	-5.9	8.1	5.6	3.269 CC	
200.2	200.2	200.2	200.2	1.2	1.2	-47.44	5.5	-5.9	8.1	5.6	3.266	
300.0	300.0	300.0	300.0	1.7	1.7	-117.69	5.5	-5.9	8.6	5.3	2.610 ES	
400.0	399.8	399.8	399.8	3.3	2.1	-141.11	5.5	-5.9	12.1	7.2	2.451 Level 1, SF	
500.0	499.3	499.3	499.3	4.6	2.5	-158.33	5.5	-5.9	20.7	13.9	3.053	
600.0	598.3	596.9	596.8	5.6	3.1	-166.09	5.5	-8.0	36.2	27.8	4.293	
700.0	696.6	692.0	691.8	6.5	4.3	-168.73	5.5	-14.0	60.2	49.7	5.748	
800.0	794.0	783.9	783.1	7.3	5.2	-169.49	5.5	-23.5	92.1	80.0	7.598	
900.0	890.3	873.1	871.5	8.0	5.6	-169.41	5.9	-36.1	131.2	118.1	10.019	
1,000.0	985.3	959.7	956.8	8.7	6.0	-168.50	8.4	-50.7	176.0	161.9	12.487	
1,100.0	1,078.9	1,042.7	1,038.0	9.4	6.5	-167.25	13.0	-66.8	226.1	211.0	14.956	
1,200.0	1,170.9	1,121.6	1,114.8	9.9	7.1	-165.95	19.3	-84.1	281.3	265.4	17.589	
1,300.0	1,262.2	1,200.0	1,190.4	10.2	7.6	-164.89	27.5	-103.1	339.5	322.8	20.378	
1,400.0	1,353.4	1,271.4	1,258.7	10.5	8.0	-163.83	36.5	-122.0	399.0	381.8	23.175	
1,500.0	1,444.7	1,343.1	1,326.6	10.9	8.5	-162.72	47.1	-142.4	460.0	442.2	25.816	
1,600.0	1,536.0	1,412.5	1,391.6	11.2	8.9	-161.63	58.8	-163.6	522.5	504.1	28.371	
1,700.0	1,627.3	1,479.7	1,453.9	11.6	9.4	-160.56	71.5	-185.4	586.4	567.4	30.847	
1,800.0	1,718.6	1,544.6	1,513.3	11.9	9.8	-159.53	85.0	-207.7	651.7	632.1	33.253	
1,900.0	1,809.9	1,607.3	1,570.0	12.3	10.1	-158.54	99.2	-230.3	718.3	698.2	35.631	
2,000.0	1,901.1	1,674.7	1,630.3	12.7	10.3	-157.51	115.6	-255.6	786.2	765.5	38.000	
2,100.0	1,992.4	1,747.2	1,695.2	13.1	10.6	-156.56	133.2	-282.9	854.3	832.9	40.061	
2,200.0	2,083.7	1,819.8	1,760.0	13.5	10.8	-155.74	150.9	-310.2	922.5	900.5	41.957	
2,300.0	2,175.0	1,892.3	1,824.9	14.0	11.1	-155.04	168.6	-337.5	990.7	968.1	43.699	
2,400.0	2,266.3	1,964.8	1,889.7	14.4	11.3	-154.42	186.3	-364.8	1,059.1	1,035.7	45.295	
2,500.0	2,357.6	2,037.4	1,954.5	14.9	11.6	-153.88	204.0	-392.2	1,127.5	1,103.4	46.768	
2,600.0	2,448.9	2,109.9	2,019.4	15.4	11.9	-153.40	221.6	-419.5	1,196.0	1,171.1	48.128	
2,700.0	2,540.1	2,182.5	2,084.2	16.0	12.2	-152.98	239.3	-446.8	1,264.5	1,238.9	49.377	
2,800.0	2,631.4	2,255.0	2,149.0	16.7	12.6	-152.59	257.0	-474.1	1,333.0	1,306.6	50.542	
2,900.0	2,722.7	2,327.6	2,213.9	17.5	13.0	-152.25	274.7	-501.4	1,401.6	1,374.4	51.600	
3,000.0	2,814.0	2,400.1	2,278.7	18.2	13.4	-151.93	292.4	-528.7	1,470.2	1,442.2	52.585	
3,100.0	2,905.3	2,472.6	2,343.5	19.0	13.8	-151.64	310.1	-556.0	1,538.8	1,510.0	53.495	
3,200.0	2,996.6	2,545.2	2,408.4	19.7	14.3	-151.38	327.7	-583.3	1,607.4	1,577.8	54.339	
3,300.0	3,087.8	2,617.7	2,473.2	20.4	14.8	-151.14	345.4	-610.6	1,676.1	1,645.7	55.123	
3,400.0	3,179.1	2,690.3	2,538.1	21.2	15.4	-150.92	363.1	-637.9	1,744.7	1,713.5	55.851	
3,500.0	3,270.4	2,762.8	2,602.9	21.9	16.0	-150.71	380.8	-665.3	1,813.4	1,781.3	56.527	
3,600.0	3,361.7	2,835.3	2,667.7	22.7	16.5	-150.52	398.5	-692.6	1,882.1	1,849.2	57.158	
3,700.0	3,453.0	2,907.9	2,732.6	23.4	17.1	-150.35	416.1	-719.9	1,950.8	1,917.0	57.748	
3,800.0	3,544.3	2,980.4	2,797.4	24.2	17.7	-150.18	433.8	-747.2	2,019.5	1,984.8	58.297	
3,900.0	3,635.6	3,053.0	2,862.2	24.9	18.3	-150.03	451.5	-774.5	2,088.2	2,052.7	58.810	
4,000.0	3,726.8	3,125.5	2,927.1	25.7	18.9	-149.88	469.2	-801.8	2,156.9	2,120.5	59.291	
4,100.0	3,818.1	3,198.0	2,991.9	26.4	19.5	-149.75	486.9	-829.1	2,225.7	2,188.4	59.743	
4,200.0	3,909.4	3,270.6	3,056.7	27.2	20.1	-149.62	504.6	-856.4	2,294.4	2,256.3	60.166	
4,300.0	4,000.7	3,343.1	3,121.6	27.9	20.7	-149.50	522.2	-883.7	2,363.1	2,324.1	60.563	
4,400.0	4,092.0	3,415.7	3,186.4	28.7	21.3	-149.39	539.9	-911.1	2,431.9	2,392.0	60.938	
4,500.0	4,183.3	3,488.2	3,251.3	29.4	21.9	-149.28	557.6	-938.4	2,500.6	2,459.8	61.290	
4,600.0	4,274.5	3,560.8	3,316.1	30.2	22.5	-149.18	575.3	-965.7	2,569.4	2,527.7	61.622	
4,700.0	4,365.8	3,633.3	3,380.9	30.9	23.1	-149.08	593.0	-993.0	2,638.1	2,595.5	61.936	
4,800.0	4,457.1	3,705.8	3,445.8	31.7	23.7	-148.99	610.6	-1,020.3	2,706.9	2,663.4	62.232	
4,900.0	4,548.4	3,778.4	3,510.6	32.4	24.3	-148.90	628.3	-1,047.6	2,775.7	2,731.3	62.512	

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 0993-21-16W - Slot A-12
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 0993-21-16W	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 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	
5,000.0	4,639.7	3,850.9	3,575.4	33.1	24.9	-148.82	646.0	-1,074.9	2,844.4	2,799.1	62.777		
5,100.0	4,731.0	3,923.5	3,640.3	33.9	25.5	-148.74	663.7	-1,102.2	2,913.2	2,867.0	63.028		
5,200.0	4,822.3	3,996.0	3,705.1	34.6	26.1	-148.67	681.4	-1,129.5	2,982.0	2,934.8	63.266		
5,300.0	4,913.5	4,068.5	3,769.9	35.4	26.7	-148.60	699.1	-1,156.9	3,050.8	3,002.7	63.492		
5,400.0	5,004.8	4,141.1	3,834.8	36.1	27.4	-148.53	716.7	-1,184.2	3,119.5	3,070.6	63.706		
5,500.0	5,096.1	4,213.6	3,899.6	36.9	28.0	-148.46	734.4	-1,211.5	3,188.3	3,138.4	63.910		
5,600.0	5,187.4	4,286.2	3,964.5	37.6	28.6	-148.50	752.1	-1,238.8	3,257.1	3,206.3	64.107		
5,700.0	5,279.7	4,360.1	4,030.5	38.3	29.2	-149.57	770.1	-1,266.6	3,324.3	3,272.5	64.241		
5,800.0	5,373.5	4,436.4	4,098.7	39.0	29.9	-150.49	788.7	-1,295.3	3,388.7	3,335.9	64.256		
5,900.0	5,468.8	4,514.8	4,168.8	39.5	30.5	-151.26	807.8	-1,324.9	3,450.1	3,396.4	64.213		
6,000.0	5,565.3	4,595.3	4,240.7	40.0	31.2	-151.90	827.5	-1,355.2	3,508.5	3,453.8	64.120		
6,100.0	5,662.9	4,677.7	4,314.3	40.3	31.9	-152.43	847.5	-1,386.2	3,563.8	3,508.1	63.983		
6,200.0	5,761.3	4,761.7	4,389.5	40.7	32.6	-152.86	868.0	-1,417.8	3,615.9	3,559.2	63.808		
6,300.0	5,860.4	4,847.3	4,466.0	40.9	33.3	-153.19	888.9	-1,450.1	3,664.6	3,607.0	63.604		
6,400.0	5,960.0	4,934.4	4,543.8	41.1	34.1	-153.44	910.1	-1,482.8	3,710.1	3,651.5	63.379		
6,500.0	6,059.9	5,022.6	4,622.7	41.1	34.8	-153.61	931.6	-1,516.0	3,752.1	3,692.7	63.151		
6,600.0	6,159.9	5,111.8	4,702.4	41.2	35.6	-90.99	953.4	-1,549.6	3,791.1	3,731.0	63.136		
6,700.0	6,259.9	5,201.2	4,782.3	41.2	36.4	-90.63	975.1	-1,583.3	3,829.6	3,768.9	63.159		
6,800.0	6,359.9	6,845.3	6,359.9	41.2	43.1	-87.63	1,172.8	-1,888.6	3,841.5	3,768.8	52.824		
6,900.0	6,459.9	6,945.3	6,459.9	41.3	43.2	-87.63	1,172.8	-1,888.6	3,841.5	3,768.7	52.789		
7,000.0	6,559.9	7,045.3	6,559.9	41.3	43.2	-87.63	1,172.8	-1,888.6	3,841.5	3,768.7	52.754		
7,100.0	6,659.9	7,145.3	6,659.9	41.3	43.2	-87.63	1,172.8	-1,888.6	3,841.5	3,768.6	52.719		
7,200.0	6,759.9	7,245.3	6,759.9	41.3	43.2	-87.63	1,172.8	-1,888.6	3,841.5	3,768.6	52.683		
7,300.0	6,859.9	7,345.3	6,859.9	41.4	43.3	-87.63	1,172.8	-1,888.6	3,841.5	3,768.5	52.648		
7,400.0	6,959.9	7,445.3	6,959.9	41.4	43.3	-87.63	1,172.8	-1,888.6	3,841.5	3,768.5	52.612		
7,500.0	7,059.9	7,545.3	7,059.9	41.4	43.3	-87.63	1,172.8	-1,888.6	3,841.5	3,768.4	52.575		
7,600.0	7,159.9	7,645.3	7,159.9	41.4	43.3	-87.63	1,172.8	-1,888.6	3,841.5	3,768.4	52.539		
7,700.0	7,259.9	7,745.3	7,259.9	41.5	43.4	-87.63	1,172.8	-1,888.6	3,841.5	3,768.3	52.503		
7,800.0	7,359.9	7,845.3	7,359.9	41.5	43.4	-87.63	1,172.8	-1,888.6	3,841.5	3,768.3	52.466		
7,900.0	7,459.9	7,945.3	7,459.9	41.5	43.4	-87.63	1,172.8	-1,888.6	3,841.5	3,768.2	52.429		
8,000.0	7,559.9	8,045.3	7,559.9	41.5	43.5	-87.63	1,172.8	-1,888.6	3,841.5	3,768.2	52.392		
8,100.0	7,659.9	8,145.3	7,659.9	41.6	43.5	-87.63	1,172.8	-1,888.6	3,841.5	3,768.1	52.355		
8,200.0	7,759.9	8,245.3	7,759.9	41.6	43.5	-87.63	1,172.8	-1,888.6	3,841.5	3,768.1	52.317		
8,300.0	7,859.9	8,345.3	7,859.9	41.6	43.5	-87.63	1,172.8	-1,888.6	3,841.5	3,768.0	52.280		
8,331.1	7,891.0	8,376.4	7,891.0	41.6	43.5	-87.63	1,172.8	-1,888.6	3,841.5	3,768.0	52.271		

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 0993-21-16W - Slot A-12
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 0993-21-16W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference	Offset		Semi Major Axis		Highside	Offset Wellbore	Centre	Distance		Separation	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)				Offset (usft)	+N/-S (usft)			+E/-W (usft)
0.0	0.0	0.0	0.0	0.0	0.0	134.02	-5.5	5.7	7.9			
100.0	100.0	100.0	100.0	0.4	0.4	134.02	-5.5	5.7	7.9	7.1	9.936	
200.0	200.0	200.0	200.0	1.2	1.2	134.02	-5.5	5.7	7.9	5.4	3.186	
300.0	300.0	300.0	300.0	1.7	1.7	80.34	-5.5	5.7	7.6	4.3	2.331 Level 1	
337.3	337.2	337.2	337.2	2.3	1.8	92.17	-5.5	5.6	7.5	4.0	2.137 Level 1, CC, ES	
400.0	399.8	399.8	399.8	3.3	2.1	127.07	-5.6	4.4	8.8	4.3	1.972 Level 2, SF	
500.0	499.3	498.2	498.1	4.6	3.5	165.89	-6.0	-0.9	20.7	13.1	2.742	
600.0	598.3	594.4	593.7	5.6	4.6	178.04	-6.8	-10.1	43.0	33.1	4.352	
700.0	696.6	687.8	686.3	6.5	5.0	-176.94	-7.7	-22.8	73.6	62.5	6.634	
800.0	794.0	778.7	775.9	7.3	5.4	-173.38	-6.6	-38.1	110.8	98.5	9.013	
900.0	890.3	866.0	861.3	8.0	6.0	-170.55	-3.6	-55.5	154.0	140.5	11.411	
1,000.0	985.3	949.2	942.3	8.7	6.6	-168.22	1.2	-74.4	203.1	188.4	13.883	
1,100.0	1,078.9	1,028.0	1,018.2	9.4	7.2	-166.24	7.5	-94.5	257.7	242.1	16.504	
1,200.0	1,170.9	1,100.0	1,087.0	9.9	7.7	-164.59	14.7	-114.5	317.6	301.2	19.382	
1,300.0	1,262.2	1,173.1	1,156.1	10.2	8.2	-163.43	23.3	-136.6	380.4	363.4	22.350	
1,400.0	1,353.4	1,241.5	1,220.1	10.5	8.7	-162.35	32.7	-158.9	444.8	427.2	25.265	
1,500.0	1,444.7	1,307.4	1,281.1	10.9	9.1	-161.33	42.8	-181.7	510.7	492.5	28.122	
1,600.0	1,536.0	1,376.1	1,344.0	11.2	9.3	-160.32	54.5	-206.7	577.9	559.3	31.036	
1,700.0	1,627.3	1,449.6	1,411.2	11.6	9.5	-159.43	67.0	-233.6	645.5	626.3	33.638	
1,800.0	1,718.6	1,523.0	1,478.4	11.9	9.8	-158.70	79.6	-260.5	713.0	693.2	36.039	
1,900.0	1,809.9	1,596.4	1,545.5	12.3	10.0	-158.11	92.2	-287.4	780.7	760.3	38.250	
2,000.0	1,901.1	1,669.9	1,612.7	12.7	10.3	-157.60	104.7	-314.3	848.3	827.3	40.280	
2,100.0	1,992.4	1,743.3	1,679.8	13.1	10.6	-157.17	117.3	-341.3	916.0	894.3	42.153	
2,200.0	2,083.7	1,816.7	1,747.0	13.5	10.9	-156.80	129.9	-368.2	983.8	961.4	43.882	
2,300.0	2,175.0	1,890.2	1,814.2	14.0	11.2	-156.48	142.4	-395.1	1,051.5	1,028.4	45.475	
2,400.0	2,266.3	1,963.6	1,881.3	14.4	11.5	-156.20	155.0	-422.0	1,119.3	1,095.4	46.930	
2,500.0	2,357.6	2,037.0	1,948.5	14.9	11.8	-155.95	167.5	-448.9	1,187.1	1,162.5	48.306	
2,600.0	2,448.9	2,110.5	2,015.6	15.4	12.2	-155.72	180.1	-475.8	1,254.9	1,229.5	49.550	
2,700.0	2,540.1	2,183.9	2,082.8	16.0	12.5	-155.52	192.7	-502.7	1,322.6	1,296.6	50.708	
2,800.0	2,631.4	2,257.3	2,149.9	16.7	12.9	-155.34	205.2	-529.6	1,390.5	1,363.6	51.779	
2,900.0	2,722.7	2,330.8	2,217.1	17.5	13.3	-155.17	217.8	-556.5	1,458.3	1,430.6	52.773	
3,000.0	2,814.0	2,404.2	2,284.3	18.2	13.7	-155.02	230.4	-583.5	1,526.1	1,497.7	53.696	
3,100.0	2,905.3	2,477.6	2,351.4	19.0	14.2	-154.88	242.9	-610.4	1,593.9	1,564.7	54.553	
3,200.0	2,996.6	2,551.1	2,418.6	19.7	14.7	-154.76	255.5	-637.3	1,661.7	1,631.7	55.351	
3,300.0	3,087.8	2,624.5	2,485.7	20.4	15.2	-154.64	268.1	-664.2	1,729.6	1,698.7	56.095	
3,400.0	3,179.1	2,697.9	2,552.9	21.2	15.7	-154.53	280.6	-691.1	1,797.4	1,765.8	56.791	
3,500.0	3,270.4	2,771.4	2,620.1	21.9	16.2	-154.43	293.2	-718.0	1,865.2	1,832.8	57.439	
3,600.0	3,361.7	2,844.8	2,687.2	22.7	16.7	-154.34	305.8	-744.9	1,933.1	1,899.8	58.046	
3,700.0	3,453.0	2,918.2	2,754.4	23.4	17.3	-154.26	318.3	-771.8	2,000.9	1,966.8	58.615	
3,800.0	3,544.3	2,991.7	2,821.5	24.2	17.8	-154.17	330.9	-798.7	2,068.8	2,033.8	59.149	
3,900.0	3,635.6	3,065.1	2,888.7	24.9	18.3	-154.10	343.5	-825.6	2,136.6	2,100.8	59.650	
4,000.0	3,726.8	3,138.5	2,955.9	25.7	18.9	-154.03	356.0	-852.6	2,204.5	2,167.8	60.121	
4,100.0	3,818.1	3,212.0	3,023.0	26.4	19.4	-153.96	368.6	-879.5	2,272.3	2,234.8	60.565	
4,200.0	3,909.4	3,285.4	3,090.2	27.2	20.0	-153.90	381.2	-906.4	2,340.2	2,301.8	60.983	
4,300.0	4,000.7	3,358.8	3,157.3	27.9	20.5	-153.84	393.7	-933.3	2,408.0	2,368.8	61.378	
4,400.0	4,092.0	3,432.3	3,224.5	28.7	21.1	-153.78	406.3	-960.2	2,475.9	2,435.8	61.750	
4,500.0	4,183.3	3,505.7	3,291.7	29.4	21.6	-153.73	418.9	-987.1	2,543.7	2,502.8	62.103	
4,600.0	4,274.5	3,579.1	3,358.8	30.2	22.2	-153.68	431.4	-1,014.0	2,611.6	2,569.8	62.436	
4,700.0	4,365.8	3,652.6	3,426.0	30.9	22.7	-153.63	444.0	-1,040.9	2,679.5	2,636.8	62.752	
4,800.0	4,457.1	3,726.0	3,493.1	31.7	23.3	-153.59	456.6	-1,067.8	2,747.3	2,703.8	63.051	
4,900.0	4,548.4	3,799.4	3,560.3	32.4	23.8	-153.54	469.1	-1,094.8	2,815.2	2,770.7	63.336	

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 0993-21-16W - Slot A-12
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 0993-21-16W	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	4,639.7	3,872.9	3,627.4	33.1	24.4	-153.50	481.7	-1,121.7	2,883.1	2,837.7	63.605		
5,100.0	4,731.0	3,946.3	3,694.6	33.9	24.9	-153.46	494.3	-1,148.6	2,950.9	2,904.7	63.861		
5,200.0	4,822.3	4,019.7	3,761.8	34.6	25.5	-153.42	506.8	-1,175.5	3,018.8	2,971.7	64.106		
5,300.0	4,913.5	4,093.1	3,828.9	35.4	26.1	-153.39	519.4	-1,202.4	3,086.6	3,038.7	64.338		
5,400.0	5,004.8	4,166.6	3,896.1	36.1	26.6	-153.35	531.9	-1,229.3	3,154.5	3,105.6	64.559		
5,500.0	5,096.1	4,240.0	3,963.2	36.9	27.2	-153.32	544.5	-1,256.2	3,222.4	3,172.6	64.770		
5,600.0	5,187.4	4,313.5	4,030.4	37.6	27.7	-153.37	557.1	-1,283.1	3,290.2	3,239.6	64.974		
5,700.0	5,279.7	4,388.4	4,098.9	38.3	28.3	-154.29	569.9	-1,310.6	3,356.4	3,304.9	65.108		
5,800.0	5,373.5	4,465.7	4,169.7	39.0	28.9	-155.06	583.1	-1,338.9	3,419.6	3,367.1	65.104		
5,900.0	5,468.8	4,545.4	4,242.5	39.5	29.5	-155.72	596.8	-1,368.1	3,479.7	3,426.2	65.036		
6,000.0	5,565.3	4,627.3	4,317.4	40.0	30.1	-156.26	610.8	-1,398.1	3,536.6	3,482.1	64.909		
6,100.0	5,662.9	4,711.1	4,394.1	40.3	30.7	-156.70	625.1	-1,428.9	3,590.1	3,534.7	64.731		
6,200.0	5,761.3	4,796.8	4,472.4	40.7	31.4	-157.06	639.8	-1,460.2	3,640.3	3,583.9	64.509		
6,300.0	5,860.4	4,884.1	4,552.3	40.9	32.1	-157.33	654.7	-1,492.3	3,687.0	3,629.6	64.250		
6,400.0	5,960.0	4,973.0	4,633.6	41.1	32.7	-157.53	669.9	-1,524.8	3,730.2	3,671.9	63.966		
6,500.0	6,059.9	5,063.2	4,716.1	41.1	33.4	-157.66	685.4	-1,557.9	3,769.8	3,710.6	63.676		
6,600.0	6,159.9	5,154.5	4,799.6	41.2	34.1	-95.05	701.0	-1,591.3	3,806.1	3,746.2	63.619		
6,700.0	6,259.9	5,245.9	4,883.2	41.2	34.8	-94.75	716.6	-1,624.9	3,841.8	3,781.4	63.604		
6,800.0	6,359.9	6,771.6	6,359.9	41.2	40.4	-92.54	842.9	-1,895.2	3,848.5	3,777.2	53.997		
6,900.0	6,459.9	6,871.6	6,459.9	41.3	40.4	-92.54	842.9	-1,895.2	3,848.5	3,777.2	53.960		
7,000.0	6,559.9	6,971.6	6,559.9	41.3	40.5	-92.54	842.9	-1,895.2	3,848.5	3,777.1	53.923		
7,100.0	6,659.9	7,071.6	6,659.9	41.3	40.5	-92.54	842.9	-1,895.2	3,848.5	3,777.1	53.886		
7,200.0	6,759.9	7,171.6	6,759.9	41.3	40.5	-92.54	842.9	-1,895.2	3,848.5	3,777.0	53.848		
7,300.0	6,859.9	7,271.6	6,859.9	41.4	40.6	-92.54	842.9	-1,895.2	3,848.5	3,777.0	53.810		
7,400.0	6,959.9	7,371.6	6,959.9	41.4	40.6	-92.54	842.9	-1,895.2	3,848.5	3,776.9	53.772		
7,500.0	7,059.9	7,471.6	7,059.9	41.4	40.6	-92.54	842.9	-1,895.2	3,848.5	3,776.9	53.734		
7,600.0	7,159.9	7,571.6	7,159.9	41.4	40.6	-92.54	842.9	-1,895.2	3,848.5	3,776.8	53.695		
7,700.0	7,259.9	7,671.6	7,259.9	41.5	40.7	-92.54	842.9	-1,895.2	3,848.5	3,776.8	53.656		
7,800.0	7,359.9	7,771.6	7,359.9	41.5	40.7	-92.54	842.9	-1,895.2	3,848.5	3,776.7	53.618		
7,900.0	7,459.9	7,871.6	7,459.9	41.5	40.7	-92.54	842.9	-1,895.2	3,848.5	3,776.7	53.578		
8,000.0	7,559.9	7,971.6	7,559.9	41.5	40.8	-92.54	842.9	-1,895.2	3,848.5	3,776.6	53.539		
8,100.0	7,659.9	8,071.6	7,659.9	41.6	40.8	-92.54	842.9	-1,895.2	3,848.5	3,776.6	53.500		
8,200.0	7,759.9	8,171.6	7,759.9	41.6	40.8	-92.54	842.9	-1,895.2	3,848.5	3,776.5	53.460		
8,201.6	7,761.5	8,173.2	7,761.5	41.6	40.8	-92.54	842.9	-1,895.2	3,848.5	3,776.5	53.459		
8,300.0	7,859.9	8,228.7	7,817.0	41.6	40.8	-92.54	842.9	-1,895.2	3,848.8	3,776.7	53.445		
8,331.1	7,891.0	8,228.7	7,817.0	41.6	40.8	-92.54	842.9	-1,895.2	3,849.2	3,777.2	53.459		

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 0993-21-16W - Slot A-12
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 0993-21-16W	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	133.49	-16.4	17.3	23.8				
100.0	100.0	100.0	100.0	0.4	0.4	133.49	-16.4	17.3	23.8	23.0	30.067		
200.0	200.0	200.0	200.0	1.2	1.2	133.49	-16.4	17.3	23.8	21.3	9.640		
300.0	300.0	300.2	300.2	1.7	1.5	74.99	-16.5	16.7	23.2	20.2	7.706		
392.8	392.6	392.9	392.8	3.2	2.8	97.13	-17.3	12.9	21.5	17.7	5.669	CC	
400.0	399.8	400.1	400.0	3.3	2.9	99.75	-17.4	12.5	21.5	17.7	5.587	ES	
500.0	499.3	498.1	497.6	4.6	4.2	138.34	-19.2	4.2	28.8	22.1	4.281	SF	
600.0	598.3	593.3	592.0	5.6	5.3	161.16	-21.7	-7.8	50.5	40.6	5.094		
700.0	696.6	686.3	683.7	6.5	5.6	172.01	-24.0	-23.0	82.3	70.8	7.130		
800.0	794.0	776.0	771.7	7.3	6.1	178.52	-24.4	-40.7	121.2	108.2	9.366		
900.0	890.3	861.8	855.2	8.0	6.7	-177.04	-22.8	-60.2	166.6	152.4	11.756		
1,000.0	985.3	943.2	933.8	8.7	7.2	-173.76	-19.8	-81.2	218.0	202.8	14.292		
1,100.0	1,078.9	1,019.9	1,007.2	9.4	7.7	-171.18	-15.5	-103.0	275.2	259.0	16.963		
1,200.0	1,170.9	1,091.7	1,075.2	9.9	8.2	-169.09	-10.1	-125.3	337.6	320.6	19.847		
1,300.0	1,262.2	1,159.9	1,139.2	10.2	8.6	-167.61	-3.9	-148.1	403.0	385.4	22.959		
1,400.0	1,353.4	1,227.0	1,201.5	10.5	9.0	-166.29	3.2	-172.0	469.9	451.9	26.045		
1,500.0	1,444.7	1,300.4	1,269.4	10.9	9.2	-165.11	11.4	-198.7	537.5	518.9	28.989		
1,600.0	1,536.0	1,373.7	1,337.2	11.2	9.4	-164.19	19.6	-225.4	605.1	586.0	31.710		
1,700.0	1,627.3	1,447.1	1,405.0	11.6	9.7	-163.46	27.8	-252.0	672.8	653.2	34.238		
1,800.0	1,718.6	1,520.4	1,472.8	11.9	10.0	-162.86	36.0	-278.7	740.6	720.3	36.583		
1,900.0	1,809.9	1,593.8	1,540.7	12.3	10.2	-162.36	44.2	-305.4	808.4	787.5	38.754		
2,000.0	1,901.1	1,667.1	1,608.5	12.7	10.5	-161.93	52.4	-332.1	876.2	854.7	40.761		
2,100.0	1,992.4	1,740.5	1,676.3	13.1	10.8	-161.57	60.6	-358.8	944.0	921.9	42.620		
2,200.0	2,083.7	1,813.8	1,744.1	13.5	11.1	-161.26	68.8	-385.4	1,011.9	989.1	44.342		
2,300.0	2,175.0	1,887.1	1,812.0	14.0	11.4	-160.98	76.9	-412.1	1,079.8	1,056.3	45.935		
2,400.0	2,266.3	1,960.5	1,879.8	14.4	11.7	-160.74	85.1	-438.8	1,147.6	1,123.4	47.410		
2,500.0	2,357.6	2,033.8	1,947.6	14.9	12.1	-160.52	93.3	-465.5	1,215.5	1,190.6	48.778		
2,600.0	2,448.9	2,107.2	2,015.5	15.4	12.4	-160.33	101.5	-492.1	1,283.5	1,257.8	50.050		
2,700.0	2,540.1	2,180.5	2,083.3	16.0	12.8	-160.16	109.7	-518.8	1,351.4	1,325.0	51.228		
2,800.0	2,631.4	2,253.9	2,151.1	16.7	13.1	-160.00	117.9	-545.5	1,419.3	1,392.2	52.325		
2,900.0	2,722.7	2,327.2	2,218.9	17.5	13.5	-159.86	126.1	-572.2	1,487.2	1,459.3	53.347		
3,000.0	2,814.0	2,400.5	2,286.8	18.2	13.9	-159.73	134.3	-598.9	1,555.1	1,526.5	54.300		
3,100.0	2,905.3	2,473.9	2,354.6	19.0	14.3	-159.61	142.5	-625.5	1,623.1	1,593.7	55.187		
3,200.0	2,996.6	2,547.2	2,422.4	19.7	14.8	-159.50	150.7	-652.2	1,691.0	1,660.8	56.017		
3,300.0	3,087.8	2,620.6	2,490.2	20.4	15.2	-159.40	158.9	-678.9	1,758.9	1,728.0	56.794		
3,400.0	3,179.1	2,693.9	2,558.1	21.2	15.7	-159.30	167.1	-705.6	1,826.9	1,795.1	57.521		
3,500.0	3,270.4	2,767.3	2,625.9	21.9	16.2	-159.22	175.3	-732.3	1,894.8	1,862.3	58.202		
3,600.0	3,361.7	2,840.6	2,693.7	22.7	16.7	-159.14	183.4	-758.9	1,962.8	1,929.4	58.842		
3,700.0	3,453.0	2,914.0	2,761.5	23.4	17.2	-159.06	191.6	-785.6	2,030.7	1,996.6	59.444		
3,800.0	3,544.3	2,987.3	2,829.4	24.2	17.7	-158.99	199.8	-812.3	2,098.7	2,063.7	60.010		
3,900.0	3,635.6	3,060.6	2,897.2	24.9	18.2	-158.92	208.0	-839.0	2,166.6	2,130.8	60.543		
4,000.0	3,726.8	3,134.0	2,965.0	25.7	18.7	-158.86	216.2	-865.7	2,234.6	2,198.0	61.046		
4,100.0	3,818.1	3,207.3	3,032.8	26.4	19.2	-158.80	224.4	-892.3	2,302.5	2,265.1	61.521		
4,200.0	3,909.4	3,280.7	3,100.7	27.2	19.7	-158.75	232.6	-919.0	2,370.5	2,332.2	61.969		
4,300.0	4,000.7	3,354.0	3,168.5	27.9	20.2	-158.70	240.8	-945.7	2,438.4	2,399.4	62.393		
4,400.0	4,092.0	3,427.4	3,236.3	28.7	20.7	-158.65	249.0	-972.4	2,506.4	2,466.5	62.795		
4,500.0	4,183.3	3,500.7	3,304.1	29.4	21.2	-158.60	257.2	-999.1	2,574.4	2,533.6	63.176		
4,600.0	4,274.5	3,574.0	3,372.0	30.2	21.7	-158.56	265.4	-1,025.7	2,642.3	2,600.7	63.536		
4,700.0	4,365.8	3,647.4	3,439.8	30.9	22.2	-158.51	273.6	-1,052.4	2,710.3	2,667.9	63.879		
4,800.0	4,457.1	3,720.7	3,507.6	31.7	22.7	-158.47	281.8	-1,079.1	2,778.2	2,735.0	64.205		
4,900.0	4,548.4	3,794.1	3,575.5	32.4	23.3	-158.44	290.0	-1,105.8	2,846.2	2,802.1	64.515		

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 0993-21-16W - Slot A-12
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 0993-21-16W	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	4,639.7	3,867.4	3,643.3	33.1	23.8	-158.40	298.1	-1,132.5	2,914.2	2,869.2	64.809			
5,100.0	4,731.0	3,940.8	3,711.1	33.9	24.3	-158.36	306.3	-1,159.1	2,982.1	2,936.3	65.090			
5,200.0	4,822.3	4,014.1	3,778.9	34.6	24.8	-158.33	314.5	-1,185.8	3,050.1	3,003.4	65.357			
5,300.0	4,913.5	4,087.5	3,846.8	35.4	25.3	-158.30	322.7	-1,212.5	3,118.1	3,070.5	65.612			
5,400.0	5,004.8	4,160.8	3,914.6	36.1	25.8	-158.27	330.9	-1,239.2	3,186.0	3,137.6	65.856			
5,500.0	5,096.1	4,234.1	3,982.4	36.9	26.4	-158.24	339.1	-1,265.9	3,254.0	3,204.8	66.088			
5,600.0	5,187.4	4,307.5	4,050.2	37.6	26.9	-158.28	347.3	-1,292.5	3,321.9	3,271.8	66.314			
5,700.0	5,279.7	4,382.4	4,119.5	38.3	27.4	-159.04	355.7	-1,319.8	3,388.2	3,337.2	66.460			
5,800.0	5,373.5	4,459.8	4,191.1	39.0	28.0	-159.67	364.3	-1,348.0	3,451.3	3,399.3	66.453			
5,900.0	5,468.8	4,539.7	4,265.0	39.5	28.5	-160.21	373.2	-1,377.0	3,511.2	3,458.3	66.372			
6,000.0	5,565.3	4,621.9	4,341.0	40.0	29.1	-160.65	382.4	-1,406.9	3,567.8	3,513.9	66.226			
6,100.0	5,662.9	4,706.2	4,418.9	40.3	29.7	-161.01	391.8	-1,437.6	3,620.9	3,566.1	66.022			
6,200.0	5,761.3	4,792.4	4,498.7	40.7	30.3	-161.29	401.5	-1,468.9	3,670.5	3,614.7	65.767			
6,300.0	5,860.4	4,880.5	4,580.1	40.9	31.0	-161.51	411.3	-1,501.0	3,716.6	3,659.8	65.471			
6,400.0	5,960.0	4,970.1	4,663.0	41.1	31.6	-161.66	421.3	-1,533.6	3,758.9	3,701.2	65.146			
6,500.0	6,059.9	5,061.2	4,747.3	41.1	32.2	-161.76	431.5	-1,566.7	3,797.6	3,739.0	64.812			
6,600.0	6,159.9	5,153.5	4,832.6	41.2	32.9	-99.15	441.8	-1,600.3	3,832.8	3,773.6	64.732			
6,700.0	6,259.9	5,246.0	4,918.2	41.2	33.6	-98.91	452.1	-1,633.9	3,867.4	3,807.6	64.701			
6,800.0	6,359.9	6,730.1	6,359.9	41.2	38.8	-97.14	532.2	-1,894.6	3,874.2	3,804.0	55.209			
6,900.0	6,459.9	6,830.1	6,459.9	41.3	38.8	-97.14	532.2	-1,894.6	3,874.2	3,804.0	55.170			
7,000.0	6,559.9	6,930.1	6,559.9	41.3	38.8	-97.14	532.2	-1,894.6	3,874.2	3,803.9	55.131			
7,100.0	6,659.9	7,030.1	6,659.9	41.3	38.8	-97.14	532.2	-1,894.6	3,874.2	3,803.9	55.092			
7,200.0	6,759.9	7,130.1	6,759.9	41.3	38.9	-97.14	532.2	-1,894.6	3,874.2	3,803.8	55.052			
7,300.0	6,859.9	7,230.1	6,859.9	41.4	38.9	-97.14	532.2	-1,894.6	3,874.2	3,803.8	55.013			
7,400.0	6,959.9	7,330.1	6,959.9	41.4	38.9	-97.14	532.2	-1,894.6	3,874.2	3,803.7	54.973			
7,500.0	7,059.9	7,430.1	7,059.9	41.4	39.0	-97.14	532.2	-1,894.6	3,874.2	3,803.7	54.933			
7,600.0	7,159.9	7,530.1	7,159.9	41.4	39.0	-97.14	532.2	-1,894.6	3,874.2	3,803.6	54.893			
7,700.0	7,259.9	7,630.1	7,259.9	41.5	39.0	-97.14	532.2	-1,894.6	3,874.2	3,803.6	54.852			
7,800.0	7,359.9	7,730.1	7,359.9	41.5	39.1	-97.14	532.2	-1,894.6	3,874.2	3,803.5	54.812			
7,900.0	7,459.9	7,830.1	7,459.9	41.5	39.1	-97.14	532.2	-1,894.6	3,874.2	3,803.5	54.771			
8,000.0	7,559.9	7,930.1	7,559.9	41.5	39.1	-97.14	532.2	-1,894.6	3,874.2	3,803.4	54.730			
8,100.0	7,659.9	8,030.1	7,659.9	41.6	39.1	-97.14	532.2	-1,894.6	3,874.2	3,803.4	54.689			
8,200.0	7,759.9	8,130.1	7,759.9	41.6	39.2	-97.14	532.2	-1,894.6	3,874.2	3,803.3	54.647			
8,300.0	7,859.9	8,230.1	7,859.9	41.6	39.2	-97.14	532.2	-1,894.6	3,874.2	3,803.3	54.605			
8,331.1	7,891.0	8,261.2	7,891.0	41.6	39.2	-97.14	532.2	-1,894.6	3,874.2	3,803.3	54.596			

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 0993-21-16W - Slot A-12
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 0993-21-16W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-46.69	55.0	-58.3	80.2			
100.0	100.0	100.0	100.0	0.4	0.4	-46.69	55.0	-58.3	80.2	79.4	101.209	
200.0	200.0	200.0	200.0	1.2	1.2	-46.69	55.0	-58.3	80.2	77.7	32.448	CC, ES
300.0	300.0	299.4	299.4	1.7	1.7	-109.18	56.0	-57.7	80.9	77.8	26.455	
400.0	399.8	398.5	398.3	3.3	3.3	-109.04	60.7	-55.1	83.9	79.8	20.334	
500.0	499.3	497.4	496.8	4.6	4.5	-108.80	69.1	-50.3	89.5	84.4	17.566	
600.0	598.3	596.1	594.5	5.6	5.6	-108.50	81.1	-43.5	97.4	91.5	16.382	
700.0	696.6	694.5	691.3	6.5	6.4	-108.14	96.7	-34.6	107.8	101.0	15.953	
800.0	794.0	792.5	786.7	7.3	7.2	-107.76	115.8	-23.8	120.5	113.0	15.929	SF
900.0	890.3	890.0	880.7	8.0	8.0	-107.36	138.3	-11.0	135.7	127.2	16.122	
1,000.0	985.3	987.0	973.0	8.7	8.6	-106.95	164.1	3.7	153.1	143.8	16.419	
1,100.0	1,078.9	1,083.4	1,063.4	9.4	9.3	-106.53	193.1	20.2	172.8	162.5	16.749	
1,200.0	1,170.9	1,179.1	1,151.8	9.9	9.9	-106.15	225.1	38.4	194.7	183.3	17.122	
1,300.0	1,262.2	1,274.2	1,237.9	10.2	10.5	-105.63	260.1	58.3	218.0	205.6	17.469	
1,400.0	1,353.4	1,368.5	1,321.6	10.5	11.1	-104.30	297.9	79.8	242.5	228.8	17.703	
1,500.0	1,444.7	1,461.8	1,402.6	10.9	11.6	-102.40	338.1	102.6	268.2	253.2	17.882	
1,600.0	1,536.0	1,553.6	1,480.5	11.2	12.0	-100.15	380.5	126.7	295.5	279.2	18.091	
1,700.0	1,627.3	1,648.3	1,559.4	11.6	12.3	-97.82	425.9	152.5	324.1	306.3	18.254	
1,800.0	1,718.6	1,743.3	1,638.7	11.9	12.6	-95.85	471.4	178.4	353.0	333.8	18.378	
1,900.0	1,809.9	1,838.4	1,718.0	12.3	13.0	-94.18	517.0	204.3	382.3	361.7	18.488	
2,000.0	1,901.1	1,933.4	1,797.3	12.7	13.3	-92.75	562.5	230.2	411.9	389.7	18.592	
2,100.0	1,992.4	2,028.5	1,876.6	13.1	13.7	-91.51	608.1	256.1	441.6	418.0	18.690	
2,200.0	2,083.7	2,123.5	1,955.9	13.5	14.0	-90.42	653.7	282.0	471.6	446.5	18.783	
2,300.0	2,175.0	2,218.6	2,035.2	14.0	14.4	-89.46	699.2	308.0	501.6	475.1	18.867	
2,400.0	2,266.3	2,313.6	2,114.5	14.4	14.8	-88.61	744.8	333.9	531.8	503.8	18.952	
2,500.0	2,357.6	2,408.7	2,193.8	14.9	15.5	-87.85	790.4	359.8	562.1	532.6	19.038	
2,600.0	2,448.9	2,503.8	2,273.1	15.4	16.4	-87.17	835.9	385.7	592.4	561.4	19.109	
2,700.0	2,540.1	2,598.8	2,352.4	16.0	17.3	-86.55	881.5	411.6	622.9	590.4	19.178	
2,800.0	2,631.4	2,693.9	2,431.7	16.7	18.2	-86.00	927.0	437.5	653.4	619.4	19.243	
2,900.0	2,722.7	2,788.9	2,511.0	17.5	19.1	-85.49	972.6	463.4	683.9	648.5	19.304	
3,000.0	2,814.0	2,884.0	2,590.3	18.2	20.0	-85.02	1,018.2	489.3	714.5	677.6	19.361	
3,100.0	2,905.3	2,979.0	2,669.6	19.0	20.9	-84.59	1,063.7	515.2	745.1	706.7	19.414	
3,200.0	2,996.6	3,074.1	2,748.9	19.7	21.8	-84.20	1,109.3	541.1	775.7	735.9	19.465	
3,300.0	3,087.8	3,169.1	2,828.2	20.4	22.7	-83.84	1,154.9	567.0	806.4	765.1	19.513	
3,400.0	3,179.1	3,264.2	2,907.5	21.2	23.6	-83.50	1,200.4	592.9	837.1	794.3	19.557	
3,500.0	3,270.4	3,359.3	2,986.8	21.9	24.5	-83.19	1,246.0	618.8	867.9	823.6	19.600	
3,600.0	3,361.7	3,454.3	3,066.1	22.7	25.4	-82.89	1,291.5	644.7	898.6	852.9	19.640	
3,700.0	3,453.0	3,549.4	3,145.4	23.4	26.3	-82.62	1,337.1	670.6	929.4	882.2	19.678	
3,800.0	3,544.3	3,644.4	3,224.7	24.2	27.2	-82.37	1,382.7	696.5	960.2	911.5	19.713	
3,900.0	3,635.6	3,739.5	3,304.0	24.9	28.1	-82.13	1,428.2	722.4	991.0	940.8	19.747	
4,000.0	3,726.8	3,834.5	3,383.3	25.7	29.0	-81.90	1,473.8	748.3	1,021.9	970.2	19.780	
4,100.0	3,818.1	3,929.6	3,462.6	26.4	29.9	-81.69	1,519.4	774.2	1,052.7	999.6	19.810	
4,200.0	3,909.4	4,024.6	3,541.9	27.2	30.8	-81.49	1,564.9	800.1	1,083.6	1,028.9	19.839	
4,300.0	4,000.7	4,119.7	3,621.2	27.9	31.7	-81.30	1,610.5	826.0	1,114.4	1,058.3	19.867	
4,400.0	4,092.0	4,214.8	3,700.5	28.7	32.6	-81.12	1,656.1	851.9	1,145.3	1,087.7	19.893	
4,500.0	4,183.3	4,309.8	3,779.8	29.4	33.5	-80.95	1,701.6	877.9	1,176.2	1,117.1	19.918	
4,600.0	4,274.5	4,404.9	3,859.1	30.2	34.4	-80.79	1,747.2	903.8	1,207.1	1,146.5	19.942	
4,700.0	4,365.8	4,499.9	3,938.4	30.9	35.3	-80.64	1,792.7	929.7	1,238.0	1,176.0	19.965	
4,800.0	4,457.1	4,595.0	4,017.7	31.7	36.2	-80.50	1,838.3	955.6	1,268.9	1,205.4	19.986	
4,900.0	4,548.4	4,690.0	4,097.0	32.4	37.1	-80.36	1,883.9	981.5	1,299.8	1,234.8	20.007	
5,000.0	4,639.7	4,785.1	4,176.3	33.1	38.0	-80.23	1,929.4	1,007.4	1,330.7	1,264.3	20.027	

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 0993-21-16W - Slot A-12
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 0993-21-16W	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	Offset		Semi Major Axis		Highside	Offset Wellbore	Centre	Distance		Separation	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)				Offset (usft)	+N/-S (usft)			+E/-W (usft)	Between Centres (usft)
5,100.0	4,731.0	4,880.1	4,255.6	33.9	38.9	-80.10	1,975.0	1,033.3	1,361.6	1,293.7	20.046		
5,200.0	4,822.3	4,975.2	4,334.9	34.6	39.8	-79.98	2,020.6	1,059.2	1,392.6	1,323.2	20.064		
5,300.0	4,913.5	5,070.3	4,414.2	35.4	40.7	-79.87	2,066.1	1,085.1	1,423.5	1,352.6	20.082		
5,400.0	5,004.8	5,165.3	4,493.5	36.1	41.6	-79.76	2,111.7	1,111.0	1,454.5	1,382.1	20.098		
5,500.0	5,096.1	5,260.4	4,572.8	36.9	42.5	-79.65	2,157.2	1,136.9	1,485.4	1,411.6	20.114		
5,600.0	5,187.4	5,355.4	4,652.1	37.6	43.4	-79.61	2,202.8	1,162.8	1,516.4	1,441.0	20.131		
5,700.0	5,279.7	5,450.2	4,731.2	38.3	44.3	-80.23	2,248.3	1,188.6	1,547.8	1,471.0	20.169		
5,800.0	5,373.5	5,544.5	4,809.8	39.0	45.2	-80.72	2,293.4	1,214.3	1,579.9	1,501.8	20.244		
5,900.0	5,468.8	5,680.3	4,924.2	39.5	46.5	-80.89	2,357.2	1,250.6	1,612.1	1,532.2	20.180		
6,000.0	5,565.3	5,858.2	5,079.8	40.0	48.0	-80.84	2,432.0	1,293.1	1,640.9	1,558.7	19.979		
6,100.0	5,662.9	6,042.5	5,247.6	40.3	49.3	-80.80	2,498.2	1,330.7	1,665.4	1,581.3	19.812		
6,200.0	5,761.3	6,232.4	5,426.3	40.7	50.4	-80.76	2,553.9	1,362.4	1,685.4	1,599.8	19.686		
6,300.0	5,860.4	6,427.1	5,614.4	40.9	51.2	-80.72	2,597.5	1,387.2	1,700.6	1,613.9	19.607		
6,400.0	5,960.0	6,625.4	5,809.6	41.1	51.8	-80.70	2,627.4	1,404.2	1,710.8	1,623.5	19.578		
6,500.0	6,059.9	6,825.9	6,009.2	41.1	52.1	-80.70	2,642.7	1,412.9	1,716.0	1,628.4	19.603		
6,600.0	6,159.9	6,976.6	6,159.9	41.2	52.2	-18.18	2,644.6	1,414.0	1,716.6	1,629.2	19.639		
6,700.0	6,259.9	7,076.6	6,259.9	41.2	52.2	-18.18	2,644.6	1,414.0	1,716.6	1,629.2	19.629		
6,800.0	6,359.9	7,176.6	6,359.9	41.2	52.2	-18.18	2,644.6	1,414.0	1,716.6	1,629.1	19.618		
6,900.0	6,459.9	7,276.6	6,459.9	41.3	52.2	-18.18	2,644.6	1,414.0	1,716.6	1,629.1	19.606		
7,000.0	6,559.9	7,376.6	6,559.9	41.3	52.2	-18.18	2,644.6	1,414.0	1,716.6	1,629.0	19.595		
7,100.0	6,659.9	7,476.6	6,659.9	41.3	52.2	-18.18	2,644.6	1,414.0	1,716.6	1,629.0	19.584		
7,200.0	6,759.9	7,576.6	6,759.9	41.3	52.3	-18.18	2,644.6	1,414.0	1,716.6	1,628.9	19.573		
7,300.0	6,859.9	7,676.6	6,859.9	41.4	52.3	-18.18	2,644.6	1,414.0	1,716.6	1,628.9	19.561		
7,400.0	6,959.9	7,776.6	6,959.9	41.4	52.3	-18.18	2,644.6	1,414.0	1,716.6	1,628.8	19.550		
7,500.0	7,059.9	7,876.6	7,059.9	41.4	52.3	-18.18	2,644.6	1,414.0	1,716.6	1,628.7	19.538		
7,600.0	7,159.9	7,976.6	7,159.9	41.4	52.3	-18.18	2,644.6	1,414.0	1,716.6	1,628.7	19.527		
7,700.0	7,259.9	8,076.6	7,259.9	41.5	52.3	-18.18	2,644.6	1,414.0	1,716.6	1,628.6	19.515		
7,800.0	7,359.9	8,176.6	7,359.9	41.5	52.4	-18.18	2,644.6	1,414.0	1,716.6	1,628.6	19.504		
7,900.0	7,459.9	8,276.6	7,459.9	41.5	52.4	-18.18	2,644.6	1,414.0	1,716.6	1,628.5	19.492		
8,000.0	7,559.9	8,376.6	7,559.9	41.5	52.4	-18.18	2,644.6	1,414.0	1,716.6	1,628.5	19.480		
8,100.0	7,659.9	8,476.6	7,659.9	41.6	52.4	-18.18	2,644.6	1,414.0	1,716.6	1,628.4	19.469		
8,200.0	7,759.9	8,576.6	7,759.9	41.6	52.4	-18.18	2,644.6	1,414.0	1,716.6	1,628.4	19.457		
8,300.0	7,859.9	8,676.6	7,859.9	41.6	52.5	-18.18	2,644.6	1,414.0	1,716.6	1,628.3	19.445		
8,331.1	7,891.0	8,707.7	7,891.0	41.6	52.5	-18.18	2,644.6	1,414.0	1,716.6	1,628.3	19.442		

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 0993-21-16W - Slot A-12
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 0993-21-16W	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 Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-46.78	43.9	-46.7	64.1			
100.0	100.0	100.0	100.0	0.4	0.4	-46.78	43.9	-46.7	64.1	63.3	80.900	
200.0	200.0	200.0	200.0	1.2	1.2	-46.78	43.9	-46.7	64.1	61.6	25.937	CC
300.0	300.0	299.5	299.5	1.7	2.4	-108.42	45.7	-45.5	64.8	61.5	19.704	ES
400.0	399.8	399.0	398.7	3.3	3.9	-107.31	51.0	-41.8	67.7	63.4	15.767	
500.0	499.3	498.3	497.4	4.6	5.0	-106.18	59.9	-35.8	72.6	67.5	14.050	
600.0	598.3	597.3	595.3	5.6	6.0	-105.13	72.2	-27.3	79.7	73.7	13.373	
700.0	696.6	696.1	692.2	6.5	6.8	-104.20	88.0	-16.5	88.9	82.1	13.212	SF
800.0	794.0	794.5	787.8	7.3	7.6	-103.40	107.1	-3.4	100.1	92.6	13.329	
900.0	890.3	892.5	882.0	8.0	8.3	-102.72	129.6	11.9	113.4	105.0	13.587	
1,000.0	985.3	990.0	974.5	8.7	8.9	-102.14	155.1	29.4	128.6	119.4	13.902	
1,100.0	1,078.9	1,087.1	1,065.1	9.4	9.6	-101.63	183.8	49.1	145.8	135.6	14.218	
1,200.0	1,170.9	1,183.6	1,153.7	9.9	10.2	-101.23	215.4	70.7	164.9	153.6	14.544	
1,300.0	1,262.2	1,279.6	1,240.1	10.2	10.8	-100.54	249.9	94.3	185.4	172.9	14.812	
1,400.0	1,353.4	1,374.8	1,324.0	10.5	11.4	-98.90	287.0	119.7	207.1	193.2	14.973	
1,500.0	1,444.7	1,471.0	1,407.3	10.9	11.8	-96.80	326.7	146.8	229.8	214.6	15.102	
1,600.0	1,536.0	1,568.0	1,491.2	11.2	12.1	-95.02	366.9	174.4	252.9	236.3	15.201	
1,700.0	1,627.3	1,665.0	1,575.1	11.6	12.4	-93.53	407.1	201.9	276.2	258.2	15.283	
1,800.0	1,718.6	1,762.0	1,659.0	11.9	12.8	-92.28	447.3	229.4	299.7	280.2	15.352	
1,900.0	1,809.9	1,859.1	1,742.9	12.3	13.1	-91.21	487.5	256.9	323.3	302.3	15.412	
2,000.0	1,901.1	1,956.1	1,826.8	12.7	13.5	-90.28	527.8	284.4	346.9	324.5	15.465	
2,100.0	1,992.4	2,053.1	1,910.7	13.1	13.8	-89.47	568.0	312.0	370.6	346.7	15.512	
2,200.0	2,083.7	2,150.1	1,994.6	13.5	14.2	-88.76	608.2	339.5	394.4	369.1	15.553	
2,300.0	2,175.0	2,247.1	2,078.4	14.0	14.6	-88.13	648.4	367.0	418.3	391.5	15.590	
2,400.0	2,266.3	2,344.2	2,162.3	14.4	15.0	-87.56	688.6	394.5	442.2	413.9	15.620	
2,500.0	2,357.6	2,441.2	2,246.2	14.9	15.5	-87.06	728.8	422.0	466.1	436.4	15.675	
2,600.0	2,448.9	2,538.2	2,330.1	15.4	16.3	-86.60	769.0	449.6	490.0	458.8	15.694	
2,700.0	2,540.1	2,635.2	2,414.0	16.0	17.1	-86.19	809.3	477.1	514.0	481.3	15.718	
2,800.0	2,631.4	2,732.2	2,497.9	16.7	17.9	-85.81	849.5	504.6	538.0	503.8	15.741	
2,900.0	2,722.7	2,829.2	2,581.8	17.5	18.8	-85.47	889.7	532.1	562.1	526.4	15.763	
3,000.0	2,814.0	2,926.3	2,665.7	18.2	19.6	-85.15	929.9	559.7	586.1	549.0	15.784	
3,100.0	2,905.3	3,023.3	2,749.6	19.0	20.4	-84.86	970.1	587.2	610.1	571.5	15.803	
3,200.0	2,996.6	3,120.3	2,833.5	19.7	21.3	-84.59	1,010.3	614.7	634.2	594.1	15.820	
3,300.0	3,087.8	3,217.3	2,917.4	20.4	22.1	-84.34	1,050.5	642.2	658.3	616.7	15.836	
3,400.0	3,179.1	3,314.3	3,001.3	21.2	23.0	-84.11	1,090.8	669.7	682.4	639.3	15.851	
3,500.0	3,270.4	3,411.4	3,085.2	21.9	23.8	-83.90	1,131.0	697.3	706.5	662.0	15.865	
3,600.0	3,361.7	3,508.4	3,169.1	22.7	24.6	-83.69	1,171.2	724.8	730.6	684.6	15.878	
3,700.0	3,453.0	3,605.4	3,252.9	23.4	25.5	-83.50	1,211.4	752.3	754.7	707.2	15.891	
3,800.0	3,544.3	3,702.4	3,336.8	24.2	26.3	-83.33	1,251.6	779.8	778.9	729.9	15.902	
3,900.0	3,635.6	3,799.4	3,420.7	24.9	27.2	-83.16	1,291.8	807.3	803.0	752.5	15.913	
4,000.0	3,726.8	3,896.4	3,504.6	25.7	28.0	-83.00	1,332.0	834.9	827.1	775.2	15.923	
4,100.0	3,818.1	3,993.5	3,588.5	26.4	28.9	-82.86	1,372.3	862.4	851.3	797.8	15.932	
4,200.0	3,909.4	4,090.5	3,672.4	27.2	29.7	-82.72	1,412.5	889.9	875.4	820.5	15.941	
4,300.0	4,000.7	4,187.5	3,756.3	27.9	30.6	-82.58	1,452.7	917.4	899.6	843.2	15.949	
4,400.0	4,092.0	4,284.5	3,840.2	28.7	31.4	-82.46	1,492.9	944.9	923.7	865.9	15.957	
4,500.0	4,183.3	4,381.5	3,924.1	29.4	32.3	-82.34	1,533.1	972.5	947.9	888.5	15.965	
4,600.0	4,274.5	4,478.6	4,008.0	30.2	33.1	-82.23	1,573.3	1,000.0	972.1	911.2	15.972	
4,700.0	4,365.8	4,575.6	4,091.9	30.9	33.9	-82.12	1,613.5	1,027.5	996.2	933.9	15.978	
4,800.0	4,457.1	4,672.6	4,175.8	31.7	34.8	-82.02	1,653.8	1,055.0	1,020.4	956.6	15.984	
4,900.0	4,548.4	4,769.6	4,259.7	32.4	35.6	-81.92	1,694.0	1,082.5	1,044.6	979.3	15.990	
5,000.0	4,639.7	4,866.6	4,343.6	33.1	36.5	-81.82	1,734.2	1,110.1	1,068.8	1,002.0	15.996	

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



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-16W - Slot A-12
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 0993-21-16W	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 Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
				Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,731.0	4,963.7	4,427.4	33.9	37.3	-81.74	1,774.4	1,137.6	1,093.0	1,024.7	16.001		
5,200.0	4,822.3	5,060.7	4,511.3	34.6	38.2	-81.65	1,814.6	1,165.1	1,117.1	1,047.4	16.007		
5,300.0	4,913.5	5,157.7	4,595.2	35.4	39.0	-81.57	1,854.8	1,192.6	1,141.3	1,070.1	16.011		
5,400.0	5,004.8	5,254.7	4,679.1	36.1	39.9	-81.49	1,895.0	1,220.1	1,165.5	1,092.8	16.016		
5,500.0	5,096.1	5,351.7	4,763.0	36.9	40.7	-81.41	1,935.3	1,247.7	1,189.7	1,115.5	16.020		
5,600.0	5,187.4	5,448.7	4,846.9	37.6	41.6	-81.39	1,975.5	1,275.2	1,213.9	1,138.2	16.025		
5,700.0	5,279.7	5,545.6	4,930.7	38.3	42.4	-81.83	2,015.6	1,302.7	1,238.5	1,161.3	16.048		
5,800.0	5,373.5	5,670.4	5,039.5	39.0	43.5	-82.02	2,066.1	1,337.2	1,263.0	1,184.1	16.007		
5,900.0	5,468.8	5,812.7	5,167.2	39.5	44.6	-82.13	2,117.7	1,372.5	1,284.9	1,204.2	15.922		
6,000.0	5,565.3	5,957.4	5,300.9	40.0	45.5	-82.23	2,163.4	1,403.8	1,304.0	1,221.7	15.851		
6,100.0	5,662.9	6,104.4	5,440.0	40.3	46.3	-82.31	2,202.6	1,430.6	1,320.1	1,236.5	15.795		
6,200.0	5,761.3	6,253.3	5,583.7	40.7	47.0	-82.37	2,234.8	1,452.6	1,333.1	1,248.4	15.756		
6,300.0	5,860.4	6,403.7	5,731.1	40.9	47.5	-82.43	2,259.3	1,469.4	1,342.9	1,257.5	15.732		
6,400.0	5,960.0	6,555.3	5,881.3	41.1	47.8	-82.46	2,276.0	1,480.8	1,349.5	1,263.7	15.727		
6,500.0	6,059.9	6,707.5	6,033.1	41.1	48.0	-82.49	2,284.4	1,486.6	1,352.8	1,266.8	15.736		
6,600.0	6,159.9	6,834.3	6,159.9	41.2	48.1	-19.97	2,285.5	1,487.4	1,353.2	1,267.3	15.749		
6,700.0	6,259.9	6,934.3	6,259.9	41.2	48.1	-19.97	2,285.5	1,487.4	1,353.2	1,267.2	15.740		
6,800.0	6,359.9	7,034.3	6,359.9	41.2	48.1	-19.97	2,285.5	1,487.4	1,353.2	1,267.2	15.731		
6,900.0	6,459.9	7,134.3	6,459.9	41.3	48.1	-19.97	2,285.5	1,487.4	1,353.2	1,267.1	15.722		
7,000.0	6,559.9	7,234.3	6,559.9	41.3	48.2	-19.97	2,285.5	1,487.4	1,353.2	1,267.1	15.713		
7,100.0	6,659.9	7,334.3	6,659.9	41.3	48.2	-19.97	2,285.5	1,487.4	1,353.2	1,267.0	15.703		
7,200.0	6,759.9	7,434.3	6,759.9	41.3	48.2	-19.97	2,285.5	1,487.4	1,353.2	1,267.0	15.694		
7,300.0	6,859.9	7,534.3	6,859.9	41.4	48.2	-19.97	2,285.5	1,487.4	1,353.2	1,266.9	15.684		
7,400.0	6,959.9	7,634.3	6,959.9	41.4	48.2	-19.97	2,285.5	1,487.4	1,353.2	1,266.9	15.675		
7,500.0	7,059.9	7,734.3	7,059.9	41.4	48.2	-19.97	2,285.5	1,487.4	1,353.2	1,266.8	15.666		
7,600.0	7,159.9	7,834.3	7,159.9	41.4	48.3	-19.97	2,285.5	1,487.4	1,353.2	1,266.8	15.656		
7,700.0	7,259.9	7,934.3	7,259.9	41.5	48.3	-19.97	2,285.5	1,487.4	1,353.2	1,266.7	15.646		
7,800.0	7,359.9	8,034.3	7,359.9	41.5	48.3	-19.97	2,285.5	1,487.4	1,353.2	1,266.7	15.637		
7,900.0	7,459.9	8,134.3	7,459.9	41.5	48.3	-19.97	2,285.5	1,487.4	1,353.2	1,266.6	15.627		
8,000.0	7,559.9	8,234.3	7,559.9	41.5	48.3	-19.97	2,285.5	1,487.4	1,353.2	1,266.5	15.618		
8,100.0	7,659.9	8,334.3	7,659.9	41.6	48.4	-19.97	2,285.5	1,487.4	1,353.2	1,266.5	15.608		
8,200.0	7,759.9	8,434.3	7,759.9	41.6	48.4	-19.97	2,285.5	1,487.4	1,353.2	1,266.4	15.598		
8,300.0	7,859.9	8,534.3	7,859.9	41.6	48.4	-19.97	2,285.5	1,487.4	1,353.2	1,266.4	15.589		
8,303.2	7,863.1	8,537.5	7,863.1	41.6	48.4	-19.97	2,285.5	1,487.4	1,353.2	1,266.4	15.589		
8,331.1	7,891.0	8,560.4	7,886.0	41.6	48.4	-19.97	2,285.5	1,487.4	1,353.2	1,266.4	15.581		

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 0993-21-16W - Slot A-12
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 0993-21-16W	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 Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-46.97	32.8	-35.1	48.0			
100.0	100.0	100.0	100.0	0.4	0.4	-46.97	32.8	-35.1	48.0	47.2	60.645	
200.0	200.0	200.0	200.0	1.2	1.2	-46.97	32.8	-35.1	48.0	45.6	19.443	CC
300.0	300.0	300.1	300.0	1.7	2.4	-108.28	34.3	-33.6	48.4	45.1	14.920	ES
400.0	399.8	400.1	399.8	3.3	3.9	-106.67	38.9	-28.9	49.9	45.7	11.961	
500.0	499.3	500.0	499.1	4.6	5.0	-104.97	46.5	-21.1	52.8	47.8	10.628	
600.0	598.3	599.8	597.8	5.6	6.0	-103.30	57.1	-10.2	56.9	51.3	10.040	
700.0	696.6	699.4	695.5	6.5	6.8	-101.75	70.6	3.7	62.4	56.0	9.804	
800.0	794.0	798.9	792.1	7.3	7.6	-100.38	87.1	20.6	69.1	62.0	9.742	SF
900.0	890.3	898.3	887.5	8.0	8.3	-99.20	106.5	40.4	77.1	69.2	9.759	
1,000.0	985.3	997.4	981.4	8.7	9.0	-98.21	128.7	63.2	86.3	77.5	9.799	
1,100.0	1,078.9	1,096.3	1,073.6	9.4	9.6	-97.37	153.6	88.8	96.7	86.9	9.832	
1,200.0	1,170.9	1,195.0	1,164.0	9.9	10.3	-96.68	181.2	117.1	108.3	97.3	9.869	
1,300.0	1,262.2	1,293.3	1,252.3	10.2	10.8	-95.15	211.4	148.1	120.8	108.5	9.863	
1,400.0	1,353.4	1,391.1	1,338.2	10.5	11.4	-92.15	244.1	181.5	134.2	120.5	9.803	
1,500.0	1,444.7	1,488.9	1,422.3	10.9	11.7	-88.35	278.9	217.2	149.0	133.8	9.784	
1,600.0	1,536.0	1,587.3	1,506.7	11.2	12.0	-85.07	314.2	253.4	164.5	147.6	9.764	
1,700.0	1,627.3	1,685.7	1,591.1	11.6	12.4	-82.36	349.5	289.6	180.4	161.9	9.773	
1,800.0	1,718.6	1,784.1	1,675.5	11.9	12.7	-80.09	384.8	325.8	196.6	176.6	9.806	
1,900.0	1,809.9	1,882.5	1,760.0	12.3	13.1	-78.17	420.1	362.0	213.1	191.5	9.856	
2,000.0	1,901.1	1,980.8	1,844.4	12.7	13.4	-76.52	455.4	398.2	229.8	206.7	9.917	
2,100.0	1,992.4	2,079.2	1,928.8	13.1	13.8	-75.10	490.7	434.4	246.7	222.0	9.983	
2,200.0	2,083.7	2,177.6	2,013.2	13.5	14.2	-73.85	526.0	470.6	263.7	237.4	10.052	
2,300.0	2,175.0	2,276.0	2,097.6	14.0	14.6	-72.76	561.3	506.8	280.8	253.0	10.117	
2,400.0	2,266.3	2,374.4	2,182.0	14.4	15.4	-71.80	596.6	543.0	298.0	268.7	10.197	
2,500.0	2,357.6	2,472.8	2,266.4	14.9	16.3	-70.94	631.9	579.2	315.2	284.5	10.261	
2,600.0	2,448.9	2,571.2	2,350.8	15.4	17.2	-70.17	667.2	615.4	332.5	300.3	10.326	
2,700.0	2,540.1	2,669.6	2,435.2	16.0	18.1	-69.47	702.5	651.6	349.9	316.2	10.389	
2,800.0	2,631.4	2,768.0	2,519.7	16.7	19.0	-68.84	737.8	687.8	367.3	332.2	10.448	
2,900.0	2,722.7	2,866.4	2,604.1	17.5	19.9	-68.27	773.1	724.0	384.8	348.1	10.505	
3,000.0	2,814.0	2,964.8	2,688.5	18.2	20.8	-67.75	808.4	760.2	402.3	364.2	10.560	
3,100.0	2,905.3	3,063.2	2,772.9	19.0	21.7	-67.27	843.7	796.4	419.8	380.2	10.611	
3,200.0	2,996.6	3,161.6	2,857.3	19.7	22.7	-66.83	879.0	832.5	437.3	396.3	10.660	
3,300.0	3,087.8	3,260.0	2,941.7	20.4	23.6	-66.42	914.3	868.7	454.9	412.4	10.707	
3,400.0	3,179.1	3,358.4	3,026.1	21.2	24.5	-66.04	949.6	904.9	472.5	428.5	10.751	
3,500.0	3,270.4	3,456.8	3,110.5	21.9	25.4	-65.69	984.9	941.1	490.1	444.7	10.793	
3,600.0	3,361.7	3,555.2	3,194.9	22.7	26.3	-65.37	1,020.2	977.3	507.7	460.8	10.833	
3,700.0	3,453.0	3,653.6	3,279.4	23.4	27.2	-65.07	1,055.5	1,013.5	525.4	477.0	10.871	
3,800.0	3,544.3	3,752.0	3,363.8	24.2	28.1	-64.78	1,090.8	1,049.7	543.0	493.2	10.907	
3,900.0	3,635.6	3,850.4	3,448.2	24.9	29.0	-64.52	1,126.1	1,085.9	560.7	509.4	10.941	
4,000.0	3,726.8	3,948.8	3,532.6	25.7	29.9	-64.27	1,161.4	1,122.1	578.3	525.6	10.974	
4,100.0	3,818.1	4,047.1	3,617.0	26.4	30.9	-64.03	1,196.7	1,158.3	596.0	541.9	11.005	
4,200.0	3,909.4	4,145.5	3,701.4	27.2	31.8	-63.81	1,232.0	1,194.5	613.7	558.1	11.035	
4,300.0	4,000.7	4,243.9	3,785.8	27.9	32.7	-63.60	1,267.3	1,230.7	631.4	574.3	11.063	
4,400.0	4,092.0	4,342.3	3,870.2	28.7	33.6	-63.40	1,302.6	1,266.9	649.1	590.6	11.090	
4,500.0	4,183.3	4,440.7	3,954.6	29.4	34.5	-63.22	1,337.9	1,303.1	666.8	606.9	11.116	
4,600.0	4,274.5	4,539.1	4,039.1	30.2	35.4	-63.04	1,373.2	1,339.3	684.6	623.1	11.141	
4,700.0	4,365.8	4,637.5	4,123.5	30.9	36.3	-62.87	1,408.5	1,375.5	702.3	639.4	11.165	
4,800.0	4,457.1	4,735.9	4,207.9	31.7	37.3	-62.71	1,443.8	1,411.7	720.0	655.7	11.187	
4,900.0	4,548.4	4,834.3	4,292.3	32.4	38.2	-62.56	1,479.1	1,447.9	737.8	672.0	11.209	
5,000.0	4,639.7	4,932.7	4,376.7	33.1	39.1	-62.41	1,514.4	1,484.1	755.5	688.2	11.230	

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 0993-21-16W - Slot A-12
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 0993-21-16W	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		Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,731.0	5,031.1	4,461.1	33.9	40.0	-62.27	1,549.7	1,520.3	773.3	704.5	11.250		
5,200.0	4,822.3	5,129.5	4,545.5	34.6	40.9	-62.14	1,585.0	1,556.5	791.0	720.8	11.269		
5,300.0	4,913.5	5,227.9	4,629.9	35.4	41.8	-62.02	1,620.3	1,592.7	808.8	737.1	11.288		
5,400.0	5,004.8	5,326.3	4,714.3	36.1	42.8	-61.89	1,655.6	1,628.9	826.5	753.4	11.305		
5,500.0	5,096.1	5,424.7	4,798.8	36.9	43.7	-61.78	1,690.9	1,665.1	844.3	769.7	11.323		
5,600.0	5,187.4	5,523.1	4,883.2	37.6	44.6	-61.70	1,726.2	1,701.3	862.1	786.1	11.340		
5,700.0	5,279.7	5,633.8	4,978.4	38.3	45.6	-61.85	1,765.7	1,741.7	880.8	803.2	11.349		
5,800.0	5,373.5	5,768.2	5,097.0	39.0	46.7	-61.88	1,809.8	1,786.9	898.4	819.0	11.311		
5,900.0	5,468.8	5,904.3	5,220.7	39.5	47.8	-61.92	1,849.5	1,827.6	914.0	833.0	11.278		
6,000.0	5,565.3	6,041.9	5,348.9	40.0	48.6	-61.95	1,884.3	1,863.3	927.6	845.2	11.257		
6,100.0	5,662.9	6,180.7	5,481.0	40.3	49.4	-61.98	1,913.9	1,893.7	939.0	855.5	11.244		
6,200.0	5,761.3	6,320.7	5,616.6	40.7	49.9	-62.00	1,938.0	1,918.4	948.2	863.9	11.243		
6,300.0	5,860.4	6,461.5	5,754.9	40.9	50.4	-62.02	1,956.4	1,937.3	955.2	870.3	11.252		
6,400.0	5,960.0	6,603.0	5,895.2	41.1	50.7	-62.03	1,968.9	1,950.1	959.9	874.7	11.270		
6,500.0	6,059.9	6,744.8	6,036.8	41.1	50.9	-62.04	1,975.4	1,956.7	962.3	877.2	11.302		
6,600.0	6,159.9	6,868.0	6,159.9	41.2	50.9	0.48	1,976.3	1,957.7	962.7	877.7	11.328		
6,700.0	6,259.9	6,968.0	6,259.9	41.2	50.9	0.48	1,976.3	1,957.7	962.7	877.6	11.321		
6,800.0	6,359.9	7,068.0	6,359.9	41.2	50.9	0.48	1,976.3	1,957.7	962.7	877.6	11.314		
6,900.0	6,459.9	7,168.0	6,459.9	41.3	51.0	0.48	1,976.3	1,957.7	962.7	877.5	11.307		
7,000.0	6,559.9	7,268.0	6,559.9	41.3	51.0	0.48	1,976.3	1,957.7	962.7	877.5	11.300		
7,100.0	6,659.9	7,368.0	6,659.9	41.3	51.0	0.48	1,976.3	1,957.7	962.7	877.4	11.292		
7,200.0	6,759.9	7,468.0	6,759.9	41.3	51.0	0.48	1,976.3	1,957.7	962.7	877.4	11.285		
7,300.0	6,859.9	7,568.0	6,859.9	41.4	51.0	0.48	1,976.3	1,957.7	962.7	877.3	11.278		
7,400.0	6,959.9	7,668.0	6,959.9	41.4	51.1	0.48	1,976.3	1,957.7	962.7	877.2	11.270		
7,500.0	7,059.9	7,768.0	7,059.9	41.4	51.1	0.48	1,976.3	1,957.7	962.7	877.2	11.263		
7,600.0	7,159.9	7,868.0	7,159.9	41.4	51.1	0.48	1,976.3	1,957.7	962.7	877.1	11.256		
7,700.0	7,259.9	7,968.0	7,259.9	41.5	51.1	0.48	1,976.3	1,957.7	962.7	877.1	11.248		
7,800.0	7,359.9	8,068.0	7,359.9	41.5	51.1	0.48	1,976.3	1,957.7	962.7	877.0	11.241		
7,900.0	7,459.9	8,168.0	7,459.9	41.5	51.2	0.48	1,976.3	1,957.7	962.7	877.0	11.233		
8,000.0	7,559.9	8,268.0	7,559.9	41.5	51.2	0.48	1,976.3	1,957.7	962.7	876.9	11.226		
8,100.0	7,659.9	8,368.0	7,659.9	41.6	51.2	0.48	1,976.3	1,957.7	962.7	876.9	11.218		
8,200.0	7,759.9	8,468.0	7,759.9	41.6	51.2	0.48	1,976.3	1,957.7	962.7	876.8	11.211		
8,300.0	7,859.9	8,568.0	7,859.9	41.6	51.2	0.48	1,976.3	1,957.7	962.7	876.7	11.203		
8,331.1	7,891.0	8,599.1	7,891.0	41.6	51.2	0.48	1,976.3	1,957.7	962.7	876.7	11.202		

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 0993-21-16W - Slot A-12
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 0993-21-16W	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 0993-21-14W - OH - Design #1											Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore 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	-47.10	21.8	-23.5	32.1			
100.0	100.0	100.0	100.0	0.4	0.4	-47.10	21.8	-23.5	32.1	31.3	40.514	
200.0	200.0	200.0	200.0	1.2	1.2	-47.10	21.8	-23.5	32.1	29.6	12.989	CC
300.0	300.0	300.1	300.1	1.7	1.7	-109.51	22.6	-22.6	32.3	29.3	10.628	ES
400.0	399.8	400.3	400.1	3.3	3.3	-109.01	26.1	-18.3	33.4	29.4	8.255	
500.0	499.3	500.5	499.8	4.6	4.6	-108.19	32.4	-10.7	35.4	30.5	7.191	
600.0	598.3	600.6	598.9	5.6	5.6	-107.15	41.4	0.2	38.3	32.6	6.751	
700.0	696.6	700.7	697.3	6.5	6.5	-106.00	53.1	14.5	42.1	35.7	6.604	
800.0	794.0	800.7	794.6	7.3	7.3	-104.83	67.5	32.0	46.8	39.7	6.602	SF
900.0	890.3	900.6	890.9	8.0	8.0	-103.70	84.7	52.8	52.3	44.5	6.664	
1,000.0	985.3	1,000.5	985.8	8.7	8.7	-102.65	104.4	76.8	58.8	50.0	6.741	
1,100.0	1,078.9	1,100.3	1,079.1	9.4	9.4	-101.68	126.8	104.0	66.1	56.3	6.804	
1,200.0	1,170.9	1,199.9	1,170.8	9.9	10.0	-100.81	151.6	134.2	74.2	63.4	6.862	
1,300.0	1,262.2	1,299.4	1,260.5	10.2	10.6	-98.43	179.0	167.4	82.7	70.7	6.898	
1,400.0	1,353.4	1,398.6	1,348.1	10.5	11.0	-93.95	208.5	203.4	91.8	78.5	6.898	
1,500.0	1,444.7	1,497.9	1,435.3	10.9	11.3	-89.72	238.7	240.0	101.6	86.7	6.848	
1,600.0	1,536.0	1,597.1	1,522.5	11.2	11.7	-86.24	268.8	276.7	111.7	95.3	6.804	
1,700.0	1,627.3	1,696.4	1,609.6	11.6	12.0	-83.35	299.0	313.3	122.3	104.2	6.783	
1,800.0	1,718.6	1,795.7	1,696.8	11.9	12.4	-80.92	329.2	350.0	133.0	113.4	6.782	
1,900.0	1,809.9	1,895.0	1,784.0	12.3	12.7	-78.86	359.3	386.6	144.0	122.8	6.797	
2,000.0	1,901.1	1,994.2	1,871.2	12.7	13.1	-77.09	389.5	423.3	155.2	132.4	6.821	
2,100.0	1,992.4	2,093.5	1,958.4	13.1	13.5	-75.56	419.7	460.0	166.4	142.2	6.853	
2,200.0	2,083.7	2,192.8	2,045.6	13.5	13.9	-74.22	449.8	496.6	177.8	152.0	6.889	
2,300.0	2,175.0	2,292.0	2,132.8	14.0	14.3	-73.05	480.0	533.3	189.3	161.9	6.927	
2,400.0	2,266.3	2,391.3	2,219.9	14.4	14.9	-72.00	510.1	569.9	200.8	172.0	6.967	
2,500.0	2,357.6	2,490.6	2,307.1	14.9	15.7	-71.08	540.3	606.6	212.4	182.1	7.006	
2,600.0	2,448.9	2,589.9	2,394.3	15.4	16.5	-70.24	570.5	643.2	224.0	192.2	7.044	
2,700.0	2,540.1	2,689.1	2,481.5	16.0	17.4	-69.50	600.6	679.9	235.7	202.4	7.082	
2,800.0	2,631.4	2,788.4	2,568.7	16.7	18.3	-68.82	630.8	716.5	247.4	212.7	7.119	
2,900.0	2,722.7	2,887.7	2,655.9	17.5	19.1	-68.20	661.0	753.2	259.2	222.9	7.154	
3,000.0	2,814.0	2,986.9	2,743.1	18.2	20.0	-67.64	691.1	789.9	270.9	233.2	7.188	
3,100.0	2,905.3	3,086.2	2,830.2	19.0	20.8	-67.12	721.3	826.5	282.7	243.6	7.221	
3,200.0	2,996.6	3,185.5	2,917.4	19.7	21.7	-66.64	751.4	863.2	294.5	253.9	7.252	
3,300.0	3,087.8	3,284.8	3,004.6	20.4	22.5	-66.20	781.6	899.8	306.4	264.3	7.282	
3,400.0	3,179.1	3,384.0	3,091.8	21.2	23.4	-65.80	811.8	936.5	318.2	274.7	7.311	
3,500.0	3,270.4	3,483.3	3,179.0	21.9	24.3	-65.42	841.9	973.1	330.1	285.1	7.338	
3,600.0	3,361.7	3,582.6	3,266.2	22.7	25.1	-65.07	872.1	1,009.8	342.0	295.5	7.364	
3,700.0	3,453.0	3,681.8	3,353.3	23.4	26.0	-64.74	902.3	1,046.4	353.9	306.0	7.389	
3,800.0	3,544.3	3,781.1	3,440.5	24.2	26.8	-64.44	932.4	1,083.1	365.8	316.4	7.413	
3,900.0	3,635.6	3,880.4	3,527.7	24.9	27.7	-64.15	962.6	1,119.8	377.7	326.9	7.435	
4,000.0	3,726.8	3,979.7	3,614.9	25.7	28.6	-63.88	992.7	1,156.4	389.6	337.3	7.457	
4,100.0	3,818.1	4,078.9	3,702.1	26.4	29.4	-63.63	1,022.9	1,193.1	401.5	347.8	7.478	
4,200.0	3,909.4	4,178.2	3,789.3	27.2	30.3	-63.39	1,053.1	1,229.7	413.4	358.3	7.498	
4,300.0	4,000.7	4,277.5	3,876.5	27.9	31.2	-63.16	1,083.2	1,266.4	425.4	368.8	7.517	
4,400.0	4,092.0	4,376.7	3,963.6	28.7	32.0	-62.95	1,113.4	1,303.0	437.3	379.3	7.535	
4,500.0	4,183.3	4,476.0	4,050.8	29.4	32.9	-62.75	1,143.6	1,339.7	449.3	389.8	7.552	
4,600.0	4,274.5	4,575.3	4,138.0	30.2	33.7	-62.56	1,173.7	1,376.4	461.2	400.3	7.569	
4,700.0	4,365.8	4,674.5	4,225.2	30.9	34.6	-62.38	1,203.9	1,413.0	473.2	410.8	7.585	
4,800.0	4,457.1	4,773.8	4,312.4	31.7	35.5	-62.20	1,234.0	1,449.7	485.2	421.3	7.600	
4,900.0	4,548.4	4,873.1	4,399.6	32.4	36.3	-62.04	1,264.2	1,486.3	497.1	431.9	7.615	
5,000.0	4,639.7	4,972.4	4,486.8	33.1	37.2	-61.88	1,294.4	1,523.0	509.1	442.4	7.629	

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



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-16W - Slot A-12
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 0993-21-16W	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 0993-21-14W - OH - Design #1											Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		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	4,731.0	5,071.6	4,573.9	33.9	38.1	-61.73	1,324.5	1,559.6	521.1	452.9	7.643	
5,200.0	4,822.3	5,170.9	4,661.1	34.6	38.9	-61.59	1,354.7	1,596.3	533.1	463.5	7.656	
5,300.0	4,913.5	5,270.2	4,748.3	35.4	39.8	-61.46	1,384.9	1,632.9	545.1	474.0	7.668	
5,400.0	5,004.8	5,369.4	4,835.5	36.1	40.7	-61.32	1,415.0	1,669.6	557.1	484.5	7.681	
5,500.0	5,096.1	5,468.7	4,922.7	36.9	41.5	-61.20	1,445.2	1,706.3	569.0	495.1	7.692	
5,600.0	5,187.4	5,568.0	5,009.9	37.6	42.4	-61.10	1,475.3	1,742.9	581.0	505.6	7.704	
5,700.0	5,279.7	5,684.7	5,113.5	38.3	43.3	-61.15	1,509.4	1,784.3	592.9	515.9	7.694	
5,800.0	5,373.5	5,804.1	5,222.3	39.0	44.2	-61.20	1,540.8	1,822.4	603.6	525.0	7.678	
5,900.0	5,468.8	5,924.2	5,334.0	39.5	45.0	-61.24	1,568.7	1,856.3	613.1	533.1	7.668	
6,000.0	5,565.3	6,044.9	5,448.5	40.0	45.7	-61.28	1,592.9	1,885.7	621.3	540.2	7.661	
6,100.0	5,662.9	6,166.0	5,565.3	40.3	46.2	-61.32	1,613.3	1,910.6	628.1	546.1	7.659	
6,200.0	5,761.3	6,287.6	5,684.0	40.7	46.7	-61.34	1,629.8	1,930.7	633.6	550.9	7.660	
6,300.0	5,860.4	6,409.4	5,804.2	40.9	47.0	-61.37	1,642.4	1,945.9	637.8	554.6	7.665	
6,400.0	5,960.0	6,531.5	5,925.6	41.1	47.3	-61.38	1,650.8	1,956.2	640.6	557.1	7.675	
6,500.0	6,059.9	6,653.8	6,047.6	41.1	47.4	-61.39	1,655.2	1,961.5	642.0	558.5	7.689	
6,600.0	6,159.9	6,766.1	6,159.9	41.2	47.4	1.13	1,655.8	1,962.2	642.2	558.8	7.700	
6,700.0	6,259.9	6,866.1	6,259.9	41.2	47.4	1.13	1,655.8	1,962.2	642.2	558.8	7.695	
6,800.0	6,359.9	6,966.1	6,359.9	41.2	47.5	1.13	1,655.8	1,962.2	642.2	558.7	7.690	
6,900.0	6,459.9	7,066.1	6,459.9	41.3	47.5	1.13	1,655.8	1,962.2	642.2	558.7	7.685	
7,000.0	6,559.9	7,166.1	6,559.9	41.3	47.5	1.13	1,655.8	1,962.2	642.2	558.6	7.680	
7,100.0	6,659.9	7,266.1	6,659.9	41.3	47.5	1.13	1,655.8	1,962.2	642.2	558.6	7.675	
7,200.0	6,759.9	7,366.1	6,759.9	41.3	47.5	1.13	1,655.8	1,962.2	642.2	558.5	7.670	
7,300.0	6,859.9	7,466.1	6,859.9	41.4	47.6	1.13	1,655.8	1,962.2	642.2	558.4	7.664	
7,400.0	6,959.9	7,566.1	6,959.9	41.4	47.6	1.13	1,655.8	1,962.2	642.2	558.4	7.659	
7,500.0	7,059.9	7,666.1	7,059.9	41.4	47.6	1.13	1,655.8	1,962.2	642.2	558.3	7.654	
7,600.0	7,159.9	7,766.1	7,159.9	41.4	47.6	1.13	1,655.8	1,962.2	642.2	558.3	7.649	
7,700.0	7,259.9	7,866.1	7,259.9	41.5	47.7	1.13	1,655.8	1,962.2	642.2	558.2	7.644	
7,800.0	7,359.9	7,966.1	7,359.9	41.5	47.7	1.13	1,655.8	1,962.2	642.2	558.2	7.638	
7,900.0	7,459.9	8,066.1	7,459.9	41.5	47.7	1.13	1,655.8	1,962.2	642.2	558.1	7.633	
8,000.0	7,559.9	8,166.1	7,559.9	41.5	47.7	1.13	1,655.8	1,962.2	642.2	558.0	7.628	
8,100.0	7,659.9	8,266.1	7,659.9	41.6	47.7	1.13	1,655.8	1,962.2	642.2	558.0	7.623	
8,200.0	7,759.9	8,366.1	7,759.9	41.6	47.8	1.13	1,655.8	1,962.2	642.2	557.9	7.617	
8,300.0	7,859.9	8,466.1	7,859.9	41.6	47.8	1.13	1,655.8	1,962.2	642.2	557.9	7.612	
8,320.4	7,880.3	8,486.4	7,880.3	41.6	47.8	1.13	1,655.8	1,962.2	642.2	557.9	7.611	
8,331.1	7,891.0	8,496.1	7,890.0	41.6	47.8	1.13	1,655.8	1,962.2	642.2	557.8	7.609	

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 0993-21-16W - Slot A-12
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 0993-21-16W	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	-46.75	10.9	-11.6	15.9					
100.0	100.0	100.0	100.0	0.4	0.4	-46.75	10.9	-11.6	15.9	15.1	20.122			
200.0	200.0	200.0	200.0	1.2	1.2	-46.75	10.9	-11.6	15.9	13.5	6.451	CC		
300.0	300.0	300.1	300.1	1.7	1.6	-110.65	11.4	-11.0	16.2	13.2	5.378			
400.0	399.8	400.3	400.1	3.3	3.0	-112.13	14.1	-7.0	16.9	12.8	4.086	ES		
500.0	499.3	500.5	499.9	4.6	4.4	-112.91	19.2	0.6	18.2	12.9	3.465			
600.0	598.3	600.7	599.2	5.6	5.4	-113.04	26.8	11.9	19.9	13.7	3.208			
700.0	696.6	700.9	697.8	6.5	6.4	-112.88	36.8	26.7	22.0	15.0	3.127	SF		
800.0	794.0	801.2	795.6	7.3	7.2	-111.97	49.2	45.1	24.6	16.8	3.143			
900.0	890.3	901.4	892.3	8.0	7.9	-111.04	63.9	67.0	27.7	19.1	3.211			
1,000.0	985.3	1,001.7	987.7	8.7	8.6	-110.00	81.1	92.4	31.2	21.8	3.300			
1,100.0	1,078.9	1,101.9	1,081.8	9.4	9.3	-108.91	100.5	121.2	35.2	24.8	3.389			
1,200.0	1,170.9	1,202.2	1,174.2	9.9	10.0	-107.81	122.2	153.4	39.6	28.2	3.479			
1,300.0	1,262.2	1,302.3	1,264.7	10.2	10.5	-103.60	146.2	188.8	43.8	31.6	3.593			
1,400.0	1,353.4	1,402.2	1,354.3	10.5	10.8	-98.25	170.8	225.4	48.1	34.9	3.634			
1,500.0	1,444.7	1,502.0	1,443.8	10.9	11.1	-93.81	195.4	261.9	52.8	38.2	3.621			
1,600.0	1,536.0	1,601.8	1,533.4	11.2	11.4	-90.11	220.1	298.4	57.7	41.6	3.596			
1,700.0	1,627.3	1,701.6	1,623.0	11.6	11.8	-87.00	244.7	334.9	62.8	45.2	3.575			
1,800.0	1,718.6	1,801.4	1,712.5	11.9	12.1	-84.36	269.4	371.5	68.0	48.9	3.561			
1,900.0	1,809.9	1,901.2	1,802.1	12.3	12.5	-82.11	294.0	408.0	73.4	52.8	3.555			
2,000.0	1,901.1	2,001.0	1,891.7	12.7	12.9	-80.16	318.7	444.5	78.9	56.7	3.556			
2,100.0	1,992.4	2,100.9	1,981.2	13.1	13.3	-78.47	343.3	481.1	84.5	60.8	3.561			
2,200.0	2,083.7	2,200.7	2,070.8	13.5	13.7	-76.99	367.9	517.6	90.1	64.9	3.569			
2,300.0	2,175.0	2,300.5	2,160.3	14.0	14.1	-75.69	392.6	554.1	95.8	69.1	3.580			
2,400.0	2,266.3	2,400.3	2,249.9	14.4	14.6	-74.53	417.2	590.6	101.5	73.3	3.593			
2,500.0	2,357.6	2,500.1	2,339.5	14.9	15.1	-73.49	441.9	627.2	107.3	77.6	3.606			
2,600.0	2,448.9	2,599.9	2,429.0	15.4	15.8	-72.57	466.5	663.7	113.1	81.9	3.621			
2,700.0	2,540.1	2,699.8	2,518.6	16.0	16.6	-71.73	491.2	700.2	118.9	86.2	3.635			
2,800.0	2,631.4	2,799.6	2,608.2	16.7	17.4	-70.97	515.8	736.8	124.8	90.6	3.650			
2,900.0	2,722.7	2,899.4	2,697.7	17.5	18.2	-70.28	540.5	773.3	130.6	95.0	3.664			
3,000.0	2,814.0	2,999.2	2,787.3	18.2	19.0	-69.65	565.1	809.8	136.5	99.4	3.678			
3,100.0	2,905.3	3,099.0	2,876.9	19.0	19.8	-69.07	589.7	846.3	142.4	103.8	3.692			
3,200.0	2,996.6	3,198.8	2,966.4	19.7	20.6	-68.53	614.4	882.9	148.3	108.3	3.705			
3,300.0	3,087.8	3,298.7	3,056.0	20.4	21.4	-68.04	639.0	919.4	154.3	112.8	3.718			
3,400.0	3,179.1	3,398.5	3,145.5	21.2	22.2	-67.58	663.7	955.9	160.2	117.3	3.730			
3,500.0	3,270.4	3,498.3	3,235.1	21.9	23.0	-67.16	688.3	992.5	166.1	121.8	3.743			
3,600.0	3,361.7	3,598.1	3,324.7	22.7	23.8	-66.77	713.0	1,029.0	172.1	126.3	3.754			
3,700.0	3,453.0	3,697.9	3,414.2	23.4	24.6	-66.40	737.6	1,065.5	178.1	130.8	3.765			
3,800.0	3,544.3	3,797.7	3,503.8	24.2	25.4	-66.05	762.2	1,102.1	184.0	135.3	3.776			
3,900.0	3,635.6	3,897.5	3,593.4	24.9	26.2	-65.73	786.9	1,138.6	190.0	139.8	3.787			
4,000.0	3,726.8	3,997.4	3,682.9	25.7	27.0	-65.43	811.5	1,175.1	196.0	144.4	3.797			
4,100.0	3,818.1	4,097.2	3,772.5	26.4	27.8	-65.14	836.2	1,211.6	202.0	148.9	3.806			
4,200.0	3,909.4	4,197.0	3,862.0	27.2	28.6	-64.88	860.8	1,248.2	208.0	153.4	3.815			
4,300.0	4,000.7	4,296.8	3,951.6	27.9	29.4	-64.62	885.5	1,284.7	213.9	158.0	3.824			
4,400.0	4,092.0	4,396.6	4,041.2	28.7	30.2	-64.38	910.1	1,321.2	219.9	162.6	3.833			
4,500.0	4,183.3	4,496.4	4,130.7	29.4	31.0	-64.16	934.8	1,357.8	225.9	167.1	3.841			
4,600.0	4,274.5	4,596.3	4,220.3	30.2	31.8	-63.94	959.4	1,394.3	231.9	171.7	3.849			
4,700.0	4,365.8	4,696.1	4,309.9	30.9	32.6	-63.74	984.0	1,430.8	238.0	176.3	3.856			
4,800.0	4,457.1	4,795.9	4,399.4	31.7	33.4	-63.54	1,008.7	1,467.3	244.0	180.8	3.864			
4,900.0	4,548.4	4,895.7	4,489.0	32.4	34.2	-63.36	1,033.3	1,503.9	250.0	185.4	3.871			
5,000.0	4,639.7	4,995.5	4,578.6	33.1	35.1	-63.18	1,058.0	1,540.4	256.0	190.0	3.878			

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 0993-21-16W - Slot A-12
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 0993-21-16W	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 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	4,731.0	5,095.3	4,668.1	33.9	35.9	-63.01	1,082.6	1,576.9	262.0	194.6	3.884		
5,200.0	4,822.3	5,195.2	4,757.7	34.6	36.7	-62.85	1,107.3	1,613.5	268.0	199.1	3.890		
5,300.0	4,913.5	5,295.0	4,847.2	35.4	37.5	-62.70	1,131.9	1,650.0	274.1	203.7	3.897		
5,400.0	5,004.8	5,394.8	4,936.8	36.1	38.3	-62.55	1,156.6	1,686.5	280.1	208.3	3.902		
5,500.0	5,096.1	5,494.6	5,026.4	36.9	39.1	-62.41	1,181.2	1,723.0	286.1	212.9	3.908		
5,600.0	5,187.4	5,595.3	5,116.8	37.6	39.9	-62.29	1,206.0	1,759.9	292.1	217.5	3.913		
5,700.0	5,279.7	5,702.8	5,214.6	38.3	40.7	-62.31	1,231.0	1,796.9	297.7	221.6	3.910		
5,800.0	5,373.5	5,810.6	5,314.5	39.0	41.4	-62.33	1,253.4	1,830.1	302.7	225.2	3.906		
5,900.0	5,468.8	5,918.5	5,416.5	39.5	42.0	-62.35	1,273.2	1,859.4	307.1	228.5	3.904		
6,000.0	5,565.3	6,026.5	5,520.1	40.0	42.6	-62.36	1,290.3	1,884.8	311.0	231.3	3.903		
6,100.0	5,662.9	6,134.7	5,625.2	40.3	43.0	-62.37	1,304.7	1,906.1	314.2	233.7	3.903		
6,200.0	5,761.3	6,243.0	5,731.5	40.7	43.4	-62.38	1,316.3	1,923.3	316.8	235.6	3.904		
6,300.0	5,860.4	6,351.4	5,838.7	40.9	43.6	-62.39	1,325.1	1,936.3	318.7	237.1	3.906		
6,400.0	5,960.0	6,459.9	5,946.7	41.1	43.8	-62.39	1,331.0	1,945.1	320.1	238.2	3.909		
6,500.0	6,059.9	6,568.4	6,055.0	41.1	43.9	-62.38	1,334.1	1,949.7	320.8	238.8	3.913		
6,600.0	6,159.9	6,673.3	6,159.9	41.2	44.0	0.15	1,334.6	1,950.4	320.9	239.0	3.917		
6,700.0	6,259.9	6,773.3	6,259.9	41.2	44.0	0.15	1,334.6	1,950.4	320.9	238.9	3.914		
6,800.0	6,359.9	6,873.3	6,359.9	41.2	44.0	0.15	1,334.6	1,950.4	320.9	238.9	3.912		
6,900.0	6,459.9	6,973.3	6,459.9	41.3	44.1	0.15	1,334.6	1,950.4	320.9	238.8	3.909		
7,000.0	6,559.9	7,073.3	6,559.9	41.3	44.1	0.15	1,334.6	1,950.4	320.9	238.7	3.907		
7,100.0	6,659.9	7,173.3	6,659.9	41.3	44.1	0.15	1,334.6	1,950.4	320.9	238.7	3.904		
7,200.0	6,759.9	7,273.3	6,759.9	41.3	44.1	0.15	1,334.6	1,950.4	320.9	238.6	3.901		
7,300.0	6,859.9	7,373.3	6,859.9	41.4	44.1	0.15	1,334.6	1,950.4	320.9	238.6	3.898		
7,400.0	6,959.9	7,473.3	6,959.9	41.4	44.2	0.15	1,334.6	1,950.4	320.9	238.5	3.896		
7,500.0	7,059.9	7,573.3	7,059.9	41.4	44.2	0.15	1,334.6	1,950.4	320.9	238.5	3.893		
7,600.0	7,159.9	7,673.3	7,159.9	41.4	44.2	0.15	1,334.6	1,950.4	320.9	238.4	3.890		
7,700.0	7,259.9	7,773.3	7,259.9	41.5	44.2	0.15	1,334.6	1,950.4	320.9	238.3	3.888		
7,800.0	7,359.9	7,873.3	7,359.9	41.5	44.3	0.15	1,334.6	1,950.4	320.9	238.3	3.885		
7,900.0	7,459.9	7,973.3	7,459.9	41.5	44.3	0.15	1,334.6	1,950.4	320.9	238.2	3.882		
8,000.0	7,559.9	8,073.3	7,559.9	41.5	44.3	0.15	1,334.6	1,950.4	320.9	238.2	3.879		
8,100.0	7,659.9	8,173.3	7,659.9	41.6	44.3	0.15	1,334.6	1,950.4	320.9	238.1	3.877		
8,200.0	7,759.9	8,273.3	7,759.9	41.6	44.4	0.15	1,334.6	1,950.4	320.9	238.0	3.874		
8,300.0	7,859.9	8,373.3	7,859.9	41.6	44.4	0.15	1,334.6	1,950.4	320.9	238.0	3.871		
8,331.1	7,891.0	8,404.4	7,891.0	41.6	44.4	0.15	1,334.6	1,950.4	320.9	238.0	3.870		



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-16W - Slot A-12
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 0993-21-16W	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 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	133.28	-10.9	11.6	15.9			
100.0	100.0	100.0	100.0	0.4	0.4	133.28	-10.9	11.6	15.9	15.2	20.131	
200.0	200.0	200.0	200.0	1.2	1.2	133.28	-10.9	11.6	15.9	13.5	6.454	CC
300.0	300.0	299.8	299.8	1.7	1.7	70.98	-10.5	12.8	16.1	13.0	5.239	
400.0	399.8	399.5	399.3	3.3	3.3	71.96	-8.7	17.8	16.7	12.4	3.886	ES
500.0	499.3	499.1	498.5	4.6	4.6	73.53	-5.3	27.0	17.9	12.6	3.367	
600.0	598.3	598.8	597.1	5.6	5.6	75.45	-0.5	40.2	19.6	13.5	3.222	SF
700.0	696.6	698.4	695.1	6.5	6.5	77.50	5.7	57.4	21.9	15.2	3.246	
800.0	794.0	798.1	792.1	7.3	7.3	79.50	13.5	78.6	24.7	17.4	3.353	
900.0	890.3	897.7	888.1	8.0	8.0	81.33	22.6	103.7	28.1	20.1	3.491	
1,000.0	985.3	997.3	982.7	8.7	8.7	82.96	33.2	132.7	32.1	23.2	3.626	
1,100.0	1,078.9	1,096.8	1,075.9	9.4	9.4	84.36	45.1	165.6	36.6	26.8	3.739	
1,200.0	1,170.9	1,196.6	1,168.2	9.9	9.7	87.17	58.1	201.2	41.4	30.7	3.871	
1,300.0	1,262.2	1,296.4	1,260.5	10.2	10.0	91.45	71.1	237.0	46.3	34.5	3.919	
1,400.0	1,353.4	1,396.2	1,352.8	10.5	10.3	94.89	84.2	272.8	51.4	38.3	3.916	
1,500.0	1,444.7	1,496.1	1,445.1	10.9	10.6	97.70	97.2	308.5	56.7	42.2	3.904	
1,600.0	1,536.0	1,595.9	1,537.3	11.2	11.0	100.02	110.2	344.3	62.1	46.1	3.893	
1,700.0	1,627.3	1,695.7	1,629.6	11.6	11.3	101.98	123.2	380.1	67.6	50.2	3.887	
1,800.0	1,718.6	1,795.5	1,721.9	11.9	11.7	103.63	136.3	415.9	73.1	54.3	3.886	
1,900.0	1,809.9	1,895.4	1,814.2	12.3	12.1	105.06	149.3	451.7	78.7	58.5	3.887	
2,000.0	1,901.1	1,995.2	1,906.4	12.7	12.5	106.29	162.3	487.5	84.4	62.7	3.892	
2,100.0	1,992.4	2,095.0	1,998.7	13.1	12.9	107.37	175.4	523.3	90.0	66.9	3.898	
2,200.0	2,083.7	2,194.8	2,091.0	13.5	13.3	108.32	188.4	559.0	95.7	71.2	3.905	
2,300.0	2,175.0	2,294.7	2,183.3	14.0	13.8	109.16	201.4	594.8	101.5	75.5	3.913	
2,400.0	2,266.3	2,394.5	2,275.5	14.4	14.2	109.91	214.5	630.6	107.2	79.9	3.921	
2,500.0	2,357.6	2,494.3	2,367.8	14.9	14.6	110.59	227.5	666.4	113.0	84.2	3.930	
2,600.0	2,448.9	2,594.1	2,460.1	15.4	15.1	111.20	240.5	702.2	118.8	88.6	3.939	
2,700.0	2,540.1	2,694.0	2,552.4	16.0	15.6	111.75	253.5	738.0	124.5	93.0	3.947	
2,800.0	2,631.4	2,793.8	2,644.6	16.7	16.1	112.26	266.6	773.7	130.3	97.4	3.956	
2,900.0	2,722.7	2,893.6	2,736.9	17.5	16.7	112.72	279.6	809.5	136.2	101.8	3.964	
3,000.0	2,814.0	2,993.4	2,829.2	18.2	17.4	113.14	292.6	845.3	142.0	106.2	3.972	
3,100.0	2,905.3	3,093.3	2,921.5	19.0	18.1	113.53	305.7	881.1	147.8	110.7	3.979	
3,200.0	2,996.6	3,193.1	3,013.7	19.7	18.8	113.89	318.7	916.9	153.6	115.1	3.987	
3,300.0	3,087.8	3,292.9	3,106.0	20.4	19.5	114.23	331.7	952.7	159.5	119.5	3.994	
3,400.0	3,179.1	3,392.7	3,198.3	21.2	20.2	114.54	344.8	988.4	165.3	124.0	4.000	
3,500.0	3,270.4	3,492.6	3,290.6	21.9	20.9	114.83	357.8	1,024.2	171.2	128.4	4.007	
3,600.0	3,361.7	3,592.4	3,382.8	22.7	21.6	115.10	370.8	1,060.0	177.0	132.9	4.013	
3,700.0	3,453.0	3,692.2	3,475.1	23.4	22.3	115.35	383.8	1,095.8	182.9	137.4	4.019	
3,800.0	3,544.3	3,792.1	3,567.4	24.2	23.0	115.59	396.9	1,131.6	188.7	141.8	4.025	
3,900.0	3,635.6	3,891.9	3,659.7	24.9	23.7	115.81	409.9	1,167.4	194.6	146.3	4.030	
4,000.0	3,726.8	3,991.7	3,751.9	25.7	24.4	116.02	422.9	1,203.1	200.4	150.8	4.035	
4,100.0	3,818.1	4,091.5	3,844.2	26.4	25.1	116.22	436.0	1,238.9	206.3	155.2	4.040	
4,200.0	3,909.4	4,191.4	3,936.5	27.2	25.8	116.41	449.0	1,274.7	212.2	159.7	4.045	
4,300.0	4,000.7	4,291.2	4,028.8	27.9	26.5	116.58	462.0	1,310.5	218.0	164.2	4.050	
4,400.0	4,092.0	4,391.0	4,121.1	28.7	27.2	116.75	475.0	1,346.3	223.9	168.7	4.054	
4,500.0	4,183.3	4,490.8	4,213.3	29.4	27.9	116.91	488.1	1,382.1	229.8	173.2	4.058	
4,600.0	4,274.5	4,590.7	4,305.6	30.2	28.6	117.06	501.1	1,417.8	235.7	177.6	4.062	
4,700.0	4,365.8	4,690.5	4,397.9	30.9	29.3	117.21	514.1	1,453.6	241.5	182.1	4.066	
4,800.0	4,457.1	4,790.3	4,490.2	31.7	30.0	117.34	527.2	1,489.4	247.4	186.6	4.070	
4,900.0	4,548.4	4,890.1	4,582.4	32.4	30.7	117.47	540.2	1,525.2	253.3	191.1	4.074	
5,000.0	4,639.7	4,990.0	4,674.7	33.1	31.4	117.60	553.2	1,561.0	259.2	195.6	4.077	

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 0993-21-16W - Slot A-12
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 0993-21-16W	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 Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
				Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,731.0	5,089.8	4,767.0	33.9	32.1	117.72	566.3	1,596.8	265.1	200.1	4.080		
5,200.0	4,822.3	5,189.6	4,859.3	34.6	32.8	117.83	579.3	1,632.6	270.9	204.6	4.083		
5,300.0	4,913.5	5,289.4	4,951.5	35.4	33.5	117.94	592.3	1,668.3	276.8	209.1	4.087		
5,400.0	5,004.8	5,389.3	5,043.8	36.1	34.2	118.05	605.3	1,704.1	282.7	213.6	4.090		
5,500.0	5,096.1	5,489.1	5,136.1	36.9	34.9	118.15	618.4	1,739.9	288.6	218.1	4.092		
5,600.0	5,187.4	5,588.9	5,228.4	37.6	35.6	118.25	631.4	1,775.7	294.5	222.6	4.095		
5,700.0	5,279.7	5,684.9	5,317.6	38.3	36.3	118.31	643.5	1,808.8	299.7	226.5	4.095		
5,800.0	5,373.5	5,780.2	5,407.6	39.0	36.8	118.37	654.2	1,838.2	304.4	230.0	4.093		
5,900.0	5,468.8	5,875.5	5,498.9	39.5	37.3	118.41	663.6	1,864.1	308.6	233.2	4.092		
6,000.0	5,565.3	5,970.7	5,591.1	40.0	37.7	118.45	671.7	1,886.3	312.1	235.8	4.091		
6,100.0	5,662.9	6,066.0	5,684.3	40.3	38.1	118.49	678.5	1,905.0	315.1	238.1	4.091		
6,200.0	5,761.3	6,161.2	5,778.2	40.7	38.4	118.52	683.9	1,919.9	317.5	239.9	4.091		
6,300.0	5,860.4	6,256.4	5,872.6	40.9	38.6	118.54	688.0	1,931.3	319.3	241.3	4.091		
6,400.0	5,960.0	6,351.6	5,967.5	41.1	38.7	118.56	690.8	1,938.9	320.6	242.2	4.090		
6,500.0	6,059.9	6,446.8	6,062.6	41.1	38.8	118.57	692.2	1,942.8	321.2	242.7	4.089		
6,600.0	6,159.9	6,544.2	6,159.9	41.2	38.9	-178.89	692.4	1,943.3	321.3	242.7	4.087		
6,700.0	6,259.9	6,644.2	6,259.9	41.2	39.0	-178.89	692.4	1,943.3	321.3	242.6	4.083		
6,800.0	6,359.9	6,744.2	6,359.9	41.2	39.0	-178.89	692.4	1,943.3	321.3	242.6	4.080		
6,900.0	6,459.9	6,844.2	6,459.9	41.3	39.0	-178.89	692.4	1,943.3	321.3	242.5	4.077		
7,000.0	6,559.9	6,944.2	6,559.9	41.3	39.0	-178.89	692.4	1,943.3	321.3	242.4	4.074		
7,100.0	6,659.9	7,044.2	6,659.9	41.3	39.1	-178.89	692.4	1,943.3	321.3	242.4	4.071		
7,200.0	6,759.9	7,144.2	6,759.9	41.3	39.1	-178.89	692.4	1,943.3	321.3	242.3	4.068		
7,300.0	6,859.9	7,244.2	6,859.9	41.4	39.1	-178.89	692.4	1,943.3	321.3	242.3	4.065		
7,400.0	6,959.9	7,344.2	6,959.9	41.4	39.1	-178.89	692.4	1,943.3	321.3	242.2	4.062		
7,500.0	7,059.9	7,444.2	7,059.9	41.4	39.2	-178.89	692.4	1,943.3	321.3	242.1	4.059		
7,600.0	7,159.9	7,544.2	7,159.9	41.4	39.2	-178.89	692.4	1,943.3	321.3	242.1	4.056		
7,700.0	7,259.9	7,644.2	7,259.9	41.5	39.2	-178.89	692.4	1,943.3	321.3	242.0	4.053		
7,800.0	7,359.9	7,744.2	7,359.9	41.5	39.3	-178.89	692.4	1,943.3	321.3	242.0	4.050		
7,900.0	7,459.9	7,844.2	7,459.9	41.5	39.3	-178.89	692.4	1,943.3	321.3	241.9	4.047		
8,000.0	7,559.9	7,944.2	7,559.9	41.5	39.3	-178.89	692.4	1,943.3	321.3	241.8	4.044		
8,100.0	7,659.9	8,044.2	7,659.9	41.6	39.4	-178.89	692.4	1,943.3	321.3	241.8	4.041		
8,200.0	7,759.9	8,144.2	7,759.9	41.6	39.4	-178.89	692.4	1,943.3	321.3	241.7	4.038		
8,300.0	7,859.9	8,244.2	7,859.9	41.6	39.4	-178.89	692.4	1,943.3	321.3	241.7	4.035		
8,331.1	7,891.0	8,275.3	7,891.0	41.6	39.4	-178.89	692.4	1,943.3	321.3	241.6	4.034		

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 0993-21-16W - Slot A-12
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 0993-21-16W	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 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	133.27	-21.9	23.2	31.9				
100.0	100.0	100.0	100.0	0.4	0.4	133.27	-21.9	23.2	31.9	31.1	40.253		
200.0	200.0	200.0	200.0	1.2	1.2	133.27	-21.9	23.2	31.9	29.4	12.905	CC	
300.0	300.0	299.2	299.2	1.7	2.3	69.62	-21.4	25.3	32.7	29.4	9.801	ES	
400.0	399.8	398.3	398.1	3.3	3.8	69.25	-20.0	31.6	34.5	29.7	7.091		
500.0	499.3	497.4	496.6	4.6	5.0	69.75	-17.6	42.0	37.3	31.3	6.142		
600.0	598.3	596.4	594.4	5.6	5.9	70.90	-14.3	56.6	41.1	34.1	5.848	SF	
700.0	696.6	695.2	691.4	6.5	6.8	72.46	-10.1	75.2	45.9	38.1	5.872		
800.0	794.0	794.0	787.4	7.3	7.5	74.20	-5.0	97.9	51.6	43.1	6.070		
900.0	890.3	892.6	882.1	8.0	8.2	75.99	1.0	124.5	58.4	49.2	6.358		
1,000.0	985.3	991.0	975.4	8.7	8.9	77.70	7.9	155.1	66.3	56.3	6.676		
1,100.0	1,078.9	1,089.8	1,067.8	9.4	9.3	79.52	15.6	189.3	75.0	64.4	7.069		
1,200.0	1,170.9	1,189.3	1,160.5	9.9	9.5	83.39	23.6	224.5	83.5	72.2	7.407		
1,300.0	1,262.2	1,288.7	1,253.1	10.2	9.8	87.75	31.5	259.7	92.3	80.1	7.582		
1,400.0	1,353.4	1,388.1	1,345.7	10.5	10.2	91.34	39.5	294.9	101.5	88.2	7.629		
1,500.0	1,444.7	1,487.5	1,438.3	10.9	10.5	94.32	47.4	330.1	111.0	96.5	7.627		
1,600.0	1,536.0	1,586.9	1,530.9	11.2	10.9	96.83	55.4	365.3	120.8	105.0	7.609		
1,700.0	1,627.3	1,686.3	1,623.5	11.6	11.2	98.96	63.3	400.5	130.8	113.6	7.590		
1,800.0	1,718.6	1,785.7	1,716.1	11.9	11.6	100.79	71.3	435.7	141.0	122.4	7.574		
1,900.0	1,809.9	1,885.1	1,808.8	12.3	12.0	102.36	79.2	470.9	151.2	131.2	7.564		
2,000.0	1,901.1	1,984.4	1,901.4	12.7	12.4	103.74	87.1	506.0	161.6	140.2	7.558		
2,100.0	1,992.4	2,083.8	1,994.0	13.1	12.8	104.95	95.1	541.2	172.1	149.3	7.556		
2,200.0	2,083.7	2,183.2	2,086.6	13.5	13.2	106.03	103.0	576.4	182.6	158.4	7.557		
2,300.0	2,175.0	2,282.6	2,179.2	14.0	13.7	106.98	111.0	611.6	193.1	167.6	7.561		
2,400.0	2,266.3	2,382.0	2,271.8	14.4	14.1	107.84	118.9	646.8	203.8	176.8	7.567		
2,500.0	2,357.6	2,481.4	2,364.4	14.9	14.5	108.61	126.9	682.0	214.4	186.1	7.574		
2,600.0	2,448.9	2,580.8	2,457.1	15.4	15.0	109.31	134.8	717.2	225.1	195.4	7.582		
2,700.0	2,540.1	2,680.2	2,549.7	16.0	15.4	109.94	142.8	752.3	235.8	204.8	7.591		
2,800.0	2,631.4	2,779.6	2,642.3	16.7	15.9	110.52	150.7	787.5	246.6	214.2	7.600		
2,900.0	2,722.7	2,879.0	2,734.9	17.5	16.4	111.05	158.6	822.7	257.4	223.5	7.609		
3,000.0	2,814.0	2,978.4	2,827.5	18.2	17.0	111.54	166.6	857.9	268.2	233.0	7.619		
3,100.0	2,905.3	3,077.7	2,920.1	19.0	17.6	111.99	174.5	893.1	279.0	242.4	7.628		
3,200.0	2,996.6	3,177.1	3,012.7	19.7	18.3	112.41	182.5	928.3	289.8	251.9	7.638		
3,300.0	3,087.8	3,276.5	3,105.4	20.4	18.9	112.80	190.4	963.5	300.7	261.3	7.647		
3,400.0	3,179.1	3,375.9	3,198.0	21.2	19.6	113.16	198.4	998.7	311.5	270.8	7.656		
3,500.0	3,270.4	3,475.3	3,290.6	21.9	20.3	113.49	206.3	1,033.8	322.4	280.3	7.665		
3,600.0	3,361.7	3,574.7	3,383.2	22.7	20.9	113.81	214.2	1,069.0	333.2	289.8	7.674		
3,700.0	3,453.0	3,674.1	3,475.8	23.4	21.6	114.10	222.2	1,104.2	344.1	299.3	7.682		
3,800.0	3,544.3	3,773.5	3,568.4	24.2	22.3	114.38	230.1	1,139.4	355.0	308.9	7.691		
3,900.0	3,635.6	3,872.9	3,661.0	24.9	22.9	114.64	238.1	1,174.6	365.9	318.4	7.699		
4,000.0	3,726.8	3,972.3	3,753.6	25.7	23.6	114.88	246.0	1,209.8	376.8	327.9	7.706		
4,100.0	3,818.1	4,071.7	3,846.3	26.4	24.3	115.11	254.0	1,245.0	387.8	337.5	7.714		
4,200.0	3,909.4	4,171.0	3,938.9	27.2	24.9	115.33	261.9	1,280.2	398.7	347.0	7.721		
4,300.0	4,000.7	4,270.4	4,031.5	27.9	25.6	115.54	269.9	1,315.3	409.6	356.6	7.728		
4,400.0	4,092.0	4,369.8	4,124.1	28.7	26.2	115.73	277.8	1,350.5	420.5	366.2	7.735		
4,500.0	4,183.3	4,469.2	4,216.7	29.4	26.9	115.92	285.7	1,385.7	431.5	375.7	7.741		
4,600.0	4,274.5	4,568.6	4,309.3	30.2	27.6	116.09	293.7	1,420.9	442.4	385.3	7.748		
4,700.0	4,365.8	4,668.0	4,401.9	30.9	28.2	116.26	301.6	1,456.1	453.4	394.9	7.754		
4,800.0	4,457.1	4,767.4	4,494.6	31.7	28.9	116.42	309.6	1,491.3	464.3	404.5	7.760		
4,900.0	4,548.4	4,866.8	4,587.2	32.4	29.6	116.57	317.5	1,526.5	475.3	414.1	7.766		
5,000.0	4,639.7	4,966.2	4,679.8	33.1	30.2	116.72	325.5	1,561.7	486.2	423.6	7.771		

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 0993-21-16W - Slot A-12
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 0993-21-16W	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	4,731.0	5,065.6	4,772.4	33.9	30.9	116.86	333.4	1,596.8	497.2	433.2	7.777			
5,200.0	4,822.3	5,164.9	4,865.0	34.6	31.6	116.99	341.4	1,632.0	508.1	442.8	7.782			
5,300.0	4,913.5	5,264.3	4,957.6	35.4	32.2	117.12	349.3	1,667.2	519.1	452.4	7.787			
5,400.0	5,004.8	5,363.7	5,050.2	36.1	32.9	117.24	357.2	1,702.4	530.1	462.0	7.792			
5,500.0	5,096.1	5,463.1	5,142.9	36.9	33.6	117.36	365.2	1,737.6	541.0	471.6	7.796			
5,600.0	5,187.4	5,562.5	5,235.5	37.6	34.2	117.49	373.1	1,772.8	552.0	481.2	7.801			
5,700.0	5,279.7	5,659.3	5,325.9	38.3	34.9	117.64	380.8	1,806.6	561.9	489.9	7.799			
5,800.0	5,373.5	5,753.4	5,414.8	39.0	35.4	117.73	387.5	1,836.5	570.7	497.5	7.795			
5,900.0	5,468.8	5,847.6	5,505.0	39.5	35.9	117.81	393.4	1,862.7	578.4	504.1	7.792			
6,000.0	5,565.3	5,941.7	5,596.3	40.0	36.3	117.88	398.5	1,885.3	585.0	509.9	7.789			
6,100.0	5,662.9	6,035.9	5,688.5	40.3	36.7	117.93	402.8	1,904.3	590.6	514.7	7.786			
6,200.0	5,761.3	6,130.2	5,781.4	40.7	37.0	117.98	406.3	1,919.5	595.1	518.6	7.783			
6,300.0	5,860.4	6,224.4	5,874.9	40.9	37.2	118.02	408.9	1,931.1	598.4	521.5	7.780			
6,400.0	5,960.0	6,318.7	5,968.9	41.1	37.3	118.04	410.6	1,938.8	600.7	523.5	7.776			
6,500.0	6,059.9	6,413.0	6,063.1	41.1	37.4	118.06	411.5	1,942.8	601.9	524.4	7.771			
6,600.0	6,159.9	6,509.9	6,159.9	41.2	37.5	-179.41	411.6	1,943.4	602.1	524.6	7.768			
6,700.0	6,259.9	6,609.9	6,259.9	41.2	37.5	-179.41	411.6	1,943.4	602.1	524.5	7.763			
6,800.0	6,359.9	6,709.9	6,359.9	41.2	37.5	-179.41	411.6	1,943.4	602.1	524.5	7.757			
6,900.0	6,459.9	6,809.9	6,459.9	41.3	37.5	-179.41	411.6	1,943.4	602.1	524.4	7.751			
7,000.0	6,559.9	6,909.9	6,559.9	41.3	37.6	-179.41	411.6	1,943.4	602.1	524.4	7.746			
7,100.0	6,659.9	7,009.9	6,659.9	41.3	37.6	-179.41	411.6	1,943.4	602.1	524.3	7.740			
7,200.0	6,759.9	7,109.9	6,759.9	41.3	37.6	-179.41	411.6	1,943.4	602.1	524.2	7.734			
7,300.0	6,859.9	7,209.9	6,859.9	41.4	37.7	-179.41	411.6	1,943.4	602.1	524.2	7.728			
7,400.0	6,959.9	7,309.9	6,959.9	41.4	37.7	-179.41	411.6	1,943.4	602.1	524.1	7.722			
7,500.0	7,059.9	7,409.9	7,059.9	41.4	37.7	-179.41	411.6	1,943.4	602.1	524.1	7.717			
7,600.0	7,159.9	7,509.9	7,159.9	41.4	37.7	-179.41	411.6	1,943.4	602.1	524.0	7.711			
7,700.0	7,259.9	7,609.9	7,259.9	41.5	37.8	-179.41	411.6	1,943.4	602.1	523.9	7.705			
7,800.0	7,359.9	7,709.9	7,359.9	41.5	37.8	-179.41	411.6	1,943.4	602.1	523.9	7.699			
7,900.0	7,459.9	7,809.9	7,459.9	41.5	37.8	-179.41	411.6	1,943.4	602.1	523.8	7.693			
8,000.0	7,559.9	7,909.9	7,559.9	41.5	37.9	-179.41	411.6	1,943.4	602.1	523.8	7.687			
8,100.0	7,659.9	8,009.9	7,659.9	41.6	37.9	-179.41	411.6	1,943.4	602.1	523.7	7.681			
8,200.0	7,759.9	8,109.9	7,759.9	41.6	37.9	-179.41	411.6	1,943.4	602.1	523.6	7.675			
8,300.0	7,859.9	8,209.9	7,859.9	41.6	38.0	-179.41	411.6	1,943.4	602.1	523.6	7.669			
8,320.4	7,880.3	8,230.3	7,880.3	41.6	38.0	-179.41	411.6	1,943.4	602.1	523.6	7.669			
8,331.1	7,891.0	8,240.0	7,890.0	41.6	38.0	-179.41	411.6	1,943.4	602.1	523.6	7.669			



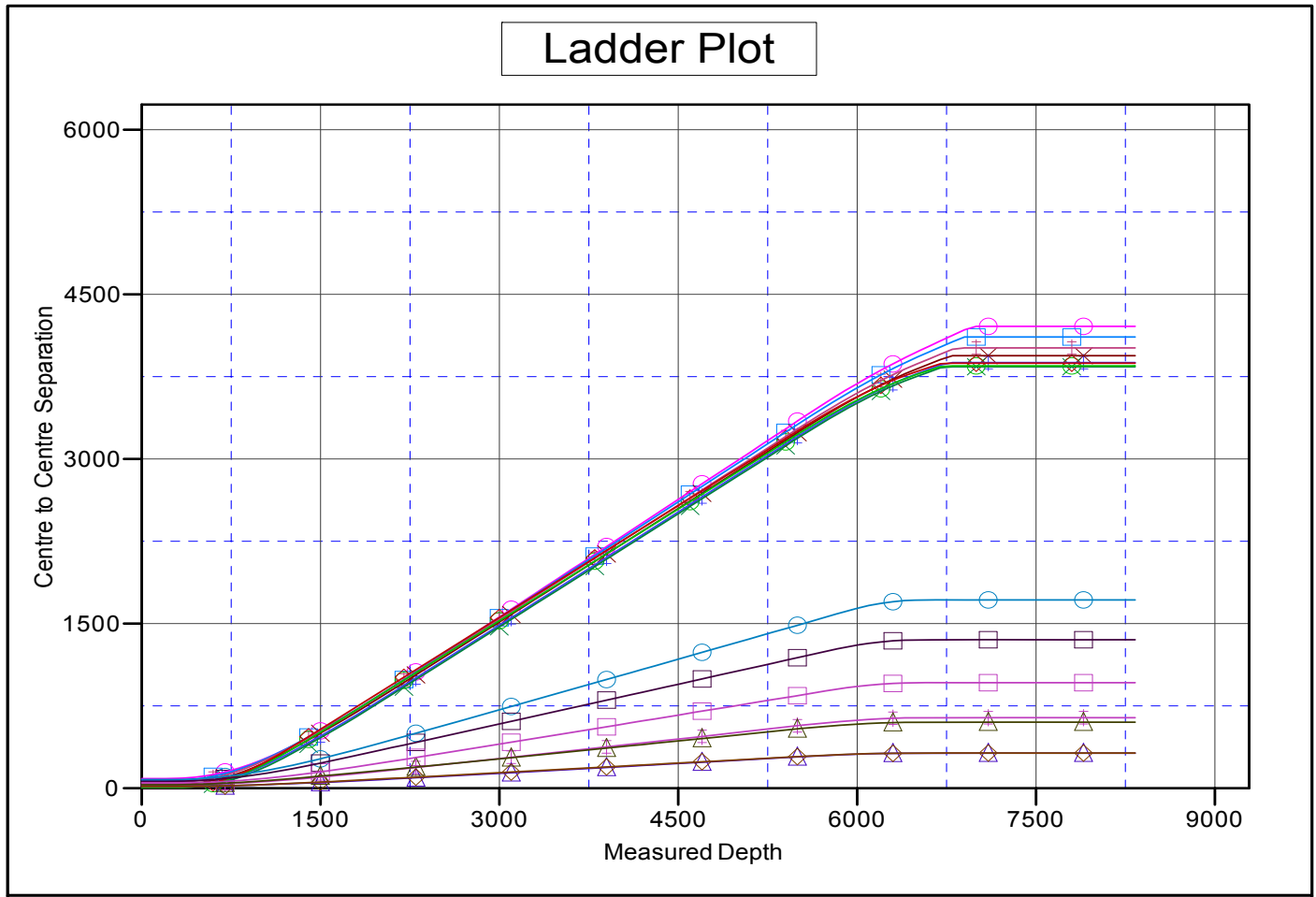
Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-16W - Slot A-12
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 0993-21-16W	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 0993-21-16W - Slot A-12
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.44°



LEGEND

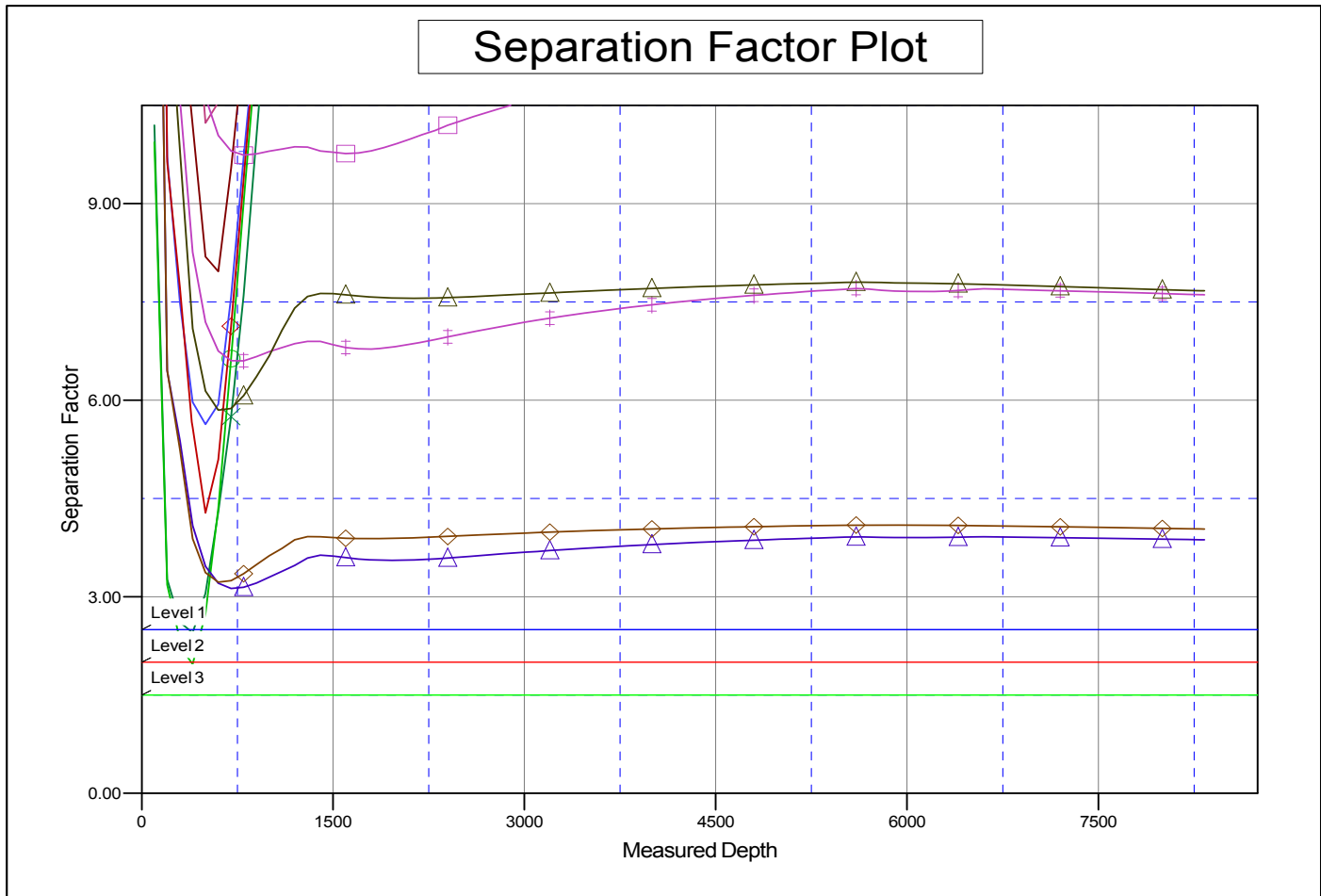
29-01 0993-20-11E, OH, Design #1 V0	Laramie 29-01 0993-20-16E, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-13W, OH,
29-01 0993-20-12E, OH, Design #1 V0	Laramie 29-01 0993-20-17E, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-14W, OH,
29-01 0993-20-13E, OH, Design #1 V0	Laramie 29-01 0993-20-18E, OH, Design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



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-16W - Slot A-12
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 0993-21-16W	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 0993-21-16W - Slot A-12
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.44°



LEGEND

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