



Laramie Energy, LLC

Mesa County, CO

Laramie 0993-29-01

Laramie 29-01 Fed 0993-21-11W

OH

Design #1

KLX Anticollision Report

23 August, 2023





Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-11W - Slot A-2
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 0993-21-11W	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
Depth Range:	Unlimited
Results Limited by:	Maximum ellipse separation of 1,000.0 usft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Pedal Curve

Survey Tool Program	Date	8/23/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	9,518.7	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
Gunderson 0993 21-05 Pad						
BCU 0993-21-08W - Wellbore #1 - Wellbore #1	7,473.1	6,478.4	938.6	876.5	15.122	CC
BCU 0993-21-08W - Wellbore #1 - Wellbore #1	7,500.0	6,501.6	938.6	876.5	15.109	ES
BCU 0993-21-08W - Wellbore #1 - Wellbore #1	7,600.0	6,590.4	939.6	877.4	15.106	SF
BCU 0993-21-09W - Wellbore #1 - Wellbore #1	8,485.5	7,503.7	744.3	678.4	11.294	CC
BCU 0993-21-09W - Wellbore #1 - Wellbore #1	8,700.0	7,717.8	744.5	678.4	11.262	ES
BCU 0993-21-09W - Wellbore #1 - Wellbore #1	8,800.0	7,722.0	750.7	683.8	11.218	SF
BCU 0993-21-10W - Wellbore #1 - Wellbore #1	7,290.2	6,337.8	451.7	379.5	6.257	CC, ES
BCU 0993-21-10W - Wellbore #1 - Wellbore #1	7,300.0	6,347.5	451.7	379.5	6.257	SF
Laramie 0993-29-01						
Laramie 29-01 0993-20-11E - OH - Design #1	200.0	200.0	8.1	5.6	3.269	CC, ES
Laramie 29-01 0993-20-11E - OH - Design #1	400.0	399.3	13.0	7.9	2.535	SF
Laramie 29-01 0993-20-12E - OH - Design #1	200.0	200.0	8.1	5.6	3.269	CC
Laramie 29-01 0993-20-12E - OH - Design #1	400.0	400.1	10.1	5.1	2.002	Level 1, ES, SF
Laramie 29-01 0993-20-13E - OH - Design #1	200.0	200.0	24.1	21.6	9.754	CC
Laramie 29-01 0993-20-13E - OH - Design #1	400.0	400.7	24.5	19.8	5.223	ES
Laramie 29-01 0993-20-13E - OH - Design #1	500.0	500.4	28.0	21.3	4.179	SF
Laramie 29-01 0993-20-14E - OH - Design #1	200.0	200.0	40.2	37.7	16.274	CC
Laramie 29-01 0993-20-14E - OH - Design #1	300.0	300.0	40.5	37.2	12.397	ES
Laramie 29-01 0993-20-14E - OH - Design #1	600.0	599.4	53.1	45.5	6.995	SF
Laramie 29-01 0993-20-15E - OH - Design #1	200.0	200.0	56.2	53.7	22.728	CC
Laramie 29-01 0993-20-15E - OH - Design #1	300.0	300.0	56.5	53.2	17.280	ES
Laramie 29-01 0993-20-15E - OH - Design #1	700.0	697.4	82.5	73.9	9.637	SF
Laramie 29-01 0993-20-16E - OH - Design #1	200.0	200.0	72.1	69.6	29.179	CC
Laramie 29-01 0993-20-16E - OH - Design #1	300.0	300.0	72.4	69.1	22.162	ES
Laramie 29-01 0993-20-16E - OH - Design #1	700.0	698.6	94.2	85.9	11.340	SF
Laramie 29-01 0993-20-17E - OH - Design #1	200.0	200.0	88.0	85.6	35.634	CC
Laramie 29-01 0993-20-17E - OH - Design #1	500.0	502.8	90.0	84.4	16.220	ES
Laramie 29-01 0993-20-17E - OH - Design #1	800.0	797.1	124.9	114.6	12.039	SF
Laramie 29-01 0993-20-18E - OH - Design #1	438.6	442.3	103.1	98.3	21.570	CC
Laramie 29-01 0993-20-18E - OH - Design #1	500.0	503.7	103.7	98.2	18.652	ES
Laramie 29-01 0993-20-18E - OH - Design #1	800.0	795.6	143.3	132.3	13.085	SF
Laramie 29-01 Fed 0993-21-12W - OH - Design #1	300.0	300.1	16.1	12.8	4.914	CC
Laramie 29-01 Fed 0993-21-12W - OH - Design #1	400.0	400.1	16.4	12.4	4.037	ES
Laramie 29-01 Fed 0993-21-12W - OH - Design #1	1,900.0	1,896.3	63.8	41.9	2.909	SF
Laramie 29-01 Fed 0993-21-13W - OH - Design #1	200.0	200.0	32.1	29.7	13.006	CC

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 0993-21-11W - Slot A-2
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 0993-21-11W	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
Offset Well - Wellbore - Design						
Laramie 0993-29-01						
Laramie 29-01 Fed 0993-21-13W - OH - Design #1	300.0	299.9	32.5	29.3	10.042	ES
Laramie 29-01 Fed 0993-21-13W - OH - Design #1	600.0	599.2	41.1	35.5	7.356	SF
Laramie 29-01 Fed 0993-21-14W - OH - Design #1	200.0	200.0	48.1	45.6	19.460	CC
Laramie 29-01 Fed 0993-21-14W - OH - Design #1	300.0	299.8	48.5	45.5	15.946	ES
Laramie 29-01 Fed 0993-21-14W - OH - Design #1	700.0	698.1	65.8	59.5	10.437	SF
Laramie 29-01 Fed 0993-21-15W - OH - Design #1	200.0	200.0	64.2	61.8	25.997	CC
Laramie 29-01 Fed 0993-21-15W - OH - Design #1	300.0	299.6	64.7	61.7	21.530	ES
Laramie 29-01 Fed 0993-21-15W - OH - Design #1	800.0	795.3	96.1	88.9	13.291	SF
Laramie 29-01 Fed 0993-21-16W - OH - Design #1	200.0	200.0	80.2	77.7	32.448	CC, ES
Laramie 29-01 Fed 0993-21-16W - OH - Design #1	800.0	790.7	120.4	112.9	15.949	SF
Laramie 29-01 Fed 0993-21-17W - OH - Design #1	200.0	200.0	96.1	93.6	38.902	CC, ES
Laramie 29-01 Fed 0993-21-17W - OH - Design #1	700.0	689.0	129.3	122.2	18.205	SF
Laramie 29-01 Fed 0993-21-18W - OH - Design #1	200.0	200.0	112.0	109.6	45.354	CC, ES
Laramie 29-01 Fed 0993-21-18W - OH - Design #1	700.0	683.0	153.1	145.4	19.935	SF

Offset Design

Gunderson 0993 21-05 Pad - BCU 0993-21-08W - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 usft

Survey Program: 301-MWD *DNU*

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)	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	16.29	3,858.9	1,127.4	4,025.5			
100.0	100.0	0.0	0.0	0.4	0.0	16.29	3,858.9	1,127.4	4,021.6	4,021.2	N/A	
200.0	200.0	0.0	0.0	1.2	0.0	16.29	3,858.9	1,127.4	4,020.2	4,019.0	3,254.468	
300.0	300.0	100.9	100.9	1.7	0.9	-13.35	3,858.9	1,127.1	4,018.9	4,016.3	1,540.645	
400.0	399.8	208.1	208.1	3.3	1.8	-13.41	3,858.9	1,126.1	4,013.4	4,008.3	794.717	
500.0	499.3	315.6	315.6	4.6	2.7	-13.53	3,858.8	1,124.5	4,003.4	3,996.2	558.937	
600.0	598.3	428.4	428.4	5.6	3.1	-13.70	3,858.6	1,122.5	3,988.9	3,980.4	467.492	
700.0	696.6	643.8	643.6	6.5	4.4	-13.92	3,853.1	1,123.6	3,968.8	3,958.5	384.107	
800.0	794.0	900.8	899.0	7.3	5.4	-13.97	3,831.4	1,140.9	3,940.1	3,928.1	326.646	
900.0	890.3	991.9	989.0	8.0	5.7	-14.09	3,821.1	1,150.6	3,906.3	3,893.3	300.383	
1,000.0	985.3	1,070.3	1,066.4	8.7	5.9	-14.26	3,812.4	1,159.4	3,868.9	3,855.1	279.212	
1,100.0	1,078.9	1,162.3	1,157.3	9.4	6.1	-14.47	3,802.4	1,169.1	3,827.7	3,813.0	260.392	
1,200.0	1,170.9	1,241.7	1,236.0	10.0	6.3	-14.75	3,794.1	1,177.0	3,782.9	3,767.4	244.082	
1,300.0	1,261.0	1,372.9	1,365.8	10.7	6.7	-15.09	3,779.5	1,189.2	3,733.6	3,717.2	228.051	
1,400.0	1,349.2	1,451.8	1,443.9	11.2	6.9	-15.52	3,770.8	1,196.0	3,680.5	3,663.4	214.814	
1,500.0	1,435.2	1,527.5	1,518.9	11.8	7.2	-16.03	3,762.6	1,201.9	3,624.1	3,606.2	202.769	
1,600.0	1,519.1	1,594.6	1,585.4	12.2	7.4	-16.42	3,755.6	1,207.3	3,564.7	3,546.3	193.369	
1,700.0	1,602.6	1,744.4	1,733.4	12.5	8.1	-16.52	3,737.6	1,221.5	3,503.6	3,484.4	183.012	
1,800.0	1,686.0	1,798.0	1,786.3	12.8	8.3	-16.55	3,730.8	1,226.8	3,442.3	3,422.6	174.799	
1,900.0	1,769.4	1,869.0	1,856.5	13.2	8.5	-16.59	3,722.2	1,233.6	3,381.4	3,361.1	166.904	
2,000.0	1,852.8	1,971.7	1,958.0	13.6	8.9	-16.67	3,710.0	1,243.1	3,320.5	3,299.7	159.008	
2,100.0	1,936.3	2,036.9	2,022.4	13.9	9.1	-16.73	3,702.0	1,249.1	3,259.3	3,237.9	151.778	
2,200.0	2,019.7	2,104.3	2,089.1	14.3	9.4	-16.79	3,694.1	1,255.2	3,198.7	3,176.6	144.827	
2,300.0	2,103.1	2,195.3	2,178.9	14.7	9.7	-16.85	3,683.1	1,264.3	3,137.8	3,115.0	137.983	
2,400.0	2,186.5	2,257.6	2,240.4	15.4	10.0	-16.89	3,675.6	1,270.7	3,077.1	3,053.7	131.629	
2,500.0	2,270.0	2,316.9	2,299.1	16.4	10.2	-16.94	3,669.0	1,276.5	3,016.8	2,992.8	125.594	
2,600.0	2,353.4	2,402.6	2,384.0	17.3	10.6	-17.04	3,660.0	1,284.3	2,957.1	2,932.4	119.680	
2,700.0	2,436.8	2,504.6	2,484.7	18.2	11.1	-17.12	3,647.9	1,294.7	2,896.3	2,870.9	113.912	

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 0993-21-11W - Slot A-2
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 0993-21-11W	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: 301-MWD *DNU*											Offset Well Error:	0.0 usft
Gunderson 0993 21-05 Pad - BCU 0993-21-08W - Wellbore #1 - Wellbore #1												
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
2,800.0	2,520.2	2,569.6	2,549.0	19.2	11.3	-17.18	3,640.3	1,301.0	2,835.8	2,809.7	108.585	
2,900.0	2,603.7	2,634.4	2,613.1	20.1	11.6	-17.25	3,633.2	1,307.3	2,775.8	2,749.0	103.558	
3,000.0	2,687.1	2,703.1	2,681.1	21.1	11.8	-17.33	3,626.0	1,313.8	2,716.1	2,688.6	98.770	
3,100.0	2,770.5	2,774.6	2,751.9	22.0	12.1	-17.41	3,618.8	1,320.7	2,656.7	2,628.5	94.206	
3,200.0	2,853.9	2,855.3	2,831.8	22.9	12.4	-17.51	3,610.8	1,328.6	2,597.5	2,568.6	89.849	
3,300.0	2,937.4	2,959.2	2,934.9	23.9	12.8	-17.69	3,600.2	1,337.0	2,537.8	2,508.1	85.650	
3,400.0	3,020.8	3,036.1	3,011.2	24.8	13.1	-17.86	3,592.3	1,342.4	2,477.8	2,447.4	81.587	
3,500.0	3,104.2	3,104.3	3,078.9	25.8	13.4	-18.01	3,585.6	1,347.2	2,418.1	2,387.0	77.713	
3,600.0	3,187.6	3,169.6	3,143.7	26.7	13.6	-18.17	3,579.6	1,351.6	2,358.9	2,327.0	74.010	
3,700.0	3,271.1	3,238.0	3,211.7	27.7	13.9	-18.35	3,573.7	1,356.3	2,300.2	2,267.6	70.486	
3,800.0	3,354.5	3,309.0	3,282.3	28.6	14.1	-18.54	3,567.8	1,361.3	2,241.8	2,208.4	67.123	
3,900.0	3,437.9	3,370.9	3,343.9	29.6	14.4	-18.73	3,563.1	1,365.4	2,183.9	2,149.7	63.871	
4,000.0	3,521.3	3,429.6	3,402.3	30.5	14.6	-18.94	3,559.5	1,368.6	2,127.0	2,092.0	60.734	
4,100.0	3,604.8	3,498.0	3,470.6	31.5	15.0	-19.24	3,556.5	1,371.0	2,071.0	2,035.1	57.748	
4,200.0	3,688.2	3,559.0	3,531.5	32.4	15.2	-19.55	3,554.4	1,372.5	2,015.7	1,979.0	54.915	
4,300.0	3,771.6	3,636.8	3,609.3	33.4	15.5	-19.98	3,552.2	1,374.4	1,961.0	1,923.5	52.284	
4,400.0	3,855.0	3,716.7	3,689.2	34.3	15.7	-20.43	3,550.0	1,376.2	1,906.4	1,868.1	49.778	
4,500.0	3,938.5	3,791.3	3,763.7	35.3	15.9	-20.89	3,548.1	1,378.0	1,852.1	1,813.0	47.348	
4,600.0	4,021.9	3,859.7	3,832.1	36.2	16.1	-21.32	3,546.9	1,379.6	1,798.5	1,758.5	45.011	
4,700.0	4,105.3	3,946.6	3,919.0	37.2	16.3	-21.91	3,545.6	1,381.7	1,745.4	1,704.6	42.855	
4,800.0	4,188.7	4,032.3	4,004.7	38.1	16.6	-22.54	3,544.2	1,383.4	1,692.1	1,650.6	40.737	
4,900.0	4,272.2	4,111.0	4,083.4	39.1	16.8	-23.17	3,543.0	1,384.6	1,639.0	1,596.6	38.650	
5,000.0	4,355.6	4,190.9	4,163.2	40.0	17.0	-23.85	3,542.1	1,385.7	1,586.4	1,543.1	36.644	
5,100.0	4,439.0	4,275.0	4,247.3	41.0	17.2	-24.64	3,541.2	1,386.4	1,534.0	1,489.8	34.713	
5,200.0	4,522.4	4,354.5	4,326.8	42.0	17.4	-25.45	3,540.5	1,386.7	1,481.9	1,436.7	32.814	
5,300.0	4,605.9	4,446.7	4,419.0	42.9	17.6	-26.46	3,539.5	1,387.0	1,429.9	1,383.8	31.017	
5,400.0	4,689.3	4,527.8	4,500.1	43.9	17.7	-27.41	3,538.5	1,387.1	1,378.0	1,330.9	29.224	
5,500.0	4,772.7	4,608.7	4,581.0	44.8	17.9	-28.43	3,537.5	1,387.2	1,326.6	1,278.3	27.495	
5,600.0	4,856.2	4,696.7	4,669.0	45.8	18.1	-29.54	3,536.5	1,387.3	1,275.5	1,226.1	25.852	
5,700.0	4,941.0	4,769.2	4,741.4	46.7	18.2	-29.83	3,535.5	1,387.6	1,226.7	1,176.2	24.266	
5,800.0	5,028.1	4,839.1	4,811.3	47.5	18.3	-30.08	3,535.7	1,388.6	1,183.2	1,131.3	22.838	
5,900.0	5,117.3	4,927.6	4,899.9	48.3	18.4	-30.55	3,536.5	1,390.1	1,143.9	1,091.1	21.661	
6,000.0	5,208.3	5,019.5	4,991.7	49.0	18.5	-31.05	3,537.4	1,391.5	1,108.5	1,054.8	20.629	
6,100.0	5,301.1	5,120.6	5,092.8	49.6	18.6	-31.61	3,538.0	1,393.2	1,076.6	1,022.0	19.724	
6,200.0	5,395.4	5,218.5	5,190.7	50.2	18.8	-32.08	3,538.1	1,394.9	1,048.0	992.5	18.889	
6,300.0	5,491.1	5,322.4	5,294.6	50.7	19.0	-32.66	3,537.5	1,396.5	1,022.5	966.2	18.148	
6,400.0	5,587.9	5,422.1	5,394.3	51.1	19.2	-32.96	3,536.5	1,397.9	1,000.3	943.1	17.472	
6,500.0	5,685.8	5,522.6	5,494.7	51.5	19.5	-33.33	3,535.1	1,398.6	981.5	923.4	16.882	
6,600.0	5,784.4	5,623.0	5,595.1	51.7	19.7	-33.64	3,533.5	1,399.0	966.2	907.3	16.383	
6,700.0	5,883.7	5,718.6	5,690.7	52.0	19.9	-33.85	3,531.9	1,399.3	954.5	894.7	15.968	
6,800.0	5,983.4	5,812.5	5,784.6	52.1	20.1	-33.98	3,531.0	1,399.5	947.1	886.7	15.662	
6,900.0	6,083.3	5,909.0	5,881.1	52.2	20.2	-34.04	3,530.4	1,399.5	943.7	882.7	15.477	
7,000.0	6,183.3	6,008.3	5,980.4	52.2	20.3	-4.47	3,530.1	1,398.9	943.3	882.2	15.430	
7,100.0	6,283.3	6,114.1	6,086.2	52.2	20.3	-4.54	3,529.4	1,397.7	942.8	881.5	15.396	
7,200.0	6,383.3	6,217.6	6,189.7	52.2	20.4	-4.61	3,528.1	1,396.6	941.6	880.2	15.332	
7,300.0	6,483.3	6,318.7	6,290.8	52.2	20.5	-4.69	3,526.6	1,395.5	940.2	878.6	15.254	
7,400.0	6,583.3	6,414.3	6,386.3	52.2	20.5	-4.81	3,525.2	1,393.7	939.0	877.1	15.171	
7,473.1	6,656.4	6,478.4	6,450.4	52.2	20.5	-4.88	3,524.8	1,392.5	938.6	876.5	15.122	CC
7,500.0	6,683.3	6,501.6	6,473.6	52.3	20.4	-4.90	3,524.8	1,392.2	938.6	876.5	15.109	ES
7,600.0	6,783.3	6,590.4	6,562.4	52.3	20.3	-4.94	3,525.7	1,391.4	939.6	877.4	15.106	SF
7,700.0	6,883.3	6,691.4	6,663.4	52.3	20.1	-4.97	3,527.3	1,390.7	941.3	879.3	15.165	

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 0993-21-11W - Slot A-2
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 0993-21-11W	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: 301-MWD *DNU*												Offset Well Error:	0.0 usft	
Gunderson 0993 21-05 Pad - BCU 0993-21-08W - Wellbore #1 - Wellbore #1														
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
7,800.0	6,983.3	6,795.3	6,767.3	52.3	20.0	-5.02	3,528.6	1,389.9	942.6	880.7	15.222			
7,900.0	7,083.3	6,897.8	6,869.8	52.3	19.8	-5.07	3,529.4	1,388.9	943.5	881.7	15.261			
8,000.0	7,183.3	7,008.8	6,980.8	52.3	19.7	-5.15	3,529.5	1,387.6	943.7	881.9	15.280			
8,100.0	7,283.3	7,112.9	7,084.9	52.4	19.7	-5.25	3,528.7	1,386.1	943.1	881.2	15.243			
8,199.3	7,382.6	7,204.6	7,176.6	52.4	19.7	-5.37	3,527.8	1,384.2	942.3	880.2	15.178			
8,200.0	7,383.3	7,205.2	7,177.1	52.4	19.7	-5.37	3,527.8	1,384.2	942.3	880.2	15.177			
8,300.0	7,483.3	7,282.9	7,254.8	52.4	19.6	-5.43	3,528.8	1,383.0	943.7	881.3	15.137			
8,400.0	7,583.3	7,385.2	7,357.1	52.4	19.4	-5.48	3,531.0	1,382.1	945.9	883.7	15.210			
8,500.0	7,683.3	7,481.9	7,453.7	52.4	19.2	-5.53	3,533.1	1,380.9	948.2	886.1	15.269			
8,600.0	7,783.3	7,583.0	7,554.8	52.4	19.0	-5.60	3,535.5	1,379.5	950.6	888.7	15.340			
8,700.0	7,883.3	7,683.7	7,655.5	52.5	18.8	-5.67	3,537.7	1,378.1	953.0	891.1	15.408			
8,800.0	7,983.3	7,786.3	7,758.1	52.5	18.6	-5.76	3,539.8	1,376.4	955.1	893.4	15.474			
8,900.0	8,083.3	7,889.5	7,861.2	52.5	18.5	-5.86	3,541.5	1,374.6	957.0	895.4	15.530			
9,000.0	8,183.3	7,990.2	7,961.9	52.5	18.3	-5.99	3,542.9	1,372.3	958.6	897.0	15.567			
9,100.0	8,283.3	8,089.9	8,061.6	52.5	18.2	-6.12	3,544.3	1,370.0	960.2	898.7	15.601			
9,200.0	8,383.3	8,190.3	8,161.9	52.5	18.0	-6.25	3,545.6	1,367.7	961.9	900.3	15.636			
9,300.0	8,483.3	8,291.8	8,263.3	52.6	17.9	-6.38	3,546.9	1,365.2	963.4	901.9	15.670			
9,400.0	8,583.3	8,390.5	8,362.1	52.6	17.7	-6.52	3,548.2	1,362.8	964.9	903.4	15.698			
9,500.0	8,683.3	8,434.0	8,405.5	52.6	17.6	-6.58	3,548.7	1,361.8	968.1	906.2	15.622			
9,518.7	8,702.0	8,434.0	8,405.5	52.6	17.6	-6.58	3,548.7	1,361.8	969.7	907.6	15.611			



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-11W - Slot A-2
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 0993-21-11W	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: 208-MWD *DNU*											Offset Well Error:	0.0 usft
Gunderson 0993 21-05 Pad - BCU 0993-21-09W - Wellbore #1 - Wellbore #1												
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	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	16.32	3,851.2	1,127.7	4,018.2			
100.0	100.0	0.0	0.0	0.4	0.0	16.32	3,851.2	1,127.7	4,014.3	4,013.9	N/A	
200.0	200.0	0.0	0.0	1.2	0.0	16.32	3,851.2	1,127.7	4,013.0	4,011.7	3,248.597	
300.0	300.0	110.2	110.2	1.7	0.7	-13.32	3,851.2	1,126.9	4,011.6	4,009.1	1,647.256	
400.0	399.8	222.2	222.1	3.3	1.4	-13.41	3,851.2	1,124.6	4,005.7	4,001.0	862.551	
500.0	499.3	702.7	700.9	4.6	5.3	-13.56	3,821.2	1,122.8	3,987.6	3,978.5	440.760	
600.0	598.3	770.1	767.6	5.6	5.6	-13.63	3,812.9	1,127.6	3,964.2	3,953.8	382.882	
700.0	696.6	865.1	861.7	6.5	5.7	-13.71	3,801.5	1,134.8	3,937.0	3,925.6	344.635	
800.0	794.0	949.0	944.7	7.3	5.8	-13.83	3,791.5	1,141.5	3,906.0	3,893.6	315.079	
900.0	890.3	1,037.0	1,031.8	8.0	6.0	-13.99	3,781.1	1,148.7	3,871.1	3,857.8	290.414	
1,000.0	985.3	1,123.7	1,117.6	8.7	6.2	-14.19	3,770.9	1,156.0	3,832.5	3,818.3	269.451	
1,100.0	1,078.9	1,203.4	1,196.4	9.4	6.4	-14.44	3,761.7	1,162.7	3,790.2	3,775.1	251.486	
1,200.0	1,170.9	1,312.2	1,304.2	10.0	6.7	-14.75	3,749.3	1,171.4	3,744.1	3,728.1	234.633	
1,300.0	1,261.0	1,439.9	1,430.7	10.7	7.1	-15.17	3,734.1	1,179.5	3,693.4	3,676.6	218.787	
1,400.0	1,349.2	1,539.1	1,529.0	11.2	7.4	-15.68	3,721.8	1,184.7	3,638.5	3,620.8	205.315	
1,500.0	1,435.2	1,623.8	1,612.8	11.8	7.7	-16.26	3,710.9	1,189.6	3,580.0	3,561.4	193.236	
1,600.0	1,519.1	1,690.8	1,679.2	12.2	7.9	-16.70	3,702.3	1,193.6	3,518.4	3,499.3	184.101	
1,700.0	1,602.6	1,751.7	1,739.5	12.5	8.2	-16.78	3,694.8	1,197.2	3,456.5	3,436.9	175.997	
1,800.0	1,686.0	1,823.1	1,810.3	12.8	8.4	-16.89	3,686.3	1,201.6	3,395.0	3,374.8	167.986	
1,900.0	1,769.4	2,001.2	1,986.5	13.2	9.1	-17.16	3,663.0	1,211.8	3,332.6	3,311.6	158.496	
2,000.0	1,852.8	2,062.2	2,046.9	13.6	9.4	-17.26	3,654.1	1,215.1	3,269.0	3,247.3	151.035	
2,100.0	1,936.3	2,119.3	2,103.3	13.9	9.6	-17.36	3,646.1	1,218.2	3,205.8	3,183.5	144.062	
2,200.0	2,019.7	2,171.0	2,154.4	14.3	9.8	-17.45	3,639.2	1,221.1	3,143.1	3,120.2	137.466	
2,300.0	2,103.1	2,234.7	2,217.5	14.7	10.0	-17.57	3,631.2	1,224.6	3,080.9	3,057.4	131.072	
2,400.0	2,186.5	2,330.4	2,312.3	15.4	10.4	-17.75	3,619.3	1,230.1	3,019.0	2,994.8	124.687	
2,500.0	2,270.0	2,402.2	2,383.3	16.4	10.7	-17.87	3,609.6	1,235.0	2,956.5	2,931.6	118.725	
2,600.0	2,353.4	2,470.0	2,450.4	17.3	11.0	-17.99	3,601.1	1,239.6	2,894.6	2,869.0	113.072	
2,700.0	2,436.8	2,599.2	2,578.0	18.2	11.6	-18.23	3,582.9	1,248.3	2,831.4	2,805.0	107.364	
2,800.0	2,520.2	2,666.9	2,644.9	19.2	11.9	-18.36	3,573.2	1,252.6	2,768.2	2,741.2	102.184	
2,900.0	2,603.7	2,738.0	2,715.1	20.1	12.2	-18.51	3,563.4	1,257.2	2,705.4	2,677.6	97.278	
3,000.0	2,687.1	2,805.9	2,782.2	21.1	12.4	-18.66	3,554.1	1,261.6	2,642.8	2,614.2	92.603	
3,100.0	2,770.5	2,876.2	2,851.8	22.0	12.7	-18.82	3,544.7	1,266.2	2,580.4	2,551.1	88.136	
3,200.0	2,853.9	2,946.0	2,920.9	22.9	13.0	-18.99	3,535.7	1,270.7	2,518.2	2,488.2	83.871	
3,300.0	2,937.4	3,021.0	2,995.1	23.9	13.3	-19.18	3,526.1	1,275.6	2,456.3	2,425.5	79.805	
3,400.0	3,020.8	3,081.5	3,055.0	24.8	13.6	-19.34	3,518.6	1,279.7	2,394.8	2,363.2	75.908	
3,500.0	3,104.2	3,209.1	3,181.3	25.8	14.1	-19.70	3,502.5	1,288.2	2,333.2	2,300.9	72.292	
3,600.0	3,187.6	3,273.2	3,244.5	26.7	14.4	-19.88	3,493.6	1,292.4	2,270.5	2,237.5	68.643	
3,700.0	3,271.1	3,344.4	3,315.0	27.7	14.7	-20.09	3,484.1	1,297.4	2,208.3	2,174.4	65.187	
3,800.0	3,354.5	3,420.0	3,389.7	28.6	15.0	-20.32	3,474.0	1,302.8	2,146.1	2,111.5	61.899	
3,900.0	3,437.9	3,493.0	3,461.9	29.6	15.3	-20.56	3,464.5	1,308.0	2,084.2	2,048.7	58.742	
4,000.0	3,521.3	3,564.0	3,532.1	30.5	15.6	-20.81	3,455.4	1,313.2	2,022.5	1,986.2	55.712	
4,100.0	3,604.8	3,633.1	3,600.5	31.5	15.9	-21.05	3,446.7	1,318.3	1,961.2	1,924.0	52.803	
4,200.0	3,688.2	3,718.2	3,684.7	32.4	16.2	-21.38	3,436.5	1,324.5	1,900.2	1,862.2	50.081	
4,300.0	3,771.6	3,816.4	3,781.8	33.4	16.6	-21.81	3,423.5	1,331.1	1,838.1	1,799.4	47.489	
4,400.0	3,855.0	3,888.0	3,852.7	34.3	16.9	-22.14	3,413.9	1,335.8	1,776.1	1,736.5	44.873	
4,500.0	3,938.5	3,956.3	3,920.2	35.3	17.2	-22.48	3,405.1	1,340.4	1,714.5	1,674.0	42.350	
4,600.0	4,021.9	4,024.8	3,988.0	36.2	17.5	-22.84	3,396.7	1,345.1	1,653.4	1,612.0	39.938	
4,700.0	4,105.3	4,096.0	4,058.6	37.2	17.8	-23.25	3,388.4	1,350.0	1,592.8	1,550.5	37.637	
4,800.0	4,188.7	4,171.1	4,133.0	38.1	18.1	-23.72	3,379.9	1,354.9	1,532.6	1,489.4	35.444	
4,900.0	4,272.2	4,249.0	4,210.3	39.1	18.4	-24.25	3,371.2	1,359.9	1,472.5	1,428.4	33.344	
5,000.0	4,355.6	4,317.8	4,278.5	40.0	18.7	-24.76	3,363.8	1,364.2	1,412.8	1,367.7	31.281	

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 0993-21-11W - Slot A-2
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 0993-21-11W	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: 208-MWD *DNU*												Offset Well Error:	0.0 usft
Gunderson 0993 21-05 Pad - BCU 0993-21-09W - Wellbore #1 - Wellbore #1													
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	4,439.0	4,383.4	4,343.7	41.0	18.9	-25.30	3,357.4	1,368.2	1,354.0	1,307.8	29.294		
5,200.0	4,522.4	4,450.6	4,410.5	42.0	19.2	-25.89	3,351.5	1,372.3	1,296.2	1,248.9	27.404		
5,300.0	4,605.9	4,529.5	4,489.1	42.9	19.5	-26.73	3,345.3	1,375.7	1,238.9	1,190.6	25.625		
5,400.0	4,689.3	4,595.0	4,554.4	43.9	19.8	-27.55	3,340.7	1,377.3	1,182.5	1,132.9	23.845		
5,500.0	4,772.7	4,655.5	4,614.8	44.8	20.0	-28.41	3,337.4	1,378.2	1,127.4	1,076.5	22.133		
5,600.0	4,856.2	4,722.0	4,681.3	45.8	20.3	-29.36	3,335.4	1,378.9	1,074.6	1,022.3	20.545		
5,700.0	4,941.0	4,784.6	4,743.9	46.7	20.5	-29.65	3,334.6	1,379.3	1,025.7	972.0	19.099		
5,800.0	5,028.1	4,866.9	4,826.1	47.5	20.6	-30.29	3,334.1	1,379.8	981.3	926.3	17.846		
5,900.0	5,117.3	4,951.9	4,911.2	48.3	20.7	-31.01	3,333.9	1,379.7	941.0	884.8	16.746		
6,000.0	5,208.3	5,038.5	4,997.8	49.0	20.7	-31.77	3,334.2	1,379.5	905.2	847.9	15.801		
6,100.0	5,301.1	5,130.2	5,089.5	49.6	20.5	-32.60	3,334.7	1,378.9	873.5	815.3	14.998		
6,200.0	5,395.4	5,224.0	5,183.3	50.2	20.4	-33.44	3,335.3	1,378.0	845.8	786.7	14.298		
6,300.0	5,491.1	5,319.4	5,278.7	50.7	20.2	-34.28	3,336.0	1,376.8	822.1	762.1	13.698		
6,400.0	5,587.9	5,418.2	5,377.5	51.1	20.1	-35.07	3,336.6	1,375.8	802.1	741.4	13.202		
6,500.0	5,685.8	5,519.0	5,478.2	51.5	20.0	-35.73	3,336.9	1,375.4	785.5	724.1	12.796		
6,600.0	5,784.4	5,620.6	5,579.8	51.7	20.0	-36.27	3,336.9	1,375.2	772.3	710.3	12.455		
6,700.0	5,883.7	5,720.2	5,679.5	52.0	20.1	-36.68	3,336.6	1,374.9	762.2	699.6	12.169		
6,800.0	5,983.4	5,819.0	5,778.3	52.1	20.1	-36.96	3,336.4	1,374.6	755.9	692.8	11.966		
6,900.0	6,083.3	5,918.7	5,877.9	52.2	20.2	-37.11	3,336.2	1,374.0	753.1	689.6	11.854		
6,995.2	6,178.5	6,014.4	5,973.6	52.2	20.2	-37.21	3,336.0	1,373.1	752.6	689.0	11.826		
7,000.0	6,183.3	6,019.2	5,978.4	52.2	20.2	-7.57	3,336.0	1,373.1	752.9	689.3	11.831		
7,100.0	6,283.3	6,129.7	6,089.0	52.2	20.3	-7.63	3,335.1	1,372.4	752.2	688.6	11.814		
7,200.0	6,383.3	6,229.9	6,189.1	52.2	20.5	-7.59	3,333.6	1,373.2	750.6	686.7	11.742		
7,300.0	6,483.3	6,329.6	6,288.8	52.2	20.8	-7.52	3,332.2	1,374.3	749.0	684.9	11.675		
7,400.0	6,583.3	6,426.3	6,385.5	52.2	21.0	-7.46	3,331.0	1,375.2	747.7	683.3	11.605		
7,500.0	6,683.3	6,521.3	6,480.5	52.3	21.2	-7.45	3,330.3	1,375.4	746.9	682.2	11.543		
7,535.5	6,718.8	6,553.6	6,512.8	52.3	21.2	-7.46	3,330.2	1,375.4	746.9	682.1	11.530		
7,600.0	6,783.3	6,612.9	6,572.1	52.3	21.2	-7.47	3,330.4	1,375.1	747.1	682.2	11.515		
7,700.0	6,883.3	6,718.9	6,678.1	52.3	21.2	-7.55	3,330.5	1,374.2	747.3	682.5	11.529		
7,736.4	6,919.7	6,754.5	6,713.7	52.3	21.2	-7.58	3,330.4	1,373.8	747.3	682.4	11.522		
7,800.0	6,983.3	6,818.2	6,777.4	52.3	21.2	-7.62	3,330.4	1,373.2	747.3	682.4	11.513		
7,900.0	7,083.3	6,922.4	6,881.5	52.3	21.2	-7.71	3,329.9	1,372.1	747.0	682.0	11.496		
8,000.0	7,183.3	7,023.2	6,982.3	52.3	21.3	-7.84	3,329.0	1,370.6	746.3	681.2	11.457		
8,100.0	7,283.3	7,122.5	7,081.7	52.4	21.4	-7.97	3,328.1	1,368.9	745.7	680.4	11.416		
8,200.0	7,383.3	7,222.5	7,181.6	52.4	21.5	-8.08	3,327.4	1,367.5	745.2	679.7	11.380		
8,300.0	7,483.3	7,321.0	7,280.1	52.4	21.6	-8.24	3,326.5	1,365.6	744.6	679.0	11.342		
8,400.0	7,583.3	7,419.2	7,378.3	52.4	21.6	-8.43	3,326.0	1,363.2	744.4	678.6	11.313		
8,485.5	7,668.8	7,503.7	7,462.8	52.4	21.6	-8.59	3,325.6	1,361.1	744.3	678.4	11.294	CC	
8,500.0	7,683.3	7,518.0	7,477.0	52.4	21.6	-8.62	3,325.6	1,360.7	744.3	678.4	11.291		
8,600.0	7,783.3	7,617.7	7,576.7	52.4	21.7	-8.79	3,325.3	1,358.5	744.4	678.4	11.275		
8,700.0	7,883.3	7,717.8	7,676.8	52.5	21.7	-8.96	3,325.0	1,356.4	744.5	678.4	11.262	ES	
8,800.0	7,983.3	7,722.0	7,681.0	52.5	21.7	-8.96	3,325.0	1,356.3	750.7	683.8	11.218	SF	
8,900.0	8,083.3	7,722.0	7,681.0	52.5	21.7	-8.96	3,325.0	1,356.3	769.9	703.0	11.507		
9,000.0	8,183.3	7,722.0	7,681.0	52.5	21.7	-8.96	3,325.0	1,356.3	801.3	735.1	12.112		
9,100.0	8,283.3	7,722.0	7,681.0	52.5	21.7	-8.96	3,325.0	1,356.3	843.4	778.5	13.002		
9,200.0	8,383.3	7,722.0	7,681.0	52.5	21.7	-8.96	3,325.0	1,356.3	894.8	831.5	14.141		
9,300.0	8,483.3	7,722.0	7,681.0	52.6	21.7	-8.96	3,325.0	1,356.3	953.9	892.3	15.498		
9,400.0	8,583.3	7,722.0	7,681.0	52.6	21.7	-8.96	3,325.0	1,356.3	1,019.4	959.6	17.040		
9,500.0	8,683.3	7,722.0	7,681.0	52.6	21.7	-8.96	3,325.0	1,356.3	1,090.1	1,032.0	18.738		
9,518.7	8,702.0	7,722.0	7,681.0	52.6	21.7	-8.96	3,325.0	1,356.3	1,103.9	1,046.0	19.070		

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



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-11W - Slot A-2
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 0993-21-11W	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: 208-MWD *DNU*											Offset Well Error:	0.0 usft
Gunderson 0993 21-05 Pad - BCU 0993-21-10W - Wellbore #1 - Wellbore #1												
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	16.36	3,844.0	1,128.3	4,011.4			
100.0	100.0	0.0	0.0	0.4	0.0	16.36	3,844.0	1,128.3	4,007.5	4,007.1	N/A	
200.0	200.0	0.0	0.0	1.2	0.0	16.36	3,844.0	1,128.3	4,006.1	4,004.9	3,243.064	
300.0	300.0	250.6	250.5	1.7	1.6	-13.28	3,839.0	1,127.9	4,003.1	3,999.7	1,188.938	
400.0	399.8	838.5	834.5	3.3	5.9	-13.10	3,779.3	1,136.6	3,991.8	3,982.9	450.054	
500.0	499.3	944.8	939.3	4.6	6.3	-13.19	3,761.1	1,137.7	3,966.3	3,955.9	381.048	
600.0	598.3	987.9	981.8	5.6	6.4	-13.34	3,753.7	1,138.6	3,937.2	3,925.6	340.318	
700.0	696.6	1,043.0	1,036.0	6.5	6.6	-13.50	3,744.9	1,141.4	3,905.4	3,892.7	308.573	
800.0	794.0	1,087.6	1,080.0	7.3	6.8	-13.67	3,738.0	1,144.6	3,870.7	3,857.0	284.074	
900.0	890.3	1,166.1	1,157.3	8.0	7.1	-13.85	3,726.0	1,150.6	3,832.6	3,818.0	261.902	
1,000.0	985.3	1,366.7	1,354.8	8.7	7.8	-14.01	3,693.4	1,164.4	3,789.8	3,773.9	238.411	
1,100.0	1,078.9	1,457.4	1,443.9	9.4	8.1	-14.32	3,677.4	1,169.7	3,741.5	3,724.7	222.503	
1,200.0	1,170.9	1,572.7	1,557.1	10.0	8.6	-14.68	3,656.6	1,176.6	3,689.4	3,671.6	207.423	
1,300.0	1,261.0	1,669.0	1,651.5	10.7	9.0	-15.13	3,638.6	1,181.9	3,633.0	3,614.3	194.456	
1,400.0	1,349.2	1,743.9	1,725.0	11.2	9.3	-15.65	3,624.5	1,186.2	3,573.1	3,553.6	183.300	
1,500.0	1,435.2	1,810.0	1,789.8	11.8	9.5	-16.24	3,612.2	1,190.2	3,510.1	3,489.9	173.257	
1,600.0	1,519.1	1,868.7	1,847.4	12.2	9.8	-16.69	3,601.4	1,193.9	3,444.5	3,423.6	165.239	
1,700.0	1,602.6	1,934.1	1,911.7	12.5	10.1	-16.76	3,589.8	1,197.8	3,378.5	3,357.1	157.822	
1,800.0	1,686.0	2,001.9	1,978.3	12.8	10.3	-16.86	3,578.1	1,201.3	3,312.7	3,290.7	150.603	
1,900.0	1,769.4	2,065.1	2,040.5	13.2	10.6	-16.96	3,567.4	1,204.4	3,247.1	3,224.5	143.721	
2,000.0	1,852.8	2,130.0	2,104.5	13.6	10.9	-17.06	3,556.6	1,207.6	3,181.8	3,158.6	137.097	
2,100.0	1,936.3	2,193.7	2,167.1	13.9	11.1	-17.16	3,546.2	1,211.1	3,116.8	3,093.0	130.728	
2,200.0	2,019.7	2,253.4	2,226.0	14.3	11.4	-17.27	3,536.9	1,213.7	3,052.2	3,027.7	124.599	
2,300.0	2,103.1	2,317.0	2,288.9	14.7	11.7	-17.42	3,527.5	1,215.7	2,987.9	2,962.7	118.698	
2,400.0	2,186.5	2,381.1	2,352.4	15.4	12.0	-17.58	3,518.3	1,217.7	2,923.9	2,898.1	113.079	
2,500.0	2,270.0	2,443.5	2,414.1	16.4	12.2	-17.74	3,509.6	1,219.7	2,860.4	2,833.8	107.783	
2,600.0	2,353.4	2,510.0	2,480.0	17.3	12.5	-17.92	3,500.7	1,221.9	2,797.2	2,769.9	102.702	
2,700.0	2,436.8	2,575.6	2,545.0	18.2	12.7	-18.11	3,492.2	1,224.0	2,734.2	2,706.3	97.848	
2,800.0	2,520.2	2,646.0	2,614.8	19.2	13.0	-18.31	3,483.4	1,226.4	2,671.8	2,643.1	93.201	
2,900.0	2,603.7	2,840.2	2,807.0	20.1	13.9	-18.94	3,456.2	1,231.9	2,609.0	2,579.5	88.440	
3,000.0	2,687.1	2,910.8	2,876.6	21.1	14.2	-19.21	3,444.6	1,232.5	2,543.2	2,513.0	83.992	
3,100.0	2,770.5	3,018.3	2,982.5	22.0	14.6	-19.65	3,426.5	1,233.7	2,477.2	2,446.2	79.779	
3,200.0	2,853.9	3,088.8	3,051.9	22.9	14.9	-19.94	3,413.9	1,234.7	2,410.6	2,378.8	75.751	
3,300.0	2,937.4	3,156.0	3,118.1	23.9	15.2	-20.23	3,402.1	1,235.8	2,344.2	2,311.6	71.894	
3,400.0	3,020.8	3,221.7	3,182.8	24.8	15.5	-20.53	3,390.8	1,236.8	2,278.1	2,244.7	68.199	
3,500.0	3,104.2	3,284.0	3,244.2	25.8	15.8	-20.82	3,380.4	1,237.8	2,212.5	2,178.2	64.658	
3,600.0	3,187.6	3,360.2	3,319.3	26.7	16.1	-21.20	3,367.8	1,239.5	2,147.1	2,112.1	61.278	
3,700.0	3,271.1	3,435.7	3,393.6	27.7	16.5	-21.52	3,354.7	1,243.0	2,081.6	2,045.7	58.038	
3,800.0	3,354.5	3,503.0	3,459.8	28.6	16.8	-21.81	3,343.1	1,246.5	2,016.3	1,979.6	54.920	
3,900.0	3,437.9	3,568.3	3,524.1	29.6	17.1	-22.11	3,332.2	1,249.8	1,951.5	1,913.9	51.947	
4,000.0	3,521.3	3,634.2	3,589.1	30.5	17.3	-22.45	3,321.6	1,253.0	1,887.0	1,848.6	49.100	
4,100.0	3,604.8	3,718.8	3,672.5	31.5	17.7	-22.91	3,308.2	1,257.1	1,822.9	1,783.7	46.436	
4,200.0	3,688.2	3,822.5	3,774.7	32.4	18.2	-23.59	3,290.4	1,260.5	1,757.5	1,717.5	43.908	
4,300.0	3,771.6	3,893.0	3,844.0	33.4	18.5	-24.10	3,278.1	1,262.5	1,691.9	1,651.0	41.335	
4,400.0	3,855.0	3,951.6	3,901.7	34.3	18.7	-24.55	3,268.2	1,264.2	1,627.0	1,585.1	38.820	
4,500.0	3,938.5	4,035.1	3,984.1	35.3	19.1	-25.24	3,254.5	1,266.7	1,562.5	1,519.7	36.515	
4,600.0	4,021.9	4,114.2	4,062.0	36.2	19.4	-25.95	3,240.9	1,269.2	1,497.5	1,453.8	34.266	
4,700.0	4,105.3	4,191.5	4,138.1	37.2	19.8	-26.69	3,227.5	1,271.9	1,432.7	1,388.0	32.093	
4,800.0	4,188.7	4,270.5	4,215.7	38.1	20.1	-27.46	3,213.4	1,275.6	1,367.6	1,322.1	30.006	
4,900.0	4,272.2	4,340.3	4,284.3	39.1	20.5	-28.18	3,201.0	1,279.4	1,302.9	1,256.3	27.954	
5,000.0	4,355.6	4,413.3	4,356.0	40.0	20.8	-28.99	3,188.1	1,283.6	1,238.5	1,190.8	25.997	

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 0993-21-11W - Slot A-2
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 0993-21-11W	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: 208-MWD *DNU*												Offset Well Error:	0.0 usft	
Gunderson 0993 21-05 Pad - BCU 0993-21-10W - Wellbore #1 - Wellbore #1														
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
5,100.0	4,439.0	4,483.1	4,424.6	41.0	21.1	-29.85	3,176.1	1,287.6	1,174.4	1,125.7	24.096			
5,200.0	4,522.4	4,552.8	4,493.3	42.0	21.4	-30.81	3,164.4	1,291.4	1,111.0	1,061.1	22.271			
5,300.0	4,605.9	4,629.2	4,568.5	42.9	21.7	-31.97	3,151.7	1,295.6	1,048.0	997.0	20.545			
5,400.0	4,689.3	4,704.3	4,642.4	43.9	22.1	-33.24	3,139.3	1,299.9	985.3	933.1	18.875			
5,500.0	4,772.7	4,773.8	4,710.9	44.8	22.4	-34.56	3,128.0	1,303.9	923.2	869.7	17.243			
5,600.0	4,856.2	4,840.6	4,776.8	45.8	22.7	-35.88	3,117.7	1,307.2	862.2	807.2	15.670			
5,700.0	4,941.0	4,914.0	4,849.4	46.7	23.0	-36.53	3,107.4	1,310.2	804.6	748.1	14.229			
5,800.0	5,028.1	4,992.8	4,927.5	47.5	23.3	-37.38	3,096.7	1,313.3	750.9	692.8	12.921			
5,900.0	5,117.3	5,080.0	5,013.7	48.3	23.7	-38.44	3,084.4	1,317.2	700.3	640.7	11.752			
6,000.0	5,208.3	5,163.4	5,096.0	49.0	24.1	-39.35	3,072.6	1,321.8	653.1	591.9	10.679			
6,100.0	5,301.1	5,241.8	5,173.6	49.6	24.4	-40.04	3,062.3	1,327.5	610.3	547.4	9.714			
6,200.0	5,395.4	5,318.3	5,249.4	50.2	24.7	-40.59	3,054.1	1,333.8	572.9	508.4	8.880			
6,300.0	5,491.1	5,395.4	5,326.0	50.7	25.0	-41.13	3,048.0	1,339.7	541.6	475.4	8.187			
6,400.0	5,587.9	5,480.0	5,410.3	51.1	25.3	-41.77	3,043.9	1,344.9	516.8	449.2	7.650			
6,500.0	5,685.8	5,566.6	5,496.9	51.5	25.6	-42.40	3,041.4	1,349.1	497.4	428.7	7.234			
6,600.0	5,784.4	5,664.9	5,595.0	51.7	25.8	-43.04	3,038.9	1,353.0	481.9	412.3	6.918			
6,700.0	5,883.7	5,761.0	5,691.0	52.0	26.1	-43.45	3,036.6	1,356.5	470.0	399.5	6.669			
6,800.0	5,983.4	5,859.0	5,788.9	52.1	26.3	-43.58	3,034.7	1,360.0	461.7	390.7	6.496			
6,900.0	6,083.3	5,957.7	5,887.6	52.2	26.6	-43.48	3,033.0	1,363.0	456.9	385.4	6.389			
7,000.0	6,183.3	6,055.7	5,985.5	52.2	26.8	-13.56	3,031.7	1,365.7	454.8	383.1	6.341			
7,100.0	6,283.3	6,153.7	6,083.4	52.2	27.0	-13.31	3,030.6	1,368.0	453.2	381.3	6.305			
7,200.0	6,383.3	6,251.6	6,181.3	52.2	27.2	-13.12	3,029.8	1,369.7	452.0	380.0	6.273			
7,290.2	6,473.5	6,337.8	6,267.5	52.2	27.3	-12.98	3,029.8	1,370.9	451.7	379.5	6.257	CC, ES		
7,300.0	6,483.3	6,347.5	6,277.2	52.2	27.3	-12.97	3,029.8	1,371.0	451.7	379.5	6.257	SF		
7,400.0	6,583.3	6,446.4	6,376.1	52.2	27.3	-12.83	3,030.1	1,372.0	451.8	379.6	6.259			
7,500.0	6,683.3	6,544.2	6,474.0	52.3	27.3	-12.73	3,030.7	1,372.7	452.2	380.1	6.269			
7,600.0	6,783.3	6,641.7	6,571.5	52.3	27.1	-12.64	3,032.0	1,373.2	453.4	381.3	6.294			
7,700.0	6,883.3	6,741.7	6,671.5	52.3	27.0	-12.57	3,033.3	1,373.4	454.6	382.7	6.326			
7,800.0	6,983.3	6,841.0	6,770.7	52.3	26.8	-12.53	3,034.8	1,373.4	456.0	384.3	6.361			
7,900.0	7,083.3	6,941.0	6,870.7	52.3	26.6	-12.48	3,036.2	1,373.5	457.4	385.9	6.397			
8,000.0	7,183.3	7,038.3	6,968.0	52.3	26.4	-12.45	3,037.8	1,373.4	459.1	387.7	6.434			
8,100.0	7,283.3	7,134.2	7,063.9	52.4	26.2	-12.41	3,040.2	1,373.2	461.5	390.3	6.482			
8,200.0	7,383.3	7,232.9	7,162.5	52.4	26.0	-12.37	3,043.3	1,372.8	464.7	393.7	6.546			
8,300.0	7,483.3	7,335.6	7,265.2	52.4	25.7	-12.42	3,046.2	1,371.8	467.7	396.9	6.610			
8,400.0	7,583.3	7,439.4	7,368.9	52.4	25.5	-12.50	3,048.3	1,370.7	469.9	399.3	6.662			
8,500.0	7,683.3	7,539.6	7,469.2	52.4	25.3	-12.55	3,049.8	1,369.9	471.5	401.2	6.701			
8,600.0	7,783.3	7,637.3	7,566.8	52.4	25.1	-12.56	3,051.7	1,369.3	473.5	403.3	6.743			
8,700.0	7,883.3	7,737.9	7,667.4	52.5	24.9	-12.55	3,053.8	1,369.0	475.6	405.6	6.794			
8,800.0	7,983.3	7,743.0	7,672.5	52.5	24.9	-12.55	3,053.9	1,369.0	487.0	416.8	6.939			
8,900.0	8,083.3	7,743.0	7,672.5	52.5	24.9	-12.55	3,053.9	1,369.0	517.8	449.4	7.568			
9,000.0	8,183.3	7,743.0	7,672.5	52.5	24.9	-12.55	3,053.9	1,369.0	564.9	499.4	8.624			
9,100.0	8,283.3	7,743.0	7,672.5	52.5	24.9	-12.55	3,053.9	1,369.0	624.6	562.3	10.036			
9,200.0	8,383.3	7,743.0	7,672.5	52.5	24.9	-12.55	3,053.9	1,369.0	693.6	634.5	11.730			
9,300.0	8,483.3	7,743.0	7,672.5	52.6	24.9	-12.55	3,053.9	1,369.0	769.4	713.0	13.642			
9,400.0	8,583.3	7,743.0	7,672.5	52.6	24.9	-12.55	3,053.9	1,369.0	850.3	796.2	15.716			
9,500.0	8,683.3	7,743.0	7,672.5	52.6	24.9	-12.55	3,053.9	1,369.0	934.9	882.6	17.905			
9,518.7	8,702.0	7,743.0	7,672.5	52.6	24.9	-12.55	3,053.9	1,369.0	951.0	899.1	18.325			

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-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, ES
300.0	300.0	299.7	299.7	1.7	2.4	-75.38	7.6	-6.1	9.4	5.7	2.569	
400.0	399.8	399.3	399.0	3.3	3.9	-79.76	14.1	-6.7	13.0	7.9	2.535	SF
500.0	499.3	498.4	497.5	4.6	4.9	-88.47	24.3	-8.8	19.7	13.8	3.315	
600.0	598.3	596.7	594.8	5.6	5.8	-97.28	37.7	-13.5	30.9	24.2	4.606	
700.0	696.6	693.9	690.4	6.5	6.5	-103.48	54.1	-20.8	46.9	39.3	6.177	
800.0	794.0	789.7	783.8	7.3	7.2	-107.53	73.3	-30.6	67.7	59.1	7.916	
900.0	890.3	883.9	874.6	8.0	7.9	-110.18	95.1	-42.5	93.1	83.6	9.767	
1,000.0	985.3	976.1	962.5	8.7	8.5	-111.91	119.2	-56.6	123.0	112.5	11.682	
1,100.0	1,078.9	1,066.2	1,047.2	9.4	9.1	-113.02	145.4	-72.5	157.3	145.7	13.618	
1,200.0	1,170.9	1,154.0	1,128.5	10.0	9.7	-113.70	173.3	-90.0	195.7	183.1	15.541	
1,300.0	1,261.0	1,239.2	1,206.3	10.7	10.2	-114.05	202.6	-109.0	238.1	224.4	17.424	
1,400.0	1,349.2	1,321.9	1,280.4	11.2	10.7	-114.15	233.2	-129.2	284.2	269.5	19.247	
1,500.0	1,435.2	1,400.0	1,349.2	11.8	11.2	-114.01	263.9	-149.8	334.0	318.1	21.047	
1,600.0	1,519.1	1,479.2	1,417.6	12.2	11.6	-114.23	296.8	-172.3	387.0	370.0	22.743	
1,700.0	1,602.6	1,554.6	1,481.4	12.5	12.0	-114.86	329.9	-195.1	442.1	424.0	24.362	
1,800.0	1,686.0	1,628.3	1,542.5	12.8	12.4	-115.07	363.7	-218.7	498.8	479.5	25.859	
1,900.0	1,769.4	1,700.9	1,601.3	13.2	12.8	-114.99	398.4	-243.3	556.9	536.5	27.255	
2,000.0	1,852.8	1,781.7	1,666.2	13.6	13.1	-114.83	437.7	-271.1	615.7	594.0	28.337	
2,100.0	1,936.3	1,862.6	1,731.2	13.9	13.4	-114.69	477.1	-299.0	674.5	651.4	29.245	
2,200.0	2,019.7	1,943.5	1,796.1	14.3	13.7	-114.57	516.4	-326.9	733.3	708.9	30.013	
2,300.0	2,103.1	2,024.4	1,861.0	14.7	14.1	-114.48	555.8	-354.8	792.1	766.3	30.677	
2,400.0	2,186.5	2,105.3	1,926.0	15.4	14.6	-114.39	595.1	-382.7	850.9	823.6	31.263	
2,500.0	2,270.0	2,186.2	1,990.9	16.4	15.2	-114.32	634.4	-410.6	909.7	881.0	31.760	
2,600.0	2,353.4	2,267.1	2,055.8	17.3	16.0	-114.25	673.8	-438.5	968.4	938.4	32.192	
2,700.0	2,436.8	2,348.0	2,120.8	18.2	16.8	-114.20	713.1	-466.4	1,027.2	995.7	32.572	
2,800.0	2,520.2	2,428.8	2,185.7	19.2	17.7	-114.14	752.5	-494.3	1,086.0	1,053.0	32.908	
2,900.0	2,603.7	2,509.7	2,250.6	20.1	18.5	-114.10	791.8	-522.2	1,144.8	1,110.3	33.206	
3,000.0	2,687.1	2,590.6	2,315.6	21.1	19.4	-114.06	831.2	-550.1	1,203.6	1,167.7	33.472	
3,100.0	2,770.5	2,671.5	2,380.5	22.0	20.3	-114.02	870.5	-578.0	1,262.4	1,225.0	33.710	
3,200.0	2,853.9	2,752.4	2,445.4	22.9	21.2	-113.98	909.9	-605.9	1,321.2	1,282.3	33.924	
3,300.0	2,937.4	2,833.3	2,510.4	23.9	22.1	-113.95	949.2	-633.8	1,380.0	1,339.6	34.117	
3,400.0	3,020.8	2,914.2	2,575.3	24.8	23.0	-113.92	988.5	-661.7	1,438.8	1,396.8	34.292	
3,500.0	3,104.2	2,995.1	2,640.2	25.8	23.9	-113.90	1,027.9	-689.6	1,497.6	1,454.1	34.451	
3,600.0	3,187.6	3,075.9	2,705.2	26.7	24.8	-113.87	1,067.2	-717.5	1,556.4	1,511.4	34.596	
3,700.0	3,271.1	3,156.8	2,770.1	27.7	25.7	-113.85	1,106.6	-745.4	1,615.2	1,568.7	34.729	
3,800.0	3,354.5	3,237.7	2,835.0	28.6	26.6	-113.83	1,145.9	-773.3	1,674.0	1,626.0	34.850	
3,900.0	3,437.9	3,318.6	2,900.0	29.6	27.5	-113.81	1,185.3	-801.2	1,732.8	1,683.2	34.962	
4,000.0	3,521.3	3,399.5	2,964.9	30.5	28.4	-113.79	1,224.6	-829.1	1,791.6	1,740.5	35.066	
4,100.0	3,604.8	3,480.4	3,029.8	31.5	29.4	-113.77	1,264.0	-857.0	1,850.4	1,797.7	35.161	
4,200.0	3,688.2	3,561.3	3,094.8	32.4	30.3	-113.76	1,303.3	-884.9	1,909.2	1,855.0	35.250	
4,300.0	3,771.6	3,642.2	3,159.7	33.4	31.2	-113.74	1,342.6	-912.8	1,968.0	1,912.3	35.332	
4,400.0	3,855.0	3,723.0	3,224.6	34.3	32.1	-113.73	1,382.0	-940.7	2,026.8	1,969.5	35.408	
4,500.0	3,938.5	3,803.9	3,289.6	35.3	33.0	-113.71	1,421.3	-968.6	2,085.6	2,026.8	35.479	
4,600.0	4,021.9	3,884.8	3,354.5	36.2	33.9	-113.70	1,460.7	-996.5	2,144.4	2,084.0	35.546	
4,700.0	4,105.3	3,965.7	3,419.4	37.2	34.8	-113.69	1,500.0	-1,024.4	2,203.2	2,141.3	35.608	
4,800.0	4,188.7	4,046.6	3,484.4	38.1	35.8	-113.68	1,539.4	-1,052.3	2,262.0	2,198.5	35.666	
4,900.0	4,272.2	4,127.5	3,549.3	39.1	36.7	-113.67	1,578.7	-1,080.2	2,320.7	2,255.8	35.721	
5,000.0	4,355.6	4,208.4	3,614.2	40.0	37.6	-113.66	1,618.1	-1,108.1	2,379.5	2,313.0	35.773	

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft	
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
5,100.0	4,439.0	4,289.3	3,679.2	41.0	38.5	-113.65	1,657.4	-1,136.0	2,438.3	2,370.3	35.821			
5,200.0	4,522.4	4,370.1	3,744.1	42.0	39.4	-113.64	1,696.8	-1,163.9	2,497.1	2,427.5	35.867			
5,300.0	4,605.9	4,451.0	3,809.0	42.9	40.4	-113.63	1,736.1	-1,191.8	2,555.9	2,484.8	35.910			
5,400.0	4,689.3	4,531.9	3,874.0	43.9	41.3	-113.62	1,775.4	-1,219.7	2,614.7	2,542.0	35.951			
5,500.0	4,772.7	4,612.8	3,938.9	44.8	42.2	-113.61	1,814.8	-1,247.6	2,673.5	2,599.2	35.989			
5,600.0	4,856.2	4,693.7	4,003.9	45.8	43.1	-113.80	1,854.1	-1,275.5	2,732.3	2,656.5	36.027			
5,700.0	4,941.0	4,775.2	4,069.3	46.7	44.0	-115.34	1,893.8	-1,303.6	2,790.2	2,712.8	36.061			
5,800.0	5,028.1	4,857.5	4,135.3	47.5	45.0	-116.71	1,933.8	-1,332.0	2,846.6	2,767.7	36.088			
5,900.0	5,117.3	4,940.5	4,202.0	48.3	45.9	-117.92	1,974.2	-1,360.6	2,901.4	2,821.0	36.115			
6,000.0	5,208.3	5,024.0	4,269.0	49.0	46.9	-118.98	2,014.8	-1,389.4	2,954.5	2,872.7	36.141			
6,100.0	5,301.1	5,107.9	4,336.4	49.6	47.8	-119.89	2,055.6	-1,418.4	3,005.9	2,922.8	36.170			
6,200.0	5,395.4	5,192.0	4,403.9	50.2	48.8	-120.67	2,096.5	-1,447.4	3,055.5	2,971.1	36.202			
6,300.0	5,491.1	5,276.1	4,471.4	50.7	49.7	-121.33	2,137.4	-1,476.4	3,103.4	3,017.8	36.239			
6,400.0	5,587.9	5,360.2	4,538.9	51.1	50.7	-121.88	2,178.3	-1,505.4	3,149.5	3,062.7	36.282			
6,500.0	5,685.8	5,443.9	4,606.1	51.5	51.7	-122.33	2,219.0	-1,534.2	3,193.9	3,106.0	36.334			
6,600.0	5,784.4	5,527.2	4,673.0	51.7	52.6	-122.68	2,259.6	-1,563.0	3,236.5	3,147.5	36.398			
6,700.0	5,883.7	5,750.7	4,855.9	52.0	55.0	-121.88	2,364.1	-1,637.1	3,276.8	3,184.4	35.489			
6,800.0	5,983.4	6,264.0	5,316.6	52.1	59.1	-119.72	2,546.9	-1,766.7	3,305.5	3,206.6	33.423			
6,900.0	6,083.3	7,041.7	6,079.0	52.2	61.4	-118.48	2,655.2	-1,843.5	3,316.4	3,213.4	32.192			
7,000.0	6,183.3	7,146.0	6,183.3	52.2	61.4	-88.87	2,655.2	-1,843.5	3,316.5	3,213.4	32.185			
7,100.0	6,283.3	7,246.0	6,283.3	52.2	61.4	-88.87	2,655.2	-1,843.5	3,316.5	3,213.4	32.176			
7,200.0	6,383.3	7,346.0	6,383.3	52.2	61.4	-88.87	2,655.2	-1,843.5	3,316.5	3,213.4	32.167			
7,300.0	6,483.3	7,446.0	6,483.3	52.2	61.4	-88.87	2,655.2	-1,843.5	3,316.5	3,213.4	32.157			
7,400.0	6,583.3	7,546.0	6,583.3	52.2	61.4	-88.87	2,655.2	-1,843.5	3,316.5	3,213.3	32.148			
7,500.0	6,683.3	7,646.0	6,683.3	52.3	61.5	-88.87	2,655.2	-1,843.5	3,316.5	3,213.3	32.138			
7,600.0	6,783.3	7,746.0	6,783.3	52.3	61.5	-88.87	2,655.2	-1,843.5	3,316.5	3,213.3	32.129			
7,700.0	6,883.3	7,846.0	6,883.3	52.3	61.5	-88.87	2,655.2	-1,843.5	3,316.5	3,213.2	32.119			
7,800.0	6,983.3	7,946.0	6,983.3	52.3	61.5	-88.87	2,655.2	-1,843.5	3,316.5	3,213.2	32.109			
7,900.0	7,083.3	8,046.0	7,083.3	52.3	61.5	-88.87	2,655.2	-1,843.5	3,316.5	3,213.2	32.099			
8,000.0	7,183.3	8,146.0	7,183.3	52.3	61.5	-88.87	2,655.2	-1,843.5	3,316.5	3,213.1	32.089			
8,100.0	7,283.3	8,246.0	7,283.3	52.4	61.6	-88.87	2,655.2	-1,843.5	3,316.5	3,213.1	32.079			
8,200.0	7,383.3	8,346.0	7,383.3	52.4	61.6	-88.87	2,655.2	-1,843.5	3,316.5	3,213.1	32.069			
8,300.0	7,483.3	8,446.0	7,483.3	52.4	61.6	-88.87	2,655.2	-1,843.5	3,316.5	3,213.0	32.059			
8,400.0	7,583.3	8,546.0	7,583.3	52.4	61.6	-88.87	2,655.2	-1,843.5	3,316.5	3,213.0	32.049			
8,500.0	7,683.3	8,646.0	7,683.3	52.4	61.6	-88.87	2,655.2	-1,843.5	3,316.5	3,213.0	32.038			
8,600.0	7,783.3	8,746.0	7,783.3	52.4	61.6	-88.87	2,655.2	-1,843.5	3,316.5	3,212.9	32.028			
8,606.0	7,789.3	8,752.0	7,789.3	52.4	61.6	-88.87	2,655.2	-1,843.5	3,316.5	3,212.9	32.027			
8,700.0	7,883.3	8,821.7	7,859.0	52.5	61.6	-88.87	2,655.2	-1,843.5	3,316.6	3,213.0	32.018			
8,800.0	7,983.3	8,821.7	7,859.0	52.5	61.6	-88.87	2,655.2	-1,843.5	3,318.8	3,215.2	32.039			
8,900.0	8,083.3	8,821.7	7,859.0	52.5	61.6	-88.87	2,655.2	-1,843.5	3,324.1	3,220.5	32.112			
9,000.0	8,183.3	8,821.7	7,859.0	52.5	61.6	-88.87	2,655.2	-1,843.5	3,332.3	3,228.9	32.237			
9,100.0	8,283.3	8,821.7	7,859.0	52.5	61.6	-88.87	2,655.2	-1,843.5	3,343.5	3,240.4	32.412			
9,200.0	8,383.3	8,821.7	7,859.0	52.5	61.6	-88.87	2,655.2	-1,843.5	3,357.7	3,254.8	32.638			
9,300.0	8,483.3	8,821.7	7,859.0	52.6	61.6	-88.87	2,655.2	-1,843.5	3,374.7	3,272.2	32.914			
9,400.0	8,583.3	8,821.7	7,859.0	52.6	61.6	-88.87	2,655.2	-1,843.5	3,394.7	3,292.5	33.240			
9,500.0	8,683.3	8,821.7	7,859.0	52.6	61.6	-88.87	2,655.2	-1,843.5	3,417.4	3,315.7	33.614			
9,518.7	8,702.0	8,821.7	7,859.0	52.6	61.6	-88.87	2,655.2	-1,843.5	3,421.9	3,320.4	33.690			

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



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-11W - Slot A-2
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 0993-21-11W	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				+N/-S	+E/-W			Between
Depth	Depth	Depth	Depth	(usft)	(usft)	(°)	(usft)	(usft)	Centres	Ellipses	Factor		
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)				(usft)	(usft)			
0.0	0.0	0.0	0.0	0.0	0.0	132.56	-5.5	5.9	8.1				
100.0	100.0	100.0	100.0	0.4	0.4	132.56	-5.5	5.9	8.1	7.3	10.196		
200.0	200.0	200.0	200.0	1.2	1.2	132.56	-5.5	5.9	8.1	5.6	3.269	CC	
300.0	300.0	300.1	300.1	1.7	1.6	111.57	-5.4	5.8	8.3	5.2	2.683		
400.0	399.8	400.1	400.0	3.3	2.6	153.50	-4.3	2.7	10.1	5.1	2.002	Level 1, ES, SF	
500.0	499.3	499.2	498.9	4.6	3.4	-171.62	-1.6	-4.3	20.3	13.4	2.970		
600.0	598.3	597.8	596.8	5.6	4.0	-157.02	3.9	-14.1	37.0	28.7	4.477		
700.0	696.6	695.3	693.2	6.5	4.9	-149.31	13.0	-25.9	58.4	48.9	6.166		
800.0	794.0	791.5	787.6	7.3	5.8	-144.36	25.3	-39.8	84.2	73.7	8.035		
900.0	890.3	886.2	879.7	8.0	6.6	-140.80	40.7	-55.5	114.1	102.7	9.991		
1,000.0	985.3	979.1	969.1	8.7	7.3	-138.03	58.9	-72.8	148.1	135.8	11.996		
1,100.0	1,078.9	1,070.1	1,055.6	9.4	8.0	-135.75	79.7	-91.7	186.0	172.8	14.018		
1,200.0	1,170.9	1,159.0	1,139.1	10.0	8.6	-133.79	102.8	-111.8	227.8	213.5	16.030		
1,300.0	1,261.0	1,245.7	1,219.2	10.7	9.2	-132.03	128.0	-133.1	273.1	257.9	18.005		
1,400.0	1,349.2	1,330.1	1,296.0	11.2	9.8	-130.41	155.0	-155.3	321.9	305.7	19.922		
1,500.0	1,435.2	1,412.1	1,369.4	11.8	10.3	-128.87	183.6	-178.2	373.9	356.8	21.768		
1,600.0	1,519.1	1,491.7	1,439.3	12.2	10.8	-127.83	213.4	-201.8	429.0	410.9	23.643		
1,700.0	1,602.6	1,569.9	1,506.7	12.5	11.2	-127.37	244.7	-226.2	485.3	466.2	25.344		
1,800.0	1,686.0	1,646.8	1,571.6	12.8	11.7	-126.70	277.5	-251.4	542.5	522.3	26.848		
1,900.0	1,769.4	1,723.3	1,634.8	13.2	12.1	-125.86	311.8	-277.4	600.5	579.2	28.205		
2,000.0	1,852.8	1,804.2	1,701.0	13.6	12.3	-125.03	348.8	-305.4	658.8	636.4	29.320		
2,100.0	1,936.3	1,885.0	1,767.3	13.9	12.6	-124.34	385.8	-333.3	717.3	693.6	30.252		
2,200.0	2,019.7	1,965.9	1,833.5	14.3	12.9	-123.75	422.7	-361.3	775.8	750.8	31.049		
2,300.0	2,103.1	2,046.7	1,899.8	14.7	13.3	-123.24	459.7	-389.2	834.4	808.1	31.734		
2,400.0	2,186.5	2,127.6	1,966.0	15.4	13.7	-122.80	496.7	-417.2	893.0	865.3	32.301		
2,500.0	2,270.0	2,208.4	2,032.3	16.4	14.3	-122.41	533.6	-445.1	951.6	922.6	32.869		
2,600.0	2,353.4	2,289.3	2,098.5	17.3	15.1	-122.07	570.6	-473.1	1,010.2	979.9	33.322		
2,700.0	2,436.8	2,370.1	2,164.8	18.2	15.9	-121.77	607.6	-501.0	1,068.9	1,037.2	33.717		
2,800.0	2,520.2	2,451.0	2,231.0	19.2	16.7	-121.49	644.6	-529.0	1,127.6	1,094.5	34.066		
2,900.0	2,603.7	2,531.9	2,297.3	20.1	17.6	-121.25	681.5	-556.9	1,186.3	1,151.8	34.376		
3,000.0	2,687.1	2,612.7	2,363.5	21.1	18.4	-121.02	718.5	-584.9	1,245.0	1,209.1	34.651		
3,100.0	2,770.5	2,693.6	2,429.8	22.0	19.3	-120.82	755.5	-612.8	1,303.7	1,266.4	34.897		
3,200.0	2,853.9	2,774.4	2,496.0	22.9	20.2	-120.64	792.4	-640.8	1,362.5	1,323.7	35.117		
3,300.0	2,937.4	2,855.3	2,562.3	23.9	21.0	-120.46	829.4	-668.7	1,421.2	1,381.0	35.315		
3,400.0	3,020.8	2,936.1	2,628.5	24.8	21.9	-120.31	866.4	-696.7	1,480.0	1,438.3	35.494		
3,500.0	3,104.2	3,017.0	2,694.8	25.8	22.8	-120.16	903.4	-724.7	1,538.7	1,495.6	35.656		
3,600.0	3,187.6	3,097.8	2,761.1	26.7	23.6	-120.03	940.3	-752.6	1,597.5	1,552.9	35.803		
3,700.0	3,271.1	3,178.7	2,827.3	27.7	24.5	-119.90	977.3	-780.6	1,656.3	1,610.2	35.937		
3,800.0	3,354.5	3,259.6	2,893.6	28.6	25.4	-119.79	1,014.3	-808.5	1,715.1	1,667.5	36.059		
3,900.0	3,437.9	3,340.4	2,959.8	29.6	26.3	-119.68	1,051.3	-836.5	1,773.8	1,724.8	36.171		
4,000.0	3,521.3	3,421.3	3,026.1	30.5	27.1	-119.58	1,088.2	-864.4	1,832.6	1,782.1	36.273		
4,100.0	3,604.8	3,502.1	3,092.3	31.5	28.0	-119.48	1,125.2	-892.4	1,891.4	1,839.4	36.368		
4,200.0	3,688.2	3,583.0	3,158.6	32.4	28.9	-119.39	1,162.2	-920.3	1,950.2	1,896.7	36.455		
4,300.0	3,771.6	3,663.8	3,224.8	33.4	29.8	-119.31	1,199.1	-948.3	2,009.0	1,954.0	36.536		
4,400.0	3,855.0	3,744.7	3,291.1	34.3	30.6	-119.23	1,236.1	-976.2	2,067.8	2,011.3	36.610		
4,500.0	3,938.5	3,825.5	3,357.3	35.3	31.5	-119.16	1,273.1	-1,004.2	2,126.6	2,068.6	36.679		
4,600.0	4,021.9	3,906.4	3,423.6	36.2	32.4	-119.08	1,310.1	-1,032.1	2,185.4	2,125.9	36.744		
4,700.0	4,105.3	3,987.2	3,489.8	37.2	33.3	-119.02	1,347.0	-1,060.1	2,244.2	2,183.2	36.803		
4,800.0	4,188.7	4,068.1	3,556.1	38.1	34.2	-118.95	1,384.0	-1,088.0	2,303.0	2,240.5	36.859		
4,900.0	4,272.2	4,149.0	3,622.3	39.1	35.0	-118.89	1,421.0	-1,116.0	2,361.8	2,297.8	36.911		
5,000.0	4,355.6	4,229.8	3,688.6	40.0	35.9	-118.84	1,457.9	-1,143.9	2,420.6	2,355.1	36.960		

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft	
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
5,100.0	4,439.0	4,310.7	3,754.8	41.0	36.8	-118.78	1,494.9	-1,171.9	2,479.5	2,412.5	37.006			
5,200.0	4,522.4	4,391.5	3,821.1	42.0	37.7	-118.73	1,531.9	-1,199.8	2,538.3	2,469.8	37.049			
5,300.0	4,605.9	4,472.4	3,887.3	42.9	38.6	-118.68	1,568.9	-1,227.8	2,597.1	2,527.1	37.089			
5,400.0	4,689.3	4,553.2	3,953.6	43.9	39.5	-118.63	1,605.8	-1,255.7	2,655.9	2,584.4	37.127			
5,500.0	4,772.7	4,634.1	4,019.8	44.8	40.3	-118.58	1,642.8	-1,283.7	2,714.7	2,641.7	37.162			
5,600.0	4,856.2	4,715.0	4,086.1	45.8	41.2	-118.73	1,679.8	-1,311.6	2,773.5	2,699.0	37.197			
5,700.0	4,941.0	4,796.5	4,152.9	46.7	42.1	-120.17	1,717.1	-1,339.8	2,831.3	2,755.2	37.223			
5,800.0	5,028.1	4,879.0	4,220.5	47.5	43.0	-121.43	1,754.8	-1,368.3	2,887.2	2,809.7	37.233			
5,900.0	5,117.3	4,962.3	4,288.8	48.3	43.9	-122.53	1,792.9	-1,397.1	2,941.3	2,862.3	37.236			
6,000.0	5,208.3	5,046.3	4,357.6	49.0	44.8	-123.48	1,831.3	-1,426.2	2,993.5	2,913.1	37.234			
6,100.0	5,301.1	5,130.7	4,426.8	49.6	45.8	-124.29	1,869.9	-1,455.4	3,043.7	2,961.9	37.228			
6,200.0	5,395.4	5,215.5	4,496.3	50.2	46.7	-124.96	1,908.7	-1,484.7	3,091.9	3,008.8	37.220			
6,300.0	5,491.1	5,300.5	4,565.9	50.7	47.6	-125.52	1,947.5	-1,514.1	3,138.1	3,053.7	37.213			
6,400.0	5,587.9	5,385.5	4,635.6	51.1	48.5	-125.97	1,986.4	-1,543.4	3,182.2	3,096.7	37.209			
6,500.0	5,685.8	5,470.4	4,705.1	51.5	49.5	-126.32	2,025.2	-1,572.8	3,224.3	3,137.7	37.209			
6,600.0	5,784.4	5,591.8	4,804.9	51.7	50.8	-126.30	2,080.4	-1,614.5	3,264.4	3,176.0	36.941			
6,700.0	5,883.7	5,995.3	5,158.3	52.0	54.4	-124.59	2,234.9	-1,731.3	3,297.5	3,203.3	35.039			
6,800.0	5,983.4	6,461.1	5,600.8	52.1	56.9	-123.41	2,348.7	-1,817.4	3,318.7	3,220.2	33.718			
6,900.0	6,083.3	6,929.9	6,066.1	52.2	57.7	-123.07	2,388.9	-1,847.7	3,326.1	3,225.8	33.177			
7,000.0	6,183.3	7,047.1	6,183.3	52.2	57.7	-93.46	2,389.0	-1,847.8	3,326.2	3,225.9	33.166			
7,100.0	6,283.3	7,147.1	6,283.3	52.2	57.7	-93.46	2,389.0	-1,847.8	3,326.2	3,225.8	33.157			
7,200.0	6,383.3	7,247.1	6,383.3	52.2	57.8	-93.46	2,389.0	-1,847.8	3,326.2	3,225.8	33.146			
7,300.0	6,483.3	7,347.1	6,483.3	52.2	57.8	-93.46	2,389.0	-1,847.8	3,326.2	3,225.8	33.136			
7,400.0	6,583.3	7,447.1	6,583.3	52.2	57.8	-93.46	2,389.0	-1,847.8	3,326.2	3,225.8	33.125			
7,500.0	6,683.3	7,547.1	6,683.3	52.3	57.8	-93.46	2,389.0	-1,847.8	3,326.2	3,225.7	33.115			
7,600.0	6,783.3	7,647.1	6,783.3	52.3	57.8	-93.46	2,389.0	-1,847.8	3,326.2	3,225.7	33.104			
7,700.0	6,883.3	7,747.1	6,883.3	52.3	57.8	-93.46	2,389.0	-1,847.8	3,326.2	3,225.7	33.093			
7,800.0	6,983.3	7,847.1	6,983.3	52.3	57.9	-93.46	2,389.0	-1,847.8	3,326.2	3,225.6	33.082			
7,900.0	7,083.3	7,947.1	7,083.3	52.3	57.9	-93.46	2,389.0	-1,847.8	3,326.2	3,225.6	33.071			
8,000.0	7,183.3	8,047.1	7,183.3	52.3	57.9	-93.46	2,389.0	-1,847.8	3,326.2	3,225.6	33.060			
8,100.0	7,283.3	8,147.1	7,283.3	52.4	57.9	-93.46	2,389.0	-1,847.8	3,326.2	3,225.5	33.049			
8,200.0	7,383.3	8,247.1	7,383.3	52.4	57.9	-93.46	2,389.0	-1,847.8	3,326.2	3,225.5	33.038			
8,300.0	7,483.3	8,347.1	7,483.3	52.4	58.0	-93.46	2,389.0	-1,847.8	3,326.2	3,225.5	33.027			
8,400.0	7,583.3	8,447.1	7,583.3	52.4	58.0	-93.46	2,389.0	-1,847.8	3,326.2	3,225.4	33.016			
8,500.0	7,683.3	8,547.1	7,683.3	52.4	58.0	-93.46	2,389.0	-1,847.8	3,326.2	3,225.4	33.004			
8,600.0	7,783.3	8,647.1	7,783.3	52.4	58.0	-93.46	2,389.0	-1,847.8	3,326.2	3,225.3	32.993			
8,700.0	7,883.3	8,747.1	7,883.3	52.5	58.0	-93.46	2,389.0	-1,847.8	3,326.2	3,225.3	32.981			
8,800.0	7,983.3	8,847.1	7,983.3	52.5	58.0	-93.46	2,389.0	-1,847.8	3,326.2	3,225.3	32.970			
8,900.0	8,083.3	8,947.1	8,083.3	52.5	58.1	-93.46	2,389.0	-1,847.8	3,326.2	3,225.2	32.958			
9,000.0	8,183.3	9,047.1	8,183.3	52.5	58.1	-93.46	2,389.0	-1,847.8	3,326.2	3,225.2	32.946			
9,100.0	8,283.3	9,147.1	8,283.3	52.5	58.1	-93.46	2,389.0	-1,847.8	3,326.2	3,225.2	32.934			
9,200.0	8,383.3	9,247.1	8,383.3	52.5	58.1	-93.46	2,389.0	-1,847.8	3,326.2	3,225.1	32.923			
9,300.0	8,483.3	9,347.1	8,483.3	52.6	58.1	-93.46	2,389.0	-1,847.8	3,326.2	3,225.1	32.911			
9,400.0	8,583.3	9,447.1	8,583.3	52.6	58.2	-93.46	2,389.0	-1,847.8	3,326.2	3,225.1	32.898			
9,412.0	8,595.3	9,459.1	8,595.3	52.6	58.2	-93.46	2,389.0	-1,847.8	3,326.2	3,225.1	32.897			
9,500.0	8,683.3	9,534.8	8,671.0	52.6	58.2	-93.46	2,389.0	-1,847.8	3,326.2	3,225.1	32.889			
9,518.7	8,702.0	9,534.8	8,671.0	52.6	58.2	-93.46	2,389.0	-1,847.8	3,326.3	3,225.2	32.891			

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	133.53	-16.6	17.5	24.1			
100.0	100.0	100.0	100.0	0.4	0.4	133.53	-16.6	17.5	24.1	23.3	30.424	
200.0	200.0	200.0	200.0	1.2	1.2	133.53	-16.6	17.5	24.1	21.6	9.754	CC
300.0	300.0	300.1	300.1	1.7	1.6	106.72	-16.6	17.5	24.4	21.2	7.663	
400.0	399.8	400.7	400.7	3.3	2.6	122.11	-15.8	14.9	24.5	19.8	5.223	ES
500.0	499.3	500.4	500.1	4.6	4.0	150.00	-13.6	8.3	28.0	21.3	4.179	SF
600.0	598.3	598.9	598.0	5.6	4.6	175.63	-10.1	-2.2	40.6	32.4	4.982	
700.0	696.6	696.7	694.7	6.5	5.0	-168.75	-3.6	-15.4	60.9	51.2	6.274	
800.0	794.0	793.2	789.5	7.3	5.8	-159.21	6.2	-30.5	86.8	75.7	7.847	
900.0	890.3	888.2	882.0	8.0	6.6	-152.81	19.0	-47.5	117.4	105.3	9.701	
1,000.0	985.3	981.3	971.8	8.7	7.2	-148.15	34.8	-66.1	152.4	139.4	11.697	
1,100.0	1,078.9	1,072.4	1,058.8	9.4	7.9	-144.54	53.3	-86.2	191.6	177.6	13.745	
1,200.0	1,170.9	1,161.5	1,142.7	10.0	8.5	-141.59	74.1	-107.7	234.6	219.7	15.803	
1,300.0	1,261.0	1,248.2	1,223.2	10.7	9.1	-139.07	97.1	-130.2	281.3	265.6	17.843	
1,400.0	1,349.2	1,332.6	1,300.4	11.2	9.6	-136.84	121.9	-153.6	331.6	314.9	19.839	
1,500.0	1,435.2	1,414.5	1,374.1	11.8	10.1	-134.81	148.3	-177.8	385.2	367.5	21.774	
1,600.0	1,519.1	1,494.1	1,444.4	12.2	10.6	-133.34	176.1	-202.5	441.8	423.2	23.761	
1,700.0	1,602.6	1,572.2	1,512.2	12.5	11.1	-132.53	205.4	-228.0	499.6	480.0	25.575	
1,800.0	1,686.0	1,649.4	1,577.8	12.8	11.4	-131.56	236.3	-254.4	558.0	537.5	27.242	
1,900.0	1,769.4	1,729.9	1,645.6	13.2	11.7	-130.59	269.4	-282.4	616.8	595.2	28.631	
2,000.0	1,852.8	1,810.3	1,713.3	13.6	12.0	-129.79	302.5	-310.5	675.6	653.0	29.828	
2,100.0	1,936.3	1,890.8	1,781.1	13.9	12.3	-129.12	335.7	-338.5	734.6	710.8	30.851	
2,200.0	2,019.7	1,971.3	1,848.9	14.3	12.6	-128.55	368.8	-366.5	793.6	768.6	31.732	
2,300.0	2,103.1	2,051.8	1,916.7	14.7	13.0	-128.06	401.9	-394.6	852.7	826.4	32.495	
2,400.0	2,186.5	2,132.3	1,984.5	15.4	13.5	-127.63	435.1	-422.6	911.8	884.3	33.150	
2,500.0	2,270.0	2,212.8	2,052.3	16.4	14.1	-127.25	468.2	-450.7	970.9	942.2	33.780	
2,600.0	2,353.4	2,293.3	2,120.1	17.3	14.8	-126.92	501.3	-478.7	1,030.1	1,000.0	34.296	
2,700.0	2,436.8	2,373.8	2,187.9	18.2	15.5	-126.62	534.5	-506.8	1,089.2	1,057.9	34.753	
2,800.0	2,520.2	2,454.3	2,255.6	19.2	16.2	-126.35	567.6	-534.8	1,148.4	1,115.7	35.158	
2,900.0	2,603.7	2,534.8	2,323.4	20.1	17.0	-126.11	600.7	-562.8	1,207.6	1,173.6	35.518	
3,000.0	2,687.1	2,615.3	2,391.2	21.1	17.8	-125.89	633.9	-590.9	1,266.8	1,231.5	35.841	
3,100.0	2,770.5	2,695.8	2,459.0	22.0	18.6	-125.70	667.0	-618.9	1,326.1	1,289.4	36.130	
3,200.0	2,853.9	2,776.3	2,526.8	22.9	19.4	-125.51	700.1	-647.0	1,385.3	1,347.2	36.390	
3,300.0	2,937.4	2,856.8	2,594.6	23.9	20.2	-125.35	733.3	-675.0	1,444.5	1,405.1	36.625	
3,400.0	3,020.8	2,937.3	2,662.4	24.8	21.0	-125.19	766.4	-703.0	1,503.8	1,463.0	36.837	
3,500.0	3,104.2	3,017.7	2,730.2	25.8	21.8	-125.05	799.5	-731.1	1,563.0	1,520.8	37.030	
3,600.0	3,187.6	3,098.2	2,797.9	26.7	22.6	-124.92	832.7	-759.1	1,622.3	1,578.7	37.206	
3,700.0	3,271.1	3,178.7	2,865.7	27.7	23.4	-124.80	865.8	-787.2	1,681.6	1,636.6	37.367	
3,800.0	3,354.5	3,259.2	2,933.5	28.6	24.2	-124.68	898.9	-815.2	1,740.8	1,694.4	37.514	
3,900.0	3,437.9	3,339.7	3,001.3	29.6	25.1	-124.57	932.0	-843.2	1,800.1	1,752.3	37.648	
4,000.0	3,521.3	3,420.2	3,069.1	30.5	25.9	-124.47	965.2	-871.3	1,859.4	1,810.2	37.773	
4,100.0	3,604.8	3,500.7	3,136.9	31.5	26.7	-124.38	998.3	-899.3	1,918.7	1,868.0	37.887	
4,200.0	3,688.2	3,581.2	3,204.7	32.4	27.5	-124.29	1,031.4	-927.4	1,978.0	1,925.9	37.993	
4,300.0	3,771.6	3,661.7	3,272.5	33.4	28.3	-124.21	1,064.6	-955.4	2,037.3	1,983.8	38.091	
4,400.0	3,855.0	3,742.2	3,340.2	34.3	29.1	-124.13	1,097.7	-983.4	2,096.6	2,041.7	38.181	
4,500.0	3,938.5	3,822.7	3,408.0	35.3	30.0	-124.06	1,130.8	-1,011.5	2,155.9	2,099.5	38.266	
4,600.0	4,021.9	3,903.2	3,475.8	36.2	30.8	-123.99	1,164.0	-1,039.5	2,215.2	2,157.4	38.344	
4,700.0	4,105.3	3,983.7	3,543.6	37.2	31.6	-123.92	1,197.1	-1,067.6	2,274.5	2,215.3	38.418	
4,800.0	4,188.7	4,064.2	3,611.4	38.1	32.4	-123.86	1,230.2	-1,095.6	2,333.8	2,273.1	38.486	
4,900.0	4,272.2	4,144.6	3,679.2	39.1	33.3	-123.80	1,263.4	-1,123.6	2,393.1	2,331.0	38.550	
5,000.0	4,355.6	4,225.1	3,747.0	40.0	34.1	-123.74	1,296.5	-1,151.7	2,452.4	2,388.8	38.610	

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft	
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	Centre +E-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
5,100.0	4,439.0	4,305.6	3,814.8	41.0	34.9	-123.69	1,329.6	-1,179.7	2,511.7	2,446.7	38.666			
5,200.0	4,522.4	4,386.1	3,882.5	42.0	35.7	-123.63	1,362.8	-1,207.8	2,571.0	2,504.6	38.719			
5,300.0	4,605.9	4,466.6	3,950.3	42.9	36.5	-123.58	1,395.9	-1,235.8	2,630.3	2,562.4	38.769			
5,400.0	4,689.3	4,547.1	4,018.1	43.9	37.4	-123.54	1,429.0	-1,263.8	2,689.6	2,620.3	38.815			
5,500.0	4,772.7	4,627.6	4,085.9	44.8	38.2	-123.49	1,462.2	-1,291.9	2,748.9	2,678.2	38.859			
5,600.0	4,856.2	4,708.1	4,153.7	45.8	39.0	-123.63	1,495.3	-1,319.9	2,808.2	2,736.0	38.902			
5,700.0	4,941.0	4,789.4	4,222.2	46.7	39.8	-125.00	1,528.8	-1,348.2	2,866.3	2,792.7	38.930			
5,800.0	5,028.1	4,871.9	4,291.6	47.5	40.7	-126.20	1,562.7	-1,377.0	2,922.4	2,847.3	38.931			
5,900.0	5,117.3	4,955.4	4,361.9	48.3	41.5	-127.24	1,597.1	-1,406.1	2,976.3	2,899.8	38.919			
6,000.0	5,208.3	5,039.7	4,433.0	49.0	42.4	-128.12	1,631.8	-1,435.4	3,028.0	2,950.2	38.894			
6,100.0	5,301.1	5,124.8	4,504.6	49.6	43.3	-128.86	1,666.8	-1,465.1	3,077.5	2,998.3	38.859			
6,200.0	5,395.4	5,210.3	4,576.7	50.2	44.2	-129.47	1,702.0	-1,494.9	3,124.8	3,044.3	38.816			
6,300.0	5,491.1	5,296.3	4,649.1	50.7	45.0	-129.96	1,737.4	-1,524.8	3,169.7	3,087.9	38.769			
6,400.0	5,587.9	5,382.5	4,721.6	51.1	45.9	-130.34	1,772.9	-1,554.9	3,212.3	3,129.4	38.718			
6,500.0	5,685.8	5,468.7	4,794.3	51.5	46.8	-130.62	1,808.4	-1,584.9	3,252.7	3,168.5	38.667			
6,600.0	5,784.4	5,552.7	4,867.2	51.7	47.6	-130.81	1,844.1	-1,615.0	3,290.2	3,203.4	38.616			
6,700.0	5,883.7	5,637.2	4,940.7	52.0	48.4	-129.15	1,880.0	-1,645.1	3,327.5	3,238.5	38.565			
6,800.0	5,983.4	5,721.0	5,014.2	52.1	49.3	-128.25	1,916.1	-1,675.1	3,364.9	3,273.9	38.514			
6,900.0	6,083.3	5,804.9	5,087.7	52.2	50.2	-127.35	1,952.4	-1,705.0	3,402.4	3,309.3	38.463			
7,000.0	6,183.3	5,888.8	5,161.2	52.2	51.1	-98.32	2,106.0	-1,836.8	3,344.2	3,247.7	34.642			
7,100.0	6,283.3	5,972.7	5,234.5	52.2	52.0	-98.32	2,106.0	-1,836.8	3,344.2	3,247.7	34.631			
7,200.0	6,383.3	6,056.6	5,307.8	52.2	52.9	-98.32	2,106.0	-1,836.8	3,344.2	3,247.6	34.619			
7,300.0	6,483.3	6,140.5	5,381.1	52.2	53.8	-98.32	2,106.0	-1,836.8	3,344.2	3,247.6	34.607			
7,400.0	6,583.3	6,224.4	5,454.4	52.2	54.7	-98.32	2,106.0	-1,836.8	3,344.2	3,247.6	34.595			
7,500.0	6,683.3	6,308.3	5,527.7	52.3	55.6	-98.32	2,106.0	-1,836.8	3,344.2	3,247.5	34.582			
7,600.0	6,783.3	6,392.2	5,601.0	52.3	56.5	-98.32	2,106.0	-1,836.8	3,344.2	3,247.5	34.570			
7,700.0	6,883.3	6,476.1	5,674.3	52.3	57.4	-98.32	2,106.0	-1,836.8	3,344.2	3,247.5	34.557			
7,800.0	6,983.3	6,559.0	5,747.6	52.3	58.3	-98.32	2,106.0	-1,836.8	3,344.2	3,247.4	34.545			
7,900.0	7,083.3	6,642.9	5,820.9	52.3	59.2	-98.32	2,106.0	-1,836.8	3,344.2	3,247.4	34.532			
8,000.0	7,183.3	6,726.8	5,894.2	52.3	60.1	-98.32	2,106.0	-1,836.8	3,344.2	3,247.4	34.520			
8,100.0	7,283.3	6,810.7	5,967.5	52.4	61.0	-98.32	2,106.0	-1,836.8	3,344.2	3,247.3	34.507			
8,200.0	7,383.3	6,894.6	6,040.8	52.4	61.9	-98.32	2,106.0	-1,836.8	3,344.2	3,247.3	34.494			
8,300.0	7,483.3	6,978.5	6,114.1	52.4	62.8	-98.32	2,106.0	-1,836.8	3,344.2	3,247.3	34.481			
8,400.0	7,583.3	7,062.4	6,187.4	52.4	63.7	-98.32	2,106.0	-1,836.8	3,344.2	3,247.2	34.468			
8,500.0	7,683.3	7,146.3	6,260.7	52.4	64.6	-98.32	2,106.0	-1,836.8	3,344.2	3,247.2	34.455			
8,600.0	7,783.3	7,230.2	6,334.0	52.4	65.5	-98.32	2,106.0	-1,836.8	3,344.2	3,247.1	34.441			
8,609.3	7,792.6	7,239.5	6,343.3	52.4	65.6	-98.32	2,106.0	-1,836.8	3,344.2	3,247.1	34.440			
8,700.0	7,883.3	7,313.9	6,407.4	52.5	66.4	-98.32	2,106.0	-1,836.8	3,344.4	3,247.3	34.441			
8,800.0	7,983.3	7,397.8	6,480.7	52.5	67.3	-98.32	2,106.0	-1,836.8	3,346.9	3,249.9	34.500			
8,900.0	8,083.3	7,481.7	6,554.0	52.5	68.2	-98.32	2,106.0	-1,836.8	3,352.4	3,255.6	34.615			
9,000.0	8,183.3	7,565.6	6,627.3	52.5	69.1	-98.32	2,106.0	-1,836.8	3,360.9	3,264.3	34.784			
9,100.0	8,283.3	7,649.5	6,700.6	52.5	70.0	-98.32	2,106.0	-1,836.8	3,372.3	3,276.0	35.007			
9,200.0	8,383.3	7,733.4	6,773.9	52.5	70.9	-98.32	2,106.0	-1,836.8	3,386.7	3,290.7	35.284			
9,300.0	8,483.3	7,817.3	6,847.2	52.6	71.8	-98.32	2,106.0	-1,836.8	3,403.9	3,308.3	35.614			
9,400.0	8,583.3	7,901.2	6,920.5	52.6	72.7	-98.32	2,106.0	-1,836.8	3,423.9	3,328.8	35.997			
9,500.0	8,683.3	7,985.1	6,993.8	52.6	73.6	-98.32	2,106.0	-1,836.8	3,446.7	3,352.1	36.433			
9,518.7	8,702.0	7,994.8	7,003.5	52.6	73.7	-98.32	2,106.0	-1,836.8	3,451.3	3,356.8	36.521			

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft	
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	133.50	-27.7	29.2	40.2					
100.0	100.0	100.0	100.0	0.4	0.4	133.50	-27.7	29.2	40.2	39.4	50.760			
200.0	200.0	200.0	200.0	1.2	1.2	133.50	-27.7	29.2	40.2	37.7	16.274	CC		
300.0	300.0	300.0	300.0	1.7	1.7	105.56	-27.7	29.2	40.5	37.2	12.397	ES		
400.0	399.8	400.5	400.4	3.3	2.0	113.25	-27.6	28.6	41.9	37.8	10.148			
500.0	499.3	500.7	500.6	4.6	3.1	129.18	-27.2	24.2	44.6	38.8	7.636			
600.0	598.3	599.4	598.9	5.6	4.4	149.52	-26.5	15.7	53.1	45.5	6.995	SF		
700.0	696.6	697.3	696.0	6.5	4.7	167.30	-24.7	3.4	70.5	61.2	7.627			
800.0	794.0	794.5	792.0	7.3	5.3	-179.97	-19.7	-11.2	94.4	83.3	8.535			
900.0	890.3	890.2	885.9	8.0	6.0	-170.87	-11.5	-27.9	123.9	111.4	9.919			
1,000.0	985.3	984.1	977.2	8.7	6.6	-164.13	-0.3	-46.5	158.4	144.8	11.625			
1,100.0	1,078.9	1,076.0	1,065.8	9.4	7.3	-158.91	13.6	-66.7	197.5	182.9	13.542			
1,200.0	1,170.9	1,165.8	1,151.3	10.0	7.9	-154.70	30.0	-88.4	240.9	225.4	15.572			
1,300.0	1,261.0	1,253.1	1,233.5	10.7	8.5	-151.19	48.6	-111.4	288.3	272.0	17.642			
1,400.0	1,349.2	1,338.0	1,312.3	11.2	9.0	-148.16	69.2	-135.3	339.5	322.3	19.709			
1,500.0	1,435.2	1,420.3	1,387.6	11.8	9.6	-145.47	91.5	-160.1	394.3	376.1	21.749			
1,600.0	1,519.1	1,500.0	1,459.2	12.2	10.1	-143.39	115.2	-185.5	452.2	433.3	23.901			
1,700.0	1,602.6	1,578.6	1,528.8	12.5	10.5	-141.98	140.6	-211.9	511.2	491.5	25.886			
1,800.0	1,686.0	1,656.0	1,596.0	12.8	10.9	-140.54	167.5	-239.2	570.8	550.2	27.714			
1,900.0	1,769.4	1,735.2	1,664.2	13.2	11.2	-139.20	196.1	-267.7	630.7	609.1	29.292			
2,000.0	1,852.8	1,814.5	1,732.4	13.6	11.4	-138.08	224.7	-296.2	690.8	668.3	30.674			
2,100.0	1,936.3	1,893.7	1,800.5	13.9	11.8	-137.14	253.2	-324.8	751.0	727.5	31.879			
2,200.0	2,019.7	1,973.0	1,868.7	14.3	12.1	-136.34	281.8	-353.3	811.4	786.7	32.925			
2,300.0	2,103.1	2,052.2	1,936.9	14.7	12.5	-135.65	310.3	-381.9	871.8	846.1	33.840			
2,400.0	2,186.5	2,131.4	2,005.1	15.4	12.9	-135.04	338.9	-410.4	932.4	905.5	34.662			
2,500.0	2,270.0	2,210.7	2,073.3	16.4	13.4	-134.51	367.5	-438.9	992.9	964.9	35.406			
2,600.0	2,353.4	2,289.9	2,141.5	17.3	14.0	-134.04	396.0	-467.5	1,053.6	1,024.3	36.045			
2,700.0	2,436.8	2,369.2	2,209.7	18.2	14.6	-133.63	424.6	-496.0	1,114.2	1,083.8	36.613			
2,800.0	2,520.2	2,448.4	2,277.9	19.2	15.3	-133.25	453.2	-524.6	1,174.9	1,143.3	37.119			
2,900.0	2,603.7	2,527.7	2,346.0	20.1	16.0	-132.91	481.7	-553.1	1,235.6	1,202.8	37.571			
3,000.0	2,687.1	2,606.9	2,414.2	21.1	16.7	-132.60	510.3	-581.6	1,296.4	1,262.3	37.978			
3,100.0	2,770.5	2,686.2	2,482.4	22.0	17.4	-132.32	538.9	-610.2	1,357.2	1,321.8	38.344			
3,200.0	2,853.9	2,765.4	2,550.6	22.9	18.2	-132.07	567.4	-638.7	1,418.0	1,381.3	38.675			
3,300.0	2,937.4	2,844.7	2,618.8	23.9	18.9	-131.83	596.0	-667.3	1,478.8	1,440.8	38.974			
3,400.0	3,020.8	2,923.9	2,687.0	24.8	19.7	-131.62	624.6	-695.8	1,539.6	1,500.4	39.246			
3,500.0	3,104.2	3,003.1	2,755.2	25.8	20.4	-131.42	653.1	-724.3	1,600.4	1,559.9	39.494			
3,600.0	3,187.6	3,082.4	2,823.3	26.7	21.1	-131.23	681.7	-752.9	1,661.3	1,619.5	39.719			
3,700.0	3,271.1	3,161.6	2,891.5	27.7	21.9	-131.06	710.2	-781.4	1,722.1	1,679.0	39.926			
3,800.0	3,354.5	3,240.9	2,959.7	28.6	22.6	-130.90	738.8	-810.0	1,783.0	1,738.6	40.116			
3,900.0	3,437.9	3,320.1	3,027.9	29.6	23.4	-130.75	767.4	-838.5	1,843.9	1,798.1	40.290			
4,000.0	3,521.3	3,399.4	3,096.1	30.5	24.1	-130.61	795.9	-867.0	1,904.8	1,857.7	40.451			
4,100.0	3,604.8	3,478.6	3,164.3	31.5	24.9	-130.48	824.5	-895.6	1,965.7	1,917.2	40.599			
4,200.0	3,688.2	3,557.9	3,232.5	32.4	25.7	-130.35	853.1	-924.1	2,026.6	1,976.8	40.736			
4,300.0	3,771.6	3,637.1	3,300.7	33.4	26.4	-130.23	881.6	-952.7	2,087.5	2,036.4	40.863			
4,400.0	3,855.0	3,716.4	3,368.8	34.3	27.2	-130.12	910.2	-981.2	2,148.4	2,095.9	40.981			
4,500.0	3,938.5	3,795.6	3,437.0	35.3	27.9	-130.02	938.8	-1,009.7	2,209.3	2,155.5	41.091			
4,600.0	4,021.9	3,874.8	3,505.2	36.2	28.7	-129.92	967.3	-1,038.3	2,270.2	2,215.1	41.193			
4,700.0	4,105.3	3,954.1	3,573.4	37.2	29.4	-129.83	995.9	-1,066.8	2,331.1	2,274.7	41.289			
4,800.0	4,188.7	4,033.3	3,641.6	38.1	30.2	-129.74	1,024.5	-1,095.4	2,392.0	2,334.2	41.378			
4,900.0	4,272.2	4,112.6	3,709.8	39.1	31.0	-129.66	1,053.0	-1,123.9	2,453.0	2,393.8	41.461			
5,000.0	4,355.6	4,191.8	3,778.0	40.0	31.7	-129.58	1,081.6	-1,152.4	2,513.9	2,453.4	41.540			

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft	
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning		
5,100.0	4,439.0	4,271.1	3,846.1	41.0	32.5	-129.50	1,110.2	-1,181.0	2,574.8	2,513.0	41.613			
5,200.0	4,522.4	4,350.3	3,914.3	42.0	33.3	-129.43	1,138.7	-1,209.5	2,635.8	2,572.5	41.682			
5,300.0	4,605.9	4,429.6	3,982.5	42.9	34.0	-129.36	1,167.3	-1,238.1	2,696.7	2,632.1	41.747			
5,400.0	4,689.3	4,508.8	4,050.7	43.9	34.8	-129.29	1,195.8	-1,266.6	2,757.6	2,691.7	41.808			
5,500.0	4,772.7	4,588.1	4,118.9	44.8	35.6	-129.23	1,224.4	-1,295.1	2,818.6	2,751.3	41.866			
5,600.0	4,856.2	4,667.3	4,187.1	45.8	36.3	-129.34	1,253.0	-1,323.7	2,879.5	2,810.8	41.922			
5,700.0	4,941.0	4,747.5	4,256.1	46.7	37.1	-130.65	1,281.9	-1,352.6	2,939.1	2,869.0	41.955			
5,800.0	5,028.1	4,829.1	4,326.3	47.5	37.9	-131.79	1,311.3	-1,381.9	2,996.4	2,924.9	41.948			
5,900.0	5,117.3	4,911.9	4,397.6	48.3	38.7	-132.75	1,341.2	-1,411.8	3,051.3	2,978.5	41.918			
6,000.0	5,208.3	4,995.9	4,469.8	49.0	39.5	-133.57	1,371.4	-1,442.0	3,103.7	3,029.6	41.868			
6,100.0	5,301.1	5,080.7	4,542.8	49.6	40.3	-134.25	1,402.0	-1,472.6	3,153.7	3,078.2	41.801			
6,200.0	5,395.4	5,166.4	4,616.5	50.2	41.2	-134.81	1,432.9	-1,503.4	3,201.1	3,124.4	41.720			
6,300.0	5,491.1	5,252.6	4,690.7	50.7	42.0	-135.24	1,464.0	-1,534.5	3,245.9	3,168.0	41.627			
6,400.0	5,587.9	5,339.3	4,765.3	51.1	42.8	-135.57	1,495.2	-1,565.7	3,288.2	3,209.0	41.526			
6,500.0	5,685.8	5,426.3	4,840.2	51.5	43.7	-135.80	1,526.6	-1,597.0	3,327.8	3,247.5	41.419			
6,600.0	5,784.4	5,513.9	4,917.9	51.7	44.1	-135.56	1,578.9	-1,649.3	3,364.6	3,282.2	40.821			
6,700.0	5,883.7	5,613.0	5,000.2	52.0	44.4	-134.59	1,667.5	-1,737.8	3,393.7	3,307.4	39.299			
6,800.0	5,983.4	5,713.0	5,090.5	52.1	44.6	-133.51	1,757.1	-1,827.4	3,411.7	3,321.0	37.604			
6,900.0	6,083.3	5,813.3	5,183.3	52.2	50.1	-133.38	1,776.7	-1,847.0	3,417.3	3,325.1	37.062			
7,000.0	6,183.3	5,913.3	5,276.3	52.2	50.1	-103.76	1,776.7	-1,847.0	3,417.4	3,325.1	37.048			
7,100.0	6,283.3	6,013.3	5,369.3	52.2	50.1	-103.76	1,776.7	-1,847.0	3,417.4	3,325.1	37.034			
7,200.0	6,383.3	6,113.3	5,462.3	52.2	50.1	-103.76	1,776.7	-1,847.0	3,417.4	3,325.1	37.019			
7,300.0	6,483.3	6,213.3	5,555.3	52.2	50.2	-103.76	1,776.7	-1,847.0	3,417.4	3,325.0	37.005			
7,400.0	6,583.3	6,313.3	5,648.3	52.2	50.2	-103.76	1,776.7	-1,847.0	3,417.4	3,325.0	36.990			
7,500.0	6,683.3	6,413.3	5,741.3	52.3	50.2	-103.76	1,776.7	-1,847.0	3,417.4	3,325.0	36.975			
7,600.0	6,783.3	6,513.3	5,834.3	52.3	50.2	-103.76	1,776.7	-1,847.0	3,417.4	3,324.9	36.960			
7,700.0	6,883.3	6,613.3	5,927.3	52.3	50.3	-103.76	1,776.7	-1,847.0	3,417.4	3,324.9	36.945			
7,800.0	6,983.3	6,713.3	6,020.3	52.3	50.3	-103.76	1,776.7	-1,847.0	3,417.4	3,324.9	36.930			
7,900.0	7,083.3	6,813.3	6,113.3	52.3	50.3	-103.76	1,776.7	-1,847.0	3,417.4	3,324.8	36.914			
8,000.0	7,183.3	6,913.3	6,206.3	52.3	50.3	-103.76	1,776.7	-1,847.0	3,417.4	3,324.8	36.899			
8,100.0	7,283.3	7,013.3	6,299.3	52.4	50.3	-103.76	1,776.7	-1,847.0	3,417.4	3,324.7	36.884			
8,200.0	7,383.3	7,113.3	6,392.3	52.4	50.4	-103.76	1,776.7	-1,847.0	3,417.4	3,324.7	36.868			
8,300.0	7,483.3	7,213.3	6,485.3	52.4	50.4	-103.76	1,776.7	-1,847.0	3,417.4	3,324.7	36.852			
8,400.0	7,583.3	7,313.3	6,578.3	52.4	50.4	-103.76	1,776.7	-1,847.0	3,417.4	3,324.6	36.837			
8,500.0	7,683.3	7,413.3	6,671.3	52.4	50.4	-103.76	1,776.7	-1,847.0	3,417.4	3,324.6	36.821			
8,600.0	7,783.3	7,513.3	6,764.3	52.4	50.5	-103.76	1,776.7	-1,847.0	3,417.4	3,324.5	36.805			
8,700.0	7,883.3	7,613.3	6,857.3	52.5	50.5	-103.76	1,776.7	-1,847.0	3,417.4	3,324.5	36.789			
8,800.0	7,983.3	7,713.3	6,950.3	52.5	50.5	-103.76	1,776.7	-1,847.0	3,417.4	3,324.5	36.773			
8,900.0	8,083.3	7,813.3	7,043.3	52.5	50.5	-103.76	1,776.7	-1,847.0	3,417.4	3,324.4	36.757			
9,000.0	8,183.3	7,913.3	7,136.3	52.5	50.5	-103.76	1,776.7	-1,847.0	3,417.4	3,324.4	36.740			
9,100.0	8,283.3	8,013.3	7,229.3	52.5	50.6	-103.76	1,776.7	-1,847.0	3,417.4	3,324.3	36.724			
9,200.0	8,383.3	8,113.3	7,322.3	52.5	50.6	-103.76	1,776.7	-1,847.0	3,417.4	3,324.3	36.707			
9,300.0	8,483.3	8,213.3	7,415.3	52.6	50.6	-103.76	1,776.7	-1,847.0	3,417.4	3,324.3	36.691			
9,400.0	8,583.3	8,313.3	7,508.3	52.6	50.6	-103.76	1,776.7	-1,847.0	3,417.4	3,324.2	36.674			
9,404.8	8,588.1	8,317.1	7,512.1	52.6	50.6	-103.76	1,776.7	-1,847.0	3,417.4	3,324.2	36.673			
9,500.0	8,683.3	8,413.3	7,601.3	52.6	50.7	-103.76	1,776.7	-1,847.0	3,417.5	3,324.3	36.672			
9,518.7	8,702.0	8,431.0	7,619.0	52.6	50.7	-103.76	1,776.7	-1,847.0	3,417.7	3,324.5	36.682			

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	133.44	-38.6	40.8	56.2			
100.0	100.0	100.0	100.0	0.4	0.4	133.44	-38.6	40.8	56.2	55.4	70.891	
200.0	200.0	200.0	200.0	1.2	1.2	133.44	-38.6	40.8	56.2	53.7	22.728	CC
300.0	300.0	300.0	300.0	1.7	1.7	105.02	-38.6	40.8	56.5	53.2	17.280	ES
400.0	399.8	399.8	399.8	3.3	2.1	110.17	-38.6	40.8	58.1	53.9	13.644	
500.0	499.3	500.2	500.2	4.6	2.4	119.66	-38.7	39.5	61.6	56.3	11.523	
600.0	598.3	599.5	599.3	5.6	3.7	133.96	-39.2	34.2	68.5	61.5	9.822	
700.0	696.6	697.4	696.8	6.5	4.2	149.51	-39.8	24.7	82.5	73.9	9.637	SF
800.0	794.0	795.5	794.1	7.3	4.6	162.90	-38.1	12.2	103.1	92.7	9.840	
900.0	890.3	892.1	889.3	8.0	5.3	173.47	-33.3	-2.7	129.8	117.6	10.613	
1,000.0	985.3	986.7	982.1	8.7	6.0	-178.24	-25.7	-20.0	162.1	148.6	11.947	
1,100.0	1,078.9	1,079.2	1,072.0	9.4	6.7	-171.68	-15.5	-39.2	199.7	185.1	13.690	
1,200.0	1,170.9	1,169.3	1,158.7	10.0	7.3	-166.38	-2.8	-60.3	242.3	226.8	15.635	
1,300.0	1,261.0	1,256.8	1,241.9	10.7	8.0	-161.99	11.9	-82.8	289.4	273.0	17.688	
1,400.0	1,349.2	1,341.6	1,321.5	11.2	8.5	-158.25	28.5	-106.5	340.8	323.6	19.793	
1,500.0	1,435.2	1,423.4	1,397.4	11.8	9.1	-155.00	46.7	-131.2	396.3	378.2	21.917	
1,600.0	1,519.1	1,502.4	1,469.6	12.2	9.6	-152.38	66.3	-156.7	455.3	436.5	24.210	
1,700.0	1,602.6	1,579.9	1,539.3	12.5	10.1	-150.45	87.3	-183.2	515.5	496.0	26.372	
1,800.0	1,686.0	1,656.3	1,606.8	12.8	10.4	-148.62	109.7	-210.8	576.3	556.0	28.385	
1,900.0	1,769.4	1,734.0	1,675.1	13.2	10.7	-146.97	133.4	-239.6	637.6	616.5	30.156	
2,000.0	1,852.8	1,811.8	1,743.4	13.6	10.9	-145.60	157.1	-268.3	699.2	677.1	31.730	
2,100.0	1,936.3	1,889.6	1,811.7	13.9	11.2	-144.45	180.8	-297.1	761.0	738.0	33.117	
2,200.0	2,019.7	1,967.3	1,879.9	14.3	11.5	-143.47	204.4	-325.8	822.9	798.9	34.343	
2,300.0	2,103.1	2,045.1	1,948.2	14.7	11.8	-142.62	228.1	-354.5	885.0	860.0	35.434	
2,400.0	2,186.5	2,122.9	2,016.5	15.4	12.2	-141.89	251.8	-383.3	947.2	921.1	36.367	
2,500.0	2,270.0	2,200.6	2,084.8	16.4	12.6	-141.24	275.4	-412.0	1,009.4	982.4	37.298	
2,600.0	2,353.4	2,278.4	2,153.0	17.3	13.1	-140.67	299.1	-440.7	1,071.8	1,043.6	38.094	
2,700.0	2,436.8	2,356.2	2,221.3	18.2	13.6	-140.16	322.8	-469.5	1,134.2	1,104.9	38.777	
2,800.0	2,520.2	2,433.9	2,289.6	19.2	14.2	-139.70	346.4	-498.2	1,196.6	1,166.3	39.399	
2,900.0	2,603.7	2,511.7	2,357.9	20.1	14.8	-139.29	370.1	-526.9	1,259.1	1,227.6	39.961	
3,000.0	2,687.1	2,589.4	2,426.1	21.1	15.4	-138.92	393.8	-555.7	1,321.6	1,289.0	40.469	
3,100.0	2,770.5	2,667.2	2,494.4	22.0	16.1	-138.58	417.5	-584.4	1,384.2	1,350.4	40.929	
3,200.0	2,853.9	2,745.0	2,562.7	22.9	16.8	-138.27	441.1	-613.1	1,446.8	1,411.8	41.347	
3,300.0	2,937.4	2,822.7	2,630.9	23.9	17.4	-137.98	464.8	-641.9	1,509.4	1,473.2	41.726	
3,400.0	3,020.8	2,900.5	2,699.2	24.8	18.1	-137.72	488.5	-670.6	1,572.0	1,534.7	42.072	
3,500.0	3,104.2	2,978.3	2,767.5	25.8	18.8	-137.48	512.1	-699.3	1,634.7	1,596.1	42.388	
3,600.0	3,187.6	3,056.0	2,835.8	26.7	19.5	-137.25	535.8	-728.1	1,697.3	1,657.6	42.678	
3,700.0	3,271.1	3,133.8	2,904.0	27.7	20.2	-137.04	559.5	-756.8	1,760.0	1,719.0	42.944	
3,800.0	3,354.5	3,211.6	2,972.3	28.6	20.9	-136.85	583.2	-785.5	1,822.7	1,780.5	43.189	
3,900.0	3,437.9	3,289.3	3,040.6	29.6	21.5	-136.67	606.8	-814.3	1,885.4	1,842.0	43.415	
4,000.0	3,521.3	3,367.1	3,108.9	30.5	22.2	-136.50	630.5	-843.0	1,948.1	1,903.5	43.624	
4,100.0	3,604.8	3,444.8	3,177.1	31.5	22.9	-136.34	654.2	-871.8	2,010.8	1,965.0	43.817	
4,200.0	3,688.2	3,522.6	3,245.4	32.4	23.6	-136.19	677.8	-900.5	2,073.6	2,026.5	43.996	
4,300.0	3,771.6	3,600.4	3,313.7	33.4	24.3	-136.05	701.5	-929.2	2,136.3	2,088.0	44.163	
4,400.0	3,855.0	3,678.1	3,381.9	34.3	25.0	-135.92	725.2	-958.0	2,199.1	2,149.5	44.318	
4,500.0	3,938.5	3,755.9	3,450.2	35.3	25.7	-135.79	748.8	-986.7	2,261.8	2,211.0	44.462	
4,600.0	4,021.9	3,833.7	3,518.5	36.2	26.4	-135.67	772.5	-1,015.4	2,324.6	2,272.5	44.597	
4,700.0	4,105.3	3,911.4	3,586.8	37.2	27.1	-135.56	796.2	-1,044.2	2,387.4	2,334.0	44.723	
4,800.0	4,188.7	3,989.2	3,655.0	38.1	27.8	-135.45	819.9	-1,072.9	2,450.1	2,395.5	44.842	
4,900.0	4,272.2	4,067.0	3,723.3	39.1	28.5	-135.35	843.5	-1,101.6	2,512.9	2,457.0	44.952	
5,000.0	4,355.6	4,144.7	3,791.6	40.0	29.2	-135.25	867.2	-1,130.4	2,575.7	2,518.5	45.056	

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 0993-21-11W - Slot A-2
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 0993-21-11W	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)			Between Centres (usft)
5,100.0	4,439.0	4,222.5	3,859.9	41.0	29.9	-135.16	890.9	-1,159.1	2,638.5	2,580.0	45.154		
5,200.0	4,522.4	4,300.2	3,928.1	42.0	30.6	-135.07	914.5	-1,187.8	2,701.3	2,641.6	45.246		
5,300.0	4,605.9	4,378.0	3,996.4	42.9	31.3	-134.99	938.2	-1,216.6	2,764.1	2,703.1	45.333		
5,400.0	4,689.3	4,455.8	4,064.7	43.9	32.0	-134.91	961.9	-1,245.3	2,826.9	2,764.6	45.415		
5,500.0	4,772.7	4,533.5	4,132.9	44.8	32.7	-134.83	985.5	-1,274.0	2,889.7	2,826.1	45.492		
5,600.0	4,856.2	4,611.3	4,201.2	45.8	33.4	-134.93	1,009.2	-1,302.8	2,952.5	2,887.7	45.567		
5,700.0	4,941.0	4,690.2	4,270.5	46.7	34.2	-136.17	1,033.2	-1,331.9	3,013.8	2,947.7	45.609		
5,800.0	5,028.1	4,770.7	4,341.1	47.5	34.9	-137.24	1,057.7	-1,361.7	3,072.6	3,005.2	45.596		
5,900.0	5,117.3	4,852.6	4,413.1	48.3	35.6	-138.14	1,082.7	-1,392.0	3,128.8	3,060.1	45.551		
6,000.0	5,208.3	4,936.0	4,486.3	49.0	36.4	-138.90	1,108.0	-1,422.8	3,182.3	3,112.3	45.477		
6,100.0	5,301.1	5,020.5	4,560.5	49.6	37.2	-139.53	1,133.8	-1,454.0	3,233.1	3,161.9	45.378		
6,200.0	5,395.4	5,106.0	4,635.5	50.2	37.9	-140.03	1,159.8	-1,485.6	3,281.2	3,208.7	45.257		
6,300.0	5,491.1	5,192.4	4,711.4	50.7	38.7	-140.42	1,186.1	-1,517.5	3,326.4	3,252.6	45.118		
6,400.0	5,587.9	5,279.4	4,787.8	51.1	39.5	-140.71	1,212.6	-1,549.7	3,368.7	3,293.8	44.964		
6,500.0	5,685.8	5,367.0	4,864.7	51.5	40.3	-140.90	1,239.2	-1,582.0	3,408.2	3,332.1	44.799		
6,600.0	5,784.4	5,455.0	4,941.9	51.7	41.1	-141.01	1,266.0	-1,614.5	3,444.8	3,367.6	44.628		
6,700.0	5,883.7	5,784.4	5,240.2	52.0	43.7	-139.81	1,354.6	-1,722.0	3,476.2	3,394.6	42.579		
6,800.0	5,983.4	6,169.9	5,610.2	52.1	45.6	-138.93	1,422.2	-1,804.2	3,495.6	3,410.2	40.932		
6,900.0	6,083.3	6,646.0	6,083.3	52.2	46.4	-138.60	1,450.7	-1,838.8	3,501.4	3,413.6	39.902		
7,000.0	6,183.3	6,746.0	6,183.3	52.2	46.4	-108.98	1,450.7	-1,838.8	3,501.5	3,413.7	39.884		
7,100.0	6,283.3	6,846.0	6,283.3	52.2	46.4	-108.98	1,450.7	-1,838.8	3,501.5	3,413.7	39.867		
7,200.0	6,383.3	6,946.0	6,383.3	52.2	46.5	-108.98	1,450.7	-1,838.8	3,501.5	3,413.6	39.849		
7,300.0	6,483.3	7,046.0	6,483.3	52.2	46.5	-108.98	1,450.7	-1,838.8	3,501.5	3,413.6	39.831		
7,400.0	6,583.3	7,146.0	6,583.3	52.2	46.5	-108.98	1,450.7	-1,838.8	3,501.5	3,413.6	39.813		
7,500.0	6,683.3	7,246.0	6,683.3	52.3	46.5	-108.98	1,450.7	-1,838.8	3,501.5	3,413.5	39.795		
7,600.0	6,783.3	7,346.0	6,783.3	52.3	46.6	-108.98	1,450.7	-1,838.8	3,501.5	3,413.5	39.776		
7,700.0	6,883.3	7,446.0	6,883.3	52.3	46.6	-108.98	1,450.7	-1,838.8	3,501.5	3,413.4	39.758		
7,800.0	6,983.3	7,546.0	6,983.3	52.3	46.6	-108.98	1,450.7	-1,838.8	3,501.5	3,413.4	39.739		
7,900.0	7,083.3	7,646.0	7,083.3	52.3	46.6	-108.98	1,450.7	-1,838.8	3,501.5	3,413.3	39.720		
8,000.0	7,183.3	7,746.0	7,183.3	52.3	46.7	-108.98	1,450.7	-1,838.8	3,501.5	3,413.3	39.701		
8,100.0	7,283.3	7,846.0	7,283.3	52.4	46.7	-108.98	1,450.7	-1,838.8	3,501.5	3,413.3	39.682		
8,200.0	7,383.3	7,946.0	7,383.3	52.4	46.7	-108.98	1,450.7	-1,838.8	3,501.5	3,413.2	39.663		
8,300.0	7,483.3	8,046.0	7,483.3	52.4	46.7	-108.98	1,450.7	-1,838.8	3,501.5	3,413.2	39.644		
8,400.0	7,583.3	8,146.0	7,583.3	52.4	46.8	-108.98	1,450.7	-1,838.8	3,501.5	3,413.1	39.625		
8,500.0	7,683.3	8,246.0	7,683.3	52.4	46.8	-108.98	1,450.7	-1,838.8	3,501.5	3,413.1	39.605		
8,600.0	7,783.3	8,346.0	7,783.3	52.4	46.8	-108.98	1,450.7	-1,838.8	3,501.5	3,413.0	39.586		
8,604.3	7,787.6	8,350.3	7,787.6	52.4	46.8	-108.98	1,450.7	-1,838.8	3,501.5	3,413.0	39.585		
8,700.0	7,883.3	8,396.7	7,834.0	52.5	46.8	-108.98	1,450.7	-1,838.8	3,501.8	3,413.4	39.611		
8,800.0	7,983.3	8,396.7	7,834.0	52.5	46.8	-108.98	1,450.7	-1,838.8	3,504.7	3,416.5	39.725		
8,900.0	8,083.3	8,396.7	7,834.0	52.5	46.8	-108.98	1,450.7	-1,838.8	3,510.4	3,422.4	39.896		
9,000.0	8,183.3	8,396.7	7,834.0	52.5	46.8	-108.98	1,450.7	-1,838.8	3,518.9	3,431.2	40.125		
9,100.0	8,283.3	8,396.7	7,834.0	52.5	46.8	-108.98	1,450.7	-1,838.8	3,530.2	3,442.8	40.410		
9,200.0	8,383.3	8,396.7	7,834.0	52.5	46.8	-108.98	1,450.7	-1,838.8	3,544.3	3,457.4	40.752		
9,300.0	8,483.3	8,396.7	7,834.0	52.6	46.8	-108.98	1,450.7	-1,838.8	3,561.2	3,474.7	41.150		
9,400.0	8,583.3	8,396.7	7,834.0	52.6	46.8	-108.98	1,450.7	-1,838.8	3,580.8	3,494.7	41.604		
9,500.0	8,683.3	8,396.7	7,834.0	52.6	46.8	-108.98	1,450.7	-1,838.8	3,603.0	3,517.5	42.112		
9,518.7	8,702.0	8,396.7	7,834.0	52.6	46.8	-108.98	1,450.7	-1,838.8	3,607.5	3,522.0	42.215		

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	133.40	-49.5	52.4	72.1			
100.0	100.0	100.0	100.0	0.4	0.4	133.40	-49.5	52.4	72.1	71.3	91.013	
200.0	200.0	200.0	200.0	1.2	1.2	133.40	-49.5	52.4	72.1	69.6	29.179	CC
300.0	300.0	300.0	300.0	1.7	1.7	104.71	-49.5	52.4	72.4	69.1	22.162	ES
400.0	399.8	399.8	399.8	3.3	2.1	108.76	-49.5	52.4	74.0	69.7	17.474	
500.0	499.3	499.3	499.3	4.6	2.5	115.51	-49.5	52.4	77.7	72.4	14.615	
600.0	598.3	599.9	599.9	5.6	3.1	125.42	-49.5	50.2	83.8	77.1	12.464	
700.0	696.6	698.6	698.3	6.5	4.4	137.94	-49.5	43.8	94.2	85.9	11.340	SF
800.0	794.0	794.5	793.7	7.3	5.4	150.61	-49.5	33.5	111.9	102.1	11.416	
900.0	890.3	890.3	888.4	8.0	5.6	161.84	-48.8	19.5	137.7	126.4	12.220	
1,000.0	985.3	985.0	981.6	8.7	6.1	170.96	-45.4	2.9	169.7	156.8	13.170	
1,100.0	1,078.9	1,077.4	1,071.9	9.4	6.8	178.28	-39.4	-15.9	207.3	193.1	14.536	
1,200.0	1,170.9	1,167.2	1,158.9	10.0	7.4	-175.77	-31.1	-36.6	250.3	234.9	16.270	
1,300.0	1,261.0	1,254.3	1,242.4	10.7	7.9	-170.85	-20.8	-59.0	298.2	281.8	18.237	
1,400.0	1,349.2	1,338.3	1,322.1	11.2	8.5	-166.68	-8.7	-82.7	350.7	333.5	20.330	
1,500.0	1,435.2	1,419.2	1,397.9	11.8	9.0	-163.08	5.0	-107.4	407.5	389.4	22.489	
1,600.0	1,519.1	1,497.1	1,469.9	12.2	9.5	-160.11	20.0	-133.0	468.2	449.3	24.872	
1,700.0	1,602.6	1,573.3	1,539.4	12.5	9.9	-157.81	36.4	-159.6	530.1	510.5	27.156	
1,800.0	1,686.0	1,648.6	1,607.0	12.8	10.2	-155.70	54.2	-187.4	592.6	572.4	29.312	
1,900.0	1,769.4	1,724.5	1,674.9	13.2	10.5	-153.86	72.7	-216.0	655.6	634.7	31.259	
2,000.0	1,852.8	1,800.5	1,742.8	13.6	10.7	-152.34	91.2	-244.7	719.0	697.3	33.016	
2,100.0	1,936.3	1,876.5	1,810.8	13.9	11.0	-151.05	109.8	-273.3	782.7	760.1	34.584	
2,200.0	2,019.7	1,952.5	1,878.7	14.3	11.3	-149.96	128.3	-301.9	846.6	823.0	36.001	
2,300.0	2,103.1	2,028.5	1,946.6	14.7	11.6	-149.01	146.8	-330.5	910.6	886.2	37.281	
2,400.0	2,186.5	2,104.5	2,014.5	15.4	11.9	-148.19	165.3	-359.1	974.7	949.4	38.442	
2,500.0	2,270.0	2,180.5	2,082.4	16.4	12.2	-147.47	183.9	-387.7	1,039.0	1,012.7	39.473	
2,600.0	2,353.4	2,256.5	2,150.3	17.3	12.6	-146.83	202.4	-416.3	1,103.4	1,076.1	40.464	
2,700.0	2,436.8	2,332.4	2,218.2	18.2	13.0	-146.26	220.9	-444.9	1,167.8	1,139.5	41.284	
2,800.0	2,520.2	2,408.4	2,286.2	19.2	13.4	-145.75	239.4	-473.5	1,232.3	1,203.0	42.048	
2,900.0	2,603.7	2,484.4	2,354.1	20.1	13.9	-145.28	257.9	-502.1	1,296.8	1,266.5	42.748	
3,000.0	2,687.1	2,560.4	2,422.0	21.1	14.4	-144.87	276.5	-530.7	1,361.4	1,330.0	43.383	
3,100.0	2,770.5	2,636.4	2,489.9	22.0	15.0	-144.49	295.0	-559.3	1,426.0	1,393.6	43.961	
3,200.0	2,853.9	2,712.4	2,557.8	22.9	15.6	-144.14	313.5	-587.9	1,490.7	1,457.1	44.489	
3,300.0	2,937.4	2,788.4	2,625.7	23.9	16.2	-143.82	332.0	-616.6	1,555.3	1,520.8	44.973	
3,400.0	3,020.8	2,864.4	2,693.7	24.8	16.8	-143.53	350.5	-645.2	1,620.0	1,584.4	45.416	
3,500.0	3,104.2	2,940.3	2,761.6	25.8	17.4	-143.26	369.1	-673.8	1,684.8	1,648.0	45.823	
3,600.0	3,187.6	3,016.3	2,829.5	26.7	18.0	-143.01	387.6	-702.4	1,749.5	1,711.7	46.198	
3,700.0	3,271.1	3,092.3	2,897.4	27.7	18.6	-142.77	406.1	-731.0	1,814.3	1,775.3	46.544	
3,800.0	3,354.5	3,168.3	2,965.3	28.6	19.2	-142.56	424.6	-759.6	1,879.1	1,839.0	46.863	
3,900.0	3,437.9	3,244.3	3,033.2	29.6	19.8	-142.35	443.2	-788.2	1,943.9	1,902.7	47.158	
4,000.0	3,521.3	3,320.3	3,101.2	30.5	20.5	-142.16	461.7	-816.8	2,008.7	1,966.4	47.432	
4,100.0	3,604.8	3,396.3	3,169.1	31.5	21.1	-141.98	480.2	-845.4	2,073.5	2,030.0	47.687	
4,200.0	3,688.2	3,472.3	3,237.0	32.4	21.7	-141.82	498.7	-874.0	2,138.4	2,093.7	47.923	
4,300.0	3,771.6	3,548.2	3,304.9	33.4	22.4	-141.66	517.2	-902.6	2,203.2	2,157.5	48.144	
4,400.0	3,855.0	3,624.2	3,372.8	34.3	23.0	-141.51	535.8	-931.2	2,268.1	2,221.2	48.350	
4,500.0	3,938.5	3,700.2	3,440.7	35.3	23.6	-141.37	554.3	-959.9	2,332.9	2,284.9	48.542	
4,600.0	4,021.9	3,776.2	3,508.7	36.2	24.3	-141.24	572.8	-988.5	2,397.8	2,348.6	48.722	
4,700.0	4,105.3	3,852.2	3,576.6	37.2	24.9	-141.11	591.3	-1,017.1	2,462.7	2,412.3	48.891	
4,800.0	4,188.7	3,928.2	3,644.5	38.1	25.6	-140.99	609.9	-1,045.7	2,527.6	2,476.0	49.049	
4,900.0	4,272.2	4,004.2	3,712.4	39.1	26.2	-140.88	628.4	-1,074.3	2,592.5	2,539.8	49.198	
5,000.0	4,355.6	4,080.2	3,780.3	40.0	26.8	-140.77	646.9	-1,102.9	2,657.4	2,603.5	49.338	

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 0993-21-11W - Slot A-2
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 0993-21-11W	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)			Between Centres (usft)
5,100.0	4,439.0	4,156.1	3,848.2	41.0	27.5	-140.67	665.4	-1,131.5	2,722.3	2,667.2	49.469		
5,200.0	4,522.4	4,232.1	3,916.2	42.0	28.1	-140.57	683.9	-1,160.1	2,787.2	2,731.0	49.594		
5,300.0	4,605.9	4,308.1	3,984.1	42.9	28.8	-140.48	702.5	-1,188.7	2,852.1	2,794.7	49.711		
5,400.0	4,689.3	4,384.1	4,052.0	43.9	29.4	-140.39	721.0	-1,217.3	2,917.0	2,858.5	49.822		
5,500.0	4,772.7	4,460.1	4,119.9	44.8	30.1	-140.30	739.5	-1,245.9	2,981.9	2,922.2	49.927		
5,600.0	4,856.2	4,536.1	4,187.8	45.8	30.7	-140.38	758.0	-1,274.5	3,046.8	2,985.9	50.028		
5,700.0	4,941.0	4,613.3	4,256.8	46.7	31.4	-141.55	776.9	-1,303.6	3,110.2	3,048.1	50.086		
5,800.0	5,028.1	4,692.4	4,327.6	47.5	32.0	-142.55	796.1	-1,333.4	3,170.8	3,107.5	50.070		
5,900.0	5,117.3	4,773.3	4,399.8	48.3	32.7	-143.39	815.8	-1,363.9	3,228.7	3,164.2	50.012		
6,000.0	5,208.3	4,855.7	4,473.5	49.0	33.4	-144.09	835.9	-1,394.9	3,283.8	3,218.0	49.915		
6,100.0	5,301.1	4,939.6	4,548.5	49.6	34.1	-144.67	856.4	-1,426.5	3,335.9	3,268.9	49.785		
6,200.0	5,395.4	5,024.8	4,624.6	50.2	34.9	-145.13	877.1	-1,458.5	3,385.0	3,316.8	49.624		
6,300.0	5,491.1	5,111.0	4,701.7	50.7	35.6	-145.49	898.2	-1,491.0	3,431.2	3,361.8	49.439		
6,400.0	5,587.9	5,198.2	4,779.6	51.1	36.3	-145.75	919.4	-1,523.8	3,474.2	3,403.6	49.231		
6,500.0	5,685.8	5,286.2	4,858.2	51.5	37.1	-145.92	940.9	-1,556.9	3,514.1	3,442.4	49.007		
6,600.0	5,784.4	5,374.8	4,937.4	51.7	37.8	-146.00	962.5	-1,590.3	3,550.9	3,478.1	48.769		
6,700.0	5,883.7	5,463.8	5,017.0	52.0	38.6	-146.01	984.2	-1,623.8	3,584.6	3,510.7	48.526		
6,800.0	5,983.4	5,553.7	5,097.6	52.1	39.3	-146.00	1,006.0	-1,657.7	3,618.2	3,542.4	48.283		
6,900.0	6,083.3	5,643.6	5,178.2	52.2	40.0	-146.00	1,027.8	-1,691.7	3,651.7	3,574.1	48.040		
7,000.0	6,183.3	5,733.5	5,258.8	52.2	40.7	-146.00	1,049.6	-1,725.7	3,685.2	3,605.8	47.797		
7,100.0	6,283.3	5,823.4	5,339.0	52.2	41.4	-146.00	1,071.4	-1,759.7	3,718.7	3,637.5	47.554		
7,200.0	6,383.3	5,913.3	5,419.2	52.2	42.1	-146.00	1,093.2	-1,793.7	3,752.2	3,669.2	47.311		
7,300.0	6,483.3	6,003.2	5,499.4	52.2	42.8	-146.00	1,115.0	-1,827.7	3,785.7	3,700.9	47.068		
7,400.0	6,583.3	6,093.1	5,579.6	52.2	43.5	-146.00	1,136.8	-1,861.7	3,819.2	3,732.6	46.825		
7,500.0	6,683.3	6,183.0	5,659.8	52.2	44.2	-146.00	1,158.6	-1,895.7	3,852.7	3,764.3	46.582		
7,600.0	6,783.3	6,272.9	5,740.0	52.2	44.9	-146.00	1,180.4	-1,929.7	3,886.2	3,796.0	46.339		
7,700.0	6,883.3	6,362.8	5,820.2	52.2	45.6	-146.00	1,202.2	-1,963.7	3,919.7	3,827.7	46.096		
7,800.0	6,983.3	6,452.7	5,900.4	52.2	46.3	-146.00	1,224.0	-1,997.7	3,953.2	3,859.4	45.853		
7,900.0	7,083.3	6,542.6	5,980.6	52.2	47.0	-146.00	1,245.8	-2,031.7	3,986.7	3,891.1	45.610		
8,000.0	7,183.3	6,632.5	6,060.8	52.2	47.7	-146.00	1,267.6	-2,065.7	4,020.2	3,922.8	45.367		
8,100.0	7,283.3	6,722.4	6,141.0	52.2	48.4	-146.00	1,289.4	-2,099.7	4,053.7	3,954.5	45.124		
8,200.0	7,383.3	6,812.3	6,221.2	52.2	49.1	-146.00	1,311.2	-2,133.7	4,087.2	3,986.2	44.881		
8,300.0	7,483.3	6,902.2	6,301.4	52.2	49.8	-146.00	1,333.0	-2,167.7	4,120.7	4,017.9	44.638		
8,400.0	7,583.3	6,992.1	6,381.6	52.2	50.5	-146.00	1,354.8	-2,201.7	4,154.2	4,049.6	44.395		
8,500.0	7,683.3	7,082.0	6,461.8	52.2	51.2	-146.00	1,376.6	-2,235.7	4,187.7	4,081.3	44.152		
8,600.0	7,783.3	7,171.9	6,542.0	52.2	51.9	-146.00	1,398.4	-2,269.7	4,221.2	4,113.0	43.909		
8,700.0	7,883.3	7,261.8	6,622.2	52.2	52.6	-146.00	1,420.2	-2,303.7	4,254.7	4,144.7	43.666		
8,800.0	7,983.3	7,351.7	6,702.4	52.2	53.3	-146.00	1,442.0	-2,337.7	4,288.2	4,176.4	43.423		
8,900.0	8,083.3	7,441.6	6,782.6	52.2	54.0	-146.00	1,463.8	-2,371.7	4,321.7	4,208.1	43.180		
9,000.0	8,183.3	7,531.5	6,862.8	52.2	54.7	-146.00	1,485.6	-2,405.7	4,355.2	4,239.8	42.937		
9,100.0	8,283.3	7,621.4	6,943.0	52.2	55.4	-146.00	1,507.4	-2,439.7	4,388.7	4,271.5	42.694		
9,200.0	8,383.3	7,711.3	7,023.2	52.2	56.1	-146.00	1,529.2	-2,473.7	4,422.2	4,303.2	42.451		
9,300.0	8,483.3	7,801.2	7,103.4	52.2	56.8	-146.00	1,551.0	-2,507.7	4,455.7	4,334.9	42.208		
9,400.0	8,583.3	7,891.1	7,183.6	52.2	57.5	-146.00	1,572.8	-2,541.7	4,489.2	4,366.6	41.965		
9,403.2	8,586.5	7,901.9	7,193.8	52.2	57.5	-146.00	1,575.0	-2,545.7	4,493.2	4,370.6	41.942		
9,500.0	8,683.3	7,981.0	7,264.0	52.2	58.2	-146.00	1,593.8	-2,579.7	4,526.7	4,402.3	41.700		
9,518.7	8,702.0	7,991.8	7,274.2	52.2	58.2	-146.00	1,596.0	-2,583.7	4,530.7	4,406.3	41.677		

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	133.38	-60.5	64.0	88.0			
100.0	100.0	100.0	100.0	0.4	0.4	133.38	-60.5	64.0	88.0	87.2	111.144	
200.0	200.0	200.0	200.0	1.2	1.2	133.38	-60.5	64.0	88.0	85.6	35.634	CC
300.0	300.0	300.0	300.0	1.7	1.7	104.52	-60.5	64.0	88.3	85.1	27.046	
400.0	399.8	401.6	401.6	3.3	2.1	108.58	-60.6	62.7	89.1	85.0	21.596	
500.0	499.3	502.8	502.6	4.6	3.5	117.42	-61.1	57.1	90.0	84.4	16.220	ES
600.0	598.3	602.0	601.3	5.6	4.7	130.23	-61.9	47.3	94.3	87.3	13.570	
700.0	696.6	700.0	698.4	6.5	5.0	144.82	-62.7	33.6	105.7	97.4	12.632	
800.0	794.0	797.1	793.9	7.3	5.5	158.38	-61.2	16.7	124.9	114.6	12.039	SF
900.0	890.3	891.7	886.4	8.0	6.2	169.68	-57.3	-2.8	152.1	139.9	12.454	
1,000.0	985.3	983.5	975.4	8.7	6.9	178.68	-51.2	-24.6	186.8	173.1	13.675	
1,100.0	1,078.9	1,072.2	1,060.5	9.4	7.5	-174.23	-43.3	-48.2	228.1	213.3	15.400	
1,200.0	1,170.9	1,157.5	1,141.4	10.0	8.1	-168.57	-33.6	-73.5	275.5	259.7	17.378	
1,300.0	1,261.0	1,239.4	1,218.1	10.7	8.6	-163.96	-22.6	-99.8	328.3	311.4	19.521	
1,400.0	1,349.2	1,317.6	1,290.5	11.2	9.1	-160.10	-10.5	-127.0	385.8	368.1	21.801	
1,500.0	1,435.2	1,394.1	1,360.4	11.8	9.3	-156.80	2.5	-154.9	447.7	429.2	24.196	
1,600.0	1,519.1	1,469.0	1,429.0	12.2	9.6	-154.48	15.4	-182.4	512.9	493.7	26.713	
1,700.0	1,602.6	1,543.6	1,497.2	12.5	9.8	-153.15	28.1	-209.7	578.9	559.0	29.116	
1,800.0	1,686.0	1,618.1	1,565.3	12.8	10.1	-152.10	40.9	-237.0	645.1	624.5	31.305	
1,900.0	1,769.4	1,692.6	1,633.5	13.2	10.4	-151.23	53.6	-264.3	711.3	690.0	33.299	
2,000.0	1,852.8	1,767.1	1,701.6	13.6	10.7	-150.52	66.4	-291.6	777.6	755.5	35.106	
2,100.0	1,936.3	1,841.6	1,769.7	13.9	11.0	-149.91	79.1	-319.0	844.0	821.1	36.751	
2,200.0	2,019.7	1,916.1	1,837.9	14.3	11.3	-149.39	91.9	-346.3	910.5	886.6	38.237	
2,300.0	2,103.1	1,990.6	1,906.0	14.7	11.6	-148.95	104.6	-373.6	976.9	952.3	39.610	
2,400.0	2,186.5	2,065.1	1,974.2	15.4	11.9	-148.56	117.4	-400.9	1,043.4	1,017.9	40.889	
2,500.0	2,270.0	2,139.7	2,042.3	16.4	12.3	-148.21	130.1	-428.2	1,109.9	1,083.5	42.000	
2,600.0	2,353.4	2,214.2	2,110.5	17.3	12.7	-147.91	142.9	-455.5	1,176.5	1,149.1	43.032	
2,700.0	2,436.8	2,288.7	2,178.6	18.2	13.1	-147.63	155.6	-482.8	1,243.0	1,214.8	43.978	
2,800.0	2,520.2	2,363.2	2,246.8	19.2	13.5	-147.39	168.4	-510.1	1,309.6	1,280.4	44.845	
2,900.0	2,603.7	2,437.7	2,314.9	20.1	13.9	-147.17	181.1	-537.4	1,376.2	1,346.0	45.640	
3,000.0	2,687.1	2,512.2	2,383.1	21.1	14.4	-146.97	193.9	-564.7	1,442.8	1,411.6	46.371	
3,100.0	2,770.5	2,586.7	2,451.2	22.0	14.9	-146.78	206.6	-592.0	1,509.4	1,477.3	47.045	
3,200.0	2,853.9	2,661.2	2,519.4	22.9	15.4	-146.61	219.4	-619.3	1,576.0	1,542.9	47.667	
3,300.0	2,937.4	2,735.8	2,587.5	23.9	15.9	-146.46	232.1	-646.6	1,642.6	1,608.5	48.241	
3,400.0	3,020.8	2,810.3	2,655.6	24.8	16.5	-146.32	244.9	-673.9	1,709.2	1,674.1	48.773	
3,500.0	3,104.2	2,884.8	2,723.8	25.8	17.0	-146.19	257.6	-701.2	1,775.8	1,739.8	49.267	
3,600.0	3,187.6	2,959.3	2,791.9	26.7	17.6	-146.06	270.4	-728.5	1,842.4	1,805.4	49.725	
3,700.0	3,271.1	3,033.8	2,860.1	27.7	18.1	-145.95	283.1	-755.9	1,909.1	1,871.0	50.152	
3,800.0	3,354.5	3,108.3	2,928.2	28.6	18.7	-145.84	295.9	-783.2	1,975.7	1,936.6	50.550	
3,900.0	3,437.9	3,182.8	2,996.4	29.6	19.2	-145.75	308.6	-810.5	2,042.4	2,002.3	50.921	
4,000.0	3,521.3	3,257.3	3,064.5	30.5	19.8	-145.65	321.4	-837.8	2,109.0	2,067.9	51.269	
4,100.0	3,604.8	3,331.9	3,132.7	31.5	20.3	-145.57	334.1	-865.1	2,175.7	2,133.5	51.594	
4,200.0	3,688.2	3,406.4	3,200.8	32.4	20.9	-145.48	346.9	-892.4	2,242.3	2,199.1	51.899	
4,300.0	3,771.6	3,480.9	3,269.0	33.4	21.4	-145.41	359.6	-919.7	2,309.0	2,264.7	52.185	
4,400.0	3,855.0	3,555.4	3,337.1	34.3	22.0	-145.33	372.4	-947.0	2,375.6	2,330.3	52.454	
4,500.0	3,938.5	3,629.9	3,405.3	35.3	22.6	-145.26	385.1	-974.3	2,442.3	2,395.9	52.707	
4,600.0	4,021.9	3,704.4	3,473.4	36.2	23.1	-145.20	397.9	-1,001.6	2,508.9	2,461.5	52.946	
4,700.0	4,105.3	3,778.9	3,541.5	37.2	23.7	-145.14	410.6	-1,028.9	2,575.6	2,527.2	53.171	
4,800.0	4,188.7	3,853.4	3,609.7	38.1	24.2	-145.08	423.4	-1,056.2	2,642.3	2,592.8	53.384	
4,900.0	4,272.2	3,928.0	3,677.8	39.1	24.8	-145.02	436.1	-1,083.5	2,708.9	2,658.4	53.586	
5,000.0	4,355.6	4,002.5	3,746.0	40.0	25.4	-144.97	448.9	-1,110.8	2,775.6	2,724.0	53.776	

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,439.0	4,077.0	3,814.1	41.0	25.9	-144.92	461.6	-1,138.1	2,842.3	2,789.6	53.957		
5,200.0	4,522.4	4,151.5	3,882.3	42.0	26.5	-144.87	474.4	-1,165.4	2,908.9	2,855.2	54.128		
5,300.0	4,605.9	4,226.0	3,950.4	42.9	27.1	-144.82	487.1	-1,192.8	2,975.6	2,920.8	54.290		
5,400.0	4,689.3	4,300.5	4,018.6	43.9	27.6	-144.78	499.9	-1,220.1	3,042.3	2,986.4	54.445		
5,500.0	4,772.7	4,375.0	4,086.7	44.8	28.2	-144.74	512.6	-1,247.4	3,108.9	3,052.0	54.592		
5,600.0	4,856.2	4,449.6	4,154.9	45.8	28.8	-144.85	525.4	-1,274.7	3,175.6	3,117.6	54.734		
5,700.0	4,941.0	4,525.5	4,224.3	46.7	29.3	-145.99	538.4	-1,302.5	3,240.6	3,181.5	54.822		
5,800.0	5,028.1	4,603.5	4,295.7	47.5	29.9	-146.96	551.7	-1,331.1	3,302.8	3,242.6	54.819		
5,900.0	5,117.3	4,683.6	4,368.9	48.3	30.5	-147.78	565.4	-1,360.5	3,362.1	3,300.8	54.762		
6,000.0	5,208.3	4,765.5	4,443.9	49.0	31.2	-148.47	579.4	-1,390.5	3,418.5	3,356.0	54.657		
6,100.0	5,301.1	4,849.2	4,520.4	49.6	31.8	-149.03	593.8	-1,421.1	3,471.8	3,408.1	54.509		
6,200.0	5,395.4	4,934.3	4,598.2	50.2	32.4	-149.49	608.3	-1,452.3	3,521.9	3,457.1	54.322		
6,300.0	5,491.1	5,020.9	4,677.4	50.7	33.1	-149.85	623.1	-1,484.1	3,568.8	3,502.9	54.101		
6,400.0	5,587.9	5,108.7	4,757.7	51.1	33.8	-150.11	638.2	-1,516.2	3,612.5	3,545.4	53.852		
6,500.0	5,685.8	5,197.5	4,838.9	51.5	34.5	-150.29	653.4	-1,548.8	3,652.8	3,584.7	53.578		
6,600.0	5,784.4	5,287.2	4,920.9	51.7	35.1	-150.39	668.7	-1,581.6	3,689.8	3,620.6	53.285		
6,700.0	5,883.7	5,377.5	5,003.6	52.0	35.8	-150.42	684.2	-1,614.8	3,723.5	3,653.2	52.977		
6,800.0	5,983.4	5,468.5	5,086.7	52.1	36.5	-150.37	699.7	-1,648.1	3,753.7	3,682.4	52.663		
6,900.0	6,083.3	5,560.0	5,170.0	52.2	37.2	-150.22	715.4	-1,681.5	3,780.0	3,708.7	52.329		
7,000.0	6,183.3	5,655.0	5,254.0	52.2	37.9	-150.07	731.1	-1,714.9	3,803.3	3,732.0	51.977		
7,100.0	6,283.3	5,750.0	5,338.0	52.2	38.6	-149.92	746.8	-1,748.3	3,823.6	3,752.3	51.611		
7,200.0	6,383.3	5,845.0	5,422.0	52.2	39.3	-149.77	762.5	-1,781.7	3,841.0	3,768.7	51.225		
7,300.0	6,483.3	5,940.0	5,506.0	52.2	40.0	-149.62	778.2	-1,815.1	3,855.4	3,781.0	50.820		
7,400.0	6,583.3	6,035.0	5,590.0	52.2	40.7	-149.47	793.9	-1,848.5	3,866.8	3,789.3	50.400		
7,500.0	6,683.3	6,130.0	5,674.0	52.2	41.4	-149.32	809.6	-1,881.9	3,875.2	3,793.6	49.965		
7,600.0	6,783.3	6,225.0	5,758.0	52.2	42.1	-149.17	825.3	-1,915.3	3,880.6	3,794.0	49.515		
7,700.0	6,883.3	6,320.0	5,842.0	52.2	42.8	-149.02	841.0	-1,948.7	3,883.0	3,791.4	49.050		
7,800.0	6,983.3	6,415.0	5,926.0	52.2	43.5	-148.87	856.7	-1,982.1	3,882.4	3,785.8	48.570		
7,900.0	7,083.3	6,510.0	6,010.0	52.2	44.2	-148.72	872.4	-2,015.5	3,878.8	3,777.2	48.075		
8,000.0	7,183.3	6,605.0	6,094.0	52.2	44.9	-148.57	888.1	-2,048.9	3,872.2	3,765.6	47.565		
8,100.0	7,283.3	6,700.0	6,178.0	52.2	45.6	-148.42	903.8	-2,082.3	3,862.6	3,750.0	47.040		
8,200.0	7,383.3	6,795.0	6,262.0	52.2	46.3	-148.27	919.5	-2,115.7	3,849.0	3,731.4	46.500		
8,300.0	7,483.3	6,890.0	6,346.0	52.2	47.0	-148.12	935.2	-2,149.1	3,832.4	3,709.8	45.945		
8,400.0	7,583.3	6,985.0	6,430.0	52.2	47.7	-147.97	950.9	-2,182.5	3,812.8	3,685.2	45.375		
8,500.0	7,683.3	7,080.0	6,514.0	52.2	48.4	-147.82	966.6	-2,215.9	3,790.2	3,658.6	44.790		
8,600.0	7,783.3	7,175.0	6,598.0	52.2	49.1	-147.67	982.3	-2,249.3	3,764.6	3,629.0	44.190		
8,601.1	7,784.4	8,196.1	7,784.4	52.4	40.8	-118.57	787.9	-1,836.9	3,767.9	3,687.0	46.591		
8,700.0	7,883.3	8,228.7	7,817.0	52.5	40.8	-118.57	787.9	-1,836.9	3,768.5	3,687.7	46.661		
8,800.0	7,983.3	8,228.7	7,817.0	52.5	40.8	-118.57	787.9	-1,836.9	3,771.6	3,691.0	46.825		
8,900.0	8,083.3	8,228.7	7,817.0	52.5	40.8	-118.57	787.9	-1,836.9	3,777.3	3,697.0	47.048		
9,000.0	8,183.3	8,228.7	7,817.0	52.5	40.8	-118.57	787.9	-1,836.9	3,785.7	3,705.7	47.329		
9,100.0	8,283.3	8,228.7	7,817.0	52.5	40.8	-118.57	787.9	-1,836.9	3,796.6	3,717.0	47.668		
9,200.0	8,383.3	8,228.7	7,817.0	52.5	40.8	-118.57	787.9	-1,836.9	3,810.2	3,730.9	48.064		
9,300.0	8,483.3	8,228.7	7,817.0	52.6	40.8	-118.57	787.9	-1,836.9	3,826.3	3,747.5	48.518		
9,400.0	8,583.3	8,228.7	7,817.0	52.6	40.8	-118.57	787.9	-1,836.9	3,845.0	3,766.6	49.028		
9,500.0	8,683.3	8,228.7	7,817.0	52.6	40.8	-118.57	787.9	-1,836.9	3,866.2	3,788.2	49.595		
9,518.7	8,702.0	8,228.7	7,817.0	52.6	40.8	-118.57	787.9	-1,836.9	3,870.4	3,792.6	49.709		

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	133.35	-71.4	75.6	104.0				
100.0	100.0	100.0	100.0	0.4	0.4	133.35	-71.4	75.6	104.0	103.2	131.276		
200.0	200.0	200.0	200.0	1.2	1.2	133.35	-71.4	75.6	104.0	101.5	42.088		
300.0	300.0	301.3	301.3	1.7	1.5	104.66	-71.5	75.0	104.0	100.9	34.326		
400.0	399.8	403.3	403.1	3.3	2.9	109.76	-72.4	70.6	103.3	99.0	24.043		
438.6	438.3	442.3	442.0	3.8	3.5	112.92	-73.1	67.7	103.1	98.3	21.570	CC	
500.0	499.3	503.7	503.1	4.6	4.3	119.19	-74.3	61.9	103.7	98.2	18.652	ES	
600.0	598.3	601.5	600.2	5.6	5.3	131.86	-77.0	49.3	109.1	102.2	15.889		
700.0	696.6	699.7	696.9	6.5	5.6	145.78	-79.2	32.8	122.1	113.5	14.107		
800.0	794.0	795.6	790.8	7.3	6.2	158.50	-79.2	13.4	143.3	132.3	13.085	SF	
900.0	890.3	888.5	881.1	8.0	6.9	169.14	-77.0	-8.5	172.8	160.0	13.454		
1,000.0	985.3	978.3	967.5	8.7	7.5	177.68	-73.0	-32.6	210.2	195.9	14.636		
1,100.0	1,078.9	1,064.5	1,049.6	9.4	8.0	-175.53	-67.3	-58.3	254.6	239.0	16.330		
1,200.0	1,170.9	1,147.1	1,127.2	10.0	8.6	-170.08	-60.2	-85.3	305.2	288.6	18.345		
1,300.0	1,261.0	1,226.0	1,200.6	10.7	9.0	-165.60	-51.9	-113.3	361.2	343.7	20.581		
1,400.0	1,349.2	1,303.7	1,272.4	11.2	9.2	-161.99	-43.2	-141.5	421.9	403.5	22.967		
1,500.0	1,435.2	1,379.0	1,342.1	11.8	9.5	-159.17	-34.8	-168.9	486.3	467.1	25.364		
1,600.0	1,519.1	1,452.1	1,409.7	12.2	9.7	-157.21	-26.6	-195.5	553.9	534.0	27.933		
1,700.0	1,602.6	1,524.7	1,476.8	12.5	10.0	-156.13	-18.5	-221.9	622.2	601.7	30.408		
1,800.0	1,686.0	1,597.3	1,543.9	12.8	10.2	-155.26	-10.4	-248.3	690.6	669.4	32.686		
1,900.0	1,769.4	1,669.9	1,611.1	13.2	10.5	-154.54	-2.3	-274.8	759.0	737.2	34.779		
2,000.0	1,852.8	1,742.5	1,678.2	13.6	10.8	-153.95	5.8	-301.2	827.5	805.0	36.705		
2,100.0	1,936.3	1,815.1	1,745.3	13.9	11.1	-153.44	13.9	-327.6	896.1	872.8	38.476		
2,200.0	2,019.7	1,887.7	1,812.5	14.3	11.4	-153.01	22.0	-354.0	964.7	940.6	40.103		
2,300.0	2,103.1	1,960.3	1,879.6	14.7	11.7	-152.63	30.1	-380.4	1,033.3	1,008.4	41.597		
2,400.0	2,186.5	2,032.8	1,946.7	15.4	12.1	-152.30	38.2	-406.8	1,101.9	1,076.3	42.972		
2,500.0	2,270.0	2,105.4	2,013.8	16.4	12.4	-152.01	46.3	-433.2	1,170.6	1,144.1	44.239		
2,600.0	2,353.4	2,178.0	2,081.0	17.3	12.8	-151.75	54.4	-459.6	1,239.2	1,211.9	45.405		
2,700.0	2,436.8	2,250.6	2,148.1	18.2	13.1	-151.51	62.6	-486.0	1,307.9	1,279.8	46.480		
2,800.0	2,520.2	2,323.2	2,215.2	19.2	13.5	-151.30	70.7	-512.4	1,376.6	1,347.6	47.475		
2,900.0	2,603.7	2,395.8	2,282.4	20.1	13.9	-151.11	78.8	-538.8	1,445.3	1,415.4	48.394		
3,000.0	2,687.1	2,468.4	2,349.5	21.1	14.3	-150.94	86.9	-565.2	1,514.0	1,483.3	49.245		
3,100.0	2,770.5	2,541.0	2,416.6	22.0	14.7	-150.78	95.0	-591.6	1,582.7	1,551.1	50.035		
3,200.0	2,853.9	2,613.6	2,483.7	22.9	15.2	-150.64	103.1	-618.0	1,651.4	1,618.9	50.769		
3,300.0	2,937.4	2,686.1	2,550.9	23.9	15.7	-150.51	111.2	-644.4	1,720.1	1,686.7	51.451		
3,400.0	3,020.8	2,758.7	2,618.0	24.8	16.1	-150.38	119.3	-670.8	1,788.9	1,754.5	52.087		
3,500.0	3,104.2	2,831.3	2,685.1	25.8	16.6	-150.27	127.4	-697.2	1,857.6	1,822.3	52.680		
3,600.0	3,187.6	2,903.9	2,752.3	26.7	17.1	-150.17	135.5	-723.6	1,926.3	1,890.2	53.234		
3,700.0	3,271.1	2,976.5	2,819.4	27.7	17.6	-150.07	143.6	-750.1	1,995.1	1,958.0	53.752		
3,800.0	3,354.5	3,049.1	2,886.5	28.6	18.1	-149.98	151.7	-776.5	2,063.8	2,025.8	54.237		
3,900.0	3,437.9	3,121.7	2,953.6	29.6	18.6	-149.89	159.9	-802.9	2,132.6	2,093.6	54.693		
4,000.0	3,521.3	3,194.3	3,020.8	30.5	19.1	-149.81	168.0	-829.3	2,201.3	2,161.4	55.120		
4,100.0	3,604.8	3,266.9	3,087.9	31.5	19.6	-149.73	176.1	-855.7	2,270.0	2,229.2	55.522		
4,200.0	3,688.2	3,339.5	3,155.0	32.4	20.1	-149.66	184.2	-882.1	2,338.8	2,297.0	55.900		
4,300.0	3,771.6	3,412.0	3,222.2	33.4	20.6	-149.60	192.3	-908.5	2,407.5	2,364.8	56.257		
4,400.0	3,855.0	3,484.6	3,289.3	34.3	21.1	-149.53	200.4	-934.9	2,476.3	2,432.5	56.594		
4,500.0	3,938.5	3,557.2	3,356.4	35.3	21.6	-149.47	208.5	-961.3	2,545.1	2,500.3	56.912		
4,600.0	4,021.9	3,629.8	3,423.5	36.2	22.1	-149.42	216.6	-987.7	2,613.8	2,568.1	57.212		
4,700.0	4,105.3	3,702.4	3,490.7	37.2	22.6	-149.36	224.7	-1,014.1	2,682.6	2,635.9	57.497		
4,800.0	4,188.7	3,775.0	3,557.8	38.1	23.1	-149.31	232.8	-1,040.5	2,751.3	2,703.7	57.767		
4,900.0	4,272.2	3,847.6	3,624.9	39.1	23.6	-149.26	240.9	-1,066.9	2,820.1	2,771.5	58.022		

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
5,000.0	4,355.6	3,920.2	3,692.1	40.0	24.1	-149.22	249.0	-1,093.3	2,888.8	2,839.3	58.265		
5,100.0	4,439.0	3,992.8	3,759.2	41.0	24.7	-149.17	257.2	-1,119.7	2,957.6	2,907.0	58.496		
5,200.0	4,522.4	4,065.4	3,826.3	42.0	25.2	-149.13	265.3	-1,146.1	3,026.4	2,974.8	58.715		
5,300.0	4,605.9	4,137.9	3,893.5	42.9	25.7	-149.09	273.4	-1,172.5	3,095.1	3,042.6	58.924		
5,400.0	4,689.3	4,210.5	3,960.6	43.9	26.2	-149.05	281.5	-1,198.9	3,163.9	3,110.4	59.123		
5,500.0	4,772.7	4,283.1	4,027.7	44.8	26.7	-149.01	289.6	-1,225.4	3,232.7	3,178.2	59.312		
5,600.0	4,856.2	4,355.7	4,094.9	45.8	27.2	-149.12	297.7	-1,251.8	3,301.4	3,245.9	59.496		
5,700.0	4,941.0	4,429.9	4,163.4	46.7	27.8	-150.20	306.0	-1,278.7	3,368.5	3,312.0	59.615		
5,800.0	5,028.1	4,506.3	4,234.1	47.5	28.3	-151.11	314.5	-1,306.5	3,432.7	3,375.1	59.623		
5,900.0	5,117.3	4,585.0	4,306.9	48.3	28.9	-151.89	323.3	-1,335.2	3,493.9	3,435.3	59.569		
6,000.0	5,208.3	4,665.8	4,381.6	49.0	29.4	-152.53	332.3	-1,364.6	3,552.1	3,492.3	59.457		
6,100.0	5,301.1	4,748.5	4,458.1	49.6	30.0	-153.07	341.6	-1,394.6	3,607.1	3,546.3	59.293		
6,200.0	5,395.4	4,833.0	4,536.2	50.2	30.6	-153.50	351.0	-1,425.4	3,658.9	3,597.0	59.082		
6,300.0	5,491.1	4,919.0	4,615.8	50.7	31.2	-153.84	360.6	-1,456.7	3,707.3	3,644.3	58.830		
6,400.0	5,587.9	5,006.5	4,696.7	51.1	31.9	-154.10	370.4	-1,488.5	3,752.4	3,688.3	58.543		
6,500.0	5,685.8	5,095.3	4,778.8	51.5	32.5	-154.28	380.3	-1,520.8	3,794.0	3,728.9	58.226		
6,600.0	5,784.4	5,185.2	4,861.9	51.7	33.1	-154.38	390.3	-1,553.5	3,832.2	3,766.0	57.883		
6,700.0	5,883.7	5,276.0	4,945.9	52.0	33.8	-154.42	400.5	-1,586.5	3,866.8	3,799.5	57.523		
6,800.0	5,983.4	5,367.5	5,030.6	52.1	34.4	-154.39	410.7	-1,619.8	3,897.8	3,829.6	57.154		
6,900.0	6,083.3	5,459.7	5,115.8	52.2	35.1	-154.30	421.0	-1,653.3	3,925.3	3,856.2	56.792		
7,000.0	6,183.3	5,553.5	5,183.3	52.2	35.7	-122.56	477.2	-1,836.3	3,925.5	3,847.8	50.556		
7,100.0	6,283.3	5,653.5	5,253.3	52.2	36.3	-122.56	477.2	-1,836.3	3,925.5	3,847.8	50.526		
7,200.0	6,383.3	5,753.5	5,323.3	52.2	36.8	-122.56	477.2	-1,836.3	3,925.5	3,847.7	50.495		
7,300.0	6,483.3	5,853.5	5,393.3	52.2	37.4	-122.56	477.2	-1,836.3	3,925.5	3,847.7	50.464		
7,400.0	6,583.3	5,953.5	5,463.3	52.2	37.9	-122.56	477.2	-1,836.3	3,925.5	3,847.7	50.433		
7,500.0	6,683.3	6,053.5	5,533.3	52.3	38.5	-122.56	477.2	-1,836.3	3,925.5	3,847.6	50.402		
7,600.0	6,783.3	6,153.5	5,603.3	52.3	39.1	-122.56	477.2	-1,836.3	3,925.5	3,847.6	50.370		
7,700.0	6,883.3	6,253.5	5,673.3	52.3	39.7	-122.56	477.2	-1,836.3	3,925.5	3,847.5	50.338		
7,800.0	6,983.3	6,353.5	5,743.3	52.3	40.3	-122.56	477.2	-1,836.3	3,925.5	3,847.5	50.307		
7,900.0	7,083.3	6,453.5	5,813.3	52.3	40.9	-122.56	477.2	-1,836.3	3,925.5	3,847.4	50.275		
8,000.0	7,183.3	6,553.5	5,883.3	52.3	41.5	-122.56	477.2	-1,836.3	3,925.5	3,847.4	50.243		
8,100.0	7,283.3	6,653.5	5,953.3	52.4	42.1	-122.56	477.2	-1,836.3	3,925.5	3,847.3	50.210		
8,200.0	7,383.3	6,753.5	6,023.3	52.4	42.7	-122.56	477.2	-1,836.3	3,925.5	3,847.3	50.178		
8,300.0	7,483.3	6,853.5	6,093.3	52.4	43.3	-122.56	477.2	-1,836.3	3,925.5	3,847.2	50.145		
8,400.0	7,583.3	6,953.5	6,163.3	52.4	43.9	-122.56	477.2	-1,836.3	3,925.5	3,847.2	50.112		
8,500.0	7,683.3	7,053.5	6,233.3	52.4	44.5	-122.56	477.2	-1,836.3	3,925.5	3,847.1	50.080		
8,600.0	7,783.3	7,153.5	6,303.3	52.4	45.1	-122.56	477.2	-1,836.3	3,925.5	3,847.0	50.047		
8,700.0	7,883.3	7,253.5	6,373.3	52.5	45.7	-122.56	477.2	-1,836.3	3,925.5	3,847.0	50.013		
8,800.0	7,983.3	7,353.5	6,443.3	52.5	46.3	-122.56	477.2	-1,836.3	3,925.5	3,846.9	49.980		
8,900.0	8,083.3	7,453.5	6,513.3	52.5	46.9	-122.56	477.2	-1,836.3	3,925.5	3,846.9	49.946		
9,000.0	8,183.3	7,553.5	6,583.3	52.5	47.5	-122.56	477.2	-1,836.3	3,925.5	3,846.8	49.913		
9,100.0	8,283.3	7,653.5	6,653.3	52.5	48.1	-122.56	477.2	-1,836.3	3,925.5	3,846.8	49.879		
9,200.0	8,383.3	7,753.5	6,723.3	52.5	48.7	-122.56	477.2	-1,836.3	3,925.5	3,846.7	49.845		
9,300.0	8,483.3	7,853.5	6,793.3	52.6	49.3	-122.56	477.2	-1,836.3	3,925.5	3,846.7	49.811		
9,400.0	8,583.3	7,953.5	6,863.3	52.6	49.9	-122.56	477.2	-1,836.3	3,925.5	3,846.6	49.779		
9,401.9	8,585.2	7,955.5	6,865.2	52.6	49.9	-122.56	477.2	-1,836.3	3,925.5	3,846.6	49.778		
9,500.0	8,683.3	8,053.5	6,933.3	52.6	50.5	-122.56	477.2	-1,836.3	3,925.9	3,847.1	49.832		
9,518.7	8,702.0	8,096.2	6,976.0	52.6	50.5	-122.56	477.2	-1,836.3	3,926.2	3,847.5	49.859		

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



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-11W - Slot A-2
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 0993-21-11W	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	133.69	-11.1	11.6	16.1				
100.0	100.0	100.0	100.0	0.4	0.4	133.69	-11.1	11.6	16.1	15.3	20.309		
200.0	200.0	200.0	200.0	1.2	1.2	133.69	-11.1	11.6	16.1	13.6	6.511		
274.9	274.9	274.9	274.9	1.6	2.1	102.93	-10.1	12.3	16.1	13.0	5.138		
300.0	300.0	300.1	300.1	1.7	2.4	100.62	-9.3	12.9	16.1	12.8	4.914	CC	
400.0	399.8	400.1	399.9	3.3	3.9	96.58	-3.9	16.6	16.4	12.4	4.037	ES	
500.0	499.3	500.1	499.3	4.6	5.1	92.72	5.1	22.7	17.3	12.5	3.623		
600.0	598.3	600.1	598.0	5.6	6.0	89.28	17.6	31.3	18.5	13.0	3.391		
700.0	696.6	699.9	696.0	6.5	6.8	86.39	33.7	42.3	20.2	13.9	3.242		
800.0	794.0	799.8	792.9	7.3	7.6	84.08	53.3	55.7	22.2	15.1	3.145		
900.0	890.3	899.5	888.7	8.0	8.3	82.31	76.3	71.5	24.6	16.7	3.085		
1,000.0	985.3	999.2	983.1	8.7	9.0	81.01	102.7	89.5	27.4	18.4	3.051		
1,100.0	1,078.9	1,098.9	1,076.0	9.4	9.7	80.09	132.5	109.9	30.5	20.5	3.033		
1,200.0	1,170.9	1,198.5	1,167.2	10.0	10.3	79.48	165.6	132.5	34.0	22.7	3.024		
1,300.0	1,261.0	1,298.0	1,256.5	10.7	10.9	79.10	201.8	157.4	37.7	25.2	3.017		
1,400.0	1,349.2	1,397.5	1,343.7	11.2	11.5	78.90	241.2	184.3	41.8	27.9	3.005		
1,500.0	1,435.2	1,497.3	1,430.1	11.8	11.9	81.03	282.6	212.6	45.8	30.5	3.003		
1,600.0	1,519.1	1,597.1	1,516.3	12.2	12.2	87.52	324.0	240.9	49.4	32.9	2.993		
1,700.0	1,602.6	1,696.8	1,602.6	12.5	12.6	94.03	365.3	269.2	53.7	35.5	2.954		
1,800.0	1,686.0	1,796.6	1,688.8	12.8	12.9	99.52	406.7	297.5	58.5	38.5	2.921		
1,900.0	1,769.4	1,896.3	1,775.1	13.2	13.3	104.14	448.0	325.8	63.8	41.9	2.909	SF	
2,000.0	1,852.8	1,996.0	1,861.3	13.6	13.6	108.04	489.3	354.1	69.5	45.7	2.917		
2,100.0	1,936.3	2,095.8	1,947.6	13.9	14.0	111.33	530.7	382.4	75.4	49.8	2.939		
2,200.0	2,019.7	2,195.5	2,033.8	14.3	14.4	114.14	572.0	410.7	81.6	54.1	2.972		
2,300.0	2,103.1	2,295.3	2,120.1	14.7	14.8	116.55	613.4	439.0	87.9	58.7	3.012		
2,400.0	2,186.5	2,395.0	2,206.3	15.4	15.2	118.63	654.7	467.3	94.3	63.5	3.056		
2,500.0	2,270.0	2,494.7	2,292.5	16.4	15.9	120.45	696.0	495.6	100.9	68.4	3.104		
2,600.0	2,353.4	2,594.5	2,378.8	17.3	16.7	122.04	737.4	523.9	107.5	73.4	3.150		
2,700.0	2,436.8	2,694.2	2,465.0	18.2	17.6	123.45	778.7	552.2	114.3	78.5	3.198		
2,800.0	2,520.2	2,793.9	2,551.3	19.2	18.5	124.70	820.1	580.4	121.0	83.7	3.244		
2,900.0	2,603.7	2,893.7	2,637.5	20.1	19.3	125.81	861.4	608.7	127.9	89.0	3.290		
3,000.0	2,687.1	2,993.4	2,723.8	21.1	20.2	126.82	902.7	637.0	134.7	94.3	3.334		
3,100.0	2,770.5	3,093.2	2,810.0	22.0	21.0	127.72	944.1	665.3	141.6	99.7	3.377		
3,200.0	2,853.9	3,192.9	2,896.3	22.9	21.9	128.55	985.4	693.6	148.6	105.1	3.419		
3,300.0	2,937.4	3,292.6	2,982.5	23.9	22.8	129.29	1,026.8	721.9	155.5	110.6	3.458		
3,400.0	3,020.8	3,392.4	3,068.7	24.8	23.6	129.98	1,068.1	750.2	162.5	116.0	3.496		
3,500.0	3,104.2	3,492.1	3,155.0	25.8	24.5	130.60	1,109.5	778.5	169.5	121.6	3.533		
3,600.0	3,187.6	3,591.8	3,241.2	26.7	25.4	131.18	1,150.8	806.8	176.6	127.1	3.568		
3,700.0	3,271.1	3,691.6	3,327.5	27.7	26.2	131.72	1,192.1	835.1	183.6	132.6	3.601		
3,800.0	3,354.5	3,791.3	3,413.7	28.6	27.1	132.21	1,233.5	863.4	190.7	138.2	3.633		
3,900.0	3,437.9	3,891.1	3,500.0	29.6	28.0	132.67	1,274.8	891.7	197.8	143.8	3.664		
4,000.0	3,521.3	3,990.8	3,586.2	30.5	28.8	133.09	1,316.2	919.9	204.9	149.4	3.694		
4,100.0	3,604.8	4,090.5	3,672.4	31.5	29.7	133.49	1,357.5	948.2	212.0	155.0	3.722		
4,200.0	3,688.2	4,190.3	3,758.7	32.4	30.6	133.87	1,398.8	976.5	219.1	160.6	3.749		
4,300.0	3,771.6	4,290.0	3,844.9	33.4	31.5	134.21	1,440.2	1,004.8	226.2	166.3	3.775		
4,400.0	3,855.0	4,389.7	3,931.2	34.3	32.3	134.54	1,481.5	1,033.1	233.3	171.9	3.799		
4,500.0	3,938.5	4,489.5	4,017.4	35.3	33.2	134.85	1,522.9	1,061.4	240.4	177.5	3.823		
4,600.0	4,021.9	4,589.2	4,103.7	36.2	34.1	135.14	1,564.2	1,089.7	247.6	183.2	3.846		
4,700.0	4,105.3	4,688.9	4,189.9	37.2	34.9	135.42	1,605.5	1,118.0	254.7	188.9	3.868		
4,800.0	4,188.7	4,788.7	4,276.2	38.1	35.8	135.67	1,646.9	1,146.3	261.9	194.5	3.889		
4,900.0	4,272.2	4,888.4	4,362.4	39.1	36.7	135.92	1,688.2	1,174.6	269.0	200.2	3.909		

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
5,000.0	4,355.6	4,988.2	4,448.6	40.0	37.6	136.15	1,729.6	1,202.9	276.2	205.9	3.928		
5,100.0	4,439.0	5,087.9	4,534.9	41.0	38.4	136.37	1,770.9	1,231.2	283.3	211.6	3.947		
5,200.0	4,522.4	5,187.6	4,621.1	42.0	39.3	136.58	1,812.3	1,259.4	290.5	217.2	3.965		
5,300.0	4,605.9	5,287.4	4,707.4	42.9	40.2	136.78	1,853.6	1,287.7	297.7	222.9	3.982		
5,400.0	4,689.3	5,387.1	4,793.6	43.9	41.0	136.97	1,894.9	1,316.0	304.9	228.6	3.999		
5,500.0	4,772.7	5,486.8	4,879.9	44.8	41.9	137.16	1,936.3	1,344.3	312.0	234.3	4.015		
5,600.0	4,856.2	5,586.0	4,965.6	45.8	42.8	137.34	1,977.4	1,372.4	319.2	240.0	4.031		
5,700.0	4,941.0	5,676.9	5,045.2	46.7	43.5	137.58	2,013.6	1,397.2	326.0	245.4	4.046		
5,800.0	5,028.1	5,767.8	5,126.5	47.5	44.2	137.79	2,047.1	1,420.2	332.2	250.3	4.057		
5,900.0	5,117.3	5,858.4	5,209.1	48.3	44.9	137.98	2,077.9	1,441.2	338.0	254.9	4.068		
6,000.0	5,208.3	5,949.0	5,293.0	49.0	45.5	138.15	2,106.0	1,460.4	343.3	259.1	4.078		
6,100.0	5,301.1	6,039.5	5,378.2	49.6	46.0	138.30	2,131.2	1,477.7	348.0	262.9	4.088		
6,200.0	5,395.4	6,129.8	5,464.3	50.2	46.4	138.43	2,153.7	1,493.1	352.2	266.2	4.097		
6,300.0	5,491.1	6,220.1	5,551.4	50.7	46.9	138.54	2,173.3	1,506.5	355.9	269.2	4.107		
6,400.0	5,587.9	6,310.2	5,639.2	51.1	47.2	138.63	2,190.0	1,518.0	359.0	271.8	4.116		
6,500.0	5,685.8	6,400.0	5,727.4	51.5	47.5	138.70	2,203.8	1,527.4	361.6	274.0	4.126		
6,600.0	5,784.4	6,490.4	5,816.9	51.7	47.7	138.76	2,214.9	1,535.0	363.7	275.7	4.134		
6,700.0	5,883.7	6,580.5	5,906.3	52.0	47.9	138.80	2,223.0	1,540.5	365.2	277.0	4.143		
6,800.0	5,983.4	6,670.5	5,996.1	52.1	48.0	138.83	2,228.1	1,544.1	366.1	278.0	4.153		
6,900.0	6,083.3	6,760.5	6,086.1	52.2	48.1	138.84	2,230.4	1,545.6	366.5	278.5	4.166		
7,000.0	6,183.3	6,857.7	6,183.3	52.2	48.1	168.46	2,230.5	1,545.7	366.5	278.6	4.169		
7,100.0	6,283.3	6,957.7	6,283.3	52.2	48.1	168.46	2,230.5	1,545.7	366.5	278.6	4.167		
7,200.0	6,383.3	7,057.7	6,383.3	52.2	48.1	168.46	2,230.5	1,545.7	366.5	278.5	4.165		
7,300.0	6,483.3	7,157.7	6,483.3	52.2	48.1	168.46	2,230.5	1,545.7	366.5	278.5	4.162		
7,400.0	6,583.3	7,257.7	6,583.3	52.2	48.2	168.46	2,230.5	1,545.7	366.5	278.4	4.160		
7,500.0	6,683.3	7,357.7	6,683.3	52.3	48.2	168.46	2,230.5	1,545.7	366.5	278.4	4.158		
7,600.0	6,783.3	7,457.7	6,783.3	52.3	48.2	168.46	2,230.5	1,545.7	366.5	278.3	4.155		
7,700.0	6,883.3	7,557.7	6,883.3	52.3	48.2	168.46	2,230.5	1,545.7	366.5	278.3	4.153		
7,800.0	6,983.3	7,657.7	6,983.3	52.3	48.2	168.46	2,230.5	1,545.7	366.5	278.2	4.150		
7,900.0	7,083.3	7,757.7	7,083.3	52.3	48.3	168.46	2,230.5	1,545.7	366.5	278.2	4.148		
8,000.0	7,183.3	7,857.7	7,183.3	52.3	48.3	168.46	2,230.5	1,545.7	366.5	278.1	4.145		
8,100.0	7,283.3	7,957.7	7,283.3	52.4	48.3	168.46	2,230.5	1,545.7	366.5	278.1	4.143		
8,200.0	7,383.3	8,057.7	7,383.3	52.4	48.3	168.46	2,230.5	1,545.7	366.5	278.0	4.140		
8,300.0	7,483.3	8,157.7	7,483.3	52.4	48.3	168.46	2,230.5	1,545.7	366.5	278.0	4.138		
8,400.0	7,583.3	8,257.7	7,583.3	52.4	48.4	168.46	2,230.5	1,545.7	366.5	277.9	4.136		
8,500.0	7,683.3	8,357.7	7,683.3	52.4	48.4	168.46	2,230.5	1,545.7	366.5	277.8	4.133		
8,600.0	7,783.3	8,457.7	7,783.3	52.4	48.4	168.46	2,230.5	1,545.7	366.5	277.8	4.131		
8,700.0	7,883.3	8,557.7	7,883.3	52.5	48.4	168.46	2,230.5	1,545.7	366.5	277.7	4.128		
8,800.0	7,983.3	8,650.4	7,886.0	52.5	48.4	168.46	2,230.5	1,545.7	379.2	297.9	4.663		
8,900.0	8,083.3	8,560.4	7,886.0	52.5	48.4	168.46	2,230.5	1,545.7	416.3	344.9	5.836		
9,000.0	8,183.3	8,560.4	7,886.0	52.5	48.4	168.46	2,230.5	1,545.7	471.9	410.0	7.616		
9,100.0	8,283.3	8,560.4	7,886.0	52.5	48.4	168.46	2,230.5	1,545.7	540.5	485.9	9.888		
9,200.0	8,383.3	8,560.4	7,886.0	52.5	48.4	168.46	2,230.5	1,545.7	617.8	568.3	12.473		
9,300.0	8,483.3	8,560.4	7,886.0	52.6	48.4	168.46	2,230.5	1,545.7	700.8	654.7	15.190		
9,400.0	8,583.3	8,560.4	7,886.0	52.6	48.4	168.46	2,230.5	1,545.7	787.8	743.8	17.904		
9,500.0	8,683.3	8,560.4	7,886.0	52.6	48.4	168.46	2,230.5	1,545.7	877.5	834.8	20.539		
9,518.7	8,702.0	8,560.4	7,886.0	52.6	48.4	168.46	2,230.5	1,545.7	894.5	852.0	21.020		

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 0993-21-11W - Slot A-2
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 0993-21-11W	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	133.74	-22.2	23.2	32.1				
100.0	100.0	100.0	100.0	0.4	0.4	133.74	-22.2	23.2	32.1	31.3	40.565		
200.0	200.0	200.0	200.0	1.2	1.2	133.74	-22.2	23.2	32.1	29.7	13.006	CC	
300.0	300.0	299.9	299.9	1.7	2.3	102.37	-20.7	24.8	32.5	29.3	10.042	ES	
400.0	399.8	399.8	399.5	3.3	3.9	100.32	-16.1	29.4	34.1	30.0	8.308		
500.0	499.3	499.6	498.7	4.6	5.0	98.42	-8.6	37.2	37.0	32.1	7.590		
600.0	598.3	599.2	597.2	5.6	6.0	96.81	2.0	48.0	41.1	35.5	7.356	SF	
700.0	696.6	698.8	694.8	6.5	6.8	95.54	15.5	61.9	46.4	40.1	7.366		
800.0	794.0	798.1	791.4	7.3	7.6	94.57	32.0	78.8	53.0	45.9	7.507		
900.0	890.3	897.4	886.6	8.0	8.3	93.87	51.3	98.6	60.7	52.8	7.710		
1,000.0	985.3	996.4	980.5	8.7	9.0	93.36	73.4	121.3	69.6	60.8	7.930		
1,100.0	1,078.9	1,095.2	1,072.6	9.4	9.6	93.01	98.3	146.8	79.6	69.8	8.137		
1,200.0	1,170.9	1,193.9	1,163.0	10.0	10.2	92.75	125.9	175.1	90.7	79.8	8.317		
1,300.0	1,261.0	1,292.3	1,251.4	10.7	10.8	92.56	156.1	206.0	102.9	90.7	8.460		
1,400.0	1,349.2	1,390.4	1,337.6	11.2	11.4	92.41	188.8	239.6	116.2	102.6	8.566		
1,500.0	1,435.2	1,488.9	1,422.3	11.8	11.7	92.55	223.9	275.6	130.4	115.3	8.665		
1,600.0	1,519.1	1,587.7	1,507.1	12.2	12.1	94.15	259.4	311.9	144.9	128.3	8.711		
1,700.0	1,602.6	1,686.5	1,591.9	12.5	12.4	95.97	294.8	348.3	159.7	141.3	8.707		
1,800.0	1,686.0	1,785.3	1,676.6	12.8	12.7	97.48	330.2	384.6	174.5	154.5	8.689		
1,900.0	1,769.4	1,884.1	1,761.4	13.2	13.1	98.75	365.7	420.9	189.5	167.7	8.669		
2,000.0	1,852.8	1,982.9	1,846.1	13.6	13.4	99.83	401.1	457.3	204.6	180.9	8.651		
2,100.0	1,936.3	2,081.7	1,930.9	13.9	13.8	100.77	436.6	493.6	219.7	194.3	8.635		
2,200.0	2,019.7	2,180.5	2,015.6	14.3	14.2	101.59	472.0	530.0	234.9	207.6	8.620		
2,300.0	2,103.1	2,279.3	2,100.4	14.7	14.6	102.30	507.5	566.3	250.1	221.0	8.601		
2,400.0	2,186.5	2,378.1	2,185.1	15.4	15.4	102.94	542.9	602.6	265.3	234.5	8.607		
2,500.0	2,270.0	2,476.9	2,269.9	16.4	16.3	103.50	578.3	639.0	280.6	248.0	8.593		
2,600.0	2,353.4	2,575.7	2,354.6	17.3	17.3	104.01	613.8	675.3	295.9	261.4	8.585		
2,700.0	2,436.8	2,674.4	2,439.4	18.2	18.2	104.47	649.2	711.7	311.2	274.9	8.579		
2,800.0	2,520.2	2,773.2	2,524.1	19.2	19.1	104.88	684.7	748.0	326.6	288.5	8.573		
2,900.0	2,603.7	2,872.0	2,608.9	20.1	20.0	105.26	720.1	784.4	341.9	302.0	8.568		
3,000.0	2,687.1	2,970.8	2,693.6	21.1	20.9	105.60	755.6	820.7	357.3	315.6	8.564		
3,100.0	2,770.5	3,069.6	2,778.4	22.0	21.8	105.92	791.0	857.0	372.6	329.1	8.560		
3,200.0	2,853.9	3,168.4	2,863.1	22.9	22.7	106.21	826.5	893.4	388.0	342.7	8.557		
3,300.0	2,937.4	3,267.2	2,947.9	23.9	23.6	106.48	861.9	929.7	403.4	356.3	8.554		
3,400.0	3,020.8	3,366.0	3,032.6	24.8	24.5	106.73	897.3	966.1	418.8	369.9	8.552		
3,500.0	3,104.2	3,464.8	3,117.4	25.8	25.5	106.96	932.8	1,002.4	434.2	383.4	8.550		
3,600.0	3,187.6	3,563.6	3,202.1	26.7	26.4	107.17	968.2	1,038.8	449.7	397.0	8.548		
3,700.0	3,271.1	3,662.4	3,286.9	27.7	27.3	107.38	1,003.7	1,075.1	465.1	410.7	8.546		
3,800.0	3,354.5	3,761.1	3,371.6	28.6	28.2	107.56	1,039.1	1,111.4	480.5	424.3	8.544		
3,900.0	3,437.9	3,859.9	3,456.4	29.6	29.1	107.74	1,074.6	1,147.8	495.9	437.9	8.543		
4,000.0	3,521.3	3,958.7	3,541.1	30.5	30.0	107.91	1,110.0	1,184.1	511.4	451.5	8.541		
4,100.0	3,604.8	4,057.5	3,625.9	31.5	31.0	108.06	1,145.4	1,220.5	526.8	465.1	8.540		
4,200.0	3,688.2	4,156.3	3,710.6	32.4	31.9	108.21	1,180.9	1,256.8	542.3	478.8	8.539		
4,300.0	3,771.6	4,255.1	3,795.4	33.4	32.8	108.35	1,216.3	1,293.1	557.7	492.4	8.538		
4,400.0	3,855.0	4,353.9	3,880.1	34.3	33.7	108.48	1,251.8	1,329.5	573.2	506.0	8.537		
4,500.0	3,938.5	4,452.7	3,964.9	35.3	34.6	108.61	1,287.2	1,365.8	588.6	519.6	8.536		
4,600.0	4,021.9	4,551.5	4,049.6	36.2	35.5	108.73	1,322.7	1,402.2	604.1	533.3	8.535		
4,700.0	4,105.3	4,650.3	4,134.4	37.2	36.5	108.84	1,358.1	1,438.5	619.5	546.9	8.535		
4,800.0	4,188.7	4,749.1	4,219.1	38.1	37.4	108.94	1,393.6	1,474.9	635.0	560.6	8.534		
4,900.0	4,272.2	4,847.8	4,303.9	39.1	38.3	109.05	1,429.0	1,511.2	650.4	574.2	8.533		
5,000.0	4,355.6	4,946.6	4,388.6	40.0	39.2	109.14	1,464.4	1,547.5	665.9	587.9	8.533		

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 0993-21-11W - Slot A-2
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 0993-21-11W	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 +N/-S (usft)	Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,439.0	5,045.4	4,473.4	41.0	40.1	109.24	1,499.9	1,583.9	681.4	601.5	8.532		
5,200.0	4,522.4	5,144.2	4,558.1	42.0	41.1	109.33	1,535.3	1,620.2	696.8	615.2	8.531		
5,300.0	4,605.9	5,243.0	4,642.9	42.9	42.0	109.41	1,570.8	1,656.6	712.3	628.8	8.531		
5,400.0	4,689.3	5,341.8	4,727.6	43.9	42.9	109.49	1,606.2	1,692.9	727.8	642.5	8.530		
5,500.0	4,772.7	5,440.6	4,812.4	44.8	43.8	109.57	1,641.7	1,729.2	743.3	656.1	8.530		
5,600.0	4,856.2	5,539.4	4,897.2	45.8	44.7	109.69	1,677.1	1,765.6	758.7	669.8	8.530		
5,700.0	4,941.0	5,636.5	4,980.8	46.7	45.6	109.96	1,711.6	1,801.0	773.3	682.6	8.526		
5,800.0	5,028.1	5,732.3	5,064.9	47.5	46.4	110.18	1,743.5	1,833.6	786.9	694.6	8.523		
5,900.0	5,117.3	5,828.1	5,151.0	48.3	47.2	110.37	1,772.9	1,863.8	799.4	705.5	8.519		
6,000.0	5,208.3	5,924.1	5,238.9	49.0	47.9	110.55	1,799.8	1,891.4	810.7	715.5	8.516		
6,100.0	5,301.1	6,020.2	5,328.5	49.6	48.5	110.71	1,824.1	1,916.4	821.0	724.6	8.514		
6,200.0	5,395.4	6,116.4	5,419.5	50.2	49.0	110.84	1,845.9	1,938.6	830.2	732.6	8.512		
6,300.0	5,491.1	6,212.8	5,511.9	50.7	49.5	110.96	1,864.9	1,958.2	838.2	739.7	8.510		
6,400.0	5,587.9	6,309.2	5,605.5	51.1	49.9	111.06	1,881.3	1,974.9	845.0	745.7	8.508		
6,500.0	5,685.8	6,405.7	5,700.0	51.5	50.2	111.14	1,894.9	1,988.9	850.7	750.7	8.506		
6,600.0	5,784.4	6,502.3	5,795.3	51.7	50.5	111.19	1,905.7	2,000.0	855.2	754.6	8.504		
6,700.0	5,883.7	6,600.0	5,892.3	52.0	50.7	111.23	1,913.8	2,008.2	858.5	757.5	8.501		
6,800.0	5,983.4	6,695.7	5,987.7	52.1	50.8	111.25	1,918.9	2,013.5	860.6	759.3	8.499		
6,900.0	6,083.3	6,792.4	6,084.3	52.2	50.9	111.25	1,921.2	2,015.9	861.5	760.1	8.495		
7,000.0	6,183.3	6,891.4	6,183.3	52.2	50.9	140.87	1,921.3	2,016.0	861.5	760.1	8.493		
7,100.0	6,283.3	6,991.4	6,283.3	52.2	50.9	140.87	1,921.3	2,016.0	861.5	760.0	8.490		
7,200.0	6,383.3	7,091.4	6,383.3	52.2	50.9	140.87	1,921.3	2,016.0	861.5	760.0	8.487		
7,300.0	6,483.3	7,191.4	6,483.3	52.2	51.0	140.87	1,921.3	2,016.0	861.5	760.0	8.484		
7,400.0	6,583.3	7,291.4	6,583.3	52.2	51.0	140.87	1,921.3	2,016.0	861.5	759.9	8.480		
7,500.0	6,683.3	7,391.4	6,683.3	52.3	51.0	140.87	1,921.3	2,016.0	861.5	759.9	8.477		
7,600.0	6,783.3	7,491.4	6,783.3	52.3	51.0	140.87	1,921.3	2,016.0	861.5	759.9	8.474		
7,700.0	6,883.3	7,591.4	6,883.3	52.3	51.0	140.87	1,921.3	2,016.0	861.5	759.8	8.471		
7,800.0	6,983.3	7,691.4	6,983.3	52.3	51.1	140.87	1,921.3	2,016.0	861.5	759.8	8.467		
7,900.0	7,083.3	7,791.4	7,083.3	52.3	51.1	140.87	1,921.3	2,016.0	861.5	759.7	8.464		
8,000.0	7,183.3	7,891.4	7,183.3	52.3	51.1	140.87	1,921.3	2,016.0	861.5	759.7	8.461		
8,100.0	7,283.3	7,991.4	7,283.3	52.4	51.1	140.87	1,921.3	2,016.0	861.5	759.7	8.457		
8,200.0	7,383.3	8,091.4	7,383.3	52.4	51.1	140.87	1,921.3	2,016.0	861.5	759.6	8.454		
8,300.0	7,483.3	8,191.4	7,483.3	52.4	51.2	140.87	1,921.3	2,016.0	861.5	759.6	8.451		
8,400.0	7,583.3	8,291.4	7,583.3	52.4	51.2	140.87	1,921.3	2,016.0	861.5	759.5	8.447		
8,500.0	7,683.3	8,391.4	7,683.3	52.4	51.2	140.87	1,921.3	2,016.0	861.5	759.5	8.444		
8,600.0	7,783.3	8,491.4	7,783.3	52.4	51.2	140.87	1,921.3	2,016.0	861.5	759.4	8.440		
8,700.0	7,883.3	8,591.4	7,883.3	52.5	51.2	140.87	1,921.3	2,016.0	861.5	759.4	8.437		
8,800.0	7,983.3	8,691.4	7,983.3	52.5	51.3	140.87	1,921.3	2,016.0	861.5	759.4	8.434		
8,900.0	8,083.3	8,791.4	8,083.3	52.5	51.3	140.87	1,921.3	2,016.0	861.5	759.3	8.430		
9,000.0	8,183.3	8,891.4	8,183.3	52.5	51.3	140.87	1,921.3	2,016.0	861.5	759.3	8.427		
9,100.0	8,283.3	8,991.4	8,283.3	52.5	51.3	140.87	1,921.3	2,016.0	861.5	759.2	8.423		
9,200.0	8,383.3	9,091.4	8,383.3	52.5	51.4	140.87	1,921.3	2,016.0	861.5	759.2	8.419		
9,300.0	8,483.3	9,191.4	8,483.3	52.6	51.4	140.87	1,921.3	2,016.0	861.5	759.2	8.416		
9,400.0	8,583.3	9,291.4	8,583.3	52.6	51.4	140.87	1,921.3	2,016.0	861.5	759.1	8.412		
9,500.0	8,683.3	9,391.4	8,683.3	52.6	51.4	140.87	1,921.3	2,016.0	861.5	759.1	8.409		
9,518.7	8,702.0	9,410.1	8,702.0	52.6	51.4	140.87	1,921.3	2,016.0	861.5	759.1	8.408		

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 0993-21-11W - Slot A-2
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 0993-21-11W	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)	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	133.58	-33.1	34.8	48.1			
100.0	100.0	100.0	100.0	0.4	0.4	133.58	-33.1	34.8	48.1	47.3	60.696	
200.0	200.0	200.0	200.0	1.2	1.2	133.58	-33.1	34.8	48.1	45.6	19.460	CC
300.0	300.0	299.8	299.8	1.7	1.7	103.93	-32.4	35.8	48.5	45.5	15.946	ES
400.0	399.8	399.5	399.4	3.3	3.3	103.76	-28.9	40.0	50.5	46.5	12.698	
500.0	499.3	499.2	498.5	4.6	4.6	103.49	-22.7	47.5	54.0	49.2	11.221	
600.0	598.3	598.7	597.1	5.6	5.6	103.14	-13.8	58.3	59.2	53.6	10.615	
700.0	696.6	698.1	694.8	6.5	6.5	102.75	-2.2	72.4	65.8	59.5	10.437	SF
800.0	794.0	797.4	791.5	7.3	7.3	102.35	12.0	89.7	74.1	67.0	10.485	
900.0	890.3	896.4	886.9	8.0	8.0	101.96	28.9	110.2	83.8	75.9	10.643	
1,000.0	985.3	995.3	980.8	8.7	8.7	101.57	48.3	133.8	95.1	86.3	10.843	
1,100.0	1,078.9	1,093.8	1,073.2	9.4	9.4	101.19	70.2	160.5	107.8	98.0	11.040	
1,200.0	1,170.9	1,192.1	1,163.6	10.0	10.0	100.82	94.6	190.1	122.0	111.1	11.211	
1,300.0	1,261.0	1,291.1	1,252.1	10.7	10.6	100.46	121.3	222.5	137.6	125.5	11.344	
1,400.0	1,349.2	1,387.9	1,338.7	11.2	11.0	100.13	150.3	257.7	154.6	141.1	11.478	
1,500.0	1,435.2	1,486.2	1,425.0	11.8	11.3	100.77	180.2	294.0	172.5	157.5	11.522	
1,600.0	1,519.1	1,584.2	1,511.1	12.2	11.6	102.56	209.9	330.2	191.4	174.8	11.547	
1,700.0	1,602.6	1,682.1	1,597.1	12.5	12.0	104.51	239.7	366.4	210.6	192.4	11.545	
1,800.0	1,686.0	1,780.0	1,683.1	12.8	12.3	106.14	269.4	402.5	230.1	210.2	11.540	
1,900.0	1,769.4	1,877.9	1,769.0	13.2	12.7	107.51	299.2	438.7	249.7	228.1	11.541	
2,000.0	1,852.8	1,975.8	1,855.0	13.6	13.0	108.68	328.9	474.8	269.4	246.1	11.546	
2,100.0	1,936.3	2,073.7	1,941.0	13.9	13.4	109.69	358.7	511.0	289.3	264.2	11.555	
2,200.0	2,019.7	2,171.6	2,027.0	14.3	13.8	110.57	388.4	547.1	309.2	282.4	11.565	
2,300.0	2,103.1	2,269.5	2,112.9	14.7	14.2	111.34	418.1	583.3	329.1	300.7	11.575	
2,400.0	2,186.5	2,367.4	2,198.9	15.4	14.7	112.03	447.9	619.4	349.2	319.0	11.589	
2,500.0	2,270.0	2,465.3	2,284.9	16.4	15.5	112.64	477.6	655.6	369.2	337.4	11.611	
2,600.0	2,353.4	2,563.2	2,370.9	17.3	16.3	113.19	507.4	691.7	389.3	355.8	11.621	
2,700.0	2,436.8	2,661.1	2,456.9	18.2	17.2	113.68	537.1	727.9	409.4	374.2	11.633	
2,800.0	2,520.2	2,759.0	2,542.8	19.2	18.0	114.13	566.9	764.0	429.6	392.7	11.645	
2,900.0	2,603.7	2,856.9	2,628.8	20.1	18.8	114.54	596.6	800.2	449.8	411.2	11.658	
3,000.0	2,687.1	2,954.8	2,714.8	21.1	19.7	114.91	626.4	836.3	470.0	429.7	11.669	
3,100.0	2,770.5	3,052.7	2,800.8	22.0	20.5	115.25	656.1	872.4	490.2	448.2	11.680	
3,200.0	2,853.9	3,150.5	2,886.7	22.9	21.4	115.57	685.8	908.6	510.4	466.7	11.691	
3,300.0	2,937.4	3,248.4	2,972.7	23.9	22.2	115.86	715.6	944.7	530.6	485.3	11.701	
3,400.0	3,020.8	3,346.3	3,058.7	24.8	23.1	116.13	745.3	980.9	550.9	503.9	11.711	
3,500.0	3,104.2	3,444.2	3,144.7	25.8	23.9	116.38	775.1	1,017.0	571.2	522.4	11.721	
3,600.0	3,187.6	3,542.1	3,230.6	26.7	24.8	116.62	804.8	1,053.2	591.4	541.0	11.729	
3,700.0	3,271.1	3,640.0	3,316.6	27.7	25.6	116.83	834.6	1,089.3	611.7	559.6	11.738	
3,800.0	3,354.5	3,737.9	3,402.6	28.6	26.5	117.04	864.3	1,125.5	632.0	578.2	11.746	
3,900.0	3,437.9	3,835.8	3,488.6	29.6	27.3	117.23	894.1	1,161.6	652.3	596.8	11.753	
4,000.0	3,521.3	3,933.7	3,574.6	30.5	28.2	117.41	923.8	1,197.8	672.6	615.4	11.761	
4,100.0	3,604.8	4,031.6	3,660.5	31.5	29.0	117.58	953.5	1,233.9	692.9	634.0	11.767	
4,200.0	3,688.2	4,129.5	3,746.5	32.4	29.9	117.74	983.3	1,270.1	713.3	652.7	11.774	
4,300.0	3,771.6	4,227.4	3,832.5	33.4	30.7	117.89	1,013.0	1,306.2	733.6	671.3	11.780	
4,400.0	3,855.0	4,325.3	3,918.5	34.3	31.6	118.03	1,042.8	1,342.4	753.9	689.9	11.786	
4,500.0	3,938.5	4,423.2	4,004.4	35.3	32.4	118.17	1,072.5	1,378.5	774.2	708.6	11.792	
4,600.0	4,021.9	4,521.1	4,090.4	36.2	33.3	118.30	1,102.3	1,414.7	794.6	727.2	11.797	
4,700.0	4,105.3	4,619.0	4,176.4	37.2	34.1	118.42	1,132.0	1,450.8	814.9	745.9	11.802	
4,800.0	4,188.7	4,716.9	4,262.4	38.1	35.0	118.53	1,161.7	1,487.0	835.2	764.5	11.807	
4,900.0	4,272.2	4,814.8	4,348.4	39.1	35.8	118.64	1,191.5	1,523.1	855.6	783.2	11.812	
5,000.0	4,355.6	4,912.7	4,434.3	40.0	36.7	118.75	1,221.2	1,559.3	875.9	801.8	11.817	

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 0993-21-11W - Slot A-2
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 0993-21-11W	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		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	4,439.0	5,010.6	4,520.3	41.0	37.5	118.85	1,251.0	1,595.4	896.3	820.5	11.821		
5,200.0	4,522.4	5,108.5	4,606.3	42.0	38.4	118.95	1,280.7	1,631.6	916.6	839.1	11.825		
5,300.0	4,605.9	5,206.4	4,692.3	42.9	39.2	119.04	1,310.5	1,667.7	937.0	857.8	11.829		
5,400.0	4,689.3	5,304.2	4,778.2	43.9	40.1	119.13	1,340.2	1,703.9	957.4	876.5	11.833		
5,500.0	4,772.7	5,402.1	4,864.2	44.8	40.9	119.21	1,370.0	1,740.0	977.7	895.1	11.837		
5,600.0	4,856.2	5,500.0	4,950.2	45.8	41.8	119.34	1,399.7	1,776.1	998.1	913.8	11.840		
5,700.0	4,941.0	5,596.6	5,035.0	46.7	42.6	119.71	1,429.0	1,811.8	1,017.1	931.2	11.833		
5,800.0	5,028.1	5,687.1	5,115.7	47.5	43.4	119.99	1,455.1	1,843.5	1,034.6	947.2	11.830		
5,900.0	5,117.3	5,777.8	5,198.1	48.3	44.0	120.24	1,479.2	1,872.8	1,050.7	961.9	11.827		
6,000.0	5,208.3	5,868.7	5,282.1	49.0	44.7	120.46	1,501.2	1,899.5	1,065.4	975.3	11.823		
6,100.0	5,301.1	5,959.7	5,367.5	49.6	45.2	120.66	1,521.2	1,923.8	1,078.6	987.4	11.820		
6,200.0	5,395.4	6,050.9	5,454.3	50.2	45.7	120.83	1,539.0	1,945.4	1,090.4	998.1	11.817		
6,300.0	5,491.1	6,142.2	5,542.2	50.7	46.1	120.98	1,554.6	1,964.4	1,100.7	1,007.5	11.814		
6,400.0	5,587.9	6,233.7	5,631.2	51.1	46.5	121.11	1,568.0	1,980.7	1,109.5	1,015.5	11.810		
6,500.0	5,685.8	6,325.2	5,721.0	51.5	46.8	121.21	1,579.1	1,994.2	1,116.7	1,022.2	11.806		
6,600.0	5,784.4	6,416.8	5,811.6	51.7	47.0	121.28	1,588.0	2,005.0	1,122.5	1,027.4	11.801		
6,700.0	5,883.7	6,508.5	5,902.7	52.0	47.2	121.34	1,594.6	2,012.9	1,126.7	1,031.2	11.796		
6,800.0	5,983.4	6,600.0	5,993.9	52.1	47.3	121.37	1,598.8	2,018.1	1,129.4	1,033.6	11.791		
6,900.0	6,083.3	6,692.1	6,085.9	52.2	47.4	121.38	1,600.7	2,020.4	1,130.6	1,034.6	11.785		
7,000.0	6,183.3	6,789.4	6,183.3	52.2	47.4	150.99	1,600.8	2,020.6	1,130.6	1,034.7	11.783		
7,100.0	6,283.3	6,889.4	6,283.3	52.2	47.4	150.99	1,600.8	2,020.6	1,130.6	1,034.6	11.778		
7,200.0	6,383.3	6,989.4	6,383.3	52.2	47.5	150.99	1,600.8	2,020.6	1,130.6	1,034.6	11.773		
7,300.0	6,483.3	7,089.4	6,483.3	52.2	47.5	150.99	1,600.8	2,020.6	1,130.6	1,034.5	11.767		
7,400.0	6,583.3	7,189.4	6,583.3	52.2	47.5	150.99	1,600.8	2,020.6	1,130.6	1,034.5	11.762		
7,500.0	6,683.3	7,289.4	6,683.3	52.3	47.5	150.99	1,600.8	2,020.6	1,130.6	1,034.5	11.757		
7,600.0	6,783.3	7,389.4	6,783.3	52.3	47.6	150.99	1,600.8	2,020.6	1,130.6	1,034.4	11.751		
7,700.0	6,883.3	7,489.4	6,883.3	52.3	47.6	150.99	1,600.8	2,020.6	1,130.6	1,034.4	11.746		
7,800.0	6,983.3	7,589.4	6,983.3	52.3	47.6	150.99	1,600.8	2,020.6	1,130.6	1,034.3	11.740		
7,900.0	7,083.3	7,689.4	7,083.3	52.3	47.6	150.99	1,600.8	2,020.6	1,130.6	1,034.3	11.735		
8,000.0	7,183.3	7,789.4	7,183.3	52.3	47.6	150.99	1,600.8	2,020.6	1,130.6	1,034.2	11.730		
8,100.0	7,283.3	7,889.4	7,283.3	52.4	47.7	150.99	1,600.8	2,020.6	1,130.6	1,034.2	11.724		
8,200.0	7,383.3	7,989.4	7,383.3	52.4	47.7	150.99	1,600.8	2,020.6	1,130.6	1,034.1	11.719		
8,300.0	7,483.3	8,089.4	7,483.3	52.4	47.7	150.99	1,600.8	2,020.6	1,130.6	1,034.1	11.713		
8,400.0	7,583.3	8,189.4	7,583.3	52.4	47.7	150.99	1,600.8	2,020.6	1,130.6	1,034.1	11.707		
8,500.0	7,683.3	8,289.4	7,683.3	52.4	47.8	150.99	1,600.8	2,020.6	1,130.6	1,034.0	11.702		
8,600.0	7,783.3	8,389.4	7,783.3	52.4	47.8	150.99	1,600.8	2,020.6	1,130.6	1,034.0	11.696		
8,700.0	7,883.3	8,489.4	7,883.3	52.5	47.8	150.99	1,600.8	2,020.6	1,130.6	1,033.9	11.691		
8,800.0	7,983.3	8,496.1	7,890.0	52.5	47.8	150.99	1,600.8	2,020.6	1,134.5	1,038.8	11.853		
8,900.0	8,083.3	8,496.1	7,890.0	52.5	47.8	150.99	1,600.8	2,020.6	1,147.0	1,052.9	12.189		
9,000.0	8,183.3	8,496.1	7,890.0	52.5	47.8	150.99	1,600.8	2,020.6	1,168.0	1,076.0	12.694		
9,100.0	8,283.3	8,496.1	7,890.0	52.5	47.8	150.99	1,600.8	2,020.6	1,197.1	1,107.5	13.365		
9,200.0	8,383.3	8,496.1	7,890.0	52.5	47.8	150.99	1,600.8	2,020.6	1,233.6	1,146.7	14.200		
9,300.0	8,483.3	8,496.1	7,890.0	52.6	47.8	150.99	1,600.8	2,020.6	1,276.8	1,192.8	15.192		
9,400.0	8,583.3	8,496.1	7,890.0	52.6	47.8	150.99	1,600.8	2,020.6	1,326.3	1,245.1	16.336		
9,500.0	8,683.3	8,496.1	7,890.0	52.6	47.8	150.99	1,600.8	2,020.6	1,381.2	1,302.8	17.622		
9,518.7	8,702.0	8,496.1	7,890.0	52.6	47.8	150.99	1,600.8	2,020.6	1,392.0	1,314.1	17.877		

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-15W - OH - Design #1												
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	133.33	-44.1	46.7	64.2			
100.0	100.0	100.0	100.0	0.4	0.4	133.33	-44.1	46.7	64.2	63.4	81.087	
200.0	200.0	200.0	200.0	1.2	1.2	133.33	-44.1	46.7	64.2	61.8	25.997	CC
300.0	300.0	299.6	299.6	1.7	1.6	104.07	-43.6	47.4	64.7	61.7	21.530	ES
400.0	399.8	399.0	398.9	3.3	3.0	104.55	-41.0	51.3	67.0	63.1	16.857	
500.0	499.3	498.3	497.8	4.6	4.4	104.92	-35.9	58.8	71.4	66.5	14.639	
600.0	598.3	597.5	596.1	5.6	5.4	105.16	-28.5	69.8	77.7	72.0	13.677	
700.0	696.6	696.5	693.5	6.5	6.3	105.26	-18.7	84.3	85.9	79.5	13.322	
800.0	794.0	795.3	789.9	7.3	7.1	105.26	-6.6	102.2	96.1	88.9	13.291	SF
900.0	890.3	893.8	884.9	8.0	7.9	105.15	7.7	123.5	108.2	100.1	13.429	
1,000.0	985.3	991.9	978.5	8.7	8.6	104.98	24.3	148.1	122.2	113.2	13.643	
1,100.0	1,078.9	1,089.7	1,070.4	9.4	9.2	104.74	43.0	175.8	138.0	128.0	13.873	
1,200.0	1,170.9	1,187.1	1,160.3	10.0	9.9	104.45	63.8	206.6	155.6	144.6	14.085	
1,300.0	1,261.0	1,284.0	1,248.3	10.7	10.4	104.13	86.6	240.5	175.0	162.8	14.285	
1,400.0	1,349.2	1,381.7	1,335.9	11.2	10.7	104.35	110.8	276.2	195.9	182.3	14.424	
1,500.0	1,435.2	1,479.1	1,423.3	11.8	11.0	105.52	134.8	311.8	217.9	202.8	14.467	
1,600.0	1,519.1	1,575.9	1,510.2	12.2	11.3	107.50	158.7	347.3	241.2	224.6	14.531	
1,700.0	1,602.6	1,672.5	1,596.9	12.5	11.7	109.62	182.6	382.6	265.2	247.0	14.578	
1,800.0	1,686.0	1,769.2	1,683.6	12.8	12.0	111.38	206.4	418.0	289.4	269.6	14.623	
1,900.0	1,769.4	1,865.9	1,770.4	13.2	12.4	112.87	230.3	453.4	313.8	292.5	14.673	
2,000.0	1,852.8	1,962.5	1,857.1	13.6	12.7	114.15	254.2	488.8	338.5	315.5	14.727	
2,100.0	1,936.3	2,059.2	1,943.8	13.9	13.1	115.25	278.0	524.1	363.2	338.7	14.781	
2,200.0	2,019.7	2,155.9	2,030.6	14.3	13.5	116.22	301.9	559.5	388.1	361.9	14.835	
2,300.0	2,103.1	2,252.5	2,117.3	14.7	13.9	117.07	325.8	594.9	413.1	385.3	14.888	
2,400.0	2,186.5	2,349.2	2,204.0	15.4	14.3	117.82	349.6	630.3	438.1	408.8	14.939	
2,500.0	2,270.0	2,445.8	2,290.8	16.4	14.7	118.49	373.5	665.6	463.2	432.3	14.980	
2,600.0	2,353.4	2,542.5	2,377.5	17.3	15.4	119.09	397.4	701.0	488.4	455.9	15.056	
2,700.0	2,436.8	2,639.2	2,464.2	18.2	16.1	119.63	421.2	736.4	513.6	479.5	15.084	
2,800.0	2,520.2	2,735.8	2,551.0	19.2	16.9	120.12	445.1	771.8	538.8	503.2	15.125	
2,900.0	2,603.7	2,832.5	2,637.7	20.1	17.7	120.57	468.9	807.1	564.1	526.9	15.164	
3,000.0	2,687.1	2,929.2	2,724.4	21.1	18.4	120.98	492.8	842.5	589.4	550.6	15.201	
3,100.0	2,770.5	3,025.8	2,811.2	22.0	19.2	121.36	516.7	877.9	614.7	574.4	15.236	
3,200.0	2,853.9	3,122.5	2,897.9	22.9	20.0	121.70	540.5	913.3	640.1	598.1	15.269	
3,300.0	2,937.4	3,219.2	2,984.6	23.9	20.8	122.02	564.4	948.6	665.4	621.9	15.300	
3,400.0	3,020.8	3,315.8	3,071.4	24.8	21.5	122.32	588.3	984.0	690.8	645.8	15.330	
3,500.0	3,104.2	3,412.5	3,158.1	25.8	22.3	122.59	612.1	1,019.4	716.2	669.6	15.357	
3,600.0	3,187.6	3,509.1	3,244.8	26.7	23.1	122.85	636.0	1,054.8	741.6	693.4	15.384	
3,700.0	3,271.1	3,605.8	3,331.6	27.7	23.9	123.09	659.9	1,090.1	767.1	717.3	15.408	
3,800.0	3,354.5	3,702.5	3,418.3	28.6	24.6	123.31	683.7	1,125.5	792.5	741.2	15.432	
3,900.0	3,437.9	3,799.1	3,505.1	29.6	25.4	123.52	707.6	1,160.9	818.0	765.1	15.454	
4,000.0	3,521.3	3,895.8	3,591.8	30.5	26.2	123.72	731.5	1,196.3	843.4	788.9	15.475	
4,100.0	3,604.8	3,992.5	3,678.5	31.5	27.0	123.91	755.3	1,231.6	868.9	812.8	15.495	
4,200.0	3,688.2	4,089.1	3,765.3	32.4	27.7	124.08	779.2	1,267.0	894.4	836.8	15.513	
4,300.0	3,771.6	4,185.8	3,852.0	33.4	28.5	124.25	803.1	1,302.4	919.9	860.7	15.531	
4,400.0	3,855.0	4,282.4	3,938.7	34.3	29.3	124.40	826.9	1,337.8	945.4	884.6	15.548	
4,500.0	3,938.5	4,379.1	4,025.5	35.3	30.1	124.55	850.8	1,373.1	970.9	908.5	15.565	
4,600.0	4,021.9	4,475.8	4,112.2	36.2	30.9	124.69	874.7	1,408.5	996.4	932.5	15.580	
4,700.0	4,105.3	4,572.4	4,198.9	37.2	31.6	124.83	898.5	1,443.9	1,021.9	956.4	15.595	
4,800.0	4,188.7	4,669.1	4,285.7	38.1	32.4	124.95	922.4	1,479.3	1,047.4	980.3	15.609	
4,900.0	4,272.2	4,765.8	4,372.4	39.1	33.2	125.08	946.3	1,514.6	1,073.0	1,004.3	15.622	
5,000.0	4,355.6	4,862.4	4,459.1	40.0	34.0	125.19	970.1	1,550.0	1,098.5	1,028.2	15.635	

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 0993-21-11W - Slot A-2
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 0993-21-11W	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 Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
5,100.0	4,439.0	4,959.1	4,545.9	41.0	34.8	125.30	994.0	1,585.4	1,124.0	1,052.2	15.647	
5,200.0	4,522.4	5,055.8	4,632.6	42.0	35.5	125.41	1,017.9	1,620.8	1,149.6	1,076.1	15.659	
5,300.0	4,605.9	5,152.4	4,719.3	42.9	36.3	125.51	1,041.7	1,656.1	1,175.1	1,100.1	15.670	
5,400.0	4,689.3	5,249.1	4,806.1	43.9	37.1	125.60	1,065.6	1,691.5	1,200.6	1,124.1	15.681	
5,500.0	4,772.7	5,345.7	4,892.8	44.8	37.9	125.70	1,089.5	1,726.9	1,226.2	1,148.0	15.692	
5,600.0	4,856.2	5,442.4	4,979.5	45.8	38.7	125.85	1,113.3	1,762.3	1,251.7	1,172.0	15.702	
5,700.0	4,941.0	5,539.5	5,066.6	46.7	39.4	126.33	1,137.3	1,797.8	1,275.7	1,194.4	15.692	
5,800.0	5,028.1	5,631.0	5,149.0	47.5	40.2	126.64	1,159.6	1,830.9	1,297.4	1,214.6	15.673	
5,900.0	5,117.3	5,718.1	5,228.6	48.3	40.8	126.91	1,179.4	1,860.1	1,317.2	1,233.1	15.663	
6,000.0	5,208.3	5,800.0	5,304.7	49.0	41.3	127.15	1,196.4	1,885.3	1,335.3	1,250.0	15.665	
6,100.0	5,301.1	5,893.0	5,392.3	49.6	41.9	127.36	1,213.8	1,911.2	1,351.6	1,265.2	15.640	
6,200.0	5,395.4	5,980.9	5,476.1	50.2	42.4	127.54	1,228.4	1,932.9	1,366.1	1,278.7	15.630	
6,300.0	5,491.1	6,068.9	5,561.1	50.7	42.8	127.70	1,241.3	1,952.0	1,378.7	1,290.5	15.620	
6,400.0	5,587.9	6,157.2	5,647.1	51.1	43.1	127.83	1,252.4	1,968.3	1,389.6	1,300.6	15.609	
6,500.0	5,685.8	6,245.6	5,734.0	51.5	43.4	127.94	1,261.6	1,982.0	1,398.5	1,308.9	15.598	
6,600.0	5,784.4	6,334.2	5,821.6	51.7	43.6	128.02	1,268.9	1,992.8	1,405.6	1,315.5	15.586	
6,700.0	5,883.7	6,422.9	5,909.8	52.0	43.8	128.08	1,274.3	2,000.9	1,410.8	1,320.2	15.574	
6,800.0	5,983.4	6,511.6	5,998.3	52.1	43.9	128.11	1,277.9	2,006.1	1,414.1	1,323.3	15.561	
6,900.0	6,083.3	6,600.0	6,086.6	52.2	44.0	128.12	1,279.5	2,008.5	1,415.6	1,324.5	15.550	
7,000.0	6,183.3	6,696.7	6,183.3	52.2	44.0	157.73	1,279.6	2,008.7	1,415.6	1,324.5	15.547	
7,100.0	6,283.3	6,796.7	6,283.3	52.2	44.0	157.73	1,279.6	2,008.7	1,415.6	1,324.5	15.539	
7,200.0	6,383.3	6,896.7	6,383.3	52.2	44.0	157.73	1,279.6	2,008.7	1,415.6	1,324.5	15.531	
7,300.0	6,483.3	6,996.7	6,483.3	52.2	44.1	157.73	1,279.6	2,008.7	1,415.6	1,324.4	15.523	
7,400.0	6,583.3	7,096.7	6,583.3	52.2	44.1	157.73	1,279.6	2,008.7	1,415.6	1,324.4	15.515	
7,500.0	6,683.3	7,196.7	6,683.3	52.3	44.1	157.73	1,279.6	2,008.7	1,415.6	1,324.3	15.507	
7,600.0	6,783.3	7,296.7	6,783.3	52.3	44.1	157.73	1,279.6	2,008.7	1,415.6	1,324.3	15.499	
7,700.0	6,883.3	7,396.7	6,883.3	52.3	44.2	157.73	1,279.6	2,008.7	1,415.6	1,324.2	15.491	
7,800.0	6,983.3	7,496.7	6,983.3	52.3	44.2	157.73	1,279.6	2,008.7	1,415.6	1,324.2	15.483	
7,900.0	7,083.3	7,596.7	7,083.3	52.3	44.2	157.73	1,279.6	2,008.7	1,415.6	1,324.1	15.474	
8,000.0	7,183.3	7,696.7	7,183.3	52.3	44.2	157.73	1,279.6	2,008.7	1,415.6	1,324.1	15.466	
8,100.0	7,283.3	7,796.7	7,283.3	52.4	44.3	157.73	1,279.6	2,008.7	1,415.6	1,324.0	15.458	
8,200.0	7,383.3	7,896.7	7,383.3	52.4	44.3	157.73	1,279.6	2,008.7	1,415.6	1,324.0	15.449	
8,300.0	7,483.3	7,996.7	7,483.3	52.4	44.3	157.73	1,279.6	2,008.7	1,415.6	1,323.9	15.441	
8,400.0	7,583.3	8,096.7	7,583.3	52.4	44.3	157.73	1,279.6	2,008.7	1,415.6	1,323.9	15.432	
8,500.0	7,683.3	8,196.7	7,683.3	52.4	44.4	157.73	1,279.6	2,008.7	1,415.6	1,323.8	15.424	
8,600.0	7,783.3	8,296.7	7,783.3	52.4	44.4	157.73	1,279.6	2,008.7	1,415.6	1,323.8	15.415	
8,700.0	7,883.3	8,396.7	7,883.3	52.5	44.4	157.73	1,279.6	2,008.7	1,415.6	1,323.7	15.407	
8,800.0	7,983.3	8,496.7	7,983.3	52.5	44.4	157.73	1,279.6	2,008.7	1,415.6	1,323.7	15.398	
8,900.0	8,083.3	8,596.7	8,083.3	52.5	44.5	157.73	1,279.6	2,008.7	1,415.6	1,323.6	15.390	
9,000.0	8,183.3	8,696.7	8,183.3	52.5	44.5	157.73	1,279.6	2,008.7	1,415.6	1,323.6	15.381	
9,100.0	8,283.3	8,796.7	8,283.3	52.5	44.5	157.73	1,279.6	2,008.7	1,415.6	1,323.5	15.372	
9,200.0	8,383.3	8,896.7	8,383.3	52.5	44.5	157.73	1,279.6	2,008.7	1,415.6	1,323.5	15.364	
9,300.0	8,483.3	8,996.7	8,483.3	52.6	44.6	157.73	1,279.6	2,008.7	1,415.6	1,323.4	15.355	
9,400.0	8,583.3	9,096.7	8,583.3	52.6	44.6	157.73	1,279.6	2,008.7	1,415.6	1,323.4	15.346	
9,500.0	8,683.3	9,196.7	8,683.3	52.6	44.6	157.73	1,279.6	2,008.7	1,415.6	1,323.3	15.337	
9,518.7	8,702.0	9,215.4	8,702.0	52.6	44.6	157.73	1,279.6	2,008.7	1,415.6	1,323.3	15.336	

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-16W - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	0.0	0.0	0.0	0.0	133.31	-55.0	58.3	80.2				
100.0	100.0	100.0	100.0	0.4	0.4	133.31	-55.0	58.3	80.2	79.4	101.209		
200.0	200.0	200.0	200.0	1.2	1.2	133.31	-55.0	58.3	80.2	77.7	32.448	CC, ES	
300.0	300.0	299.1	299.1	1.7	1.7	103.71	-54.4	59.4	80.9	77.8	26.459		
400.0	399.8	397.9	397.8	3.3	3.2	103.77	-52.0	64.1	83.9	79.8	20.353		
500.0	499.3	496.6	495.9	4.6	4.5	103.87	-47.6	72.6	89.4	84.3	17.586		
600.0	598.3	595.0	593.4	5.6	5.5	103.99	-41.2	84.8	97.4	91.4	16.401		
700.0	696.6	693.1	689.8	6.5	6.4	104.09	-33.0	100.6	107.7	101.0	15.973		
800.0	794.0	790.7	785.0	7.3	7.2	104.15	-22.9	120.0	120.4	112.9	15.949	SF	
900.0	890.3	888.0	878.8	8.0	7.9	104.18	-11.1	142.8	135.5	127.1	16.144		
1,000.0	985.3	984.6	970.8	8.7	8.6	104.15	2.6	169.0	152.9	143.6	16.442		
1,100.0	1,078.9	1,080.7	1,061.0	9.4	9.3	104.08	17.9	198.4	172.5	162.2	16.773		
1,200.0	1,170.9	1,176.1	1,149.1	10.0	9.8	103.95	34.8	230.9	194.3	183.0	17.126		
1,300.0	1,261.0	1,273.0	1,237.5	10.7	10.1	104.18	53.0	266.0	217.9	205.4	17.442		
1,400.0	1,349.2	1,369.6	1,325.7	11.2	10.4	105.24	71.2	301.0	242.7	228.9	17.615		
1,500.0	1,435.2	1,465.6	1,413.3	11.8	10.7	106.86	89.3	335.8	268.9	253.7	17.704		
1,600.0	1,519.1	1,560.9	1,500.3	12.2	11.1	109.05	107.2	370.3	296.6	280.0	17.831		
1,700.0	1,602.6	1,655.9	1,587.1	12.5	11.4	111.38	125.1	404.7	325.2	307.1	17.937		
1,800.0	1,686.0	1,751.0	1,673.8	12.8	11.8	113.33	143.0	439.2	354.2	334.5	18.037		
1,900.0	1,769.4	1,846.0	1,760.6	13.2	12.1	114.99	160.9	473.6	383.5	362.3	18.140		
2,000.0	1,852.8	1,941.1	1,847.4	13.6	12.5	116.42	178.8	508.0	413.1	390.4	18.244		
2,100.0	1,936.3	2,036.1	1,934.1	13.9	12.9	117.66	196.7	542.5	442.8	418.7	18.346		
2,200.0	2,019.7	2,131.2	2,020.9	14.3	13.3	118.74	214.6	576.9	472.8	447.1	18.446		
2,300.0	2,103.1	2,226.3	2,107.7	14.7	13.7	119.69	232.5	611.3	502.8	475.7	18.543		
2,400.0	2,186.5	2,321.3	2,194.5	15.4	14.1	120.54	250.5	645.8	533.0	504.4	18.635		
2,500.0	2,270.0	2,416.4	2,281.2	16.4	14.5	121.29	268.4	680.2	563.3	533.2	18.723		
2,600.0	2,353.4	2,511.4	2,368.0	17.3	14.9	121.97	286.3	714.6	593.6	562.1	18.806		
2,700.0	2,436.8	2,606.5	2,454.8	18.2	15.4	122.59	304.2	749.1	624.1	591.0	18.884		
2,800.0	2,520.2	2,701.5	2,541.5	19.2	16.0	123.14	322.1	783.5	654.6	620.0	18.962		
2,900.0	2,603.7	2,796.6	2,628.3	20.1	16.7	123.65	340.0	817.9	685.1	649.1	19.032		
3,000.0	2,687.1	2,891.6	2,715.1	21.1	17.4	124.11	357.9	852.4	715.7	678.2	19.099		
3,100.0	2,770.5	2,986.7	2,801.9	22.0	18.1	124.54	375.8	886.8	746.3	707.3	19.161		
3,200.0	2,853.9	3,081.8	2,888.6	22.9	18.8	124.93	393.7	921.2	777.0	736.5	19.220		
3,300.0	2,937.4	3,176.8	2,975.4	23.9	19.5	125.29	411.6	955.7	807.6	765.7	19.276		
3,400.0	3,020.8	3,271.9	3,062.2	24.8	20.2	125.63	429.5	990.1	838.4	795.0	19.328		
3,500.0	3,104.2	3,366.9	3,148.9	25.8	20.9	125.94	447.4	1,024.5	869.1	824.2	19.378		
3,600.0	3,187.6	3,462.0	3,235.7	26.7	21.7	126.23	465.3	1,059.0	899.9	853.5	19.425		
3,700.0	3,271.1	3,557.0	3,322.5	27.7	22.4	126.51	483.2	1,093.4	930.6	882.8	19.469		
3,800.0	3,354.5	3,652.1	3,409.2	28.6	23.1	126.76	501.1	1,127.8	961.4	912.2	19.511		
3,900.0	3,437.9	3,747.1	3,496.0	29.6	23.8	127.00	519.0	1,162.3	992.2	941.5	19.551		
4,000.0	3,521.3	3,842.2	3,582.8	30.5	24.5	127.22	536.9	1,196.7	1,023.1	970.8	19.589		
4,100.0	3,604.8	3,937.3	3,669.6	31.5	25.2	127.44	554.8	1,231.1	1,053.9	1,000.2	19.625		
4,200.0	3,688.2	4,032.3	3,756.3	32.4	25.9	127.63	572.7	1,265.6	1,084.8	1,029.6	19.659		
4,300.0	3,771.6	4,127.4	3,843.1	33.4	26.6	127.82	590.6	1,300.0	1,115.6	1,059.0	19.692		
4,400.0	3,855.0	4,222.4	3,929.9	34.3	27.3	128.00	608.5	1,334.5	1,146.5	1,088.4	19.723		
4,500.0	3,938.5	4,317.5	4,016.6	35.3	28.0	128.17	626.5	1,368.9	1,177.4	1,117.8	19.752		
4,600.0	4,021.9	4,412.5	4,103.4	36.2	28.8	128.33	644.4	1,403.3	1,208.3	1,147.2	19.780		
4,700.0	4,105.3	4,507.6	4,190.2	37.2	29.5	128.48	662.3	1,437.8	1,239.2	1,176.6	19.807		
4,800.0	4,188.7	4,602.6	4,277.0	38.1	30.2	128.63	680.2	1,472.2	1,270.1	1,206.1	19.833		
4,900.0	4,272.2	4,697.7	4,363.7	39.1	30.9	128.76	698.1	1,506.6	1,301.0	1,235.5	19.857		
5,000.0	4,355.6	4,792.8	4,450.5	40.0	31.6	128.90	716.0	1,541.1	1,331.9	1,264.9	19.881		

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-16W - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,439.0	4,887.8	4,537.3	41.0	32.3	129.02	733.9	1,575.5	1,362.9	1,294.4	19.903		
5,200.0	4,522.4	4,982.9	4,624.0	42.0	33.0	129.14	751.8	1,609.9	1,393.8	1,323.8	19.925		
5,300.0	4,605.9	5,077.9	4,710.8	42.9	33.7	129.26	769.7	1,644.4	1,424.7	1,353.3	19.946		
5,400.0	4,689.3	5,173.0	4,797.6	43.9	34.4	129.37	787.6	1,678.8	1,455.7	1,382.8	19.965		
5,500.0	4,772.7	5,268.0	4,884.4	44.8	35.2	129.47	805.5	1,713.2	1,486.6	1,412.2	19.984		
5,600.0	4,856.2	5,363.1	4,971.1	45.8	35.9	129.65	823.4	1,747.7	1,517.6	1,441.7	20.003		
5,700.0	4,941.0	5,458.7	5,058.4	46.7	36.6	130.25	841.4	1,782.3	1,546.9	1,469.5	19.999		
5,800.0	5,028.1	5,555.0	5,146.3	47.5	37.3	130.66	859.6	1,817.2	1,573.5	1,494.6	19.956		
5,900.0	5,117.3	5,645.3	5,229.0	48.3	38.0	130.94	876.3	1,849.4	1,597.5	1,517.3	19.916		
6,000.0	5,208.3	5,731.8	5,309.4	49.0	38.5	131.19	891.1	1,877.8	1,619.3	1,537.9	19.886		
6,100.0	5,301.1	5,818.9	5,391.4	49.6	39.1	131.41	904.5	1,903.6	1,639.0	1,556.5	19.856		
6,200.0	5,395.4	5,906.3	5,474.9	50.2	39.5	131.60	916.5	1,926.7	1,656.6	1,573.0	19.827		
6,300.0	5,491.1	5,994.2	5,559.7	50.7	39.9	131.76	927.1	1,947.1	1,671.9	1,587.4	19.798		
6,400.0	5,587.9	6,082.4	5,645.7	51.1	40.3	131.90	936.2	1,964.6	1,685.0	1,599.8	19.772		
6,500.0	5,685.8	6,170.9	5,732.6	51.5	40.6	132.01	943.8	1,979.2	1,695.9	1,610.0	19.745		
6,600.0	5,784.4	6,259.7	5,820.4	51.7	40.8	132.10	949.9	1,990.9	1,704.5	1,618.0	19.718		
6,700.0	5,883.7	6,348.6	5,908.8	52.0	41.0	132.16	954.4	1,999.5	1,710.8	1,623.9	19.692		
6,800.0	5,983.4	6,437.7	5,997.7	52.1	41.1	132.19	957.3	2,005.2	1,714.8	1,627.6	19.666		
6,900.0	6,083.3	6,526.9	6,086.8	52.2	41.2	132.20	958.6	2,007.7	1,716.5	1,629.1	19.643		
7,000.0	6,183.3	6,623.4	6,183.3	52.2	41.2	161.82	958.7	2,007.9	1,716.6	1,629.2	19.637		
7,100.0	6,283.3	6,723.4	6,283.3	52.2	41.2	161.82	958.7	2,007.9	1,716.6	1,629.1	19.626		
7,200.0	6,383.3	6,823.4	6,383.3	52.2	41.2	161.82	958.7	2,007.9	1,716.6	1,629.1	19.615		
7,300.0	6,483.3	6,923.4	6,483.3	52.2	41.3	161.82	958.7	2,007.9	1,716.6	1,629.0	19.604		
7,400.0	6,583.3	7,023.4	6,583.3	52.2	41.3	161.82	958.7	2,007.9	1,716.6	1,629.0	19.593		
7,500.0	6,683.3	7,123.4	6,683.3	52.3	41.3	161.82	958.7	2,007.9	1,716.6	1,628.9	19.581		
7,600.0	6,783.3	7,223.4	6,783.3	52.3	41.3	161.82	958.7	2,007.9	1,716.6	1,628.9	19.570		
7,700.0	6,883.3	7,323.4	6,883.3	52.3	41.4	161.82	958.7	2,007.9	1,716.6	1,628.8	19.559		
7,800.0	6,983.3	7,423.4	6,983.3	52.3	41.4	161.82	958.7	2,007.9	1,716.6	1,628.8	19.547		
7,900.0	7,083.3	7,523.4	7,083.3	52.3	41.4	161.82	958.7	2,007.9	1,716.6	1,628.7	19.536		
8,000.0	7,183.3	7,623.4	7,183.3	52.3	41.4	161.82	958.7	2,007.9	1,716.6	1,628.7	19.524		
8,100.0	7,283.3	7,723.4	7,283.3	52.4	41.5	161.82	958.7	2,007.9	1,716.6	1,628.6	19.513		
8,200.0	7,383.3	7,823.4	7,383.3	52.4	41.5	161.82	958.7	2,007.9	1,716.6	1,628.6	19.501		
8,300.0	7,483.3	7,923.4	7,483.3	52.4	41.5	161.82	958.7	2,007.9	1,716.6	1,628.5	19.489		
8,400.0	7,583.3	8,023.4	7,583.3	52.4	41.6	161.82	958.7	2,007.9	1,716.6	1,628.5	19.478		
8,500.0	7,683.3	8,123.4	7,683.3	52.4	41.6	161.82	958.7	2,007.9	1,716.6	1,628.4	19.466		
8,600.0	7,783.3	8,223.4	7,783.3	52.4	41.6	161.82	958.7	2,007.9	1,716.6	1,628.4	19.454		
8,700.0	7,883.3	8,323.4	7,883.3	52.5	41.6	161.82	958.7	2,007.9	1,716.6	1,628.3	19.443		
8,800.0	7,983.3	8,331.1	7,891.0	52.5	41.6	161.82	958.7	2,007.9	1,719.1	1,631.5	19.623		
8,900.0	8,083.3	8,331.1	7,891.0	52.5	41.6	161.82	958.7	2,007.9	1,727.3	1,640.7	19.935		
9,000.0	8,183.3	8,331.1	7,891.0	52.5	41.6	161.82	958.7	2,007.9	1,741.3	1,655.8	20.369		
9,100.0	8,283.3	8,331.1	7,891.0	52.5	41.6	161.82	958.7	2,007.9	1,760.9	1,676.7	20.925		
9,200.0	8,383.3	8,331.1	7,891.0	52.5	41.6	161.82	958.7	2,007.9	1,785.8	1,703.1	21.603		
9,300.0	8,483.3	8,331.1	7,891.0	52.6	41.6	161.82	958.7	2,007.9	1,815.9	1,734.9	22.401		
9,400.0	8,583.3	8,331.1	7,891.0	52.6	41.6	161.82	958.7	2,007.9	1,851.0	1,771.6	23.317		
9,500.0	8,683.3	8,331.1	7,891.0	52.6	41.6	161.82	958.7	2,007.9	1,890.6	1,813.0	24.349		
9,518.7	8,702.0	8,331.1	7,891.0	52.6	41.6	161.82	958.7	2,007.9	1,898.5	1,821.2	24.555		

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 0993-21-11W - Slot A-2
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 0993-21-11W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	133.31	-65.9	69.9	96.1			
100.0	100.0	100.0	100.0	0.4	0.4	133.31	-65.9	69.9	96.1	95.3	121.340	
200.0	200.0	200.0	200.0	1.2	1.2	133.31	-65.9	69.9	96.1	93.6	38.902	CC, ES
300.0	300.0	298.6	298.6	1.7	1.7	103.73	-65.5	71.0	96.9	93.9	31.568	
400.0	399.8	396.7	396.5	3.3	3.2	103.93	-63.7	76.0	100.6	96.4	23.637	
500.0	499.3	494.5	493.9	4.6	4.5	104.25	-60.5	84.8	107.3	102.0	20.159	
600.0	598.3	592.0	590.4	5.6	5.5	104.62	-55.9	97.5	116.8	110.6	18.710	
700.0	696.6	689.0	685.8	6.5	6.4	105.00	-49.9	113.9	129.3	122.2	18.205	SF
800.0	794.0	785.4	779.8	7.3	7.2	105.33	-42.6	134.0	144.7	136.7	18.206	
900.0	890.3	881.2	872.2	8.0	7.9	105.60	-34.0	157.6	162.8	154.0	18.489	
1,000.0	985.3	976.2	962.8	8.7	8.6	105.78	-24.2	184.6	183.8	174.1	18.917	
1,100.0	1,078.9	1,070.3	1,051.2	9.4	9.2	105.88	-13.2	214.8	207.5	196.8	19.405	
1,200.0	1,170.9	1,165.0	1,139.0	10.0	9.6	106.00	-1.0	248.2	233.6	222.0	20.026	
1,300.0	1,261.0	1,260.9	1,227.6	10.7	9.8	106.75	11.5	282.6	261.3	248.5	20.474	
1,400.0	1,349.2	1,356.1	1,315.7	11.2	10.1	108.04	23.9	316.7	290.4	276.4	20.770	
1,500.0	1,435.2	1,450.4	1,402.9	11.8	10.5	109.67	36.2	350.5	321.2	305.8	20.980	
1,600.0	1,519.1	1,543.8	1,489.2	12.2	10.8	111.77	48.4	384.0	353.8	337.2	21.243	
1,700.0	1,602.6	1,636.9	1,575.3	12.5	11.1	114.06	60.6	417.4	387.4	369.3	21.474	
1,800.0	1,686.0	1,730.1	1,661.4	12.8	11.5	115.99	72.7	450.8	421.4	401.9	21.681	
1,900.0	1,769.4	1,823.2	1,747.5	13.2	11.8	117.64	84.9	484.2	455.8	434.9	21.877	
2,000.0	1,852.8	1,916.4	1,833.6	13.6	12.2	119.05	97.1	517.5	490.5	468.2	22.063	
2,100.0	1,936.3	2,009.5	1,919.7	13.9	12.6	120.28	109.2	550.9	525.4	501.7	22.238	
2,200.0	2,019.7	2,102.6	2,005.8	14.3	12.9	121.36	121.4	584.3	560.5	535.4	22.403	
2,300.0	2,103.1	2,195.8	2,091.8	14.7	13.3	122.32	133.5	617.7	595.7	569.3	22.557	
2,400.0	2,186.5	2,288.9	2,177.9	15.4	13.7	123.17	145.7	651.1	631.1	603.3	22.702	
2,500.0	2,270.0	2,382.1	2,264.0	16.4	14.1	123.92	157.8	684.5	666.6	637.4	22.837	
2,600.0	2,353.4	2,475.2	2,350.1	17.3	14.5	124.61	170.0	717.9	702.2	671.6	22.964	
2,700.0	2,436.8	2,568.3	2,436.2	18.2	15.0	125.22	182.2	751.3	737.9	705.9	23.083	
2,800.0	2,520.2	2,661.5	2,522.3	19.2	15.4	125.78	194.3	784.6	773.6	740.2	23.194	
2,900.0	2,603.7	2,754.6	2,608.4	20.1	15.9	126.29	206.5	818.0	809.4	774.6	23.297	
3,000.0	2,687.1	2,847.8	2,694.5	21.1	16.4	126.76	218.6	851.4	845.2	809.1	23.388	
3,100.0	2,770.5	2,940.9	2,780.6	22.0	17.1	127.19	230.8	884.8	881.1	843.6	23.490	
3,200.0	2,853.9	3,034.1	2,866.7	22.9	17.7	127.59	242.9	918.2	917.0	878.1	23.574	
3,300.0	2,937.4	3,127.2	2,952.8	23.9	18.4	127.95	255.1	951.6	953.0	912.7	23.655	
3,400.0	3,020.8	3,220.3	3,038.9	24.8	19.0	128.29	267.3	985.0	989.0	947.3	23.730	
3,500.0	3,104.2	3,313.5	3,125.0	25.8	19.7	128.61	279.4	1,018.4	1,025.0	982.0	23.802	
3,600.0	3,187.6	3,406.6	3,211.1	26.7	20.3	128.90	291.6	1,051.7	1,061.1	1,016.6	23.869	
3,700.0	3,271.1	3,499.8	3,297.2	27.7	21.0	129.18	303.7	1,085.1	1,097.2	1,051.3	23.932	
3,800.0	3,354.5	3,592.9	3,383.3	28.6	21.6	129.43	315.9	1,118.5	1,133.2	1,086.0	23.993	
3,900.0	3,437.9	3,686.0	3,469.4	29.6	22.3	129.68	328.0	1,151.9	1,169.4	1,120.7	24.049	
4,000.0	3,521.3	3,779.2	3,555.5	30.5	22.9	129.90	340.2	1,185.3	1,205.5	1,155.5	24.103	
4,100.0	3,604.8	3,872.3	3,641.6	31.5	23.6	130.12	352.4	1,218.7	1,241.6	1,190.2	24.154	
4,200.0	3,688.2	3,965.5	3,727.7	32.4	24.2	130.32	364.5	1,252.1	1,277.8	1,225.0	24.202	
4,300.0	3,771.6	4,058.6	3,813.8	33.4	24.9	130.51	376.7	1,285.5	1,314.0	1,259.8	24.248	
4,400.0	3,855.0	4,151.8	3,899.9	34.3	25.5	130.69	388.8	1,318.8	1,350.1	1,294.6	24.292	
4,500.0	3,938.5	4,244.9	3,986.0	35.3	26.2	130.86	401.0	1,352.2	1,386.3	1,329.4	24.334	
4,600.0	4,021.9	4,338.0	4,072.1	36.2	26.8	131.03	413.1	1,385.6	1,422.5	1,364.2	24.373	
4,700.0	4,105.3	4,431.2	4,158.2	37.2	27.5	131.18	425.3	1,419.0	1,458.8	1,399.0	24.411	
4,800.0	4,188.7	4,524.3	4,244.3	38.1	28.1	131.33	437.5	1,452.4	1,495.0	1,433.8	24.447	
4,900.0	4,272.2	4,617.5	4,330.4	39.1	28.8	131.47	449.6	1,485.8	1,531.2	1,468.7	24.481	
5,000.0	4,355.6	4,710.6	4,416.5	40.0	29.4	131.60	461.8	1,519.2	1,567.5	1,503.5	24.514	

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 0993-21-11W - Slot A-2
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 0993-21-11W	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	
5,100.0	4,439.0	4,803.7	4,502.6	41.0	30.1	131.73	473.9	1,552.6	1,603.7	1,538.4	24.546		
5,200.0	4,522.4	4,896.9	4,588.7	42.0	30.7	131.85	486.1	1,586.0	1,640.0	1,573.2	24.576		
5,300.0	4,605.9	4,990.0	4,674.8	42.9	31.4	131.97	498.2	1,619.3	1,676.2	1,608.1	24.605		
5,400.0	4,689.3	5,083.2	4,760.9	43.9	32.1	132.08	510.4	1,652.7	1,712.5	1,643.0	24.632		
5,500.0	4,772.7	5,176.3	4,847.0	44.8	32.7	132.19	522.6	1,686.1	1,748.8	1,677.8	24.659		
5,600.0	4,856.2	5,269.5	4,933.1	45.8	33.4	132.37	534.7	1,719.5	1,785.0	1,712.7	24.685		
5,700.0	4,941.0	5,363.3	5,019.8	46.7	34.0	133.08	547.0	1,753.1	1,819.6	1,745.9	24.685		
5,800.0	5,028.1	5,458.1	5,107.4	47.5	34.7	133.62	559.3	1,787.1	1,851.4	1,776.2	24.641		
5,900.0	5,117.3	5,553.6	5,195.8	48.3	35.4	133.99	571.8	1,821.4	1,880.3	1,803.7	24.565		
6,000.0	5,208.3	5,646.0	5,281.3	49.0	36.0	134.24	583.7	1,854.1	1,906.3	1,828.5	24.484		
6,100.0	5,301.1	5,735.2	5,365.0	49.6	36.6	134.45	594.3	1,883.1	1,929.8	1,850.8	24.416		
6,200.0	5,395.4	5,825.1	5,450.5	50.2	37.1	134.63	603.8	1,909.2	1,950.7	1,870.6	24.350		
6,300.0	5,491.1	5,915.8	5,537.8	50.7	37.5	134.79	612.2	1,932.2	1,969.1	1,888.0	24.287		
6,400.0	5,587.9	6,007.1	5,626.6	51.1	37.9	134.92	619.4	1,952.2	1,984.7	1,902.8	24.225		
6,500.0	5,685.8	6,100.0	5,717.7	51.5	38.2	135.02	625.6	1,969.1	1,997.7	1,915.1	24.164		
6,600.0	5,784.4	6,191.2	5,807.9	51.7	38.4	135.10	630.4	1,982.2	2,008.1	1,924.8	24.112		
6,700.0	5,883.7	6,283.9	5,899.9	52.0	38.6	135.16	634.0	1,992.2	2,015.6	1,931.9	24.060		
6,800.0	5,983.4	6,376.7	5,992.5	52.1	38.8	135.20	636.3	1,998.6	2,020.5	1,936.3	24.012		
6,900.0	6,083.3	6,469.8	6,085.5	52.2	38.9	135.21	637.4	2,001.5	2,022.6	1,938.2	23.964		
7,000.0	6,183.3	6,567.6	6,183.3	52.2	38.9	164.83	637.5	2,001.7	2,022.7	1,938.2	23.940		
7,100.0	6,283.3	6,667.6	6,283.3	52.2	39.0	164.83	637.5	2,001.7	2,022.7	1,938.1	23.923		
7,200.0	6,383.3	6,767.6	6,383.3	52.2	39.0	164.83	637.5	2,001.7	2,022.7	1,938.1	23.909		
7,300.0	6,483.3	6,867.6	6,483.3	52.2	39.0	164.83	637.5	2,001.7	2,022.7	1,938.0	23.894		
7,400.0	6,583.3	6,967.6	6,583.3	52.2	39.0	164.83	637.5	2,001.7	2,022.7	1,938.0	23.879		
7,500.0	6,683.3	7,067.6	6,683.3	52.3	39.1	164.83	637.5	2,001.7	2,022.7	1,937.9	23.865		
7,600.0	6,783.3	7,167.6	6,783.3	52.3	39.1	164.83	637.5	2,001.7	2,022.7	1,937.9	23.850		
7,700.0	6,883.3	7,267.6	6,883.3	52.3	39.1	164.83	637.5	2,001.7	2,022.7	1,937.8	23.835		
7,800.0	6,983.3	7,367.6	6,983.3	52.3	39.2	164.83	637.5	2,001.7	2,022.7	1,937.7	23.820		
7,900.0	7,083.3	7,467.6	7,083.3	52.3	39.2	164.83	637.5	2,001.7	2,022.7	1,937.7	23.805		
8,000.0	7,183.3	7,567.6	7,183.3	52.3	39.2	164.83	637.5	2,001.7	2,022.7	1,937.6	23.790		
8,100.0	7,283.3	7,667.6	7,283.3	52.4	39.2	164.83	637.5	2,001.7	2,022.7	1,937.6	23.775		
8,200.0	7,383.3	7,767.6	7,383.3	52.4	39.3	164.83	637.5	2,001.7	2,022.7	1,937.5	23.760		
8,300.0	7,483.3	7,867.6	7,483.3	52.4	39.3	164.83	637.5	2,001.7	2,022.7	1,937.5	23.744		
8,400.0	7,583.3	7,967.6	7,583.3	52.4	39.3	164.83	637.5	2,001.7	2,022.7	1,937.4	23.729		
8,500.0	7,683.3	8,067.6	7,683.3	52.4	39.4	164.83	637.5	2,001.7	2,022.7	1,937.4	23.714		
8,600.0	7,783.3	8,167.6	7,783.3	52.4	39.4	164.83	637.5	2,001.7	2,022.7	1,937.3	23.698		
8,700.0	7,883.3	8,267.6	7,883.3	52.5	39.4	164.83	637.5	2,001.7	2,022.7	1,937.3	23.683		
8,800.0	7,983.3	8,367.6	7,983.3	52.5	39.5	164.83	637.5	2,001.7	2,022.7	1,937.2	23.667		
8,900.0	8,083.3	8,467.6	8,083.3	52.5	39.5	164.83	637.5	2,001.7	2,022.7	1,937.1	23.652		
9,000.0	8,183.3	8,567.6	8,183.3	52.5	39.5	164.83	637.5	2,001.7	2,022.7	1,937.1	23.636		
9,100.0	8,283.3	8,667.6	8,283.3	52.5	39.5	164.83	637.5	2,001.7	2,022.7	1,937.0	23.620		
9,200.0	8,383.3	8,767.6	8,383.3	52.5	39.6	164.83	637.5	2,001.7	2,022.7	1,937.0	23.605		
9,300.0	8,483.3	8,867.6	8,483.3	52.6	39.6	164.83	637.5	2,001.7	2,022.7	1,936.9	23.589		
9,400.0	8,583.3	8,967.6	8,583.3	52.6	39.6	164.83	637.5	2,001.7	2,022.7	1,936.9	23.573		
9,500.0	8,683.3	9,067.6	8,683.3	52.6	39.7	164.83	637.5	2,001.7	2,022.7	1,936.8	23.558		
9,518.7	8,702.0	9,086.3	8,702.0	52.6	39.7	164.83	637.5	2,001.7	2,022.7	1,936.8	23.555		

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 0993-21-11W - Slot A-2
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 0993-21-11W	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 Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	133.30	-76.8	81.5	112.0			
100.0	100.0	100.0	100.0	0.4	0.4	133.30	-76.8	81.5	112.0	111.3	141.462	
200.0	200.0	200.0	200.0	1.2	1.2	133.30	-76.8	81.5	112.0	109.6	45.354	CC, ES
300.0	300.0	297.3	297.3	1.7	2.2	103.37	-76.4	83.6	113.5	110.2	34.202	
400.0	399.8	394.4	394.2	3.3	3.8	103.27	-75.0	89.6	118.4	113.7	25.247	
500.0	499.3	491.2	490.4	4.6	4.9	103.42	-72.8	99.6	126.6	120.8	21.774	
600.0	598.3	587.4	585.6	5.6	5.8	103.75	-69.6	113.4	138.2	131.4	20.367	
700.0	696.6	683.0	679.4	6.5	6.7	104.18	-65.7	131.0	153.1	145.4	19.935	SF
800.0	794.0	777.7	771.6	7.3	7.4	104.62	-60.9	152.2	171.2	162.7	20.041	
900.0	890.3	871.5	862.0	8.0	8.1	105.03	-55.3	176.8	192.7	183.2	20.458	
1,000.0	985.3	964.3	950.2	8.7	8.7	105.36	-49.0	204.7	217.2	206.9	21.046	
1,100.0	1,078.9	1,056.0	1,036.3	9.4	9.2	105.61	-42.0	235.7	244.9	233.7	21.909	
1,200.0	1,170.9	1,151.3	1,125.0	10.0	9.4	106.23	-34.4	269.4	274.6	262.5	22.699	
1,300.0	1,261.0	1,245.9	1,213.2	10.7	9.7	107.36	-26.9	302.9	305.7	292.6	23.263	
1,400.0	1,349.2	1,339.6	1,300.5	11.2	10.0	108.82	-19.4	336.1	338.5	324.2	23.677	
1,500.0	1,435.2	1,432.2	1,386.8	11.8	10.3	110.47	-12.0	368.9	373.1	357.5	24.002	
1,600.0	1,519.1	1,523.7	1,472.0	12.2	10.6	112.53	-4.7	401.2	409.7	392.9	24.387	
1,700.0	1,602.6	1,614.9	1,557.0	12.5	11.0	114.85	2.6	433.5	447.3	429.2	24.727	
1,800.0	1,686.0	1,706.1	1,642.0	12.8	11.3	116.81	9.9	465.8	485.4	466.0	25.029	
1,900.0	1,769.4	1,797.3	1,727.0	13.2	11.7	118.50	17.2	498.1	524.0	503.3	25.307	
2,000.0	1,852.8	1,888.6	1,812.0	13.6	12.0	119.95	24.5	530.4	562.9	540.9	25.564	
2,100.0	1,936.3	1,979.8	1,897.0	13.9	12.4	121.22	31.8	562.7	602.1	578.8	25.803	
2,200.0	2,019.7	2,071.0	1,982.0	14.3	12.8	122.34	39.1	595.0	641.6	616.9	26.026	
2,300.0	2,103.1	2,162.2	2,067.0	14.7	13.2	123.33	46.4	627.3	681.2	655.2	26.233	
2,400.0	2,186.5	2,253.4	2,152.0	15.4	13.5	124.21	53.7	659.6	720.9	693.6	26.425	
2,500.0	2,270.0	2,344.6	2,237.0	16.4	13.9	125.00	60.9	691.9	760.8	732.2	26.604	
2,600.0	2,353.4	2,435.8	2,322.0	17.3	14.3	125.71	68.2	724.2	800.8	770.9	26.771	
2,700.0	2,436.8	2,527.1	2,407.0	18.2	14.7	126.35	75.5	756.5	840.9	809.7	26.926	
2,800.0	2,520.2	2,618.3	2,492.0	19.2	15.2	126.94	82.8	788.8	881.1	848.5	27.071	
2,900.0	2,603.7	2,709.5	2,577.0	20.1	15.6	127.48	90.1	821.1	921.3	887.5	27.207	
3,000.0	2,687.1	2,800.7	2,662.0	21.1	16.0	127.97	97.4	853.4	961.6	926.5	27.334	
3,100.0	2,770.5	2,891.9	2,747.0	22.0	16.5	128.42	104.7	885.6	1,002.0	965.5	27.452	
3,200.0	2,853.9	2,983.1	2,832.0	22.9	17.0	128.84	112.0	917.9	1,042.4	1,004.6	27.563	
3,300.0	2,937.4	3,074.4	2,917.0	23.9	17.6	129.22	119.3	950.2	1,082.9	1,043.7	27.667	
3,400.0	3,020.8	3,165.6	3,002.0	24.8	18.2	129.58	126.6	982.5	1,123.4	1,082.9	27.763	
3,500.0	3,104.2	3,256.8	3,087.0	25.8	18.8	129.91	133.9	1,014.8	1,163.9	1,122.1	27.859	
3,600.0	3,187.6	3,348.0	3,172.0	26.7	19.4	130.23	141.1	1,047.1	1,204.4	1,161.3	27.945	
3,700.0	3,271.1	3,439.2	3,257.0	27.7	20.0	130.52	148.4	1,079.4	1,245.0	1,200.6	28.027	
3,800.0	3,354.5	3,530.4	3,341.9	28.6	20.6	130.79	155.7	1,111.7	1,285.6	1,239.9	28.104	
3,900.0	3,437.9	3,621.7	3,426.9	29.6	21.2	131.04	163.0	1,144.0	1,326.3	1,279.2	28.178	
4,000.0	3,521.3	3,712.9	3,511.9	30.5	21.9	131.29	170.3	1,176.3	1,366.9	1,318.5	28.247	
4,100.0	3,604.8	3,804.1	3,596.9	31.5	22.5	131.51	177.6	1,208.6	1,407.6	1,357.9	28.313	
4,200.0	3,688.2	3,895.3	3,681.9	32.4	23.1	131.73	184.9	1,240.9	1,448.3	1,397.3	28.375	
4,300.0	3,771.6	3,986.5	3,766.9	33.4	23.7	131.93	192.2	1,273.2	1,489.0	1,436.6	28.434	
4,400.0	3,855.0	4,077.7	3,851.9	34.3	24.3	132.12	199.5	1,305.5	1,529.7	1,476.0	28.490	
4,500.0	3,938.5	4,168.9	3,936.9	35.3	24.9	132.30	206.8	1,337.7	1,570.5	1,515.4	28.544	
4,600.0	4,021.9	4,260.2	4,021.9	36.2	25.5	132.48	214.0	1,370.0	1,611.2	1,554.9	28.595	
4,700.0	4,105.3	4,351.4	4,106.9	37.2	26.1	132.64	221.3	1,402.3	1,652.0	1,594.3	28.643	
4,800.0	4,188.7	4,442.6	4,191.9	38.1	26.7	132.80	228.6	1,434.6	1,692.8	1,633.7	28.690	
4,900.0	4,272.2	4,533.8	4,276.9	39.1	27.3	132.94	235.9	1,466.9	1,733.5	1,673.2	28.734	
5,000.0	4,355.6	4,625.0	4,361.9	40.0	28.0	133.09	243.2	1,499.2	1,774.3	1,712.7	28.776	

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 0993-21-11W - Slot A-2
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 0993-21-11W	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		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	4,439.0	4,716.2	4,446.9	41.0	28.6	133.22	250.5	1,531.5	1,815.1	1,752.1	28.817		
5,200.0	4,522.4	4,807.5	4,531.9	42.0	29.2	133.35	257.8	1,563.8	1,855.9	1,791.6	28.856		
5,300.0	4,605.9	4,898.7	4,616.9	42.9	29.8	133.48	265.1	1,596.1	1,896.7	1,831.1	28.893		
5,400.0	4,689.3	4,989.9	4,701.9	43.9	30.4	133.60	272.4	1,628.4	1,937.6	1,870.6	28.928		
5,500.0	4,772.7	5,081.1	4,786.9	44.8	31.0	133.71	279.7	1,660.7	1,978.4	1,910.1	28.963		
5,600.0	4,856.2	5,172.3	4,871.9	45.8	31.6	133.91	287.0	1,693.0	2,019.2	1,949.6	28.997		
5,700.0	4,941.0	5,264.3	4,957.6	46.7	32.2	134.72	294.3	1,725.5	2,058.3	1,987.4	29.002		
5,800.0	5,028.1	5,357.5	5,044.4	47.5	32.9	135.36	301.8	1,758.5	2,094.6	2,022.3	28.958		
5,900.0	5,117.3	5,451.7	5,132.2	48.3	33.5	135.85	309.3	1,791.9	2,128.0	2,054.3	28.882		
6,000.0	5,208.3	5,546.6	5,220.6	49.0	34.1	136.19	316.9	1,825.5	2,158.4	2,083.4	28.775		
6,100.0	5,301.1	5,641.9	5,309.5	49.6	34.8	136.40	324.4	1,859.0	2,185.9	2,109.6	28.648		
6,200.0	5,395.4	5,737.5	5,399.7	50.2	35.3	136.56	331.4	1,890.0	2,210.3	2,132.8	28.522		
6,300.0	5,491.1	5,834.3	5,492.3	50.7	35.9	136.69	337.7	1,917.6	2,231.8	2,153.2	28.399		
6,400.0	5,587.9	5,932.3	5,587.1	51.1	36.3	136.80	343.1	1,941.6	2,250.2	2,170.6	28.284		
6,500.0	5,685.8	6,031.2	5,683.8	51.5	36.7	136.89	347.6	1,961.8	2,265.5	2,185.1	28.176		
6,600.0	5,784.4	6,130.9	5,782.1	51.7	37.0	136.96	351.3	1,978.0	2,277.6	2,196.5	28.075		
6,700.0	5,883.7	6,231.2	5,881.6	52.0	37.2	137.01	354.0	1,990.1	2,286.5	2,204.8	27.982		
6,800.0	5,983.4	6,331.9	5,982.0	52.1	37.3	137.04	355.8	1,997.9	2,292.3	2,210.1	27.897		
6,900.0	6,083.3	6,432.9	6,083.0	52.2	37.4	137.04	356.6	2,001.5	2,294.8	2,212.3	27.823		
7,000.0	6,183.3	6,533.3	6,183.3	52.2	37.5	166.66	356.6	2,001.7	2,294.9	2,212.3	27.803		
7,100.0	6,283.3	6,633.3	6,283.3	52.2	37.5	166.66	356.6	2,001.7	2,294.9	2,212.3	27.786		
7,200.0	6,383.3	6,733.3	6,383.3	52.2	37.5	166.66	356.6	2,001.7	2,294.9	2,212.2	27.768		
7,300.0	6,483.3	6,833.3	6,483.3	52.2	37.5	166.66	356.6	2,001.7	2,294.9	2,212.2	27.751		
7,400.0	6,583.3	6,933.3	6,583.3	52.2	37.6	166.66	356.6	2,001.7	2,294.9	2,212.1	27.733		
7,500.0	6,683.3	7,033.3	6,683.3	52.3	37.6	166.66	356.6	2,001.7	2,294.9	2,212.1	27.715		
7,600.0	6,783.3	7,133.3	6,783.3	52.3	37.6	166.66	356.6	2,001.7	2,294.9	2,212.0	27.697		
7,700.0	6,883.3	7,233.3	6,883.3	52.3	37.7	166.66	356.6	2,001.7	2,294.9	2,212.0	27.679		
7,800.0	6,983.3	7,333.3	6,983.3	52.3	37.7	166.66	356.6	2,001.7	2,294.9	2,211.9	27.661		
7,900.0	7,083.3	7,433.3	7,083.3	52.3	37.7	166.66	356.6	2,001.7	2,294.9	2,211.9	27.643		
8,000.0	7,183.3	7,533.3	7,183.3	52.3	37.8	166.66	356.6	2,001.7	2,294.9	2,211.8	27.625		
8,100.0	7,283.3	7,633.3	7,283.3	52.4	37.8	166.66	356.6	2,001.7	2,294.9	2,211.7	27.607		
8,200.0	7,383.3	7,733.3	7,383.3	52.4	37.8	166.66	356.6	2,001.7	2,294.9	2,211.7	27.588		
8,300.0	7,483.3	7,833.3	7,483.3	52.4	37.8	166.66	356.6	2,001.7	2,294.9	2,211.6	27.570		
8,400.0	7,583.3	7,933.3	7,583.3	52.4	37.9	166.66	356.6	2,001.7	2,294.9	2,211.6	27.552		
8,500.0	7,683.3	8,033.3	7,683.3	52.4	37.9	166.66	356.6	2,001.7	2,294.9	2,211.5	27.533		
8,600.0	7,783.3	8,133.3	7,783.3	52.4	37.9	166.66	356.6	2,001.7	2,294.9	2,211.5	27.514		
8,700.0	7,883.3	8,233.3	7,883.3	52.5	38.0	166.66	356.6	2,001.7	2,294.9	2,211.4	27.497		
8,800.0	7,983.3	8,240.0	7,890.0	52.5	38.0	166.66	356.6	2,001.7	2,296.8	2,213.8	27.673		
8,900.0	8,083.3	8,240.0	7,890.0	52.5	38.0	166.66	356.6	2,001.7	2,303.0	2,220.6	27.955		
9,000.0	8,183.3	8,240.0	7,890.0	52.5	38.0	166.66	356.6	2,001.7	2,313.5	2,231.9	28.332		
9,100.0	8,283.3	8,240.0	7,890.0	52.5	38.0	166.66	356.6	2,001.7	2,328.3	2,247.5	28.804		
9,200.0	8,383.3	8,240.0	7,890.0	52.5	38.0	166.66	356.6	2,001.7	2,347.3	2,267.4	29.371		
9,300.0	8,483.3	8,240.0	7,890.0	52.6	38.0	166.66	356.6	2,001.7	2,370.3	2,291.4	30.033		
9,400.0	8,583.3	8,240.0	7,890.0	52.6	38.0	166.66	356.6	2,001.7	2,397.3	2,319.4	30.789		
9,500.0	8,683.3	8,240.0	7,890.0	52.6	38.0	166.66	356.6	2,001.7	2,428.1	2,351.4	31.637		
9,518.7	8,702.0	8,240.0	7,890.0	52.6	38.0	166.66	356.6	2,001.7	2,434.3	2,357.8	31.806		

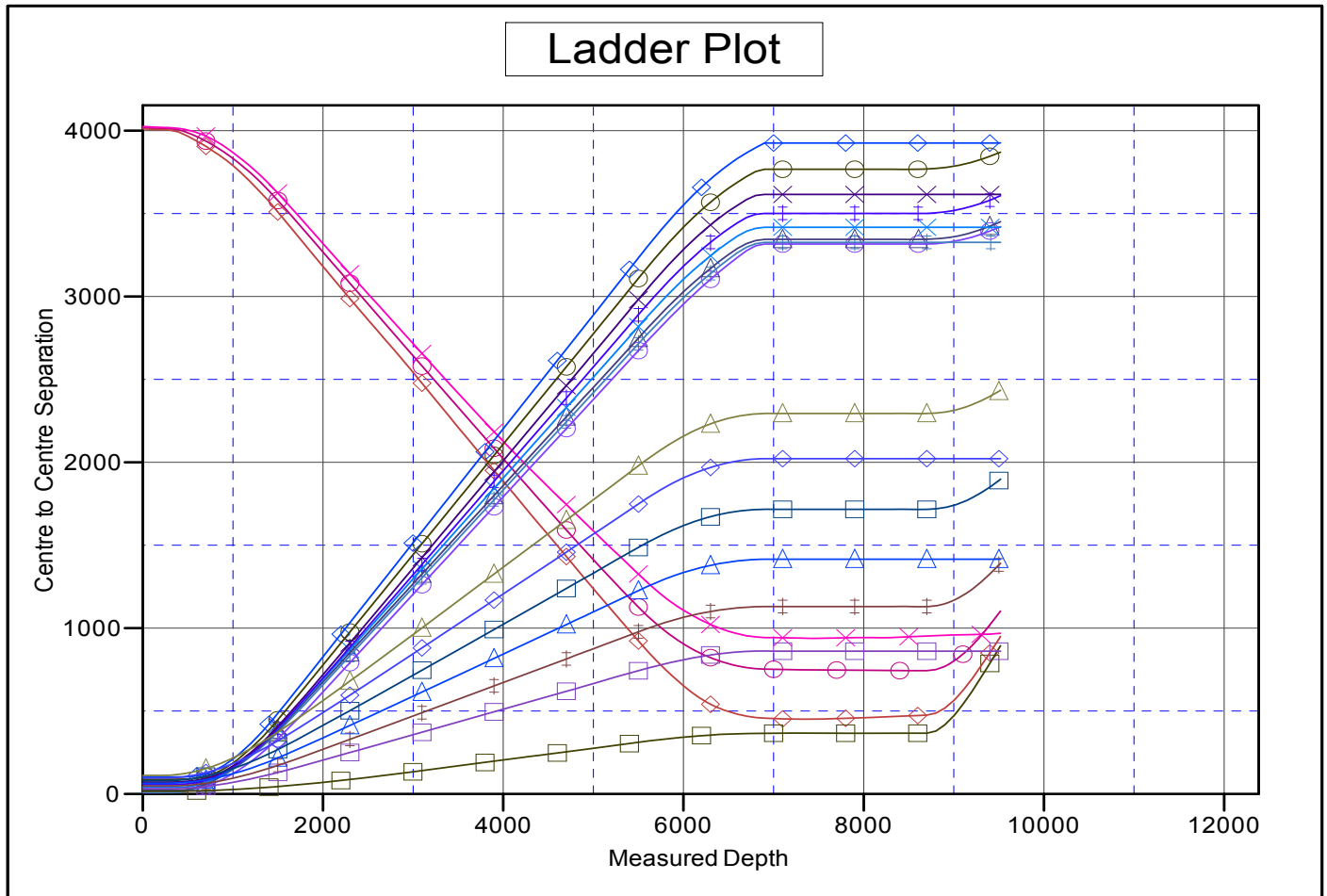
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-11W - Slot A-2
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 0993-21-11W	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 0993-21-11W - Slot A-2
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.44°



LEGEND

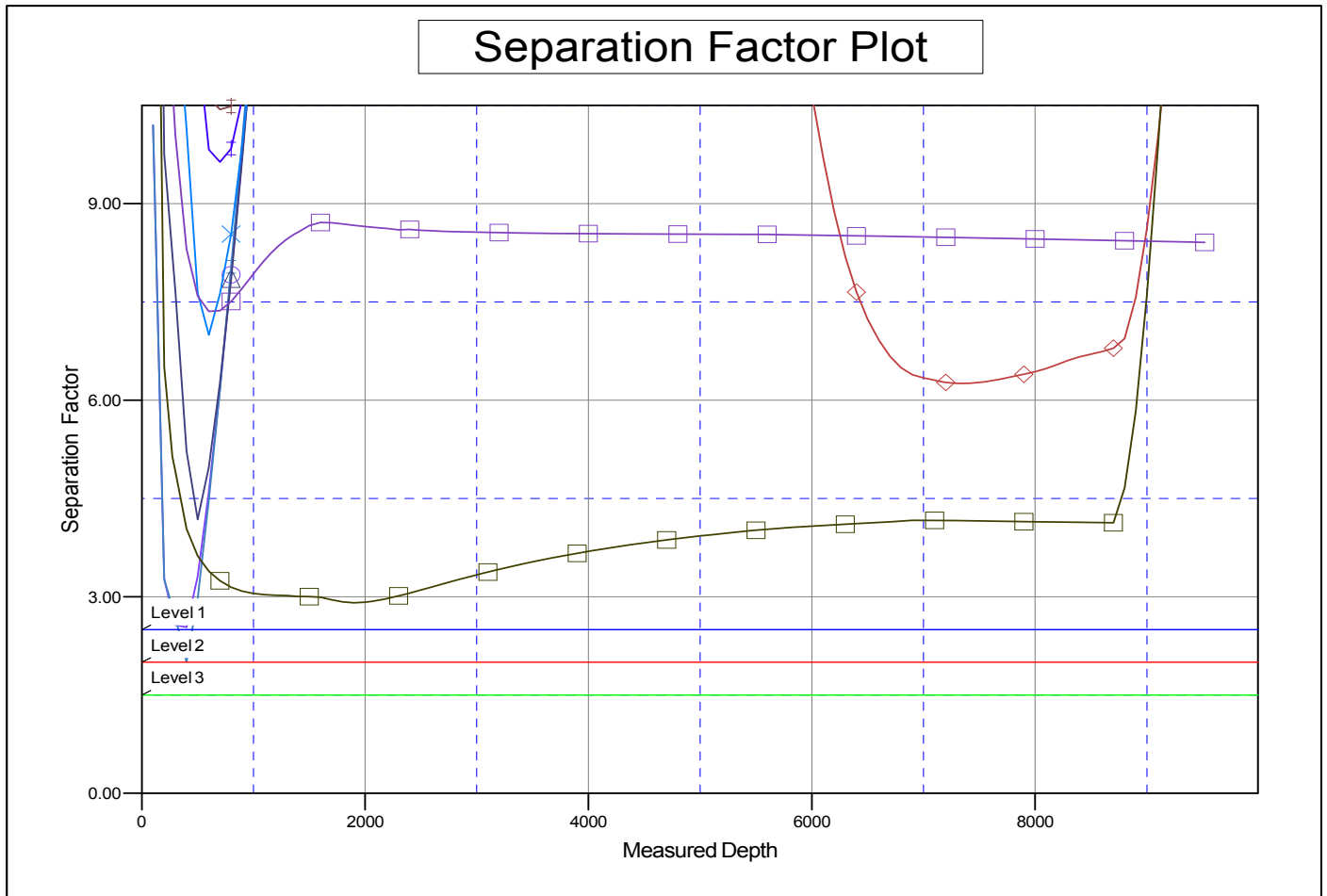
33-21-09W, Wellbore #1, Wellbore #1 V0	Laramie 29-01 0993-20-14E, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-13W, OH,
33-21-10W, Wellbore #1, Wellbore #1 V0	Laramie 29-01 0993-20-15E, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-14W, OH,
33-21-08W, Wellbore #1, Wellbore #1 V0	Laramie 29-01 0993-20-16E, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-15W, OH,
29-01 0993-20-11E, OH, Design #1 V0	Laramie 29-01 0993-20-17E, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-16W, OH,
29-01 0993-20-12E, OH, Design #1 V0	Laramie 29-01 0993-20-18E, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-17W, OH,
29-01 0993-20-13E, 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 0993-21-11W - Slot A-2
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 0993-21-11W	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 0993-21-11W - Slot A-2
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.44°



LEGEND

33-21-09W, Wellbore #1, Wellbore #1 V0	Laramie 29-01 0993-20-14E, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-13W, OH,
33-21-10W, Wellbore #1, Wellbore #1 V0	Laramie 29-01 0993-20-15E, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-14W, OH,
33-21-08W, Wellbore #1, Wellbore #1 V0	Laramie 29-01 0993-20-16E, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-15W, OH,
29-01 0993-20-11E, OH, Design #1 V0	Laramie 29-01 0993-20-17E, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-16W, OH,
29-01 0993-20-12E, OH, Design #1 V0	Laramie 29-01 0993-20-18E, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-17W, OH,
29-01 0993-20-13E, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-12W, OH, Design #1 V0	Laramie 29-01 Fed 0993-21-18W, OH,