



Laramie Energy, LLC

Mesa County, CO

Laramie 0993-29-01

Laramie 29-01 Fed 0993-21-18W

OH

Design #2

KLX Anticollision Report

08 May, 2025





Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Reference	Design #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum ellipse separation of 1,000.0 usft	Error Surface:	Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	5/8/2025		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	8,250.2	Design #2 (OH)	OWSG (REV5) MWD HD(OWSG MWD - Standard	

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Laramie 0993-29-01						
Laramie 29-01 0993-20-11E - OH - Design #2	200.0	200.0	80.0	77.2	28.272	CC, ES
Laramie 29-01 0993-20-11E - OH - Design #2	500.0	488.9	103.1	95.5	13.464	SF
Laramie 29-01 0993-20-12E - OH - Design #2	200.0	200.0	80.6	77.8	28.493	CC, ES
Laramie 29-01 0993-20-12E - OH - Design #2	500.0	487.8	106.1	98.0	13.085	SF
Laramie 29-01 0993-20-13E - OH - Design #2	200.0	200.0	70.7	67.9	24.990	CC
Laramie 29-01 0993-20-13E - OH - Design #2	204.4	204.4	70.7	67.9	24.825	ES
Laramie 29-01 0993-20-13E - OH - Design #2	600.0	583.6	115.5	106.8	13.218	SF
Laramie 29-01 0993-20-14E - OH - Design #2	200.0	200.0	60.8	58.0	21.500	CC
Laramie 29-01 0993-20-14E - OH - Design #2	300.0	299.1	61.2	57.8	18.195	ES
Laramie 29-01 0993-20-14E - OH - Design #2	500.0	492.1	80.5	72.8	10.494	SF
Laramie 29-01 0993-20-15E - OH - Design #2	200.0	200.0	51.0	48.1	18.015	CC
Laramie 29-01 0993-20-15E - OH - Design #2	300.0	300.0	51.1	47.5	14.325	ES
Laramie 29-01 0993-20-15E - OH - Design #2	500.0	494.1	66.9	59.4	8.922	SF
Laramie 29-01 0993-20-16E - OH - Design #2	200.0	200.0	31.6	28.8	11.171	CC
Laramie 29-01 0993-20-16E - OH - Design #2	300.0	299.5	32.0	28.7	9.553	ES
Laramie 29-01 0993-20-16E - OH - Design #2	500.0	494.7	53.1	45.0	6.601	SF
Laramie 29-01 0993-20-17E - OH - Design #2	200.0	200.0	22.4	19.5	7.900	CC
Laramie 29-01 0993-20-17E - OH - Design #2	300.0	300.0	22.5	18.9	6.302	ES
Laramie 29-01 0993-20-17E - OH - Design #2	500.0	496.9	39.0	31.4	5.168	SF
Laramie 29-01 0993-20-18E - OH - Design #2	200.0	200.0	10.0	7.2	3.534	CC
Laramie 29-01 0993-20-18E - OH - Design #2	300.0	300.0	10.1	6.5	2.834	ES, SF
Laramie 29-01 Fed 0993-21-11W - OH - Design #2	200.0	200.0	70.0	67.2	24.741	CC
Laramie 29-01 Fed 0993-21-11W - OH - Design #2	300.0	299.3	70.5	66.9	19.962	ES
Laramie 29-01 Fed 0993-21-11W - OH - Design #2	600.0	595.1	91.6	84.8	13.551	SF
Laramie 29-01 Fed 0993-21-12W - OH - Design #2	200.0	200.0	60.0	57.2	21.207	CC
Laramie 29-01 Fed 0993-21-12W - OH - Design #2	300.0	299.5	60.5	56.9	16.797	ES
Laramie 29-01 Fed 0993-21-12W - OH - Design #2	600.0	596.2	80.0	73.3	12.005	SF
Laramie 29-01 Fed 0993-21-13W - OH - Design #2	200.0	200.0	50.0	47.1	17.665	CC
Laramie 29-01 Fed 0993-21-13W - OH - Design #2	300.0	300.0	50.0	46.6	14.799	ES
Laramie 29-01 Fed 0993-21-13W - OH - Design #2	600.0	599.1	62.9	56.8	10.314	SF
Laramie 29-01 Fed 0993-21-14W - OH - Design #2	300.0	300.2	39.9	36.4	11.366	CC, ES
Laramie 29-01 Fed 0993-21-14W - OH - Design #2	600.0	599.6	50.7	44.7	8.428	SF
Laramie 29-01 Fed 0993-21-15W - OH - Design #2	300.0	300.1	29.9	26.6	9.011	CC
Laramie 29-01 Fed 0993-21-15W - OH - Design #2	400.0	400.4	30.9	26.6	7.212	ES
Laramie 29-01 Fed 0993-21-15W - OH - Design #2	600.0	600.5	37.8	31.8	6.355	SF
Laramie 29-01 Fed 0993-21-16W - OH - Design #2	200.0	200.0	20.0	17.2	7.066	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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Summary						
Laramie 0993-29-01						
Laramie 29-01 Fed 0993-21-16W - OH - Design #2	300.0	300.0	20.1	16.5	5.630	ES
Laramie 29-01 Fed 0993-21-16W - OH - Design #2	600.0	601.0	26.5	19.5	3.808	SF
Laramie 29-01 Fed 0993-21-17W - OH - Design #2	353.5	353.7	9.7	5.8	2.471	Level 1, CC
Laramie 29-01 Fed 0993-21-17W - OH - Design #2	500.0	500.3	10.5	5.4	2.077	Level 1, ES, SF

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-46.73	54.8	-58.2	80.0				
100.0	100.0	100.0	100.0	0.8	0.8	-46.73	54.8	-58.2	80.0	78.4	50.493		
200.0	200.0	200.0	200.0	1.4	1.4	-46.73	54.8	-58.2	80.0	77.2	28.272	CC, ES	
300.0	300.0	296.9	296.9	1.7	2.5	-124.00	56.7	-58.9	82.0	77.9	20.363		
400.0	399.9	393.4	393.2	2.7	3.9	-123.80	62.5	-61.0	89.5	83.6	15.121		
500.0	499.6	488.9	488.1	4.2	5.0	-124.44	71.9	-64.5	103.1	95.5	13.464	SF	
600.0	598.9	582.7	581.0	5.3	5.9	-125.50	84.8	-69.2	122.9	113.8	13.508		
700.0	697.6	674.0	670.6	6.2	6.6	-126.76	100.5	-75.3	148.9	138.5	14.381		
800.0	795.4	762.2	756.6	7.0	7.3	-128.18	118.3	-83.5	181.2	169.7	15.767		
900.0	892.3	847.0	838.5	7.8	7.9	-129.47	137.7	-93.3	219.7	207.2	17.501		
1,000.0	988.0	927.9	916.0	8.5	8.5	-130.53	158.4	-104.6	264.2	250.7	19.498		
1,100.0	1,082.3	1,000.0	984.2	9.2	8.9	-131.18	178.5	-116.2	314.5	300.1	21.843		
1,200.0	1,175.3	1,077.3	1,056.5	9.5	9.4	-132.37	201.9	-130.1	369.6	354.4	24.356		
1,300.0	1,268.2	1,147.0	1,121.0	9.8	9.9	-133.51	224.6	-144.1	427.7	411.8	27.003		
1,400.0	1,361.0	1,214.0	1,182.1	10.1	10.3	-134.27	247.7	-158.7	488.0	471.6	29.601		
1,500.0	1,453.9	1,278.4	1,240.1	10.4	10.7	-134.77	271.2	-173.9	550.6	533.5	32.158		
1,600.0	1,546.7	1,340.1	1,295.0	10.8	11.0	-135.09	294.9	-189.5	615.1	597.4	34.676		
1,700.0	1,639.6	1,400.0	1,347.4	11.1	11.4	-135.29	318.9	-205.5	681.5	663.1	37.135		
1,800.0	1,732.5	1,456.2	1,396.0	11.5	11.7	-135.39	342.4	-221.4	749.6	730.7	39.605		
1,900.0	1,825.3	1,500.0	1,433.3	11.9	11.9	-135.42	361.2	-234.4	819.5	800.2	42.455		
2,000.0	1,918.2	1,562.8	1,486.1	12.3	12.3	-135.40	389.3	-253.8	890.6	870.6	44.419		
2,100.0	2,011.0	1,612.8	1,527.4	12.7	12.5	-135.35	412.3	-269.9	963.3	942.8	46.815		
2,200.0	2,103.9	1,660.7	1,566.4	13.1	12.8	-135.28	435.0	-285.9	1,037.4	1,016.3	49.256		
2,300.0	2,196.7	1,715.9	1,610.7	13.5	13.0	-135.17	461.8	-304.9	1,112.6	1,090.9	51.433		
2,400.0	2,289.6	1,781.6	1,663.5	14.0	13.2	-135.05	493.8	-327.7	1,187.9	1,165.6	53.164		
2,500.0	2,382.4	1,847.3	1,716.2	14.4	13.4	-134.94	525.8	-350.4	1,263.3	1,240.2	54.760		
2,600.0	2,475.3	1,913.0	1,768.9	14.9	13.7	-134.85	557.7	-373.2	1,338.6	1,314.8	56.223		
2,700.0	2,568.1	1,978.7	1,821.6	15.3	14.0	-134.77	589.7	-395.9	1,414.0	1,389.4	57.568		
2,800.0	2,661.0	2,044.4	1,874.3	15.8	14.3	-134.69	621.7	-418.6	1,489.4	1,464.1	58.872		
2,900.0	2,753.9	2,110.2	1,927.0	16.3	14.7	-134.62	653.7	-441.4	1,564.7	1,538.6	59.911		
3,000.0	2,846.7	2,175.9	1,979.7	17.0	15.1	-134.56	685.7	-464.1	1,640.1	1,613.2	60.944		
3,100.0	2,939.6	2,241.6	2,032.4	17.6	15.8	-134.51	717.7	-486.9	1,715.5	1,687.8	61.921		
3,200.0	3,032.4	2,307.3	2,085.1	18.3	16.4	-134.46	749.7	-509.6	1,790.9	1,762.3	62.825		
3,300.0	3,125.3	2,373.0	2,137.8	19.0	17.1	-134.41	781.7	-532.4	1,866.2	1,836.9	63.646		
3,400.0	3,218.1	2,438.7	2,190.5	19.7	17.8	-134.36	813.6	-555.1	1,941.6	1,911.4	64.411		
3,500.0	3,311.0	2,504.4	2,243.2	20.4	18.5	-134.32	845.6	-577.9	2,017.0	1,986.0	65.126		
3,600.0	3,403.8	2,570.2	2,295.9	21.1	19.3	-134.29	877.6	-600.6	2,092.3	2,060.5	65.782		
3,700.0	3,496.7	2,635.9	2,348.6	21.7	20.0	-134.25	909.6	-623.3	2,167.7	2,135.1	66.396		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
3,800.0	3,589.5	2,701.6	2,401.3	22.4	20.7	-134.22	941.6	-646.1	2,243.1	2,209.6	66.972		
3,900.0	3,682.4	2,767.3	2,454.0	23.1	21.4	-134.19	973.6	-668.8	2,318.5	2,284.1	67.502		
4,000.0	3,775.3	2,833.0	2,506.7	23.8	22.2	-134.16	1,005.6	-691.6	2,393.8	2,358.6	68.001		
4,100.0	3,868.1	2,898.7	2,559.4	24.5	22.9	-134.13	1,037.6	-714.3	2,469.2	2,433.1	68.469		
4,200.0	3,961.0	2,964.4	2,612.1	25.2	23.7	-134.11	1,069.5	-737.1	2,544.6	2,507.6	68.904		
4,300.0	4,053.8	3,030.2	2,664.8	25.9	24.4	-134.08	1,101.5	-759.8	2,619.9	2,582.2	69.313		
4,400.0	4,146.7	3,095.9	2,717.5	26.5	25.1	-134.06	1,133.5	-782.6	2,695.3	2,656.7	69.699		
4,500.0	4,239.5	3,161.6	2,770.2	27.2	25.9	-134.04	1,165.5	-805.3	2,770.7	2,731.1	70.058		
4,600.0	4,332.4	3,227.3	2,822.9	27.9	26.6	-134.02	1,197.5	-828.0	2,846.1	2,805.6	70.398		
4,700.0	4,425.2	3,293.0	2,875.7	28.6	27.4	-134.00	1,229.5	-850.8	2,921.4	2,880.1	70.719		
4,800.0	4,518.1	3,358.7	2,928.4	29.3	28.1	-133.98	1,261.5	-873.5	2,996.8	2,954.6	71.019		
4,900.0	4,610.9	3,424.4	2,981.1	30.0	28.8	-133.97	1,293.5	-896.3	3,072.2	3,029.1	71.303		
5,000.0	4,703.8	3,490.1	3,033.8	30.7	29.6	-133.95	1,325.4	-919.0	3,147.6	3,103.6	71.572		
5,100.0	4,796.7	3,555.9	3,086.5	31.4	30.3	-133.94	1,357.4	-941.8	3,222.9	3,178.1	71.825		
5,200.0	4,889.5	3,621.6	3,139.2	32.1	31.1	-133.92	1,389.4	-964.5	3,298.3	3,252.6	72.065		
5,300.0	4,982.4	3,687.3	3,191.9	32.7	31.8	-133.91	1,421.4	-987.3	3,373.7	3,327.0	72.292		
5,400.0	5,075.2	3,753.0	3,244.6	33.4	32.6	-133.89	1,453.4	-1,010.0	3,449.1	3,401.5	72.507		
5,500.0	5,168.1	3,818.7	3,297.3	34.1	33.3	-133.88	1,485.4	-1,032.8	3,524.4	3,476.0	72.711		
5,600.0	5,260.9	3,884.4	3,350.0	34.8	34.1	-133.87	1,517.4	-1,055.5	3,599.8	3,550.4	72.903		
5,700.0	5,354.5	3,951.2	3,403.5	35.5	34.8	-135.73	1,549.9	-1,078.6	3,674.3	3,624.0	73.061		
5,800.0	5,449.5	4,020.0	3,458.8	36.0	35.6	-137.41	1,583.4	-1,102.4	3,746.6	3,695.3	73.147		
5,900.0	5,545.8	4,090.9	3,515.6	36.5	36.4	-138.88	1,617.9	-1,127.0	3,816.6	3,764.5	73.199		
6,000.0	5,643.2	4,163.7	3,573.9	36.9	37.2	-140.15	1,653.3	-1,152.1	3,884.4	3,831.3	73.223		
6,100.0	5,741.5	4,238.1	3,633.7	37.2	38.1	-141.25	1,689.5	-1,177.9	3,949.6	3,895.7	73.225		
6,200.0	5,840.5	4,314.2	3,694.7	37.5	39.0	-142.20	1,726.6	-1,204.2	4,012.3	3,957.5	73.209		
6,300.0	5,940.0	4,391.7	3,756.8	37.7	39.8	-143.00	1,764.3	-1,231.1	4,072.4	4,016.7	73.183		
6,400.0	6,039.8	4,470.5	3,820.0	37.8	40.7	-143.68	1,802.6	-1,258.3	4,129.7	4,073.3	73.159		
6,500.0	6,139.8	4,550.4	3,884.1	37.8	41.7	-66.16	1,841.5	-1,286.0	4,184.4	4,127.3	73.319		
6,600.0	6,239.8	4,630.6	3,948.4	37.9	42.6	-65.77	1,880.6	-1,313.8	4,238.4	4,180.7	73.516		
6,700.0	6,339.8	4,710.8	4,012.7	37.9	43.5	-65.38	1,919.6	-1,341.5	4,292.5	4,234.3	73.709		
6,800.0	6,439.8	4,791.0	4,077.1	37.9	44.4	-65.01	1,958.7	-1,369.3	4,346.8	4,288.0	73.900		
6,900.0	6,539.8	4,871.2	4,141.4	38.0	45.3	-64.64	1,997.7	-1,397.0	4,401.2	4,341.8	74.089		
7,000.0	6,639.8	4,951.4	4,205.7	38.0	46.2	-64.28	2,036.7	-1,424.8	4,455.8	4,395.8	74.275		
7,100.0	6,739.8	7,709.4	6,739.8	38.0	61.8	-59.13	2,715.7	-1,907.6	4,479.8	4,401.5	57.163		
7,200.0	6,839.8	7,809.4	6,839.8	38.0	61.8	-59.13	2,715.7	-1,907.6	4,479.8	4,401.4	57.129		
7,300.0	6,939.8	7,909.4	6,939.8	38.1	61.8	-59.13	2,715.7	-1,907.6	4,479.8	4,401.4	57.095		
7,400.0	7,039.8	8,009.4	7,039.8	38.1	61.8	-59.13	2,715.7	-1,907.6	4,479.8	4,401.3	57.060		
7,500.0	7,139.8	8,109.4	7,139.8	38.1	61.8	-59.13	2,715.7	-1,907.6	4,479.8	4,401.3	57.025		
7,600.0	7,239.8	8,209.4	7,239.8	38.2	61.8	-59.13	2,715.7	-1,907.6	4,479.8	4,401.2	56.990		
7,700.0	7,339.8	8,309.4	7,339.8	38.2	61.9	-59.13	2,715.7	-1,907.6	4,479.8	4,401.2	56.955		
7,800.0	7,439.8	8,409.4	7,439.8	38.2	61.9	-59.13	2,715.7	-1,907.6	4,479.8	4,401.1	56.920		
7,900.0	7,539.8	8,509.4	7,539.8	38.2	61.9	-59.13	2,715.7	-1,907.6	4,479.8	4,401.1	56.885		
8,000.0	7,639.8	8,609.4	7,639.8	38.3	61.9	-59.13	2,715.7	-1,907.6	4,479.8	4,401.0	56.849		
8,100.0	7,739.8	8,709.4	7,739.8	38.3	61.9	-59.13	2,715.7	-1,907.6	4,479.8	4,401.0	56.813		
8,200.0	7,839.8	8,809.4	7,839.8	38.3	61.9	-59.13	2,715.7	-1,907.6	4,479.8	4,400.9	56.778		
8,205.0	7,844.8	8,814.4	7,844.8	38.3	61.9	-59.13	2,715.7	-1,907.6	4,479.8	4,400.9	56.777		
8,250.2	7,890.0	8,828.6	7,859.0	38.3	61.9	-59.13	2,715.7	-1,907.6	4,479.9	4,401.0	56.731		

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



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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	-53.85	47.5	-65.1	80.6			
100.0	100.0	100.0	100.0	0.8	0.8	-53.85	47.5	-65.1	80.6	79.0	50.886	
200.0	200.0	200.0	200.0	1.4	1.4	-53.85	47.5	-65.1	80.6	77.8	28.493	CC, ES
300.0	300.0	296.7	296.6	1.7	2.4	-131.36	49.2	-66.3	82.7	78.7	20.385	
400.0	399.9	392.8	392.6	2.7	3.9	-131.64	54.0	-70.0	91.0	84.8	14.815	
500.0	499.6	487.8	487.0	4.2	5.0	-132.80	61.9	-76.1	106.1	98.0	13.085	SF
600.0	598.9	580.7	579.0	5.3	5.9	-134.27	72.6	-84.3	128.0	118.3	13.185	
700.0	697.6	671.2	667.9	6.2	6.6	-135.66	85.8	-94.5	156.7	145.6	14.117	
800.0	795.4	758.5	753.0	7.0	7.3	-136.79	101.2	-106.4	192.0	179.6	15.557	
900.0	892.3	842.2	833.8	7.8	7.9	-137.61	118.4	-119.6	233.4	220.0	17.350	
1,000.0	988.0	922.0	910.1	8.5	8.5	-138.13	137.0	-133.8	280.8	266.4	19.409	
1,100.0	1,082.3	1,000.0	983.9	9.2	9.0	-138.41	157.1	-149.3	333.8	318.4	21.610	
1,200.0	1,175.3	1,068.9	1,048.3	9.5	9.5	-138.95	176.6	-164.3	391.6	375.5	24.396	
1,300.0	1,268.2	1,137.5	1,111.6	9.8	9.9	-139.65	197.5	-180.4	451.9	435.2	27.107	
1,400.0	1,361.0	1,200.0	1,168.6	10.1	10.3	-140.04	217.8	-196.0	514.3	497.1	29.872	
1,500.0	1,453.9	1,267.0	1,228.9	10.4	10.7	-140.25	240.9	-213.8	578.6	560.7	32.364	
1,600.0	1,546.7	1,328.0	1,283.0	10.8	11.1	-140.31	263.2	-230.9	644.6	626.2	34.922	
1,700.0	1,639.6	1,386.5	1,334.2	11.1	11.4	-140.27	285.7	-248.2	712.4	693.3	37.437	
1,800.0	1,732.5	1,442.7	1,382.7	11.5	11.7	-140.17	308.2	-265.5	781.7	762.1	39.913	
1,900.0	1,825.3	1,500.0	1,431.4	11.9	12.1	-140.01	332.1	-283.9	852.5	832.3	42.234	
2,000.0	1,918.2	1,548.4	1,471.9	12.3	12.2	-139.85	353.0	-300.0	924.7	904.2	44.950	
2,100.0	2,011.0	1,610.6	1,523.5	12.7	12.5	-139.61	380.7	-321.2	998.0	976.8	47.178	
2,200.0	2,103.9	1,678.6	1,579.8	13.1	12.7	-139.39	410.9	-344.5	1,071.3	1,049.5	49.072	
2,300.0	2,196.7	1,746.5	1,636.0	13.5	12.9	-139.19	441.1	-367.7	1,144.6	1,122.1	50.804	
2,400.0	2,289.6	1,814.5	1,692.3	14.0	13.1	-139.02	471.3	-390.9	1,218.0	1,194.7	52.390	
2,500.0	2,382.4	1,882.4	1,748.5	14.4	13.3	-138.87	501.5	-414.1	1,291.3	1,267.3	53.844	
2,600.0	2,475.3	1,950.4	1,804.8	14.9	13.6	-138.73	531.7	-437.4	1,364.6	1,339.9	55.186	
2,700.0	2,568.1	2,018.3	1,861.0	15.3	13.8	-138.61	561.9	-460.6	1,438.0	1,412.5	56.419	
2,800.0	2,661.0	2,086.2	1,917.3	15.8	14.1	-138.50	592.1	-483.8	1,511.3	1,485.1	57.549	
2,900.0	2,753.9	2,154.2	1,973.5	16.3	14.4	-138.40	622.3	-507.0	1,584.7	1,557.6	58.566	
3,000.0	2,846.7	2,222.1	2,029.8	17.0	15.0	-138.31	652.6	-530.3	1,658.0	1,630.2	59.531	
3,100.0	2,939.6	2,290.1	2,086.0	17.6	15.8	-138.22	682.8	-553.5	1,731.4	1,702.7	60.430	
3,200.0	3,032.4	2,358.0	2,142.3	18.3	16.5	-138.15	713.0	-576.7	1,804.7	1,775.3	61.251	
3,300.0	3,125.3	2,426.0	2,198.5	19.0	17.2	-138.08	743.2	-599.9	1,878.1	1,847.8	62.020	
3,400.0	3,218.1	2,493.9	2,254.8	19.7	17.9	-138.01	773.4	-623.2	1,951.4	1,920.3	62.733	
3,500.0	3,311.0	2,561.9	2,311.0	20.4	18.6	-137.95	803.6	-646.4	2,024.8	1,992.9	63.389	
3,600.0	3,403.8	2,629.8	2,367.3	21.1	19.3	-137.89	833.8	-669.6	2,098.2	2,065.4	64.003	
3,700.0	3,496.7	2,697.7	2,423.6	21.7	20.0	-137.84	864.0	-692.9	2,171.5	2,137.9	64.578	
3,800.0	3,589.5	2,765.7	2,479.8	22.4	20.7	-137.79	894.2	-716.1	2,244.9	2,210.4	65.108	
3,900.0	3,682.4	2,833.6	2,536.1	23.1	21.5	-137.75	924.4	-739.3	2,318.2	2,282.9	65.607	
4,000.0	3,775.3	2,901.6	2,592.3	23.8	22.2	-137.70	954.6	-762.5	2,391.6	2,355.4	66.075	
4,100.0	3,868.1	2,969.5	2,648.6	24.5	22.9	-137.66	984.9	-785.8	2,465.0	2,427.9	66.509	
4,200.0	3,961.0	3,037.5	2,704.8	25.2	23.6	-137.62	1,015.1	-809.0	2,538.3	2,500.4	66.918	
4,300.0	4,053.8	3,105.4	2,761.1	25.9	24.3	-137.59	1,045.3	-832.2	2,611.7	2,572.9	67.303	
4,400.0	4,146.7	3,173.4	2,817.3	26.5	25.1	-137.55	1,075.5	-855.4	2,685.1	2,645.4	67.663	
4,500.0	4,239.5	3,241.3	2,873.6	27.2	25.8	-137.52	1,105.7	-878.7	2,758.4	2,717.9	68.002	
4,600.0	4,332.4	3,309.2	2,929.8	27.9	26.5	-137.49	1,135.9	-901.9	2,831.8	2,790.4	68.322	
4,700.0	4,425.2	3,377.2	2,986.1	28.6	27.2	-137.46	1,166.1	-925.1	2,905.2	2,862.8	68.622	
4,800.0	4,518.1	3,445.1	3,042.3	29.3	27.9	-137.43	1,196.3	-948.3	2,978.5	2,935.3	68.906	
4,900.0	4,610.9	3,513.1	3,098.6	30.0	28.7	-137.41	1,226.5	-971.6	3,051.9	3,007.8	69.175	
5,000.0	4,703.8	3,581.0	3,154.8	30.7	29.4	-137.38	1,256.7	-994.8	3,125.3	3,080.3	69.428	

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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		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	4,796.7	3,649.0	3,211.1	31.4	30.1	-137.36	1,286.9	-1,018.0	3,198.6	3,152.7	69.667		
5,200.0	4,889.5	3,716.9	3,267.3	32.1	30.8	-137.33	1,317.1	-1,041.2	3,272.0	3,225.2	69.894		
5,300.0	4,982.4	3,784.9	3,323.6	32.7	31.6	-137.31	1,347.4	-1,064.5	3,345.4	3,297.7	70.108		
5,400.0	5,075.2	3,852.8	3,379.9	33.4	32.3	-137.29	1,377.6	-1,087.7	3,418.7	3,370.1	70.312		
5,500.0	5,168.1	3,920.7	3,436.1	34.1	33.0	-137.27	1,407.8	-1,110.9	3,492.1	3,442.6	70.505		
5,600.0	5,260.9	3,988.7	3,492.4	34.8	33.7	-137.25	1,438.0	-1,134.2	3,565.5	3,515.0	70.687		
5,700.0	5,354.5	4,057.7	3,549.5	35.5	34.5	-138.89	1,468.7	-1,157.7	3,637.8	3,586.4	70.831		
5,800.0	5,449.5	4,128.9	3,608.4	36.0	35.2	-140.37	1,500.3	-1,182.1	3,707.8	3,655.5	70.893		
5,900.0	5,545.8	4,202.1	3,669.1	36.5	36.0	-141.65	1,532.9	-1,207.1	3,775.5	3,722.2	70.917		
6,000.0	5,643.2	4,277.3	3,731.3	36.9	36.8	-142.75	1,566.3	-1,232.8	3,840.5	3,786.4	70.908		
6,100.0	5,741.5	4,354.2	3,795.0	37.2	37.6	-143.69	1,600.5	-1,259.1	3,903.0	3,847.9	70.872		
6,200.0	5,840.5	4,432.8	3,860.0	37.5	38.5	-144.50	1,635.4	-1,286.0	3,962.7	3,906.7	70.816		
6,300.0	5,940.0	4,512.8	3,926.3	37.7	39.3	-145.17	1,671.0	-1,313.3	4,019.6	3,962.8	70.746		
6,400.0	6,039.8	4,594.1	3,993.6	37.8	40.2	-145.73	1,707.2	-1,341.1	4,073.6	4,016.0	70.674		
6,500.0	6,139.8	4,676.6	4,061.9	37.8	41.1	-68.14	1,743.8	-1,369.3	4,124.8	4,066.5	70.790		
6,600.0	6,239.8	4,759.4	4,130.5	37.9	41.9	-67.76	1,780.7	-1,397.6	4,175.2	4,116.4	70.948		
6,700.0	6,339.8	4,842.2	4,199.0	37.9	42.8	-67.40	1,817.5	-1,425.9	4,225.8	4,166.4	71.102		
6,800.0	6,439.8	4,925.0	4,267.6	37.9	43.7	-67.04	1,854.3	-1,454.2	4,276.5	4,216.5	71.255		
6,900.0	6,539.8	5,007.8	4,336.1	38.0	44.6	-66.69	1,891.1	-1,482.5	4,327.4	4,266.8	71.406		
7,000.0	6,639.8	7,485.8	6,639.8	38.0	57.7	-62.17	2,449.4	-1,911.8	4,353.0	4,275.8	56.383		
7,100.0	6,739.8	7,585.8	6,739.8	38.0	57.7	-62.17	2,449.4	-1,911.8	4,353.0	4,275.8	56.348		
7,200.0	6,839.8	7,685.8	6,839.8	38.0	57.7	-62.17	2,449.4	-1,911.8	4,353.0	4,275.7	56.314		
7,300.0	6,939.8	7,785.8	6,939.8	38.1	57.7	-62.17	2,449.4	-1,911.8	4,353.0	4,275.7	56.279		
7,400.0	7,039.8	7,885.8	7,039.8	38.1	57.8	-62.17	2,449.4	-1,911.8	4,353.0	4,275.6	56.245		
7,500.0	7,139.8	7,985.8	7,139.8	38.1	57.8	-62.17	2,449.4	-1,911.8	4,353.0	4,275.6	56.210		
7,600.0	7,239.8	8,085.8	7,239.8	38.2	57.8	-62.17	2,449.4	-1,911.8	4,353.0	4,275.5	56.174		
7,700.0	7,339.8	8,185.8	7,339.8	38.2	57.8	-62.17	2,449.4	-1,911.8	4,353.0	4,275.5	56.139		
7,800.0	7,439.8	8,285.8	7,439.8	38.2	57.8	-62.17	2,449.4	-1,911.8	4,353.0	4,275.4	56.103		
7,900.0	7,539.8	8,385.8	7,539.8	38.2	57.8	-62.17	2,449.4	-1,911.8	4,353.0	4,275.4	56.068		
8,000.0	7,639.8	8,485.8	7,639.8	38.3	57.9	-62.17	2,449.4	-1,911.8	4,353.0	4,275.3	56.032		
8,100.0	7,739.8	8,585.8	7,739.8	38.3	57.9	-62.17	2,449.4	-1,911.8	4,353.0	4,275.3	55.996		
8,200.0	7,839.8	8,685.8	7,839.8	38.3	57.9	-62.17	2,449.4	-1,911.8	4,353.0	4,275.2	55.959		
8,250.2	7,890.0	8,736.0	7,890.0	38.3	57.9	-62.17	2,449.4	-1,911.8	4,353.0	4,275.2	55.945		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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	-54.87	40.7	-57.8	70.7					
100.0	100.0	100.0	100.0	0.8	0.8	-54.87	40.7	-57.8	70.7	69.1	44.631			
200.0	200.0	200.0	200.0	1.4	1.4	-54.87	40.7	-57.8	70.7	67.9	24.990	CC		
204.4	204.4	204.4	204.4	1.4	1.4	-132.72	40.7	-57.8	70.7	67.9	24.825	ES		
300.0	300.0	298.0	298.0	1.7	1.8	-133.02	41.0	-58.8	71.8	68.3	20.652			
400.0	399.9	394.6	394.4	2.7	3.2	-135.61	42.5	-63.4	79.0	73.4	14.205			
500.0	499.6	490.0	489.4	4.2	3.6	-139.56	45.6	-71.5	93.6	86.5	13.255			
600.0	598.9	583.6	582.3	5.3	4.3	-142.66	51.7	-81.8	115.5	106.8	13.218	SF		
700.0	697.6	674.7	672.2	6.2	5.1	-144.71	60.6	-93.9	144.5	134.1	13.911			
800.0	795.4	762.8	758.5	7.0	5.9	-145.94	72.0	-107.5	180.2	168.3	15.217			
900.0	892.3	847.5	840.7	7.8	6.6	-146.58	85.4	-122.4	222.1	209.0	16.946			
1,000.0	988.0	928.2	918.3	8.5	7.3	-146.80	100.6	-138.2	270.0	255.8	18.969			
1,100.0	1,082.3	1,000.0	986.8	9.2	7.8	-146.66	116.0	-153.5	323.5	308.3	21.344			
1,200.0	1,175.3	1,077.1	1,059.5	9.5	8.4	-146.88	134.5	-171.4	381.7	365.8	23.952			
1,300.0	1,268.2	1,146.9	1,124.5	9.8	8.8	-147.15	152.9	-188.7	442.2	425.6	26.676			
1,400.0	1,361.0	1,214.1	1,186.5	10.1	9.3	-147.18	172.2	-206.5	504.6	487.4	29.328			
1,500.0	1,453.9	1,279.0	1,245.4	10.4	9.7	-147.04	192.3	-224.5	568.7	550.9	31.924			
1,600.0	1,546.7	1,341.4	1,301.4	10.8	10.1	-146.80	212.8	-242.8	634.5	616.1	34.463			
1,700.0	1,639.6	1,400.0	1,353.3	11.1	10.5	-146.51	233.3	-260.8	701.9	682.9	37.001			
1,800.0	1,732.5	1,459.1	1,404.9	11.5	10.8	-146.16	255.1	-279.6	770.8	751.2	39.399			
1,900.0	1,825.3	1,514.5	1,452.6	11.9	11.1	-145.79	276.5	-297.9	841.1	821.0	41.879			
2,000.0	1,918.2	1,575.1	1,504.1	12.3	11.3	-145.37	300.8	-318.6	912.6	892.0	44.316			
2,100.0	2,011.0	1,644.5	1,563.0	12.7	11.6	-144.94	328.9	-342.4	984.4	963.2	46.331			
2,200.0	2,103.9	1,714.0	1,621.9	13.1	11.8	-144.57	357.0	-366.2	1,056.2	1,034.3	48.176			
2,300.0	2,196.7	1,783.4	1,680.7	13.5	12.1	-144.25	385.1	-390.1	1,128.1	1,105.4	49.859			
2,400.0	2,289.6	1,852.9	1,739.6	14.0	12.3	-143.96	413.2	-413.9	1,199.9	1,176.6	51.405			
2,500.0	2,382.4	1,922.3	1,798.5	14.4	12.6	-143.71	441.2	-437.7	1,271.7	1,247.7	52.826			
2,600.0	2,475.3	1,991.8	1,857.4	14.9	12.9	-143.48	469.3	-461.5	1,343.6	1,318.8	54.128			
2,700.0	2,568.1	2,061.2	1,916.3	15.3	13.3	-143.28	497.4	-485.3	1,415.5	1,389.9	55.344			
2,800.0	2,661.0	2,130.7	1,975.2	15.8	13.7	-143.10	525.5	-509.1	1,487.4	1,461.0	56.419			
2,900.0	2,753.9	2,200.1	2,034.1	16.3	14.2	-142.93	553.6	-532.9	1,559.2	1,532.1	57.452			
3,000.0	2,846.7	2,269.6	2,092.9	17.0	14.8	-142.78	581.6	-556.7	1,631.1	1,603.2	58.382			
3,100.0	2,939.6	2,339.0	2,151.8	17.6	15.5	-142.64	609.7	-580.6	1,703.0	1,674.3	59.257			
3,200.0	3,032.4	2,408.4	2,210.7	18.3	16.2	-142.51	637.8	-604.4	1,774.9	1,745.4	60.070			
3,300.0	3,125.3	2,477.9	2,269.6	19.0	16.8	-142.40	665.9	-628.2	1,846.8	1,816.5	60.816			
3,400.0	3,218.1	2,547.3	2,328.5	19.7	17.5	-142.29	693.9	-652.0	1,918.8	1,887.6	61.510			
3,500.0	3,311.0	2,616.8	2,387.4	20.4	18.2	-142.19	722.0	-675.8	1,990.7	1,958.6	62.158			
3,600.0	3,403.8	2,686.2	2,446.2	21.1	18.9	-142.09	750.1	-699.6	2,062.6	2,029.7	62.760			
3,700.0	3,496.7	2,755.7	2,505.1	21.7	19.5	-142.00	778.2	-723.4	2,134.5	2,100.8	63.320			
3,800.0	3,589.5	2,825.1	2,564.0	22.4	20.2	-141.92	806.3	-747.3	2,206.4	2,171.9	63.845			
3,900.0	3,682.4	2,894.6	2,622.9	23.1	20.9	-141.84	834.3	-771.1	2,278.3	2,242.9	64.335			
4,000.0	3,775.3	2,964.0	2,681.8	23.8	21.6	-141.77	862.4	-794.9	2,350.3	2,314.0	64.792			
4,100.0	3,868.1	3,033.5	2,740.7	24.5	22.3	-141.70	890.5	-818.7	2,422.2	2,385.1	65.221			
4,200.0	3,961.0	3,102.9	2,799.6	25.2	23.0	-141.64	918.6	-842.5	2,494.1	2,456.1	65.626			
4,300.0	4,053.8	3,172.4	2,858.4	25.9	23.7	-141.58	946.7	-866.3	2,566.0	2,527.2	66.003			
4,400.0	4,146.7	3,241.8	2,917.3	26.5	24.4	-141.52	974.7	-890.1	2,638.0	2,598.2	66.358			
4,500.0	4,239.5	3,311.3	2,976.2	27.2	25.0	-141.47	1,002.8	-913.9	2,709.9	2,669.3	66.694			
4,600.0	4,332.4	3,380.7	3,035.1	27.9	25.7	-141.42	1,030.9	-937.8	2,781.8	2,740.3	67.009			
4,700.0	4,425.2	3,450.1	3,094.0	28.6	26.4	-141.37	1,059.0	-961.6	2,853.8	2,811.4	67.306			
4,800.0	4,518.1	3,519.6	3,152.9	29.3	27.1	-141.32	1,087.0	-985.4	2,925.7	2,882.4	67.587			
4,900.0	4,610.9	3,589.0	3,211.7	30.0	27.8	-141.28	1,115.1	-1,009.2	2,997.6	2,953.5	67.852			

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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	
5,000.0	4,703.8	3,658.5	3,270.6	30.7	28.5	-141.24	1,143.2	-1,033.0	3,069.6	3,024.5	68.102		
5,100.0	4,796.7	3,727.9	3,329.5	31.4	29.2	-141.20	1,171.3	-1,056.8	3,141.5	3,095.5	68.340		
5,200.0	4,889.5	3,797.4	3,388.4	32.1	29.9	-141.16	1,199.4	-1,080.6	3,213.5	3,166.6	68.565		
5,300.0	4,982.4	3,866.8	3,447.3	32.7	30.6	-141.12	1,227.4	-1,104.4	3,285.4	3,237.6	68.778		
5,400.0	5,075.2	3,936.3	3,506.2	33.4	31.3	-141.09	1,255.5	-1,128.3	3,357.3	3,308.7	68.980		
5,500.0	5,168.1	4,005.7	3,565.1	34.1	32.0	-141.05	1,283.6	-1,152.1	3,429.3	3,379.7	69.172		
5,600.0	5,260.9	4,075.2	3,623.9	34.8	32.7	-141.02	1,311.7	-1,175.9	3,501.2	3,450.7	69.353		
5,700.0	5,354.5	4,145.7	3,683.8	35.5	33.4	-142.46	1,340.2	-1,200.1	3,572.0	3,520.6	69.490		
5,800.0	5,449.5	4,218.5	3,745.5	36.0	34.1	-143.75	1,369.6	-1,225.0	3,640.4	3,588.0	69.534		
5,900.0	5,545.8	4,293.4	3,809.0	36.5	34.9	-144.86	1,399.9	-1,250.7	3,706.1	3,652.8	69.532		
6,000.0	5,643.2	4,370.3	3,874.2	36.9	35.6	-145.80	1,431.0	-1,277.1	3,769.2	3,714.9	69.493		
6,100.0	5,741.5	4,449.0	3,940.9	37.2	36.4	-146.61	1,462.8	-1,304.1	3,829.4	3,774.3	69.421		
6,200.0	5,840.5	4,529.4	4,009.1	37.5	37.2	-147.29	1,495.3	-1,331.6	3,886.8	3,830.7	69.324		
6,300.0	5,940.0	4,611.3	4,078.6	37.7	38.1	-147.84	1,528.5	-1,359.7	3,941.1	3,884.2	69.210		
6,400.0	6,039.8	4,694.6	4,149.2	37.8	38.9	-148.30	1,562.1	-1,388.3	3,992.5	3,934.7	69.091		
6,500.0	6,139.8	4,779.1	4,220.8	37.8	39.8	-70.63	1,596.3	-1,417.3	4,040.8	3,982.4	69.169		
6,600.0	6,239.8	4,863.9	4,292.7	37.9	40.6	-70.27	1,630.6	-1,446.3	4,088.4	4,029.4	69.295		
6,700.0	6,339.8	4,948.7	4,364.6	37.9	41.5	-69.92	1,664.8	-1,475.4	4,136.1	4,076.5	69.417		
6,800.0	6,439.8	5,033.5	4,436.5	37.9	42.3	-69.57	1,699.1	-1,504.5	4,183.9	4,123.7	69.538		
6,900.0	6,539.8	7,278.2	6,539.8	38.0	53.7	-65.50	2,166.4	-1,900.8	4,218.3	4,142.8	55.872		
7,000.0	6,639.8	7,378.2	6,639.8	38.0	53.7	-65.50	2,166.4	-1,900.8	4,218.3	4,142.7	55.837		
7,100.0	6,739.8	7,478.2	6,739.8	38.0	53.7	-65.50	2,166.4	-1,900.8	4,218.3	4,142.7	55.802		
7,200.0	6,839.8	7,578.2	6,839.8	38.0	53.7	-65.50	2,166.4	-1,900.8	4,218.3	4,142.6	55.767		
7,300.0	6,939.8	7,678.2	6,939.8	38.1	53.8	-65.50	2,166.4	-1,900.8	4,218.3	4,142.6	55.732		
7,400.0	7,039.8	7,778.2	7,039.8	38.1	53.8	-65.50	2,166.4	-1,900.8	4,218.3	4,142.5	55.696		
7,500.0	7,139.8	7,878.2	7,139.8	38.1	53.8	-65.50	2,166.4	-1,900.8	4,218.3	4,142.5	55.660		
7,600.0	7,239.8	7,978.2	7,239.8	38.2	53.8	-65.50	2,166.4	-1,900.8	4,218.3	4,142.4	55.624		
7,700.0	7,339.8	8,078.2	7,339.8	38.2	53.8	-65.50	2,166.4	-1,900.8	4,218.3	4,142.4	55.588		
7,800.0	7,439.8	8,178.2	7,439.8	38.2	53.9	-65.50	2,166.4	-1,900.8	4,218.3	4,142.3	55.551		
7,900.0	7,539.8	8,278.2	7,539.8	38.2	53.9	-65.50	2,166.4	-1,900.8	4,218.3	4,142.3	55.515		
8,000.0	7,639.8	8,378.2	7,639.8	38.3	53.9	-65.50	2,166.4	-1,900.8	4,218.3	4,142.2	55.478		
8,100.0	7,739.8	8,478.2	7,739.8	38.3	53.9	-65.50	2,166.4	-1,900.8	4,218.3	4,142.2	55.441		
8,200.0	7,839.8	8,578.2	7,839.8	38.3	53.9	-65.50	2,166.4	-1,900.8	4,218.3	4,142.1	55.405		
8,250.2	7,890.0	8,587.4	7,849.0	38.3	53.9	-65.50	2,166.4	-1,900.8	4,218.5	4,142.3	55.363		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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	-56.20	33.8	-50.5	60.8				
100.0	100.0	100.0	100.0	0.8	0.8	-56.20	33.8	-50.5	60.8	59.2	38.398		
200.0	200.0	200.0	200.0	1.4	1.4	-56.20	33.8	-50.5	60.8	58.0	21.500	CC	
200.4	200.4	200.4	200.4	1.4	1.4	-56.20	33.8	-50.5	60.8	58.0	21.480		
300.0	300.0	299.1	299.1	1.7	1.7	-134.19	33.9	-50.8	61.2	57.8	18.195	ES	
400.0	399.9	396.2	396.2	2.7	2.8	-136.75	35.1	-54.1	67.0	61.9	12.936		
500.0	499.6	492.1	491.7	4.2	4.1	-141.18	37.7	-61.1	80.5	72.8	10.494	SF	
600.0	598.9	586.0	584.9	5.3	4.5	-145.55	41.7	-71.5	101.9	92.9	11.248		
700.0	697.6	677.5	675.4	6.2	5.0	-148.41	48.2	-84.1	130.8	120.3	12.521		
800.0	795.4	766.1	762.3	7.0	5.8	-150.01	57.2	-98.5	166.5	154.7	14.038		
900.0	892.3	851.0	845.0	7.8	6.5	-150.80	68.3	-114.1	208.7	195.6	15.864		
1,000.0	988.0	932.0	923.2	8.5	7.1	-151.06	81.1	-130.8	257.0	242.7	17.968		
1,100.0	1,082.3	1,008.6	996.5	9.2	7.7	-150.97	95.3	-148.2	310.9	295.6	20.284		
1,200.0	1,175.3	1,081.1	1,065.1	9.5	8.2	-151.07	110.5	-166.0	369.7	353.6	23.088		
1,300.0	1,268.2	1,150.8	1,130.3	9.8	8.7	-151.24	126.7	-184.3	430.7	414.1	25.879		
1,400.0	1,361.0	1,218.0	1,192.5	10.1	9.1	-151.17	143.8	-203.1	493.6	476.3	28.596		
1,500.0	1,453.9	1,282.7	1,251.7	10.4	9.6	-150.96	161.7	-222.3	558.2	540.3	31.254		
1,600.0	1,546.7	1,345.0	1,307.9	10.8	10.0	-150.67	180.1	-241.7	624.4	606.0	33.857		
1,700.0	1,639.6	1,400.0	1,357.0	11.1	10.3	-150.35	197.4	-259.6	692.3	673.3	36.576		
1,800.0	1,732.5	1,462.4	1,411.9	11.5	10.6	-149.93	218.2	-280.7	761.6	742.1	39.058		
1,900.0	1,825.3	1,528.3	1,469.3	11.9	10.9	-149.48	241.1	-303.8	832.0	811.9	41.466		
2,000.0	1,918.2	1,599.1	1,530.8	12.3	11.1	-149.07	265.7	-328.6	902.5	881.8	43.607		
2,100.0	2,011.0	1,669.8	1,592.3	12.7	11.3	-148.71	290.3	-353.4	973.0	951.7	45.567		
2,200.0	2,103.9	1,740.6	1,653.9	13.1	11.6	-148.40	314.9	-378.1	1,043.6	1,021.6	47.372		
2,300.0	2,196.7	1,811.4	1,715.4	13.5	11.9	-148.14	339.5	-402.9	1,114.2	1,091.4	49.032		
2,400.0	2,289.6	1,882.1	1,777.0	14.0	12.1	-147.90	364.1	-427.7	1,184.7	1,161.3	50.557		
2,500.0	2,382.4	1,952.9	1,838.5	14.4	12.4	-147.69	388.7	-452.5	1,255.3	1,231.2	51.963		
2,600.0	2,475.3	2,023.6	1,900.0	14.9	12.8	-147.50	413.3	-477.3	1,325.9	1,301.0	53.259		
2,700.0	2,568.1	2,094.4	1,961.6	15.3	13.1	-147.33	438.0	-502.1	1,396.5	1,370.9	54.448		
2,800.0	2,661.0	2,165.2	2,023.1	15.8	13.5	-147.18	462.6	-526.8	1,467.2	1,440.7	55.547		
2,900.0	2,753.9	2,235.9	2,084.6	16.3	14.0	-147.04	487.2	-551.6	1,537.8	1,510.6	56.549		
3,000.0	2,846.7	2,306.7	2,146.2	17.0	14.5	-146.91	511.8	-576.4	1,608.4	1,580.4	57.503		
3,100.0	2,939.6	2,377.4	2,207.7	17.6	15.1	-146.80	536.4	-601.2	1,679.0	1,650.2	58.372		
3,200.0	3,032.4	2,448.2	2,269.3	18.3	15.7	-146.69	561.0	-626.0	1,749.6	1,720.1	59.181		
3,300.0	3,125.3	2,519.0	2,330.8	19.0	16.4	-146.59	585.6	-650.8	1,820.3	1,789.9	59.936		
3,400.0	3,218.1	2,589.7	2,392.3	19.7	17.0	-146.50	610.2	-675.6	1,890.9	1,859.7	60.636		
3,500.0	3,311.0	2,660.5	2,453.9	20.4	17.6	-146.42	634.9	-700.3	1,961.5	1,929.5	61.286		
3,600.0	3,403.8	2,731.2	2,515.4	21.1	18.3	-146.34	659.5	-725.1	2,032.2	1,999.3	61.895		
3,700.0	3,496.7	2,802.0	2,576.9	21.7	18.9	-146.27	684.1	-749.9	2,102.8	2,069.1	62.464		
3,800.0	3,589.5	2,872.7	2,638.5	22.4	19.6	-146.20	708.7	-774.7	2,173.4	2,138.9	62.994		
3,900.0	3,682.4	2,943.5	2,700.0	23.1	20.2	-146.13	733.3	-799.5	2,244.1	2,208.7	63.490		
4,000.0	3,775.3	3,014.3	2,761.5	23.8	20.9	-146.07	757.9	-824.3	2,314.7	2,278.5	63.957		
4,100.0	3,868.1	3,085.0	2,823.1	24.5	21.5	-146.02	782.5	-849.0	2,385.4	2,348.3	64.394		
4,200.0	3,961.0	3,155.8	2,884.6	25.2	22.2	-145.96	807.2	-873.8	2,456.0	2,418.1	64.805		
4,300.0	4,053.8	3,226.5	2,946.2	25.9	22.8	-145.91	831.8	-898.6	2,526.7	2,487.9	65.191		
4,400.0	4,146.7	3,297.3	3,007.7	26.5	23.5	-145.86	856.4	-923.4	2,597.3	2,557.7	65.556		
4,500.0	4,239.5	3,368.1	3,069.2	27.2	24.2	-145.82	881.0	-948.2	2,668.0	2,627.5	65.898		
4,600.0	4,332.4	3,438.8	3,130.8	27.9	24.8	-145.78	905.6	-973.0	2,738.6	2,697.2	66.222		
4,700.0	4,425.2	3,509.6	3,192.3	28.6	25.5	-145.74	930.2	-997.7	2,809.3	2,767.0	66.528		
4,800.0	4,518.1	3,580.3	3,253.8	29.3	26.1	-145.70	954.8	-1,022.5	2,879.9	2,836.8	66.816		
4,900.0	4,610.9	3,651.1	3,315.4	30.0	26.8	-145.66	979.4	-1,047.3	2,950.6	2,906.6	67.089		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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	
5,000.0	4,703.8	3,721.9	3,376.9	30.7	27.4	-145.63	1,004.1	-1,072.1	3,021.2	2,976.3	67.348		
5,100.0	4,796.7	3,792.6	3,438.5	31.4	28.1	-145.59	1,028.7	-1,096.9	3,091.9	3,046.1	67.594		
5,200.0	4,889.5	3,863.4	3,500.0	32.1	28.8	-145.56	1,053.3	-1,121.7	3,162.5	3,115.9	67.826		
5,300.0	4,982.4	3,934.1	3,561.5	32.7	29.4	-145.53	1,077.9	-1,146.4	3,233.2	3,185.6	68.047		
5,400.0	5,075.2	4,004.9	3,623.1	33.4	30.1	-145.50	1,102.5	-1,171.2	3,303.8	3,255.4	68.257		
5,500.0	5,168.1	4,075.6	3,684.6	34.1	30.7	-145.47	1,127.1	-1,196.0	3,374.5	3,325.2	68.456		
5,600.0	5,260.9	4,146.4	3,746.1	34.8	31.4	-145.44	1,151.7	-1,220.8	3,445.1	3,394.9	68.644		
5,700.0	5,354.5	4,218.3	3,808.7	35.5	32.1	-146.89	1,176.7	-1,246.0	3,514.6	3,463.5	68.781		
5,800.0	5,449.5	4,292.6	3,873.3	36.0	32.8	-147.80	1,202.6	-1,272.0	3,581.4	3,529.3	68.808		
5,900.0	5,545.8	4,369.1	3,939.8	36.5	33.5	-148.75	1,229.2	-1,298.8	3,645.4	3,592.4	68.780		
6,000.0	5,643.2	4,447.6	4,008.1	36.9	34.2	-149.56	1,256.5	-1,326.3	3,706.5	3,652.5	68.707		
6,100.0	5,741.5	4,528.1	4,078.1	37.2	35.0	-150.23	1,284.5	-1,354.5	3,764.6	3,709.7	68.594		
6,200.0	5,840.5	4,610.4	4,149.7	37.5	35.7	-150.79	1,313.1	-1,383.3	3,819.7	3,763.9	68.449		
6,300.0	5,940.0	4,694.3	4,222.6	37.7	36.5	-151.25	1,342.3	-1,412.7	3,871.6	3,814.9	68.282		
6,400.0	6,039.8	4,779.7	4,296.9	37.8	37.3	-151.61	1,372.0	-1,442.6	3,920.2	3,862.7	68.106		
6,500.0	6,139.8	4,866.3	4,372.2	37.8	38.1	-73.89	1,402.1	-1,473.0	3,965.7	3,907.5	68.140		
6,600.0	6,239.8	4,953.3	4,447.8	37.9	38.9	-73.56	1,432.4	-1,503.4	4,010.3	3,951.6	68.228		
6,700.0	6,339.8	5,040.2	4,523.5	37.9	39.8	-73.24	1,462.6	-1,533.9	4,055.1	3,995.7	68.313		
6,800.0	6,439.8	5,127.2	4,599.1	37.9	40.6	-72.92	1,492.9	-1,564.3	4,099.9	4,040.0	68.397		
6,900.0	6,539.8	7,169.9	6,539.8	38.0	49.7	-69.75	1,837.2	-1,911.0	4,102.3	4,028.7	55.773		
7,000.0	6,639.8	7,269.9	6,639.8	38.0	49.7	-69.75	1,837.2	-1,911.0	4,102.3	4,028.7	55.737		
7,100.0	6,739.8	7,369.9	6,739.8	38.0	49.7	-69.75	1,837.2	-1,911.0	4,102.3	4,028.6	55.700		
7,200.0	6,839.8	7,469.9	6,839.8	38.0	49.8	-69.75	1,837.2	-1,911.0	4,102.3	4,028.6	55.663		
7,300.0	6,939.8	7,569.9	6,939.8	38.1	49.8	-69.75	1,837.2	-1,911.0	4,102.3	4,028.5	55.626		
7,400.0	7,039.8	7,669.9	7,039.8	38.1	49.8	-69.75	1,837.2	-1,911.0	4,102.3	4,028.5	55.588		
7,500.0	7,139.8	7,769.9	7,139.8	38.1	49.8	-69.75	1,837.2	-1,911.0	4,102.3	4,028.4	55.551		
7,600.0	7,239.8	7,869.9	7,239.8	38.2	49.8	-69.75	1,837.2	-1,911.0	4,102.3	4,028.4	55.513		
7,700.0	7,339.8	7,969.9	7,339.8	38.2	49.9	-69.75	1,837.2	-1,911.0	4,102.3	4,028.3	55.475		
7,800.0	7,439.8	8,069.9	7,439.8	38.2	49.9	-69.75	1,837.2	-1,911.0	4,102.3	4,028.3	55.437		
7,900.0	7,539.8	8,169.9	7,539.8	38.2	49.9	-69.75	1,837.2	-1,911.0	4,102.3	4,028.2	55.399		
8,000.0	7,639.8	8,269.9	7,639.8	38.3	49.9	-69.75	1,837.2	-1,911.0	4,102.3	4,028.2	55.360		
8,100.0	7,739.8	8,369.9	7,739.8	38.3	50.0	-69.75	1,837.2	-1,911.0	4,102.3	4,028.1	55.322		
8,200.0	7,839.8	8,469.9	7,839.8	38.3	50.0	-69.75	1,837.2	-1,911.0	4,102.3	4,028.1	55.283		
8,250.2	7,890.0	8,520.1	7,890.0	38.3	50.0	-69.75	1,837.2	-1,911.0	4,102.3	4,028.1	55.267		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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	-58.04	27.0	-43.2	51.0			
100.0	100.0	100.0	100.0	0.8	0.8	-58.04	27.0	-43.2	51.0	49.4	32.174	
200.0	200.0	200.0	200.0	1.4	1.4	-58.04	27.0	-43.2	51.0	48.1	18.015	CC
200.0	200.0	200.0	200.0	1.4	1.4	-58.04	27.0	-43.2	51.0	48.1	18.014	
300.0	300.0	300.0	300.0	1.7	1.9	-135.99	27.0	-43.2	51.1	47.5	14.325	ES
400.0	399.9	398.0	398.0	2.7	2.3	-138.80	27.2	-44.6	54.8	50.1	11.566	
500.0	499.6	494.1	493.9	4.2	3.9	-144.52	28.3	-50.6	66.9	59.4	8.922	SF
600.0	598.9	587.7	586.9	5.3	5.1	-150.21	30.1	-61.0	88.1	78.3	8.979	
700.0	697.6	679.6	677.7	6.2	5.5	-154.03	33.6	-74.7	117.6	106.5	10.559	
800.0	795.4	768.4	764.9	7.0	6.1	-155.89	39.7	-90.1	154.1	141.7	12.372	
900.0	892.3	853.6	848.0	7.8	6.7	-156.64	47.9	-106.9	197.1	183.4	14.403	
1,000.0	988.0	934.8	926.6	8.5	7.3	-156.77	58.0	-124.8	246.2	231.4	16.646	
1,100.0	1,082.3	1,011.6	1,000.2	9.2	7.8	-156.52	69.6	-143.3	300.9	285.1	19.068	
1,200.0	1,175.3	1,084.2	1,069.1	9.5	8.3	-156.41	82.2	-162.2	360.4	344.0	21.947	
1,300.0	1,268.2	1,153.9	1,134.7	9.8	8.7	-156.34	96.0	-181.6	422.1	405.1	24.808	
1,400.0	1,361.0	1,221.2	1,197.3	10.1	9.1	-156.09	110.8	-201.6	485.6	468.0	27.593	
1,500.0	1,453.9	1,286.1	1,256.8	10.4	9.5	-155.73	126.3	-221.9	550.7	532.5	30.317	
1,600.0	1,546.7	1,348.5	1,313.4	10.8	9.9	-155.30	142.6	-242.4	617.4	598.7	32.983	
1,700.0	1,639.6	1,408.5	1,367.2	11.1	10.3	-154.83	159.4	-263.0	685.7	666.4	35.652	
1,800.0	1,732.5	1,479.1	1,430.1	11.5	10.5	-154.30	179.9	-287.9	754.8	735.0	38.159	
1,900.0	1,825.3	1,551.2	1,494.2	11.9	10.7	-153.84	200.8	-313.3	824.0	803.6	40.439	
2,000.0	1,918.2	1,623.3	1,558.3	12.3	11.0	-153.46	221.8	-338.7	893.2	872.2	42.549	
2,100.0	2,011.0	1,695.3	1,622.4	12.7	11.2	-153.13	242.7	-364.1	962.4	940.8	44.492	
2,200.0	2,103.9	1,767.4	1,686.5	13.1	11.5	-152.84	263.7	-389.6	1,031.6	1,009.3	46.280	
2,300.0	2,196.7	1,839.5	1,750.6	13.5	11.8	-152.59	284.6	-415.0	1,100.9	1,077.9	47.932	
2,400.0	2,289.6	1,911.5	1,814.7	14.0	12.1	-152.37	305.6	-440.4	1,170.1	1,146.5	49.456	
2,500.0	2,382.4	1,983.6	1,878.9	14.4	12.4	-152.18	326.5	-465.8	1,239.4	1,215.0	50.862	
2,600.0	2,475.3	2,055.7	1,943.0	14.9	12.7	-152.00	347.5	-491.2	1,308.6	1,283.6	52.167	
2,700.0	2,568.1	2,127.8	2,007.1	15.3	13.1	-151.85	368.4	-516.6	1,377.9	1,352.1	53.349	
2,800.0	2,661.0	2,199.8	2,071.2	15.8	13.5	-151.71	389.4	-542.0	1,447.2	1,420.6	54.471	
2,900.0	2,753.9	2,271.9	2,135.3	16.3	14.0	-151.58	410.3	-567.4	1,516.5	1,489.1	55.495	
3,000.0	2,846.7	2,344.0	2,199.4	17.0	14.5	-151.46	431.2	-592.8	1,585.7	1,557.7	56.451	
3,100.0	2,939.6	2,416.1	2,263.5	17.6	15.0	-151.35	452.2	-618.2	1,655.0	1,626.2	57.340	
3,200.0	3,032.4	2,488.1	2,327.6	18.3	15.5	-151.25	473.1	-643.6	1,724.3	1,694.7	58.165	
3,300.0	3,125.3	2,560.2	2,391.7	19.0	16.1	-151.16	494.1	-669.1	1,793.6	1,763.2	58.931	
3,400.0	3,218.1	2,632.3	2,455.9	19.7	16.7	-151.07	515.0	-694.5	1,862.9	1,831.7	59.648	
3,500.0	3,311.0	2,704.4	2,520.0	20.4	17.3	-151.00	536.0	-719.9	1,932.2	1,900.2	60.317	
3,600.0	3,403.8	2,776.4	2,584.1	21.1	17.9	-150.92	556.9	-745.3	2,001.5	1,968.7	60.940	
3,700.0	3,496.7	2,848.5	2,648.2	21.7	18.5	-150.85	577.9	-770.7	2,070.8	2,037.1	61.523	
3,800.0	3,589.5	2,920.6	2,712.3	22.4	19.1	-150.79	598.8	-796.1	2,140.1	2,105.6	62.071	
3,900.0	3,682.4	2,992.6	2,776.4	23.1	19.7	-150.73	619.8	-821.5	2,209.4	2,174.1	62.584	
4,000.0	3,775.3	3,064.7	2,840.5	23.8	20.3	-150.67	640.7	-846.9	2,278.7	2,242.6	63.065	
4,100.0	3,868.1	3,136.8	2,904.6	24.5	20.9	-150.62	661.7	-872.3	2,348.0	2,311.0	63.517	
4,200.0	3,961.0	3,208.9	2,968.7	25.2	21.5	-150.57	682.6	-897.7	2,417.3	2,379.5	63.944	
4,300.0	4,053.8	3,280.9	3,032.8	25.9	22.1	-150.52	703.5	-923.1	2,486.6	2,448.0	64.344	
4,400.0	4,146.7	3,353.0	3,097.0	26.5	22.7	-150.48	724.5	-948.5	2,555.9	2,516.4	64.722	
4,500.0	4,239.5	3,425.1	3,161.1	27.2	23.3	-150.44	745.4	-974.0	2,625.2	2,584.9	65.079	
4,600.0	4,332.4	3,497.2	3,225.2	27.9	23.9	-150.40	766.4	-999.4	2,694.6	2,653.4	65.416	
4,700.0	4,425.2	3,569.2	3,289.3	28.6	24.5	-150.36	787.3	-1,024.8	2,763.9	2,721.8	65.734	
4,800.0	4,518.1	3,641.3	3,353.4	29.3	25.2	-150.32	808.3	-1,050.2	2,833.2	2,790.3	66.035	
4,900.0	4,610.9	3,713.4	3,417.5	30.0	25.8	-150.29	829.2	-1,075.6	2,902.5	2,858.7	66.321	

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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		Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance		Separation Factor	Warning	
				Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,703.8	3,785.4	3,481.6	30.7	26.4	-150.25	850.2	-1,101.0	2,971.8	2,927.2	66.592		
5,100.0	4,796.7	3,857.5	3,545.7	31.4	27.0	-150.22	871.1	-1,126.4	3,041.1	2,995.6	66.848		
5,200.0	4,889.5	3,929.6	3,609.8	32.1	27.6	-150.19	892.1	-1,151.8	3,110.4	3,064.1	67.092		
5,300.0	4,982.4	4,001.7	3,674.0	32.7	28.2	-150.16	913.0	-1,177.2	3,179.7	3,132.5	67.324		
5,400.0	5,075.2	4,073.7	3,738.1	33.4	28.8	-150.14	934.0	-1,202.6	3,249.0	3,200.9	67.544		
5,500.0	5,168.1	4,145.8	3,802.2	34.1	29.5	-150.11	954.9	-1,228.0	3,318.4	3,269.4	67.753		
5,600.0	5,260.9	4,217.9	3,866.3	34.8	30.1	-150.09	975.9	-1,253.4	3,387.7	3,337.8	67.952		
5,700.0	5,354.5	4,291.1	3,931.4	35.5	30.7	-151.14	997.1	-1,279.3	3,455.7	3,404.9	68.091		
5,800.0	5,449.5	4,366.8	3,998.8	36.0	31.4	-152.07	1,019.1	-1,306.0	3,520.9	3,469.2	68.104		
5,900.0	5,545.8	4,444.9	4,068.2	36.5	32.0	-152.86	1,041.8	-1,333.5	3,583.1	3,530.4	68.054		
6,000.0	5,643.2	4,525.0	4,139.5	36.9	32.7	-153.52	1,065.1	-1,361.7	3,642.2	3,588.6	67.951		
6,100.0	5,741.5	4,607.2	4,212.6	37.2	33.4	-154.07	1,089.0	-1,390.7	3,698.2	3,643.7	67.802		
6,200.0	5,840.5	4,691.3	4,287.4	37.5	34.1	-154.52	1,113.4	-1,420.3	3,751.0	3,695.5	67.614		
6,300.0	5,940.0	4,777.0	4,363.6	37.7	34.9	-154.88	1,138.4	-1,450.6	3,800.3	3,744.0	67.399		
6,400.0	6,039.8	4,864.3	4,441.3	37.8	35.6	-155.15	1,163.7	-1,481.3	3,846.3	3,789.1	67.172		
6,500.0	6,139.8	4,952.9	4,520.1	37.8	36.4	-77.38	1,189.5	-1,512.6	3,888.9	3,831.0	67.167		
6,600.0	6,239.8	5,041.8	4,599.2	37.9	37.2	-77.09	1,215.3	-1,543.9	3,930.6	3,872.2	67.224		
6,700.0	6,339.8	5,130.8	4,678.3	37.9	37.9	-76.80	1,241.2	-1,575.3	3,972.4	3,913.4	67.278		
6,800.0	6,439.8	5,220.0	4,759.8	37.9	38.6	-76.51	1,267.1	-1,606.7	4,013.2	3,954.2	67.332		
6,900.0	6,539.8	5,309.0	4,840.8	38.0	39.3	-76.22	1,293.0	-1,638.1	4,053.0	3,995.0	67.386		
7,000.0	6,639.8	5,398.2	4,921.8	38.0	40.0	-75.93	1,318.9	-1,669.5	4,092.8	4,035.8	67.440		
7,100.0	6,739.8	5,487.4	5,002.8	38.0	40.7	-75.64	1,344.8	-1,700.9	4,132.6	4,076.6	67.494		
7,200.0	6,839.8	5,576.6	5,083.8	38.0	41.4	-75.35	1,370.7	-1,732.3	4,172.4	4,117.4	67.548		
7,300.0	6,939.8	5,665.8	5,164.8	38.1	42.1	-75.06	1,396.6	-1,763.7	4,212.2	4,158.2	67.602		
7,400.0	7,039.8	5,755.0	5,245.8	38.1	42.8	-74.77	1,422.5	-1,795.1	4,252.0	4,199.0	67.656		
7,500.0	7,139.8	5,844.2	5,326.8	38.1	43.5	-74.48	1,448.4	-1,826.5	4,291.8	4,239.8	67.710		
7,600.0	7,239.8	5,933.4	5,407.8	38.2	44.2	-74.19	1,474.3	-1,857.9	4,331.6	4,280.6	67.764		
7,700.0	7,339.8	6,022.6	5,488.8	38.2	44.9	-73.90	1,500.2	-1,889.3	4,371.4	4,321.4	67.818		
7,800.0	7,439.8	6,111.8	5,569.8	38.2	45.6	-73.61	1,526.1	-1,920.7	4,411.2	4,362.2	67.872		
7,900.0	7,539.8	6,201.0	5,650.8	38.2	46.3	-73.32	1,552.0	-1,952.1	4,451.0	4,403.0	67.926		
8,000.0	7,639.8	6,290.2	5,731.8	38.3	47.0	-73.03	1,577.9	-1,983.5	4,490.8	4,443.8	67.980		
8,100.0	7,739.8	6,379.4	5,812.8	38.3	47.7	-72.74	1,603.8	-2,014.9	4,530.6	4,484.6	68.034		
8,114.6	7,754.4	6,398.2	5,834.0	38.3	47.8	-72.72	1,608.0	-2,018.0	4,535.0	4,488.0	68.040		
8,200.0	7,839.8	6,467.6	5,913.8	38.3	48.4	-72.43	1,633.7	-2,049.4	4,574.8	4,528.8	68.094		
8,250.2	7,890.0	6,518.0	5,964.2	38.3	49.0	-72.14	1,659.4	-2,080.8	4,614.6	4,569.6	68.148		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-65.17	13.3	-28.7	31.6					
100.0	100.0	100.0	100.0	0.8	0.8	-65.17	13.3	-28.7	31.6	30.0	19.951			
200.0	200.0	200.0	200.0	1.4	1.4	-65.17	13.3	-28.7	31.6	28.8	11.171 CC			
204.4	204.4	204.4	204.4	1.4	1.4	-143.02	13.3	-28.7	31.6	28.8	11.074			
300.0	300.0	299.5	299.5	1.7	1.7	-143.36	13.3	-29.0	32.0	28.7	9.553 ES			
400.0	399.9	397.8	397.7	2.7	2.8	-148.05	13.6	-32.8	38.4	33.1	7.188			
500.0	499.6	494.7	494.3	4.2	4.2	-154.37	14.3	-40.6	53.1	45.0	6.601 SF			
600.0	598.9	589.2	588.1	5.3	4.9	-159.24	15.3	-52.2	76.2	66.4	7.749			
700.0	697.6	681.3	679.0	6.2	5.3	-161.67	18.0	-66.5	107.0	95.9	9.660			
800.0	795.4	770.1	766.2	7.0	5.9	-162.40	23.0	-82.8	144.7	132.3	11.656			
900.0	892.3	855.1	849.0	7.8	6.5	-162.33	30.0	-100.7	188.9	175.2	13.825			
1,000.0	988.0	935.8	926.9	8.5	7.1	-161.88	38.7	-119.6	239.2	224.4	16.184			
1,100.0	1,082.3	1,011.8	999.7	9.2	7.7	-161.24	48.6	-139.2	295.2	279.4	18.709			
1,200.0	1,175.3	1,083.4	1,067.5	9.5	8.2	-160.79	59.6	-159.3	356.1	339.7	21.683			
1,300.0	1,268.2	1,152.0	1,131.9	9.8	8.6	-160.47	71.5	-179.8	419.2	402.2	24.635			
1,400.0	1,361.0	1,218.0	1,193.1	10.1	9.1	-160.03	84.2	-200.9	484.0	466.4	27.493			
1,500.0	1,453.9	1,281.5	1,251.3	10.4	9.5	-159.55	97.7	-222.3	550.5	532.3	30.248			
1,600.0	1,546.7	1,349.9	1,313.4	10.8	9.9	-159.00	113.2	-246.4	618.4	599.6	32.883			
1,700.0	1,639.6	1,423.1	1,379.8	11.1	10.1	-158.51	129.9	-272.3	686.4	667.0	35.352			
1,800.0	1,732.5	1,496.3	1,446.2	11.5	10.4	-158.11	146.6	-298.1	754.4	734.4	37.728			
1,900.0	1,825.3	1,569.5	1,512.6	11.9	10.6	-157.78	163.3	-324.0	822.5	801.9	39.918			
2,000.0	1,918.2	1,642.7	1,579.0	12.3	10.9	-157.50	180.1	-349.9	890.5	869.3	41.945			
2,100.0	2,011.0	1,715.9	1,645.4	12.7	11.2	-157.26	196.8	-375.7	958.6	936.7	43.821			
2,200.0	2,103.9	1,789.1	1,711.8	13.1	11.5	-157.05	213.5	-401.6	1,026.7	1,004.2	45.553			
2,300.0	2,196.7	1,862.3	1,778.3	13.5	11.8	-156.87	230.2	-427.5	1,094.8	1,071.6	47.152			
2,400.0	2,289.6	1,935.5	1,844.7	14.0	12.1	-156.70	246.9	-453.3	1,162.9	1,139.0	48.634			
2,500.0	2,382.4	2,008.7	1,911.1	14.4	12.4	-156.56	263.6	-479.2	1,231.0	1,206.4	50.006			
2,600.0	2,475.3	2,081.9	1,977.5	14.9	12.7	-156.43	280.4	-505.1	1,299.1	1,273.7	51.275			
2,700.0	2,568.1	2,155.1	2,043.9	15.3	13.0	-156.32	297.1	-530.9	1,367.2	1,341.1	52.462			
2,800.0	2,661.0	2,228.3	2,110.3	15.8	13.4	-156.21	313.8	-556.8	1,435.3	1,408.5	53.540			
2,900.0	2,753.9	2,301.4	2,176.7	16.3	13.8	-156.11	330.5	-582.6	1,503.4	1,475.8	54.562			
3,000.0	2,846.7	2,374.6	2,243.1	17.0	14.2	-156.03	347.2	-608.5	1,571.5	1,543.2	55.504			
3,100.0	2,939.6	2,447.8	2,309.5	17.6	14.7	-155.95	363.9	-634.4	1,639.6	1,610.5	56.385			
3,200.0	3,032.4	2,521.0	2,375.9	18.3	15.2	-155.87	380.7	-660.2	1,707.7	1,677.9	57.207			
3,300.0	3,125.3	2,594.2	2,442.3	19.0	15.7	-155.81	397.4	-686.1	1,775.9	1,745.2	57.975			
3,400.0	3,218.1	2,667.4	2,508.7	19.7	16.3	-155.74	414.1	-712.0	1,844.0	1,812.6	58.690			
3,500.0	3,311.0	2,740.6	2,575.1	20.4	16.8	-155.68	430.8	-737.8	1,912.1	1,879.9	59.361			
3,600.0	3,403.8	2,813.8	2,641.5	21.1	17.4	-155.63	447.5	-763.7	1,980.2	1,947.2	59.991			
3,700.0	3,496.7	2,887.0	2,707.9	21.7	17.9	-155.58	464.2	-789.6	2,048.3	2,014.5	60.580			
3,800.0	3,589.5	2,960.2	2,774.3	22.4	18.5	-155.53	481.0	-815.4	2,116.5	2,081.8	61.134			
3,900.0	3,682.4	3,033.4	2,840.7	23.1	19.0	-155.49	497.7	-841.3	2,184.6	2,149.1	61.655			
4,000.0	3,775.3	3,106.6	2,907.1	23.8	19.6	-155.44	514.4	-867.1	2,252.7	2,216.4	62.146			
4,100.0	3,868.1	3,179.8	2,973.5	24.5	20.2	-155.40	531.1	-893.0	2,320.8	2,283.8	62.607			
4,200.0	3,961.0	3,253.0	3,039.9	25.2	20.7	-155.37	547.8	-918.9	2,388.9	2,351.0	63.043			
4,300.0	4,053.8	3,326.2	3,106.3	25.9	21.3	-155.33	564.5	-944.7	2,457.1	2,418.3	63.455			
4,400.0	4,146.7	3,399.4	3,172.7	26.5	21.9	-155.30	581.3	-970.6	2,525.2	2,485.6	63.844			
4,500.0	4,239.5	3,472.6	3,239.1	27.2	22.4	-155.27	598.0	-996.5	2,593.3	2,552.9	64.212			
4,600.0	4,332.4	3,545.8	3,305.5	27.9	23.0	-155.24	614.7	-1,022.3	2,661.4	2,620.2	64.560			
4,700.0	4,425.2	3,619.0	3,371.9	28.6	23.6	-155.21	631.4	-1,048.2	2,729.6	2,687.5	64.890			
4,800.0	4,518.1	3,692.2	3,438.4	29.3	24.1	-155.18	648.1	-1,074.1	2,797.7	2,754.8	65.204			
4,900.0	4,610.9	3,765.4	3,504.8	30.0	24.7	-155.16	664.8	-1,099.9	2,865.8	2,822.1	65.501			

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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		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)			
5,000.0	4,703.8	3,838.6	3,571.2	30.7	25.3	-155.13	681.6	-1,125.8	2,934.0	2,889.3	65.783		
5,100.0	4,796.7	3,911.8	3,637.6	31.4	25.9	-155.11	698.3	-1,151.7	3,002.1	2,956.6	66.052		
5,200.0	4,889.5	3,985.0	3,704.0	32.1	26.4	-155.09	715.0	-1,177.5	3,070.2	3,023.9	66.308		
5,300.0	4,982.4	4,058.2	3,770.4	32.7	27.0	-155.06	731.7	-1,203.4	3,138.3	3,091.2	66.551		
5,400.0	5,075.2	4,131.4	3,836.8	33.4	27.6	-155.04	748.4	-1,229.2	3,206.5	3,158.4	66.783		
5,500.0	5,168.1	4,204.6	3,903.2	34.1	28.2	-155.02	765.1	-1,255.1	3,274.6	3,225.7	67.004		
5,600.0	5,260.9	4,277.8	3,969.6	34.8	28.7	-155.01	781.9	-1,281.0	3,342.7	3,293.0	67.214		
5,700.0	5,354.5	4,352.2	4,037.1	35.5	29.3	-155.87	798.9	-1,307.3	3,409.5	3,358.9	67.357		
5,800.0	5,449.5	4,429.2	4,106.9	36.0	29.9	-156.62	816.4	-1,334.5	3,473.2	3,421.7	67.360		
5,900.0	5,545.8	4,508.5	4,178.9	36.5	30.6	-157.26	834.5	-1,362.5	3,533.9	3,481.3	67.291		
6,000.0	5,643.2	4,590.1	4,252.9	36.9	31.2	-157.80	853.2	-1,391.3	3,591.2	3,537.8	67.162		
6,100.0	5,741.5	4,673.8	4,328.8	37.2	31.9	-158.23	872.3	-1,420.9	3,645.3	3,590.9	66.980		
6,200.0	5,840.5	4,759.4	4,406.5	37.5	32.5	-158.59	891.8	-1,451.1	3,695.9	3,640.5	66.754		
6,300.0	5,940.0	4,846.7	4,485.7	37.7	33.2	-158.86	911.8	-1,482.0	3,743.0	3,686.7	66.495		
6,400.0	6,039.8	4,935.7	4,566.4	37.8	33.9	-159.06	932.1	-1,513.4	3,786.6	3,729.4	66.221		
6,500.0	6,139.8	5,026.0	4,648.4	37.8	34.7	-81.26	952.7	-1,545.4	3,826.6	3,768.7	66.181		
6,600.0	6,239.8	5,116.7	4,730.7	37.9	35.4	-81.01	973.5	-1,577.4	3,865.6	3,807.2	66.209		
6,700.0	6,339.8	5,207.4	4,813.0	37.9	36.1	-80.76	994.2	-1,609.5	3,904.6	3,845.7	66.234		
6,800.0	6,439.8	5,298.2	4,895.3	37.9	36.8	-80.51	1,015.0	-1,641.6	3,943.6	3,884.7	66.259		
6,900.0	6,539.8	5,389.0	4,977.6	38.0	37.5	-80.26	1,035.8	-1,673.7	3,982.6	3,923.7	66.284		
7,000.0	6,639.8	5,479.8	5,060.0	38.0	38.2	-80.01	1,056.6	-1,705.8	4,021.6	3,962.7	66.309		
7,100.0	6,739.8	5,570.6	5,142.4	38.0	38.9	-79.76	1,077.4	-1,737.9	4,060.6	3,999.9	66.334		
7,200.0	6,839.8	5,661.4	5,224.8	38.0	39.6	-79.51	1,098.2	-1,770.0	4,099.6	4,037.1	66.359		
7,300.0	6,939.8	5,752.2	5,307.2	38.1	40.3	-79.26	1,119.0	-1,802.1	4,138.6	4,074.2	66.384		
7,400.0	7,039.8	5,843.0	5,390.0	38.1	41.0	-79.01	1,139.8	-1,834.2	4,179.6	4,111.2	66.409		
7,500.0	7,139.8	5,933.8	5,472.4	38.1	41.7	-78.76	1,160.6	-1,866.3	4,220.6	4,148.2	66.434		
7,600.0	7,239.8	6,024.6	5,554.8	38.2	42.4	-78.51	1,181.4	-1,898.4	4,261.6	4,185.2	66.459		
7,700.0	7,339.8	6,115.4	5,637.2	38.2	43.1	-78.26	1,202.2	-1,930.5	4,302.6	4,222.2	66.484		
7,800.0	7,439.8	6,206.2	5,719.6	38.2	43.8	-78.01	1,223.0	-1,962.6	4,343.6	4,259.2	66.509		
7,900.0	7,539.8	6,297.0	5,802.0	38.2	44.5	-77.76	1,243.8	-1,994.7	4,384.6	4,296.2	66.534		
8,000.0	7,639.8	6,387.8	5,884.4	38.3	45.2	-77.51	1,264.6	-2,026.8	4,425.6	4,333.2	66.559		
8,100.0	7,739.8	6,478.6	5,966.8	38.3	45.9	-77.26	1,285.4	-2,058.9	4,466.6	4,370.2	66.584		
8,200.0	7,839.8	6,569.4	6,049.2	38.3	46.6	-77.01	1,306.2	-2,091.0	4,507.6	4,407.2	66.609		
8,250.2	7,890.0	6,620.2	6,131.6	38.3	47.3	-76.76	1,327.0	-2,123.1	4,548.6	4,444.2	66.634		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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	-73.30	6.4	-21.4	22.4			
100.0	100.0	100.0	100.0	0.8	0.8	-73.30	6.4	-21.4	22.4	20.8	14.109	
200.0	200.0	200.0	200.0	1.4	1.4	-73.30	6.4	-21.4	22.4	19.5	7.900 CC	
200.0	200.0	200.0	200.0	1.4	1.4	-73.30	6.4	-21.4	22.4	19.5	7.900	
300.0	300.0	300.0	300.0	1.7	1.9	-151.32	6.4	-21.4	22.5	18.9	6.302 ES	
400.0	399.9	399.1	399.1	2.7	2.2	-155.37	6.4	-22.6	26.6	21.7	5.472	
500.0	499.6	496.9	496.7	4.2	3.5	-161.58	6.4	-27.9	39.0	31.4	5.168 SF	
600.0	598.9	592.5	591.9	5.3	4.7	-165.96	6.4	-37.0	59.9	50.1	6.130	
700.0	697.6	685.1	683.6	6.2	5.6	-168.53	6.4	-49.6	89.2	77.6	7.705	
800.0	795.4	774.4	771.6	7.0	6.0	-169.85	6.8	-65.2	126.1	113.5	9.984	
900.0	892.3	860.4	855.7	7.8	6.4	-169.93	9.0	-82.7	169.7	156.0	12.408	
1,000.0	988.0	942.2	935.2	8.5	6.9	-169.43	13.1	-101.5	219.4	204.7	14.892	
1,100.0	1,082.3	1,019.3	1,009.5	9.2	7.4	-168.68	18.7	-121.3	274.9	259.2	17.472	
1,200.0	1,175.3	1,091.8	1,078.8	9.5	7.9	-168.02	25.6	-141.5	335.4	319.0	20.477	
1,300.0	1,268.2	1,161.5	1,144.8	9.8	8.3	-167.43	33.5	-162.5	398.0	381.1	23.461	
1,400.0	1,361.0	1,228.5	1,207.6	10.1	8.7	-166.78	42.4	-184.0	462.4	444.9	26.363	
1,500.0	1,453.9	1,300.0	1,273.9	10.4	9.2	-166.03	53.3	-208.5	528.5	510.3	28.993	
1,600.0	1,546.7	1,360.1	1,329.1	10.8	9.4	-165.41	63.4	-230.2	596.0	577.5	32.161	
1,700.0	1,639.6	1,433.5	1,396.3	11.1	9.6	-164.77	75.9	-256.7	663.8	644.7	34.818	
1,800.0	1,732.5	1,506.8	1,463.5	11.5	9.9	-164.24	88.3	-283.2	731.6	712.0	37.278	
1,900.0	1,825.3	1,580.1	1,530.7	11.9	10.1	-163.81	100.8	-309.7	799.5	779.3	39.546	
2,000.0	1,918.2	1,653.4	1,597.9	12.3	10.4	-163.44	113.2	-336.2	867.4	846.6	41.645	
2,100.0	2,011.0	1,726.8	1,665.2	12.7	10.7	-163.13	125.7	-362.8	935.3	913.8	43.589	
2,200.0	2,103.9	1,800.1	1,732.4	13.1	10.9	-162.86	138.1	-389.3	1,003.2	981.1	45.390	
2,300.0	2,196.7	1,873.4	1,799.6	13.5	11.2	-162.63	150.6	-415.8	1,071.1	1,048.4	47.051	
2,400.0	2,289.6	1,946.7	1,866.8	14.0	11.5	-162.42	163.1	-442.3	1,139.1	1,115.6	48.593	
2,500.0	2,382.4	2,020.1	1,934.0	14.4	11.9	-162.23	175.5	-468.8	1,207.0	1,182.9	50.018	
2,600.0	2,475.3	2,093.4	2,001.3	14.9	12.2	-162.07	188.0	-495.3	1,274.9	1,250.1	51.343	
2,700.0	2,568.1	2,166.7	2,068.5	15.3	12.5	-161.92	200.4	-521.9	1,342.9	1,317.3	52.570	
2,800.0	2,661.0	2,240.0	2,135.7	15.8	12.9	-161.78	212.9	-548.4	1,410.9	1,384.6	53.711	
2,900.0	2,753.9	2,313.4	2,202.9	16.3	13.3	-161.66	225.4	-574.9	1,478.8	1,451.8	54.774	
3,000.0	2,846.7	2,386.7	2,270.1	17.0	13.7	-161.55	237.8	-601.4	1,546.8	1,519.0	55.762	
3,100.0	2,939.6	2,460.0	2,337.3	17.6	14.1	-161.45	250.3	-627.9	1,614.7	1,586.3	56.682	
3,200.0	3,032.4	2,533.3	2,404.6	18.3	14.6	-161.36	262.7	-654.4	1,682.7	1,653.5	57.542	
3,300.0	3,125.3	2,606.7	2,471.8	19.0	15.1	-161.27	275.2	-680.9	1,750.7	1,720.7	58.347	
3,400.0	3,218.1	2,680.0	2,539.0	19.7	15.5	-161.19	287.6	-707.5	1,818.6	1,787.9	59.098	
3,500.0	3,311.0	2,753.3	2,606.2	20.4	16.1	-161.12	300.1	-734.0	1,886.6	1,855.1	59.801	
3,600.0	3,403.8	2,826.6	2,673.4	21.1	16.6	-161.05	312.6	-760.5	1,954.6	1,922.3	60.462	
3,700.0	3,496.7	2,900.0	2,740.6	21.7	17.1	-160.98	325.0	-787.0	2,022.6	1,989.5	61.083	
3,800.0	3,589.5	2,973.3	2,807.9	22.4	17.6	-160.92	337.5	-813.5	2,090.6	2,056.7	61.664	
3,900.0	3,682.4	3,046.6	2,875.1	23.1	18.1	-160.87	349.9	-840.0	2,158.5	2,123.8	62.212	
4,000.0	3,775.3	3,119.9	2,942.3	23.8	18.7	-160.81	362.4	-866.6	2,226.5	2,191.0	62.729	
4,100.0	3,868.1	3,193.2	3,009.5	24.5	19.2	-160.76	374.8	-893.1	2,294.5	2,258.2	63.216	
4,200.0	3,961.0	3,266.6	3,076.7	25.2	19.7	-160.72	387.3	-919.6	2,362.5	2,325.4	63.675	
4,300.0	4,053.8	3,339.9	3,143.9	25.9	20.3	-160.67	399.8	-946.1	2,430.5	2,392.6	64.109	
4,400.0	4,146.7	3,413.2	3,211.2	26.5	20.8	-160.63	412.2	-972.6	2,498.4	2,459.7	64.519	
4,500.0	4,239.5	3,486.5	3,278.4	27.2	21.4	-160.59	424.7	-999.1	2,566.4	2,526.9	64.908	
4,600.0	4,332.4	3,559.9	3,345.6	27.9	21.9	-160.55	437.1	-1,025.7	2,634.4	2,594.1	65.276	
4,700.0	4,425.2	3,633.2	3,412.8	28.6	22.4	-160.52	449.6	-1,052.2	2,702.4	2,661.2	65.625	
4,800.0	4,518.1	3,706.5	3,480.0	29.3	23.0	-160.48	462.1	-1,078.7	2,770.4	2,728.4	65.957	
4,900.0	4,610.9	3,779.8	3,547.2	30.0	23.5	-160.45	474.5	-1,105.2	2,838.4	2,795.5	66.271	

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



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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		
5,000.0	4,703.8	3,853.2	3,614.5	30.7	24.1	-160.42	487.0	-1,131.7	2,906.4	2,862.7	66.570			
5,100.0	4,796.7	3,926.5	3,681.7	31.4	24.6	-160.39	499.4	-1,158.2	2,974.4	2,929.9	66.855			
5,200.0	4,889.5	3,999.8	3,748.9	32.1	25.2	-160.36	511.9	-1,184.8	3,042.3	2,997.0	67.126			
5,300.0	4,982.4	4,073.1	3,816.1	32.7	25.7	-160.34	524.3	-1,211.3	3,110.3	3,064.2	67.384			
5,400.0	5,075.2	4,146.5	3,883.3	33.4	26.2	-160.31	536.8	-1,237.8	3,178.3	3,131.3	67.630			
5,500.0	5,168.1	4,219.8	3,950.5	34.1	26.8	-160.29	549.3	-1,264.3	3,246.3	3,198.5	67.865			
5,600.0	5,260.9	4,293.1	4,017.8	34.8	27.3	-160.26	561.7	-1,290.8	3,314.3	3,265.6	68.088			
5,700.0	5,354.5	4,367.7	4,086.1	35.5	27.9	-160.94	574.4	-1,317.8	3,380.9	3,331.3	68.236			
5,800.0	5,449.5	4,444.9	4,156.9	36.0	28.5	-161.53	587.5	-1,345.7	3,444.3	3,393.8	68.225			
5,900.0	5,545.8	4,524.6	4,230.0	36.5	29.1	-162.03	601.0	-1,374.6	3,504.5	3,453.1	68.135			
6,000.0	5,643.2	4,606.7	4,305.2	36.9	29.7	-162.43	615.0	-1,404.2	3,561.3	3,509.0	67.977			
6,100.0	5,741.5	4,690.9	4,382.4	37.2	30.3	-162.77	629.3	-1,434.7	3,614.7	3,561.4	67.759			
6,200.0	5,840.5	4,777.2	4,461.5	37.5	31.0	-163.03	644.0	-1,465.9	3,664.6	3,610.3	67.491			
6,300.0	5,940.0	4,865.3	4,542.3	37.7	31.6	-163.23	658.9	-1,497.7	3,710.7	3,655.5	67.186			
6,400.0	6,039.8	4,955.1	4,624.6	37.8	32.3	-163.38	674.2	-1,530.2	3,753.2	3,697.1	66.863			
6,500.0	6,139.8	5,046.3	4,708.2	37.8	33.0	-85.55	689.7	-1,563.2	3,792.0	3,735.3	66.793			
6,600.0	6,239.8	5,138.0	4,792.3	37.9	33.7	-85.34	705.3	-1,596.4	3,829.8	3,772.5	66.802			
6,700.0	6,339.8	5,230.2	4,876.5	37.9	34.4	-85.13	721.5	-1,629.6	3,867.7	3,809.6	66.811			
6,800.0	6,439.8	5,322.4	4,960.7	37.9	35.1	-84.92	738.1	-1,662.8	3,905.6	3,846.5	66.820			
6,900.0	6,539.8	5,414.6	5,045.0	38.0	35.8	-84.71	755.0	-1,695.9	3,941.5	3,883.4	66.829			
7,000.0	6,639.8	5,506.8	5,129.2	38.0	36.5	-84.50	772.1	-1,728.9	3,977.4	3,920.3	66.838			
7,100.0	6,739.8	5,599.0	5,213.4	38.0	37.2	-84.29	789.3	-1,761.8	4,013.3	3,957.2	66.847			
7,200.0	6,839.8	5,691.2	5,297.6	38.0	37.9	-84.08	806.6	-1,794.6	4,049.1	3,994.0	66.856			
7,300.0	6,939.8	5,783.4	5,381.8	38.1	38.6	-83.87	824.0	-1,827.4	4,084.9	4,030.8	66.865			
7,400.0	7,039.8	5,875.6	5,466.0	38.1	39.3	-83.66	841.5	-1,860.1	4,120.7	4,067.6	66.874			
7,500.0	7,139.8	5,967.8	5,550.2	38.1	40.0	-83.45	859.0	-1,892.8	4,156.5	4,104.4	66.883			
7,600.0	7,239.8	6,060.0	5,634.4	38.2	40.7	-83.24	876.5	-1,925.5	4,192.3	4,141.2	66.892			
7,700.0	7,339.8	6,152.2	5,718.6	38.2	41.4	-83.03	894.0	-1,958.2	4,228.1	4,178.0	66.901			
7,800.0	7,439.8	6,244.4	5,802.8	38.2	42.1	-82.82	911.5	-1,990.9	4,263.9	4,214.8	66.910			
7,900.0	7,539.8	6,336.6	5,887.0	38.2	42.8	-82.61	929.0	-2,023.6	4,299.7	4,251.6	66.919			
8,000.0	7,639.8	6,428.8	5,971.2	38.3	43.5	-82.40	946.5	-2,056.3	4,335.5	4,288.4	66.928			
8,100.0	7,739.8	6,521.0	6,055.4	38.3	44.2	-82.19	964.0	-2,089.0	4,371.3	4,325.2	66.937			
8,106.8	7,746.6	6,527.8	6,062.2	38.3	44.3	-82.18	966.0	-2,091.0	4,373.3	4,327.2	66.938			
8,200.0	7,839.8	6,614.2	6,146.6	38.3	45.0	-81.97	983.5	-2,123.7	4,409.1	4,364.0	66.947			
8,250.2	7,890.0	6,665.4	6,197.8	38.3	45.3	-81.92	1,000.0	-2,137.0	4,426.0	4,381.0	66.950			

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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	-136.76	-7.3	-6.8	10.0			
100.0	100.0	100.0	100.0	0.8	0.8	-136.76	-7.3	-6.8	10.0	8.4	6.312	
200.0	200.0	200.0	200.0	1.4	1.4	-136.76	-7.3	-6.8	10.0	7.2	3.534 CC	
200.0	200.0	200.0	200.0	1.4	1.4	-136.76	-7.3	-6.8	10.0	7.2	3.534	
300.0	300.0	300.0	300.0	1.7	1.9	145.82	-7.3	-6.8	10.1	6.5	2.834 ES, SF	
400.0	399.9	399.7	399.7	2.7	2.1	155.35	-7.3	-7.4	13.4	8.7	2.856	
500.0	499.6	498.3	498.2	4.2	3.2	168.85	-7.3	-11.6	24.4	17.3	3.404	
600.0	598.9	594.8	594.4	5.3	4.4	176.09	-7.3	-19.9	44.3	34.8	4.653	
700.0	697.6	688.4	687.1	6.2	5.4	179.64	-7.3	-31.8	72.7	61.3	6.382	
800.0	795.4	778.3	775.8	7.0	5.8	-178.40	-7.2	-46.7	108.9	96.4	8.721	
900.0	892.3	864.5	860.3	7.8	6.2	-176.72	-5.9	-64.0	152.1	138.6	11.251	
1,000.0	988.0	946.2	939.6	8.5	6.7	-175.22	-3.2	-82.9	201.9	187.3	13.823	
1,100.0	1,082.3	1,022.8	1,013.5	9.2	7.3	-173.90	0.5	-102.9	257.7	242.1	16.475	
1,200.0	1,175.3	1,094.4	1,082.0	9.5	7.8	-172.84	5.2	-123.6	318.8	302.5	19.555	
1,300.0	1,268.2	1,162.9	1,146.8	9.8	8.3	-171.96	10.6	-145.0	382.3	365.4	22.623	
1,400.0	1,361.0	1,228.5	1,208.2	10.1	8.7	-171.16	16.7	-167.1	447.7	430.3	25.682	
1,500.0	1,453.9	1,293.5	1,268.5	10.4	9.0	-170.40	23.6	-190.5	514.9	497.0	28.776	
1,600.0	1,546.7	1,366.9	1,336.3	10.8	9.2	-169.68	31.7	-217.4	582.7	564.3	31.646	
1,700.0	1,639.6	1,440.2	1,404.0	11.1	9.5	-169.11	39.8	-244.3	650.5	631.6	34.314	
1,800.0	1,732.5	1,513.6	1,471.8	11.5	9.7	-168.65	47.8	-271.1	718.4	698.9	36.792	
1,900.0	1,825.3	1,586.9	1,539.5	11.9	10.0	-168.27	55.9	-298.0	786.3	766.1	39.089	
2,000.0	1,918.2	1,660.2	1,607.3	12.3	10.2	-167.95	64.0	-324.9	854.2	833.4	41.216	
2,100.0	2,011.0	1,733.6	1,675.0	12.7	10.5	-167.67	72.1	-351.8	922.1	900.7	43.189	
2,200.0	2,103.9	1,806.9	1,742.8	13.1	10.8	-167.44	80.2	-378.7	990.0	968.0	45.020	
2,300.0	2,196.7	1,880.3	1,810.6	13.5	11.1	-167.23	88.2	-405.6	1,057.9	1,035.3	46.714	
2,400.0	2,289.6	1,953.6	1,878.3	14.0	11.4	-167.05	96.3	-432.5	1,125.8	1,102.5	48.286	
2,500.0	2,382.4	2,027.0	1,946.1	14.4	11.7	-166.89	104.4	-459.3	1,193.8	1,169.8	49.746	
2,600.0	2,475.3	2,100.3	2,013.8	14.9	12.0	-166.74	112.5	-486.2	1,261.7	1,237.0	51.104	
2,700.0	2,568.1	2,173.6	2,081.6	15.3	12.3	-166.61	120.6	-513.1	1,329.6	1,304.3	52.365	
2,800.0	2,661.0	2,247.0	2,149.3	15.8	12.6	-166.50	128.7	-540.0	1,397.6	1,371.5	53.537	
2,900.0	2,753.9	2,320.3	2,217.1	16.3	13.0	-166.39	136.7	-566.9	1,465.5	1,438.7	54.631	
3,000.0	2,846.7	2,393.7	2,284.9	17.0	13.3	-166.30	144.8	-593.8	1,533.5	1,505.9	55.652	
3,100.0	2,939.6	2,467.0	2,352.6	17.6	13.7	-166.21	152.9	-620.6	1,601.4	1,573.2	56.604	
3,200.0	3,032.4	2,540.3	2,420.4	18.3	14.1	-166.13	161.0	-647.5	1,669.4	1,640.4	57.495	
3,300.0	3,125.3	2,613.7	2,488.1	19.0	14.5	-166.05	169.1	-674.4	1,737.4	1,707.6	58.329	
3,400.0	3,218.1	2,687.0	2,555.9	19.7	14.9	-165.98	177.2	-701.3	1,805.3	1,774.8	59.111	
3,500.0	3,311.0	2,760.4	2,623.6	20.4	15.4	-165.92	185.2	-728.2	1,873.3	1,842.0	59.843	
3,600.0	3,403.8	2,833.7	2,691.4	21.1	15.9	-165.86	193.3	-755.1	1,941.2	1,909.2	60.532	
3,700.0	3,496.7	2,907.1	2,759.2	21.7	16.4	-165.80	201.4	-781.9	2,009.2	1,976.4	61.180	
3,800.0	3,589.5	2,980.4	2,826.9	22.4	16.9	-165.75	209.5	-808.8	2,077.2	2,043.6	61.789	
3,900.0	3,682.4	3,053.7	2,894.7	23.1	17.4	-165.70	217.6	-835.7	2,145.1	2,110.7	62.363	
4,000.0	3,775.3	3,127.1	2,962.4	23.8	17.9	-165.66	225.7	-862.6	2,213.1	2,177.9	62.905	
4,100.0	3,868.1	3,200.4	3,030.2	24.5	18.5	-165.62	233.7	-889.5	2,281.1	2,245.1	63.416	
4,200.0	3,961.0	3,273.8	3,097.9	25.2	19.0	-165.57	241.8	-916.4	2,349.0	2,312.3	63.899	
4,300.0	4,053.8	3,347.1	3,165.7	25.9	19.5	-165.54	249.9	-943.2	2,417.0	2,379.4	64.357	
4,400.0	4,146.7	3,420.5	3,233.5	26.5	20.0	-165.50	258.0	-970.1	2,485.0	2,446.6	64.790	
4,500.0	4,239.5	3,493.8	3,301.2	27.2	20.5	-165.47	266.1	-997.0	2,552.9	2,513.8	65.201	
4,600.0	4,332.4	3,567.1	3,369.0	27.9	21.1	-165.43	274.1	-1,023.9	2,620.9	2,580.9	65.590	
4,700.0	4,425.2	3,640.5	3,436.7	28.6	21.6	-165.40	282.2	-1,050.8	2,688.9	2,648.1	65.960	
4,800.0	4,518.1	3,713.8	3,504.5	29.3	22.1	-165.37	290.3	-1,077.7	2,756.8	2,715.3	66.311	
4,900.0	4,610.9	3,787.2	3,572.2	30.0	22.6	-165.35	298.4	-1,104.5	2,824.8	2,782.4	66.645	

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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	
5,000.0	4,703.8	3,860.5	3,640.0	30.7	23.2	-165.32	306.5	-1,131.4	2,892.8	2,849.6	66.963		
5,100.0	4,796.7	3,933.9	3,707.8	31.4	23.7	-165.29	314.6	-1,158.3	2,960.8	2,916.7	67.266		
5,200.0	4,889.5	4,007.2	3,775.5	32.1	24.2	-165.27	322.6	-1,185.2	3,028.7	2,983.9	67.555		
5,300.0	4,982.4	4,080.5	3,843.3	32.7	24.7	-165.25	330.7	-1,212.1	3,096.7	3,051.0	67.830		
5,400.0	5,075.2	4,153.9	3,911.0	33.4	25.3	-165.23	338.8	-1,239.0	3,164.7	3,118.2	68.093		
5,500.0	5,168.1	4,227.2	3,978.8	34.1	25.8	-165.20	346.9	-1,265.8	3,232.6	3,185.3	68.344		
5,600.0	5,260.9	4,300.6	4,046.5	34.8	26.3	-165.18	355.0	-1,292.7	3,300.6	3,252.5	68.583		
5,700.0	5,354.5	4,375.2	4,115.5	35.5	26.9	-165.69	363.2	-1,320.1	3,367.1	3,318.1	68.740		
5,800.0	5,449.5	4,452.6	4,187.0	36.0	27.4	-166.14	371.7	-1,348.4	3,430.4	3,380.5	68.726		
5,900.0	5,545.8	4,532.5	4,260.8	36.5	28.0	-166.51	380.5	-1,377.7	3,490.4	3,439.5	68.625		
6,000.0	5,643.2	4,614.9	4,336.9	36.9	28.6	-166.81	389.6	-1,407.9	3,546.9	3,495.1	68.450		
6,100.0	5,741.5	4,699.5	4,415.1	37.2	29.2	-167.06	398.9	-1,438.9	3,599.9	3,547.1	68.210		
6,200.0	5,840.5	4,786.2	4,495.2	37.5	29.8	-167.25	408.5	-1,470.7	3,649.2	3,595.5	67.916		
6,300.0	5,940.0	4,874.8	4,577.1	37.7	30.5	-167.39	418.3	-1,503.2	3,694.9	3,640.2	67.581		
6,400.0	6,039.8	4,965.2	4,660.6	37.8	31.1	-167.50	428.2	-1,536.4	3,736.7	3,681.1	67.224		
6,500.0	6,139.8	5,057.2	4,745.6	37.8	31.8	-89.65	438.4	-1,570.1	3,774.7	3,718.5	67.134		
6,600.0	6,239.8	5,149.6	4,830.9	37.9	32.4	-89.49	448.5	-1,603.9	3,811.6	3,754.9	67.131		
6,700.0	6,339.8	6,708.3	6,339.8	37.9	38.4	-88.20	537.7	-1,900.4	3,839.9	3,772.1	56.686		
6,800.0	6,439.8	6,808.3	6,439.8	37.9	38.4	-88.20	537.7	-1,900.4	3,839.9	3,772.1	56.644		
6,900.0	6,539.8	6,908.3	6,539.8	38.0	38.4	-88.20	537.7	-1,900.4	3,839.9	3,772.0	56.602		
7,000.0	6,639.8	7,008.3	6,639.8	38.0	38.4	-88.20	537.7	-1,900.4	3,839.9	3,772.0	56.560		
7,100.0	6,739.8	7,108.3	6,739.8	38.0	38.5	-88.20	537.7	-1,900.4	3,839.9	3,771.9	56.517		
7,200.0	6,839.8	7,208.3	6,839.8	38.0	38.5	-88.20	537.7	-1,900.4	3,839.9	3,771.9	56.475		
7,300.0	6,939.8	7,308.3	6,939.8	38.1	38.5	-88.20	537.7	-1,900.4	3,839.9	3,771.8	56.432		
7,400.0	7,039.8	7,408.3	7,039.8	38.1	38.6	-88.20	537.7	-1,900.4	3,839.9	3,771.8	56.389		
7,500.0	7,139.8	7,508.3	7,139.8	38.1	38.6	-88.20	537.7	-1,900.4	3,839.9	3,771.7	56.346		
7,600.0	7,239.8	7,608.3	7,239.8	38.2	38.6	-88.20	537.7	-1,900.4	3,839.9	3,771.7	56.302		
7,700.0	7,339.8	7,708.3	7,339.8	38.2	38.7	-88.20	537.7	-1,900.4	3,839.9	3,771.6	56.258		
7,800.0	7,439.8	7,808.3	7,439.8	38.2	38.7	-88.20	537.7	-1,900.4	3,839.9	3,771.6	56.214		
7,900.0	7,539.8	7,908.3	7,539.8	38.2	38.7	-88.20	537.7	-1,900.4	3,839.9	3,771.5	56.170		
8,000.0	7,639.8	8,008.3	7,639.8	38.3	38.7	-88.20	537.7	-1,900.4	3,839.9	3,771.5	56.126		
8,100.0	7,739.8	8,108.3	7,739.8	38.3	38.8	-88.20	537.7	-1,900.4	3,839.9	3,771.4	56.081		
8,200.0	7,839.8	8,208.3	7,839.8	38.3	38.8	-88.20	537.7	-1,900.4	3,839.9	3,771.4	56.036		
8,250.2	7,890.0	8,258.5	7,890.0	38.3	38.8	-88.20	537.7	-1,900.4	3,839.9	3,771.3	56.018		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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 0993-21-11W - OH - Design #2													
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	-46.74	48.0	-51.0	70.0				
100.0	100.0	100.0	100.0	0.8	0.8	-46.74	48.0	-51.0	70.0	68.4	44.186		
200.0	200.0	200.0	200.0	1.4	1.4	-46.74	48.0	-51.0	70.0	67.2	24.741 CC		
204.4	204.4	204.4	204.4	1.4	1.4	-124.59	48.0	-51.0	70.0	67.2	24.593		
300.0	300.0	299.3	299.3	1.7	2.1	-123.45	49.3	-50.2	70.5	66.9	19.962 ES		
400.0	399.9	398.4	398.2	2.7	3.6	-121.14	54.4	-47.4	73.9	69.3	16.061		
500.0	499.6	497.0	496.3	4.2	4.8	-118.78	63.1	-42.5	80.9	75.1	14.032		
600.0	598.9	595.1	593.4	5.3	5.7	-116.63	75.4	-35.6	91.6	84.8	13.551 SF		
700.0	697.6	692.5	689.0	6.2	6.6	-114.84	91.2	-26.7	105.8	98.1	13.799		
800.0	795.4	788.9	782.9	7.0	7.4	-113.39	110.3	-16.0	123.5	115.0	14.457		
900.0	892.3	884.3	874.9	7.8	8.1	-112.23	132.6	-3.5	144.7	135.2	15.353		
1,000.0	988.0	978.6	964.5	8.5	8.7	-111.29	157.9	10.7	169.1	158.8	16.377		
1,100.0	1,082.3	1,071.5	1,051.7	9.2	9.3	-110.51	186.0	26.4	196.7	185.5	17.450		
1,200.0	1,175.3	1,163.2	1,136.3	9.5	9.9	-110.08	216.6	43.6	227.3	215.1	18.694		
1,300.0	1,268.2	1,253.6	1,218.4	9.8	10.5	-109.36	249.7	62.2	259.6	246.5	19.743		
1,400.0	1,361.0	1,342.6	1,297.7	10.1	11.0	-108.15	285.1	82.0	293.6	279.4	20.657		
1,500.0	1,453.9	1,430.1	1,374.0	10.4	11.5	-106.65	322.4	102.9	329.5	314.1	21.488		
1,600.0	1,546.7	1,515.7	1,447.0	10.8	12.0	-104.97	361.4	124.8	367.2	350.8	22.301		
1,700.0	1,639.6	1,603.7	1,520.6	11.1	12.3	-103.19	403.5	148.4	406.8	389.1	23.107		
1,800.0	1,732.5	1,694.8	1,596.6	11.5	12.6	-101.63	447.2	172.9	446.8	427.9	23.730		
1,900.0	1,825.3	1,785.8	1,672.5	11.9	12.9	-100.32	490.9	197.4	487.0	466.9	24.261		
2,000.0	1,918.2	1,876.8	1,748.5	12.3	13.2	-99.22	534.7	222.0	527.4	506.1	24.724		
2,100.0	2,011.0	1,967.8	1,824.5	12.7	13.5	-98.27	578.4	246.5	568.0	545.4	25.131		
2,200.0	2,103.9	2,058.9	1,900.4	13.1	13.8	-97.44	622.2	271.0	608.7	584.8	25.490		
2,300.0	2,196.7	2,149.9	1,976.4	13.5	14.2	-96.72	665.9	295.6	649.4	624.3	25.809		
2,400.0	2,289.6	2,240.9	2,052.3	14.0	14.5	-96.08	709.7	320.1	690.3	663.8	26.087		
2,500.0	2,382.4	2,331.9	2,128.3	14.4	14.9	-95.52	753.4	344.6	731.2	703.5	26.369		
2,600.0	2,475.3	2,422.9	2,204.2	14.9	15.7	-95.01	797.2	369.2	772.2	743.1	26.595		
2,700.0	2,568.1	2,514.0	2,280.2	15.3	16.6	-94.56	840.9	393.7	813.2	782.8	26.801		
2,800.0	2,661.0	2,605.0	2,356.2	15.8	17.4	-94.14	884.7	418.2	854.2	822.6	26.990		
2,900.0	2,753.9	2,696.0	2,432.1	16.3	18.3	-93.77	928.4	442.8	895.3	862.3	27.163		
3,000.0	2,846.7	2,787.0	2,508.1	17.0	19.1	-93.43	972.1	467.3	936.4	902.1	27.321		
3,100.0	2,939.6	2,878.1	2,584.0	17.6	20.0	-93.12	1,015.9	491.8	977.5	942.0	27.466		
3,200.0	3,032.4	2,969.1	2,660.0	18.3	20.9	-92.83	1,059.6	516.4	1,018.7	981.8	27.599		
3,300.0	3,125.3	3,060.1	2,736.0	19.0	21.7	-92.56	1,103.4	540.9	1,059.9	1,021.6	27.721		
3,400.0	3,218.1	3,151.1	2,811.9	19.7	22.6	-92.32	1,147.1	565.4	1,101.1	1,061.5	27.834		
3,500.0	3,311.0	3,242.2	2,887.9	20.4	23.4	-92.09	1,190.9	590.0	1,142.3	1,101.4	27.939		
3,600.0	3,403.8	3,333.2	2,963.8	21.1	24.3	-91.88	1,234.6	614.5	1,183.5	1,141.3	28.037		
3,700.0	3,496.7	3,424.2	3,039.8	21.7	25.1	-91.68	1,278.4	639.0	1,224.8	1,181.2	28.127		
3,800.0	3,589.5	3,515.2	3,115.7	22.4	26.0	-91.50	1,322.1	663.6	1,266.0	1,221.1	28.212		
3,900.0	3,682.4	3,606.2	3,191.7	23.1	26.9	-91.32	1,365.8	688.1	1,307.3	1,261.1	28.291		
4,000.0	3,775.3	3,697.3	3,267.7	23.8	27.7	-91.16	1,409.6	712.6	1,348.5	1,301.0	28.364		
4,100.0	3,868.1	3,788.3	3,343.6	24.5	28.6	-91.01	1,453.3	737.1	1,389.8	1,340.9	28.434		
4,200.0	3,961.0	3,879.3	3,419.6	25.2	29.5	-90.86	1,497.1	761.7	1,431.1	1,380.9	28.499		
4,300.0	4,053.8	3,970.3	3,495.5	25.9	30.3	-90.73	1,540.8	786.2	1,472.4	1,420.8	28.560		
4,400.0	4,146.7	4,061.4	3,571.5	26.5	31.2	-90.60	1,584.6	810.7	1,513.7	1,460.8	28.617		
4,500.0	4,239.5	4,152.4	3,647.5	27.2	32.0	-90.48	1,628.3	835.3	1,555.0	1,500.8	28.672		
4,600.0	4,332.4	4,243.4	3,723.4	27.9	32.9	-90.36	1,672.1	859.8	1,596.3	1,540.7	28.723		
4,700.0	4,425.2	4,334.4	3,799.4	28.6	33.8	-90.25	1,715.8	884.3	1,637.6	1,580.7	28.771		
4,800.0	4,518.1	4,425.4	3,875.3	29.3	34.6	-90.15	1,759.6	908.9	1,678.9	1,620.7	28.817		
4,900.0	4,610.9	4,516.5	3,951.3	30.0	35.5	-90.05	1,803.3	933.4	1,720.3	1,660.7	28.861		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-11W - OH - Design #2												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)			
5,000.0	4,703.8	4,607.5	4,027.2	30.7	36.4	-89.95	1,847.0	957.9	1,761.6	1,700.6	28.902		
5,100.0	4,796.7	4,698.5	4,103.2	31.4	37.2	-89.86	1,890.8	982.5	1,802.9	1,740.6	28.941		
5,200.0	4,889.5	4,789.5	4,179.2	32.1	38.1	-89.78	1,934.5	1,007.0	1,844.3	1,780.6	28.979		
5,300.0	4,982.4	4,880.6	4,255.1	32.7	39.0	-89.69	1,978.3	1,031.5	1,885.6	1,820.6	29.014		
5,400.0	5,075.2	4,971.6	4,331.1	33.4	39.8	-89.61	2,022.0	1,056.1	1,926.9	1,860.6	29.048		
5,500.0	5,168.1	5,062.6	4,407.0	34.1	40.7	-89.54	2,065.8	1,080.6	1,968.3	1,900.6	29.080		
5,600.0	5,260.9	5,153.6	4,483.0	34.8	41.6	-89.47	2,109.5	1,105.1	2,009.6	1,940.6	29.111		
5,700.0	5,354.5	5,244.6	4,558.9	35.5	42.4	-90.43	2,153.2	1,129.6	2,051.0	1,980.7	29.160		
5,800.0	5,449.5	5,335.2	4,634.5	36.0	43.3	-91.31	2,196.8	1,154.1	2,092.3	2,020.8	29.247		
5,900.0	5,545.8	5,425.4	4,709.8	36.5	44.1	-92.07	2,240.1	1,178.4	2,133.7	2,061.0	29.372		
6,000.0	5,643.2	5,514.9	4,784.5	36.9	45.0	-92.72	2,283.2	1,202.5	2,174.9	2,101.3	29.532		
6,100.0	5,741.5	5,635.3	4,862.2	37.2	46.1	-93.07	2,340.7	1,234.8	2,216.1	2,141.1	29.541		
6,200.0	5,840.5	5,729.6	4,940.6	37.5	47.2	-92.27	2,400.5	1,267.6	2,256.6	2,179.2	28.608		
6,300.0	5,940.0	5,829.3	5,019.9	37.7	48.3	-91.63	2,474.1	1,306.6	2,297.3	2,195.8	27.942		
6,400.0	6,039.8	5,929.6	5,100.6	37.8	49.4	-91.26	2,556.7	1,351.7	2,338.8	2,208.9	27.641		
6,500.0	6,139.8	6,029.3	5,183.8	37.8	50.5	-13.34	2,650.1	1,408.3	2,294.9	2,212.0	27.689		
6,600.0	6,239.8	6,129.3	5,269.6	37.9	51.6	-13.34	2,650.1	1,408.3	2,294.9	2,211.9	27.673		
6,700.0	6,339.8	6,229.3	5,359.6	37.9	52.7	-13.34	2,650.1	1,408.3	2,294.9	2,211.9	27.656		
6,800.0	6,439.8	6,329.3	5,450.6	37.9	53.8	-13.34	2,650.1	1,408.3	2,294.9	2,211.8	27.639		
6,900.0	6,539.8	6,429.3	5,541.6	38.0	54.9	-13.34	2,650.1	1,408.3	2,294.9	2,211.8	27.621		
7,000.0	6,639.8	6,529.3	5,632.6	38.0	56.0	-13.34	2,650.1	1,408.3	2,294.9	2,211.7	27.604		
7,100.0	6,739.8	6,629.3	5,723.6	38.0	57.1	-13.34	2,650.1	1,408.3	2,294.9	2,211.7	27.586		
7,200.0	6,839.8	6,729.3	5,814.6	38.0	58.2	-13.34	2,650.1	1,408.3	2,294.9	2,211.6	27.568		
7,300.0	6,939.8	6,829.3	5,905.6	38.1	59.3	-13.34	2,650.1	1,408.3	2,294.9	2,211.6	27.550		
7,400.0	7,039.8	6,929.3	6,000.6	38.1	60.4	-13.34	2,650.1	1,408.3	2,294.9	2,211.5	27.533		
7,500.0	7,139.8	7,029.3	6,091.6	38.1	61.5	-13.34	2,650.1	1,408.3	2,294.9	2,211.5	27.515		
7,600.0	7,239.8	7,129.3	6,182.6	38.2	62.6	-13.34	2,650.1	1,408.3	2,294.9	2,211.4	27.497		
7,700.0	7,339.8	7,229.3	6,273.6	38.2	63.7	-13.34	2,650.1	1,408.3	2,294.9	2,211.4	27.478		
7,800.0	7,439.8	7,329.3	6,364.6	38.2	64.8	-13.34	2,650.1	1,408.3	2,294.9	2,211.3	27.460		
7,900.0	7,539.8	7,429.3	6,455.6	38.2	65.9	-13.34	2,650.1	1,408.3	2,294.9	2,211.2	27.442		
8,000.0	7,639.8	7,529.3	6,546.6	38.3	67.0	-13.34	2,650.1	1,408.3	2,294.9	2,211.2	27.424		
8,100.0	7,739.8	7,629.3	6,637.6	38.3	68.1	-13.34	2,650.1	1,408.3	2,294.9	2,211.1	27.405		
8,200.0	7,839.8	7,729.3	6,728.6	38.3	69.2	-13.34	2,650.1	1,408.3	2,294.9	2,211.1	27.387		
8,250.2	7,890.0	7,779.5	6,780.0	38.3	70.0	-13.34	2,650.1	1,408.3	2,294.9	2,211.1	27.379		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)		
0.0	0.0	0.0	0.0	0.0	0.0	-46.73	41.1	-43.7	60.0			
100.0	100.0	100.0	100.0	0.8	0.8	-46.73	41.1	-43.7	60.0	58.4	37.874	
200.0	200.0	200.0	200.0	1.4	1.4	-46.73	41.1	-43.7	60.0	57.2	21.207	CC
204.4	204.4	204.4	204.4	1.4	1.5	-124.58	41.1	-43.7	60.0	57.1	20.873	
300.0	300.0	299.5	299.5	1.7	2.5	-122.66	42.9	-42.5	60.5	56.9	16.797	ES
400.0	399.9	398.8	398.6	2.7	4.0	-119.34	48.3	-38.9	63.6	58.9	13.726	
500.0	499.6	497.7	496.9	4.2	5.1	-116.08	57.1	-32.8	70.1	64.4	12.242	
600.0	598.9	596.2	594.2	5.3	6.0	-113.26	69.4	-24.5	80.0	73.3	12.005	SF
700.0	697.6	693.9	690.1	6.2	6.8	-111.01	85.0	-13.9	93.2	85.7	12.369	
800.0	795.4	790.9	784.3	7.0	7.6	-109.30	103.8	-1.2	109.6	101.2	13.070	
900.0	892.3	886.9	876.7	7.8	8.3	-108.02	125.7	13.6	129.1	119.8	13.962	
1,000.0	988.0	981.9	966.9	8.5	8.9	-107.04	150.5	30.4	151.6	141.4	14.947	
1,100.0	1,082.3	1,075.9	1,054.7	9.2	9.5	-106.28	178.0	49.1	177.0	165.9	15.953	
1,200.0	1,175.3	1,168.6	1,140.0	9.5	10.1	-105.86	208.0	69.5	205.0	193.0	17.070	
1,300.0	1,268.2	1,260.3	1,222.8	9.8	10.7	-105.05	240.5	91.5	234.9	221.8	17.988	
1,400.0	1,361.0	1,350.6	1,302.9	10.1	11.2	-103.69	275.2	115.0	266.4	252.2	18.765	
1,500.0	1,453.9	1,441.4	1,381.7	10.4	11.7	-102.00	312.5	140.3	299.7	284.3	19.464	
1,600.0	1,546.7	1,535.1	1,462.7	10.8	12.1	-100.49	351.5	166.7	333.6	317.0	20.063	
1,700.0	1,639.6	1,628.9	1,543.8	11.1	12.4	-99.26	390.5	193.2	367.6	349.8	20.589	
1,800.0	1,732.5	1,722.7	1,624.9	11.5	12.7	-98.23	429.5	219.6	401.8	382.7	21.034	
1,900.0	1,825.3	1,816.4	1,705.9	11.9	13.0	-97.37	468.5	246.1	436.1	415.7	21.414	
2,000.0	1,918.2	1,910.2	1,787.0	12.3	13.3	-96.63	507.5	272.5	470.4	448.8	21.741	
2,100.0	2,011.0	2,003.9	1,868.0	12.7	13.7	-95.99	546.5	298.9	504.8	481.9	22.025	
2,200.0	2,103.9	2,097.7	1,949.1	13.1	14.0	-95.43	585.5	325.4	539.2	515.0	22.273	
2,300.0	2,196.7	2,191.5	2,030.1	13.5	14.4	-94.94	624.5	351.8	573.7	548.2	22.489	
2,400.0	2,289.6	2,285.2	2,111.2	14.0	14.8	-94.50	663.5	378.3	608.2	581.4	22.680	
2,500.0	2,382.4	2,379.0	2,192.3	14.4	15.2	-94.12	702.5	404.7	642.8	614.6	22.846	
2,600.0	2,475.3	2,472.7	2,273.3	14.9	15.7	-93.77	741.5	431.2	677.3	647.9	23.028	
2,700.0	2,568.1	2,566.5	2,354.4	15.3	16.5	-93.45	780.5	457.6	711.9	681.2	23.146	
2,800.0	2,661.0	2,660.3	2,435.4	15.8	17.3	-93.17	819.5	484.1	746.5	714.5	23.267	
2,900.0	2,753.9	2,754.0	2,516.5	16.3	18.1	-92.91	858.5	510.5	781.2	747.7	23.378	
3,000.0	2,846.7	2,847.8	2,597.5	17.0	18.9	-92.67	897.6	536.9	815.8	781.0	23.478	
3,100.0	2,939.6	2,941.5	2,678.6	17.6	19.7	-92.45	936.6	563.4	850.4	814.4	23.570	
3,200.0	3,032.4	3,035.3	2,759.7	18.3	20.6	-92.25	975.6	589.8	885.1	847.7	23.654	
3,300.0	3,125.3	3,129.0	2,840.7	19.0	21.4	-92.06	1,014.6	616.3	919.8	881.0	23.731	
3,400.0	3,218.1	3,222.8	2,921.8	19.7	22.2	-91.89	1,053.6	642.7	954.4	914.3	23.801	
3,500.0	3,311.0	3,316.6	3,002.8	20.4	23.0	-91.73	1,092.6	669.2	989.1	947.7	23.866	
3,600.0	3,403.8	3,410.3	3,083.9	21.1	23.8	-91.57	1,131.6	695.6	1,023.8	981.0	23.927	
3,700.0	3,496.7	3,504.1	3,164.9	21.7	24.6	-91.43	1,170.6	722.1	1,058.5	1,014.3	23.982	
3,800.0	3,589.5	3,597.8	3,246.0	22.4	25.4	-91.30	1,209.6	748.5	1,093.2	1,047.7	24.034	
3,900.0	3,682.4	3,691.6	3,327.0	23.1	26.3	-91.18	1,248.6	774.9	1,127.9	1,081.0	24.082	
4,000.0	3,775.3	3,785.4	3,408.1	23.8	27.1	-91.06	1,287.6	801.4	1,162.6	1,114.4	24.127	
4,100.0	3,868.1	3,879.1	3,489.2	24.5	27.9	-90.95	1,326.6	827.8	1,197.3	1,147.7	24.168	
4,200.0	3,961.0	3,972.9	3,570.2	25.2	28.7	-90.85	1,365.6	854.3	1,232.0	1,181.1	24.207	
4,300.0	4,053.8	4,066.6	3,651.3	25.9	29.5	-90.75	1,404.6	880.7	1,266.7	1,214.5	24.244	
4,400.0	4,146.7	4,160.4	3,732.3	26.5	30.3	-90.66	1,443.6	907.2	1,301.4	1,247.8	24.278	
4,500.0	4,239.5	4,254.2	3,813.4	27.2	31.2	-90.57	1,482.6	933.6	1,336.2	1,281.2	24.310	
4,600.0	4,332.4	4,347.9	3,894.4	27.9	32.0	-90.49	1,521.6	960.0	1,370.9	1,314.6	24.341	
4,700.0	4,425.2	4,441.7	3,975.5	28.6	32.8	-90.41	1,560.6	986.5	1,405.6	1,347.9	24.369	
4,800.0	4,518.1	4,535.4	4,056.6	29.3	33.6	-90.34	1,599.6	1,012.9	1,440.3	1,381.3	24.396	
4,900.0	4,610.9	4,629.2	4,137.6	30.0	34.4	-90.27	1,638.6	1,039.4	1,475.1	1,414.7	24.422	

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-12W - OH - Design #2												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
				Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,703.8	4,723.0	4,218.7	30.7	35.2	-90.20	1,677.7	1,065.8	1,509.8	1,448.0	24.446		
5,100.0	4,796.7	4,816.7	4,299.7	31.4	36.1	-90.13	1,716.7	1,092.3	1,544.5	1,481.4	24.469		
5,200.0	4,889.5	4,910.5	4,380.8	32.1	36.9	-90.07	1,755.7	1,118.7	1,579.3	1,514.8	24.490		
5,300.0	4,982.4	5,004.2	4,461.8	32.7	37.7	-90.01	1,794.7	1,145.2	1,614.0	1,548.2	24.511		
5,400.0	5,075.2	5,098.0	4,542.9	33.4	38.5	-89.95	1,833.7	1,171.6	1,648.7	1,581.5	24.530		
5,500.0	5,168.1	5,191.8	4,624.0	34.1	39.3	-89.90	1,872.7	1,198.0	1,683.5	1,614.9	24.549		
5,600.0	5,260.9	5,285.5	4,705.0	34.8	40.2	-89.85	1,911.7	1,224.5	1,718.2	1,648.3	24.566		
5,700.0	5,354.5	5,379.2	4,786.0	35.5	41.0	-90.82	1,950.7	1,250.9	1,753.0	1,681.7	24.599		
5,800.0	5,449.5	5,472.7	4,866.8	36.0	41.8	-91.28	1,989.5	1,277.3	1,787.7	1,715.2	24.664		
5,900.0	5,545.8	5,565.7	4,947.2	36.5	42.6	-91.81	2,028.2	1,303.5	1,822.4	1,748.8	24.761		
6,000.0	5,643.2	5,748.3	5,108.1	36.9	44.1	-91.80	2,099.7	1,352.0	1,855.1	1,779.3	24.460		
6,100.0	5,741.5	5,955.7	5,298.5	37.2	45.5	-91.71	2,167.7	1,398.1	1,882.4	1,804.4	24.130		
6,200.0	5,840.5	6,171.9	5,503.9	37.5	46.7	-91.63	2,223.2	1,435.7	1,903.6	1,823.9	23.880		
6,300.0	5,940.0	6,395.0	5,721.6	37.7	47.5	-91.56	2,263.4	1,462.9	1,918.6	1,837.7	23.719		
6,400.0	6,039.8	6,581.7	5,906.7	37.8	47.9	-91.57	2,283.1	1,476.3	1,926.8	1,845.3	23.655		
6,500.0	6,139.8	6,815.2	6,139.8	37.8	48.1	-13.68	2,291.0	1,481.6	1,928.6	1,847.1	23.685		
6,600.0	6,239.8	6,915.2	6,239.8	37.9	48.1	-13.68	2,291.0	1,481.6	1,928.6	1,847.1	23.669		
6,700.0	6,339.8	7,015.2	6,339.8	37.9	48.1	-13.68	2,291.0	1,481.6	1,928.6	1,847.0	23.653		
6,800.0	6,439.8	7,115.2	6,439.8	37.9	48.2	-13.68	2,291.0	1,481.6	1,928.6	1,847.0	23.638		
6,900.0	6,539.8	7,215.2	6,539.8	38.0	48.2	-13.68	2,291.0	1,481.6	1,928.6	1,846.9	23.622		
7,000.0	6,639.8	7,315.2	6,639.8	38.0	48.2	-13.68	2,291.0	1,481.6	1,928.6	1,846.9	23.607		
7,100.0	6,739.8	7,415.2	6,739.8	38.0	48.2	-13.68	2,291.0	1,481.6	1,928.6	1,846.8	23.591		
7,200.0	6,839.8	7,515.2	6,839.8	38.0	48.2	-13.68	2,291.0	1,481.6	1,928.6	1,846.8	23.575		
7,300.0	6,939.8	7,615.2	6,939.8	38.1	48.2	-13.68	2,291.0	1,481.6	1,928.6	1,846.7	23.559		
7,400.0	7,039.8	7,715.2	7,039.8	38.1	48.3	-13.68	2,291.0	1,481.6	1,928.6	1,846.6	23.544		
7,500.0	7,139.8	7,815.2	7,139.8	38.1	48.3	-13.68	2,291.0	1,481.6	1,928.6	1,846.6	23.528		
7,600.0	7,239.8	7,915.2	7,239.8	38.2	48.3	-13.68	2,291.0	1,481.6	1,928.6	1,846.5	23.512		
7,700.0	7,339.8	8,015.2	7,339.8	38.2	48.3	-13.68	2,291.0	1,481.6	1,928.6	1,846.5	23.496		
7,800.0	7,439.8	8,115.2	7,439.8	38.2	48.3	-13.68	2,291.0	1,481.6	1,928.6	1,846.4	23.480		
7,900.0	7,539.8	8,215.2	7,539.8	38.2	48.4	-13.68	2,291.0	1,481.6	1,928.6	1,846.4	23.463		
8,000.0	7,639.8	8,315.2	7,639.8	38.3	48.4	-13.68	2,291.0	1,481.6	1,928.6	1,846.3	23.447		
8,100.0	7,739.8	8,415.2	7,739.8	38.3	48.4	-13.68	2,291.0	1,481.6	1,928.6	1,846.2	23.431		
8,200.0	7,839.8	8,515.2	7,839.8	38.3	48.4	-13.68	2,291.0	1,481.6	1,928.6	1,846.2	23.415		
8,206.9	7,846.7	8,522.1	7,846.7	38.3	48.4	-13.68	2,291.0	1,481.6	1,928.6	1,846.2	23.414		
8,250.2	7,890.0	8,561.3	7,886.0	38.3	48.4	-13.68	2,291.0	1,481.6	1,928.6	1,846.2	23.404		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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	-46.72	34.3	-36.4	50.0			
100.0	100.0	100.0	100.0	0.8	0.8	-46.72	34.3	-36.4	50.0	48.4	31.549	
200.0	200.0	200.0	200.0	1.4	1.4	-46.72	34.3	-36.4	50.0	47.1	17.665	CC
205.3	205.3	205.3	205.3	1.4	1.4	-124.57	34.3	-36.4	50.0	47.1	17.532	
300.0	300.0	300.0	300.0	1.7	1.9	-123.29	35.1	-35.5	50.0	46.6	14.799	ES
400.0	399.9	400.0	399.8	2.7	3.4	-120.24	38.9	-31.6	51.8	47.5	12.001	
500.0	499.6	499.7	499.0	4.2	4.6	-116.88	45.8	-24.6	56.1	50.8	10.591	
600.0	598.9	599.1	597.4	5.3	5.6	-113.84	55.6	-14.6	62.9	56.8	10.314	SF
700.0	697.6	698.1	694.8	6.2	6.5	-110.82	68.3	-1.6	72.2	65.4	10.544	
800.0	795.4	796.7	790.8	7.0	7.3	-108.51	83.9	14.3	84.0	76.4	11.037	
900.0	892.3	894.7	885.2	7.8	8.0	-106.67	102.2	33.0	98.3	89.8	11.664	
1,000.0	988.0	992.1	977.9	8.5	8.7	-105.22	123.3	54.5	114.8	105.5	12.342	
1,100.0	1,082.3	1,088.9	1,068.6	9.2	9.4	-104.07	146.9	78.6	133.6	123.4	13.011	
1,200.0	1,175.3	1,185.0	1,157.1	9.5	10.0	-103.20	172.9	105.2	154.5	143.3	13.747	
1,300.0	1,268.2	1,280.3	1,243.4	9.8	10.6	-101.61	201.3	134.1	176.8	164.4	14.288	
1,400.0	1,361.0	1,374.5	1,326.9	10.1	11.1	-99.30	231.8	165.3	200.5	186.9	14.716	
1,500.0	1,453.9	1,467.4	1,407.4	10.4	11.6	-96.57	264.2	198.4	226.1	211.1	15.153	
1,600.0	1,546.7	1,563.1	1,489.3	10.8	11.8	-93.90	298.8	233.7	252.9	236.6	15.524	
1,700.0	1,639.6	1,658.8	1,571.3	11.1	12.2	-91.74	333.4	269.0	280.1	262.5	15.841	
1,800.0	1,732.5	1,754.5	1,653.3	11.5	12.5	-89.96	367.9	304.3	307.7	288.6	16.123	
1,900.0	1,825.3	1,850.2	1,735.3	11.9	12.8	-88.47	402.5	339.6	335.5	315.0	16.380	
2,000.0	1,918.2	1,946.0	1,817.2	12.3	13.2	-87.20	437.1	374.9	363.4	341.6	16.613	
2,100.0	2,011.0	2,041.7	1,899.2	12.7	13.5	-86.12	471.7	410.2	391.5	368.3	16.826	
2,200.0	2,103.9	2,137.4	1,981.2	13.1	13.9	-85.19	506.3	445.6	419.7	395.1	17.019	
2,300.0	2,196.7	2,233.1	2,063.1	13.5	14.3	-84.37	540.9	480.9	448.0	422.0	17.189	
2,400.0	2,289.6	2,328.9	2,145.1	14.0	14.8	-83.64	575.5	516.2	476.4	449.0	17.377	
2,500.0	2,382.4	2,424.6	2,227.1	14.4	15.7	-83.00	610.1	551.5	504.9	476.0	17.514	
2,600.0	2,475.3	2,520.3	2,309.1	14.9	16.6	-82.43	644.7	586.8	533.4	503.1	17.650	
2,700.0	2,568.1	2,616.0	2,391.0	15.3	17.5	-81.91	679.3	622.2	561.9	530.3	17.777	
2,800.0	2,661.0	2,711.8	2,473.0	15.8	18.3	-81.45	713.9	657.5	590.5	557.5	17.893	
2,900.0	2,753.9	2,807.5	2,555.0	16.3	19.2	-81.03	748.5	692.8	619.1	584.7	18.001	
3,000.0	2,846.7	2,903.2	2,636.9	17.0	20.1	-80.64	783.1	728.1	647.7	611.9	18.101	
3,100.0	2,939.6	2,998.9	2,718.9	17.6	21.0	-80.29	817.7	763.4	676.4	639.2	18.193	
3,200.0	3,032.4	3,094.7	2,800.9	18.3	21.9	-79.96	852.3	798.7	705.1	666.5	18.280	
3,300.0	3,125.3	3,190.4	2,882.9	19.0	22.8	-79.66	886.8	834.1	733.8	693.8	18.360	
3,400.0	3,218.1	3,286.1	2,964.8	19.7	23.7	-79.39	921.4	869.4	762.5	721.1	18.435	
3,500.0	3,311.0	3,381.8	3,046.8	20.4	24.6	-79.13	956.0	904.7	791.2	748.4	18.505	
3,600.0	3,403.8	3,477.6	3,128.8	21.1	25.4	-78.89	990.6	940.0	819.9	775.8	18.571	
3,700.0	3,496.7	3,573.3	3,210.7	21.7	26.3	-78.67	1,025.2	975.3	848.7	803.2	18.633	
3,800.0	3,589.5	3,669.0	3,292.7	22.4	27.2	-78.46	1,059.8	1,010.7	877.5	830.5	18.691	
3,900.0	3,682.4	3,764.7	3,374.7	23.1	28.1	-78.27	1,094.4	1,046.0	906.3	857.9	18.745	
4,000.0	3,775.3	3,860.5	3,456.7	23.8	29.0	-78.09	1,129.0	1,081.3	935.0	885.3	18.797	
4,100.0	3,868.1	3,956.2	3,538.6	24.5	29.9	-77.92	1,163.6	1,116.6	963.8	912.7	18.845	
4,200.0	3,961.0	4,051.9	3,620.6	25.2	30.8	-77.75	1,198.2	1,151.9	992.6	940.1	18.891	
4,300.0	4,053.8	4,147.6	3,702.6	25.9	31.7	-77.60	1,232.8	1,187.3	1,021.5	967.5	18.935	
4,400.0	4,146.7	4,243.4	3,784.5	26.5	32.6	-77.46	1,267.4	1,222.6	1,050.3	994.9	18.976	
4,500.0	4,239.5	4,339.1	3,866.5	27.2	33.5	-77.32	1,302.0	1,257.9	1,079.1	1,022.3	19.015	
4,600.0	4,332.4	4,434.8	3,948.5	27.9	34.4	-77.19	1,336.6	1,293.2	1,107.9	1,049.8	19.052	
4,700.0	4,425.2	4,530.5	4,030.5	28.6	35.3	-77.07	1,371.2	1,328.5	1,136.8	1,077.2	19.088	
4,800.0	4,518.1	4,626.3	4,112.4	29.3	36.2	-76.95	1,405.7	1,363.8	1,165.6	1,104.6	19.121	
4,900.0	4,610.9	4,722.0	4,194.4	30.0	37.1	-76.84	1,440.3	1,399.2	1,194.4	1,132.1	19.153	

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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 #2											Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis 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
5,000.0	4,703.8	4,817.7	4,276.4	30.7	38.0	-76.74	1,474.9	1,434.5	1,223.3	1,159.5	19.184	
5,100.0	4,796.7	4,913.4	4,358.3	31.4	38.9	-76.63	1,509.5	1,469.8	1,252.1	1,187.0	19.213	
5,200.0	4,889.5	5,009.2	4,440.3	32.1	39.8	-76.54	1,544.1	1,505.1	1,281.0	1,214.4	19.241	
5,300.0	4,982.4	5,104.9	4,522.3	32.7	40.6	-76.45	1,578.7	1,540.4	1,309.8	1,241.9	19.268	
5,400.0	5,075.2	5,200.6	4,604.3	33.4	41.5	-76.36	1,613.3	1,575.8	1,338.7	1,269.3	19.293	
5,500.0	5,168.1	5,296.4	4,686.2	34.1	42.4	-76.27	1,647.9	1,611.1	1,367.6	1,296.8	19.318	
5,600.0	5,260.9	5,392.1	4,768.2	34.8	43.3	-76.19	1,682.5	1,646.4	1,396.4	1,324.2	19.341	
5,700.0	5,354.5	5,487.6	4,850.0	35.5	44.2	-76.75	1,717.0	1,681.6	1,425.7	1,352.2	19.384	
5,800.0	5,449.5	5,582.6	4,931.3	36.0	45.1	-77.20	1,751.3	1,716.7	1,456.1	1,381.3	19.469	
5,900.0	5,545.8	5,753.8	5,081.1	36.5	46.6	-77.25	1,809.3	1,775.9	1,484.9	1,407.9	19.282	
6,000.0	5,643.2	5,930.8	5,242.0	36.9	47.9	-77.29	1,860.9	1,828.5	1,509.7	1,430.7	19.120	
6,100.0	5,741.5	6,113.0	5,413.0	37.2	49.0	-77.31	1,904.7	1,873.3	1,530.1	1,449.6	18.995	
6,200.0	5,840.5	6,299.4	5,592.6	37.5	49.9	-77.32	1,939.6	1,908.9	1,546.0	1,464.3	18.918	
6,300.0	5,940.0	6,489.3	5,779.0	37.7	50.5	-77.33	1,964.5	1,934.3	1,557.1	1,474.7	18.887	
6,400.0	6,039.8	6,681.3	5,970.0	37.8	50.8	-77.33	1,978.6	1,948.7	1,563.3	1,480.6	18.904	
6,500.0	6,139.8	6,851.2	6,139.8	37.8	50.9	0.52	1,981.8	1,952.0	1,564.7	1,482.2	18.956	
6,600.0	6,239.8	6,951.2	6,239.8	37.9	50.9	0.52	1,981.8	1,952.0	1,564.7	1,482.1	18.945	
6,700.0	6,339.8	7,051.2	6,339.8	37.9	50.9	0.52	1,981.8	1,952.0	1,564.7	1,482.1	18.932	
6,800.0	6,439.8	7,151.2	6,439.8	37.9	51.0	0.52	1,981.8	1,952.0	1,564.7	1,482.0	18.920	
6,900.0	6,539.8	7,251.2	6,539.8	38.0	51.0	0.52	1,981.8	1,952.0	1,564.7	1,482.0	18.907	
7,000.0	6,639.8	7,351.2	6,639.8	38.0	51.0	0.52	1,981.8	1,952.0	1,564.7	1,481.9	18.895	
7,100.0	6,739.8	7,451.2	6,739.8	38.0	51.0	0.52	1,981.8	1,952.0	1,564.7	1,481.9	18.882	
7,200.0	6,839.8	7,551.2	6,839.8	38.0	51.0	0.52	1,981.8	1,952.0	1,564.7	1,481.8	18.870	
7,300.0	6,939.8	7,651.2	6,939.8	38.1	51.1	0.52	1,981.8	1,952.0	1,564.7	1,481.8	18.857	
7,400.0	7,039.8	7,751.2	7,039.8	38.1	51.1	0.52	1,981.8	1,952.0	1,564.7	1,481.7	18.844	
7,500.0	7,139.8	7,851.2	7,139.8	38.1	51.1	0.52	1,981.8	1,952.0	1,564.7	1,481.7	18.831	
7,600.0	7,239.8	7,951.2	7,239.8	38.2	51.1	0.52	1,981.8	1,952.0	1,564.7	1,481.6	18.818	
7,700.0	7,339.8	8,051.2	7,339.8	38.2	51.1	0.52	1,981.8	1,952.0	1,564.7	1,481.5	18.806	
7,800.0	7,439.8	8,151.2	7,439.8	38.2	51.2	0.52	1,981.8	1,952.0	1,564.7	1,481.5	18.793	
7,900.0	7,539.8	8,251.2	7,539.8	38.2	51.2	0.52	1,981.8	1,952.0	1,564.7	1,481.4	18.780	
8,000.0	7,639.8	8,351.2	7,639.8	38.3	51.2	0.52	1,981.8	1,952.0	1,564.7	1,481.4	18.767	
8,100.0	7,739.8	8,451.2	7,739.8	38.3	51.2	0.52	1,981.8	1,952.0	1,564.7	1,481.3	18.753	
8,200.0	7,839.8	8,551.2	7,839.8	38.3	51.2	0.52	1,981.8	1,952.0	1,564.7	1,481.2	18.740	
8,250.2	7,890.0	8,601.4	7,890.0	38.3	51.3	0.52	1,981.8	1,952.0	1,564.7	1,481.2	18.735	

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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 #2												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-46.72	27.4	-29.1	40.0				
100.0	100.0	100.0	100.0	0.8	0.8	-46.72	27.4	-29.1	40.0	38.4	25.238		
200.0	200.0	200.0	200.0	1.4	1.4	-46.72	27.4	-29.1	40.0	37.2	14.131		
281.1	281.1	281.3	281.3	1.6	1.9	-123.64	28.0	-28.4	40.1	36.7	11.810		
300.0	300.0	300.2	300.1	1.7	2.1	-122.48	28.4	-27.9	39.9	36.4	11.366	CC, ES	
400.0	399.9	400.2	400.0	2.7	3.6	-118.12	32.2	-23.3	41.2	36.8	9.362		
500.0	499.6	500.0	499.3	4.2	4.8	-113.54	38.7	-15.4	44.8	39.5	8.478		
600.0	598.9	599.6	597.8	5.3	5.8	-109.36	47.9	-4.3	50.7	44.7	8.428	SF	
700.0	697.6	698.8	695.2	6.2	6.6	-105.93	59.7	10.2	58.7	52.0	8.740		
800.0	795.4	797.7	791.4	7.0	7.4	-103.27	74.2	27.8	69.0	61.5	9.236		
900.0	892.3	896.1	886.1	7.8	8.1	-101.30	91.2	48.5	81.3	73.0	9.820		
1,000.0	988.0	994.0	979.1	8.5	8.8	-99.84	110.7	72.2	95.6	86.4	10.427		
1,100.0	1,082.3	1,091.5	1,070.2	9.2	9.5	-98.76	132.6	98.7	111.8	101.6	11.013		
1,200.0	1,175.3	1,188.3	1,159.3	9.5	10.1	-97.93	156.8	128.1	129.8	118.6	11.627		
1,300.0	1,268.2	1,284.5	1,246.1	9.8	10.7	-96.13	183.1	160.1	149.2	136.8	12.058		
1,400.0	1,361.0	1,380.3	1,330.8	10.1	11.0	-93.49	211.6	194.7	170.1	156.5	12.470		
1,500.0	1,453.9	1,477.7	1,416.4	10.4	11.3	-91.09	241.1	230.5	191.8	176.8	12.786		
1,600.0	1,546.7	1,575.0	1,501.9	10.8	11.7	-89.17	270.6	266.4	213.7	197.3	13.048		
1,700.0	1,639.6	1,672.3	1,587.5	11.1	12.0	-87.61	300.1	302.3	235.8	218.1	13.276		
1,800.0	1,732.5	1,769.7	1,673.0	11.5	12.3	-86.32	329.6	338.1	258.1	238.9	13.478		
1,900.0	1,825.3	1,867.0	1,758.5	11.9	12.7	-85.23	359.1	374.0	280.4	259.9	13.658		
2,000.0	1,918.2	1,964.4	1,844.1	12.3	13.1	-84.30	388.6	409.9	302.9	281.0	13.820		
2,100.0	2,011.0	2,061.7	1,929.6	12.7	13.4	-83.50	418.1	445.7	325.4	302.1	13.964		
2,200.0	2,103.9	2,159.1	2,015.2	13.1	13.8	-82.81	447.7	481.6	347.9	323.2	14.095		
2,300.0	2,196.7	2,256.4	2,100.7	13.5	14.2	-82.20	477.2	517.5	370.5	344.5	14.211		
2,400.0	2,289.6	2,353.7	2,186.3	14.0	14.7	-81.66	506.7	553.3	393.2	365.7	14.317		
2,500.0	2,382.4	2,451.1	2,271.8	14.4	15.4	-81.17	536.2	589.2	415.8	387.0	14.420		
2,600.0	2,475.3	2,548.4	2,357.4	14.9	16.3	-80.74	565.7	625.1	438.5	408.3	14.507		
2,700.0	2,568.1	2,645.8	2,442.9	15.3	17.1	-80.35	595.2	660.9	461.2	429.6	14.587		
2,800.0	2,661.0	2,743.1	2,528.5	15.8	17.9	-80.00	624.7	696.8	483.9	450.9	14.661		
2,900.0	2,753.9	2,840.4	2,614.0	16.3	18.8	-79.68	654.2	732.7	506.7	472.3	14.729		
3,000.0	2,846.7	2,937.8	2,699.5	17.0	19.6	-79.38	683.8	768.5	529.4	493.6	14.792		
3,100.0	2,939.6	3,035.1	2,785.1	17.6	20.5	-79.11	713.3	804.4	552.2	515.0	14.849		
3,200.0	3,032.4	3,132.5	2,870.6	18.3	21.3	-78.86	742.8	840.3	575.0	536.4	14.903		
3,300.0	3,125.3	3,229.8	2,956.2	19.0	22.1	-78.64	772.3	876.2	597.8	557.8	14.953		
3,400.0	3,218.1	3,327.2	3,041.7	19.7	23.0	-78.42	801.8	912.0	620.6	579.2	14.999		
3,500.0	3,311.0	3,424.5	3,127.3	20.4	23.8	-78.22	831.3	947.9	643.4	600.6	15.042		
3,600.0	3,403.8	3,521.8	3,212.8	21.1	24.7	-78.04	860.8	983.8	666.2	622.0	15.082		
3,700.0	3,496.7	3,619.2	3,298.4	21.7	25.5	-77.87	890.3	1,019.6	689.0	643.4	15.120		
3,800.0	3,589.5	3,716.5	3,383.9	22.4	26.3	-77.71	919.9	1,055.5	711.8	664.9	15.155		
3,900.0	3,682.4	3,813.9	3,469.5	23.1	27.2	-77.56	949.4	1,091.4	734.6	686.3	15.188		
4,000.0	3,775.3	3,911.2	3,555.0	23.8	28.0	-77.42	978.9	1,127.2	757.5	707.7	15.219		
4,100.0	3,868.1	4,008.6	3,640.5	24.5	28.9	-77.28	1,008.4	1,163.1	780.3	729.1	15.248		
4,200.0	3,961.0	4,105.9	3,726.1	25.2	29.7	-77.16	1,037.9	1,199.0	803.2	750.6	15.276		
4,300.0	4,053.8	4,203.2	3,811.6	25.9	30.6	-77.04	1,067.4	1,234.8	826.0	772.0	15.302		
4,400.0	4,146.7	4,300.6	3,897.2	26.5	31.4	-76.92	1,096.9	1,270.7	848.8	793.5	15.327		
4,500.0	4,239.5	4,397.9	3,982.7	27.2	32.2	-76.82	1,126.5	1,306.6	871.7	814.9	15.350		
4,600.0	4,332.4	4,495.3	4,068.3	27.9	33.1	-76.72	1,156.0	1,342.4	894.5	836.4	15.372		
4,700.0	4,425.2	4,592.6	4,153.8	28.6	33.9	-76.62	1,185.5	1,378.3	917.4	857.8	15.393		
4,800.0	4,518.1	4,689.9	4,239.4	29.3	34.8	-76.53	1,215.0	1,414.2	940.3	879.3	15.413		
4,900.0	4,610.9	4,787.3	4,324.9	30.0	35.6	-76.44	1,244.5	1,450.0	963.1	900.7	15.432		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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 #2												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)			
5,000.0	4,703.8	4,884.6	4,410.5	30.7	36.5	-76.36	1,274.0	1,485.9	986.0	922.2	15.450		
5,100.0	4,796.7	4,982.0	4,496.0	31.4	37.3	-76.28	1,303.5	1,521.8	1,008.8	943.6	15.467		
5,200.0	4,889.5	5,079.3	4,581.5	32.1	38.2	-76.20	1,333.0	1,557.6	1,031.7	965.1	15.484		
5,300.0	4,982.4	5,176.7	4,667.1	32.7	39.0	-76.13	1,362.6	1,593.5	1,054.6	986.5	15.499		
5,400.0	5,075.2	5,274.0	4,752.6	33.4	39.8	-76.06	1,392.1	1,629.4	1,077.4	1,008.0	15.514		
5,500.0	5,168.1	5,371.3	4,838.2	34.1	40.7	-76.00	1,421.6	1,665.2	1,100.3	1,029.5	15.529		
5,600.0	5,260.9	5,468.7	4,923.7	34.8	41.5	-75.93	1,451.1	1,701.1	1,123.2	1,050.9	15.542		
5,700.0	5,354.5	5,565.9	5,009.1	35.5	42.4	-76.33	1,480.6	1,736.9	1,146.5	1,072.9	15.574		
5,800.0	5,449.5	5,702.3	5,130.5	36.0	43.5	-76.51	1,520.1	1,784.9	1,169.5	1,094.1	15.507		
5,900.0	5,545.8	5,847.8	5,263.8	36.5	44.5	-76.64	1,557.1	1,829.9	1,189.6	1,112.5	15.429		
6,000.0	5,643.2	5,995.7	5,402.8	36.9	45.4	-76.75	1,589.2	1,868.9	1,206.8	1,128.2	15.366		
6,100.0	5,741.5	6,145.7	5,546.8	37.2	46.2	-76.84	1,615.8	1,901.3	1,220.8	1,141.1	15.324		
6,200.0	5,840.5	6,297.3	5,694.8	37.5	46.7	-76.91	1,636.6	1,926.5	1,231.6	1,151.1	15.298		
6,300.0	5,940.0	6,450.2	5,846.0	37.7	47.1	-76.95	1,651.2	1,944.3	1,239.2	1,158.1	15.293		
6,400.0	6,039.8	6,604.0	5,999.2	37.8	47.4	-76.98	1,659.4	1,954.2	1,243.4	1,162.1	15.304		
6,500.0	6,139.8	6,744.7	6,139.8	37.8	47.4	0.87	1,661.3	1,956.5	1,244.3	1,163.1	15.330		
6,600.0	6,239.8	6,844.7	6,239.8	37.9	47.4	0.87	1,661.3	1,956.5	1,244.3	1,163.1	15.320		
6,700.0	6,339.8	6,944.7	6,339.8	37.9	47.5	0.87	1,661.3	1,956.5	1,244.3	1,163.0	15.310		
6,800.0	6,439.8	7,044.7	6,439.8	37.9	47.5	0.87	1,661.3	1,956.5	1,244.3	1,163.0	15.300		
6,900.0	6,539.8	7,144.7	6,539.8	38.0	47.5	0.87	1,661.3	1,956.5	1,244.3	1,162.9	15.289		
7,000.0	6,639.8	7,244.7	6,639.8	38.0	47.5	0.87	1,661.3	1,956.5	1,244.3	1,162.9	15.279		
7,100.0	6,739.8	7,344.7	6,739.8	38.0	47.5	0.87	1,661.3	1,956.5	1,244.3	1,162.8	15.268		
7,200.0	6,839.8	7,444.7	6,839.8	38.0	47.6	0.87	1,661.3	1,956.5	1,244.3	1,162.8	15.257		
7,300.0	6,939.8	7,544.7	6,939.8	38.1	47.6	0.87	1,661.3	1,956.5	1,244.3	1,162.7	15.247		
7,400.0	7,039.8	7,644.7	7,039.8	38.1	47.6	0.87	1,661.3	1,956.5	1,244.3	1,162.6	15.236		
7,500.0	7,139.8	7,744.7	7,139.8	38.1	47.6	0.87	1,661.3	1,956.5	1,244.3	1,162.6	15.225		
7,600.0	7,239.8	7,844.7	7,239.8	38.2	47.7	0.87	1,661.3	1,956.5	1,244.3	1,162.5	15.215		
7,700.0	7,339.8	7,944.7	7,339.8	38.2	47.7	0.87	1,661.3	1,956.5	1,244.3	1,162.5	15.204		
7,800.0	7,439.8	8,044.7	7,439.8	38.2	47.7	0.87	1,661.3	1,956.5	1,244.3	1,162.4	15.193		
7,900.0	7,539.8	8,144.7	7,539.8	38.2	47.7	0.87	1,661.3	1,956.5	1,244.3	1,162.4	15.182		
8,000.0	7,639.8	8,244.7	7,639.8	38.3	47.8	0.87	1,661.3	1,956.5	1,244.3	1,162.3	15.171		
8,100.0	7,739.8	8,344.7	7,739.8	38.3	47.8	0.87	1,661.3	1,956.5	1,244.3	1,162.2	15.161		
8,200.0	7,839.8	8,444.7	7,839.8	38.3	47.8	0.87	1,661.3	1,956.5	1,244.3	1,162.2	15.150		
8,250.2	7,890.0	8,494.9	7,890.0	38.3	47.8	0.87	1,661.3	1,956.5	1,244.3	1,162.2	15.145		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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	-46.72	20.6	-21.8	30.0			
100.0	100.0	100.0	100.0	0.8	0.8	-46.72	20.6	-21.8	30.0	28.4	18.930	
200.0	200.0	200.0	200.0	1.4	1.4	-46.72	20.6	-21.8	30.0	27.2	10.600	
278.6	278.6	278.6	278.6	1.6	1.6	-124.77	20.7	-21.7	30.1	26.9	9.341	
300.0	300.0	300.1	300.1	1.7	1.7	-123.77	20.9	-21.4	29.9	26.6	9.011 CC	
400.0	399.9	400.4	400.3	2.7	3.0	-120.85	23.3	-17.7	30.9	26.6	7.212 ES	
500.0	499.6	500.5	500.0	4.2	4.3	-117.23	28.2	-10.5	33.5	28.2	6.387	
600.0	598.9	600.5	599.1	5.3	5.4	-113.52	35.5	0.4	37.8	31.8	6.355 SF	
700.0	697.6	700.3	697.4	6.2	6.3	-110.16	45.1	14.8	43.8	37.2	6.666	
800.0	795.4	799.9	794.6	7.0	7.1	-107.35	57.1	32.7	51.5	44.3	7.137	
900.0	892.3	899.2	890.5	7.8	7.9	-105.09	71.4	54.0	60.9	52.9	7.670	
1,000.0	988.0	998.2	985.0	8.5	8.6	-103.31	88.0	78.7	71.9	63.1	8.202	
1,100.0	1,082.3	1,097.0	1,077.8	9.2	9.3	-101.92	106.8	106.6	84.5	74.8	8.696	
1,200.0	1,175.3	1,195.3	1,168.8	9.5	9.9	-100.64	127.7	137.8	98.5	87.8	9.205	
1,300.0	1,268.2	1,293.2	1,257.6	9.8	10.5	-97.93	150.6	172.0	113.5	101.6	9.547	
1,400.0	1,361.0	1,391.7	1,345.9	10.1	10.9	-94.79	174.9	208.1	129.2	116.0	9.786	
1,500.0	1,453.9	1,490.2	1,434.2	10.4	11.2	-92.33	199.2	244.3	145.3	130.7	9.975	
1,600.0	1,546.7	1,588.7	1,522.6	10.8	11.5	-90.36	223.5	280.6	161.6	145.6	10.133	
1,700.0	1,639.6	1,687.3	1,610.9	11.1	11.9	-88.76	247.8	316.8	178.0	160.7	10.271	
1,800.0	1,732.5	1,785.8	1,699.3	11.5	12.2	-87.42	272.1	353.0	194.6	175.9	10.392	
1,900.0	1,825.3	1,884.3	1,787.6	11.9	12.6	-86.29	296.4	389.2	211.2	191.1	10.501	
2,000.0	1,918.2	1,982.9	1,876.0	12.3	13.0	-85.33	320.7	425.4	227.9	206.4	10.599	
2,100.0	2,011.0	2,081.4	1,964.3	12.7	13.4	-84.50	345.0	461.6	244.7	221.8	10.687	
2,200.0	2,103.9	2,179.9	2,052.7	13.1	13.8	-83.78	369.3	497.9	261.5	237.2	10.767	
2,300.0	2,196.7	2,278.4	2,141.0	13.5	14.2	-83.14	393.6	534.1	278.3	252.6	10.840	
2,400.0	2,289.6	2,377.0	2,229.4	14.0	14.6	-82.57	417.9	570.3	295.2	268.1	10.906	
2,500.0	2,382.4	2,475.5	2,317.7	14.4	15.0	-82.07	442.2	606.5	312.1	283.6	10.966	
2,600.0	2,475.3	2,574.0	2,406.1	14.9	15.6	-81.62	466.5	642.7	329.0	299.1	11.025	
2,700.0	2,568.1	2,672.6	2,494.4	15.3	16.4	-81.21	490.8	678.9	345.9	314.7	11.074	
2,800.0	2,661.0	2,771.1	2,582.8	15.8	17.2	-80.84	515.1	715.2	362.8	330.2	11.120	
2,900.0	2,753.9	2,869.6	2,671.1	16.3	18.0	-80.51	539.4	751.4	379.8	345.8	11.163	
3,000.0	2,846.7	2,968.1	2,759.5	17.0	18.8	-80.20	563.7	787.6	396.8	361.3	11.203	
3,100.0	2,939.6	3,066.7	2,847.8	17.6	19.5	-79.92	588.0	823.8	413.7	376.9	11.239	
3,200.0	3,032.4	3,165.2	2,936.2	18.3	20.3	-79.66	612.3	860.0	430.7	392.5	11.274	
3,300.0	3,125.3	3,263.7	3,024.5	19.0	21.1	-79.42	636.6	896.2	447.7	408.1	11.306	
3,400.0	3,218.1	3,362.3	3,112.9	19.7	21.9	-79.19	660.9	932.5	464.7	423.7	11.335	
3,500.0	3,311.0	3,460.8	3,201.2	20.4	22.7	-78.99	685.2	968.7	481.7	439.3	11.363	
3,600.0	3,403.8	3,559.3	3,289.6	21.1	23.5	-78.79	709.5	1,004.9	498.8	455.0	11.389	
3,700.0	3,496.7	3,657.8	3,377.9	21.7	24.3	-78.61	733.8	1,041.1	515.8	470.6	11.413	
3,800.0	3,589.5	3,756.4	3,466.3	22.4	25.1	-78.44	758.1	1,077.3	532.8	486.2	11.436	
3,900.0	3,682.4	3,854.9	3,554.6	23.1	25.9	-78.29	782.4	1,113.5	549.8	501.8	11.457	
4,000.0	3,775.3	3,953.4	3,643.0	23.8	26.7	-78.14	806.7	1,149.7	566.9	517.5	11.477	
4,100.0	3,868.1	4,051.9	3,731.3	24.5	27.5	-78.00	831.0	1,186.0	583.9	533.1	11.497	
4,200.0	3,961.0	4,150.5	3,819.7	25.2	28.3	-77.87	855.3	1,222.2	600.9	548.7	11.515	
4,300.0	4,053.8	4,249.0	3,908.0	25.9	29.1	-77.74	879.6	1,258.4	618.0	564.4	11.532	
4,400.0	4,146.7	4,347.5	3,996.4	26.5	29.9	-77.62	903.9	1,294.6	635.0	580.0	11.548	
4,500.0	4,239.5	4,446.1	4,084.7	27.2	30.7	-77.51	928.2	1,330.8	652.1	595.7	11.563	
4,600.0	4,332.4	4,544.6	4,173.1	27.9	31.4	-77.40	952.5	1,367.0	669.1	611.3	11.577	
4,700.0	4,425.2	4,643.1	4,261.4	28.6	32.2	-77.30	976.8	1,403.3	686.2	627.0	11.591	
4,800.0	4,518.1	4,741.6	4,349.8	29.3	33.0	-77.21	1,001.1	1,439.5	703.2	642.6	11.604	
4,900.0	4,610.9	4,840.2	4,438.1	30.0	33.8	-77.12	1,025.4	1,475.7	720.3	658.3	11.617	

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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 #2												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,703.8	4,938.7	4,526.5	30.7	34.6	-77.03	1,049.7	1,511.9	737.3	673.9	11.629		
5,100.0	4,796.7	5,037.2	4,614.8	31.4	35.4	-76.94	1,074.0	1,548.1	754.4	689.6	11.640		
5,200.0	4,889.5	5,135.8	4,703.2	32.1	36.2	-76.87	1,098.3	1,584.3	771.5	705.2	11.651		
5,300.0	4,982.4	5,234.3	4,791.5	32.7	37.0	-76.79	1,122.6	1,620.6	788.5	720.9	11.661		
5,400.0	5,075.2	5,332.8	4,879.9	33.4	37.8	-76.72	1,146.9	1,656.8	805.6	736.6	11.671		
5,500.0	5,168.1	5,431.3	4,968.2	34.1	38.6	-76.65	1,171.2	1,693.0	822.7	752.2	11.681		
5,600.0	5,260.9	5,529.9	5,056.6	34.8	39.4	-76.58	1,195.5	1,729.2	839.7	767.9	11.690		
5,700.0	5,354.5	5,640.5	5,156.1	35.5	40.3	-76.80	1,222.4	1,769.3	856.9	783.6	11.682		
5,800.0	5,449.5	5,765.3	5,270.8	36.0	41.2	-76.95	1,249.8	1,810.2	872.5	797.6	11.648		
5,900.0	5,545.8	5,891.2	5,389.0	36.5	42.0	-77.09	1,273.9	1,846.1	886.2	809.9	11.620		
6,000.0	5,643.2	6,018.1	5,510.4	36.9	42.6	-77.20	1,294.5	1,876.8	897.7	820.3	11.600		
6,100.0	5,741.5	6,145.8	5,634.4	37.2	43.1	-77.28	1,311.4	1,902.0	907.1	828.8	11.587		
6,200.0	5,840.5	6,274.2	5,760.6	37.5	43.5	-77.35	1,324.5	1,921.5	914.4	835.4	11.581		
6,300.0	5,940.0	6,403.0	5,888.4	37.7	43.8	-77.39	1,333.7	1,935.1	919.4	840.0	11.580		
6,400.0	6,039.8	6,532.2	6,017.2	37.8	44.0	-77.41	1,338.8	1,942.8	922.3	842.7	11.587		
6,500.0	6,139.8	6,654.9	6,139.8	37.8	44.1	0.44	1,340.0	1,944.6	923.0	843.4	11.597		
6,600.0	6,239.8	6,754.9	6,239.8	37.9	44.1	0.44	1,340.0	1,944.6	923.0	843.3	11.590		
6,700.0	6,339.8	6,854.9	6,339.8	37.9	44.1	0.44	1,340.0	1,944.6	923.0	843.3	11.582		
6,800.0	6,439.8	6,954.9	6,439.8	37.9	44.1	0.44	1,340.0	1,944.6	923.0	843.2	11.574		
6,900.0	6,539.8	7,054.9	6,539.8	38.0	44.1	0.44	1,340.0	1,944.6	923.0	843.2	11.565		
7,000.0	6,639.8	7,154.9	6,639.8	38.0	44.2	0.44	1,340.0	1,944.6	923.0	843.1	11.557		
7,100.0	6,739.8	7,254.9	6,739.8	38.0	44.2	0.44	1,340.0	1,944.6	923.0	843.0	11.549		
7,200.0	6,839.8	7,354.9	6,839.8	38.0	44.2	0.44	1,340.0	1,944.6	923.0	843.0	11.541		
7,300.0	6,939.8	7,454.9	6,939.8	38.1	44.2	0.44	1,340.0	1,944.6	923.0	842.9	11.532		
7,400.0	7,039.8	7,554.9	7,039.8	38.1	44.3	0.44	1,340.0	1,944.6	923.0	842.9	11.524		
7,500.0	7,139.8	7,654.9	7,139.8	38.1	44.3	0.44	1,340.0	1,944.6	923.0	842.8	11.516		
7,600.0	7,239.8	7,754.9	7,239.8	38.2	44.3	0.44	1,340.0	1,944.6	923.0	842.7	11.507		
7,700.0	7,339.8	7,854.9	7,339.8	38.2	44.3	0.44	1,340.0	1,944.6	923.0	842.7	11.499		
7,800.0	7,439.8	7,954.9	7,439.8	38.2	44.4	0.44	1,340.0	1,944.6	923.0	842.6	11.490		
7,900.0	7,539.8	8,054.9	7,539.8	38.2	44.4	0.44	1,340.0	1,944.6	923.0	842.6	11.482		
8,000.0	7,639.8	8,154.9	7,639.8	38.3	44.4	0.44	1,340.0	1,944.6	923.0	842.5	11.473		
8,100.0	7,739.8	8,254.9	7,739.8	38.3	44.4	0.44	1,340.0	1,944.6	923.0	842.4	11.465		
8,200.0	7,839.8	8,354.9	7,839.8	38.3	44.5	0.44	1,340.0	1,944.6	923.0	842.4	11.456		
8,250.2	7,890.0	8,405.0	7,890.0	38.3	44.5	0.44	1,340.0	1,944.6	923.0	842.4	11.453		

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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 #2											Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis 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	-46.70	13.7	-14.5	20.0			
100.0	100.0	100.0	100.0	0.8	0.8	-46.70	13.7	-14.5	20.0	18.4	12.619	
200.0	200.0	200.0	200.0	1.4	1.4	-46.70	13.7	-14.5	20.0	17.2	7.066	CC
200.1	200.1	200.1	200.1	1.4	1.4	-46.70	13.7	-14.5	20.0	17.2	7.064	
300.0	300.0	300.0	300.0	1.7	1.9	-124.87	13.7	-14.5	20.1	16.5	5.630	ES
400.0	399.9	400.3	400.3	2.7	2.7	-126.55	14.7	-12.6	21.2	16.6	4.651	
500.0	499.6	500.6	500.4	4.2	4.1	-126.57	17.7	-6.7	23.3	17.4	3.947	
600.0	598.9	601.0	600.1	5.3	5.2	-125.34	22.7	3.0	26.5	19.5	3.808	SF
700.0	697.6	701.3	699.3	6.2	6.1	-123.34	29.7	16.6	30.6	22.9	3.943	
800.0	795.4	801.6	797.6	7.0	7.0	-121.01	38.7	34.1	35.8	27.4	4.242	
900.0	892.3	901.8	894.9	7.8	7.7	-118.65	49.6	55.3	42.1	33.0	4.637	
1,000.0	988.0	1,002.0	991.1	8.5	8.4	-116.40	62.4	80.4	49.4	39.7	5.074	
1,100.0	1,082.3	1,102.1	1,085.8	9.2	9.1	-114.35	77.2	109.0	57.8	47.3	5.510	
1,200.0	1,175.3	1,202.1	1,179.0	9.5	9.8	-112.13	93.7	141.3	67.1	55.9	5.996	
1,300.0	1,268.2	1,301.8	1,270.2	9.8	10.2	-107.67	112.1	177.1	76.2	64.3	6.416	
1,400.0	1,361.0	1,401.1	1,360.6	10.1	10.5	-103.26	130.9	213.8	85.7	72.8	6.660	
1,500.0	1,453.9	1,500.5	1,450.9	10.4	10.8	-99.74	149.8	250.5	95.6	81.5	6.803	
1,600.0	1,546.7	1,599.8	1,541.3	10.8	11.1	-96.88	168.7	287.3	105.7	90.4	6.896	
1,700.0	1,639.6	1,699.2	1,631.7	11.1	11.5	-94.53	187.5	324.0	116.1	99.5	6.964	
1,800.0	1,732.5	1,798.5	1,722.1	11.5	11.8	-92.57	206.4	360.7	126.7	108.6	7.019	
1,900.0	1,825.3	1,897.9	1,812.4	11.9	12.2	-90.91	225.2	397.4	137.4	117.9	7.067	
2,000.0	1,918.2	1,997.3	1,902.8	12.3	12.6	-89.49	244.1	434.2	148.1	127.3	7.111	
2,100.0	2,011.0	2,096.6	1,993.2	12.7	13.0	-88.26	262.9	470.9	159.0	136.7	7.151	
2,200.0	2,103.9	2,196.0	2,083.5	13.1	13.4	-87.20	281.8	507.6	169.9	146.3	7.189	
2,300.0	2,196.7	2,295.3	2,173.9	13.5	13.8	-86.25	300.7	544.4	180.8	155.8	7.225	
2,400.0	2,289.6	2,394.7	2,264.3	14.0	14.2	-85.42	319.5	581.1	191.9	165.4	7.258	
2,500.0	2,382.4	2,494.0	2,354.7	14.4	14.6	-84.68	338.4	617.8	202.9	175.1	7.290	
2,600.0	2,475.3	2,593.4	2,445.0	14.9	15.1	-84.01	357.2	654.5	214.0	184.7	7.319	
2,700.0	2,568.1	2,692.8	2,535.4	15.3	15.7	-83.41	376.1	691.3	225.1	194.4	7.347	
2,800.0	2,661.0	2,792.1	2,625.8	15.8	16.4	-82.87	394.9	728.0	236.2	204.1	7.374	
2,900.0	2,753.9	2,891.5	2,716.2	16.3	17.2	-82.38	413.8	764.7	247.3	213.9	7.399	
3,000.0	2,846.7	2,990.8	2,806.5	17.0	17.9	-81.92	432.7	801.5	258.5	223.6	7.422	
3,100.0	2,939.6	3,090.2	2,896.9	17.6	18.7	-81.51	451.5	838.2	269.6	233.4	7.444	
3,200.0	3,032.4	3,189.5	2,987.3	18.3	19.4	-81.13	470.4	874.9	280.8	243.2	7.465	
3,300.0	3,125.3	3,288.9	3,077.6	19.0	20.2	-80.77	489.2	911.7	292.0	253.0	7.485	
3,400.0	3,218.1	3,388.2	3,168.0	19.7	20.9	-80.45	508.1	948.4	303.2	262.8	7.503	
3,500.0	3,311.0	3,487.6	3,258.4	20.4	21.7	-80.14	526.9	985.1	314.4	272.6	7.521	
3,600.0	3,403.8	3,587.0	3,348.8	21.1	22.4	-79.86	545.8	1,021.8	325.6	282.4	7.537	
3,700.0	3,496.7	3,686.3	3,439.1	21.7	23.2	-79.60	564.7	1,058.6	336.9	292.3	7.553	
3,800.0	3,589.5	3,785.7	3,529.5	22.4	24.0	-79.35	583.5	1,095.3	348.1	302.1	7.568	
3,900.0	3,682.4	3,885.0	3,619.9	23.1	24.7	-79.12	602.4	1,132.0	359.4	312.0	7.582	
4,000.0	3,775.3	3,984.4	3,710.2	23.8	25.5	-78.90	621.2	1,168.8	370.6	321.8	7.596	
4,100.0	3,868.1	4,083.7	3,800.6	24.5	26.2	-78.70	640.1	1,205.5	381.8	331.7	7.609	
4,200.0	3,961.0	4,183.1	3,891.0	25.2	27.0	-78.51	658.9	1,242.2	393.1	341.5	7.621	
4,300.0	4,053.8	4,282.5	3,981.4	25.9	27.7	-78.33	677.8	1,278.9	404.4	351.4	7.633	
4,400.0	4,146.7	4,381.8	4,071.7	26.5	28.5	-78.15	696.7	1,315.7	415.6	361.3	7.644	
4,500.0	4,239.5	4,481.2	4,162.1	27.2	29.2	-77.99	715.5	1,352.4	426.9	371.1	7.655	
4,600.0	4,332.4	4,580.5	4,252.5	27.9	30.0	-77.84	734.4	1,389.1	438.2	381.0	7.665	
4,700.0	4,425.2	4,679.9	4,342.8	28.6	30.8	-77.69	753.2	1,425.9	449.4	390.9	7.674	
4,800.0	4,518.1	4,779.2	4,433.2	29.3	31.5	-77.55	772.1	1,462.6	460.7	400.7	7.684	
4,900.0	4,610.9	4,878.6	4,523.6	30.0	32.3	-77.42	790.9	1,499.3	472.0	410.6	7.693	

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft	
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
5,000.0	4,703.8	4,977.9	4,614.0	30.7	33.0	-77.29	809.8	1,536.0	483.3	420.5	7.701			
5,100.0	4,796.7	5,077.3	4,704.3	31.4	33.8	-77.17	828.7	1,572.8	494.5	430.4	7.709			
5,200.0	4,889.5	5,176.7	4,794.7	32.1	34.6	-77.05	847.5	1,609.5	505.8	440.3	7.717			
5,300.0	4,982.4	5,276.0	4,885.1	32.7	35.3	-76.94	866.4	1,646.2	517.1	450.2	7.725			
5,400.0	5,075.2	5,375.4	4,975.4	33.4	36.1	-76.84	885.2	1,683.0	528.4	460.1	7.732			
5,500.0	5,168.1	5,474.7	5,065.8	34.1	36.8	-76.74	904.1	1,719.7	539.7	470.0	7.739			
5,600.0	5,260.9	5,574.1	5,156.2	34.8	37.6	-76.64	922.9	1,756.4	551.0	479.9	7.746			
5,700.0	5,354.5	5,684.9	5,257.9	35.5	38.4	-76.77	943.0	1,795.5	561.8	489.2	7.737			
5,800.0	5,449.5	5,797.2	5,363.1	36.0	39.1	-76.89	961.1	1,830.6	571.4	497.4	7.726			
5,900.0	5,545.8	5,909.9	5,470.4	36.5	39.7	-77.00	976.8	1,861.2	579.7	504.6	7.719			
6,000.0	5,643.2	6,023.0	5,579.6	36.9	40.2	-77.09	990.1	1,887.2	586.8	510.7	7.714			
6,100.0	5,741.5	6,136.4	5,690.4	37.2	40.6	-77.16	1,000.9	1,908.4	592.5	515.7	7.712			
6,200.0	5,840.5	6,250.0	5,802.5	37.5	41.0	-77.21	1,009.3	1,924.7	596.9	519.5	7.711			
6,300.0	5,940.0	6,363.7	5,915.6	37.7	41.2	-77.24	1,015.1	1,936.0	600.0	522.2	7.712			
6,400.0	6,039.8	6,477.6	6,029.2	37.8	41.3	-77.26	1,018.4	1,942.4	601.7	523.7	7.714			
6,500.0	6,139.8	6,588.2	6,139.8	37.8	41.4	0.59	1,019.2	1,943.8	602.1	524.1	7.716			
6,600.0	6,239.8	6,688.2	6,239.8	37.9	41.4	0.59	1,019.2	1,943.8	602.1	524.0	7.711			
6,700.0	6,339.8	6,788.2	6,339.8	37.9	41.4	0.59	1,019.2	1,943.8	602.1	523.9	7.706			
6,800.0	6,439.8	6,888.2	6,439.8	37.9	41.5	0.59	1,019.2	1,943.8	602.1	523.9	7.700			
6,900.0	6,539.8	6,988.2	6,539.8	38.0	41.5	0.59	1,019.2	1,943.8	602.1	523.8	7.694			
7,000.0	6,639.8	7,088.2	6,639.8	38.0	41.5	0.59	1,019.2	1,943.8	602.1	523.8	7.689			
7,100.0	6,739.8	7,188.2	6,739.8	38.0	41.5	0.59	1,019.2	1,943.8	602.1	523.7	7.683			
7,200.0	6,839.8	7,288.2	6,839.8	38.0	41.6	0.59	1,019.2	1,943.8	602.1	523.7	7.677			
7,300.0	6,939.8	7,388.2	6,939.8	38.1	41.6	0.59	1,019.2	1,943.8	602.1	523.6	7.672			
7,400.0	7,039.8	7,488.2	7,039.8	38.1	41.6	0.59	1,019.2	1,943.8	602.1	523.5	7.666			
7,500.0	7,139.8	7,588.2	7,139.8	38.1	41.6	0.59	1,019.2	1,943.8	602.1	523.5	7.660			
7,600.0	7,239.8	7,688.2	7,239.8	38.2	41.7	0.59	1,019.2	1,943.8	602.1	523.4	7.654			
7,700.0	7,339.8	7,788.2	7,339.8	38.2	41.7	0.59	1,019.2	1,943.8	602.1	523.4	7.648			
7,800.0	7,439.8	7,888.2	7,439.8	38.2	41.7	0.59	1,019.2	1,943.8	602.1	523.3	7.643			
7,900.0	7,539.8	7,988.2	7,539.8	38.2	41.8	0.59	1,019.2	1,943.8	602.1	523.2	7.637			
8,000.0	7,639.8	8,088.2	7,639.8	38.3	41.8	0.59	1,019.2	1,943.8	602.1	523.2	7.631			
8,100.0	7,739.8	8,188.2	7,739.8	38.3	41.8	0.59	1,019.2	1,943.8	602.1	523.1	7.625			
8,200.0	7,839.8	8,288.2	7,839.8	38.3	41.8	0.59	1,019.2	1,943.8	602.1	523.1	7.619			
8,250.2	7,890.0	8,338.4	7,890.0	38.3	41.8	0.59	1,019.2	1,943.8	602.1	523.0	7.617			

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-17W - OH - Design #2											Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Axis 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	-46.72	6.8	-7.3	10.0			
100.0	100.0	100.0	100.0	0.8	0.8	-46.72	6.8	-7.3	10.0	8.4	6.307	
200.0	200.0	200.0	200.0	1.4	1.4	-46.72	6.8	-7.3	10.0	7.2	3.532	
300.0	300.0	300.1	300.1	1.7	1.7	-122.39	7.0	-6.8	9.8	6.5	2.955	
353.5	353.5	353.7	353.7	2.3	2.4	-118.81	7.6	-5.1	9.7	5.8	2.471	Level 1, CC
400.0	399.9	400.2	400.1	2.7	3.0	-115.36	8.5	-2.6	9.8	5.5	2.280	Level 1
500.0	499.6	500.3	499.8	4.2	4.3	-107.59	11.4	5.6	10.5	5.4	2.077	Level 1, ES, SF
600.0	598.9	600.4	599.0	5.3	5.4	-100.48	15.8	17.9	11.9	6.4	2.151	Level 1
700.0	697.6	700.3	697.5	6.2	6.3	-94.87	21.6	34.3	14.0	7.9	2.301	Level 1
800.0	795.4	800.2	795.0	7.0	7.1	-90.83	28.9	54.7	16.7	9.9	2.467	Level 1
900.0	892.3	900.1	891.4	7.8	7.9	-88.08	37.5	79.0	20.1	12.5	2.636	
1,000.0	988.0	999.8	986.5	8.5	8.6	-86.27	47.6	107.3	24.0	15.4	2.804	
1,100.0	1,082.3	1,099.5	1,080.2	9.2	9.3	-85.13	59.0	139.4	28.4	18.8	2.962	
1,200.0	1,175.3	1,199.2	1,172.5	9.5	9.6	-84.12	71.6	175.0	33.4	22.8	3.147	
1,300.0	1,268.2	1,299.1	1,264.7	9.8	9.9	-83.11	84.5	211.2	38.5	26.6	3.254	
1,400.0	1,361.0	1,399.0	1,356.8	10.1	10.2	-82.33	97.4	247.4	43.5	30.5	3.328	
1,500.0	1,453.9	1,498.8	1,449.0	10.4	10.5	-81.72	110.2	283.7	48.6	34.3	3.385	
1,600.0	1,546.7	1,598.7	1,541.2	10.8	10.9	-81.22	123.1	319.9	53.7	38.1	3.430	
1,700.0	1,639.6	1,698.6	1,633.3	11.1	11.3	-80.81	136.0	356.1	58.8	41.8	3.466	
1,800.0	1,732.5	1,798.4	1,725.5	11.5	11.6	-80.46	148.9	392.4	63.9	45.6	3.495	
1,900.0	1,825.3	1,898.3	1,817.7	11.9	12.0	-80.17	161.7	428.6	69.0	49.4	3.519	
2,000.0	1,918.2	1,998.2	1,909.8	12.3	12.4	-79.91	174.6	464.8	74.1	53.2	3.539	
2,100.0	2,011.0	2,098.1	2,002.0	12.7	12.8	-79.69	187.5	501.1	79.2	56.9	3.556	
2,200.0	2,103.9	2,197.9	2,094.2	13.1	13.2	-79.50	200.4	537.3	84.3	60.7	3.570	
2,300.0	2,196.7	2,297.8	2,186.3	13.5	13.7	-79.33	213.2	573.5	89.4	64.5	3.582	
2,400.0	2,289.6	2,397.7	2,278.5	14.0	14.1	-79.17	226.1	609.8	94.5	68.2	3.592	
2,500.0	2,382.4	2,497.5	2,370.7	14.4	14.6	-79.03	239.0	646.0	99.6	72.0	3.601	
2,600.0	2,475.3	2,597.4	2,462.9	14.9	15.0	-78.91	251.9	682.3	104.7	75.7	3.609	
2,700.0	2,568.1	2,697.3	2,555.0	15.3	15.5	-78.80	264.7	718.5	109.8	79.5	3.616	
2,800.0	2,661.0	2,797.1	2,647.2	15.8	16.1	-78.69	277.6	754.7	114.9	83.2	3.622	
2,900.0	2,753.9	2,897.0	2,739.4	16.3	16.7	-78.60	290.5	791.0	120.0	86.9	3.627	
3,000.0	2,846.7	2,996.9	2,831.5	17.0	17.4	-78.51	303.4	827.2	125.2	90.7	3.631	
3,100.0	2,939.6	3,096.8	2,923.7	17.6	18.1	-78.43	316.2	863.4	130.3	94.4	3.636	
3,200.0	3,032.4	3,196.6	3,015.9	18.3	18.8	-78.36	329.1	899.7	135.4	98.2	3.639	
3,300.0	3,125.3	3,296.5	3,108.0	19.0	19.5	-78.29	342.0	935.9	140.5	101.9	3.643	
3,400.0	3,218.1	3,396.4	3,200.2	19.7	20.2	-78.23	354.9	972.1	145.6	105.6	3.646	
3,500.0	3,311.0	3,496.2	3,292.4	20.4	20.9	-78.17	367.7	1,008.4	150.7	109.4	3.648	
3,600.0	3,403.8	3,596.1	3,384.5	21.1	21.7	-78.11	380.6	1,044.6	155.8	113.1	3.651	
3,700.0	3,496.7	3,696.0	3,476.7	21.7	22.4	-78.06	393.5	1,080.8	160.9	116.9	3.653	
3,800.0	3,589.5	3,795.8	3,568.9	22.4	23.1	-78.01	406.4	1,117.1	166.0	120.6	3.655	
3,900.0	3,682.4	3,895.7	3,661.1	23.1	23.8	-77.97	419.2	1,153.3	171.1	124.3	3.657	
4,000.0	3,775.3	3,995.6	3,753.2	23.8	24.5	-77.92	432.1	1,189.5	176.2	128.1	3.659	
4,100.0	3,868.1	4,095.4	3,845.4	24.5	25.2	-77.88	445.0	1,225.8	181.3	131.8	3.660	
4,200.0	3,961.0	4,195.3	3,937.6	25.2	25.9	-77.84	457.9	1,262.0	186.4	135.5	3.662	
4,300.0	4,053.8	4,295.2	4,029.7	25.9	26.6	-77.81	470.7	1,298.2	191.5	139.3	3.663	
4,400.0	4,146.7	4,395.1	4,121.9	26.5	27.3	-77.77	483.6	1,334.5	196.7	143.0	3.664	
4,500.0	4,239.5	4,494.9	4,214.1	27.2	28.0	-77.74	496.5	1,370.7	201.8	146.7	3.665	
4,600.0	4,332.4	4,594.8	4,306.2	27.9	28.7	-77.71	509.4	1,406.9	206.9	150.4	3.666	
4,700.0	4,425.2	4,694.7	4,398.4	28.6	29.4	-77.68	522.2	1,443.2	212.0	154.2	3.667	
4,800.0	4,518.1	4,794.5	4,490.6	29.3	30.2	-77.65	535.1	1,479.4	217.1	157.9	3.668	
4,900.0	4,610.9	4,894.4	4,582.7	30.0	30.9	-77.62	548.0	1,515.7	222.2	161.6	3.669	

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 0993-21-18W - Slot A9
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 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-17W - OH - Design #2												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
5,000.0	4,703.8	4,994.3	4,674.9	30.7	31.6	-77.60	560.9	1,551.9	227.3	165.4	3.670		
5,100.0	4,796.7	5,094.1	4,767.1	31.4	32.3	-77.57	573.7	1,588.1	232.4	169.1	3.671		
5,200.0	4,889.5	5,194.0	4,859.3	32.1	33.0	-77.55	586.6	1,624.4	237.5	172.8	3.671		
5,300.0	4,982.4	5,293.9	4,951.4	32.7	33.7	-77.53	599.5	1,660.6	242.6	176.6	3.672		
5,400.0	5,075.2	5,393.7	5,043.6	33.4	34.4	-77.51	612.4	1,696.8	247.7	180.3	3.673		
5,500.0	5,168.1	5,493.6	5,135.8	34.1	35.1	-77.49	625.2	1,733.1	252.8	184.0	3.673		
5,600.0	5,260.9	5,593.5	5,227.9	34.8	35.8	-77.47	638.1	1,769.3	258.0	187.7	3.674		
5,700.0	5,354.5	5,697.1	5,324.3	35.5	36.6	-77.55	650.8	1,805.0	262.8	191.2	3.668		
5,800.0	5,449.5	5,801.0	5,422.6	36.0	37.2	-77.62	662.1	1,836.7	267.1	194.3	3.667		
5,900.0	5,545.8	5,905.0	5,522.5	36.5	37.7	-77.69	671.8	1,864.2	270.9	197.0	3.666		
6,000.0	5,643.2	6,009.1	5,623.6	36.9	38.2	-77.74	680.1	1,887.4	274.0	199.3	3.666		
6,100.0	5,741.5	6,113.2	5,725.8	37.2	38.5	-77.78	686.8	1,906.2	276.6	201.1	3.666		
6,200.0	5,840.5	6,217.4	5,828.8	37.5	38.8	-77.82	691.9	1,920.7	278.5	202.6	3.667		
6,300.0	5,940.0	6,321.7	5,932.5	37.7	39.0	-77.84	695.5	1,930.8	279.9	203.6	3.667		
6,400.0	6,039.8	6,425.9	6,036.6	37.8	39.1	-77.85	697.5	1,936.3	280.6	204.1	3.667		
6,500.0	6,139.8	6,529.1	6,139.8	37.8	39.2	0.00	697.9	1,937.6	280.8	204.2	3.664		
6,600.0	6,239.8	6,629.1	6,239.8	37.9	39.2	0.00	697.9	1,937.6	280.8	204.1	3.660		
6,700.0	6,339.8	6,729.1	6,339.8	37.9	39.3	0.00	697.9	1,937.6	280.8	204.0	3.657		
6,800.0	6,439.8	6,829.1	6,439.8	37.9	39.3	0.00	697.9	1,937.6	280.8	204.0	3.655		
6,900.0	6,539.8	6,929.1	6,539.8	38.0	39.3	0.00	697.9	1,937.6	280.8	203.9	3.652		
7,000.0	6,639.8	7,029.1	6,639.8	38.0	39.4	0.00	697.9	1,937.6	280.8	203.9	3.649		
7,100.0	6,739.8	7,129.1	6,739.8	38.0	39.4	0.00	697.9	1,937.6	280.8	203.8	3.646		
7,200.0	6,839.8	7,229.1	6,839.8	38.0	39.4	0.00	697.9	1,937.6	280.8	203.7	3.644		
7,300.0	6,939.8	7,329.1	6,939.8	38.1	39.4	0.00	697.9	1,937.6	280.8	203.7	3.641		
7,400.0	7,039.8	7,429.1	7,039.8	38.1	39.5	0.00	697.9	1,937.6	280.8	203.6	3.638		
7,500.0	7,139.8	7,529.1	7,139.8	38.1	39.5	0.00	697.9	1,937.6	280.8	203.6	3.635		
7,600.0	7,239.8	7,629.1	7,239.8	38.2	39.5	0.00	697.9	1,937.6	280.8	203.5	3.632		
7,700.0	7,339.8	7,729.1	7,339.8	38.2	39.6	0.00	697.9	1,937.6	280.8	203.4	3.630		
7,800.0	7,439.8	7,829.1	7,439.8	38.2	39.6	0.00	697.9	1,937.6	280.8	203.4	3.627		
7,900.0	7,539.8	7,929.1	7,539.8	38.2	39.6	0.00	697.9	1,937.6	280.8	203.3	3.624		
8,000.0	7,639.8	8,029.1	7,639.8	38.3	39.6	0.00	697.9	1,937.6	280.8	203.3	3.621		
8,100.0	7,739.8	8,129.1	7,739.8	38.3	39.7	0.00	697.9	1,937.6	280.8	203.2	3.618		
8,200.0	7,839.8	8,229.1	7,839.8	38.3	39.7	0.00	697.9	1,937.6	280.8	203.1	3.615		
8,250.2	7,890.0	8,279.3	7,890.0	38.3	39.7	0.00	697.9	1,937.6	280.8	203.1	3.614		

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

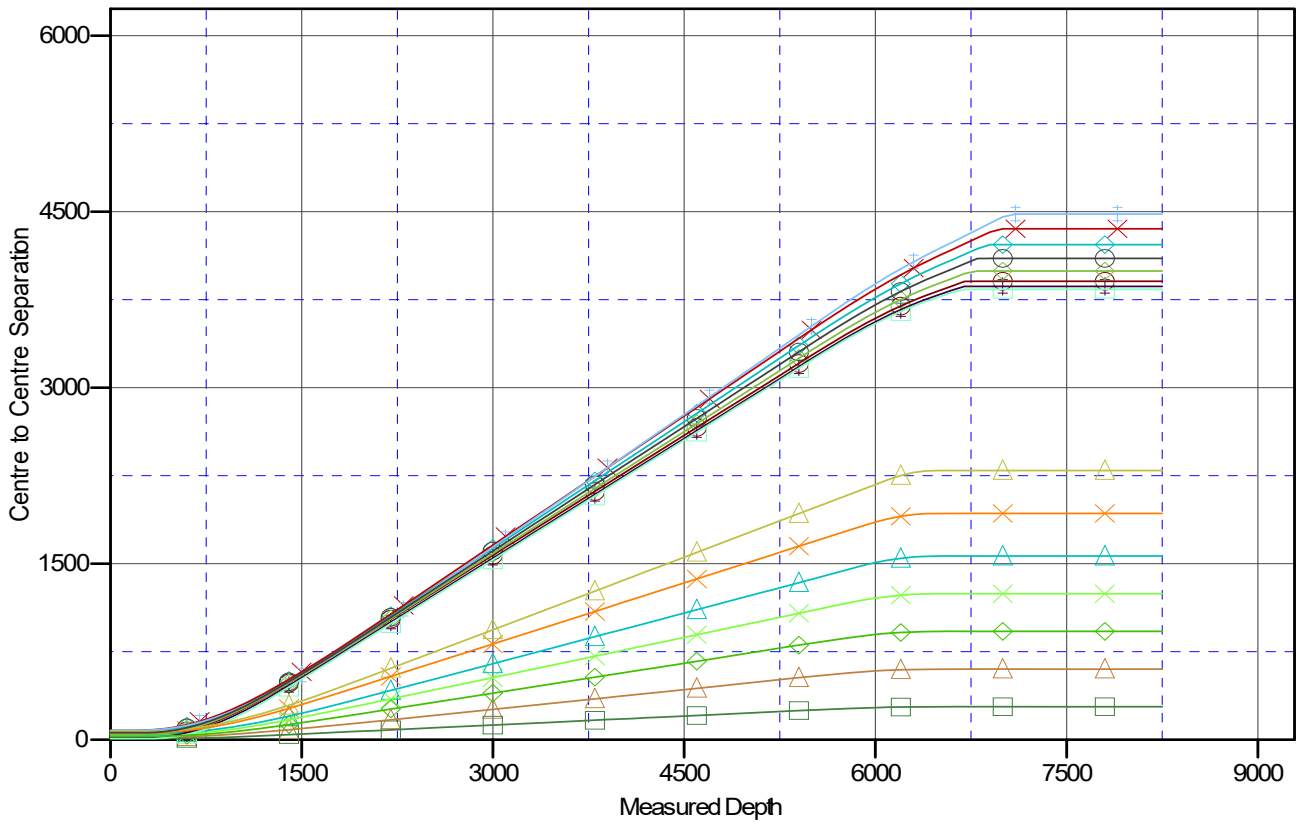


Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-18W - Slot A9
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie 29-01 Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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 0993-21-18W - Slot A9
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.44°

Ladder Plot



LEGEND

- ◆ Laramie 29-01 0993-20-13E, OH, Design#2 V0
- ◆ Laramie 29-01 0993-20-11E, OH, Design#2 V0
- ◆ Laramie 29-01 0993-20-18E, OH, Design#2 V0
- ✕ Laramie 29-01 0993-20-12E, OH, Design#2 V0
- ✕ Laramie 29-01 Fed 0993-21-14W, OH, Design#2 V0
- ✕ Laramie 29-01 Fed 0993-21-12W, OH, Design#2 V0
- ✕ Laramie 29-01 Fed 0993-21-16W, OH, Design#2 V0
- ▲ Laramie 29-01 Fed 0993-21-13W, OH, Design#2 V0
- ▲ Laramie 29-01 Fed 0993-21-11W, OH, Design#2 V0
- Laramie 29-01 Fed 0993-21-17W, OH, Design#2 V0
- ◆ Laramie 29-01 0993-20-17E, OH, Design#2 V0
- Laramie 29-01 0993-20-14E, OH, Design#2 V0
- Laramie 29-01 0993-20-16E, OH, Design#2 V0
- ◆ Laramie 29-01 0993-20-15E, OH, Design#2 V0
- ◆ Laramie 29-01 Fed 0993-21-15W, OH, Design#2 V0

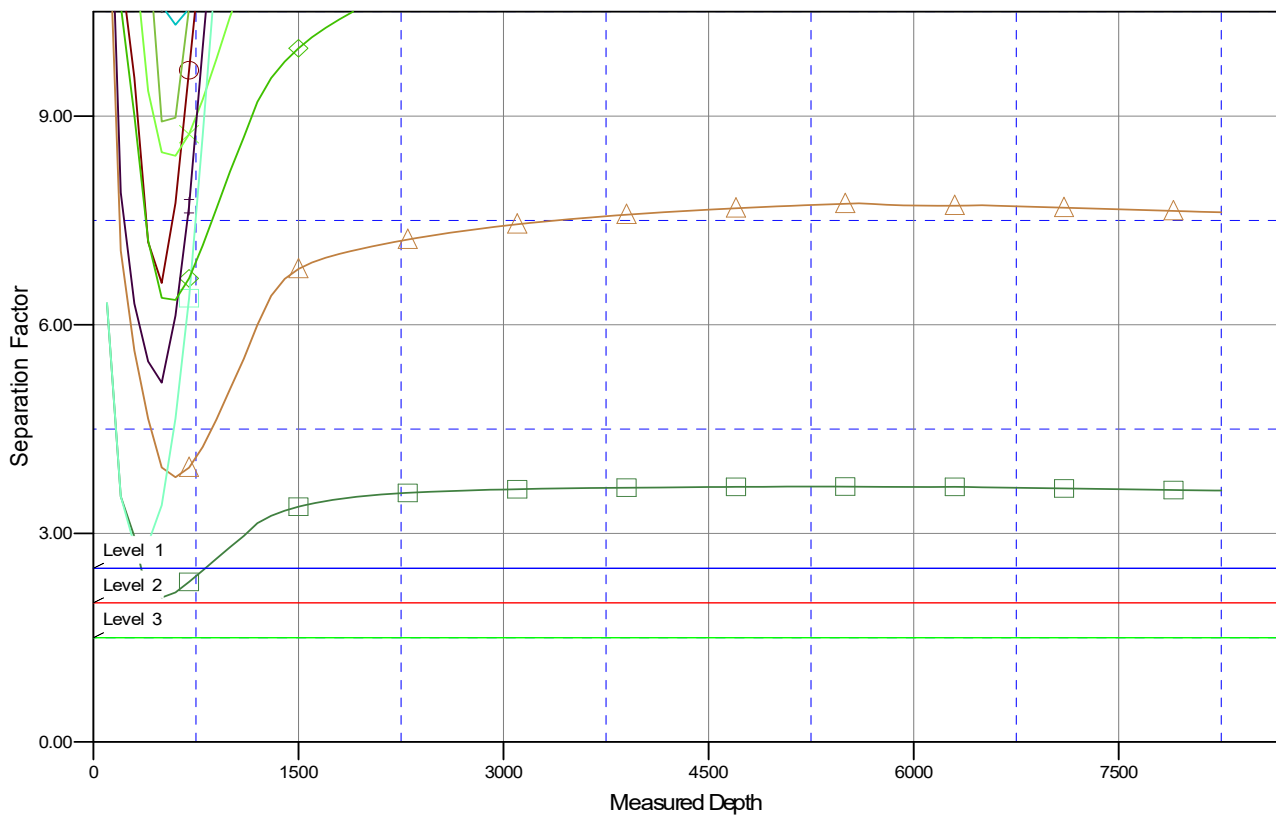


Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-18W - Slot A9
Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie 29-01 Fed 0993-21-18W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	KLXDirectional-AD
Reference Design:	Design #2	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 0993-21-18W - Slot A9
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.44°

Separation Factor Plot



LEGEND

- Laramie 29-01 0993-20-13E, OH, Design#2 V0
- Laramie 29-01 0993-20-11E, OH, Design#2 V0
- Laramie 29-01 0993-20-18E, OH, Design#2 V0
- Laramie 29-01 0993-20-12E, OH, Design#2 V0
- Laramie 29-01 Fed 0993-21-14W, OH, Design#2 V0
- Laramie 29-01 Fed 0993-21-12W, OH, Design#2 V0
- Laramie 29-01 Fed 0993-21-16W, OH, Design#2 V0
- Laramie 29-01 Fed 0993-21-13W, OH, Design#2 V0
- Laramie 29-01 Fed 0993-21-11W, OH, Design#2 V0
- Laramie 29-01 Fed 0993-21-17W, OH, Design#2 V0
- Laramie 29-01 0993-20-17E, OH, Design#2 V0
- Laramie 29-01 0993-20-14E, OH, Design#2 V0
- Laramie 29-01 0993-20-16E, OH, Design#2 V0
- Laramie 29-01 0993-20-15E, OH, Design#2 V0
- Laramie 29-01 Fed 0993-21-15W, OH, Design#2 V0