



Laramie Energy, LLC

Mesa County, CO

Laramie 0993-29-01

Laramie 29-01 Fed 0993-21-13W

OH

Design #1

KLX Anticollision Report

23 August, 2023





Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

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

Survey Tool Program	Date	8/23/2023		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	9,415.1	Design #1 (OH)	OWSG (REV5) MWD HD	OWSG MWD - Standard

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Laramie 0993-29-01						
Laramie 29-01 0993-20-11E - OH - Design #1	200.0	200.0	40.2	37.7	16.274	CC, ES
Laramie 29-01 0993-20-11E - OH - Design #1	500.0	494.5	56.4	50.1	8.860	SF
Laramie 29-01 0993-20-12E - OH - Design #1	200.0	200.0	24.1	21.6	9.737	CC
Laramie 29-01 0993-20-12E - OH - Design #1	300.0	299.7	24.3	21.1	7.463	ES
Laramie 29-01 0993-20-12E - OH - Design #1	400.0	398.2	29.2	24.2	5.820	SF
Laramie 29-01 0993-20-13E - OH - Design #1	200.0	200.0	8.0	5.6	3.252	CC
Laramie 29-01 0993-20-13E - OH - Design #1	300.0	299.9	8.4	5.0	2.480	Level 1, ES, SF
Laramie 29-01 0993-20-14E - OH - Design #1	245.2	245.2	8.1	5.1	2.703	CC
Laramie 29-01 0993-20-14E - OH - Design #1	300.0	300.0	8.2	4.7	2.348	Level 1, ES
Laramie 29-01 0993-20-14E - OH - Design #1	400.0	399.8	11.5	6.3	2.220	Level 1, SF
Laramie 29-01 0993-20-15E - OH - Design #1	271.8	271.7	24.0	20.8	7.435	CC
Laramie 29-01 0993-20-15E - OH - Design #1	300.0	300.0	24.0	20.6	6.942	ES
Laramie 29-01 0993-20-15E - OH - Design #1	500.0	499.1	30.3	24.2	4.990	SF
Laramie 29-01 0993-20-16E - OH - Design #1	291.0	291.0	39.9	36.5	11.797	CC
Laramie 29-01 0993-20-16E - OH - Design #1	400.0	399.7	40.5	36.2	9.368	ES
Laramie 29-01 0993-20-16E - OH - Design #1	600.0	598.1	51.7	44.4	7.133	SF
Laramie 29-01 0993-20-17E - OH - Design #1	436.9	437.7	55.4	50.8	12.022	CC, ES
Laramie 29-01 0993-20-17E - OH - Design #1	700.0	693.4	83.2	73.7	8.761	SF
Laramie 29-01 0993-20-18E - OH - Design #1	445.8	447.4	69.4	64.7	14.717	CC, ES
Laramie 29-01 0993-20-18E - OH - Design #1	700.0	692.3	99.1	89.2	10.087	SF
Laramie 29-01 Fed 0993-21-11W - OH - Design #1	200.0	200.0	32.1	29.7	13.006	CC
Laramie 29-01 Fed 0993-21-11W - OH - Design #1	300.0	299.8	32.5	29.3	10.043	ES
Laramie 29-01 Fed 0993-21-11W - OH - Design #1	600.0	598.8	41.1	35.5	7.354	SF
Laramie 29-01 Fed 0993-21-12W - OH - Design #1	200.0	200.0	16.0	13.6	6.494	CC
Laramie 29-01 Fed 0993-21-12W - OH - Design #1	300.0	299.9	16.5	13.0	4.740	ES
Laramie 29-01 Fed 0993-21-12W - OH - Design #1	500.0	499.6	19.9	14.9	3.969	SF
Laramie 29-01 Fed 0993-21-14W - OH - Design #1	233.4	233.4	15.9	13.2	5.761	CC
Laramie 29-01 Fed 0993-21-14W - OH - Design #1	400.0	399.9	16.6	12.5	4.077	ES
Laramie 29-01 Fed 0993-21-14W - OH - Design #1	1,500.0	1,501.4	48.0	31.8	2.961	SF
Laramie 29-01 Fed 0993-21-15W - OH - Design #1	247.6	247.6	32.1	29.2	11.154	CC
Laramie 29-01 Fed 0993-21-15W - OH - Design #1	300.0	299.8	32.2	29.0	10.092	ES
Laramie 29-01 Fed 0993-21-15W - OH - Design #1	1,600.0	1,597.2	107.6	90.1	6.125	SF
Laramie 29-01 Fed 0993-21-16W - OH - Design #1	200.0	200.0	48.0	45.6	19.443	CC
Laramie 29-01 Fed 0993-21-16W - OH - Design #1	300.0	299.5	48.4	45.1	14.927	ES
Laramie 29-01 Fed 0993-21-16W - OH - Design #1	1,600.0	1,586.7	164.4	147.4	9.629	SF
Laramie 29-01 Fed 0993-21-17W - OH - Design #1	200.0	200.0	64.0	61.5	25.897	CC

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



Anticollision Report



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Project:	Mesa County, CO	TVD Reference:	RKB=30' @ 7493.0usft (TBD)
Reference Site:	Laramie 0993-29-01	MD Reference:	RKB=30' @ 7493.0usft (TBD)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	Laramie 29-01 Fed 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Laramie 0993-29-01						
Laramie 29-01 Fed 0993-21-17W - OH - Design #1	300.0	299.1	64.4	61.2	19.802	ES
Laramie 29-01 Fed 0993-21-17W - OH - Design #1	700.0	693.7	84.1	77.4	12.635	SF
Laramie 29-01 Fed 0993-21-18W - OH - Design #1	200.0	200.0	79.9	77.4	32.349	CC, ES
Laramie 29-01 Fed 0993-21-18W - OH - Design #1	700.0	688.8	107.8	100.5	14.796	SF

Offset Design												Offset Site Error:	0.0 usft	
Laramie 0993-29-01 - Laramie 29-01 0993-20-11E - OH - Design #1												Offset Well Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard														
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset 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	-46.50	27.7	-29.2	40.2					
100.0	100.0	100.0	100.0	0.4	0.4	-46.50	27.7	-29.2	40.2	39.4	50.760			
200.0	200.0	200.0	200.0	1.2	1.2	-46.50	27.7	-29.2	40.2	37.7	16.274	CC, ES		
300.0	300.0	298.7	298.6	2.3	2.4	-93.19	29.8	-29.4	41.9	38.1	10.986			
400.0	399.7	397.1	396.9	3.9	3.9	-95.68	36.1	-29.9	47.1	41.8	8.959			
500.0	499.1	494.5	493.7	5.0	4.9	-99.72	46.1	-31.9	56.4	50.1	8.860	SF		
600.0	598.0	590.7	588.9	6.0	5.7	-104.73	59.0	-36.4	71.0	63.6	9.560			
700.0	696.0	685.3	682.0	6.8	6.4	-109.28	74.8	-43.3	91.2	82.7	10.732			
800.0	793.2	778.0	772.3	7.6	7.1	-112.89	93.0	-52.4	116.9	107.3	12.228			
900.0	889.2	868.3	859.5	8.3	7.8	-115.56	113.5	-63.6	148.0	137.4	13.960			
1,000.0	983.9	955.9	943.3	9.0	8.4	-117.45	135.9	-76.5	184.4	172.7	15.860			
1,100.0	1,077.0	1,040.6	1,023.2	9.7	9.0	-118.74	159.9	-91.0	225.7	213.1	17.871			
1,200.0	1,168.6	1,122.1	1,099.2	10.3	9.5	-119.56	185.1	-106.6	271.7	258.1	19.949			
1,300.0	1,258.2	1,200.0	1,170.7	10.9	10.0	-119.98	211.1	-123.3	322.2	307.6	22.074			
1,400.0	1,345.9	1,275.3	1,238.8	11.5	10.4	-120.11	237.9	-140.8	376.9	361.3	24.173			
1,500.0	1,431.9	1,347.0	1,302.6	11.8	10.8	-120.86	265.1	-158.9	435.2	418.7	26.410			
1,600.0	1,517.6	1,416.6	1,363.6	12.1	11.3	-121.67	292.9	-177.6	495.4	478.0	28.522			
1,700.0	1,603.4	1,484.2	1,421.8	12.4	11.6	-122.12	321.2	-197.0	557.4	539.1	30.507			
1,800.0	1,689.2	1,549.7	1,477.3	12.8	12.0	-122.31	349.9	-216.8	620.9	601.7	32.380			
1,900.0	1,775.0	1,613.1	1,530.0	13.1	12.3	-122.33	378.8	-237.0	686.0	665.9	34.176			
2,000.0	1,860.8	1,674.4	1,580.0	13.5	12.7	-122.22	407.8	-257.4	752.4	731.5	35.898			
2,100.0	1,946.6	1,743.3	1,635.4	13.9	12.9	-122.01	441.3	-281.1	820.0	798.0	37.337			
2,200.0	2,032.4	1,817.0	1,694.5	14.3	13.2	-121.82	477.1	-306.5	887.6	864.6	38.507			
2,300.0	2,118.2	1,890.6	1,753.6	14.8	13.5	-121.65	512.9	-331.9	955.3	931.1	39.515			
2,400.0	2,203.9	1,964.2	1,812.7	15.7	13.8	-121.51	548.7	-357.3	1,022.9	997.6	40.394			
2,500.0	2,289.7	2,037.9	1,871.8	16.6	14.2	-121.39	584.5	-382.7	1,090.5	1,064.0	41.171			
2,600.0	2,375.5	2,111.5	1,930.9	17.5	14.6	-121.27	620.3	-408.1	1,158.2	1,130.5	41.859			
2,700.0	2,461.3	2,185.1	1,990.1	18.4	15.2	-121.17	656.2	-433.5	1,225.8	1,197.0	42.466			
2,800.0	2,547.1	2,258.8	2,049.2	19.3	15.9	-121.09	692.0	-458.9	1,293.5	1,263.4	43.006			
2,900.0	2,632.9	2,332.4	2,108.3	20.2	16.7	-121.01	727.8	-484.3	1,361.1	1,329.8	43.488			
3,000.0	2,718.7	2,406.0	2,167.4	21.2	17.4	-120.93	763.6	-509.7	1,428.8	1,396.2	43.922			
3,100.0	2,804.5	2,479.7	2,226.5	22.1	18.2	-120.87	799.4	-535.1	1,496.4	1,462.7	44.310			
3,200.0	2,890.2	2,553.3	2,285.6	23.0	19.0	-120.81	835.2	-560.5	1,564.1	1,529.1	44.661			
3,300.0	2,976.0	2,626.9	2,344.7	23.9	19.8	-120.75	871.0	-585.9	1,631.7	1,595.5	44.979			
3,400.0	3,061.8	2,700.6	2,403.8	24.9	20.6	-120.70	906.9	-611.3	1,699.4	1,661.8	45.268			
3,500.0	3,147.6	2,774.2	2,462.9	25.8	21.4	-120.66	942.7	-636.7	1,767.0	1,728.2	45.530			
3,600.0	3,233.4	2,847.8	2,522.0	26.7	22.3	-120.61	978.5	-662.1	1,834.7	1,794.6	45.770			
3,700.0	3,319.2	2,921.5	2,581.1	27.6	23.1	-120.57	1,014.3	-687.5	1,902.4	1,861.0	45.990			

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



Anticollision Report



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Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
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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	
3,800.0	3,405.0	2,995.1	2,640.3	28.6	23.9	-120.53	1,050.1	-712.8	1,970.0	1,927.4	46.192		
3,900.0	3,490.8	3,068.7	2,699.4	29.5	24.7	-120.50	1,085.9	-738.2	2,037.7	1,993.7	46.378		
4,000.0	3,576.5	3,142.3	2,758.5	30.4	25.6	-120.47	1,121.8	-763.6	2,105.3	2,060.1	46.549		
4,100.0	3,662.3	3,216.0	2,817.6	31.4	26.4	-120.44	1,157.6	-789.0	2,173.0	2,126.5	46.707		
4,200.0	3,748.1	3,289.6	2,876.7	32.3	27.2	-120.41	1,193.4	-814.4	2,240.6	2,192.8	46.853		
4,300.0	3,833.9	3,363.2	2,935.8	33.2	28.0	-120.38	1,229.2	-839.8	2,308.3	2,259.2	46.989		
4,400.0	3,919.7	3,436.9	2,994.9	34.1	28.9	-120.35	1,265.0	-865.2	2,376.0	2,325.5	47.115		
4,500.0	4,005.5	3,510.5	3,054.0	35.1	29.7	-120.33	1,300.8	-890.6	2,443.6	2,391.9	47.233		
4,600.0	4,091.3	3,584.1	3,113.1	36.0	30.5	-120.31	1,336.6	-916.0	2,511.3	2,458.2	47.343		
4,700.0	4,177.1	3,657.8	3,172.2	36.9	31.4	-120.29	1,372.5	-941.4	2,578.9	2,524.6	47.445		
4,800.0	4,262.8	3,731.4	3,231.4	37.9	32.2	-120.26	1,408.3	-966.8	2,646.6	2,590.9	47.541		
4,900.0	4,348.6	3,805.0	3,290.5	38.8	33.0	-120.25	1,444.1	-992.2	2,714.3	2,657.3	47.630		
5,000.0	4,434.4	3,878.7	3,349.6	39.7	33.9	-120.23	1,479.9	-1,017.6	2,781.9	2,723.6	47.714		
5,100.0	4,520.2	3,952.3	3,408.7	40.7	34.7	-120.21	1,515.7	-1,043.0	2,849.6	2,790.0	47.793		
5,200.0	4,606.0	4,025.9	3,467.8	41.6	35.5	-120.19	1,551.5	-1,068.4	2,917.2	2,856.3	47.868		
5,300.0	4,691.8	4,099.6	3,526.9	42.5	36.4	-120.18	1,587.4	-1,093.8	2,984.9	2,922.6	47.938		
5,400.0	4,777.6	4,173.2	3,586.0	43.4	37.2	-120.16	1,623.2	-1,119.2	3,052.6	2,989.0	48.004		
5,500.0	4,863.4	4,246.8	3,645.1	44.4	38.0	-120.15	1,659.0	-1,144.6	3,120.2	3,055.3	48.066		
5,600.0	4,949.2	4,320.5	3,704.2	45.3	38.9	-120.40	1,694.8	-1,170.0	3,187.9	3,121.6	48.127		
5,700.0	5,036.4	4,395.0	3,764.1	46.2	39.7	-122.24	1,731.1	-1,195.7	3,254.5	3,186.9	48.178		
5,800.0	5,125.6	4,470.8	3,824.9	47.0	40.6	-123.87	1,767.9	-1,221.8	3,319.3	3,250.5	48.212		
5,900.0	5,216.7	4,547.8	3,886.7	47.7	41.5	-125.32	1,805.4	-1,248.4	3,382.3	3,312.2	48.241		
6,000.0	5,309.5	4,625.7	3,949.3	48.4	42.3	-126.59	1,843.3	-1,275.3	3,443.4	3,372.1	48.266		
6,100.0	5,403.9	4,704.5	4,012.6	48.9	43.2	-127.71	1,881.6	-1,302.4	3,502.5	3,430.0	48.288		
6,200.0	5,499.6	4,784.1	4,076.4	49.4	44.1	-128.68	1,920.3	-1,329.9	3,559.5	3,485.8	48.310		
6,300.0	5,596.5	4,864.1	4,140.7	49.9	45.1	-129.51	1,959.3	-1,357.5	3,614.4	3,539.6	48.333		
6,400.0	5,694.3	4,944.6	4,205.3	50.2	46.0	-130.22	1,998.4	-1,385.2	3,667.1	3,591.3	48.360		
6,500.0	5,793.0	5,025.3	4,270.1	50.5	46.9	-130.82	2,037.7	-1,413.1	3,717.6	3,640.8	48.392		
6,600.0	5,892.3	5,106.1	4,334.9	50.7	47.8	-131.32	2,077.0	-1,440.9	3,766.0	3,688.2	48.433		
6,700.0	5,992.0	5,186.9	4,399.8	50.8	48.7	-131.72	2,116.2	-1,468.8	3,812.1	3,733.5	48.485		
6,800.0	6,091.9	5,267.4	4,464.4	50.9	49.7	-132.04	2,155.4	-1,496.6	3,856.0	3,776.6	48.554		
6,900.0	6,191.9	5,347.7	4,528.8	50.9	50.6	-85.92	2,194.4	-1,524.3	3,898.5	3,818.5	48.690		
7,000.0	6,291.9	5,428.0	4,593.1	50.9	61.4	-79.23	2,677.4	-1,866.7	3,928.7	3,831.8	40.553		
7,100.0	6,391.9	5,508.3	4,657.4	51.0	61.4	-79.23	2,677.4	-1,866.7	3,928.7	3,831.8	40.539		
7,200.0	6,491.9	5,588.6	4,721.7	51.0	61.4	-79.23	2,677.4	-1,866.7	3,928.7	3,831.7	40.525		
7,300.0	6,591.9	5,668.9	4,786.0	51.0	61.4	-79.23	2,677.4	-1,866.7	3,928.7	3,831.7	40.511		
7,400.0	6,691.9	5,749.2	4,850.3	51.0	61.5	-79.23	2,677.4	-1,866.7	3,928.7	3,831.7	40.496		
7,500.0	6,791.9	5,829.5	4,914.6	51.0	61.5	-79.23	2,677.4	-1,866.7	3,928.7	3,831.6	40.482		
7,600.0	6,891.9	5,909.8	4,978.9	51.0	61.5	-79.23	2,677.4	-1,866.7	3,928.7	3,831.6	40.467		
7,700.0	6,991.9	5,990.1	5,043.2	51.1	61.5	-79.23	2,677.4	-1,866.7	3,928.7	3,831.6	40.453		
7,800.0	7,091.9	6,070.4	5,107.5	51.1	61.5	-79.23	2,677.4	-1,866.7	3,928.7	3,831.5	40.438		
7,900.0	7,191.9	6,150.7	5,171.8	51.1	61.5	-79.23	2,677.4	-1,866.7	3,928.7	3,831.5	40.423		
8,000.0	7,291.9	6,231.0	5,236.1	51.1	61.6	-79.23	2,677.4	-1,866.7	3,928.7	3,831.4	40.408		
8,100.0	7,391.9	6,311.3	5,300.4	51.1	61.6	-79.23	2,677.4	-1,866.7	3,928.7	3,831.4	40.393		
8,200.0	7,491.9	6,391.6	5,364.7	51.2	61.6	-79.23	2,677.4	-1,866.7	3,928.7	3,831.4	40.378		
8,300.0	7,591.9	6,471.9	5,429.0	51.2	61.6	-79.23	2,677.4	-1,866.7	3,928.7	3,831.3	40.363		
8,400.0	7,691.9	6,552.2	5,493.3	51.2	61.6	-79.23	2,677.4	-1,866.7	3,928.7	3,831.3	40.348		
8,500.0	7,791.9	6,632.5	5,557.6	51.2	61.6	-79.23	2,677.4	-1,866.7	3,928.7	3,831.3	40.333		
8,500.3	7,792.2	6,633.1	5,558.2	51.2	61.6	-79.23	2,677.4	-1,866.7	3,928.7	3,831.3	40.332		
8,600.0	7,891.9	6,712.8	5,622.5	51.2	61.6	-79.23	2,677.4	-1,866.7	3,928.8	3,831.4	40.313		
8,700.0	7,991.9	6,793.1	5,686.8	51.3	61.6	-79.23	2,677.4	-1,866.7	3,930.9	3,833.4	40.313		

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 0993-20-11E - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset 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	
8,800.0	8,091.9	8,821.7	7,859.0	51.3	61.6	-79.23	2,677.4	-1,866.7	3,935.6	3,838.1	40.359		
8,900.0	8,191.9	8,821.7	7,859.0	51.3	61.6	-79.23	2,677.4	-1,866.7	3,942.8	3,845.3	40.451		
9,000.0	8,291.9	8,821.7	7,859.0	51.3	61.6	-79.23	2,677.4	-1,866.7	3,952.5	3,855.1	40.589		
9,100.0	8,391.9	8,821.7	7,859.0	51.4	61.6	-79.23	2,677.4	-1,866.7	3,964.7	3,867.4	40.772		
9,200.0	8,491.9	8,821.7	7,859.0	51.4	61.6	-79.23	2,677.4	-1,866.7	3,979.3	3,882.3	40.999		
9,300.0	8,591.9	8,821.7	7,859.0	51.4	61.6	-79.23	2,677.4	-1,866.7	3,996.5	3,899.6	41.271		
9,400.0	8,691.9	8,821.7	7,859.0	51.4	61.6	-79.23	2,677.4	-1,866.7	4,016.0	3,919.4	41.586		
9,415.1	8,707.0	8,821.7	7,859.0	51.4	61.6	-79.23	2,677.4	-1,866.7	4,019.1	3,922.6	41.638		



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft	
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	-45.87	16.8	-17.3	24.1					
100.0	100.0	100.0	100.0	0.4	0.4	-45.87	16.8	-17.3	24.1	23.3	30.372			
200.0	200.0	200.0	200.0	1.2	1.2	-45.87	16.8	-17.3	24.1	21.6	9.737	CC		
201.4	201.4	201.4	201.4	1.2	1.2	-91.59	16.8	-17.3	24.1	21.6	9.671			
300.0	300.0	299.7	299.7	2.3	1.6	-96.82	16.8	-17.4	24.3	21.1	7.463	ES		
400.0	399.7	398.2	398.2	3.9	2.6	-111.50	17.9	-20.4	29.2	24.2	5.820	SF		
500.0	499.1	495.6	495.3	5.0	3.4	-125.64	20.4	-27.2	42.0	35.1	6.072			
600.0	598.0	592.0	591.1	6.0	4.0	-133.14	25.7	-36.6	62.0	53.6	7.417			
700.0	696.0	686.9	684.9	6.8	4.9	-136.33	34.3	-48.0	87.7	77.9	8.912			
800.0	793.2	779.9	776.2	7.6	5.7	-137.50	45.8	-61.2	118.7	107.6	10.698			
900.0	889.2	870.7	864.6	8.3	6.5	-137.70	60.1	-76.0	154.5	142.3	12.671			
1,000.0	983.9	958.9	949.7	9.0	7.2	-137.39	76.9	-92.1	195.1	181.9	14.764			
1,100.0	1,077.0	1,044.4	1,031.3	9.7	7.8	-136.80	95.7	-109.4	240.1	225.9	16.937			
1,200.0	1,168.6	1,127.1	1,109.2	10.3	8.4	-136.02	116.4	-127.6	289.4	274.3	19.157			
1,300.0	1,258.2	1,206.6	1,183.2	10.9	9.0	-135.11	138.5	-146.5	342.9	326.8	21.401			
1,400.0	1,345.9	1,283.0	1,253.3	11.5	9.5	-134.11	161.9	-165.9	400.1	383.2	23.640			
1,500.0	1,431.9	1,356.4	1,319.7	11.8	9.9	-133.81	186.2	-185.7	460.6	442.9	26.034			
1,600.0	1,517.6	1,428.2	1,383.6	12.1	10.4	-133.70	211.6	-206.1	522.3	503.8	28.267			
1,700.0	1,603.4	1,500.0	1,446.5	12.4	10.8	-133.36	238.9	-227.6	585.1	565.8	30.293			
1,800.0	1,689.2	1,566.7	1,503.9	12.8	11.2	-132.89	265.6	-248.4	649.1	628.9	32.244			
1,900.0	1,775.0	1,633.2	1,560.2	13.1	11.6	-132.32	293.8	-270.1	714.0	693.1	34.026			
2,000.0	1,860.8	1,700.0	1,615.7	13.5	12.0	-131.66	323.4	-292.6	780.1	758.2	35.648			
2,100.0	1,946.6	1,770.0	1,673.0	13.9	12.2	-130.96	355.4	-316.8	846.9	824.1	37.145			
2,200.0	2,032.4	1,844.0	1,733.6	14.3	12.5	-130.33	389.2	-342.4	913.8	890.0	38.357			
2,300.0	2,118.2	1,917.9	1,794.3	14.8	12.7	-129.78	423.0	-367.9	980.7	955.9	39.424			
2,400.0	2,203.9	1,991.9	1,854.9	15.7	13.0	-129.31	456.9	-393.5	1,047.7	1,021.8	40.365			
2,500.0	2,289.7	2,065.9	1,915.5	16.6	13.4	-128.88	490.7	-419.1	1,114.7	1,087.7	41.189			
2,600.0	2,375.5	2,139.9	1,976.1	17.5	13.8	-128.51	524.5	-444.7	1,181.8	1,153.6	41.909			
2,700.0	2,461.3	2,213.9	2,036.7	18.4	14.4	-128.18	558.3	-470.2	1,248.9	1,219.5	42.593			
2,800.0	2,547.1	2,287.9	2,097.4	19.3	15.1	-127.88	592.2	-495.8	1,316.0	1,285.5	43.179			
2,900.0	2,632.9	2,361.8	2,158.0	20.2	15.8	-127.61	626.0	-521.4	1,383.1	1,351.4	43.703			
3,000.0	2,718.7	2,435.8	2,218.6	21.2	16.6	-127.36	659.8	-547.0	1,450.2	1,417.4	44.174			
3,100.0	2,804.5	2,509.8	2,279.2	22.1	17.3	-127.14	693.7	-572.5	1,517.3	1,483.3	44.600			
3,200.0	2,890.2	2,583.8	2,339.8	23.0	18.1	-126.93	727.5	-598.1	1,584.5	1,549.3	44.984			
3,300.0	2,976.0	2,657.8	2,400.5	23.9	18.9	-126.74	761.3	-623.7	1,651.7	1,615.2	45.332			
3,400.0	3,061.8	2,731.7	2,461.1	24.9	19.7	-126.57	795.1	-649.3	1,718.8	1,681.2	45.648			
3,500.0	3,147.6	2,805.7	2,521.7	25.8	20.5	-126.41	829.0	-674.8	1,786.0	1,747.1	45.937			
3,600.0	3,233.4	2,879.7	2,582.3	26.7	21.3	-126.26	862.8	-700.4	1,853.2	1,813.1	46.200			
3,700.0	3,319.2	2,953.7	2,642.9	27.6	22.1	-126.12	896.6	-726.0	1,920.4	1,879.0	46.441			
3,800.0	3,405.0	3,027.7	2,703.6	28.6	22.9	-125.99	930.5	-751.6	1,987.6	1,945.0	46.663			
3,900.0	3,490.8	3,101.7	2,764.2	29.5	23.7	-125.87	964.3	-777.1	2,054.8	2,011.0	46.867			
4,000.0	3,576.5	3,175.6	2,824.8	30.4	24.5	-125.76	998.1	-802.7	2,122.0	2,076.9	47.054			
4,100.0	3,662.3	3,249.6	2,885.4	31.4	25.3	-125.65	1,032.0	-828.3	2,189.2	2,142.9	47.227			
4,200.0	3,748.1	3,323.6	2,946.0	32.3	26.1	-125.55	1,065.8	-853.9	2,256.4	2,208.8	47.387			
4,300.0	3,833.9	3,397.6	3,006.7	33.2	26.9	-125.46	1,099.6	-879.4	2,323.7	2,274.8	47.535			
4,400.0	3,919.7	3,471.6	3,067.3	34.1	27.7	-125.37	1,133.4	-905.0	2,390.9	2,340.7	47.673			
4,500.0	4,005.5	3,545.6	3,127.9	35.1	28.5	-125.29	1,167.3	-930.6	2,458.1	2,406.7	47.801			
4,600.0	4,091.3	3,619.5	3,188.5	36.0	29.3	-125.21	1,201.1	-956.2	2,525.4	2,472.7	47.920			
4,700.0	4,177.1	3,693.5	3,249.1	36.9	30.1	-125.13	1,234.9	-981.7	2,592.6	2,538.6	48.032			
4,800.0	4,262.8	3,767.5	3,309.8	37.9	30.9	-125.06	1,268.8	-1,007.3	2,659.8	2,604.6	48.136			
4,900.0	4,348.6	3,841.5	3,370.4	38.8	31.7	-124.99	1,302.6	-1,032.9	2,727.1	2,670.5	48.233			

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
5,000.0	4,434.4	3,915.5	3,431.0	39.7	32.5	-124.93	1,336.4	-1,058.5	2,794.3	2,736.5	48.324	
5,100.0	4,520.2	3,989.4	3,491.6	40.7	33.3	-124.86	1,370.3	-1,084.0	2,861.5	2,802.4	48.409	
5,200.0	4,606.0	4,063.4	3,552.2	41.6	34.1	-124.81	1,404.1	-1,109.6	2,928.8	2,868.4	48.489	
5,300.0	4,691.8	4,137.4	3,612.9	42.5	34.9	-124.75	1,437.9	-1,135.2	2,996.0	2,934.3	48.565	
5,400.0	4,777.6	4,211.4	3,673.5	43.4	35.7	-124.69	1,471.7	-1,160.8	3,063.3	3,000.3	48.636	
5,500.0	4,863.4	4,285.4	3,734.1	44.4	36.5	-124.64	1,505.6	-1,186.3	3,130.5	3,066.3	48.703	
5,600.0	4,949.2	4,359.4	3,794.7	45.3	37.3	-124.85	1,539.4	-1,211.9	3,197.8	3,132.2	48.768	
5,700.0	5,036.4	4,434.3	3,856.1	46.2	38.2	-126.54	1,573.7	-1,237.8	3,263.8	3,197.0	48.816	
5,800.0	5,125.6	4,510.7	3,918.7	47.0	39.0	-128.02	1,608.6	-1,264.2	3,327.9	3,259.8	48.838	
5,900.0	5,216.7	4,588.3	3,982.3	47.7	39.8	-129.32	1,644.1	-1,291.1	3,389.9	3,320.5	48.847	
6,000.0	5,309.5	4,667.0	4,046.8	48.4	40.7	-130.46	1,680.1	-1,318.3	3,449.8	3,379.2	48.846	
6,100.0	5,403.9	4,746.7	4,112.1	48.9	41.6	-131.44	1,716.5	-1,345.8	3,507.5	3,435.7	48.836	
6,200.0	5,499.6	4,827.2	4,178.1	49.4	42.4	-132.28	1,753.3	-1,373.7	3,562.9	3,490.0	48.821	
6,300.0	5,596.5	4,908.4	4,244.6	49.9	43.3	-132.99	1,790.4	-1,401.7	3,616.0	3,541.9	48.803	
6,400.0	5,694.3	4,990.0	4,311.5	50.2	44.2	-133.59	1,827.8	-1,429.9	3,666.8	3,591.6	48.783	
6,500.0	5,793.0	5,072.1	4,378.7	50.5	45.1	-134.08	1,865.3	-1,458.3	3,715.1	3,638.9	48.765	
6,600.0	5,892.3	5,154.3	4,446.1	50.7	46.0	-134.47	1,902.9	-1,486.7	3,761.1	3,683.9	48.752	
6,700.0	5,992.0	5,236.5	4,513.4	50.8	46.9	-134.77	1,940.5	-1,515.1	3,804.6	3,726.6	48.747	
6,800.0	6,091.9	5,318.6	4,580.7	50.9	47.8	-134.98	1,978.0	-1,543.5	3,845.8	3,766.9	48.758	
6,900.0	6,191.9	5,400.6	4,647.9	50.9	48.7	-88.84	2,015.5	-1,571.9	3,885.4	3,805.8	48.844	
7,000.0	6,291.9	7,155.8	6,291.9	50.9	57.7	-83.10	2,411.2	-1,871.0	3,892.0	3,797.5	41.176	
7,100.0	6,391.9	7,255.8	6,391.9	51.0	57.8	-83.10	2,411.2	-1,871.0	3,892.0	3,797.4	41.161	
7,200.0	6,491.9	7,355.8	6,491.9	51.0	57.8	-83.10	2,411.2	-1,871.0	3,892.0	3,797.4	41.146	
7,300.0	6,591.9	7,455.8	6,591.9	51.0	57.8	-83.10	2,411.2	-1,871.0	3,892.0	3,797.4	41.131	
7,400.0	6,691.9	7,555.8	6,691.9	51.0	57.8	-83.10	2,411.2	-1,871.0	3,892.0	3,797.3	41.116	
7,500.0	6,791.9	7,655.8	6,791.9	51.0	57.8	-83.10	2,411.2	-1,871.0	3,892.0	3,797.3	41.100	
7,600.0	6,891.9	7,755.8	6,891.9	51.0	57.8	-83.10	2,411.2	-1,871.0	3,892.0	3,797.3	41.085	
7,700.0	6,991.9	7,855.8	6,991.9	51.1	57.9	-83.10	2,411.2	-1,871.0	3,892.0	3,797.2	41.069	
7,800.0	7,091.9	7,955.8	7,091.9	51.1	57.9	-83.10	2,411.2	-1,871.0	3,892.0	3,797.2	41.053	
7,900.0	7,191.9	8,055.8	7,191.9	51.1	57.9	-83.10	2,411.2	-1,871.0	3,892.0	3,797.1	41.038	
8,000.0	7,291.9	8,155.8	7,291.9	51.1	57.9	-83.10	2,411.2	-1,871.0	3,892.0	3,797.1	41.022	
8,100.0	7,391.9	8,255.8	7,391.9	51.1	57.9	-83.10	2,411.2	-1,871.0	3,892.0	3,797.1	41.006	
8,200.0	7,491.9	8,355.8	7,491.9	51.2	58.0	-83.10	2,411.2	-1,871.0	3,892.0	3,797.0	40.990	
8,300.0	7,591.9	8,455.8	7,591.9	51.2	58.0	-83.10	2,411.2	-1,871.0	3,892.0	3,797.0	40.973	
8,400.0	7,691.9	8,555.8	7,691.9	51.2	58.0	-83.10	2,411.2	-1,871.0	3,892.0	3,797.0	40.957	
8,500.0	7,791.9	8,655.8	7,791.9	51.2	58.0	-83.10	2,411.2	-1,871.0	3,892.0	3,796.9	40.941	
8,600.0	7,891.9	8,755.8	7,891.9	51.2	58.0	-83.10	2,411.2	-1,871.0	3,892.0	3,796.9	40.924	
8,700.0	7,991.9	8,855.8	7,991.9	51.3	58.1	-83.10	2,411.2	-1,871.0	3,892.0	3,796.8	40.908	
8,800.0	8,091.9	8,955.8	8,091.9	51.3	58.1	-83.10	2,411.2	-1,871.0	3,892.0	3,796.8	40.891	
8,900.0	8,191.9	9,055.8	8,191.9	51.3	58.1	-83.10	2,411.2	-1,871.0	3,892.0	3,796.8	40.874	
9,000.0	8,291.9	9,155.8	8,291.9	51.3	58.1	-83.10	2,411.2	-1,871.0	3,892.0	3,796.7	40.857	
9,100.0	8,391.9	9,255.8	8,391.9	51.4	58.1	-83.10	2,411.2	-1,871.0	3,892.0	3,796.7	40.840	
9,200.0	8,491.9	9,355.8	8,491.9	51.4	58.1	-83.10	2,411.2	-1,871.0	3,892.0	3,796.6	40.823	
9,300.0	8,591.9	9,455.8	8,591.9	51.4	58.2	-83.10	2,411.2	-1,871.0	3,892.0	3,796.6	40.806	
9,307.8	8,599.8	9,463.6	8,599.8	51.4	58.2	-83.10	2,411.2	-1,871.0	3,892.0	3,796.6	40.804	
9,400.0	8,691.9	9,534.8	8,671.0	51.4	58.2	-83.10	2,411.2	-1,871.0	3,892.0	3,796.6	40.789	
9,415.1	8,707.0	9,534.8	8,671.0	51.4	58.2	-83.10	2,411.2	-1,871.0	3,892.1	3,796.7	40.788	

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-45.63	5.6	-5.7	8.0			
100.0	100.0	100.0	100.0	0.4	0.4	-45.63	5.6	-5.7	8.0	7.2	10.142	
200.0	200.0	200.0	200.0	1.2	1.2	-45.63	5.6	-5.7	8.0	5.6	3.252	CC
200.4	200.4	200.4	200.4	1.2	1.2	-91.35	5.6	-5.7	8.0	5.6	3.244	
300.0	300.0	299.9	299.9	2.3	1.6	-106.45	5.6	-5.8	8.4	5.0	2.480	Level 1, ES, SF
400.0	399.7	399.1	399.1	3.9	2.5	-134.13	6.4	-8.2	14.5	8.9	2.597	
500.0	499.1	497.1	496.8	5.0	4.0	-145.39	8.5	-14.6	29.2	21.2	3.636	
600.0	598.0	593.3	592.5	6.0	4.6	-148.82	11.9	-24.8	51.5	42.2	5.506	
700.0	696.0	688.5	686.6	6.8	5.0	-149.05	17.9	-37.4	79.4	68.9	7.580	
800.0	793.2	781.7	778.2	7.6	5.7	-148.09	27.0	-51.8	112.1	100.4	9.583	
900.0	889.2	872.7	866.9	8.3	6.4	-146.78	38.9	-67.8	149.6	136.8	11.690	
1,000.0	983.9	961.1	952.4	9.0	7.1	-145.37	53.4	-85.1	191.6	177.9	13.900	
1,100.0	1,077.0	1,046.7	1,034.4	9.7	7.7	-143.95	70.0	-103.6	238.1	223.4	16.175	
1,200.0	1,168.6	1,129.4	1,112.5	10.3	8.3	-142.54	88.5	-123.0	288.9	273.3	18.488	
1,300.0	1,258.2	1,208.9	1,186.8	10.9	8.8	-141.13	108.6	-143.0	343.7	327.2	20.822	
1,400.0	1,345.9	1,285.1	1,257.1	11.5	9.3	-139.72	129.8	-163.5	402.4	385.0	23.155	
1,500.0	1,431.9	1,358.5	1,323.8	11.8	9.8	-139.04	152.2	-184.3	464.2	446.1	25.655	
1,600.0	1,517.6	1,430.1	1,388.0	12.1	10.2	-138.61	175.8	-205.7	527.1	508.3	27.992	
1,700.0	1,603.4	1,500.0	1,449.6	12.4	10.7	-138.02	200.4	-227.6	591.0	571.4	30.169	
1,800.0	1,689.2	1,568.6	1,509.1	12.8	11.1	-137.33	226.2	-250.0	655.9	635.5	32.163	
1,900.0	1,775.0	1,635.2	1,565.9	13.1	11.4	-136.57	252.7	-272.7	721.7	700.6	34.110	
2,000.0	1,860.8	1,708.0	1,627.1	13.5	11.6	-135.76	282.6	-298.0	788.3	766.2	35.787	
2,100.0	1,946.6	1,782.2	1,689.6	13.9	11.9	-135.05	313.2	-323.9	854.9	831.9	37.219	
2,200.0	2,032.4	1,856.4	1,752.1	14.3	12.2	-134.44	343.7	-349.7	921.5	897.6	38.482	
2,300.0	2,118.2	1,930.6	1,814.6	14.8	12.5	-133.92	374.2	-375.6	988.3	963.3	39.606	
2,400.0	2,203.9	2,004.8	1,877.1	15.7	12.8	-133.46	404.8	-401.4	1,055.0	1,029.0	40.610	
2,500.0	2,289.7	2,079.0	1,939.6	16.6	13.2	-133.05	435.3	-427.3	1,121.8	1,094.8	41.494	
2,600.0	2,375.5	2,153.2	2,002.1	17.5	13.6	-132.69	465.9	-453.1	1,188.6	1,160.5	42.288	
2,700.0	2,461.3	2,227.4	2,064.5	18.4	14.2	-132.37	496.4	-479.0	1,255.5	1,226.3	43.012	
2,800.0	2,547.1	2,301.6	2,127.0	19.3	14.8	-132.08	526.9	-504.8	1,322.4	1,292.1	43.648	
2,900.0	2,632.9	2,375.8	2,189.5	20.2	15.5	-131.82	557.5	-530.7	1,389.2	1,357.8	44.223	
3,000.0	2,718.7	2,450.0	2,252.0	21.2	16.2	-131.58	588.0	-556.5	1,456.1	1,423.6	44.742	
3,100.0	2,804.5	2,524.2	2,314.5	22.1	16.9	-131.37	618.6	-582.3	1,523.0	1,489.4	45.211	
3,200.0	2,890.2	2,598.4	2,377.0	23.0	17.6	-131.17	649.1	-608.2	1,590.0	1,555.1	45.638	
3,300.0	2,976.0	2,672.6	2,439.5	23.9	18.4	-130.98	679.7	-634.0	1,656.9	1,620.9	46.025	
3,400.0	3,061.8	2,746.8	2,502.0	24.9	19.1	-130.82	710.2	-659.9	1,723.8	1,686.7	46.379	
3,500.0	3,147.6	2,821.0	2,564.4	25.8	19.8	-130.66	740.7	-685.7	1,790.8	1,752.4	46.702	
3,600.0	3,233.4	2,895.2	2,626.9	26.7	20.6	-130.52	771.3	-711.6	1,857.7	1,818.2	46.999	
3,700.0	3,319.2	2,969.4	2,689.4	27.6	21.3	-130.38	801.8	-737.4	1,924.7	1,884.0	47.270	
3,800.0	3,405.0	3,043.6	2,751.9	28.6	22.1	-130.26	832.4	-763.3	1,991.7	1,949.7	47.520	
3,900.0	3,490.8	3,117.8	2,814.4	29.5	22.8	-130.14	862.9	-789.1	2,058.6	2,015.5	47.751	
4,000.0	3,576.5	3,192.0	2,876.9	30.4	23.6	-130.03	893.4	-815.0	2,125.6	2,081.3	47.965	
4,100.0	3,662.3	3,266.2	2,939.4	31.4	24.3	-129.92	924.0	-840.8	2,192.6	2,147.1	48.161	
4,200.0	3,748.1	3,340.4	3,001.8	32.3	25.1	-129.83	954.5	-866.7	2,259.6	2,212.8	48.344	
4,300.0	3,833.9	3,414.6	3,064.3	33.2	25.8	-129.74	985.1	-892.5	2,326.5	2,278.6	48.514	
4,400.0	3,919.7	3,488.8	3,126.8	34.1	26.6	-129.65	1,015.6	-918.4	2,393.5	2,344.4	48.672	
4,500.0	4,005.5	3,563.0	3,189.3	35.1	27.3	-129.57	1,046.2	-944.2	2,460.5	2,410.1	48.820	
4,600.0	4,091.3	3,637.2	3,251.8	36.0	28.1	-129.49	1,076.7	-970.1	2,527.5	2,475.9	48.957	
4,700.0	4,177.1	3,711.4	3,314.3	36.9	28.8	-129.42	1,107.2	-995.9	2,594.5	2,541.7	49.086	
4,800.0	4,262.8	3,785.6	3,376.8	37.9	29.6	-129.35	1,137.8	-1,021.8	2,661.5	2,607.4	49.206	
4,900.0	4,348.6	3,859.8	3,439.3	38.8	30.3	-129.28	1,168.3	-1,047.6	2,728.5	2,673.2	49.318	

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning	
5,000.0	4,434.4	3,934.0	3,501.7	39.7	31.1	-129.22	1,198.9	-1,073.5	2,795.5	2,739.0	49.424		
5,100.0	4,520.2	4,008.2	3,564.2	40.7	31.9	-129.16	1,229.4	-1,099.3	2,862.5	2,804.7	49.523		
5,200.0	4,606.0	4,082.4	3,626.7	41.6	32.6	-129.10	1,259.9	-1,125.2	2,929.5	2,870.5	49.617		
5,300.0	4,691.8	4,156.5	3,689.2	42.5	33.4	-129.05	1,290.5	-1,151.0	2,996.5	2,936.3	49.704		
5,400.0	4,777.6	4,230.7	3,751.7	43.4	34.1	-128.99	1,321.0	-1,176.9	3,063.6	3,002.0	49.787		
5,500.0	4,863.4	4,304.9	3,814.2	44.4	34.9	-128.94	1,351.6	-1,202.7	3,130.6	3,067.8	49.866		
5,600.0	4,949.2	4,379.2	3,876.7	45.3	35.6	-129.13	1,382.1	-1,228.6	3,197.6	3,133.5	49.942		
5,700.0	5,036.4	4,454.4	3,940.1	46.2	36.4	-130.71	1,413.1	-1,254.8	3,263.2	3,198.0	49.994		
5,800.0	5,125.6	4,531.3	4,004.8	47.0	37.2	-132.08	1,444.7	-1,281.6	3,326.8	3,260.2	50.007		
5,900.0	5,216.7	4,609.6	4,070.7	47.7	38.0	-133.28	1,477.0	-1,308.8	3,388.0	3,320.3	50.000		
6,000.0	5,309.5	4,689.2	4,137.8	48.4	38.8	-134.31	1,509.7	-1,336.6	3,447.0	3,378.0	49.976		
6,100.0	5,403.9	4,769.9	4,205.7	48.9	39.6	-135.20	1,542.9	-1,364.7	3,503.5	3,433.3	49.937		
6,200.0	5,499.6	4,851.6	4,274.5	49.4	40.5	-135.94	1,576.6	-1,393.1	3,557.5	3,486.2	49.885		
6,300.0	5,596.5	4,934.1	4,344.1	49.9	41.3	-136.57	1,610.5	-1,421.9	3,609.0	3,536.5	49.825		
6,400.0	5,694.3	5,017.3	4,414.1	50.2	42.2	-137.07	1,644.8	-1,450.9	3,657.9	3,584.4	49.758		
6,500.0	5,793.0	5,101.0	4,484.6	50.5	43.0	-137.48	1,679.3	-1,480.0	3,704.2	3,629.7	49.687		
6,600.0	5,892.3	5,185.1	4,555.4	50.7	43.9	-137.79	1,713.9	-1,509.3	3,747.9	3,672.4	49.617		
6,700.0	5,992.0	5,269.4	4,626.4	50.8	44.8	-138.01	1,748.5	-1,538.7	3,789.0	3,712.5	49.551		
6,800.0	6,091.9	5,353.7	4,697.3	50.9	45.6	-138.14	1,783.2	-1,568.0	3,827.4	3,750.1	49.499		
6,900.0	6,191.9	5,438.1	4,769.2	50.9	45.9	-138.14	1,818.2	-1,597.0	3,865.2	3,787.9	49.451		
7,000.0	6,291.9	5,522.5	4,841.1	50.9	45.9	-138.14	1,853.2	-1,626.0	3,903.0	3,825.7	49.403		
7,100.0	6,391.9	5,607.0	4,913.1	51.0	45.9	-138.14	1,888.2	-1,654.0	3,940.8	3,863.5	49.355		
7,200.0	6,491.9	5,691.5	4,985.1	51.0	45.9	-138.14	1,923.2	-1,682.0	3,978.6	3,901.3	49.307		
7,300.0	6,591.9	5,776.0	5,057.1	51.0	45.9	-138.14	1,958.2	-1,710.0	4,016.4	3,938.9	49.259		
7,400.0	6,691.9	5,860.5	5,129.1	51.0	45.0	-138.14	1,993.2	-1,738.0	4,054.2	3,976.7	49.211		
7,500.0	6,791.9	5,945.0	5,201.1	51.0	45.0	-138.14	2,028.2	-1,766.0	4,092.0	3,976.7	49.163		
7,600.0	6,891.9	6,029.5	5,273.1	51.0	45.0	-138.14	2,063.2	-1,794.0	4,129.8	3,976.7	49.115		
7,700.0	6,991.9	6,114.0	5,345.1	51.1	45.0	-138.14	2,098.2	-1,822.0	4,167.6	3,976.6	49.067		
7,800.0	7,091.9	6,198.5	5,417.1	51.1	45.0	-138.14	2,133.2	-1,850.0	4,205.4	3,976.6	49.019		
7,900.0	7,191.9	6,283.0	5,489.1	51.1	45.1	-138.14	2,168.2	-1,878.0	4,243.2	3,976.6	48.971		
8,000.0	7,291.9	6,367.5	5,561.1	51.1	45.1	-138.14	2,203.2	-1,906.0	4,281.0	3,976.5	48.923		
8,100.0	7,391.9	6,452.0	5,633.1	51.1	45.1	-138.14	2,238.2	-1,934.0	4,318.8	3,976.5	48.875		
8,200.0	7,491.9	6,536.5	5,705.1	51.2	45.1	-138.14	2,273.2	-1,962.0	4,356.6	3,976.5	48.827		
8,300.0	7,591.9	6,621.0	5,777.1	51.2	45.1	-138.14	2,308.2	-1,990.0	4,394.4	3,976.4	48.779		
8,400.0	7,691.9	6,705.5	5,849.1	51.2	45.2	-138.14	2,343.2	-2,018.0	4,432.2	3,976.4	48.731		
8,500.0	7,791.9	6,790.0	5,921.1	51.2	45.2	-138.14	2,378.2	-2,046.0	4,470.0	3,976.3	48.683		
8,501.6	7,793.5	6,791.9	5,921.1	51.2	45.2	-138.14	2,378.2	-2,046.0	4,470.0	3,976.3	48.683		
8,600.0	7,891.9	6,874.5	6,000.0	51.2	45.2	-138.14	2,413.2	-2,074.0	4,507.8	3,976.5	48.635		
8,700.0	7,991.9	6,959.0	6,079.0	51.3	45.2	-138.14	2,448.2	-2,102.0	4,545.6	3,976.5	48.587		
8,800.0	8,091.9	7,043.5	6,159.0	51.3	45.2	-138.14	2,483.2	-2,130.0	4,583.4	3,976.0	48.539		
8,900.0	8,191.9	7,128.0	6,239.0	51.3	45.2	-138.14	2,518.2	-2,158.0	4,621.2	3,976.0	48.491		
9,000.0	8,291.9	7,212.5	6,319.0	51.3	45.2	-138.14	2,553.2	-2,186.0	4,659.0	3,976.0	48.443		
9,100.0	8,391.9	7,297.0	6,399.0	51.4	45.2	-138.14	2,588.2	-2,214.0	4,696.8	3,976.0	48.395		
9,200.0	8,491.9	7,381.5	6,479.0	51.4	45.2	-138.14	2,623.2	-2,242.0	4,734.6	3,976.0	48.347		
9,300.0	8,591.9	7,466.0	6,559.0	51.4	45.2	-138.14	2,658.2	-2,270.0	4,772.4	3,976.0	48.299		
9,400.0	8,691.9	7,550.5	6,639.0	51.4	45.2	-138.14	2,693.2	-2,298.0	4,810.2	3,976.0	48.251		
9,415.1	8,707.0	7,561.0	6,649.0	51.4	45.2	-138.14	2,693.2	-2,298.0	4,810.2	3,976.0	48.251		

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)		
0.0	0.0	0.0	0.0	0.0	0.0	132.56	-5.5	5.9	8.1			
100.0	100.0	100.0	100.0	0.4	0.4	132.56	-5.5	5.9	8.1	7.3	10.196	
200.0	200.0	200.0	200.0	1.2	1.2	132.56	-5.5	5.9	8.1	5.6	3.269	
245.2	245.2	245.2	245.2	1.7	1.5	90.00	-5.5	5.9	8.1	5.1	2.703	CC
300.0	300.0	300.0	300.0	2.3	1.7	102.14	-5.5	5.9	8.2	4.7	2.348	Level 1, ES
400.0	399.7	399.8	399.8	3.9	1.9	138.31	-5.4	5.4	11.5	6.3	2.220	Level 1, SF
500.0	499.1	498.5	498.4	5.0	3.1	168.65	-5.0	1.2	22.7	15.3	3.058	
600.0	598.0	595.3	594.8	6.0	4.4	-177.43	-4.3	-7.1	43.1	33.6	4.551	
700.0	696.0	690.6	689.4	6.8	4.7	-170.40	-2.7	-18.9	70.9	60.3	6.650	
800.0	793.2	784.6	782.2	7.6	5.2	-165.52	1.9	-32.8	103.8	91.8	8.694	
900.0	889.2	876.4	872.3	8.3	5.9	-161.72	9.4	-48.6	141.3	128.2	10.765	
1,000.0	983.9	965.7	959.3	9.0	6.5	-158.61	19.5	-65.9	183.6	169.4	12.935	
1,100.0	1,077.0	1,052.1	1,042.8	9.7	7.1	-155.95	31.9	-84.5	230.4	215.3	15.212	
1,200.0	1,168.6	1,135.5	1,122.5	10.3	7.7	-153.60	46.4	-104.1	281.6	265.6	17.568	
1,300.0	1,258.2	1,215.6	1,198.3	10.9	8.2	-151.48	62.5	-124.5	337.1	320.2	19.975	
1,400.0	1,345.9	1,292.4	1,270.1	11.5	8.7	-149.50	80.1	-145.5	396.5	378.8	22.401	
1,500.0	1,431.9	1,366.1	1,338.1	11.8	9.2	-148.24	98.8	-166.8	459.1	440.8	25.029	
1,600.0	1,517.6	1,438.2	1,403.8	12.1	9.7	-147.28	118.8	-188.9	522.8	503.8	27.502	
1,700.0	1,603.4	1,508.8	1,467.1	12.4	10.1	-146.26	140.1	-211.6	587.3	567.6	29.808	
1,800.0	1,689.2	1,577.7	1,527.9	12.8	10.5	-145.22	162.5	-234.8	652.7	632.3	31.948	
1,900.0	1,775.0	1,644.8	1,586.4	13.1	10.8	-144.18	185.7	-258.4	719.0	697.9	34.028	
2,000.0	1,860.8	1,717.2	1,648.6	13.5	11.1	-143.10	211.8	-284.4	785.9	764.0	35.857	
2,100.0	1,946.6	1,790.7	1,711.9	13.9	11.4	-142.18	238.3	-310.9	853.0	830.2	37.461	
2,200.0	2,032.4	1,864.1	1,775.1	14.3	11.6	-141.39	264.8	-337.4	920.2	896.5	38.881	
2,300.0	2,118.2	1,937.6	1,838.4	14.8	11.9	-140.70	291.3	-363.8	987.5	962.9	40.157	
2,400.0	2,203.9	2,011.1	1,901.6	15.7	12.3	-140.10	317.8	-390.3	1,054.8	1,029.3	41.307	
2,500.0	2,289.7	2,084.6	1,964.8	16.6	12.6	-139.57	344.3	-416.8	1,122.2	1,095.7	42.333	
2,600.0	2,375.5	2,158.1	2,028.1	17.5	13.1	-139.11	370.7	-443.2	1,189.7	1,162.2	43.284	
2,700.0	2,461.3	2,231.6	2,091.3	18.4	13.5	-138.69	397.2	-469.7	1,257.1	1,228.6	44.105	
2,800.0	2,547.1	2,305.1	2,154.6	19.3	14.1	-138.31	423.7	-496.2	1,324.7	1,295.1	44.853	
2,900.0	2,632.9	2,378.6	2,217.8	20.2	14.7	-137.97	450.2	-522.6	1,392.2	1,361.6	45.535	
3,000.0	2,718.7	2,452.1	2,281.1	21.2	15.3	-137.66	476.7	-549.1	1,459.8	1,428.1	46.152	
3,100.0	2,804.5	2,525.6	2,344.3	22.1	16.0	-137.38	503.2	-575.6	1,527.4	1,494.7	46.713	
3,200.0	2,890.2	2,599.1	2,407.5	23.0	16.7	-137.12	529.7	-602.1	1,595.0	1,561.2	47.224	
3,300.0	2,976.0	2,672.6	2,470.8	23.9	17.3	-136.88	556.2	-628.5	1,662.6	1,627.7	47.691	
3,400.0	3,061.8	2,746.1	2,534.0	24.9	18.0	-136.67	582.7	-655.0	1,730.2	1,694.3	48.117	
3,500.0	3,147.6	2,819.6	2,597.3	25.8	18.7	-136.46	609.2	-681.5	1,797.9	1,760.8	48.509	
3,600.0	3,233.4	2,893.1	2,660.5	26.7	19.4	-136.28	635.7	-707.9	1,865.5	1,827.4	48.869	
3,700.0	3,319.2	2,966.6	2,723.7	27.6	20.1	-136.10	662.2	-734.4	1,933.2	1,893.9	49.200	
3,800.0	3,405.0	3,040.1	2,787.0	28.6	20.7	-135.94	688.7	-760.9	2,000.9	1,960.5	49.506	
3,900.0	3,490.8	3,113.6	2,850.2	29.5	21.4	-135.79	715.2	-787.4	2,068.6	2,027.0	49.788	
4,000.0	3,576.5	3,187.1	2,913.5	30.4	22.1	-135.64	741.7	-813.8	2,136.3	2,093.6	50.050	
4,100.0	3,662.3	3,260.6	2,976.7	31.4	22.8	-135.51	768.1	-840.3	2,204.0	2,160.2	50.292	
4,200.0	3,748.1	3,334.1	3,040.0	32.3	23.5	-135.39	794.6	-866.8	2,271.7	2,226.7	50.517	
4,300.0	3,833.9	3,407.6	3,103.2	33.2	24.2	-135.27	821.1	-893.2	2,339.4	2,293.3	50.727	
4,400.0	3,919.7	3,481.1	3,166.4	34.1	24.9	-135.15	847.6	-919.7	2,407.1	2,359.9	50.922	
4,500.0	4,005.5	3,554.6	3,229.7	35.1	25.6	-135.05	874.1	-946.2	2,474.9	2,426.4	51.104	
4,600.0	4,091.3	3,628.1	3,292.9	36.0	26.3	-134.95	900.6	-972.6	2,542.6	2,493.0	51.275	
4,700.0	4,177.1	3,701.6	3,356.2	36.9	27.0	-134.85	927.1	-999.1	2,610.3	2,559.6	51.434	
4,800.0	4,262.8	3,775.1	3,419.4	37.9	27.7	-134.76	953.6	-1,025.6	2,678.1	2,626.2	51.583	
4,900.0	4,348.6	3,848.6	3,482.7	38.8	28.4	-134.68	980.1	-1,052.1	2,745.8	2,692.7	51.724	

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,434.4	3,922.1	3,545.9	39.7	29.1	-134.60	1,006.6	-1,078.5	2,813.6	2,759.3	51.856		
5,100.0	4,520.2	3,995.6	3,609.1	40.7	29.8	-134.52	1,033.1	-1,105.0	2,881.3	2,825.9	51.980		
5,200.0	4,606.0	4,069.1	3,672.4	41.6	30.6	-134.44	1,059.6	-1,131.5	2,949.1	2,892.4	52.096		
5,300.0	4,691.8	4,142.6	3,735.6	42.5	31.3	-134.37	1,086.1	-1,157.9	3,016.8	2,959.0	52.206		
5,400.0	4,777.6	4,216.1	3,798.9	43.4	32.0	-134.31	1,112.6	-1,184.4	3,084.6	3,025.6	52.310		
5,500.0	4,863.4	4,289.6	3,862.1	44.4	32.7	-134.24	1,139.1	-1,210.9	3,152.3	3,092.2	52.408		
5,600.0	4,949.2	4,363.1	3,925.4	45.3	33.4	-134.40	1,165.6	-1,237.4	3,220.1	3,158.7	52.503		
5,700.0	5,036.4	4,437.9	3,989.6	46.2	34.1	-135.86	1,192.5	-1,264.3	3,286.4	3,223.8	52.565		
5,800.0	5,125.6	4,514.4	4,055.5	47.0	34.8	-137.12	1,220.1	-1,291.8	3,350.3	3,286.6	52.571		
5,900.0	5,216.7	4,592.5	4,122.7	47.7	35.6	-138.21	1,248.2	-1,320.0	3,411.8	3,346.9	52.547		
6,000.0	5,309.5	4,672.1	4,191.2	48.4	36.4	-139.14	1,276.9	-1,348.6	3,470.7	3,404.6	52.497		
6,100.0	5,403.9	4,753.1	4,260.9	48.9	37.2	-139.92	1,306.1	-1,377.8	3,527.0	3,459.7	52.424		
6,200.0	5,499.6	4,835.3	4,331.6	49.4	38.0	-140.58	1,335.7	-1,407.4	3,580.6	3,512.2	52.331		
6,300.0	5,596.5	4,918.5	4,403.2	49.9	38.8	-141.12	1,365.7	-1,437.4	3,631.4	3,561.9	52.222		
6,400.0	5,694.3	5,002.6	4,475.6	50.2	39.6	-141.55	1,396.1	-1,467.7	3,679.5	3,608.9	52.100		
6,500.0	5,793.0	5,087.4	4,548.5	50.5	40.4	-141.88	1,426.6	-1,498.2	3,724.7	3,653.0	51.969		
6,600.0	5,892.3	5,172.8	4,622.0	50.7	41.2	-142.11	1,457.4	-1,528.9	3,767.0	3,694.4	51.833		
6,700.0	5,992.0	5,258.5	4,695.8	50.8	42.0	-142.27	1,488.3	-1,559.8	3,806.5	3,732.9	51.698		
6,800.0	6,091.9	5,344.5	4,769.7	50.9	42.9	-142.34	1,519.3	-1,590.8	3,843.1	3,768.6	51.575		
6,900.0	6,191.9	5,431.4	4,844.9	50.9	50.1	-92.14	1,798.9	-1,870.2	3,865.7	3,778.2	44.199		
7,000.0	6,291.9	5,518.3	4,920.3	50.9	50.1	-92.14	1,798.9	-1,870.2	3,865.7	3,778.2	44.180		
7,100.0	6,391.9	5,605.2	4,995.7	51.0	50.1	-92.14	1,798.9	-1,870.2	3,865.7	3,778.1	44.161		
7,200.0	6,491.9	5,692.1	5,071.1	51.0	50.2	-92.14	1,798.9	-1,870.2	3,865.7	3,778.1	44.141		
7,300.0	6,591.9	5,778.0	5,146.5	51.0	50.2	-92.14	1,798.9	-1,870.2	3,865.7	3,778.1	44.122		
7,400.0	6,691.9	5,864.9	5,221.9	51.0	50.2	-92.14	1,798.9	-1,870.2	3,865.7	3,778.0	44.102		
7,500.0	6,791.9	5,951.8	5,297.3	51.0	50.2	-92.14	1,798.9	-1,870.2	3,865.7	3,778.0	44.082		
7,600.0	6,891.9	6,038.7	5,372.7	51.0	50.3	-92.14	1,798.9	-1,870.2	3,865.7	3,778.0	44.062		
7,700.0	6,991.9	6,125.6	5,448.1	51.1	50.3	-92.14	1,798.9	-1,870.2	3,865.7	3,777.9	44.042		
7,800.0	7,091.9	6,212.5	5,523.5	51.1	50.3	-92.14	1,798.9	-1,870.2	3,865.7	3,777.9	44.022		
7,900.0	7,191.9	6,299.4	5,598.9	51.1	50.3	-92.14	1,798.9	-1,870.2	3,865.7	3,777.8	44.002		
8,000.0	7,291.9	6,386.3	5,674.3	51.1	50.3	-92.14	1,798.9	-1,870.2	3,865.7	3,777.8	43.981		
8,100.0	7,391.9	6,473.2	5,749.7	51.1	50.4	-92.14	1,798.9	-1,870.2	3,865.7	3,777.7	43.960		
8,200.0	7,491.9	6,560.1	5,825.1	51.2	50.4	-92.14	1,798.9	-1,870.2	3,865.7	3,777.7	43.940		
8,300.0	7,591.9	6,647.0	5,900.5	51.2	50.4	-92.14	1,798.9	-1,870.2	3,865.7	3,777.7	43.919		
8,400.0	7,691.9	6,733.9	5,975.9	51.2	50.4	-92.14	1,798.9	-1,870.2	3,865.7	3,777.6	43.898		
8,500.0	7,791.9	6,820.8	6,051.3	51.2	50.5	-92.14	1,798.9	-1,870.2	3,865.7	3,777.6	43.877		
8,600.0	7,891.9	6,907.7	6,126.7	51.2	50.5	-92.14	1,798.9	-1,870.2	3,865.7	3,777.5	43.856		
8,700.0	7,991.9	6,994.6	6,202.1	51.3	50.5	-92.14	1,798.9	-1,870.2	3,865.7	3,777.5	43.834		
8,800.0	8,091.9	7,081.5	6,277.5	51.3	50.5	-92.14	1,798.9	-1,870.2	3,865.7	3,777.5	43.813		
8,900.0	8,191.9	7,168.4	6,352.9	51.3	50.5	-92.14	1,798.9	-1,870.2	3,865.7	3,777.4	43.791		
9,000.0	8,291.9	7,255.3	6,428.3	51.3	50.6	-92.14	1,798.9	-1,870.2	3,865.7	3,777.4	43.770		
9,100.0	8,391.9	7,342.2	6,503.7	51.4	50.6	-92.14	1,798.9	-1,870.2	3,865.7	3,777.3	43.748		
9,200.0	8,491.9	7,429.1	6,579.1	51.4	50.6	-92.14	1,798.9	-1,870.2	3,865.7	3,777.3	43.726		
9,300.0	8,591.9	7,516.0	6,654.5	51.4	50.6	-92.14	1,798.9	-1,870.2	3,865.7	3,777.2	43.704		
9,308.8	8,600.7	7,525.7	6,660.7	51.4	50.6	-92.14	1,798.9	-1,870.2	3,865.7	3,777.2	43.702		
9,400.0	8,691.9	7,602.9	6,736.1	51.4	50.7	-92.14	1,798.9	-1,870.2	3,865.8	3,777.4	43.695		
9,415.1	8,707.0	7,610.0	6,742.3	51.4	50.7	-92.14	1,798.9	-1,870.2	3,866.0	3,777.5	43.700		

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



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)		
0.0	0.0	0.0	0.0	0.0	0.0	133.04	-16.4	17.6	24.0			
100.0	100.0	100.0	100.0	0.4	0.4	133.04	-16.4	17.6	24.0	23.2	30.327	
200.0	200.0	200.0	200.0	1.2	1.2	133.04	-16.4	17.6	24.0	21.6	9.723	
271.8	271.7	271.7	271.7	2.0	1.6	90.00	-16.4	17.6	24.0	20.8	7.435	CC
300.0	300.0	300.0	300.0	2.3	1.7	92.52	-16.4	17.6	24.0	20.6	6.942	ES
400.0	399.7	399.7	399.7	3.9	2.1	107.51	-16.4	17.6	25.2	20.7	5.611	
500.0	499.1	499.1	499.1	5.0	2.4	129.63	-16.5	16.4	30.3	24.2	4.990	SF
600.0	598.0	596.8	596.7	6.0	3.7	152.25	-17.0	11.1	43.5	35.3	5.277	
700.0	696.0	692.5	691.9	6.8	4.2	167.36	-17.6	2.1	66.8	56.7	6.663	
800.0	793.2	787.5	786.1	7.6	4.6	177.07	-16.2	-9.9	96.8	85.3	8.392	
900.0	889.2	880.3	877.7	8.3	5.2	-176.13	-11.9	-24.0	132.3	119.4	10.243	
1,000.0	983.9	970.4	966.1	9.0	5.9	-171.02	-5.0	-40.0	173.0	158.9	12.254	
1,100.0	1,077.0	1,057.6	1,051.0	9.7	6.5	-166.96	4.1	-57.7	218.8	203.7	14.512	
1,200.0	1,168.6	1,141.5	1,131.9	10.3	7.1	-163.62	15.2	-76.7	269.4	253.5	16.876	
1,300.0	1,258.2	1,221.9	1,208.8	10.9	7.7	-160.77	28.0	-96.7	324.7	307.9	19.323	
1,400.0	1,345.9	1,300.0	1,282.6	11.5	8.3	-158.22	42.3	-117.8	384.2	366.6	21.793	
1,500.0	1,431.9	1,372.1	1,349.9	11.8	8.7	-156.43	57.3	-138.7	447.2	429.0	24.562	
1,600.0	1,517.6	1,443.8	1,416.1	12.1	9.2	-154.98	73.8	-160.8	511.4	492.5	27.164	
1,700.0	1,603.4	1,513.7	1,479.8	12.4	9.6	-153.59	91.4	-183.7	576.4	556.9	29.608	
1,800.0	1,689.2	1,581.9	1,541.1	12.8	10.1	-152.25	110.0	-207.2	642.4	622.3	31.899	
1,900.0	1,775.0	1,648.3	1,599.8	13.1	10.4	-150.98	129.5	-231.1	709.4	688.6	34.153	
2,000.0	1,860.8	1,720.6	1,663.3	13.5	10.6	-149.70	151.5	-257.8	777.0	755.5	36.129	
2,100.0	1,946.6	1,793.2	1,727.1	13.9	10.9	-148.63	173.6	-284.7	844.8	822.5	37.901	
2,200.0	2,032.4	1,865.9	1,790.9	14.3	11.1	-147.70	195.8	-311.5	912.7	889.6	39.485	
2,300.0	2,118.2	1,938.5	1,854.6	14.8	11.4	-146.91	217.9	-338.4	980.7	956.7	40.920	
2,400.0	2,203.9	2,011.2	1,918.4	15.7	11.7	-146.21	240.0	-365.2	1,048.8	1,024.0	42.224	
2,500.0	2,289.7	2,083.8	1,982.2	16.6	12.0	-145.60	262.1	-392.0	1,117.0	1,091.3	43.397	
2,600.0	2,375.5	2,156.5	2,046.0	17.5	12.4	-145.06	284.2	-418.9	1,185.3	1,158.6	44.412	
2,700.0	2,461.3	2,229.1	2,109.8	18.4	12.8	-144.58	306.3	-445.7	1,253.6	1,226.0	45.452	
2,800.0	2,547.1	2,301.7	2,173.5	19.3	13.2	-144.14	328.4	-472.6	1,321.9	1,293.4	46.311	
2,900.0	2,632.9	2,374.4	2,237.3	20.2	13.7	-143.75	350.5	-499.4	1,390.3	1,360.8	47.111	
3,000.0	2,718.7	2,447.0	2,301.1	21.2	14.3	-143.40	372.7	-526.3	1,458.7	1,428.2	47.837	
3,100.0	2,804.5	2,519.7	2,364.9	22.1	14.9	-143.08	394.8	-553.1	1,527.2	1,495.7	48.501	
3,200.0	2,890.2	2,592.3	2,428.7	23.0	15.5	-142.78	416.9	-579.9	1,595.7	1,563.2	49.109	
3,300.0	2,976.0	2,665.0	2,492.4	23.9	16.1	-142.51	439.0	-606.8	1,664.1	1,630.6	49.666	
3,400.0	3,061.8	2,737.6	2,556.2	24.9	16.7	-142.26	461.1	-633.6	1,732.7	1,698.1	50.178	
3,500.0	3,147.6	2,810.3	2,620.0	25.8	17.3	-142.03	483.2	-660.5	1,801.2	1,765.6	50.649	
3,600.0	3,233.4	2,882.9	2,683.8	26.7	18.0	-141.81	505.3	-687.3	1,869.7	1,833.1	51.084	
3,700.0	3,319.2	2,955.5	2,747.5	27.6	18.6	-141.61	527.4	-714.2	1,938.3	1,900.6	51.485	
3,800.0	3,405.0	3,028.2	2,811.3	28.6	19.2	-141.43	549.6	-741.0	2,006.8	1,968.1	51.856	
3,900.0	3,490.8	3,100.8	2,875.1	29.5	19.9	-141.25	571.7	-767.9	2,075.4	2,035.6	52.201	
4,000.0	3,576.5	3,173.5	2,938.9	30.4	20.5	-141.09	593.8	-794.7	2,144.0	2,103.2	52.521	
4,100.0	3,662.3	3,246.1	3,002.7	31.4	21.2	-140.94	615.9	-821.5	2,212.6	2,170.7	52.818	
4,200.0	3,748.1	3,318.8	3,066.4	32.3	21.8	-140.80	638.0	-848.4	2,281.2	2,238.2	53.095	
4,300.0	3,833.9	3,391.4	3,130.2	33.2	22.5	-140.66	660.1	-875.2	2,349.8	2,305.7	53.354	
4,400.0	3,919.7	3,464.1	3,194.0	34.1	23.1	-140.53	682.2	-902.1	2,418.4	2,373.3	53.595	
4,500.0	4,005.5	3,536.7	3,257.8	35.1	23.7	-140.41	704.3	-928.9	2,487.0	2,440.8	53.821	
4,600.0	4,091.3	3,609.4	3,321.6	36.0	24.4	-140.30	726.5	-955.8	2,555.6	2,508.3	54.033	
4,700.0	4,177.1	3,682.0	3,385.3	36.9	25.1	-140.19	748.6	-982.6	2,624.3	2,575.9	54.231	
4,800.0	4,262.8	3,754.6	3,449.1	37.9	25.7	-140.09	770.7	-1,009.4	2,692.9	2,643.4	54.417	
4,900.0	4,348.6	3,827.3	3,512.9	38.8	26.4	-139.99	792.8	-1,036.3	2,761.5	2,711.0	54.593	

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft	
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning		
5,000.0	4,434.4	3,899.9	3,576.7	39.7	27.0	-139.90	814.9	-1,063.1	2,830.2	2,778.5	54.758			
5,100.0	4,520.2	3,972.6	3,640.5	40.7	27.7	-139.81	837.0	-1,090.0	2,898.8	2,846.0	54.913			
5,200.0	4,606.0	4,045.2	3,704.2	41.6	28.3	-139.73	859.1	-1,116.8	2,967.5	2,913.6	55.060			
5,300.0	4,691.8	4,117.9	3,768.0	42.5	29.0	-139.65	881.2	-1,143.7	3,036.1	2,981.1	55.198			
5,400.0	4,777.6	4,190.5	3,831.8	43.4	29.6	-139.57	903.3	-1,170.5	3,104.8	3,048.7	55.329			
5,500.0	4,863.4	4,263.2	3,895.6	44.4	30.3	-139.50	925.5	-1,197.4	3,173.5	3,116.2	55.453			
5,600.0	4,949.2	4,335.8	3,959.4	45.3	31.0	-139.63	947.6	-1,224.2	3,242.1	3,183.8	55.573			
5,700.0	5,036.4	4,409.8	4,024.3	46.2	31.6	-140.97	970.1	-1,251.5	3,309.2	3,249.7	55.649			
5,800.0	5,125.6	4,485.8	4,091.0	47.0	32.3	-142.12	993.2	-1,279.6	3,373.8	3,313.1	55.650			
5,900.0	5,216.7	4,563.7	4,159.4	47.7	33.0	-143.10	1,016.9	-1,308.4	3,435.7	3,373.9	55.611			
6,000.0	5,309.5	4,643.2	4,229.3	48.4	33.7	-143.93	1,041.1	-1,337.8	3,494.8	3,431.9	55.535			
6,100.0	5,403.9	4,724.3	4,300.5	48.9	34.5	-144.63	1,065.8	-1,367.8	3,551.2	3,487.1	55.427			
6,200.0	5,499.6	4,806.9	4,372.9	49.4	35.2	-145.20	1,091.0	-1,398.3	3,604.7	3,539.5	55.291			
6,300.0	5,596.5	4,890.6	4,446.5	49.9	36.0	-145.66	1,116.5	-1,429.2	3,655.2	3,588.9	55.131			
6,400.0	5,694.3	4,975.5	4,521.0	50.2	36.8	-146.02	1,142.3	-1,460.6	3,702.7	3,635.3	54.952			
6,500.0	5,793.0	5,061.3	4,596.3	50.5	37.5	-146.29	1,168.4	-1,492.3	3,747.1	3,678.7	54.758			
6,600.0	5,892.3	5,147.8	4,672.3	50.7	38.3	-146.47	1,194.7	-1,524.3	3,788.5	3,719.1	54.554			
6,700.0	5,992.0	5,235.0	4,748.8	50.8	39.1	-146.57	1,221.3	-1,556.5	3,826.8	3,756.4	54.346			
6,800.0	6,091.9	5,322.6	4,825.7	50.9	39.9	-146.60	1,247.9	-1,588.8	3,861.9	3,790.6	54.151			
6,900.0	6,191.9	5,410.7	4,903.6	50.9	40.4	-146.56	1,273.0	-1,621.0	3,883.4	3,799.8	46.473			
7,000.0	6,291.9	5,499.5	4,981.5	50.9	40.4	-146.56	1,298.0	-1,653.0	3,883.4	3,799.8	46.451			
7,100.0	6,391.9	5,589.4	5,060.4	51.0	40.5	-146.56	1,323.0	-1,685.0	3,883.4	3,799.8	46.428			
7,200.0	6,491.9	5,679.3	5,140.3	51.0	40.5	-146.56	1,348.0	-1,717.0	3,883.4	3,799.7	46.405			
7,300.0	6,591.9	5,769.2	5,220.2	51.0	40.5	-146.56	1,373.0	-1,749.0	3,883.4	3,799.7	46.382			
7,400.0	6,691.9	5,859.1	5,300.1	51.0	40.5	-146.56	1,398.0	-1,781.0	3,883.4	3,799.6	46.359			
7,500.0	6,791.9	5,949.0	5,380.0	51.0	40.5	-146.56	1,423.0	-1,813.0	3,883.4	3,799.6	46.336			
7,600.0	6,891.9	6,038.9	5,460.0	51.0	40.5	-146.56	1,448.0	-1,845.0	3,883.4	3,799.6	46.312			
7,700.0	6,991.9	6,128.8	5,540.0	51.1	40.5	-146.56	1,473.0	-1,877.0	3,883.4	3,799.5	46.289			
7,800.0	7,091.9	6,217.7	5,620.0	51.1	40.5	-146.56	1,498.0	-1,909.0	3,883.4	3,799.5	46.265			
7,900.0	7,191.9	6,306.6	5,700.0	51.1	40.5	-146.56	1,523.0	-1,941.0	3,883.4	3,799.4	46.241			
8,000.0	7,291.9	6,395.5	5,780.0	51.1	40.5	-146.56	1,548.0	-1,973.0	3,883.4	3,799.4	46.217			
8,100.0	7,391.9	6,484.4	5,860.0	51.1	40.5	-146.56	1,573.0	-2,005.0	3,883.4	3,799.3	46.193			
8,200.0	7,491.9	6,573.3	5,940.0	51.2	40.5	-146.56	1,598.0	-2,037.0	3,883.4	3,799.3	46.168			
8,300.0	7,591.9	6,662.2	6,020.0	51.2	40.5	-146.56	1,623.0	-2,069.0	3,883.4	3,799.2	46.144			
8,400.0	7,691.9	6,751.1	6,100.0	51.2	40.5	-146.56	1,648.0	-2,101.0	3,883.4	3,799.2	46.119			
8,500.0	7,791.9	6,840.0	6,180.0	51.2	40.5	-146.56	1,673.0	-2,133.0	3,883.4	3,799.2	46.095			
8,500.7	7,792.7	6,840.0	6,180.0	51.2	40.5	-146.56	1,673.0	-2,133.0	3,883.4	3,799.2	46.095			
8,600.0	7,891.9	6,928.9	6,260.0	51.2	40.5	-146.56	1,698.0	-2,165.0	3,883.8	3,799.6	46.111			
8,700.0	7,991.9	7,017.8	6,340.0	51.3	40.5	-146.56	1,723.0	-2,197.0	3,886.6	3,802.5	46.200			
8,800.0	8,091.9	7,106.7	6,420.0	51.3	40.5	-146.56	1,748.0	-2,229.0	3,892.0	3,808.0	46.343			
8,900.0	8,191.9	7,195.6	6,500.0	51.3	40.5	-146.56	1,773.0	-2,261.0	3,899.9	3,816.1	46.540			
9,000.0	8,291.9	7,284.5	6,580.0	51.3	40.5	-146.56	1,798.0	-2,293.0	3,910.3	3,826.7	46.790			
9,100.0	8,391.9	7,373.4	6,660.0	51.4	40.5	-146.56	1,823.0	-2,325.0	3,923.3	3,840.0	47.093			
9,200.0	8,491.9	7,462.3	6,740.0	51.4	40.5	-146.56	1,848.0	-2,357.0	3,938.7	3,855.7	47.449			
9,300.0	8,591.9	7,551.2	6,820.0	51.4	40.5	-146.56	1,873.0	-2,389.0	3,956.7	3,874.0	47.857			
9,400.0	8,691.9	7,640.1	6,900.0	51.4	40.5	-146.56	1,898.0	-2,421.0	3,977.0	3,894.7	48.316			
9,415.1	8,707.0	7,640.1	6,900.0	51.4	40.5	-146.56	1,898.0	-2,421.0	3,980.3	3,898.1	48.391			

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	133.12	-27.3	29.2	40.0			
100.0	100.0	100.0	100.0	0.4	0.4	133.12	-27.3	29.2	40.0	39.2	50.449	
200.0	200.0	200.0	200.0	1.2	1.2	133.12	-27.3	29.2	40.0	37.5	16.174	
291.0	291.0	291.0	291.0	2.2	1.7	90.00	-27.3	29.2	39.9	36.5	11.797	CC
300.0	300.0	300.0	300.0	2.3	1.7	90.54	-27.3	29.2	39.9	36.5	11.560	
400.0	399.7	399.7	399.7	3.9	2.1	99.79	-27.3	29.2	40.5	36.2	9.368	ES
500.0	499.1	499.1	499.1	5.0	2.4	113.85	-27.3	29.2	43.7	38.2	7.916	
600.0	598.0	598.1	598.1	6.0	3.1	131.49	-27.3	27.1	51.7	44.4	7.133	SF
700.0	696.0	694.7	694.5	6.8	4.3	148.95	-27.3	20.9	67.7	58.5	7.397	
800.0	793.2	788.3	787.5	7.6	5.3	162.16	-27.3	11.1	93.5	82.5	8.471	
900.0	889.2	880.3	878.6	8.3	5.6	171.41	-26.8	-2.1	127.9	115.5	10.260	
1,000.0	983.9	970.6	967.5	9.0	6.1	178.19	-23.9	-17.6	168.3	154.5	12.182	
1,100.0	1,077.0	1,057.8	1,052.8	9.7	6.6	-176.64	-18.7	-34.9	214.1	199.1	14.263	
1,200.0	1,168.6	1,141.6	1,134.2	10.3	7.2	-172.51	-11.5	-53.7	265.1	249.0	16.527	
1,300.0	1,258.2	1,221.7	1,211.3	10.9	7.7	-169.09	-2.7	-73.6	320.9	303.9	18.947	
1,400.0	1,345.9	1,298.0	1,284.0	11.5	8.2	-166.16	7.5	-94.3	381.2	363.4	21.473	
1,500.0	1,431.9	1,370.8	1,352.6	11.8	8.7	-163.90	18.8	-115.6	445.2	426.8	24.278	
1,600.0	1,517.6	1,441.7	1,418.8	12.1	9.1	-162.05	31.4	-137.9	510.3	491.4	26.965	
1,700.0	1,603.4	1,510.9	1,482.6	12.4	9.6	-160.36	45.1	-160.9	576.4	556.8	29.512	
1,800.0	1,689.2	1,578.3	1,543.9	12.8	10.0	-158.79	59.7	-184.6	643.4	623.2	31.920	
1,900.0	1,775.0	1,644.8	1,603.6	13.1	10.2	-157.32	75.5	-209.2	711.4	690.6	34.297	
2,000.0	1,860.8	1,716.4	1,667.6	13.5	10.5	-155.92	92.9	-236.2	779.9	758.5	36.419	
2,100.0	1,946.6	1,787.9	1,731.6	13.9	10.7	-154.74	110.4	-263.1	848.7	826.5	38.349	
2,200.0	2,032.4	1,859.5	1,795.5	14.3	11.0	-153.73	127.8	-290.1	917.6	894.7	40.102	
2,300.0	2,118.2	1,931.1	1,859.5	14.8	11.2	-152.86	145.3	-317.0	986.6	962.9	41.710	
2,400.0	2,203.9	2,002.6	1,923.5	15.7	11.5	-152.10	162.7	-344.0	1,055.7	1,031.3	43.185	
2,500.0	2,289.7	2,074.2	1,987.4	16.6	11.8	-151.44	180.2	-370.9	1,125.0	1,099.7	44.517	
2,600.0	2,375.5	2,145.8	2,051.4	17.5	12.1	-150.85	197.6	-397.8	1,194.3	1,168.2	45.732	
2,700.0	2,461.3	2,217.4	2,115.4	18.4	12.4	-150.32	215.1	-424.8	1,263.6	1,236.7	46.862	
2,800.0	2,547.1	2,288.9	2,179.3	19.3	12.8	-149.85	232.5	-451.7	1,333.0	1,305.2	47.915	
2,900.0	2,632.9	2,360.5	2,243.3	20.2	13.1	-149.42	249.9	-478.7	1,402.5	1,373.8	48.842	
3,000.0	2,718.7	2,432.1	2,307.3	21.2	13.6	-149.04	267.4	-505.6	1,472.0	1,442.4	49.701	
3,100.0	2,804.5	2,503.6	2,371.3	22.1	14.0	-148.69	284.8	-532.6	1,541.5	1,511.0	50.493	
3,200.0	2,890.2	2,575.2	2,435.2	23.0	14.5	-148.37	302.3	-559.5	1,611.0	1,579.6	51.223	
3,300.0	2,976.0	2,646.8	2,499.2	23.9	15.1	-148.07	319.7	-586.5	1,680.6	1,648.2	51.896	
3,400.0	3,061.8	2,718.4	2,563.2	24.9	15.6	-147.80	337.2	-613.4	1,750.2	1,716.9	52.517	
3,500.0	3,147.6	2,789.9	2,627.1	25.8	16.2	-147.55	354.6	-640.4	1,819.8	1,785.5	53.091	
3,600.0	3,233.4	2,861.5	2,691.1	26.7	16.7	-147.32	372.1	-667.3	1,889.5	1,854.2	53.623	
3,700.0	3,319.2	2,933.1	2,755.1	27.6	17.3	-147.10	389.5	-694.2	1,959.1	1,922.9	54.117	
3,800.0	3,405.0	3,004.6	2,819.0	28.6	17.9	-146.90	407.0	-721.2	2,028.8	1,991.6	54.576	
3,900.0	3,490.8	3,076.2	2,883.0	29.5	18.5	-146.71	424.4	-748.1	2,098.4	2,060.3	55.002	
4,000.0	3,576.5	3,147.8	2,947.0	30.4	19.1	-146.53	441.8	-775.1	2,168.1	2,129.0	55.400	
4,100.0	3,662.3	3,219.3	3,010.9	31.4	19.6	-146.37	459.3	-802.0	2,237.8	2,197.7	55.771	
4,200.0	3,748.1	3,290.9	3,074.9	32.3	20.2	-146.21	476.7	-829.0	2,307.5	2,266.4	56.118	
4,300.0	3,833.9	3,362.5	3,138.9	33.2	20.8	-146.07	494.2	-855.9	2,377.2	2,335.1	56.442	
4,400.0	3,919.7	3,434.1	3,202.8	34.1	21.4	-145.93	511.6	-882.9	2,446.9	2,403.8	56.745	
4,500.0	4,005.5	3,505.6	3,266.8	35.1	22.0	-145.80	529.1	-909.8	2,516.6	2,472.5	57.031	
4,600.0	4,091.3	3,577.2	3,330.8	36.0	22.6	-145.68	546.5	-936.8	2,586.4	2,541.2	57.298	
4,700.0	4,177.1	3,648.8	3,394.8	36.9	23.2	-145.56	564.0	-963.7	2,656.1	2,610.0	57.549	
4,800.0	4,262.8	3,720.3	3,458.7	37.9	23.8	-145.45	581.4	-990.6	2,725.8	2,678.7	57.786	
4,900.0	4,348.6	3,791.9	3,522.7	38.8	24.4	-145.34	598.9	-1,017.6	2,795.6	2,747.4	58.010	

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,434.4	3,863.5	3,586.7	39.7	25.0	-145.24	616.3	-1,044.5	2,865.3	2,816.1	58.220		
5,100.0	4,520.2	3,935.1	3,650.6	40.7	25.6	-145.15	633.7	-1,071.5	2,935.1	2,884.9	58.419		
5,200.0	4,606.0	4,006.6	3,714.6	41.6	26.2	-145.06	651.2	-1,098.4	3,004.9	2,953.6	58.607		
5,300.0	4,691.8	4,078.2	3,778.6	42.5	26.8	-144.97	668.6	-1,125.4	3,074.6	3,022.3	58.785		
5,400.0	4,777.6	4,149.8	3,842.5	43.4	27.4	-144.89	686.1	-1,152.3	3,144.4	3,091.0	58.953		
5,500.0	4,863.4	4,221.3	3,906.5	44.4	28.0	-144.81	703.5	-1,179.3	3,214.2	3,159.8	59.113		
5,600.0	4,949.2	4,292.9	3,970.5	45.3	28.6	-144.92	721.0	-1,206.2	3,283.9	3,228.5	59.267		
5,700.0	5,036.4	4,366.0	4,035.8	46.2	29.3	-146.13	738.8	-1,233.7	3,352.0	3,295.5	59.363		
5,800.0	5,125.6	4,441.3	4,103.1	47.0	29.9	-147.16	757.1	-1,262.1	3,417.4	3,359.9	59.365		
5,900.0	5,216.7	4,518.6	4,172.2	47.7	30.5	-148.03	776.0	-1,291.2	3,480.1	3,421.4	59.314		
6,000.0	5,309.5	4,597.9	4,243.0	48.4	31.2	-148.77	795.3	-1,321.0	3,539.8	3,480.0	59.216		
6,100.0	5,403.9	4,678.9	4,315.5	48.9	31.9	-149.38	815.1	-1,351.5	3,596.6	3,535.7	59.075		
6,200.0	5,499.6	4,761.6	4,389.4	49.4	32.6	-149.87	835.2	-1,382.7	3,650.3	3,588.3	58.898		
6,300.0	5,596.5	4,845.7	4,464.6	49.9	33.3	-150.27	855.7	-1,414.3	3,700.9	3,637.8	58.688		
6,400.0	5,694.3	4,931.2	4,540.9	50.2	34.1	-150.57	876.5	-1,446.5	3,748.2	3,684.1	58.451		
6,500.0	5,793.0	5,017.7	4,618.3	50.5	34.8	-150.79	897.6	-1,479.1	3,792.4	3,727.2	58.194		
6,600.0	5,892.3	5,105.3	4,696.6	50.7	35.5	-150.93	919.0	-1,512.1	3,833.2	3,767.0	57.920		
6,700.0	5,992.0	5,193.7	4,775.6	50.8	36.3	-150.99	940.5	-1,545.3	3,870.8	3,803.6	57.640		
6,800.0	6,091.9	5,282.7	4,855.1	50.9	37.0	-150.98	962.2	-1,578.8	3,904.9	3,836.9	57.372		
6,900.0	6,191.9	5,372.4	4,934.6	50.9	37.0	-150.98	984.1	-1,612.1	3,939.3	3,869.9	57.104		
7,000.0	6,291.9	5,463.4	5,013.1	50.9	37.0	-150.98	1,006.1	-1,645.5	3,973.3	3,902.9	56.836		
7,100.0	6,391.9	5,553.4	5,091.6	51.0	37.0	-150.98	1,028.1	-1,678.9	4,007.3	3,936.9	56.568		
7,200.0	6,491.9	5,643.4	5,170.1	51.0	37.0	-150.98	1,050.1	-1,712.3	4,041.3	3,970.9	56.300		
7,300.0	6,591.9	5,733.4	5,248.6	51.0	37.0	-150.98	1,072.1	-1,745.7	4,075.3	3,999.9	56.032		
7,400.0	6,691.9	5,823.4	5,327.1	51.0	37.0	-150.98	1,094.1	-1,779.1	4,109.3	4,028.9	55.764		
7,500.0	6,791.9	5,913.4	5,405.6	51.0	37.0	-150.98	1,116.1	-1,812.5	4,143.3	4,057.9	55.496		
7,600.0	6,891.9	6,003.4	5,484.1	51.0	37.0	-150.98	1,138.1	-1,845.9	4,177.3	4,086.9	55.228		
7,700.0	6,991.9	6,093.4	5,562.6	51.0	37.0	-150.98	1,160.1	-1,879.3	4,211.3	4,115.9	54.960		
7,800.0	7,091.9	6,183.4	5,641.1	51.0	37.0	-150.98	1,182.1	-1,912.7	4,245.3	4,144.9	54.692		
7,900.0	7,191.9	6,273.4	5,719.6	51.0	37.0	-150.98	1,204.1	-1,946.1	4,279.3	4,173.9	54.424		
8,000.0	7,291.9	6,363.4	5,798.1	51.0	37.0	-150.98	1,226.1	-1,979.5	4,313.3	4,202.9	54.156		
8,100.0	7,391.9	6,453.4	5,876.6	51.0	37.0	-150.98	1,248.1	-2,012.9	4,347.3	4,231.9	53.888		
8,200.0	7,491.9	6,543.4	5,955.1	51.0	37.0	-150.98	1,270.1	-2,046.3	4,381.3	4,260.9	53.620		
8,300.0	7,591.9	6,633.4	6,033.6	51.0	37.0	-150.98	1,292.1	-2,079.7	4,415.3	4,289.9	53.352		
8,400.0	7,691.9	6,723.4	6,112.1	51.0	37.0	-150.98	1,314.1	-2,113.1	4,449.3	4,318.9	53.084		
8,500.0	7,791.9	6,813.4	6,190.6	51.0	37.0	-150.98	1,336.1	-2,146.5	4,483.3	4,347.9	52.816		
8,600.0	7,891.9	6,903.4	6,269.1	51.0	37.0	-150.98	1,358.1	-2,179.9	4,517.3	4,376.9	52.548		
8,700.0	7,991.9	6,993.4	6,347.6	51.0	37.0	-150.98	1,380.1	-2,213.3	4,551.3	4,405.9	52.280		
8,800.0	8,091.9	7,083.4	6,426.1	51.0	37.0	-150.98	1,402.1	-2,246.7	4,585.3	4,434.9	52.012		
8,900.0	8,191.9	7,173.4	6,504.6	51.0	37.0	-150.98	1,424.1	-2,280.1	4,619.3	4,463.9	51.744		
9,000.0	8,291.9	7,263.4	6,583.1	51.0	37.0	-150.98	1,446.1	-2,313.5	4,653.3	4,492.9	51.476		
9,100.0	8,391.9	7,353.4	6,661.6	51.0	37.0	-150.98	1,468.1	-2,346.9	4,687.3	4,521.9	51.208		
9,200.0	8,491.9	7,443.4	6,740.1	51.0	37.0	-150.98	1,490.1	-2,380.3	4,721.3	4,550.9	50.940		
9,300.0	8,591.9	7,533.4	6,818.6	51.0	37.0	-150.98	1,512.1	-2,413.7	4,755.3	4,579.9	50.672		
9,303.4	8,595.4	7,537.4	6,822.1	51.0	37.0	-150.98	1,514.1	-2,415.7	4,757.3	4,581.9	50.652		
9,400.0	8,691.9	7,623.4	6,896.6	51.0	37.0	-150.98	1,534.1	-2,449.1	4,791.3	4,610.9	50.404		
9,415.1	8,707.0	7,638.4	6,901.1	51.0	37.0	-150.98	1,538.1	-2,453.1	4,795.3	4,614.9	50.364		

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)		
0.0	0.0	0.0	0.0	0.0	0.0	133.17	-38.2	40.8	55.9			
100.0	100.0	100.0	100.0	0.4	0.4	133.17	-38.2	40.8	55.9	55.1	70.580	
200.0	200.0	200.0	200.0	1.2	1.2	133.17	-38.2	40.8	55.9	53.4	22.628	
300.0	300.0	300.0	300.0	2.3	1.7	89.69	-38.2	40.8	55.9	52.4	16.183	
400.0	399.7	400.7	400.7	3.9	2.1	97.51	-38.4	39.5	55.5	51.4	13.331	
436.9	436.4	437.7	437.7	4.3	2.6	102.46	-38.5	38.0	55.4	50.8	12.022	CC, ES
500.0	499.1	500.5	500.3	5.0	3.5	113.36	-38.8	34.1	56.2	50.8	10.340	
600.0	598.0	597.9	597.3	6.0	4.7	134.05	-39.7	24.6	64.0	56.7	8.791	
700.0	696.0	693.4	691.8	6.8	5.0	152.73	-40.5	11.5	83.2	73.7	8.761	SF
800.0	793.2	787.1	784.1	7.6	5.5	166.38	-39.2	-4.6	111.9	100.4	9.668	
900.0	889.2	877.7	872.8	8.3	6.1	175.94	-35.8	-22.9	148.7	135.5	11.254	
1,000.0	983.9	964.7	957.2	9.0	6.8	-177.20	-30.4	-43.1	192.3	177.8	13.245	
1,100.0	1,077.0	1,047.9	1,037.3	9.7	7.3	-172.07	-23.4	-64.7	242.1	226.6	15.564	
1,200.0	1,168.6	1,127.0	1,112.6	10.3	7.9	-168.05	-15.1	-87.4	297.5	281.0	18.035	
1,300.0	1,258.2	1,200.0	1,181.4	10.9	8.4	-164.83	-5.9	-110.1	357.9	340.6	20.663	
1,400.0	1,345.9	1,272.2	1,248.7	11.5	8.9	-161.97	4.5	-134.2	422.9	404.8	23.289	
1,500.0	1,431.9	1,339.8	1,310.8	11.8	9.2	-159.94	15.5	-158.3	491.6	472.9	26.322	
1,600.0	1,517.6	1,409.8	1,374.8	12.1	9.4	-158.43	27.4	-183.9	561.1	541.9	29.217	
1,700.0	1,603.4	1,480.9	1,439.9	12.4	9.6	-157.22	39.6	-210.0	630.9	611.0	31.852	
1,800.0	1,689.2	1,552.0	1,504.9	12.8	9.9	-156.25	51.8	-236.0	700.7	680.2	34.279	
1,900.0	1,775.0	1,623.1	1,569.9	13.1	10.1	-155.45	63.9	-262.1	770.6	749.5	36.516	
2,000.0	1,860.8	1,694.3	1,635.0	13.5	10.4	-154.79	76.1	-288.2	840.6	818.8	38.576	
2,100.0	1,946.6	1,765.4	1,700.0	13.9	10.7	-154.22	88.3	-314.2	910.6	888.1	40.461	
2,200.0	2,032.4	1,836.5	1,765.1	14.3	11.0	-153.74	100.5	-340.3	980.7	957.4	42.196	
2,300.0	2,118.2	1,907.6	1,830.1	14.8	11.3	-153.32	112.6	-366.4	1,050.8	1,026.8	43.790	
2,400.0	2,203.9	1,978.7	1,895.1	15.7	11.6	-152.95	124.8	-392.4	1,120.9	1,096.1	45.245	
2,500.0	2,289.7	2,049.8	1,960.2	16.6	11.9	-152.63	137.0	-418.5	1,191.1	1,165.5	46.637	
2,600.0	2,375.5	2,121.0	2,025.2	17.5	12.2	-152.34	149.1	-444.5	1,261.2	1,234.9	47.860	
2,700.0	2,461.3	2,192.1	2,090.3	18.4	12.5	-152.08	161.3	-470.6	1,331.4	1,304.2	49.005	
2,800.0	2,547.1	2,263.2	2,155.3	19.3	12.9	-151.85	173.5	-496.7	1,401.6	1,373.6	50.062	
2,900.0	2,632.9	2,334.3	2,220.3	20.2	13.3	-151.64	185.6	-522.7	1,471.8	1,443.0	51.039	
3,000.0	2,718.7	2,405.4	2,285.4	21.2	13.7	-151.45	197.8	-548.8	1,542.0	1,512.3	51.943	
3,100.0	2,804.5	2,476.5	2,350.4	22.1	14.2	-151.27	210.0	-574.8	1,612.2	1,581.7	52.781	
3,200.0	2,890.2	2,547.6	2,415.5	23.0	14.6	-151.11	222.1	-600.9	1,682.5	1,651.0	53.559	
3,300.0	2,976.0	2,618.8	2,480.5	23.9	15.1	-150.97	234.3	-627.0	1,752.7	1,720.4	54.282	
3,400.0	3,061.8	2,689.9	2,545.5	24.9	15.6	-150.83	246.5	-653.0	1,822.9	1,789.8	54.954	
3,500.0	3,147.6	2,761.0	2,610.6	25.8	16.1	-150.70	258.7	-679.1	1,893.2	1,859.1	55.581	
3,600.0	3,233.4	2,832.1	2,675.6	26.7	16.6	-150.59	270.8	-705.2	1,963.4	1,928.5	56.166	
3,700.0	3,319.2	2,903.2	2,740.7	27.6	17.1	-150.48	283.0	-731.2	2,033.7	1,997.8	56.713	
3,800.0	3,405.0	2,974.3	2,805.7	28.6	17.7	-150.38	295.2	-757.3	2,103.9	2,067.2	57.224	
3,900.0	3,490.8	3,045.5	2,870.7	29.5	18.2	-150.28	307.3	-783.3	2,174.2	2,136.5	57.703	
4,000.0	3,576.5	3,116.6	2,935.8	30.4	18.7	-150.19	319.5	-809.4	2,244.4	2,205.8	58.153	
4,100.0	3,662.3	3,187.7	3,000.8	31.4	19.2	-150.11	331.7	-835.5	2,314.7	2,275.2	58.576	
4,200.0	3,748.1	3,258.8	3,065.9	32.3	19.8	-150.03	343.8	-861.5	2,385.0	2,344.5	58.973	
4,300.0	3,833.9	3,329.9	3,130.9	33.2	20.3	-149.96	356.0	-887.6	2,455.2	2,413.9	59.347	
4,400.0	3,919.7	3,401.0	3,195.9	34.1	20.8	-149.89	368.2	-913.6	2,525.5	2,483.2	59.700	
4,500.0	4,005.5	3,472.2	3,261.0	35.1	21.4	-149.82	380.3	-939.7	2,595.8	2,552.5	60.032	
4,600.0	4,091.3	3,543.3	3,326.0	36.0	21.9	-149.76	392.5	-965.8	2,666.1	2,621.9	60.346	
4,700.0	4,177.1	3,614.4	3,391.1	36.9	22.4	-149.70	404.7	-991.8	2,736.3	2,691.2	60.643	
4,800.0	4,262.8	3,685.5	3,456.1	37.9	23.0	-149.64	416.8	-1,017.9	2,806.6	2,760.5	60.925	
4,900.0	4,348.6	3,756.6	3,521.2	38.8	23.5	-149.59	429.0	-1,044.0	2,876.9	2,829.9	61.191	

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,434.4	3,827.7	3,586.2	39.7	24.0	-149.54	441.2	-1,070.0	2,947.2	2,899.2	61.444		
5,100.0	4,520.2	3,898.9	3,651.2	40.7	24.6	-149.49	453.4	-1,096.1	3,017.4	2,968.5	61.684		
5,200.0	4,606.0	3,970.0	3,716.3	41.6	25.1	-149.44	465.5	-1,122.1	3,087.7	3,037.8	61.912		
5,300.0	4,691.8	4,041.1	3,781.3	42.5	25.7	-149.40	477.7	-1,148.2	3,158.0	3,107.2	62.128		
5,400.0	4,777.6	4,112.2	3,846.4	43.4	26.2	-149.35	489.9	-1,174.3	3,228.3	3,176.5	62.334		
5,500.0	4,863.4	4,183.3	3,911.4	44.4	26.7	-149.31	502.0	-1,200.3	3,298.6	3,245.8	62.531		
5,600.0	4,949.2	4,254.5	3,976.5	45.3	27.3	-149.45	514.2	-1,226.4	3,368.8	3,315.1	62.721		
5,700.0	5,036.4	4,327.2	4,043.0	46.2	27.8	-150.55	526.7	-1,253.1	3,437.4	3,382.7	62.843		
5,800.0	5,125.6	4,402.4	4,111.7	47.0	28.4	-151.50	539.5	-1,280.6	3,503.1	3,447.4	62.850		
5,900.0	5,216.7	4,479.8	4,182.5	47.7	29.0	-152.29	552.8	-1,309.0	3,565.9	3,509.2	62.795		
6,000.0	5,309.5	4,559.4	4,255.3	48.4	29.6	-152.96	566.4	-1,338.1	3,625.7	3,567.9	62.682		
6,100.0	5,403.9	4,640.9	4,329.9	48.9	30.2	-153.52	580.3	-1,368.0	3,682.4	3,623.5	62.518		
6,200.0	5,499.6	4,724.3	4,406.2	49.4	30.8	-153.97	594.6	-1,398.6	3,735.8	3,675.9	62.309		
6,300.0	5,596.5	4,809.4	4,484.0	49.9	31.5	-154.33	609.2	-1,429.8	3,786.0	3,725.0	62.059		
6,400.0	5,694.3	4,896.0	4,563.2	50.2	32.2	-154.61	624.0	-1,461.5	3,832.8	3,770.7	61.774		
6,500.0	5,793.0	4,983.9	4,643.6	50.5	32.8	-154.80	639.0	-1,493.7	3,876.1	3,813.1	61.462		
6,600.0	5,892.3	5,073.0	4,725.1	50.7	33.5	-154.93	654.3	-1,526.4	3,916.0	3,851.9	61.129		
6,700.0	5,992.0	5,163.1	4,807.5	50.8	34.2	-154.98	669.7	-1,559.4	3,952.4	3,887.3	60.784		
6,800.0	6,091.9	5,254.1	4,890.7	50.9	34.9	-154.98	685.3	-1,592.7	3,985.2	3,919.2	60.450		
6,900.0	6,191.9	5,345.5	4,974.3	50.9	35.6	-108.95	700.9	-1,626.2	4,015.5	3,948.9	60.318		
7,000.0	6,291.9	6,703.7	6,291.9	50.9	40.4	-106.39	810.1	-1,860.1	4,016.1	3,939.0	52.077		
7,100.0	6,391.9	6,803.7	6,391.9	51.0	40.4	-106.39	810.1	-1,860.1	4,016.1	3,939.0	52.046		
7,200.0	6,491.9	6,903.7	6,491.9	51.0	40.5	-106.39	810.1	-1,860.1	4,016.1	3,938.9	52.015		
7,300.0	6,591.9	7,003.7	6,591.9	51.0	40.5	-106.39	810.1	-1,860.1	4,016.1	3,938.9	51.984		
7,400.0	6,691.9	7,103.7	6,691.9	51.0	40.5	-106.39	810.1	-1,860.1	4,016.1	3,938.8	51.952		
7,500.0	6,791.9	7,203.7	6,791.9	51.0	40.5	-106.39	810.1	-1,860.1	4,016.1	3,938.8	51.921		
7,600.0	6,891.9	7,303.7	6,891.9	51.0	40.6	-106.39	810.1	-1,860.1	4,016.1	3,938.7	51.889		
7,700.0	6,991.9	7,403.7	6,991.9	51.1	40.6	-106.39	810.1	-1,860.1	4,016.1	3,938.7	51.857		
7,800.0	7,091.9	7,503.7	7,091.9	51.1	40.6	-106.39	810.1	-1,860.1	4,016.1	3,938.6	51.824		
7,900.0	7,191.9	7,603.7	7,191.9	51.1	40.7	-106.39	810.1	-1,860.1	4,016.1	3,938.6	51.792		
8,000.0	7,291.9	7,703.7	7,291.9	51.1	40.7	-106.39	810.1	-1,860.1	4,016.1	3,938.5	51.759		
8,100.0	7,391.9	7,803.7	7,391.9	51.1	40.7	-106.39	810.1	-1,860.1	4,016.1	3,938.5	51.727		
8,200.0	7,491.9	7,903.7	7,491.9	51.2	40.7	-106.39	810.1	-1,860.1	4,016.1	3,938.4	51.694		
8,300.0	7,591.9	8,003.7	7,591.9	51.2	40.8	-106.39	810.1	-1,860.1	4,016.1	3,938.4	51.661		
8,400.0	7,691.9	8,103.7	7,691.9	51.2	40.8	-106.39	810.1	-1,860.1	4,016.1	3,938.3	51.628		
8,500.0	7,791.9	8,203.7	7,791.9	51.2	40.8	-106.39	810.1	-1,860.1	4,016.1	3,938.3	51.595		
8,600.0	7,891.9	8,228.7	7,817.0	51.2	40.8	-106.39	810.1	-1,860.1	4,016.8	3,939.1	51.656		
8,700.0	7,991.9	8,228.7	7,817.0	51.3	40.8	-106.39	810.1	-1,860.1	4,019.9	3,942.3	51.795		
8,800.0	8,091.9	8,228.7	7,817.0	51.3	40.8	-106.39	810.1	-1,860.1	4,025.5	3,948.1	51.991		
8,900.0	8,191.9	8,228.7	7,817.0	51.3	40.8	-106.39	810.1	-1,860.1	4,033.6	3,956.4	52.244		
9,000.0	8,291.9	8,228.7	7,817.0	51.3	40.8	-106.39	810.1	-1,860.1	4,044.1	3,967.2	52.552		
9,100.0	8,391.9	8,228.7	7,817.0	51.4	40.8	-106.39	810.1	-1,860.1	4,057.1	3,980.4	52.916		
9,200.0	8,491.9	8,228.7	7,817.0	51.4	40.8	-106.39	810.1	-1,860.1	4,072.4	3,996.1	53.335		
9,300.0	8,591.9	8,228.7	7,817.0	51.4	40.8	-106.39	810.1	-1,860.1	4,090.2	4,014.2	53.809		
9,400.0	8,691.9	8,228.7	7,817.0	51.4	40.8	-106.39	810.1	-1,860.1	4,110.3	4,034.7	54.337		
9,415.1	8,707.0	8,228.7	7,817.0	51.4	40.8	-106.39	810.1	-1,860.1	4,113.6	4,038.0	54.423		

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft	
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	133.18	-49.2	52.4	71.9					
100.0	100.0	100.0	100.0	0.4	0.4	133.18	-49.2	52.4	71.9	71.1	90.711			
200.0	200.0	200.0	200.0	1.2	1.2	133.18	-49.2	52.4	71.9	69.4	29.083			
300.0	300.0	300.8	300.8	2.3	1.5	89.61	-49.3	51.8	71.5	68.3	22.277			
400.0	399.7	401.8	401.6	3.9	2.9	98.17	-50.2	47.5	69.8	65.6	16.387			
445.8	445.3	447.4	447.1	4.4	3.5	104.40	-50.9	44.1	69.4	64.7	14.717	CC, ES		
500.0	499.1	500.8	500.3	5.0	4.3	113.43	-52.0	39.0	70.3	64.9	13.117			
600.0	598.0	597.1	595.7	6.0	5.3	132.32	-54.6	26.7	79.0	71.7	10.840			
700.0	696.0	692.3	689.6	6.8	5.6	149.68	-56.9	11.0	99.1	89.2	10.087	SF		
800.0	793.2	784.8	780.2	7.6	6.2	162.88	-57.1	-7.4	129.0	116.8	10.634			
900.0	889.2	873.7	866.7	8.3	6.8	172.42	-55.3	-28.0	167.5	153.6	12.102			
1,000.0	983.9	958.7	948.7	9.0	7.3	179.39	-51.8	-50.3	213.3	198.2	14.072			
1,100.0	1,077.0	1,039.5	1,025.8	9.7	7.9	-175.35	-46.9	-73.8	265.6	249.4	16.354			
1,200.0	1,168.6	1,115.8	1,097.9	10.3	8.4	-171.23	-40.8	-98.0	323.7	306.5	18.843			
1,300.0	1,258.2	1,187.6	1,165.0	10.9	8.8	-167.87	-33.9	-122.6	386.9	368.9	21.481			
1,400.0	1,345.9	1,258.1	1,230.2	11.5	9.1	-164.97	-26.1	-148.2	454.6	435.8	24.293			
1,500.0	1,431.9	1,328.2	1,295.1	11.8	9.3	-163.03	-18.3	-173.7	525.1	505.8	27.310			
1,600.0	1,517.6	1,398.2	1,359.8	12.1	9.5	-161.74	-10.5	-199.1	596.0	576.2	30.154			
1,700.0	1,603.4	1,468.1	1,424.5	12.4	9.8	-160.73	-2.6	-224.6	667.0	646.6	32.793			
1,800.0	1,689.2	1,538.1	1,489.2	12.8	10.0	-159.90	5.2	-250.0	738.1	717.1	35.249			
1,900.0	1,775.0	1,608.0	1,553.9	13.1	10.3	-159.22	13.0	-275.5	809.2	787.7	37.531			
2,000.0	1,860.8	1,678.0	1,618.6	13.5	10.6	-158.65	20.8	-300.9	880.4	858.2	39.643			
2,100.0	1,946.6	1,748.0	1,683.3	13.9	10.8	-158.16	28.6	-326.4	951.7	928.8	41.599			
2,200.0	2,032.4	1,817.9	1,748.0	14.3	11.1	-157.74	36.4	-351.8	1,022.9	999.4	43.413			
2,300.0	2,118.2	1,887.9	1,812.7	14.8	11.4	-157.38	44.3	-377.3	1,094.2	1,070.0	45.091			
2,400.0	2,203.9	1,957.8	1,877.4	15.7	11.7	-157.06	52.1	-402.7	1,165.6	1,140.6	46.645			
2,500.0	2,289.7	2,027.8	1,942.1	16.6	12.0	-156.77	59.9	-428.2	1,236.9	1,211.2	48.086			
2,600.0	2,375.5	2,097.8	2,006.8	17.5	12.4	-156.52	67.7	-453.6	1,308.2	1,281.8	49.425			
2,700.0	2,461.3	2,167.7	2,071.4	18.4	12.7	-156.30	75.5	-479.1	1,379.6	1,352.4	50.664			
2,800.0	2,547.1	2,237.7	2,136.1	19.3	13.1	-156.09	83.3	-504.5	1,451.0	1,423.0	51.817			
2,900.0	2,632.9	2,307.6	2,200.8	20.2	13.4	-155.91	91.1	-530.0	1,522.3	1,493.6	52.891			
3,000.0	2,718.7	2,377.6	2,265.5	21.2	13.8	-155.74	99.0	-555.4	1,593.7	1,564.1	53.889			
3,100.0	2,804.5	2,447.6	2,330.2	22.1	14.2	-155.58	106.8	-580.9	1,665.1	1,634.7	54.820			
3,200.0	2,890.2	2,517.5	2,394.9	23.0	14.6	-155.44	114.6	-606.3	1,736.5	1,705.3	55.689			
3,300.0	2,976.0	2,587.5	2,459.6	23.9	15.0	-155.31	122.4	-631.8	1,807.9	1,775.9	56.501			
3,400.0	3,061.8	2,657.4	2,524.3	24.9	15.5	-155.19	130.2	-657.2	1,879.3	1,846.5	57.260			
3,500.0	3,147.6	2,727.4	2,589.0	25.8	15.9	-155.08	138.0	-682.7	1,950.7	1,917.1	57.972			
3,600.0	3,233.4	2,797.4	2,653.7	26.7	16.4	-154.97	145.8	-708.1	2,022.1	1,987.6	58.640			
3,700.0	3,319.2	2,867.3	2,718.4	27.6	16.8	-154.88	153.7	-733.5	2,093.5	2,058.2	59.265			
3,800.0	3,405.0	2,937.3	2,783.1	28.6	17.3	-154.79	161.5	-759.0	2,164.9	2,128.8	59.854			
3,900.0	3,490.8	3,007.2	2,847.8	29.5	17.8	-154.70	169.3	-784.4	2,236.4	2,199.3	60.408			
4,000.0	3,576.5	3,077.2	2,912.5	30.4	18.3	-154.62	177.1	-809.9	2,307.8	2,269.9	60.930			
4,100.0	3,662.3	3,147.2	2,977.2	31.4	18.7	-154.55	184.9	-835.3	2,379.2	2,340.5	61.422			
4,200.0	3,748.1	3,217.1	3,041.9	32.3	19.2	-154.48	192.7	-860.8	2,450.6	2,411.0	61.886			
4,300.0	3,833.9	3,287.1	3,106.6	33.2	19.7	-154.41	200.5	-886.2	2,522.0	2,481.6	62.325			
4,400.0	3,919.7	3,357.0	3,171.3	34.1	20.2	-154.35	208.4	-911.7	2,593.5	2,552.1	62.740			
4,500.0	4,005.5	3,427.0	3,236.0	35.1	20.7	-154.29	216.2	-937.1	2,664.9	2,622.7	63.133			
4,600.0	4,091.3	3,497.0	3,300.7	36.0	21.2	-154.23	224.0	-962.6	2,736.3	2,693.2	63.505			
4,700.0	4,177.1	3,566.9	3,365.4	36.9	21.7	-154.18	231.8	-988.0	2,807.8	2,763.8	63.858			
4,800.0	4,262.8	3,636.9	3,430.1	37.9	22.2	-154.13	239.6	-1,013.5	2,879.2	2,834.3	64.193			
4,900.0	4,348.6	3,706.8	3,494.8	38.8	22.6	-154.08	247.4	-1,038.9	2,950.6	2,904.9	64.512			

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



Anticollision Report



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Laramie 0993-29-01 - Laramie 29-01 0993-20-18E - OH - Design #1												Offset Well Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard														
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore +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)			Offset Site Error:	Offset Well Error:
5,000.0	4,434.4	3,776.8	3,559.5	39.7	23.1	-154.04	255.2	-1,064.4	3,022.1	2,975.4	64.815			
5,100.0	4,520.2	3,846.8	3,624.2	40.7	23.6	-153.99	263.1	-1,089.8	3,093.5	3,046.0	65.103			
5,200.0	4,606.0	3,916.7	3,688.9	41.6	24.1	-153.95	270.9	-1,115.3	3,164.9	3,116.5	65.378			
5,300.0	4,691.8	3,986.7	3,753.6	42.5	24.6	-153.91	278.7	-1,140.7	3,236.4	3,187.1	65.639			
5,400.0	4,777.6	4,056.6	3,818.3	43.4	25.1	-153.87	286.5	-1,166.2	3,307.8	3,257.6	65.889			
5,500.0	4,863.4	4,126.6	3,883.0	44.4	25.6	-153.84	294.3	-1,191.6	3,379.2	3,328.1	66.127			
5,600.0	4,949.2	4,196.6	3,947.7	45.3	26.1	-153.95	302.1	-1,217.1	3,450.7	3,398.7	66.358			
5,700.0	5,036.4	4,268.3	4,014.0	46.2	26.6	-154.94	310.1	-1,243.2	3,520.3	3,467.4	66.509			
5,800.0	5,125.6	4,342.6	4,082.7	47.0	27.1	-155.78	318.4	-1,270.2	3,587.1	3,533.2	66.527			
5,900.0	5,216.7	4,419.3	4,153.6	47.7	27.7	-156.48	327.0	-1,298.1	3,650.9	3,595.9	66.471			
6,000.0	5,309.5	4,498.4	4,226.7	48.4	28.2	-157.07	335.8	-1,326.9	3,711.5	3,655.6	66.350			
6,100.0	5,403.9	4,579.6	4,301.9	48.9	28.8	-157.56	344.9	-1,356.4	3,768.9	3,712.0	66.167			
6,200.0	5,499.6	4,662.8	4,378.8	49.4	29.4	-157.96	354.2	-1,386.7	3,823.1	3,765.1	65.931			
6,300.0	5,596.5	4,747.9	4,457.5	49.9	30.0	-158.27	363.7	-1,417.6	3,873.8	3,814.8	65.648			
6,400.0	5,694.3	4,834.7	4,537.7	50.2	30.6	-158.51	373.4	-1,449.2	3,921.0	3,861.0	65.323			
6,500.0	5,793.0	4,922.9	4,619.4	50.5	31.3	-158.68	383.3	-1,481.3	3,964.7	3,903.7	64.965			
6,600.0	5,892.3	5,012.6	4,702.3	50.7	31.9	-158.79	393.3	-1,513.9	4,004.8	3,942.8	64.582			
6,700.0	5,992.0	5,103.4	4,786.3	50.8	32.5	-158.84	403.4	-1,547.0	4,041.2	3,978.3	64.184			
6,800.0	6,091.9	5,195.3	4,871.2	50.9	33.2	-158.83	413.7	-1,580.4	4,074.0	4,010.1	63.798			
6,900.0	6,191.9	5,287.7	4,956.7	50.9	33.9	-112.85	424.0	-1,614.0	4,104.1	4,039.6	63.649			
7,000.0	6,291.9	5,380.2	5,042.2	50.9	34.6	-112.85	434.3	-1,647.5	4,133.1	4,069.1	63.500			
7,100.0	6,391.9	5,472.7	5,127.7	51.0	35.3	-112.85	444.6	-1,681.0	4,162.1	4,098.6	63.351			
7,200.0	6,491.9	5,565.2	5,213.2	51.0	36.0	-112.85	454.9	-1,714.5	4,191.1	4,128.1	63.202			
7,300.0	6,591.9	5,657.7	5,298.7	51.0	36.7	-112.85	465.2	-1,748.0	4,220.1	4,157.6	63.053			
7,400.0	6,691.9	5,750.2	5,384.2	51.0	37.4	-112.85	475.5	-1,781.5	4,249.1	4,187.1	62.904			
7,500.0	6,791.9	5,842.7	5,469.7	51.0	38.1	-112.85	485.8	-1,815.0	4,278.1	4,216.6	62.755			
7,600.0	6,891.9	5,935.2	5,555.2	51.0	38.8	-112.85	496.1	-1,848.5	4,307.1	4,246.1	62.606			
7,700.0	6,991.9	6,027.7	5,640.7	51.1	39.5	-112.85	506.4	-1,882.0	4,336.1	4,275.6	62.457			
7,800.0	7,091.9	6,120.2	5,726.2	51.1	40.2	-112.85	516.7	-1,915.5	4,365.1	4,305.1	62.308			
7,900.0	7,191.9	6,212.7	5,811.7	51.1	40.9	-112.85	527.0	-1,949.0	4,394.1	4,334.6	62.159			
8,000.0	7,291.9	6,305.2	5,897.2	51.1	41.6	-112.85	537.3	-1,982.5	4,423.1	4,364.1	62.010			
8,100.0	7,391.9	6,397.7	5,982.7	51.1	42.3	-112.85	547.6	-2,016.0	4,452.1	4,393.6	61.861			
8,200.0	7,491.9	6,490.2	6,068.2	51.2	43.0	-112.85	557.9	-2,049.5	4,481.1	4,423.1	61.712			
8,300.0	7,591.9	6,582.7	6,153.7	51.2	43.7	-112.85	568.2	-2,083.0	4,510.1	4,452.6	61.563			
8,400.0	7,691.9	6,675.2	6,239.2	51.2	44.4	-112.85	578.5	-2,116.5	4,539.1	4,482.1	61.414			
8,500.0	7,791.9	6,767.7	6,324.7	51.2	45.1	-112.85	588.8	-2,150.0	4,568.1	4,511.6	61.265			
8,600.0	7,891.9	6,860.2	6,410.2	51.2	45.8	-112.85	599.1	-2,183.5	4,597.1	4,541.1	61.116			
8,700.0	7,991.9	6,952.7	6,495.7	51.3	46.5	-112.85	609.4	-2,217.0	4,626.1	4,570.6	60.967			
8,800.0	8,091.9	7,045.2	6,581.2	51.3	47.2	-112.85	619.7	-2,250.5	4,655.1	4,600.1	60.818			
8,900.0	8,191.9	7,137.7	6,666.7	51.3	47.9	-112.85	630.0	-2,284.0	4,684.1	4,629.6	60.669			
9,000.0	8,291.9	7,230.2	6,752.2	51.3	48.6	-112.85	640.3	-2,317.5	4,713.1	4,659.1	60.520			
9,100.0	8,391.9	7,322.7	6,837.7	51.4	49.3	-112.85	650.6	-2,351.0	4,742.1	4,688.6	60.371			
9,200.0	8,491.9	7,415.2	6,923.2	51.4	50.0	-112.85	660.9	-2,384.5	4,771.1	4,718.1	60.222			
9,300.0	8,591.9	7,507.7	7,008.7	51.4	50.7	-112.85	671.2	-2,418.0	4,800.1	4,747.6	60.073			
9,302.1	8,594.1	7,510.9	7,011.9	51.4	50.7	-112.85	671.2	-2,418.0	4,800.1	4,747.6	60.073			
9,400.0	8,691.9	7,600.2	7,100.2	51.4	51.4	-112.85	681.5	-2,451.5	4,829.1	4,777.1	59.924			
9,415.1	8,707.0	7,615.3	7,115.3	51.4	51.4	-112.85	681.5	-2,451.5	4,829.1	4,777.1	59.924			

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-11W - OH - Design #1													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-46.26	22.2	-23.2	32.1				
100.0	100.0	100.0	100.0	0.4	0.4	-46.26	22.2	-23.2	32.1	31.3	40.565		
200.0	200.0	200.0	200.0	1.2	1.2	-46.26	22.2	-23.2	32.1	29.7	13.006	CC	
300.0	300.0	299.8	299.7	2.3	1.7	-93.72	23.3	-22.6	32.5	29.3	10.043	ES	
400.0	399.7	399.4	399.3	3.9	3.3	-95.72	28.0	-19.9	34.1	30.0	8.310		
500.0	499.1	499.2	498.5	5.0	4.6	-97.55	36.5	-15.1	37.0	32.1	7.592		
600.0	598.0	598.8	597.2	6.0	5.6	-99.05	48.7	-8.2	41.1	35.5	7.354	SF	
700.0	696.0	698.5	695.1	6.8	6.5	-100.20	64.6	0.9	46.4	40.1	7.360		
800.0	793.2	798.1	792.1	7.6	7.3	-101.00	84.2	12.0	53.0	45.9	7.494		
900.0	889.2	897.6	888.0	8.3	8.0	-101.51	107.4	25.2	60.7	52.8	7.688		
1,000.0	983.9	997.0	982.5	9.0	8.7	-101.80	134.2	40.4	69.6	60.8	7.900		
1,100.0	1,077.0	1,096.3	1,075.5	9.7	9.4	-101.91	164.5	57.7	79.6	69.8	8.099		
1,200.0	1,168.6	1,195.5	1,166.8	10.3	10.0	-101.89	198.2	76.8	90.8	79.8	8.272		
1,300.0	1,258.2	1,294.6	1,256.2	10.9	10.6	-101.77	235.3	97.9	103.1	90.8	8.410		
1,400.0	1,345.9	1,393.5	1,343.5	11.5	11.2	-101.58	275.6	120.8	116.4	102.7	8.513		
1,500.0	1,431.9	1,492.2	1,428.6	11.8	11.8	-101.19	319.1	145.6	130.6	115.5	8.620		
1,600.0	1,517.6	1,590.8	1,511.5	12.1	12.2	-99.47	365.6	172.0	145.1	128.4	8.692		
1,700.0	1,603.4	1,689.6	1,593.9	12.4	12.5	-97.66	412.9	198.9	159.9	141.5	8.709		
1,800.0	1,689.2	1,788.4	1,676.3	12.8	12.8	-96.15	460.3	225.8	174.8	154.7	8.704		
1,900.0	1,775.0	1,887.2	1,758.8	13.1	13.1	-94.88	507.6	252.8	189.8	167.9	8.692		
2,000.0	1,860.8	1,986.0	1,841.2	13.5	13.5	-93.80	555.0	279.7	204.8	181.2	8.678		
2,100.0	1,946.6	2,084.8	1,923.6	13.9	13.9	-92.87	602.3	306.6	219.9	194.6	8.665		
2,200.0	2,032.4	2,183.6	2,006.0	14.3	14.2	-92.05	649.7	333.5	235.1	207.9	8.651		
2,300.0	2,118.2	2,282.4	2,088.4	14.8	14.6	-91.34	697.0	360.4	250.3	221.3	8.638		
2,400.0	2,203.9	2,381.2	2,170.8	15.7	15.2	-90.71	744.4	387.4	265.6	234.8	8.642		
2,500.0	2,289.7	2,480.0	2,253.3	16.6	16.2	-90.14	791.7	414.3	280.8	248.3	8.624		
2,600.0	2,375.5	2,578.8	2,335.7	17.5	17.1	-89.63	839.1	441.2	296.1	261.8	8.615		
2,700.0	2,461.3	2,677.5	2,418.1	18.4	18.0	-89.18	886.4	468.1	311.5	275.3	8.608		
2,800.0	2,547.1	2,776.3	2,500.5	19.3	18.9	-88.76	933.8	495.1	326.8	288.8	8.601		
2,900.0	2,632.9	2,875.1	2,582.9	20.2	19.9	-88.39	981.1	522.0	342.1	302.3	8.596		
3,000.0	2,718.7	2,973.9	2,665.3	21.2	20.8	-88.04	1,028.5	548.9	357.5	315.9	8.590		
3,100.0	2,804.5	3,072.7	2,747.8	22.1	21.7	-87.73	1,075.9	575.8	372.9	329.5	8.586		
3,200.0	2,890.2	3,171.5	2,830.2	23.0	22.7	-87.44	1,123.2	602.8	388.3	343.0	8.582		
3,300.0	2,976.0	3,270.3	2,912.6	23.9	23.6	-87.17	1,170.6	629.7	403.7	356.6	8.578		
3,400.0	3,061.8	3,369.1	2,995.0	24.9	24.5	-86.92	1,217.9	656.6	419.1	370.2	8.575		
3,500.0	3,147.6	3,467.9	3,077.4	25.8	25.5	-86.69	1,265.3	683.5	434.5	383.8	8.572		
3,600.0	3,233.4	3,566.7	3,159.8	26.7	26.4	-86.47	1,312.6	710.4	449.9	397.4	8.569		
3,700.0	3,319.2	3,665.5	3,242.3	27.6	27.4	-86.27	1,360.0	737.4	465.3	411.0	8.567		
3,800.0	3,405.0	3,764.2	3,324.7	28.6	28.3	-86.08	1,407.3	764.3	480.7	424.6	8.564		
3,900.0	3,490.8	3,863.0	3,407.1	29.5	29.2	-85.91	1,454.7	791.2	496.2	438.2	8.562		
4,000.0	3,576.5	3,961.8	3,489.5	30.4	30.2	-85.74	1,502.0	818.1	511.6	451.8	8.560		
4,100.0	3,662.3	4,060.6	3,571.9	31.4	31.1	-85.58	1,549.4	845.1	527.0	465.5	8.559		
4,200.0	3,748.1	4,159.4	3,654.3	32.3	32.0	-85.44	1,596.7	872.0	542.5	479.1	8.557		
4,300.0	3,833.9	4,258.2	3,736.7	33.2	33.0	-85.30	1,644.1	898.9	557.9	492.7	8.555		
4,400.0	3,919.7	4,357.0	3,819.2	34.1	33.9	-85.17	1,691.5	925.8	573.4	506.4	8.554		
4,500.0	4,005.5	4,455.8	3,901.6	35.1	34.9	-85.04	1,738.8	952.7	588.8	520.0	8.552		
4,600.0	4,091.3	4,554.6	3,984.0	36.0	35.8	-84.92	1,786.2	979.7	604.3	533.6	8.551		
4,700.0	4,177.1	4,653.4	4,066.4	36.9	36.7	-84.81	1,833.5	1,006.6	619.8	547.3	8.550		
4,800.0	4,262.8	4,752.2	4,148.8	37.9	37.7	-84.70	1,880.9	1,033.5	635.2	560.9	8.549		
4,900.0	4,348.6	4,850.9	4,231.2	38.8	38.6	-84.60	1,928.2	1,060.4	650.7	574.6	8.548		
5,000.0	4,434.4	4,949.7	4,313.7	39.7	39.6	-84.51	1,975.6	1,087.4	666.1	588.2	8.547		

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft	
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
5,100.0	4,520.2	5,048.5	4,396.1	40.7	40.5	-84.41	2,022.9	1,114.3	681.6	601.9	8.546			
5,200.0	4,606.0	5,147.3	4,478.5	41.6	41.5	-84.32	2,070.3	1,141.2	697.1	615.5	8.545			
5,300.0	4,691.8	5,246.1	4,560.9	42.5	42.4	-84.24	2,117.6	1,168.1	712.5	629.2	8.544			
5,400.0	4,777.6	5,344.9	4,643.3	43.4	43.3	-84.16	2,165.0	1,195.0	728.0	642.8	8.543			
5,500.0	4,863.4	5,443.7	4,725.7	44.4	44.3	-84.08	2,212.3	1,222.0	743.5	656.5	8.543			
5,600.0	4,949.2	5,542.5	4,808.2	45.3	45.2	-84.06	2,259.7	1,248.9	759.0	670.1	8.542			
5,700.0	5,036.4	5,648.0	4,896.7	46.2	46.2	-84.20	2,309.7	1,277.3	774.5	683.8	8.539			
5,800.0	5,125.6	5,760.0	4,993.1	47.0	47.2	-84.29	2,359.2	1,305.5	789.0	696.5	8.527			
5,900.0	5,216.7	5,872.6	5,092.7	47.7	48.1	-84.37	2,404.8	1,331.4	802.3	708.1	8.516			
6,000.0	5,309.5	5,985.8	5,195.3	48.4	48.9	-84.45	2,446.3	1,355.0	814.3	718.6	8.507			
6,100.0	5,403.9	6,099.6	5,300.7	48.9	49.6	-84.53	2,483.5	1,376.1	825.0	728.0	8.500			
6,200.0	5,499.6	6,213.8	5,408.6	49.4	50.3	-84.60	2,516.2	1,394.8	834.4	736.2	8.495			
6,300.0	5,596.5	6,328.5	5,518.5	49.9	50.8	-84.66	2,544.4	1,410.7	842.4	743.2	8.492			
6,400.0	5,694.3	6,443.5	5,630.4	50.2	51.3	-84.71	2,567.7	1,424.0	849.1	749.1	8.490			
6,500.0	5,793.0	6,558.8	5,743.7	50.5	51.6	-84.75	2,586.2	1,434.5	854.3	753.7	8.490			
6,600.0	5,892.3	6,674.3	5,858.2	50.7	51.9	-84.79	2,599.8	1,442.2	858.1	757.1	8.490			
6,700.0	5,992.0	6,790.0	5,973.4	50.8	52.1	-84.82	2,608.3	1,447.1	860.5	759.2	8.491			
6,800.0	6,091.9	6,905.8	6,089.1	50.9	52.2	-84.84	2,611.8	1,449.1	861.5	760.1	8.494			
6,900.0	6,191.9	7,008.6	6,191.9	50.9	52.2	-39.13	2,611.8	1,449.1	861.5	760.1	8.493			
7,000.0	6,291.9	7,108.6	6,291.9	50.9	52.2	-39.13	2,611.8	1,449.1	861.5	760.0	8.490			
7,100.0	6,391.9	7,208.6	6,391.9	51.0	52.2	-39.13	2,611.8	1,449.1	861.5	760.0	8.487			
7,200.0	6,491.9	7,308.6	6,491.9	51.0	52.2	-39.13	2,611.8	1,449.1	861.5	760.0	8.483			
7,300.0	6,591.9	7,408.6	6,591.9	51.0	52.2	-39.13	2,611.8	1,449.1	861.5	759.9	8.480			
7,400.0	6,691.9	7,508.6	6,691.9	51.0	52.3	-39.13	2,611.8	1,449.1	861.5	759.9	8.477			
7,500.0	6,791.9	7,608.6	6,791.9	51.0	52.3	-39.13	2,611.8	1,449.1	861.5	759.8	8.474			
7,600.0	6,891.9	7,708.6	6,891.9	51.0	52.3	-39.13	2,611.8	1,449.1	861.5	759.8	8.470			
7,700.0	6,991.9	7,808.6	6,991.9	51.1	52.3	-39.13	2,611.8	1,449.1	861.5	759.8	8.467			
7,800.0	7,091.9	7,908.6	7,091.9	51.1	52.3	-39.13	2,611.8	1,449.1	861.5	759.7	8.464			
7,900.0	7,191.9	8,008.6	7,191.9	51.1	52.3	-39.13	2,611.8	1,449.1	861.5	759.7	8.460			
8,000.0	7,291.9	8,108.6	7,291.9	51.1	52.4	-39.13	2,611.8	1,449.1	861.5	759.7	8.457			
8,100.0	7,391.9	8,208.6	7,391.9	51.1	52.4	-39.13	2,611.8	1,449.1	861.5	759.6	8.454			
8,200.0	7,491.9	8,308.6	7,491.9	51.2	52.4	-39.13	2,611.8	1,449.1	861.5	759.6	8.450			
8,300.0	7,591.9	8,408.6	7,591.9	51.2	52.4	-39.13	2,611.8	1,449.1	861.5	759.5	8.447			
8,400.0	7,691.9	8,508.6	7,691.9	51.2	52.4	-39.13	2,611.8	1,449.1	861.5	759.5	8.444			
8,500.0	7,791.9	8,608.6	7,791.9	51.2	52.4	-39.13	2,611.8	1,449.1	861.5	759.4	8.440			
8,600.0	7,891.9	8,708.6	7,891.9	51.2	52.5	-39.13	2,611.8	1,449.1	861.5	759.4	8.437			
8,700.0	7,991.9	8,808.6	7,991.9	51.3	52.5	-39.13	2,611.8	1,449.1	861.5	759.4	8.433			
8,800.0	8,091.9	8,908.6	8,091.9	51.3	52.5	-39.13	2,611.8	1,449.1	861.5	759.3	8.430			
8,900.0	8,191.9	9,008.6	8,191.9	51.3	52.5	-39.13	2,611.8	1,449.1	861.5	759.3	8.426			
9,000.0	8,291.9	9,108.6	8,291.9	51.3	52.5	-39.13	2,611.8	1,449.1	861.5	759.2	8.423			
9,100.0	8,391.9	9,208.6	8,391.9	51.4	52.5	-39.13	2,611.8	1,449.1	861.5	759.2	8.419			
9,200.0	8,491.9	9,308.6	8,491.9	51.4	52.6	-39.13	2,611.8	1,449.1	861.5	759.1	8.416			
9,300.0	8,591.9	9,408.6	8,591.9	51.4	52.6	-39.13	2,611.8	1,449.1	861.5	759.1	8.412			
9,400.0	8,691.9	9,508.6	8,691.9	51.4	52.6	-39.13	2,611.8	1,449.1	861.5	759.1	8.409			
9,400.0	8,692.0	9,508.7	8,692.0	51.4	52.6	-39.13	2,611.8	1,449.1	861.5	759.1	8.409			
9,415.1	8,707.0	9,518.7	8,702.0	51.4	52.6	-39.13	2,611.8	1,449.1	861.5	759.0	8.406			

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-12W - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
0.0	0.0	0.0	0.0	0.0	0.0	-46.21	11.1	-11.6	16.0				
100.0	100.0	100.0	100.0	0.4	0.4	-46.21	11.1	-11.6	16.0	15.3	20.256		
200.0	200.0	200.0	200.0	1.2	1.2	-46.21	11.1	-11.6	16.0	13.6	6.494	CC	
300.0	300.0	299.9	299.9	2.3	2.4	-92.03	12.9	-10.4	16.5	13.0	4.740	ES	
400.0	399.7	399.8	399.5	3.9	3.9	-92.28	18.3	-6.7	17.8	13.5	4.129		
500.0	499.1	499.6	498.8	5.0	5.1	-92.63	27.2	-0.5	19.9	14.9	3.969	SF	
600.0	598.0	599.4	597.4	6.0	6.0	-93.00	39.8	8.0	22.9	17.2	4.027		
700.0	696.0	699.2	695.3	6.8	6.8	-93.34	55.8	19.0	26.7	20.4	4.203		
800.0	793.2	798.9	792.1	7.6	7.6	-93.63	75.3	32.4	31.4	24.3	4.436		
900.0	889.2	898.6	887.8	8.3	8.3	-93.85	98.3	48.1	36.9	29.1	4.687		
1,000.0	983.9	998.2	982.1	9.0	9.0	-94.02	124.7	66.1	43.3	34.5	4.928		
1,100.0	1,077.0	1,097.7	1,074.9	9.7	9.6	-94.13	154.3	86.4	50.4	40.6	5.143		
1,200.0	1,168.6	1,197.1	1,166.0	10.3	10.3	-94.20	187.3	109.0	58.3	47.4	5.324		
1,300.0	1,258.2	1,296.5	1,255.1	10.9	10.9	-94.23	223.5	133.7	67.1	54.8	5.468		
1,400.0	1,345.9	1,395.7	1,342.2	11.5	11.5	-94.23	262.7	160.6	76.5	62.8	5.574		
1,500.0	1,431.9	1,495.2	1,428.2	11.8	11.9	-94.92	303.9	188.8	86.5	71.3	5.671		
1,600.0	1,517.6	1,594.7	1,514.2	12.1	12.2	-95.71	345.2	217.0	96.5	79.7	5.720		
1,700.0	1,603.4	1,694.1	1,600.3	12.4	12.5	-96.35	386.4	245.3	106.6	88.0	5.749		
1,800.0	1,689.2	1,793.6	1,686.3	12.8	12.9	-96.88	427.7	273.5	116.6	96.4	5.767		
1,900.0	1,775.0	1,893.1	1,772.3	13.1	13.2	-97.33	468.9	301.7	126.7	104.8	5.778		
2,000.0	1,860.8	1,992.6	1,858.4	13.5	13.6	-97.71	510.1	329.9	136.8	113.1	5.785		
2,100.0	1,946.6	2,092.1	1,944.4	13.9	14.0	-98.04	551.4	358.1	146.8	121.5	5.789		
2,200.0	2,032.4	2,191.6	2,030.4	14.3	14.4	-98.32	592.6	386.4	156.9	129.8	5.790		
2,300.0	2,118.2	2,291.1	2,116.4	14.8	14.8	-98.58	633.8	414.6	167.0	138.2	5.790		
2,400.0	2,203.9	2,390.6	2,202.5	15.7	15.2	-98.80	675.1	442.8	177.1	146.5	5.789		
2,500.0	2,289.7	2,490.0	2,288.5	16.6	15.8	-99.00	716.3	471.0	187.2	154.9	5.793		
2,600.0	2,375.5	2,589.5	2,374.5	17.5	16.7	-99.18	757.6	499.2	197.3	163.2	5.788		
2,700.0	2,461.3	2,689.0	2,460.6	18.4	17.6	-99.34	798.8	527.5	207.4	171.5	5.785		
2,800.0	2,547.1	2,788.5	2,546.6	19.3	18.4	-99.48	840.0	555.7	217.5	179.9	5.783		
2,900.0	2,632.9	2,888.0	2,632.6	20.2	19.3	-99.62	881.3	583.9	227.6	188.2	5.780		
3,000.0	2,718.7	2,987.5	2,718.6	21.2	20.1	-99.74	922.5	612.1	237.6	196.5	5.778		
3,100.0	2,804.5	3,087.0	2,804.7	22.1	21.0	-99.85	963.7	640.4	247.7	204.8	5.775		
3,200.0	2,890.2	3,186.5	2,890.7	23.0	21.9	-99.95	1,005.0	668.6	257.8	213.2	5.773		
3,300.0	2,976.0	3,286.0	2,976.7	23.9	22.7	-100.05	1,046.2	696.8	267.9	221.5	5.770		
3,400.0	3,061.8	3,385.4	3,062.8	24.9	23.6	-100.14	1,087.5	725.0	278.0	229.8	5.768		
3,500.0	3,147.6	3,484.9	3,148.8	25.8	24.4	-100.22	1,128.7	753.2	288.1	238.2	5.765		
3,600.0	3,233.4	3,584.4	3,234.8	26.7	25.3	-100.30	1,169.9	781.5	298.2	246.5	5.763		
3,700.0	3,319.2	3,683.9	3,320.8	27.6	26.2	-100.37	1,211.2	809.7	308.3	254.8	5.761		
3,800.0	3,405.0	3,783.4	3,406.9	28.6	27.0	-100.44	1,252.4	837.9	318.4	263.1	5.759		
3,900.0	3,490.8	3,882.9	3,492.9	29.5	27.9	-100.50	1,293.6	866.1	328.5	271.5	5.757		
4,000.0	3,576.5	3,982.4	3,578.9	30.4	28.8	-100.56	1,334.9	894.3	338.6	279.8	5.754		
4,100.0	3,662.3	4,081.9	3,664.9	31.4	29.6	-100.61	1,376.1	922.6	348.7	288.1	5.752		
4,200.0	3,748.1	4,181.3	3,751.0	32.3	30.5	-100.67	1,417.4	950.8	358.8	296.4	5.750		
4,300.0	3,833.9	4,280.8	3,837.0	33.2	31.4	-100.72	1,458.6	979.0	368.9	304.8	5.749		
4,400.0	3,919.7	4,380.3	3,923.0	34.1	32.2	-100.76	1,499.8	1,007.2	379.1	313.1	5.747		
4,500.0	4,005.5	4,479.8	4,009.1	35.1	33.1	-100.81	1,541.1	1,035.4	389.2	321.4	5.745		
4,600.0	4,091.3	4,579.3	4,095.1	36.0	34.0	-100.85	1,582.3	1,063.7	399.3	329.7	5.743		
4,700.0	4,177.1	4,678.8	4,181.1	36.9	34.8	-100.89	1,623.5	1,091.9	409.4	338.1	5.742		
4,800.0	4,262.8	4,778.3	4,267.1	37.9	35.7	-100.93	1,664.8	1,120.1	419.5	346.4	5.740		
4,900.0	4,348.6	4,877.8	4,353.2	38.8	36.6	-100.97	1,706.0	1,148.3	429.6	354.7	5.739		
5,000.0	4,434.4	4,977.2	4,439.2	39.7	37.5	-101.00	1,747.3	1,176.5	439.7	363.0	5.737		

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft	
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
5,100.0	4,520.2	5,076.7	4,525.2	40.7	38.3	-101.03	1,788.5	1,204.8	449.8	371.4	5.736			
5,200.0	4,606.0	5,176.2	4,611.3	41.6	39.2	-101.07	1,829.7	1,233.0	459.9	379.7	5.734			
5,300.0	4,691.8	5,275.7	4,697.3	42.5	40.1	-101.10	1,871.0	1,261.2	470.0	388.0	5.733			
5,400.0	4,777.6	5,375.2	4,783.3	43.4	40.9	-101.13	1,912.2	1,289.4	480.1	396.3	5.732			
5,500.0	4,863.4	5,474.7	4,869.3	44.4	41.8	-101.15	1,953.5	1,317.7	490.2	404.7	5.730			
5,600.0	4,949.2	5,574.2	4,955.4	45.3	42.7	-101.21	1,994.7	1,345.9	500.3	413.0	5.729			
5,700.0	5,036.4	5,673.2	5,042.0	46.2	43.5	-101.38	2,034.4	1,373.0	509.9	420.9	5.728			
5,800.0	5,125.6	5,772.3	5,130.6	47.0	44.3	-101.54	2,070.9	1,398.0	518.8	428.2	5.727			
5,900.0	5,216.7	5,871.5	5,221.1	47.7	45.0	-101.68	2,104.3	1,420.9	526.8	434.8	5.727			
6,000.0	5,309.5	5,970.7	5,313.4	48.4	45.6	-101.82	2,134.5	1,441.5	534.1	440.9	5.726			
6,100.0	5,403.9	6,070.0	5,407.2	48.9	46.1	-101.93	2,161.3	1,459.9	540.6	446.2	5.727			
6,200.0	5,499.6	6,169.4	5,502.4	49.4	46.6	-102.04	2,184.8	1,476.0	546.3	450.9	5.727			
6,300.0	5,596.5	6,268.8	5,598.8	49.9	47.0	-102.13	2,204.9	1,489.7	551.2	454.9	5.727			
6,400.0	5,694.3	6,368.3	5,696.2	50.2	47.4	-102.21	2,221.5	1,501.1	555.2	458.3	5.727			
6,500.0	5,793.0	6,467.8	5,794.4	50.5	47.7	-102.27	2,234.6	1,510.1	558.4	460.9	5.728			
6,600.0	5,892.3	6,567.3	5,893.3	50.7	47.9	-102.33	2,244.2	1,516.6	560.7	462.8	5.727			
6,700.0	5,992.0	6,666.9	5,992.5	50.8	48.0	-102.37	2,250.2	1,520.7	562.2	464.0	5.726			
6,800.0	6,091.9	6,766.4	6,092.0	50.9	48.1	-102.39	2,252.7	1,522.4	562.8	464.5	5.725			
6,900.0	6,191.9	6,866.3	6,191.9	50.9	48.1	-56.68	2,252.7	1,522.5	562.9	464.5	5.723			
7,000.0	6,291.9	6,966.3	6,291.9	50.9	48.1	-56.68	2,252.7	1,522.5	562.9	464.5	5.721			
7,100.0	6,391.9	7,066.3	6,391.9	51.0	48.1	-56.68	2,252.7	1,522.5	562.9	464.4	5.719			
7,200.0	6,491.9	7,166.3	6,491.9	51.0	48.1	-56.68	2,252.7	1,522.5	562.9	464.4	5.717			
7,300.0	6,591.9	7,266.3	6,591.9	51.0	48.2	-56.68	2,252.7	1,522.5	562.9	464.4	5.715			
7,400.0	6,691.9	7,366.3	6,691.9	51.0	48.2	-56.68	2,252.7	1,522.5	562.9	464.3	5.713			
7,500.0	6,791.9	7,466.3	6,791.9	51.0	48.2	-56.68	2,252.7	1,522.5	562.9	464.3	5.710			
7,600.0	6,891.9	7,566.3	6,891.9	51.0	48.2	-56.68	2,252.7	1,522.5	562.9	464.3	5.708			
7,700.0	6,991.9	7,666.3	6,991.9	51.1	48.2	-56.68	2,252.7	1,522.5	562.9	464.2	5.706			
7,800.0	7,091.9	7,766.3	7,091.9	51.1	48.3	-56.68	2,252.7	1,522.5	562.9	464.2	5.704			
7,900.0	7,191.9	7,866.3	7,191.9	51.1	48.3	-56.68	2,252.7	1,522.5	562.9	464.1	5.702			
8,000.0	7,291.9	7,966.3	7,291.9	51.1	48.3	-56.68	2,252.7	1,522.5	562.9	464.1	5.700			
8,100.0	7,391.9	8,066.3	7,391.9	51.1	48.3	-56.68	2,252.7	1,522.5	562.9	464.1	5.697			
8,200.0	7,491.9	8,166.3	7,491.9	51.2	48.3	-56.68	2,252.7	1,522.5	562.9	464.0	5.695			
8,300.0	7,591.9	8,266.3	7,591.9	51.2	48.4	-56.68	2,252.7	1,522.5	562.9	464.0	5.693			
8,400.0	7,691.9	8,366.3	7,691.9	51.2	48.4	-56.68	2,252.7	1,522.5	562.9	463.9	5.691			
8,500.0	7,791.9	8,466.3	7,791.9	51.2	48.4	-56.68	2,252.7	1,522.5	562.9	463.9	5.688			
8,514.6	7,806.5	8,480.9	7,806.5	51.2	48.4	-56.68	2,252.7	1,522.5	562.9	463.9	5.688			
8,600.0	7,891.9	8,560.4	7,886.0	51.2	48.4	-56.68	2,252.7	1,522.5	562.9	463.9	5.689			
8,700.0	7,991.9	8,560.4	7,886.0	51.3	48.4	-56.68	2,252.7	1,522.5	572.7	475.5	5.892			
8,800.0	8,091.9	8,560.4	7,886.0	51.3	48.4	-56.68	2,252.7	1,522.5	599.3	505.9	6.414			
8,900.0	8,191.9	8,560.4	7,886.0	51.3	48.4	-56.68	2,252.7	1,522.5	640.6	552.1	7.239			
9,000.0	8,291.9	8,560.4	7,886.0	51.3	48.4	-56.68	2,252.7	1,522.5	694.0	610.8	8.341			
9,100.0	8,391.9	8,560.4	7,886.0	51.4	48.4	-56.68	2,252.7	1,522.5	756.8	678.7	9.688			
9,200.0	8,491.9	8,560.4	7,886.0	51.4	48.4	-56.68	2,252.7	1,522.5	827.0	753.5	11.242			
9,300.0	8,591.9	8,560.4	7,886.0	51.4	48.4	-56.68	2,252.7	1,522.5	902.9	833.2	12.966			
9,400.0	8,691.9	8,560.4	7,886.0	51.4	48.4	-56.68	2,252.7	1,522.5	983.0	916.7	14.825			
9,415.1	8,707.0	8,560.4	7,886.0	51.4	48.4	-56.68	2,252.7	1,522.5	995.4	929.6	15.114			

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-14W - OH - Design #1											Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major 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)		
0.0	0.0	0.0	0.0	0.0	0.0	133.28	-10.9	11.6	15.9			
100.0	100.0	100.0	100.0	0.4	0.4	133.28	-10.9	11.6	15.9	15.2	20.131	
200.0	200.0	200.0	200.0	1.2	1.2	133.28	-10.9	11.6	15.9	13.5	6.454	
233.4	233.4	233.4	233.4	1.6	1.3	88.38	-10.9	11.6	15.9	13.2	5.761 CC	
300.0	300.0	299.9	299.9	2.3	1.7	91.00	-10.2	12.6	16.0	12.8	4.962	
400.0	399.7	399.9	399.7	3.9	3.3	94.82	-6.7	16.8	16.6	12.5	4.077 ES	
500.0	499.1	499.9	499.3	5.0	4.6	98.25	-0.5	24.3	17.5	12.6	3.606	
600.0	598.0	600.0	598.3	6.0	5.6	101.14	8.5	35.2	18.9	13.2	3.326	
700.0	696.0	700.1	696.7	6.8	6.5	103.41	20.2	49.5	20.6	14.1	3.153	
800.0	793.2	800.2	794.2	7.6	7.3	105.09	34.7	67.1	22.8	15.3	3.052	
900.0	889.2	900.4	890.6	8.3	8.0	106.26	51.8	87.9	25.3	16.8	2.999	
1,000.0	983.9	1,000.6	985.9	9.0	8.7	107.00	71.7	112.0	28.1	18.7	2.975	
1,100.0	1,077.0	1,100.8	1,079.7	9.7	9.4	107.40	94.1	139.3	31.3	20.8	2.967	
1,200.0	1,168.6	1,201.1	1,171.8	10.3	10.0	107.54	119.2	169.7	34.8	23.1	2.966	
1,300.0	1,258.2	1,301.4	1,262.2	10.9	10.7	107.48	146.7	203.2	38.7	25.6	2.963	
1,400.0	1,345.9	1,401.6	1,350.7	11.5	11.0	107.61	176.6	239.6	42.9	28.4	2.966	
1,500.0	1,431.9	1,501.4	1,438.4	11.8	11.3	110.62	207.0	276.4	48.0	31.8	2.961 SF	
1,600.0	1,517.6	1,601.2	1,526.0	12.1	11.7	113.37	237.3	313.3	53.3	35.3	2.965	
1,700.0	1,603.4	1,701.0	1,613.7	12.4	12.0	115.62	267.6	350.2	58.7	39.0	2.981	
1,800.0	1,689.2	1,800.9	1,701.4	12.8	12.4	117.49	298.0	387.0	64.2	42.9	3.005	
1,900.0	1,775.0	1,900.7	1,789.1	13.1	12.7	119.06	328.3	423.9	69.8	46.8	3.032	
2,000.0	1,860.8	2,000.5	1,876.7	13.5	13.1	120.40	358.6	460.7	75.4	50.8	3.061	
2,100.0	1,946.6	2,100.4	1,964.4	13.9	13.5	121.55	389.0	497.6	81.1	54.8	3.089	
2,200.0	2,032.4	2,200.2	2,052.1	14.3	13.9	122.55	419.3	534.5	86.7	58.9	3.118	
2,300.0	2,118.2	2,300.0	2,139.8	14.8	14.4	123.43	449.6	571.3	92.4	63.0	3.145	
2,400.0	2,203.9	2,399.8	2,227.4	15.7	14.9	124.20	480.0	608.2	98.1	67.2	3.171	
2,500.0	2,289.7	2,499.7	2,315.1	16.6	15.8	124.89	510.3	645.0	103.9	71.4	3.195	
2,600.0	2,375.5	2,599.5	2,402.8	17.5	16.6	125.51	540.6	681.9	109.6	75.6	3.218	
2,700.0	2,461.3	2,699.3	2,490.5	18.4	17.5	126.07	571.0	718.8	115.4	79.8	3.240	
2,800.0	2,547.1	2,799.2	2,578.1	19.3	18.3	126.57	601.3	755.6	121.1	84.0	3.261	
2,900.0	2,632.9	2,899.0	2,665.8	20.2	19.2	127.03	631.6	792.5	126.9	88.2	3.280	
3,000.0	2,718.7	2,998.8	2,753.5	21.2	20.1	127.45	662.0	829.4	132.7	92.5	3.298	
3,100.0	2,804.5	3,098.6	2,841.2	22.1	20.9	127.83	692.3	866.2	138.5	96.7	3.315	
3,200.0	2,890.2	3,198.5	2,928.8	23.0	21.8	128.18	722.6	903.1	144.3	101.0	3.331	
3,300.0	2,976.0	3,298.3	3,016.5	23.9	22.7	128.51	752.9	939.9	150.1	105.2	3.345	
3,400.0	3,061.8	3,398.1	3,104.2	24.9	23.5	128.81	783.3	976.8	155.9	109.5	3.360	
3,500.0	3,147.6	3,498.0	3,191.9	25.8	24.4	129.09	813.6	1,013.7	161.7	113.8	3.373	
3,600.0	3,233.4	3,597.8	3,279.5	26.7	25.3	129.35	843.9	1,050.5	167.5	118.0	3.385	
3,700.0	3,319.2	3,697.6	3,367.2	27.6	26.1	129.59	874.3	1,087.4	173.3	122.3	3.397	
3,800.0	3,405.0	3,797.4	3,454.9	28.6	27.0	129.82	904.6	1,124.2	179.1	126.6	3.408	
3,900.0	3,490.8	3,897.3	3,542.6	29.5	27.9	130.03	934.9	1,161.1	185.0	130.9	3.419	
4,000.0	3,576.5	3,997.1	3,630.2	30.4	28.7	130.23	965.3	1,198.0	190.8	135.1	3.429	
4,100.0	3,662.3	4,096.9	3,717.9	31.4	29.6	130.42	995.6	1,234.8	196.6	139.4	3.438	
4,200.0	3,748.1	4,196.8	3,805.6	32.3	30.5	130.60	1,025.9	1,271.7	202.4	143.7	3.447	
4,300.0	3,833.9	4,296.6	3,893.3	33.2	31.3	130.76	1,056.3	1,308.6	208.3	148.0	3.455	
4,400.0	3,919.7	4,396.4	3,980.9	34.1	32.2	130.92	1,086.6	1,345.4	214.1	152.3	3.463	
4,500.0	4,005.5	4,496.2	4,068.6	35.1	33.1	131.07	1,116.9	1,382.3	219.9	156.6	3.471	
4,600.0	4,091.3	4,596.1	4,156.3	36.0	33.9	131.21	1,147.3	1,419.1	225.7	160.8	3.478	
4,700.0	4,177.1	4,695.9	4,243.9	36.9	34.8	131.35	1,177.6	1,456.0	231.6	165.1	3.485	
4,800.0	4,262.8	4,795.7	4,331.6	37.9	35.7	131.48	1,207.9	1,492.9	237.4	169.4	3.492	
4,900.0	4,348.6	4,895.5	4,419.3	38.8	36.5	131.60	1,238.3	1,529.7	243.3	173.7	3.498	

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-14W - OH - Design #1												Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,000.0	4,434.4	4,995.4	4,507.0	39.7	37.4	131.71	1,268.6	1,566.6	249.1	178.0	3.505		
5,100.0	4,520.2	5,095.2	4,594.6	40.7	38.3	131.82	1,298.9	1,603.4	254.9	182.3	3.510		
5,200.0	4,606.0	5,195.0	4,682.3	41.6	39.1	131.93	1,329.2	1,640.3	260.8	186.6	3.516		
5,300.0	4,691.8	5,294.9	4,770.0	42.5	40.0	132.03	1,359.6	1,677.2	266.6	190.9	3.521		
5,400.0	4,777.6	5,394.7	4,857.7	43.4	40.9	132.13	1,389.9	1,714.0	272.5	195.2	3.526		
5,500.0	4,863.4	5,494.5	4,945.3	44.4	41.7	132.22	1,420.2	1,750.9	278.3	199.5	3.531		
5,600.0	4,949.2	5,593.2	5,032.1	45.3	42.6	132.33	1,450.2	1,787.3	284.1	203.8	3.537		
5,700.0	5,036.4	5,685.9	5,114.6	46.2	43.4	132.52	1,477.0	1,819.8	289.8	208.0	3.545		
5,800.0	5,125.6	5,778.4	5,198.7	47.0	44.1	132.69	1,501.6	1,849.7	294.9	211.8	3.550		
5,900.0	5,216.7	5,870.9	5,284.1	47.7	44.7	132.84	1,524.0	1,876.9	299.6	215.3	3.555		
6,000.0	5,309.5	5,963.2	5,370.8	48.4	45.2	132.97	1,544.1	1,901.5	303.9	218.5	3.560		
6,100.0	5,403.9	6,055.5	5,458.7	48.9	45.7	133.09	1,562.0	1,923.2	307.7	221.4	3.566		
6,200.0	5,499.6	6,147.7	5,547.5	49.4	46.2	133.19	1,577.7	1,942.2	311.0	223.9	3.571		
6,300.0	5,596.5	6,239.9	5,637.2	49.9	46.5	133.27	1,591.0	1,958.5	313.8	226.0	3.576		
6,400.0	5,694.3	6,331.9	5,727.7	50.2	46.8	133.34	1,602.1	1,971.9	316.1	227.9	3.582		
6,500.0	5,793.0	6,424.0	5,818.7	50.5	47.1	133.39	1,610.8	1,982.5	318.0	229.3	3.587		
6,600.0	5,892.3	6,516.0	5,910.1	50.7	47.2	133.43	1,617.2	1,990.3	319.3	230.4	3.593		
6,700.0	5,992.0	6,608.0	6,001.9	50.8	47.3	133.46	1,621.3	1,995.2	320.2	231.2	3.598		
6,800.0	6,091.9	6,700.0	6,093.9	50.9	47.4	133.47	1,623.0	1,997.3	320.5	231.6	3.605		
6,900.0	6,191.9	6,798.1	6,191.9	50.9	47.4	179.19	1,623.0	1,997.3	320.5	231.7	3.607		
7,000.0	6,291.9	6,898.1	6,291.9	50.9	47.4	179.19	1,623.0	1,997.3	320.5	231.6	3.605		
7,100.0	6,391.9	6,998.1	6,391.9	51.0	47.5	179.19	1,623.0	1,997.3	320.5	231.6	3.603		
7,200.0	6,491.9	7,098.1	6,491.9	51.0	47.5	179.19	1,623.0	1,997.3	320.5	231.5	3.601		
7,300.0	6,591.9	7,198.1	6,591.9	51.0	47.5	179.19	1,623.0	1,997.3	320.5	231.5	3.599		
7,400.0	6,691.9	7,298.1	6,691.9	51.0	47.5	179.19	1,623.0	1,997.3	320.5	231.4	3.596		
7,500.0	6,791.9	7,398.1	6,791.9	51.0	47.6	179.19	1,623.0	1,997.3	320.5	231.4	3.594		
7,600.0	6,891.9	7,498.1	6,891.9	51.0	47.6	179.19	1,623.0	1,997.3	320.5	231.3	3.592		
7,700.0	6,991.9	7,598.1	6,991.9	51.1	47.6	179.19	1,623.0	1,997.3	320.5	231.3	3.590		
7,800.0	7,091.9	7,698.1	7,091.9	51.1	47.6	179.19	1,623.0	1,997.3	320.5	231.2	3.588		
7,900.0	7,191.9	7,798.1	7,191.9	51.1	47.6	179.19	1,623.0	1,997.3	320.5	231.1	3.586		
8,000.0	7,291.9	7,898.1	7,291.9	51.1	47.7	179.19	1,623.0	1,997.3	320.5	231.1	3.584		
8,100.0	7,391.9	7,998.1	7,391.9	51.1	47.7	179.19	1,623.0	1,997.3	320.5	231.0	3.581		
8,200.0	7,491.9	8,098.1	7,491.9	51.2	47.7	179.19	1,623.0	1,997.3	320.5	231.0	3.579		
8,300.0	7,591.9	8,198.1	7,591.9	51.2	47.7	179.19	1,623.0	1,997.3	320.5	230.9	3.577		
8,400.0	7,691.9	8,298.1	7,691.9	51.2	47.8	179.19	1,623.0	1,997.3	320.5	230.9	3.575		
8,500.0	7,791.9	8,398.1	7,791.9	51.2	47.8	179.19	1,623.0	1,997.3	320.5	230.8	3.573		
8,516.0	7,807.9	8,414.1	7,807.9	51.2	47.8	179.19	1,623.0	1,997.3	320.5	230.8	3.572		
8,600.0	7,891.9	8,496.1	7,890.0	51.2	47.8	179.19	1,623.0	1,997.3	320.5	230.9	3.575		
8,700.0	7,991.9	8,496.1	7,890.0	51.3	47.8	179.19	1,623.0	1,997.3	336.4	254.9	4.131		
8,800.0	8,091.9	8,496.1	7,890.0	51.3	47.8	179.19	1,623.0	1,997.3	378.9	308.4	5.378		
8,900.0	8,191.9	8,496.1	7,890.0	51.3	47.8	179.19	1,623.0	1,997.3	440.4	379.7	7.260		
9,000.0	8,291.9	8,496.1	7,890.0	51.3	47.8	179.19	1,623.0	1,997.3	514.1	460.7	9.621		
9,100.0	8,391.9	8,496.1	7,890.0	51.4	47.8	179.19	1,623.0	1,997.3	595.6	547.0	12.260		
9,200.0	8,491.9	8,496.1	7,890.0	51.4	47.8	179.19	1,623.0	1,997.3	682.0	636.5	15.000		
9,300.0	8,591.9	8,496.1	7,890.0	51.4	47.8	179.19	1,623.0	1,997.3	771.7	728.1	17.724		
9,400.0	8,691.9	8,496.1	7,890.0	51.4	47.8	179.19	1,623.0	1,997.3	863.6	821.2	20.373		
9,415.1	8,707.0	8,496.1	7,890.0	51.4	47.8	179.19	1,623.0	1,997.3	877.6	835.4	20.764		

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-15W - OH - Design #1											Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major 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)		
0.0	0.0	0.0	0.0	0.0	0.0	132.92	-21.9	23.5	32.1			
100.0	100.0	100.0	100.0	0.4	0.4	132.92	-21.9	23.5	32.1	31.3	40.523	
200.0	200.0	200.0	200.0	1.2	1.2	132.92	-21.9	23.5	32.1	29.6	12.992	
247.6	247.6	247.6	247.6	1.7	1.3	88.06	-21.8	23.5	32.1	29.2	11.154	CC
300.0	300.0	299.8	299.8	2.3	1.6	89.71	-21.4	24.2	32.2	29.0	10.092	ES
400.0	399.7	399.6	399.5	3.9	3.0	92.87	-18.8	28.1	33.1	29.1	8.225	
500.0	499.1	499.4	498.8	5.0	4.4	95.83	-13.7	35.7	34.9	30.1	7.304	
600.0	598.0	599.3	597.8	6.0	5.4	98.41	-6.1	46.8	37.5	32.0	6.817	
700.0	696.0	699.2	696.1	6.8	6.3	100.53	3.8	61.5	41.0	34.7	6.542	
800.0	793.2	799.1	793.6	7.6	7.2	102.17	16.1	79.8	45.2	38.1	6.386	
900.0	889.2	899.1	890.0	8.3	7.9	103.37	30.8	101.5	50.3	42.3	6.303	
1,000.0	983.9	999.1	985.3	9.0	8.6	104.18	47.8	126.8	56.1	47.1	6.261	
1,100.0	1,077.0	1,099.1	1,079.1	9.7	9.3	104.69	67.1	155.4	62.6	52.6	6.238	
1,200.0	1,168.6	1,199.1	1,171.3	10.3	9.9	104.96	88.8	187.5	69.9	58.7	6.219	
1,300.0	1,258.2	1,299.1	1,261.8	10.9	10.5	105.06	112.6	222.8	77.9	65.3	6.209	
1,400.0	1,345.9	1,398.6	1,351.1	11.5	10.7	106.73	137.1	259.2	86.8	72.7	6.156	
1,500.0	1,431.9	1,497.9	1,440.2	11.8	11.1	110.15	161.7	295.5	97.0	81.2	6.127	
1,600.0	1,517.6	1,597.2	1,529.3	12.1	11.4	113.12	186.2	331.9	107.6	90.1	6.125	SF
1,700.0	1,603.4	1,696.5	1,618.4	12.4	11.7	115.55	210.7	368.2	118.5	99.2	6.149	
1,800.0	1,689.2	1,795.8	1,707.5	12.8	12.1	117.58	235.2	404.5	129.5	108.6	6.191	
1,900.0	1,775.0	1,895.1	1,796.6	13.1	12.5	119.29	259.7	440.9	140.6	118.1	6.243	
2,000.0	1,860.8	1,994.4	1,885.7	13.5	12.9	120.74	284.2	477.2	151.9	127.8	6.300	
2,100.0	1,946.6	2,093.7	1,974.8	13.9	13.3	122.00	308.8	513.6	163.2	137.6	6.358	
2,200.0	2,032.4	2,193.0	2,063.9	14.3	13.7	123.09	333.3	549.9	174.6	147.4	6.416	
2,300.0	2,118.2	2,292.3	2,153.0	14.8	14.1	124.04	357.8	586.2	186.1	157.3	6.473	
2,400.0	2,203.9	2,391.6	2,242.1	15.7	14.5	124.89	382.3	622.6	197.6	167.3	6.527	
2,500.0	2,289.7	2,490.9	2,331.2	16.6	15.0	125.64	406.8	658.9	209.1	177.3	6.579	
2,600.0	2,375.5	2,590.2	2,420.3	17.5	15.7	126.32	431.3	695.3	220.7	187.4	6.630	
2,700.0	2,461.3	2,689.5	2,509.4	18.4	16.5	126.92	455.9	731.6	232.3	197.5	6.676	
2,800.0	2,547.1	2,788.8	2,598.5	19.3	17.3	127.47	480.4	767.9	243.9	207.6	6.720	
2,900.0	2,632.9	2,888.1	2,687.6	20.2	18.1	127.97	504.9	804.3	255.6	217.8	6.762	
3,000.0	2,718.7	2,987.4	2,776.7	21.2	18.9	128.43	529.4	840.6	267.2	227.9	6.801	
3,100.0	2,804.5	3,086.7	2,865.8	22.1	19.7	128.85	553.9	876.9	278.9	238.1	6.838	
3,200.0	2,890.2	3,186.0	2,954.9	23.0	20.5	129.23	578.4	913.3	290.6	248.3	6.873	
3,300.0	2,976.0	3,285.3	3,044.0	23.9	21.3	129.58	602.9	949.6	302.3	258.5	6.906	
3,400.0	3,061.8	3,384.6	3,133.1	24.9	22.1	129.91	627.5	986.0	314.0	268.7	6.937	
3,500.0	3,147.6	3,483.9	3,222.2	25.8	22.9	130.22	652.0	1,022.3	325.7	279.0	6.967	
3,600.0	3,233.4	3,583.2	3,311.3	26.7	23.7	130.50	676.5	1,058.6	337.5	289.2	6.994	
3,700.0	3,319.2	3,682.5	3,400.4	27.6	24.5	130.76	701.0	1,095.0	349.2	299.5	7.021	
3,800.0	3,405.0	3,781.8	3,489.5	28.6	25.3	131.01	725.5	1,131.3	360.9	309.7	7.045	
3,900.0	3,490.8	3,881.0	3,578.6	29.5	26.1	131.24	750.0	1,167.7	372.7	320.0	7.069	
4,000.0	3,576.5	3,980.3	3,667.7	30.4	26.9	131.46	774.6	1,204.0	384.5	330.2	7.091	
4,100.0	3,662.3	4,079.6	3,756.7	31.4	27.7	131.66	799.1	1,240.3	396.2	340.5	7.113	
4,200.0	3,748.1	4,178.9	3,845.8	32.3	28.5	131.85	823.6	1,276.7	408.0	350.8	7.133	
4,300.0	3,833.9	4,278.2	3,934.9	33.2	29.3	132.04	848.1	1,313.0	419.8	361.1	7.152	
4,400.0	3,919.7	4,377.5	4,024.0	34.1	30.1	132.21	872.6	1,349.3	431.5	371.3	7.170	
4,500.0	4,005.5	4,476.8	4,113.1	35.1	30.9	132.37	897.1	1,385.7	443.3	381.6	7.187	
4,600.0	4,091.3	4,576.1	4,202.2	36.0	31.7	132.53	921.7	1,422.0	455.1	391.9	7.204	
4,700.0	4,177.1	4,675.4	4,291.3	36.9	32.5	132.67	946.2	1,458.4	466.9	402.2	7.220	
4,800.0	4,262.8	4,774.7	4,380.4	37.9	33.3	132.81	970.7	1,494.7	478.7	412.5	7.235	
4,900.0	4,348.6	4,874.0	4,469.5	38.8	34.1	132.94	995.2	1,531.0	490.4	422.8	7.249	

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-15W - OH - Design #1												Offset Well Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard														
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning		
		Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)				
5,000.0	4,434.4	4,973.3	4,558.6	39.7	34.9	133.07	1,019.7	1,567.4	502.2	433.1	7.263			
5,100.0	4,520.2	5,072.6	4,647.7	40.7	35.7	133.19	1,044.2	1,603.7	514.0	443.4	7.277			
5,200.0	4,606.0	5,171.9	4,736.8	41.6	36.5	133.31	1,068.7	1,640.1	525.8	453.7	7.289			
5,300.0	4,691.8	5,271.2	4,825.9	42.5	37.3	133.42	1,093.3	1,676.4	537.6	464.0	7.301			
5,400.0	4,777.6	5,370.5	4,915.0	43.4	38.1	133.52	1,117.8	1,712.7	549.4	474.3	7.313			
5,500.0	4,863.4	5,469.8	5,004.1	44.4	38.9	133.62	1,142.3	1,749.1	561.2	484.6	7.324			
5,600.0	4,949.2	5,569.1	5,093.2	45.3	39.7	133.74	1,166.8	1,785.4	573.0	494.9	7.335			
5,700.0	5,036.4	5,657.7	5,173.2	46.2	40.4	133.95	1,188.1	1,816.9	583.7	504.2	7.346			
5,800.0	5,125.6	5,744.5	5,253.0	47.0	41.0	134.13	1,207.2	1,845.3	593.5	512.8	7.353			
5,900.0	5,216.7	5,831.2	5,333.9	47.7	41.5	134.29	1,224.6	1,871.1	602.4	520.6	7.359			
6,000.0	5,309.5	5,917.8	5,415.9	48.4	42.0	134.43	1,240.3	1,894.4	610.5	527.6	7.365			
6,100.0	5,403.9	6,000.0	5,494.5	48.9	42.5	134.55	1,253.6	1,914.1	617.6	533.9	7.378			
6,200.0	5,499.6	6,090.9	5,582.4	49.4	42.9	134.66	1,266.4	1,933.1	623.9	539.3	7.377			
6,300.0	5,596.5	6,177.3	5,666.8	49.9	43.2	134.74	1,276.8	1,948.5	629.2	544.0	7.383			
6,400.0	5,694.3	6,263.6	5,751.8	50.2	43.4	134.81	1,285.4	1,961.2	633.6	547.8	7.389			
6,500.0	5,793.0	6,349.9	5,837.3	50.5	43.6	134.87	1,292.2	1,971.3	637.0	550.9	7.395			
6,600.0	5,892.3	6,436.2	5,923.1	50.7	43.8	134.91	1,297.2	1,978.7	639.5	553.1	7.400			
6,700.0	5,992.0	6,522.5	6,009.2	50.8	43.9	134.93	1,300.4	1,983.4	641.1	554.6	7.406			
6,800.0	6,091.9	6,608.8	6,095.4	50.9	44.0	134.94	1,301.7	1,985.4	641.8	555.2	7.413			
6,900.0	6,191.9	6,705.3	6,191.9	50.9	44.0	-179.35	1,301.8	1,985.5	641.8	555.2	7.416			
7,000.0	6,291.9	6,805.3	6,291.9	50.9	44.0	-179.35	1,301.8	1,985.5	641.8	555.2	7.411			
7,100.0	6,391.9	6,905.3	6,391.9	51.0	44.0	-179.35	1,301.8	1,985.5	641.8	555.1	7.407			
7,200.0	6,491.9	7,005.3	6,491.9	51.0	44.1	-179.35	1,301.8	1,985.5	641.8	555.1	7.402			
7,300.0	6,591.9	7,105.3	6,591.9	51.0	44.1	-179.35	1,301.8	1,985.5	641.8	555.0	7.398			
7,400.0	6,691.9	7,205.3	6,691.9	51.0	44.1	-179.35	1,301.8	1,985.5	641.8	555.0	7.393			
7,500.0	6,791.9	7,305.3	6,791.9	51.0	44.1	-179.35	1,301.8	1,985.5	641.8	554.9	7.389			
7,600.0	6,891.9	7,405.3	6,891.9	51.0	44.2	-179.35	1,301.8	1,985.5	641.8	554.9	7.384			
7,700.0	6,991.9	7,505.3	6,991.9	51.1	44.2	-179.35	1,301.8	1,985.5	641.8	554.8	7.379			
7,800.0	7,091.9	7,605.3	7,091.9	51.1	44.2	-179.35	1,301.8	1,985.5	641.8	554.8	7.375			
7,900.0	7,191.9	7,705.3	7,191.9	51.1	44.2	-179.35	1,301.8	1,985.5	641.8	554.7	7.370			
8,000.0	7,291.9	7,805.3	7,291.9	51.1	44.3	-179.35	1,301.8	1,985.5	641.8	554.7	7.365			
8,100.0	7,391.9	7,905.3	7,391.9	51.1	44.3	-179.35	1,301.8	1,985.5	641.8	554.6	7.360			
8,200.0	7,491.9	8,005.3	7,491.9	51.2	44.3	-179.35	1,301.8	1,985.5	641.8	554.5	7.356			
8,300.0	7,591.9	8,105.3	7,591.9	51.2	44.3	-179.35	1,301.8	1,985.5	641.8	554.5	7.351			
8,400.0	7,691.9	8,205.3	7,691.9	51.2	44.4	-179.35	1,301.8	1,985.5	641.8	554.4	7.346			
8,500.0	7,791.9	8,305.3	7,791.9	51.2	44.4	-179.35	1,301.8	1,985.5	641.8	554.4	7.341			
8,600.0	7,891.9	8,405.3	7,891.9	51.2	44.4	-179.35	1,301.8	1,985.5	641.8	554.3	7.337			
8,700.0	7,991.9	8,505.3	7,991.9	51.3	44.4	-179.35	1,301.8	1,985.5	641.8	554.3	7.332			
8,800.0	8,091.9	8,605.3	8,091.9	51.3	44.5	-179.35	1,301.8	1,985.5	641.8	554.2	7.327			
8,900.0	8,191.9	8,705.3	8,191.9	51.3	44.5	-179.35	1,301.8	1,985.5	641.8	554.1	7.322			
9,000.0	8,291.9	8,805.3	8,291.9	51.3	44.5	-179.35	1,301.8	1,985.5	641.8	554.1	7.317			
9,100.0	8,391.9	8,905.3	8,391.9	51.4	44.5	-179.35	1,301.8	1,985.5	641.8	554.0	7.312			
9,200.0	8,491.9	9,005.3	8,491.9	51.4	44.6	-179.35	1,301.8	1,985.5	641.8	554.0	7.307			
9,300.0	8,591.9	9,105.3	8,591.9	51.4	44.6	-179.35	1,301.8	1,985.5	641.8	553.9	7.303			
9,400.0	8,691.9	9,205.3	8,691.9	51.4	44.6	-179.35	1,301.8	1,985.5	641.8	553.8	7.298			
9,415.1	8,707.0	9,220.4	8,707.0	51.4	44.6	-179.35	1,301.8	1,985.5	641.8	553.8	7.297			

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard											Offset Well Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-16W - OH - Design #1												
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore +N/-S (usft)	Centre +E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	133.03	-32.8	35.1	48.0			
100.0	100.0	100.0	100.0	0.4	0.4	133.03	-32.8	35.1	48.0	47.2	60.645	
200.0	200.0	200.0	200.0	1.2	1.2	133.03	-32.8	35.1	48.0	45.6	19.443	CC
300.0	300.0	299.5	299.5	2.3	1.7	88.52	-32.2	36.2	48.4	45.1	14.927	ES
400.0	399.7	398.8	398.7	3.9	3.3	90.07	-29.7	41.0	49.9	45.7	11.975	
500.0	499.1	498.2	497.5	5.0	4.5	91.70	-25.3	49.5	52.7	47.8	10.644	
600.0	598.0	597.5	595.9	6.0	5.6	93.26	-18.8	61.9	56.9	51.2	10.056	
700.0	696.0	696.8	693.5	6.8	6.4	94.66	-10.5	78.0	62.3	56.0	9.818	
800.0	793.2	796.0	790.1	7.6	7.2	95.87	-0.1	97.9	69.0	61.9	9.752	
900.0	889.2	895.1	885.6	8.3	8.0	96.85	12.1	121.4	76.9	69.1	9.764	
1,000.0	983.9	994.2	979.8	9.0	8.7	97.62	26.2	148.6	86.1	77.3	9.797	
1,100.0	1,077.0	1,093.1	1,072.5	9.7	9.3	98.20	42.2	179.2	96.5	86.7	9.822	
1,200.0	1,168.6	1,191.9	1,163.5	10.3	9.9	98.61	59.9	213.4	108.1	97.1	9.846	
1,300.0	1,258.2	1,291.0	1,254.0	10.9	10.2	99.97	78.6	249.3	120.6	108.3	9.822	
1,400.0	1,345.9	1,389.9	1,344.2	11.5	10.5	102.83	97.2	285.1	134.1	120.4	9.723	
1,500.0	1,431.9	1,488.3	1,434.0	11.8	10.8	106.60	115.8	320.8	149.0	133.6	9.665	
1,600.0	1,517.6	1,586.7	1,523.9	12.1	11.2	109.88	134.3	356.4	164.4	147.4	9.629	SF
1,700.0	1,603.4	1,685.1	1,613.7	12.4	11.5	112.59	152.8	392.1	180.3	161.6	9.631	
1,800.0	1,689.2	1,783.5	1,703.5	12.8	11.9	114.86	171.4	427.7	196.6	176.2	9.664	
1,900.0	1,775.0	1,881.9	1,793.3	13.1	12.3	116.79	189.9	463.4	213.1	191.1	9.716	
2,000.0	1,860.8	1,980.3	1,883.1	13.5	12.6	118.43	208.4	499.0	229.8	206.3	9.780	
2,100.0	1,946.6	2,078.7	1,973.0	13.9	13.0	119.86	227.0	534.6	246.6	221.6	9.851	
2,200.0	2,032.4	2,177.1	2,062.8	14.3	13.4	121.10	245.5	570.3	263.6	237.1	9.925	
2,300.0	2,118.2	2,275.5	2,152.6	14.8	13.9	122.19	264.0	605.9	280.7	252.6	10.000	
2,400.0	2,203.9	2,373.8	2,242.4	15.7	14.3	123.16	282.6	641.6	297.9	268.3	10.073	
2,500.0	2,289.7	2,472.2	2,332.2	16.6	14.7	124.02	301.1	677.2	315.2	284.1	10.145	
2,600.0	2,375.5	2,570.6	2,422.0	17.5	15.2	124.79	319.6	712.9	332.5	299.9	10.214	
2,700.0	2,461.3	2,669.0	2,511.9	18.4	15.8	125.49	338.2	748.5	349.8	315.8	10.283	
2,800.0	2,547.1	2,767.4	2,601.7	19.3	16.5	126.12	356.7	784.2	367.3	331.8	10.346	
2,900.0	2,632.9	2,865.8	2,691.5	20.2	17.2	126.69	375.2	819.8	384.7	347.8	10.407	
3,000.0	2,718.7	2,964.2	2,781.3	21.2	18.0	127.21	393.8	855.4	402.2	363.8	10.465	
3,100.0	2,804.5	3,062.6	2,871.1	22.1	18.7	127.69	412.3	891.1	419.7	379.8	10.520	
3,200.0	2,890.2	3,161.0	2,961.0	23.0	19.4	128.13	430.8	926.7	437.3	395.9	10.572	
3,300.0	2,976.0	3,259.4	3,050.8	23.9	20.1	128.54	449.4	962.4	454.8	412.0	10.622	
3,400.0	3,061.8	3,357.8	3,140.6	24.9	20.9	128.91	467.9	998.0	472.4	428.1	10.669	
3,500.0	3,147.6	3,456.2	3,230.4	25.8	21.6	129.26	486.4	1,033.7	490.0	444.3	10.713	
3,600.0	3,233.4	3,554.6	3,320.2	26.7	22.3	129.59	505.0	1,069.3	507.7	460.5	10.756	
3,700.0	3,319.2	3,653.0	3,410.1	27.6	23.1	129.89	523.5	1,105.0	525.3	476.6	10.796	
3,800.0	3,405.0	3,751.4	3,499.9	28.6	23.8	130.18	542.0	1,140.6	543.0	492.8	10.835	
3,900.0	3,490.8	3,849.8	3,589.7	29.5	24.5	130.44	560.6	1,176.2	560.6	509.0	10.871	
4,000.0	3,576.5	3,948.2	3,679.5	30.4	25.3	130.69	579.1	1,211.9	578.3	525.3	10.906	
4,100.0	3,662.3	4,046.6	3,769.3	31.4	26.0	130.93	597.6	1,247.5	596.0	541.5	10.939	
4,200.0	3,748.1	4,145.0	3,859.2	32.3	26.8	131.15	616.2	1,283.2	613.7	557.7	10.971	
4,300.0	3,833.9	4,243.4	3,949.0	33.2	27.5	131.36	634.7	1,318.8	631.4	574.0	11.001	
4,400.0	3,919.7	4,341.8	4,038.8	34.1	28.2	131.55	653.2	1,354.5	649.1	590.2	11.030	
4,500.0	4,005.5	4,440.1	4,128.6	35.1	29.0	131.74	671.8	1,390.1	666.8	606.5	11.057	
4,600.0	4,091.3	4,538.5	4,218.4	36.0	29.7	131.92	690.3	1,425.8	684.5	622.8	11.084	
4,700.0	4,177.1	4,636.9	4,308.3	36.9	30.4	132.09	708.8	1,461.4	702.3	639.0	11.109	
4,800.0	4,262.8	4,735.3	4,398.1	37.9	31.2	132.25	727.4	1,497.0	720.0	655.3	11.133	
4,900.0	4,348.6	4,833.7	4,487.9	38.8	31.9	132.40	745.9	1,532.7	737.7	671.6	11.156	
5,000.0	4,434.4	4,932.1	4,577.7	39.7	32.6	132.54	764.4	1,568.3	755.5	687.9	11.178	

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)				Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,520.2	5,030.5	4,667.5	40.7	33.4	132.68	783.0	1,604.0	773.2	704.2	11.200		
5,200.0	4,606.0	5,128.9	4,757.4	41.6	34.1	132.82	801.5	1,639.6	791.0	720.5	11.220		
5,300.0	4,691.8	5,227.3	4,847.2	42.5	34.9	132.94	820.0	1,675.3	808.7	736.8	11.240		
5,400.0	4,777.6	5,325.7	4,937.0	43.4	35.6	133.06	838.6	1,710.9	826.5	753.1	11.259		
5,500.0	4,863.4	5,424.1	5,026.8	44.4	36.3	133.18	857.1	1,746.6	844.3	769.4	11.277		
5,600.0	4,949.2	5,522.5	5,116.6	45.3	37.1	133.33	875.6	1,782.2	862.0	785.7	11.295		
5,700.0	5,036.4	5,616.7	5,202.7	46.2	37.8	133.61	893.3	1,816.2	878.0	800.2	11.296		
5,800.0	5,125.6	5,700.0	5,279.7	47.0	38.3	133.82	908.0	1,844.4	892.2	813.3	11.301		
5,900.0	5,216.7	5,784.0	5,358.4	47.7	38.9	134.00	921.5	1,870.3	905.2	825.1	11.304		
6,000.0	5,309.5	5,867.6	5,437.8	48.4	39.3	134.16	933.6	1,893.6	916.9	835.8	11.307		
6,100.0	5,403.9	5,951.1	5,518.0	48.9	39.7	134.30	944.3	1,914.2	927.3	845.3	11.311		
6,200.0	5,499.6	6,034.7	5,599.1	49.4	40.1	134.42	953.7	1,932.3	936.4	853.6	11.313		
6,300.0	5,596.5	6,118.3	5,680.8	49.9	40.4	134.53	961.7	1,947.7	944.1	860.7	11.315		
6,400.0	5,694.3	6,200.0	5,761.3	50.2	40.7	134.61	968.2	1,960.2	950.6	866.6	11.320		
6,500.0	5,793.0	6,285.4	5,845.9	50.5	40.9	134.68	973.5	1,970.5	955.6	871.2	11.319		
6,600.0	5,892.3	6,368.9	5,929.0	50.7	41.0	134.73	977.4	1,977.9	959.3	874.6	11.320		
6,700.0	5,992.0	6,452.4	6,012.4	50.8	41.1	134.76	979.8	1,982.6	961.7	876.7	11.321		
6,800.0	6,091.9	6,536.0	6,095.9	50.9	41.2	134.77	980.9	1,984.6	962.6	877.6	11.325		
6,900.0	6,191.9	6,632.0	6,191.9	50.9	41.2	-179.52	980.9	1,984.7	962.7	877.7	11.326		
7,000.0	6,291.9	6,732.0	6,291.9	50.9	41.2	-179.52	980.9	1,984.7	962.7	877.6	11.319		
7,100.0	6,391.9	6,832.0	6,391.9	51.0	41.2	-179.52	980.9	1,984.7	962.7	877.6	11.312		
7,200.0	6,491.9	6,932.0	6,491.9	51.0	41.3	-179.52	980.9	1,984.7	962.7	877.5	11.304		
7,300.0	6,591.9	7,032.0	6,591.9	51.0	41.3	-179.52	980.9	1,984.7	962.7	877.4	11.297		
7,400.0	6,691.9	7,132.0	6,691.9	51.0	41.3	-179.52	980.9	1,984.7	962.7	877.4	11.290		
7,500.0	6,791.9	7,232.0	6,791.9	51.0	41.3	-179.52	980.9	1,984.7	962.7	877.3	11.283		
7,600.0	6,891.9	7,332.0	6,891.9	51.0	41.4	-179.52	980.9	1,984.7	962.7	877.3	11.275		
7,700.0	6,991.9	7,432.0	6,991.9	51.1	41.4	-179.52	980.9	1,984.7	962.7	877.2	11.268		
7,800.0	7,091.9	7,532.0	7,091.9	51.1	41.4	-179.52	980.9	1,984.7	962.7	877.2	11.261		
7,900.0	7,191.9	7,632.0	7,191.9	51.1	41.4	-179.52	980.9	1,984.7	962.7	877.1	11.253		
8,000.0	7,291.9	7,732.0	7,291.9	51.1	41.5	-179.52	980.9	1,984.7	962.7	877.1	11.246		
8,100.0	7,391.9	7,832.0	7,391.9	51.1	41.5	-179.52	980.9	1,984.7	962.7	877.0	11.238		
8,200.0	7,491.9	7,932.0	7,491.9	51.2	41.5	-179.52	980.9	1,984.7	962.7	876.9	11.231		
8,300.0	7,591.9	8,032.0	7,591.9	51.2	41.6	-179.52	980.9	1,984.7	962.7	876.9	11.224		
8,400.0	7,691.9	8,132.0	7,691.9	51.2	41.6	-179.52	980.9	1,984.7	962.7	876.8	11.216		
8,500.0	7,791.9	8,232.0	7,791.9	51.2	41.6	-179.52	980.9	1,984.7	962.7	876.8	11.208		
8,516.3	7,808.3	8,248.4	7,808.3	51.2	41.6	-179.52	980.9	1,984.7	962.7	876.8	11.207		
8,600.0	7,891.9	8,331.1	7,891.0	51.2	41.6	-179.52	980.9	1,984.7	962.7	876.7	11.203		
8,700.0	7,991.9	8,331.1	7,891.0	51.3	41.6	-179.52	980.9	1,984.7	967.9	883.8	11.509		
8,800.0	8,091.9	8,331.1	7,891.0	51.3	41.6	-179.52	980.9	1,984.7	983.4	901.8	12.046		
8,900.0	8,191.9	8,331.1	7,891.0	51.3	41.6	-179.52	980.9	1,984.7	1,008.6	929.9	12.817		
9,000.0	8,291.9	8,331.1	7,891.0	51.3	41.6	-179.52	980.9	1,984.7	1,042.8	967.4	13.821		
9,100.0	8,391.9	8,331.1	7,891.0	51.4	41.6	-179.52	980.9	1,984.7	1,085.2	1,013.1	15.055		
9,200.0	8,491.9	8,331.1	7,891.0	51.4	41.6	-179.52	980.9	1,984.7	1,134.8	1,066.1	16.508		
9,300.0	8,591.9	8,331.1	7,891.0	51.4	41.6	-179.52	980.9	1,984.7	1,190.8	1,125.3	18.166		
9,400.0	8,691.9	8,331.1	7,891.0	51.4	41.6	-179.52	980.9	1,984.7	1,252.3	1,189.7	20.012		
9,415.1	8,707.0	8,331.1	7,891.0	51.4	41.6	-179.52	980.9	1,984.7	1,262.0	1,199.8	20.305		

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-17W - OH - Design #1													
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	133.09	-43.7	46.7	64.0				
100.0	100.0	100.0	100.0	0.4	0.4	133.09	-43.7	46.7	64.0	63.2	80.776		
200.0	200.0	200.0	200.0	1.2	1.2	133.09	-43.7	46.7	64.0	61.5	25.897	CC	
300.0	300.0	299.1	299.1	2.3	1.7	88.33	-43.3	47.8	64.4	61.2	19.802	ES	
400.0	399.7	397.8	397.7	3.9	3.2	89.72	-41.5	52.8	66.6	62.3	15.485		
500.0	499.1	496.5	495.9	5.0	4.5	91.29	-38.2	61.8	70.6	65.4	13.621		
600.0	598.0	595.2	593.6	6.0	5.5	92.90	-33.5	74.8	76.4	70.5	12.869		
700.0	696.0	693.7	690.4	6.8	6.4	94.42	-27.4	91.6	84.1	77.4	12.635	SF	
800.0	793.2	792.0	786.2	7.6	7.2	95.77	-19.8	112.3	93.6	86.2	12.658		
900.0	889.2	890.1	880.8	8.3	8.0	96.92	-10.9	136.8	104.8	96.7	12.801		
1,000.0	983.9	987.9	973.9	9.0	8.6	97.85	-0.7	164.9	117.9	108.8	12.979		
1,100.0	1,077.0	1,085.5	1,065.4	9.7	9.3	98.59	10.9	196.7	132.6	122.6	13.145		
1,200.0	1,168.6	1,183.6	1,156.2	10.3	9.6	99.46	23.6	231.6	148.9	137.8	13.353		
1,300.0	1,258.2	1,281.8	1,247.0	10.9	9.9	101.46	36.5	266.9	166.1	153.7	13.400		
1,400.0	1,345.9	1,379.6	1,337.4	11.5	10.2	104.29	49.2	301.9	184.6	170.8	13.358		
1,500.0	1,431.9	1,476.8	1,427.3	11.8	10.5	107.73	61.9	336.8	204.7	189.4	13.364		
1,600.0	1,517.6	1,574.0	1,517.1	12.1	10.9	110.78	74.6	371.6	225.4	208.6	13.369		
1,700.0	1,603.4	1,671.2	1,606.9	12.4	11.2	113.31	87.3	406.4	246.7	228.3	13.404		
1,800.0	1,689.2	1,768.3	1,696.7	12.8	11.6	115.44	100.0	441.3	268.4	248.5	13.464		
1,900.0	1,775.0	1,865.5	1,786.6	13.1	12.0	117.25	112.6	476.1	290.4	269.0	13.542		
2,000.0	1,860.8	1,962.7	1,876.4	13.5	12.4	118.81	125.3	510.9	312.6	289.7	13.630		
2,100.0	1,946.6	2,059.8	1,966.2	13.9	12.8	120.16	138.0	545.8	335.0	310.6	13.723		
2,200.0	2,032.4	2,157.0	2,056.0	14.3	13.2	121.34	150.7	580.6	357.6	331.7	13.818		
2,300.0	2,118.2	2,254.2	2,145.8	14.8	13.6	122.38	163.4	615.4	380.3	353.0	13.913		
2,400.0	2,203.9	2,351.4	2,235.7	15.7	14.0	123.31	176.0	650.3	403.1	374.3	14.005		
2,500.0	2,289.7	2,448.5	2,325.5	16.6	14.4	124.13	188.7	685.1	426.0	395.8	14.095		
2,600.0	2,375.5	2,545.7	2,415.3	17.5	14.9	124.88	201.4	719.9	449.0	417.3	14.181		
2,700.0	2,461.3	2,642.9	2,505.1	18.4	15.3	125.55	214.1	754.7	472.0	438.9	14.264		
2,800.0	2,547.1	2,740.0	2,594.9	19.3	15.8	126.15	226.8	789.6	495.1	460.6	14.342		
2,900.0	2,632.9	2,837.2	2,684.8	20.2	16.4	126.71	239.5	824.4	518.2	482.3	14.416		
3,000.0	2,718.7	2,934.4	2,774.6	21.2	17.0	127.21	252.1	859.2	541.4	504.1	14.490		
3,100.0	2,804.5	3,031.5	2,864.4	22.1	17.7	127.68	264.8	894.1	564.6	525.8	14.557		
3,200.0	2,890.2	3,128.7	2,954.2	23.0	18.4	128.11	277.5	928.9	587.9	547.7	14.621		
3,300.0	2,976.0	3,225.9	3,044.0	23.9	19.0	128.50	290.2	963.7	611.2	569.5	14.682		
3,400.0	3,061.8	3,323.1	3,133.9	24.9	19.7	128.87	302.9	998.6	634.5	591.4	14.740		
3,500.0	3,147.6	3,420.2	3,223.7	25.8	20.4	129.21	315.6	1,033.4	657.8	613.3	14.794		
3,600.0	3,233.4	3,517.4	3,313.5	26.7	21.1	129.53	328.2	1,068.2	681.1	635.3	14.846		
3,700.0	3,319.2	3,614.6	3,403.3	27.6	21.8	129.82	340.9	1,103.1	704.5	657.2	14.896		
3,800.0	3,405.0	3,711.7	3,493.1	28.6	22.4	130.10	353.6	1,137.9	727.9	679.2	14.943		
3,900.0	3,490.8	3,808.9	3,583.0	29.5	23.1	130.36	366.3	1,172.7	751.3	701.2	14.988		
4,000.0	3,576.5	3,906.1	3,672.8	30.4	23.8	130.60	379.0	1,207.6	774.7	723.1	15.030		
4,100.0	3,662.3	4,003.2	3,762.6	31.4	24.5	130.83	391.7	1,242.4	798.1	745.2	15.071		
4,200.0	3,748.1	4,100.4	3,852.4	32.3	25.2	131.05	404.3	1,277.2	821.5	767.2	15.109		
4,300.0	3,833.9	4,197.6	3,942.3	33.2	25.8	131.25	417.0	1,312.1	845.0	789.2	15.146		
4,400.0	3,919.7	4,294.7	4,032.1	34.1	26.5	131.45	429.7	1,346.9	868.4	811.2	15.182		
4,500.0	4,005.5	4,391.9	4,121.9	35.1	27.2	131.63	442.4	1,381.7	891.9	833.3	15.215		
4,600.0	4,091.3	4,489.1	4,211.7	36.0	27.9	131.81	455.1	1,416.6	915.4	855.3	15.247		
4,700.0	4,177.1	4,586.3	4,301.5	36.9	28.6	131.97	467.8	1,451.4	938.9	877.4	15.278		
4,800.0	4,262.8	4,683.4	4,391.4	37.9	29.2	132.13	480.4	1,486.2	962.4	899.5	15.308		
4,900.0	4,348.6	4,780.6	4,481.2	38.8	29.9	132.28	493.1	1,521.1	985.8	921.6	15.336		
5,000.0	4,434.4	4,877.8	4,571.0	39.7	30.6	132.42	505.8	1,555.9	1,009.3	943.6	15.363		

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
5,100.0	4,520.2	4,974.9	4,660.8	40.7	31.3	132.56	518.5	1,590.7	1,032.8	965.7	15.389		
5,200.0	4,606.0	5,072.1	4,750.6	41.6	32.0	132.69	531.2	1,625.5	1,056.4	987.8	15.414		
5,300.0	4,691.8	5,169.3	4,840.5	42.5	32.7	132.81	543.9	1,660.4	1,079.9	1,009.9	15.438		
5,400.0	4,777.6	5,266.4	4,930.3	43.4	33.3	132.93	556.5	1,695.2	1,103.4	1,032.0	15.461		
5,500.0	4,863.4	5,363.6	5,020.1	44.4	34.0	133.05	569.2	1,730.0	1,126.9	1,054.1	15.483		
5,600.0	4,949.2	5,460.8	5,109.9	45.3	34.7	133.22	581.9	1,764.9	1,150.4	1,076.2	15.505		
5,700.0	5,036.4	5,558.4	5,200.2	46.2	35.4	133.62	594.6	1,799.9	1,172.1	1,096.5	15.499		
5,800.0	5,125.6	5,647.9	5,283.1	47.0	36.0	133.86	606.2	1,831.6	1,191.0	1,114.1	15.480		
5,900.0	5,216.7	5,730.7	5,360.7	47.7	36.5	134.06	616.0	1,858.5	1,208.1	1,130.1	15.474		
6,000.0	5,309.5	5,813.6	5,439.5	48.4	37.0	134.24	624.8	1,882.8	1,223.6	1,144.4	15.467		
6,100.0	5,403.9	5,900.0	5,522.5	48.9	37.4	134.39	633.0	1,905.2	1,237.3	1,157.2	15.451		
6,200.0	5,499.6	5,979.7	5,599.9	49.4	37.8	134.53	639.6	1,923.3	1,249.2	1,168.4	15.453		
6,300.0	5,596.5	6,062.9	5,681.3	49.9	38.1	134.65	645.5	1,939.5	1,259.4	1,177.9	15.447		
6,400.0	5,694.3	6,146.2	5,763.3	50.2	38.3	134.74	650.4	1,952.9	1,267.9	1,185.8	15.439		
6,500.0	5,793.0	6,229.6	5,846.0	50.5	38.5	134.82	654.2	1,963.6	1,274.6	1,192.0	15.431		
6,600.0	5,892.3	6,313.1	5,929.0	50.7	38.7	134.87	657.1	1,971.3	1,279.5	1,196.5	15.422		
6,700.0	5,992.0	6,400.0	6,015.7	50.8	38.8	134.91	658.9	1,976.4	1,282.6	1,199.3	15.405		
6,800.0	6,091.9	6,480.0	6,095.7	50.9	38.9	134.92	659.6	1,978.4	1,283.9	1,200.5	15.404		
6,900.0	6,191.9	6,576.2	6,191.9	50.9	38.9	-179.36	659.7	1,978.4	1,283.9	1,200.5	15.393		
7,000.0	6,291.9	6,676.2	6,291.9	50.9	39.0	-179.36	659.7	1,978.4	1,283.9	1,200.5	15.381		
7,100.0	6,391.9	6,776.2	6,391.9	51.0	39.0	-179.36	659.7	1,978.4	1,283.9	1,200.4	15.371		
7,200.0	6,491.9	6,876.2	6,491.9	51.0	39.0	-179.36	659.7	1,978.4	1,283.9	1,200.4	15.361		
7,300.0	6,591.9	6,976.2	6,591.9	51.0	39.0	-179.36	659.7	1,978.4	1,283.9	1,200.3	15.351		
7,400.0	6,691.9	7,076.2	6,691.9	51.0	39.1	-179.36	659.7	1,978.4	1,283.9	1,200.3	15.341		
7,500.0	6,791.9	7,176.2	6,791.9	51.0	39.1	-179.36	659.7	1,978.4	1,283.9	1,200.2	15.331		
7,600.0	6,891.9	7,276.2	6,891.9	51.0	39.1	-179.36	659.7	1,978.4	1,283.9	1,200.1	15.320		
7,700.0	6,991.9	7,376.2	6,991.9	51.1	39.2	-179.36	659.7	1,978.4	1,283.9	1,200.1	15.310		
7,800.0	7,091.9	7,476.2	7,091.9	51.1	39.2	-179.36	659.7	1,978.4	1,283.9	1,200.0	15.300		
7,900.0	7,191.9	7,576.2	7,191.9	51.1	39.2	-179.36	659.7	1,978.4	1,283.9	1,200.0	15.290		
8,000.0	7,291.9	7,676.2	7,291.9	51.1	39.2	-179.36	659.7	1,978.4	1,283.9	1,199.9	15.279		
8,100.0	7,391.9	7,776.2	7,391.9	51.1	39.3	-179.36	659.7	1,978.4	1,283.9	1,199.9	15.269		
8,200.0	7,491.9	7,876.2	7,491.9	51.2	39.3	-179.36	659.7	1,978.4	1,283.9	1,199.8	15.258		
8,300.0	7,591.9	7,976.2	7,591.9	51.2	39.3	-179.36	659.7	1,978.4	1,283.9	1,199.7	15.248		
8,400.0	7,691.9	8,076.2	7,691.9	51.2	39.4	-179.36	659.7	1,978.4	1,283.9	1,199.7	15.237		
8,500.0	7,791.9	8,176.2	7,791.9	51.2	39.4	-179.36	659.7	1,978.4	1,283.9	1,199.6	15.227		
8,600.0	7,891.9	8,276.2	7,891.9	51.2	39.4	-179.36	659.7	1,978.4	1,283.9	1,199.6	15.216		
8,700.0	7,991.9	8,376.2	7,991.9	51.3	39.5	-179.36	659.7	1,978.4	1,283.9	1,199.5	15.206		
8,800.0	8,091.9	8,476.2	8,091.9	51.3	39.5	-179.36	659.7	1,978.4	1,283.9	1,199.4	15.195		
8,900.0	8,191.9	8,576.2	8,191.9	51.3	39.5	-179.36	659.7	1,978.4	1,283.9	1,199.4	15.184		
9,000.0	8,291.9	8,676.2	8,291.9	51.3	39.5	-179.36	659.7	1,978.4	1,283.9	1,199.3	15.174		
9,100.0	8,391.9	8,776.2	8,391.9	51.4	39.6	-179.36	659.7	1,978.4	1,283.9	1,199.3	15.163		
9,200.0	8,491.9	8,876.2	8,491.9	51.4	39.6	-179.36	659.7	1,978.4	1,283.9	1,199.2	15.152		
9,300.0	8,591.9	8,976.2	8,591.9	51.4	39.6	-179.36	659.7	1,978.4	1,283.9	1,199.1	15.141		
9,400.0	8,691.9	9,076.2	8,691.9	51.4	39.7	-179.36	659.7	1,978.4	1,283.9	1,199.1	15.131		
9,415.1	8,707.0	9,091.3	8,707.0	51.4	39.7	-179.36	659.7	1,978.4	1,283.9	1,199.1	15.129		

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:	0.0 usft
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-18W - OH - Design #1											Offset Well Error:	0.0 usft
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	133.12	-54.6	58.3	79.9			
100.0	100.0	100.0	100.0	0.4	0.4	133.12	-54.6	58.3	79.9	79.1	100.898	
200.0	200.0	200.0	200.0	1.2	1.2	133.12	-54.6	58.3	79.9	77.4	32.349	CC, ES
300.0	300.0	298.1	298.0	2.3	2.2	87.66	-54.2	60.4	81.0	77.5	23.132	
400.0	399.7	396.1	395.8	3.9	3.8	88.39	-52.8	66.5	84.3	79.6	17.748	
500.0	499.1	493.9	493.1	5.0	4.9	89.47	-50.5	76.7	89.9	84.2	15.726	
600.0	598.0	591.5	589.6	6.0	5.9	90.76	-47.3	90.9	97.7	91.2	14.957	
700.0	696.0	688.8	685.1	6.8	6.7	92.11	-43.2	109.0	107.8	100.5	14.796	SF
800.0	793.2	785.7	779.4	7.6	7.5	93.42	-38.2	130.9	120.1	112.1	14.955	
900.0	889.2	882.2	872.2	8.3	8.2	94.61	-32.4	156.7	134.7	125.9	15.270	
1,000.0	983.9	978.2	963.4	9.0	8.8	95.66	-25.8	186.0	151.5	141.8	15.642	
1,100.0	1,077.0	1,074.3	1,053.3	9.7	9.2	96.57	-18.4	219.0	170.5	159.9	16.167	
1,200.0	1,168.6	1,172.1	1,144.4	10.3	9.5	98.19	-10.6	253.6	190.5	179.0	16.523	
1,300.0	1,258.2	1,269.3	1,235.0	10.9	9.8	100.55	-2.8	288.0	211.6	198.9	16.687	
1,400.0	1,345.9	1,365.9	1,325.0	11.5	10.1	103.40	4.9	322.2	234.1	220.1	16.731	
1,500.0	1,431.9	1,461.8	1,414.3	11.8	10.4	106.73	12.6	356.1	258.2	242.8	16.808	
1,600.0	1,517.6	1,557.6	1,503.6	12.1	10.8	109.73	20.3	390.0	283.1	266.3	16.854	
1,700.0	1,603.4	1,653.4	1,592.9	12.4	11.1	112.25	27.9	424.0	308.8	290.5	16.913	
1,800.0	1,689.2	1,749.3	1,682.2	12.8	11.5	114.39	35.6	457.9	334.9	315.1	16.992	
1,900.0	1,775.0	1,845.1	1,771.5	13.1	11.8	116.22	43.2	491.8	361.3	340.2	17.084	
2,000.0	1,860.8	1,940.9	1,860.8	13.5	12.2	117.80	50.9	525.7	388.1	365.5	17.184	
2,100.0	1,946.6	2,036.8	1,950.1	13.9	12.6	119.18	58.6	559.7	415.1	391.1	17.289	
2,200.0	2,032.4	2,132.6	2,039.4	14.3	13.0	120.39	66.2	593.6	442.3	416.9	17.395	
2,300.0	2,118.2	2,228.4	2,128.7	14.8	13.4	121.46	73.9	627.5	469.7	442.8	17.501	
2,400.0	2,203.9	2,324.2	2,218.0	15.7	13.8	122.41	81.5	661.5	497.2	468.9	17.605	
2,500.0	2,289.7	2,420.1	2,307.3	16.6	14.3	123.27	89.2	695.4	524.8	495.2	17.705	
2,600.0	2,375.5	2,515.9	2,396.6	17.5	14.7	124.04	96.8	729.3	552.5	521.5	17.802	
2,700.0	2,461.3	2,611.7	2,485.9	18.4	15.1	124.73	104.5	763.2	580.3	547.9	17.895	
2,800.0	2,547.1	2,707.6	2,575.2	19.3	15.6	125.36	112.2	797.2	608.2	574.4	17.984	
2,900.0	2,632.9	2,803.4	2,664.5	20.2	16.0	125.94	119.8	831.1	636.1	600.9	18.069	
3,000.0	2,718.7	2,899.2	2,753.8	21.2	16.5	126.47	127.5	865.0	664.1	627.5	18.150	
3,100.0	2,804.5	2,995.0	2,843.1	22.1	17.1	126.95	135.1	898.9	692.2	654.2	18.226	
3,200.0	2,890.2	3,090.9	2,932.4	23.0	17.7	127.40	142.8	932.9	720.2	680.9	18.299	
3,300.0	2,976.0	3,186.7	3,021.7	23.9	18.4	127.82	150.5	966.8	748.4	707.6	18.369	
3,400.0	3,061.8	3,282.5	3,111.0	24.9	19.0	128.20	158.1	1,000.7	776.5	734.4	18.435	
3,500.0	3,147.6	3,378.4	3,200.2	25.8	19.6	128.56	165.8	1,034.6	804.7	761.2	18.498	
3,600.0	3,233.4	3,474.2	3,289.5	26.7	20.3	128.89	173.4	1,068.6	832.9	788.0	18.558	
3,700.0	3,319.2	3,570.0	3,378.8	27.6	20.9	129.21	181.1	1,102.5	861.1	814.9	18.614	
3,800.0	3,405.0	3,665.8	3,468.1	28.6	21.5	129.50	188.8	1,136.4	889.4	841.8	18.669	
3,900.0	3,490.8	3,761.7	3,557.4	29.5	22.2	129.77	196.4	1,170.3	917.7	868.7	18.720	
4,000.0	3,576.5	3,857.5	3,646.7	30.4	22.8	130.03	204.1	1,204.3	946.0	895.6	18.769	
4,100.0	3,662.3	3,953.3	3,736.0	31.4	23.5	130.27	211.7	1,238.2	974.3	922.5	18.816	
4,200.0	3,748.1	4,049.2	3,825.3	32.3	24.1	130.50	219.4	1,272.1	1,002.6	949.5	18.861	
4,300.0	3,833.9	4,145.0	3,914.6	33.2	24.7	130.72	227.1	1,306.1	1,030.9	976.4	18.904	
4,400.0	3,919.7	4,240.8	4,003.9	34.1	25.4	130.92	234.7	1,340.0	1,059.3	1,003.4	18.944	
4,500.0	4,005.5	4,336.7	4,093.2	35.1	26.0	131.12	242.4	1,373.9	1,087.7	1,030.4	18.983	
4,600.0	4,091.3	4,432.5	4,182.5	36.0	26.7	131.30	250.0	1,407.8	1,116.0	1,057.4	19.021	
4,700.0	4,177.1	4,528.3	4,271.8	36.9	27.3	131.48	257.7	1,441.8	1,144.4	1,084.4	19.057	
4,800.0	4,262.8	4,624.1	4,361.1	37.9	28.0	131.64	265.4	1,475.7	1,172.8	1,111.4	19.091	
4,900.0	4,348.6	4,720.0	4,450.4	38.8	28.6	131.80	273.0	1,509.6	1,201.2	1,138.4	19.124	
5,000.0	4,434.4	4,815.8	4,539.7	39.7	29.2	131.95	280.7	1,543.5	1,229.6	1,165.4	19.155	

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 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft	
Survey Program: 0-OWSG (REV5) MWD HDGM Standard												Offset Well Error:	0.0 usft	
Laramie 0993-29-01 - Laramie 29-01 Fed 0993-21-18W - OH - Design #1														
Reference Measured Depth (usft)	Vertical Depth (usft)	Offset Measured Depth (usft)	Vertical Depth (usft)	Semi Major Reference (usft)	Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning		
5,100.0	4,520.2	4,911.6	4,629.0	40.7	29.9	132.10	288.3	1,577.5	1,258.1	1,192.5	19.186			
5,200.0	4,606.0	5,007.5	4,718.3	41.6	30.5	132.24	296.0	1,611.4	1,286.5	1,219.5	19.215			
5,300.0	4,691.8	5,103.3	4,807.6	42.5	31.2	132.37	303.6	1,645.3	1,314.9	1,246.6	19.243			
5,400.0	4,777.6	5,199.1	4,896.8	43.4	31.8	132.50	311.3	1,679.2	1,343.4	1,273.6	19.270			
5,500.0	4,863.4	5,294.9	4,986.1	44.4	32.5	132.62	319.0	1,713.2	1,371.8	1,300.7	19.296			
5,600.0	4,949.2	5,390.8	5,075.4	45.3	33.1	132.81	326.6	1,747.1	1,400.2	1,327.8	19.322			
5,700.0	5,036.4	5,487.2	5,165.3	46.2	33.7	133.34	334.3	1,781.2	1,426.9	1,353.0	19.320			
5,800.0	5,125.6	5,584.3	5,255.7	47.0	34.4	133.88	342.1	1,815.6	1,450.6	1,375.3	19.276			
5,900.0	5,216.7	5,672.7	5,338.4	47.7	35.0	133.89	349.0	1,846.2	1,471.6	1,395.1	19.241			
6,000.0	5,309.5	5,757.5	5,418.7	48.4	35.5	134.08	355.0	1,872.8	1,490.5	1,413.0	19.217			
6,100.0	5,403.9	5,842.6	5,500.3	48.9	35.9	134.25	360.4	1,896.5	1,507.4	1,428.8	19.192			
6,200.0	5,499.6	5,928.1	5,583.0	49.4	36.3	134.40	365.1	1,917.4	1,522.1	1,442.6	19.167			
6,300.0	5,596.5	6,013.8	5,666.7	49.9	36.6	134.52	369.1	1,935.3	1,534.6	1,454.4	19.143			
6,400.0	5,694.3	6,100.0	5,751.6	50.2	36.9	134.62	372.5	1,950.2	1,545.0	1,464.2	19.118			
6,500.0	5,793.0	6,185.9	5,836.6	50.5	37.1	134.70	375.1	1,961.9	1,553.2	1,471.9	19.096			
6,600.0	5,892.3	6,272.2	5,922.4	50.7	37.3	134.76	377.1	1,970.6	1,559.2	1,477.5	19.073			
6,700.0	5,992.0	6,358.6	6,008.6	50.8	37.4	134.79	378.3	1,976.1	1,563.1	1,481.0	19.050			
6,800.0	6,091.9	6,445.0	6,095.1	50.9	37.4	134.81	378.8	1,978.4	1,564.7	1,482.5	19.029			
6,900.0	6,191.9	6,541.9	6,191.9	50.9	37.5	-179.48	378.9	1,978.5	1,564.7	1,482.5	19.021			
7,000.0	6,291.9	6,641.9	6,291.9	50.9	37.5	-179.48	378.9	1,978.5	1,564.7	1,482.4	19.009			
7,100.0	6,391.9	6,741.9	6,391.9	51.0	37.5	-179.48	378.9	1,978.5	1,564.7	1,482.4	18.997			
7,200.0	6,491.9	6,841.9	6,491.9	51.0	37.6	-179.48	378.9	1,978.5	1,564.7	1,482.3	18.984			
7,300.0	6,591.9	6,941.9	6,591.9	51.0	37.6	-179.48	378.9	1,978.5	1,564.7	1,482.3	18.972			
7,400.0	6,691.9	7,041.9	6,691.9	51.0	37.6	-179.48	378.9	1,978.5	1,564.7	1,482.2	18.959			
7,500.0	6,791.9	7,141.9	6,791.9	51.0	37.6	-179.48	378.9	1,978.5	1,564.7	1,482.2	18.946			
7,600.0	6,891.9	7,241.9	6,891.9	51.0	37.7	-179.48	378.9	1,978.5	1,564.7	1,482.1	18.933			
7,700.0	6,991.9	7,341.9	6,991.9	51.1	37.7	-179.48	378.9	1,978.5	1,564.7	1,482.0	18.920			
7,800.0	7,091.9	7,441.9	7,091.9	51.1	37.7	-179.48	378.9	1,978.5	1,564.7	1,482.0	18.907			
7,900.0	7,191.9	7,541.9	7,191.9	51.1	37.8	-179.48	378.9	1,978.5	1,564.7	1,481.9	18.895			
8,000.0	7,291.9	7,641.9	7,291.9	51.1	37.8	-179.48	378.9	1,978.5	1,564.7	1,481.9	18.882			
8,100.0	7,391.9	7,741.9	7,391.9	51.1	37.8	-179.48	378.9	1,978.5	1,564.7	1,481.8	18.868			
8,200.0	7,491.9	7,841.9	7,491.9	51.2	37.8	-179.48	378.9	1,978.5	1,564.7	1,481.8	18.855			
8,300.0	7,591.9	7,941.9	7,591.9	51.2	37.9	-179.48	378.9	1,978.5	1,564.7	1,481.7	18.842			
8,400.0	7,691.9	8,041.9	7,691.9	51.2	37.9	-179.48	378.9	1,978.5	1,564.7	1,481.6	18.829			
8,500.0	7,791.9	8,141.9	7,791.9	51.2	37.9	-179.48	378.9	1,978.5	1,564.7	1,481.6	18.816			
8,516.0	7,807.9	8,157.9	7,807.9	51.2	37.9	-179.48	378.9	1,978.5	1,564.7	1,481.6	18.814			
8,600.0	7,891.9	8,240.0	7,890.0	51.2	38.0	-179.48	378.9	1,978.5	1,564.7	1,481.5	18.807			
8,700.0	7,991.9	8,240.0	7,890.0	51.3	38.0	-179.48	378.9	1,978.5	1,568.1	1,485.7	19.043			
8,800.0	8,091.9	8,240.0	7,890.0	51.3	38.0	-179.48	378.9	1,978.5	1,577.7	1,496.5	19.422			
8,900.0	8,191.9	8,240.0	7,890.0	51.3	38.0	-179.48	378.9	1,978.5	1,593.6	1,513.7	19.944			
9,000.0	8,291.9	8,240.0	7,890.0	51.3	38.0	-179.48	378.9	1,978.5	1,615.5	1,537.2	20.609			
9,100.0	8,391.9	8,240.0	7,890.0	51.4	38.0	-179.48	378.9	1,978.5	1,643.3	1,566.6	21.418			
9,200.0	8,491.9	8,240.0	7,890.0	51.4	38.0	-179.48	378.9	1,978.5	1,676.5	1,601.6	22.368			
9,300.0	8,591.9	8,240.0	7,890.0	51.4	38.0	-179.48	378.9	1,978.5	1,715.0	1,641.9	23.455			
9,400.0	8,691.9	8,240.0	7,890.0	51.4	38.0	-179.48	378.9	1,978.5	1,758.3	1,687.0	24.677			
9,415.1	8,707.0	8,240.0	7,890.0	51.4	38.0	-179.48	378.9	1,978.5	1,765.2	1,694.2	24.873			

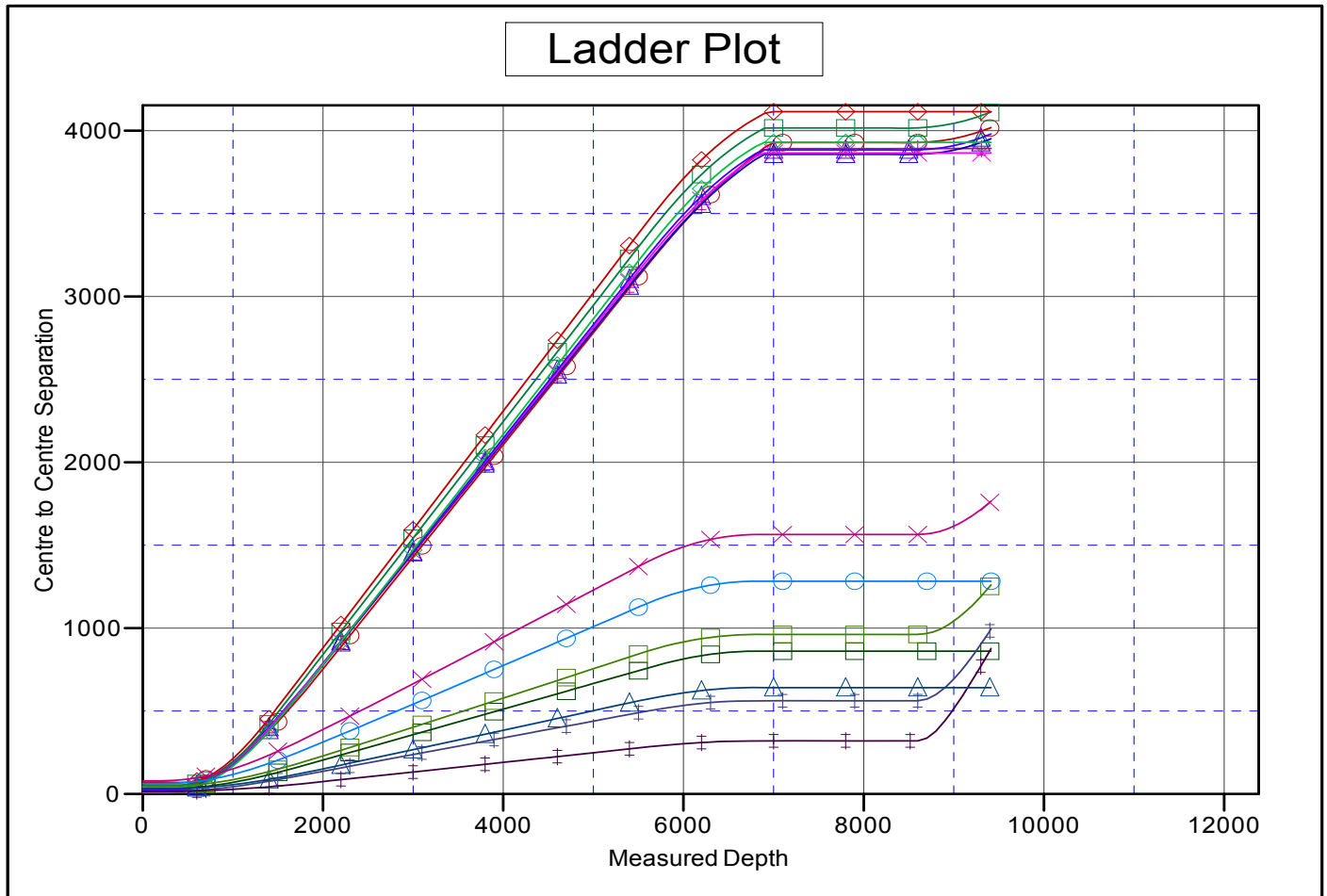
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

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

Coordinates are relative to: Laramie 29-01 Fed 0993-21-13W - Slot A-6
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.44°



LEGEND

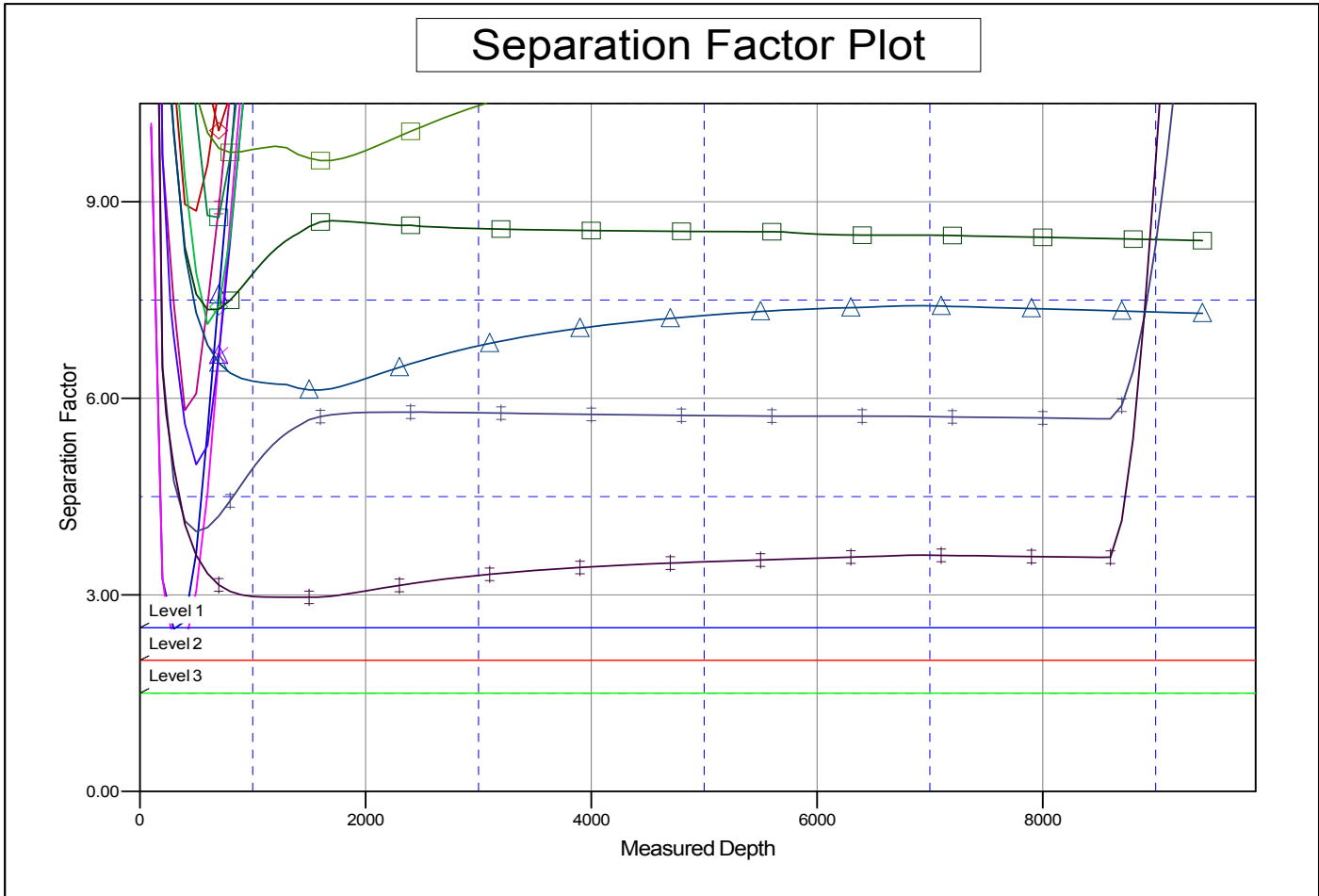
- | | | |
|-------------------------------------|---|------------------------------------|
| 29-01 0993-20-11E, OH, Design #1 V0 | Laramie 29-01 0993-20-16E, OH, Design #1 V0 | Laramie 29-01 Fed 0993-21-14W, OH, |
| 29-01 0993-20-12E, OH, Design #1 V0 | Laramie 29-01 0993-20-17E, OH, Design #1 V0 | Laramie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



Company:	Laramie Energy, LLC	Local Co-ordinate Reference:	Well Laramie 29-01 Fed 0993-21-13W - Slot A-6
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 0993-21-13W	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Design #1	Offset TVD Reference:	Offset Datum

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

Coordinates are relative to: Laramie 29-01 Fed 0993-21-13W - Slot A-6
 Coordinate System is US State Plane 1983, Colorado Central Zone
 Grid Convergence at Surface is: -1.44°



LEGEND

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