

Devon Energy

Lea County, NM (NAD-83)

Thistle Unit

117H

OH

Plan #1

Anticollision Report

12 January, 2017

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 117H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Reference Site:	Thistle Unit	MD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	117H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 9,999.98 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	1/12/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	17,401.09	Plan #1 (OH)	LEAM MWD+HDGM	MWD+HDGM	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Thistle Unit						
102H - OH - Plan #1	2,300.00	2,303.00	30.00	19.93	2.980	CC, ES
102H - OH - Plan #1	17,401.09	17,204.54	716.82	460.37	2.795	SF
138H - OH - Plan #1	2,300.00	2,302.50	59.93	49.86	5.953	CC, ES
138H - OH - Plan #1	17,401.09	17,765.85	835.58	599.78	3.544	SF
Thistle Unit (Offsets)						
50H - OH - OH	4,627.01	4,615.98	119.74	108.07	10.263	CC, ES
50H - OH - OH	4,800.00	4,787.99	122.01	109.94	10.104	SF
58H - OH - OH	15,100.00	16,290.00	1,585.97	1,491.53	16.793	SF
58H - OH - OH	17,070.08	14,378.60	1,567.45	1,475.78	17.100	CC, ES
71H - OH - OH	15,076.14	14,979.00	1,009.50	878.71	7.719	CC, ES
71H - OH - OH	17,068.74	12,985.00	1,020.73	888.20	7.702	SF

Offset Design													Thistle Unit - 102H - OH - Plan #1		Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error: 0.00 usft			
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor				
0.00	0.00	3.00	3.00	0.00	0.00	89.69	0.16	30.00	30.00							
100.00	100.00	103.00	103.00	0.09	0.09	89.69	0.16	30.00	30.00	29.82	0.18	167.892				
200.00	200.00	203.00	203.00	0.31	0.32	89.69	0.16	30.00	30.00	29.37	0.63	47.755				
300.00	300.00	303.00	303.00	0.54	0.54	89.69	0.16	30.00	30.00	28.92	1.08	27.836				
400.00	400.00	403.00	403.00	0.76	0.77	89.69	0.16	30.00	30.00	28.47	1.53	19.643				
500.00	500.00	503.00	503.00	0.99	0.99	89.69	0.16	30.00	30.00	28.02	1.98	15.176				
600.00	600.00	603.00	603.00	1.21	1.22	89.69	0.16	30.00	30.00	27.57	2.43	12.364				
700.00	700.00	703.00	703.00	1.43	1.44	89.69	0.16	30.00	30.00	27.12	2.88	10.432				
800.00	800.00	803.00	803.00	1.66	1.67	89.69	0.16	30.00	30.00	26.68	3.33	9.022				
900.00	900.00	903.00	903.00	1.88	1.89	89.69	0.16	30.00	30.00	26.23	3.77	7.947				
1,000.00	1,000.00	1,003.00	1,003.00	2.11	2.12	89.69	0.16	30.00	30.00	25.78	4.22	7.102				
1,100.00	1,100.00	1,103.00	1,103.00	2.33	2.34	89.69	0.16	30.00	30.00	25.33	4.67	6.419				
1,200.00	1,200.00	1,203.00	1,203.00	2.56	2.57	89.69	0.16	30.00	30.00	24.88	5.12	5.855				
1,300.00	1,300.00	1,303.00	1,303.00	2.78	2.79	89.69	0.16	30.00	30.00	24.43	5.57	5.383				

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

LEAM Drilling Systems LLC

Anticollision Report

Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Thistle Unit
Site Error: 0.00 usft
Reference Well: 117H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 117H
TVD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
MD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Thistle Unit - 102H - OH - Plan #1														Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
1,400.00	1,400.00	1,403.00	1,403.00	3.01	3.01	89.69	0.16	30.00	30.00	23.98	6.02	4.981		
1,500.00	1,500.00	1,503.00	1,503.00	3.23	3.24	89.69	0.16	30.00	30.00	23.53	6.47	4.635		
1,600.00	1,600.00	1,603.00	1,603.00	3.46	3.46	89.69	0.16	30.00	30.00	23.08	6.92	4.334		
1,700.00	1,700.00	1,703.00	1,703.00	3.68	3.69	89.69	0.16	30.00	30.00	22.63	7.37	4.070		
1,800.00	1,800.00	1,803.00	1,803.00	3.91	3.91	89.69	0.16	30.00	30.00	22.18	7.82	3.836		
1,900.00	1,900.00	1,903.00	1,903.00	4.13	4.14	89.69	0.16	30.00	30.00	21.73	8.27	3.628		
2,000.00	2,000.00	2,003.00	2,003.00	4.36	4.36	89.69	0.16	30.00	30.00	21.28	8.72	3.440		
2,100.00	2,100.00	2,103.00	2,103.00	4.58	4.59	89.69	0.16	30.00	30.00	20.83	9.17	3.272		
2,200.00	2,200.00	2,203.00	2,203.00	4.81	4.81	89.69	0.16	30.00	30.00	20.38	9.62	3.119		
2,300.00	2,300.00	2,303.00	2,303.00	5.03	5.04	89.69	0.16	30.00	30.00	19.93	10.07	2.980 CC, ES		
2,400.00	2,399.99	2,402.99	2,402.99	5.24	5.26	-167.08	0.16	30.00	30.85	20.35	10.50	2.938		
2,500.00	2,499.96	2,502.96	2,502.96	5.43	5.49	-168.08	0.16	30.00	33.41	22.49	10.92	3.060		
2,600.00	2,599.86	2,602.86	2,602.86	5.63	5.71	-169.44	0.16	30.00	37.69	26.35	11.33	3.325		
2,700.00	2,699.88	2,702.88	2,702.88	5.83	5.94	-170.90	0.16	30.00	43.70	31.95	11.76	3.718		
2,800.00	2,799.37	2,802.37	2,802.37	6.03	6.16	-172.27	0.16	30.00	51.46	39.29	12.18	4.226		
2,895.31	2,894.24	2,897.24	2,897.24	6.24	6.37	-173.42	0.16	30.00	60.49	47.91	12.58	4.807		
2,900.00	2,898.90	2,901.90	2,901.90	6.25	6.38	-173.47	0.16	30.00	60.97	48.37	12.60	4.838		
3,000.00	2,998.36	3,001.36	3,001.36	6.47	6.61	-174.42	0.16	30.00	71.29	58.26	13.03	5.471		
3,100.00	3,097.83	3,100.83	3,100.83	6.69	6.83	-175.13	0.16	30.00	81.62	68.16	13.46	6.065		
3,200.00	3,197.29	3,200.29	3,200.29	6.92	7.05	-175.68	0.16	30.00	91.96	78.07	13.89	6.621		
3,300.00	3,296.75	3,299.75	3,299.75	7.15	7.28	-176.11	0.16	30.00	102.30	87.98	14.32	7.144		
3,400.00	3,396.21	3,399.21	3,399.21	7.38	7.50	-176.47	0.16	30.00	112.65	97.90	14.75	7.636		
3,500.00	3,495.67	3,498.67	3,498.67	7.62	7.73	-176.77	0.16	30.00	123.00	107.82	15.19	8.099		
3,600.00	3,595.13	3,598.13	3,598.13	7.86	7.95	-177.02	0.16	30.00	133.36	117.74	15.62	8.535		
3,700.00	3,694.59	3,697.59	3,697.59	8.11	8.17	-177.24	0.16	30.00	143.72	127.66	16.06	8.948		
3,800.00	3,794.05	3,797.05	3,797.05	8.36	8.40	-177.42	0.16	30.00	154.08	137.58	16.50	9.338		
3,900.00	3,893.51	3,896.51	3,896.51	8.60	8.62	-177.58	0.16	30.00	164.44	147.50	16.94	9.707		
4,000.00	3,992.97	3,995.97	3,995.97	8.86	8.84	-177.73	0.16	30.00	174.81	157.42	17.38	10.057		
4,100.00	4,092.43	4,095.43	4,095.43	9.11	9.07	-177.85	0.16	30.00	185.17	167.34	17.82	10.389		
4,200.00	4,191.89	4,194.89	4,194.89	9.36	9.29	-177.97	0.16	30.00	195.53	177.27	18.27	10.704		
4,300.00	4,291.35	4,294.35	4,294.35	9.62	9.51	-178.07	0.16	30.00	205.90	187.19	18.71	11.004		
4,400.00	4,390.81	4,393.81	4,393.81	9.88	9.74	-178.16	0.16	30.00	216.27	197.11	19.16	11.290		
4,500.00	4,490.28	4,493.28	4,493.28	10.13	9.96	-178.25	0.16	30.00	226.63	207.03	19.60	11.563		
4,600.00	4,589.74	4,592.74	4,592.74	10.39	10.18	-178.32	0.16	30.00	237.00	216.95	20.05	11.823		
4,700.00	4,689.20	4,692.20	4,692.20	10.66	10.41	-178.39	0.16	30.00	247.37	226.87	20.49	12.071		
4,800.00	4,788.66	4,791.66	4,791.66	10.92	10.63	-178.46	0.16	30.00	257.73	236.79	20.94	12.308		
4,900.00	4,888.12	4,891.12	4,891.12	11.18	10.85	-178.52	0.16	30.00	268.10	246.71	21.39	12.536		
5,000.00	4,987.58	4,990.58	4,990.58	11.45	11.08	-178.57	0.16	30.00	278.47	256.63	21.84	12.753		
5,100.00	5,087.04	5,090.04	5,090.04	11.71	11.30	-178.62	0.16	30.00	288.84	266.55	22.28	12.962		
5,200.00	5,186.50	5,189.50	5,189.50	11.98	11.53	-178.67	0.16	30.00	299.21	276.47	22.73	13.162		
5,300.00	5,285.96	5,288.96	5,288.96	12.24	11.75	-178.72	0.16	30.00	309.58	286.39	23.18	13.354		
5,400.00	5,385.42	5,388.42	5,388.42	12.51	11.97	-178.76	0.16	30.00	319.94	296.31	23.63	13.539		
5,500.00	5,484.88	5,487.88	5,487.88	12.78	12.20	-178.80	0.16	30.00	330.31	306.23	24.08	13.716		
5,600.00	5,584.34	5,587.34	5,587.34	13.05	12.42	-178.83	0.16	30.00	340.68	316.15	24.53	13.887		
5,700.00	5,683.80	5,686.80	5,686.80	13.32	12.64	-178.87	0.16	30.00	351.05	326.07	24.98	14.051		
5,800.00	5,783.26	5,786.26	5,786.26	13.59	12.87	-178.90	0.16	30.00	361.42	335.99	25.43	14.210		
5,900.00	5,882.73	5,885.73	5,885.73	13.86	13.09	-178.93	0.16	30.00	371.79	345.91	25.89	14.362		
6,000.00	5,982.19	5,985.19	5,985.19	14.13	13.31	-178.96	0.16	30.00	382.16	355.82	26.34	14.510		
6,100.00	6,081.65	6,084.65	6,084.65	14.40	13.54	-178.99	0.16	30.00	392.53	365.74	26.79	14.652		
6,200.00	6,181.11	6,184.11	6,184.11	14.67	13.76	-179.01	0.16	30.00	402.90	375.66	27.24	14.789		
6,300.00	6,280.57	6,283.57	6,283.57	14.94	13.98	-179.04	0.16	30.00	413.27	385.58	27.70	14.922		

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

Offset Design Thistle Unit - 102H - OH - Plan #1														Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM MWD+HDGM														Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
6,400.00	6,380.03	6,383.03	6,383.03	15.21	14.21	-179.06	0.16	30.00	423.64	395.49	28.15	15.051			
6,500.00	6,479.49	6,482.49	6,482.49	15.49	14.43	-179.08	0.16	30.00	434.01	405.41	28.60	15.175			
6,600.00	6,578.95	6,581.95	6,581.95	15.76	14.66	-179.11	0.16	30.00	444.38	415.33	29.05	15.295			
6,700.00	6,678.41	6,681.41	6,681.41	16.03	14.88	-179.13	0.16	30.00	454.75	425.24	29.51	15.411			
6,800.00	6,777.87	6,780.87	6,780.87	16.31	15.10	-179.15	0.16	30.00	465.12	435.16	29.96	15.524			
6,900.00	6,877.33	6,880.33	6,880.33	16.58	15.33	-179.16	0.16	30.00	475.49	445.08	30.42	15.633			
7,000.00	6,976.79	6,979.79	6,979.79	16.85	15.55	-179.18	0.16	30.00	485.86	454.99	30.87	15.739			
7,100.00	7,076.25	7,079.25	7,079.25	17.13	15.77	-179.20	0.16	30.00	496.23	464.91	31.32	15.842			
7,200.00	7,175.71	7,178.71	7,178.71	17.40	16.00	-179.22	0.16	30.00	506.60	474.83	31.78	15.942			
7,300.00	7,275.18	7,278.18	7,278.18	17.68	16.22	-179.23	0.16	30.00	516.97	484.74	32.23	16.039			
7,400.00	7,374.64	7,377.64	7,377.64	17.95	16.44	-179.25	0.16	30.00	527.35	494.66	32.69	16.133			
7,500.00	7,474.10	7,477.10	7,477.10	18.23	16.67	-179.26	0.16	30.00	537.72	504.57	33.14	16.224			
7,600.00	7,573.56	7,576.56	7,576.56	18.51	16.89	-179.28	0.16	30.00	548.09	514.49	33.60	16.313			
7,700.00	7,673.02	7,676.02	7,676.02	18.78	17.11	-179.29	0.16	30.00	558.46	524.40	34.05	16.400			
7,800.00	7,772.48	7,775.48	7,775.48	19.06	17.34	-179.30	0.16	30.00	568.83	534.32	34.51	16.484			
7,900.00	7,871.94	7,874.94	7,874.94	19.33	17.56	-179.31	0.16	30.00	579.20	544.24	34.96	16.566			
8,000.00	7,971.40	7,974.40	7,974.40	19.61	17.78	-179.33	0.16	30.00	589.57	554.15	35.42	16.646			
8,100.00	8,070.86	8,073.86	8,073.86	19.89	18.01	-179.34	0.16	30.00	599.94	564.07	35.87	16.723			
8,200.00	8,170.32	8,173.32	8,173.32	20.16	18.23	-179.35	0.16	30.00	610.31	573.98	36.33	16.799			
8,300.00	8,269.78	8,272.78	8,272.78	20.44	18.46	-179.36	0.16	30.00	620.68	583.90	36.79	16.873			
8,400.00	8,369.24	8,372.24	8,372.24	20.72	18.68	-179.37	0.16	30.00	631.05	593.81	37.24	16.944			
8,500.00	8,468.70	8,471.70	8,471.70	21.00	18.90	-179.38	0.16	30.00	641.42	603.72	37.70	17.014			
8,600.00	8,568.16	8,571.16	8,571.16	21.27	19.13	-179.39	0.16	30.00	651.79	613.64	38.16	17.083			
8,700.00	8,667.63	8,670.63	8,670.63	21.55	19.35	-179.40	0.16	30.00	662.17	623.55	38.61	17.149			
8,800.00	8,767.09	8,770.09	8,770.09	21.83	19.57	-179.41	0.16	30.00	672.54	633.47	39.07	17.215			
8,900.00	8,866.55	8,869.55	8,869.55	22.11	19.80	-179.42	0.16	30.00	682.91	643.38	39.52	17.278			
9,000.00	8,966.01	8,969.01	8,969.01	22.38	20.02	-179.43	0.16	30.00	693.28	653.30	39.98	17.340			
9,100.00	9,065.47	9,068.47	9,068.47	22.66	20.24	-179.44	0.16	30.00	703.65	663.21	40.44	17.401			
9,200.93	9,165.85	9,168.85	9,168.85	22.94	20.47	-179.44	0.16	30.00	714.12	673.22	40.90	17.460			
9,250.00	9,214.64	9,207.78	9,207.76	23.07	20.56	132.02	1.17	30.00	718.98	677.90	41.08	17.503			
9,300.00	9,264.02	9,250.00	9,249.74	23.18	20.65	107.75	5.51	29.98	723.63	682.38	41.26	17.540			
9,350.00	9,312.62	9,284.18	9,283.39	23.28	20.73	97.30	11.50	29.95	727.92	686.54	41.39	17.588			
9,400.00	9,359.98	9,322.53	9,320.58	23.38	20.82	91.89	20.84	29.91	731.86	690.33	41.53	17.623			
9,450.00	9,405.67	9,361.04	9,357.13	23.46	20.90	88.70	32.94	29.86	735.41	693.75	41.67	17.650			
9,500.00	9,449.26	9,400.00	9,393.09	23.54	20.98	86.70	47.89	29.80	738.56	696.76	41.81	17.666			
9,550.00	9,490.36	9,438.78	9,427.68	23.61	21.06	85.43	65.40	29.72	741.30	699.35	41.95	17.671			
9,600.00	9,528.60	9,478.10	9,461.33	23.67	21.14	84.65	85.74	29.64	743.63	701.52	42.11	17.660			
9,650.00	9,563.60	9,517.81	9,493.65	23.72	21.22	84.23	108.79	29.54	745.55	703.27	42.29	17.631			
9,700.00	9,595.07	9,557.96	9,524.44	23.78	21.31	84.10	134.53	29.43	747.07	704.58	42.49	17.584			
9,750.00	9,622.69	9,600.00	9,554.47	23.83	21.42	84.22	163.94	29.31	748.21	705.48	42.73	17.511			
9,800.00	9,646.23	9,639.85	9,580.65	23.89	21.53	84.50	193.97	29.18	748.97	705.98	42.98	17.424			
9,850.00	9,665.46	9,661.74	9,605.62	23.96	21.65	84.99	227.59	29.04	749.39	706.10	43.29	17.311			
9,900.00	9,680.20	9,724.36	9,628.16	24.04	21.79	85.63	263.75	28.89	749.48	705.85	43.63	17.177			
9,950.00	9,690.33	9,767.81	9,648.02	24.14	21.95	86.43	302.37	28.72	749.28	705.26	44.02	17.023			
10,000.00	9,695.74	9,812.17	9,664.91	24.26	22.13	87.36	343.38	28.55	748.81	704.37	44.44	16.849			
10,031.09	9,696.71	9,840.25	9,673.77	24.35	22.25	88.01	370.03	28.44	748.40	703.67	44.73	16.733			
10,100.00	9,696.81	9,905.00	9,688.65	24.60	22.55	89.14	433.00	28.17	747.70	702.30	45.41	16.466			
10,200.00	9,696.95	10,003.51	9,696.16	25.07	23.07	89.71	531.09	27.76	747.21	700.68	46.53	16.059			
10,300.00	9,697.09	10,103.51	9,696.33	25.67	23.68	89.71	631.09	27.34	746.78	698.96	47.83	15.614			
10,400.00	9,697.22	10,203.51	9,696.51	26.37	24.39	89.71	731.08	26.92	746.36	697.05	49.31	15.137			

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 117H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Reference Site:	Thistle Unit	MD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	117H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 102H - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD+HDGM														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				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)	Minimum Separation (usft)	Separation Factor			
10,500.00	9,697.36	10,303.51	9,696.68	27.16	25.19	89.72	831.08	26.49	745.94	694.98	50.96	14.639			
10,600.00	9,697.50	10,403.51	9,696.86	28.04	26.06	89.72	931.08	26.07	745.52	692.76	52.76	14.131			
10,700.00	9,697.64	10,503.51	9,697.03	28.98	27.01	89.72	1,031.08	25.65	745.10	690.40	54.69	13.623			
10,800.00	9,697.78	10,603.51	9,697.21	29.99	28.02	89.72	1,131.08	25.23	744.67	687.92	56.75	13.121			
10,900.00	9,697.92	10,703.51	9,697.38	31.05	29.09	89.73	1,231.08	24.81	744.25	685.33	58.92	12.631			
11,000.00	9,698.06	10,803.51	9,697.55	32.16	30.21	89.73	1,331.07	24.38	743.83	682.64	61.19	12.156			
11,100.00	9,698.20	10,903.51	9,697.73	33.31	31.37	89.73	1,431.07	23.96	743.41	679.86	63.55	11.699			
11,200.00	9,698.34	11,003.50	9,697.90	34.50	32.57	89.73	1,531.07	23.54	742.99	677.01	65.98	11.261			
11,300.00	9,698.48	11,103.50	9,698.08	35.73	33.82	89.74	1,631.07	23.12	742.56	674.08	68.48	10.843			
11,400.00	9,698.62	11,203.50	9,698.25	36.99	35.09	89.74	1,731.07	22.70	742.14	671.09	71.05	10.445			
11,500.00	9,698.76	11,303.50	9,698.43	38.28	36.39	89.74	1,831.06	22.28	741.72	668.05	73.67	10.068			
11,600.00	9,698.90	11,403.50	9,698.60	39.59	37.72	89.74	1,931.06	21.85	741.30	664.95	76.35	9.710			
11,700.00	9,699.04	11,503.50	9,698.78	40.93	39.07	89.75	2,031.06	21.43	740.88	661.81	79.06	9.371			
11,800.00	9,699.18	11,603.50	9,698.95	42.28	40.44	89.75	2,131.06	21.01	740.45	658.63	81.82	9.049			
11,900.00	9,699.32	11,703.50	9,699.12	43.66	41.84	89.75	2,231.06	20.59	740.03	655.41	84.62	8.746			
12,000.00	9,699.46	11,803.50	9,699.30	45.05	43.25	89.75	2,331.05	20.17	739.61	652.16	87.45	8.458			
12,100.00	9,699.60	11,903.50	9,699.47	46.46	44.67	89.76	2,431.05	19.74	739.19	648.88	90.31	8.185			
12,200.00	9,699.74	12,003.50	9,699.65	47.88	46.11	89.76	2,531.05	19.32	738.76	645.57	93.19	7.927			
12,300.00	9,699.88	12,103.49	9,699.82	49.32	47.56	89.76	2,631.05	18.90	738.34	642.24	96.10	7.683			
12,400.00	9,700.02	12,203.49	9,700.00	50.77	49.03	89.77	2,731.05	18.48	737.92	638.89	99.04	7.451			
12,500.00	9,700.16	12,303.49	9,700.17	52.23	50.50	89.77	2,831.04	18.06	737.50	635.51	101.99	7.231			
12,600.00	9,700.30	12,403.49	9,700.35	53.70	51.98	89.77	2,931.04	17.63	737.08	632.11	104.96	7.022			
12,700.00	9,700.44	12,503.49	9,700.52	55.17	53.48	89.77	3,031.04	17.21	736.65	628.70	107.95	6.824			
12,800.00	9,700.58	12,603.49	9,700.70	56.66	54.98	89.78	3,131.04	16.79	736.23	625.27	110.96	6.635			
12,900.00	9,700.72	12,703.49	9,700.87	58.16	56.49	89.78	3,231.04	16.37	735.81	621.83	113.98	6.456			
13,000.00	9,700.86	12,803.49	9,701.04	59.66	58.00	89.78	3,331.03	15.95	735.39	618.37	117.01	6.285			
13,100.00	9,700.99	12,903.49	9,701.22	61.17	59.52	89.78	3,431.03	15.52	734.97	614.91	120.06	6.122			
13,200.00	9,701.13	13,003.49	9,701.39	62.68	61.05	89.79	3,531.03	15.10	734.54	611.42	123.12	5.966			
13,300.00	9,701.27	13,103.49	9,701.57	64.21	62.58	89.79	3,631.03	14.68	734.12	607.93	126.19	5.818			
13,400.00	9,701.41	13,203.48	9,701.74	65.73	64.12	89.79	3,731.03	14.26	733.70	604.43	129.27	5.676			
13,500.00	9,701.55	13,303.48	9,701.92	67.26	65.67	89.79	3,831.02	13.84	733.28	600.92	132.36	5.540			
13,600.00	9,701.69	13,403.48	9,702.09	68.80	67.21	89.80	3,931.02	13.42	732.86	597.40	135.45	5.410			
13,700.00	9,701.83	13,503.48	9,702.27	70.34	68.77	89.80	4,031.02	12.99	732.43	593.87	138.56	5.286			
13,800.00	9,701.97	13,603.48	9,702.44	71.89	70.32	89.80	4,131.02	12.57	732.01	590.34	141.67	5.167			
13,900.00	9,702.11	13,703.48	9,702.62	73.44	71.88	89.80	4,231.02	12.15	731.59	586.80	144.79	5.053			
14,000.00	9,702.25	13,803.48	9,702.79	74.99	73.44	89.81	4,331.02	11.73	731.17	583.25	147.92	4.943			
14,100.00	9,702.39	13,903.48	9,702.96	76.54	75.01	89.81	4,431.01	11.31	730.75	579.69	151.05	4.838			
14,200.00	9,702.53	14,003.48	9,703.14	78.10	76.58	89.81	4,531.01	10.88	730.32	576.13	154.19	4.736			
14,300.00	9,702.67	14,103.48	9,703.31	79.67	78.15	89.81	4,631.01	10.46	729.90	572.57	157.34	4.639			
14,400.00	9,702.81	14,203.48	9,703.49	81.23	79.73	89.82	4,731.01	10.04	729.48	569.00	160.48	4.545			
14,500.00	9,702.95	14,303.47	9,703.66	82.80	81.30	89.82	4,831.01	9.62	729.06	565.42	163.64	4.455			
14,600.00	9,703.09	14,403.47	9,703.84	84.37	82.88	89.82	4,931.00	9.20	728.64	561.84	166.80	4.368			
14,700.00	9,703.23	14,503.47	9,704.01	85.94	84.46	89.83	5,031.00	8.77	728.21	558.25	169.96	4.285			
14,800.00	9,703.37	14,603.47	9,704.19	87.52	86.05	89.83	5,131.00	8.35	727.79	554.66	173.13	4.204			
14,900.00	9,703.51	14,703.47	9,704.36	89.10	87.63	89.83	5,231.00	7.93	727.37	551.07	176.30	4.126			
15,000.00	9,703.65	14,803.47	9,704.54	90.68	89.22	89.83	5,331.00	7.51	726.95	547.47	179.47	4.050			
15,100.00	9,703.79	14,903.47	9,704.71	92.26	90.81	89.84	5,430.99	7.09	726.53	543.87	182.65	3.978			
15,200.00	9,703.93	15,003.47	9,704.88	93.84	92.40	89.84	5,530.99	6.66	726.10	540.27	185.83	3.907			
15,300.00	9,704.07	15,103.47	9,705.06	95.43	93.99	89.84	5,630.99	6.24	725.68	536.66	189.02	3.839			
15,400.00	9,704.21	15,203.47	9,705.23	97.01	95.59	89.84	5,730.99	5.82	725.26	533.05	192.21	3.773			
15,500.00	9,704.35	15,303.47	9,705.41	98.60	97.18	89.85	5,830.99	5.40	724.84	529.44	195.40	3.710			

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 117H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Reference Site:	Thistle Unit	MD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	117H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 102H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				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)	Minimum Separation (usft)	Separation Factor	
15,600.00	9,704.49	15,403.47	9,705.58	100.19	98.78	89.85	5,930.98	4.98	724.42	525.83	198.59	3.648	
15,700.00	9,704.63	15,503.46	9,705.76	101.78	100.38	89.85	6,030.98	4.56	723.99	522.21	201.78	3.588	
15,800.00	9,704.76	15,603.46	9,705.93	103.37	101.97	89.85	6,130.98	4.13	723.57	518.59	204.98	3.530	
15,900.00	9,704.90	15,703.46	9,706.11	104.97	103.57	89.86	6,230.98	3.71	723.15	514.97	208.18	3.474	
16,000.00	9,705.04	15,803.46	9,706.28	106.56	105.18	89.86	6,330.98	3.29	722.73	511.34	211.39	3.419	
16,100.00	9,705.18	15,903.46	9,706.46	108.16	106.78	89.86	6,430.97	2.87	722.31	507.72	214.59	3.366	
16,200.00	9,705.32	16,003.46	9,706.63	109.76	108.38	89.87	6,530.97	2.45	721.88	504.09	217.80	3.314	
16,300.00	9,705.46	16,103.46	9,706.80	111.36	109.99	89.87	6,630.97	2.02	721.46	500.46	221.01	3.264	
16,400.00	9,705.60	16,203.46	9,706.98	112.96	111.59	89.87	6,730.97	1.60	721.04	496.82	224.22	3.216	
16,500.00	9,705.74	16,303.46	9,707.15	114.56	113.20	89.87	6,830.97	1.18	720.62	493.19	227.43	3.169	
16,600.00	9,705.88	16,403.46	9,707.33	116.16	114.81	89.88	6,930.96	0.76	720.20	489.55	230.64	3.123	
16,700.00	9,706.02	16,503.46	9,707.50	117.76	116.41	89.88	7,030.96	0.34	719.77	485.92	233.86	3.078	
16,800.00	9,706.16	16,603.45	9,707.68	119.37	118.02	89.88	7,130.96	-0.09	719.35	482.28	237.08	3.034	
16,900.00	9,706.30	16,703.45	9,707.85	120.97	119.63	89.88	7,230.96	-0.51	718.93	478.64	240.29	2.992	
17,000.00	9,706.44	16,803.45	9,708.03	122.58	121.24	89.89	7,330.96	-0.93	718.51	474.99	243.51	2.951	
17,100.00	9,706.58	16,903.45	9,708.20	124.18	122.85	89.89	7,430.96	-1.35	718.09	471.35	246.74	2.910	
17,200.00	9,706.72	17,003.45	9,708.38	125.79	124.47	89.89	7,530.95	-1.77	717.66	467.71	249.96	2.871	
17,300.00	9,706.86	17,103.45	9,708.55	127.40	126.08	89.90	7,630.95	-2.20	717.24	464.06	253.18	2.833	
17,401.09	9,707.00	17,204.54	9,708.73	129.02	127.71	89.90	7,732.04	-2.62	716.82	460.37	256.44	2.795 SF	

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 117H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Reference Site:	Thistle Unit	MD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	117H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 138H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				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)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	2.50	2.50	0.00	0.00	89.67	0.34	59.93	59.93					
100.00	100.00	102.50	102.50	0.09	0.09	89.67	0.34	59.93	59.93	59.75	0.18	337.515		
200.00	200.00	202.50	202.50	0.31	0.32	89.67	0.34	59.93	59.93	59.30	0.63	95.569		
300.00	300.00	302.50	302.50	0.54	0.54	89.67	0.34	59.93	59.93	58.85	1.08	55.665		
400.00	400.00	402.50	402.50	0.76	0.77	89.67	0.34	59.93	59.93	58.40	1.53	39.269		
500.00	500.00	502.50	502.50	0.99	0.99	89.67	0.34	59.93	59.93	57.96	1.98	30.334		
600.00	600.00	602.50	602.50	1.21	1.22	89.67	0.34	59.93	59.93	57.51	2.43	24.711		
700.00	700.00	702.50	702.50	1.43	1.44	89.67	0.34	59.93	59.93	57.06	2.87	20.847		
800.00	800.00	802.50	802.50	1.66	1.66	89.67	0.34	59.93	59.93	56.61	3.32	18.028		
900.00	900.00	902.50	902.50	1.88	1.89	89.67	0.34	59.93	59.93	56.16	3.77	15.881		
1,000.00	1,000.00	1,002.50	1,002.50	2.11	2.11	89.67	0.34	59.93	59.93	55.71	4.22	14.190		
1,100.00	1,100.00	1,102.50	1,102.50	2.33	2.34	89.67	0.34	59.93	59.93	55.26	4.67	12.825		
1,200.00	1,200.00	1,202.50	1,202.50	2.56	2.56	89.67	0.34	59.93	59.93	54.81	5.12	11.700		
1,300.00	1,300.00	1,302.50	1,302.50	2.78	2.79	89.67	0.34	59.93	59.93	54.36	5.57	10.756		
1,400.00	1,400.00	1,402.50	1,402.50	3.01	3.01	89.67	0.34	59.93	59.93	53.91	6.02	9.953		
1,500.00	1,500.00	1,502.50	1,502.50	3.23	3.24	89.67	0.34	59.93	59.93	53.46	6.47	9.261		
1,600.00	1,600.00	1,602.50	1,602.50	3.46	3.46	89.67	0.34	59.93	59.93	53.01	6.92	8.660		
1,700.00	1,700.00	1,702.50	1,702.50	3.68	3.69	89.67	0.34	59.93	59.93	52.56	7.37	8.132		
1,800.00	1,800.00	1,802.50	1,802.50	3.91	3.91	89.67	0.34	59.93	59.93	52.11	7.82	7.664		
1,900.00	1,900.00	1,902.50	1,902.50	4.13	4.14	89.67	0.34	59.93	59.93	51.66	8.27	7.248		
2,000.00	2,000.00	2,002.50	2,002.50	4.36	4.36	89.67	0.34	59.93	59.93	51.21	8.72	6.874		
2,100.00	2,100.00	2,102.50	2,102.50	4.58	4.59	89.67	0.34	59.93	59.93	50.76	9.17	6.537		
2,200.00	2,200.00	2,202.50	2,202.50	4.81	4.81	89.67	0.34	59.93	59.93	50.31	9.62	6.231		
2,300.00	2,300.00	2,302.50	2,302.50	5.03	5.04	89.67	0.34	59.93	59.93	49.86	10.07	5.953 CC, ES		
2,400.00	2,399.99	2,402.49	2,402.49	5.24	5.26	-166.92	0.34	59.93	60.78	50.28	10.50	5.789		
2,500.00	2,499.96	2,502.46	2,502.46	5.43	5.49	-167.45	0.34	59.93	63.33	52.42	10.91	5.802		
2,600.00	2,599.86	2,602.36	2,602.36	5.63	5.71	-168.24	0.34	59.93	67.60	56.26	11.33	5.965		
2,700.00	2,699.68	2,702.18	2,702.18	5.83	5.93	-169.20	0.34	59.93	73.59	61.83	11.75	6.260		
2,800.00	2,799.37	2,801.87	2,801.87	6.03	6.16	-170.22	0.34	59.93	81.31	69.13	12.18	6.677		
2,895.31	2,894.24	2,896.74	2,896.74	6.24	6.37	-171.19	0.34	59.93	90.28	77.70	12.58	7.175		
2,900.00	2,898.90	2,901.40	2,901.40	6.25	6.38	-171.24	0.34	59.93	90.76	78.16	12.60	7.202		
3,000.00	2,998.36	3,000.86	3,000.86	6.47	6.61	-172.13	0.34	59.93	101.03	88.00	13.03	7.754		
3,100.00	3,097.83	3,100.33	3,100.33	6.69	6.83	-172.86	0.34	59.93	111.31	97.86	13.46	8.272		
3,200.00	3,197.29	3,199.79	3,199.79	6.92	7.05	-173.47	0.34	59.93	121.61	107.72	13.89	8.757		
3,300.00	3,296.75	3,299.54	3,299.54	7.15	7.25	-173.61	-0.52	59.93	131.81	117.52	14.29	9.224		
3,400.00	3,396.21	3,399.32	3,399.28	7.38	7.42	-173.03	-3.13	59.93	141.80	127.13	14.67	9.667		
3,500.00	3,495.67	3,499.06	3,498.93	7.62	7.59	-171.87	-7.46	59.93	151.62	136.57	15.05	10.074		
3,600.00	3,595.13	3,598.71	3,598.39	7.86	7.76	-170.24	-13.53	59.93	161.37	145.93	15.44	10.452		
3,700.00	3,694.59	3,698.20	3,697.58	8.11	7.94	-168.21	-21.31	59.93	171.18	155.34	15.83	10.810		
3,800.00	3,794.05	3,797.50	3,796.49	8.36	8.12	-166.13	-29.96	59.93	181.17	164.93	16.24	11.158		
3,900.00	3,893.51	3,896.79	3,895.41	8.60	8.30	-164.27	-38.61	59.93	191.37	174.72	16.65	11.497		
4,000.00	3,992.97	3,996.09	3,994.33	8.86	8.49	-162.59	-47.27	59.93	201.75	184.69	17.06	11.826		
4,100.00	4,092.43	4,095.38	4,093.24	9.11	8.69	-161.08	-55.92	59.93	212.29	194.81	17.48	12.144		
4,200.00	4,191.89	4,194.68	4,192.16	9.36	8.89	-159.71	-64.58	59.93	222.96	205.06	17.91	12.451		
4,300.00	4,291.35	4,293.97	4,291.08	9.62	9.09	-158.47	-73.23	59.93	233.75	215.41	18.34	12.746		
4,400.00	4,390.81	4,393.27	4,390.00	9.88	9.29	-157.34	-81.89	59.93	244.63	225.86	18.78	13.029		
4,500.00	4,490.28	4,492.56	4,488.91	10.13	9.50	-156.31	-90.54	59.93	255.60	236.39	19.22	13.301		
4,600.00	4,589.74	4,591.86	4,587.83	10.39	9.71	-155.36	-99.19	59.93	266.65	246.99	19.66	13.562		
4,700.00	4,689.20	4,691.15	4,686.75	10.66	9.92	-154.48	-107.85	59.93	277.76	257.65	20.11	13.812		
4,800.00	4,788.66	4,790.45	4,785.66	10.92	10.14	-153.68	-116.50	59.93	288.94	268.37	20.56	14.051		
4,900.00	4,888.12	4,889.74	4,884.58	11.18	10.36	-152.93	-125.16	59.93	300.16	279.14	21.02	14.280		

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 117H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Reference Site:	Thistle Unit	MD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	117H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 138H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,987.58	4,989.04	4,983.50	11.45	10.58	-152.24	-133.81	59.93	311.43	289.96	21.48	14.500	
5,100.00	5,087.04	5,089.60	5,083.74	11.71	10.81	-151.70	-141.88	59.93	322.57	300.63	21.95	14.698	
5,200.00	5,186.50	5,190.48	5,184.42	11.98	11.04	-151.50	-148.21	59.93	333.29	310.87	22.42	14.888	
5,300.00	5,285.96	5,291.47	5,285.30	12.24	11.26	-151.60	-152.77	59.93	343.56	320.68	22.88	15.015	
5,400.00	5,385.42	5,392.49	5,386.28	12.51	11.49	-151.97	-155.56	59.93	353.40	330.06	23.34	15.142	
5,500.00	5,484.88	5,493.50	5,487.29	12.78	11.69	-152.80	-156.56	59.93	362.83	339.05	23.78	15.258	
5,600.00	5,584.34	5,593.06	5,586.84	13.05	11.90	-153.33	-156.57	59.93	372.08	347.87	24.21	15.368	
5,700.00	5,683.80	5,692.52	5,686.30	13.32	12.11	-154.03	-156.57	59.93	381.39	356.74	24.65	15.471	
5,800.00	5,783.26	5,791.98	5,785.76	13.59	12.32	-154.70	-156.57	59.93	390.75	365.66	25.09	15.573	
5,900.00	5,882.73	5,891.44	5,885.23	13.86	12.53	-155.33	-156.57	59.93	400.16	374.63	25.53	15.672	
6,000.00	5,982.19	5,990.90	5,984.69	14.13	12.74	-155.94	-156.57	59.93	409.62	383.64	25.97	15.770	
6,100.00	6,081.65	6,090.36	6,084.15	14.40	12.96	-156.51	-156.57	59.93	419.12	392.70	26.42	15.866	
6,200.00	6,181.11	6,189.82	6,183.61	14.67	13.17	-157.07	-156.57	59.93	428.66	401.80	26.86	15.960	
6,300.00	6,280.57	6,289.28	6,283.07	14.94	13.38	-157.59	-156.57	59.93	438.23	410.93	27.30	16.052	
6,400.00	6,380.03	6,388.74	6,382.53	15.21	13.60	-158.10	-156.57	59.93	447.85	420.10	27.74	16.142	
6,500.00	6,479.49	6,488.21	6,481.99	15.49	13.81	-158.58	-156.57	59.93	457.49	429.31	28.19	16.231	
6,600.00	6,578.95	6,587.67	6,581.45	15.76	14.03	-159.05	-156.57	59.93	467.17	438.54	28.63	16.317	
6,700.00	6,678.41	6,687.13	6,680.91	16.03	14.24	-159.49	-156.57	59.93	476.88	447.80	29.08	16.401	
6,800.00	6,777.87	6,786.59	6,780.37	16.31	14.46	-159.92	-156.57	59.93	486.61	457.09	29.52	16.484	
6,900.00	6,877.33	6,886.05	6,879.83	16.58	14.67	-160.33	-156.57	59.93	496.37	466.41	29.97	16.565	
7,000.00	6,976.79	6,985.51	6,979.29	16.85	14.89	-160.73	-156.57	59.93	506.16	475.75	30.41	16.644	
7,100.00	7,076.25	7,084.97	7,078.75	17.13	15.10	-161.11	-156.57	59.93	515.96	485.11	30.86	16.722	
7,200.00	7,175.71	7,184.43	7,178.21	17.40	15.32	-161.47	-156.57	59.93	525.79	494.49	31.30	16.797	
7,300.00	7,275.18	7,283.89	7,277.68	17.68	15.54	-161.82	-156.57	59.93	535.64	503.89	31.75	16.871	
7,400.00	7,374.64	7,383.35	7,377.14	17.95	15.75	-162.16	-156.57	59.93	545.51	513.31	32.20	16.944	
7,500.00	7,474.10	7,482.81	7,476.60	18.23	15.97	-162.49	-156.57	59.93	555.40	522.75	32.64	17.014	
7,600.00	7,573.56	7,582.27	7,576.06	18.51	16.19	-162.81	-156.57	59.93	565.30	532.21	33.09	17.084	
7,700.00	7,673.02	7,681.73	7,675.52	18.78	16.40	-163.11	-156.57	59.93	575.22	541.68	33.54	17.151	
7,800.00	7,772.48	7,781.19	7,774.98	19.06	16.62	-163.41	-156.57	59.93	585.16	551.17	33.99	17.218	
7,900.00	7,871.94	7,880.66	7,874.44	19.33	16.84	-163.69	-156.57	59.93	595.11	560.68	34.43	17.283	
8,000.00	7,971.40	7,980.12	7,973.90	19.61	17.05	-163.97	-156.57	59.93	605.08	570.19	34.88	17.346	
8,100.00	8,070.86	8,079.58	8,073.36	19.89	17.27	-164.24	-156.57	59.93	615.05	579.72	35.33	17.408	
8,200.00	8,170.32	8,179.04	8,172.82	20.16	17.49	-164.49	-156.57	59.93	625.05	589.27	35.78	17.469	
8,300.00	8,269.78	8,278.50	8,272.28	20.44	17.71	-164.74	-156.57	59.93	635.05	598.82	36.23	17.528	
8,400.00	8,369.24	8,377.96	8,371.74	20.72	17.93	-164.99	-156.57	59.93	645.07	608.39	36.68	17.586	
8,500.00	8,468.70	8,477.42	8,471.20	21.00	18.14	-165.22	-156.57	59.93	655.09	617.96	37.13	17.643	
8,600.00	8,568.16	8,576.88	8,570.66	21.27	18.36	-165.45	-156.57	59.93	665.13	627.55	37.58	17.699	
8,700.00	8,667.63	8,676.34	8,670.13	21.55	18.58	-165.67	-156.57	59.93	675.18	637.15	38.03	17.754	
8,800.00	8,767.09	8,775.80	8,769.59	21.83	18.80	-165.88	-156.57	59.93	685.23	646.75	38.48	17.807	
8,900.00	8,866.55	8,875.26	8,869.05	22.11	19.02	-166.09	-156.57	59.93	695.30	656.37	38.93	17.860	
9,000.00	8,966.01	8,974.72	8,968.51	22.38	19.24	-166.30	-156.57	59.93	705.37	665.99	39.38	17.911	
9,100.00	9,065.47	9,074.18	9,067.97	22.66	19.46	-166.49	-156.57	59.93	715.46	675.62	39.83	17.961	
9,200.93	9,165.85	9,174.57	9,168.35	22.94	19.68	-166.68	-156.57	59.93	725.64	685.35	40.29	18.011	
9,250.00	9,214.64	9,223.36	9,217.14	23.07	19.79	144.79	-156.57	59.93	730.58	690.08	40.51	18.036	
9,300.00	9,264.02	9,272.74	9,266.52	23.18	19.89	120.79	-156.57	59.93	735.58	694.86	40.72	18.064	
9,350.00	9,312.62	9,321.33	9,315.12	23.28	20.00	110.87	-156.57	59.93	740.62	699.69	40.93	18.094	
9,400.00	9,359.98	9,368.69	9,362.48	23.38	20.11	106.16	-156.57	59.93	745.84	704.70	41.14	18.129	
9,450.00	9,405.67	9,414.38	9,408.17	23.46	20.21	103.79	-156.57	59.93	751.47	710.13	41.35	18.175	
9,500.00	9,449.26	9,457.98	9,451.76	23.54	20.30	102.64	-156.57	59.93	757.79	716.25	41.55	18.240	
9,550.00	9,490.36	9,499.08	9,492.86	23.61	20.39	102.14	-156.57	59.93	765.11	723.37	41.74	18.331	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 117H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Reference Site:	Thistle Unit	MD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	117H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 138H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,600.00	9,528.60	9,537.31	9,531.10	23.67	20.48	101.97	-156.57	59.93	773.77	731.84	41.93	18.455		
9,650.00	9,563.60	9,572.32	9,566.10	23.72	20.55	101.88	-156.57	59.93	784.08	741.97	42.11	18.621		
9,700.00	9,595.07	9,620.22	9,613.97	23.78	20.66	102.59	-154.96	59.92	796.09	753.76	42.33	18.809		
9,750.00	9,622.69	9,678.87	9,672.05	23.83	20.77	103.83	-147.09	59.88	809.24	766.71	42.53	19.029		
9,800.00	9,646.23	9,748.10	9,738.95	23.89	20.89	105.49	-129.47	59.80	823.20	780.54	42.66	19.299		
9,850.00	9,665.46	9,833.08	9,816.95	23.96	21.02	107.69	-95.98	59.64	837.45	794.81	42.64	19.641		
9,900.00	9,680.20	9,941.63	9,906.90	24.04	21.19	110.51	-35.58	59.35	851.10	808.71	42.39	20.078		
9,950.00	9,690.33	10,083.68	10,002.27	24.14	21.43	113.72	69.10	58.86	862.70	820.76	41.94	20.572		
10,000.00	9,695.74	10,284.55	10,077.12	24.26	21.92	116.32	232.76	58.08	870.05	828.26	41.78	20.822		
10,031.09	9,696.71	10,390.98	10,093.96	24.35	22.42	116.94	357.75	57.48	871.45	829.14	42.31	20.599		
10,100.00	9,696.81	10,464.85	10,094.00	24.60	22.79	116.94	431.62	57.13	871.12	828.12	43.00	20.258		
10,200.00	9,696.95	10,564.85	10,094.00	25.07	23.36	116.95	531.62	56.66	870.63	826.53	44.10	19.741		
10,300.00	9,697.09	10,664.85	10,094.00	25.67	24.03	116.95	631.62	56.18	870.14	824.77	45.38	19.177		
10,400.00	9,697.22	10,764.85	10,094.00	26.37	24.79	116.96	731.61	55.71	869.66	822.85	46.80	18.580		
10,500.00	9,697.36	10,864.85	10,094.00	27.16	25.63	116.97	831.61	55.23	869.17	820.79	48.38	17.967		
10,600.00	9,697.50	10,964.85	10,094.00	28.04	26.55	116.97	931.61	54.76	868.68	818.60	50.08	17.346		
10,700.00	9,697.64	11,064.85	10,094.00	28.98	27.53	116.98	1,031.61	54.28	868.20	816.30	51.90	16.729		
10,800.00	9,697.78	11,164.84	10,094.00	29.99	28.57	116.98	1,131.61	53.81	867.71	813.89	53.82	16.122		
10,900.00	9,697.92	11,264.84	10,094.00	31.05	29.67	116.99	1,231.60	53.33	867.22	811.39	55.84	15.531		
11,000.00	9,698.06	11,364.84	10,094.00	32.16	30.82	117.00	1,331.60	52.85	866.74	808.80	57.94	14.960		
11,100.00	9,698.20	11,464.84	10,094.00	33.31	32.01	117.00	1,431.60	52.38	866.25	806.13	60.11	14.410		
11,200.00	9,698.34	11,564.84	10,094.00	34.50	33.23	117.01	1,531.60	51.90	865.76	803.40	62.36	13.884		
11,300.00	9,698.48	11,664.84	10,094.00	35.73	34.49	117.01	1,631.59	51.43	865.27	800.61	64.66	13.382		
11,400.00	9,698.62	11,764.84	10,094.00	36.99	35.78	117.02	1,731.59	50.95	864.79	797.77	67.02	12.904		
11,500.00	9,698.76	11,864.84	10,094.00	38.28	37.10	117.03	1,831.59	50.48	864.30	794.88	69.42	12.450		
11,600.00	9,698.90	11,964.83	10,094.00	39.59	38.44	117.03	1,931.59	50.00	863.81	791.94	71.87	12.019		
11,700.00	9,699.04	12,064.83	10,094.00	40.93	39.81	117.04	2,031.58	49.53	863.33	788.96	74.36	11.610		
11,800.00	9,699.18	12,164.83	10,094.00	42.28	41.19	117.04	2,131.58	49.05	862.84	785.95	76.89	11.222		
11,900.00	9,699.32	12,264.83	10,094.00	43.66	42.60	117.05	2,231.58	48.58	862.35	782.91	79.44	10.855		
12,000.00	9,699.46	12,364.83	10,094.00	45.05	44.02	117.06	2,331.58	48.10	861.87	779.84	82.03	10.507		
12,100.00	9,699.60	12,464.83	10,094.00	46.46	45.45	117.06	2,431.57	47.62	861.38	776.74	84.64	10.177		
12,200.00	9,699.74	12,564.83	10,094.00	47.88	46.90	117.07	2,531.57	47.15	860.89	773.62	87.27	9.864		
12,300.00	9,699.88	12,664.83	10,094.00	49.32	48.36	117.08	2,631.57	46.67	860.41	770.47	89.93	9.567		
12,400.00	9,700.02	12,764.82	10,094.00	50.77	49.83	117.08	2,731.57	46.20	859.92	767.31	92.61	9.286		
12,500.00	9,700.16	12,864.82	10,094.00	52.23	51.31	117.09	2,831.57	45.72	859.43	764.13	95.30	9.018		
12,600.00	9,700.30	12,964.82	10,094.00	53.70	52.80	117.09	2,931.56	45.25	858.94	760.93	98.01	8.763		
12,700.00	9,700.44	13,064.82	10,094.00	55.17	54.29	117.10	3,031.56	44.77	858.46	757.72	100.74	8.521		
12,800.00	9,700.58	13,164.82	10,094.00	56.66	55.80	117.11	3,131.56	44.30	857.97	754.49	103.48	8.291		
12,900.00	9,700.72	13,264.82	10,094.00	58.16	57.31	117.11	3,231.56	43.82	857.48	751.25	106.24	8.072		
13,000.00	9,700.86	13,364.82	10,094.00	59.66	58.83	117.12	3,331.55	43.35	857.00	748.00	109.00	7.862		
13,100.00	9,700.99	13,464.82	10,094.00	61.17	60.36	117.12	3,431.55	42.87	856.51	744.73	111.78	7.663		
13,200.00	9,701.13	13,564.81	10,094.00	62.68	61.89	117.13	3,531.55	42.40	856.02	741.46	114.56	7.472		
13,300.00	9,701.27	13,664.81	10,094.00	64.21	63.43	117.14	3,631.55	41.92	855.54	738.18	117.36	7.290		
13,400.00	9,701.41	13,764.81	10,094.00	65.73	64.97	117.14	3,731.54	41.44	855.05	734.88	120.17	7.116		
13,500.00	9,701.55	13,864.81	10,094.00	67.26	66.52	117.15	3,831.54	40.97	854.56	731.58	122.98	6.949		
13,600.00	9,701.69	13,964.81	10,094.00	68.80	68.07	117.16	3,931.54	40.49	854.08	728.28	125.80	6.789		
13,700.00	9,701.83	14,064.81	10,094.00	70.34	69.62	117.16	4,031.54	40.02	853.59	724.96	128.63	6.636		
13,800.00	9,701.97	14,164.81	10,094.00	71.89	71.18	117.17	4,131.53	39.54	853.10	721.64	131.46	6.489		
13,900.00	9,702.11	14,264.81	10,094.00	73.44	72.74	117.17	4,231.53	39.07	852.62	718.31	134.30	6.348		
14,000.00	9,702.25	14,364.80	10,094.00	74.99	74.31	117.18	4,331.53	38.59	852.13	714.98	137.15	6.213		
14,100.00	9,702.39	14,464.80	10,094.00	76.54	75.88	117.19	4,431.53	38.12	851.64	711.64	140.00	6.083		

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

LEAM Drilling Systems LLC

Anticollision Report

Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Thistle Unit
Site Error: 0.00 usft
Reference Well: 117H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 117H
TVD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
MD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Thistle Unit - 138H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,200.00	9,702.53	14,564.80	10,094.00	78.10	77.45	117.19	4,531.53	37.64	851.16	708.30	142.86	5.958		
14,300.00	9,702.67	14,664.80	10,094.00	79.67	79.02	117.20	4,631.52	37.17	850.67	704.95	145.72	5.838		
14,400.00	9,702.81	14,764.80	10,094.00	81.23	80.60	117.21	4,731.52	36.69	850.18	701.60	148.59	5.722		
14,500.00	9,702.95	14,864.80	10,094.00	82.80	82.17	117.21	4,831.52	36.21	849.70	698.24	151.46	5.610		
14,600.00	9,703.09	14,964.80	10,094.00	84.37	83.76	117.22	4,931.52	35.74	849.21	694.88	154.33	5.503		
14,700.00	9,703.23	15,064.80	10,094.00	85.94	85.34	117.22	5,031.51	35.26	848.72	691.51	157.21	5.399		
14,800.00	9,703.37	15,164.80	10,094.00	87.52	86.92	117.23	5,131.51	34.79	848.24	688.15	160.09	5.298		
14,900.00	9,703.51	15,264.79	10,094.00	89.10	88.51	117.24	5,231.51	34.31	847.75	684.78	162.97	5.202		
15,000.00	9,703.65	15,364.79	10,094.00	90.68	90.10	117.24	5,331.51	33.84	847.26	681.40	165.86	5.108		
15,100.00	9,703.79	15,464.79	10,094.00	92.26	91.69	117.25	5,431.50	33.36	846.78	678.02	168.75	5.018		
15,200.00	9,703.93	15,564.79	10,094.00	93.84	93.28	117.26	5,531.50	32.89	846.29	674.64	171.65	4.930		
15,300.00	9,704.07	15,664.79	10,094.00	95.43	94.87	117.26	5,631.50	32.41	845.80	671.26	174.54	4.846		
15,400.00	9,704.21	15,764.79	10,094.00	97.01	96.47	117.27	5,731.50	31.94	845.32	667.88	177.44	4.764		
15,500.00	9,704.35	15,864.79	10,094.00	98.60	98.07	117.28	5,831.49	31.46	844.83	664.49	180.34	4.685		
15,600.00	9,704.49	15,964.79	10,094.00	100.19	99.66	117.28	5,931.49	30.99	844.34	661.10	183.24	4.608		
15,700.00	9,704.63	16,064.78	10,094.00	101.78	101.26	117.29	6,031.49	30.51	843.86	657.71	186.15	4.533		
15,800.00	9,704.76	16,164.78	10,094.00	103.37	102.86	117.29	6,131.49	30.03	843.37	654.31	189.06	4.461		
15,900.00	9,704.90	16,264.78	10,094.00	104.97	104.46	117.30	6,231.49	29.56	842.88	650.92	191.97	4.391		
16,000.00	9,705.04	16,364.78	10,094.00	106.56	106.07	117.31	6,331.48	29.08	842.40	647.52	194.88	4.323		
16,100.00	9,705.18	16,464.78	10,094.00	108.16	107.67	117.31	6,431.48	28.61	841.91	644.12	197.79	4.257		
16,200.00	9,705.32	16,564.78	10,094.00	109.76	109.28	117.32	6,531.48	28.13	841.42	640.72	200.70	4.192		
16,300.00	9,705.46	16,664.78	10,094.00	111.36	110.88	117.33	6,631.48	27.66	840.94	637.32	203.62	4.130		
16,400.00	9,705.60	16,764.78	10,094.00	112.96	112.49	117.33	6,731.47	27.18	840.45	633.92	206.54	4.069		
16,500.00	9,705.74	16,864.77	10,094.00	114.56	114.09	117.34	6,831.47	26.71	839.96	630.51	209.45	4.010		
16,600.00	9,705.88	16,964.77	10,094.00	116.16	115.70	117.35	6,931.47	26.23	839.48	627.10	212.37	3.953		
16,700.00	9,706.02	17,064.77	10,094.00	117.76	117.31	117.35	7,031.47	25.76	838.99	623.70	215.29	3.897		
16,800.00	9,706.16	17,164.77	10,094.00	119.37	118.92	117.36	7,131.46	25.28	838.51	620.29	218.22	3.843		
16,900.00	9,706.30	17,264.77	10,094.00	120.97	120.53	117.36	7,231.46	24.80	838.02	616.88	221.14	3.790		
17,000.00	9,706.44	17,364.77	10,094.00	122.58	122.14	117.37	7,331.46	24.33	837.53	613.47	224.06	3.738		
17,100.00	9,706.58	17,464.77	10,094.00	124.18	123.75	117.38	7,431.46	23.85	837.05	610.06	226.99	3.688		
17,200.00	9,706.72	17,564.77	10,094.00	125.79	125.37	117.38	7,531.45	23.38	836.56	606.64	229.92	3.639		
17,300.00	9,706.86	17,664.76	10,094.00	127.40	126.98	117.39	7,631.45	22.90	836.07	603.23	232.84	3.591		
17,401.09	9,707.00	17,765.85	10,094.00	129.02	128.61	117.40	7,732.54	22.42	835.58	599.78	235.80	3.544 SF		

LEAM Drilling Systems LLC

Anticollision Report

Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Thistle Unit
Site Error: 0.00 usft
Reference Well: 117H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 117H
TVD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
MD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Thistle Unit (Offsets) - 50H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 158- VES GyroFlex V2, 10541-MWD-ISCWSA													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-74.70	61.28	-223.99	232.24				
100.00	100.00	96.97	96.97	0.09	0.09	-74.64	61.52	-223.91	232.20	232.03	0.17	1,359.866	
200.00	200.00	197.13	197.12	0.31	0.17	-74.45	62.24	-223.65	232.15	231.67	0.48	483.126	
300.00	300.00	297.40	297.39	0.54	0.25	-74.28	62.85	-223.32	232.00	231.22	0.78	298.576	
400.00	400.00	397.45	397.45	0.76	0.31	-74.23	63.00	-223.03	231.75	230.70	1.06	219.162	
500.00	500.00	496.97	496.96	0.99	0.36	-74.18	63.13	-222.82	231.59	230.26	1.33	174.429	
508.41	508.41	505.31	505.31	1.00	0.37	-74.18	63.14	-222.81	231.59	230.24	1.35	171.536	
600.00	600.00	596.55	596.55	1.21	0.40	-74.18	63.16	-222.90	231.68	230.09	1.59	145.687	
700.00	700.00	696.32	696.31	1.43	0.43	-74.24	62.96	-223.17	231.88	230.03	1.85	125.365	
800.00	800.00	796.59	796.58	1.66	0.46	-74.27	62.91	-223.41	232.10	229.99	2.11	110.141	
900.00	900.00	896.82	896.81	1.88	0.49	-74.24	63.05	-223.45	232.18	229.82	2.36	98.246	
1,000.00	1,000.00	995.44	995.43	2.11	0.52	-74.25	63.11	-223.75	232.49	229.87	2.62	88.793	
1,100.00	1,100.00	1,095.33	1,095.32	2.33	0.55	-74.29	63.11	-224.45	233.16	230.28	2.87	81.129	
1,200.00	1,200.00	1,196.45	1,196.44	2.56	0.57	-74.38	62.88	-224.94	233.56	230.43	3.13	74.663	
1,300.00	1,300.00	1,296.03	1,296.01	2.78	0.60	-74.52	62.42	-225.37	233.85	230.47	3.38	69.173	
1,400.00	1,400.00	1,395.55	1,395.54	3.01	0.63	-74.66	61.98	-225.96	234.31	230.68	3.63	64.486	
1,500.00	1,500.00	1,494.83	1,494.81	3.23	0.65	-74.75	61.81	-226.80	235.08	231.20	3.89	60.472	
1,600.00	1,600.00	1,594.75	1,594.72	3.46	0.68	-74.63	62.54	-227.54	235.99	231.84	4.14	56.981	
1,700.00	1,700.00	1,694.32	1,694.29	3.68	0.71	-74.54	63.17	-228.37	236.96	232.56	4.40	53.899	
1,800.00	1,800.00	1,794.23	1,794.19	3.91	0.74	-74.51	63.60	-229.52	238.19	233.54	4.65	51.202	
1,900.00	1,900.00	1,894.56	1,894.51	4.13	0.78	-74.40	64.30	-230.34	239.16	234.25	4.91	48.739	
2,000.00	2,000.00	1,994.59	1,994.53	4.36	0.81	-74.30	65.02	-231.24	240.22	235.05	5.16	46.531	
2,100.00	2,100.00	2,095.48	2,095.42	4.58	0.84	-74.25	65.41	-231.99	241.04	235.62	5.42	44.484	
2,200.00	2,200.00	2,196.39	2,196.33	4.81	0.87	-74.19	65.76	-232.32	241.45	235.78	5.67	42.569	
2,300.00	2,300.00	2,295.84	2,295.78	5.03	0.90	-74.14	66.08	-232.51	241.72	235.80	5.92	40.804	
2,400.00	2,399.99	2,396.02	2,395.96	5.24	0.93	29.60	66.38	-232.93	241.45	235.29	6.16	39.187	
2,500.00	2,499.96	2,495.02	2,494.96	5.43	0.96	29.95	66.66	-233.40	239.71	233.33	6.38	37.547	
2,600.00	2,599.86	2,597.01	2,596.95	5.63	0.98	30.59	67.10	-233.75	236.39	229.79	6.60	35.814	
2,700.00	2,699.68	2,697.16	2,697.10	5.83	0.99	31.46	67.32	-233.49	230.98	224.17	6.80	33.943	
2,800.00	2,799.37	2,797.10	2,797.03	6.03	1.00	32.61	67.48	-233.14	224.04	217.03	7.01	31.962	
2,895.31	2,894.24	2,892.09	2,892.03	6.24	1.01	34.04	67.65	-232.70	216.07	208.86	7.21	29.972	
2,900.00	2,898.90	2,896.77	2,896.70	6.25	1.01	34.11	67.66	-232.68	215.65	208.43	7.22	29.870	
3,000.00	2,998.36	2,996.42	2,996.36	6.47	1.02	35.89	68.02	-232.01	206.65	199.21	7.43	27.795	
3,100.00	3,097.83	3,095.73	3,095.65	6.69	1.03	37.84	68.46	-231.29	197.84	190.19	7.66	25.842	
3,200.00	3,197.29	3,195.25	3,195.18	6.92	1.04	39.95	68.82	-230.60	189.27	181.38	7.88	24.012	
3,300.00	3,296.75	3,294.71	3,294.63	7.15	1.05	42.30	69.25	-229.73	180.86	172.75	8.11	22.289	
3,400.00	3,396.21	3,393.80	3,393.72	7.38	1.06	44.87	69.75	-228.95	172.90	164.54	8.35	20.696	
3,500.00	3,495.67	3,492.97	3,492.88	7.62	1.08	47.75	70.48	-228.14	165.42	156.82	8.60	19.229	
3,600.00	3,595.13	3,592.83	3,592.74	7.86	1.10	50.94	71.31	-227.34	158.47	149.61	8.86	17.892	
3,700.00	3,694.59	3,692.27	3,692.17	8.11	1.11	54.26	71.48	-226.34	151.47	142.35	9.12	16.616	
3,800.00	3,794.05	3,791.47	3,791.36	8.36	1.13	57.79	71.80	-225.79	145.45	136.07	9.38	15.504	
3,900.00	3,893.51	3,890.93	3,890.82	8.60	1.14	61.57	71.87	-225.17	139.81	130.16	9.65	14.487	
4,000.00	3,992.97	3,991.34	3,991.23	8.86	1.15	65.70	71.84	-224.45	134.69	124.77	9.92	13.574	
4,100.00	4,092.43	4,090.03	4,089.90	9.11	1.17	70.30	71.73	-222.98	129.83	119.62	10.21	12.721	
4,200.00	4,191.89	4,189.07	4,188.95	9.36	1.18	74.81	71.73	-222.65	126.52	116.04	10.49	12.065	
4,300.00	4,291.35	4,288.63	4,288.51	9.62	1.20	79.61	71.78	-222.20	124.05	113.28	10.77	11.518	
4,400.00	4,390.81	4,388.65	4,388.52	9.88	1.21	84.98	71.84	-220.87	122.23	111.17	11.05	11.057	
4,500.00	4,490.28	4,489.27	4,489.09	10.13	1.23	91.21	71.49	-217.88	120.74	109.41	11.33	10.655	
4,600.00	4,589.74	4,589.19	4,588.90	10.39	1.24	98.11	70.39	-213.48	119.79	108.20	11.60	10.329	
4,627.01	4,616.60	4,615.98	4,615.66	10.47	1.24	100.03	70.00	-212.16	119.74	108.07	11.67	10.263 CC, ES	
4,700.00	4,689.20	4,688.39	4,687.96	10.66	1.25	105.30	68.86	-208.42	120.18	108.33	11.85	10.144	

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

LEAM Drilling Systems LLC

Anticollision Report

Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Thistle Unit
Site Error: 0.00 usft
Reference Well: 117H
Well Error: 0.00 usft
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Reference Design: Plan #1

Local Co-ordinate Reference: Well 117H
TVD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft
(Original Well Elev)
MD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft
(Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Thistle Unit (Offsets) - 50H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 158- VES GyroFlex V2, 10541-MWD-ISCWSA													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
4,800.00	4,788.66	4,787.99	4,787.35	10.92	1.27	112.87	66.70	-202.32	122.01	109.94	12.08	10.104 SF	
4,900.00	4,888.12	4,887.18	4,886.24	11.18	1.28	120.61	63.78	-195.23	125.46	113.18	12.28	10.217	
5,000.00	4,987.58	4,986.50	4,985.24	11.45	1.30	127.98	60.19	-188.06	130.52	118.06	12.47	10.468	
5,100.00	5,087.04	5,085.59	5,084.05	11.71	1.32	134.45	56.47	-181.67	137.07	124.41	12.65	10.834	
5,200.00	5,186.50	5,184.28	5,182.52	11.98	1.33	140.01	52.86	-176.01	144.87	132.03	12.84	11.287	
5,300.00	5,285.96	5,282.12	5,280.16	12.24	1.35	144.74	49.96	-170.50	154.34	141.31	13.02	11.851	
5,400.00	5,385.42	5,380.81	5,378.67	12.51	1.37	148.80	47.56	-164.98	165.10	151.88	13.22	12.487	
5,500.00	5,484.88	5,480.47	5,478.16	12.78	1.39	152.33	45.07	-159.75	176.30	162.87	13.43	13.126	
5,600.00	5,584.34	5,579.82	5,577.36	13.05	1.40	155.35	42.48	-155.05	187.60	173.95	13.65	13.748	
5,700.00	5,683.80	5,678.78	5,676.20	13.32	1.42	157.86	40.30	-150.71	199.31	185.44	13.87	14.374	
5,800.00	5,783.26	5,779.14	5,776.48	13.59	1.45	159.92	38.53	-146.92	211.10	197.00	14.10	14.974	
5,900.00	5,882.73	5,879.32	5,876.56	13.86	1.46	161.90	35.94	-143.52	222.37	208.04	14.33	15.518	
6,000.00	5,982.19	5,980.11	5,977.26	14.13	1.48	163.72	32.98	-140.41	233.44	218.87	14.56	16.029	
6,100.00	6,081.65	6,080.71	6,077.79	14.40	1.50	165.31	29.92	-138.13	243.93	229.14	14.80	16.484	
6,200.00	6,181.11	6,181.12	6,178.14	14.67	1.51	166.65	27.05	-136.49	254.13	239.10	15.03	16.904	
6,300.00	6,280.57	6,282.03	6,279.02	14.94	1.52	167.76	24.52	-135.59	263.94	248.67	15.27	17.284	
6,400.00	6,380.03	6,381.13	6,378.09	15.21	1.53	168.73	22.11	-135.03	273.57	258.07	15.50	17.650	
6,500.00	6,479.49	6,479.74	6,476.67	15.49	1.55	169.53	20.21	-134.44	283.50	267.77	15.73	18.023	
6,600.00	6,578.95	6,578.87	6,575.79	15.76	1.56	170.34	18.13	-133.58	293.67	277.71	15.96	18.396	
6,700.00	6,678.41	6,677.77	6,674.65	16.03	1.58	171.08	16.14	-132.62	304.03	287.83	16.20	18.767	
6,800.00	6,777.87	6,776.43	6,773.30	16.31	1.60	171.70	14.62	-131.65	314.61	298.17	16.44	19.141	
6,900.00	6,877.33	6,874.61	6,871.47	16.58	1.62	172.23	13.46	-130.48	325.55	308.88	16.68	19.522	
7,000.00	6,976.79	6,973.17	6,970.01	16.85	1.64	172.74	12.31	-129.01	336.79	319.87	16.92	19.906	
7,100.00	7,076.25	7,071.54	7,068.34	17.13	1.67	173.30	10.78	-127.13	348.34	331.17	17.16	20.296	
7,200.00	7,175.71	7,171.38	7,168.16	17.40	1.69	173.82	9.34	-125.10	360.05	342.64	17.41	20.678	
7,300.00	7,275.18	7,272.24	7,268.99	17.68	1.72	174.32	7.69	-123.54	371.27	353.61	17.66	21.018	
7,400.00	7,374.64	7,372.00	7,368.72	17.95	1.74	174.81	5.89	-122.00	382.46	364.55	17.91	21.352	
7,500.00	7,474.10	7,471.33	7,468.04	18.23	1.76	175.21	4.34	-120.84	393.40	375.25	18.16	21.666	
7,600.00	7,573.56	7,569.60	7,566.25	18.51	1.79	175.78	1.66	-118.97	404.70	386.30	18.40	21.995	
7,700.00	7,673.02	7,669.03	7,665.65	18.78	1.81	176.21	-0.27	-117.28	416.08	397.43	18.65	22.313	
7,800.00	7,772.48	7,769.70	7,766.28	19.06	1.84	176.65	-2.41	-115.64	427.35	408.45	18.90	22.611	
7,900.00	7,871.94	7,868.90	7,865.45	19.33	1.86	176.99	-4.16	-114.42	438.37	419.23	19.15	22.896	
8,000.00	7,971.40	7,969.47	7,966.00	19.61	1.89	177.37	-6.27	-113.06	449.44	430.05	19.40	23.169	
8,100.00	8,070.86	8,069.01	8,065.51	19.89	1.91	177.73	-8.39	-111.97	460.26	440.82	19.64	23.429	
8,200.00	8,170.32	8,168.54	8,165.01	20.16	1.93	178.03	-10.26	-110.94	471.11	451.22	19.89	23.684	
8,300.00	8,269.78	8,268.31	8,264.77	20.44	1.96	178.28	-11.79	-110.07	481.91	461.77	20.14	23.928	
8,400.00	8,369.24	8,368.25	8,364.68	20.72	1.98	178.57	-13.79	-109.17	492.62	472.23	20.39	24.163	
8,500.00	8,468.70	8,468.38	8,464.78	21.00	2.01	178.91	-16.36	-108.25	503.22	482.59	20.64	24.385	
8,600.00	8,568.16	8,568.71	8,565.08	21.27	2.03	179.20	-18.69	-107.56	513.67	492.79	20.88	24.596	
8,700.00	8,667.63	8,669.06	8,665.40	21.55	2.05	179.46	-20.81	-107.10	523.97	502.83	21.13	24.795	
8,800.00	8,767.09	8,769.43	8,765.75	21.83	2.07	179.69	-22.88	-106.88	534.05	512.68	21.38	24.982	
8,900.00	8,866.55	8,867.40	8,863.70	22.11	2.09	179.90	-24.84	-106.65	544.18	522.57	21.61	25.180	
9,000.00	8,966.01	8,964.03	8,960.32	22.38	2.12	-179.93	-26.37	-106.00	554.82	532.98	21.84	25.400	
9,100.00	9,065.47	9,065.77	9,062.04	22.66	2.14	-179.80	-27.52	-105.28	565.62	543.52	22.10	25.593	
9,200.93	9,165.85	9,170.26	9,166.53	22.94	2.16	-179.66	-29.04	-105.43	575.60	553.24	22.37	25.736	
9,250.00	9,214.64	9,218.88	9,215.14	23.07	2.17	132.09	-29.63	-105.61	579.86	557.38	22.48	25.799	
9,300.00	9,264.02	9,268.66	9,264.92	23.18	2.17	108.55	-30.18	-105.82	583.13	560.54	22.59	25.815	
9,350.00	9,312.62	9,317.63	9,313.88	23.28	2.18	99.27	-30.75	-106.06	585.46	562.76	22.71	25.785	
9,400.00	9,359.98	9,365.63	9,361.88	23.38	2.18	95.40	-31.38	-106.34	587.08	564.26	22.83	25.719	
9,450.00	9,405.67	9,411.75	9,408.00	23.46	2.19	94.01	-32.11	-106.64	588.35	565.40	22.95	25.634	

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

LEAM Drilling Systems LLC

Anticollision Report

Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Thistle Unit
Site Error: 0.00 usft
Reference Well: 117H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 117H
TVD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft
(Original Well Elev)
MD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft
(Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Thistle Unit (Offsets) - 50H - OH - OH													Offset Site Error: 0.00 usft	
Survey Program: 158- VES GyroFlex V2, 10541-MWD-ISCWSA													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance					Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor	
9,500.00	9,449.26	9,455.34	9,451.57	23.54	2.20	93.96	-32.97	-106.96	589.73	566.65	23.08	25.551		
9,550.00	9,490.36	9,496.06	9,492.28	23.61	2.20	94.63	-33.96	-107.26	591.76	568.55	23.21	25.493		
9,600.00	9,528.60	9,536.10	9,532.30	23.67	2.21	95.82	-35.09	-107.63	594.95	571.58	23.37	25.458		
9,650.00	9,563.60	9,572.78	9,568.96	23.72	2.21	97.11	-36.24	-108.16	599.77	576.23	23.53	25.485		
9,700.00	9,595.07	9,604.19	9,600.35	23.78	2.22	98.13	-37.30	-108.74	606.79	583.10	23.69	25.617		
9,750.00	9,622.69	9,628.97	9,625.11	23.83	2.22	98.59	-38.16	-109.18	616.59	592.78	23.81	25.892		
9,800.00	9,646.23	9,649.76	9,645.88	23.89	2.22	98.54	-38.89	-109.51	629.48	605.54	23.94	26.295		
9,850.00	9,665.46	9,666.37	9,662.48	23.96	2.23	97.89	-39.47	-109.74	645.58	621.52	24.06	26.835		
9,900.00	9,680.20	9,678.68	9,674.78	24.04	2.23	96.53	-39.91	-109.90	664.84	640.68	24.17	27.513		
9,950.00	9,690.33	9,686.57	9,682.67	24.14	2.23	94.41	-40.20	-109.99	687.08	662.83	24.26	28.325		
10,000.00	9,695.74	9,690.50	9,686.59	24.26	2.23	91.56	-40.34	-110.03	711.99	687.65	24.33	29.259		
10,031.09	9,696.71	9,690.50	9,686.59	24.35	2.23	89.39	-40.34	-110.03	728.63	704.26	24.37	29.897		
10,100.00	9,696.81	9,687.62	9,683.72	24.60	2.23	89.12	-40.23	-110.00	768.56	744.13	24.43	31.459		
10,200.00	9,696.95	9,684.39	9,680.49	25.07	2.23	88.82	-40.12	-109.96	833.25	808.76	24.49	34.026		
10,300.00	9,697.09	9,681.17	9,677.27	25.67	2.23	88.52	-40.00	-109.93	904.38	879.86	24.53	36.876		
10,400.00	9,697.22	9,677.96	9,674.06	26.37	2.23	88.22	-39.89	-109.89	980.55	956.01	24.55	39.946		
10,500.00	9,697.36	9,674.76	9,670.86	27.16	2.23	87.91	-39.77	-109.85	1,060.68	1,036.12	24.56	43.187		
10,600.00	9,697.50	9,671.56	9,667.67	28.04	2.23	87.62	-39.66	-109.81	1,143.93	1,119.36	24.57	46.560		
10,700.00	9,697.64	9,668.38	9,664.49	28.98	2.23	87.32	-39.55	-109.77	1,229.67	1,205.10	24.57	50.038		
10,800.00	9,697.78	9,665.21	9,661.32	29.99	2.23	87.02	-39.43	-109.73	1,317.42	1,292.84	24.58	53.596		
10,900.00	9,697.92	9,662.05	9,658.16	31.05	2.22	86.72	-39.32	-109.68	1,406.79	1,382.20	24.59	57.217		
11,000.00	9,698.06	9,658.89	9,655.01	32.16	2.22	86.43	-39.21	-109.64	1,497.50	1,472.91	24.59	60.887		
11,100.00	9,698.20	9,655.75	9,651.87	33.31	2.22	86.14	-39.10	-109.60	1,589.32	1,564.72	24.60	64.596		
11,200.00	9,698.34	12,638.77	11,235.55	34.50	28.30	160.42	1,554.76	-171.50	1,635.09	1,599.96	35.13	46.550		
11,300.00	9,698.48	12,708.00	11,235.27	35.73	29.47	160.49	1,623.96	-173.71	1,633.73	1,597.44	36.30	45.012		
11,335.38	9,698.53	12,745.22	11,235.38	36.17	30.10	160.52	1,661.16	-174.66	1,633.47	1,596.62	36.85	44.328		
11,400.00	9,698.62	12,803.00	11,236.55	36.99	31.07	160.57	1,718.92	-175.84	1,634.11	1,596.36	37.75	43.287		
11,500.00	9,698.76	12,897.21	11,238.62	38.28	32.69	160.64	1,813.10	-177.14	1,635.54	1,596.32	39.22	41.697		
11,600.00	9,698.90	13,046.13	11,236.53	39.59	35.29	160.63	1,961.99	-177.80	1,633.52	1,592.13	41.38	39.474		
11,700.00	9,699.04	13,115.08	11,235.69	40.93	36.47	160.64	2,030.93	-178.40	1,632.04	1,589.41	42.63	38.285		
11,711.60	9,699.06	13,121.53	11,235.73	41.08	36.58	160.64	2,037.38	-178.49	1,632.02	1,589.27	42.75	38.172		
11,800.00	9,699.18	13,181.00	11,237.16	42.28	37.59	160.70	2,096.81	-179.74	1,633.15	1,589.34	43.80	37.284		
11,900.00	9,699.32	13,330.13	11,240.98	43.66	40.17	160.87	2,245.84	-183.53	1,635.17	1,589.29	45.88	35.637		
12,000.00	9,699.46	13,465.00	11,237.68	45.05	42.55	160.94	2,380.62	-186.93	1,631.57	1,583.70	47.87	34.084		
12,100.00	9,699.60	13,535.99	11,236.21	46.46	43.78	160.98	2,451.57	-188.66	1,628.80	1,579.65	49.15	33.140		
12,172.47	9,699.70	13,579.30	11,236.38	47.49	44.52	161.02	2,494.86	-189.95	1,628.28	1,578.32	49.96	32.588		
12,200.00	9,699.74	13,594.93	11,236.68	47.88	44.78	161.04	2,510.47	-190.49	1,628.44	1,578.18	50.26	32.402		
12,300.00	9,699.88	13,653.00	11,239.00	49.32	45.77	161.15	2,568.44	-192.91	1,630.71	1,579.41	51.30	31.787		
12,400.00	9,700.02	13,804.24	11,246.49	50.77	48.36	161.51	2,719.25	-201.40	1,633.89	1,580.62	53.27	30.670		
12,500.00	9,700.16	13,912.27	11,248.29	52.23	50.23	161.77	2,827.03	-208.60	1,633.18	1,578.38	54.80	29.805		
12,505.41	9,700.16	13,916.43	11,248.38	52.31	50.30	161.78	2,831.17	-208.86	1,633.17	1,578.31	54.86	29.769		
12,600.00	9,700.30	13,991.01	11,250.42	53.70	51.56	161.95	2,905.60	-213.24	1,633.77	1,577.74	56.03	29.159		
12,700.00	9,700.44	14,137.36	11,253.50	55.17	54.08	162.20	3,051.76	-219.95	1,634.53	1,576.53	58.00	28.183		
12,800.00	9,700.58	14,261.06	11,252.69	56.66	56.23	162.44	3,175.23	-227.31	1,631.91	1,572.21	59.70	27.336		
12,900.00	9,700.72	14,381.00	11,250.35	58.16	58.32	162.67	3,294.89	-235.07	1,627.91	1,566.56	61.34	26.537		
13,000.00	9,700.86	14,448.01	11,248.42	59.66	59.47	162.76	3,361.79	-238.30	1,623.95	1,561.41	62.54	25.967		
13,085.58	9,700.97	14,497.58	11,248.33	60.95	60.32	162.79	3,411.34	-239.20	1,623.12	1,559.63	63.50	25.563		
13,100.00	9,700.99	14,508.26	11,248.38	61.17	60.50	162.79	3,422.02	-239.30	1,623.14	1,559.45	63.68	25.488		
13,200.00	9,701.13	14,571.00	11,249.08	62.68	61.56	162.80	3,484.76	-239.33	1,624.22	1,559.36	64.86	25.043		
13,300.00	9,701.27	14,644.56	11,250.97	64.21	62.81	162.78	3,558.28	-238.00	1,627.21	1,561.03	66.18	24.586		
13,400.00	9,701.41	14,738.49	11,254.64	65.73	64.41	162.70	3,652.08	-234.64	1,631.85	1,564.02	67.83	24.057		

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

LEAM Drilling Systems LLC

Anticollision Report

Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Thistle Unit
Site Error: 0.00 usft
Reference Well: 117H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 117H
TVD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
MD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Thistle Unit (Offsets) - 50H - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 158- VES GyroFlex V2, 10541-MWD-ISCWSA												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
13,500.00	9,701.55	14,853.19	11,258.39	67.26	66.39	162.59	3,766.64	-230.38	1,635.95	1,566.15	69.80	23.438	
13,600.00	9,701.69	14,963.33	11,261.17	68.80	68.29	162.49	3,876.67	-226.44	1,639.31	1,567.59	71.71	22.859	
13,700.00	9,701.83	15,067.99	11,262.84	70.34	70.10	162.38	3,981.25	-222.79	1,641.73	1,568.17	73.56	22.317	
13,800.00	9,701.97	15,138.00	11,265.06	71.89	71.28	162.34	4,051.19	-220.66	1,645.48	1,570.59	74.89	21.972	
13,900.00	9,702.11	15,244.11	11,269.45	73.44	73.08	162.30	4,157.18	-218.13	1,650.02	1,573.33	76.69	21.515	
14,000.00	9,702.25	15,355.34	11,274.14	74.99	74.98	162.35	4,268.31	-218.38	1,653.84	1,575.39	78.45	21.081	
14,100.00	9,702.39	15,463.53	11,278.45	76.54	76.85	162.46	4,376.40	-220.19	1,657.00	1,576.88	80.11	20.683	
14,200.00	9,702.53	15,579.89	11,282.44	78.10	78.87	162.56	4,492.67	-222.02	1,659.69	1,577.81	81.88	20.270	
14,300.00	9,702.67	15,697.03	11,285.43	79.67	80.90	162.70	4,609.72	-225.59	1,661.07	1,577.48	83.59	19.872	
14,400.00	9,702.81	15,817.07	11,287.54	81.23	83.01	162.86	4,729.66	-229.74	1,661.63	1,576.32	85.31	19.478	
14,489.84	9,702.94	15,903.00	11,288.09	82.64	84.53	162.97	4,815.54	-232.91	1,661.11	1,574.48	86.63	19.175	
14,500.00	9,702.95	15,903.00	11,288.09	82.80	84.53	162.97	4,815.54	-232.91	1,661.14	1,574.46	86.68	19.165	
14,600.00	9,703.09	15,903.00	11,288.09	84.37	84.53	162.97	4,815.54	-232.91	1,664.76	1,577.76	86.99	19.137	
14,700.00	9,703.23	15,903.00	11,288.09	85.94	84.53	162.97	4,815.54	-232.91	1,674.35	1,587.30	87.04	19.236	
14,800.00	9,703.37	15,903.00	11,288.09	87.52	84.53	162.97	4,815.54	-232.91	1,689.82	1,602.97	86.84	19.458	
14,900.00	9,703.51	15,903.00	11,288.09	89.10	84.53	162.97	4,815.54	-232.91	1,711.00	1,624.59	86.40	19.802	
15,000.00	9,703.65	15,903.00	11,288.09	90.68	84.53	162.97	4,815.54	-232.91	1,737.68	1,651.94	85.75	20.265	
15,100.00	9,703.79	15,903.00	11,288.09	92.26	84.53	162.97	4,815.54	-232.91	1,769.63	1,684.72	84.90	20.843	
15,200.00	9,703.93	15,903.00	11,288.09	93.84	84.53	162.97	4,815.54	-232.91	1,806.55	1,722.65	83.90	21.532	
15,300.00	9,704.07	15,903.00	11,288.09	95.43	84.53	162.97	4,815.54	-232.91	1,848.15	1,765.38	82.77	22.329	
15,400.00	9,704.21	15,903.00	11,288.09	97.01	84.53	162.97	4,815.54	-232.91	1,894.12	1,812.58	81.54	23.231	
15,500.00	9,704.35	15,903.00	11,288.09	98.60	84.53	162.97	4,815.54	-232.91	1,944.15	1,863.92	80.23	24.232	
15,600.00	9,704.49	15,903.00	11,288.09	100.19	84.53	162.97	4,815.54	-232.91	1,997.94	1,919.06	78.88	25.330	
15,700.00	9,704.63	15,903.00	11,288.09	101.78	84.53	162.97	4,815.54	-232.91	2,055.18	1,977.69	77.50	26.520	
15,800.00	9,704.76	15,903.00	11,288.09	103.37	84.53	162.97	4,815.54	-232.91	2,115.61	2,039.51	76.11	27.798	
15,900.00	9,704.90	15,903.00	11,288.09	104.97	84.53	162.97	4,815.54	-232.91	2,178.96	2,104.23	74.72	29.160	
16,000.00	9,705.04	15,903.00	11,288.09	106.56	84.53	162.97	4,815.54	-232.91	2,244.97	2,171.61	73.36	30.602	
16,100.00	9,705.18	15,903.00	11,288.09	108.16	84.53	162.97	4,815.54	-232.91	2,313.42	2,241.40	72.02	32.120	
16,200.00	9,705.32	15,903.00	11,288.09	109.76	84.53	162.97	4,815.54	-232.91	2,384.10	2,313.38	70.72	33.710	
16,300.00	9,705.46	15,903.00	11,288.09	111.36	84.53	162.97	4,815.54	-232.91	2,456.82	2,387.36	69.46	35.368	
16,400.00	9,705.60	15,903.00	11,288.09	112.96	84.53	162.97	4,815.54	-232.91	2,531.41	2,463.16	68.25	37.090	
16,500.00	9,705.74	15,903.00	11,288.09	114.56	84.53	162.97	4,815.54	-232.91	2,607.69	2,540.61	67.08	38.873	
16,600.00	9,705.88	15,903.00	11,288.09	116.16	84.53	162.97	4,815.54	-232.91	2,685.53	2,619.57	65.96	40.713	
16,700.00	9,706.02	15,903.00	11,288.09	117.76	84.53	162.97	4,815.54	-232.91	2,764.80	2,699.90	64.90	42.598	
16,800.00	9,706.16	15,903.00	11,288.09	119.37	84.53	162.97	4,815.54	-232.91	2,845.37	2,781.24	64.14	44.363	
16,900.00	9,706.30	15,903.00	11,288.09	120.97	84.53	162.97	4,815.54	-232.91	2,927.15	2,863.74	63.41	46.165	
17,000.00	9,706.44	15,903.00	11,288.09	122.58	84.53	162.97	4,815.54	-232.91	3,010.02	2,947.31	62.71	48.000	
17,100.00	9,706.58	15,903.00	11,288.09	124.18	84.53	162.97	4,815.54	-232.91	3,093.91	3,031.86	62.04	49.867	
17,200.00	9,706.72	15,903.00	11,288.09	125.79	84.53	162.97	4,815.54	-232.91	3,178.73	3,117.32	61.41	51.763	
17,300.00	9,706.86	15,903.00	11,288.09	127.40	84.53	162.97	4,815.54	-232.91	3,264.40	3,203.60	60.81	53.685	
17,401.09	9,707.00	15,903.00	11,288.09	129.02	84.53	162.97	4,815.54	-232.91	3,351.82	3,291.59	60.23	55.652	

LEAM Drilling Systems LLC

Anticollision Report

Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Thistle Unit
Site Error: 0.00 usft
Reference Well: 117H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 117H
TVD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
MD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Thistle Unit (Offsets) - 58H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 1629-MWD-ISCWSA, 16290-Project													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,895.31	2,894.24	16,290.00	11,265.27	6.24	93.92	109.89	5,487.36	-234.31	9,971.31	9,929.87	41.45	240.580		
2,900.00	2,898.90	16,290.00	11,265.27	6.25	93.92	109.89	5,487.36	-234.31	9,967.48	9,926.03	41.45	240.471		
3,000.00	2,998.36	16,290.00	11,265.27	6.47	93.92	109.89	5,487.36	-234.31	9,885.83	9,844.27	41.55	237.913		
3,100.00	3,097.83	16,290.00	11,265.27	6.69	93.92	109.89	5,487.36	-234.31	9,804.51	9,762.85	41.66	235.320		
3,200.00	3,197.29	16,290.00	11,265.27	6.92	93.92	109.89	5,487.36	-234.31	9,723.55	9,681.76	41.79	232.698		
3,300.00	3,296.75	16,290.00	11,265.27	7.15	93.92	109.89	5,487.36	-234.31	9,642.94	9,601.02	41.92	230.049		
3,400.00	3,396.21	16,290.00	11,265.27	7.38	93.92	109.89	5,487.36	-234.31	9,562.70	9,520.64	42.06	227.378		
3,500.00	3,495.67	16,290.00	11,265.27	7.62	93.92	109.89	5,487.36	-234.31	9,482.83	9,440.63	42.20	224.688		
3,600.00	3,595.13	16,290.00	11,265.27	7.86	93.92	109.89	5,487.36	-234.31	9,403.35	9,360.99	42.36	221.984		
3,700.00	3,694.59	16,290.00	11,265.27	8.11	93.92	109.89	5,487.36	-234.31	9,324.27	9,281.74	42.52	219.268		
3,800.00	3,794.05	16,290.00	11,265.27	8.36	93.92	109.89	5,487.36	-234.31	9,245.59	9,202.89	42.70	216.544		
3,900.00	3,893.51	16,290.00	11,265.27	8.60	93.92	109.89	5,487.36	-234.31	9,167.32	9,124.45	42.88	213.815		
4,000.00	3,992.97	16,290.00	11,265.27	8.86	93.92	109.89	5,487.36	-234.31	9,089.48	9,046.42	43.06	211.083		
4,100.00	4,092.43	16,290.00	11,265.27	9.11	93.92	109.89	5,487.36	-234.31	9,012.08	8,968.83	43.25	208.351		
4,200.00	4,191.89	16,290.00	11,265.27	9.36	93.92	109.89	5,487.36	-234.31	8,935.13	8,891.68	43.45	205.622		
4,300.00	4,291.35	16,290.00	11,265.27	9.62	93.92	109.89	5,487.36	-234.31	8,858.64	8,814.98	43.66	202.897		
4,400.00	4,390.81	16,290.00	11,265.27	9.88	93.92	109.89	5,487.36	-234.31	8,782.62	8,738.74	43.87	200.179		
4,500.00	4,490.28	16,290.00	11,265.27	10.13	93.92	109.89	5,487.36	-234.31	8,707.08	8,662.99	44.09	197.469		
4,600.00	4,589.74	16,290.00	11,265.27	10.39	93.92	109.89	5,487.36	-234.31	8,632.05	8,587.73	44.32	194.770		
4,700.00	4,689.20	16,290.00	11,265.27	10.66	93.92	109.89	5,487.36	-234.31	8,557.52	8,512.97	44.55	192.083		
4,800.00	4,788.66	16,290.00	11,265.27	10.92	93.92	109.89	5,487.36	-234.31	8,483.52	8,438.73	44.79	189.410		
4,900.00	4,888.12	16,290.00	11,265.27	11.18	93.92	109.89	5,487.36	-234.31	8,410.05	8,365.02	45.03	186.751		
5,000.00	4,987.58	16,290.00	11,265.27	11.45	93.92	109.89	5,487.36	-234.31	8,337.14	8,291.85	45.28	184.109		
5,100.00	5,087.04	16,290.00	11,265.27	11.71	93.92	109.89	5,487.36	-234.31	8,264.79	8,219.25	45.54	181.485		
5,200.00	5,186.50	16,290.00	11,265.27	11.98	93.92	109.89	5,487.36	-234.31	8,193.03	8,147.22	45.80	178.879		
5,300.00	5,285.96	16,290.00	11,265.27	12.24	93.92	109.89	5,487.36	-234.31	8,121.86	8,075.79	46.07	176.293		
5,400.00	5,385.42	16,290.00	11,265.27	12.51	93.92	109.89	5,487.36	-234.31	8,051.31	8,004.96	46.34	173.729		
5,500.00	5,484.88	16,290.00	11,265.27	12.78	93.92	109.89	5,487.36	-234.31	7,981.38	7,934.76	46.62	171.186		
5,600.00	5,584.34	16,290.00	11,265.27	13.05	93.92	109.89	5,487.36	-234.31	7,912.10	7,865.19	46.91	168.667		
5,700.00	5,683.80	16,290.00	11,265.27	13.32	93.92	109.89	5,487.36	-234.31	7,843.49	7,796.28	47.20	166.171		
5,800.00	5,783.26	16,290.00	11,265.27	13.59	93.92	109.89	5,487.36	-234.31	7,775.55	7,728.05	47.50	163.701		
5,900.00	5,882.73	16,290.00	11,265.27	13.86	93.92	109.89	5,487.36	-234.31	7,708.31	7,660.51	47.80	161.256		
6,000.00	5,982.19	16,290.00	11,265.27	14.13	93.92	109.89	5,487.36	-234.31	7,641.79	7,593.68	48.11	158.837		
6,100.00	6,081.65	16,290.00	11,265.27	14.40	93.92	109.89	5,487.36	-234.31	7,576.01	7,527.58	48.43	156.446		
6,200.00	6,181.11	16,290.00	11,265.27	14.67	93.92	109.89	5,487.36	-234.31	7,510.98	7,462.23	48.75	154.083		
6,300.00	6,280.57	16,290.00	11,265.27	14.94	93.92	109.89	5,487.36	-234.31	7,446.73	7,397.65	49.07	151.749		
6,400.00	6,380.03	16,290.00	11,265.27	15.21	93.92	109.89	5,487.36	-234.31	7,383.27	7,333.86	49.40	149.445		
6,500.00	6,479.49	16,290.00	11,265.27	15.49	93.92	109.89	5,487.36	-234.31	7,320.63	7,270.82	49.80	146.986		
6,600.00	6,578.95	16,290.00	11,265.27	15.76	93.92	109.89	5,487.36	-234.31	7,258.82	7,208.51	50.31	144.281		
6,700.00	6,678.41	16,290.00	11,265.27	16.03	93.92	109.89	5,487.36	-234.31	7,197.88	7,147.05	50.82	141.623		
6,800.00	6,777.87	16,290.00	11,265.27	16.31	93.92	109.89	5,487.36	-234.31	7,137.81	7,086.46	51.35	139.013		
6,900.00	6,877.33	16,290.00	11,265.27	16.58	93.92	109.89	5,487.36	-234.31	7,078.65	7,026.77	51.88	136.451		
7,000.00	6,976.79	16,290.00	11,265.27	16.85	93.92	109.89	5,487.36	-234.31	7,020.41	6,967.99	52.42	133.937		
7,100.00	7,076.25	16,290.00	11,265.27	17.13	93.92	109.89	5,487.36	-234.31	6,963.12	6,910.16	52.96	131.472		
7,200.00	7,175.71	16,290.00	11,265.27	17.40	93.92	109.89	5,487.36	-234.31	6,906.81	6,853.29	53.52	129.056		
7,300.00	7,275.18	16,290.00	11,265.27	17.68	93.92	109.89	5,487.36	-234.31	6,851.49	6,797.41	54.08	126.689		
7,400.00	7,374.64	16,290.00	11,265.27	17.95	93.92	109.89	5,487.36	-234.31	6,797.19	6,742.54	54.65	124.372		
7,500.00	7,474.10	16,290.00	11,265.27	18.23	93.92	109.89	5,487.36	-234.31	6,743.94	6,688.71	55.23	122.104		
7,600.00	7,573.56	16,290.00	11,265.27	18.51	93.92	109.89	5,487.36	-234.31	6,691.76	6,635.94	55.82	119.886		
7,700.00	7,673.02	16,290.00	11,265.27	18.78	93.92	109.89	5,487.36	-234.31	6,640.67	6,584.26	56.41	117.718		
7,800.00	7,772.48	16,290.00	11,265.27	19.06	93.92	109.89	5,487.36	-234.31	6,590.71	6,533.70	57.01	115.600		

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 117H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Reference Site:	Thistle Unit	MD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	117H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 58H - OH - OH														Offset Site Error: 0.00 usft
Survey Program: 1629-MWD-ISCWSA, 16290-Project														Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
7,900.00	7,871.94	16,290.00	11,265.27	19.33	93.92	109.89	5,487.36	-234.31	6,541.89	6,484.27	57.62	113.532		
8,000.00	7,971.40	16,290.00	11,265.27	19.61	93.92	109.89	5,487.36	-234.31	6,494.25	6,436.01	58.24	111.515		
8,100.00	8,070.86	16,290.00	11,265.27	19.89	93.92	109.89	5,487.36	-234.31	6,447.81	6,388.95	58.86	109.547		
8,200.00	8,170.32	16,290.00	11,265.27	20.16	93.92	109.89	5,487.36	-234.31	6,402.59	6,343.10	59.49	107.631		
8,300.00	8,269.78	16,290.00	11,265.27	20.44	93.92	109.89	5,487.36	-234.31	6,358.62	6,298.50	60.12	105.764		
8,400.00	8,369.24	16,290.00	11,265.27	20.72	93.92	109.89	5,487.36	-234.31	6,315.93	6,255.17	60.76	103.948		
8,500.00	8,468.70	16,290.00	11,265.27	21.00	93.92	109.89	5,487.36	-234.31	6,274.54	6,213.14	61.41	102.182		
8,600.00	8,568.16	16,290.00	11,265.27	21.27	93.92	109.89	5,487.36	-234.31	6,234.48	6,172.43	62.06	100.466		
8,700.00	8,667.63	16,290.00	11,265.27	21.55	93.92	109.89	5,487.36	-234.31	6,195.78	6,133.07	62.71	98.801		
8,800.00	8,767.09	16,290.00	11,265.27	21.83	93.92	109.89	5,487.36	-234.31	6,158.46	6,095.09	63.37	97.185		
8,900.00	8,866.55	16,290.00	11,265.27	22.11	93.92	109.89	5,487.36	-234.31	6,122.54	6,058.51	64.03	95.619		
9,000.00	8,966.01	16,290.00	11,265.27	22.38	93.92	109.89	5,487.36	-234.31	6,088.06	6,023.36	64.70	94.103		
9,100.00	9,065.47	16,290.00	11,265.27	22.66	93.92	109.89	5,487.36	-234.31	6,055.03	5,989.66	65.36	92.636		
9,200.93	9,165.85	16,290.00	11,265.27	22.94	93.92	109.89	5,487.36	-234.31	6,023.19	5,957.15	66.04	91.205		
9,250.00	9,214.64	16,290.00	11,265.27	23.07	93.92	62.05	5,487.36	-234.31	6,006.10	5,939.73	66.36	90.502		
9,300.00	9,264.02	16,290.00	11,265.27	23.18	93.92	38.45	5,487.36	-234.31	5,984.68	5,917.99	66.69	89.741		
9,350.00	9,312.82	16,290.00	11,265.27	23.28	93.92	28.88	5,487.36	-234.31	5,959.38	5,892.37	67.01	88.937		
9,400.00	9,359.98	16,290.00	11,265.27	23.38	93.92	23.95	5,487.36	-234.31	5,930.38	5,863.06	67.32	88.096		
9,450.00	9,405.67	16,290.00	11,265.27	23.46	93.92	21.49	5,487.36	-234.31	5,897.90	5,830.28	67.62	87.225		
9,500.00	9,449.26	16,290.00	11,265.27	23.54	93.92	20.32	5,487.36	-234.31	5,862.18	5,794.27	67.91	86.329		
9,550.00	9,490.36	16,290.00	11,265.27	23.61	93.92	20.06	5,487.36	-234.31	5,823.49	5,755.31	68.18	85.415		
9,600.00	9,528.60	16,290.00	11,265.27	23.67	93.92	20.82	5,487.36	-234.31	5,782.13	5,713.70	68.44	84.490		
9,650.00	9,563.80	16,290.00	11,265.27	23.72	93.92	22.12	5,487.36	-234.31	5,738.44	5,669.77	68.68	83.559		
9,700.00	9,595.07	16,290.00	11,265.27	23.78	93.92	24.97	5,487.36	-234.31	5,692.76	5,623.87	68.90	82.629		
9,750.00	9,622.69	16,290.00	11,265.27	23.83	93.92	30.18	5,487.36	-234.31	5,645.47	5,576.38	69.09	81.706		
9,800.00	9,646.23	16,290.00	11,265.27	23.89	93.92	40.41	5,487.36	-234.31	5,596.98	5,527.71	69.27	80.797		
9,850.00	9,665.46	16,290.00	11,265.27	23.96	93.92	63.05	5,487.36	-234.31	5,547.70	5,478.27	69.43	79.908		
9,900.00	9,680.20	16,290.00	11,265.27	24.04	93.92	106.01	5,487.36	-234.31	5,498.07	5,428.51	69.56	79.044		
9,950.00	9,690.33	16,290.00	11,265.27	24.14	93.92	140.77	5,487.36	-234.31	5,448.54	5,378.88	69.66	78.213		
10,000.00	9,695.74	16,290.00	11,265.27	24.26	93.92	156.74	5,487.36	-234.31	5,399.58	5,329.84	69.75	77.418		
10,031.09	9,696.71	16,290.00	11,265.27	24.35	93.92	162.17	5,487.36	-234.31	5,369.64	5,299.86	69.78	76.946		
10,100.00	9,696.81	16,290.00	11,265.27	24.60	93.92	162.17	5,487.36	-234.31	5,303.84	5,233.97	69.87	75.911		
10,200.00	9,696.95	16,290.00	11,265.27	25.07	93.92	162.17	5,487.36	-234.31	5,208.49	5,138.49	70.00	74.407		
10,300.00	9,697.09	16,290.00	11,265.27	25.67	93.92	162.17	5,487.36	-234.31	5,113.32	5,043.18	70.14	72.902		
10,400.00	9,697.22	16,290.00	11,265.27	26.37	93.92	162.17	5,487.36	-234.31	5,018.34	4,948.06	70.29	71.398		
10,500.00	9,697.36	16,290.00	11,265.27	27.16	93.92	162.17	5,487.36	-234.31	4,923.56	4,853.12	70.44	69.895		
10,600.00	9,697.50	16,290.00	11,265.27	28.04	93.92	162.17	5,487.36	-234.31	4,828.99	4,758.38	70.61	68.392		
10,700.00	9,697.64	16,290.00	11,265.27	28.98	93.92	162.17	5,487.36	-234.31	4,734.64	4,663.86	70.78	66.891		
10,800.00	9,697.78	16,290.00	11,265.27	29.99	93.92	162.17	5,487.36	-234.31	4,640.53	4,569.57	70.97	65.391		
10,900.00	9,697.92	16,290.00	11,265.27	31.05	93.92	162.17	5,487.36	-234.31	4,546.67	4,475.51	71.16	63.893		
11,000.00	9,698.06	16,290.00	11,265.27	32.16	93.92	162.17	5,487.36	-234.31	4,453.08	4,381.71	71.37	62.397		
11,100.00	9,698.20	16,290.00	11,265.27	33.31	93.92	162.17	5,487.36	-234.31	4,359.77	4,288.19	71.58	60.905		
11,200.00	9,698.34	16,290.00	11,265.27	34.50	93.92	162.17	5,487.36	-234.31	4,266.77	4,194.96	71.81	59.415		
11,300.00	9,698.48	16,290.00	11,265.27	35.73	93.92	162.17	5,487.36	-234.31	4,174.09	4,102.03	72.06	57.928		
11,400.00	9,698.62	16,290.00	11,265.27	36.99	93.92	162.17	5,487.36	-234.31	4,081.75	4,009.44	72.31	56.446		
11,500.00	9,698.76	16,290.00	11,265.27	38.28	93.92	162.17	5,487.36	-234.31	3,989.79	3,917.20	72.58	54.968		
11,600.00	9,698.90	16,290.00	11,265.27	39.59	93.92	162.17	5,487.36	-234.31	3,898.22	3,825.35	72.87	53.496		
11,700.00	9,699.04	16,290.00	11,265.27	40.93	93.92	162.17	5,487.36	-234.31	3,807.07	3,733.90	73.17	52.029		
11,800.00	9,699.18	16,290.00	11,265.27	42.28	93.92	162.17	5,487.36	-234.31	3,716.38	3,642.89	73.49	50.569		
11,900.00	9,699.32	16,290.00	11,265.27	43.66	93.92	162.17	5,487.36	-234.31	3,626.18	3,552.35	73.83	49.117		

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 117H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Reference Site:	Thistle Unit	MD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	117H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 58H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 1629-MWD-ISCWSA, 16290-Project													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,000.00	9,699.46	16,290.00	11,265.27	45.05	93.92	162.17	5,487.36	-234.31	3,536.50	3,462.32	74.18	47.672		
12,100.00	9,699.80	16,290.00	11,265.27	46.46	93.92	162.17	5,487.36	-234.31	3,447.40	3,372.84	74.56	46.236		
12,200.00	9,699.74	16,290.00	11,265.27	47.88	93.92	162.17	5,487.36	-234.31	3,358.90	3,283.95	74.96	44.811		
12,300.00	9,699.88	16,290.00	11,265.27	49.32	93.92	162.17	5,487.36	-234.31	3,271.07	3,195.70	75.38	43.397		
12,400.00	9,700.02	16,290.00	11,265.27	50.77	93.92	162.17	5,487.36	-234.31	3,183.96	3,108.14	75.82	41.995		
12,500.00	9,700.16	16,290.00	11,265.27	52.23	93.92	162.17	5,487.36	-234.31	3,097.63	3,021.35	76.28	40.607		
12,600.00	9,700.30	16,290.00	11,265.27	53.70	93.92	162.17	5,487.36	-234.31	3,012.14	2,935.37	76.77	39.235		
12,700.00	9,700.44	16,290.00	11,265.27	55.17	93.92	162.17	5,487.36	-234.31	2,927.57	2,850.29	77.29	37.879		
12,800.00	9,700.58	16,290.00	11,265.27	56.66	93.92	162.17	5,487.36	-234.31	2,844.01	2,766.18	77.83	36.542		
12,900.00	9,700.72	16,290.00	11,265.27	58.16	93.92	162.17	5,487.36	-234.31	2,761.53	2,683.14	78.40	35.225		
13,000.00	9,700.86	16,290.00	11,265.27	59.66	93.92	162.17	5,487.36	-234.31	2,680.25	2,601.27	78.99	33.932		
13,100.00	9,700.99	16,290.00	11,265.27	61.17	93.92	162.17	5,487.36	-234.31	2,600.28	2,520.67	79.61	32.664		
13,200.00	9,701.13	16,290.00	11,265.27	62.68	93.92	162.17	5,487.36	-234.31	2,521.74	2,441.49	80.25	31.423		
13,300.00	9,701.27	16,290.00	11,265.27	64.21	93.92	162.17	5,487.36	-234.31	2,444.76	2,363.84	80.92	30.214		
13,400.00	9,701.41	16,290.00	11,265.27	65.73	93.92	162.17	5,487.36	-234.31	2,369.50	2,287.90	81.60	29.038		
13,500.00	9,701.55	16,290.00	11,265.27	67.26	93.92	162.17	5,487.36	-234.31	2,296.13	2,213.83	82.30	27.899		
13,600.00	9,701.69	16,290.00	11,265.27	68.80	93.92	162.17	5,487.36	-234.31	2,224.84	2,141.53	83.11	26.705		
13,700.00	9,701.83	16,290.00	11,265.27	70.34	93.92	162.17	5,487.36	-234.31	2,155.83	2,071.36	84.48	25.520		
13,800.00	9,701.97	16,290.00	11,265.27	71.89	93.92	162.17	5,487.36	-234.31	2,089.33	2,003.67	85.66	24.390		
13,900.00	9,702.11	16,290.00	11,265.27	73.44	93.92	162.17	5,487.36	-234.31	2,025.58	1,938.72	86.86	23.320		
14,000.00	9,702.25	16,290.00	11,265.27	74.99	93.92	162.17	5,487.36	-234.31	1,964.86	1,876.80	88.06	22.313		
14,100.00	9,702.39	16,290.00	11,265.27	76.54	93.92	162.17	5,487.36	-234.31	1,907.45	1,818.21	89.24	21.375		
14,200.00	9,702.53	16,290.00	11,265.27	78.10	93.92	162.17	5,487.36	-234.31	1,853.66	1,763.28	90.38	20.510		
14,300.00	9,702.67	16,290.00	11,265.27	79.67	93.92	162.17	5,487.36	-234.31	1,803.82	1,712.36	91.46	19.723		
14,400.00	9,702.81	16,290.00	11,265.27	81.23	93.92	162.17	5,487.36	-234.31	1,758.25	1,665.80	92.45	19.019		
14,500.00	9,702.95	16,290.00	11,265.27	82.80	93.92	162.17	5,487.36	-234.31	1,717.31	1,623.99	93.32	18.402		
14,600.00	9,703.09	16,290.00	11,265.27	84.37	93.92	162.17	5,487.36	-234.31	1,681.32	1,587.28	94.04	17.878		
14,700.00	9,703.23	16,290.00	11,265.27	85.94	93.92	162.17	5,487.36	-234.31	1,650.61	1,556.03	94.58	17.452		
14,800.00	9,703.37	16,290.00	11,265.27	87.52	93.92	162.17	5,487.36	-234.31	1,625.49	1,530.58	94.91	17.126		
14,900.00	9,703.51	16,290.00	11,265.27	89.10	93.92	162.17	5,487.36	-234.31	1,606.21	1,511.20	95.01	16.906		
15,000.00	9,703.65	16,290.00	11,265.27	90.68	93.92	162.17	5,487.36	-234.31	1,592.99	1,498.13	94.86	16.794		
15,100.00	9,703.79	16,290.00	11,265.27	92.26	93.92	162.17	5,487.36	-234.31	1,585.97	1,491.53	94.44	16.793 SF		
15,161.54	9,703.87	16,290.00	11,265.27	93.23	93.92	162.17	5,487.36	-234.31	1,584.77	1,490.72	94.06	16.849		
15,200.00	9,703.93	16,290.00	11,265.27	93.84	93.92	162.17	5,487.36	-234.31	1,585.24	1,491.47	93.77	16.906		
15,300.00	9,704.07	16,200.96	11,267.86	95.43	93.43	162.16	5,576.36	-233.07	1,588.27	1,494.09	94.18	16.864		
15,400.00	9,704.21	16,104.44	11,270.80	97.01	91.91	162.14	5,672.82	-231.65	1,591.49	1,497.34	94.15	16.904		
15,500.00	9,704.35	15,996.88	11,273.97	98.60	90.21	162.11	5,780.31	-229.68	1,594.74	1,500.52	94.22	16.926		
15,600.00	9,704.49	15,857.57	11,276.27	100.19	87.98	162.07	5,919.58	-227.97	1,596.63	1,502.12	94.51	16.894		
15,700.00	9,704.63	15,698.49	11,275.12	101.78	85.39	162.22	6,078.57	-232.74	1,594.72	1,500.13	94.60	16.858		
15,800.00	9,704.76	15,597.01	11,272.95	103.37	83.77	162.34	6,179.94	-237.04	1,591.26	1,496.85	94.40	16.856		
15,900.00	9,704.90	15,513.80	11,271.46	104.97	82.47	162.43	6,263.08	-239.98	1,588.35	1,494.17	94.18	16.866		
16,000.00	9,705.04	15,422.09	11,270.68	106.56	81.04	162.53	6,354.73	-243.24	1,586.33	1,492.37	93.96	16.882		
16,100.00	9,705.18	15,326.99	11,270.46	108.16	79.54	162.67	6,449.74	-247.38	1,584.67	1,490.95	93.72	16.909		
16,200.00	9,705.32	15,228.66	11,270.55	109.76	77.97	162.83	6,547.96	-251.98	1,583.24	1,489.78	93.46	16.940		
16,300.00	9,705.46	15,118.58	11,270.33	111.36	76.19	162.99	6,657.93	-256.98	1,581.58	1,488.33	93.25	16.960		
16,400.00	9,705.60	15,010.59	11,269.52	112.96	74.45	163.17	6,765.79	-262.23	1,579.31	1,486.28	93.03	16.976		
16,500.00	9,705.74	14,901.16	11,268.05	114.56	72.72	163.34	6,875.06	-267.76	1,576.44	1,483.62	92.81	16.985		
16,600.00	9,705.88	14,812.97	11,266.54	116.16	71.35	163.47	6,963.15	-271.86	1,573.37	1,480.81	92.56	16.998		
16,700.00	9,706.02	14,739.00	11,266.95	117.76	70.20	163.58	7,037.05	-274.99	1,572.38	1,480.12	92.26	17.044		
16,800.00	9,706.16	14,624.70	11,267.59	119.37	68.43	163.73	7,151.26	-279.08	1,571.85	1,479.73	92.12	17.064		
16,900.00	9,706.30	14,518.83	11,266.54	120.97	66.81	163.81	7,257.10	-281.67	1,570.08	1,478.06	92.03	17.061		

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 117H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Reference Site:	Thistle Unit	MD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	117H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 58H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 1629-MWD-ISCWSA, 16290-Project													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
17,000.00	9,706.44	14,426.51	11,265.38	122.58	65.43	163.88	7,349.38	-284.19	1,568.01	1,476.13	91.87	17.067		
17,070.08	9,706.54	14,378.60	11,265.52	123.70	64.71	163.94	7,397.26	-285.82	1,567.45	1,475.78	91.67	17.100 CC, ES		
17,100.00	9,706.58	14,356.00	11,265.85	124.18	64.38	163.97	7,419.84	-286.67	1,567.51	1,475.93	91.58	17.117		
17,200.00	9,706.72	14,251.05	11,267.26	125.79	62.80	164.12	7,524.72	-290.37	1,567.70	1,476.29	91.41	17.150		
17,300.00	9,706.86	14,151.98	11,268.44	127.40	61.33	164.24	7,623.73	-293.54	1,567.84	1,476.60	91.24	17.184		
17,401.09	9,707.00	14,044.94	11,269.36	129.02	59.74	164.35	7,730.72	-296.47	1,567.80	1,476.68	91.12	17.207		

LEAM Drilling Systems LLC

Anticollision Report

Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Thistle Unit
Site Error: 0.00 usft
Reference Well: 117H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 117H
TVD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft
 (Original Well Elev)
MD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft
 (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Thistle Unit (Offsets) - 71H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 126-MWD-ISCWSA														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)							
2,100.00	2,100.00	14,979.00	10,508.93	4.58	84.85	-0.59	5,403.00	-55.54	9,957.70	9,922.00	35.71	278.884			
2,200.00	2,200.00	14,979.00	10,508.93	4.81	84.85	-0.59	5,403.00	-55.54	9,873.86	9,838.14	35.72	276.431			
2,300.00	2,300.00	14,979.00	10,508.93	5.03	84.85	-0.59	5,403.00	-55.54	9,790.31	9,754.57	35.74	273.927			
2,400.00	2,399.99	14,979.00	10,508.93	5.24	84.85	104.46	5,403.00	-55.54	9,707.19	9,671.43	35.76	271.450			
2,500.00	2,499.96	14,979.00	10,508.93	5.43	84.85	105.87	5,403.00	-55.54	9,624.64	9,588.86	35.78	269.003			
2,600.00	2,599.86	14,979.00	10,508.93	5.63	84.85	107.24	5,403.00	-55.54	9,542.69	9,506.89	35.81	266.516			
2,700.00	2,699.68	14,979.00	10,508.93	5.83	84.85	108.57	5,403.00	-55.54	9,461.39	9,425.55	35.84	263.991			
2,800.00	2,799.37	14,979.00	10,508.93	6.03	84.85	109.85	5,403.00	-55.54	9,380.79	9,344.90	35.88	261.427			
2,895.31	2,894.24	14,979.00	10,508.93	6.24	84.85	111.04	5,403.00	-55.54	9,304.64	9,268.71	35.93	258.946			
2,900.00	2,898.90	14,979.00	10,508.93	6.25	84.85	111.04	5,403.00	-55.54	9,300.91	9,264.98	35.93	258.834			
3,000.00	2,998.36	14,979.00	10,508.93	6.47	84.85	111.04	5,403.00	-55.54	9,221.60	9,185.60	36.00	256.160			
3,100.00	3,097.83	14,979.00	10,508.93	6.69	84.85	111.04	5,403.00	-55.54	9,142.70	9,106.62	36.07	253.448			
3,200.00	3,197.29	14,979.00	10,508.93	6.92	84.85	111.04	5,403.00	-55.54	9,064.21	9,028.05	36.15	250.705			
3,300.00	3,296.75	14,979.00	10,508.93	7.15	84.85	111.04	5,403.00	-55.54	8,986.15	8,949.90	36.24	247.935			
3,400.00	3,396.21	14,979.00	10,508.93	7.38	84.85	111.04	5,403.00	-55.54	8,908.52	8,872.18	36.34	245.143			
3,500.00	3,495.67	14,979.00	10,508.93	7.62	84.85	111.04	5,403.00	-55.54	8,831.35	8,794.91	36.44	242.335			
3,600.00	3,595.13	14,979.00	10,508.93	7.86	84.85	111.04	5,403.00	-55.54	8,754.64	8,718.09	36.55	239.514			
3,700.00	3,694.59	14,979.00	10,508.93	8.11	84.85	111.04	5,403.00	-55.54	8,678.41	8,641.74	36.67	236.684			
3,800.00	3,794.05	14,979.00	10,508.93	8.36	84.85	111.04	5,403.00	-55.54	8,602.66	8,565.87	36.79	233.850			
3,900.00	3,893.51	14,979.00	10,508.93	8.60	84.85	111.04	5,403.00	-55.54	8,527.41	8,490.49	36.91	231.015			
4,000.00	3,992.97	14,979.00	10,508.93	8.86	84.85	111.04	5,403.00	-55.54	8,452.67	8,415.63	37.04	228.182			
4,100.00	4,092.43	14,979.00	10,508.93	9.11	84.85	111.04	5,403.00	-55.54	8,378.46	8,341.28	37.18	225.354			
4,200.00	4,191.89	14,979.00	10,508.93	9.36	84.85	111.04	5,403.00	-55.54	8,304.79	8,267.47	37.32	222.534			
4,300.00	4,291.35	14,979.00	10,508.93	9.62	84.85	111.04	5,403.00	-55.54	8,231.68	8,194.21	37.46	219.725			
4,400.00	4,390.81	14,979.00	10,508.93	9.88	84.85	111.04	5,403.00	-55.54	8,159.14	8,121.52	37.61	216.929			
4,500.00	4,490.28	14,979.00	10,508.93	10.13	84.85	111.04	5,403.00	-55.54	8,087.18	8,049.41	37.76	214.148			
4,600.00	4,589.74	14,979.00	10,508.93	10.39	84.85	111.04	5,403.00	-55.54	8,015.82	7,977.90	37.92	211.385			
4,700.00	4,689.20	14,979.00	10,508.93	10.66	84.85	111.04	5,403.00	-55.54	7,945.09	7,907.01	38.08	208.641			
4,800.00	4,788.66	14,979.00	10,508.93	10.92	84.85	111.04	5,403.00	-55.54	7,874.98	7,836.74	38.24	205.918			
4,900.00	4,888.12	14,979.00	10,508.93	11.18	84.85	111.04	5,403.00	-55.54	7,805.53	7,767.12	38.41	203.217			
5,000.00	4,987.58	14,979.00	10,508.93	11.45	84.85	111.04	5,403.00	-55.54	7,736.75	7,698.17	38.58	200.541			
5,100.00	5,087.04	14,979.00	10,508.93	11.71	84.85	111.04	5,403.00	-55.54	7,668.65	7,629.90	38.75	197.891			
5,200.00	5,186.50	14,979.00	10,508.93	11.98	84.85	111.04	5,403.00	-55.54	7,601.27	7,562.34	38.93	195.267			
5,300.00	5,285.96	14,979.00	10,508.93	12.24	84.85	111.04	5,403.00	-55.54	7,534.60	7,495.49	39.11	192.671			
5,400.00	5,385.42	14,979.00	10,508.93	12.51	84.85	111.04	5,403.00	-55.54	7,468.68	7,429.39	39.29	190.105			
5,500.00	5,484.88	14,979.00	10,508.93	12.78	84.85	111.04	5,403.00	-55.54	7,403.52	7,364.05	39.47	187.569			
5,600.00	5,584.34	14,979.00	10,508.93	13.05	84.85	111.04	5,403.00	-55.54	7,339.15	7,299.49	39.66	185.065			
5,700.00	5,683.80	14,979.00	10,508.93	13.32	84.85	111.04	5,403.00	-55.54	7,275.58	7,235.73	39.85	182.593			
5,800.00	5,783.26	14,979.00	10,508.93	13.59	84.85	111.04	5,403.00	-55.54	7,212.84	7,172.80	40.04	180.154			
5,900.00	5,882.73	14,979.00	10,508.93	13.86	84.85	111.04	5,403.00	-55.54	7,150.94	7,110.71	40.23	177.749			
6,000.00	5,982.19	14,979.00	10,508.93	14.13	84.85	111.04	5,403.00	-55.54	7,089.92	7,049.49	40.43	175.380			
6,100.00	6,081.65	14,979.00	10,508.93	14.40	84.85	111.04	5,403.00	-55.54	7,029.79	6,989.17	40.62	173.046			
6,200.00	6,181.11	14,979.00	10,508.93	14.67	84.85	111.04	5,403.00	-55.54	6,970.57	6,929.75	40.82	170.749			
6,300.00	6,280.57	14,979.00	10,508.93	14.94	84.85	111.04	5,403.00	-55.54	6,912.30	6,871.26	41.04	168.431			
6,400.00	6,380.03	14,979.00	10,508.93	15.21	84.85	111.04	5,403.00	-55.54	6,854.99	6,813.60	41.39	166.031			
6,500.00	6,479.49	14,979.00	10,508.93	15.49	84.85	111.04	5,403.00	-55.54	6,798.66	6,756.92	41.74	163.685			
6,600.00	6,578.95	14,979.00	10,508.93	15.76	84.85	111.04	5,403.00	-55.54	6,743.35	6,701.26	42.10	161.393			
6,700.00	6,678.41	14,979.00	10,508.93	16.03	84.85	111.04	5,403.00	-55.54	6,688.08	6,646.62	42.46	159.155			
6,800.00	6,777.87	14,979.00	10,508.93	16.31	84.85	111.04	5,403.00	-55.54	6,633.87	6,593.05	42.82	156.972			
6,900.00	6,877.33	14,979.00	10,508.93	16.58	84.85	111.04	5,403.00	-55.54	6,583.74	6,540.56	43.19	154.844			
7,000.00	6,976.79	14,979.00	10,508.93	16.85	84.85	111.04	5,403.00	-55.54	6,532.74	6,489.18	43.56	149.971			

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

LEAM Drilling Systems LLC

Anticollision Report

Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Thistle Unit
Site Error: 0.00 usft
Reference Well: 117H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 117H
TVD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft
 (Original Well Elev)
MD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft
 (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Thistle Unit (Offsets) - 71H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 126-MWD-ISCWSA														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
7,100.00	7,076.25	14,979.00	10,508.93	17.13	84.85	111.04	5,403.00	-55.54	6,482.87	6,438.93	43.94	147.552			
7,200.00	7,175.71	14,979.00	10,508.93	17.40	84.85	111.04	5,403.00	-55.54	6,434.17	6,389.86	44.32	145.190			
7,300.00	7,275.18	14,979.00	10,508.93	17.68	84.85	111.04	5,403.00	-55.54	6,386.67	6,341.97	44.70	142.882			
7,400.00	7,374.64	14,979.00	10,508.93	17.95	84.85	111.04	5,403.00	-55.54	6,340.39	6,295.30	45.09	140.630			
7,500.00	7,474.10	14,979.00	10,508.93	18.23	84.85	111.04	5,403.00	-55.54	6,295.35	6,249.88	45.48	138.433			
7,600.00	7,573.56	14,979.00	10,508.93	18.51	84.85	111.04	5,403.00	-55.54	6,251.60	6,205.73	45.87	136.291			
7,700.00	7,673.02	14,979.00	10,508.93	18.78	84.85	111.04	5,403.00	-55.54	6,209.14	6,162.87	46.27	134.205			
7,800.00	7,772.48	14,979.00	10,508.93	19.06	84.85	111.04	5,403.00	-55.54	6,168.01	6,121.35	46.67	132.173			
7,900.00	7,871.94	14,979.00	10,508.93	19.33	84.85	111.04	5,403.00	-55.54	6,128.24	6,081.17	47.07	130.196			
8,000.00	7,971.40	14,979.00	10,508.93	19.61	84.85	111.04	5,403.00	-55.54	6,089.85	6,042.38	47.48	128.274			
8,100.00	8,070.86	14,979.00	10,508.93	19.89	84.85	111.04	5,403.00	-55.54	6,052.87	6,004.99	47.88	126.407			
8,200.00	8,170.32	14,979.00	10,508.93	20.16	84.85	111.04	5,403.00	-55.54	6,017.33	5,969.03	48.30	124.593			
8,300.00	8,269.78	14,979.00	10,508.93	20.44	84.85	111.04	5,403.00	-55.54	5,983.25	5,934.53	48.71	122.834			
8,400.00	8,369.24	14,979.00	10,508.93	20.72	84.85	111.04	5,403.00	-55.54	5,950.85	5,901.52	49.13	121.128			
8,500.00	8,468.70	14,979.00	10,508.93	21.00	84.85	111.04	5,403.00	-55.54	5,919.56	5,870.01	49.55	119.475			
8,600.00	8,568.16	14,979.00	10,508.93	21.27	84.85	111.04	5,403.00	-55.54	5,890.00	5,840.03	49.97	117.875			
8,700.00	8,667.63	14,979.00	10,508.93	21.55	84.85	111.04	5,403.00	-55.54	5,862.00	5,811.61	50.39	116.328			
8,800.00	8,767.09	14,979.00	10,508.93	21.83	84.85	111.04	5,403.00	-55.54	5,835.59	5,784.77	50.82	114.833			
8,900.00	8,866.55	14,979.00	10,508.93	22.11	84.85	111.04	5,403.00	-55.54	5,810.77	5,759.52	51.25	113.390			
9,000.00	8,966.01	14,979.00	10,508.93	22.38	84.85	111.04	5,403.00	-55.54	5,787.57	5,735.90	51.68	111.998			
9,100.00	9,065.47	14,979.00	10,508.93	22.66	84.85	111.04	5,403.00	-55.54	5,766.02	5,713.91	52.11	110.657			
9,200.93	9,165.85	14,979.00	10,508.93	22.94	84.85	111.04	5,403.00	-55.54	5,745.95	5,693.40	52.54	109.354			
9,250.00	9,214.84	14,979.00	10,508.93	23.07	84.85	63.14	5,403.00	-55.54	5,734.57	5,681.81	52.75	108.706			
9,300.00	9,264.02	14,979.00	10,508.93	23.18	84.85	39.48	5,403.00	-55.54	5,718.84	5,665.88	52.96	107.980			
9,350.00	9,312.62	14,979.00	10,508.93	23.28	84.85	29.65	5,403.00	-55.54	5,699.05	5,645.88	53.17	107.184			
9,400.00	9,359.98	14,979.00	10,508.93	23.38	84.85	24.84	5,403.00	-55.54	5,675.35	5,621.97	53.38	106.324			
9,450.00	9,405.67	14,979.00	10,508.93	23.46	84.85	22.28	5,403.00	-55.54	5,647.90	5,594.32	53.58	105.407			
9,500.00	9,449.26	14,979.00	10,508.93	23.54	84.85	20.97	5,403.00	-55.54	5,616.90	5,563.12	53.78	104.440			
9,550.00	9,490.36	14,979.00	10,508.93	23.61	84.85	20.49	5,403.00	-55.54	5,582.58	5,528.61	53.97	103.430			
9,600.00	9,528.60	14,979.00	10,508.93	23.67	84.85	20.71	5,403.00	-55.54	5,545.20	5,491.04	54.16	102.384			
9,650.00	9,563.60	14,979.00	10,508.93	23.72	84.85	21.61	5,403.00	-55.54	5,505.05	5,450.71	54.34	101.308			
9,700.00	9,595.07	14,979.00	10,508.93	23.78	84.85	23.36	5,403.00	-55.54	5,462.43	5,407.92	54.51	100.210			
9,750.00	9,622.69	14,979.00	10,508.93	23.83	84.85	26.30	5,403.00	-55.54	5,417.69	5,363.02	54.67	99.098			
9,800.00	9,646.23	14,979.00	10,508.93	23.89	84.85	31.24	5,403.00	-55.54	5,371.19	5,316.37	54.82	97.979			
9,850.00	9,665.46	14,979.00	10,508.93	23.96	84.85	39.95	5,403.00	-55.54	5,323.31	5,268.35	54.96	96.860			
9,900.00	9,680.20	14,979.00	10,508.93	24.04	84.85	56.61	5,403.00	-55.54	5,274.48	5,219.39	55.09	95.750			
9,950.00	9,690.33	14,979.00	10,508.93	24.14	84.85	87.58	5,403.00	-55.54	5,225.11	5,169.90	55.20	94.656			
10,000.00	9,695.74	14,979.00	10,508.93	24.26	84.85	123.47	5,403.00	-55.54	5,175.65	5,120.34	55.30	93.584			
10,031.09	9,696.71	14,979.00	10,508.93	24.35	84.85	138.88	5,403.00	-55.54	5,145.06	5,089.69	55.36	92.933			
10,100.00	9,696.81	14,979.00	10,508.93	24.60	84.85	138.88	5,403.00	-55.54	5,077.50	5,022.01	55.49	91.497			
10,200.00	9,696.95	14,979.00	10,508.93	25.07	84.85	138.88	5,403.00	-55.54	4,979.54	4,923.84	55.69	89.408			
10,300.00	9,697.09	14,979.00	10,508.93	25.67	84.85	138.88	5,403.00	-55.54	4,881.66	4,825.75	55.91	87.316			
10,400.00	9,697.22	14,979.00	10,508.93	26.37	84.85	138.88	5,403.00	-55.54	4,783.86	4,727.73	56.13	85.221			
10,500.00	9,697.36	14,979.00	10,508.93	27.16	84.85	138.88	5,403.00	-55.54	4,686.16	4,629.78	56.38	83.123			
10,600.00	9,697.50	14,979.00	10,508.93	28.04	84.85	138.88	5,403.00	-55.54	4,588.56	4,531.93	56.63	81.023			
10,700.00	9,697.64	14,979.00	10,508.93	28.98	84.85	138.88	5,403.00	-55.54	4,491.06	4,434.16	56.91	78.920			
10,800.00	9,697.78	14,979.00	10,508.93	29.99	84.85	138.88	5,403.00	-55.54	4,393.68	4,336.48	57.20	76.817			
10,900.00	9,697.92	14,979.00	10,508.93	31.05	84.85	138.88	5,403.00	-55.54	4,296.42	4,238.91	57.51	74.712			
11,000.00	9,698.06	14,979.00	10,508.93	32.16	84.85	138.88	5,403.00	-55.54	4,199.28	4,141.45	57.84	72.606			
11,100.00	9,698.20	14,979.00	10,508.93	33.31	84.85	138.88	5,403.00	-55.54	4,102.28	4,044.10	58.19	70.501			

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 117H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Reference Site:	Thistle Unit	MD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	117H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 71H - OH - OH												Offset Site Error: 0.00 usft	
Survey Program: 126-MWD-ISCWSA												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)		Separation Factor
11,200.00	9,698.34	14,979.00	10,508.93	34.50	84.85	138.88	5,403.00	-55.54	4,005.44	3,946.87	58.56	68.396	
11,300.00	9,698.48	14,979.00	10,508.93	35.73	84.85	138.88	5,403.00	-55.54	3,908.74	3,849.78	58.96	66.292	
11,400.00	9,698.62	14,979.00	10,508.93	36.99	84.85	138.88	5,403.00	-55.54	3,812.22	3,752.83	59.39	64.189	
11,500.00	9,698.76	14,979.00	10,508.93	38.28	84.85	138.88	5,403.00	-55.54	3,715.89	3,656.04	59.85	62.089	
11,600.00	9,698.90	14,979.00	10,508.93	39.59	84.85	138.88	5,403.00	-55.54	3,619.75	3,559.42	60.34	59.993	
11,700.00	9,699.04	14,979.00	10,508.93	40.93	84.85	138.88	5,403.00	-55.54	3,523.83	3,462.97	60.86	57.901	
11,800.00	9,699.18	14,979.00	10,508.93	42.28	84.85	138.88	5,403.00	-55.54	3,428.14	3,366.72	61.42	55.813	
11,900.00	9,699.32	14,979.00	10,508.93	43.66	84.85	138.88	5,403.00	-55.54	3,332.70	3,270.68	62.02	53.733	
12,000.00	9,699.46	14,979.00	10,508.93	45.05	84.85	138.88	5,403.00	-55.54	3,237.54	3,174.87	62.67	51.659	
12,100.00	9,699.60	14,979.00	10,508.93	46.46	84.85	138.88	5,403.00	-55.54	3,142.68	3,079.32	63.37	49.595	
12,200.00	9,699.74	14,979.00	10,508.93	47.88	84.85	138.88	5,403.00	-55.54	3,048.15	2,984.04	64.12	47.541	
12,300.00	9,699.88	14,979.00	10,508.93	49.32	84.85	138.88	5,403.00	-55.54	2,953.98	2,889.06	64.92	45.499	
12,400.00	9,700.02	14,979.00	10,508.93	50.77	84.85	138.88	5,403.00	-55.54	2,860.21	2,794.41	65.79	43.472	
12,500.00	9,700.16	14,979.00	10,508.93	52.23	84.85	138.88	5,403.00	-55.54	2,766.87	2,700.13	66.74	41.460	
12,600.00	9,700.30	14,979.00	10,508.93	53.70	84.85	138.88	5,403.00	-55.54	2,674.01	2,606.26	67.76	39.466	
12,700.00	9,700.44	14,979.00	10,508.93	55.17	84.85	138.88	5,403.00	-55.54	2,581.69	2,512.83	68.86	37.493	
12,800.00	9,700.58	14,979.00	10,508.93	56.66	84.85	138.88	5,403.00	-55.54	2,489.96	2,419.90	70.05	35.543	
12,900.00	9,700.72	14,979.00	10,508.93	58.16	84.85	138.88	5,403.00	-55.54	2,398.89	2,327.53	71.35	33.620	
13,000.00	9,700.86	14,979.00	10,508.93	59.66	84.85	138.88	5,403.00	-55.54	2,308.55	2,235.79	72.76	31.727	
13,100.00	9,700.99	14,979.00	10,508.93	61.17	84.85	138.88	5,403.00	-55.54	2,219.05	2,144.76	74.30	29.867	
13,200.00	9,701.13	14,979.00	10,508.93	62.68	84.85	138.88	5,403.00	-55.54	2,130.49	2,054.52	75.97	28.045	
13,300.00	9,701.27	14,979.00	10,508.93	64.21	84.85	138.88	5,403.00	-55.54	2,042.97	1,965.19	77.78	26.265	
13,400.00	9,701.41	14,979.00	10,508.93	65.73	84.85	138.88	5,403.00	-55.54	1,956.66	1,876.90	79.76	24.531	
13,500.00	9,701.55	14,979.00	10,508.93	67.26	84.85	138.88	5,403.00	-55.54	1,871.71	1,789.79	81.92	22.849	
13,600.00	9,701.69	14,979.00	10,508.93	68.80	84.85	138.88	5,403.00	-55.54	1,788.31	1,704.05	84.26	21.224	
13,700.00	9,701.83	14,979.00	10,508.93	70.34	84.85	138.88	5,403.00	-55.54	1,706.70	1,619.90	86.80	19.662	
13,800.00	9,701.97	14,979.00	10,508.93	71.89	84.85	138.88	5,403.00	-55.54	1,627.15	1,537.59	89.56	18.168	
13,900.00	9,702.11	14,979.00	10,508.93	73.44	84.85	138.88	5,403.00	-55.54	1,549.96	1,457.43	92.53	16.751	
14,000.00	9,702.25	14,979.00	10,508.93	74.99	84.85	138.88	5,403.00	-55.54	1,475.52	1,379.80	95.72	15.415	
14,100.00	9,702.39	14,979.00	10,508.93	76.54	84.85	138.88	5,403.00	-55.54	1,404.25	1,305.14	99.11	14.168	
14,200.00	9,702.53	14,979.00	10,508.93	78.10	84.85	138.88	5,403.00	-55.54	1,336.67	1,233.99	102.68	13.017	
14,300.00	9,702.67	14,979.00	10,508.93	79.67	84.85	138.88	5,403.00	-55.54	1,273.37	1,166.99	106.38	11.970	
14,400.00	9,702.81	14,979.00	10,508.93	81.23	84.85	138.88	5,403.00	-55.54	1,215.01	1,104.36	110.65	10.981	
14,500.00	9,702.95	14,979.00	10,508.93	82.80	84.85	138.88	5,403.00	-55.54	1,162.33	1,047.36	114.98	10.109	
14,600.00	9,703.09	14,979.00	10,508.93	84.37	84.85	138.88	5,403.00	-55.54	1,116.15	997.00	119.15	9.368	
14,700.00	9,703.23	14,979.00	10,508.93	85.94	84.85	138.88	5,403.00	-55.54	1,077.29	954.31	122.99	8.759	
14,800.00	9,703.37	14,979.00	10,508.93	87.52	84.85	138.88	5,403.00	-55.54	1,046.58	920.31	126.27	8.289	
14,900.00	9,703.51	14,979.00	10,508.93	89.10	84.85	138.88	5,403.00	-55.54	1,024.75	895.97	128.78	7.958	
15,000.00	9,703.65	14,979.00	10,508.93	90.68	84.85	138.88	5,403.00	-55.54	1,012.36	882.04	130.33	7.768	
15,076.14	9,703.75	14,979.00	10,508.93	91.88	84.85	138.88	5,403.00	-55.54	1,009.50	878.71	130.79	7.719 CC, ES	
15,100.00	9,703.79	14,979.00	10,508.93	92.26	84.85	138.88	5,403.00	-55.54	1,009.78	878.98	130.80	7.720	
15,200.00	9,703.93	14,923.24	10,511.95	93.84	83.91	138.89	5,458.63	-53.21	1,015.54	884.95	130.59	7.777	
15,300.00	9,704.07	14,800.49	10,517.73	95.43	81.81	138.91	5,581.16	-48.86	1,021.35	890.80	130.56	7.823	
15,400.00	9,704.21	14,647.88	10,518.49	97.01	79.22	138.79	5,733.71	-45.55	1,022.94	892.27	130.67	7.828	
15,500.00	9,704.35	14,542.96	10,515.73	98.60	77.50	138.62	5,838.57	-43.98	1,021.84	890.93	130.91	7.805	
15,578.04	9,704.45	14,476.61	10,514.00	99.84	76.44	138.50	5,904.89	-42.77	1,021.20	890.08	131.13	7.788	
15,600.00	9,704.49	14,460.79	10,513.75	100.19	76.18	138.47	5,920.71	-42.39	1,021.27	890.09	131.18	7.785	
15,700.00	9,704.63	14,387.38	10,513.59	101.78	75.00	138.36	5,994.07	-39.93	1,023.22	891.87	131.34	7.790	
15,800.00	9,704.76	14,295.22	10,514.68	103.37	73.47	138.19	6,086.10	-35.05	1,027.46	895.90	131.56	7.810	
15,900.00	9,704.90	14,161.75	10,512.63	104.97	71.27	137.85	6,219.40	-28.79	1,029.20	897.09	132.11	7.790	
16,000.00	9,705.04	14,080.63	10,511.52	106.56	69.99	137.68	6,300.45	-25.79	1,030.62	898.23	132.40	7.784	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 117H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Reference Site:	Thistle Unit	MD Reference:	3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	117H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 71H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 126-MWD-ISCWSA													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
16,100.00	9,705.18	13,986.47	10,512.96	108.16	68.52	137.61	6,394.55	-22.85	1,033.75	901.22	132.52	7.800	
16,200.00	9,705.32	13,892.15	10,515.31	109.76	67.01	137.60	6,488.82	-20.64	1,037.07	904.54	132.52	7.826	
16,300.00	9,705.46	13,756.47	10,517.37	111.36	64.83	137.62	6,624.46	-19.24	1,038.69	906.18	132.51	7.838	
16,400.00	9,705.60	13,650.67	10,517.92	112.96	63.10	137.64	6,730.26	-19.37	1,038.91	906.46	132.45	7.844	
16,500.00	9,705.74	13,525.49	10,516.62	114.56	61.00	137.63	6,855.42	-20.47	1,037.46	905.14	132.32	7.840	
16,600.00	9,705.88	13,408.48	10,512.59	116.16	59.11	137.55	6,972.34	-22.35	1,033.71	901.36	132.35	7.811	
16,700.00	9,706.02	13,318.03	10,508.96	117.76	57.70	137.47	7,062.71	-24.04	1,029.42	896.88	132.55	7.766	
16,800.00	9,706.16	13,243.43	10,508.40	119.37	56.51	137.51	7,137.28	-25.47	1,027.39	894.78	132.61	7.748	
16,900.00	9,706.30	13,115.87	10,506.70	120.97	54.44	137.55	7,264.79	-26.33	1,024.73	892.33	132.40	7.740	
17,000.00	9,706.44	13,032.96	10,504.85	122.58	53.16	137.57	7,347.65	-30.50	1,021.32	888.83	132.49	7.709	
17,068.74	9,706.54	12,985.00	10,504.98	123.68	52.44	137.60	7,395.61	-31.13	1,020.73	888.20	132.54	7.702 SF	
17,100.00	9,706.58	12,964.82	10,505.34	124.18	52.13	137.62	7,415.78	-31.26	1,020.95	888.42	132.53	7.704	
17,200.00	9,706.72	12,879.89	10,508.39	125.79	50.80	137.74	7,500.65	-31.57	1,023.18	890.84	132.34	7.731	
17,300.00	9,706.86	12,733.97	10,509.98	127.40	48.47	137.88	7,646.53	-33.68	1,022.64	890.58	132.06	7.744	
17,401.09	9,707.00	12,618.79	10,508.05	129.02	46.65	137.89	7,761.67	-35.90	1,019.98	887.98	132.00	7.727	

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

LEAM Drilling Systems LLC

Anticollision Report

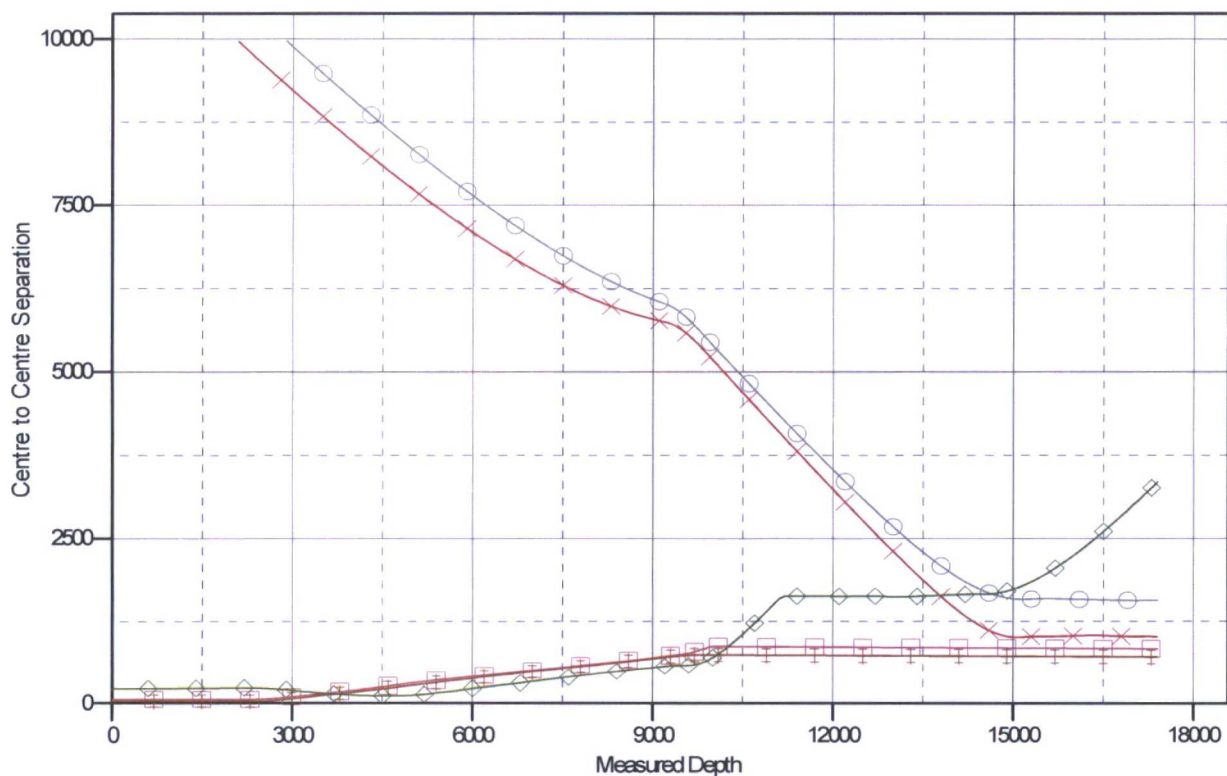
Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Thistle Unit
Site Error: 0.00 usft
Reference Well: 117H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 117H
TVD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
MD Reference: 3637.8' GE + 23.5' KB @ 3661.30usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to 3637.8' GE + 23.5' KB @ 3661.30usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 117H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.42°

Ladder Plot



LEGEND

138H, OH, Plan#1 V0 71H, OH, OH V0 50H, OH, OH V0
 102H, OH, Plan#1 V0 58H, OH, OH V0

LEAM Drilling Systems LLC

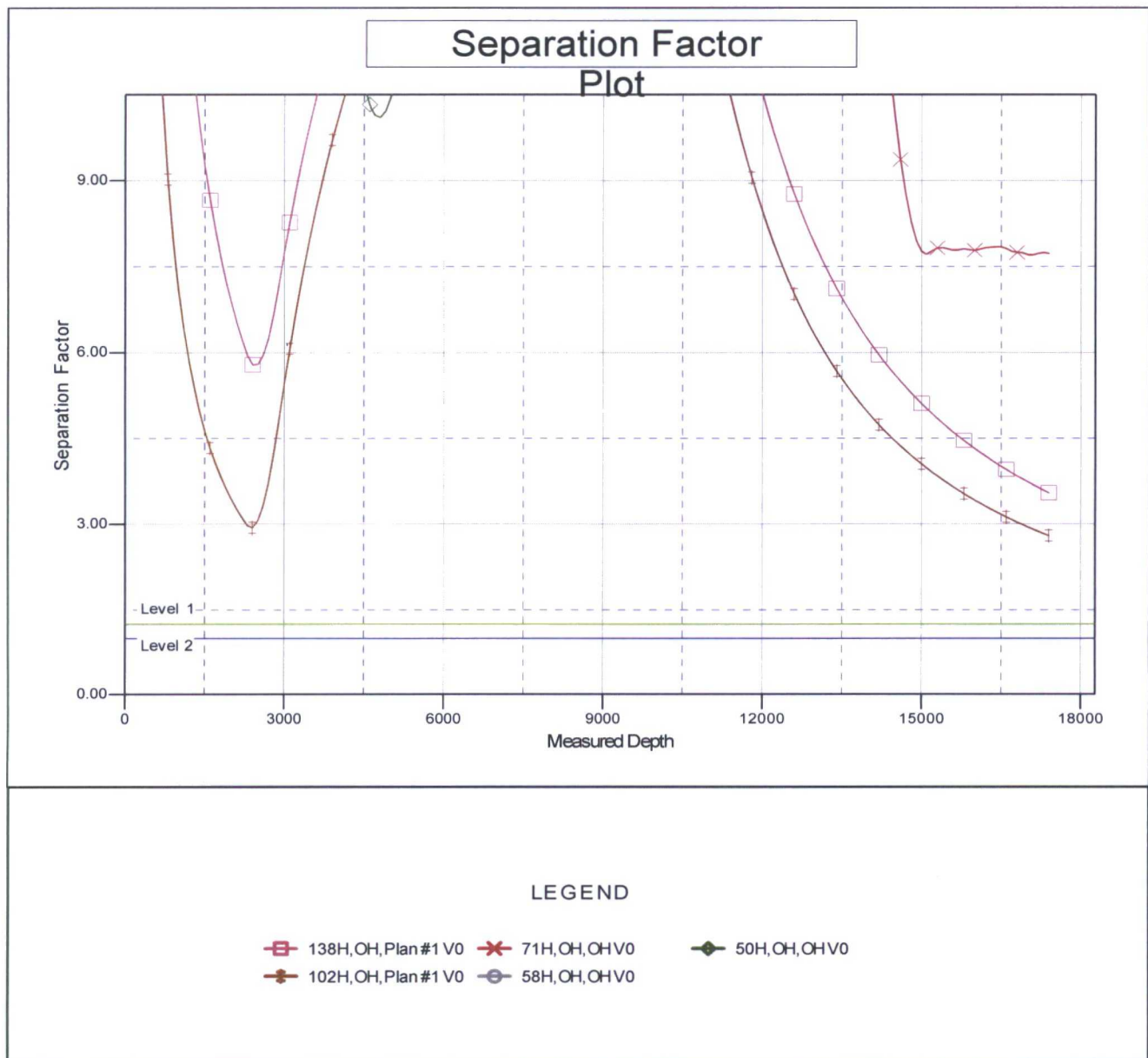
Anticollision Report

Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Thistle Unit
Site Error: 0.00 usft
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(Original Well Elev)
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(Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to 3637.8' GE + 23.5' KB @ 3661.30usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 117H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.42°



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