



Devon Energy

Lea County, NM (NAD-83)

Thistle Unit Sec 22-27 Trac Pad

Thistle Unit 133H

OH

Plan #2

Anticollision Report

20 September, 2017



LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
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	9/20/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	10,500.05	Plan #2 (OH)	LEAM MWD+HDGM	MWD+HDGM	
10,500.05	17,495.86	Plan #2 (OH)	MWD+IFR1+MS	MWD + IFR1 + Multi-Station Correction	

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						
62H - OH - OH	14,709.79	10,133.56	127.63	55.39	1.767	CC, ES, SF
72H - OH - OH	15,164.62	15,490.00	1,114.52	1,011.54	10.823	CC, ES
72H - OH - OH	15,200.00	15,490.00	1,115.08	1,011.97	10.814	SF
Thistle Unit (Offsets)						
57H - OH - OH	14,659.01	10,141.74	291.42	232.84	4.975	CC, ES
57H - OH - OH	14,700.00	10,140.94	294.29	234.92	4.957	SF
Thistle Unit Sec 22-27 Trac Pad						
Thistle Unit 110H - OH - Plan #2	3,500.00	3,499.90	389.90	374.44	25.227	CC, ES
Thistle Unit 110H - OH - Plan #2	17,495.86	17,195.33	991.68	811.97	5.518	SF
Thistle Unit 114H - OH - Plan #2	4,000.00	4,000.00	30.00	12.30	1.695	CC, ES, SF
Thistle Unit 125H - OH - Plan #2	4,000.00	3,999.70	359.91	342.20	20.330	CC, ES
Thistle Unit 125H - OH - Plan #2	17,495.86	17,557.62	803.96	620.01	4.371	SF
Thistle Unit 160H - OH - Plan #2	4,162.15	4,170.09	269.97	251.60	14.691	CC
Thistle Unit 160H - OH - Plan #2	4,200.00	4,207.89	270.10	251.57	14.571	ES
Thistle Unit 160H - OH - Plan #2	17,495.86	17,053.67	771.39	613.97	4.900	SF
Thistle Unit 161H - OH - Plan #2	3,000.00	3,000.00	29.99	16.78	2.271	CC, ES
Thistle Unit 161H - OH - Plan #2	9,409.79	9,438.81	61.87	21.16	1.520	SF
Thistle Unit 86H - OH - Plan #2	4,107.71	4,113.33	321.73	303.57	17.711	CC, ES
Thistle Unit 86H - OH - Plan #2	17,495.86	18,058.29	840.24	680.54	5.261	SF
Thistle Unit 99H - OH - Plan #2	2,000.00	2,000.00	59.94	51.23	6.879	CC, ES
Thistle Unit 99H - OH - Plan #2	17,495.86	18,077.45	681.12	533.71	4.620	SF

Thistle Unit - 62H - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 85-ISCWSA-GYRO-3, 1447-LEAM_MWD, 15750-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
0.00	0.00	0.00	0.00	0.00	0.00	163.58	-4,444.98	1,309.61	4,633.93				
100.00	100.00	57.46	57.46	0.09	0.05	163.58	-4,445.11	1,309.69	4,634.09	4,633.96	0.13		N/A
200.00	200.00	161.51	161.51	0.31	0.20	163.58	-4,445.65	1,309.99	4,634.68	4,634.18	0.50		9,250.292
300.00	300.00	287.91	287.91	0.54	0.41	163.59	-4,445.90	1,309.68	4,634.80	4,633.85	0.95	4,886.678	
400.00	400.00	404.07	404.06	0.76	0.61	163.59	-4,445.68	1,309.00	4,634.45	4,633.07	1.38	3,365.702	

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 62H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 85-ISCWSA-GYRO-3, 1447-LEAM_MWD, 15750-Project													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
500.00	500.00	512.60	512.59	0.99	0.80	163.60		-4,445.18	1,308.35	4,633.83	4,632.04	1.79	2,587.308	
600.00	600.00	626.34	626.32	1.21	1.00	163.60		-4,444.37	1,307.71	4,632.99	4,630.78	2.22	2,091.127	
700.00	700.00	726.62	726.60	1.43	1.18	163.60		-4,443.44	1,307.36	4,632.00	4,629.39	2.61	1,771.672	
800.00	800.00	824.71	824.68	1.66	1.35	163.60		-4,442.45	1,307.26	4,631.01	4,628.00	3.01	1,538.693	
900.00	900.00	916.92	916.89	1.88	1.51	163.60		-4,441.66	1,307.19	4,630.16	4,626.77	3.39	1,364.061	
1,000.00	1,000.00	1,018.89	1,018.86	2.11	1.69	163.60		-4,440.76	1,307.34	4,629.36	4,625.56	3.80	1,219.089	
1,100.00	1,100.00	1,122.59	1,122.56	2.33	1.87	163.59		-4,439.73	1,307.72	4,628.51	4,624.30	4.20	1,101.084	
1,200.00	1,200.00	1,228.84	1,228.80	2.56	2.05	163.58		-4,438.52	1,308.15	4,627.53	4,622.91	4.61	1,002.820	
1,300.00	1,300.00	1,328.74	1,328.69	2.78	2.23	163.57		-4,437.28	1,308.57	4,626.46	4,621.45	5.01	922.715	
1,400.00	1,400.00	1,416.00	1,415.94	3.01	2.38	163.56		-4,436.33	1,308.89	4,625.53	4,620.14	5.39	858.062	
1,500.00	1,500.00	1,498.57	1,498.51	3.23	2.42	163.56		-4,435.85	1,308.75	4,624.92	4,619.27	5.65	817.866	
1,600.00	1,600.00	1,617.64	1,617.51	3.46	2.50	163.61		-4,436.30	1,304.92	4,624.38	4,618.42	5.96	776.197	
1,700.00	1,700.00	1,687.45	1,687.13	3.68	2.58	163.67		-4,437.24	1,300.11	4,623.79	4,617.53	6.26	738.284	
1,718.05	1,718.05	1,699.00	1,698.65	3.72	2.60	163.68		-4,437.52	1,299.15	4,623.79	4,617.47	6.32	731.768	
1,800.00	1,800.00	1,746.81	1,746.25	3.91	2.67	163.74		-4,438.90	1,294.99	4,624.07	4,617.50	6.58	703.183	
1,900.00	1,900.00	1,800.23	1,799.41	4.13	2.76	163.80		-4,441.04	1,290.14	4,625.35	4,618.46	6.89	670.912	
2,000.00	2,000.00	1,881.70	1,880.41	4.36	2.93	163.91		-4,445.01	1,282.35	4,627.38	4,620.09	7.29	634.782	
2,100.00	2,100.00	1,977.64	1,975.79	4.58	3.16	164.03		-4,449.86	1,273.22	4,629.61	4,621.87	7.74	597.971	
2,200.00	2,200.00	2,077.06	2,074.64	4.81	3.43	164.16		-4,454.86	1,263.87	4,631.89	4,623.66	8.23	562.692	
2,300.00	2,300.00	2,179.67	2,176.65	5.03	3.73	164.30		-4,460.04	1,254.08	4,634.16	4,625.41	8.75	529.380	
2,400.00	2,400.00	2,283.78	2,280.16	5.26	4.05	164.43		-4,465.21	1,244.09	4,636.37	4,627.07	9.30	498.507	
2,500.00	2,500.00	2,392.00	2,387.77	5.48	4.40	164.57		-4,470.35	1,233.87	4,638.43	4,628.56	9.87	469.719	
2,600.00	2,600.00	2,487.00	2,482.26	5.71	4.72	164.69		-4,474.74	1,225.15	4,640.47	4,630.06	10.42	445.504	
2,700.00	2,700.00	2,594.03	2,588.74	5.93	5.09	164.82		-4,479.64	1,215.41	4,642.51	4,631.50	11.01	421.773	
2,800.00	2,800.00	2,695.43	2,689.62	6.15	5.44	164.94		-4,484.26	1,206.28	4,644.56	4,632.98	11.59	400.907	
2,900.00	2,900.00	2,822.71	2,816.29	6.38	5.90	165.10		-4,489.30	1,194.85	4,646.03	4,633.77	12.26	378.935	
3,000.00	3,000.00	2,929.38	2,922.47	6.60	6.28	165.22		-4,493.27	1,185.54	4,647.41	4,634.54	12.87	361.209	
3,100.00	3,100.00	3,012.18	3,004.94	6.83	6.58	165.31		-4,496.21	1,178.68	4,648.76	4,635.37	13.39	347.261	
3,200.00	3,200.00	3,160.49	3,152.61	7.05	7.12	165.48		-4,501.57	1,166.02	4,650.22	4,636.07	14.15	328.634	
3,300.00	3,300.00	3,252.26	3,243.92	7.28	7.46	165.59		-4,504.49	1,157.43	4,650.96	4,636.24	14.71	316.091	
3,400.00	3,400.00	3,366.47	3,357.62	7.50	7.88	165.72		-4,507.75	1,147.06	4,651.46	4,636.10	15.36	302.810	
3,500.00	3,500.00	3,450.44	3,441.22	7.73	8.19	165.82		-4,510.23	1,139.67	4,652.16	4,636.26	15.90	292.645	
3,600.00	3,600.00	3,557.07	3,547.35	7.95	8.59	165.95		-4,513.62	1,129.86	4,653.00	4,636.48	16.52	281.656	
3,700.00	3,700.00	3,665.98	3,655.75	8.18	9.00	166.08		-4,516.71	1,119.78	4,653.52	4,636.36	17.15	271.273	
3,800.00	3,800.00	3,749.36	3,738.71	8.40	9.32	166.18		-4,519.24	1,111.89	4,654.20	4,636.51	17.69	263.031	
3,900.00	3,900.00	3,830.97	3,819.87	8.63	9.63	166.28		-4,522.17	1,103.88	4,655.34	4,637.11	18.23	255.369	
4,000.00	4,000.00	3,933.71	3,922.07	8.85	10.02	166.41		-4,525.93	1,094.08	4,656.66	4,637.81	18.85	247.083	
4,100.00	4,100.00	4,023.54	4,011.48	9.06	10.36	76.52		-4,529.02	1,085.87	4,657.68	4,638.28	19.40	240.100	
4,200.00	4,199.96	4,092.00	4,079.55	9.26	10.63	76.61		-4,531.99	1,079.27	4,659.01	4,639.16	19.86	234.626	
4,300.00	4,299.86	4,158.01	4,145.16	9.46	10.89	76.72		-4,535.35	1,072.77	4,660.66	4,640.35	20.31	229.479	
4,400.00	4,399.68	4,277.86	4,264.32	9.66	11.35	76.95		-4,541.44	1,061.46	4,662.12	4,641.15	20.98	222.262	
4,411.45	4,411.10	4,289.12	4,275.51	9.69	11.39	76.97		-4,541.96	1,060.43	4,662.22	4,641.18	21.04	221.565	
4,500.00	4,499.42	4,366.88	4,352.89	9.87	11.69	77.13		-4,545.59	1,053.61	4,663.11	4,641.59	21.52	216.692	
4,600.00	4,599.16	4,441.61	4,427.27	10.08	11.98	77.27		-4,549.27	1,047.37	4,664.51	4,642.50	22.01	211.947	
4,700.00	4,698.90	4,516.77	4,502.06	10.29	12.27	77.42		-4,553.38	1,041.14	4,666.49	4,643.99	22.50	207.406	
4,800.00	4,798.65	4,610.26	4,595.07	10.50	12.63	77.61		-4,558.87	1,033.44	4,668.93	4,645.86	23.07	202.423	
4,900.00	4,898.39	4,717.55	4,701.77	10.71	13.05	77.83		-4,565.04	1,024.12	4,671.21	4,647.52	23.69	197.183	
5,000.00	4,998.13	4,795.26	4,779.06	10.93	13.35	77.99		-4,569.56	1,017.44	4,673.68	4,649.48	24.20	193.148	
5,100.00	5,097.87	4,849.00	4,832.53	11.15	13.55	78.09		-4,572.94	1,013.22	4,676.86	4,652.25	24.61	190.050	
5,200.00	5,197.61	4,944.00	4,927.05	11.36	13.92	78.27		-4,579.50	1,006.22	4,680.70	4,655.51	25.18	185.872	
5,300.00	5,297.36	5,182.94	5,164.80	11.58	14.84	78.75		-4,591.82	986.05	4,682.01	4,655.68	26.33	177.794	
5,400.00	5,397.10	5,320.87	5,302.16	11.81	15.37	79.02		-4,597.04	974.75	4,682.83	4,655.75	27.08	172.924	

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 62H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 85-ISCWSA-GYRO-3, 1447-LEAM_MWD, 15750-Project													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,500.00	5,496.84	5,449.35	5,429.84	12.03	15.88	79.30		-4,601.27	961.16	4,682.72	4,654.92	27.81	168.402	
5,600.00	5,596.58	5,547.76	5,527.39	12.25	16.28	79.54		-4,604.59	948.58	4,682.39	4,653.96	28.43	164.718	
5,700.00	5,696.33	5,643.50	5,622.26	12.48	16.67	79.78		-4,607.96	936.12	4,682.24	4,653.19	29.04	161.231	
5,736.75	5,732.98	5,676.00	5,654.45	12.56	16.80	79.86		-4,609.11	931.83	4,682.20	4,652.95	29.26	160.044	
5,800.00	5,796.07	5,716.69	5,694.76	12.70	16.97	79.97		-4,610.66	926.49	4,682.34	4,652.78	29.56	158.384	
5,900.00	5,895.81	5,771.00	5,748.58	12.93	17.20	80.10		-4,613.03	919.56	4,683.29	4,653.28	30.01	156.071	
6,000.00	5,995.55	5,826.82	5,803.89	13.16	17.43	80.24		-4,615.95	912.66	4,685.21	4,654.75	30.46	153.840	
6,100.00	6,095.29	5,884.94	5,861.48	13.38	17.67	80.38		-4,619.59	905.72	4,688.19	4,657.28	30.91	151.674	
6,200.00	6,195.04	5,969.42	5,945.29	13.61	18.01	80.57		-4,625.11	896.67	4,691.76	4,660.28	31.47	149.079	
6,300.00	6,294.78	6,054.00	6,029.29	13.84	18.35	80.75		-4,630.78	888.54	4,695.71	4,663.69	32.03	146.613	
6,400.00	6,394.52	6,149.00	6,123.66	14.07	18.73	80.95		-4,637.17	879.69	4,699.81	4,667.19	32.63	144.049	
6,500.00	6,494.26	15,750.00	11,082.01	14.31	85.39	-169.58		52.29	210.83	4,607.68	4,562.34	45.34	101.615	
6,600.00	6,594.01	15,750.00	11,082.01	14.54	85.39	-169.58		52.29	210.83	4,507.88	4,462.40	45.49	99.105	
6,700.00	6,693.75	15,750.00	11,082.01	14.77	85.39	-169.58		52.29	210.83	4,408.09	4,362.46	45.63	96.603	
6,800.00	6,793.49	15,750.00	11,082.01	15.01	85.39	-169.58		52.29	210.83	4,308.31	4,262.53	45.78	94.112	
6,900.00	6,893.23	15,750.00	11,082.01	15.24	85.39	-169.58		52.29	210.83	4,208.54	4,162.61	45.93	91.630	
7,000.00	6,992.97	15,750.00	11,082.01	15.47	85.39	-169.58		52.29	210.83	4,108.79	4,062.70	46.08	89.160	
7,100.00	7,092.72	15,750.00	11,082.01	15.71	85.39	-169.58		52.29	210.83	4,009.04	3,962.80	46.24	86.700	
7,200.00	7,192.46	15,750.00	11,082.01	15.95	85.39	-169.58		52.29	210.83	3,909.31	3,862.91	46.40	84.252	
7,300.00	7,292.20	15,750.00	11,082.01	16.18	85.39	-169.58		52.29	210.83	3,809.59	3,763.03	46.56	81.817	
7,400.00	7,391.94	15,750.00	11,082.01	16.42	85.39	-169.58		52.29	210.83	3,709.88	3,663.16	46.73	79.393	
7,500.00	7,491.69	15,750.00	11,082.01	16.66	85.39	-169.58		52.29	210.83	3,610.20	3,563.30	46.90	76.983	
7,600.00	7,591.43	15,750.00	11,082.01	16.89	85.39	-169.58		52.29	210.83	3,510.53	3,463.46	47.07	74.586	
7,700.00	7,691.17	15,750.00	11,082.01	17.13	85.39	-169.58		52.29	210.83	3,410.88	3,363.64	47.24	72.202	
7,800.00	7,790.91	15,750.00	11,082.01	17.37	85.39	-169.58		52.29	210.83	3,311.25	3,263.83	47.42	69.831	
7,900.00	7,890.66	15,750.00	11,082.01	17.61	85.39	-169.58		52.29	210.83	3,211.64	3,164.05	47.60	67.475	
8,000.00	7,990.40	15,750.00	11,082.01	17.85	85.39	-169.58		52.29	210.83	3,112.06	3,064.28	47.78	65.133	
8,100.00	8,090.14	15,750.00	11,082.01	18.09	85.39	-169.58		52.29	210.83	3,012.51	2,964.54	47.97	62.805	
8,200.00	8,189.88	15,750.00	11,082.01	18.33	85.39	-169.58		52.29	210.83	2,912.99	2,864.83	48.16	60.492	
8,300.00	8,289.62	15,750.00	11,082.01	18.57	85.39	-169.58		52.29	210.83	2,813.50	2,765.15	48.35	58.193	
8,400.00	8,389.37	15,750.00	11,082.01	18.81	85.39	-169.58		52.29	210.83	2,714.05	2,665.50	48.54	55.909	
8,500.00	8,489.11	15,750.00	11,082.01	19.05	85.39	-169.58		52.29	210.83	2,614.64	2,565.90	48.74	53.640	
8,600.00	8,588.85	15,750.00	11,082.01	19.29	85.39	-169.58		52.29	210.83	2,515.28	2,466.33	48.95	51.385	
8,700.00	8,688.59	15,747.52	11,082.08	19.53	85.39	-170.06		49.82	211.04	2,415.97	2,366.79	49.17	49.131	
8,800.00	8,788.34	15,744.48	11,082.15	19.78	85.39	-170.64		46.79	211.29	2,316.71	2,267.31	49.41	46.892	
8,877.86	8,865.99	15,742.12	11,082.21	19.96	85.39	-171.10		44.44	211.49	2,239.48	2,189.89	49.59	45.160	
8,900.00	8,888.08	15,741.45	11,082.22	20.01	85.39	-170.96		43.77	211.55	2,217.51	2,167.87	49.64	44.670	
9,000.00	8,987.90	15,738.52	11,082.30	20.21	85.38	-170.24		40.85	211.79	2,118.23	2,068.35	49.88	42.463	
9,100.00	9,087.82	15,735.73	11,082.36	20.40	85.38	-169.29		38.07	212.03	2,018.82	1,968.69	50.13	40.272	
9,200.00	9,187.79	15,733.08	11,082.43	20.59	85.38	-168.01		35.43	212.25	1,919.27	1,868.89	50.38	38.097	
9,289.31	9,277.09	15,730.84	11,082.48	20.75	85.38	-76.43		33.20	212.44	1,830.27	1,779.67	50.60	36.169	
9,300.00	9,287.78	15,730.58	11,082.49	20.77	85.38	-76.53		32.94	212.46	1,819.61	1,768.98	50.63	35.939	
9,400.00	9,387.78	15,728.14	11,082.55	20.98	85.38	-77.48		30.51	212.66	1,719.93	1,669.05	50.89	33.800	
9,500.00	9,487.78	15,725.69	11,082.61	21.19	85.37	-78.43		28.07	212.87	1,620.29	1,569.14	51.15	31.678	
9,589.31	9,577.09	15,723.51	11,082.66	21.38	85.37	-79.29		25.90	213.05	1,531.33	1,479.94	51.39	29.797	
9,600.00	9,587.78	15,723.15	11,082.67	21.40	85.37	111.87		25.54	213.08	1,520.68	1,469.26	51.42	29.573	
9,650.00	9,637.67	15,718.83	11,082.78	21.49	85.37	142.87		21.24	213.44	1,471.07	1,419.52	51.55	28.537	
9,700.00	9,687.09	15,710.20	11,082.99	21.58	85.36	155.33		12.64	214.16	1,422.00	1,370.32	51.67	27.518	
9,750.00	9,735.68	15,697.32	11,083.30	21.68	85.35	161.41		-0.19	215.24	1,373.84	1,322.02	51.82	26.514	
9,800.00	9,783.07	15,679.29	11,083.73	21.77	85.11	164.89		-18.15	216.72	1,326.96	1,275.13	51.83	25.601	
9,850.00	9,828.88	15,656.94	11,084.23	21.87	84.76	167.13		-40.43	218.43	1,281.70	1,229.91	51.79	24.749	
9,900.00	9,872.78	15,627.65	11,084.82	21.97	84.31	168.64		-69.63	220.56	1,238.35	1,186.67	51.68	23.960	

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 62H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 85-ISCWSA-GYRO-3, 1447-LEAM_MWD, 15750-Project													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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,950.00	9,914.43	15,592.74	11,085.36	22.07	83.78	169.76	-104.45	223.20	1,197.16	1,145.64	51.53	23.234		
10,000.00	9,953.51	15,554.08	11,085.74	22.18	83.18	170.63	-142.98	226.28	1,158.38	1,107.04	51.34	22.565		
10,050.00	9,989.72	15,514.27	11,085.92	22.30	82.57	171.33	-182.66	229.44	1,122.26	1,071.13	51.13	21.948		
10,100.00	10,022.80	15,471.46	11,085.89	22.43	81.92	171.89	-225.35	232.62	1,089.08	1,038.18	50.90	21.395		
10,150.00	10,052.48	15,437.01	11,085.79	22.58	81.39	172.35	-259.72	235.00	1,059.20	1,008.45	50.75	20.873		
10,200.00	10,078.55	15,404.60	11,085.98	22.74	80.90	172.73	-292.06	237.13	1,033.27	982.66	50.61	20.417		
10,250.00	10,100.79	15,364.00	11,086.66	22.93	80.28	173.03	-332.58	239.63	1,011.62	961.21	50.40	20.070		
10,300.00	10,119.06	15,324.43	11,087.55	23.14	79.69	173.28	-372.07	242.00	994.20	943.99	50.21	19.800		
10,350.00	10,133.20	15,275.18	11,088.61	23.38	78.94	173.51	-421.21	245.04	980.89	930.96	49.93	19.645		
10,400.00	10,143.10	15,224.51	11,089.63	23.64	78.18	173.72	-471.78	248.18	971.73	922.09	49.64	19.575		
10,450.00	10,148.70	15,173.12	11,090.57	23.92	77.41	173.90	-523.06	251.27	966.79	917.45	49.35	19.591		
10,483.74	10,150.02	15,137.36	11,091.14	24.13	76.88	174.01	-558.77	253.30	965.84	916.70	49.14	19.653		
10,496.68	10,150.00	15,123.63	11,091.34	24.21	76.67	174.05	-572.47	254.04	965.98	916.92	49.07	19.688		
10,500.00	10,149.96	15,120.10	11,091.39	24.23	76.62	174.06	-575.99	254.22	966.05	917.01	49.05	19.697		
10,600.00	10,148.67	15,025.24	11,092.66	28.67	75.22	174.31	-670.73	258.96	968.25	919.48	48.78	19.851		
10,700.00	10,147.39	14,924.12	11,094.81	28.75	73.72	174.62	-771.67	264.63	971.18	923.14	48.04	20.215		
10,800.00	10,146.10	14,814.23	11,096.12	28.84	72.12	174.93	-881.39	270.48	973.23	926.06	47.18	20.630		
10,900.00	10,144.81	14,717.47	11,096.82	28.92	70.71	175.18	-978.03	275.20	974.87	928.22	46.65	20.898		
11,000.00	10,143.53	14,613.28	11,097.68	29.01	69.21	175.43	-1,082.10	280.15	976.66	930.64	46.02	21.224		
11,100.00	10,142.24	14,508.28	11,097.96	29.10	67.72	175.69	-1,186.98	285.19	977.89	932.46	45.42	21.529		
11,200.00	10,140.96	14,406.93	11,097.86	29.20	66.29	175.91	-1,288.23	289.59	978.80	933.85	44.95	21.774		
11,300.00	10,139.67	14,304.63	11,097.66	29.29	64.86	176.14	-1,390.43	294.21	979.63	935.12	44.51	22.008		
11,400.00	10,138.39	14,194.57	11,096.60	29.39	63.34	176.39	-1,500.36	299.31	979.69	935.72	43.97	22.283		
11,500.00	10,137.10	14,088.59	11,094.79	29.49	61.89	176.67	-1,606.18	304.88	978.99	935.44	43.55	22.481		
11,600.00	10,135.81	13,983.92	11,092.42	29.59	60.46	176.96	-1,710.67	310.62	977.75	934.55	43.20	22.633		
11,700.00	10,134.53	13,884.52	11,089.91	29.69	59.13	177.26	-1,809.85	316.61	976.25	933.26	42.99	22.709		
11,800.00	10,133.24	13,786.94	11,087.71	29.80	57.83	177.59	-1,907.20	323.04	975.01	932.16	42.85	22.753		
11,900.00	10,131.96	13,686.76	11,085.56	29.91	56.52	177.92	-2,007.16	329.37	973.93	931.23	42.71	22.806		
12,000.00	10,130.67	13,583.65	11,083.12	30.02	55.19	178.21	-2,110.08	335.09	972.68	930.14	42.54	22.865		
12,100.00	10,129.38	13,484.87	11,080.60	30.14	53.95	178.48	-2,208.68	340.40	971.28	928.80	42.48	22.864		
12,200.00	10,128.10	13,386.80	11,078.27	30.26	52.74	178.71	-2,306.62	344.96	970.09	927.63	42.46	22.848		
12,300.00	10,126.81	13,283.51	11,075.76	30.38	51.49	178.96	-2,409.75	350.06	968.86	926.48	42.38	22.860		
12,368.16	10,125.94	13,229.02	11,074.71	30.47	50.85	179.11	-2,464.15	352.95	968.38	925.77	42.61	22.726		
12,400.00	10,125.53	13,203.62	11,074.49	30.52	50.55	179.17	-2,489.52	354.26	968.48	925.76	42.72	22.669		
12,500.00	10,124.24	13,102.89	11,074.08	30.66	49.39	179.41	-2,590.13	359.02	969.32	926.58	42.74	22.681		
12,600.00	10,122.95	13,019.90	11,074.17	30.81	48.46	179.56	-2,673.06	362.19	970.70	927.62	43.07	22.536		
12,700.00	10,121.67	12,928.56	11,075.70	30.97	47.47	179.66	-2,764.36	364.52	973.63	930.35	43.28	22.494		
12,800.00	10,120.38	12,820.73	11,077.54	31.15	46.35	179.70	-2,872.17	365.84	976.64	933.42	43.22	22.597		
12,900.00	10,119.10	12,721.28	11,078.66	31.36	45.35	179.76	-2,971.60	367.60	979.05	935.72	43.33	22.595		
13,000.00	10,117.81	12,627.78	11,080.09	31.60	44.44	179.84	-3,065.06	369.72	981.85	938.29	43.57	22.537		
13,100.00	10,116.53	12,526.59	11,081.95	31.88	43.50	179.91	-3,166.21	371.60	984.97	941.28	43.70	22.540		
13,200.00	10,115.24	12,432.00	11,083.27	32.21	42.66	179.95	-3,260.78	373.09	987.69	943.73	43.96	22.469		
13,300.00	10,113.95	12,337.00	11,085.76	32.57	41.86	-179.98	-3,355.73	374.83	991.59	947.35	44.24	22.415		
13,400.00	10,112.67	12,242.39	11,089.30	32.98	41.11	-179.89	-3,450.24	377.14	996.58	952.03	44.56	22.367		
13,500.00	10,111.38	12,137.32	11,092.48	33.42	40.32	-179.76	-3,555.22	380.26	1,000.90	956.15	44.75	22.366		
13,600.00	10,110.10	12,036.24	11,095.29	33.89	39.62	-179.60	-3,656.20	383.81	1,004.99	959.95	45.04	22.313		
13,700.00	10,108.81	11,930.07	11,097.73	34.38	38.96	-179.41	-3,762.25	387.93	1,008.59	963.29	45.30	22.264		
13,800.00	10,107.52	10,111.00	10,065.37	34.88	34.25	-85.10	-4,791.32	514.20	918.42	852.80	65.62	13.997		
13,900.00	10,106.24	10,113.42	10,067.78	35.41	34.26	-86.16	-4,791.41	513.98	819.54	753.78	65.76	12.463		
14,000.00	10,104.95	10,115.85	10,070.20	35.95	34.27	-87.23	-4,791.50	513.77	720.96	655.05	65.91	10.939		
14,100.00	10,103.67	10,118.29	10,072.62	36.50	34.28	-88.30	-4,791.60	513.55	622.82	556.75	66.07	9.426		
14,200.00	10,102.38	10,120.74	10,075.06	37.06	34.29	-89.39	-4,791.69	513.34	525.37	459.10	66.27	7.928		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 62H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 85-ISCWSA-GYRO-3, 1447-LEAM_MWD, 15750-Project													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						
14,300.00	10,101.09	10,123.20	10,077.52	37.63	34.30	-90.49	-4,791.79	513.12	429.09	362.55	66.53	6.449		
14,400.00	10,099.81	10,125.80	10,080.10	38.21	34.31	-91.65	-4,791.88	512.89	334.96	268.02	66.95	5.003		
14,500.00	10,098.52	10,128.36	10,082.64	38.79	34.32	-92.79	-4,791.98	512.67	245.51	177.75	67.76	3.623		
14,600.00	10,097.24	10,130.86	10,085.14	39.38	34.33	-93.91	-4,792.08	512.44	168.33	98.72	69.62	2.418		
14,700.00	10,095.95	10,133.32	10,087.59	39.98	34.34	-95.02	-4,792.17	512.23	128.00	55.84	72.17	1.774		
14,709.79	10,095.83	10,133.56	10,087.82	40.04	34.34	-95.12	-4,792.18	512.20	127.63	55.39	72.24	1.767	CC, ES, SF	
14,800.00	10,094.67	10,135.73	10,089.99	40.59	34.35	-96.10	-4,792.26	512.01	156.28	85.37	70.91	2.204		
14,900.00	10,093.38	10,138.11	10,092.35	41.20	34.36	-97.16	-4,792.35	511.80	229.02	159.83	69.18	3.310		
15,000.00	10,092.09	10,140.44	10,094.67	41.82	34.37	-98.21	-4,792.43	511.59	316.96	248.53	68.43	4.632		
15,100.00	10,090.81	10,142.73	10,096.95	42.44	34.38	-99.23	-4,792.52	511.38	410.45	342.33	68.12	6.025		
15,200.00	10,089.52	10,144.98	10,099.19	43.07	34.39	-100.24	-4,792.60	511.18	506.42	438.40	68.02	7.446		
15,300.00	10,088.24	10,147.19	10,101.39	43.71	34.40	-101.22	-4,792.68	510.98	603.69	535.69	68.00	8.877		
15,400.00	10,086.95	10,149.36	10,103.55	44.34	34.41	-102.18	-4,792.76	510.78	701.73	633.69	68.04	10.313		
15,500.00	10,085.66	10,151.50	10,105.68	44.98	34.41	-103.12	-4,792.84	510.59	800.24	732.13	68.11	11.750		
15,600.00	10,084.38	10,153.60	10,107.77	45.63	34.42	-104.05	-4,792.91	510.40	899.08	830.88	68.19	13.185		
15,700.00	10,083.09	10,155.67	10,109.83	46.28	34.43	-104.95	-4,792.98	510.21	998.14	929.85	68.29	14.617		
15,800.00	10,081.81	10,157.70	10,111.85	46.93	34.44	-105.83	-4,793.06	510.02	1,097.37	1,028.98	68.39	16.045		
15,900.00	10,080.52	10,159.70	10,113.84	47.59	34.45	-106.70	-4,793.13	509.84	1,196.72	1,128.22	68.50	17.469		
16,000.00	10,079.24	10,161.67	10,115.80	48.25	34.45	-107.54	-4,793.19	509.66	1,296.17	1,227.55	68.62	18.889		
16,100.00	10,077.95	10,163.60	10,117.72	48.91	34.46	-108.37	-4,793.26	509.48	1,395.70	1,326.96	68.74	20.304		
16,200.00	10,076.66	10,165.51	10,119.62	49.58	34.47	-109.18	-4,793.33	509.30	1,495.28	1,426.42	68.86	21.714		
16,300.00	10,075.38	10,167.38	10,121.48	50.25	34.48	-109.97	-4,793.39	509.13	1,594.92	1,525.93	68.99	23.119		
16,400.00	10,074.09	10,169.22	10,123.32	50.92	34.48	-110.74	-4,793.46	508.96	1,694.60	1,625.48	69.11	24.519		
16,500.00	10,072.81	10,171.04	10,125.12	51.59	34.49	-111.50	-4,793.52	508.79	1,794.31	1,725.06	69.24	25.914		
16,600.00	10,071.52	10,172.83	10,126.90	52.27	34.50	-112.23	-4,793.58	508.62	1,894.04	1,824.67	69.37	27.303		
16,700.00	10,070.23	10,174.59	10,128.66	52.95	34.50	-112.95	-4,793.64	508.46	1,993.81	1,924.31	69.50	28.687		
16,800.00	10,068.95	10,176.32	10,130.38	53.63	34.51	-113.66	-4,793.70	508.30	2,093.59	2,023.96	69.63	30.066		
16,900.00	10,067.66	10,178.03	10,132.08	54.31	34.52	-114.35	-4,793.76	508.14	2,193.39	2,123.63	69.77	31.439		
17,000.00	10,066.38	10,179.71	10,133.75	55.00	34.52	-115.02	-4,793.81	507.98	2,293.21	2,223.31	69.90	32.807		
17,100.00	10,065.09	10,181.37	10,135.40	55.69	34.53	-115.67	-4,793.87	507.82	2,393.04	2,323.01	70.03	34.169		
17,200.00	10,063.80	10,183.00	10,137.03	56.38	34.54	-116.32	-4,793.92	507.67	2,492.89	2,422.72	70.17	35.527		
17,300.00	10,062.52	10,184.61	10,138.63	57.07	34.54	-116.94	-4,793.97	507.52	2,592.74	2,522.44	70.31	36.878		
17,400.00	10,061.23	10,186.19	10,140.20	57.76	34.55	-117.56	-4,794.03	507.37	2,692.61	2,622.16	70.44	38.224		
17,495.86	10,060.00	10,187.69	10,141.69	58.43	34.56	-118.13	-4,794.07	507.22	2,788.35	2,717.77	70.57	39.510		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 72H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 62- VES GyroFlex V2, 10428-LEAM MWD+HDGM, 15490-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		
0.00	0.00	0.00	0.00	0.00	0.00	174.26	-9,893.13	994.36	9,943.07					
100.00	100.00	97.64	97.64	0.09	0.09	174.26	-9,892.89	993.97	9,942.79	9,942.61	0.17	N/A		
200.00	200.00	188.12	188.12	0.31	0.20	174.27	-9,892.61	993.28	9,942.40	9,941.90	0.50	N/A		
300.00	300.00	269.53	269.52	0.54	0.26	174.27	-9,892.52	992.63	9,942.20	9,941.41	0.78	N/A		
400.00	400.00	346.52	346.51	0.76	0.31	174.27	-9,892.51	991.97	9,942.12	9,941.07	1.05	9,445.990		
405.04	405.04	362.05	362.04	0.77	0.32	174.27	-9,892.52	991.83	9,942.11	9,941.04	1.07	9,285.505		
500.00	500.00	441.29	441.28	0.99	0.36	174.28	-9,892.73	991.18	9,942.27	9,940.95	1.32	7,528.444		
600.00	600.00	512.84	512.82	1.21	0.39	174.28	-9,893.07	990.70	9,942.65	9,941.07	1.57	6,315.580		
700.00	700.00	599.08	599.06	1.43	0.43	174.28	-9,893.55	990.28	9,943.16	9,941.33	1.83	5,428.423		
800.00	800.00	743.17	743.15	1.66	0.49	174.29	-9,894.20	989.71	9,943.59	9,941.49	2.11	4,723.677		
900.00	900.00	838.93	838.90	1.88	0.53	174.29	-9,894.37	989.44	9,943.74	9,941.38	2.36	4,211.892		
1,000.00	1,000.00	915.14	915.12	2.11	0.56	174.29	-9,894.58	989.34	9,944.01	9,941.40	2.61	3,809.398		
1,100.00	1,100.00	995.07	995.05	2.33	0.59	174.29	-9,894.96	989.39	9,944.50	9,941.64	2.86	3,475.422		
1,200.00	1,200.00	1,100.62	1,100.59	2.56	0.61	174.29	-9,895.59	989.80	9,945.13	9,942.01	3.12	3,187.714		
1,300.00	1,300.00	1,193.49	1,193.46	2.78	0.63	174.28	-9,896.09	990.41	9,945.73	9,942.36	3.37	2,948.332		
1,400.00	1,400.00	1,307.38	1,307.35	3.01	0.65	174.28	-9,896.67	991.11	9,946.30	9,942.66	3.63	2,738.067		
1,500.00	1,500.00	1,398.60	1,398.57	3.23	0.68	174.28	-9,897.12	991.57	9,946.84	9,942.95	3.89	2,560.051		
1,600.00	1,600.00	1,483.76	1,483.72	3.46	0.70	174.28	-9,897.64	992.11	9,947.51	9,943.37	4.14	2,404.967		
1,700.00	1,700.00	1,611.82	1,611.78	3.68	0.73	174.27	-9,898.34	992.93	9,948.12	9,943.73	4.40	2,261.731		
1,800.00	1,800.00	1,728.39	1,728.35	3.91	0.76	174.27	-9,898.67	993.45	9,948.44	9,943.79	4.66	2,136.650		
1,900.00	1,900.00	1,814.19	1,814.15	4.13	0.78	174.27	-9,898.93	993.76	9,948.78	9,943.88	4.91	2,027.923		
2,000.00	2,000.00	1,898.99	1,898.94	4.36	0.80	174.27	-9,899.36	994.05	9,949.31	9,944.16	5.16	1,929.421		
2,100.00	2,100.00	2,039.30	2,039.25	4.58	0.84	174.26	-9,900.00	994.45	9,949.83	9,944.41	5.42	1,834.579		
2,200.00	2,200.00	2,136.39	2,136.34	4.81	0.87	174.26	-9,900.14	994.61	9,949.99	9,944.32	5.68	1,752.982		
2,300.00	2,300.00	2,261.43	2,261.38	5.03	0.90	174.26	-9,900.22	994.79	9,950.07	9,944.15	5.93	1,679.092		
2,400.00	2,400.00	2,367.06	2,367.01	5.26	0.90	174.26	-9,900.17	994.80	9,950.03	9,943.87	6.16	1,615.973		
2,500.00	2,500.00	2,495.10	2,495.05	5.48	0.91	174.26	-9,899.90	994.59	9,949.80	9,943.42	6.39	1,557.913		
2,600.00	2,600.00	2,599.06	2,599.01	5.71	0.91	174.26	-9,899.48	994.23	9,949.37	9,942.75	6.62	1,503.645		
2,700.00	2,700.00	15,490.00	10,980.34	5.93	101.62	169.25	-5,255.28	997.92	9,893.78	9,852.48	41.29	239.594		
2,800.00	2,800.00	15,490.00	10,980.34	6.15	101.62	169.25	-5,255.28	997.92	9,809.80	9,768.44	41.36	237.173		
2,900.00	2,900.00	15,490.00	10,980.34	6.38	101.62	169.25	-5,255.28	997.92	9,726.13	9,684.69	41.44	234.730		
3,000.00	3,000.00	15,490.00	10,980.34	6.60	101.62	169.25	-5,255.28	997.92	9,642.77	9,601.25	41.52	232.269		
3,100.00	3,100.00	15,490.00	10,980.34	6.83	101.62	169.25	-5,255.28	997.92	9,559.73	9,518.12	41.60	229.793		
3,200.00	3,200.00	15,490.00	10,980.34	7.05	101.62	169.25	-5,255.28	997.92	9,477.01	9,435.32	41.69	227.304		
3,300.00	3,300.00	15,490.00	10,980.34	7.28	101.62	169.25	-5,255.28	997.92	9,394.63	9,352.84	41.79	224.806		
3,400.00	3,400.00	15,490.00	10,980.34	7.50	101.62	169.25	-5,255.28	997.92	9,312.60	9,270.71	41.89	222.301		
3,500.00	3,500.00	15,490.00	10,980.34	7.73	101.62	169.25	-5,255.28	997.92	9,230.92	9,188.92	42.00	219.791		
3,600.00	3,600.00	15,490.00	10,980.34	7.95	101.62	169.25	-5,255.28	997.92	9,149.61	9,107.50	42.11	217.280		
3,700.00	3,700.00	15,490.00	10,980.34	8.18	101.62	169.25	-5,255.28	997.92	9,068.67	9,026.44	42.23	214.769		
3,800.00	3,800.00	15,490.00	10,980.34	8.40	101.62	169.25	-5,255.28	997.92	8,988.11	8,945.76	42.34	212.261		
3,900.00	3,900.00	15,490.00	10,980.34	8.63	101.62	169.25	-5,255.28	997.92	8,907.95	8,865.48	42.47	209.758		
4,000.00	4,000.00	15,490.00	10,980.34	8.85	101.62	169.25	-5,255.28	997.92	8,828.19	8,785.59	42.59	207.261		
4,100.00	4,100.00	15,490.00	10,980.34	9.06	101.62	80.54	-5,255.28	997.92	8,748.75	8,706.04	42.71	204.823		
4,200.00	4,199.96	15,490.00	10,980.34	9.26	101.62	81.82	-5,255.28	997.92	8,669.56	8,626.74	42.82	202.456		
4,300.00	4,299.86	15,490.00	10,980.34	9.46	101.62	83.09	-5,255.28	997.92	8,590.65	8,547.72	42.93	200.124		
4,400.00	4,399.68	15,490.00	10,980.34	9.66	101.62	84.35	-5,255.28	997.92	8,512.06	8,469.03	43.03	197.827		
4,411.45	4,411.10	15,490.00	10,980.34	9.69	101.62	84.50	-5,255.28	997.92	8,503.08	8,460.04	43.04	197.565		
4,500.00	4,499.42	15,490.00	10,980.34	9.87	101.62	84.50	-5,255.28	997.92	8,433.84	8,390.72	43.13	195.558		
4,600.00	4,599.16	15,490.00	10,980.34	10.08	101.62	84.50	-5,255.28	997.92	8,356.10	8,312.87	43.23	193.301		
4,700.00	4,698.90	15,490.00	10,980.34	10.29	101.62	84.50	-5,255.28	997.92	8,278.83	8,235.49	43.33	191.056		
4,800.00	4,798.65	15,490.00	10,980.34	10.50	101.62	84.50	-5,255.28	997.92	8,202.05	8,158.61	43.44	188.824		
4,900.00	4,898.39	15,490.00	10,980.34	10.71	101.62	84.50	-5,255.28	997.92	8,125.77	8,082.23	43.54	186.608		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 72H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 62- VES GyroFlex V2, 10428-LEAM MWD+HDGM, 15490-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		
5,000.00	4,998.13	15,490.00	10,980.34	10.93	101.62	84.50	-5,255.28	997.92	8,050.02	8,006.37	43.65	184.408		
5,100.00	5,097.87	15,490.00	10,980.34	11.15	101.62	84.50	-5,255.28	997.92	7,974.80	7,931.04	43.76	182.226		
5,200.00	5,197.61	15,490.00	10,980.34	11.36	101.62	84.50	-5,255.28	997.92	7,900.13	7,856.26	43.87	180.063		
5,300.00	5,297.36	15,490.00	10,980.34	11.58	101.62	84.50	-5,255.28	997.92	7,826.03	7,782.04	43.99	177.920		
5,400.00	5,397.10	15,490.00	10,980.34	11.81	101.62	84.50	-5,255.28	997.92	7,752.50	7,708.41	44.10	175.800		
5,500.00	5,496.84	15,490.00	10,980.34	12.03	101.62	84.50	-5,255.28	997.92	7,679.58	7,635.37	44.21	173.702		
5,600.00	5,596.58	15,490.00	10,980.34	12.25	101.62	84.50	-5,255.28	997.92	7,607.27	7,562.95	44.32	171.628		
5,700.00	5,696.33	15,490.00	10,980.34	12.48	101.62	84.50	-5,255.28	997.92	7,535.59	7,491.16	44.44	169.580		
5,800.00	5,796.07	15,490.00	10,980.34	12.70	101.62	84.50	-5,255.28	997.92	7,464.57	7,420.02	44.55	167.557		
5,900.00	5,895.81	15,490.00	10,980.34	12.93	101.62	84.50	-5,255.28	997.92	7,394.22	7,349.55	44.66	165.562		
6,000.00	5,995.55	15,490.00	10,980.34	13.16	101.62	84.50	-5,255.28	997.92	7,324.55	7,279.78	44.77	163.596		
6,100.00	6,095.29	15,490.00	10,980.34	13.38	101.62	84.50	-5,255.28	997.92	7,255.60	7,210.71	44.88	161.659		
6,200.00	6,195.04	15,490.00	10,980.34	13.61	101.62	84.50	-5,255.28	997.92	7,187.37	7,142.38	44.99	159.752		
6,300.00	6,294.78	15,490.00	10,980.34	13.84	101.62	84.50	-5,255.28	997.92	7,119.90	7,074.80	45.10	157.877		
6,400.00	6,394.52	15,490.00	10,980.34	14.07	101.62	84.50	-5,255.28	997.92	7,053.19	7,007.99	45.20	156.034		
6,500.00	6,494.26	15,490.00	10,980.34	14.31	101.62	84.50	-5,255.28	997.92	6,987.29	6,941.98	45.31	154.224		
6,600.00	6,594.01	15,490.00	10,980.34	14.54	101.62	84.50	-5,255.28	997.92	6,922.19	6,876.79	45.41	152.448		
6,700.00	6,693.75	15,490.00	10,980.34	14.77	101.62	84.50	-5,255.28	997.92	6,857.94	6,812.44	45.50	150.708		
6,800.00	6,793.49	15,490.00	10,980.34	15.01	101.62	84.50	-5,255.28	997.92	6,794.56	6,748.96	45.60	149.004		
6,900.00	6,893.23	15,490.00	10,980.34	15.24	101.62	84.50	-5,255.28	997.92	6,732.06	6,686.37	45.69	147.336		
7,000.00	6,992.97	15,490.00	10,980.34	15.47	101.62	84.50	-5,255.28	997.92	6,670.48	6,624.70	45.78	145.707		
7,100.00	7,092.72	15,490.00	10,980.34	15.71	101.62	84.50	-5,255.28	997.92	6,609.83	6,563.97	45.86	144.116		
7,200.00	7,192.46	15,490.00	10,980.34	15.95	101.62	84.50	-5,255.28	997.92	6,550.15	6,504.21	45.94	142.565		
7,300.00	7,292.20	15,490.00	10,980.34	16.18	101.62	84.50	-5,255.28	997.92	6,491.47	6,445.45	46.02	141.055		
7,400.00	7,391.94	15,490.00	10,980.34	16.42	101.62	84.50	-5,255.28	997.92	6,433.80	6,387.71	46.09	139.586		
7,500.00	7,491.69	15,490.00	10,980.34	16.66	101.62	84.50	-5,255.28	997.92	6,377.18	6,331.02	46.16	138.159		
7,600.00	7,591.43	15,490.00	10,980.34	16.89	101.62	84.50	-5,255.28	997.92	6,321.63	6,275.41	46.22	136.775		
7,700.00	7,691.17	15,490.00	10,980.34	17.13	101.62	84.50	-5,255.28	997.92	6,267.19	6,220.91	46.27	135.435		
7,800.00	7,790.91	15,490.00	10,980.34	17.37	101.62	84.50	-5,255.28	997.92	6,213.87	6,167.55	46.32	134.141		
7,900.00	7,890.66	15,490.00	10,980.34	17.61	101.62	84.50	-5,255.28	997.92	6,161.73	6,115.36	46.37	132.891		
8,000.00	7,990.40	15,490.00	10,980.34	17.85	101.62	84.50	-5,255.28	997.92	6,110.77	6,064.36	46.40	131.689		
8,100.00	8,090.14	15,490.00	10,980.34	18.09	101.62	84.50	-5,255.28	997.92	6,061.03	6,014.60	46.43	130.534		
8,200.00	8,189.88	15,490.00	10,980.34	18.33	101.62	84.50	-5,255.28	997.92	6,012.55	5,966.09	46.46	129.427		
8,300.00	8,289.62	15,490.00	10,980.34	18.57	101.62	84.50	-5,255.28	997.92	5,965.35	5,918.87	46.47	128.369		
8,400.00	8,389.37	15,490.00	10,980.34	18.81	101.62	84.50	-5,255.28	997.92	5,919.46	5,872.98	46.48	127.360		
8,500.00	8,489.11	15,490.00	10,980.34	19.05	101.62	84.50	-5,255.28	997.92	5,874.91	5,828.43	46.48	126.402		
8,600.00	8,588.85	15,490.00	10,980.34	19.29	101.62	84.50	-5,255.28	997.92	5,831.74	5,785.27	46.47	125.496		
8,700.00	8,688.59	15,490.00	10,980.34	19.53	101.62	84.50	-5,255.28	997.92	5,789.98	5,743.52	46.45	124.641		
8,800.00	8,788.34	15,490.00	10,980.34	19.78	101.62	84.50	-5,255.28	997.92	5,749.65	5,703.22	46.43	123.838		
8,877.86	8,865.99	15,490.00	10,980.34	19.96	101.62	84.50	-5,255.28	997.92	5,719.26	5,672.86	46.40	123.250		
8,900.00	8,888.08	15,490.00	10,980.34	20.01	101.62	84.41	-5,255.28	997.92	5,710.79	5,664.40	46.39	123.100		
9,000.00	8,987.90	15,490.00	10,980.34	20.21	101.62	84.01	-5,255.28	997.92	5,673.54	5,627.22	46.32	122.490		
9,100.00	9,087.82	15,490.00	10,980.34	20.40	101.62	83.63	-5,255.28	997.92	5,637.99	5,591.74	46.25	121.907		
9,200.00	9,187.79	15,490.00	10,980.34	20.59	101.62	83.27	-5,255.28	997.92	5,604.18	5,558.00	46.18	121.351		
9,289.31	9,277.09	15,490.00	10,980.34	20.75	101.62	172.97	-5,255.28	997.92	5,575.49	5,529.37	46.13	120.877		
9,300.00	9,287.78	15,490.00	10,980.34	20.77	101.62	172.97	-5,255.28	997.92	5,572.15	5,526.03	46.12	120.817		
9,400.00	9,387.78	15,490.00	10,980.34	20.98	101.62	172.97	-5,255.28	997.92	5,541.83	5,495.74	46.08	120.255		
9,500.00	9,487.78	15,490.00	10,980.34	21.19	101.62	172.97	-5,255.28	997.92	5,513.15	5,467.10	46.04	119.740		
9,589.31	9,577.09	15,490.00	10,980.34	21.38	101.62	172.97	-5,255.28	997.92	5,488.95	5,442.95	46.00	119.322		
9,600.00	9,587.78	15,490.00	10,980.34	21.40	101.62	-6.64	-5,255.28	997.92	5,486.04	5,440.05	46.00	119.275		
9,650.00	9,637.67	15,490.00	10,980.34	21.49	101.62	-6.84	-5,255.28	997.92	5,470.21	5,424.25	45.96	119.012		
9,700.00	9,687.09	15,490.00	10,980.34	21.58	101.62	-7.10	-5,255.28	997.92	5,450.73	5,404.79	45.94	118.647		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 72H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 62- VES GyroFlex V2, 10428-LEAM MWD+HDGM, 15490-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		
9,750.00	9,735.68	15,490.00	10,980.34	21.68	101.62	-7.42	-5,255.28	997.92	5,427.71	5,381.79	45.92	118.189		
9,800.00	9,783.07	15,490.00	10,980.34	21.77	101.62	-7.84	-5,255.28	997.92	5,401.28	5,355.37	45.91	117.642		
9,850.00	9,828.88	15,490.00	10,980.34	21.87	101.62	-8.36	-5,255.28	997.92	5,371.59	5,325.68	45.91	117.009		
9,900.00	9,872.78	15,490.00	10,980.34	21.97	101.62	-9.01	-5,255.28	997.92	5,338.82	5,292.91	45.91	116.293		
9,950.00	9,914.43	15,490.00	10,980.34	22.07	101.62	-9.85	-5,255.28	997.92	5,303.15	5,257.24	45.92	115.499		
10,000.00	9,953.51	15,490.00	10,980.34	22.18	101.62	-10.93	-5,255.28	997.92	5,264.82	5,218.89	45.93	114.631		
10,050.00	9,989.72	15,490.00	10,980.34	22.30	101.62	-12.35	-5,255.28	997.92	5,224.05	5,178.10	45.95	113.693		
10,100.00	10,022.80	15,490.00	10,980.34	22.43	101.62	-14.29	-5,255.28	997.92	5,181.09	5,135.12	45.98	112.693		
10,150.00	10,052.48	15,490.00	10,980.34	22.58	101.62	-17.03	-5,255.28	997.92	5,136.23	5,090.22	46.01	111.634		
10,200.00	10,078.55	15,490.00	10,980.34	22.74	101.62	-21.16	-5,255.28	997.92	5,089.77	5,043.71	46.05	110.525		
10,250.00	10,100.79	15,490.00	10,980.34	22.93	101.62	-27.87	-5,255.28	997.92	5,042.00	4,995.90	46.10	109.371		
10,300.00	10,119.06	15,490.00	10,980.34	23.14	101.62	-40.02	-5,255.28	997.92	4,993.28	4,947.12	46.16	108.180		
10,350.00	10,133.20	15,490.00	10,980.34	23.38	101.62	-63.95	-5,255.28	997.92	4,943.94	4,897.72	46.22	106.959		
10,400.00	10,143.10	15,490.00	10,980.34	23.64	101.62	-101.85	-5,255.28	997.92	4,894.35	4,848.05	46.30	105.715		
10,450.00	10,148.70	15,490.00	10,980.34	23.92	101.62	-131.98	-5,255.28	997.92	4,844.88	4,798.50	46.38	104.454		
10,496.68	10,150.00	15,490.00	10,980.34	24.21	101.62	-146.85	-5,255.28	997.92	4,799.15	4,752.68	46.47	103.269		
10,500.00	10,149.96	15,490.00	10,980.34	24.23	101.62	-146.85	-5,255.28	997.92	4,795.92	4,749.44	46.48	103.187		
10,600.00	10,148.67	15,490.00	10,980.34	28.67	101.62	-146.85	-5,255.28	997.92	4,698.71	4,647.33	51.38	91.450		
10,700.00	10,147.39	15,490.00	10,980.34	28.75	101.62	-146.85	-5,255.28	997.92	4,601.63	4,549.95	51.68	89.046		
10,800.00	10,146.10	15,490.00	10,980.34	28.84	101.62	-146.85	-5,255.28	997.92	4,504.67	4,452.69	51.99	86.652		
10,900.00	10,144.81	15,490.00	10,980.34	28.92	101.62	-146.85	-5,255.28	997.92	4,407.85	4,355.54	52.31	84.269		
11,000.00	10,143.53	15,490.00	10,980.34	29.01	101.62	-146.85	-5,255.28	997.92	4,311.17	4,258.53	52.64	81.899		
11,100.00	10,142.24	15,490.00	10,980.34	29.10	101.62	-146.85	-5,255.28	997.92	4,214.65	4,161.66	52.99	79.541		
11,200.00	10,140.96	15,490.00	10,980.34	29.20	101.62	-146.85	-5,255.28	997.92	4,118.30	4,064.95	53.35	77.196		
11,300.00	10,139.67	15,490.00	10,980.34	29.29	101.62	-146.85	-5,255.28	997.92	4,022.12	3,968.39	53.73	74.864		
11,400.00	10,138.39	15,490.00	10,980.34	29.39	101.62	-146.85	-5,255.28	997.92	3,926.13	3,872.01	54.12	72.546		
11,500.00	10,137.10	15,490.00	10,980.34	29.49	101.62	-146.85	-5,255.28	997.92	3,830.35	3,775.82	54.53	70.242		
11,600.00	10,135.81	15,490.00	10,980.34	29.59	101.62	-146.85	-5,255.28	997.92	3,734.79	3,679.83	54.96	67.954		
11,700.00	10,134.53	15,490.00	10,980.34	29.69	101.62	-146.85	-5,255.28	997.92	3,639.47	3,584.06	55.41	65.681		
11,800.00	10,133.24	15,490.00	10,980.34	29.80	101.62	-146.85	-5,255.28	997.92	3,544.41	3,488.52	55.88	63.424		
11,900.00	10,131.96	15,490.00	10,980.34	29.91	101.62	-146.85	-5,255.28	997.92	3,449.62	3,393.24	56.38	61.184		
12,000.00	10,130.67	15,490.00	10,980.34	30.02	101.62	-146.85	-5,255.28	997.92	3,355.14	3,298.24	56.90	58.962		
12,100.00	10,129.38	15,490.00	10,980.34	30.14	101.62	-146.85	-5,255.28	997.92	3,260.99	3,203.54	57.45	56.759		
12,200.00	10,128.10	15,490.00	10,980.34	30.26	101.62	-146.85	-5,255.28	997.92	3,167.20	3,109.16	58.03	54.576		
12,300.00	10,126.81	15,490.00	10,980.34	30.38	101.62	-146.85	-5,255.28	997.92	3,073.79	3,015.15	58.65	52.413		
12,400.00	10,125.53	15,490.00	10,980.34	30.52	101.62	-146.85	-5,255.28	997.92	2,980.82	2,921.52	59.29	50.272		
12,500.00	10,124.24	15,490.00	10,980.34	30.66	101.62	-146.85	-5,255.28	997.92	2,888.31	2,828.33	59.98	48.153		
12,600.00	10,122.95	15,490.00	10,980.34	30.81	101.62	-146.85	-5,255.28	997.92	2,796.32	2,735.61	60.71	46.060		
12,700.00	10,121.67	15,490.00	10,980.34	30.97	101.62	-146.85	-5,255.28	997.92	2,704.90	2,643.42	61.49	43.991		
12,800.00	10,120.38	15,490.00	10,980.34	31.15	101.62	-146.85	-5,255.28	997.92	2,614.11	2,551.80	62.31	41.951		
12,900.00	10,119.10	15,490.00	10,980.34	31.36	101.62	-146.85	-5,255.28	997.92	2,524.02	2,460.82	63.20	39.939		
13,000.00	10,117.81	15,490.00	10,980.34	31.60	101.62	-146.85	-5,255.28	997.92	2,434.69	2,370.55	64.14	37.959		
13,100.00	10,116.53	15,490.00	10,980.34	31.88	101.62	-146.85	-5,255.28	997.92	2,346.23	2,281.08	65.15	36.012		
13,200.00	10,115.24	15,490.00	10,980.34	32.21	101.62	-146.85	-5,255.28	997.92	2,258.74	2,192.50	66.24	34.102		
13,300.00	10,113.95	15,490.00	10,980.34	32.57	101.62	-146.85	-5,255.28	997.92	2,172.32	2,104.92	67.40	32.229		
13,400.00	10,112.67	15,490.00	10,980.34	32.98	101.62	-146.85	-5,255.28	997.92	2,087.11	2,018.45	68.66	30.399		
13,500.00	10,111.38	15,490.00	10,980.34	33.42	101.62	-146.85	-5,255.28	997.92	2,003.28	1,933.26	70.01	28.614		
13,600.00	10,110.10	15,490.00	10,980.34	33.89	101.62	-146.85	-5,255.28	997.92	1,920.99	1,849.51	71.47	26.878		
13,700.00	10,108.81	15,490.00	10,980.34	34.38	101.62	-146.85	-5,255.28	997.92	1,840.45	1,767.40	73.05	25.195		
13,800.00	10,107.52	15,490.00	10,980.34	34.88	101.62	-146.85	-5,255.28	997.92	1,761.91	1,687.16	74.75	23.570		
13,900.00	10,106.24	15,490.00	10,980.34	35.41	101.62	-146.85	-5,255.28	997.92	1,685.65	1,609.06	76.59	22.010		
14,000.00	10,104.95	15,490.00	10,980.34	35.95	101.62	-146.85	-5,255.28	997.92	1,611.98	1,533.42	78.56	20.519		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 72H - OH - OH													Offset Site Error: 0.00 usft	
Survey Program: 62- VES GyroFlex V2, 10428-LEAM MWD+HDGM, 15490-Project													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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
14,100.00	10,103.67	15,490.00	10,980.34	36.50	101.62	-146.85	-5,255.28	997.92	1,541.29	1,460.61	80.68	19.104		
14,200.00	10,102.38	15,490.00	10,980.34	37.06	101.62	-146.85	-5,255.28	997.92	1,473.99	1,391.05	82.94	17.772		
14,300.00	10,101.09	15,490.00	10,980.34	37.63	101.62	-146.85	-5,255.28	997.92	1,410.57	1,325.25	85.32	16.532		
14,400.00	10,099.81	15,490.00	10,980.34	38.21	101.62	-146.85	-5,255.28	997.92	1,351.59	1,263.78	87.81	15.392		
14,500.00	10,098.52	15,490.00	10,980.34	38.79	101.62	-146.85	-5,255.28	997.92	1,297.64	1,207.28	90.36	14.360		
14,600.00	10,097.24	15,490.00	10,980.34	39.38	101.62	-146.85	-5,255.28	997.92	1,249.38	1,156.46	92.92	13.446		
14,700.00	10,095.95	15,490.00	10,980.34	39.98	101.62	-146.85	-5,255.28	997.92	1,207.49	1,112.08	95.41	12.656		
14,800.00	10,094.67	15,490.00	10,980.34	40.59	101.62	-146.85	-5,255.28	997.92	1,172.65	1,074.92	97.72	12.000		
14,900.00	10,093.38	15,490.00	10,980.34	41.20	101.62	-146.85	-5,255.28	997.92	1,145.50	1,045.75	99.76	11.483		
15,000.00	10,092.09	15,490.00	10,980.34	41.82	101.62	-146.85	-5,255.28	997.92	1,126.61	1,025.22	101.39	11.111		
15,100.00	10,090.81	15,490.00	10,980.34	42.44	101.62	-146.85	-5,255.28	997.92	1,116.39	1,013.85	102.54	10.888		
15,164.62	10,089.98	15,490.00	10,980.34	42.85	101.62	-146.85	-5,255.28	997.92	1,114.52	1,011.54	102.98	10.823 CC, ES		
15,200.00	10,089.52	15,490.00	10,980.34	43.07	101.62	-146.85	-5,255.28	997.92	1,115.08	1,011.97	103.11	10.814 SF		
15,300.00	10,088.24	15,435.59	10,983.19	43.71	101.59	-146.87	-5,309.57	1,000.10	1,121.40	1,017.72	103.68	10.816		
15,400.00	10,086.95	15,327.14	10,987.77	44.34	99.24	-146.86	-5,417.81	1,005.09	1,128.12	1,025.11	103.01	10.952		
15,500.00	10,085.66	15,230.02	10,991.57	44.98	97.32	-146.84	-5,514.75	1,009.58	1,134.60	1,032.04	102.56	11.063		
15,600.00	10,084.38	15,134.00	10,995.77	45.63	95.33	-146.83	-5,610.57	1,014.13	1,141.53	1,039.46	102.07	11.184		
15,700.00	10,083.09	15,032.84	11,000.63	46.28	93.05	-146.85	-5,711.52	1,018.40	1,148.53	1,047.13	101.41	11.326		
15,800.00	10,081.81	14,928.01	11,005.50	46.93	90.63	-146.88	-5,816.16	1,022.53	1,155.25	1,054.57	100.68	11.475		
15,900.00	10,080.52	14,807.55	11,009.95	47.59	87.91	-146.90	-5,936.46	1,026.79	1,160.99	1,061.19	99.80	11.633		
16,000.00	10,079.24	14,701.50	11,013.03	48.25	85.55	-146.95	-6,042.43	1,029.29	1,165.38	1,066.31	99.08	11.762		
16,100.00	10,077.95	14,602.21	11,016.05	48.91	83.51	-147.02	-6,141.66	1,030.96	1,169.53	1,071.03	98.50	11.873		
16,200.00	10,076.66	14,509.01	11,019.13	49.58	81.79	-147.09	-6,234.79	1,032.80	1,174.05	1,075.95	98.10	11.968		
16,300.00	10,075.38	14,411.93	11,022.73	50.25	79.72	-147.16	-6,331.78	1,034.83	1,178.98	1,081.46	97.52	12.089		
16,400.00	10,074.09	14,307.22	11,026.47	50.92	77.33	-147.23	-6,436.40	1,037.24	1,183.92	1,087.12	96.80	12.230		
16,500.00	10,072.81	14,199.17	11,029.52	51.59	75.04	-147.30	-6,544.38	1,039.23	1,187.96	1,091.83	96.13	12.358		
16,600.00	10,071.52	14,106.90	11,031.93	52.27	73.11	-147.33	-6,636.60	1,041.47	1,192.16	1,096.47	95.69	12.459		
16,700.00	10,070.23	14,013.88	11,034.37	52.95	71.10	-147.31	-6,729.52	1,045.06	1,197.13	1,101.87	95.26	12.567		
16,800.00	10,068.95	13,916.13	11,036.97	53.63	69.09	-147.27	-6,827.15	1,049.15	1,202.31	1,107.48	94.83	12.678		
16,900.00	10,067.66	13,821.43	11,039.81	54.31	67.15	-147.24	-6,921.72	1,053.23	1,207.86	1,113.42	94.44	12.790		
17,000.00	10,066.38	13,723.64	11,042.46	55.00	65.00	-147.16	-7,019.32	1,058.55	1,213.77	1,119.78	93.98	12.915		
17,100.00	10,065.09	13,621.93	11,045.13	55.69	62.76	-147.07	-7,120.85	1,064.09	1,219.60	1,126.11	93.49	13.045		
17,200.00	10,063.80	13,520.60	11,047.86	56.38	60.66	-147.00	-7,222.01	1,069.24	1,225.31	1,132.27	93.05	13.169		
17,300.00	10,062.52	13,421.26	11,051.03	57.07	58.57	-146.98	-7,321.21	1,073.39	1,230.95	1,138.36	92.58	13.296		
17,400.00	10,061.23	13,300.17	11,054.22	57.76	55.94	-146.94	-7,442.16	1,078.33	1,236.12	1,144.27	91.85	13.458		
17,495.86	10,060.00	13,204.37	11,055.01	58.43	53.88	-146.85	-7,537.85	1,082.73	1,239.83	1,148.40	91.43	13.561		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 57H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 172- VES GyroFlex V2, 1519-MWD-ISCWSA, 16135-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)	Offset Wellbore Centre +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	163.43	-4,744.39	1,412.01	4,950.10					
100.00	100.00	65.58	65.58	0.09	0.05	163.43	-4,744.50	1,411.94	4,950.16	4,950.02	0.14	N/A		
200.00	200.00	148.38	148.38	0.31	0.12	163.43	-4,744.97	1,411.67	4,950.61	4,950.19	0.42	N/A		
300.00	300.00	237.97	237.96	0.54	0.19	163.44	-4,745.80	1,411.24	4,951.36	4,950.63	0.72	6,832.417		
400.00	400.00	342.99	342.97	0.76	0.27	163.45	-4,746.82	1,410.82	4,952.18	4,951.15	1.02	4,839.509		
500.00	500.00	446.72	446.70	0.99	0.33	163.45	-4,747.65	1,410.52	4,952.86	4,951.55	1.31	3,790.820		
600.00	600.00	550.06	550.04	1.21	0.38	163.46	-4,748.39	1,410.35	4,953.50	4,951.92	1.57	3,146.075		
700.00	700.00	656.41	656.39	1.43	0.43	163.46	-4,749.01	1,410.17	4,954.01	4,952.16	1.85	2,679.575		
800.00	800.00	756.71	756.69	1.66	0.48	163.46	-4,749.51	1,410.05	4,954.45	4,952.33	2.12	2,339.883		
900.00	900.00	854.06	854.03	1.88	0.53	163.47	-4,750.04	1,409.92	4,954.93	4,952.55	2.38	2,079.535		
1,000.00	1,000.00	957.67	957.64	2.11	0.57	163.47	-4,750.60	1,409.83	4,955.43	4,952.78	2.65	1,870.159		
1,100.00	1,100.00	1,058.38	1,058.35	2.33	0.61	163.47	-4,750.99	1,409.95	4,955.84	4,952.92	2.92	1,699.661		
1,200.00	1,200.00	1,153.27	1,153.24	2.56	0.65	163.47	-4,751.41	1,410.09	4,956.30	4,953.12	3.18	1,559.070		
1,300.00	1,300.00	1,269.25	1,269.22	2.78	0.69	163.47	-4,751.87	1,410.24	4,956.73	4,953.28	3.45	1,436.812		
1,400.00	1,400.00	1,371.93	1,371.90	3.01	0.73	163.47	-4,752.01	1,410.35	4,956.89	4,953.18	3.71	1,334.669		
1,500.00	1,500.00	1,470.94	1,470.91	3.23	0.75	163.47	-4,752.15	1,410.43	4,957.05	4,953.08	3.97	1,249.904		
1,600.00	1,600.00	1,614.00	1,613.97	3.46	0.81	163.48	-4,751.97	1,409.81	4,956.81	4,952.55	4.26	1,163.635		
1,699.06	1,699.06	1,678.30	1,678.26	3.68	0.88	163.48	-4,751.83	1,409.04	4,956.34	4,951.80	4.54	1,090.565		
1,700.00	1,700.00	1,678.81	1,678.77	3.68	0.88	163.48	-4,751.83	1,409.04	4,956.34	4,951.79	4.55	1,089.943		
1,800.00	1,800.00	1,709.00	1,708.96	3.91	0.91	163.49	-4,752.02	1,408.68	4,956.92	4,952.12	4.80	1,032.036		
1,900.00	1,900.00	1,760.69	1,760.64	4.13	0.98	163.50	-4,752.93	1,408.27	4,958.59	4,953.49	5.10	972.667		
2,000.00	2,000.00	1,804.00	1,803.93	4.36	1.04	163.50	-4,754.37	1,408.25	4,961.64	4,956.27	5.38	922.467		
2,100.00	2,100.00	1,836.36	1,836.25	4.58	1.09	163.50	-4,755.84	1,408.32	4,965.93	4,960.27	5.66	877.792		
2,200.00	2,200.00	1,899.00	1,898.77	4.81	1.19	163.52	-4,759.65	1,408.23	4,971.52	4,965.54	5.98	831.063		
2,300.00	2,300.00	1,930.78	1,930.46	5.03	1.25	163.53	-4,761.98	1,408.05	4,978.02	4,971.75	6.26	794.592		
2,400.00	2,400.00	2,000.51	1,999.97	5.26	1.39	163.56	-4,767.58	1,407.14	4,985.35	4,978.72	6.62	752.520		
2,500.00	2,500.00	2,725.42	2,720.66	5.48	3.41	164.33	-4,791.51	1,344.51	4,982.43	4,973.58	8.86	562.608		
2,600.00	2,600.00	2,803.99	2,798.89	5.71	3.60	164.40	-4,789.77	1,337.40	4,977.83	4,968.56	9.28	536.422		
2,700.00	2,700.00	2,895.14	2,889.69	5.93	3.83	164.48	-4,787.90	1,329.61	4,973.55	4,963.80	9.75	510.210		
2,800.00	2,800.00	2,990.06	2,984.15	6.15	4.10	164.58	-4,786.36	1,320.32	4,969.36	4,959.11	10.25	484.934		
2,900.00	2,900.00	3,066.91	3,060.61	6.38	4.32	164.66	-4,785.28	1,312.75	4,965.40	4,954.70	10.70	464.200		
3,000.00	3,000.00	3,134.65	3,128.09	6.60	4.52	164.72	-4,784.63	1,306.78	4,962.11	4,950.99	11.11	446.465		
3,100.00	3,100.00	3,253.54	3,246.46	6.83	4.87	164.84	-4,783.60	1,295.80	4,958.82	4,947.13	11.69	424.136		
3,200.00	3,200.00	3,344.61	3,337.08	7.05	5.16	164.94	-4,782.98	1,286.70	4,955.54	4,943.34	12.20	406.154		
3,300.00	3,300.00	3,433.92	3,426.01	7.28	5.42	165.03	-4,782.32	1,278.52	4,952.45	4,939.76	12.69	390.357		
3,400.00	3,400.00	3,524.50	3,516.27	7.50	5.68	165.11	-4,781.70	1,271.05	4,949.65	4,936.49	13.16	376.079		
3,500.00	3,500.00	3,657.02	3,648.27	7.73	6.07	165.24	-4,780.54	1,259.33	4,946.52	4,932.75	13.77	359.251		
3,600.00	3,600.00	3,754.15	3,745.03	7.95	6.35	165.33	-4,779.29	1,250.89	4,943.05	4,928.78	14.27	346.404		
3,700.00	3,700.00	3,836.70	3,827.30	8.18	6.59	165.40	-4,778.30	1,244.24	4,939.86	4,925.14	14.73	335.446		
3,800.00	3,800.00	3,927.40	3,917.65	8.40	6.86	165.49	-4,777.72	1,236.27	4,937.02	4,921.80	15.22	324.333		
3,900.00	3,900.00	4,015.08	4,004.85	8.63	7.15	165.59	-4,777.58	1,227.16	4,934.27	4,918.54	15.73	313.665		
4,000.00	4,000.00	4,097.18	4,086.49	8.85	7.42	165.69	-4,777.88	1,218.49	4,931.97	4,915.75	16.23	303.971		
4,100.00	4,100.00	4,195.15	4,184.00	9.06	7.73	75.83	-4,778.06	1,208.98	4,929.54	4,912.80	16.74	294.546		
4,200.00	4,199.96	4,287.72	4,276.25	9.26	8.00	75.97	-4,778.15	1,201.32	4,926.96	4,909.76	17.20	286.437		
4,300.00	4,299.86	4,437.01	4,424.98	9.46	8.45	76.22	-4,777.55	1,188.46	4,923.42	4,905.59	17.84	275.985		
4,400.00	4,399.68	4,516.89	4,504.49	9.66	8.70	76.41	-4,777.12	1,180.80	4,919.16	4,900.87	18.29	268.950		
4,411.45	4,411.10	4,525.36	4,512.92	9.69	8.73	76.43	-4,777.09	1,180.02	4,918.68	4,900.34	18.34	268.192		
4,500.00	4,499.42	4,615.56	4,602.74	9.87	9.01	76.59	-4,776.84	1,171.71	4,915.03	4,896.23	18.80	261.446		
4,600.00	4,599.16	4,732.00	4,718.69	10.08	9.37	76.81	-4,776.17	1,161.05	4,910.66	4,891.30	19.36	253.664		
4,700.00	4,698.90	4,783.90	4,770.42	10.29	9.51	76.89	-4,775.87	1,156.91	4,906.64	4,886.93	19.71	248.892		
4,800.00	4,798.65	4,827.00	4,813.42	10.50	9.63	76.96	-4,775.92	1,153.96	4,903.64	4,883.59	20.05	244.626		
4,900.00	4,898.39	4,921.00	4,907.26	10.71	9.87	77.10	-4,776.57	1,148.58	4,901.40	4,880.91	20.49	239.165		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 57H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 172- VES GyroFlex V2, 1519-MWD-ISCWSA, 16135-Project														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	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)							
5,000.00	4,998.13	4,970.16	4,956.37	10.93	9.98	77.17	-4,777.13	1,146.36	4,899.81	4,878.99	20.82	235.348			
5,100.00	5,097.87	5,051.06	5,037.22	11.15	10.15	77.27	-4,778.34	1,143.94	4,898.99	4,877.78	21.21	231.003			
5,200.00	5,197.61	5,190.92	5,177.05	11.36	10.41	77.41	-4,779.52	1,141.35	4,897.83	4,876.14	21.69	225.764			
5,300.00	5,297.36	5,554.15	5,539.73	11.58	11.24	77.88	-4,775.06	1,125.30	4,895.53	4,872.83	22.71	215.603			
5,400.00	5,397.10	5,707.02	5,691.54	11.81	11.76	78.19	-4,768.99	1,108.44	4,887.61	4,864.19	23.41	208.749			
5,500.00	5,496.84	5,796.93	5,780.73	12.03	12.09	78.38	-4,765.51	1,097.59	4,879.79	4,855.85	23.94	203.816			
5,600.00	5,596.58	5,870.02	5,853.24	12.25	12.34	78.53	-4,762.85	1,088.81	4,872.31	4,847.89	24.42	199.529			
5,700.00	5,696.33	5,945.24	5,927.91	12.48	12.61	78.69	-4,760.59	1,080.06	4,865.52	4,840.62	24.90	195.387			
5,800.00	5,796.07	6,048.10	6,030.03	12.70	12.97	78.90	-4,757.50	1,068.11	4,858.84	4,833.37	25.47	190.751			
5,900.00	5,895.81	6,134.16	6,115.51	12.93	13.27	79.08	-4,754.97	1,058.43	4,852.35	4,826.36	25.99	186.714			
6,000.00	5,995.55	6,204.00	6,184.88	13.16	13.51	79.23	-4,753.10	1,050.56	4,846.22	4,819.77	26.45	183.189			
6,100.00	6,095.29	6,441.85	6,420.82	13.38	14.36	79.73	-4,744.35	1,022.28	4,838.85	4,811.39	27.46	176.218			
6,200.00	6,195.04	6,487.00	6,465.51	13.61	14.55	79.84	-4,742.64	1,016.12	4,831.11	4,803.23	27.88	173.296			
6,300.00	6,294.78	6,577.05	6,554.70	13.84	14.90	80.05	-4,739.75	1,004.01	4,824.20	4,795.75	28.45	169.581			
6,400.00	6,394.52	6,663.84	6,640.64	14.07	15.24	80.25	-4,736.86	992.28	4,817.26	4,788.25	29.01	166.052			
6,500.00	6,494.26	6,771.00	6,746.80	14.31	15.65	80.50	-4,733.28	978.12	4,810.45	4,780.82	29.64	162.311			
6,600.00	6,594.01	6,849.42	6,824.57	14.54	15.94	80.68	-4,730.61	968.39	4,803.79	4,773.64	30.15	159.316			
6,700.00	6,693.75	6,916.70	6,891.34	14.77	16.19	80.82	-4,728.60	960.43	4,797.71	4,767.08	30.63	156.621			
6,800.00	6,793.49	6,980.79	6,954.97	15.01	16.42	80.97	-4,727.15	952.82	4,792.38	4,761.28	31.10	154.075			
6,900.00	6,893.23	7,054.00	7,027.64	15.24	16.70	81.13	-4,726.09	944.06	4,787.86	4,756.25	31.61	151.457			
7,000.00	6,992.97	7,103.36	7,076.65	15.47	16.88	81.24	-4,725.75	938.21	4,784.12	4,752.09	32.04	149.336			
7,100.00	7,092.72	7,187.40	7,160.15	15.71	17.18	81.42	-4,725.71	928.68	4,781.21	4,748.64	32.57	146.782			
7,200.00	7,192.46	7,309.19	7,281.21	15.95	17.60	81.68	-4,725.03	915.48	4,777.95	4,744.71	33.23	143.779			
7,300.00	7,292.20	7,396.78	7,368.20	16.18	17.91	81.88	-4,724.60	905.14	4,774.71	4,740.93	33.78	141.346			
7,400.00	7,391.94	7,487.08	7,457.98	16.42	18.22	82.07	-4,724.25	895.60	4,771.81	4,737.49	34.33	139.005			
7,500.00	7,491.69	7,573.56	7,544.04	16.66	18.51	82.24	-4,723.95	887.03	4,769.11	4,734.26	34.86	136.826			
7,600.00	7,591.43	7,645.71	7,615.84	16.89	18.74	82.39	-4,723.97	879.94	4,766.86	4,731.52	35.34	134.898			
7,700.00	7,691.17	7,716.00	7,685.80	17.13	18.98	82.53	-4,724.54	873.12	4,765.39	4,729.57	35.81	133.059			
7,800.00	7,790.91	7,773.38	7,742.94	17.37	19.15	82.64	-4,725.38	867.99	4,764.68	4,728.44	36.23	131.499			
7,852.88	7,843.65	7,810.00	7,779.44	17.50	19.26	82.70	-4,726.02	865.13	4,764.59	4,728.11	36.47	130.628			
7,900.00	7,890.66	7,852.53	7,821.85	17.61	19.38	82.78	-4,726.83	862.01	4,764.62	4,727.90	36.71	129.781			
8,000.00	7,990.40	7,996.44	7,965.31	17.85	19.80	83.04	-4,729.30	850.95	4,764.58	4,727.20	37.38	127.453			
8,100.00	8,090.14	8,078.12	8,046.71	18.09	20.04	83.19	-4,730.34	844.20	4,763.99	4,726.12	37.87	125.800			
8,200.00	8,189.88	8,167.48	8,135.79	18.33	20.29	83.35	-4,731.69	837.33	4,763.75	4,725.38	38.38	124.136			
8,300.00	8,289.62	8,310.59	8,278.49	18.57	20.69	83.60	-4,733.16	826.68	4,763.08	4,724.05	39.03	122.045			
8,400.00	8,389.37	8,398.87	8,366.54	18.81	20.94	83.75	-4,733.86	820.27	4,762.26	4,722.74	39.52	120.508			
8,500.00	8,489.11	8,509.67	8,477.08	19.05	21.24	83.94	-4,734.58	812.76	4,761.41	4,721.34	40.07	118.825			
8,600.00	8,588.85	8,611.91	8,578.98	19.29	21.53	84.13	-4,735.21	804.41	4,760.42	4,719.80	40.61	117.212			
8,700.00	8,688.59	8,704.95	8,671.69	19.53	21.81	84.30	-4,735.84	796.70	4,759.52	4,718.38	41.14	115.691			
8,800.00	8,788.34	8,807.67	8,774.09	19.78	22.12	84.49	-4,736.60	788.48	4,758.78	4,717.08	41.69	114.137			
8,877.86	8,865.99	8,906.62	8,872.66	19.96	22.41	84.67	-4,737.09	779.95	4,758.00	4,715.82	42.18	112.801			
8,900.00	8,888.08	8,936.64	8,902.58	20.01	22.50	84.73	-4,737.13	777.39	4,757.71	4,715.39	42.32	112.423			
9,000.00	8,987.90	9,010.06	8,975.75	20.21	22.71	84.84	-4,737.32	771.36	4,756.68	4,713.95	42.74	111.301			
9,100.00	9,087.82	9,124.72	9,090.00	20.40	23.06	85.01	-4,737.96	761.76	4,756.15	4,712.87	43.28	109.894			
9,200.00	9,187.79	9,204.78	9,169.72	20.59	23.31	85.11	-4,738.36	754.40	4,755.64	4,711.92	43.72	108.774			
9,242.78	9,230.56	9,241.71	9,206.51	20.66	23.42	85.16	-4,738.64	751.15	4,755.61	4,711.70	43.91	108.294			
9,289.31	9,277.09	9,288.00	9,252.63	20.75	23.56	175.21	-4,739.00	747.28	4,755.63	4,711.49	44.14	107.736			
9,300.00	9,287.78	9,298.64	9,263.24	20.77	23.60	175.22	-4,739.09	746.42	4,755.64	4,711.44	44.19	107.606			
9,400.00	9,387.78	9,377.80	9,342.18	20.98	23.82	175.29	-4,739.76	740.57	4,755.89	4,711.26	44.63	106.561			
9,500.00	9,487.78	9,485.73	9,449.89	21.19	24.10	175.37	-4,740.97	733.83	4,756.51	4,711.38	45.13	105.391			
9,589.31	9,577.09	9,658.61	9,622.33	21.38	24.57	175.52	-4,741.13	721.56	4,756.13	4,710.34	45.79	103.870			
9,600.00	9,587.78	9,672.04	9,635.71	21.40	24.61	-4.05	-4,741.03	720.43	4,755.87	4,710.02	45.85	103.727			

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 57H - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 172- VES GyroFlex V2, 1519-MWD-ISCWSA, 16135-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	
9,650.00	9,637.67	9,728.00	9,691.42	21.49	24.78	-4.02	-4,740.56	715.17	4,751.99	4,705.88	46.11	103.063	
9,700.00	9,687.09	9,764.55	9,727.79	21.58	24.89	-4.04	-4,740.30	711.58	4,743.83	4,697.52	46.31	102.428	
9,750.00	9,735.68	9,797.12	9,760.22	21.68	25.00	-4.10	-4,740.15	708.62	4,731.58	4,685.08	46.51	101.742	
9,800.00	9,783.07	9,823.00	9,786.01	21.77	25.08	-4.20	-4,740.11	706.42	4,715.33	4,668.66	46.67	101.028	
9,850.00	9,828.88	9,867.43	9,830.28	21.87	25.22	-4.33	-4,740.14	702.59	4,695.13	4,648.23	46.90	100.118	
9,900.00	9,872.78	9,903.16	9,865.85	21.97	25.33	-4.51	-4,740.25	699.25	4,671.11	4,624.02	47.09	99.203	
9,950.00	9,914.43	9,941.35	9,903.85	22.07	25.45	-4.75	-4,740.45	695.44	4,643.44	4,596.15	47.28	98.201	
10,000.00	9,953.51	9,979.95	9,942.24	22.18	25.58	-5.06	-4,740.66	691.42	4,612.26	4,564.78	47.48	97.137	
10,050.00	9,989.72	10,026.94	9,988.96	22.30	25.74	-5.46	-4,740.92	686.34	4,577.81	4,530.10	47.70	95.968	
10,100.00	10,022.80	10,105.00	10,066.60	22.43	25.99	-5.99	-4,740.70	678.35	4,540.02	4,492.01	48.01	94.555	
10,150.00	10,052.48	10,133.04	10,094.51	22.58	26.08	-6.76	-4,740.47	675.65	4,499.45	4,451.30	48.15	93.444	
10,200.00	10,078.55	10,151.86	10,113.25	22.74	26.14	-7.83	-4,740.35	673.88	4,456.55	4,408.30	48.25	92.362	
10,250.00	10,100.79	10,167.98	10,129.29	22.93	26.20	-9.38	-4,740.27	672.38	4,411.62	4,363.29	48.33	91.275	
10,300.00	10,119.06	10,181.24	10,142.50	23.14	26.24	-11.80	-4,740.22	671.16	4,365.00	4,316.61	48.40	90.188	
10,350.00	10,133.20	10,199.00	10,160.19	23.38	26.29	-16.04	-4,740.17	669.55	4,317.04	4,268.57	48.47	89.066	
10,400.00	10,143.10	10,199.00	10,160.19	23.64	26.29	-24.55	-4,740.17	669.55	4,268.06	4,219.58	48.48	88.041	
10,450.00	10,148.70	10,208.31	10,169.46	23.92	26.33	-48.98	-4,740.15	668.69	4,218.45	4,169.94	48.51	86.960	
10,496.68	10,150.00	10,210.38	10,171.52	24.21	26.33	-108.66	-4,740.14	668.49	4,171.90	4,123.39	48.51	85.997	
10,500.00	10,149.96	10,210.28	10,171.42	24.23	26.33	-108.64	-4,740.14	668.50	4,168.59	4,120.07	48.51	85.930	
10,600.00	10,148.67	10,207.33	10,168.48	28.67	26.32	-108.09	-4,740.15	668.78	4,068.85	4,014.48	54.37	74.834	
10,700.00	10,147.39	10,204.46	10,165.63	28.75	26.31	-107.55	-4,740.16	669.05	3,969.13	3,914.68	54.44	72.905	
10,800.00	10,146.10	10,201.67	10,162.84	28.84	26.30	-107.03	-4,740.17	669.31	3,869.42	3,814.90	54.51	70.980	
10,900.00	10,144.81	10,199.00	10,160.19	28.92	26.29	-106.52	-4,740.17	669.55	3,769.72	3,715.13	54.59	69.060	
11,000.00	10,143.53	10,199.00	10,160.19	29.01	26.29	-106.52	-4,740.17	669.55	3,670.04	3,615.37	54.66	67.138	
11,100.00	10,142.24	10,199.00	10,160.19	29.10	26.29	-106.52	-4,740.17	669.55	3,570.38	3,515.63	54.74	65.221	
11,200.00	10,140.96	10,199.00	10,160.19	29.20	26.29	-106.52	-4,740.17	669.55	3,470.73	3,415.91	54.82	63.310	
11,300.00	10,139.67	10,199.00	10,160.19	29.29	26.29	-106.52	-4,740.17	669.55	3,371.11	3,316.21	54.90	61.405	
11,400.00	10,138.39	10,199.00	10,160.19	29.39	26.29	-106.52	-4,740.17	669.55	3,271.51	3,216.53	54.98	59.505	
11,500.00	10,137.10	10,199.00	10,160.19	29.49	26.29	-106.52	-4,740.17	669.55	3,171.94	3,116.88	55.06	57.612	
11,600.00	10,135.81	10,199.00	10,160.19	29.59	26.29	-106.52	-4,740.17	669.55	3,072.39	3,017.26	55.14	55.724	
11,700.00	10,134.53	10,189.00	10,150.22	29.69	26.26	-104.62	-4,740.20	670.45	2,972.86	2,917.65	55.20	53.854	
11,800.00	10,133.24	10,187.68	10,148.91	29.80	26.26	-104.37	-4,740.20	670.57	2,873.37	2,818.09	55.28	51.980	
11,900.00	10,131.96	10,186.35	10,147.58	29.91	26.25	-104.11	-4,740.20	670.69	2,773.91	2,718.56	55.36	50.111	
12,000.00	10,130.67	10,185.00	10,146.24	30.02	26.25	-103.85	-4,740.21	670.82	2,674.50	2,619.07	55.43	48.248	
12,100.00	10,129.38	10,183.63	10,144.88	30.14	26.25	-103.59	-4,740.21	670.94	2,575.13	2,519.63	55.51	46.392	
12,200.00	10,128.10	10,182.25	10,143.50	30.26	26.24	-103.32	-4,740.22	671.07	2,475.82	2,420.23	55.58	44.542	
12,300.00	10,126.81	10,180.85	10,142.11	30.38	26.24	-103.05	-4,740.22	671.20	2,376.55	2,320.90	55.66	42.699	
12,400.00	10,125.53	10,179.43	10,140.69	30.52	26.23	-102.78	-4,740.23	671.32	2,277.36	2,221.62	55.73	40.863	
12,500.00	10,124.24	10,177.99	10,139.26	30.66	26.23	-102.50	-4,740.23	671.46	2,178.23	2,122.43	55.80	39.034	
12,600.00	10,122.95	10,176.53	10,137.81	30.81	26.22	-102.22	-4,740.24	671.59	2,079.19	2,023.31	55.87	37.212	
12,700.00	10,121.67	10,175.06	10,136.34	30.97	26.22	-101.93	-4,740.24	671.73	1,980.24	1,924.29	55.94	35.398	
12,800.00	10,120.38	10,173.56	10,134.86	31.15	26.21	-101.64	-4,740.25	671.86	1,881.40	1,825.39	56.01	33.591	
12,900.00	10,119.10	10,172.05	10,133.35	31.36	26.21	-101.35	-4,740.26	672.00	1,782.69	1,726.61	56.07	31.793	
13,000.00	10,117.81	10,170.52	10,131.82	31.60	26.20	-101.05	-4,740.26	672.14	1,684.13	1,627.99	56.13	30.003	
13,100.00	10,116.53	10,168.96	10,130.28	31.88	26.20	-100.75	-4,740.27	672.29	1,585.74	1,529.56	56.19	28.221	
13,200.00	10,115.24	10,167.39	10,128.71	32.21	26.19	-100.44	-4,740.28	672.43	1,487.58	1,431.34	56.24	26.450	
13,300.00	10,113.95	10,165.79	10,127.12	32.57	26.19	-100.13	-4,740.28	672.58	1,389.67	1,333.38	56.29	24.689	
13,400.00	10,112.67	10,164.17	10,125.51	32.98	26.18	-99.81	-4,740.29	672.73	1,292.08	1,235.75	56.33	22.938	
13,500.00	10,111.38	10,162.53	10,123.87	33.42	26.18	-99.49	-4,740.30	672.88	1,194.88	1,138.52	56.36	21.201	
13,600.00	10,110.10	10,160.87	10,122.22	33.89	26.17	-99.17	-4,740.31	673.04	1,098.19	1,041.81	56.38	19.477	
13,700.00	10,108.81	10,159.19	10,120.54	34.38	26.17	-98.84	-4,740.32	673.19	1,002.14	945.75	56.40	17.770	
13,800.00	10,107.52	10,157.48	10,118.84	34.88	26.16	-98.50	-4,740.32	673.35	906.95	850.55	56.40	16.082	

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Thistle Unit (Offsets) - 57H - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 172- VES GyroFlex V2, 1519-MWD-ISCWSA, 16135-Project												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)					
13,900.00	10,106.24	10,155.74	10,117.11	35.41	26.16	-98.16	-4,740.33	673.51	812.90	756.52	56.38	14.418	
14,000.00	10,104.95	10,153.98	10,115.36	35.95	26.15	-97.82	-4,740.34	673.68	720.46	664.10	56.35	12.785	
14,100.00	10,103.67	10,152.20	10,113.59	36.50	26.15	-97.47	-4,740.35	673.85	630.32	574.00	56.31	11.193	
14,200.00	10,102.38	10,150.39	10,111.78	37.06	26.14	-97.11	-4,740.36	674.02	543.63	487.36	56.27	9.661	
14,300.00	10,101.09	10,148.56	10,109.96	37.63	26.13	-96.75	-4,740.37	674.19	462.35	406.09	56.26	8.218	
14,400.00	10,099.81	10,146.69	10,108.10	38.21	26.13	-96.39	-4,740.39	674.36	389.85	333.51	56.35	6.919	
14,500.00	10,098.52	10,144.80	10,106.22	38.79	26.12	-96.02	-4,740.40	674.54	331.96	275.27	56.69	5.856	
14,600.00	10,097.24	10,142.89	10,104.31	39.38	26.12	-95.64	-4,740.41	674.72	297.33	239.73	57.60	5.162	
14,659.01	10,096.48	10,141.74	10,103.17	39.74	26.11	-95.41	-4,740.42	674.83	291.42	232.84	58.58	4.975 CC, ES	
14,700.00	10,095.95	10,140.94	10,102.38	39.98	26.11	-95.26	-4,740.42	674.90	294.29	234.92	59.37	4.957 SF	
14,800.00	10,094.67	10,138.97	10,100.41	40.59	26.10	-94.87	-4,740.43	675.09	323.72	262.67	61.05	5.303	
14,900.00	10,093.38	10,136.96	10,098.41	41.20	26.10	-94.47	-4,740.45	675.28	378.13	316.23	61.89	6.109	
15,000.00	10,092.09	10,134.92	10,096.39	41.82	26.09	-94.07	-4,740.46	675.47	448.50	386.39	62.11	7.221	
15,100.00	10,090.81	10,132.86	10,094.33	42.44	26.08	-93.67	-4,740.48	675.67	528.51	466.43	62.08	8.513	
15,200.00	10,089.52	10,130.76	10,092.24	43.07	26.08	-93.26	-4,740.49	675.87	614.39	552.42	61.98	9.913	
15,300.00	10,088.24	10,128.63	10,090.12	43.71	26.07	-92.84	-4,740.51	676.07	704.01	642.13	61.87	11.378	
15,400.00	10,086.95	10,126.46	10,087.96	44.34	26.06	-92.41	-4,740.52	676.28	796.10	734.30	61.79	12.883	
15,500.00	10,085.66	10,124.26	10,085.77	44.98	26.06	-91.98	-4,740.54	676.49	889.89	828.15	61.74	14.413	
15,600.00	10,084.38	10,122.02	10,083.55	45.63	26.05	-91.54	-4,740.56	676.70	984.90	923.18	61.71	15.960	
15,700.00	10,083.09	10,119.75	10,081.28	46.28	26.04	-91.10	-4,740.58	676.92	1,080.80	1,019.10	61.71	17.516	
15,800.00	10,081.81	10,117.44	10,078.99	46.93	26.03	-90.65	-4,740.59	677.14	1,177.38	1,115.67	61.72	19.077	
15,900.00	10,080.52	12,253.06	11,264.82	47.59	45.21	-174.43	-5,974.09	511.26	1,210.84	1,155.87	54.97	22.028	
16,000.00	10,079.24	12,369.99	11,265.68	48.25	47.56	-174.97	-6,090.56	500.89	1,211.94	1,155.61	56.34	21.513	
16,100.00	10,077.95	12,464.02	11,265.73	48.91	49.54	-175.36	-6,184.29	493.30	1,212.55	1,154.96	57.59	21.053	
16,200.00	10,076.66	12,548.65	11,266.75	49.58	51.19	-175.67	-6,268.72	487.64	1,214.43	1,155.61	58.83	20.644	
16,300.00	10,075.38	12,640.33	11,268.33	50.25	52.98	-175.88	-6,360.30	483.88	1,217.09	1,156.94	60.15	20.235	
16,400.00	10,074.09	12,724.24	11,270.62	50.92	54.63	-176.03	-6,444.15	481.64	1,220.86	1,159.40	61.45	19.867	
16,500.00	10,072.81	12,813.99	11,274.14	51.59	56.37	-176.16	-6,533.81	479.75	1,225.84	1,163.04	62.80	19.518	
16,600.00	10,071.52	12,935.98	11,277.34	52.27	58.98	-176.35	-6,655.72	477.04	1,229.41	1,165.06	64.35	19.106	
16,700.00	10,070.23	13,026.80	11,280.23	52.95	60.90	-176.55	-6,746.43	473.51	1,233.55	1,167.85	65.69	18.778	
16,800.00	10,068.95	13,173.02	11,282.77	53.63	64.31	-176.92	-6,892.47	466.89	1,236.45	1,169.09	67.36	18.356	
16,900.00	10,067.66	13,277.00	11,281.67	54.31	66.95	-177.21	-6,996.29	461.35	1,236.35	1,167.58	68.77	17.978	
16,915.76	10,067.46	13,294.93	11,281.46	54.42	67.36	-177.26	-7,014.20	460.38	1,236.31	1,167.31	69.00	17.917	
17,000.00	10,066.38	13,360.72	11,281.28	55.00	68.86	-177.45	-7,079.90	456.96	1,236.94	1,166.87	70.07	17.653	
17,100.00	10,065.09	13,434.54	11,282.38	55.69	70.38	-177.64	-7,153.62	453.41	1,239.47	1,168.14	71.33	17.376	
17,200.00	10,063.80	13,503.70	11,284.92	56.38	71.78	-177.81	-7,222.66	450.31	1,244.27	1,171.67	72.59	17.140	
17,300.00	10,062.52	13,583.80	11,290.04	57.07	73.46	-178.03	-7,302.50	446.38	1,251.63	1,177.71	73.92	16.932	
17,400.00	10,061.23	13,745.65	11,296.73	57.76	77.40	-178.48	-7,463.98	437.94	1,256.88	1,181.25	75.63	16.619	
17,495.86	10,060.00	13,826.43	11,298.49	58.43	79.27	-178.74	-7,544.58	432.95	1,260.05	1,183.13	76.92	16.381	

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 110H - OH - Plan #2													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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	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)						
0.00	0.00	0.00	0.00	0.00	0.00	-90.33	-2.26	-389.89	389.90					
100.00	100.00	99.90	99.90	0.09	0.09	-90.33	-2.26	-389.89	389.90	389.72	0.17	2,268.684		
200.00	200.00	199.90	199.90	0.31	0.31	-90.33	-2.26	-389.89	389.90	389.28	0.62	627.597		
300.00	300.00	299.90	299.90	0.54	0.54	-90.33	-2.26	-389.89	389.90	388.83	1.07	364.122		
400.00	400.00	399.90	399.90	0.76	0.76	-90.33	-2.26	-389.89	389.90	388.38	1.52	256.457		
500.00	500.00	499.90	499.90	0.99	0.98	-90.33	-2.26	-389.89	389.90	387.93	1.97	197.932		
600.00	600.00	599.90	599.90	1.21	1.21	-90.33	-2.26	-389.89	389.90	387.48	2.42	161.155		
700.00	700.00	699.90	699.90	1.43	1.43	-90.33	-2.26	-389.89	389.90	387.03	2.87	135.904		
800.00	800.00	799.90	799.90	1.66	1.66	-90.33	-2.26	-389.89	389.90	386.58	3.32	117.494		
900.00	900.00	899.90	899.90	1.88	1.88	-90.33	-2.26	-389.89	389.90	386.13	3.77	103.476		
1,000.00	1,000.00	999.90	999.90	2.11	2.11	-90.33	-2.26	-389.89	389.90	385.68	4.22	92.447		
1,100.00	1,100.00	1,099.90	1,099.90	2.33	2.33	-90.33	-2.26	-389.89	389.90	385.23	4.67	83.543		
1,200.00	1,200.00	1,199.90	1,199.90	2.56	2.56	-90.33	-2.26	-389.89	389.90	384.78	5.12	76.203		
1,300.00	1,300.00	1,299.90	1,299.90	2.78	2.78	-90.33	-2.26	-389.89	389.90	384.33	5.57	70.048		
1,400.00	1,400.00	1,399.90	1,399.90	3.01	3.01	-90.33	-2.26	-389.89	389.90	383.88	6.02	64.814		
1,500.00	1,500.00	1,499.90	1,499.90	3.23	3.23	-90.33	-2.26	-389.89	389.90	383.43	6.47	60.307		
1,600.00	1,600.00	1,599.90	1,599.90	3.46	3.46	-90.33	-2.26	-389.89	389.90	382.98	6.91	56.387		
1,700.00	1,700.00	1,699.90	1,699.90	3.68	3.68	-90.33	-2.26	-389.89	389.90	382.53	7.36	52.945		
1,800.00	1,800.00	1,799.90	1,799.90	3.91	3.91	-90.33	-2.26	-389.89	389.90	382.08	7.81	49.899		
1,900.00	1,900.00	1,899.90	1,899.90	4.13	4.13	-90.33	-2.26	-389.89	389.90	381.63	8.26	47.184		
2,000.00	2,000.00	1,999.90	1,999.90	4.36	4.36	-90.33	-2.26	-389.89	389.90	381.18	8.71	44.750		
2,100.00	2,100.00	2,099.90	2,099.90	4.58	4.58	-90.33	-2.26	-389.89	389.90	380.73	9.16	42.554		
2,200.00	2,200.00	2,199.90	2,199.90	4.81	4.81	-90.33	-2.26	-389.89	389.90	380.28	9.61	40.564		
2,300.00	2,300.00	2,299.90	2,299.90	5.03	5.03	-90.33	-2.26	-389.89	389.90	379.84	10.06	38.752		
2,400.00	2,400.00	2,399.90	2,399.90	5.26	5.26	-90.33	-2.26	-389.89	389.90	379.39	10.51	37.094		
2,500.00	2,500.00	2,499.90	2,499.90	5.48	5.48	-90.33	-2.26	-389.89	389.90	378.94	10.96	35.573		
2,600.00	2,600.00	2,599.90	2,599.90	5.71	5.70	-90.33	-2.26	-389.89	389.90	378.49	11.41	34.171		
2,700.00	2,700.00	2,699.90	2,699.90	5.93	5.93	-90.33	-2.26	-389.89	389.90	378.04	11.86	32.876		
2,800.00	2,800.00	2,799.90	2,799.90	6.15	6.15	-90.33	-2.26	-389.89	389.90	377.59	12.31	31.676		
2,900.00	2,900.00	2,899.90	2,899.90	6.38	6.38	-90.33	-2.26	-389.89	389.90	377.14	12.76	30.559		
3,000.00	3,000.00	2,999.90	2,999.90	6.60	6.60	-90.33	-2.26	-389.89	389.90	376.69	13.21	29.519		
3,100.00	3,100.00	3,099.90	3,099.90	6.83	6.83	-90.33	-2.26	-389.89	389.90	376.24	13.66	28.548		
3,200.00	3,200.00	3,199.90	3,199.90	7.05	7.05	-90.33	-2.26	-389.89	389.90	375.79	14.11	27.638		
3,300.00	3,300.00	3,299.90	3,299.90	7.28	7.28	-90.33	-2.26	-389.89	389.90	375.34	14.56	26.785		
3,400.00	3,400.00	3,399.90	3,399.90	7.50	7.50	-90.33	-2.26	-389.89	389.90	374.89	15.01	25.982		
3,500.00	3,500.00	3,499.90	3,499.90	7.73	7.73	-90.33	-2.26	-389.89	389.90	374.44	15.46	25.227 CC, ES		
3,600.00	3,600.00	3,594.35	3,594.34	7.95	7.93	-90.27	-1.87	-390.56	390.61	374.72	15.88	24.591		
3,700.00	3,700.00	3,688.74	3,688.71	8.18	8.13	-90.10	-0.71	-392.58	392.74	376.44	16.30	24.089		
3,800.00	3,800.00	3,783.03	3,782.91	8.40	8.34	-89.82	1.23	-395.94	396.31	379.59	16.72	23.704		
3,900.00	3,900.00	3,877.17	3,876.89	8.63	8.54	-89.44	3.94	-400.64	401.32	384.19	17.13	23.426		
4,000.00	4,000.00	3,973.25	3,972.72	8.85	8.75	-88.95	7.44	-406.71	407.68	390.13	17.55	23.229		
4,100.00	4,100.00	4,072.90	4,072.08	9.06	8.97	-178.44	11.23	-413.28	415.24	397.26	17.97	23.104		
4,200.00	4,199.96	4,172.40	4,171.29	9.26	9.19	-177.96	15.02	-419.84	424.56	406.18	18.38	23.096		
4,300.00	4,299.86	4,271.72	4,270.33	9.46	9.41	-177.51	18.80	-426.39	435.64	416.85	18.79	23.181		
4,400.00	4,399.68	4,370.84	4,369.16	9.66	9.63	-177.09	22.57	-432.93	448.48	429.28	19.21	23.351		
4,411.45	4,411.10	4,382.18	4,380.47	9.69	9.66	-177.04	23.00	-433.67	450.07	430.81	19.25	23.375		
4,500.00	4,499.42	4,469.82	4,467.86	9.87	9.85	-176.70	26.33	-439.45	462.40	442.78	19.62	23.568		
4,600.00	4,599.16	4,568.80	4,566.55	10.08	10.08	-176.34	30.10	-445.98	476.34	456.31	20.03	23.776		
4,700.00	4,698.90	4,667.78	4,665.24	10.29	10.31	-176.00	33.86	-452.51	490.30	469.85	20.45	23.974		
4,800.00	4,798.65	4,766.76	4,763.93	10.50	10.53	-175.68	37.63	-459.03	504.28	483.41	20.87	24.163		
4,900.00	4,898.39	4,865.74	4,862.63	10.71	10.76	-175.37	41.40	-465.56	518.27	496.98	21.29	24.343		
5,000.00	4,998.13	4,964.72	4,961.32	10.93	10.99	-175.08	45.16	-472.09	532.27	510.56	21.71	24.515		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 110H - OH - Plan #2														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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	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)							
5,100.00	5,097.87	5,063.70	5,060.01	11.15	11.22	-174.81	48.93	-478.61	546.29	524.15	22.14	24.679			
5,200.00	5,197.61	5,162.68	5,158.70	11.36	11.45	-174.55	52.69	-485.14	560.32	537.76	22.56	24.836			
5,300.00	5,297.36	5,261.66	5,257.40	11.58	11.69	-174.30	56.46	-491.67	574.36	551.37	22.99	24.987			
5,400.00	5,397.10	5,360.64	5,356.09	11.81	11.92	-174.07	60.22	-498.19	588.41	565.00	23.41	25.131			
5,500.00	5,496.84	5,459.62	5,454.78	12.03	12.15	-173.84	63.99	-504.72	602.47	578.63	23.84	25.269			
5,600.00	5,596.58	5,558.60	5,553.47	12.25	12.39	-173.63	67.75	-511.25	616.54	592.26	24.27	25.401			
5,700.00	5,696.33	5,657.58	5,652.17	12.48	12.62	-173.42	71.52	-517.77	630.61	605.91	24.70	25.528			
5,800.00	5,796.07	5,756.56	5,750.86	12.70	12.86	-173.23	75.28	-524.30	644.70	619.56	25.13	25.649			
5,900.00	5,895.81	5,855.54	5,849.55	12.93	13.10	-173.04	79.05	-530.83	658.79	633.22	25.57	25.766			
6,000.00	5,995.55	5,954.52	5,948.24	13.16	13.33	-172.86	82.81	-537.35	672.89	646.88	26.00	25.879			
6,100.00	6,095.29	6,053.50	6,046.93	13.38	13.57	-172.69	86.58	-543.88	686.99	660.55	26.44	25.987			
6,200.00	6,195.04	6,152.48	6,145.63	13.61	13.81	-172.52	90.35	-550.41	701.10	674.23	26.87	26.091			
6,300.00	6,294.78	6,251.46	6,244.32	13.84	14.05	-172.36	94.11	-556.93	715.21	687.91	27.31	26.191			
6,400.00	6,394.52	6,350.44	6,343.01	14.07	14.29	-172.21	97.88	-563.46	729.33	701.59	27.74	26.287			
6,500.00	6,494.26	6,449.42	6,441.70	14.31	14.53	-172.06	101.64	-569.99	743.46	715.28	28.18	26.380			
6,600.00	6,594.01	6,548.40	6,540.40	14.54	14.77	-171.92	105.41	-576.51	757.59	728.97	28.62	26.470			
6,700.00	6,693.75	6,647.38	6,639.09	14.77	15.01	-171.78	109.17	-583.04	771.72	742.66	29.06	26.556			
6,800.00	6,793.49	6,750.81	6,751.27	15.01	15.24	-171.66	112.96	-589.61	785.07	755.55	29.52	26.593			
6,900.00	6,893.23	6,873.77	6,865.09	15.24	15.45	-171.60	115.69	-594.33	796.60	766.63	29.97	26.582			
7,000.00	6,992.97	6,988.18	6,979.45	15.47	15.66	-171.60	117.28	-597.09	806.28	775.87	30.40	26.518			
7,100.00	7,092.72	7,101.35	7,092.62	15.71	15.86	-171.66	117.74	-597.89	814.12	783.29	30.83	26.405			
7,200.00	7,192.46	7,201.09	7,192.36	15.95	16.07	-171.74	117.74	-597.89	821.22	789.95	31.27	26.263			
7,300.00	7,292.20	7,300.83	7,292.10	16.18	16.29	-171.81	117.74	-597.89	828.32	796.61	31.71	26.124			
7,400.00	7,391.94	7,400.57	7,391.84	16.42	16.51	-171.88	117.74	-597.89	835.42	803.28	32.15	25.988			
7,500.00	7,491.69	7,500.32	7,491.59	16.66	16.72	-171.95	117.74	-597.89	842.53	809.94	32.59	25.856			
7,600.00	7,591.43	7,600.06	7,591.33	16.89	16.94	-172.01	117.74	-597.89	849.63	816.61	33.02	25.727			
7,700.00	7,691.17	7,699.80	7,691.07	17.13	17.15	-172.08	117.74	-597.89	856.74	823.28	33.46	25.601			
7,800.00	7,790.91	7,799.54	7,790.81	17.37	17.37	-172.15	117.74	-597.89	863.85	829.94	33.90	25.479			
7,900.00	7,890.66	7,899.29	7,890.56	17.61	17.59	-172.21	117.74	-597.89	870.96	836.61	34.35	25.359			
8,000.00	7,990.40	7,999.03	7,990.30	17.85	17.80	-172.27	117.74	-597.89	878.07	843.28	34.79	25.242			
8,100.00	8,090.14	8,098.77	8,090.04	18.09	18.02	-172.34	117.74	-597.89	885.18	849.95	35.23	25.127			
8,200.00	8,189.88	8,198.51	8,189.78	18.33	18.24	-172.40	117.74	-597.89	892.29	856.62	35.67	25.015			
8,300.00	8,289.62	8,298.26	8,289.52	18.57	18.46	-172.46	117.74	-597.89	899.40	863.29	36.11	24.906			
8,400.00	8,389.37	8,398.00	8,389.27	18.81	18.67	-172.52	117.74	-597.89	906.52	869.96	36.55	24.799			
8,500.00	8,489.11	8,497.74	8,489.01	19.05	18.89	-172.58	117.74	-597.89	913.63	876.63	37.00	24.695			
8,600.00	8,588.85	8,597.48	8,588.75	19.29	19.11	-172.63	117.74	-597.89	920.75	883.31	37.44	24.593			
8,700.00	8,688.59	8,697.22	8,688.49	19.53	19.33	-172.69	117.74	-597.89	927.86	889.98	37.88	24.493			
8,800.00	8,788.34	8,796.97	8,788.24	19.78	19.55	-172.75	117.74	-597.89	934.98	896.65	38.33	24.395			
8,877.86	8,865.99	8,874.62	8,865.89	19.96	19.72	-172.79	117.74	-597.89	940.52	901.85	38.67	24.321			
8,900.00	8,888.08	8,896.71	8,887.98	20.01	19.76	-172.80	117.74	-597.89	942.06	903.29	38.77	24.301			
9,000.00	8,987.90	8,996.54	8,987.80	20.21	19.98	-172.86	117.74	-597.89	947.93	908.75	39.18	24.196			
9,100.00	9,087.82	9,096.45	9,087.72	20.40	20.20	-172.89	117.74	-597.89	952.07	912.48	39.59	24.050			
9,200.00	9,187.79	9,204.88	9,196.12	20.59	20.43	-172.99	116.41	-597.88	954.35	914.34	40.00	23.856			
9,289.31	9,277.09	9,315.58	9,305.15	20.75	20.60	-84.08	98.27	-597.75	953.24	912.91	40.33	23.634			
9,300.00	9,287.78	9,328.25	9,317.35	20.77	20.62	-84.28	94.86	-597.72	952.92	912.55	40.37	23.604			
9,400.00	9,387.78	9,438.04	9,419.18	20.98	20.77	-86.72	54.26	-597.42	949.50	908.77	40.73	23.310			
9,500.00	9,487.78	9,529.90	9,497.15	21.19	20.89	-89.64	5.88	-597.07	947.13	906.05	41.09	23.053			
9,526.22	9,514.00	9,551.01	9,513.90	21.24	20.92	-90.42	-6.96	-596.97	947.00	905.83	41.17	23.001			
9,589.31	9,577.09	9,597.10	9,548.77	21.38	20.97	-92.24	-37.08	-596.75	947.90	906.54	41.36	22.916			
9,600.00	9,587.78	9,604.35	9,554.03	21.40	20.98	87.84	-42.07	-596.72	948.24	906.85	41.39	22.910			
9,650.00	9,637.67	9,637.73	9,577.41	21.49	21.03	86.27	-65.88	-596.54	950.54	909.04	41.50	22.905			
9,700.00	9,687.09	9,670.30	9,598.85	21.58	21.07	84.67	-90.40	-596.36	953.87	912.29	41.58	22.939			

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 110H - OH - Plan #2													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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)						
9,750.00	9,735.68	9,700.00	9,617.16	21.68	21.11	83.14	-113.78	-596.19	958.10	916.47	41.63	23.014		
9,800.00	9,783.07	9,733.55	9,636.35	21.77	21.16	81.45	-141.28	-595.99	963.08	921.40	41.68	23.105		
9,850.00	9,828.88	9,764.41	9,652.56	21.87	21.22	79.86	-167.55	-595.79	968.67	926.97	41.70	23.227		
9,900.00	9,872.78	9,800.00	9,669.46	21.97	21.30	78.14	-198.86	-595.56	974.75	933.01	41.74	23.351		
9,950.00	9,914.43	9,824.98	9,680.15	22.07	21.37	76.78	-221.44	-595.40	981.12	939.40	41.72	23.517		
10,000.00	9,953.51	9,850.00	9,689.85	22.18	21.44	75.44	-244.49	-595.23	987.72	946.03	41.69	23.691		
10,050.00	9,989.72	9,884.35	9,701.52	22.30	21.56	73.92	-276.80	-594.99	994.34	952.60	41.74	23.823		
10,100.00	10,022.80	9,913.69	9,709.94	22.43	21.67	72.60	-304.90	-594.79	1,000.92	959.15	41.77	23.962		
10,150.00	10,052.48	9,950.00	9,718.35	22.58	21.82	71.23	-340.21	-594.53	1,007.37	965.50	41.87	24.059		
10,200.00	10,078.55	9,971.82	9,722.32	22.74	21.92	70.24	-361.66	-594.37	1,013.46	971.54	41.91	24.181		
10,250.00	10,100.79	10,000.00	9,726.24	22.93	22.05	69.22	-389.57	-594.16	1,019.21	977.18	42.03	24.251		
10,300.00	10,119.06	10,029.39	9,728.85	23.14	22.19	68.29	-418.83	-593.95	1,024.49	982.30	42.20	24.279		
10,350.00	10,133.20	10,058.01	9,729.96	23.38	22.34	67.48	-447.43	-593.74	1,029.24	986.84	42.40	24.272		
10,400.00	10,143.10	10,103.56	9,730.20	23.64	22.60	66.69	-492.98	-593.40	1,033.05	990.28	42.78	24.151		
10,450.00	10,148.70	10,153.26	9,730.44	23.92	22.91	66.22	-542.67	-593.04	1,035.20	991.93	43.27	23.926		
10,496.68	10,150.00	10,199.91	9,730.67	24.21	23.20	66.12	-589.32	-592.70	1,035.63	991.85	43.79	23.651		
10,500.00	10,149.96	10,203.23	9,730.69	24.23	23.23	66.13	-592.65	-592.67	1,035.61	991.78	43.83	23.628		
10,600.00	10,148.67	10,303.21	9,731.18	28.67	23.95	66.22	-692.63	-591.94	1,034.89	990.03	44.86	23.068		
10,700.00	10,147.39	10,403.20	9,731.67	28.75	24.76	66.31	-792.61	-591.20	1,034.17	988.49	45.68	22.640		
10,800.00	10,146.10	10,503.18	9,732.16	28.84	25.66	66.40	-892.59	-590.47	1,033.46	986.86	46.60	22.179		
10,900.00	10,144.81	10,603.17	9,732.65	28.92	26.62	66.49	-992.57	-589.73	1,032.74	985.14	47.61	21.693		
11,000.00	10,143.53	10,703.15	9,733.14	29.01	27.64	66.58	-1,092.55	-589.00	1,032.04	983.33	48.70	21.191		
11,100.00	10,142.24	10,803.13	9,733.63	29.10	28.73	66.67	-1,192.53	-588.27	1,031.33	981.45	49.87	20.679		
11,200.00	10,140.96	10,903.12	9,734.12	29.20	29.86	66.76	-1,292.51	-587.53	1,030.62	979.50	51.12	20.161		
11,300.00	10,139.67	11,003.10	9,734.61	29.29	31.04	66.85	-1,392.49	-586.80	1,029.92	977.49	52.43	19.643		
11,400.00	10,138.39	11,103.09	9,735.11	29.39	32.25	66.94	-1,492.47	-586.06	1,029.22	975.42	53.81	19.128		
11,500.00	10,137.10	11,203.07	9,735.60	29.49	33.51	67.03	-1,592.45	-585.33	1,028.52	973.29	55.24	18.620		
11,600.00	10,135.81	11,303.06	9,736.09	29.59	34.80	67.12	-1,692.43	-584.59	1,027.83	971.11	56.72	18.120		
11,700.00	10,134.53	11,403.04	9,736.58	29.69	36.11	67.21	-1,792.41	-583.86	1,027.14	968.88	58.26	17.631		
11,800.00	10,133.24	11,503.02	9,737.07	29.80	37.45	67.31	-1,892.39	-583.13	1,026.45	966.61	59.84	17.154		
11,900.00	10,131.96	11,603.01	9,737.56	29.91	38.81	67.40	-1,992.37	-582.39	1,025.76	964.30	61.46	16.690		
12,000.00	10,130.67	11,702.99	9,738.05	30.02	40.20	67.49	-2,092.35	-581.66	1,025.08	961.96	63.12	16.240		
12,100.00	10,129.38	11,802.98	9,738.54	30.14	41.60	67.58	-2,192.33	-580.92	1,024.40	959.58	64.82	15.804		
12,200.00	10,128.10	11,902.96	9,739.03	30.26	43.02	67.67	-2,292.31	-580.19	1,023.72	957.17	66.55	15.382		
12,300.00	10,126.81	12,002.95	9,739.52	30.38	44.45	67.76	-2,392.29	-579.45	1,023.04	954.73	68.32	14.975		
12,400.00	10,125.53	12,102.93	9,740.01	30.52	45.90	67.86	-2,492.27	-578.72	1,022.37	952.26	70.11	14.582		
12,500.00	10,124.24	12,202.91	9,740.50	30.66	47.36	67.95	-2,592.25	-577.98	1,021.70	949.76	71.94	14.202		
12,600.00	10,122.95	12,302.90	9,740.99	30.81	48.83	68.04	-2,692.23	-577.25	1,021.03	947.24	73.79	13.837		
12,700.00	10,121.67	12,402.88	9,741.48	30.97	50.31	68.13	-2,792.21	-576.52	1,020.37	944.70	75.67	13.485		
12,800.00	10,120.38	12,502.87	9,741.97	31.15	51.80	68.23	-2,892.19	-575.78	1,019.70	942.14	77.56	13.147		
12,900.00	10,119.10	12,602.85	9,742.47	31.36	53.30	68.32	-2,992.17	-575.05	1,019.04	939.56	79.49	12.820		
13,000.00	10,117.81	12,702.84	9,742.96	31.60	54.81	68.41	-3,092.15	-574.31	1,018.39	936.96	81.43	12.507		
13,100.00	10,116.53	12,802.82	9,743.45	31.88	56.33	68.50	-3,192.13	-573.58	1,017.73	934.34	83.39	12.204		
13,200.00	10,115.24	12,902.80	9,743.94	32.21	57.85	68.60	-3,292.11	-572.84	1,017.08	931.71	85.37	11.914		
13,300.00	10,113.95	13,002.79	9,744.43	32.57	59.38	68.69	-3,392.09	-572.11	1,016.43	929.06	87.37	11.634		
13,400.00	10,112.67	13,102.77	9,744.92	32.98	60.91	68.78	-3,492.07	-571.38	1,015.78	926.40	89.38	11.364		
13,500.00	10,111.38	13,202.76	9,745.41	33.42	62.45	68.88	-3,592.06	-570.64	1,015.14	923.73	91.41	11.105		
13,600.00	10,110.10	13,302.74	9,745.90	33.89	63.99	68.97	-3,692.04	-569.91	1,014.50	921.04	93.46	10.855		
13,700.00	10,108.81	13,402.72	9,746.39	34.38	65.54	69.06	-3,792.02	-569.17	1,013.86	918.34	95.52	10.614		
13,800.00	10,107.52	13,502.71	9,746.88	34.88	67.10	69.16	-3,892.00	-568.44	1,013.22	915.63	97.59	10.382		
13,900.00	10,106.24	13,602.69	9,747.37	35.41	68.65	69.25	-3,991.98	-567.70	1,012.59	912.91	99.68	10.159		
14,000.00	10,104.95	13,702.68	9,747.86	35.95	70.21	69.35	-4,091.96	-566.97	1,011.96	910.19	101.77	9.943		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 110H - OH - Plan #2													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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	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)						
14,100.00	10,103.67	13,802.66	9,748.35	36.50	71.78	69.44	-4,191.94	-566.24	1,011.33	907.45	103.88	9.735		
14,200.00	10,102.38	13,902.65	9,748.84	37.06	73.35	69.53	-4,291.92	-565.50	1,010.71	904.71	106.00	9.535		
14,300.00	10,101.09	14,002.63	9,749.33	37.63	74.92	69.63	-4,391.90	-564.77	1,010.09	901.95	108.13	9.341		
14,400.00	10,099.81	14,102.61	9,749.83	38.21	76.49	69.72	-4,491.88	-564.03	1,009.47	899.19	110.27	9.154		
14,500.00	10,098.52	14,202.60	9,750.32	38.79	78.07	69.82	-4,591.86	-563.30	1,008.85	896.43	112.42	8.974		
14,600.00	10,097.24	14,302.58	9,750.81	39.38	79.64	69.91	-4,691.84	-562.56	1,008.24	893.66	114.58	8.799		
14,700.00	10,095.95	14,402.57	9,751.30	39.98	81.23	70.01	-4,791.82	-561.83	1,007.62	890.88	116.75	8.631		
14,800.00	10,094.67	14,502.55	9,751.79	40.59	82.81	70.10	-4,891.80	-561.09	1,007.02	888.09	118.92	8.468		
14,900.00	10,093.38	14,602.54	9,752.28	41.20	84.39	70.20	-4,991.78	-560.36	1,006.41	885.31	121.10	8.310		
15,000.00	10,092.09	14,702.52	9,752.77	41.82	85.98	70.29	-5,091.76	-559.63	1,005.81	882.51	123.29	8.158		
15,100.00	10,090.81	14,802.50	9,753.26	42.44	87.57	70.39	-5,191.74	-558.89	1,005.21	879.71	125.49	8.010		
15,200.00	10,089.52	14,902.49	9,753.75	43.07	89.16	70.48	-5,291.72	-558.16	1,004.61	876.91	127.70	7.867		
15,300.00	10,088.24	15,002.47	9,754.24	43.71	90.75	70.58	-5,391.70	-557.42	1,004.02	874.11	129.91	7.729		
15,400.00	10,086.95	15,102.46	9,754.73	44.34	92.35	70.67	-5,491.68	-556.69	1,003.42	871.30	132.13	7.594		
15,500.00	10,085.66	15,202.44	9,755.22	44.98	93.94	70.77	-5,591.66	-555.95	1,002.83	868.48	134.35	7.464		
15,600.00	10,084.38	15,302.42	9,755.71	45.63	95.54	70.87	-5,691.64	-555.22	1,002.25	865.67	136.58	7.338		
15,700.00	10,083.09	15,402.41	9,756.20	46.28	97.14	70.96	-5,791.62	-554.49	1,001.66	862.85	138.82	7.216		
15,800.00	10,081.81	15,502.39	9,756.69	46.93	98.74	71.06	-5,891.60	-553.75	1,001.08	860.03	141.06	7.097		
15,900.00	10,080.52	15,602.38	9,757.19	47.59	100.34	71.15	-5,991.58	-553.02	1,000.51	857.20	143.30	6.982		
16,000.00	10,079.24	15,702.36	9,757.68	48.25	101.94	71.25	-6,091.56	-552.28	999.93	854.38	145.56	6.870		
16,100.00	10,077.95	15,802.35	9,758.17	48.91	103.55	71.35	-6,191.54	-551.55	999.36	851.55	147.81	6.761		
16,200.00	10,076.66	15,902.33	9,758.66	49.58	105.15	71.44	-6,291.52	-550.81	998.79	848.72	150.07	6.655		
16,300.00	10,075.38	16,002.31	9,759.15	50.25	106.76	71.54	-6,391.50	-550.08	998.22	845.88	152.34	6.553		
16,400.00	10,074.09	16,102.30	9,759.64	50.92	108.37	71.64	-6,491.48	-549.34	997.66	843.05	154.61	6.453		
16,500.00	10,072.81	16,202.28	9,760.13	51.59	109.97	71.73	-6,591.46	-548.61	997.10	840.21	156.89	6.356		
16,600.00	10,071.52	16,302.27	9,760.62	52.27	111.58	71.83	-6,691.44	-547.88	996.54	837.38	159.17	6.261		
16,700.00	10,070.23	16,402.25	9,761.11	52.95	113.19	71.93	-6,791.43	-547.14	995.99	834.54	161.45	6.169		
16,800.00	10,068.95	16,502.24	9,761.60	53.63	114.80	72.02	-6,891.41	-546.41	995.44	831.70	163.74	6.080		
16,900.00	10,067.66	16,602.22	9,762.09	54.31	116.41	72.12	-6,991.39	-545.67	994.89	828.86	166.03	5.992		
17,000.00	10,066.38	16,702.20	9,762.58	55.00	118.02	72.22	-7,091.37	-544.94	994.34	826.02	168.32	5.907		
17,100.00	10,065.09	16,802.19	9,763.07	55.69	119.64	72.32	-7,191.35	-544.20	993.80	823.18	170.62	5.825		
17,200.00	10,063.80	16,902.17	9,763.56	56.38	121.25	72.41	-7,291.33	-543.47	993.26	820.33	172.92	5.744		
17,300.00	10,062.52	17,002.16	9,764.05	57.07	122.86	72.51	-7,391.31	-542.74	992.72	817.49	175.23	5.665		
17,400.00	10,061.23	17,102.14	9,764.55	57.76	124.48	72.61	-7,491.29	-542.00	992.18	814.65	177.53	5.589		
17,495.86	10,060.00	17,195.33	9,765.00	58.43	125.98	72.70	-7,584.48	-541.32	991.68	811.97	179.71	5.518 SF		

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 114H - OH - Plan #2													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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						
0.00	0.00	0.00	0.00	0.00	0.00	-90.32	-0.17	-30.00	30.00					
100.00	100.00	100.00	100.00	0.09	0.09	-90.32	-0.17	-30.00	30.00	29.83	0.17	174.476		
200.00	200.00	200.00	200.00	0.31	0.31	-90.32	-0.17	-30.00	30.00	29.38	0.62	48.273		
300.00	300.00	300.00	300.00	0.54	0.54	-90.32	-0.17	-30.00	30.00	28.93	1.07	28.011		
400.00	400.00	400.00	400.00	0.76	0.76	-90.32	-0.17	-30.00	30.00	28.48	1.52	19.730		
500.00	500.00	500.00	500.00	0.99	0.99	-90.32	-0.17	-30.00	30.00	28.03	1.97	15.228		
600.00	600.00	600.00	600.00	1.21	1.21	-90.32	-0.17	-30.00	30.00	27.58	2.42	12.399		
700.00	700.00	700.00	700.00	1.43	1.43	-90.32	-0.17	-30.00	30.00	27.13	2.87	10.456		
800.00	800.00	800.00	800.00	1.66	1.66	-90.32	-0.17	-30.00	30.00	26.68	3.32	9.040		
900.00	900.00	900.00	900.00	1.88	1.88	-90.32	-0.17	-30.00	30.00	26.23	3.77	7.961		
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	-90.32	-0.17	-30.00	30.00	25.78	4.22	7.113		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	-90.32	-0.17	-30.00	30.00	25.33	4.67	6.428		
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	-90.32	-0.17	-30.00	30.00	24.88	5.12	5.863		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	-90.32	-0.17	-30.00	30.00	24.43	5.57	5.390		
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-90.32	-0.17	-30.00	30.00	23.98	6.02	4.987		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	-90.32	-0.17	-30.00	30.00	23.54	6.47	4.640		
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-90.32	-0.17	-30.00	30.00	23.09	6.91	4.339		
1,700.00	1,700.00	1,700.00	1,700.00	3.68	3.68	-90.32	-0.17	-30.00	30.00	22.64	7.36	4.074		
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-90.32	-0.17	-30.00	30.00	22.19	7.81	3.839		
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	-90.32	-0.17	-30.00	30.00	21.74	8.26	3.630		
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-90.32	-0.17	-30.00	30.00	21.29	8.71	3.443		
2,100.00	2,100.00	2,100.00	2,100.00	4.58	4.58	-90.32	-0.17	-30.00	30.00	20.84	9.16	3.274		
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	-90.32	-0.17	-30.00	30.00	20.39	9.61	3.121		
2,300.00	2,300.00	2,300.00	2,300.00	5.03	5.03	-90.32	-0.17	-30.00	30.00	19.94	10.06	2.982		
2,400.00	2,400.00	2,400.00	2,400.00	5.26	5.26	-90.32	-0.17	-30.00	30.00	19.49	10.51	2.854		
2,500.00	2,500.00	2,500.00	2,500.00	5.48	5.48	-90.32	-0.17	-30.00	30.00	19.04	10.96	2.737		
2,600.00	2,600.00	2,600.00	2,600.00	5.71	5.71	-90.32	-0.17	-30.00	30.00	18.59	11.41	2.629		
2,700.00	2,700.00	2,700.00	2,700.00	5.93	5.93	-90.32	-0.17	-30.00	30.00	18.14	11.86	2.530		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	-90.32	-0.17	-30.00	30.00	17.69	12.31	2.437		
2,900.00	2,900.00	2,900.00	2,900.00	6.38	6.38	-90.32	-0.17	-30.00	30.00	17.24	12.76	2.351		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	-90.32	-0.17	-30.00	30.00	16.79	13.21	2.271		
3,100.00	3,100.00	3,100.00	3,100.00	6.83	6.83	-90.32	-0.17	-30.00	30.00	16.34	13.66	2.197		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	-90.32	-0.17	-30.00	30.00	15.89	14.11	2.127		
3,300.00	3,300.00	3,300.00	3,300.00	7.28	7.28	-90.32	-0.17	-30.00	30.00	15.44	14.56	2.061		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	-90.32	-0.17	-30.00	30.00	14.99	15.01	1.999		
3,500.00	3,500.00	3,500.00	3,500.00	7.73	7.73	-90.32	-0.17	-30.00	30.00	14.54	15.46	1.941		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	-90.32	-0.17	-30.00	30.00	14.09	15.91	1.886		
3,700.00	3,700.00	3,700.00	3,700.00	8.18	8.18	-90.32	-0.17	-30.00	30.00	13.65	16.36	1.834		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	-90.32	-0.17	-30.00	30.00	13.20	16.80	1.785		
3,900.00	3,900.00	3,900.00	3,900.00	8.63	8.63	-90.32	-0.17	-30.00	30.00	12.75	17.25	1.739		
4,000.00	4,000.00	4,000.00	4,000.00	8.85	8.85	-90.32	-0.17	-30.00	30.00	12.30	17.70	1.695 CC, ES, SF		
4,100.00	4,100.00	4,100.00	4,100.00	9.06	9.08	179.68	-0.17	-30.00	30.87	12.73	18.14	1.702		
4,200.00	4,199.96	4,199.96	4,199.96	9.26	9.30	179.71	-0.17	-30.00	33.49	14.93	18.56	1.804		
4,300.00	4,299.86	4,299.86	4,299.86	9.46	9.53	179.74	-0.17	-30.00	37.85	18.87	18.98	1.994		
4,400.00	4,399.68	4,399.68	4,399.68	9.66	9.75	179.78	-0.17	-30.00	43.96	24.55	19.41	2.265		
4,411.45	4,411.10	4,411.10	4,411.10	9.69	9.78	179.78	-0.17	-30.00	44.77	25.31	19.45	2.301		
4,500.00	4,499.42	4,499.42	4,499.42	9.87	9.97	179.81	-0.17	-30.00	51.12	31.29	19.83	2.578		
4,600.00	4,599.16	4,599.16	4,599.16	10.08	10.20	179.83	-0.17	-30.00	58.30	38.04	20.26	2.878		
4,700.00	4,698.90	4,698.90	4,698.90	10.29	10.42	179.85	-0.17	-30.00	65.47	44.79	20.68	3.166		
4,800.00	4,798.65	4,798.65	4,798.65	10.50	10.65	179.87	-0.17	-30.00	72.65	51.54	21.11	3.441		
4,900.00	4,898.39	4,898.39	4,898.39	10.71	10.87	179.88	-0.17	-30.00	79.82	58.28	21.54	3.706		
5,000.00	4,998.13	4,998.13	4,998.13	10.93	11.10	179.89	-0.17	-30.00	87.00	65.03	21.97	3.960		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 114H - OH - Plan #2												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 (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset		+N-S (usft)	+E-W (usft)					
5,100.00	5,097.87	5,097.87	5,097.87	11.15	11.32	179.90	-0.17	-30.00	94.17	71.77	22.40	4.204	
5,200.00	5,197.61	5,197.61	5,197.61	11.36	11.54	179.90	-0.17	-30.00	101.35	78.52	22.83	4.439	
5,300.00	5,297.36	5,297.36	5,297.36	11.58	11.77	179.91	-0.17	-30.00	108.52	85.26	23.26	4.665	
5,400.00	5,397.10	5,397.10	5,397.10	11.81	11.99	179.92	-0.17	-30.00	115.70	92.00	23.70	4.883	
5,500.00	5,496.84	5,496.84	5,496.84	12.03	12.22	179.92	-0.17	-30.00	122.87	98.74	24.13	5.092	
5,600.00	5,596.58	5,596.58	5,596.58	12.25	12.43	179.92	-0.17	-29.15	129.21	104.66	24.55	5.262	
5,700.00	5,696.33	5,701.06	5,701.02	12.48	12.63	179.93	-0.17	-26.47	133.78	108.82	24.96	5.360	
5,800.00	5,796.07	5,803.44	5,803.30	12.70	12.84	179.93	-0.17	-21.97	136.55	111.20	25.36	5.385	
5,900.00	5,895.81	5,904.65	5,904.33	12.93	13.04	179.93	-0.17	-15.94	137.77	112.01	25.76	5.348	
6,000.00	5,995.55	6,004.65	6,004.13	13.16	13.25	179.93	-0.17	-9.75	138.76	112.59	26.17	5.302	
6,100.00	6,095.29	6,104.64	6,103.94	13.38	13.45	179.93	-0.17	-3.57	139.76	113.17	26.59	5.257	
6,200.00	6,195.04	6,204.64	6,203.74	13.61	13.66	179.93	-0.17	2.61	140.75	113.75	27.00	5.213	
6,300.00	6,294.78	6,304.63	6,303.54	13.84	13.86	179.93	-0.17	8.80	141.75	114.33	27.42	5.170	
6,400.00	6,394.52	6,404.63	6,403.35	14.07	14.07	179.93	-0.17	14.98	142.74	114.90	27.84	5.128	
6,500.00	6,494.26	6,504.62	6,503.15	14.31	14.28	179.93	-0.17	21.16	143.74	115.48	28.26	5.087	
6,600.00	6,594.01	6,604.62	6,602.95	14.54	14.49	179.93	-0.17	27.34	144.73	116.05	28.68	5.047	
6,700.00	6,693.75	6,704.61	6,702.76	14.77	14.71	179.93	-0.17	33.53	145.72	116.62	29.10	5.008	
6,800.00	6,793.49	6,804.61	6,802.56	15.01	14.92	179.93	-0.17	39.71	146.72	117.19	29.52	4.970	
6,900.00	6,893.23	6,904.60	6,902.37	15.24	15.13	179.93	-0.17	45.89	147.71	117.76	29.95	4.932	
7,000.00	6,992.97	7,004.60	7,002.17	15.47	15.35	179.93	-0.17	52.07	148.71	118.33	30.37	4.896	
7,100.00	7,092.72	7,104.59	7,101.97	15.71	15.56	179.93	-0.17	58.26	149.70	118.90	30.80	4.861	
7,200.00	7,192.46	7,204.59	7,201.78	15.95	15.78	179.94	-0.17	64.44	150.69	119.47	31.23	4.826	
7,300.00	7,292.20	7,304.58	7,301.58	16.18	16.00	179.94	-0.17	70.62	151.69	120.03	31.65	4.792	
7,400.00	7,391.94	7,404.58	7,401.38	16.42	16.22	179.94	-0.17	76.81	152.68	120.60	32.08	4.759	
7,500.00	7,491.69	7,504.57	7,501.19	16.66	16.44	179.94	-0.17	82.99	153.68	121.16	32.51	4.727	
7,600.00	7,591.43	7,604.57	7,600.99	16.89	16.65	179.94	-0.17	89.17	154.67	121.73	32.94	4.695	
7,700.00	7,691.17	7,704.56	7,700.80	17.13	16.88	179.94	-0.17	95.35	155.66	122.29	33.37	4.664	
7,800.00	7,790.91	7,804.56	7,800.60	17.37	17.10	179.94	-0.17	101.54	156.66	122.85	33.81	4.634	
7,900.00	7,890.66	7,904.55	7,900.40	17.61	17.32	179.94	-0.17	107.72	157.65	123.41	34.24	4.605	
8,000.00	7,990.40	8,004.55	8,000.21	17.85	17.54	179.94	-0.17	113.90	158.65	123.98	34.67	4.576	
8,100.00	8,090.14	8,104.54	8,100.01	18.09	17.76	179.94	-0.17	120.09	159.64	124.54	35.11	4.547	
8,200.00	8,189.88	8,204.54	8,199.81	18.33	17.99	179.94	-0.17	126.27	160.64	125.10	35.54	4.520	
8,300.00	8,289.62	8,304.53	8,299.62	18.57	18.21	179.94	-0.17	132.45	161.63	125.65	35.98	4.493	
8,400.00	8,389.37	8,404.53	8,399.42	18.81	18.44	179.94	-0.17	138.63	162.62	126.21	36.41	4.466	
8,500.00	8,489.11	8,504.52	8,499.23	19.05	18.66	179.94	-0.17	144.82	163.62	126.77	36.85	4.440	
8,600.00	8,588.85	8,601.82	8,596.38	19.29	18.87	179.94	-0.17	150.07	165.40	128.12	37.28	4.436	
8,700.00	8,688.59	8,700.00	8,694.49	19.53	19.06	179.94	-0.17	153.69	168.88	131.18	37.70	4.479	
8,800.00	8,788.34	8,795.89	8,790.36	19.78	19.24	179.94	-0.17	155.61	174.05	135.94	38.11	4.567	
8,877.86	8,865.99	8,871.52	8,865.99	19.96	19.38	179.95	-0.17	156.00	179.23	140.81	38.42	4.665	
8,900.00	8,888.08	8,893.61	8,888.08	20.01	19.43	179.95	-0.17	156.00	180.78	142.27	38.51	4.694	
9,000.00	8,987.90	8,993.43	8,987.90	20.21	19.65	179.95	-0.17	156.00	186.70	147.78	38.92	4.797	
9,100.00	9,087.82	9,093.35	9,087.82	20.40	19.86	179.95	-0.17	156.00	190.87	151.54	39.33	4.853	
9,200.00	9,187.79	9,193.35	9,187.81	20.59	20.08	179.70	-1.00	156.01	193.30	153.57	39.73	4.865	
9,289.31	9,277.09	9,281.16	9,274.79	20.75	20.24	-93.66	-12.40	156.09	194.32	154.26	40.06	4.851	
9,300.00	9,287.78	9,291.38	9,284.77	20.77	20.26	-94.30	-14.59	156.11	194.47	154.37	40.10	4.850	
9,400.00	9,387.78	9,382.36	9,371.48	20.98	20.43	-102.18	-41.81	156.30	198.82	158.43	40.40	4.922	
9,500.00	9,487.78	9,463.07	9,443.96	21.19	20.58	-111.75	-77.18	156.56	212.82	172.55	40.27	5.284	
9,589.31	9,577.09	9,525.63	9,496.29	21.38	20.71	-119.97	-111.39	156.81	237.19	197.68	39.51	6.004	
9,600.00	9,587.78	9,532.58	9,501.86	21.40	20.72	59.21	-115.54	156.85	240.87	201.49	39.37	6.118	
9,650.00	9,637.67	9,564.70	9,526.96	21.49	20.79	53.81	-135.58	156.99	258.92	220.25	38.67	6.696	
9,700.00	9,687.09	9,600.00	9,553.20	21.58	20.87	48.76	-159.18	157.16	277.85	239.79	38.06	7.300	
9,750.00	9,735.68	9,627.47	9,572.58	21.68	20.94	45.01	-178.64	157.31	297.01	259.96	37.04	8.018	

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 114H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-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)	Offset Wellbore Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,800.00	9,783.07	9,658.25	9,593.17	21.77	21.02	41.50	-201.53	157.47	316.03	279.86	36.17	8.737		
9,850.00	9,828.88	9,688.71	9,612.29	21.87	21.10	38.50	-225.22	157.65	334.57	299.28	35.29	9.480		
9,900.00	9,872.78	9,718.88	9,629.98	21.97	21.19	35.95	-249.67	157.83	352.37	317.94	34.42	10.236		
9,950.00	9,914.43	9,750.00	9,646.84	22.07	21.30	33.73	-275.82	158.02	369.22	335.60	33.62	10.982		
10,000.00	9,953.51	9,778.54	9,661.03	22.18	21.40	31.92	-300.57	158.20	384.96	352.21	32.74	11.758		
10,050.00	9,989.72	9,800.00	9,670.89	22.30	21.48	30.55	-319.64	158.34	399.59	367.96	31.64	12.631		
10,100.00	10,022.80	9,837.48	9,686.35	22.43	21.64	29.04	-353.76	158.59	412.64	381.40	31.23	13.211		
10,150.00	10,052.48	9,866.74	9,696.86	22.58	21.77	27.95	-381.07	158.79	424.39	393.81	30.57	13.881		
10,200.00	10,078.55	9,900.00	9,707.10	22.74	21.93	26.99	-412.71	159.02	434.69	404.57	30.12	14.432		
10,250.00	10,100.79	9,924.95	9,713.56	22.93	22.06	26.31	-436.81	159.20	443.38	413.88	29.50	15.031		
10,300.00	10,119.06	9,950.00	9,718.98	23.14	22.19	25.76	-461.26	159.38	450.54	421.53	29.01	15.531		
10,350.00	10,133.20	9,982.87	9,724.47	23.38	22.38	25.30	-493.66	159.61	456.03	427.21	28.82	15.825		
10,400.00	10,143.10	10,011.76	9,727.76	23.64	22.55	25.00	-522.36	159.82	459.90	431.25	28.65	16.053		
10,450.00	10,148.70	10,050.00	9,729.87	23.92	22.78	24.81	-560.53	160.10	462.28	433.56	28.72	16.098		
10,496.68	10,150.00	10,073.30	9,730.07	24.21	22.94	24.80	-583.83	160.28	462.58	433.86	28.72	16.105		
10,500.00	10,149.96	10,076.62	9,730.09	24.23	22.96	24.80	-587.15	160.30	462.53	433.78	28.74	16.091		
10,600.00	10,148.67	10,176.60	9,730.58	28.67	23.67	24.89	-687.13	161.03	460.91	431.47	29.44	15.658		
10,700.00	10,147.39	10,276.59	9,731.08	28.75	24.47	24.99	-787.11	161.76	459.29	429.38	29.91	15.356		
10,800.00	10,146.10	10,376.57	9,731.58	28.84	25.34	25.08	-887.09	162.50	457.67	427.20	30.47	15.019		
10,900.00	10,144.81	10,476.55	9,732.08	28.92	26.29	25.18	-987.07	163.23	456.05	424.93	31.12	14.652		
11,000.00	10,143.53	10,576.54	9,732.58	29.01	27.31	25.27	-1,087.05	163.96	454.44	422.58	31.86	14.264		
11,100.00	10,142.24	10,676.52	9,733.08	29.10	28.38	25.37	-1,187.03	164.69	452.82	420.16	32.67	13.861		
11,200.00	10,140.96	10,776.51	9,733.58	29.20	29.51	25.47	-1,287.01	165.43	451.21	417.66	33.55	13.448		
11,300.00	10,139.67	10,876.49	9,734.08	29.29	30.68	25.56	-1,386.99	166.16	449.60	415.10	34.50	13.032		
11,400.00	10,138.39	10,976.47	9,734.58	29.39	31.89	25.66	-1,486.97	166.89	447.99	412.48	35.51	12.615		
11,500.00	10,137.10	11,076.46	9,735.08	29.49	33.14	25.76	-1,586.95	167.62	446.38	409.80	36.58	12.202		
11,600.00	10,135.81	11,176.44	9,735.58	29.59	34.42	25.86	-1,686.93	168.36	444.78	407.07	37.71	11.796		
11,700.00	10,134.53	11,276.43	9,736.08	29.69	35.73	25.96	-1,786.91	169.09	443.17	404.29	38.88	11.399		
11,800.00	10,133.24	11,376.41	9,736.57	29.80	37.07	26.06	-1,886.89	169.82	441.56	401.47	40.10	11.012		
11,900.00	10,131.96	11,476.40	9,737.07	29.91	38.43	26.17	-1,986.87	170.55	439.96	398.60	41.36	10.638		
12,000.00	10,130.67	11,576.38	9,737.57	30.02	39.82	26.27	-2,086.85	171.28	438.36	395.70	42.66	10.276		
12,100.00	10,129.38	11,676.36	9,738.07	30.14	41.22	26.37	-2,186.83	172.02	436.76	392.76	43.99	9.928		
12,200.00	10,128.10	11,776.35	9,738.57	30.26	42.63	26.48	-2,286.81	172.75	435.16	389.80	45.37	9.592		
12,300.00	10,126.81	11,876.33	9,739.07	30.38	44.07	26.58	-2,386.79	173.48	433.56	386.80	46.77	9.271		
12,400.00	10,125.53	11,976.32	9,739.57	30.52	45.51	26.69	-2,486.77	174.21	431.97	383.77	48.20	8.962		
12,500.00	10,124.24	12,076.30	9,740.07	30.66	46.97	26.79	-2,586.75	174.95	430.37	380.72	49.66	8.667		
12,600.00	10,122.95	12,176.28	9,740.57	30.81	48.44	26.90	-2,686.73	175.68	428.78	377.64	51.14	8.385		
12,700.00	10,121.67	12,276.27	9,741.07	30.97	49.93	27.01	-2,786.71	176.41	427.19	374.54	52.64	8.115		
12,800.00	10,120.38	12,376.25	9,741.57	31.15	51.42	27.12	-2,886.69	177.14	425.60	371.43	54.17	7.856		
12,900.00	10,119.10	12,476.24	9,742.07	31.36	52.92	27.23	-2,986.67	177.88	424.01	368.29	55.72	7.609		
13,000.00	10,117.81	12,576.22	9,742.57	31.60	54.42	27.34	-3,086.65	178.61	422.42	365.13	57.29	7.373		
13,100.00	10,116.53	12,676.20	9,743.06	31.88	55.94	27.45	-3,186.63	179.34	420.84	361.96	58.88	7.148		
13,200.00	10,115.24	12,776.19	9,743.56	32.21	57.46	27.56	-3,286.61	180.07	419.26	358.77	60.48	6.932		
13,300.00	10,113.95	12,876.17	9,744.06	32.57	58.99	27.68	-3,386.59	180.81	417.67	355.57	62.10	6.726		
13,400.00	10,112.67	12,976.16	9,744.56	32.98	60.52	27.79	-3,486.57	181.54	416.09	352.36	63.74	6.528		
13,500.00	10,111.38	13,076.14	9,745.06	33.42	62.06	27.91	-3,586.55	182.27	414.51	349.13	65.39	6.339		
13,600.00	10,110.10	13,176.12	9,745.56	33.89	63.61	28.02	-3,686.53	183.00	412.94	345.89	67.05	6.158		
13,700.00	10,108.81	13,276.11	9,746.06	34.38	65.16	28.14	-3,786.51	183.73	411.36	342.63	68.73	5.985		
13,800.00	10,107.52	13,376.09	9,746.56	34.88	66.71	28.26	-3,886.49	184.47	409.79	339.37	70.42	5.819		
13,900.00	10,106.24	13,476.08	9,747.06	35.41	68.27	28.38	-3,986.48	185.20	408.22	336.09	72.12	5.660		
14,000.00	10,104.95	13,576.06	9,747.56	35.95	69.83	28.49	-4,086.46	185.93	406.65	332.81	73.84	5.507		
14,100.00	10,103.67	13,676.04	9,748.06	36.50	71.39	28.62	-4,186.44	186.66	405.08	329.52	75.56	5.361		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 114H - OH - Plan #2													Offset Site Error: 0.00 usft	
Survey Program: O-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	10,102.38	13,776.03	9,748.56	37.06	72.96	28.74	-4,286.42	187.40	403.51	326.21	77.30	5.220		
14,300.00	10,101.09	13,876.01	9,749.06	37.63	74.53	28.86	-4,386.40	188.13	401.95	322.90	79.05	5.085		
14,400.00	10,099.81	13,976.00	9,749.55	38.21	76.10	28.98	-4,486.38	188.86	400.38	319.58	80.81	4.955		
14,500.00	10,098.52	14,075.98	9,750.05	38.79	77.68	29.11	-4,586.36	189.59	398.82	316.25	82.57	4.830		
14,600.00	10,097.24	14,175.97	9,750.55	39.38	79.26	29.23	-4,686.34	190.33	397.27	312.92	84.35	4.710		
14,700.00	10,095.95	14,275.95	9,751.05	39.98	80.84	29.36	-4,786.32	191.06	395.71	309.57	86.14	4.594		
14,800.00	10,094.67	14,375.93	9,751.55	40.59	82.42	29.48	-4,886.30	191.79	394.15	306.22	87.93	4.482		
14,900.00	10,093.38	14,475.92	9,752.05	41.20	84.01	29.61	-4,986.28	192.52	392.60	302.86	89.74	4.375		
15,000.00	10,092.09	14,575.90	9,752.55	41.82	85.60	29.74	-5,086.26	193.26	391.05	299.50	91.55	4.271		
15,100.00	10,090.81	14,675.89	9,753.05	42.44	87.19	29.87	-5,186.24	193.99	389.50	296.13	93.37	4.171		
15,200.00	10,089.52	14,775.87	9,753.55	43.07	88.78	30.00	-5,286.22	194.72	387.95	292.75	95.20	4.075		
15,300.00	10,088.24	14,875.85	9,754.05	43.71	90.37	30.14	-5,386.20	195.45	386.41	289.36	97.04	3.982		
15,400.00	10,086.95	14,975.84	9,754.55	44.34	91.97	30.27	-5,486.18	196.18	384.86	285.97	98.89	3.892		
15,500.00	10,085.66	15,075.82	9,755.05	44.98	93.56	30.40	-5,586.16	196.92	383.32	282.57	100.75	3.805		
15,600.00	10,084.38	15,175.81	9,755.54	45.63	95.16	30.54	-5,686.14	197.65	381.78	279.17	102.61	3.721		
15,700.00	10,083.09	15,275.79	9,756.04	46.28	96.76	30.68	-5,786.12	198.38	380.25	275.76	104.48	3.639		
15,800.00	10,081.81	15,375.77	9,756.54	46.93	98.36	30.81	-5,886.10	199.11	378.71	272.35	106.36	3.561		
15,900.00	10,080.52	15,475.76	9,757.04	47.59	99.96	30.95	-5,986.08	199.85	377.18	268.93	108.25	3.484		
16,000.00	10,079.24	15,575.74	9,757.54	48.25	101.56	31.09	-6,086.06	200.58	375.65	265.50	110.15	3.410		
16,100.00	10,077.95	15,675.73	9,758.04	48.91	103.17	31.23	-6,186.04	201.31	374.12	262.07	112.05	3.339		
16,200.00	10,076.66	15,775.71	9,758.54	49.58	104.77	31.38	-6,286.02	202.04	372.60	258.63	113.96	3.269		
16,300.00	10,075.38	15,875.69	9,759.04	50.25	106.38	31.52	-6,386.00	202.78	371.07	255.19	115.88	3.202		
16,400.00	10,074.09	15,975.68	9,759.54	50.92	107.98	31.66	-6,485.98	203.51	369.55	251.75	117.81	3.137		
16,500.00	10,072.81	16,075.66	9,760.04	51.59	109.59	31.81	-6,585.96	204.24	368.03	248.29	119.74	3.074		
16,600.00	10,071.52	16,175.65	9,760.54	52.27	111.20	31.96	-6,685.94	204.97	366.52	244.83	121.68	3.012		
16,700.00	10,070.23	16,275.63	9,761.04	52.95	112.81	32.10	-6,785.92	205.70	365.00	241.37	123.63	2.952		
16,800.00	10,068.95	16,375.61	9,761.54	53.63	114.42	32.25	-6,885.90	206.44	363.49	237.90	125.59	2.894		
16,900.00	10,067.66	16,475.60	9,762.03	54.31	116.03	32.40	-6,985.88	207.17	361.98	234.43	127.56	2.838		
17,000.00	10,066.38	16,575.58	9,762.53	55.00	117.64	32.56	-7,085.86	207.90	360.48	230.95	129.53	2.783		
17,100.00	10,065.09	16,675.57	9,763.03	55.69	119.26	32.71	-7,185.84	208.63	358.98	227.47	131.51	2.730		
17,200.00	10,063.80	16,775.55	9,763.53	56.38	120.87	32.86	-7,285.82	209.37	357.47	223.98	133.50	2.678		
17,300.00	10,062.52	16,875.53	9,764.03	57.07	122.49	33.02	-7,385.80	210.10	355.98	220.49	135.49	2.627		
17,400.00	10,061.23	16,975.52	9,764.53	57.76	124.10	33.18	-7,485.78	210.83	354.48	216.99	137.49	2.578		
17,495.86	10,060.00	17,069.55	9,765.00	58.43	125.62	33.33	-7,579.81	211.52	353.05	213.68	139.38	2.533		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 125H - OH - Plan #2													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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	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)						
0.00	0.00	0.00	0.00	0.00	0.00	-90.33	-2.06	-359.90	359.91					
100.00	100.00	99.70	99.70	0.09	0.09	-90.33	-2.06	-359.90	359.91	359.73	0.17	2,096.275		
200.00	200.00	199.70	199.70	0.31	0.31	-90.33	-2.06	-359.90	359.91	359.29	0.62	579.742		
300.00	300.00	299.70	299.70	0.54	0.53	-90.33	-2.06	-359.90	359.91	358.84	1.07	336.255		
400.00	400.00	399.70	399.70	0.76	0.76	-90.33	-2.06	-359.90	359.91	358.39	1.52	236.801		
500.00	500.00	499.70	499.70	0.99	0.98	-90.33	-2.06	-359.90	359.91	357.94	1.97	182.749		
600.00	600.00	599.70	599.70	1.21	1.21	-90.33	-2.06	-359.90	359.91	357.49	2.42	148.787		
700.00	700.00	699.70	699.70	1.43	1.43	-90.33	-2.06	-359.90	359.91	357.04	2.87	125.470		
800.00	800.00	799.70	799.70	1.66	1.66	-90.33	-2.06	-359.90	359.91	356.59	3.32	108.471		
900.00	900.00	899.70	899.70	1.88	1.88	-90.33	-2.06	-359.90	359.91	356.14	3.77	95.528		
1,000.00	1,000.00	999.70	999.70	2.11	2.11	-90.33	-2.06	-359.90	359.91	355.69	4.22	85.345		
1,100.00	1,100.00	1,099.70	1,099.70	2.33	2.33	-90.33	-2.06	-359.90	359.91	355.24	4.67	77.124		
1,200.00	1,200.00	1,199.70	1,199.70	2.56	2.56	-90.33	-2.06	-359.90	359.91	354.79	5.12	70.347		
1,300.00	1,300.00	1,299.70	1,299.70	2.78	2.78	-90.33	-2.06	-359.90	359.91	354.34	5.57	64.665		
1,400.00	1,400.00	1,399.70	1,399.70	3.01	3.01	-90.33	-2.06	-359.90	359.91	353.89	6.02	59.833		
1,500.00	1,500.00	1,499.70	1,499.70	3.23	3.23	-90.33	-2.06	-359.90	359.91	353.44	6.46	55.672		
1,600.00	1,600.00	1,599.70	1,599.70	3.46	3.46	-90.33	-2.06	-359.90	359.91	352.99	6.91	52.053		
1,700.00	1,700.00	1,699.70	1,699.70	3.68	3.68	-90.33	-2.06	-359.90	359.91	352.54	7.36	48.875		
1,800.00	1,800.00	1,799.70	1,799.70	3.91	3.91	-90.33	-2.06	-359.90	359.91	352.09	7.81	46.063		
1,900.00	1,900.00	1,899.70	1,899.70	4.13	4.13	-90.33	-2.06	-359.90	359.91	351.64	8.26	43.557		
2,000.00	2,000.00	1,999.70	1,999.70	4.36	4.36	-90.33	-2.06	-359.90	359.91	351.19	8.71	41.310		
2,100.00	2,100.00	2,099.70	2,099.70	4.58	4.58	-90.33	-2.06	-359.90	359.91	350.74	9.16	39.283		
2,200.00	2,200.00	2,199.70	2,199.70	4.81	4.81	-90.33	-2.06	-359.90	359.91	350.29	9.61	37.446		
2,300.00	2,300.00	2,299.70	2,299.70	5.03	5.03	-90.33	-2.06	-359.90	359.91	349.84	10.06	35.772		
2,400.00	2,400.00	2,399.70	2,399.70	5.26	5.25	-90.33	-2.06	-359.90	359.91	349.40	10.51	34.242		
2,500.00	2,500.00	2,499.70	2,499.70	5.48	5.48	-90.33	-2.06	-359.90	359.91	348.95	10.96	32.838		
2,600.00	2,600.00	2,599.70	2,599.70	5.71	5.70	-90.33	-2.06	-359.90	359.91	348.50	11.41	31.544		
2,700.00	2,700.00	2,699.70	2,699.70	5.93	5.93	-90.33	-2.06	-359.90	359.91	348.05	11.86	30.348		
2,800.00	2,800.00	2,799.70	2,799.70	6.15	6.15	-90.33	-2.06	-359.90	359.91	347.60	12.31	29.240		
2,900.00	2,900.00	2,899.70	2,899.70	6.38	6.38	-90.33	-2.06	-359.90	359.91	347.15	12.76	28.210		
3,000.00	3,000.00	2,999.70	2,999.70	6.60	6.60	-90.33	-2.06	-359.90	359.91	346.70	13.21	27.250		
3,100.00	3,100.00	3,099.70	3,099.70	6.83	6.83	-90.33	-2.06	-359.90	359.91	346.25	13.66	26.353		
3,200.00	3,200.00	3,199.70	3,199.70	7.05	7.05	-90.33	-2.06	-359.90	359.91	345.80	14.11	25.513		
3,300.00	3,300.00	3,299.70	3,299.70	7.28	7.28	-90.33	-2.06	-359.90	359.91	345.35	14.56	24.725		
3,400.00	3,400.00	3,399.70	3,399.70	7.50	7.50	-90.33	-2.06	-359.90	359.91	344.90	15.01	23.984		
3,500.00	3,500.00	3,499.70	3,499.70	7.73	7.73	-90.33	-2.06	-359.90	359.91	344.45	15.46	23.287		
3,600.00	3,600.00	3,599.70	3,599.70	7.95	7.95	-90.33	-2.06	-359.90	359.91	344.00	15.90	22.629		
3,700.00	3,700.00	3,699.70	3,699.70	8.18	8.18	-90.33	-2.06	-359.90	359.91	343.55	16.35	22.007		
3,800.00	3,800.00	3,799.70	3,799.70	8.40	8.40	-90.33	-2.06	-359.90	359.91	343.10	16.80	21.418		
3,900.00	3,900.00	3,899.70	3,899.70	8.63	8.63	-90.33	-2.06	-359.90	359.91	342.65	17.25	20.860		
4,000.00	4,000.00	3,999.70	3,999.70	8.85	8.85	-90.33	-2.06	-359.90	359.91	342.20	17.70	20.330 CC, ES		
4,100.00	4,100.00	4,096.06	4,096.05	9.06	9.07	-179.77	-1.42	-360.39	361.28	343.15	18.13	19.932		
4,200.00	4,199.96	4,192.27	4,192.24	9.26	9.28	-179.92	0.51	-361.85	365.42	346.89	18.53	19.720		
4,300.00	4,299.86	4,288.22	4,288.09	9.46	9.49	-179.43	3.71	-364.28	372.33	353.39	18.93	19.666		
4,400.00	4,399.68	4,383.76	4,383.47	9.66	9.70	-178.77	8.18	-367.66	382.04	362.71	19.33	19.761		
4,411.45	4,411.10	4,394.67	4,394.36	9.69	9.72	-178.68	8.77	-368.11	383.33	363.95	19.38	19.780		
4,500.00	4,499.42	4,478.85	4,478.29	9.87	9.91	-177.97	13.87	-371.98	393.90	374.17	19.73	19.963		
4,600.00	4,599.16	4,576.50	4,575.57	10.08	10.13	-177.06	20.72	-377.17	406.66	386.52	20.14	20.191		
4,700.00	4,698.90	4,675.46	4,674.14	10.29	10.35	-176.18	27.71	-382.48	419.58	399.02	20.56	20.407		
4,800.00	4,798.65	4,774.43	4,772.71	10.50	10.58	-175.36	34.71	-387.78	432.59	411.60	20.98	20.618		
4,900.00	4,898.39	4,873.39	4,871.29	10.71	10.81	-174.58	41.71	-393.09	445.68	424.27	21.40	20.821		
5,000.00	4,998.13	4,972.36	4,969.86	10.93	11.03	-173.85	48.70	-398.40	458.84	437.01	21.83	21.019		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 125H - OH - Plan #2												Offset Well Error:	0.00 usft
Survey Program: O-LEAM MWD+HDGM													
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
5,100.00	5,097.87	5,071.32	5,068.43	11.15	11.26	-173.16	55.70	-403.70	472.08	449.82	22.26	21.210	
5,200.00	5,197.61	5,170.29	5,167.01	11.36	11.49	-172.51	62.70	-409.01	485.37	462.69	22.69	21.396	
5,300.00	5,297.36	5,269.25	5,265.58	11.58	11.73	-171.89	69.69	-414.31	498.73	475.61	23.12	21.575	
5,400.00	5,397.10	5,368.21	5,364.16	11.81	11.96	-171.31	76.69	-419.62	512.14	488.59	23.55	21.749	
5,500.00	5,496.84	5,467.18	5,462.73	12.03	12.19	-170.75	83.69	-424.92	525.60	501.62	23.98	21.917	
5,600.00	5,596.58	5,566.14	5,561.30	12.25	12.43	-170.23	90.68	-430.23	539.11	514.69	24.42	22.080	
5,700.00	5,696.33	5,665.11	5,659.88	12.48	12.67	-169.72	97.68	-435.54	552.66	527.81	24.85	22.238	
5,800.00	5,796.07	5,769.38	5,763.78	12.70	12.88	-169.25	104.69	-440.85	565.94	540.65	25.28	22.385	
5,900.00	5,895.81	5,876.58	5,870.73	12.93	13.08	-168.92	110.40	-445.18	577.93	552.23	25.71	22.483	
6,000.00	5,995.55	5,984.18	5,978.21	13.16	13.27	-168.72	114.52	-448.31	588.55	562.43	26.12	22.582	
6,100.00	6,095.29	6,092.12	6,086.10	13.38	13.47	-168.67	117.04	-450.22	597.77	571.23	26.54	22.523	
6,200.00	6,195.04	6,200.31	6,194.29	13.61	13.66	-168.74	117.94	-450.90	605.59	578.64	26.95	22.471	
6,300.00	6,294.78	6,300.50	6,294.48	13.84	13.86	-168.87	117.94	-450.90	612.63	585.27	27.36	22.389	
6,400.00	6,394.52	6,400.25	6,394.22	14.07	14.08	-169.00	117.94	-450.90	619.67	591.87	27.80	22.290	
6,500.00	6,494.26	6,499.99	6,493.96	14.31	14.30	-169.13	117.94	-450.90	626.72	598.48	28.24	22.194	
6,600.00	6,594.01	6,599.73	6,593.71	14.54	14.52	-169.25	117.94	-450.90	633.77	605.09	28.68	22.101	
6,700.00	6,693.75	6,699.47	6,693.45	14.77	14.74	-169.37	117.94	-450.90	640.82	611.70	29.11	22.010	
6,800.00	6,793.49	6,799.21	6,793.19	15.01	14.96	-169.48	117.94	-450.90	647.87	618.32	29.55	21.922	
6,900.00	6,893.23	6,898.96	6,892.93	15.24	15.18	-169.60	117.94	-450.90	654.93	624.93	29.99	21.836	
7,000.00	6,992.97	6,998.70	6,992.67	15.47	15.40	-169.71	117.94	-450.90	661.99	631.55	30.43	21.752	
7,100.00	7,092.72	7,098.44	7,092.42	15.71	15.62	-169.82	117.94	-450.90	669.05	638.17	30.87	21.671	
7,200.00	7,192.46	7,198.18	7,192.16	15.95	15.84	-169.93	117.94	-450.90	676.11	644.80	31.31	21.591	
7,300.00	7,292.20	7,297.93	7,291.90	16.18	16.06	-170.03	117.94	-450.90	683.18	651.42	31.76	21.514	
7,400.00	7,391.94	7,397.67	7,391.64	16.42	16.28	-170.14	117.94	-450.90	690.25	658.05	32.20	21.438	
7,500.00	7,491.69	7,497.41	7,491.39	16.66	16.51	-170.24	117.94	-450.90	697.32	664.68	32.64	21.365	
7,600.00	7,591.43	7,597.15	7,591.13	16.89	16.73	-170.34	117.94	-450.90	704.39	671.31	33.08	21.293	
7,700.00	7,691.17	7,696.90	7,690.87	17.13	16.95	-170.43	117.94	-450.90	711.46	677.94	33.52	21.223	
7,800.00	7,790.91	7,796.64	7,790.61	17.37	17.17	-170.53	117.94	-450.90	718.54	684.58	33.97	21.154	
7,900.00	7,890.66	7,896.38	7,890.36	17.61	17.39	-170.62	117.94	-450.90	725.62	691.21	34.41	21.088	
8,000.00	7,990.40	7,996.12	7,990.10	17.85	17.61	-170.71	117.94	-450.90	732.70	697.85	34.85	21.023	
8,100.00	8,090.14	8,095.86	8,089.84	18.09	17.84	-170.80	117.94	-450.90	739.78	704.49	35.30	20.959	
8,200.00	8,189.88	8,195.61	8,189.58	18.33	18.06	-170.89	117.94	-450.90	746.87	711.13	35.74	20.897	
8,300.00	8,289.62	8,295.35	8,289.32	18.57	18.28	-170.98	117.94	-450.90	753.95	717.77	36.19	20.836	
8,400.00	8,389.37	8,395.09	8,389.07	18.81	18.50	-171.06	117.94	-450.90	761.04	724.41	36.63	20.777	
8,500.00	8,489.11	8,494.83	8,488.81	19.05	18.72	-171.15	117.94	-450.90	768.13	731.06	37.07	20.719	
8,600.00	8,588.85	8,594.58	8,588.55	19.29	18.94	-171.23	117.94	-450.90	775.22	737.70	37.52	20.662	
8,700.00	8,688.59	8,694.32	8,688.29	19.53	19.17	-171.31	117.94	-450.90	782.31	744.35	37.96	20.606	
8,800.00	8,788.34	8,794.06	8,788.04	19.78	19.39	-171.39	117.94	-450.90	789.41	751.00	38.41	20.552	
8,877.86	8,865.99	8,871.72	8,865.69	19.96	19.56	-171.45	117.94	-450.90	794.93	756.17	38.76	20.511	
8,900.00	8,888.08	8,893.81	8,887.78	20.01	19.61	-171.46	117.94	-450.90	796.46	757.61	38.85	20.500	
9,000.00	8,987.90	8,993.63	8,987.60	20.21	19.83	-171.54	117.94	-450.90	802.31	763.05	39.27	20.433	
9,100.00	9,087.82	9,093.54	9,087.52	20.40	20.06	-171.59	117.94	-450.90	806.44	766.77	39.68	20.325	
9,200.00	9,187.79	9,193.51	9,187.49	20.59	20.28	-171.61	117.94	-450.90	808.85	768.76	40.09	20.176	
9,289.31	9,277.09	9,282.81	9,276.79	20.75	20.48	-81.62	117.94	-450.90	809.54	769.08	40.46	20.010	
9,300.00	9,287.78	9,293.51	9,287.48	20.77	20.50	-81.62	117.94	-450.90	809.54	769.04	40.50	19.988	
9,400.00	9,387.78	9,393.51	9,387.48	20.98	20.73	-81.62	117.94	-450.90	809.54	768.60	40.94	19.774	
9,500.00	9,487.78	9,493.51	9,487.48	21.19	20.95	-81.62	117.94	-450.90	809.54	768.16	41.38	19.564	
9,589.31	9,577.09	9,582.81	9,581.12	21.38	21.15	-81.91	113.88	-450.87	809.05	767.29	41.77	19.371	
9,600.00	9,587.78	9,610.73	9,604.43	21.40	21.17	98.42	112.13	-450.86	808.86	767.05	41.81	19.347	
9,650.00	9,637.67	9,672.86	9,665.33	21.49	21.26	97.93	99.99	-450.77	807.90	765.92	41.98	19.245	
9,700.00	9,687.09	9,733.85	9,723.49	21.58	21.35	97.37	81.74	-450.63	806.86	764.72	42.14	19.147	
9,750.00	9,735.68	9,793.60	9,778.28	21.68	21.43	96.75	57.95	-450.46	805.79	763.49	42.30	19.052	

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 125H - OH - Plan #2													Offset Site Error: 0.00 usft		
Survey Program: O-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			
9,800.00	9,783.07	9,852.07	9,829.21	21.77	21.51	96.08	29.29	-450.25	804.72	762.27	42.45	18.956			
9,850.00	9,828.88	9,909.22	9,875.92	21.87	21.58	95.37	-3.61	-450.01	803.69	761.08	42.62	18.858			
9,900.00	9,872.78	9,965.07	9,918.17	21.97	21.65	94.62	-40.09	-449.74	802.75	759.95	42.80	18.754			
9,950.00	9,914.43	10,019.62	9,955.82	22.07	21.71	93.85	-79.53	-449.45	801.91	758.90	43.01	18.644			
10,000.00	9,953.51	10,072.91	9,988.83	22.18	21.79	93.05	-121.35	-449.14	801.21	757.96	43.25	18.526			
10,050.00	9,989.72	10,125.01	10,017.20	22.30	21.90	92.24	-165.01	-448.82	800.66	757.14	43.51	18.401			
10,100.00	10,022.80	10,175.95	10,041.00	22.43	22.04	91.42	-210.04	-448.49	800.27	756.46	43.81	18.268			
10,150.00	10,052.48	10,225.82	10,060.33	22.58	22.20	90.60	-255.99	-448.15	800.05	755.92	44.14	18.127			
10,187.33	10,072.29	10,262.38	10,071.93	22.70	22.33	89.99	-290.65	-447.90	800.01	755.60	44.40	18.016			
10,200.00	10,078.55	10,274.67	10,075.33	22.74	22.38	89.79	-302.46	-447.81	800.01	755.51	44.50	17.979			
10,250.00	10,100.79	10,322.57	10,086.14	22.93	22.57	88.98	-349.11	-447.47	800.14	755.25	44.89	17.825			
10,300.00	10,119.06	10,369.59	10,092.92	23.14	22.78	88.19	-395.63	-447.13	800.43	755.12	45.31	17.666			
10,350.00	10,133.20	10,415.81	10,095.85	23.38	23.01	87.41	-441.74	-446.79	800.86	755.10	45.76	17.503			
10,400.00	10,143.10	10,464.24	10,096.24	23.64	23.27	86.71	-490.17	-446.43	801.36	755.09	46.26	17.322			
10,450.00	10,148.70	10,513.94	10,096.55	23.92	23.56	86.30	-539.87	-446.07	801.68	754.86	46.82	17.122			
10,496.68	10,150.00	10,560.60	10,096.85	24.21	23.86	86.22	-586.52	-445.73	801.74	754.34	47.41	16.912			
10,500.00	10,149.96	10,563.92	10,096.87	24.23	23.88	86.23	-589.84	-445.70	801.74	754.29	47.45	16.897			
10,600.00	10,148.67	10,663.90	10,097.50	28.67	24.58	86.36	-689.82	-444.97	801.61	753.12	48.49	16.531			
10,700.00	10,147.39	10,763.88	10,098.13	28.75	25.37	86.50	-789.79	-444.23	801.49	752.18	49.31	16.254			
10,800.00	10,146.10	10,863.86	10,098.76	28.84	26.23	86.64	-889.77	-443.50	801.37	751.14	50.23	15.953			
10,900.00	10,144.81	10,963.85	10,099.39	28.92	27.17	86.77	-989.75	-442.77	801.26	750.01	51.25	15.634			
11,000.00	10,143.53	11,063.83	10,100.02	29.01	28.17	86.91	-1,089.73	-442.03	801.15	748.80	52.36	15.302			
11,100.00	10,142.24	11,163.81	10,100.66	29.10	29.22	87.05	-1,189.70	-441.30	801.05	747.51	53.54	14.961			
11,200.00	10,140.96	11,263.79	10,101.29	29.20	30.33	87.18	-1,289.68	-440.56	800.95	746.15	54.81	14.615			
11,300.00	10,139.67	11,363.77	10,101.92	29.29	31.49	87.32	-1,389.66	-439.83	800.86	744.72	56.14	14.266			
11,400.00	10,138.39	11,463.75	10,102.55	29.39	32.69	87.46	-1,489.63	-439.10	800.77	743.24	57.53	13.919			
11,500.00	10,137.10	11,563.74	10,103.18	29.49	33.92	87.59	-1,589.61	-438.36	800.68	741.70	58.98	13.575			
11,600.00	10,135.81	11,663.72	10,103.81	29.59	35.19	87.73	-1,689.59	-437.63	800.60	740.11	60.49	13.235			
11,700.00	10,134.53	11,763.70	10,104.44	29.69	36.48	87.87	-1,789.56	-436.89	800.53	738.48	62.05	12.902			
11,800.00	10,133.24	11,863.68	10,105.07	29.80	37.81	88.01	-1,889.54	-436.16	800.46	736.80	63.65	12.575			
11,900.00	10,131.96	11,963.66	10,105.70	29.91	39.15	88.14	-1,989.52	-435.42	800.39	735.09	65.30	12.257			
12,000.00	10,130.67	12,063.64	10,106.33	30.02	40.52	88.28	-2,089.49	-434.69	800.33	733.34	66.99	11.947			
12,100.00	10,129.38	12,163.63	10,106.96	30.14	41.91	88.42	-2,189.47	-433.96	800.27	731.56	68.71	11.647			
12,200.00	10,128.10	12,263.61	10,107.60	30.26	43.32	88.55	-2,289.45	-433.22	800.22	729.74	70.47	11.355			
12,300.00	10,126.81	12,363.59	10,108.23	30.38	44.74	88.69	-2,389.43	-432.49	800.17	727.90	72.26	11.073			
12,400.00	10,125.53	12,463.57	10,108.86	30.52	46.17	88.83	-2,489.40	-431.75	800.12	726.04	74.09	10.800			
12,500.00	10,124.24	12,563.55	10,109.49	30.66	47.62	88.97	-2,589.38	-431.02	800.08	724.15	75.94	10.536			
12,600.00	10,122.95	12,663.53	10,110.12	30.81	49.08	89.10	-2,689.36	-430.29	800.05	722.24	77.81	10.282			
12,700.00	10,121.67	12,763.51	10,110.75	30.97	50.55	89.24	-2,789.33	-429.55	800.02	720.30	79.72	10.036			
12,800.00	10,120.38	12,863.50	10,111.38	31.15	52.04	89.38	-2,889.31	-428.82	799.99	718.35	81.64	9.799			
12,900.00	10,119.10	12,963.48	10,112.01	31.36	53.53	89.51	-2,989.29	-428.08	799.97	716.39	83.59	9.570			
13,000.00	10,117.81	13,063.46	10,112.64	31.60	55.03	89.65	-3,089.26	-427.35	799.96	714.40	85.56	9.350			
13,100.00	10,116.53	13,163.44	10,113.27	31.88	56.53	89.79	-3,189.24	-426.62	799.95	712.40	87.54	9.138			
13,200.00	10,115.24	13,263.42	10,113.90	32.21	58.05	89.93	-3,289.22	-425.88	799.94	710.39	89.55	8.933			
13,300.00	10,113.95	13,363.40	10,114.53	32.57	59.57	90.06	-3,389.19	-425.15	799.94	708.37	91.57	8.736			
13,303.15	10,113.91	13,366.56	10,114.55	32.58	59.62	90.07	-3,392.35	-425.12	799.94	708.30	91.63	8.730			
13,400.00	10,112.67	13,463.39	10,115.17	32.98	61.10	90.20	-3,489.17	-424.41	799.94	706.33	93.61	8.546			
13,500.00	10,111.38	13,563.37	10,115.80	33.42	62.63	90.34	-3,589.15	-423.68	799.95	704.28	95.66	8.362			
13,600.00	10,110.10	13,663.35	10,116.43	33.89	64.17	90.47	-3,689.13	-422.94	799.96	702.23	97.73	8.185			
13,700.00	10,108.81	13,763.33	10,117.06	34.38	65.71	90.61	-3,789.10	-422.21	799.97	700.16	99.81	8.015			
13,800.00	10,107.52	13,863.31	10,117.69	34.88	67.26	90.75	-3,889.08	-421.48	799.99	698.09	101.90	7.851			
13,900.00	10,106.24	13,963.29	10,118.32	35.41	68.81	90.89	-3,989.06	-420.74	800.02	696.01	104.01	7.692			

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 125H - OH - Plan #2													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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	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)						
14,000.00	10,104.95	14,063.28	10,118.95	35.95	70.36	91.02	-4,089.03	-420.01	800.05	693.92	106.12	7.539		
14,100.00	10,103.67	14,163.26	10,119.58	36.50	71.92	91.16	-4,189.01	-419.27	800.08	691.83	108.25	7.391		
14,200.00	10,102.38	14,263.24	10,120.21	37.06	73.48	91.30	-4,288.99	-418.54	800.12	689.73	110.39	7.248		
14,300.00	10,101.09	14,363.22	10,120.84	37.63	75.05	91.44	-4,388.96	-417.81	800.16	687.63	112.53	7.110		
14,400.00	10,099.81	14,463.20	10,121.47	38.21	76.62	91.57	-4,488.94	-417.07	800.21	685.52	114.69	6.977		
14,500.00	10,098.52	14,563.18	10,122.11	38.79	78.19	91.71	-4,588.92	-416.34	800.27	683.41	116.85	6.848		
14,600.00	10,097.24	14,663.17	10,122.74	39.38	79.77	91.85	-4,688.90	-415.60	800.32	681.30	119.03	6.724		
14,700.00	10,095.95	14,763.15	10,123.37	39.98	81.34	91.98	-4,788.87	-414.87	800.38	679.18	121.20	6.604		
14,800.00	10,094.67	14,863.13	10,124.00	40.59	82.92	92.12	-4,888.85	-414.13	800.45	677.06	123.39	6.487		
14,900.00	10,093.38	14,963.11	10,124.63	41.20	84.50	92.26	-4,988.83	-413.40	800.52	674.94	125.58	6.374		
15,000.00	10,092.09	15,063.09	10,125.26	41.82	86.09	92.40	-5,088.80	-412.67	800.60	672.81	127.78	6.265		
15,100.00	10,090.81	15,163.07	10,125.89	42.44	87.67	92.53	-5,188.78	-411.93	800.68	670.69	129.99	6.160		
15,200.00	10,089.52	15,263.06	10,126.52	43.07	89.26	92.67	-5,288.76	-411.20	800.76	668.56	132.20	6.057		
15,300.00	10,088.24	15,363.04	10,127.15	43.71	90.85	92.81	-5,388.73	-410.46	800.85	666.44	134.42	5.958		
15,400.00	10,086.95	15,463.02	10,127.78	44.34	92.44	92.94	-5,488.71	-409.73	800.95	664.31	136.64	5.862		
15,500.00	10,085.66	15,563.00	10,128.41	44.98	94.03	93.08	-5,588.69	-409.00	801.04	662.18	138.86	5.769		
15,600.00	10,084.38	15,662.98	10,129.05	45.63	95.63	93.22	-5,688.66	-408.26	801.15	660.05	141.09	5.678		
15,700.00	10,083.09	15,762.96	10,129.68	46.28	97.22	93.35	-5,788.64	-407.53	801.25	657.93	143.33	5.590		
15,800.00	10,081.81	15,862.95	10,130.31	46.93	98.82	93.49	-5,888.62	-406.79	801.37	655.80	145.57	5.505		
15,900.00	10,080.52	15,962.93	10,130.94	47.59	100.42	93.63	-5,988.60	-406.06	801.48	653.67	147.81	5.422		
16,000.00	10,079.24	16,062.91	10,131.57	48.25	102.02	93.76	-6,088.57	-405.33	801.61	651.55	150.06	5.342		
16,100.00	10,077.95	16,162.89	10,132.20	48.91	103.62	93.90	-6,188.55	-404.59	801.73	649.42	152.31	5.264		
16,200.00	10,076.66	16,262.87	10,132.83	49.58	105.22	94.04	-6,288.53	-403.86	801.86	647.30	154.56	5.188		
16,300.00	10,075.38	16,362.85	10,133.46	50.25	106.83	94.17	-6,388.50	-403.12	802.00	645.18	156.82	5.114		
16,400.00	10,074.09	16,462.84	10,134.09	50.92	108.43	94.31	-6,488.48	-402.39	802.14	643.06	159.07	5.043		
16,500.00	10,072.81	16,562.82	10,134.72	51.59	110.04	94.45	-6,588.46	-401.65	802.28	640.94	161.34	4.973		
16,600.00	10,071.52	16,662.80	10,135.35	52.27	111.64	94.58	-6,688.43	-400.92	802.43	638.83	163.60	4.905		
16,700.00	10,070.23	16,762.78	10,135.98	52.95	113.25	94.72	-6,788.41	-400.19	802.58	636.72	165.86	4.839		
16,800.00	10,068.95	16,862.76	10,136.62	53.63	114.86	94.86	-6,888.39	-399.45	802.74	634.61	168.13	4.774		
16,900.00	10,067.66	16,962.74	10,137.25	54.31	116.47	94.99	-6,988.36	-398.72	802.90	632.50	170.40	4.712		
17,000.00	10,066.38	17,062.73	10,137.88	55.00	118.08	95.13	-7,088.34	-397.98	803.07	630.39	172.68	4.651		
17,100.00	10,065.09	17,162.71	10,138.51	55.69	119.69	95.26	-7,188.32	-397.25	803.24	628.29	174.95	4.591		
17,200.00	10,063.80	17,262.69	10,139.14	56.38	121.30	95.40	-7,288.30	-396.52	803.42	626.19	177.22	4.533		
17,300.00	10,062.52	17,362.67	10,139.77	57.07	122.91	95.54	-7,388.27	-395.78	803.60	624.09	179.50	4.477		
17,400.00	10,061.23	17,462.65	10,140.40	57.76	124.53	95.67	-7,488.25	-395.05	803.78	622.00	181.78	4.422		
17,495.86	10,060.00	17,557.62	10,141.00	58.43	126.06	95.80	-7,583.21	-394.35	803.96	620.01	183.95	4.371 SF		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 160H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-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		
0.00	0.00	0.00	0.00	0.00	0.00	-90.33	-1.72	-299.94	299.95					
100.00	100.00	98.80	98.80	0.09	0.08	-90.33	-1.72	-299.94	299.94	299.77	0.17	1,754.941		
200.00	200.00	198.80	198.80	0.31	0.31	-90.33	-1.72	-299.94	299.94	299.33	0.62	484.735		
300.00	300.00	298.80	298.80	0.54	0.53	-90.33	-1.72	-299.94	299.94	298.88	1.07	280.765		
400.00	400.00	398.80	398.80	0.76	0.76	-90.33	-1.72	-299.94	299.94	298.43	1.52	197.612		
500.00	500.00	498.80	498.80	0.99	0.98	-90.33	-1.72	-299.94	299.94	297.98	1.97	152.459		
600.00	600.00	598.80	598.80	1.21	1.21	-90.33	-1.72	-299.94	299.94	297.53	2.42	124.103		
700.00	700.00	698.80	698.80	1.43	1.43	-90.33	-1.72	-299.94	299.94	297.08	2.87	104.640		
800.00	800.00	798.80	798.80	1.66	1.66	-90.33	-1.72	-299.94	299.94	296.63	3.32	90.455		
900.00	900.00	898.80	898.80	1.88	1.88	-90.33	-1.72	-299.94	299.94	296.18	3.77	79.656		
1,000.00	1,000.00	998.80	998.80	2.11	2.11	-90.33	-1.72	-299.94	299.94	295.73	4.22	71.161		
1,100.00	1,100.00	1,098.80	1,098.80	2.33	2.33	-90.33	-1.72	-299.94	299.94	295.28	4.66	64.303		
1,200.00	1,200.00	1,198.80	1,198.80	2.56	2.56	-90.33	-1.72	-299.94	299.94	294.83	5.11	58.651		
1,300.00	1,300.00	1,298.80	1,298.80	2.78	2.78	-90.33	-1.72	-299.94	299.94	294.38	5.56	53.912		
1,400.00	1,400.00	1,398.80	1,398.80	3.01	3.01	-90.33	-1.72	-299.94	299.94	293.93	6.01	49.881		
1,500.00	1,500.00	1,498.80	1,498.80	3.23	3.23	-90.33	-1.72	-299.94	299.94	293.48	6.46	46.412		
1,600.00	1,600.00	1,598.80	1,598.80	3.46	3.45	-90.33	-1.72	-299.94	299.94	293.03	6.91	43.393		
1,700.00	1,700.00	1,698.80	1,698.80	3.68	3.68	-90.33	-1.72	-299.94	299.94	292.58	7.36	40.744		
1,800.00	1,800.00	1,798.80	1,798.80	3.91	3.90	-90.33	-1.72	-299.94	299.94	292.13	7.81	38.399		
1,900.00	1,900.00	1,898.80	1,898.80	4.13	4.13	-90.33	-1.72	-299.94	299.94	291.68	8.26	36.309		
2,000.00	2,000.00	1,998.80	1,998.80	4.36	4.35	-90.33	-1.72	-299.94	299.94	291.23	8.71	34.435		
2,100.00	2,100.00	2,098.80	2,098.80	4.58	4.58	-90.33	-1.72	-299.94	299.94	290.79	9.16	32.745		
2,200.00	2,200.00	2,198.80	2,198.80	4.81	4.80	-90.33	-1.72	-299.94	299.94	290.34	9.61	31.214		
2,300.00	2,300.00	2,298.80	2,298.80	5.03	5.03	-90.33	-1.72	-299.94	299.94	289.89	10.06	29.819		
2,400.00	2,400.00	2,398.80	2,398.80	5.26	5.25	-90.33	-1.72	-299.94	299.94	289.44	10.51	28.543		
2,500.00	2,500.00	2,498.80	2,498.80	5.48	5.48	-90.33	-1.72	-299.94	299.94	288.99	10.96	27.372		
2,600.00	2,600.00	2,598.80	2,598.80	5.71	5.70	-90.33	-1.72	-299.94	299.94	288.54	11.41	26.294		
2,700.00	2,700.00	2,698.80	2,698.80	5.93	5.93	-90.33	-1.72	-299.94	299.94	288.09	11.86	25.297		
2,800.00	2,800.00	2,798.80	2,798.80	6.15	6.15	-90.33	-1.72	-299.94	299.94	287.64	12.31	24.373		
2,900.00	2,900.00	2,898.80	2,898.80	6.38	6.38	-90.33	-1.72	-299.94	299.94	287.19	12.76	23.514		
3,000.00	3,000.00	2,998.80	2,998.80	6.60	6.60	-90.33	-1.72	-299.94	299.94	286.74	13.21	22.713		
3,100.00	3,100.00	3,102.10	3,102.10	6.83	6.83	-90.19	-1.00	-299.38	299.40	285.74	13.66	21.921		
3,200.00	3,200.00	3,205.38	3,205.33	7.05	7.06	-89.77	1.18	-297.68	297.75	283.64	14.11	21.108		
3,300.00	3,300.00	3,308.52	3,308.37	7.28	7.28	-89.06	4.83	-294.83	295.03	280.48	14.55	20.274		
3,400.00	3,400.00	3,409.18	3,408.86	7.50	7.51	-88.15	9.42	-291.25	291.58	276.58	15.00	19.444		
3,500.00	3,500.00	3,509.01	3,508.52	7.73	7.73	-87.21	14.02	-287.66	288.16	272.72	15.44	18.663		
3,600.00	3,600.00	3,608.84	3,608.18	7.95	7.95	-86.25	18.63	-284.07	284.83	268.95	15.89	17.930		
3,700.00	3,700.00	3,708.66	3,707.83	8.18	8.18	-85.26	23.23	-280.48	281.58	265.25	16.33	17.241		
3,800.00	3,800.00	3,808.49	3,807.49	8.40	8.40	-84.26	27.84	-276.89	278.42	261.64	16.78	16.592		
3,900.00	3,900.00	3,908.32	3,907.15	8.63	8.62	-83.23	32.44	-273.29	275.34	258.11	17.23	15.982		
4,000.00	4,000.00	4,008.15	4,006.81	8.85	8.85	-82.18	37.04	-269.70	272.35	254.68	17.68	15.406		
4,100.00	4,100.00	4,108.01	4,106.49	9.06	9.08	-171.14	41.65	-266.11	270.32	252.21	18.11	14.924		
4,162.15	4,162.13	4,170.09	4,168.47	9.19	9.22	-170.51	44.51	-263.88	269.97	251.60	18.38	14.691 CC		
4,200.00	4,199.96	4,207.89	4,206.21	9.26	9.31	-170.14	46.26	-262.52	270.10	251.57	18.54	14.571 ES		
4,300.00	4,299.86	4,307.78	4,305.93	9.46	9.53	-169.21	50.86	-258.92	271.68	252.72	18.96	14.328		
4,400.00	4,399.68	4,407.64	4,405.62	9.66	9.76	-168.35	55.47	-255.33	275.04	255.65	19.39	14.185		
4,411.45	4,411.10	4,419.08	4,417.03	9.69	9.79	-168.26	56.00	-254.92	275.53	256.09	19.44	14.175		
4,500.00	4,499.42	4,507.47	4,505.28	9.87	9.99	-167.58	60.07	-251.74	279.49	259.67	19.82	14.103		
4,600.00	4,599.16	4,607.30	4,604.93	10.08	10.22	-166.82	64.68	-248.15	284.00	263.75	20.25	14.026		
4,700.00	4,698.90	4,707.13	4,704.59	10.29	10.45	-166.09	69.28	-244.56	288.55	267.87	20.68	13.953		
4,800.00	4,798.65	4,806.96	4,804.25	10.50	10.68	-165.39	73.89	-240.97	293.16	272.04	21.11	13.884		
4,900.00	4,898.39	4,906.79	4,903.91	10.71	10.91	-164.70	78.49	-237.38	297.81	276.26	21.55	13.819		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 160H - OH - Plan #2													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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset		+N/-S (usft)	+E/-W (usft)						
5,000.00	4,998.13	5,006.62	5,003.57	10.93	11.15	-164.04	83.09	-233.79	302.49	280.51	21.99	13.758		
5,100.00	5,097.87	5,106.45	5,103.23	11.15	11.38	-163.39	87.70	-230.19	307.22	284.79	22.43	13.699		
5,200.00	5,197.61	5,205.56	5,202.17	11.36	11.60	-162.80	92.17	-226.70	312.03	289.17	22.85	13.653		
5,300.00	5,297.36	5,303.51	5,300.03	11.58	11.77	-162.45	95.53	-224.09	317.35	294.11	23.24	13.654		
5,400.00	5,397.10	5,401.42	5,397.91	11.81	11.95	-162.40	97.56	-222.50	323.28	299.65	23.63	13.682		
5,500.00	5,496.84	5,499.25	5,495.73	12.03	12.12	-162.62	98.28	-221.94	329.80	305.79	24.01	13.737		
5,600.00	5,596.58	5,598.90	5,595.38	12.25	12.31	-162.98	98.28	-221.94	336.65	312.24	24.41	13.789		
5,700.00	5,696.33	5,698.65	5,695.13	12.48	12.53	-163.33	98.28	-221.94	343.52	318.67	24.85	13.826		
5,800.00	5,796.07	5,798.39	5,794.87	12.70	12.76	-163.67	98.28	-221.94	350.40	325.12	25.28	13.862		
5,900.00	5,895.81	5,898.13	5,894.61	12.93	12.98	-163.99	98.28	-221.94	357.29	331.58	25.71	13.897		
6,000.00	5,995.55	5,997.87	5,994.35	13.16	13.20	-164.31	98.28	-221.94	364.20	338.05	26.14	13.931		
6,100.00	6,095.29	6,097.62	6,094.09	13.38	13.42	-164.61	98.28	-221.94	371.11	344.53	26.58	13.963		
6,200.00	6,195.04	6,197.36	6,193.84	13.61	13.64	-164.89	98.28	-221.94	378.03	351.02	27.01	13.995		
6,300.00	6,294.78	6,297.10	6,293.58	13.84	13.86	-165.17	98.28	-221.94	384.97	357.52	27.45	14.025		
6,400.00	6,394.52	6,396.84	6,393.32	14.07	14.08	-165.44	98.28	-221.94	391.91	364.02	27.88	14.055		
6,500.00	6,494.26	6,496.58	6,493.06	14.31	14.30	-165.70	98.28	-221.94	398.86	370.54	28.32	14.084		
6,600.00	6,594.01	6,596.33	6,592.81	14.54	14.52	-165.95	98.28	-221.94	405.82	377.06	28.76	14.111		
6,700.00	6,693.75	6,696.07	6,692.55	14.77	14.74	-166.19	98.28	-221.94	412.78	383.59	29.20	14.138		
6,800.00	6,793.49	6,795.81	6,792.29	15.01	14.97	-166.43	98.28	-221.94	419.75	390.12	29.63	14.165		
6,900.00	6,893.23	6,895.55	6,892.03	15.24	15.19	-166.65	98.28	-221.94	426.73	396.66	30.07	14.190		
7,000.00	6,992.97	6,995.30	6,991.77	15.47	15.41	-166.87	98.28	-221.94	433.72	403.21	30.51	14.215		
7,100.00	7,092.72	7,095.04	7,091.52	15.71	15.63	-167.08	98.28	-221.94	440.71	409.76	30.95	14.239		
7,200.00	7,192.46	7,194.78	7,191.26	15.95	15.85	-167.29	98.28	-221.94	447.71	416.32	31.39	14.262		
7,300.00	7,292.20	7,294.52	7,291.00	16.18	16.07	-167.49	98.28	-221.94	454.71	422.88	31.83	14.285		
7,400.00	7,391.94	7,394.26	7,390.74	16.42	16.30	-167.68	98.28	-221.94	461.72	429.44	32.27	14.307		
7,500.00	7,491.69	7,494.01	7,490.49	16.66	16.52	-167.87	98.28	-221.94	468.73	436.02	32.71	14.328		
7,600.00	7,591.43	7,593.75	7,590.23	16.89	16.74	-168.05	98.28	-221.94	475.75	442.59	33.16	14.349		
7,700.00	7,691.17	7,693.49	7,689.97	17.13	16.96	-168.22	98.28	-221.94	482.77	449.17	33.60	14.369		
7,800.00	7,790.91	7,793.23	7,789.71	17.37	17.18	-168.40	98.28	-221.94	489.80	455.76	34.04	14.389		
7,900.00	7,890.66	7,892.98	7,889.46	17.61	17.41	-168.56	98.28	-221.94	496.83	462.35	34.48	14.408		
8,000.00	7,990.40	7,992.72	7,989.20	17.85	17.63	-168.72	98.28	-221.94	503.86	468.94	34.92	14.427		
8,100.00	8,090.14	8,092.46	8,088.94	18.09	17.85	-168.88	98.28	-221.94	510.90	475.54	35.37	14.445		
8,200.00	8,189.88	8,192.20	8,188.68	18.33	18.07	-169.03	98.28	-221.94	517.95	482.13	35.81	14.463		
8,300.00	8,289.62	8,291.95	8,288.42	18.57	18.30	-169.18	98.28	-221.94	524.99	488.74	36.26	14.480		
8,400.00	8,389.37	8,391.69	8,388.17	18.81	18.52	-169.33	98.28	-221.94	532.04	495.34	36.70	14.497		
8,500.00	8,489.11	8,491.43	8,487.91	19.05	18.74	-169.47	98.28	-221.94	539.10	501.95	37.14	14.514		
8,600.00	8,588.85	8,591.17	8,587.65	19.29	18.96	-169.61	98.28	-221.94	546.15	508.56	37.59	14.530		
8,700.00	8,688.59	8,690.91	8,687.39	19.53	19.19	-169.74	98.28	-221.94	553.21	515.18	38.03	14.546		
8,800.00	8,788.34	8,790.66	8,787.14	19.78	19.41	-169.87	98.28	-221.94	560.27	521.80	38.48	14.561		
8,877.86	8,865.99	8,868.31	8,864.79	19.96	19.58	-169.97	98.28	-221.94	565.77	526.95	38.82	14.573		
8,900.00	8,888.08	8,890.40	8,886.88	20.01	19.63	-170.00	98.28	-221.94	567.30	528.38	38.92	14.576		
9,000.00	8,987.90	8,990.23	8,986.70	20.21	19.85	-170.11	98.28	-221.94	573.13	533.79	39.33	14.571		
9,100.00	9,087.82	9,090.63	9,095.06	20.40	20.08	-170.39	96.27	-221.93	576.95	537.20	39.75	14.514		
9,200.00	9,187.79	9,215.76	9,209.96	20.59	20.27	-172.56	74.64	-221.77	576.40	536.31	40.09	14.376		
9,289.31	9,277.09	9,309.96	9,297.67	20.75	20.41	-85.94	40.58	-221.52	573.37	532.99	40.38	14.199		
9,300.00	9,287.78	9,320.39	9,307.01	20.77	20.42	-86.40	35.93	-221.48	572.97	532.56	40.42	14.177		
9,387.51	9,375.29	9,398.62	9,374.09	20.95	20.54	-90.42	-4.20	-221.19	571.20	530.49	40.71	14.032		
9,400.00	9,387.78	9,408.75	9,382.36	20.98	20.55	-91.01	-10.06	-221.14	571.25	530.50	40.75	14.020		
9,500.00	9,487.78	9,481.11	9,438.21	21.19	20.65	-95.60	-55.99	-220.80	575.58	534.64	40.94	14.059		
9,589.31	9,577.09	9,534.01	9,475.15	21.38	20.72	-99.34	-93.83	-220.53	586.90	546.04	40.86	14.365		
9,600.00	9,587.78	9,539.76	9,478.95	21.40	20.73	80.47	-98.15	-220.49	588.78	547.95	40.83	14.422		
9,650.00	9,637.67	9,566.53	9,496.06	21.49	20.78	77.60	-118.73	-220.34	598.64	558.02	40.63	14.735		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 160H - OH - Plan #2													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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset		+N/-S (usft)	+E/-W (usft)						
9,700.00	9,687.09	9,593.14	9,512.10	21.58	20.83	74.71	-139.95	-220.19	610.02	569.66	40.36	15.116		
9,750.00	9,735.68	9,619.62	9,527.07	21.68	20.89	71.84	-161.79	-220.03	622.55	582.52	40.03	15.552		
9,800.00	9,783.07	9,650.00	9,542.98	21.77	20.97	68.82	-187.67	-219.83	635.93	596.22	39.71	16.014		
9,850.00	9,828.88	9,672.25	9,553.74	21.87	21.04	66.33	-207.14	-219.69	649.79	610.53	39.26	16.551		
9,900.00	9,872.78	9,700.00	9,566.10	21.97	21.12	63.69	-231.98	-219.51	663.91	625.05	38.86	17.083		
9,950.00	9,914.43	9,724.55	9,576.02	22.07	21.21	61.35	-254.43	-219.34	678.00	639.57	38.43	17.642		
10,000.00	9,953.51	9,750.00	9,585.28	22.18	21.30	59.14	-278.14	-219.17	691.84	653.83	38.02	18.197		
10,050.00	9,989.72	9,776.60	9,593.82	22.30	21.40	57.06	-303.33	-218.98	705.23	667.58	37.65	18.729		
10,100.00	10,022.80	9,800.00	9,600.36	22.43	21.50	55.27	-325.79	-218.82	717.99	680.71	37.28	19.258		
10,150.00	10,052.48	9,828.48	9,607.07	22.58	21.62	53.53	-353.47	-218.61	729.95	692.92	37.03	19.714		
10,200.00	10,078.55	9,850.00	9,611.23	22.74	21.72	52.14	-374.58	-218.46	741.00	704.26	36.74	20.166		
10,250.00	10,100.79	9,880.23	9,615.72	22.93	21.87	50.76	-404.47	-218.24	750.97	714.35	36.62	20.505		
10,300.00	10,119.06	9,900.00	9,617.81	23.14	21.97	49.74	-424.13	-218.09	759.86	723.39	36.47	20.834		
10,350.00	10,133.20	9,931.88	9,619.73	23.38	22.14	48.73	-455.95	-217.86	767.43	730.92	36.50	21.024		
10,400.00	10,143.10	9,958.26	9,619.99	23.64	22.28	47.98	-482.32	-217.67	773.74	737.18	36.56	21.164		
10,450.00	10,148.70	10,007.86	9,619.43	23.92	22.58	47.34	-531.92	-217.30	777.91	741.04	36.87	21.100		
10,496.68	10,150.00	10,054.49	9,618.90	24.21	22.89	47.15	-578.54	-216.96	779.15	741.88	37.27	20.906		
10,500.00	10,149.96	10,057.82	9,618.87	24.23	22.91	47.15	-581.87	-216.93	779.14	741.84	37.30	20.888		
10,600.00	10,148.67	10,157.82	9,617.74	28.67	23.63	47.15	-681.86	-216.20	779.03	740.93	38.10	20.448		
10,700.00	10,147.39	10,257.82	9,616.61	28.75	24.44	47.16	-781.85	-215.46	778.92	740.16	38.76	20.098		
10,800.00	10,146.10	10,357.82	9,615.49	28.84	25.33	47.17	-881.84	-214.72	778.81	739.30	39.51	19.712		
10,900.00	10,144.81	10,457.82	9,614.36	28.92	26.29	47.18	-981.83	-213.99	778.70	738.35	40.35	19.297		
11,000.00	10,143.53	10,557.82	9,613.23	29.01	27.31	47.19	-1,081.82	-213.25	778.59	737.31	41.28	18.862		
11,100.00	10,142.24	10,657.82	9,612.11	29.10	28.39	47.20	-1,181.81	-212.52	778.47	736.19	42.28	18.412		
11,200.00	10,140.96	10,757.82	9,610.98	29.20	29.53	47.20	-1,281.80	-211.78	778.36	735.01	43.35	17.954		
11,300.00	10,139.67	10,857.82	9,609.85	29.29	30.71	47.21	-1,381.79	-211.04	778.25	733.76	44.49	17.492		
11,400.00	10,138.39	10,957.81	9,608.73	29.39	31.93	47.22	-1,481.79	-210.31	778.14	732.45	45.69	17.030		
11,500.00	10,137.10	11,057.81	9,607.60	29.49	33.18	47.23	-1,581.78	-209.57	778.03	731.08	46.95	16.573		
11,600.00	10,135.81	11,157.81	9,606.47	29.59	34.47	47.24	-1,681.77	-208.84	777.92	729.66	48.25	16.121		
11,700.00	10,134.53	11,257.81	9,605.35	29.69	35.79	47.25	-1,781.76	-208.10	777.81	728.20	49.61	15.679		
11,800.00	10,133.24	11,357.81	9,604.22	29.80	37.13	47.25	-1,881.75	-207.36	777.70	726.69	51.01	15.246		
11,900.00	10,131.96	11,457.81	9,603.09	29.91	38.50	47.26	-1,981.74	-206.63	777.58	725.14	52.45	14.825		
12,000.00	10,130.67	11,557.81	9,601.97	30.02	39.88	47.27	-2,081.73	-205.89	777.47	723.54	53.93	14.417		
12,100.00	10,129.38	11,657.81	9,600.84	30.14	41.29	47.28	-2,181.72	-205.16	777.36	721.92	55.44	14.021		
12,200.00	10,128.10	11,757.81	9,599.72	30.26	42.71	47.29	-2,281.71	-204.42	777.25	720.26	56.99	13.638		
12,300.00	10,126.81	11,857.81	9,598.59	30.38	44.15	47.30	-2,381.70	-203.68	777.14	718.57	58.57	13.269		
12,400.00	10,125.53	11,957.81	9,597.46	30.52	45.60	47.31	-2,481.69	-202.95	777.03	716.85	60.17	12.913		
12,500.00	10,124.24	12,057.81	9,596.34	30.66	47.06	47.31	-2,581.68	-202.21	776.92	715.11	61.81	12.570		
12,600.00	10,122.95	12,157.81	9,595.21	30.81	48.53	47.32	-2,681.68	-201.47	776.81	713.34	63.46	12.240		
12,700.00	10,121.67	12,257.81	9,594.08	30.97	50.02	47.33	-2,781.67	-200.74	776.70	711.55	65.14	11.923		
12,800.00	10,120.38	12,357.81	9,592.96	31.15	51.51	47.34	-2,881.66	-200.00	776.59	709.74	66.85	11.617		
12,900.00	10,119.10	12,457.81	9,591.83	31.36	53.01	47.35	-2,981.65	-199.27	776.47	707.91	68.57	11.324		
13,000.00	10,117.81	12,557.81	9,590.70	31.60	54.52	47.36	-3,081.64	-198.53	776.36	706.06	70.31	11.042		
13,100.00	10,116.53	12,657.81	9,589.58	31.88	56.04	47.36	-3,181.63	-197.79	776.25	704.19	72.07	10.772		
13,200.00	10,115.24	12,757.81	9,588.45	32.21	57.56	47.37	-3,281.62	-197.06	776.14	702.30	73.84	10.511		
13,300.00	10,113.95	12,857.81	9,587.32	32.57	59.09	47.38	-3,381.61	-196.32	776.03	700.40	75.63	10.261		
13,400.00	10,112.67	12,957.81	9,586.20	32.98	60.63	47.39	-3,481.60	-195.59	775.92	698.49	77.43	10.021		
13,500.00	10,111.38	13,057.81	9,585.07	33.42	62.17	47.40	-3,581.59	-194.85	775.81	696.56	79.25	9.790		
13,600.00	10,110.10	13,157.81	9,583.94	33.89	63.72	47.41	-3,681.58	-194.11	775.70	694.62	81.08	9.568		
13,700.00	10,108.81	13,257.81	9,582.82	34.38	65.27	47.42	-3,781.57	-193.38	775.59	692.67	82.92	9.354		
13,800.00	10,107.52	13,357.81	9,581.69	34.88	66.82	47.42	-3,881.57	-192.64	775.48	690.71	84.77	9.148		
13,900.00	10,106.24	13,457.81	9,580.56	35.41	68.38	47.43	-3,981.56	-191.91	775.37	688.74	86.63	8.950		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 160H - OH - Plan #2													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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)						
14,000.00	10,104.95	13,557.81	9,579.44	35.95	69.94	47.44	-4,081.55	-191.17	775.25	686.75	88.50	8.760		
14,100.00	10,103.67	13,657.81	9,578.31	36.50	71.51	47.45	-4,181.54	-190.43	775.14	684.76	90.38	8.576		
14,200.00	10,102.38	13,757.81	9,577.18	37.06	73.08	47.46	-4,281.53	-189.70	775.03	682.76	92.27	8.399		
14,300.00	10,101.09	13,857.81	9,576.06	37.63	74.65	47.47	-4,381.52	-188.96	774.92	680.75	94.17	8.229		
14,400.00	10,099.81	13,957.81	9,574.93	38.21	76.22	47.47	-4,481.51	-188.22	774.81	678.74	96.08	8.065		
14,500.00	10,098.52	14,057.81	9,573.80	38.79	77.80	47.48	-4,581.50	-187.49	774.70	676.71	97.99	7.906		
14,600.00	10,097.24	14,157.81	9,572.68	39.38	79.38	47.49	-4,681.49	-186.75	774.59	674.68	99.91	7.753		
14,700.00	10,095.95	14,257.81	9,571.55	39.98	80.96	47.50	-4,781.48	-186.02	774.48	672.64	101.84	7.605		
14,800.00	10,094.67	14,357.81	9,570.42	40.59	82.55	47.51	-4,881.47	-185.28	774.37	670.60	103.77	7.462		
14,900.00	10,093.38	14,457.81	9,569.30	41.20	84.13	47.52	-4,981.46	-184.54	774.26	668.55	105.71	7.325		
15,000.00	10,092.09	14,557.81	9,568.17	41.82	85.72	47.53	-5,081.45	-183.81	774.15	666.50	107.65	7.191		
15,100.00	10,090.81	14,657.81	9,567.05	42.44	87.31	47.53	-5,181.45	-183.07	774.04	664.44	109.60	7.062		
15,200.00	10,089.52	14,757.81	9,565.92	43.07	88.90	47.54	-5,281.44	-182.34	773.93	662.37	111.56	6.938		
15,300.00	10,088.24	14,857.81	9,564.79	43.71	90.50	47.55	-5,381.43	-181.60	773.82	660.30	113.52	6.817		
15,400.00	10,086.95	14,957.81	9,563.67	44.34	92.09	47.56	-5,481.42	-180.86	773.70	658.22	115.48	6.700		
15,500.00	10,085.66	15,057.81	9,562.54	44.98	93.69	47.57	-5,581.41	-180.13	773.59	656.15	117.45	6.587		
15,600.00	10,084.38	15,157.81	9,561.41	45.63	95.29	47.58	-5,681.40	-179.39	773.48	654.06	119.42	6.477		
15,700.00	10,083.09	15,257.81	9,560.29	46.28	96.89	47.58	-5,781.39	-178.66	773.37	651.97	121.40	6.371		
15,800.00	10,081.81	15,357.81	9,559.16	46.93	98.49	47.59	-5,881.38	-177.92	773.26	649.88	123.38	6.267		
15,900.00	10,080.52	15,457.81	9,558.03	47.59	100.09	47.60	-5,981.37	-177.18	773.15	647.79	125.36	6.167		
16,000.00	10,079.24	15,557.81	9,556.91	48.25	101.70	47.61	-6,081.36	-176.45	773.04	645.69	127.35	6.070		
16,100.00	10,077.95	15,657.81	9,555.78	48.91	103.30	47.62	-6,181.35	-175.71	772.93	643.59	129.34	5.976		
16,200.00	10,076.66	15,757.81	9,554.65	49.58	104.91	47.63	-6,281.34	-174.97	772.82	641.48	131.34	5.884		
16,300.00	10,075.38	15,857.81	9,553.53	50.25	106.51	47.64	-6,381.34	-174.24	772.71	639.38	133.33	5.795		
16,400.00	10,074.09	15,957.81	9,552.40	50.92	108.12	47.64	-6,481.33	-173.50	772.60	637.26	135.34	5.709		
16,500.00	10,072.81	16,057.81	9,551.27	51.59	109.73	47.65	-6,581.32	-172.77	772.49	635.15	137.34	5.625		
16,600.00	10,071.52	16,157.81	9,550.15	52.27	111.34	47.66	-6,681.31	-172.03	772.38	633.03	139.34	5.543		
16,700.00	10,070.23	16,257.81	9,549.02	52.95	112.95	47.67	-6,781.30	-171.29	772.27	630.92	141.35	5.463		
16,800.00	10,068.95	16,357.81	9,547.89	53.63	114.56	47.68	-6,881.29	-170.56	772.16	628.79	143.36	5.386		
16,900.00	10,067.66	16,457.81	9,546.77	54.31	116.17	47.69	-6,981.28	-169.82	772.05	626.67	145.38	5.311		
17,000.00	10,066.38	16,557.81	9,545.64	55.00	117.78	47.70	-7,081.27	-169.09	771.94	624.54	147.39	5.237		
17,100.00	10,065.09	16,657.81	9,544.51	55.69	119.40	47.70	-7,181.26	-168.35	771.83	622.42	149.41	5.166		
17,200.00	10,063.80	16,757.81	9,543.39	56.38	121.01	47.71	-7,281.25	-167.61	771.72	620.28	151.43	5.096		
17,300.00	10,062.52	16,857.81	9,542.26	57.07	122.62	47.72	-7,381.24	-166.88	771.61	618.15	153.46	5.028		
17,400.00	10,061.23	16,957.81	9,541.13	57.76	124.24	47.73	-7,481.23	-166.14	771.50	616.02	155.48	4.962		
17,495.86	10,060.00	17,053.67	9,540.05	58.43	125.79	47.74	-7,577.09	-165.44	771.39	613.97	157.42	4.900 SF		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 161H - OH - Plan #2													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 9996-MWD+IFR1+MS													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	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.69	0.16	29.99	29.99	29.82	0.17	174.417	
100.00	100.00	100.00	100.00	0.09	0.09	89.69	0.16	29.99	29.99	29.37	0.62	48.257	
200.00	200.00	200.00	200.00	0.31	0.31	89.69	0.16	29.99	29.99	28.92	1.07	28.002	
300.00	300.00	300.00	300.00	0.54	0.54	89.69	0.16	29.99	29.99	28.47	1.52	19.724	
400.00	400.00	400.00	400.00	0.76	0.76	89.69	0.16	29.99	29.99	28.02	1.97	15.223	
500.00	500.00	500.00	500.00	0.99	0.99	89.69	0.16	29.99	29.99	27.57	2.42	12.395	
600.00	600.00	600.00	600.00	1.21	1.21	89.69	0.16	29.99	29.99	27.12	2.87	10.453	
700.00	700.00	700.00	700.00	1.43	1.43	89.69	0.16	29.99	29.99	26.67	3.32	9.037	
800.00	800.00	800.00	800.00	1.66	1.66	89.69	0.16	29.99	29.99	26.22	3.77	7.959	
900.00	900.00	900.00	900.00	1.88	1.88	89.69	0.16	29.99	29.99	25.77	4.22	7.111	
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	89.69	0.16	29.99	29.99	25.32	4.67	6.426	
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	89.69	0.16	29.99	29.99	24.87	5.12	5.861	
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	89.69	0.16	29.99	29.99	24.42	5.57	5.388	
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	89.69	0.16	29.99	29.99	23.97	6.02	4.985	
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	89.69	0.16	29.99	29.99	23.53	6.47	4.639	
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	89.69	0.16	29.99	29.99	23.08	6.91	4.337	
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	89.69	0.16	29.99	29.99	22.63	7.36	4.072	
1,700.00	1,700.00	1,700.00	1,700.00	3.68	3.68	89.69	0.16	29.99	29.99	22.18	7.81	3.838	
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	89.69	0.16	29.99	29.99	21.73	8.26	3.629	
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	89.69	0.16	29.99	29.99	21.28	8.71	3.442	
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	89.69	0.16	29.99	29.99	20.83	9.16	3.273	
2,100.00	2,100.00	2,100.00	2,100.00	4.58	4.58	89.69	0.16	29.99	29.99	20.38	9.61	3.120	
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	89.69	0.16	29.99	29.99	19.93	10.06	2.981	
2,300.00	2,300.00	2,300.00	2,300.00	5.03	5.03	89.69	0.16	29.99	29.99	19.48	10.51	2.853	
2,400.00	2,400.00	2,400.00	2,400.00	5.26	5.26	89.69	0.16	29.99	29.99	19.03	10.96	2.736	
2,500.00	2,500.00	2,500.00	2,500.00	5.48	5.48	89.69	0.16	29.99	29.99	18.58	11.41	2.628	
2,600.00	2,600.00	2,600.00	2,600.00	5.71	5.71	89.69	0.16	29.99	29.99	18.13	11.86	2.529	
2,700.00	2,700.00	2,700.00	2,700.00	5.93	5.93	89.69	0.16	29.99	29.99	17.68	12.31	2.436	
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	89.69	0.16	29.99	29.99	17.23	12.76	2.351	
2,900.00	2,900.00	2,900.00	2,900.00	6.38	6.38	89.69	0.16	29.99	29.99	16.78	13.21	2.271	CC, ES
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	89.69	0.16	29.99	29.99	17.18	13.64	2.259	
3,100.00	3,100.00	3,099.49	3,099.49	6.83	6.82	89.22	0.42	30.81	30.82	19.26	14.07	2.369	
3,200.00	3,200.00	3,198.92	3,198.88	7.05	7.02	87.94	1.20	33.28	33.32	23.03	14.49	2.590	
3,300.00	3,300.00	3,298.24	3,298.10	7.28	7.23	86.19	2.49	37.39	37.52	28.54	14.90	2.915	
3,400.00	3,400.00	3,397.37	3,397.05	7.50	7.44	84.31	4.30	43.13	43.44	35.38	15.33	3.308	
3,500.00	3,500.00	3,496.85	3,496.26	7.73	7.65	82.60	6.51	50.15	50.71	42.34	15.76	3.686	
3,600.00	3,600.00	3,596.57	3,595.70	7.95	7.87	81.31	8.75	57.27	58.10	49.32	16.20	4.045	
3,700.00	3,700.00	3,596.29	3,595.14	8.18	8.09	80.31	11.00	64.40	65.51	56.31	16.63	4.385	
3,800.00	3,800.00	3,796.01	3,794.58	8.40	8.31	79.51	13.24	71.53	72.94	63.31	17.07	4.709	
3,900.00	3,900.00	3,895.73	3,894.02	8.63	8.53	78.86	15.49	78.65	80.38	70.33	17.51	5.017	
4,000.00	4,000.00	3,895.45	3,893.45	8.85	8.76	78.32	17.73	85.78	87.83	76.51	17.93	5.267	
4,100.00	4,100.00	4,095.22	4,092.95	9.06	8.98	-12.23	19.98	92.90	94.44	81.01	18.34	5.417	
4,200.00	4,199.96	4,195.09	4,192.54	9.26	9.21	-12.94	22.22	100.04	99.35	83.83	18.76	5.470	
4,300.00	4,299.86	4,295.03	4,292.19	9.46	9.44	-13.81	24.47	107.18	102.59	84.98	19.17	5.433	
4,400.00	4,399.68	4,395.00	4,391.88	9.66	9.67	-14.87	26.72	114.32	104.16	85.01	19.22	5.423	
4,411.45	4,411.10	4,406.44	4,403.30	9.69	9.69	-15.00	26.98	115.14	104.23	85.15	19.59	5.346	
4,500.00	4,499.42	4,494.97	4,491.57	9.87	9.90	-16.06	28.97	121.47	104.74	85.36	20.01	5.264	
4,600.00	4,599.16	4,594.94	4,591.27	10.08	10.13	-17.24	31.22	128.61	105.36	85.58	20.44	5.188	
4,700.00	4,698.90	4,694.92	4,690.96	10.29	10.37	-18.40	33.47	135.75	106.02	85.86	20.86	5.115	
4,800.00	4,798.65	4,794.89	4,790.66	10.50	10.60	-19.56	35.72	142.90	106.73	86.18	21.29	5.048	
4,900.00	4,898.39	4,894.87	4,890.35	10.71	10.83	-20.69	37.97	150.04	107.47	86.54	21.72	4.984	
5,000.00	4,998.13	4,994.84	4,990.04	10.93	11.07	-21.81	40.22	157.18	108.26				

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 161H - OH - Plan #2													Offset Site Error: 0.00 usft	
Survey Program: O-LEAM MWD+HDGM, 9996-MWD+IFR1+MS													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		
5,100.00	5,097.87	5,094.82	5,089.74	11.15	11.31	-22.91	42.47	164.33	109.09	86.94	22.16	4.924		
5,200.00	5,197.61	5,194.79	5,189.43	11.36	11.55	-24.00	44.72	171.47	109.96	87.37	22.59	4.868		
5,300.00	5,297.36	5,294.77	5,289.12	11.58	11.78	-25.07	46.97	178.61	110.87	87.84	23.03	4.815		
5,400.00	5,397.10	5,394.74	5,388.82	11.81	12.02	-26.12	49.22	185.76	111.82	88.35	23.47	4.765		
5,500.00	5,496.84	5,494.72	5,488.51	12.03	12.26	-27.15	51.47	192.90	112.80	88.89	23.91	4.718		
5,600.00	5,596.58	5,594.69	5,588.21	12.25	12.50	-28.16	53.72	200.04	113.82	89.47	24.35	4.674		
5,700.00	5,696.33	5,694.67	5,687.90	12.48	12.74	-29.16	55.97	207.19	114.88	90.08	24.80	4.633		
5,800.00	5,796.07	5,794.64	5,787.59	12.70	12.98	-30.14	58.22	214.33	115.97	90.72	25.25	4.594		
5,900.00	5,895.81	5,894.62	5,887.29	12.93	13.23	-31.10	60.47	221.48	117.09	91.40	25.70	4.557		
6,000.00	5,995.55	5,994.59	5,986.98	13.16	13.47	-32.04	62.72	228.62	118.24	92.10	26.15	4.522		
6,100.00	6,095.29	6,094.57	6,086.67	13.38	13.71	-32.96	64.97	235.76	119.43	92.83	26.60	4.490		
6,200.00	6,195.04	6,194.54	6,186.37	13.61	13.95	-33.86	67.22	242.91	120.65	93.59	27.05	4.459		
6,300.00	6,294.78	6,294.51	6,286.06	13.84	14.20	-34.75	69.47	250.05	121.89	94.38	27.51	4.431		
6,400.00	6,394.52	6,394.49	6,385.76	14.07	14.44	-35.62	71.72	257.19	123.17	95.20	27.97	4.404		
6,500.00	6,494.26	6,494.46	6,485.45	14.31	14.68	-36.47	73.97	264.34	124.47	96.04	28.43	4.378		
6,600.00	6,594.01	6,594.44	6,585.14	14.54	14.93	-37.30	76.22	271.48	125.80	96.91	28.89	4.354		
6,700.00	6,693.75	6,694.41	6,684.84	14.77	15.17	-38.11	78.47	278.62	127.15	97.80	29.35	4.332		
6,800.00	6,793.49	6,794.39	6,784.53	15.01	15.42	-38.91	80.72	285.77	128.53	98.71	29.82	4.310		
6,900.00	6,893.23	6,894.36	6,884.22	15.24	15.66	-39.69	82.97	292.91	129.93	99.65	30.28	4.291		
7,000.00	6,992.97	6,994.34	6,983.92	15.47	15.91	-40.45	85.22	300.05	131.36	100.61	30.75	4.272		
7,100.00	7,092.72	7,094.31	7,083.61	15.71	16.15	-41.20	87.47	307.20	132.81	101.59	31.22	4.254		
7,200.00	7,192.46	7,194.29	7,183.31	15.95	16.40	-41.93	89.72	314.34	134.28	102.59	31.69	4.237		
7,300.00	7,292.20	7,294.26	7,283.00	16.18	16.65	-42.64	91.97	321.48	135.78	103.62	32.16	4.222		
7,400.00	7,391.94	7,394.24	7,382.69	16.42	16.89	-43.34	94.22	328.63	137.29	104.66	32.63	4.207		
7,500.00	7,491.69	7,494.21	7,482.39	16.66	17.14	-44.02	96.47	335.77	138.83	105.72	33.11	4.193		
7,600.00	7,591.43	7,594.19	7,582.08	16.89	17.39	-44.69	98.72	342.91	140.38	106.80	33.58	4.180		
7,700.00	7,691.17	7,694.16	7,681.77	17.13	17.63	-45.35	100.97	350.06	141.95	107.89	34.06	4.168		
7,800.00	7,790.91	7,794.13	7,781.47	17.37	17.88	-45.99	103.22	357.20	143.54	109.01	34.54	4.156		
7,900.00	7,890.66	7,894.11	7,881.16	17.61	18.13	-46.61	105.47	364.34	145.15	110.13	35.02	4.145		
8,000.00	7,990.40	7,994.08	7,980.86	17.85	18.38	-47.22	107.72	371.49	146.77	111.28	35.49	4.135		
8,100.00	8,090.14	8,094.06	8,080.55	18.09	18.62	-47.82	109.97	378.63	148.42	112.44	35.97	4.126		
8,200.00	8,189.88	8,194.03	8,180.24	18.33	18.87	-48.41	112.22	385.77	150.07	113.62	36.46	4.117		
8,300.00	8,289.62	8,294.01	8,279.94	18.57	19.12	-48.98	114.47	392.92	151.74	114.81	36.94	4.108		
8,400.00	8,389.37	8,395.42	8,381.09	18.81	19.35	-49.61	116.64	399.83	153.14	115.72	37.42	4.093		
8,500.00	8,489.11	8,497.69	8,483.20	19.05	19.55	-50.59	118.33	405.19	153.17	115.30	37.87	4.045		
8,600.00	8,588.85	8,599.88	8,585.32	19.29	19.74	-51.95	119.47	408.81	151.76	113.44	38.32	3.960		
8,700.00	8,688.59	8,701.92	8,687.34	19.53	19.92	-53.74	120.07	410.69	149.00	110.22	38.78	3.842		
8,800.00	8,788.34	8,802.92	8,788.34	19.78	20.10	-55.97	120.16	410.99	145.10	105.85	39.25	3.697		
8,877.86	8,865.99	8,880.57	8,865.99	19.96	20.26	-57.84	120.16	410.99	142.05	102.40	39.65	3.583		
8,900.00	8,888.08	8,902.66	8,888.08	20.01	20.31	-58.36	120.16	410.99	141.23	101.47	39.76	3.552		
9,000.00	8,987.90	9,002.48	8,987.90	20.21	20.52	-60.42	120.16	410.99	138.21	98.00	40.21	3.437		
9,100.00	9,087.82	9,113.01	9,098.37	20.40	20.73	-61.59	117.86	411.01	134.59	94.09	40.50	3.323		
9,200.00	9,187.79	9,234.12	9,216.95	20.59	20.92	-56.95	94.40	411.18	116.58	76.80	39.78	2.931		
9,289.31	9,277.09	9,330.72	9,306.36	20.75	21.06	46.58	58.14	411.44	89.51	50.51	39.01	2.295		
9,300.00	9,287.78	9,341.37	9,315.81	20.77	21.08	49.11	53.23	411.48	86.02	47.02	38.99	2.206		
9,400.00	9,387.78	9,430.98	9,391.35	20.98	21.20	85.19	5.20	411.83	62.15	21.57	40.59	1.531		
9,409.79	9,397.58	9,438.81	9,397.58	21.00	21.21	89.58	0.45	411.87	61.87	21.16	40.71	1.520 SF		
9,500.00	9,487.78	9,503.62	9,446.50	21.19	21.30	124.04	-42.01	412.18	85.65	47.65	37.99	2.254		
9,589.31	9,577.09	9,556.30	9,482.53	21.38	21.38	142.16	-80.41	412.46	138.96	104.57	34.39	4.040		
9,600.00	9,587.78	9,562.00	9,486.21	21.40	21.39	-35.42	-84.77	412.49	146.25	112.19	34.07	4.293		
9,650.00	9,637.67	9,588.58	9,502.80	21.49	21.44	-27.98	-105.52	412.64	180.49	147.78	32.71	5.517		
9,700.00	9,687.09	9,615.01	9,518.33	21.58	21.49	-22.84	-126.91	412.80	214.31	182.74	31.57	6.789		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 161H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 9996-MWD+IFR1+MS													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)						
9,750.00	9,735.68	9,641.32	9,532.79	21.68	21.54	-19.15	-148.88	412.96	247.20	216.66	30.54	8.095		
9,800.00	9,783.07	9,667.52	9,546.18	21.77	21.60	-16.43	-171.40	413.13	278.89	249.30	29.59	9.424		
9,850.00	9,828.88	9,700.00	9,561.32	21.87	21.68	-14.15	-200.13	413.34	309.30	280.19	29.10	10.627		
9,900.00	9,872.78	9,719.68	9,569.69	21.97	21.73	-12.77	-217.94	413.47	337.99	310.08	27.91	12.109		
9,950.00	9,914.43	9,750.00	9,581.39	22.07	21.82	-11.41	-245.91	413.67	365.22	337.85	27.37	13.342		
10,000.00	9,953.51	9,771.58	9,588.80	22.18	21.89	-10.48	-266.17	413.82	390.67	364.17	26.51	14.739		
10,050.00	9,989.72	9,800.00	9,597.38	22.30	21.99	-9.63	-293.26	414.02	414.42	388.41	26.01	15.933		
10,100.00	10,022.80	9,823.29	9,603.41	22.43	22.08	-8.99	-315.76	414.19	436.33	410.90	25.43	17.159		
10,150.00	10,052.48	9,850.00	9,609.19	22.58	22.19	-8.43	-341.83	414.38	456.38	431.32	25.05	18.216		
10,200.00	10,078.55	9,874.86	9,613.48	22.74	22.30	-7.98	-366.32	414.56	474.51	449.76	24.74	19.176		
10,250.00	10,100.79	9,900.00	9,616.72	22.93	22.41	-7.61	-391.24	414.74	490.68	466.12	24.56	19.977		
10,300.00	10,119.06	9,926.34	9,618.95	23.14	22.54	-7.30	-417.48	414.93	504.87	480.35	24.52	20.594		
10,350.00	10,133.20	9,950.00	9,619.92	23.38	22.66	-7.06	-441.12	415.10	517.03	492.46	24.58	21.038		
10,400.00	10,143.10	9,986.54	9,619.79	23.64	24.77	-6.84	-477.66	415.37	526.99	502.21	24.78	21.269		
10,450.00	10,148.70	10,036.15	9,619.24	23.92	26.78	-6.69	-527.26	415.74	533.10	508.24	24.86	21.442		
10,496.68	10,150.00	10,082.77	9,618.71	24.21	26.82	-6.64	-573.89	416.08	534.91	509.93	24.98	21.415		
10,500.00	10,149.96	10,086.10	9,618.68	24.23	26.82	-6.64	-577.21	416.10	534.91	509.92	24.99	21.407		
10,600.00	10,148.67	10,186.10	9,617.55	28.67	26.90	-6.64	-677.20	416.84	534.75	509.54	25.21	21.212		
10,700.00	10,147.39	10,286.10	9,616.43	28.75	26.98	-6.65	-777.19	417.57	534.58	509.20	25.39	21.059		
10,800.00	10,146.10	10,386.10	9,615.30	28.84	27.06	-6.65	-877.18	418.30	534.42	508.77	25.66	20.830		
10,900.00	10,144.81	10,486.10	9,614.18	28.92	27.14	-6.65	-977.17	419.03	534.26	508.24	26.02	20.534		
11,000.00	10,143.53	10,586.10	9,613.06	29.01	27.23	-6.65	-1,077.16	419.77	534.10	507.63	26.47	20.178		
11,100.00	10,142.24	10,686.10	9,611.93	29.10	27.32	-6.66	-1,177.15	420.50	533.94	506.94	27.00	19.773		
11,200.00	10,140.96	10,786.10	9,610.81	29.20	27.41	-6.66	-1,277.14	421.23	533.78	506.17	27.62	19.329		
11,300.00	10,139.67	10,886.10	9,609.68	29.29	27.50	-6.66	-1,377.14	421.97	533.62	505.32	28.30	18.855		
11,400.00	10,138.39	10,986.10	9,608.56	29.39	27.59	-6.66	-1,477.13	422.70	533.46	504.40	29.06	18.360		
11,500.00	10,137.10	11,086.10	9,607.44	29.49	27.69	-6.66	-1,577.12	423.43	533.30	503.42	29.87	17.852		
11,600.00	10,135.81	11,186.10	9,606.31	29.59	27.79	-6.67	-1,677.11	424.17	533.14	502.39	30.75	17.338		
11,700.00	10,134.53	11,286.10	9,605.19	29.69	27.89	-6.67	-1,777.10	424.90	532.98	501.30	31.68	16.824		
11,800.00	10,133.24	11,386.10	9,604.07	29.80	27.99	-6.67	-1,877.09	425.63	532.82	500.16	32.66	16.316		
11,900.00	10,131.96	11,486.10	9,602.94	29.91	28.10	-6.67	-1,977.08	426.37	532.66	498.98	33.68	15.815		
12,000.00	10,130.67	11,586.10	9,601.82	30.02	28.21	-6.67	-2,077.07	427.10	532.49	497.75	34.74	15.327		
12,100.00	10,129.38	11,686.10	9,600.69	30.14	28.33	-6.68	-2,177.06	427.83	532.33	496.49	35.84	14.852		
12,200.00	10,128.10	11,786.10	9,599.57	30.26	28.46	-6.68	-2,277.05	428.56	532.17	495.20	36.98	14.392		
12,300.00	10,126.81	11,886.10	9,598.45	30.38	28.59	-6.68	-2,377.04	429.30	532.01	493.87	38.14	13.948		
12,400.00	10,125.53	11,986.09	9,597.32	30.52	28.74	-6.68	-2,477.03	430.03	531.85	492.52	39.34	13.521		
12,500.00	10,124.24	12,086.09	9,596.20	30.66	28.91	-6.69	-2,577.03	430.76	531.69	491.14	40.55	13.111		
12,600.00	10,122.95	12,186.09	9,595.08	30.81	29.11	-6.69	-2,677.02	431.50	531.53	489.73	41.80	12.717		
12,700.00	10,121.67	12,286.09	9,593.95	30.97	29.35	-6.69	-2,777.01	432.23	531.37	488.31	43.06	12.340		
12,800.00	10,120.38	12,386.09	9,592.83	31.15	29.63	-6.69	-2,877.00	432.96	531.21	486.87	44.34	11.980		
12,900.00	10,119.10	12,486.09	9,591.70	31.36	29.97	-6.69	-2,976.99	433.70	531.05	485.40	45.64	11.635		
13,000.00	10,117.81	12,586.09	9,590.58	31.60	30.36	-6.70	-3,076.98	434.43	530.89	483.93	46.96	11.305		
13,100.00	10,116.53	12,686.09	9,589.46	31.88	30.79	-6.70	-3,176.97	435.16	530.73	482.43	48.29	10.990		
13,200.00	10,115.24	12,786.09	9,588.33	32.21	31.25	-6.70	-3,276.96	435.89	530.56	480.93	49.64	10.689		
13,300.00	10,113.95	12,886.09	9,587.21	32.57	31.74	-6.70	-3,376.95	436.63	530.40	479.41	51.00	10.401		
13,400.00	10,112.67	12,986.09	9,586.08	32.98	32.25	-6.70	-3,476.94	437.36	530.24	477.88	52.37	10.125		
13,500.00	10,111.38	13,086.09	9,584.96	33.42	32.77	-6.71	-3,576.93	438.09	530.08	476.33	53.75	9.862		
13,600.00	10,110.10	13,186.09	9,583.84	33.89	33.32	-6.71	-3,676.93	438.83	529.92	474.78	55.14	9.610		
13,700.00	10,108.81	13,286.09	9,582.71	34.38	33.87	-6.71	-3,776.92	439.56	529.76	473.22	56.54	9.369		
13,800.00	10,107.52	13,386.09	9,581.59	34.88	34.43	-6.71	-3,876.91	440.29	529.60	471.65	57.95	9.139		
13,900.00	10,106.24	13,486.09	9,580.47	35.41	35.01	-6.72	-3,976.90	441.03	529.44	470.07	59.37	8.918		
14,000.00	10,104.95	13,586.09	9,579.34	35.95	35.59	-6.72	-4,076.89	441.76	529.28	468.48	60.79	8.706		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 161H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 9996-MWD+IFR1+MS													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	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)						
14,100.00	10,103.67	13,686.09	9,578.22	36.50	36.18	-6.72	-4,176.88	442.49	529.12	466.89	62.23	8.503		
14,200.00	10,102.38	13,786.09	9,577.09	37.06	36.78	-6.72	-4,276.87	443.23	528.96	465.29	63.66	8.309		
14,300.00	10,101.09	13,886.09	9,575.97	37.63	37.38	-6.72	-4,376.86	443.96	528.80	463.69	65.11	8.122		
14,400.00	10,099.81	13,986.09	9,574.85	38.21	38.00	-6.73	-4,476.85	444.69	528.63	462.08	66.56	7.942		
14,500.00	10,098.52	14,086.09	9,573.72	38.79	38.61	-6.73	-4,576.84	445.42	528.47	460.46	68.01	7.770		
14,600.00	10,097.24	14,186.09	9,572.60	39.38	39.24	-6.73	-4,676.83	446.16	528.31	458.84	69.47	7.604		
14,700.00	10,095.95	14,286.09	9,571.47	39.98	39.86	-6.73	-4,776.82	446.89	528.15	457.21	70.94	7.445		
14,800.00	10,094.67	14,386.09	9,570.35	40.59	40.50	-6.73	-4,876.82	447.62	527.99	455.58	72.41	7.292		
14,900.00	10,093.38	14,486.09	9,569.23	41.20	41.14	-6.74	-4,976.81	448.36	527.83	453.95	73.88	7.144		
15,000.00	10,092.09	14,586.09	9,568.10	41.82	41.78	-6.74	-5,076.80	449.09	527.67	452.31	75.36	7.002		
15,100.00	10,090.81	14,686.09	9,566.98	42.44	42.42	-6.74	-5,176.79	449.82	527.51	450.67	76.84	6.865		
15,200.00	10,089.52	14,786.09	9,565.86	43.07	43.08	-6.74	-5,276.78	450.56	527.35	449.02	78.33	6.733		
15,300.00	10,088.24	14,886.09	9,564.73	43.71	43.73	-6.75	-5,376.77	451.29	527.19	447.37	79.81	6.605		
15,400.00	10,086.95	14,986.09	9,563.61	44.34	44.39	-6.75	-5,476.76	452.02	527.03	445.72	81.30	6.482		
15,500.00	10,085.66	15,086.09	9,562.48	44.98	45.05	-6.75	-5,576.75	452.75	526.87	444.07	82.80	6.363		
15,600.00	10,084.38	15,186.09	9,561.36	45.63	45.72	-6.75	-5,676.74	453.49	526.71	442.41	84.29	6.248		
15,700.00	10,083.09	15,286.09	9,560.24	46.28	46.38	-6.75	-5,776.73	454.22	526.54	440.75	85.79	6.137		
15,800.00	10,081.81	15,386.09	9,559.11	46.93	47.06	-6.76	-5,876.72	454.95	526.38	439.09	87.29	6.030		
15,900.00	10,080.52	15,486.09	9,557.99	47.59	47.73	-6.76	-5,976.72	455.69	526.22	437.42	88.80	5.926		
16,000.00	10,079.24	15,586.09	9,556.86	48.25	48.41	-6.76	-6,076.71	456.42	526.06	435.76	90.30	5.825		
16,100.00	10,077.95	15,686.09	9,555.74	48.91	49.09	-6.76	-6,176.70	457.15	525.90	434.09	91.81	5.728		
16,200.00	10,076.66	15,786.09	9,554.62	49.58	49.77	-6.77	-6,276.69	457.89	525.74	432.42	93.32	5.634		
16,300.00	10,075.38	15,886.09	9,553.49	50.25	50.45	-6.77	-6,376.68	458.62	525.58	430.74	94.84	5.542		
16,400.00	10,074.09	15,986.09	9,552.37	50.92	51.14	-6.77	-6,476.67	459.35	525.42	429.07	96.35	5.453		
16,500.00	10,072.81	16,086.09	9,551.25	51.59	51.83	-6.77	-6,576.66	460.09	525.26	427.39	97.86	5.367		
16,600.00	10,071.52	16,186.09	9,550.12	52.27	52.52	-6.77	-6,676.65	460.82	525.10	425.72	99.38	5.284		
16,700.00	10,070.23	16,286.09	9,549.00	52.95	53.21	-6.78	-6,776.64	461.55	524.94	424.04	100.90	5.202		
16,800.00	10,068.95	16,386.09	9,547.87	53.63	53.91	-6.78	-6,876.63	462.28	524.78	422.35	102.42	5.124		
16,900.00	10,067.66	16,486.09	9,546.75	54.31	54.61	-6.78	-6,976.62	463.02	524.62	420.67	103.94	5.047		
17,000.00	10,066.38	16,586.09	9,545.63	55.00	55.30	-6.78	-7,076.61	463.75	524.45	418.99	105.47	4.973		
17,100.00	10,065.09	16,686.09	9,544.50	55.69	56.01	-6.79	-7,176.61	464.48	524.29	417.30	106.99	4.900		
17,200.00	10,063.80	16,786.09	9,543.38	56.38	56.71	-6.79	-7,276.60	465.22	524.13	415.61	108.52	4.830		
17,300.00	10,062.52	16,886.09	9,542.25	57.07	57.41	-6.79	-7,376.59	465.95	523.97	413.93	110.05	4.761		
17,400.00	10,061.23	16,986.09	9,541.13	57.76	58.12	-6.79	-7,476.58	466.68	523.81	412.24	111.57	4.695		
17,495.86	10,060.00	17,081.95	9,540.05	58.43	58.79	-6.79	-7,572.43	467.39	523.66	410.62	113.04	4.633		

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 86H - OH - Plan #2													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	0.00	0.00	0.00	0.00	-90.33	-1.88	-329.88	329.89					
100.00	100.00	98.90	98.90	0.09	0.09	-90.33	-1.88	-329.88	329.89	329.71	0.17	1,929.148		
200.00	200.00	198.90	198.90	0.31	0.31	-90.33	-1.88	-329.88	329.89	329.27	0.62	532.928		
300.00	300.00	298.90	298.90	0.54	0.53	-90.33	-1.88	-329.88	329.89	328.82	1.07	308.726		
400.00	400.00	398.90	398.90	0.76	0.76	-90.33	-1.88	-329.88	329.89	328.37	1.52	217.306		
500.00	500.00	498.90	498.90	0.99	0.98	-90.33	-1.88	-329.88	329.89	327.92	1.97	167.659		
600.00	600.00	598.90	598.90	1.21	1.21	-90.33	-1.88	-329.88	329.89	327.47	2.42	136.478		
700.00	700.00	698.90	698.90	1.43	1.43	-90.33	-1.88	-329.88	329.89	327.02	2.87	115.076		
800.00	800.00	798.90	798.90	1.66	1.66	-90.33	-1.88	-329.88	329.89	326.57	3.32	99.477		
900.00	900.00	898.90	898.90	1.88	1.88	-90.33	-1.88	-329.88	329.89	326.12	3.77	87.602		
1,000.00	1,000.00	998.90	998.90	2.11	2.11	-90.33	-1.88	-329.88	329.89	325.67	4.22	78.260		
1,100.00	1,100.00	1,098.90	1,098.90	2.33	2.33	-90.33	-1.88	-329.88	329.89	325.22	4.66	70.718		
1,200.00	1,200.00	1,198.90	1,198.90	2.56	2.56	-90.33	-1.88	-329.88	329.89	324.77	5.11	64.502		
1,300.00	1,300.00	1,298.90	1,298.90	2.78	2.78	-90.33	-1.88	-329.88	329.89	324.32	5.56	59.291		
1,400.00	1,400.00	1,398.90	1,398.90	3.01	3.01	-90.33	-1.88	-329.88	329.89	323.87	6.01	54.858		
1,500.00	1,500.00	1,498.90	1,498.90	3.23	3.23	-90.33	-1.88	-329.88	329.89	323.42	6.46	51.043		
1,600.00	1,600.00	1,598.90	1,598.90	3.46	3.45	-90.33	-1.88	-329.88	329.89	322.97	6.91	47.723		
1,700.00	1,700.00	1,698.90	1,698.90	3.68	3.68	-90.33	-1.88	-329.88	329.89	322.52	7.36	44.809		
1,800.00	1,800.00	1,798.90	1,798.90	3.91	3.90	-90.33	-1.88	-329.88	329.89	322.07	7.81	42.231		
1,900.00	1,900.00	1,898.90	1,898.90	4.13	4.13	-90.33	-1.88	-329.88	329.89	321.62	8.26	39.933		
2,000.00	2,000.00	1,998.90	1,998.90	4.36	4.35	-90.33	-1.88	-329.88	329.89	321.17	8.71	37.872		
2,100.00	2,100.00	2,098.90	2,098.90	4.58	4.58	-90.33	-1.88	-329.88	329.89	320.73	9.16	36.013		
2,200.00	2,200.00	2,198.90	2,198.90	4.81	4.80	-90.33	-1.88	-329.88	329.89	320.28	9.61	34.329		
2,300.00	2,300.00	2,298.90	2,298.90	5.03	5.03	-90.33	-1.88	-329.88	329.89	319.83	10.06	32.794		
2,400.00	2,400.00	2,398.90	2,398.90	5.26	5.25	-90.33	-1.88	-329.88	329.89	319.38	10.51	31.392		
2,500.00	2,500.00	2,498.90	2,498.90	5.48	5.48	-90.33	-1.88	-329.88	329.89	318.93	10.96	30.104		
2,600.00	2,600.00	2,598.90	2,598.90	5.71	5.70	-90.33	-1.88	-329.88	329.89	318.48	11.41	28.918		
2,700.00	2,700.00	2,698.90	2,698.90	5.93	5.93	-90.33	-1.88	-329.88	329.89	318.03	11.86	27.821		
2,800.00	2,800.00	2,798.90	2,798.90	6.15	6.15	-90.33	-1.88	-329.88	329.89	317.58	12.31	26.805		
2,900.00	2,900.00	2,898.90	2,898.90	6.38	6.38	-90.33	-1.88	-329.88	329.89	317.13	12.76	25.860		
3,000.00	3,000.00	2,998.90	2,998.90	6.60	6.60	-90.33	-1.88	-329.88	329.89	316.68	13.21	24.980		
3,100.00	3,100.00	3,098.90	3,098.90	6.83	6.83	-90.33	-1.88	-329.88	329.89	316.23	13.66	24.158		
3,200.00	3,200.00	3,198.90	3,198.90	7.05	7.05	-90.33	-1.88	-329.88	329.89	315.78	14.10	23.388		
3,300.00	3,300.00	3,298.90	3,298.90	7.28	7.28	-90.33	-1.88	-329.88	329.89	315.33	14.55	22.666		
3,400.00	3,400.00	3,398.90	3,398.90	7.50	7.50	-90.33	-1.88	-329.88	329.89	314.88	15.00	21.986		
3,500.00	3,500.00	3,498.90	3,498.90	7.73	7.73	-90.33	-1.88	-329.88	329.89	314.43	15.45	21.347		
3,600.00	3,600.00	3,601.12	3,601.12	7.95	7.95	-90.18	-1.05	-329.54	329.55	313.65	15.91	20.718		
3,700.00	3,700.00	3,703.30	3,703.26	8.18	8.18	-89.75	1.46	-328.52	328.55	312.19	16.36	20.087		
3,800.00	3,800.00	3,805.36	3,805.21	8.40	8.41	-89.01	5.65	-326.80	326.91	310.11	16.81	19.453		
3,900.00	3,900.00	3,905.98	3,905.66	8.63	8.63	-88.04	11.12	-324.57	324.83	307.58	17.25	18.828		
4,000.00	4,000.00	4,005.80	4,005.30	8.85	8.86	-87.04	16.67	-322.31	322.80	305.10	17.70	18.238		
4,100.00	4,100.00	4,105.63	4,104.95	9.06	9.08	-176.04	22.21	-320.04	321.74	303.61	18.13	17.743		
4,107.71	4,107.70	4,113.33	4,112.64	9.08	9.10	-175.96	22.64	-319.87	321.73	303.57	18.17	17.711 CC, ES		
4,200.00	4,199.96	4,205.47	4,204.62	9.26	9.31	-175.06	27.76	-317.78	322.52	303.96	18.55	17.382		
4,300.00	4,299.86	4,305.30	4,304.26	9.46	9.53	-174.12	33.31	-315.51	325.12	306.14	18.98	17.132		
4,400.00	4,399.68	4,405.07	4,403.85	9.66	9.76	-173.22	38.85	-313.25	329.55	310.14	19.40	16.985		
4,411.45	4,411.10	4,416.49	4,415.25	9.69	9.78	-173.12	39.49	-312.99	330.17	310.72	19.45	16.974		
4,500.00	4,499.42	4,504.79	4,503.40	9.87	9.98	-172.38	44.39	-310.99	335.10	315.27	19.83	16.900		
4,600.00	4,599.16	4,604.52	4,602.94	10.08	10.21	-171.56	49.93	-308.72	340.73	320.48	20.26	16.820		
4,700.00	4,698.90	4,704.24	4,702.49	10.29	10.44	-170.77	55.48	-306.46	346.43	325.75	20.69	16.746		
4,800.00	4,798.65	4,803.97	4,802.03	10.50	10.67	-170.01	61.02	-304.20	352.20	331.08	21.12	16.677		
4,900.00	4,898.39	4,903.69	4,901.58	10.71	10.89	-169.27	66.56	-301.93	358.02	336.47	21.55	16.611		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 86H - OH - Plan #2													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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						
5,000.00	4,998.13	5,003.42	5,001.12	10.93	11.12	-168.55	72.10	-299.67	363.91	341.92	21.99	16.550		
5,100.00	5,097.87	5,103.15	5,100.67	11.15	11.35	-167.86	77.64	-297.41	369.84	347.42	22.43	16.492		
5,200.00	5,197.61	5,202.87	5,200.21	11.36	11.58	-167.19	83.18	-295.15	375.83	352.97	22.86	16.438		
5,300.00	5,297.36	5,302.60	5,299.76	11.58	11.82	-166.54	88.72	-292.88	381.87	358.57	23.30	16.387		
5,400.00	5,397.10	5,402.32	5,399.31	11.81	12.05	-165.91	94.26	-290.62	387.96	364.21	23.75	16.337		
5,500.00	5,496.84	5,502.05	5,498.85	12.03	12.28	-165.30	99.80	-288.36	394.09	369.90	24.19	16.293		
5,600.00	5,596.58	5,601.77	5,598.40	12.25	12.51	-164.71	105.34	-286.10	400.26	375.63	24.63	16.250		
5,700.00	5,696.33	5,701.17	5,697.62	12.48	12.73	-164.16	110.73	-283.90	406.50	381.43	25.06	16.218		
5,800.00	5,796.07	5,800.00	5,796.36	12.70	12.91	-163.83	114.77	-282.25	412.92	387.46	25.45	16.223		
5,900.00	5,895.81	5,899.19	5,895.51	12.93	13.08	-163.73	117.24	-281.24	419.53	393.69	25.84	16.235		
6,000.00	5,995.55	5,998.18	5,994.50	13.16	13.25	-163.88	118.12	-280.88	426.32	400.09	26.23	16.256		
6,100.00	6,095.29	6,097.88	6,094.19	13.38	13.45	-164.14	118.12	-280.88	433.22	406.58	26.63	16.266		
6,200.00	6,195.04	6,197.62	6,193.94	13.61	13.67	-164.39	118.12	-280.88	440.12	413.05	27.07	16.260		
6,300.00	6,294.78	6,297.37	6,293.68	13.84	13.89	-164.64	118.12	-280.88	447.04	419.53	27.50	16.253		
6,400.00	6,394.52	6,397.11	6,393.42	14.07	14.11	-164.88	118.12	-280.88	453.96	426.02	27.94	16.247		
6,500.00	6,494.26	6,496.85	6,493.16	14.31	14.33	-165.11	118.12	-280.88	460.89	432.52	28.38	16.241		
6,600.00	6,594.01	6,596.59	6,592.91	14.54	14.55	-165.34	118.12	-280.88	467.83	439.02	28.82	16.235		
6,700.00	6,693.75	6,696.33	6,692.65	14.77	14.77	-165.56	118.12	-280.88	474.78	445.53	29.25	16.230		
6,800.00	6,793.49	6,796.08	6,792.39	15.01	14.99	-165.77	118.12	-280.88	481.73	452.04	29.69	16.224		
6,900.00	6,893.23	6,895.82	6,892.13	15.24	15.22	-165.98	118.12	-280.88	488.69	458.56	30.13	16.219		
7,000.00	6,992.97	6,995.56	6,991.87	15.47	15.44	-166.18	118.12	-280.88	495.66	465.09	30.57	16.213		
7,100.00	7,092.72	7,095.30	7,091.62	15.71	15.66	-166.37	118.12	-280.88	502.63	471.62	31.01	16.208		
7,200.00	7,192.46	7,195.05	7,191.36	15.95	15.88	-166.56	118.12	-280.88	509.60	478.15	31.45	16.203		
7,300.00	7,292.20	7,294.79	7,291.10	16.18	16.10	-166.75	118.12	-280.88	516.59	484.69	31.89	16.198		
7,400.00	7,391.94	7,394.53	7,390.84	16.42	16.33	-166.93	118.12	-280.88	523.57	491.24	32.33	16.193		
7,500.00	7,491.69	7,494.27	7,490.59	16.66	16.55	-167.10	118.12	-280.88	530.57	497.79	32.77	16.188		
7,600.00	7,591.43	7,594.01	7,590.33	16.89	16.77	-167.27	118.12	-280.88	537.56	504.35	33.22	16.184		
7,700.00	7,691.17	7,693.76	7,690.07	17.13	16.99	-167.44	118.12	-280.88	544.57	510.91	33.66	16.179		
7,800.00	7,790.91	7,793.50	7,789.81	17.37	17.22	-167.60	118.12	-280.88	551.57	517.47	34.10	16.175		
7,900.00	7,890.66	7,893.24	7,889.56	17.61	17.44	-167.76	118.12	-280.88	558.58	524.04	34.54	16.170		
8,000.00	7,990.40	7,992.98	7,989.30	17.85	17.66	-167.92	118.12	-280.88	565.60	530.61	34.99	16.166		
8,100.00	8,090.14	8,092.73	8,089.04	18.09	17.88	-168.07	118.12	-280.88	572.62	537.19	35.43	16.162		
8,200.00	8,189.88	8,192.47	8,188.78	18.33	18.10	-168.21	118.12	-280.88	579.64	543.77	35.87	16.158		
8,300.00	8,289.62	8,292.21	8,288.52	18.57	18.33	-168.36	118.12	-280.88	586.67	550.35	36.32	16.154		
8,400.00	8,389.37	8,391.95	8,388.27	18.81	18.55	-168.50	118.12	-280.88	593.70	556.93	36.76	16.150		
8,500.00	8,489.11	8,491.70	8,488.01	19.05	18.77	-168.63	118.12	-280.88	600.73	563.52	37.21	16.146		
8,600.00	8,588.85	8,591.44	8,587.75	19.29	19.00	-168.76	118.12	-280.88	607.77	570.11	37.65	16.142		
8,700.00	8,688.59	8,691.18	8,687.49	19.53	19.22	-168.90	118.12	-280.88	614.81	576.71	38.10	16.139		
8,800.00	8,788.34	8,790.92	8,787.24	19.78	19.44	-169.02	118.12	-280.88	621.85	583.31	38.54	16.135		
8,877.86	8,865.99	8,868.58	8,864.89	19.96	19.61	-169.12	118.12	-280.88	627.33	588.45	38.89	16.132		
8,900.00	8,888.08	8,890.67	8,886.98	20.01	19.66	-169.15	118.12	-280.88	628.85	589.87	38.98	16.132		
9,000.00	8,987.90	8,990.49	8,986.80	20.21	19.89	-169.26	118.12	-280.88	634.67	595.27	39.40	16.110		
9,100.00	9,087.82	9,090.40	9,086.72	20.40	20.11	-169.34	118.12	-280.88	638.77	598.96	39.81	16.046		
9,200.00	9,187.79	9,190.37	9,186.69	20.59	20.33	-169.38	118.12	-280.88	641.16	600.94	40.22	15.942		
9,289.31	9,277.09	9,279.68	9,275.99	20.75	20.53	-79.40	118.12	-280.88	641.84	601.26	40.59	15.814		
9,300.00	9,287.78	9,290.37	9,286.68	20.77	20.56	-79.40	118.12	-280.88	641.84	601.21	40.63	15.796		
9,400.00	9,387.78	9,390.37	9,386.68	20.98	20.78	-79.40	118.12	-280.88	641.84	600.77	41.07	15.628		
9,500.00	9,487.78	9,490.37	9,486.68	21.19	21.00	-79.40	118.12	-280.88	641.84	600.33	41.51	15.463		
9,589.31	9,577.09	9,579.68	9,575.99	21.38	21.20	-79.40	118.12	-280.88	641.84	599.94	41.90	15.319		
9,600.00	9,587.78	9,590.37	9,586.68	21.40	21.23	101.03	118.12	-280.88	641.86	599.92	41.94	15.302		
9,650.00	9,637.67	9,640.25	9,636.57	21.49	21.34	101.24	118.12	-280.88	642.46	600.32	42.15	15.243		
9,700.00	9,687.09	9,689.68	9,685.99	21.58	21.45	101.74	118.12	-280.88	643.97	601.62	42.35	15.206		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 86H - OH - Plan #2													Offset Site Error: 0.00 usft	
Survey Program: O-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)	Offset Wellbore Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,750.00	9,735.68	9,738.27	9,734.58	21.68	21.56	102.48	118.12	-280.88	646.50	603.95	42.55	15.195		
9,800.00	9,783.07	9,785.65	9,781.97	21.77	21.66	103.42	118.12	-280.88	650.25	607.52	42.74	15.215		
9,850.00	9,828.88	9,831.47	9,827.78	21.87	21.77	104.47	118.12	-280.88	655.49	612.57	42.93	15.271		
9,900.00	9,872.78	9,875.36	9,871.68	21.97	21.86	105.57	118.12	-280.88	662.49	619.38	43.11	15.369		
9,950.00	9,914.43	9,917.01	9,913.33	22.07	21.96	106.61	118.12	-280.88	671.55	628.27	43.28	15.516		
10,000.00	9,953.51	9,956.09	9,952.41	22.18	22.05	107.52	118.12	-280.88	682.97	639.52	43.45	15.718		
10,050.00	9,989.72	9,992.31	9,988.62	22.30	22.13	108.18	118.12	-280.88	697.00	653.39	43.61	15.982		
10,100.00	10,022.80	10,025.38	10,021.70	22.43	22.20	108.51	118.12	-280.88	713.84	670.07	43.77	16.310		
10,150.00	10,052.48	10,101.13	10,097.27	22.58	22.33	111.29	113.80	-280.85	732.84	688.90	43.94	16.678		
10,200.00	10,078.55	10,211.49	10,204.82	22.74	22.50	115.48	89.84	-280.67	751.94	708.09	43.85	17.148		
10,250.00	10,100.79	10,365.97	10,343.48	22.93	22.72	120.57	22.81	-280.18	769.24	726.13	43.11	17.843		
10,300.00	10,119.06	10,582.94	10,497.65	23.14	23.01	125.22	-128.01	-279.07	781.40	739.82	41.57	18.795		
10,350.00	10,133.20	10,848.42	10,594.10	23.38	23.85	126.40	-372.80	-277.28	784.09	743.08	41.01	19.118		
10,400.00	10,143.10	10,963.56	10,600.07	23.64	24.40	125.70	-487.65	-276.44	778.92	737.03	41.89	18.594		
10,450.00	10,148.70	11,013.24	10,600.17	23.92	24.68	125.63	-537.33	-276.07	775.70	733.22	42.48	18.261		
10,488.12	10,150.05	11,051.33	10,600.25	24.15	24.91	125.62	-575.42	-275.79	774.96	732.06	42.90	18.063		
10,496.68	10,150.00	11,059.89	10,600.27	24.21	24.96	125.62	-583.98	-275.73	775.00	732.00	42.99	18.026		
10,500.00	10,149.96	11,063.21	10,600.28	24.23	24.98	125.62	-587.30	-275.71	775.03	732.00	43.03	18.012		
10,600.00	10,148.67	11,163.20	10,600.49	28.67	25.65	125.71	-687.29	-274.97	775.90	732.01	43.89	17.679		
10,700.00	10,147.39	11,263.19	10,600.70	28.75	26.40	125.80	-787.28	-274.24	776.77	732.25	44.52	17.448		
10,800.00	10,146.10	11,363.18	10,600.91	28.84	27.23	125.89	-887.26	-273.50	777.65	732.40	45.24	17.188		
10,900.00	10,144.81	11,463.17	10,601.12	28.92	28.13	125.98	-987.25	-272.77	778.52	732.47	46.05	16.905		
11,000.00	10,143.53	11,563.16	10,601.33	29.01	29.09	126.07	-1,087.23	-272.04	779.40	732.46	46.94	16.603		
11,100.00	10,142.24	11,663.15	10,601.54	29.10	30.11	126.16	-1,187.22	-271.30	780.28	732.38	47.91	16.288		
11,200.00	10,140.96	11,763.13	10,601.75	29.20	31.19	126.25	-1,287.21	-270.57	781.16	732.22	48.94	15.961		
11,300.00	10,139.67	11,863.12	10,601.96	29.29	32.31	126.33	-1,387.19	-269.84	782.05	732.01	50.04	15.628		
11,400.00	10,138.39	11,963.11	10,602.17	29.39	33.48	126.42	-1,487.18	-269.10	782.94	731.74	51.20	15.292		
11,500.00	10,137.10	12,063.10	10,602.38	29.49	34.68	126.51	-1,587.16	-268.37	783.82	731.41	52.41	14.955		
11,600.00	10,135.81	12,163.09	10,602.59	29.59	35.92	126.60	-1,687.15	-267.64	784.71	731.03	53.68	14.618		
11,700.00	10,134.53	12,263.08	10,602.80	29.69	37.19	126.69	-1,787.14	-266.90	785.61	730.61	55.00	14.285		
11,800.00	10,133.24	12,363.07	10,603.01	29.80	38.49	126.77	-1,887.12	-266.17	786.50	730.14	56.35	13.956		
11,900.00	10,131.96	12,463.06	10,603.22	29.91	39.81	126.86	-1,987.11	-265.44	787.39	729.64	57.75	13.633		
12,000.00	10,130.67	12,563.04	10,603.43	30.02	41.16	126.95	-2,087.09	-264.70	788.29	729.10	59.19	13.317		
12,100.00	10,129.38	12,663.03	10,603.65	30.14	42.52	127.03	-2,187.08	-263.97	789.19	728.52	60.67	13.008		
12,200.00	10,128.10	12,763.02	10,603.86	30.26	43.91	127.12	-2,287.06	-263.24	790.09	727.92	62.18	12.707		
12,300.00	10,126.81	12,863.01	10,604.07	30.38	45.31	127.21	-2,387.05	-262.50	790.99	727.28	63.72	12.414		
12,400.00	10,125.53	12,963.00	10,604.28	30.52	46.72	127.29	-2,487.04	-261.77	791.90	726.62	65.28	12.130		
12,500.00	10,124.24	13,062.99	10,604.49	30.66	48.16	127.38	-2,587.02	-261.04	792.81	725.93	66.88	11.855		
12,600.00	10,122.95	13,162.98	10,604.70	30.81	49.60	127.47	-2,687.01	-260.30	793.71	725.22	68.50	11.588		
12,700.00	10,121.67	13,262.97	10,604.91	30.97	51.06	127.55	-2,786.99	-259.57	794.62	724.49	70.14	11.329		
12,800.00	10,120.38	13,362.95	10,605.12	31.15	52.52	127.64	-2,886.98	-258.83	795.54	723.73	71.80	11.080		
12,900.00	10,119.10	13,462.94	10,605.33	31.36	54.00	127.72	-2,986.97	-258.10	796.45	722.96	73.49	10.838		
13,000.00	10,117.81	13,562.93	10,605.54	31.60	55.48	127.81	-3,086.95	-257.37	797.36	722.18	75.19	10.605		
13,100.00	10,116.53	13,662.92	10,605.75	31.88	56.98	127.89	-3,186.94	-256.63	798.28	721.37	76.91	10.380		
13,200.00	10,115.24	13,762.91	10,605.96	32.21	58.48	127.98	-3,286.92	-255.90	799.20	720.56	78.64	10.162		
13,300.00	10,113.95	13,862.90	10,606.17	32.57	59.99	128.06	-3,386.91	-255.17	800.12	719.73	80.39	9.953		
13,400.00	10,112.67	13,962.89	10,606.38	32.98	61.50	128.15	-3,486.90	-254.43	801.04	718.88	82.16	9.750		
13,500.00	10,111.38	14,062.88	10,606.59	33.42	63.03	128.23	-3,586.88	-253.70	801.97	718.03	83.94	9.554		
13,600.00	10,110.10	14,162.87	10,606.80	33.89	64.55	128.31	-3,686.87	-252.97	802.89	717.17	85.73	9.366		
13,700.00	10,108.81	14,262.85	10,607.01	34.38	66.09	128.40	-3,786.85	-252.23	803.82	716.29	87.53	9.184		
13,800.00	10,107.52	14,362.84	10,607.22	34.88	67.62	128.48	-3,886.84	-251.50	804.75	715.41	89.34	9.008		
13,900.00	10,106.24	14,462.83	10,607.43	35.41	69.17	128.56	-3,986.82	-250.77	805.68	714.52	91.16	8.838		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 86H - OH - Plan #2													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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						
14,000.00	10,104.95	14,562.82	10,607.64	35.95	70.71	128.65	-4,086.81	-250.03	806.61	713.62	92.99	8.674		
14,100.00	10,103.67	14,662.81	10,607.85	36.50	72.26	128.73	-4,186.80	-249.30	807.55	712.72	94.83	8.516		
14,200.00	10,102.38	14,762.80	10,608.06	37.06	73.82	128.81	-4,286.78	-248.57	808.48	711.80	96.68	8.363		
14,300.00	10,101.09	14,862.79	10,608.27	37.63	75.38	128.90	-4,386.77	-247.83	809.42	710.89	98.53	8.215		
14,400.00	10,099.81	14,962.78	10,608.49	38.21	76.94	128.98	-4,486.75	-247.10	810.36	709.97	100.39	8.072		
14,500.00	10,098.52	15,062.76	10,608.70	38.79	78.50	129.06	-4,586.74	-246.37	811.30	709.04	102.26	7.934		
14,600.00	10,097.24	15,162.75	10,608.91	39.38	80.07	129.14	-4,686.73	-245.63	812.24	708.11	104.13	7.800		
14,700.00	10,095.95	15,262.74	10,609.12	39.98	81.64	129.22	-4,786.71	-244.90	813.19	707.17	106.01	7.671		
14,800.00	10,094.67	15,362.73	10,609.33	40.59	83.21	129.31	-4,886.70	-244.16	814.13	706.23	107.90	7.545		
14,900.00	10,093.38	15,462.72	10,609.54	41.20	84.79	129.39	-4,986.68	-243.43	815.08	705.29	109.79	7.424		
15,000.00	10,092.09	15,562.71	10,609.75	41.82	86.37	129.47	-5,086.67	-242.70	816.03	704.35	111.68	7.307		
15,100.00	10,090.81	15,662.70	10,609.96	42.44	87.95	129.55	-5,186.66	-241.96	816.98	703.40	113.58	7.193		
15,200.00	10,089.52	15,762.69	10,610.17	43.07	89.53	129.63	-5,286.64	-241.23	817.93	702.45	115.48	7.083		
15,300.00	10,088.24	15,862.68	10,610.38	43.71	91.12	129.71	-5,386.63	-240.50	818.89	701.50	117.38	6.976		
15,400.00	10,086.95	15,962.66	10,610.59	44.34	92.70	129.79	-5,486.61	-239.76	819.84	700.55	119.29	6.873		
15,500.00	10,085.66	16,062.65	10,610.80	44.98	94.29	129.87	-5,586.60	-239.03	820.80	699.60	121.20	6.772		
15,600.00	10,084.38	16,162.64	10,611.01	45.63	95.88	129.95	-5,686.59	-238.30	821.76	698.64	123.12	6.675		
15,700.00	10,083.09	16,262.63	10,611.22	46.28	97.47	130.03	-5,786.57	-237.56	822.72	697.69	125.03	6.580		
15,800.00	10,081.81	16,362.62	10,611.43	46.93	99.06	130.11	-5,886.56	-236.83	823.68	696.73	126.95	6.488		
15,900.00	10,080.52	16,462.61	10,611.64	47.59	100.66	130.19	-5,986.54	-236.10	824.64	695.77	128.87	6.399		
16,000.00	10,079.24	16,562.60	10,611.85	48.25	102.25	130.27	-6,086.53	-235.36	825.61	694.81	130.80	6.312		
16,100.00	10,077.95	16,662.59	10,612.06	48.91	103.85	130.35	-6,186.51	-234.63	826.58	693.86	132.72	6.228		
16,200.00	10,076.66	16,762.57	10,612.27	49.58	105.45	130.43	-6,286.50	-233.90	827.55	692.90	134.65	6.146		
16,300.00	10,075.38	16,862.56	10,612.48	50.25	107.05	130.51	-6,386.49	-233.16	828.52	691.94	136.58	6.066		
16,400.00	10,074.09	16,962.55	10,612.69	50.92	108.65	130.59	-6,486.47	-232.43	829.49	690.98	138.50	5.989		
16,500.00	10,072.81	17,062.54	10,612.90	51.59	110.25	130.67	-6,586.46	-231.70	830.46	690.03	140.43	5.914		
16,600.00	10,071.52	17,162.53	10,613.11	52.27	111.85	130.74	-6,686.44	-230.96	831.44	689.07	142.37	5.840		
16,700.00	10,070.23	17,262.52	10,613.33	52.95	113.46	130.82	-6,786.43	-230.23	832.41	688.11	144.30	5.769		
16,800.00	10,068.95	17,362.51	10,613.54	53.63	115.06	130.90	-6,886.42	-229.49	833.39	687.16	146.23	5.699		
16,900.00	10,067.66	17,462.50	10,613.75	54.31	116.67	130.98	-6,986.40	-228.76	834.37	686.20	148.16	5.631		
17,000.00	10,066.38	17,562.48	10,613.96	55.00	118.28	131.06	-7,086.39	-228.03	835.35	685.25	150.10	5.565		
17,100.00	10,065.09	17,662.47	10,614.17	55.69	119.88	131.13	-7,186.37	-227.29	836.33	684.30	152.03	5.501		
17,200.00	10,063.80	17,762.46	10,614.38	56.38	121.49	131.21	-7,286.36	-226.56	837.32	683.35	153.97	5.438		
17,300.00	10,062.52	17,862.45	10,614.59	57.07	123.10	131.29	-7,386.35	-225.83	838.30	682.40	155.91	5.377		
17,400.00	10,061.23	17,962.44	10,614.80	57.76	124.71	131.36	-7,486.33	-225.09	839.29	681.45	157.84	5.317		
17,495.86	10,060.00	18,058.29	10,615.00	58.43	126.26	131.44	-7,582.18	-224.39	840.24	680.54	159.70	5.261 SF		

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 99H - OH - Plan #2													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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)						
0.00	0.00	0.00	0.00	0.00	0.00	89.68	0.33	59.94	59.94					
100.00	100.00	100.00	100.00	0.09	0.09	89.68	0.33	59.94	59.94	59.77	0.17	348.603		
200.00	200.00	200.00	200.00	0.31	0.31	89.68	0.33	59.94	59.94	59.32	0.62	96.449		
300.00	300.00	300.00	300.00	0.54	0.54	89.68	0.33	59.94	59.94	58.87	1.07	55.967		
400.00	400.00	400.00	400.00	0.76	0.76	89.68	0.33	59.94	59.94	58.42	1.52	39.421		
500.00	500.00	500.00	500.00	0.99	0.99	89.68	0.33	59.94	59.94	57.97	1.97	30.426		
600.00	600.00	600.00	600.00	1.21	1.21	89.68	0.33	59.94	59.94	57.52	2.42	24.773		
700.00	700.00	700.00	700.00	1.43	1.43	89.68	0.33	59.94	59.94	57.07	2.87	20.892		
800.00	800.00	800.00	800.00	1.66	1.66	89.68	0.33	59.94	59.94	56.62	3.32	18.062		
900.00	900.00	900.00	900.00	1.88	1.88	89.68	0.33	59.94	59.94	56.17	3.77	15.907		
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	89.68	0.33	59.94	59.94	55.72	4.22	14.212		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	89.68	0.33	59.94	59.94	55.27	4.67	12.843		
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	89.68	0.33	59.94	59.94	54.82	5.12	11.715		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	89.68	0.33	59.94	59.94	54.37	5.57	10.768		
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	89.68	0.33	59.94	59.94	53.93	6.02	9.964		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	89.68	0.33	59.94	59.94	53.48	6.47	9.271		
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	89.68	0.33	59.94	59.94	53.03	6.91	8.668		
1,700.00	1,700.00	1,700.00	1,700.00	3.68	3.68	89.68	0.33	59.94	59.94	52.58	7.36	8.139		
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	89.68	0.33	59.94	59.94	52.13	7.81	7.671		
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	89.68	0.33	59.94	59.94	51.68	8.26	7.254		
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	89.68	0.33	59.94	59.94	51.23	8.71	6.879 CC, ES		
2,100.00	2,100.00	2,098.96	2,098.95	4.58	4.57	89.62	0.40	60.79	60.80	51.66	9.15	6.648		
2,200.00	2,200.00	2,197.86	2,197.82	4.81	4.77	89.45	0.61	63.34	63.38	53.82	9.57	6.626		
2,300.00	2,300.00	2,296.64	2,296.51	5.03	4.97	89.19	0.96	67.59	67.69	57.70	9.98	6.779		
2,400.00	2,400.00	2,395.24	2,394.93	5.26	5.17	88.87	1.45	73.52	73.71	63.31	10.40	7.086		
2,500.00	2,500.00	2,493.61	2,493.00	5.48	5.39	88.54	2.07	81.12	81.45	70.63	10.82	7.529		
2,600.00	2,600.00	2,591.86	2,590.81	5.71	5.60	88.21	2.83	90.37	90.88	79.65	11.23	8.090		
2,700.00	2,700.00	2,691.34	2,689.78	5.93	5.83	87.91	3.66	100.41	101.00	89.33	11.67	8.657		
2,800.00	2,800.00	2,790.83	2,788.76	6.15	6.06	87.68	4.48	110.45	111.11	99.01	12.10	9.183		
2,900.00	2,900.00	2,890.32	2,887.73	6.38	6.29	87.48	5.31	120.49	121.23	108.70	12.54	9.671		
3,000.00	3,000.00	2,989.80	2,986.71	6.60	6.52	87.31	6.13	130.54	131.35	118.38	12.97	10.124		
3,100.00	3,100.00	3,089.29	3,085.68	6.83	6.76	87.17	6.96	140.58	141.48	128.06	13.41	10.548		
3,200.00	3,200.00	3,188.77	3,184.65	7.05	7.01	87.04	7.78	150.62	151.60	137.74	13.85	10.943		
3,300.00	3,300.00	3,288.26	3,283.63	7.28	7.25	86.93	8.61	160.66	161.72	147.43	14.30	11.313		
3,400.00	3,400.00	3,387.75	3,382.60	7.50	7.50	86.84	9.43	170.70	171.84	157.11	14.74	11.660		
3,500.00	3,500.00	3,487.23	3,481.58	7.73	7.75	86.75	10.26	180.74	181.97	166.79	15.18	11.986		
3,600.00	3,600.00	3,586.72	3,580.55	7.95	8.00	86.67	11.08	190.78	192.09	176.47	15.63	12.293		
3,700.00	3,700.00	3,686.20	3,679.53	8.18	8.25	86.61	11.91	200.83	202.22	186.15	16.07	12.583		
3,800.00	3,800.00	3,785.69	3,778.50	8.40	8.50	86.54	12.73	210.87	212.34	195.82	16.52	12.856		
3,900.00	3,900.00	3,885.18	3,877.47	8.63	8.76	86.49	13.56	220.91	222.47	205.50	16.96	13.114		
4,000.00	4,000.00	3,984.66	3,976.45	8.85	9.01	86.44	14.39	230.95	232.59	215.18	17.41	13.359		
4,100.00	4,100.00	4,084.23	4,075.51	9.06	9.27	-3.62	15.21	241.00	241.85	224.01	17.84	13.553		
4,200.00	4,199.96	4,183.94	4,174.71	9.26	9.53	-3.70	16.04	251.06	249.37	231.11	18.27	13.653		
4,300.00	4,299.86	4,283.77	4,274.03	9.46	9.79	-3.79	16.87	261.14	255.16	236.47	18.69	13.653		
4,400.00	4,399.68	4,383.69	4,373.43	9.66	10.05	-3.92	17.70	271.22	259.21	240.09	19.11	13.561		
4,411.45	4,411.10	4,395.14	4,384.81	9.69	10.08	-3.93	17.79	272.38	259.56	240.40	19.16	13.545		
4,500.00	4,499.42	4,483.64	4,472.87	9.87	10.31	-4.05	18.53	281.31	262.20	242.66	19.54	13.417		
4,600.00	4,599.16	4,583.60	4,572.31	10.08	10.58	-4.19	19.35	291.40	265.18	245.21	19.97	13.278		
4,700.00	4,698.90	4,683.55	4,671.75	10.29	10.84	-4.32	20.18	301.49	268.16	247.76	20.40	13.144		
4,800.00	4,798.65	4,783.50	4,771.19	10.50	11.10	-4.45	21.01	311.58	271.15	250.31	20.84	13.014		
4,900.00	4,898.39	4,883.46	4,870.63	10.71	11.37	-4.57	21.84	321.67	274.13	252.86	21.27	12.889		
5,000.00	4,998.13	4,983.41	4,970.06	10.93	11.64	-4.69	22.67	331.76	277.12	255.41	21.71	12.768		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 99H - OH - Plan #2													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	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,097.87	5,083.37	5,069.50	11.15	11.90	-4.81		23.50	341.85	280.11	257.97	22.14	12.651	
5,200.00	5,197.61	5,183.32	5,168.94	11.36	12.17	-4.93		24.33	351.93	283.10	260.52	22.58	12.538	
5,300.00	5,297.36	5,283.27	5,268.38	11.58	12.44	-5.05		25.16	362.02	286.09	263.07	23.02	12.428	
5,400.00	5,397.10	5,383.23	5,367.82	11.81	12.70	-5.16		25.99	372.11	289.08	265.62	23.46	12.322	
5,500.00	5,496.84	5,483.18	5,467.26	12.03	12.97	-5.27		26.82	382.20	292.07	268.17	23.90	12.220	
5,600.00	5,596.58	5,583.13	5,566.70	12.25	13.24	-5.38		27.65	392.29	295.06	270.72	24.34	12.121	
5,700.00	5,696.33	5,683.09	5,666.14	12.48	13.51	-5.48		28.48	402.38	298.06	273.27	24.79	12.025	
5,800.00	5,796.07	5,783.04	5,765.58	12.70	13.78	-5.59		29.30	412.47	301.05	275.82	25.23	11.932	
5,900.00	5,895.81	5,882.99	5,865.02	12.93	14.05	-5.69		30.13	422.55	304.05	278.38	25.68	11.842	
6,000.00	5,995.55	5,982.95	5,964.46	13.16	14.32	-5.79		30.96	432.64	307.05	280.93	26.12	11.754	
6,100.00	6,095.29	6,082.90	6,063.90	13.38	14.59	-5.89		31.79	442.73	310.05	283.48	26.57	11.670	
6,200.00	6,195.04	6,182.86	6,163.34	13.61	14.86	-5.98		32.62	452.82	313.05	286.03	27.02	11.587	
6,300.00	6,294.78	6,282.81	6,262.78	13.84	15.13	-6.08		33.45	462.91	316.05	288.58	27.46	11.508	
6,400.00	6,394.52	6,382.76	6,362.22	14.07	15.40	-6.17		34.28	473.00	319.05	291.13	27.91	11.430	
6,500.00	6,494.26	6,482.72	6,461.66	14.31	15.67	-6.26		35.11	483.09	322.05	293.69	28.36	11.355	
6,600.00	6,594.01	6,582.67	6,561.10	14.54	15.94	-6.35		35.94	493.18	325.05	296.24	28.81	11.282	
6,700.00	6,693.75	6,682.62	6,660.54	14.77	16.21	-6.44		36.77	503.26	328.06	298.79	29.26	11.211	
6,800.00	6,793.49	6,782.58	6,759.98	15.01	16.48	-6.52		37.60	513.35	331.06	301.35	29.71	11.141	
6,900.00	6,893.23	6,882.53	6,859.42	15.24	16.75	-6.61		38.43	523.44	334.06	303.90	30.17	11.074	
7,000.00	6,992.97	6,982.48	6,958.86	15.47	17.03	-6.69		39.26	533.53	337.07	306.45	30.62	11.009	
7,100.00	7,092.72	7,082.44	7,058.30	15.71	17.30	-6.77		40.08	543.62	340.08	309.00	31.07	10.945	
7,200.00	7,192.46	7,182.39	7,157.74	15.95	17.57	-6.85		40.91	553.71	343.08	311.56	31.52	10.883	
7,300.00	7,292.20	7,282.35	7,257.18	16.18	17.84	-6.93		41.74	563.80	346.09	314.11	31.98	10.823	
7,400.00	7,391.94	7,382.30	7,356.62	16.42	18.12	-7.01		42.57	573.88	349.10	316.67	32.43	10.764	
7,500.00	7,491.69	7,482.25	7,456.06	16.66	18.39	-7.08		43.40	583.97	352.11	319.22	32.89	10.707	
7,600.00	7,591.43	7,582.21	7,555.50	16.89	18.66	-7.16		44.23	594.06	355.12	321.78	33.34	10.651	
7,700.00	7,691.17	7,682.16	7,654.94	17.13	18.94	-7.23		45.06	604.15	358.13	324.33	33.80	10.596	
7,800.00	7,790.91	7,782.11	7,754.38	17.37	19.21	-7.30		45.89	614.24	361.14	326.88	34.25	10.543	
7,900.00	7,890.66	7,882.07	7,853.82	17.61	19.48	-7.37		46.72	624.33	364.15	329.44	34.71	10.491	
8,000.00	7,990.40	7,982.02	7,953.26	17.85	19.76	-7.44		47.55	634.42	367.16	331.99	35.17	10.441	
8,100.00	8,090.14	8,081.97	8,052.70	18.09	20.03	-7.51		48.38	644.50	370.17	334.55	35.62	10.391	
8,200.00	8,189.88	8,181.93	8,152.14	18.33	20.30	-7.58		49.21	654.59	373.19	337.11	36.08	10.343	
8,300.00	8,289.62	8,281.88	8,251.58	18.57	20.58	-7.65		50.03	664.68	376.20	339.66	36.54	10.296	
8,400.00	8,389.37	8,381.84	8,351.02	18.81	20.85	-7.71		50.86	674.77	379.21	342.22	37.00	10.250	
8,500.00	8,489.11	8,481.79	8,450.46	19.05	21.12	-7.78		51.69	684.86	382.23	344.77	37.45	10.205	
8,600.00	8,588.85	8,581.74	8,549.90	19.29	21.40	-7.84		52.52	694.95	385.24	347.33	37.91	10.161	
8,700.00	8,688.59	8,681.70	8,649.34	19.53	21.67	-7.90		53.35	705.04	388.26	349.89	38.37	10.119	
8,800.00	8,788.34	8,781.65	8,748.78	19.78	21.95	-7.96		54.18	715.13	391.27	352.44	38.83	10.077	
8,877.86	8,865.99	8,859.47	8,826.20	19.96	22.16	-8.01		54.83	722.98	393.62	354.43	39.19	10.045	
8,900.00	8,888.08	8,881.60	8,848.21	20.01	22.22	-8.02		55.01	725.21	394.33	355.05	39.28	10.038	
9,000.00	8,987.90	8,981.51	8,947.61	20.21	22.49	-8.06		55.84	735.30	398.59	358.88	39.71	10.038	
9,100.00	9,087.82	9,081.33	9,046.91	20.40	22.77	-8.07		56.67	745.37	404.58	364.45	40.13	10.081	
9,200.00	9,187.79	9,181.03	9,146.10	20.59	23.04	-8.05		57.49	755.44	412.29	371.74	40.55	10.167	
9,289.31	9,277.09	9,272.95	9,237.56	20.75	23.28	-82.00		58.24	764.57	420.50	379.57	40.93	10.273	
9,300.00	9,287.78	9,284.43	9,249.00	20.77	23.31	-82.01		58.33	765.63	421.50	380.51	40.98	10.285	
9,400.00	9,387.78	9,392.08	9,356.27	20.98	23.53	-82.08		59.06	774.52	429.76	388.35	41.42	10.377	
9,500.00	9,487.78	9,500.02	9,463.98	21.19	23.74	-82.13		59.63	781.41	436.16	394.32	41.84	10.426	
9,589.31	9,577.09	9,596.61	9,560.47	21.38	23.91	-82.16		59.99	785.86	440.28	398.08	42.20	10.434	
9,600.00	9,587.78	9,608.18	9,572.03	21.40	23.93	-97.39		60.03	786.28	440.69	398.45	42.24	10.433	
9,650.00	9,637.67	9,662.19	9,626.02	21.49	24.03	-97.61		60.17	787.96	442.65	400.22	42.43	10.432	
9,700.00	9,687.09	9,715.73	9,679.55	21.58	24.12	-98.41		60.26	789.11	444.79	402.16	42.63	10.434	
9,750.00	9,735.68	9,768.39	9,732.20	21.68	24.20	-99.72		60.32	789.76	447.33	404.49	42.84	10.443	

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 99H - OH - Plan #2													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 (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)						
9,800.00	9,783.07	9,819.25	9,783.07	21.77	24.29	-101.43	60.33	789.94	450.59	407.52	43.06	10.463		
9,850.00	9,828.88	9,865.07	9,828.88	21.87	24.37	-103.25	60.33	789.94	455.24	411.91	43.33	10.506		
9,900.00	9,872.78	9,908.96	9,872.78	21.97	24.44	-105.16	60.33	789.94	461.88	418.25	43.63	10.587		
9,950.00	9,914.43	9,950.61	9,914.43	22.07	24.52	-107.04	60.33	789.94	470.95	426.99	43.97	10.712		
10,000.00	9,953.51	9,989.69	9,953.51	22.18	24.59	-108.73	60.33	789.94	482.88	438.54	44.34	10.891		
10,050.00	9,989.72	10,025.91	9,989.72	22.30	24.66	-110.12	60.33	789.94	498.00	453.26	44.74	11.131		
10,100.00	10,022.80	10,058.98	10,022.80	22.43	24.72	-111.07	60.33	789.94	516.57	471.40	45.17	11.437		
10,150.00	10,052.48	10,088.67	10,052.48	22.58	24.78	-111.47	60.33	789.94	538.68	493.08	45.60	11.814		
10,200.00	10,078.55	10,117.10	10,080.91	22.74	24.83	-111.42	60.32	789.94	564.32	518.30	46.02	12.262		
10,250.00	10,100.79	10,190.34	10,153.92	22.93	24.96	-115.26	55.15	789.98	592.27	546.00	46.27	12.800		
10,300.00	10,119.06	10,293.88	10,254.71	23.14	25.13	-120.87	32.10	790.15	620.76	574.80	45.95	13.508		
10,350.00	10,133.20	10,461.08	10,403.92	23.38	25.40	-129.00	-42.04	790.68	647.39	603.35	44.05	14.698		
10,400.00	10,143.10	10,756.01	10,593.24	23.64	26.01	-137.37	-263.93	792.29	666.00	627.26	38.75	17.189		
10,450.00	10,148.70	11,036.08	10,649.83	23.92	27.13	-138.61	-535.44	794.27	667.12	630.95	36.17	18.444		
10,495.02	10,150.02	11,081.06	10,649.38	24.19	27.37	-138.60	-580.41	794.59	665.79	629.26	36.53	18.224		
10,496.68	10,150.00	11,082.71	10,649.37	24.21	27.38	-138.60	-582.06	794.60	665.80	629.25	36.55	18.218		
10,500.00	10,149.96	11,086.04	10,649.33	24.23	27.40	-138.60	-585.39	794.63	665.80	629.23	36.57	18.206		
10,600.00	10,148.67	11,186.04	10,648.34	28.67	28.02	-138.61	-685.38	795.35	666.02	628.83	37.19	17.911		
10,700.00	10,147.39	11,286.04	10,647.35	28.75	28.71	-138.63	-785.37	796.08	666.24	628.56	37.67	17.685		
10,800.00	10,146.10	11,386.04	10,646.36	28.84	29.49	-138.65	-885.36	796.81	666.45	628.20	38.26	17.421		
10,900.00	10,144.81	11,486.04	10,645.37	28.92	30.33	-138.67	-985.36	797.53	666.67	627.74	38.93	17.125		
11,000.00	10,143.53	11,586.04	10,644.38	29.01	31.24	-138.68	-1,085.35	798.26	666.89	627.20	39.69	16.803		
11,100.00	10,142.24	11,686.04	10,643.38	29.10	32.20	-138.70	-1,185.34	798.98	667.10	626.58	40.53	16.461		
11,200.00	10,140.96	11,786.04	10,642.39	29.20	33.22	-138.72	-1,285.33	799.71	667.32	625.88	41.44	16.103		
11,300.00	10,139.67	11,886.03	10,641.40	29.29	34.29	-138.73	-1,385.32	800.44	667.54	625.11	42.42	15.735		
11,400.00	10,138.39	11,986.03	10,640.41	29.39	35.40	-138.75	-1,485.32	801.16	667.76	624.28	43.47	15.361		
11,500.00	10,137.10	12,086.03	10,639.42	29.49	36.55	-138.77	-1,585.31	801.89	667.97	623.39	44.58	14.983		
11,600.00	10,135.81	12,186.03	10,638.43	29.59	37.73	-138.78	-1,685.30	802.62	668.19	622.45	45.74	14.607		
11,700.00	10,134.53	12,286.03	10,637.43	29.69	38.95	-138.80	-1,785.29	803.34	668.41	621.45	46.96	14.233		
11,800.00	10,133.24	12,386.03	10,636.44	29.80	40.20	-138.82	-1,885.28	804.07	668.63	620.40	48.22	13.865		
11,900.00	10,131.96	12,486.03	10,635.45	29.91	41.48	-138.84	-1,985.28	804.79	668.84	619.31	49.53	13.503		
12,000.00	10,130.67	12,586.03	10,634.46	30.02	42.78	-138.85	-2,085.27	805.52	669.06	618.18	50.88	13.149		
12,100.00	10,129.38	12,686.03	10,633.47	30.14	44.10	-138.87	-2,185.26	806.25	669.28	617.01	52.27	12.804		
12,200.00	10,128.10	12,786.03	10,632.48	30.26	45.45	-138.89	-2,285.25	806.97	669.50	615.80	53.69	12.469		
12,300.00	10,126.81	12,886.03	10,631.48	30.38	46.81	-138.90	-2,385.24	807.70	669.71	614.57	55.15	12.144		
12,400.00	10,125.53	12,986.03	10,630.49	30.52	48.19	-138.92	-2,485.24	808.42	669.93	613.30	56.63	11.829		
12,500.00	10,124.24	13,086.03	10,629.50	30.66	49.58	-138.94	-2,585.23	809.15	670.15	612.00	58.15	11.525		
12,600.00	10,122.95	13,186.03	10,628.51	30.81	50.99	-138.95	-2,685.22	809.88	670.37	610.68	59.68	11.232		
12,700.00	10,121.67	13,286.03	10,627.52	30.97	52.42	-138.97	-2,785.21	810.60	670.59	609.34	61.25	10.949		
12,800.00	10,120.38	13,386.03	10,626.53	31.15	53.85	-138.99	-2,885.20	811.33	670.80	607.97	62.83	10.676		
12,900.00	10,119.10	13,486.03	10,625.53	31.36	55.30	-139.00	-2,985.20	812.05	671.02	606.58	64.44	10.413		
13,000.00	10,117.81	13,586.03	10,624.54	31.60	56.76	-139.02	-3,085.19	812.78	671.24	605.18	66.06	10.161		
13,100.00	10,116.53	13,686.03	10,623.55	31.88	58.22	-139.04	-3,185.18	813.51	671.46	603.75	67.71	9.917		
13,200.00	10,115.24	13,786.03	10,622.56	32.21	59.70	-139.06	-3,285.17	814.23	671.68	602.31	69.36	9.683		
13,300.00	10,113.95	13,886.03	10,621.57	32.57	61.18	-139.07	-3,385.16	814.96	671.89	600.86	71.04	9.458		
13,400.00	10,112.67	13,986.03	10,620.58	32.98	62.68	-139.09	-3,485.16	815.68	672.11	599.39	72.73	9.241		
13,500.00	10,111.38	14,086.03	10,619.58	33.42	64.17	-139.11	-3,585.15	816.41	672.33	597.90	74.43	9.033		
13,600.00	10,110.10	14,186.02	10,618.59	33.89	65.68	-139.12	-3,685.14	817.14	672.55	596.41	76.14	8.833		
13,700.00	10,108.81	14,286.02	10,617.60	34.38	67.19	-139.14	-3,785.13	817.86	672.77	594.90	77.87	8.640		
13,800.00	10,107.52	14,386.02	10,616.61	34.88	68.71	-139.16	-3,885.12	818.59	672.99	593.38	79.61	8.454		
13,900.00	10,106.24	14,486.02	10,615.62	35.41	70.23	-139.17	-3,985.12	819.31	673.21	591.85	81.36	8.275		
14,000.00	10,104.95	14,586.02	10,614.62	35.95	71.76	-139.19	-4,085.11	820.04	673.42	590.31	83.11	8.103		

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 Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Offset Design													Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 99H - OH - Plan #2		Offset Site Error:		0.00 usft
Survey Program: O-LEAM MWD+HDGM															Offset Well Error:		0.00 usft
Reference		Offset		Semi Major Axis			Distance										
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning					
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)						
14,100.00	10,103.67	14,686.02	10,613.63	36.50	73.29	-139.21	-4,185.10	820.77	673.64	588.77	84.88	7.937					
14,200.00	10,102.38	14,786.02	10,612.64	37.06	74.83	-139.22	-4,285.09	821.49	673.86	587.21	86.65	7.777					
14,300.00	10,101.09	14,886.02	10,611.65	37.63	76.37	-139.24	-4,385.08	822.22	674.08	585.65	88.43	7.623					
14,400.00	10,099.81	14,986.02	10,610.66	38.21	77.92	-139.26	-4,485.08	822.94	674.30	584.08	90.22	7.474					
14,500.00	10,098.52	15,086.02	10,609.67	38.79	79.47	-139.27	-4,585.07	823.67	674.52	582.50	92.02	7.330					
14,600.00	10,097.24	15,186.02	10,608.67	39.38	81.02	-139.29	-4,685.06	824.40	674.74	580.92	93.82	7.192					
14,700.00	10,095.95	15,286.02	10,607.68	39.98	82.58	-139.31	-4,785.05	825.12	674.96	579.33	95.63	7.058					
14,800.00	10,094.67	15,386.02	10,606.69	40.59	84.14	-139.32	-4,885.04	825.85	675.18	577.73	97.44	6.929					
14,900.00	10,093.38	15,486.02	10,605.70	41.20	85.70	-139.34	-4,985.04	826.57	675.40	576.13	99.26	6.804					
15,000.00	10,092.09	15,586.02	10,604.71	41.82	87.26	-139.36	-5,085.03	827.30	675.62	574.53	101.09	6.684					
15,100.00	10,090.81	15,686.02	10,603.72	42.44	88.83	-139.37	-5,185.02	828.03	675.83	572.92	102.92	6.567					
15,200.00	10,089.52	15,786.02	10,602.72	43.07	90.40	-139.39	-5,285.01	828.75	676.05	571.31	104.75	6.454					
15,300.00	10,088.24	15,886.02	10,601.73	43.71	91.98	-139.41	-5,385.01	829.48	676.27	569.69	106.59	6.345					
15,400.00	10,086.95	15,986.02	10,600.74	44.34	93.55	-139.42	-5,485.00	830.21	676.49	568.06	108.43	6.239					
15,500.00	10,085.66	16,086.02	10,599.75	44.98	95.13	-139.44	-5,584.99	830.93	676.71	566.44	110.27	6.137					
15,600.00	10,084.38	16,186.02	10,598.76	45.63	96.71	-139.46	-5,684.98	831.66	676.93	564.81	112.12	6.037					
15,700.00	10,083.09	16,286.02	10,597.77	46.28	98.29	-139.47	-5,784.97	832.38	677.15	563.18	113.98	5.941					
15,800.00	10,081.81	16,386.02	10,596.77	46.93	99.87	-139.49	-5,884.97	833.11	677.37	561.54	115.83	5.848					
15,900.00	10,080.52	16,486.01	10,595.78	47.59	101.46	-139.51	-5,984.96	833.84	677.59	559.90	117.69	5.757					
16,000.00	10,079.24	16,586.01	10,594.79	48.25	103.04	-139.52	-6,084.95	834.56	677.81	558.26	119.55	5.670					
16,100.00	10,077.95	16,686.01	10,593.80	48.91	104.63	-139.54	-6,184.94	835.29	678.03	556.62	121.42	5.584					
16,200.00	10,076.66	16,786.01	10,592.81	49.58	106.22	-139.55	-6,284.93	836.01	678.25	554.97	123.28	5.502					
16,300.00	10,075.38	16,886.01	10,591.82	50.25	107.81	-139.57	-6,384.93	836.74	678.47	553.32	125.15	5.421					
16,400.00	10,074.09	16,986.01	10,590.82	50.92	109.40	-139.59	-6,484.92	837.47	678.69	551.67	127.02	5.343					
16,500.00	10,072.81	17,086.01	10,589.83	51.59	111.00	-139.60	-6,584.91	838.19	678.91	550.02	128.90	5.267					
16,600.00	10,071.52	17,186.01	10,588.84	52.27	112.59	-139.62	-6,684.90	838.92	679.13	548.36	130.77	5.193					
16,700.00	10,070.23	17,286.01	10,587.85	52.95	114.19	-139.64	-6,784.89	839.64	679.35	546.70	132.65	5.121					
16,800.00	10,068.95	17,386.01	10,586.86	53.63	115.79	-139.65	-6,884.89	840.37	679.57	545.04	134.53	5.052					
16,900.00	10,067.66	17,486.01	10,585.87	54.31	117.38	-139.67	-6,984.88	841.10	679.79	543.38	136.41	4.983					
17,000.00	10,066.38	17,586.01	10,584.87	55.00	118.98	-139.69	-7,084.87	841.82	680.01	541.72	138.29	4.917					
17,100.00	10,065.09	17,686.01	10,583.88	55.69	120.59	-139.70	-7,184.86	842.55	680.23	540.06	140.18	4.853					
17,200.00	10,063.80	17,786.01	10,582.89	56.38	122.19	-139.72	-7,284.85	843.27	680.45	538.39	142.06	4.790					
17,300.00	10,062.52	17,886.01	10,581.90	57.07	123.79	-139.74	-7,384.85	844.00	680.68	536.73	143.95	4.729					
17,400.00	10,061.23	17,986.01	10,580.91	57.76	125.39	-139.75	-7,484.84	844.73	680.90	535.06	145.84	4.669					
17,495.86	10,060.00	18,077.45	10,580.00	58.43	126.59	-139.77	-7,576.27	845.39	681.12	533.71	147.42	4.620 SF					

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

LEAM Drilling Systems LLC

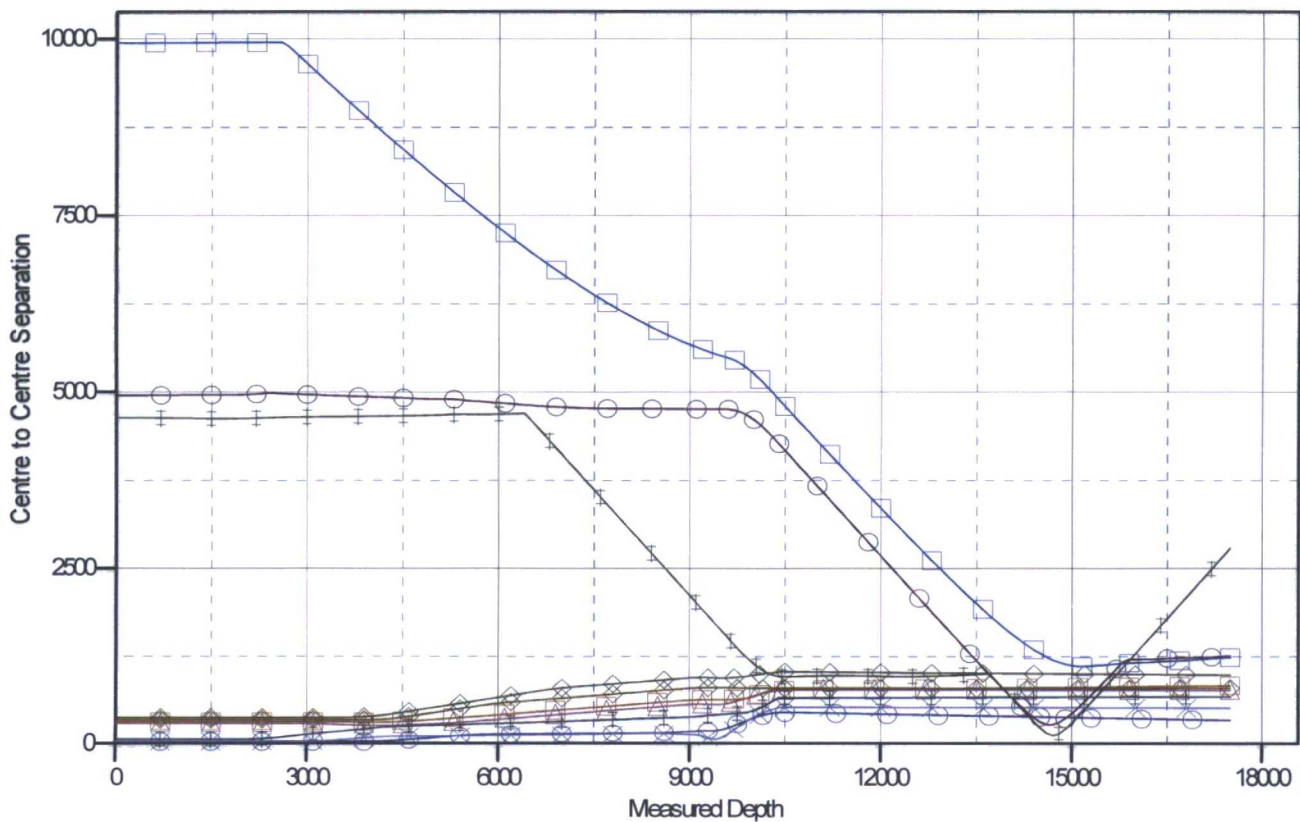
Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3711.5' GE + 23.5' KB @ 3735.00usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: Thistle Unit 133H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.41°

Ladder Plot



LEGEND

- Thistle Unit 110H, OH, Plan #2 V0
- Thistle Unit 114H, OH, Plan #2 V0
- 62H, OH, OH V0
- Thistle Unit 160H, OH, Plan #2 V0
- Thistle Unit 161H, OH, Plan #2 V0
- 72H, OH, OH V0
- Thistle Unit 86H, OH, Plan #2 V0
- Thistle Unit 99H, OH, Plan #2 V0
- Thistle Unit 125H, OH, Plan #2 V0
- 57H, OH, OH V0

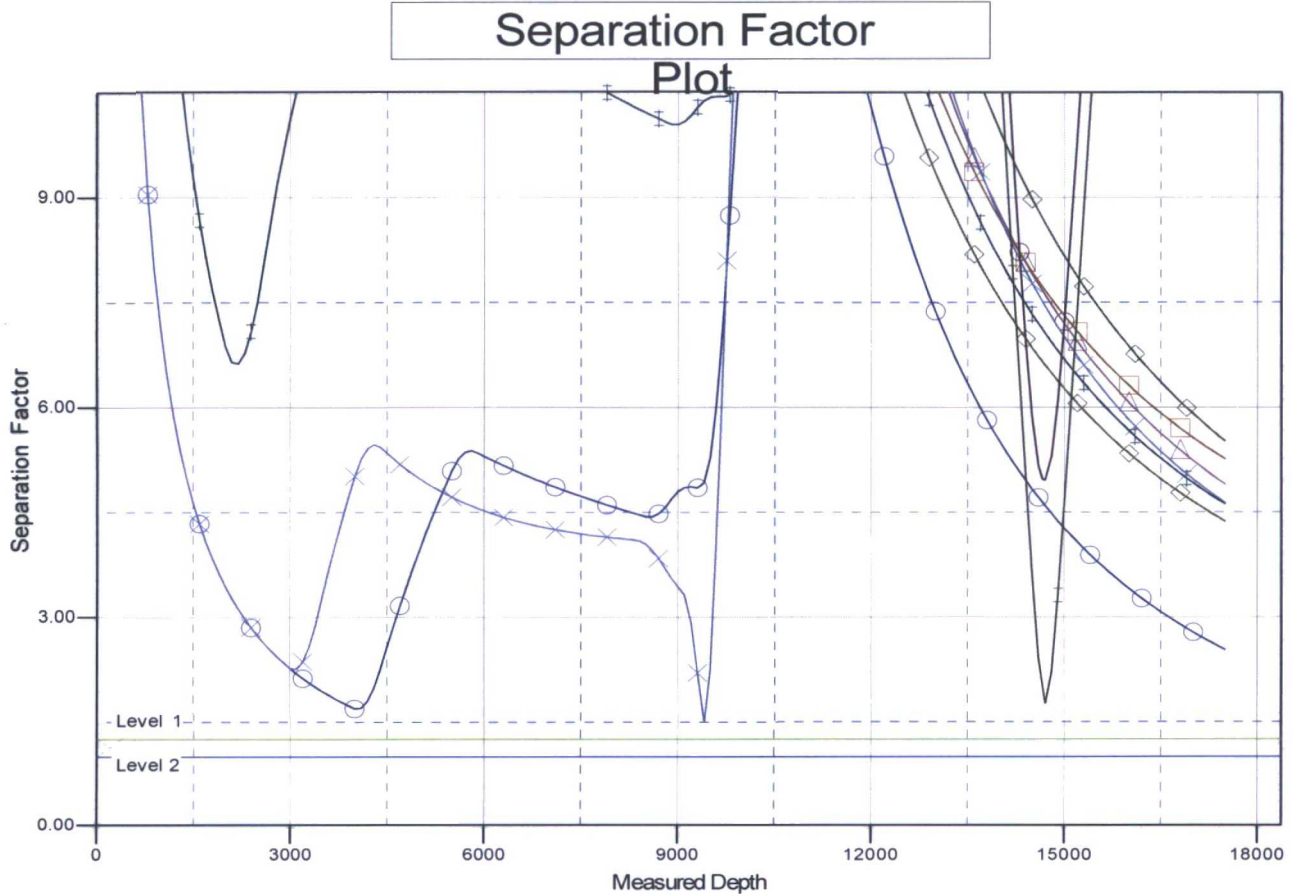
LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 133H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 133H	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 #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3711.5' GE + 23.5' KB @ 3735.00usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: Thistle Unit 133H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.41°



LEGEND

- ◆ Thistle Unit 110H, OH, Plan #2 V0 ○ Thistle Unit 114H, OH, Plan #2 V0 ◆ 62H, OH, OH V0
- ▲ Thistle Unit 160H, OH, Plan #2 V0 × Thistle Unit 161H, OH, Plan #2 V0 ◆ 72H, OH, OH V0
- Thistle Unit 86H, OH, Plan #2 V0 ◆ Thistle Unit 99H, OH, Plan #2 V0
- ◆ Thistle Unit 125H, OH, Plan #2 V0 ○ 57H, OH, OH V0

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