

Devon Energy

Lea County, NM (NAD-83)

Thistle Unit Sec 22-27 Trac Pad

Thistle Unit 142H

OH

Plan #2

Anticollision Report

20 September, 2017

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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	9,973.33	Plan #2 (OH)	LEAM MWD+HDGM	MWD+HDGM	
9,973.33	16,973.85	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						
109H - OH - OH	8,826.82	8,821.77	445.11	409.49	12.498	CC
109H - OH - OH	8,862.49	8,857.70	445.20	409.44	12.453	ES
109H - OH - OH	16,973.85	17,602.00	742.92	595.82	5.051	SF
124H - OH - OH	9,737.57	9,812.15	455.38	415.48	11.414	CC
124H - OH - OH	15,700.00	15,797.02	489.85	346.93	3.427	ES
124H - OH - OH	16,900.00	16,989.15	518.70	351.93	3.110	SF
26H - OH - OH	9,002.08	13,419.07	207.39	112.91	2.195	CC, ES, SF
94H - OH - OH	8,847.32	8,836.85	519.10	483.94	14.764	CC
94H - OH - OH	8,900.00	8,888.81	519.26	483.89	14.680	ES
94H - OH - OH	16,973.85	18,012.00	1,152.80	1,026.11	9.099	SF
94H - ST - ST	8,847.32	8,836.85	519.10	483.94	14.764	CC
94H - ST - ST	8,900.00	8,888.81	519.26	483.89	14.680	ES
94H - ST - ST	16,973.85	18,012.00	1,156.45	1,041.46	10.057	SF
Thistle Unit (Offsets)						
55H - OH - OH	14,237.63	9,567.38	186.46	144.84	4.480	CC, ES, SF
61H - OH - OH	14,130.81	9,573.83	100.57	41.25	1.695	CC, ES, SF
Thistle Unit Sec 22-27 Trac Pad						
Thistle Unit 110H - OH - Plan #2	2,500.00	2,501.40	30.00	19.04	2.736	CC, ES
Thistle Unit 110H - OH - Plan #2	16,973.85	17,194.06	333.35	172.14	2.068	SF
Thistle Unit 125H - OH - Plan #2	2,500.00	2,501.20	59.99	49.03	5.472	CC, ES
Thistle Unit 125H - OH - Plan #2	16,973.85	17,553.86	714.27	571.97	5.020	SF
Thistle Unit 160H - OH - Plan #2	2,500.00	2,500.30	119.95	108.99	10.943	CC, ES
Thistle Unit 160H - OH - Plan #2	16,973.85	17,057.94	631.94	447.83	3.432	SF
Thistle Unit 86H - OH - Plan #2	2,500.00	2,500.40	90.01	79.05	8.212	CC, ES
Thistle Unit 86H - OH - Plan #2	2,700.00	2,700.36	93.50	81.68	7.911	SF

Offset Design	Thistle Unit - 109H - OH - OH	Offset Site Error:	0.00 usft
Survey Program:	145-MWD-ISCWSA, 1461-LEAM MWD+HDGM, 17602-Project	Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis	Distance
Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)
0.00	0.00	5.69	5.69
		0.00	0.01
		-85.27	79.49
		-960.45	963.74

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

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Reference Well:	Thistle Unit 142H	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 - 109H - OH - OH												Offset Site Error:	0.00 usft
Survey Program: 145-MWD-ISCWSA, 1461-LEAM MWD+HDGM, 17602-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	
100.00	100.00	98.99	98.99	0.09	0.09	-85.27	79.50	-960.82	964.12	963.94	0.19	5,207.608	
200.00	200.00	194.85	194.85	0.31	0.24	-85.27	79.64	-961.78	965.14	964.58	0.56	1,729.400	
300.00	300.00	293.86	293.85	0.54	0.45	-85.22	80.53	-962.93	966.37	965.38	0.99	974.706	
400.00	400.00	393.94	393.91	0.76	0.67	-85.16	81.62	-964.12	967.65	966.22	1.43	678.812	
500.00	500.00	497.16	497.11	0.99	0.88	-85.08	83.01	-965.18	968.78	966.92	1.86	520.458	
600.00	600.00	596.99	596.93	1.21	1.09	-85.02	84.09	-965.99	969.68	967.39	2.29	422.972	
700.00	700.00	696.00	695.94	1.43	1.29	-84.97	85.10	-966.89	970.68	967.96	2.73	356.159	
800.00	800.00	789.00	788.93	1.66	1.49	-84.95	85.57	-968.16	972.09	968.94	3.15	308.823	
900.00	900.00	888.04	887.95	1.88	1.71	-84.93	86.04	-969.92	973.90	970.32	3.58	271.742	
1,000.00	1,000.00	988.68	988.57	2.11	1.92	-84.90	86.72	-971.73	975.75	971.73	4.02	242.717	
1,100.00	1,100.00	1,090.55	1,090.43	2.33	2.13	-84.86	87.57	-973.36	977.41	972.96	4.46	219.319	
1,200.00	1,200.00	1,190.93	1,190.79	2.56	2.34	-84.82	88.38	-974.91	979.03	974.14	4.89	200.263	
1,300.00	1,300.00	1,289.27	1,289.11	2.78	2.55	-84.79	88.98	-976.39	980.58	975.26	5.32	184.423	
1,400.00	1,400.00	1,388.33	1,388.16	3.01	2.69	-84.78	89.35	-978.20	982.43	976.75	5.68	172.990	
1,500.00	1,500.00	1,489.98	1,489.79	3.23	2.77	-84.77	89.67	-979.96	984.19	978.20	5.99	164.327	
1,600.00	1,600.00	1,592.05	1,591.85	3.46	2.80	-84.75	90.13	-981.50	985.73	979.49	6.24	157.923	
1,700.00	1,700.00	1,689.24	1,689.03	3.68	2.84	-84.72	90.88	-982.91	987.25	980.75	6.51	151.767	
1,800.00	1,800.00	1,799.95	1,799.72	3.91	2.91	-84.68	91.73	-984.37	988.66	981.87	6.79	145.603	
1,900.00	1,900.00	1,909.18	1,908.95	4.13	2.99	-84.61	92.88	-984.42	988.79	981.70	7.10	139.341	
2,000.00	2,000.00	2,012.53	2,012.29	4.36	3.08	-84.54	93.98	-983.82	988.32	980.91	7.41	133.301	
2,100.00	2,100.00	2,113.56	2,113.32	4.58	3.18	-84.48	95.05	-983.03	987.65	979.90	7.74	127.576	
2,200.00	2,200.00	2,214.42	2,214.16	4.81	3.29	-84.47	95.15	-982.23	986.86	978.79	8.08	122.203	
2,300.00	2,300.00	2,313.65	2,313.39	5.03	3.40	-84.48	94.81	-981.46	986.06	977.64	8.42	117.155	
2,400.00	2,400.00	2,410.97	2,410.71	5.26	3.52	-84.46	95.18	-980.84	985.46	976.70	8.76	112.440	
2,500.00	2,500.00	2,508.94	2,508.68	5.48	3.65	-84.41	96.03	-980.40	985.10	975.98	9.12	108.044	
2,600.00	2,599.99	2,609.41	2,609.14	5.69	3.79	5.64	96.74	-980.12	984.02	974.56	9.46	103.972	
2,700.00	2,699.96	2,712.29	2,712.02	5.89	3.94	5.69	97.14	-979.55	980.90	971.09	9.81	99.973	
2,800.00	2,799.86	2,811.92	2,811.64	6.09	4.09	5.75	97.69	-978.89	975.95	965.79	10.17	96.007	
2,900.00	2,899.68	2,910.69	2,910.41	6.30	4.24	5.85	98.49	-978.27	969.34	958.82	10.52	92.116	
2,917.68	2,917.31	2,928.09	2,927.81	6.33	4.27	5.87	98.64	-978.18	968.01	957.42	10.59	91.434	
3,000.00	2,999.41	3,010.02	3,009.73	6.51	4.40	5.95	99.41	-977.74	961.69	950.80	10.89	88.331	
3,100.00	3,099.15	3,110.10	3,109.81	6.72	4.57	6.06	100.44	-977.17	953.99	942.73	11.26	84.740	
3,200.00	3,198.88	3,209.58	3,209.28	6.94	4.74	6.17	101.36	-976.60	946.27	934.64	11.63	81.350	
3,300.00	3,298.61	3,308.75	3,308.44	7.16	4.91	6.29	102.47	-976.05	938.61	926.60	12.01	78.160	
3,400.00	3,398.35	3,408.01	3,407.69	7.38	5.08	6.41	103.70	-975.54	931.00	918.61	12.39	75.138	
3,500.00	3,498.08	3,507.32	3,507.00	7.60	5.25	6.53	104.78	-975.10	923.43	910.66	12.77	72.286	
3,600.00	3,597.82	3,607.59	3,607.27	7.82	5.43	6.65	105.80	-974.65	915.87	902.71	13.17	69.561	
3,700.00	3,697.55	3,708.08	3,707.74	8.05	5.61	6.78	106.97	-974.10	908.23	894.67	13.56	66.976	
3,800.00	3,797.29	3,806.53	3,806.19	8.28	5.79	6.92	108.19	-973.56	900.61	886.65	13.96	64.531	
3,900.00	3,897.02	3,904.77	3,904.41	8.51	5.98	7.05	109.37	-973.19	893.15	878.80	14.35	62.228	
4,000.00	3,996.76	4,009.81	4,009.44	8.74	6.17	7.21	110.76	-972.57	885.50	870.73	14.76	59.975	
4,100.00	4,096.49	4,115.04	4,114.65	8.97	6.37	7.39	112.43	-971.23	877.22	862.04	15.18	57.797	
4,200.00	4,196.22	4,220.52	4,220.10	9.20	6.58	7.58	114.12	-969.20	868.30	852.71	15.60	55.675	
4,300.00	4,295.96	4,326.64	4,326.18	9.44	6.78	7.76	115.38	-966.42	858.66	842.64	16.01	53.619	
4,400.00	4,395.69	4,435.79	4,435.26	9.67	6.99	7.91	115.95	-962.75	848.20	831.76	16.44	51.609	
4,500.00	4,495.43	4,542.62	4,541.97	9.91	7.20	8.06	116.49	-957.78	836.45	819.60	16.86	49.622	
4,600.00	4,595.16	4,643.30	4,642.51	10.15	7.40	8.28	117.85	-952.55	824.31	807.04	17.27	47.722	
4,700.00	4,694.90	4,750.45	4,749.48	10.38	7.61	8.50	118.91	-946.58	811.77	794.07	17.69	45.880	
4,800.00	4,794.63	4,860.06	4,858.85	10.62	7.83	8.67	118.97	-939.22	797.97	779.86	18.11	44.059	
4,900.00	4,894.37	4,959.93	4,958.44	10.86	8.04	8.80	118.57	-931.86	783.46	764.93	18.53	42.276	
5,000.00	4,994.10	5,055.41	5,053.66	11.10	8.23	8.94	118.28	-924.84	768.99	750.04	18.95	40.579	
5,100.00	5,093.83	5,147.26	5,145.32	11.34	8.42	9.07	118.05	-918.85	755.35	735.98	19.37	39.001	

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

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Offset Design Thistle Unit - 109H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 145-MWD-ISCWSA, 1461-LEAM MWD+HDGM, 17602-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	
5,200.00	5,193.57	5,244.39	5,242.28	11.58	8.61	9.21	117.77	-913.17	742.36	722.58	19.78	37.530	
5,300.00	5,293.30	5,347.27	5,344.97	11.83	8.82	9.39	117.93	-906.87	729.18	708.98	20.20	36.095	
5,400.00	5,393.04	5,446.02	5,443.50	12.07	9.03	9.69	119.35	-900.37	715.77	695.14	20.63	34.696	
5,500.00	5,492.77	5,541.13	5,538.37	12.31	9.23	10.08	122.03	-894.22	702.73	681.67	21.06	33.370	
5,600.00	5,592.51	5,638.27	5,635.25	12.56	9.44	10.57	125.64	-888.18	690.12	668.63	21.49	32.114	
5,700.00	5,692.24	5,734.83	5,731.57	12.80	9.64	11.08	129.36	-882.42	677.84	655.92	21.92	30.925	
5,800.00	5,791.97	5,828.21	5,824.72	13.04	9.84	11.63	133.47	-877.39	666.29	643.94	22.35	29.813	
5,900.00	5,891.71	5,924.57	5,920.85	13.29	10.04	12.25	138.27	-872.70	655.43	632.65	22.78	28.767	
6,000.00	5,991.44	6,021.86	6,017.91	13.53	10.25	12.90	143.24	-868.26	644.98	621.76	23.22	27.777	
6,100.00	6,091.18	6,119.36	6,115.21	13.78	10.45	13.54	147.97	-864.26	635.00	611.35	23.66	26.844	
6,200.00	6,190.91	6,222.63	6,218.24	14.02	10.67	14.27	153.17	-859.64	624.79	600.69	24.10	25.924	
6,300.00	6,290.65	6,322.84	6,318.18	14.27	10.90	15.05	158.56	-854.61	614.25	589.70	24.55	25.020	
6,400.00	6,390.38	6,420.99	6,416.08	14.51	11.11	15.82	163.73	-849.78	603.88	578.88	25.00	24.159	
6,500.00	6,490.12	6,519.36	6,514.21	14.76	11.32	16.60	168.81	-845.11	593.76	568.32	25.44	23.339	
6,600.00	6,589.85	6,618.55	6,613.15	15.01	11.54	17.42	173.96	-840.47	583.84	557.95	25.89	22.549	
6,700.00	6,689.58	6,716.16	6,710.52	15.25	11.75	18.28	179.21	-835.86	574.05	547.70	26.35	21.788	
6,800.00	6,789.32	6,811.89	6,805.99	15.50	11.96	19.18	184.88	-831.73	564.95	538.15	26.80	21.079	
6,900.00	6,889.05	6,909.42	6,903.31	15.75	12.17	20.05	190.16	-828.18	556.47	529.22	27.25	20.418	
7,000.00	6,988.79	7,006.40	7,000.13	16.00	12.38	20.88	194.88	-825.10	548.37	520.67	27.70	19.794	
7,100.00	7,088.52	7,101.95	7,095.57	16.24	12.58	21.60	198.69	-823.04	541.01	512.87	28.15	19.221	
7,200.00	7,188.26	7,199.73	7,193.30	16.49	12.78	22.25	201.86	-821.88	534.36	505.77	28.59	18.689	
7,300.00	7,287.99	7,299.37	7,292.88	16.74	12.99	22.90	204.96	-820.82	527.84	498.80	29.04	18.177	
7,400.00	7,387.73	7,398.39	7,391.85	16.99	13.19	23.55	207.90	-819.87	521.43	491.94	29.49	17.684	
7,500.00	7,487.46	7,498.61	7,492.03	17.24	13.40	24.19	210.69	-819.07	515.16	485.22	29.93	17.210	
7,600.00	7,587.19	7,599.53	7,592.92	17.48	13.61	24.82	213.05	-818.19	508.71	478.32	30.38	16.743	
7,700.00	7,686.93	7,698.52	7,691.89	17.73	13.81	25.39	214.89	-817.45	502.21	471.38	30.83	16.291	
7,800.00	7,786.66	7,797.30	7,790.66	17.98	14.01	25.94	216.52	-817.03	495.98	464.70	31.27	15.860	
7,900.00	7,886.40	7,896.21	7,889.55	18.23	14.21	26.47	218.00	-816.87	489.95	458.23	31.72	15.447	
8,000.00	7,986.13	7,996.31	7,989.65	18.48	14.42	26.97	219.12	-816.97	484.03	451.86	32.16	15.050	
8,100.00	8,085.87	8,096.47	8,089.81	18.73	14.62	27.41	219.68	-817.23	478.03	445.43	32.61	14.661	
8,200.00	8,185.60	8,195.09	8,188.43	18.98	14.82	27.83	220.06	-817.66	472.14	439.09	33.05	14.287	
8,300.00	8,285.34	8,297.19	8,290.52	19.23	15.02	28.26	220.25	-818.05	466.14	432.64	33.49	13.918	
8,400.00	8,385.07	8,395.00	8,388.33	19.48	15.22	28.68	220.50	-818.43	460.19	426.25	33.93	13.561	
8,444.81	8,429.76	8,442.06	8,435.39	19.59	15.31	28.88	220.52	-818.61	457.49	423.35	34.14	13.402	
8,500.00	8,484.82	8,498.85	8,492.18	19.71	15.43	29.06	220.22	-818.67	454.10	419.74	34.37	13.214	
8,600.00	8,584.67	8,597.09	8,590.42	19.90	15.63	29.27	219.49	-818.95	449.23	414.48	34.75	12.926	
8,700.00	8,684.60	8,695.24	8,688.56	20.08	15.82	29.37	218.84	-819.66	446.30	411.17	35.13	12.703	
8,800.00	8,784.58	8,794.75	8,788.07	20.26	16.02	29.34	218.10	-820.72	445.16	409.65	35.51	12.535	
8,826.82	8,811.40	8,821.77	8,815.08	20.31	16.08	29.30	217.85	-821.03	445.11	409.49	35.62	12.498 CC	
8,862.49	8,847.07	8,857.70	8,851.01	20.37	16.15	-60.76	217.49	-821.45	445.20	409.44	35.75	12.453 ES	
8,900.00	8,884.58	8,894.73	8,888.04	20.44	16.22	-60.83	217.11	-821.88	445.39	409.50	35.90	12.407	
9,000.00	8,984.58	8,993.33	8,986.62	20.64	16.42	-61.00	216.31	-823.20	446.16	409.86	36.30	12.292	
9,062.49	9,047.07	9,055.18	9,048.46	20.77	16.54	-61.09	215.95	-824.09	446.78	410.23	36.55	12.224	
9,100.00	9,084.55	9,092.57	9,085.85	20.84	16.62	119.32	215.76	-824.65	447.78	411.08	36.70	12.201	
9,150.00	9,134.24	9,142.16	9,135.44	20.93	16.71	119.57	215.53	-825.39	451.01	414.10	36.91	12.219	
9,200.00	9,183.26	9,190.78	9,184.05	21.02	16.81	120.07	215.37	-826.11	456.50	419.36	37.14	12.292	
9,250.00	9,231.25	9,238.27	9,231.53	21.12	16.91	120.78	215.36	-826.79	464.42	427.04	37.38	12.426	
9,300.00	9,277.84	9,284.73	9,277.99	21.21	17.00	121.62	215.44	-827.43	474.95	437.32	37.63	12.622	
9,350.00	9,322.67	9,329.48	9,322.73	21.31	17.09	122.48	215.53	-828.05	488.26	450.37	37.89	12.885	
9,400.00	9,365.40	9,370.75	9,364.00	21.41	17.17	123.20	215.64	-828.66	504.61	466.44	38.17	13.221	
9,450.00	9,405.71	9,409.25	9,402.49	21.52	17.25	123.68	215.81	-829.33	524.23	485.78	38.45	13.635	
9,500.00	9,443.29	9,451.40	9,444.63	21.63	17.33	124.28	215.84	-830.20	547.07	508.33	38.74	14.123	

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 109H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 145-MWD-ISCWSA, 1461-LEAM MWD+HDGM, 17602-Project													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,550.00	9,477.85	9,498.37	9,491.56	21.75	17.43	124.98	214.43	-831.46	572.50	533.48	39.02	14.670		
9,600.00	9,509.14	9,599.72	9,591.71	21.89	17.60	128.60	200.84	-836.11	599.14	560.02	39.12	15.317		
9,650.00	9,536.90	9,721.06	9,706.19	22.04	17.79	132.00	161.76	-842.96	622.70	584.02	38.68	16.100		
9,700.00	9,560.95	9,824.31	9,798.26	22.22	17.93	134.04	115.52	-848.68	646.13	608.02	38.11	16.953		
9,750.00	9,581.08	10,021.87	9,952.48	22.42	18.28	138.07	-6.44	-856.55	666.26	630.36	35.90	18.560		
9,800.00	9,597.14	10,481.69	10,103.27	22.64	20.41	137.41	-425.65	-868.60	665.27	632.70	32.57	20.423		
9,850.00	9,609.02	10,539.02	10,101.18	22.89	20.82	137.13	-482.93	-868.66	655.35	622.08	33.28	19.694		
9,900.00	9,616.62	10,583.21	10,099.40	23.17	21.12	137.07	-527.09	-868.66	648.52	614.64	33.88	19.144		
9,950.00	9,619.89	10,627.61	10,098.12	23.47	21.42	137.01	-571.47	-868.66	645.31	610.90	34.41	18.754		
9,965.06	9,620.02	10,637.00	10,097.91	23.57	21.49	137.00	-580.86	-868.66	645.07	610.52	34.54	18.674		
9,968.21	9,620.00	10,637.00	10,097.91	23.59	21.49	137.00	-580.86	-868.66	645.08	610.51	34.57	18.662		
10,000.00	9,619.68	10,668.58	10,097.49	27.08	21.70	136.98	-612.43	-868.68	645.18	610.32	34.86	18.510		
10,100.00	9,618.68	10,753.26	10,098.68	27.16	22.28	137.05	-697.11	-868.92	647.58	612.09	35.49	18.247		
10,200.00	9,617.68	10,855.17	10,100.33	27.23	23.15	137.09	-799.00	-869.93	650.66	614.51	36.15	17.999		
10,300.00	9,616.68	10,957.36	10,101.33	27.31	24.14	137.07	-901.16	-871.46	653.64	616.68	36.95	17.688		
10,400.00	9,615.69	11,065.27	10,100.89	27.39	25.26	136.95	-1,009.06	-873.17	655.65	617.79	37.86	17.318		
10,500.00	9,614.69	11,165.24	10,100.24	27.48	26.29	136.88	-1,109.02	-873.82	656.84	618.03	38.82	16.922		
10,600.00	9,613.69	11,263.02	10,100.59	27.56	27.32	136.89	-1,206.80	-874.17	658.58	618.78	39.80	16.546		
10,700.00	9,612.69	11,361.45	10,100.91	27.65	28.45	136.89	-1,305.23	-874.67	660.40	619.52	40.88	16.153		
10,800.00	9,611.69	11,450.92	10,101.52	27.75	29.47	136.87	-1,394.69	-875.78	663.00	620.98	42.02	15.777		
10,900.00	9,610.69	11,545.04	10,104.27	27.84	30.53	136.95	-1,488.76	-877.20	667.38	624.24	43.13	15.472		
11,000.00	9,609.69	11,655.99	10,107.74	27.94	31.87	137.13	-1,599.65	-877.77	671.27	627.01	44.26	15.165		
11,100.00	9,608.69	11,780.40	10,107.47	28.04	33.49	137.13	-1,724.05	-877.79	672.37	626.78	45.59	14.749		
11,200.00	9,607.69	11,877.36	10,105.55	28.15	34.72	137.06	-1,820.99	-877.30	671.81	624.87	46.93	14.314		
11,286.00	9,606.83	11,961.00	10,104.47	28.24	35.74	137.05	-1,904.62	-876.66	671.60	623.53	48.07	13.970		
11,300.00	9,606.69	11,973.66	10,104.34	28.26	35.90	137.05	-1,917.28	-876.57	671.61	623.35	48.26	13.917		
11,400.00	9,605.69	12,058.94	10,104.85	28.37	36.96	137.11	-2,002.55	-876.15	672.94	623.37	49.57	13.576		
11,500.00	9,604.69	12,161.84	10,106.73	28.50	38.31	137.27	-2,105.43	-875.58	675.13	624.21	50.92	13.258		
11,600.00	9,603.69	12,265.79	10,108.90	28.63	39.71	137.52	-2,209.35	-873.72	676.68	624.40	52.28	12.945		
11,700.00	9,602.70	12,366.26	10,111.32	28.77	41.05	137.80	-2,309.76	-871.64	678.30	624.68	53.62	12.650		
11,800.00	9,601.70	12,476.22	10,111.41	28.92	42.57	137.93	-2,419.71	-869.89	678.49	623.38	55.11	12.311		
11,832.94	9,601.37	12,508.14	10,111.15	28.97	43.02	137.94	-2,451.62	-869.55	678.47	622.86	55.61	12.200		
11,900.00	9,600.70	12,574.48	10,110.69	29.08	43.94	137.96	-2,517.96	-868.93	678.53	621.90	56.63	11.981		
12,000.00	9,599.70	12,679.28	10,110.68	29.27	45.39	138.10	-2,622.73	-866.90	678.46	620.33	58.14	11.670		
12,100.00	9,598.70	12,779.69	10,110.10	29.48	46.80	138.24	-2,723.11	-864.33	677.56	617.90	59.66	11.358		
12,200.00	9,597.70	12,877.12	10,110.94	29.72	48.16	138.50	-2,820.48	-861.03	677.19	616.09	61.10	11.084		
12,300.00	9,596.70	12,984.58	10,112.25	29.99	49.68	138.87	-2,927.84	-856.52	676.58	614.03	62.55	10.817		
12,400.00	9,595.70	13,085.96	10,112.80	30.31	51.14	139.23	-3,029.09	-851.48	674.97	610.97	64.00	10.547		
12,500.00	9,594.70	13,186.43	10,113.61	30.66	52.60	139.62	-3,129.42	-846.23	673.41	607.98	65.43	10.292		
12,600.00	9,593.70	13,284.62	10,114.16	31.04	54.04	139.97	-3,227.49	-841.44	671.92	605.03	66.89	10.045		
12,700.00	9,592.70	13,381.07	10,114.43	31.46	55.43	140.24	-3,323.87	-837.65	670.85	602.46	68.39	9.810		
12,800.00	9,591.70	13,476.75	10,114.52	31.91	56.82	140.43	-3,419.51	-834.97	670.38	600.45	69.93	9.587		
12,822.35	9,591.48	13,498.13	10,114.52	32.01	57.13	140.46	-3,440.88	-834.53	670.36	600.08	70.28	9.538		
12,900.00	9,590.71	13,572.41	10,114.45	32.38	58.21	140.53	-3,515.15	-833.46	670.56	599.03	71.53	9.375		
13,000.00	9,589.71	13,668.29	10,113.78	32.87	59.61	140.49	-3,611.03	-833.64	671.37	598.14	73.22	9.169		
13,100.00	9,588.71	13,769.34	10,111.63	33.38	61.10	140.23	-3,712.03	-835.95	672.43	597.32	75.11	8.952		
13,200.00	9,587.71	13,865.00	10,109.38	33.91	62.48	139.91	-3,807.61	-838.96	673.87	596.88	76.99	8.753		
13,300.00	9,586.71	13,963.53	10,107.57	34.44	63.90	139.62	-3,906.08	-842.05	675.73	596.85	78.89	8.566		
13,400.00	9,585.71	14,056.00	10,106.71	34.99	65.24	139.41	-3,998.51	-844.62	678.08	597.39	80.69	8.404		
13,500.00	9,584.71	14,154.59	10,107.34	35.56	66.64	139.33	-4,097.07	-846.58	681.09	598.63	82.46	8.260		
13,600.00	9,583.71	14,259.52	10,108.24	36.13	68.17	139.30	-4,201.99	-848.04	683.89	599.61	84.27	8.115		
13,700.00	9,582.71	14,362.33	10,108.49	36.71	69.70	139.24	-4,304.79	-849.30	686.10	599.99	86.11	7.968		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 109H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 145-MWD-ISCWSA, 1461-LEAM MWD+HDGM, 17602-Project														Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
13,800.00	9,581.71	14,461.70	10,108.11	37.29	71.20	139.13	-4,404.15	-850.82	688.04	600.07	87.97	7.821			
13,900.00	9,580.71	14,549.11	10,109.45	37.89	72.48	139.15	-4,491.54	-851.72	691.11	601.51	89.60	7.713			
14,000.00	9,579.71	14,654.67	10,111.88	38.49	74.05	139.23	-4,597.06	-852.70	694.70	603.31	91.39	7.601			
14,100.00	9,578.72	14,761.61	10,112.52	39.10	75.65	139.21	-4,704.00	-853.77	697.02	603.75	93.28	7.473			
14,200.00	9,577.72	14,855.52	10,113.36	39.72	77.03	139.19	-4,797.90	-854.84	699.67	604.66	95.01	7.364			
14,300.00	9,576.72	14,956.72	10,114.41	40.34	78.53	139.17	-4,899.08	-856.33	702.66	605.82	96.84	7.256			
14,400.00	9,575.72	15,060.89	10,114.63	40.96	80.11	139.09	-5,003.24	-857.97	705.08	606.31	98.77	7.139			
14,500.00	9,574.72	15,159.61	10,114.49	41.59	81.60	138.99	-5,101.95	-859.60	707.29	606.64	100.65	7.027			
14,600.00	9,573.72	15,256.99	10,114.30	42.23	83.06	138.84	-5,199.29	-861.89	709.92	607.36	102.56	6.922			
14,700.00	9,572.72	15,358.66	10,114.00	42.87	84.58	138.68	-5,300.93	-864.54	712.65	608.12	104.54	6.817			
14,800.00	9,571.72	15,465.66	10,113.93	43.52	86.16	138.59	-5,407.92	-866.01	714.76	608.27	106.49	6.712			
14,900.00	9,570.72	15,566.35	10,114.21	44.16	87.66	138.63	-5,508.61	-865.83	716.08	607.78	108.30	6.612			
15,000.00	9,569.72	15,667.60	10,113.44	44.82	89.21	138.53	-5,609.84	-867.00	717.51	607.26	110.25	6.508			
15,100.00	9,568.72	15,765.90	10,111.76	45.47	90.68	138.33	-5,708.11	-869.02	718.83	606.59	112.24	6.404			
15,200.00	9,567.72	15,866.65	10,110.40	46.13	92.14	138.15	-5,808.84	-870.95	720.33	606.11	114.22	6.306			
15,300.00	9,566.73	15,963.16	10,109.22	46.80	93.57	137.99	-5,905.32	-872.79	721.93	605.77	116.16	6.215			
15,400.00	9,565.73	16,061.74	10,108.08	47.46	95.02	137.79	-6,003.86	-875.19	723.94	605.79	118.15	6.127			
15,500.00	9,564.73	16,154.48	10,107.43	48.13	96.36	137.62	-6,096.56	-877.71	726.49	606.44	120.05	6.052			
15,600.00	9,563.73	16,251.34	10,107.79	48.81	97.76	137.50	-6,193.38	-880.35	729.83	607.88	121.95	5.984			
15,700.00	9,562.73	16,353.98	10,109.42	49.48	99.27	137.51	-6,296.00	-881.81	733.19	609.37	123.82	5.921			
15,800.00	9,561.73	16,460.51	10,111.65	50.16	100.86	137.65	-6,402.50	-881.69	735.89	610.25	125.64	5.857			
15,900.00	9,560.73	16,565.78	10,113.52	50.84	102.44	137.82	-6,507.75	-880.60	737.75	610.34	127.41	5.791			
16,000.00	9,559.73	16,670.61	10,115.33	51.52	104.02	138.02	-6,612.55	-878.81	739.12	609.99	129.13	5.724			
16,100.00	9,558.73	16,780.19	10,115.36	52.21	105.69	138.15	-6,722.11	-876.82	739.15	608.16	130.98	5.643			
16,200.00	9,557.73	16,878.73	10,113.96	52.89	107.20	138.14	-6,820.63	-875.93	738.72	605.86	132.86	5.560			
16,300.00	9,556.73	16,978.54	10,112.92	53.58	108.70	138.14	-6,920.44	-875.20	738.69	603.95	134.74	5.482			
16,400.00	9,555.73	17,079.73	10,110.93	54.28	110.24	138.05	-7,021.61	-875.00	738.32	601.61	136.71	5.401			
16,500.00	9,554.73	17,177.63	10,109.47	54.97	111.72	138.02	-7,119.50	-874.50	738.10	599.49	138.61	5.325			
16,517.21	9,554.56	17,194.40	10,109.21	55.09	111.98	138.01	-7,136.27	-874.46	738.10	599.16	138.94	5.312			
16,600.00	9,553.74	17,276.70	10,107.92	55.67	113.23	137.95	-7,218.55	-874.45	738.15	597.59	140.56	5.251			
16,700.00	9,552.74	17,372.09	10,106.39	56.36	114.69	137.86	-7,313.93	-874.79	738.43	595.93	142.50	5.182			
16,800.00	9,551.74	17,467.14	10,104.58	57.06	116.13	137.67	-7,408.95	-876.54	739.50	594.97	144.53	5.117			
16,900.00	9,550.74	17,567.66	10,102.00	57.76	117.31	137.37	-7,509.39	-879.62	740.90	594.43	146.47	5.058			
16,973.85	9,550.00	17,602.00	10,101.04	58.28	117.31	137.27	-7,543.70	-880.70	742.92	595.82	147.10	5.051 SF			

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 124H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 200-MWD-ISCWSA, 1466-LEAM MWD+HDGM, 17057-Project													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	8.06	8.06	0.00	0.01	-84.99	79.83	-910.44	913.93					
100.00	100.00	108.83	108.83	0.09	0.11	-84.95	80.38	-910.34	913.88	913.69	0.19	4,714.101		
200.00	200.00	209.53	209.51	0.31	0.22	-84.86	81.88	-910.08	913.75	913.22	0.53	1,728.569		
300.00	300.00	309.70	309.67	0.54	0.42	-84.74	83.69	-909.74	913.58	912.62	0.96	951.470		
400.00	400.00	410.97	410.92	0.76	0.64	-84.64	85.31	-909.34	913.34	911.94	1.40	653.635		
500.00	500.00	512.58	512.53	0.99	0.85	-84.56	86.48	-908.82	912.93	911.10	1.84	497.146		
568.12	568.12	576.18	576.12	1.14	0.99	-84.53	87.00	-908.59	912.75	910.62	2.12	429.744		
600.00	600.00	605.72	605.66	1.21	1.05	-84.52	87.18	-908.61	912.79	910.53	2.26	404.148		
700.00	700.00	700.00	699.94	1.43	1.25	-84.50	87.57	-909.21	913.45	910.77	2.68	340.255		
800.00	800.00	796.05	795.98	1.66	1.45	-84.49	87.74	-910.34	914.64	911.53	3.11	293.628		
900.00	900.00	894.04	893.96	1.88	1.66	-84.50	87.83	-911.75	916.07	912.53	3.55	258.173		
1,000.00	1,000.00	994.07	993.98	2.11	1.87	-84.50	87.98	-913.27	917.60	913.62	3.98	230.566		
1,100.00	1,100.00	1,095.49	1,095.39	2.33	2.08	-84.49	88.28	-914.77	919.11	914.70	4.41	208.279		
1,200.00	1,200.00	1,200.84	1,200.73	2.56	2.29	-84.47	88.72	-915.88	920.19	915.34	4.85	189.707		
1,300.00	1,300.00	1,302.91	1,302.80	2.78	2.50	-84.43	89.32	-916.42	920.78	915.50	5.28	174.259		
1,400.00	1,400.00	1,402.54	1,402.42	3.01	2.63	-84.39	90.14	-916.94	921.37	915.74	5.63	163.532		
1,500.00	1,500.00	1,501.38	1,501.26	3.23	2.71	-84.36	90.60	-917.52	922.01	916.07	5.94	155.307		
1,600.00	1,600.00	1,598.59	1,598.46	3.46	2.73	-84.33	91.10	-918.33	922.89	916.70	6.19	149.177		
1,700.00	1,700.00	1,700.17	1,700.04	3.68	2.78	-84.31	91.65	-919.30	923.89	917.44	6.46	143.071		
1,800.00	1,800.00	1,803.14	1,803.01	3.91	2.83	-84.29	91.94	-920.00	924.60	917.86	6.74	137.273		
1,900.00	1,900.00	1,905.48	1,905.35	4.13	2.91	-84.30	91.88	-920.43	925.01	917.97	7.04	131.389		
2,000.00	2,000.00	2,007.84	2,007.71	4.36	3.00	-84.33	91.37	-920.65	925.17	917.82	7.35	125.892		
2,100.00	2,100.00	2,111.16	2,111.02	4.58	3.10	-84.38	90.59	-920.57	925.02	917.34	7.68	120.411		
2,200.00	2,200.00	2,213.33	2,213.19	4.81	3.21	-84.43	89.70	-920.15	924.53	916.51	8.02	115.321		
2,300.00	2,300.00	2,311.81	2,311.66	5.03	3.33	-84.47	88.97	-919.75	924.05	915.69	8.36	110.570		
2,400.00	2,400.00	2,410.12	2,409.97	5.26	3.45	-84.50	88.46	-919.49	923.74	915.04	8.70	106.170		
2,500.00	2,500.00	2,508.06	2,507.91	5.48	3.57	-84.52	88.17	-919.42	923.64	914.59	9.05	102.043		
2,546.04	2,546.04	2,553.15	2,553.01	5.58	3.63	5.47	88.09	-919.46	923.48	914.28	9.21	100.309		
2,600.00	2,599.99	2,606.85	2,606.70	5.69	3.71	5.48	88.06	-919.53	922.87	913.48	9.40	98.227		
2,700.00	2,699.96	2,706.96	2,706.81	5.89	3.85	5.49	88.08	-919.67	920.40	910.66	9.74	94.516		
2,800.00	2,799.86	2,806.76	2,806.62	6.09	4.00	5.53	88.22	-919.78	916.18	906.09	10.09	90.812		
2,900.00	2,899.68	2,906.23	2,906.09	6.30	4.16	5.59	88.45	-919.91	910.26	899.81	10.45	87.128		
2,917.68	2,917.31	2,923.81	2,923.66	6.33	4.19	5.60	88.50	-919.94	909.04	898.53	10.51	86.481		
3,000.00	2,999.41	3,006.82	3,006.67	6.51	4.32	5.65	88.75	-920.04	903.19	892.38	10.81	83.516		
3,100.00	3,099.15	3,108.17	3,108.02	6.72	4.49	5.72	89.06	-920.00	895.94	884.75	11.19	80.082		
3,200.00	3,198.88	3,208.17	3,208.02	6.94	4.66	5.79	89.36	-919.83	888.56	876.99	11.56	76.835		
3,300.00	3,298.61	3,307.66	3,307.51	7.16	4.84	5.86	89.68	-919.69	881.20	869.25	11.94	73.781		
3,400.00	3,398.35	3,406.51	3,406.36	7.38	5.01	5.93	90.06	-919.59	873.89	861.57	12.33	70.884		
3,500.00	3,498.08	3,505.22	3,505.07	7.60	5.19	6.02	90.63	-919.59	866.71	853.99	12.72	68.158		
3,600.00	3,597.82	3,605.58	3,605.43	7.82	5.37	6.11	91.32	-919.61	859.56	846.45	13.11	65.561		
3,700.00	3,697.55	3,706.15	3,705.99	8.05	5.56	6.21	92.02	-919.53	852.31	838.81	13.51	63.099		
3,800.00	3,797.29	3,805.12	3,804.96	8.28	5.74	6.31	92.70	-919.45	845.07	831.16	13.90	60.779		
3,900.00	3,897.02	3,904.16	3,903.99	8.51	5.92	6.42	93.38	-919.45	837.91	823.61	14.30	58.589		
4,000.00	3,996.76	4,004.15	4,003.98	8.74	6.11	6.51	93.92	-919.50	830.78	816.08	14.70	56.506		
4,100.00	4,096.49	4,104.59	4,104.43	8.97	6.29	6.58	94.18	-919.55	823.62	808.51	15.11	54.526		
4,200.00	4,196.22	4,207.36	4,207.20	9.20	6.49	6.64	94.16	-919.37	816.21	800.69	15.51	52.612		
4,300.00	4,295.96	4,313.05	4,312.89	9.44	6.69	6.69	93.81	-918.76	808.37	792.44	15.93	50.750		
4,400.00	4,395.69	4,425.70	4,425.51	9.67	6.90	6.71	92.90	-916.69	799.22	782.87	16.35	48.871		
4,500.00	4,495.43	4,527.60	4,527.35	9.91	7.10	6.70	91.52	-913.63	788.86	772.09	16.77	47.050		
4,600.00	4,595.16	4,622.75	4,622.45	10.15	7.28	6.64	89.69	-911.21	778.88	761.71	17.17	45.355		
4,700.00	4,694.90	4,725.70	4,725.35	10.38	7.48	6.55	87.27	-908.89	769.16	751.57	17.59	43.727		
4,800.00	4,794.63	4,833.67	4,833.24	10.62	7.69	6.46	84.85	-905.39	758.46	740.45	18.01	42.110		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 124H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 200-MWD-ISCWSA, 1466-LEAM MWD+HDGM, 17057-Project													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	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
4,900.00	4,894.37	4,930.24	4,929.71	10.86	7.88	6.38		82.53	-901.78	747.26	728.84	18.43	40.557	
5,000.00	4,994.10	5,024.61	5,023.99	11.10	8.07	6.23		79.48	-898.97	736.72	717.88	18.84	39.109	
5,100.00	5,093.83	5,120.39	5,119.69	11.34	8.26	6.04		76.13	-896.74	726.79	707.54	19.25	37.752	
5,200.00	5,193.57	5,217.58	5,216.82	11.58	8.45	5.91		73.52	-894.80	717.29	697.62	19.67	36.470	
5,300.00	5,293.30	5,315.51	5,314.70	11.83	8.65	5.79		71.17	-893.06	708.04	687.96	20.09	35.251	
5,400.00	5,393.04	5,412.17	5,411.33	12.07	8.84	5.70		69.23	-891.61	699.11	678.60	20.50	34.095	
5,500.00	5,492.77	5,508.76	5,507.90	12.31	9.04	5.66		67.86	-890.53	690.61	669.69	20.92	33.006	
5,600.00	5,592.51	5,608.37	5,607.51	12.56	9.24	5.64		66.81	-889.62	682.35	661.00	21.35	31.963	
5,700.00	5,692.24	5,708.00	5,707.13	12.80	9.44	5.62		65.78	-888.68	674.07	652.29	21.77	30.958	
5,800.00	5,791.97	5,805.24	5,804.36	13.04	9.64	5.61		64.88	-887.93	665.97	643.77	22.20	30.004	
5,900.00	5,891.71	5,902.46	5,901.58	13.29	9.84	5.61		64.16	-887.55	658.26	635.64	22.62	29.102	
6,000.00	5,991.44	6,002.08	6,001.20	13.53	10.04	5.62		63.56	-887.34	650.73	627.68	23.05	28.235	
6,100.00	6,091.18	6,101.69	6,100.81	13.78	10.24	5.64		63.04	-887.12	643.22	619.75	23.48	27.400	
6,200.00	6,190.91	6,201.27	6,200.39	14.02	10.44	5.66		62.50	-886.93	635.73	611.83	23.90	26.598	
6,300.00	6,290.65	6,301.25	6,300.36	14.27	10.65	5.67		61.85	-886.77	628.26	603.93	24.33	25.824	
6,400.00	6,390.38	6,402.53	6,401.64	14.51	10.85	5.69		61.36	-886.41	620.61	595.85	24.76	25.068	
6,500.00	6,490.12	6,503.24	6,502.34	14.76	11.06	5.74		61.13	-885.79	612.73	587.54	25.19	24.328	
6,600.00	6,589.85	6,602.96	6,602.06	15.01	11.26	5.83		61.23	-885.09	604.79	579.17	25.62	23.608	
6,700.00	6,689.58	6,702.23	6,701.33	15.25	11.47	5.94		61.63	-884.37	596.87	570.82	26.05	22.913	
6,800.00	6,789.32	6,800.95	6,800.05	15.50	11.67	6.07		62.11	-883.77	589.08	562.60	26.48	22.246	
6,900.00	6,889.05	6,900.08	6,899.18	15.75	11.88	6.20		62.65	-883.32	581.44	554.53	26.91	21.605	
7,000.00	6,988.79	6,999.60	6,998.70	16.00	12.08	6.34		63.20	-882.91	573.85	546.51	27.34	20.986	
7,100.00	7,088.52	7,098.69	7,097.78	16.24	12.28	6.48		63.73	-882.56	566.32	538.55	27.78	20.390	
7,200.00	7,188.26	7,197.48	7,196.57	16.49	12.49	6.59		63.98	-882.39	558.95	530.74	28.20	19.818	
7,300.00	7,287.99	7,295.99	7,295.08	16.74	12.69	6.68		64.02	-882.43	551.76	523.12	28.63	19.270	
7,400.00	7,387.73	7,394.38	7,393.47	16.99	12.89	6.78		64.17	-882.70	544.81	515.75	29.06	18.747	
7,500.00	7,487.46	7,495.14	7,494.23	17.24	13.09	6.88		64.32	-883.07	537.96	508.47	29.49	18.240	
7,600.00	7,587.19	7,596.78	7,595.87	17.48	13.30	6.95		64.07	-883.15	530.78	500.86	29.93	17.736	
7,700.00	7,686.93	7,696.83	7,695.91	17.73	13.50	6.98		63.46	-883.05	523.37	493.02	30.36	17.241	
7,800.00	7,786.66	7,796.60	7,795.68	17.98	13.70	6.99		62.58	-882.96	515.95	485.17	30.78	16.760	
7,900.00	7,886.40	7,895.13	7,894.21	18.23	13.90	6.96		61.49	-883.01	508.64	477.42	31.21	16.295	
8,000.00	7,986.13	7,993.63	7,992.69	18.48	14.10	6.92		60.25	-883.32	501.57	469.92	31.64	15.850	
8,100.00	8,085.87	8,092.33	8,091.39	18.73	14.31	6.88		59.11	-883.85	494.73	462.65	32.08	15.423	
8,200.00	8,185.60	8,191.08	8,190.14	18.98	14.51	6.87		58.29	-884.55	488.10	455.59	32.51	15.013	
8,300.00	8,285.34	8,290.07	8,289.12	19.23	14.72	6.88		57.56	-885.43	481.66	448.71	32.95	14.619	
8,400.00	8,385.07	8,389.27	8,388.31	19.48	14.93	6.87		56.77	-886.48	475.38	442.00	33.38	14.240	
8,444.81	8,429.76	8,434.17	8,433.20	19.59	15.02	6.88		56.49	-886.95	472.58	439.00	33.58	14.074	
8,500.00	8,484.82	8,489.47	8,488.50	19.71	15.13	6.90		56.31	-887.50	469.37	435.57	33.81	13.884	
8,600.00	8,584.67	8,589.93	8,588.96	19.90	15.34	6.97		56.38	-888.38	464.84	430.64	34.20	13.593	
8,700.00	8,684.60	8,690.99	8,690.02	20.08	15.55	7.01		56.32	-889.08	461.84	427.25	34.59	13.353	
8,800.00	8,784.58	8,791.52	8,790.54	20.26	15.75	6.97		55.88	-889.60	460.35	425.38	34.97	13.163	
8,835.06	8,819.64	8,826.43	8,825.45	20.32	15.82	6.95		55.70	-889.78	460.24	425.13	35.11	13.109	
8,862.49	8,847.07	8,853.75	8,852.77	20.37	15.88	-83.07		55.55	-889.94	460.31	425.09	35.22	13.071	
8,900.00	8,884.58	8,891.10	8,890.12	20.44	15.96	-83.10		55.35	-890.15	460.50	425.13	35.37	13.020	
9,000.00	8,984.58	8,990.98	8,989.99	20.64	16.16	-83.18		54.77	-890.79	461.06	425.28	35.78	12.886	
9,062.49	9,047.07	9,053.62	9,052.63	20.77	16.29	-83.23		54.39	-891.18	461.41	425.37	36.04	12.803	
9,100.00	9,084.55	9,090.01	9,089.01	20.84	16.37	97.23		53.84	-891.48	461.80	425.61	36.19	12.761	
9,150.00	9,134.24	9,140.16	9,139.11	20.93	16.47	97.52		51.70	-892.20	462.95	426.56	36.39	12.721	
9,200.00	9,183.26	9,200.25	9,198.56	21.02	16.60	97.80		43.27	-893.01	464.04	427.44	36.60	12.679	
9,250.00	9,231.25	9,253.87	9,250.40	21.12	16.71	97.88		29.69	-893.69	464.95	428.14	36.81	12.633	
9,300.00	9,277.84	9,313.30	9,306.16	21.21	16.84	97.91		9.20	-894.55	465.94	428.93	37.01	12.590	
9,350.00	9,322.67	9,382.00	9,368.52	21.31	17.01	98.14		-19.58	-894.01	465.88	428.69	37.19	12.527	

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 124H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 200-MWD-ISCWSA, 1466-LEAM MWD+HDGM, 17057-Project													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,400.00	9,365.40	9,446.42	9,424.51	21.41	17.18	98.52	-51.32	-891.84	464.59	427.22	37.37	12.431		
9,450.00	9,405.71	9,507.92	9,474.75	21.52	17.36	98.91	-86.65	-888.96	462.63	425.05	37.59	12.309		
9,500.00	9,443.29	9,563.82	9,517.15	21.63	17.55	99.27	-122.90	-885.99	460.33	422.48	37.85	12.161		
9,550.00	9,477.85	9,612.91	9,551.17	21.75	17.74	99.50	-158.22	-883.93	458.55	420.36	38.19	12.008		
9,600.00	9,509.14	9,664.93	9,583.25	21.89	17.96	99.57	-199.11	-882.56	457.44	418.88	38.56	11.863		
9,650.00	9,536.90	9,722.14	9,612.90	22.04	18.24	99.36	-247.98	-881.65	456.62	417.64	38.98	11.714		
9,700.00	9,560.95	9,775.98	9,635.13	22.22	18.53	98.94	-296.98	-880.89	455.63	416.15	39.48	11.541		
9,737.57	9,576.44	9,812.15	9,647.35	22.36	18.74	98.60	-331.02	-880.84	455.38	415.48	39.90	11.414 CC		
9,750.00	9,581.08	9,824.02	9,651.01	22.42	18.82	98.49	-342.31	-880.91	455.41	415.37	40.03	11.375		
9,800.00	9,597.14	9,870.86	9,663.86	22.64	19.12	98.12	-387.34	-881.62	456.15	415.52	40.63	11.227		
9,850.00	9,609.02	9,920.69	9,676.32	22.89	19.47	98.02	-435.57	-882.74	457.70	416.46	41.25	11.096		
9,900.00	9,616.62	9,974.69	9,688.05	23.17	19.88	98.24	-488.27	-883.92	459.61	417.71	41.89	10.971		
9,950.00	9,619.89	10,026.21	9,695.67	23.47	20.29	98.51	-539.19	-885.25	461.86	419.29	42.57	10.849		
9,968.21	9,620.00	10,044.79	9,697.71	23.59	20.44	98.65	-557.65	-885.80	462.81	419.99	42.82	10.808		
10,000.00	9,619.68	10,076.48	9,700.58	27.08	20.72	99.01	-589.19	-886.80	464.53	421.28	43.24	10.742		
10,100.00	9,618.68	10,174.52	9,706.22	27.16	21.61	99.72	-686.98	-890.67	470.25	426.16	44.09	10.667		
10,200.00	9,617.68	10,278.80	9,709.38	27.23	22.62	100.11	-791.11	-895.23	475.99	430.93	45.06	10.564		
10,300.00	9,616.68	10,385.85	9,710.87	27.31	23.70	100.34	-898.11	-897.92	479.57	433.46	46.11	10.400		
10,400.00	9,615.69	10,479.90	9,710.49	27.39	24.70	100.32	-992.11	-901.12	483.74	436.49	47.24	10.239		
10,500.00	9,614.69	10,582.93	9,708.96	27.48	25.86	100.16	-1,095.03	-905.45	488.52	440.02	48.51	10.072		
10,600.00	9,613.69	10,703.88	9,704.13	27.56	27.24	99.67	-1,215.85	-907.90	490.79	440.87	49.92	9.832		
10,700.00	9,612.69	10,812.91	9,700.84	27.65	28.43	99.44	-1,324.81	-905.86	489.30	438.08	51.22	9.552		
10,800.00	9,611.69	10,914.97	9,699.05	27.75	29.58	99.40	-1,426.81	-902.86	487.00	434.45	52.55	9.267		
10,900.00	9,610.69	11,022.16	9,697.48	27.84	30.88	99.41	-1,533.90	-898.51	483.64	429.64	54.00	8.957		
11,000.00	9,609.69	11,114.38	9,696.55	27.94	32.00	99.46	-1,626.04	-894.85	480.44	425.04	55.40	8.672		
11,100.00	9,608.69	11,203.00	9,696.33	28.04	33.04	99.81	-1,714.60	-892.57	479.15	422.41	56.74	8.444		
11,116.41	9,608.53	11,219.48	9,699.06	28.06	33.25	99.92	-1,731.06	-892.28	479.13	422.15	56.98	8.409		
11,200.00	9,607.69	11,299.00	9,701.85	28.15	34.26	100.35	-1,810.53	-891.48	479.57	421.39	58.18	8.243		
11,300.00	9,606.69	11,393.00	9,703.16	28.26	35.55	100.58	-1,904.51	-892.14	481.39	421.62	59.77	8.054		
11,400.00	9,605.69	11,491.12	9,705.17	28.37	36.83	100.89	-2,002.60	-893.41	483.95	422.63	61.33	7.892		
11,500.00	9,604.69	11,593.66	9,709.78	28.50	38.14	101.51	-2,105.04	-893.82	486.13	423.28	62.84	7.735		
11,600.00	9,603.69	11,689.69	9,713.28	28.63	39.45	101.99	-2,201.00	-894.71	488.69	424.25	64.44	7.583		
11,700.00	9,602.70	11,799.13	9,716.88	28.77	40.98	102.50	-2,310.37	-894.81	490.40	424.23	66.17	7.411		
11,800.00	9,601.70	11,898.78	9,718.92	28.92	42.37	102.84	-2,409.99	-894.17	491.15	423.28	67.87	7.236		
11,900.00	9,600.70	11,992.22	9,720.71	29.08	43.65	103.13	-2,503.42	-894.50	492.87	423.34	69.53	7.089		
12,000.00	9,599.70	12,082.15	9,722.33	29.27	44.88	103.35	-2,593.32	-896.05	495.93	424.76	71.17	6.968		
12,100.00	9,598.70	12,168.62	9,723.60	29.48	46.10	103.46	-2,679.67	-900.35	502.00	429.17	72.82	6.893		
12,200.00	9,597.70	12,269.37	9,724.49	29.72	47.50	103.50	-2,780.25	-906.14	508.74	434.09	74.65	6.815		
12,300.00	9,596.70	12,372.03	9,727.52	29.99	48.89	103.76	-2,882.69	-912.01	515.96	439.54	76.42	6.752		
12,400.00	9,595.70	12,504.60	9,733.28	30.31	50.73	104.45	-3,015.09	-913.78	519.32	440.92	78.40	6.624		
12,500.00	9,594.70	12,624.74	9,739.16	30.66	52.47	105.33	-3,134.96	-908.39	517.15	436.95	80.20	6.448		
12,600.00	9,593.70	12,728.75	9,742.53	31.04	54.01	105.98	-3,238.71	-901.85	512.94	430.93	82.01	6.255		
12,700.00	9,592.70	12,829.37	9,743.92	31.46	55.53	106.41	-3,339.12	-895.56	508.30	424.42	83.88	6.060		
12,800.00	9,591.70	12,929.05	9,744.97	31.91	56.99	106.81	-3,438.60	-889.30	503.56	417.84	85.72	5.874		
12,900.00	9,590.71	13,025.26	9,742.63	32.38	58.42	106.79	-3,534.67	-884.71	499.29	411.59	87.70	5.693		
13,000.00	9,589.71	13,121.55	9,737.75	32.87	59.87	106.44	-3,630.78	-881.65	495.77	405.97	89.80	5.521		
13,100.00	9,588.71	13,216.23	9,734.47	33.38	61.24	106.25	-3,725.35	-878.83	492.94	401.15	91.79	5.370		
13,172.74	9,587.98	13,278.68	9,733.84	33.76	62.11	106.27	-3,787.79	-877.69	492.18	399.06	93.12	5.286		
13,200.00	9,587.71	13,302.85	9,733.90	33.91	62.44	106.30	-3,811.96	-877.52	492.28	398.67	93.61	5.259		
13,300.00	9,586.71	13,395.30	9,734.61	34.44	63.74	106.45	-3,904.40	-877.76	493.73	398.30	95.43	5.174		
13,400.00	9,585.71	13,492.98	9,735.02	34.99	65.18	106.54	-4,002.07	-879.04	496.09	398.70	97.39	5.094		
13,500.00	9,584.71	13,590.07	9,735.46	35.56	66.59	106.61	-4,099.14	-881.06	499.20	399.87	99.33	5.026		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 124H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 200-MWD-ISCWSA, 1466-LEAM MWD+HDGM, 17057-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)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,600.00	9,583.71	13,698.04	9,737.35	36.13	68.15	106.89		-4,207.09	-881.70	501.23	399.90	101.33	4.947	
13,700.00	9,582.71	13,796.42	9,739.36	36.71	69.60	107.17		-4,305.45	-882.14	503.25	400.00	103.25	4.874	
13,800.00	9,581.71	13,900.30	9,744.19	37.29	71.12	107.82		-4,409.20	-881.02	504.61	399.51	105.10	4.801	
13,900.00	9,580.71	14,003.44	9,751.36	37.89	72.63	108.76		-4,512.07	-878.81	505.78	398.96	106.82	4.735	
14,000.00	9,579.71	14,113.57	9,757.57	38.49	74.27	109.65		-4,621.96	-875.11	505.48	396.86	108.62	4.654	
14,100.00	9,578.72	14,215.59	9,760.63	39.10	75.83	110.21		-4,723.84	-870.98	503.72	393.22	110.50	4.559	
14,200.00	9,577.72	14,312.87	9,762.74	39.72	77.29	110.65		-4,821.04	-867.63	502.28	389.90	112.38	4.470	
14,300.00	9,576.72	14,422.94	9,765.68	40.34	78.94	111.23		-4,930.98	-863.14	500.50	386.26	114.24	4.381	
14,400.00	9,575.72	14,523.53	9,765.83	40.96	80.48	111.52		-5,031.45	-858.38	497.19	380.97	116.22	4.278	
14,500.00	9,574.72	14,612.29	9,765.99	41.59	81.83	111.74		-5,120.15	-855.24	495.02	376.88	118.14	4.190	
14,600.00	9,573.72	14,713.25	9,766.40	42.23	83.34	111.96		-5,221.09	-852.96	494.13	374.01	120.12	4.114	
14,700.00	9,572.72	14,817.36	9,765.79	42.87	84.93	112.09		-5,325.16	-850.24	492.55	370.36	122.19	4.031	
14,800.00	9,571.72	14,920.10	9,764.18	43.52	86.51	112.13		-5,427.84	-847.20	490.27	365.96	124.30	3.944	
14,900.00	9,570.72	15,018.94	9,762.62	44.16	87.99	112.17		-5,526.63	-844.09	487.82	361.46	126.36	3.861	
15,000.00	9,569.72	15,123.49	9,760.31	44.82	89.56	112.16		-5,631.08	-840.51	484.86	356.40	128.47	3.774	
15,100.00	9,568.72	15,216.29	9,757.37	45.47	90.97	112.01		-5,723.80	-838.09	482.31	351.69	130.62	3.692	
15,190.64	9,567.82	15,298.66	9,754.86	46.07	92.21	111.83		-5,806.13	-837.33	481.46	348.92	132.54	3.632	
15,200.00	9,567.72	15,303.00	9,754.74	46.13	92.27	111.82		-5,810.47	-837.33	481.48	348.79	132.69	3.629	
15,300.00	9,566.73	15,398.00	9,752.92	46.80	93.66	111.66		-5,905.45	-838.08	482.57	347.80	134.77	3.581	
15,400.00	9,565.73	15,495.95	9,752.77	47.46	95.07	111.66		-6,003.38	-839.44	484.86	348.07	136.79	3.545	
15,500.00	9,564.73	15,599.67	9,753.70	48.13	96.59	111.81		-6,107.10	-840.18	486.91	348.07	138.83	3.507	
15,600.00	9,563.73	15,702.11	9,754.41	48.81	98.13	111.97		-6,209.53	-840.10	488.15	347.26	140.89	3.465	
15,700.00	9,562.73	15,797.02	9,754.32	49.48	99.57	112.00		-6,304.44	-840.81	489.85	346.93	142.93	3.427 ES	
15,800.00	9,561.73	15,894.29	9,753.24	50.16	101.05	111.88		-6,401.68	-842.79	492.37	347.29	145.08	3.394	
15,900.00	9,560.73	15,994.91	9,753.89	50.84	102.55	111.95		-6,502.29	-844.35	495.11	347.96	147.15	3.365	
16,000.00	9,559.73	16,096.54	9,754.90	51.52	104.08	112.09		-6,603.90	-845.36	497.46	348.24	149.22	3.334	
16,100.00	9,558.73	16,195.54	9,755.01	52.21	105.59	112.12		-6,702.90	-846.75	499.86	348.53	151.32	3.303	
16,200.00	9,557.73	16,295.02	9,755.64	52.89	107.08	112.20		-6,802.36	-848.06	502.37	348.99	153.38	3.275	
16,300.00	9,556.73	16,394.47	9,756.09	53.58	108.57	112.26		-6,901.80	-849.57	505.01	349.54	155.46	3.248	
16,400.00	9,555.73	16,493.15	9,756.67	54.28	110.03	112.33		-7,000.47	-851.14	507.76	350.26	157.50	3.224	
16,500.00	9,554.73	16,594.66	9,757.53	54.97	111.52	112.41		-7,101.96	-852.86	510.71	351.15	159.56	3.201	
16,600.00	9,553.74	16,698.60	9,757.26	55.67	113.08	112.40		-7,205.89	-854.25	512.91	351.15	161.76	3.171	
16,700.00	9,552.74	16,802.49	9,758.84	56.36	114.63	112.65		-7,309.76	-854.08	514.40	350.62	163.78	3.141	
16,800.00	9,551.74	16,897.52	9,763.71	57.06	116.04	113.29		-7,404.64	-852.33	515.78	350.37	165.41	3.118	
16,900.00	9,550.74	16,989.15	9,771.20	57.76	117.39	114.18		-7,495.96	-850.88	518.70	351.93	166.77	3.110 SF	
16,973.85	9,550.00	17,057.00	9,777.22	58.28	117.53	114.85		-7,563.53	-850.29	521.67	354.73	166.94	3.125	

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 26H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 160-MWD-ISCWSA, 5394-LEAM MWD+HDGM, 13431-Project													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-174.43	-4,852.20	-472.92	4,875.20					
100.00	100.00	83.59	83.59	0.09	0.08	-174.43	-4,852.30	-472.85	4,875.29	4,875.13	0.17	N/A		
200.00	200.00	178.65	178.65	0.31	0.19	-174.44	-4,852.63	-472.62	4,875.61	4,875.11	0.50	9,731.522		
300.00	300.00	320.73	320.73	0.54	0.48	-174.44	-4,852.55	-472.24	4,875.55	4,874.53	1.02	4,783.341		
400.00	400.00	416.72	416.72	0.76	0.68	-174.45	-4,852.03	-471.87	4,874.97	4,873.53	1.44	3,378.260		
500.00	500.00	509.16	509.15	0.99	0.88	-174.45	-4,851.71	-471.50	4,874.59	4,872.73	1.86	2,619.530		
600.00	600.00	607.41	607.40	1.21	1.09	-174.46	-4,851.52	-470.67	4,874.32	4,872.02	2.30	2,122.070		
700.00	700.00	714.05	714.03	1.43	1.31	-174.47	-4,851.23	-469.46	4,873.94	4,871.19	2.75	1,771.962		
800.00	800.00	806.52	806.50	1.66	1.51	-174.49	-4,851.06	-468.25	4,873.62	4,870.45	3.17	1,536.251		
900.00	900.00	905.28	905.25	1.88	1.72	-174.50	-4,850.92	-466.89	4,873.35	4,869.75	3.60	1,351.853		
1,000.00	1,000.00	994.72	994.68	2.11	1.91	-174.52	-4,850.93	-465.67	4,873.23	4,869.21	4.02	1,213.606		
1,004.75	1,004.75	998.90	998.85	2.12	1.92	-174.52	-4,850.93	-465.62	4,873.23	4,869.19	4.03	1,207.803		
1,100.00	1,100.00	1,083.30	1,083.25	2.33	2.09	-174.53	-4,851.11	-464.81	4,873.34	4,868.92	4.42	1,101.955		
1,200.00	1,200.00	1,180.97	1,180.92	2.56	2.29	-174.53	-4,851.44	-464.34	4,873.62	4,868.78	4.85	1,005.537		
1,300.00	1,300.00	1,283.48	1,283.44	2.78	2.50	-174.53	-4,851.64	-464.32	4,873.82	4,868.54	5.28	922.506		
1,400.00	1,400.00	1,390.01	1,389.96	3.01	2.72	-174.53	-4,851.87	-464.48	4,874.06	4,868.33	5.73	850.575		
1,500.00	1,500.00	1,504.74	1,504.69	3.23	2.96	-174.53	-4,851.76	-464.31	4,873.94	4,867.74	6.19	786.792		
1,600.00	1,600.00	1,610.58	1,610.53	3.46	3.18	-174.53	-4,851.43	-464.86	4,873.67	4,867.03	6.64	733.886		
1,700.00	1,700.00	1,725.07	1,725.01	3.68	3.42	-174.52	-4,850.81	-465.73	4,873.21	4,866.10	7.11	685.672		
1,800.00	1,800.00	1,826.77	1,826.70	3.91	3.64	-174.50	-4,850.02	-466.68	4,872.53	4,864.99	7.55	645.703		
1,900.00	1,900.00	1,923.99	1,923.91	4.13	3.84	-174.49	-4,849.30	-467.63	4,871.89	4,863.92	7.98	610.879		
2,000.00	2,000.00	2,028.07	2,027.99	4.36	4.06	-174.48	-4,848.52	-468.72	4,871.24	4,862.82	8.42	578.485		
2,100.00	2,100.00	2,134.02	2,133.93	4.58	4.29	-174.46	-4,847.61	-469.87	4,870.49	4,861.63	8.87	549.239		
2,200.00	2,200.00	2,243.49	2,243.38	4.81	4.51	-174.45	-4,846.47	-471.04	4,869.56	4,860.23	9.32	522.313		
2,300.00	2,300.00	2,347.41	2,347.29	5.03	4.74	-174.43	-4,845.26	-472.37	4,868.52	4,858.75	9.77	498.312		
2,400.00	2,400.00	2,462.08	2,461.93	5.26	4.98	-174.41	-4,843.69	-474.14	4,867.31	4,857.07	10.24	475.249		
2,500.00	2,500.00	2,570.57	2,570.40	5.48	5.22	-174.39	-4,841.86	-475.89	4,865.79	4,855.09	10.70	454.771		
2,600.00	2,599.99	2,689.71	2,689.50	5.69	5.47	-84.39	-4,839.58	-477.95	4,863.98	4,852.81	11.17	435.541		
2,700.00	2,699.96	2,812.01	2,811.74	5.89	5.74	-84.42	-4,836.65	-480.35	4,861.52	4,849.89	11.63	417.948		
2,800.00	2,799.86	2,937.57	2,937.22	6.09	6.01	-84.48	-4,833.03	-482.99	4,858.44	4,846.34	12.11	401.310		
2,900.00	2,899.68	3,042.97	3,042.54	6.30	6.24	-84.56	-4,829.56	-485.33	4,854.79	4,842.25	12.54	387.167		
2,917.68	2,917.31	3,060.20	3,059.75	6.33	6.28	-84.58	-4,828.99	-485.72	4,854.12	4,841.51	12.61	384.847		
3,000.00	2,999.41	3,154.53	3,154.00	6.51	6.49	-84.63	-4,825.76	-487.96	4,850.94	4,837.95	12.99	373.450		
3,100.00	3,099.15	3,280.24	3,279.57	6.72	6.77	-84.69	-4,820.88	-491.24	4,846.62	4,833.14	13.48	359.580		
3,200.00	3,198.88	3,395.11	3,394.30	6.94	7.02	-84.75	-4,816.03	-494.46	4,842.01	4,828.06	13.95	347.178		
3,300.00	3,298.61	3,525.41	3,524.39	7.16	7.32	-84.81	-4,809.82	-498.12	4,836.85	4,822.40	14.45	334.747		
3,400.00	3,398.35	3,627.43	3,626.24	7.38	7.54	-84.86	-4,804.59	-501.09	4,831.34	4,816.46	14.89	324.478		
3,500.00	3,498.08	3,764.73	3,763.26	7.60	7.85	-84.92	-4,796.93	-505.22	4,825.39	4,809.98	15.41	313.199		
3,600.00	3,597.82	3,872.29	3,870.57	7.82	8.10	-84.96	-4,790.45	-508.50	4,819.00	4,803.14	15.87	303.738		
3,700.00	3,697.55	3,971.01	3,969.08	8.05	8.32	-85.01	-4,784.47	-511.12	4,812.56	4,796.26	16.30	295.238		
3,800.00	3,797.29	4,070.65	4,068.50	8.28	8.54	-85.06	-4,778.46	-513.89	4,806.16	4,789.42	16.74	287.072		
3,900.00	3,897.02	4,172.22	4,169.83	8.51	8.77	-85.11	-4,772.29	-516.88	4,799.74	4,782.55	17.19	279.230		
4,000.00	3,996.76	4,275.91	4,273.31	8.74	9.00	-85.16	-4,765.99	-519.40	4,793.26	4,775.62	17.63	271.815		
4,100.00	4,096.49	4,370.95	4,368.16	8.97	9.20	-85.22	-4,760.24	-521.12	4,786.77	4,768.71	18.06	265.017		
4,200.00	4,196.22	4,463.81	4,460.85	9.20	9.41	-85.28	-4,754.81	-522.19	4,780.42	4,761.93	18.49	258.580		
4,300.00	4,295.96	13,331.19	8,979.12	9.44	74.57	-29.43	-99.45	-635.11	4,718.77	4,681.59	37.18	126.931		
4,400.00	4,395.69	13,332.21	8,979.14	9.67	74.58	-29.17	-98.43	-635.16	4,618.86	4,581.62	37.24	124.019		
4,500.00	4,495.43	13,354.00	8,979.51	9.91	74.91	-23.36	-76.68	-636.38	4,519.05	4,481.58	37.47	120.613		
4,600.00	4,595.16	13,354.00	8,979.51	10.15	74.91	-23.36	-76.68	-636.38	4,419.14	4,381.60	37.54	117.710		
4,700.00	4,694.90	13,354.00	8,979.51	10.38	74.91	-23.36	-76.68	-636.38	4,319.24	4,281.61	37.63	114.797		
4,800.00	4,794.63	13,354.00	8,979.51	10.62	74.91	-23.36	-76.68	-636.38	4,219.34	4,181.63	37.72	111.874		
4,900.00	4,894.37	13,354.00	8,979.51	10.86	74.91	-23.36	-76.68	-636.38	4,119.45	4,081.64	37.81	108.945		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 26H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 160-MWD-ISCWSA, 5394-LEAM MWD+HDGM, 13431-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		
5,000.00	4,994.10	13,354.00	8,979.51	11.10	74.91	-23.36	-76.68	-636.38	4,019.56	3,981.64	37.92	106.011		
5,100.00	5,093.83	13,354.00	8,979.51	11.34	74.91	-23.36	-76.68	-636.38	3,919.68	3,881.65	38.03	103.075		
5,200.00	5,193.57	13,354.00	8,979.51	11.58	74.91	-23.36	-76.68	-636.38	3,819.80	3,781.66	38.15	100.138		
5,300.00	5,293.30	13,354.00	8,979.51	11.83	74.91	-23.36	-76.68	-636.38	3,719.94	3,681.67	38.27	97.202		
5,400.00	5,393.04	13,354.00	8,979.51	12.07	74.91	-23.36	-76.68	-636.38	3,620.08	3,581.67	38.40	94.269		
5,500.00	5,492.77	13,354.00	8,979.51	12.31	74.91	-23.36	-76.68	-636.38	3,520.22	3,481.68	38.54	91.340		
5,600.00	5,592.51	13,354.00	8,979.51	12.56	74.91	-23.36	-76.68	-636.38	3,420.38	3,381.69	38.68	88.417		
5,700.00	5,692.24	13,354.00	8,979.51	12.80	74.91	-23.36	-76.68	-636.38	3,320.54	3,281.71	38.84	85.502		
5,800.00	5,791.97	13,354.00	8,979.51	13.04	74.91	-23.36	-76.68	-636.38	3,220.72	3,181.72	38.99	82.595		
5,900.00	5,891.71	13,354.00	8,979.51	13.29	74.91	-23.36	-76.68	-636.38	3,120.90	3,081.74	39.16	79.698		
6,000.00	5,991.44	13,354.00	8,979.51	13.53	74.91	-23.36	-76.68	-636.38	3,021.10	2,981.77	39.33	76.811		
6,100.00	6,091.18	13,354.00	8,979.51	13.78	74.91	-23.36	-76.68	-636.38	2,921.31	2,881.80	39.51	73.937		
6,200.00	6,190.91	13,355.30	8,979.54	14.02	74.91	-23.00	-75.38	-636.46	2,821.54	2,781.84	39.70	71.078		
6,300.00	6,290.65	13,357.63	8,979.58	14.27	74.91	-22.34	-73.06	-636.59	2,721.78	2,681.89	39.89	68.234		
6,400.00	6,390.38	13,359.96	8,979.62	14.51	74.91	-21.69	-70.73	-636.72	2,622.04	2,581.95	40.09	65.403		
6,500.00	6,490.12	13,362.28	8,979.67	14.76	74.91	-21.02	-68.41	-636.85	2,522.32	2,482.02	40.30	62.588		
6,600.00	6,589.85	13,364.61	8,979.71	15.01	74.91	-20.36	-66.09	-636.98	2,422.61	2,382.09	40.52	59.787		
6,700.00	6,689.58	13,366.94	8,979.76	15.25	74.91	-19.68	-63.77	-637.11	2,322.93	2,282.18	40.75	57.003		
6,800.00	6,789.32	13,369.26	8,979.80	15.50	74.91	-19.01	-61.45	-637.25	2,223.28	2,182.29	40.99	54.235		
6,900.00	6,889.05	13,371.59	8,979.85	15.75	74.91	-18.32	-59.12	-637.38	2,123.66	2,082.41	41.25	51.484		
7,000.00	6,988.79	13,373.91	8,979.89	16.00	74.91	-17.64	-56.80	-637.51	2,024.07	1,982.55	41.52	48.750		
7,100.00	7,088.52	13,376.24	8,979.94	16.24	74.91	-16.95	-54.48	-637.64	1,924.52	1,882.71	41.81	46.034		
7,200.00	7,188.26	13,378.57	8,979.98	16.49	74.91	-16.25	-52.16	-637.77	1,825.02	1,782.90	42.11	43.337		
7,300.00	7,287.99	13,380.89	8,980.03	16.74	74.91	-15.56	-49.84	-637.90	1,725.57	1,683.13	42.44	40.658		
7,400.00	7,387.73	13,383.22	8,980.07	16.99	74.91	-14.85	-47.51	-638.03	1,626.18	1,583.39	42.80	37.998		
7,500.00	7,487.46	13,385.55	8,980.12	17.24	74.91	-14.15	-45.19	-638.17	1,526.88	1,483.69	43.18	35.357		
7,600.00	7,587.19	13,387.87	8,980.16	17.48	74.91	-13.44	-42.87	-638.30	1,427.66	1,384.05	43.61	32.736		
7,700.00	7,686.93	13,390.20	8,980.21	17.73	74.91	-12.73	-40.55	-638.43	1,328.56	1,284.47	44.09	30.134		
7,800.00	7,786.66	13,392.52	8,980.25	17.98	74.91	-12.01	-38.22	-638.56	1,229.60	1,184.97	44.63	27.553		
7,900.00	7,886.40	13,394.85	8,980.29	18.23	74.91	-11.29	-35.90	-638.69	1,130.82	1,085.57	45.25	24.991		
8,000.00	7,986.13	13,397.18	8,980.34	18.48	74.91	-10.57	-33.58	-638.82	1,032.27	986.29	45.98	22.452		
8,100.00	8,085.87	13,399.50	8,980.38	18.73	74.91	-9.85	-31.26	-638.95	934.02	887.16	46.85	19.935		
8,200.00	8,185.60	13,401.83	8,980.43	18.98	74.91	-9.12	-28.94	-639.09	836.17	788.24	47.94	17.442		
8,300.00	8,285.34	13,404.16	8,980.47	19.23	74.91	-8.40	-26.61	-639.22	738.90	689.58	49.33	14.980		
8,400.00	8,385.07	13,406.48	8,980.52	19.48	74.91	-7.67	-24.29	-639.35	642.46	591.29	51.17	12.555		
8,444.81	8,429.76	13,407.52	8,980.54	19.59	74.91	-7.34	-23.25	-639.41	599.62	547.41	52.21	11.485		
8,500.00	8,484.82	13,408.79	8,980.56	19.71	74.91	-6.75	-21.98	-639.48	547.38	493.62	53.75	10.183		
8,600.00	8,584.67	13,411.02	8,980.60	19.90	74.91	-5.82	-19.76	-639.60	455.04	397.36	57.68	7.889		
8,700.00	8,684.60	13,413.15	8,980.65	20.08	74.91	-5.03	-17.64	-639.72	367.66	303.76	63.90	5.754		
8,800.00	8,784.58	13,415.18	8,980.68	20.26	74.91	-4.36	-15.61	-639.84	289.78	216.13	73.65	3.934		
8,862.49	8,847.07	13,416.40	8,980.71	20.37	74.91	-93.98	-14.40	-639.91	249.98	168.33	81.64	3.062		
8,900.00	8,884.58	13,417.12	8,980.72	20.44	74.91	-93.78	-13.68	-639.95	231.14	144.54	86.60	2.669		
9,000.00	8,984.58	13,419.03	8,980.76	20.64	74.91	-93.25	-11.76	-640.06	207.40	112.94	94.47	2.196		
9,002.08	8,986.66	13,419.07	8,980.76	20.65	74.91	-93.24	-11.72	-640.06	207.39	112.91	94.48	2.195 CC, ES, SF		
9,062.49	9,047.07	13,420.23	8,980.78	20.77	74.91	-92.92	-10.56	-640.13	216.01	124.29	91.71	2.355		
9,100.00	9,084.55	13,419.73	8,980.77	20.84	74.91	85.94	-11.07	-640.10	229.28	141.56	87.73	2.614		
9,150.00	9,134.24	13,415.25	8,980.69	20.93	74.91	81.82	-15.54	-639.84	254.33	172.95	81.38	3.125		
9,200.00	9,183.26	13,406.45	8,980.52	21.02	74.91	75.61	-24.32	-639.35	285.38	210.15	75.22	3.794		
9,250.00	9,231.25	13,393.40	8,980.27	21.12	74.91	67.82	-37.35	-638.61	320.13	250.19	69.94	4.577		
9,300.00	9,277.84	13,376.21	8,979.94	21.21	74.91	59.31	-54.51	-637.64	356.82	291.16	65.66	5.434		
9,350.00	9,322.67	13,354.99	8,979.53	21.31	74.91	50.97	-75.69	-636.44	394.15	331.87	62.28	6.329		
9,400.00	9,365.40	13,328.40	8,979.08	21.41	74.52	43.34	-102.23	-634.95	431.07	371.67	59.40	7.257		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 26H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 160-MWD-ISCWSA, 5394-LEAM MWD+HDGM, 13431-Project													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,450.00	9,405.71	13,297.41	8,978.72	21.52	74.06	36.91	-133.18	-633.27	466.74	409.66	57.08	8.176		
9,500.00	9,443.29	13,262.24	8,978.52	21.63	73.54	31.73	-168.30	-631.41	500.48	445.28	55.20	9.067		
9,550.00	9,477.85	13,222.58	8,978.49	21.75	72.94	27.58	-207.89	-629.17	531.71	478.08	53.63	9.915		
9,600.00	9,509.14	13,179.53	8,978.62	21.89	72.30	24.30	-250.85	-626.30	559.94	507.66	52.27	10.712		
9,650.00	9,536.90	13,137.13	8,978.86	22.04	71.66	21.82	-293.13	-623.13	584.88	533.74	51.15	11.436		
9,700.00	9,560.95	13,094.07	8,979.08	22.22	71.02	19.90	-336.08	-619.96	606.50	556.30	50.20	12.082		
9,750.00	9,581.08	13,046.81	8,979.35	22.42	70.30	18.37	-383.22	-616.62	624.53	575.16	49.37	12.651		
9,800.00	9,597.14	12,995.26	8,980.11	22.64	69.50	17.23	-434.66	-613.54	638.49	589.84	48.65	13.124		
9,850.00	9,609.02	12,948.55	8,981.09	22.89	68.77	16.49	-481.31	-611.18	648.30	600.18	48.12	13.473		
9,900.00	9,616.62	12,904.61	8,981.62	23.17	68.07	15.99	-525.18	-608.81	654.39	606.70	47.69	13.722		
9,950.00	9,619.89	12,861.26	8,981.69	23.47	67.40	15.67	-568.45	-606.25	656.75	609.42	47.33	13.876		
9,968.21	9,620.00	12,845.76	8,981.57	23.59	67.16	15.59	-583.92	-605.22	656.71	609.49	47.21	13.909		
10,000.00	9,619.68	12,818.73	8,981.14	27.08	66.74	15.44	-610.87	-603.25	656.33	609.29	47.04	13.954		
10,100.00	9,618.68	12,698.59	8,979.49	27.16	64.96	14.69	-730.60	-593.63	654.96	609.00	45.96	14.251		
10,200.00	9,617.68	12,587.42	8,982.10	27.23	63.28	14.16	-841.46	-585.66	650.09	605.06	45.04	14.435		
10,300.00	9,616.68	12,488.85	8,985.00	27.31	61.79	13.65	-939.69	-578.00	644.57	600.46	44.11	14.613		
10,400.00	9,615.69	12,396.31	8,987.17	27.39	60.40	13.19	-1,031.96	-571.29	639.80	596.57	43.23	14.799		
10,500.00	9,614.69	12,305.91	8,988.43	27.48	59.01	12.82	-1,122.18	-565.90	636.30	593.85	42.45	14.990		
10,586.83	9,613.82	12,235.92	8,987.89	27.55	57.91	12.51	-1,192.05	-561.85	635.14	593.38	41.77	15.206		
10,600.00	9,613.69	12,223.00	8,987.57	27.56	57.71	12.45	-1,204.94	-561.07	635.18	593.50	41.67	15.242		
10,700.00	9,612.69	12,128.00	8,984.73	27.65	56.23	11.92	-1,299.69	-554.83	635.88	594.92	40.96	15.524		
10,800.00	9,611.69	12,027.63	8,981.34	27.75	54.73	11.27	-1,399.71	-547.13	636.82	596.54	40.29	15.807		
10,900.00	9,610.69	11,918.76	8,978.71	27.84	53.09	10.53	-1,508.19	-538.34	636.81	597.12	39.69	16.044		
11,000.00	9,609.69	11,817.96	8,976.66	27.94	51.59	9.82	-1,608.61	-529.75	636.46	597.33	39.13	16.265		
11,100.00	9,608.69	11,711.03	8,975.82	28.04	50.04	9.20	-1,715.24	-521.96	635.15	596.45	38.70	16.414		
11,200.00	9,607.69	11,605.86	8,976.08	28.15	48.50	8.86	-1,820.30	-517.18	633.33	594.94	38.39	16.498		
11,300.00	9,606.69	11,503.66	8,977.97	28.26	46.96	8.83	-1,922.47	-515.65	630.40	592.21	38.19	16.507		
11,400.00	9,605.69	11,409.06	8,979.06	28.37	45.56	8.71	-2,017.03	-513.29	628.00	590.04	37.96	16.545		
11,500.00	9,604.69	11,291.06	8,980.60	28.50	43.84	8.44	-2,134.93	-509.06	625.42	587.60	37.83	16.535		
11,600.00	9,603.69	11,188.19	8,985.07	28.63	42.36	8.48	-2,237.70	-507.85	620.06	582.34	37.73	16.435		
11,700.00	9,602.70	11,073.88	8,991.25	28.77	40.71	8.43	-2,351.81	-505.41	613.51	575.82	37.69	16.278		
11,800.00	9,601.70	10,979.13	8,996.97	28.92	39.27	8.33	-2,446.34	-502.63	606.23	568.67	37.56	16.139		
11,900.00	9,600.70	10,888.70	9,001.25	29.08	37.90	8.15	-2,536.61	-499.39	600.15	562.72	37.43	16.034		
12,000.00	9,599.70	10,803.00	9,003.46	29.27	36.62	7.89	-2,622.20	-495.57	596.09	558.79	37.30	15.983		
12,100.00	9,598.70	10,708.00	9,003.97	29.48	35.23	7.46	-2,717.04	-490.20	593.89	556.69	37.20	15.967		
12,200.00	9,597.70	10,612.00	9,003.53	29.72	33.90	6.85	-2,812.77	-483.01	592.50	555.40	37.10	15.969		
12,300.00	9,596.70	10,500.55	9,003.72	29.99	32.41	6.06	-2,923.84	-473.84	590.53	553.45	37.07	15.930		
12,400.00	9,595.70	10,385.51	9,007.72	30.31	30.78	5.21	-3,038.36	-463.71	585.14	548.05	37.10	15.774		
12,500.00	9,594.70	10,295.33	9,010.59	30.66	29.48	4.51	-3,128.13	-455.66	580.28	543.18	37.10	15.643		
12,600.00	9,593.70	10,205.96	9,011.97	31.04	28.23	3.78	-3,217.11	-447.47	577.13	540.00	37.13	15.542		
12,700.00	9,592.70	10,114.11	9,011.52	31.46	27.03	2.94	-3,308.49	-438.26	576.05	538.83	37.22	15.478		
12,800.00	9,591.70	9,999.55	9,011.69	31.91	25.62	1.97	-3,422.56	-427.62	574.58	537.17	37.41	15.360		
12,900.00	9,590.71	9,889.06	9,015.38	32.38	24.23	1.18	-3,532.63	-418.80	569.99	532.34	37.65	15.139		
13,000.00	9,589.71	9,793.44	9,018.74	32.87	23.01	0.44	-3,627.85	-410.68	565.35	527.47	37.89	14.922		
13,100.00	9,588.71	9,695.84	9,021.42	33.38	21.83	-0.36	-3,725.03	-402.12	561.59	523.42	38.17	14.711		
13,200.00	9,587.71	9,600.84	9,023.68	33.91	20.70	-1.12	-3,819.65	-394.03	558.31	519.82	38.50	14.503		
13,300.00	9,586.71	9,510.35	9,024.65	34.44	19.71	-1.63	-3,909.97	-388.44	556.39	517.55	38.84	14.324		
13,400.00	9,585.71	9,410.19	9,024.48	34.99	18.67	-2.27	-4,009.89	-381.54	555.77	516.49	39.27	14.151		
13,453.57	9,585.17	9,361.92	9,024.56	35.30	18.17	-2.61	-4,058.03	-377.95	555.31	515.81	39.50	14.059		
13,500.00	9,584.71	9,326.46	9,023.96	35.56	17.81	-2.82	-4,093.40	-375.61	555.77	516.10	39.68	14.007		
13,600.00	9,583.71	9,265.00	9,020.85	36.13	17.18	-3.07	-4,154.69	-372.61	560.49	520.45	40.04	13.998		
13,700.00	9,582.71	9,223.44	9,014.75	36.71	16.78	-3.01	-4,195.78	-372.56	574.30	533.88	40.43	14.205		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 26H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 160-MWD-ISCWSA, 5394-LEAM MWD+HDGM, 13431-Project													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
13,800.00	9,581.71	9,184.43	9,005.03	37.29	16.43	-2.82	-4,233.53	-373.70	598.09	557.20	40.90	14.625		
13,900.00	9,580.71	9,139.00	8,989.31	37.89	16.04	-2.44	-4,276.03	-376.54	631.01	589.60	41.41	15.239		
14,000.00	9,579.71	9,107.00	8,975.87	38.49	15.78	-2.09	-4,304.91	-379.48	671.64	629.70	41.94	16.015		
14,100.00	9,578.72	9,076.00	8,961.12	39.10	15.54	-1.69	-4,331.93	-383.10	719.34	676.88	42.45	16.944		
14,200.00	9,577.72	9,044.00	8,944.26	39.72	15.31	-1.22	-4,358.77	-387.51	773.08	730.14	42.94	18.003		
14,300.00	9,576.72	9,012.00	8,925.61	40.34	15.10	-0.77	-4,384.35	-392.11	832.31	788.92	43.39	19.182		
14,400.00	9,575.72	8,981.00	8,905.74	40.96	14.91	-0.34	-4,407.70	-396.64	896.61	852.81	43.80	20.471		
14,500.00	9,574.72	8,950.00	8,884.32	41.59	14.74	0.06	-4,429.64	-401.18	965.19	921.02	44.17	21.850		
14,600.00	9,573.72	8,924.00	8,865.43	42.23	14.60	0.37	-4,447.11	-404.91	1,037.11	992.60	44.51	23.300		
14,700.00	9,572.72	8,905.11	8,851.29	42.87	14.51	0.58	-4,459.34	-407.56	1,111.73	1,066.91	44.81	24.808		
14,800.00	9,571.72	8,879.43	8,831.58	43.52	14.39	0.84	-4,475.42	-411.09	1,188.70	1,143.60	45.10	26.359		
14,900.00	9,570.72	8,861.00	8,817.12	44.16	14.31	1.02	-4,486.56	-413.62	1,267.71	1,222.36	45.35	27.954		
15,000.00	9,569.72	8,830.00	8,792.14	44.82	14.18	1.30	-4,504.45	-417.76	1,348.54	1,302.93	45.61	29.567		
15,100.00	9,568.72	8,817.30	8,781.67	45.47	14.13	1.41	-4,511.45	-419.37	1,430.96	1,385.14	45.82	31.230		
15,200.00	9,567.72	8,798.00	8,765.50	46.13	14.05	1.55	-4,521.72	-421.72	1,514.89	1,468.86	46.03	32.910		
15,300.00	9,566.73	8,780.29	8,750.44	46.80	13.99	1.67	-4,530.81	-423.80	1,600.06	1,553.83	46.23	34.610		
15,400.00	9,565.73	8,759.26	8,732.34	47.46	13.92	1.80	-4,541.25	-426.17	1,686.25	1,639.82	46.43	36.318		
15,500.00	9,564.73	8,736.00	8,712.14	48.13	13.84	1.93	-4,552.52	-428.63	1,773.23	1,726.60	46.63	38.028		
15,600.00	9,563.73	8,704.00	8,684.09	48.81	13.74	2.08	-4,567.59	-431.75	1,860.90	1,814.05	46.85	39.722		
15,700.00	9,562.73	8,704.00	8,684.09	49.48	13.74	2.08	-4,567.59	-431.75	1,949.29	1,902.31	46.98	41.494		
15,800.00	9,561.73	8,673.00	8,656.50	50.16	13.65	2.20	-4,581.42	-434.68	2,038.35	1,991.17	47.19	43.198		
15,900.00	9,560.73	8,673.00	8,656.50	50.84	13.65	2.20	-4,581.42	-434.68	2,128.11	2,080.80	47.31	44.985		
16,000.00	9,559.73	8,659.76	8,644.55	51.52	13.62	2.25	-4,586.97	-435.92	2,218.57	2,171.11	47.46	46.743		
16,100.00	9,558.73	8,641.00	8,627.41	52.21	13.57	2.32	-4,594.42	-437.62	2,309.74	2,262.11	47.63	48.492		
16,200.00	9,557.73	8,641.00	8,627.41	52.89	13.57	2.32	-4,594.42	-437.62	2,401.29	2,353.55	47.75	50.293		
16,300.00	9,556.73	8,641.00	8,627.41	53.58	13.57	2.32	-4,594.42	-437.62	2,493.50	2,445.64	47.86	52.100		
16,400.00	9,555.73	8,626.66	8,614.17	54.28	13.53	2.36	-4,599.77	-438.86	2,586.07	2,538.06	48.01	53.864		
16,500.00	9,554.73	8,609.00	8,597.68	54.97	13.49	2.41	-4,605.93	-440.28	2,679.24	2,631.07	48.17	55.619		
16,600.00	9,553.74	8,609.00	8,597.68	55.67	13.49	2.41	-4,605.93	-440.28	2,772.60	2,724.31	48.28	57.424		
16,700.00	9,552.74	8,609.00	8,597.68	56.36	13.49	2.41	-4,605.93	-440.28	2,866.40	2,818.00	48.40	59.229		
16,800.00	9,551.74	8,609.00	8,597.68	57.06	13.49	2.41	-4,605.93	-440.28	2,960.61	2,912.10	48.51	61.034		
16,900.00	9,550.74	8,594.06	8,583.60	57.76	13.46	2.44	-4,610.79	-441.40	3,054.99	3,006.33	48.66	62.785		
16,973.85	9,550.00	8,577.00	8,567.39	58.28	13.42	2.47	-4,615.98	-442.56	3,125.05	3,076.27	48.79	64.057		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 94H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 170-MWD-ISCWSA, 1460-LEAM MWD+HDGM, 18012-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)					
0.00	0.00	4.81	4.81	0.00	0.00	-85.52	79.23	-1,010.41	1,013.51				
100.00	100.00	104.98	104.97	0.09	0.11	-85.47	80.02	-1,010.34	1,013.50	1,013.31	0.19	5,392.539	
200.00	200.00	205.75	205.72	0.31	0.26	-85.35	82.20	-1,010.13	1,013.47	1,012.91	0.56	1,816.959	
300.00	300.00	307.69	307.62	0.54	0.48	-85.18	85.18	-1,009.69	1,013.28	1,012.27	1.02	997.366	
400.00	400.00	405.78	405.66	0.76	0.69	-85.01	88.20	-1,009.24	1,013.08	1,011.64	1.45	700.838	
500.00	500.00	505.72	505.56	0.99	0.88	-84.86	90.84	-1,008.95	1,013.03	1,011.16	1.87	541.905	
600.00	600.00	610.65	610.46	1.21	1.10	-84.72	93.17	-1,008.41	1,012.72	1,010.41	2.32	437.296	
700.00	700.00	715.78	715.57	1.43	1.33	-84.61	95.01	-1,007.38	1,011.91	1,009.15	2.76	366.110	
800.00	800.00	815.22	814.99	1.66	1.54	-84.53	96.37	-1,006.10	1,010.76	1,007.56	3.20	316.076	
900.00	900.00	910.68	910.45	1.88	1.74	-84.45	97.70	-1,005.22	1,009.97	1,006.35	3.62	278.858	
1,000.00	1,000.00	1,006.36	1,006.11	2.11	1.94	-84.37	99.10	-1,004.76	1,009.64	1,005.59	4.05	249.497	
1,033.69	1,033.69	1,038.74	1,038.49	2.18	2.01	-84.34	99.57	-1,004.69	1,009.61	1,005.42	4.19	240.931	
1,100.00	1,100.00	1,102.48	1,102.22	2.33	2.14	-84.29	100.46	-1,004.69	1,009.70	1,005.23	4.47	225.706	
1,200.00	1,200.00	1,201.62	1,201.35	2.56	2.35	-84.22	101.79	-1,004.94	1,010.09	1,005.18	4.91	205.854	
1,300.00	1,300.00	1,305.25	1,304.97	2.78	2.57	-84.14	103.10	-1,004.97	1,010.25	1,004.90	5.35	188.838	
1,400.00	1,400.00	1,408.90	1,408.61	3.01	2.69	-84.07	104.35	-1,004.64	1,010.05	1,004.35	5.70	177.104	
1,500.00	1,500.00	1,510.28	1,509.99	3.23	2.77	-84.00	105.56	-1,004.00	1,009.55	1,003.55	6.00	168.314	
1,600.00	1,600.00	1,609.47	1,609.17	3.46	2.79	-83.93	106.62	-1,003.42	1,009.08	1,002.83	6.25	161.413	
1,700.00	1,700.00	1,709.33	1,709.03	3.68	2.84	-83.88	107.53	-1,002.91	1,008.66	1,002.14	6.52	154.635	
1,800.00	1,800.00	1,809.68	1,809.37	3.91	2.90	-83.83	108.32	-1,002.38	1,008.23	1,001.42	6.81	148.114	
1,900.00	1,900.00	1,908.74	1,908.43	4.13	2.98	-83.79	109.00	-1,001.88	1,007.80	1,000.69	7.11	141.794	
2,000.00	2,000.00	2,007.19	2,006.88	4.36	3.06	-83.75	109.66	-1,001.53	1,007.52	1,000.10	7.42	135.866	
2,100.00	2,100.00	2,106.04	2,105.72	4.58	3.16	-83.72	110.26	-1,001.32	1,007.38	999.63	7.74	130.140	
2,190.83	2,190.83	2,195.95	2,195.63	4.79	3.26	-83.69	110.68	-1,001.24	1,007.33	999.29	8.04	125.266	
2,200.00	2,200.00	2,205.03	2,204.71	4.81	3.27	-83.69	110.71	-1,001.23	1,007.33	999.26	8.07	124.794	
2,300.00	2,300.00	2,304.43	2,304.11	5.03	3.38	-83.67	111.09	-1,001.23	1,007.38	998.96	8.42	119.706	
2,400.00	2,400.00	2,403.93	2,403.61	5.26	3.51	-83.64	111.56	-1,001.27	1,007.47	998.71	8.76	114.988	
2,500.00	2,500.00	2,504.47	2,504.15	5.48	3.64	-83.62	111.97	-1,001.33	1,007.57	998.44	9.12	110.449	
2,600.00	2,599.99	2,605.10	2,604.78	5.69	3.78	6.39	112.10	-1,001.34	1,006.73	997.26	9.47	106.299	
2,700.00	2,699.96	2,703.99	2,703.67	5.89	3.93	6.41	112.04	-1,001.40	1,004.18	994.36	9.82	102.229	
2,800.00	2,799.86	2,802.88	2,802.56	6.09	4.09	6.43	111.84	-1,001.59	1,000.01	989.83	10.18	98.261	
2,900.00	2,899.68	2,902.30	2,901.98	6.30	4.25	6.47	111.73	-1,001.83	994.18	983.64	10.53	94.370	
2,917.68	2,917.31	2,919.86	2,919.54	6.33	4.27	6.48	111.74	-1,001.88	992.97	982.37	10.60	93.688	
3,000.00	2,999.41	3,001.54	3,001.22	6.51	4.40	6.52	111.87	-1,002.09	987.24	976.34	10.89	90.620	
3,100.00	3,099.15	3,100.22	3,099.89	6.72	4.56	6.59	112.21	-1,002.41	980.36	969.10	11.26	87.094	
3,200.00	3,198.88	3,199.31	3,198.99	6.94	4.72	6.66	112.70	-1,002.81	973.59	961.96	11.62	83.769	
3,300.00	3,298.61	3,299.74	3,299.41	7.16	4.89	6.74	113.28	-1,003.20	966.80	954.80	12.00	80.582	
3,400.00	3,398.35	3,400.26	3,399.92	7.38	5.06	6.83	113.92	-1,003.50	959.94	947.57	12.38	77.564	
3,500.00	3,498.08	3,500.93	3,500.60	7.60	5.23	6.93	114.74	-1,003.70	953.00	940.24	12.76	74.689	
3,600.00	3,597.82	3,600.17	3,599.83	7.82	5.40	7.04	115.73	-1,003.80	946.00	932.85	13.15	71.960	
3,700.00	3,697.55	3,697.66	3,697.31	8.05	5.58	7.15	116.68	-1,004.09	939.18	925.65	13.54	69.380	
3,800.00	3,797.29	3,797.95	3,797.60	8.28	5.77	7.26	117.58	-1,004.57	932.54	918.60	13.93	66.922	
3,900.00	3,897.02	3,901.05	3,900.70	8.51	5.96	7.37	118.48	-1,004.76	925.61	911.27	14.34	64.548	
4,000.00	3,996.76	4,001.41	4,001.06	8.74	6.14	7.48	119.21	-1,004.70	918.43	903.68	14.74	62.300	
4,100.00	4,096.49	4,100.29	4,099.93	8.97	6.33	7.54	119.29	-1,004.80	911.31	896.16	15.14	60.180	
4,200.00	4,196.22	4,205.13	4,204.77	9.20	6.53	7.57	118.74	-1,004.82	904.05	888.49	15.56	58.113	
4,300.00	4,295.96	4,312.29	4,311.93	9.44	6.73	7.58	117.83	-1,004.05	896.00	880.03	15.97	56.089	
4,400.00	4,395.69	4,428.35	4,427.95	9.67	6.95	7.58	116.29	-1,001.75	886.65	870.25	16.40	54.054	
4,500.00	4,495.43	4,536.65	4,536.15	9.91	7.16	7.54	114.18	-997.77	875.53	858.71	16.82	52.053	
4,600.00	4,595.16	4,626.12	4,625.56	10.15	7.33	7.50	112.33	-994.83	864.79	847.57	17.22	50.220	
4,700.00	4,694.90	4,719.27	4,718.67	10.38	7.51	7.46	110.49	-992.81	855.16	837.53	17.62	48.522	
4,800.00	4,794.63	4,831.44	4,830.77	10.62	7.73	7.41	108.34	-989.74	844.98	826.93	18.05	46.813	

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 94H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 170-MWD-ISCWSA, 1460-LEAM MWD+HDGM, 18012-Project													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis (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
4,900.00	4,894.37	4,935.25	4,934.48	10.86	7.93	7.38		106.40	-985.56	833.54	815.07	18.47	45.135	
5,000.00	4,994.10	5,029.29	5,028.43	11.10	8.12	7.36		104.69	-982.07	822.42	803.54	18.88	43.564	
5,100.00	5,093.83	5,124.34	5,123.43	11.34	8.30	7.33		103.06	-979.13	811.91	792.62	19.29	42.089	
5,200.00	5,193.57	5,220.96	5,220.01	11.58	8.50	7.32		101.72	-976.50	801.83	782.12	19.71	40.690	
5,300.00	5,293.30	5,317.71	5,316.72	11.83	8.69	7.32		100.50	-974.20	792.09	771.96	20.12	39.365	
5,400.00	5,393.04	5,416.27	5,415.25	12.07	8.89	7.33		99.35	-972.10	782.61	762.07	20.54	38.099	
5,500.00	5,492.77	5,515.40	5,514.35	12.31	9.09	7.34		98.33	-970.03	773.19	752.23	20.96	36.884	
5,600.00	5,592.51	5,614.46	5,613.39	12.56	9.29	7.36		97.41	-968.01	763.84	742.45	21.39	35.718	
5,700.00	5,692.24	5,713.51	5,712.42	12.80	9.49	7.39		96.60	-966.05	754.55	732.74	21.81	34.599	
5,800.00	5,791.97	5,811.42	5,810.31	13.04	9.69	7.43		95.97	-964.22	745.40	723.17	22.23	33.527	
5,900.00	5,891.71	5,909.25	5,908.13	13.29	9.89	7.49		95.61	-962.60	736.49	713.83	22.66	32.505	
6,000.00	5,991.44	6,009.46	6,008.32	13.53	10.09	7.56		95.37	-961.00	727.66	704.57	23.08	31.523	
6,100.00	6,091.18	6,109.72	6,108.56	13.78	10.29	7.63		95.09	-959.31	718.74	695.23	23.51	30.573	
6,200.00	6,190.91	6,209.92	6,208.75	14.02	10.49	7.70		94.74	-957.54	709.73	685.80	23.93	29.655	
6,300.00	6,290.65	6,310.01	6,308.82	14.27	10.69	7.77		94.32	-955.70	700.64	676.28	24.36	28.765	
6,400.00	6,390.38	6,409.54	6,408.34	14.51	10.89	7.83		93.83	-953.85	691.52	666.74	24.78	27.902	
6,500.00	6,490.12	6,509.10	6,507.88	14.76	11.10	7.89		93.30	-952.02	682.42	657.20	25.21	27.068	
6,600.00	6,589.85	6,608.71	6,607.47	15.01	11.30	7.95		92.78	-950.18	673.31	647.67	25.64	26.260	
6,700.00	6,689.58	6,707.89	6,706.62	15.25	11.50	8.02		92.29	-948.35	664.20	638.14	26.07	25.479	
6,800.00	6,789.32	6,806.30	6,805.02	15.50	11.71	8.09		91.84	-946.67	655.25	628.75	26.50	24.728	
6,900.00	6,889.05	6,905.43	6,904.14	15.75	11.91	8.16		91.41	-945.13	646.44	619.52	26.93	24.007	
7,000.00	6,988.79	7,005.57	7,004.27	16.00	12.12	8.23		90.93	-943.55	637.61	610.25	27.36	23.306	
7,100.00	7,088.52	7,102.10	7,100.79	16.24	12.31	8.29		90.36	-942.09	628.83	601.04	27.79	22.631	
7,200.00	7,188.26	7,195.11	7,193.78	16.49	12.50	8.31		89.54	-941.60	620.97	592.76	28.21	22.013	
7,300.00	7,287.99	7,290.98	7,289.65	16.74	12.70	8.30		88.42	-942.07	614.08	585.44	28.64	21.444	
7,400.00	7,387.73	7,390.18	7,388.84	16.99	12.90	8.29		87.35	-942.79	607.43	578.36	29.07	20.897	
7,500.00	7,487.46	7,490.52	7,489.18	17.24	13.11	8.28		86.36	-943.54	600.82	571.32	29.50	20.367	
7,600.00	7,587.19	7,591.81	7,590.45	17.48	13.31	8.27		85.19	-944.11	594.00	564.07	29.93	19.845	
7,700.00	7,686.93	7,691.89	7,690.52	17.73	13.52	8.23		83.84	-944.51	586.99	556.63	30.36	19.332	
7,800.00	7,786.66	7,791.34	7,789.97	17.98	13.72	8.19		82.41	-944.94	580.01	549.22	30.80	18.834	
7,900.00	7,886.40	7,891.41	7,890.02	18.23	13.92	8.14		80.94	-945.40	573.05	541.82	31.23	18.351	
8,000.00	7,986.13	7,991.67	7,990.27	18.48	14.13	8.10		79.53	-945.77	566.00	534.34	31.66	17.877	
8,100.00	8,085.87	8,091.08	8,089.67	18.73	14.33	8.05		78.08	-946.11	558.92	526.83	32.09	17.416	
8,200.00	8,185.60	8,190.34	8,188.91	18.98	14.54	7.98		76.39	-946.57	551.93	519.41	32.52	16.971	
8,300.00	8,285.34	8,291.51	8,290.07	19.23	14.74	7.89		74.63	-946.97	544.87	511.91	32.96	16.533	
8,400.00	8,385.07	8,392.68	8,391.22	19.48	14.95	7.84		73.11	-947.05	537.53	504.13	33.39	16.098	
8,444.81	8,429.76	8,437.10	8,435.64	19.59	15.04	7.82		72.48	-947.03	534.19	500.61	33.58	15.906	
8,500.00	8,484.82	8,491.83	8,490.37	19.71	15.15	7.78		71.68	-947.05	530.38	496.56	33.81	15.687	
8,600.00	8,584.67	8,591.14	8,589.66	19.90	15.36	7.69		70.16	-947.17	524.89	490.69	34.20	15.348	
8,700.00	8,684.60	8,690.76	8,689.27	20.08	15.57	7.55		68.44	-947.39	521.21	486.62	34.59	15.069	
8,800.00	8,784.58	8,790.19	8,788.68	20.26	15.77	7.35		66.48	-947.71	519.32	484.35	34.98	14.848	
8,847.32	8,831.90	8,836.85	8,835.33	20.35	15.87	7.26		65.63	-947.91	519.10	483.94	35.16	14.764 CC	
8,862.49	8,847.07	8,851.82	8,850.30	20.37	15.90	-82.76		65.39	-947.99	519.12	483.90	35.22	14.740	
8,900.00	8,884.58	8,888.81	8,887.28	20.44	15.98	-82.83		64.83	-948.19	519.26	483.89	35.37	14.680 ES	
9,000.00	8,984.58	8,987.73	8,986.19	20.64	16.18	-82.96		63.71	-948.86	519.79	484.00	35.78	14.526	
9,062.49	9,047.07	9,050.00	9,048.46	20.77	16.31	-83.03		63.08	-949.33	520.18	484.14	36.04	14.433	
9,100.00	9,084.55	9,087.37	9,085.83	20.84	16.39	97.43		62.69	-949.63	520.59	484.39	36.20	14.383	
9,150.00	9,134.24	9,136.95	9,135.40	20.93	16.49	97.85		62.15	-950.04	521.66	485.27	36.40	14.332	
9,200.00	9,183.26	9,185.72	9,184.17	21.02	16.59	98.64		61.62	-950.47	523.46	486.85	36.61	14.299	
9,250.00	9,231.25	9,233.42	9,231.86	21.12	16.69	99.75		61.14	-950.92	526.19	489.36	36.82	14.290	
9,300.00	9,277.84	9,279.74	9,278.18	21.21	16.79	101.11		60.71	-951.39	530.14	493.09	37.05	14.309	
9,350.00	9,322.67	9,324.34	9,322.77	21.31	16.88	102.60		60.32	-951.87	535.67	498.38	37.29	14.365	

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 94H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 170-MWD-ISCWSA, 1460-LEAM MWD+HDGM, 18012-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)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
9,400.00	9,365.40	9,367.24	9,365.67	21.41	16.97	104.15	59.99	-952.35	543.13	505.58	37.55	14.464			
9,450.00	9,405.71	9,407.87	9,406.30	21.52	17.05	105.63	59.78	-952.76	552.89	515.06	37.83	14.615			
9,500.00	9,443.29	9,445.64	9,444.07	21.63	17.13	106.91	59.67	-953.10	565.32	527.19	38.13	14.825			
9,550.00	9,477.85	9,480.23	9,478.66	21.75	17.20	107.86	59.65	-953.37	580.72	542.27	38.45	15.103			
9,600.00	9,509.14	9,511.40	9,509.82	21.89	17.26	108.37	59.70	-953.59	599.31	560.53	38.78	15.453			
9,650.00	9,536.90	9,539.20	9,537.63	22.04	17.32	108.35	59.79	-953.76	621.20	582.08	39.12	15.879			
9,700.00	9,560.95	9,564.24	9,562.66	22.22	17.37	107.76	59.84	-953.89	646.31	606.86	39.45	16.382			
9,750.00	9,581.08	9,585.33	9,583.76	22.42	17.42	106.43	59.86	-953.99	674.53	634.75	39.78	16.958			
9,800.00	9,597.14	9,602.30	9,600.72	22.64	17.45	104.24	59.84	-954.05	705.61	665.54	40.08	17.607			
9,850.00	9,609.02	9,614.96	9,613.38	22.89	17.48	101.08	59.82	-954.10	739.27	698.91	40.35	18.320			
9,900.00	9,616.62	9,623.17	9,621.59	23.17	17.49	96.86	59.80	-954.12	775.12	734.52	40.60	19.092			
9,950.00	9,619.89	9,626.82	9,625.24	23.47	17.50	91.56	59.79	-954.13	812.76	771.95	40.81	19.914			
9,968.21	9,620.00	9,626.99	9,625.42	23.59	17.50	89.36	59.79	-954.13	826.83	785.94	40.88	20.223			
10,000.00	9,619.68	9,626.76	9,625.19	27.08	17.50	89.34	59.79	-954.13	851.75	807.71	44.04	19.339			
10,100.00	9,618.68	9,626.03	9,624.46	27.16	17.50	89.26	59.79	-954.13	932.89	888.62	44.28	21.069			
10,200.00	9,617.68	9,625.29	9,623.72	27.23	17.50	89.17	59.79	-954.13	1,017.40	972.93	44.47	22.878			
10,300.00	9,616.68	9,624.54	9,622.96	27.31	17.50	89.09	59.79	-954.12	1,104.49	1,059.86	44.63	24.746			
10,400.00	9,615.69	11,464.13	10,596.32	27.39	25.87	151.53	-1,001.30	-954.76	1,110.12	1,077.18	32.93	33.706			
10,500.00	9,614.69	11,548.61	10,597.61	27.48	26.69	151.53	-1,085.77	-955.19	1,112.92	1,079.20	33.73	32.998			
10,600.00	9,613.69	11,643.41	10,600.86	27.56	27.65	151.64	-1,180.50	-954.45	1,116.78	1,082.27	34.51	32.363			
10,700.00	9,612.69	11,756.36	10,604.88	27.65	28.88	151.85	-1,293.35	-951.76	1,120.01	1,084.73	35.28	31.744			
10,800.00	9,611.69	11,860.71	10,608.32	27.75	30.10	152.09	-1,397.58	-948.12	1,122.51	1,086.36	36.14	31.059			
10,900.00	9,610.69	12,008.90	10,609.72	27.84	31.93	152.29	-1,545.67	-944.12	1,123.58	1,086.51	37.07	30.312			
11,000.00	9,609.69	12,119.77	10,605.38	27.94	33.34	152.21	-1,656.45	-943.23	1,120.95	1,082.75	38.19	29.348			
11,100.00	9,608.69	12,210.43	10,601.90	28.04	34.46	152.15	-1,747.05	-942.68	1,118.49	1,079.16	39.33	28.435			
11,200.00	9,607.69	12,304.96	10,599.27	28.15	35.61	152.12	-1,841.53	-941.67	1,116.76	1,076.26	40.49	27.579			
11,300.00	9,606.69	12,408.88	10,596.84	28.26	36.94	152.14	-1,945.40	-939.68	1,115.01	1,073.32	41.69	26.745			
11,400.00	9,605.69	12,497.88	10,595.31	28.37	38.08	152.20	-2,034.37	-937.51	1,113.58	1,070.69	42.89	25.965			
11,450.75	9,605.19	12,538.26	10,595.03	28.44	38.60	152.23	-2,074.73	-936.52	1,113.33	1,069.83	43.49	25.597			
11,500.00	9,604.69	12,576.45	10,595.21	28.50	39.08	152.27	-2,112.90	-935.59	1,113.57	1,069.50	44.08	25.265			
11,600.00	9,603.69	12,668.17	10,596.85	28.63	40.29	152.41	-2,204.58	-933.18	1,115.14	1,069.85	45.29	24.622			
11,700.00	9,602.70	12,756.55	10,599.13	28.77	41.47	152.58	-2,292.89	-930.50	1,117.28	1,070.77	46.51	24.022			
11,800.00	9,601.70	12,842.09	10,602.46	28.92	42.60	152.75	-2,378.34	-928.21	1,120.73	1,073.00	47.73	23.481			
11,900.00	9,600.70	12,935.03	10,606.90	29.08	43.84	152.93	-2,471.14	-926.34	1,125.27	1,076.29	48.98	22.975			
12,000.00	9,599.70	13,031.23	10,611.68	29.27	45.15	153.12	-2,567.22	-924.50	1,130.06	1,079.80	50.26	22.484			
12,100.00	9,598.70	13,151.59	10,617.48	29.48	46.81	153.34	-2,687.41	-922.14	1,134.81	1,083.18	51.62	21.982			
12,200.00	9,597.70	13,249.23	10,620.43	29.72	48.17	153.49	-2,784.98	-920.15	1,137.83	1,084.86	52.97	21.482			
12,300.00	9,596.70	13,348.37	10,623.80	29.99	49.55	153.62	-2,884.06	-918.60	1,141.40	1,087.07	54.33	21.007			
12,400.00	9,595.70	13,457.38	10,626.73	30.31	51.09	153.73	-2,993.01	-917.48	1,144.57	1,088.79	55.78	20.520			
12,500.00	9,594.70	13,588.49	10,627.15	30.66	52.97	153.76	-3,124.12	-916.67	1,145.77	1,088.39	57.38	19.968			
12,600.00	9,593.70	13,689.53	10,625.04	31.04	54.42	153.67	-3,225.12	-917.28	1,145.38	1,086.45	58.93	19.437			
12,605.64	9,593.65	13,694.28	10,624.95	31.06	54.49	153.67	-3,229.88	-917.32	1,145.38	1,086.37	59.01	19.409			
12,700.00	9,592.70	13,774.92	10,624.20	31.46	55.64	153.63	-3,310.51	-917.78	1,145.97	1,085.58	60.39	18.976			
12,800.00	9,591.70	13,869.98	10,624.49	31.91	56.98	153.60	-3,405.57	-918.16	1,147.63	1,085.74	61.89	18.544			
12,900.00	9,590.71	13,981.87	10,623.88	32.38	58.60	153.55	-3,517.46	-918.83	1,148.62	1,085.11	63.51	18.085			
13,000.00	9,589.71	14,079.35	10,622.42	32.87	60.01	153.44	-3,614.92	-920.26	1,149.16	1,084.06	65.10	17.652			
13,100.00	9,588.71	14,175.12	10,621.56	33.38	61.38	153.35	-3,710.66	-921.75	1,150.27	1,083.59	66.68	17.251			
13,200.00	9,587.71	14,273.05	10,621.32	33.91	62.80	153.31	-3,808.60	-922.21	1,151.48	1,083.24	68.25	16.872			
13,300.00	9,586.71	14,374.44	10,621.80	34.44	64.29	153.33	-3,909.99	-921.68	1,152.90	1,083.08	69.82	16.514			
13,400.00	9,585.71	14,497.08	10,621.08	34.99	66.10	153.33	-4,032.62	-921.02	1,153.40	1,081.87	71.53	16.125			
13,450.37	9,585.21	14,539.12	10,620.53	35.28	66.72	153.34	-4,074.65	-920.49	1,153.15	1,080.88	72.27	15.955			
13,500.00	9,584.71	14,577.30	10,620.68	35.56	67.28	153.38	-4,112.82	-919.57	1,153.40	1,080.43	72.97	15.807			

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 94H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 170-MWD-ISCWSA, 1460-LEAM MWD+HDGM, 18012-Project													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
13,600.00	9,583.71	14,655.15	10,622.81	36.13	68.43	153.55	-4,190.58	-916.61	1,155.37	1,081.07	74.30	15.550		
13,700.00	9,582.71	14,763.78	10,627.57	36.71	70.05	153.86	-4,299.00	-911.79	1,158.61	1,082.85	75.75	15.295		
13,800.00	9,581.71	14,862.96	10,629.89	37.29	71.52	154.05	-4,398.10	-908.49	1,160.47	1,083.25	77.22	15.029		
13,900.00	9,580.71	14,966.65	10,632.82	37.89	73.04	154.26	-4,501.69	-904.94	1,162.75	1,084.05	78.70	14.775		
14,000.00	9,579.71	15,098.98	10,634.20	38.49	75.01	154.48	-4,633.91	-900.10	1,163.33	1,082.98	80.36	14.477		
14,100.00	9,578.72	15,210.79	10,633.00	39.10	76.69	154.65	-4,745.62	-895.59	1,161.83	1,079.90	81.92	14.182		
14,200.00	9,577.72	15,309.01	10,631.23	39.72	78.15	154.75	-4,843.76	-892.28	1,159.98	1,076.53	83.45	13.900		
14,300.00	9,576.72	15,404.07	10,629.57	40.34	79.55	154.81	-4,938.78	-889.88	1,158.53	1,073.55	84.98	13.632		
14,400.00	9,575.72	15,496.74	10,628.13	40.96	80.90	154.85	-5,031.42	-888.06	1,157.51	1,070.99	86.51	13.379		
14,500.00	9,574.72	15,595.10	10,626.78	41.59	82.34	154.84	-5,129.77	-887.42	1,157.20	1,069.08	88.12	13.132		
14,600.00	9,573.72	15,702.09	10,624.53	42.23	83.93	154.80	-5,236.74	-886.90	1,156.31	1,066.49	89.82	12.874		
14,700.00	9,572.72	15,791.10	10,622.41	42.87	85.26	154.74	-5,325.72	-887.08	1,155.48	1,064.06	91.42	12.639		
14,708.36	9,572.64	15,797.89	10,622.31	42.92	85.36	154.73	-5,332.51	-887.09	1,155.48	1,063.93	91.55	12.622		
14,800.00	9,571.72	15,879.26	10,621.76	43.52	86.57	154.71	-5,413.87	-887.12	1,156.02	1,063.04	92.98	12.433		
14,900.00	9,570.72	15,966.77	10,621.82	44.16	87.86	154.71	-5,501.39	-886.93	1,157.24	1,062.74	94.51	12.245		
15,000.00	9,569.72	16,048.00	10,624.18	44.82	89.07	154.83	-5,582.56	-885.21	1,160.16	1,064.28	95.88	12.100		
15,100.00	9,568.72	16,143.56	10,627.88	45.47	90.51	154.99	-5,678.02	-883.08	1,163.93	1,066.59	97.34	11.957		
15,200.00	9,567.72	16,248.22	10,632.71	46.13	92.09	155.22	-5,782.52	-879.76	1,168.01	1,069.18	98.83	11.818		
15,300.00	9,566.73	16,434.35	10,634.10	46.80	94.91	155.60	-5,968.39	-871.41	1,168.16	1,067.37	100.79	11.590		
15,400.00	9,565.73	16,536.75	10,630.88	47.46	96.47	155.77	-6,070.59	-865.82	1,164.25	1,061.95	102.30	11.381		
15,500.00	9,564.73	16,636.87	10,628.17	48.13	98.01	156.01	-6,170.44	-859.09	1,160.24	1,056.50	103.74	11.184		
15,600.00	9,563.73	16,738.00	10,626.04	48.81	99.57	156.32	-6,271.22	-850.94	1,156.25	1,051.13	105.12	10.999		
15,700.00	9,562.73	16,837.18	10,623.48	49.48	101.10	156.60	-6,370.09	-843.52	1,152.10	1,045.57	106.52	10.815		
15,800.00	9,561.73	16,935.23	10,620.35	50.16	102.61	156.76	-6,467.95	-838.29	1,148.26	1,040.25	108.01	10.631		
15,900.00	9,560.73	17,028.46	10,616.79	50.84	104.03	156.83	-6,561.05	-834.91	1,144.54	1,035.00	109.54	10.448		
16,000.00	9,559.73	17,113.55	10,613.98	51.52	105.30	156.85	-6,646.07	-833.17	1,141.91	1,030.84	111.07	10.281		
16,100.00	9,558.73	17,200.30	10,611.97	52.21	106.59	156.83	-6,732.80	-832.41	1,140.62	1,028.00	112.62	10.128		
16,200.00	9,557.73	17,292.67	10,610.18	52.89	107.96	156.77	-6,825.15	-832.64	1,140.15	1,025.90	114.25	9.980		
16,216.40	9,557.57	17,307.66	10,609.93	53.01	108.18	156.76	-6,840.14	-832.73	1,140.14	1,025.63	114.51	9.956		
16,300.00	9,556.73	17,379.67	10,609.03	53.58	109.25	156.71	-6,912.13	-833.28	1,140.46	1,024.62	115.83	9.846		
16,400.00	9,555.73	17,455.00	10,609.86	54.28	110.37	156.72	-6,987.46	-833.14	1,142.59	1,025.37	117.22	9.748		
16,500.00	9,554.73	17,551.00	10,611.45	54.97	111.83	156.72	-7,083.44	-833.48	1,145.48	1,026.66	118.81	9.641		
16,600.00	9,553.74	17,646.00	10,613.35	55.67	113.26	156.68	-7,178.41	-834.97	1,149.15	1,028.71	120.44	9.541		
16,700.00	9,552.74	17,745.41	10,616.28	56.36	114.74	156.65	-7,277.76	-836.53	1,153.68	1,031.58	122.10	9.449		
16,800.00	9,551.74	17,906.63	10,613.89	57.06	117.17	156.48	-7,438.92	-838.79	1,153.51	1,029.03	124.48	9.267		
16,900.00	9,550.74	18,012.00	10,609.94	57.76	117.95	156.33	-7,544.21	-840.02	1,151.73	1,025.89	125.85	9.152		
16,920.36	9,550.53	18,012.00	10,609.94	57.91	117.95	156.33	-7,544.21	-840.02	1,151.55	1,025.43	126.12	9.131		
16,973.85	9,550.00	18,012.00	10,609.94	58.28	117.95	156.33	-7,544.21	-840.02	1,152.80	1,026.11	126.69	9.099 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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 94H - ST - ST														Offset Site Error:	0.00 usft
Survey Program: 170-MWD-ISCWSA, 1460-LEAM MWD+HDGM, 11993-LEAM MWD+HDGM, 18012-Project														Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis (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	4.81	4.81	0.00	0.00	-85.52		79.23	-1,010.41	1,013.51					
100.00	100.00	104.98	104.97	0.09	0.11	-85.47		80.02	-1,010.34	1,013.50	1,013.31	0.19	5,392.521		
200.00	200.00	205.75	205.72	0.31	0.26	-85.35		82.20	-1,010.13	1,013.47	1,012.91	0.56	1,816.952		
300.00	300.00	307.69	307.62	0.54	0.48	-85.18		85.18	-1,009.69	1,013.28	1,012.27	1.02	997.362		
400.00	400.00	405.78	405.66	0.76	0.69	-85.01		88.20	-1,009.24	1,013.08	1,011.64	1.45	700.835		
500.00	500.00	505.72	505.56	0.99	0.88	-84.86		90.84	-1,008.95	1,013.03	1,011.16	1.87	541.903		
600.00	600.00	610.65	610.46	1.21	1.10	-84.72		93.17	-1,008.41	1,012.72	1,010.41	2.32	437.295		
700.00	700.00	715.78	715.57	1.43	1.33	-84.61		95.01	-1,007.38	1,011.91	1,009.15	2.76	366.110		
800.00	800.00	815.22	814.99	1.66	1.54	-84.53		96.37	-1,006.10	1,010.76	1,007.56	3.20	316.075		
900.00	900.00	910.68	910.45	1.88	1.74	-84.45		97.70	-1,005.22	1,009.97	1,006.35	3.62	278.858		
1,000.00	1,000.00	1,006.36	1,006.11	2.11	1.94	-84.37		99.10	-1,004.76	1,009.64	1,005.59	4.05	249.496		
1,033.69	1,033.69	1,038.74	1,038.49	2.18	2.01	-84.34		99.57	-1,004.69	1,009.61	1,005.42	4.19	240.931		
1,100.00	1,100.00	1,102.48	1,102.22	2.33	2.14	-84.29		100.46	-1,004.69	1,009.70	1,005.23	4.47	225.705		
1,200.00	1,200.00	1,201.62	1,201.35	2.56	2.35	-84.22		101.79	-1,004.94	1,010.09	1,005.18	4.91	205.854		
1,300.00	1,300.00	1,305.25	1,304.97	2.78	2.57	-84.14		103.10	-1,004.97	1,010.25	1,004.90	5.35	188.838		
1,400.00	1,400.00	1,408.90	1,408.61	3.01	2.69	-84.07		104.35	-1,004.64	1,010.05	1,004.35	5.70	177.104		
1,500.00	1,500.00	1,510.28	1,509.99	3.23	2.77	-84.00		105.56	-1,004.00	1,009.55	1,003.55	6.00	168.314		
1,600.00	1,600.00	1,609.47	1,609.17	3.46	2.79	-83.93		106.62	-1,003.42	1,009.08	1,002.83	6.25	161.413		
1,700.00	1,700.00	1,709.33	1,709.03	3.68	2.84	-83.88		107.53	-1,002.91	1,008.66	1,002.14	6.52	154.635		
1,800.00	1,800.00	1,809.68	1,809.37	3.91	2.90	-83.83		108.32	-1,002.38	1,008.23	1,001.42	6.81	148.114		
1,900.00	1,900.00	1,908.74	1,908.43	4.13	2.98	-83.79		109.00	-1,001.88	1,007.80	1,000.69	7.11	141.794		
2,000.00	2,000.00	2,007.19	2,006.88	4.36	3.06	-83.75		109.66	-1,001.53	1,007.52	1,000.10	7.42	135.866		
2,100.00	2,100.00	2,106.04	2,105.72	4.58	3.16	-83.72		110.26	-1,001.32	1,007.38	999.63	7.74	130.140		
2,190.83	2,190.83	2,195.95	2,195.63	4.79	3.26	-83.69		110.68	-1,001.24	1,007.33	999.29	8.04	125.266		
2,200.00	2,200.00	2,205.03	2,204.71	4.81	3.27	-83.69		110.71	-1,001.23	1,007.33	999.26	8.07	124.794		
2,300.00	2,300.00	2,304.43	2,304.11	5.03	3.38	-83.67		111.09	-1,001.23	1,007.38	998.96	8.42	119.706		
2,400.00	2,400.00	2,403.93	2,403.61	5.26	3.51	-83.64		111.56	-1,001.27	1,007.47	998.71	8.76	114.988		
2,500.00	2,500.00	2,504.47	2,504.15	5.48	3.64	-83.62		111.97	-1,001.33	1,007.57	998.44	9.12	110.449		
2,600.00	2,599.99	2,605.10	2,604.78	5.69	3.78	6.39		112.10	-1,001.34	1,006.73	997.26	9.47	106.299		
2,700.00	2,699.96	2,703.99	2,703.67	5.89	3.93	6.41		112.04	-1,001.40	1,004.18	994.36	9.82	102.229		
2,800.00	2,799.86	2,802.88	2,802.56	6.09	4.09	6.43		111.84	-1,001.59	1,000.01	989.83	10.18	98.261		
2,900.00	2,899.68	2,902.30	2,901.98	6.30	4.25	6.47		111.73	-1,001.83	994.18	983.64	10.53	94.370		
2,917.68	2,917.31	2,919.86	2,919.54	6.33	4.27	6.48		111.74	-1,001.88	992.97	982.37	10.60	93.688		
3,000.00	2,999.41	3,001.54	3,001.22	6.51	4.40	6.52		111.87	-1,002.09	987.24	976.34	10.89	90.620		
3,100.00	3,099.15	3,100.22	3,099.89	6.72	4.56	6.59		112.21	-1,002.41	980.36	969.10	11.26	87.094		
3,200.00	3,198.88	3,199.31	3,198.99	6.94	4.72	6.66		112.70	-1,002.81	973.59	961.96	11.62	83.768		
3,300.00	3,298.61	3,299.74	3,299.41	7.16	4.89	6.74		113.28	-1,003.20	966.80	954.80	12.00	80.582		
3,400.00	3,398.35	3,400.26	3,399.92	7.38	5.06	6.83		113.92	-1,003.50	959.94	947.57	12.38	77.564		
3,500.00	3,498.08	3,500.93	3,500.60	7.60	5.23	6.93		114.74	-1,003.70	953.00	940.24	12.76	74.689		
3,600.00	3,597.82	3,600.17	3,599.83	7.82	5.40	7.04		115.73	-1,003.80	946.00	932.85	13.15	71.960		
3,700.00	3,697.55	3,697.66	3,697.31	8.05	5.58	7.15		116.68	-1,004.09	939.18	925.65	13.54	69.380		
3,800.00	3,797.29	3,797.95	3,797.60	8.28	5.77	7.26		117.58	-1,004.57	932.54	918.60	13.93	66.922		
3,900.00	3,897.02	3,901.05	3,900.70	8.51	5.96	7.37		118.48	-1,004.76	925.61	911.27	14.34	64.548		
4,000.00	3,996.76	4,001.41	4,001.06	8.74	6.14	7.48		119.21	-1,004.70	918.43	903.68	14.74	62.300		
4,100.00	4,096.49	4,100.29	4,099.93	8.97	6.33	7.54		119.29	-1,004.80	911.31	896.16	15.14	60.180		
4,200.00	4,196.22	4,205.13	4,204.77	9.20	6.53	7.57		118.74	-1,004.82	904.05	888.49	15.56	58.113		
4,300.00	4,295.96	4,312.29	4,311.93	9.44	6.73	7.58		117.83	-1,004.05	896.00	880.03	15.97	56.089		
4,400.00	4,395.69	4,428.35	4,427.95	9.67	6.95	7.58		116.29	-1,001.75	886.65	870.25	16.40	54.054		
4,500.00	4,495.43	4,536.65	4,536.15	9.91	7.16	7.54		114.18	-997.77	875.53	858.71	16.82	52.053		
4,600.00	4,595.16	4,626.12	4,625.56	10.15	7.33	7.50		112.33	-994.83	864.79	847.57	17.22	50.220		
4,700.00	4,694.90	4,719.27	4,718.67	10.38	7.51	7.46		110.49	-992.81	855.16	837.53	17.62	48.522		
4,800.00	4,794.63	4,831.44	4,830.77	10.62	7.73	7.41		108.34	-989.74	844.98	826.93	18.05	46.813		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 94H - ST - ST													Offset Site Error:	0.00 usft
Survey Program: 170-MWD-ISCWSA, 1460-LEAM MWD+HDGM, 11993-LEAM MWD+HDGM, 18012-Project													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.00	4,894.37	4,935.25	4,934.48	10.86	7.93	7.38		106.40	-985.56	833.54	815.07	18.47	45.135	
5,000.00	4,994.10	5,029.29	5,028.43	11.10	8.12	7.36		104.69	-982.07	822.42	803.54	18.88	43.564	
5,100.00	5,093.83	5,124.34	5,123.43	11.34	8.30	7.33		103.06	-979.13	811.91	792.62	19.29	42.089	
5,200.00	5,193.57	5,220.96	5,220.01	11.58	8.50	7.32		101.72	-976.50	801.83	782.12	19.71	40.690	
5,300.00	5,293.30	5,317.71	5,316.72	11.83	8.69	7.32		100.50	-974.20	792.09	771.96	20.12	39.365	
5,400.00	5,393.04	5,416.27	5,415.25	12.07	8.89	7.33		99.35	-972.10	782.61	762.07	20.54	38.099	
5,500.00	5,492.77	5,515.40	5,514.35	12.31	9.09	7.34		98.33	-970.03	773.19	752.23	20.96	36.884	
5,600.00	5,592.51	5,614.46	5,613.39	12.56	9.29	7.36		97.41	-968.01	763.84	742.45	21.39	35.718	
5,700.00	5,692.24	5,713.51	5,712.42	12.80	9.49	7.39		96.60	-966.05	754.55	732.74	21.81	34.599	
5,800.00	5,791.97	5,811.42	5,810.31	13.04	9.69	7.43		95.97	-964.22	745.40	723.17	22.23	33.527	
5,900.00	5,891.71	5,909.25	5,908.13	13.29	9.89	7.49		95.61	-962.60	736.49	713.83	22.66	32.505	
6,000.00	5,991.44	6,009.46	6,008.32	13.53	10.09	7.56		95.37	-961.00	727.66	704.57	23.08	31.523	
6,100.00	6,091.18	6,109.72	6,108.56	13.78	10.29	7.63		95.09	-959.31	718.74	695.23	23.51	30.573	
6,200.00	6,190.91	6,209.92	6,208.75	14.02	10.49	7.70		94.74	-957.54	709.73	685.80	23.93	29.655	
6,300.00	6,290.65	6,310.01	6,308.82	14.27	10.69	7.77		94.32	-955.70	700.64	676.28	24.36	28.765	
6,400.00	6,390.38	6,409.54	6,408.34	14.51	10.89	7.83		93.83	-953.85	691.52	666.74	24.78	27.902	
6,500.00	6,490.12	6,509.10	6,507.88	14.76	11.10	7.89		93.30	-952.02	682.42	657.20	25.21	27.068	
6,600.00	6,589.85	6,608.71	6,607.47	15.01	11.30	7.95		92.78	-950.18	673.31	647.67	25.64	26.260	
6,700.00	6,689.58	6,707.89	6,706.62	15.25	11.50	8.02		92.29	-948.35	664.20	638.14	26.07	25.479	
6,800.00	6,789.32	6,806.30	6,805.02	15.50	11.71	8.09		91.84	-946.67	655.25	628.75	26.50	24.728	
6,900.00	6,889.05	6,905.43	6,904.14	15.75	11.91	8.16		91.41	-945.13	646.44	619.52	26.93	24.007	
7,000.00	6,988.79	7,005.57	7,004.27	16.00	12.12	8.23		90.93	-943.55	637.61	610.25	27.36	23.306	
7,100.00	7,088.52	7,102.10	7,100.79	16.24	12.31	8.29		90.36	-942.09	628.83	601.04	27.79	22.631	
7,200.00	7,188.26	7,195.11	7,193.78	16.49	12.50	8.31		89.54	-941.60	620.97	592.76	28.21	22.013	
7,300.00	7,287.99	7,290.98	7,289.65	16.74	12.70	8.30		88.42	-942.07	614.08	585.44	28.64	21.444	
7,400.00	7,387.73	7,390.18	7,388.84	16.99	12.90	8.29		87.35	-942.79	607.43	578.36	29.07	20.897	
7,500.00	7,487.46	7,490.52	7,489.18	17.24	13.11	8.28		86.36	-943.54	600.82	571.32	29.50	20.367	
7,600.00	7,587.19	7,591.81	7,590.45	17.48	13.31	8.27		85.19	-944.11	594.00	564.07	29.93	19.845	
7,700.00	7,686.93	7,691.89	7,690.52	17.73	13.52	8.23		83.84	-944.51	586.99	556.63	30.36	19.332	
7,800.00	7,786.66	7,791.34	7,789.97	17.98	13.72	8.19		82.41	-944.94	580.01	549.22	30.80	18.834	
7,900.00	7,886.40	7,891.41	7,890.02	18.23	13.92	8.14		80.94	-945.40	573.05	541.82	31.23	18.351	
8,000.00	7,986.13	7,991.67	7,990.27	18.48	14.13	8.10		79.53	-945.77	566.00	534.34	31.66	17.877	
8,100.00	8,085.87	8,091.08	8,089.67	18.73	14.33	8.05		78.08	-946.11	558.92	526.83	32.09	17.416	
8,200.00	8,185.60	8,190.34	8,188.91	18.98	14.54	7.98		76.39	-946.57	551.93	519.41	32.52	16.971	
8,300.00	8,285.34	8,291.51	8,290.07	19.23	14.74	7.89		74.63	-946.97	544.87	511.91	32.96	16.533	
8,400.00	8,385.07	8,392.68	8,391.22	19.48	14.95	7.84		73.11	-947.05	537.53	504.13	33.39	16.098	
8,444.81	8,429.76	8,437.10	8,435.64	19.59	15.04	7.82		72.48	-947.03	534.19	500.61	33.58	15.906	
8,500.00	8,484.82	8,491.83	8,490.37	19.71	15.15	7.78		71.68	-947.05	530.38	496.56	33.81	15.687	
8,600.00	8,584.67	8,591.14	8,589.66	19.90	15.36	7.69		70.16	-947.17	524.89	490.69	34.20	15.348	
8,700.00	8,684.60	8,690.76	8,689.27	20.08	15.57	7.55		68.44	-947.39	521.21	486.62	34.59	15.069	
8,800.00	8,784.58	8,790.19	8,788.68	20.26	15.77	7.35		66.48	-947.71	519.32	484.35	34.98	14.848	
8,847.32	8,831.90	8,836.85	8,835.33	20.35	15.87	7.26		65.63	-947.91	519.10	483.94	35.16	14.764 CC	
8,862.49	8,847.07	8,851.82	8,850.30	20.37	15.90	-82.76		65.39	-947.99	519.12	483.90	35.22	14.740	
8,900.00	8,884.58	8,888.81	8,887.28	20.44	15.98	-82.83		64.83	-948.19	519.26	483.89	35.37	14.680 ES	
9,000.00	8,984.58	8,987.73	8,986.19	20.64	16.18	-82.96		63.71	-948.86	519.79	484.00	35.78	14.526	
9,062.49	9,047.07	9,050.00	9,048.46	20.77	16.31	-83.03		63.08	-949.33	520.18	484.14	36.04	14.433	
9,100.00	9,084.55	9,087.37	9,085.83	20.84	16.39	97.43		62.69	-949.63	520.59	484.39	36.20	14.383	
9,150.00	9,134.24	9,136.95	9,135.40	20.93	16.49	97.85		62.15	-950.04	521.66	485.27	36.40	14.332	
9,200.00	9,183.26	9,185.72	9,184.17	21.02	16.59	98.64		61.62	-950.47	523.46	486.85	36.61	14.299	
9,250.00	9,231.25	9,233.42	9,231.86	21.12	16.69	99.75		61.14	-950.92	526.19	489.36	36.82	14.290	
9,300.00	9,277.84	9,279.74	9,278.18	21.21	16.79	101.11		60.71	-951.39	530.14	493.09	37.05	14.309	
9,350.00	9,322.67	9,324.34	9,322.77	21.31	16.88	102.60		60.32	-951.87	535.67	498.38	37.29	14.365	

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 94H - ST - ST													Offset Site Error:	0.00 usft
Survey Program: 170-MWD-ISCWSA, 1460-LEAM MWD+HDGM, 11993-LEAM MWD+HDGM, 18012-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)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,400.00	9,365.40	9,367.24	9,365.67	21.41	16.97	104.15	59.99	-952.35	543.13	505.58	37.55	14.464		
9,450.00	9,405.71	9,407.87	9,406.30	21.52	17.05	105.63	59.78	-952.76	552.89	515.06	37.83	14.615		
9,500.00	9,443.29	9,445.64	9,444.07	21.63	17.13	106.91	59.67	-953.10	565.32	527.19	38.13	14.825		
9,550.00	9,477.85	9,480.23	9,478.66	21.75	17.20	107.86	59.65	-953.37	580.72	542.27	38.45	15.103		
9,600.00	9,509.14	9,511.40	9,509.82	21.89	17.26	108.37	59.70	-953.59	599.31	560.53	38.78	15.453		
9,650.00	9,536.90	9,539.20	9,537.63	22.04	17.32	108.35	59.79	-953.76	621.20	582.08	39.12	15.879		
9,700.00	9,560.95	9,564.24	9,562.66	22.22	17.37	107.76	59.84	-953.89	646.31	606.86	39.45	16.382		
9,750.00	9,581.08	9,585.33	9,583.76	22.42	17.42	106.43	59.86	-953.99	674.53	634.75	39.78	16.958		
9,800.00	9,597.14	9,602.30	9,600.72	22.64	17.45	104.24	59.84	-954.05	705.61	665.54	40.08	17.607		
9,850.00	9,609.02	9,614.96	9,613.38	22.89	17.48	101.08	59.82	-954.10	739.27	698.91	40.35	18.320		
9,900.00	9,616.62	9,623.17	9,621.59	23.17	17.49	96.86	59.80	-954.12	775.12	734.52	40.60	19.092		
9,950.00	9,619.89	9,626.82	9,625.24	23.47	17.50	91.56	59.79	-954.13	812.76	771.95	40.81	19.914		
9,968.21	9,620.00	9,626.99	9,625.42	23.59	17.50	89.36	59.79	-954.13	826.83	785.94	40.88	20.223		
10,000.00	9,619.68	9,626.76	9,625.19	27.08	17.50	89.34	59.79	-954.13	851.75	807.71	44.04	19.339		
10,100.00	9,618.68	9,626.03	9,624.46	27.16	17.50	89.26	59.79	-954.13	932.89	888.62	44.28	21.069		
10,200.00	9,617.68	9,625.29	9,623.72	27.23	17.50	89.17	59.79	-954.13	1,017.40	972.93	44.47	22.878		
10,300.00	9,616.68	9,624.54	9,622.96	27.31	17.50	89.09	59.79	-954.12	1,104.49	1,059.86	44.63	24.746		
10,400.00	9,615.69	11,464.13	10,596.32	27.39	25.87	151.53	-1,001.30	-954.76	1,110.12	1,077.18	32.93	33.706		
10,500.00	9,614.69	11,548.61	10,597.61	27.48	26.69	151.53	-1,085.77	-955.19	1,112.92	1,079.20	33.73	32.998		
10,600.00	9,613.69	11,643.41	10,600.86	27.56	27.65	151.64	-1,180.50	-954.45	1,116.78	1,082.27	34.51	32.363		
10,700.00	9,612.69	11,756.36	10,604.88	27.65	28.88	151.85	-1,293.35	-951.76	1,120.01	1,084.73	35.28	31.744		
10,800.00	9,611.69	11,860.71	10,608.32	27.75	30.10	152.09	-1,397.58	-948.12	1,122.51	1,086.37	36.14	31.059		
10,900.00	9,610.69	11,957.09	10,611.20	27.84	31.15	152.28	-1,493.87	-945.14	1,124.93	1,087.97	36.96	30.436		
11,000.00	9,609.69	12,030.67	10,613.72	27.94	31.80	152.39	-1,567.39	-943.83	1,128.48	1,090.64	37.84	29.824		
11,100.00	9,608.69	12,112.15	10,619.66	28.04	32.45	152.59	-1,648.63	-942.35	1,135.15	1,096.59	38.57	29.433		
11,200.00	9,607.69	12,269.54	10,623.61	28.15	33.80	152.76	-1,805.94	-940.24	1,137.24	1,098.39	38.85	29.270		
11,300.00	9,606.69	12,368.34	10,625.21	28.26	34.70	152.89	-1,904.70	-938.03	1,138.89	1,099.27	39.62	28.743		
11,400.00	9,605.69	12,471.00	10,627.22	28.37	35.69	153.08	-2,007.27	-934.44	1,140.26	1,099.86	40.40	28.223		
11,500.00	9,604.69	12,566.00	10,629.12	28.50	36.64	153.26	-2,102.20	-931.29	1,141.79	1,100.52	41.27	27.666		
11,600.00	9,603.69	12,656.67	10,632.10	28.63	37.58	153.47	-2,192.75	-927.76	1,144.19	1,102.02	42.18	27.129		
11,700.00	9,602.70	12,783.69	10,635.08	28.77	38.96	153.76	-2,319.62	-922.42	1,145.61	1,102.62	42.99	26.649		
11,800.00	9,601.70	12,883.33	10,635.73	28.92	40.07	153.93	-2,419.19	-918.89	1,145.86	1,101.88	43.99	26.051		
11,900.00	9,600.70	12,967.05	10,637.20	29.08	41.03	154.10	-2,502.82	-915.45	1,146.89	1,101.85	45.03	25.469		
12,000.00	9,599.70	13,042.00	10,640.37	29.27	41.89	154.31	-2,577.63	-912.11	1,149.94	1,103.85	46.09	24.950		
12,100.00	9,598.70	13,214.17	10,642.87	29.48	43.93	154.72	-2,749.55	-903.86	1,150.07	1,103.06	47.01	24.464		
12,200.00	9,597.70	13,321.62	10,640.55	29.72	45.25	154.88	-2,856.86	-898.98	1,147.39	1,099.24	48.15	23.829		
12,300.00	9,596.70	13,425.32	10,637.22	29.99	46.56	154.94	-2,960.46	-895.80	1,144.39	1,095.02	49.38	23.178		
12,400.00	9,595.70	13,533.97	10,632.68	30.31	47.93	154.94	-3,068.99	-893.32	1,140.86	1,090.20	50.66	22.520		
12,500.00	9,594.70	13,636.50	10,627.05	30.66	49.24	154.87	-3,171.35	-891.93	1,136.52	1,084.51	52.01	21.854		
12,600.00	9,593.70	13,718.02	10,623.22	31.04	50.28	154.80	-3,252.77	-891.50	1,133.24	1,079.91	53.34	21.247		
12,700.00	9,592.70	13,814.63	10,619.86	31.46	51.51	154.76	-3,349.32	-890.43	1,130.84	1,076.16	54.68	20.680		
12,800.00	9,591.70	13,899.00	10,618.36	31.91	52.61	154.87	-3,433.61	-887.23	1,128.90	1,072.95	55.95	20.178		
12,871.01	9,591.00	13,960.45	10,618.55	32.24	53.42	155.03	-3,494.96	-883.76	1,128.31	1,071.50	56.81	19.862		
12,900.00	9,590.71	13,982.27	10,618.91	32.38	53.71	155.09	-3,516.74	-882.51	1,128.40	1,071.25	57.15	19.745		
13,000.00	9,589.71	14,079.06	10,621.06	32.87	55.01	155.36	-3,613.36	-877.27	1,129.35	1,070.99	58.36	19.351		
13,100.00	9,588.71	14,163.32	10,623.17	33.38	56.14	155.58	-3,697.50	-873.30	1,130.91	1,071.33	59.58	18.982		
13,200.00	9,587.71	14,278.67	10,626.55	33.91	57.68	155.88	-3,812.68	-868.01	1,132.96	1,072.11	60.85	18.619		
13,300.00	9,586.71	14,383.01	10,627.97	34.44	59.12	156.08	-3,916.93	-863.88	1,133.80	1,071.64	62.16	18.240		
13,400.00	9,585.71	14,508.13	10,626.28	34.99	60.86	156.10	-4,042.02	-862.55	1,133.36	1,069.66	63.70	17.793		
13,500.00	9,584.71	14,610.99	10,622.72	35.56	62.27	156.04	-4,144.81	-861.87	1,131.12	1,065.92	65.20	17.350		
13,600.00	9,583.71	14,696.48	10,621.11	36.13	63.44	156.05	-4,230.27	-860.66	1,130.01	1,063.42	66.59	16.970		
13,664.94	9,583.06	14,755.00	10,620.47	36.50	64.23	156.07	-4,288.79	-859.88	1,129.80	1,062.30	67.50	16.738		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 - 94H - ST - ST													Offset Site Error:	0.00 usft
Survey Program: 170-MWD-ISCWSA, 1460-LEAM MWD+HDGM, 11993-LEAM MWD+HDGM, 18012-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)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
13,700.00	9,582.71	14,781.66	10,620.33	36.71	64.60	156.07	-4,315.45	-859.62	1,129.92	1,061.95	67.97	16.623		
13,800.00	9,581.71	14,859.63	10,620.94	37.29	65.66	156.07	-4,393.42	-859.60	1,131.80	1,062.47	69.33	16.324		
13,900.00	9,580.71	14,979.62	10,621.34	37.89	67.32	156.04	-4,513.39	-860.12	1,133.46	1,062.52	70.95	15.977		
14,000.00	9,579.71	15,076.27	10,620.59	38.49	68.69	155.99	-4,610.04	-860.68	1,134.21	1,061.75	72.47	15.651		
14,100.00	9,578.72	15,160.75	10,621.90	39.10	69.88	156.06	-4,694.50	-859.52	1,136.26	1,062.42	73.84	15.388		
14,200.00	9,577.72	15,273.38	10,624.90	39.72	71.48	156.25	-4,807.04	-856.30	1,138.81	1,063.53	75.28	15.127		
14,300.00	9,576.72	15,392.02	10,625.35	40.34	73.18	156.43	-4,925.62	-852.26	1,138.91	1,062.13	76.78	14.834		
14,400.00	9,575.72	15,507.26	10,625.05	40.96	74.85	156.62	-5,040.76	-847.64	1,138.31	1,060.06	78.25	14.547		
14,500.00	9,574.72	15,599.77	10,623.57	41.59	76.18	156.69	-5,133.23	-845.28	1,137.05	1,057.35	79.70	14.267		
14,600.00	9,573.72	15,698.75	10,622.05	42.23	77.61	156.70	-5,232.18	-843.99	1,136.33	1,055.11	81.22	13.991		
14,700.00	9,572.72	15,802.44	10,620.32	42.87	79.12	156.72	-5,335.85	-842.50	1,135.44	1,052.67	82.77	13.718		
14,780.25	9,571.92	15,870.67	10,619.97	43.39	80.10	156.81	-5,404.04	-840.32	1,135.01	1,051.14	83.88	13.532		
14,800.00	9,571.72	15,887.42	10,620.10	43.52	80.34	156.85	-5,420.77	-839.55	1,135.04	1,050.90	84.13	13.491		
14,900.00	9,570.72	15,992.44	10,620.82	44.16	81.89	157.05	-5,525.69	-835.04	1,135.20	1,049.64	85.56	13.269		
15,000.00	9,569.72	16,089.00	10,619.91	44.82	83.31	157.17	-5,622.19	-831.93	1,134.31	1,047.31	87.00	13.038		
15,030.63	9,569.42	16,121.20	10,619.70	45.02	83.78	157.21	-5,654.36	-830.71	1,134.04	1,046.59	87.45	12.968		
15,030.63	9,569.42	16,121.20	10,619.70	45.02	83.78	157.21	-5,654.36	-830.71	1,134.04	1,046.59	87.45	12.968		
15,100.00	9,568.72	16,164.61	10,620.56	45.47	84.41	157.32	-5,697.72	-828.59	1,134.83	1,046.57	88.26	12.858		
15,200.00	9,567.72	16,252.48	10,624.46	46.13	85.71	157.61	-5,785.37	-823.87	1,138.03	1,048.54	89.49	12.717		
15,300.00	9,566.73	16,389.16	10,628.14	46.80	87.72	157.95	-5,921.85	-817.61	1,140.06	1,049.02	91.04	12.523		
15,400.00	9,565.73	16,500.41	10,628.62	47.46	89.37	158.19	-6,032.97	-812.33	1,139.90	1,047.42	92.47	12.327		
15,500.00	9,564.73	16,605.92	10,627.37	48.13	90.94	158.36	-6,138.37	-807.72	1,138.36	1,044.43	93.93	12.119		
15,594.39	9,563.78	16,685.67	10,627.23	48.77	92.10	158.51	-6,218.04	-804.23	1,137.81	1,042.63	95.18	11.955		
15,600.00	9,563.73	16,690.70	10,627.25	48.81	92.18	158.52	-6,223.07	-804.00	1,137.81	1,042.56	95.25	11.945		
15,700.00	9,562.73	16,783.09	10,628.28	49.48	93.53	158.73	-6,315.35	-799.57	1,138.29	1,041.71	96.58	11.787		
15,800.00	9,561.73	16,886.32	10,629.92	50.16	95.06	159.01	-6,418.41	-793.90	1,138.98	1,041.06	97.92	11.632		
15,900.00	9,560.73	17,002.58	10,630.31	50.84	96.82	159.25	-6,534.54	-788.54	1,138.86	1,039.46	99.40	11.457		
16,000.00	9,559.73	17,111.95	10,627.92	51.52	98.48	159.29	-6,643.85	-786.37	1,137.30	1,036.30	101.00	11.260		
16,100.00	9,558.73	17,231.01	10,623.81	52.21	100.27	159.27	-6,762.84	-784.89	1,134.86	1,032.14	102.72	11.048		
16,200.00	9,557.73	17,303.62	10,621.41	52.89	101.33	159.25	-6,835.40	-784.10	1,132.58	1,028.44	104.14	10.876		
16,250.01	9,557.23	17,340.66	10,620.89	53.24	101.87	159.25	-6,872.44	-783.77	1,132.35	1,027.52	104.83	10.802		
16,300.00	9,556.73	17,379.35	10,620.77	53.58	102.43	159.26	-6,911.13	-783.43	1,132.65	1,027.13	105.52	10.734		
16,400.00	9,555.73	17,461.37	10,621.78	54.28	103.62	159.30	-6,993.13	-782.69	1,134.65	1,027.75	106.89	10.615		
16,500.00	9,554.73	17,544.40	10,623.95	54.97	104.83	159.36	-7,076.13	-781.79	1,137.94	1,029.70	108.24	10.513		
16,600.00	9,553.74	17,623.83	10,627.49	55.67	105.98	159.42	-7,155.48	-781.68	1,143.20	1,033.67	109.53	10.437		
16,700.00	9,552.74	17,752.80	10,631.75	56.36	107.87	159.43	-7,284.37	-782.52	1,147.66	1,036.25	111.41	10.302		
16,800.00	9,551.74	17,859.15	10,633.81	57.06	109.43	159.45	-7,390.70	-782.43	1,150.63	1,037.60	113.03	10.180		
16,900.00	9,550.74	17,951.24	10,636.11	57.76	110.80	159.53	-7,482.75	-781.23	1,153.71	1,039.26	114.45	10.081		
16,973.85	9,550.00	18,012.00	10,638.12	58.28	110.90	159.61	-7,543.47	-780.07	1,156.45	1,041.46	115.00	10.057 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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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) - 55H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 100- VES GyroFlex V2, 10790-MWD-ISCWSA													Offset Well Error: 0.00 usft
Reference	Offset		Semi Major Axis		Distance		Between Centres		Between Ellipses		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)	Centres (usft)	Ellipses (usft)	(usft)		
0.00	0.00	0.00	0.00	0.00	0.00	-172.70	-4,802.92	-615.22	4,842.17				
100.00	100.00	75.83	75.83	0.09	0.07	-172.70	-4,803.05	-615.21	4,842.32	4,842.17	0.16	N/A	
200.00	200.00	173.38	173.38	0.31	0.17	-172.70	-4,803.48	-615.15	4,842.75	4,842.26	0.48	N/A	
300.00	300.00	285.13	285.13	0.54	0.26	-172.70	-4,803.83	-615.04	4,843.04	4,842.24	0.80	6,064.965	
400.00	400.00	385.74	385.73	0.76	0.33	-172.71	-4,803.99	-614.82	4,843.17	4,842.09	1.08	4,476.122	
500.00	500.00	491.50	491.49	0.99	0.38	-172.71	-4,804.15	-614.31	4,843.27	4,841.91	1.36	3,570.025	
600.00	600.00	596.73	596.73	1.21	0.43	-172.72	-4,804.18	-613.83	4,843.24	4,841.62	1.62	2,986.289	
700.00	700.00	696.17	696.16	1.43	0.47	-172.72	-4,804.13	-613.64	4,843.16	4,841.28	1.88	2,577.380	
800.00	800.00	799.19	799.19	1.66	0.51	-172.72	-4,804.04	-613.49	4,843.06	4,840.92	2.13	2,268.654	
900.00	900.00	900.00	899.99	1.88	0.55	-172.72	-4,803.90	-613.30	4,842.90	4,840.51	2.39	2,027.897	
1,000.00	1,000.00	998.12	998.12	2.11	0.58	-172.73	-4,803.77	-613.13	4,842.75	4,840.11	2.64	1,834.343	
1,100.00	1,100.00	1,096.90	1,096.89	2.33	0.62	-172.73	-4,803.70	-612.97	4,842.65	4,839.76	2.89	1,674.602	
1,200.00	1,200.00	1,194.12	1,194.12	2.56	0.66	-172.73	-4,803.67	-612.75	4,842.59	4,839.45	3.14	1,541.053	
1,221.35	1,221.35	1,214.05	1,214.05	2.61	0.66	-172.73	-4,803.67	-612.70	4,842.59	4,839.39	3.20	1,515.428	
1,300.00	1,300.00	1,286.29	1,286.28	2.78	0.69	-172.73	-4,803.74	-612.54	4,842.64	4,839.25	3.39	1,428.185	
1,400.00	1,400.00	1,379.86	1,379.86	3.01	0.72	-172.74	-4,803.95	-612.39	4,842.84	4,839.20	3.64	1,330.635	
1,500.00	1,500.00	1,475.28	1,475.28	3.23	0.74	-172.74	-4,804.25	-612.41	4,843.16	4,839.27	3.89	1,245.229	
1,600.00	1,600.00	1,571.73	1,571.72	3.46	0.76	-172.73	-4,804.62	-612.51	4,843.56	4,839.42	4.14	1,169.911	
1,700.00	1,700.00	1,691.72	1,691.71	3.68	0.78	-172.73	-4,804.92	-612.94	4,843.85	4,839.46	4.39	1,102.204	
1,800.00	1,800.00	1,795.98	1,795.97	3.91	0.79	-172.72	-4,804.80	-613.53	4,843.81	4,839.17	4.64	1,043.752	
1,900.00	1,900.00	1,896.58	1,896.57	4.13	0.79	-172.72	-4,804.68	-613.89	4,843.74	4,838.85	4.88	991.606	
2,000.00	2,000.00	2,000.50	2,000.48	4.36	0.80	-172.71	-4,804.49	-614.36	4,843.62	4,838.49	5.13	944.401	
2,100.00	2,100.00	2,103.22	2,103.21	4.58	0.81	-172.71	-4,804.22	-614.91	4,843.43	4,838.06	5.37	901.608	
2,200.00	2,200.00	2,200.73	2,200.71	4.81	0.82	-172.70	-4,803.98	-615.37	4,843.24	4,837.62	5.61	862.714	
2,300.00	2,300.00	2,306.80	2,306.78	5.03	0.84	-172.69	-4,803.66	-615.88	4,843.00	4,837.14	5.86	826.840	
2,400.00	2,400.00	2,400.90	2,400.88	5.26	0.85	-172.69	-4,803.39	-616.28	4,842.77	4,836.67	6.10	794.119	
2,500.00	2,500.00	2,500.00	2,499.98	5.48	0.86	-172.68	-4,803.19	-616.65	4,842.61	4,836.27	6.34	763.785	
2,600.00	2,599.99	2,609.68	2,609.66	5.69	0.88	-82.69	-4,802.84	-617.08	4,842.24	4,835.67	6.57	737.028	
2,700.00	2,699.96	2,704.36	2,704.33	5.89	0.90	-82.72	-4,802.51	-617.45	4,841.61	4,834.83	6.79	713.564	
2,800.00	2,799.86	2,803.14	2,803.12	6.09	0.91	-82.78	-4,802.23	-617.88	4,840.83	4,833.83	7.00	691.121	
2,900.00	2,899.68	2,904.18	2,904.15	6.30	0.93	-82.85	-4,801.91	-618.50	4,839.83	4,832.60	7.23	669.631	
2,917.68	2,917.31	2,920.49	2,920.47	6.33	0.93	-82.87	-4,801.86	-618.61	4,839.63	4,832.37	7.27	665.950	
3,000.00	2,999.41	3,000.00	2,999.97	6.51	0.95	-82.93	-4,801.69	-618.98	4,838.77	4,831.31	7.45	649.168	
3,100.00	3,099.15	3,111.75	3,111.72	6.72	0.97	-83.02	-4,801.38	-619.25	4,837.62	4,829.94	7.69	629.365	
3,200.00	3,198.88	3,217.59	3,217.56	6.94	0.99	-83.11	-4,800.82	-619.44	4,836.24	4,828.31	7.92	610.456	
3,300.00	3,298.61	3,310.16	3,310.13	7.16	1.01	-83.19	-4,800.39	-619.54	4,834.92	4,826.76	8.16	592.593	
3,400.00	3,398.35	3,418.54	3,418.51	7.38	1.04	-83.28	-4,799.84	-619.69	4,833.57	4,825.16	8.40	575.319	
3,500.00	3,498.08	3,520.30	3,520.26	7.60	1.06	-83.36	-4,799.18	-620.03	4,832.11	4,823.47	8.64	558.949	
3,600.00	3,597.82	3,614.37	3,614.33	7.82	1.08	-83.43	-4,798.59	-620.48	4,830.71	4,821.82	8.89	543.483	
3,700.00	3,697.55	3,700.80	3,700.76	8.05	1.10	-83.50	-4,798.24	-620.84	4,829.52	4,820.39	9.13	528.888	
3,800.00	3,797.29	3,801.24	3,801.19	8.28	1.13	-83.58	-4,797.98	-621.20	4,828.47	4,819.10	9.38	514.866	
3,900.00	3,897.02	3,907.53	3,907.49	8.51	1.16	-83.67	-4,797.58	-621.74	4,827.35	4,817.72	9.63	501.426	
4,000.00	3,996.76	4,000.00	3,999.95	8.74	1.18	-83.74	-4,797.26	-622.21	4,826.26	4,816.39	9.87	488.738	
4,100.00	4,096.49	4,100.00	4,099.95	8.97	1.20	-83.82	-4,796.99	-622.71	4,825.25	4,815.12	10.12	476.584	
4,200.00	4,196.22	4,198.60	4,198.55	9.20	1.23	-83.90	-4,796.72	-623.19	4,824.25	4,813.87	10.38	464.977	
4,300.00	4,295.96	4,296.12	4,296.07	9.44	1.25	-83.98	-4,796.50	-623.58	4,823.30	4,812.67	10.63	453.891	
4,400.00	4,395.69	4,390.00	4,389.95	9.67	1.26	-84.06	-4,796.52	-623.72	4,822.57	4,811.70	10.86	443.948	
4,500.00	4,495.43	4,480.00	4,479.95	9.91	1.25	-84.14	-4,796.64	-623.31	4,821.90	4,810.81	11.10	434.494	
4,600.00	4,595.16	4,578.88	4,578.83	10.15	1.24	-84.24	-4,796.98	-622.58	4,821.43	4,810.10	11.33	425.474	
4,700.00	4,694.90	4,681.37	4,681.31	10.38	1.23	-84.34	-4,797.23	-621.38	4,820.83	4,809.26	11.57	416.698	
4,800.00	4,794.63	4,773.64	4,773.56	10.62	1.22	-84.44	-4,797.66	-619.76	4,820.40	4,808.59	11.81	408.274	
4,900.00	4,894.37	4,875.70	4,875.60	10.86	1.21	-84.55	-4,798.14	-617.64	4,819.97	4,807.92	12.05	400.152	

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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) - 55H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 100-VES GyroFlex V2, 10790-MWD-ISCWSA														Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor			
5,000.00	4,994.10	4,958.14	4,958.01	11.10	1.21	-84.65	-4,798.66	-615.57	4,819.68	4,807.38	12.29	392.123			
5,020.44	5,014.49	4,974.70	4,974.56	11.15	1.21	-84.67	-4,798.81	-615.11	4,819.67	4,807.33	12.34	390.506			
5,100.00	5,093.83	5,042.96	5,042.79	11.34	1.22	-84.75	-4,799.55	-613.08	4,819.78	4,807.24	12.54	384.347			
5,200.00	5,193.57	5,137.42	5,137.20	11.58	1.22	-84.87	-4,800.75	-610.31	4,820.12	4,807.33	12.79	376.859			
5,300.00	5,293.30	5,241.92	5,241.65	11.83	1.23	-84.99	-4,802.01	-607.51	4,820.44	4,807.40	13.04	369.618			
5,400.00	5,393.04	5,340.27	5,339.97	12.07	1.24	-85.10	-4,803.10	-605.17	4,820.71	4,807.42	13.29	362.651			
5,500.00	5,492.77	5,433.73	5,433.40	12.31	1.24	-85.21	-4,804.26	-602.97	4,821.14	4,807.59	13.54	355.960			
5,600.00	5,592.51	5,536.39	5,536.03	12.56	1.25	-85.33	-4,805.55	-600.67	4,821.61	4,807.81	13.80	349.483			
5,700.00	5,692.24	5,640.93	5,640.53	12.80	1.26	-85.45	-4,806.73	-598.30	4,821.97	4,807.92	14.05	343.206			
5,800.00	5,791.97	5,741.66	5,741.23	13.04	1.27	-85.56	-4,807.84	-596.17	4,822.33	4,808.02	14.30	337.148			
5,900.00	5,891.71	5,850.96	5,850.50	13.29	1.28	-85.68	-4,808.91	-593.96	4,822.60	4,808.04	14.56	331.261			
6,000.00	5,991.44	5,960.86	5,960.39	13.53	1.30	-85.80	-4,809.68	-592.14	4,822.63	4,807.82	14.81	325.543			
6,100.00	6,091.18	6,063.09	6,062.60	13.78	1.31	-85.91	-4,810.26	-590.48	4,822.56	4,807.49	15.07	320.018			
6,200.00	6,190.91	6,170.59	6,170.09	14.02	1.33	-86.02	-4,810.79	-588.97	4,822.43	4,807.11	15.33	314.654			
6,300.00	6,290.65	6,264.58	6,264.07	14.27	1.34	-86.11	-4,811.11	-588.24	4,822.23	4,806.64	15.58	309.495			
6,339.88	6,330.42	6,300.00	6,299.50	14.37	1.35	-86.14	-4,811.29	-588.00	4,822.21	4,806.53	15.68	307.491			
6,400.00	6,390.38	6,359.29	6,358.79	14.51	1.35	-86.20	-4,811.61	-587.64	4,822.22	4,806.38	15.84	304.516			
6,500.00	6,490.12	6,462.81	6,462.31	14.76	1.37	-86.29	-4,812.14	-587.16	4,822.22	4,806.13	16.09	299.675			
6,578.59	6,568.50	6,539.43	6,538.92	14.95	1.38	-86.36	-4,812.47	-586.94	4,822.18	4,805.89	16.29	295.976			
6,600.00	6,589.85	6,558.79	6,558.28	15.01	1.38	-86.38	-4,812.57	-586.88	4,822.18	4,805.84	16.35	294.987			
6,700.00	6,689.58	6,658.76	6,658.25	15.25	1.39	-86.47	-4,813.13	-586.54	4,822.28	4,805.67	16.60	290.431			
6,800.00	6,789.32	6,764.27	6,763.76	15.50	1.41	-86.57	-4,813.60	-586.26	4,822.26	4,805.40	16.86	285.978			
6,900.00	6,889.05	6,863.67	6,863.16	15.75	1.42	-86.65	-4,813.98	-586.04	4,822.20	4,805.08	17.12	281.659			
7,000.00	6,988.79	6,969.98	6,969.46	16.00	1.44	-86.75	-4,814.37	-585.81	4,822.13	4,804.75	17.38	277.440			
7,100.00	7,088.52	7,071.24	7,070.73	16.24	1.46	-86.84	-4,814.58	-585.68	4,821.93	4,804.29	17.64	273.334			
7,200.00	7,188.26	7,169.40	7,168.89	16.49	1.47	-86.93	-4,814.82	-585.58	4,821.77	4,803.87	17.90	269.344			
7,300.00	7,287.99	7,264.97	7,264.46	16.74	1.49	-87.01	-4,815.10	-585.50	4,821.67	4,803.50	18.16	265.464			
7,333.92	7,321.82	7,296.94	7,296.43	16.82	1.49	-87.04	-4,815.21	-585.48	4,821.66	4,803.41	18.25	264.174			
7,400.00	7,387.73	7,363.05	7,362.53	16.99	1.50	-87.09	-4,815.46	-585.47	4,821.66	4,803.23	18.43	261.680			
7,500.00	7,487.46	7,458.91	7,458.39	17.24	1.52	-87.18	-4,815.84	-585.50	4,821.70	4,803.02	18.69	258.003			
7,600.00	7,587.19	7,548.28	7,547.76	17.48	1.53	-87.25	-4,816.37	-585.58	4,821.94	4,802.98	18.95	254.432			
7,700.00	7,686.93	7,634.21	7,633.69	17.73	1.54	-87.33	-4,817.03	-585.63	4,822.37	4,803.15	19.22	250.968			
7,800.00	7,786.66	7,714.60	7,714.07	17.98	1.56	-87.40	-4,817.99	-585.54	4,823.21	4,803.73	19.48	247.613			
7,900.00	7,886.40	7,811.83	7,811.29	18.23	1.57	-87.49	-4,819.35	-585.29	4,824.28	4,804.53	19.75	244.326			
8,000.00	7,986.13	7,914.99	7,914.44	18.48	1.59	-87.58	-4,820.77	-584.85	4,825.32	4,805.31	20.01	241.112			
8,100.00	8,085.87	8,010.10	8,009.54	18.73	1.61	-87.67	-4,822.10	-584.36	4,826.40	4,806.12	20.28	237.987			
8,200.00	8,185.60	8,100.00	8,099.43	18.98	1.63	-87.76	-4,823.53	-583.75	4,827.67	4,807.12	20.55	234.951			
8,300.00	8,285.34	8,184.19	8,183.60	19.23	1.65	-87.84	-4,825.09	-583.00	4,829.22	4,808.40	20.82	232.001			
8,400.00	8,385.07	8,286.85	8,286.24	19.48	1.68	-87.94	-4,827.14	-581.98	4,830.91	4,809.82	21.08	229.119			
8,444.81	8,429.76	8,333.24	8,332.61	19.59	1.69	-87.98	-4,828.02	-581.57	4,831.63	4,810.43	21.21	227.846			
8,500.00	8,484.82	8,389.85	8,389.21	19.71	1.70	-88.04	-4,829.08	-581.15	4,832.52	4,811.18	21.34	226.465			
8,600.00	8,584.67	8,477.15	8,476.50	19.90	1.72	-88.13	-4,830.79	-580.59	4,834.28	4,812.74	21.55	224.340			
8,700.00	8,684.60	8,577.31	8,576.63	20.08	1.74	-88.20	-4,832.94	-579.91	4,836.29	4,814.54	21.75	222.319			
8,800.00	8,784.58	8,668.10	8,667.40	20.26	1.77	-88.25	-4,834.90	-579.44	4,838.37	4,816.42	21.95	220.393			
8,862.49	8,847.07	8,724.66	8,723.94	20.37	1.78	-178.27	-4,836.23	-579.30	4,839.83	4,817.75	22.08	219.216			
8,900.00	8,884.58	8,760.61	8,759.88	20.44	1.79	-178.27	-4,837.10	-579.26	4,840.73	4,818.58	22.16	218.470			
9,000.00	8,984.58	8,854.52	8,853.76	20.64	1.81	-178.27	-4,839.43	-579.33	4,843.21	4,820.83	22.38	216.406			
9,062.49	9,047.07	8,912.67	8,911.89	20.77	1.82	-178.27	-4,840.93	-579.55	4,844.84	4,822.32	22.52	215.135			
9,100.00	9,084.55	8,948.25	8,947.46	20.84	1.83	2.16	-4,841.87	-579.69	4,844.61	4,822.01	22.60	214.366			
9,150.00	9,134.24	8,995.51	8,994.70	20.93	1.84	2.18	-4,843.15	-579.82	4,840.51	4,817.81	22.70	213.231			
9,200.00	9,183.26	9,060.89	9,060.06	21.02	1.85	2.22	-4,844.83	-579.93	4,832.04	4,809.24	22.80	211.931			
9,250.00	9,231.25	9,157.20	9,156.35	21.12	1.87	2.28	-4,846.75	-580.02	4,819.07	4,796.16	22.90	210.419			

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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) - 55H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100- VES GyroFlex V2, 10790-MWD-ISCWSA													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		
9,300.00	9,277.84	9,232.93	9,232.08	21.21	1.89	2.37	-4,847.49	-580.07	4,801.38	4,778.38	23.01	208.703		
9,350.00	9,322.67	9,279.23	9,278.37	21.31	1.90	2.49	-4,847.85	-580.19	4,779.65	4,756.55	23.10	206.931		
9,400.00	9,365.40	9,326.96	9,326.11	21.41	1.91	2.64	-4,848.20	-580.41	4,754.05	4,730.87	23.18	205.053		
9,450.00	9,405.71	9,374.94	9,374.08	21.52	1.91	2.84	-4,848.47	-580.84	4,724.76	4,701.49	23.27	203.079		
9,500.00	9,443.29	9,417.04	9,416.18	21.63	1.92	3.10	-4,848.65	-581.38	4,691.99	4,668.66	23.34	201.041		
9,550.00	9,477.85	9,452.77	9,451.90	21.75	1.92	3.43	-4,848.78	-581.90	4,656.06	4,632.66	23.40	198.958		
9,600.00	9,509.14	9,485.12	9,484.25	21.89	1.92	3.86	-4,848.89	-582.41	4,617.23	4,593.77	23.46	196.824		
9,650.00	9,536.90	9,515.13	9,514.25	22.04	1.92	4.45	-4,848.98	-582.90	4,575.80	4,552.30	23.51	194.655		
9,700.00	9,560.95	9,542.29	9,541.41	22.22	1.92	5.28	-4,849.05	-583.38	4,532.09	4,508.54	23.55	192.464		
9,750.00	9,581.08	9,564.99	9,564.11	22.42	1.92	6.51	-4,849.09	-583.80	4,486.43	4,462.85	23.58	190.266		
9,800.00	9,597.14	9,583.08	9,582.19	22.64	1.92	8.51	-4,849.11	-584.15	4,439.17	4,415.56	23.60	188.076		
9,850.00	9,609.02	9,596.43	9,595.54	22.89	1.92	12.24	-4,849.12	-584.41	4,390.68	4,367.06	23.62	185.904		
9,900.00	9,616.62	9,605.75	9,604.86	23.17	1.92	21.44	-4,849.13	-584.60	4,341.33	4,317.71	23.63	183.760		
9,950.00	9,619.89	9,609.99	9,609.09	23.47	1.92	62.63	-4,849.13	-584.69	4,291.50	4,267.88	23.63	181.651		
9,968.21	9,620.00	9,610.12	9,609.23	23.59	1.92	101.82	-4,849.13	-584.69	4,273.31	4,249.68	23.62	180.890		
10,000.00	9,619.68	9,609.71	9,608.82	27.08	1.92	101.70	-4,849.13	-584.68	4,241.55	4,213.06	28.49	148.881		
10,100.00	9,618.68	9,608.43	9,607.53	27.16	1.92	101.32	-4,849.13	-584.65	4,141.66	4,113.09	28.57	144.982		
10,200.00	9,617.68	9,607.16	9,606.27	27.23	1.92	100.95	-4,849.13	-584.63	4,041.77	4,013.12	28.64	141.100		
10,300.00	9,616.68	9,605.91	9,605.02	27.31	1.92	100.58	-4,849.13	-584.60	3,941.88	3,913.16	28.72	137.235		
10,400.00	9,615.69	9,604.67	9,603.78	27.39	1.92	100.22	-4,849.13	-584.58	3,842.00	3,813.20	28.80	133.387		
10,500.00	9,614.69	9,603.46	9,602.56	27.48	1.92	99.86	-4,849.13	-584.55	3,742.13	3,713.24	28.88	129.557		
10,600.00	9,613.69	9,602.25	9,601.36	27.56	1.92	99.50	-4,849.12	-584.53	3,642.26	3,613.29	28.97	125.745		
10,700.00	9,612.69	9,601.07	9,600.18	27.65	1.92	99.15	-4,849.12	-584.51	3,542.40	3,513.35	29.05	121.951		
10,800.00	9,611.69	9,599.91	9,599.02	27.75	1.92	98.80	-4,849.12	-584.48	3,442.54	3,413.41	29.13	118.175		
10,900.00	9,610.69	9,598.87	9,597.98	27.84	1.92	98.50	-4,849.12	-584.46	3,342.70	3,313.49	29.21	114.419		
11,000.00	9,609.69	9,597.84	9,596.95	27.94	1.92	98.19	-4,849.12	-584.44	3,242.87	3,213.57	29.30	110.682		
11,100.00	9,608.69	9,596.82	9,595.93	28.04	1.92	97.88	-4,849.12	-584.42	3,143.04	3,113.66	29.38	106.964		
11,200.00	9,607.69	9,595.80	9,594.91	28.15	1.92	97.58	-4,849.12	-584.40	3,043.23	3,013.76	29.47	103.265		
11,300.00	9,606.69	9,594.79	9,593.90	28.26	1.92	97.27	-4,849.12	-584.38	2,943.43	2,913.87	29.56	99.586		
11,400.00	9,605.69	9,593.78	9,592.89	28.37	1.92	96.97	-4,849.12	-584.36	2,843.64	2,813.99	29.64	95.926		
11,500.00	9,604.69	9,592.78	9,591.89	28.50	1.92	96.67	-4,849.12	-584.34	2,743.86	2,714.13	29.73	92.287		
11,600.00	9,603.69	9,591.78	9,590.89	28.63	1.92	96.37	-4,849.12	-584.32	2,644.11	2,614.29	29.82	88.667		
11,700.00	9,602.70	9,590.79	9,589.90	28.77	1.92	96.07	-4,849.12	-584.30	2,544.37	2,514.46	29.91	85.068		
11,800.00	9,601.70	9,589.81	9,588.92	28.92	1.92	95.77	-4,849.12	-584.28	2,444.66	2,414.66	30.00	81.490		
11,900.00	9,600.70	9,588.83	9,587.94	29.08	1.92	95.47	-4,849.11	-584.26	2,344.96	2,314.87	30.09	77.932		
12,000.00	9,599.70	9,587.86	9,586.97	29.27	1.92	95.18	-4,849.11	-584.24	2,245.30	2,215.12	30.18	74.394		
12,100.00	9,598.70	9,586.89	9,586.00	29.48	1.92	94.88	-4,849.11	-584.22	2,145.66	2,115.39	30.27	70.878		
12,200.00	9,597.70	9,585.92	9,585.04	29.72	1.92	94.59	-4,849.11	-584.20	2,046.07	2,015.70	30.36	67.383		
12,300.00	9,596.70	9,584.97	9,584.08	29.99	1.92	94.30	-4,849.11	-584.18	1,946.51	1,916.05	30.46	63.909		
12,400.00	9,595.70	9,584.01	9,583.13	30.31	1.92	94.01	-4,849.11	-584.17	1,847.00	1,816.45	30.55	60.457		
12,500.00	9,594.70	9,583.07	9,582.18	30.66	1.92	93.72	-4,849.11	-584.15	1,747.54	1,716.90	30.64	57.026		
12,600.00	9,593.70	9,582.12	9,581.24	31.04	1.92	93.43	-4,849.11	-584.13	1,648.15	1,617.41	30.74	53.617		
12,700.00	9,592.70	9,581.19	9,580.30	31.46	1.92	93.15	-4,849.11	-584.11	1,548.84	1,518.00	30.83	50.230		
12,800.00	9,591.70	9,580.25	9,579.37	31.91	1.92	92.86	-4,849.11	-584.09	1,449.62	1,418.69	30.93	46.865		
12,900.00	9,590.71	9,579.33	9,578.44	32.38	1.92	92.58	-4,849.11	-584.07	1,350.51	1,319.48	31.03	43.523		
13,000.00	9,589.71	9,578.40	9,577.52	32.87	1.92	92.29	-4,849.10	-584.06	1,251.55	1,220.42	31.13	40.203		
13,100.00	9,588.71	9,577.49	9,576.60	33.38	1.92	92.01	-4,849.10	-584.04	1,152.77	1,121.53	31.23	36.907		
13,200.00	9,587.71	9,576.57	9,575.69	33.91	1.92	91.73	-4,849.10	-584.02	1,054.21	1,022.87	31.34	33.634		
13,300.00	9,586.71	9,575.67	9,574.78	34.44	1.92	91.45	-4,849.10	-584.00	955.96	924.50	31.46	30.386		
13,400.00	9,585.71	9,574.76	9,573.88	34.99	1.92	91.18	-4,849.10	-583.99	858.10	826.51	31.59	27.163		
13,500.00	9,584.71	9,573.86	9,572.98	35.56	1.92	90.90	-4,849.10	-583.97	760.81	729.06	31.74	23.968		
13,600.00	9,583.71	9,572.97	9,572.08	36.13	1.92	90.63	-4,849.10	-583.95	664.31	632.38	31.93	20.803		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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) - 55H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100- VES GyroFlex V2, 10790-MWD-ISCWSA													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)						
13,700.00	9,582.71	9,572.08	9,571.20	36.71	1.92	90.35	-4,849.10	-583.93	569.03	536.83	32.20	17.674		
13,800.00	9,581.71	9,571.20	9,570.31	37.29	1.92	90.08	-4,849.10	-583.92	475.68	443.08	32.60	14.592		
13,900.00	9,580.71	9,570.32	9,569.43	37.89	1.92	89.81	-4,849.09	-583.90	385.69	352.39	33.30	11.584		
14,000.00	9,579.71	9,569.44	9,568.56	38.49	1.92	89.54	-4,849.09	-583.88	302.04	267.42	34.62	8.724		
14,100.00	9,578.72	9,568.57	9,567.69	39.10	1.92	89.28	-4,849.09	-583.87	231.75	194.57	37.18	6.233		
14,200.00	9,577.72	9,567.71	9,566.82	39.72	1.92	89.01	-4,849.09	-583.85	190.22	149.48	40.73	4.670		
14,237.63	9,577.34	9,567.38	9,566.50	39.95	1.92	88.91	-4,849.09	-583.84	186.46	144.84	41.62	4.480 CC, ES, SF		
14,300.00	9,576.72	9,566.84	9,565.96	40.34	1.92	88.75	-4,849.09	-583.83	196.61	154.89	41.72	4.713		
14,400.00	9,575.72	9,565.99	9,565.10	40.96	1.92	88.48	-4,849.09	-583.82	247.24	207.54	39.70	6.228		
14,500.00	9,574.72	9,565.13	9,564.25	41.59	1.92	88.22	-4,849.09	-583.80	321.87	284.12	37.75	8.526		
14,600.00	9,573.72	9,564.28	9,563.40	42.23	1.92	87.96	-4,849.09	-583.79	407.51	370.98	36.53	11.155		
14,700.00	9,572.72	9,563.44	9,562.56	42.87	1.92	87.70	-4,849.08	-583.77	498.53	462.72	35.81	13.920		
14,800.00	9,571.72	9,562.60	9,561.72	43.52	1.92	87.44	-4,849.08	-583.75	592.45	557.06	35.39	16.741		
14,900.00	9,570.72	9,561.77	9,560.88	44.16	1.92	87.19	-4,849.08	-583.74	688.09	652.95	35.14	19.583		
15,000.00	9,569.72	9,560.93	9,560.05	44.82	1.92	86.93	-4,849.08	-583.72	784.81	749.82	34.99	22.428		
15,100.00	9,568.72	9,560.11	9,559.22	45.47	1.92	86.68	-4,849.08	-583.71	882.26	847.35	34.92	25.268		
15,200.00	9,567.72	9,559.28	9,558.40	46.13	1.92	86.42	-4,849.08	-583.69	980.23	945.34	34.89	28.098		
15,300.00	9,566.73	9,558.46	9,557.58	46.80	1.92	86.17	-4,849.08	-583.68	1,078.57	1,043.68	34.89	30.914		
15,400.00	9,565.73	9,557.65	9,556.77	47.46	1.92	85.92	-4,849.07	-583.66	1,177.19	1,142.27	34.92	33.715		
15,500.00	9,564.73	9,556.84	9,555.96	48.13	1.92	85.68	-4,849.07	-583.65	1,276.02	1,241.06	34.96	36.499		
15,600.00	9,563.73	9,556.03	9,555.15	48.81	1.92	85.43	-4,849.07	-583.63	1,375.02	1,340.00	35.02	39.266		
15,700.00	9,562.73	9,555.23	9,554.35	49.48	1.92	85.18	-4,849.07	-583.62	1,474.15	1,439.07	35.09	42.014		
15,800.00	9,561.73	9,554.43	9,553.55	50.16	1.92	84.94	-4,849.07	-583.60	1,573.40	1,538.23	35.16	44.744		
15,900.00	9,560.73	9,553.64	9,552.75	50.84	1.92	84.70	-4,849.07	-583.59	1,672.73	1,637.48	35.25	47.456		
16,000.00	9,559.73	12,809.14	11,262.93	51.52	46.10	173.40	-6,573.64	-582.65	1,722.32	1,659.92	62.41	27.598		
16,100.00	9,558.73	12,890.83	11,265.41	52.21	47.98	173.45	-6,655.27	-580.74	1,726.13	1,662.32	63.81	27.053		
16,200.00	9,557.73	12,976.91	11,268.57	52.89	49.88	173.48	-6,741.29	-579.76	1,730.73	1,665.50	65.23	26.533		
16,300.00	9,556.73	13,063.83	11,272.48	53.58	51.92	173.48	-6,828.11	-579.81	1,736.26	1,669.59	66.67	26.042		
16,400.00	9,555.73	13,172.61	11,277.34	54.28	54.79	173.45	-6,936.78	-580.40	1,741.84	1,673.58	68.26	25.517		
16,500.00	9,554.73	13,288.94	11,281.66	54.97	58.00	173.42	-7,053.04	-581.10	1,746.68	1,676.78	69.91	24.986		
16,600.00	9,553.74	13,372.61	11,284.50	55.67	60.11	173.42	-7,136.65	-580.89	1,751.16	1,679.81	71.35	24.545		
16,700.00	9,552.74	13,449.21	11,288.47	56.36	61.93	173.43	-7,213.15	-580.57	1,757.28	1,684.55	72.73	24.162		
16,800.00	9,551.74	13,550.65	11,294.08	57.06	64.36	173.46	-7,314.43	-579.89	1,763.77	1,689.52	74.26	23.752		
16,900.00	9,550.74	13,667.41	11,300.37	57.76	67.24	173.49	-7,431.01	-578.78	1,770.14	1,694.26	75.88	23.329		
16,973.85	9,550.00	13,795.59	11,304.54	58.28	70.67	173.56	-7,559.10	-576.31	1,773.21	1,695.92	77.29	22.943		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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) - 61H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 57-MWD-ISCWSA													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						
0.00	0.00	0.00	0.00	0.00	0.00	-172.62	-4,752.94	-615.57	4,792.64					
100.00	100.00	57.16	57.16	0.09	0.05	-172.62	-4,753.19	-615.43	4,792.99	0.13	N/A			
200.00	200.00	151.73	151.72	0.31	0.25	-172.63	-4,754.05	-614.85	4,793.82	0.56	8,542.401			
300.00	300.00	277.56	277.54	0.54	0.51	-172.64	-4,754.89	-613.79	4,794.37	1.05	4,582.840			
400.00	400.00	390.31	390.30	0.76	0.74	-172.65	-4,755.22	-612.99	4,794.57	1.50	3,194.669			
491.92	491.92	484.64	484.62	0.97	0.94	-172.66	-4,755.27	-612.40	4,794.54	1.90	2,518.769			
500.00	500.00	492.13	492.11	0.99	0.95	-172.66	-4,755.27	-612.35	4,794.54	1.94	2,474.946			
600.00	600.00	595.57	595.54	1.21	1.17	-172.67	-4,755.37	-611.74	4,794.56	2.38	2,016.936			
700.00	700.00	699.61	699.59	1.43	1.39	-172.68	-4,755.31	-611.26	4,794.44	2.82	1,699.117			
800.00	800.00	796.51	796.48	1.66	1.59	-172.68	-4,755.24	-610.85	4,794.32	3.25	1,475.685			
900.00	900.00	892.71	892.69	1.88	1.79	-172.68	-4,755.26	-610.43	4,794.28	3.67	1,305.207			
950.23	950.23	944.98	944.95	2.00	1.90	-172.69	-4,755.27	-610.29	4,794.28	3.90	1,230.526			
1,000.00	1,000.00	998.59	998.56	2.11	2.01	-172.69	-4,755.25	-610.14	4,794.24	4.12	1,163.194			
1,100.00	1,100.00	1,105.80	1,105.78	2.33	2.24	-172.69	-4,755.07	-609.86	4,794.03	4.58	1,047.490			
1,200.00	1,200.00	1,208.09	1,208.06	2.56	2.46	-172.69	-4,754.79	-609.63	4,793.74	5.02	954.415			
1,300.00	1,300.00	1,310.45	1,310.42	2.78	2.68	-172.69	-4,754.45	-609.59	4,793.40	5.47	876.625			
1,400.00	1,400.00	1,414.92	1,414.89	3.01	2.91	-172.69	-4,753.98	-609.70	4,792.97	5.92	810.082			
1,500.00	1,500.00	1,522.23	1,522.20	3.23	3.13	-172.69	-4,753.45	-609.66	4,792.47	6.37	752.681			
1,600.00	1,600.00	1,634.47	1,634.44	3.46	3.37	-172.69	-4,752.55	-609.87	4,791.71	6.83	701.178			
1,700.00	1,700.00	1,738.27	1,738.23	3.68	3.60	-172.68	-4,751.54	-610.26	4,790.78	7.28	657.661			
1,800.00	1,800.00	1,843.95	1,843.91	3.91	3.83	-172.67	-4,750.39	-610.87	4,789.78	7.74	618.857			
1,900.00	1,900.00	1,940.29	1,940.23	4.13	4.03	-172.66	-4,749.29	-611.55	4,788.74	8.16	586.515			
2,000.00	2,000.00	2,034.23	2,034.17	4.36	4.21	-172.65	-4,748.34	-612.13	4,787.81	8.57	558.386			
2,100.00	2,100.00	2,127.89	2,127.82	4.58	4.41	-172.65	-4,747.50	-612.74	4,787.01	8.99	532.504			
2,200.00	2,200.00	2,229.44	2,229.37	4.81	4.62	-172.63	-4,746.63	-613.59	4,786.27	9.43	507.684			
2,300.00	2,300.00	2,323.17	2,323.09	5.03	4.81	-172.63	-4,745.88	-614.25	4,785.57	9.84	486.173			
2,400.00	2,400.00	2,421.41	2,421.33	5.26	5.01	-172.62	-4,745.21	-614.77	4,784.96	10.27	466.128			
2,500.00	2,500.00	2,511.41	2,511.32	5.48	5.19	-172.61	-4,744.71	-615.25	4,784.47	10.67	448.274			
2,600.00	2,599.99	2,617.32	2,617.23	5.69	5.41	-82.62	-4,744.16	-615.77	4,783.91	11.10	430.833			
2,700.00	2,699.96	2,717.13	2,717.03	5.89	5.62	-82.65	-4,743.57	-616.36	4,783.06	11.51	415.455			
2,800.00	2,799.86	2,817.15	2,817.05	6.09	5.83	-82.70	-4,742.97	-617.19	4,782.02	11.93	400.949			
2,900.00	2,899.68	2,924.97	2,924.87	6.30	6.06	-82.79	-4,742.19	-617.84	4,780.60	12.36	386.806			
2,917.68	2,917.31	2,941.43	2,941.33	6.33	6.10	-82.80	-4,742.07	-617.94	4,780.32	12.43	384.565			
3,000.00	2,999.41	3,022.50	3,022.39	6.51	6.27	-82.86	-4,741.48	-618.64	4,779.06	12.77	374.097			
3,100.00	3,099.15	3,132.82	3,132.70	6.72	6.50	-82.95	-4,740.54	-619.71	4,777.43	13.22	361.293			
3,200.00	3,198.88	3,235.02	3,234.89	6.94	6.72	-83.02	-4,739.48	-620.47	4,775.61	13.65	349.759			
3,300.00	3,298.61	3,332.41	3,332.27	7.16	6.92	-83.10	-4,738.53	-621.30	4,773.85	14.07	339.173			
3,400.00	3,398.35	3,434.71	3,434.57	7.38	7.13	-83.18	-4,737.55	-621.94	4,772.10	14.51	328.968			
3,500.00	3,498.08	3,536.67	3,536.53	7.60	7.34	-83.26	-4,736.54	-622.28	4,770.30	14.94	319.310			
3,600.00	3,597.82	3,639.42	3,639.26	7.82	7.56	-83.34	-4,735.48	-622.59	4,768.46	15.38	310.055			
3,700.00	3,697.55	3,743.35	3,743.19	8.05	7.78	-83.43	-4,734.33	-622.95	4,766.55	15.83	301.198			
3,800.00	3,797.29	3,841.26	3,841.09	8.28	7.98	-83.51	-4,733.23	-623.10	4,764.62	16.26	293.081			
3,900.00	3,897.02	3,944.17	3,943.99	8.51	8.20	-83.60	-4,732.06	-623.27	4,762.69	16.70	285.166			
4,000.00	3,996.76	4,039.53	4,039.35	8.74	8.40	-83.68	-4,730.99	-623.45	4,760.78	17.13	277.904			
4,100.00	4,096.49	4,135.87	4,135.69	8.97	8.60	-83.76	-4,729.99	-623.63	4,758.96	17.56	270.974			
4,200.00	4,196.22	4,232.20	4,232.01	9.20	8.80	-83.83	-4,729.05	-624.10	4,757.26	18.00	264.331			
4,300.00	4,295.96	4,335.41	4,335.21	9.44	9.02	-83.92	-4,727.93	-624.39	4,755.43	18.45	257.790			
4,400.00	4,395.69	4,407.38	4,407.18	9.67	9.17	-83.98	-4,727.46	-624.20	4,753.97	18.83	252.420			
4,500.00	4,495.43	4,513.22	4,513.01	9.91	9.39	-84.09	-4,727.05	-623.09	4,752.71	19.29	246.412			
4,600.00	4,595.16	4,596.52	4,596.30	10.15	9.56	-84.18	-4,727.00	-621.53	4,751.70	19.70	241.219			
4,700.00	4,694.90	4,678.24	4,677.99	10.38	9.73	-84.27	-4,727.29	-619.60	4,751.06	20.11	236.288			
4,800.00	4,794.63	4,784.16	4,783.87	10.62	9.95	-84.41	-4,727.78	-616.34	4,750.50	20.57	230.996			

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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) - 61H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 57-MWD-ISCWSA													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
4,900.00	4,894.37	4,870.23	4,869.86	10.86	10.13	-84.52	-4,728.32	-612.78	4,750.02	4,729.03	20.99	226.346	
5,000.00	4,994.10	4,959.12	4,958.63	11.10	10.31	-84.66	-4,729.17	-608.31	4,749.82	4,728.40	21.41	221.825	
5,036.84	5,030.84	4,992.16	4,991.62	11.19	10.38	-84.71	-4,729.54	-606.59	4,749.80	4,728.23	21.57	220.198	
5,100.00	5,093.83	5,030.42	5,029.83	11.34	10.46	-84.76	-4,730.09	-604.56	4,749.97	4,728.16	21.81	217.836	
5,200.00	5,193.57	5,116.56	5,115.83	11.58	10.64	-84.90	-4,731.90	-600.03	4,750.90	4,728.67	22.23	213.739	
5,300.00	5,293.30	5,265.85	5,264.92	11.83	10.96	-85.12	-4,733.55	-592.51	4,750.79	4,728.02	22.77	208.605	
5,400.00	5,393.04	5,451.16	5,450.02	12.07	11.35	-85.38	-4,732.94	-583.95	4,749.25	4,725.84	23.41	202.888	
5,500.00	5,492.77	5,513.75	5,512.55	12.31	11.49	-85.47	-4,732.50	-581.19	4,747.64	4,723.85	23.78	199.609	
5,600.00	5,592.51	5,574.54	5,573.28	12.56	11.61	-85.56	-4,732.66	-578.44	4,746.95	4,722.79	24.16	196.510	
5,685.01	5,677.29	5,645.80	5,644.46	12.76	11.77	-85.66	-4,733.20	-575.07	4,746.81	4,722.30	24.51	193.630	
5,700.00	5,692.24	5,654.01	5,652.66	12.80	11.78	-85.67	-4,733.28	-574.67	4,746.81	4,722.24	24.57	193.192	
5,800.00	5,791.97	5,731.21	5,729.77	13.04	11.95	-85.78	-4,734.22	-570.99	4,747.15	4,722.17	24.98	190.014	
5,900.00	5,891.71	5,877.30	5,875.68	13.29	12.26	-86.00	-4,735.64	-564.18	4,747.25	4,721.72	25.53	185.925	
6,000.00	5,991.44	6,040.83	6,039.05	13.53	12.61	-86.23	-4,735.79	-556.90	4,746.71	4,720.59	26.13	181.679	
6,100.00	6,091.18	6,150.58	6,148.72	13.78	12.84	-86.37	-4,734.54	-552.88	4,744.85	4,718.24	26.61	178.337	
6,200.00	6,190.91	6,221.31	6,219.41	14.02	12.99	-86.46	-4,733.92	-550.52	4,743.31	4,716.31	27.00	175.658	
6,300.00	6,290.65	6,290.58	6,288.64	14.27	13.14	-86.55	-4,733.74	-548.29	4,742.42	4,715.02	27.40	173.106	
6,400.00	6,390.38	6,423.01	6,421.01	14.51	13.42	-86.71	-4,733.56	-544.21	4,741.72	4,713.79	27.92	169.812	
6,500.00	6,490.12	15,714.00	11,121.66	14.76	85.50	-8.09	-9.54	-682.18	4,656.59	4,616.78	39.82	116.951	
6,600.00	6,589.85	15,714.00	11,121.66	15.01	85.50	-8.09	-9.54	-682.18	4,556.60	4,516.63	39.98	113.978	
6,700.00	6,689.58	15,714.00	11,121.66	15.25	85.50	-8.09	-9.54	-682.18	4,456.61	4,416.47	40.14	111.019	
6,800.00	6,789.32	15,714.00	11,121.66	15.50	85.50	-8.09	-9.54	-682.18	4,356.63	4,316.31	40.31	108.073	
6,900.00	6,889.05	15,714.00	11,121.66	15.75	85.50	-8.09	-9.54	-682.18	4,256.64	4,216.15	40.48	105.143	
7,000.00	6,988.79	15,714.00	11,121.66	16.00	85.50	-8.09	-9.54	-682.18	4,156.65	4,115.99	40.66	102.229	
7,100.00	7,088.52	15,714.00	11,121.66	16.24	85.50	-8.09	-9.54	-682.18	4,056.67	4,015.83	40.84	99.331	
7,200.00	7,188.26	15,714.00	11,121.66	16.49	85.50	-8.09	-9.54	-682.18	3,956.68	3,915.66	41.02	96.449	
7,300.00	7,287.99	15,714.00	11,121.66	16.74	85.50	-8.09	-9.54	-682.18	3,856.69	3,815.48	41.21	93.585	
7,400.00	7,387.73	15,714.00	11,121.66	16.99	85.50	-8.09	-9.54	-682.18	3,756.71	3,715.31	41.40	90.740	
7,500.00	7,487.46	15,714.00	11,121.66	17.24	85.50	-8.09	-9.54	-682.18	3,656.73	3,615.13	41.60	87.912	
7,600.00	7,587.19	15,714.00	11,121.66	17.48	85.50	-8.09	-9.54	-682.18	3,556.74	3,514.95	41.79	85.104	
7,700.00	7,686.93	15,714.00	11,121.66	17.73	85.50	-8.09	-9.54	-682.18	3,456.76	3,414.77	41.99	82.314	
7,800.00	7,786.66	15,714.00	11,121.66	17.98	85.50	-8.09	-9.54	-682.18	3,356.78	3,314.58	42.20	79.545	
7,900.00	7,886.40	15,714.00	11,121.66	18.23	85.50	-8.09	-9.54	-682.18	3,256.80	3,214.40	42.41	76.795	
8,000.00	7,986.13	15,714.00	11,121.66	18.48	85.50	-8.09	-9.54	-682.18	3,156.83	3,114.20	42.62	74.066	
8,100.00	8,085.87	15,714.00	11,121.66	18.73	85.50	-8.09	-9.54	-682.18	3,056.85	3,014.01	42.84	71.357	
8,200.00	8,185.60	15,714.00	11,121.66	18.98	85.50	-8.09	-9.54	-682.18	2,956.88	2,913.82	43.06	68.670	
8,300.00	8,285.34	15,714.00	11,121.66	19.23	85.50	-8.09	-9.54	-682.18	2,856.90	2,813.62	43.28	66.004	
8,400.00	8,385.07	15,714.00	11,121.66	19.48	85.50	-8.09	-9.54	-682.18	2,756.93	2,713.42	43.51	63.359	
8,444.81	8,429.76	15,714.00	11,121.66	19.59	85.50	-8.09	-9.54	-682.18	2,712.14	2,668.52	43.62	62.181	
8,500.00	8,484.82	15,714.00	11,121.66	19.71	85.50	-5.86	-9.54	-682.18	2,656.97	2,613.22	43.75	60.733	
8,600.00	8,584.67	15,714.00	11,121.66	19.90	85.50	-3.94	-9.54	-682.18	2,557.07	2,513.07	44.00	58.114	
8,700.00	8,684.60	15,714.00	11,121.66	20.08	85.50	-3.00	-9.54	-682.18	2,457.28	2,413.01	44.27	55.502	
8,800.00	8,784.58	15,714.00	11,121.66	20.26	85.50	-2.44	-9.54	-682.18	2,357.64	2,313.07	44.57	52.896	
8,862.49	8,847.07	15,714.00	11,121.66	20.37	85.50	-92.19	-9.54	-682.18	2,295.48	2,250.70	44.77	51.271	
8,900.00	8,884.58	15,714.00	11,121.66	20.44	85.50	-92.19	-9.54	-682.18	2,258.19	2,213.29	44.90	50.298	
9,000.00	8,984.58	15,714.00	11,121.66	20.64	85.50	-92.19	-9.54	-682.18	2,158.83	2,113.59	45.24	47.717	
9,062.49	9,047.07	15,714.00	11,121.66	20.77	85.50	-92.19	-9.54	-682.18	2,096.77	2,051.30	45.47	46.115	
9,100.00	9,084.55	15,714.00	11,121.66	20.84	85.50	117.05	-9.54	-682.18	2,059.55	2,013.95	45.61	45.160	
9,150.00	9,134.24	15,714.00	11,121.66	20.93	85.50	140.51	-9.54	-682.18	2,010.23	1,964.45	45.79	43.904	
9,200.00	9,183.26	15,714.00	11,121.66	21.02	85.50	152.11	-9.54	-682.18	1,961.62	1,915.65	45.96	42.679	
9,250.00	9,231.25	15,712.38	11,121.68	21.12	85.47	158.42	-11.16	-682.15	1,914.14	1,868.02	46.12	41.503	
9,300.00	9,277.84	15,693.66	11,121.92	21.21	85.16	161.96	-29.87	-681.75	1,868.16	1,822.01	46.16	40.476	

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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) - 61H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 57-MWD-ISCWSA													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	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	
9,350.00	9,322.67	15,670.98	11,122.22	21.31	84.78	164.33	-52.55	-681.27	1,823.99	1,777.83	46.15	39.519		
9,400.00	9,365.40	15,646.90	11,122.54	21.41	84.38	166.03	-76.62	-680.77	1,781.96	1,735.82	46.14	38.624		
9,450.00	9,405.71	15,619.64	11,122.94	21.52	83.94	167.28	-103.87	-680.23	1,742.44	1,696.36	46.09	37.808		
9,500.00	9,443.29	15,588.76	11,123.47	21.63	83.43	168.21	-134.74	-679.56	1,705.74	1,659.74	46.00	37.080		
9,550.00	9,477.85	15,453.00	11,126.62	21.75	81.24	169.57	-265.45	-651.88	1,672.13	1,627.33	44.81	37.319		
9,600.00	9,509.14	15,453.00	11,126.62	21.89	81.24	170.31	-265.45	-651.88	1,639.98	1,595.10	44.89	36.534		
9,650.00	9,536.90	15,414.22	11,127.71	22.04	80.63	171.42	-300.33	-635.15	1,611.29	1,566.82	44.46	36.238		
9,700.00	9,560.95	15,393.21	11,128.29	22.22	80.29	171.99	-320.51	-629.37	1,587.13	1,542.81	44.32	35.813		
9,750.00	9,581.08	15,359.00	11,129.18	22.42	79.75	172.37	-354.39	-625.13	1,567.59	1,523.49	44.11	35.542		
9,800.00	9,597.14	15,335.30	11,129.77	22.64	79.36	172.56	-378.07	-624.48	1,552.55	1,508.53	44.02	35.269		
9,850.00	9,609.02	15,290.13	11,130.97	22.89	78.61	172.68	-423.22	-623.42	1,541.95	1,498.17	43.78	35.220		
9,900.00	9,616.62	15,241.19	11,132.34	23.17	77.81	172.76	-472.13	-622.52	1,535.71	1,492.20	43.51	35.292		
9,948.75	9,619.86	15,189.18	11,133.71	23.46	76.96	172.79	-524.12	-621.65	1,533.71	1,490.48	43.22	35.482		
9,950.00	9,619.89	15,187.83	11,133.74	23.47	76.93	172.79	-525.46	-621.62	1,533.71	1,490.49	43.22	35.488		
9,968.21	9,620.00	15,170.00	11,134.18	23.59	76.64	172.79	-543.29	-621.34	1,534.03	1,490.91	43.12	35.575		
10,000.00	9,619.68	15,140.83	11,134.93	27.08	76.17	172.81	-572.44	-620.88	1,535.12	1,491.80	43.32	35.434		
10,100.00	9,618.68	15,051.26	11,137.68	27.16	74.73	172.85	-661.96	-619.59	1,539.06	1,496.32	42.74	36.006		
10,200.00	9,617.68	14,954.25	11,141.05	27.23	73.16	172.89	-758.90	-618.22	1,543.42	1,501.32	42.11	36.655		
10,300.00	9,616.68	14,832.43	11,144.92	27.31	71.15	172.93	-880.65	-616.83	1,547.60	1,506.43	41.17	37.595		
10,400.00	9,615.69	14,703.49	11,146.18	27.39	69.03	172.99	-1,009.57	-614.65	1,549.37	1,509.20	40.18	38.562		
10,500.00	9,614.69	14,553.16	11,143.51	27.48	66.55	173.07	-1,159.82	-611.24	1,548.18	1,509.20	38.97	39.723		
10,600.00	9,613.69	14,456.36	11,140.77	27.56	65.00	173.14	-1,256.54	-608.49	1,546.11	1,507.57	38.54	40.120		
10,700.00	9,612.69	14,363.52	11,138.51	27.65	63.53	173.21	-1,349.32	-605.76	1,544.42	1,506.23	38.19	40.438		
10,800.00	9,611.69	14,285.23	11,137.21	27.75	62.29	173.29	-1,427.54	-602.78	1,543.47	1,505.40	38.07	40.547		
10,801.47	9,611.67	14,284.27	11,137.21	27.75	62.27	173.29	-1,428.49	-602.74	1,543.47	1,505.40	38.07	40.546		
10,900.00	9,610.69	14,215.44	11,137.61	27.84	61.17	173.39	-1,497.26	-599.77	1,544.55	1,506.47	38.08	40.559		
11,000.00	9,609.69	14,106.61	11,138.44	27.94	59.43	173.56	-1,605.97	-594.64	1,545.82	1,508.21	37.61	41.105		
11,100.00	9,608.69	14,027.70	11,139.85	28.04	58.18	173.69	-1,684.76	-590.59	1,548.05	1,510.50	37.55	41.224		
11,200.00	9,607.69	13,880.71	11,140.66	28.15	55.82	173.96	-1,831.52	-582.48	1,548.99	1,512.34	36.65	42.260		
11,274.59	9,606.95	13,810.61	11,140.01	28.23	54.73	174.09	-1,901.50	-578.55	1,548.67	1,512.16	36.51	42.416		
11,300.00	9,606.69	13,791.14	11,139.94	28.26	54.43	174.12	-1,920.95	-577.53	1,548.72	1,512.20	36.52	42.411		
11,400.00	9,605.69	13,707.06	11,140.34	28.37	53.14	174.26	-2,004.92	-573.34	1,549.74	1,513.27	36.47	42.491		
11,500.00	9,604.69	13,596.30	11,141.28	28.50	51.40	174.46	-2,115.51	-567.25	1,551.14	1,515.02	36.12	42.940		
11,600.00	9,603.69	13,470.00	11,140.19	28.63	49.46	174.72	-2,241.55	-559.29	1,550.68	1,515.05	35.62	43.529		
11,675.90	9,602.94	13,408.74	11,139.42	28.73	48.54	174.85	-2,302.67	-555.26	1,550.12	1,514.46	35.65	43.477		
11,700.00	9,602.70	13,391.60	11,139.38	28.77	48.29	174.89	-2,319.77	-554.07	1,550.17	1,514.48	35.69	43.436		
11,800.00	9,601.70	13,292.13	11,139.68	28.92	46.78	175.15	-2,418.93	-546.28	1,550.84	1,515.32	35.52	43.656		
11,900.00	9,600.70	13,172.07	11,138.84	29.08	45.01	175.52	-2,538.51	-535.49	1,550.42	1,515.27	35.15	44.108		
11,937.38	9,600.32	13,146.41	11,138.66	29.15	44.64	175.60	-2,564.05	-533.13	1,550.28	1,515.06	35.22	44.012		
12,000.00	9,599.70	13,092.00	11,138.92	29.27	43.87	175.78	-2,618.21	-527.93	1,550.74	1,515.52	35.22	44.024		
12,100.00	9,598.70	13,033.36	11,140.13	29.48	43.01	175.98	-2,676.56	-522.28	1,552.94	1,517.39	35.55	43.685		
12,200.00	9,597.70	12,931.11	11,143.45	29.72	41.52	176.31	-2,778.30	-512.64	1,556.61	1,521.20	35.41	43.963		
12,300.00	9,596.70	12,830.22	11,145.82	29.99	40.07	176.62	-2,878.78	-503.76	1,559.46	1,524.16	35.30	44.174		
12,400.00	9,595.70	12,697.61	11,147.64	30.31	38.22	176.93	-3,011.04	-494.55	1,561.48	1,526.57	34.91	44.734		
12,500.00	9,594.70	12,620.00	11,148.26	30.66	37.19	177.08	-3,088.52	-489.96	1,563.05	1,527.97	35.07	44.563		
12,600.00	9,593.70	9,579.94	9,577.31	31.04	20.08	93.53	-4,741.72	-498.77	1,534.10	1,485.03	49.07	31.265		
12,700.00	9,592.70	9,579.53	9,576.90	31.46	20.08	93.30	-4,741.72	-498.77	1,434.33	1,385.17	49.16	29.174		
12,800.00	9,591.70	9,579.12	9,576.49	31.91	20.08	93.06	-4,741.71	-498.77	1,334.59	1,285.33	49.26	27.093		
12,900.00	9,590.71	9,578.71	9,576.08	32.38	20.08	92.83	-4,741.71	-498.77	1,234.90	1,185.55	49.36	25.020		
13,000.00	9,589.71	9,578.31	9,575.67	32.87	20.08	92.60	-4,741.71	-498.77	1,135.26	1,085.81	49.45	22.956		
13,100.00	9,588.71	9,577.90	9,575.27	33.38	20.08	92.37	-4,741.71	-498.77	1,035.70	986.14	49.55	20.901		
13,200.00	9,587.71	9,577.50	9,574.86	33.91	20.08	92.14	-4,741.70	-498.77	936.22	886.57	49.65	18.856		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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) - 61H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 57-MWD-ISCWSA													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)					
13,300.00	9,586.71	9,577.10	9,574.46	34.44	20.07	91.91	-4,741.70	-498.77	836.87	787.12	49.75	16.821	
13,400.00	9,585.71	9,576.70	9,574.06	34.99	20.07	91.68	-4,741.70	-498.77	737.69	687.83	49.86	14.796	
13,500.00	9,584.71	9,576.30	9,573.67	35.56	20.07	91.46	-4,741.70	-498.77	638.77	588.80	49.97	12.783	
13,600.00	9,583.71	9,575.90	9,573.27	36.13	20.07	91.23	-4,741.69	-498.77	540.25	490.15	50.10	10.783	
13,700.00	9,582.71	9,575.51	9,572.87	36.71	20.07	91.01	-4,741.69	-498.77	442.39	392.12	50.27	8.800	
13,800.00	9,581.71	9,575.12	9,572.48	37.29	20.07	90.78	-4,741.69	-498.77	345.76	295.21	50.55	6.840	
13,900.00	9,580.71	9,574.73	9,572.09	37.89	20.07	90.56	-4,741.69	-498.77	251.77	200.63	51.14	4.923	
14,000.00	9,579.71	9,574.34	9,571.70	38.49	20.07	90.34	-4,741.69	-498.77	165.00	112.10	52.90	3.119	
14,100.00	9,578.72	9,573.95	9,571.31	39.10	20.07	90.12	-4,741.68	-498.77	105.18	47.17	58.01	1.813	
14,130.81	9,578.41	9,573.83	9,571.19	39.29	20.07	90.05	-4,741.68	-498.77	100.57	41.25	59.32	1.695 CC, ES, SF	
14,200.00	9,577.72	9,573.56	9,570.93	39.72	20.07	89.90	-4,741.68	-498.77	122.07	64.10	57.96	2.106	
14,300.00	9,576.72	9,573.18	9,570.54	40.34	20.07	89.68	-4,741.68	-498.77	196.82	142.24	54.58	3.606	
14,400.00	9,575.72	9,572.79	9,570.16	40.96	20.07	89.46	-4,741.68	-498.77	287.36	234.17	53.19	5.403	
14,500.00	9,574.72	9,572.41	9,569.78	41.59	20.07	89.24	-4,741.67	-498.77	382.64	330.02	52.61	7.273	
14,600.00	9,573.72	9,572.03	9,569.40	42.23	20.06	89.02	-4,741.67	-498.78	479.84	427.48	52.36	9.164	
14,700.00	9,572.72	9,571.65	9,569.02	42.87	20.06	88.81	-4,741.67	-498.78	578.00	525.74	52.26	11.061	
14,800.00	9,571.72	9,571.27	9,568.64	43.52	20.06	88.59	-4,741.67	-498.78	676.70	624.47	52.23	12.956	
14,900.00	9,570.72	9,570.90	9,568.26	44.16	20.06	88.38	-4,741.66	-498.78	775.73	723.49	52.24	14.848	
15,000.00	9,569.72	9,570.53	9,567.89	44.82	20.06	88.17	-4,741.66	-498.78	874.98	822.69	52.29	16.734	
15,100.00	9,568.72	9,570.15	9,567.52	45.47	20.06	87.96	-4,741.66	-498.78	974.39	922.04	52.35	18.614	
15,200.00	9,567.72	9,569.78	9,567.15	46.13	20.06	87.74	-4,741.66	-498.78	1,073.90	1,021.48	52.42	20.486	
15,300.00	9,566.73	9,569.41	9,566.78	46.80	20.06	87.53	-4,741.65	-498.78	1,173.50	1,120.99	52.51	22.350	
15,400.00	9,565.73	9,569.04	9,566.41	47.46	20.06	87.33	-4,741.65	-498.78	1,273.16	1,220.56	52.60	24.206	
15,500.00	9,564.73	9,568.68	9,566.04	48.13	20.06	87.12	-4,741.65	-498.78	1,372.87	1,320.18	52.69	26.055	
15,600.00	9,563.73	9,568.31	9,565.68	48.81	20.06	86.91	-4,741.65	-498.78	1,472.62	1,419.82	52.79	27.895	
15,700.00	9,562.73	9,567.95	9,565.31	49.48	20.06	86.70	-4,741.65	-498.78	1,572.40	1,519.50	52.90	29.726	
15,800.00	9,561.73	9,567.59	9,564.95	50.16	20.06	86.50	-4,741.64	-498.78	1,672.20	1,619.20	53.00	31.549	
15,900.00	9,560.73	9,567.23	9,564.59	50.84	20.05	86.29	-4,741.64	-498.78	1,772.03	1,718.92	53.11	33.364	
16,000.00	9,559.73	9,566.87	9,564.23	51.52	20.05	86.09	-4,741.64	-498.78	1,871.88	1,818.66	53.22	35.170	
16,100.00	9,558.73	9,566.51	9,563.88	52.21	20.05	85.89	-4,741.64	-498.78	1,971.74	1,918.41	53.34	36.968	
16,200.00	9,557.73	9,566.15	9,563.52	52.89	20.05	85.68	-4,741.63	-498.78	2,071.62	2,018.17	53.45	38.757	
16,300.00	9,556.73	9,565.80	9,563.16	53.58	20.05	85.48	-4,741.63	-498.78	2,171.50	2,117.94	53.57	40.538	
16,400.00	9,555.73	9,565.45	9,562.81	54.28	20.05	85.28	-4,741.63	-498.78	2,271.40	2,217.72	53.69	42.310	
16,500.00	9,554.73	9,565.09	9,562.46	54.97	20.05	85.08	-4,741.63	-498.78	2,371.31	2,317.50	53.80	44.073	
16,600.00	9,553.74	9,564.74	9,562.11	55.67	20.05	84.89	-4,741.63	-498.78	2,471.22	2,417.30	53.92	45.828	
16,700.00	9,552.74	9,564.39	9,561.76	56.36	20.05	84.69	-4,741.62	-498.78	2,571.14	2,517.09	54.04	47.574	
16,800.00	9,551.74	9,564.05	9,561.41	57.06	20.05	84.49	-4,741.62	-498.78	2,671.06	2,616.90	54.17	49.312	
16,900.00	9,550.74	9,563.70	9,561.06	57.76	20.05	84.30	-4,741.62	-498.78	2,771.00	2,716.71	54.29	51.041	
16,973.85	9,550.00	9,563.44	9,560.81	58.28	20.05	84.15	-4,741.62	-498.78	2,844.79	2,790.41	54.38	52.313	

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 (°)	Offset Wellbore Centre		Distance		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)	Between Centres (usft)	Between Ellipses (usft)					
0.00	0.00	1.40	1.40	0.00	0.00	89.79	0.11	30.00	30.00						
100.00	100.00	101.40	101.40	0.09	0.09	89.79	0.11	30.00	30.00	29.83	0.18	171.339			
200.00	200.00	201.40	201.40	0.31	0.31	89.79	0.11	30.00	30.00	29.38	0.62	48.029			
300.00	300.00	301.40	301.40	0.54	0.54	89.79	0.11	30.00	30.00	28.93	1.07	27.929			
400.00	400.00	401.40	401.40	0.76	0.76	89.79	0.11	30.00	30.00	28.48	1.52	19.689			
500.00	500.00	501.40	501.40	0.99	0.99	89.79	0.11	30.00	30.00	28.03	1.97	15.204			
600.00	600.00	601.40	601.40	1.21	1.21	89.79	0.11	30.00	30.00	27.58	2.42	12.383			
700.00	700.00	701.40	701.40	1.43	1.44	89.79	0.11	30.00	30.00	27.13	2.87	10.445			
800.00	800.00	801.40	801.40	1.66	1.66	89.79	0.11	30.00	30.00	26.68	3.32	9.031			
900.00	900.00	901.40	901.40	1.88	1.89	89.79	0.11	30.00	30.00	26.23	3.77	7.955			
1,000.00	1,000.00	1,001.40	1,001.40	2.11	2.11	89.79	0.11	30.00	30.00	25.78	4.22	7.108			
1,100.00	1,100.00	1,101.40	1,101.40	2.33	2.34	89.79	0.11	30.00	30.00	25.33	4.67	6.423			
1,200.00	1,200.00	1,201.40	1,201.40	2.56	2.56	89.79	0.11	30.00	30.00	24.88	5.12	5.859			
1,300.00	1,300.00	1,301.40	1,301.40	2.78	2.79	89.79	0.11	30.00	30.00	24.43	5.57	5.387			
1,400.00	1,400.00	1,401.40	1,401.40	3.01	3.01	89.79	0.11	30.00	30.00	23.98	6.02	4.984			
1,500.00	1,500.00	1,501.40	1,501.40	3.23	3.24	89.79	0.11	30.00	30.00	23.53	6.47	4.638			
1,600.00	1,600.00	1,601.40	1,601.40	3.46	3.46	89.79	0.11	30.00	30.00	23.08	6.92	4.336			
1,700.00	1,700.00	1,701.40	1,701.40	3.68	3.69	89.79	0.11	30.00	30.00	22.63	7.37	4.072			
1,800.00	1,800.00	1,801.40	1,801.40	3.91	3.91	89.79	0.11	30.00	30.00	22.18	7.82	3.838			
1,900.00	1,900.00	1,901.40	1,901.40	4.13	4.13	89.79	0.11	30.00	30.00	21.73	8.27	3.629			
2,000.00	2,000.00	2,001.40	2,001.40	4.36	4.36	89.79	0.11	30.00	30.00	21.28	8.72	3.442			
2,100.00	2,100.00	2,101.40	2,101.40	4.58	4.58	89.79	0.11	30.00	30.00	20.83	9.17	3.273			
2,200.00	2,200.00	2,201.40	2,201.40	4.81	4.81	89.79	0.11	30.00	30.00	20.38	9.62	3.120			
2,300.00	2,300.00	2,301.40	2,301.40	5.03	5.03	89.79	0.11	30.00	30.00	19.94	10.06	2.981			
2,400.00	2,400.00	2,401.40	2,401.40	5.26	5.26	89.79	0.11	30.00	30.00	19.49	10.51	2.853			
2,500.00	2,500.00	2,501.40	2,501.40	5.48	5.48	89.79	0.11	30.00	30.00	19.04	10.96	2.736 CC, ES			
2,600.00	2,599.99	2,601.39	2,601.39	5.69	5.71	179.80	0.11	30.00	30.87	19.47	11.40	2.708			
2,700.00	2,699.96	2,701.36	2,701.36	5.89	5.93	179.81	0.11	30.00	33.49	21.67	11.82	2.833			
2,800.00	2,799.86	2,801.26	2,801.26	6.09	6.16	179.83	0.11	30.00	37.85	25.61	12.25	3.091			
2,900.00	2,899.68	2,901.08	2,901.08	6.30	6.38	179.86	0.11	30.00	43.96	31.29	12.67	3.469			
2,917.68	2,917.31	2,918.71	2,918.71	6.33	6.42	179.86	0.11	30.00	45.22	32.47	12.75	3.547			
3,000.00	2,999.41	3,000.81	3,000.81	6.51	6.61	179.88	0.11	30.00	51.21	38.11	13.10	3.910			
3,100.00	3,099.15	3,100.55	3,100.55	6.72	6.83	179.89	0.11	30.00	58.50	44.97	13.53	4.324			
3,200.00	3,198.88	3,200.28	3,200.28	6.94	7.05	179.90	0.11	30.00	65.78	51.82	13.96	4.713			
3,300.00	3,298.61	3,300.01	3,300.01	7.16	7.28	179.91	0.11	30.00	73.06	58.68	14.39	5.078			
3,400.00	3,398.35	3,399.75	3,399.75	7.38	7.50	179.92	0.11	30.00	80.35	65.53	14.82	5.421			
3,500.00	3,498.08	3,499.48	3,499.48	7.60	7.73	179.93	0.11	30.00	87.63	72.38	15.26	5.744			
3,600.00	3,597.82	3,600.65	3,600.65	7.82	7.95	179.66	0.55	29.23	94.16	78.47	15.69	6.003			
3,700.00	3,697.55	3,701.99	3,701.99	8.05	8.16	178.91	1.89	26.92	99.18	83.07	16.11	6.157			
3,800.00	3,797.29	3,803.43	3,803.28	8.28	8.38	177.70	4.12	23.04	102.71	86.18	16.53	6.214			
3,900.00	3,897.02	3,904.90	3,904.56	8.51	8.60	176.03	7.26	17.61	104.81	87.86	16.95	6.184			
4,000.00	3,996.76	4,005.31	4,004.69	8.74	8.82	174.02	11.03	11.07	105.89	88.52	17.38	6.094			
4,100.00	4,096.49	4,105.23	4,104.32	8.97	9.04	172.03	14.83	4.48	107.04	89.23	17.81	6.010			
4,200.00	4,196.22	4,205.16	4,203.96	9.20	9.26	170.09	18.64	-2.11	108.31	90.06	18.24	5.936			
4,300.00	4,295.96	4,305.08	4,303.59	9.44	9.48	168.20	22.44	-8.70	109.70	91.02	18.68	5.871			
4,400.00	4,395.69	4,405.01	4,403.23	9.67	9.71	166.35	26.24	-15.29	111.21	92.08	19.12	5.815			
4,500.00	4,495.43	4,504.93	4,502.86	9.91	9.93	164.56	30.04	-21.88	112.83	93.26	19.57	5.766			
4,600.00	4,595.16	4,604.86	4,602.50	10.15	10.16	162.82	33.84	-28.47	114.56	94.54	20.02	5.723			
4,700.00	4,694.90	4,704.78	4,702.13	10.38	10.39	161.13	37.64	-35.06	116.39	95.92	20.47	5.687			
4,800.00	4,794.63	4,804.71	4,801.77	10.62	10.62	159.49	41.44	-41.64	118.31	97.40	20.92	5.656			
4,900.00	4,894.37	4,904.64	4,901.40	10.86	10.85	157.91	45.24	-48.23	120.34	98.96	21.37	5.630			
5,000.00	4,994.10	5,004.56	5,001.04	11.10	11.08	156.38	49.05	-54.82	122.45	100.62	21.83	5.609			

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 (°)	Offset Wellbore Centre		Distance		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)	Between Centres (usft)	Between Ellipses (usft)				
5,100.00	5,093.83	5,104.49	5,100.67	11.34	11.32	154.91	52.85	-61.41	124.64	102.35	22.29	5.591		
5,200.00	5,193.57	5,204.41	5,200.31	11.58	11.55	153.48	56.65	-68.00	126.92	104.16	22.76	5.577		
5,300.00	5,293.30	5,304.34	5,299.95	11.83	11.79	152.11	60.45	-74.59	129.27	106.05	23.22	5.567		
5,400.00	5,393.04	5,404.26	5,399.58	12.07	12.02	150.79	64.25	-81.18	131.69	108.00	23.69	5.559		
5,500.00	5,492.77	5,504.19	5,499.22	12.31	12.26	149.51	68.05	-87.77	134.18	110.02	24.16	5.554		
5,600.00	5,592.51	5,604.11	5,598.85	12.56	12.50	148.29	71.85	-94.36	136.73	112.10	24.63	5.552		
5,700.00	5,692.24	5,704.04	5,698.49	12.80	12.73	147.10	75.66	-100.95	139.35	114.24	25.10	5.551		
5,800.00	5,791.97	5,803.96	5,798.12	13.04	12.97	145.97	79.46	-107.54	142.02	116.44	25.58	5.552		
5,900.00	5,891.71	5,903.89	5,897.76	13.29	13.21	144.87	83.26	-114.12	144.74	118.69	26.06	5.555		
6,000.00	5,991.44	6,003.81	5,997.39	13.53	13.45	143.82	87.06	-120.71	147.52	120.98	26.53	5.560		
6,100.00	6,091.18	6,103.74	6,097.03	13.78	13.69	142.80	90.86	-127.30	150.34	123.33	27.01	5.565		
6,200.00	6,190.91	6,203.66	6,196.66	14.02	13.93	141.82	94.66	-133.89	153.21	125.72	27.50	5.572		
6,300.00	6,290.65	6,303.59	6,296.30	14.27	14.17	140.88	98.46	-140.48	156.13	128.15	27.98	5.580		
6,400.00	6,390.38	6,403.51	6,395.93	14.51	14.42	139.97	102.27	-147.07	159.08	130.62	28.46	5.589		
6,500.00	6,490.12	6,503.44	6,495.57	14.76	14.66	139.10	106.07	-153.66	162.07	133.12	28.95	5.599		
6,600.00	6,589.85	6,603.36	6,595.20	15.01	14.90	138.26	109.87	-160.25	165.10	135.66	29.43	5.609		
6,700.00	6,689.58	6,702.86	6,694.42	15.25	15.13	137.52	113.55	-166.63	168.22	138.32	29.91	5.625		
6,800.00	6,789.32	6,801.91	6,793.30	15.50	15.32	137.28	116.47	-171.69	171.82	141.49	30.33	5.664		
6,900.00	6,889.05	6,900.92	6,892.22	15.75	15.50	137.59	118.54	-175.28	175.93	145.19	30.75	5.722		
7,000.00	6,988.79	7,000.00	6,991.27	16.00	15.68	138.40	119.75	-177.38	180.59	149.45	31.15	5.798		
7,100.00	7,088.52	7,098.65	7,089.92	16.24	15.85	139.67	120.11	-178.00	185.86	154.33	31.53	5.895		
7,200.00	7,188.26	7,198.39	7,189.66	16.49	16.07	141.08	120.11	-178.00	191.47	159.52	31.95	5.992		
7,300.00	7,287.99	7,298.12	7,289.39	16.74	16.28	142.40	120.11	-178.00	197.20	164.82	32.38	6.091		
7,400.00	7,387.73	7,397.86	7,389.13	16.99	16.50	143.66	120.11	-178.00	203.02	170.22	32.80	6.189		
7,500.00	7,487.46	7,497.59	7,488.86	17.24	16.72	144.84	120.11	-178.00	208.94	175.71	33.23	6.288		
7,600.00	7,587.19	7,597.33	7,588.59	17.48	16.93	145.96	120.11	-178.00	214.94	181.29	33.66	6.387		
7,700.00	7,686.93	7,697.06	7,688.33	17.73	17.15	147.01	120.11	-178.00	221.02	186.94	34.08	6.485		
7,800.00	7,786.66	7,796.79	7,788.06	17.98	17.37	148.01	120.11	-178.00	227.17	192.66	34.51	6.582		
7,900.00	7,886.40	7,896.53	7,887.80	18.23	17.58	148.96	120.11	-178.00	233.38	198.44	34.94	6.679		
8,000.00	7,986.13	7,996.26	7,987.53	18.48	17.80	149.86	120.11	-178.00	239.66	204.28	35.37	6.775		
8,100.00	8,085.87	8,096.00	8,087.27	18.73	18.02	150.71	120.11	-178.00	245.99	210.18	35.81	6.870		
8,200.00	8,185.60	8,195.73	8,187.00	18.98	18.23	151.52	120.11	-178.00	252.37	216.13	36.24	6.964		
8,300.00	8,285.34	8,295.47	8,286.74	19.23	18.45	152.28	120.11	-178.00	258.80	222.12	36.67	7.057		
8,400.00	8,385.07	8,395.20	8,386.47	19.48	18.67	153.02	120.11	-178.00	265.27	228.16	37.11	7.149		
8,444.81	8,429.76	8,439.89	8,431.16	19.59	18.77	153.33	120.11	-178.00	268.18	230.88	37.30	7.189		
8,500.00	8,484.82	8,494.95	8,486.22	19.71	18.89	153.70	120.11	-178.00	271.55	234.01	37.53	7.235		
8,600.00	8,584.67	8,594.80	8,586.07	19.90	19.10	154.22	120.11	-178.00	276.44	238.52	37.93	7.289		
8,700.00	8,684.60	8,694.73	8,686.00	20.08	19.32	154.57	120.11	-178.00	279.79	241.46	38.33	7.300		
8,800.00	8,784.58	8,794.71	8,785.98	20.26	19.54	154.75	120.11	-178.00	281.56	242.84	38.73	7.271		
8,862.49	8,847.07	8,857.20	8,848.47	20.37	19.68	64.78	120.11	-178.00	281.87	242.89	38.98	7.232		
8,900.00	8,884.58	8,894.71	8,885.98	20.44	19.76	64.78	120.11	-178.00	281.87	242.74	39.13	7.203		
9,000.00	8,984.58	8,994.71	8,985.98	20.64	19.98	64.78	120.11	-178.00	281.87	242.31	39.56	7.125		
9,062.49	9,047.07	9,057.20	9,048.47	20.77	20.12	64.78	120.11	-178.00	281.87	242.04	39.83	7.077		
9,100.00	9,084.55	9,094.68	9,085.95	20.84	20.20	-114.98	120.11	-178.00	282.39	242.40	39.99	7.062		
9,150.00	9,134.24	9,144.37	9,135.64	20.93	20.31	-115.76	120.11	-178.00	284.73	244.53	40.20	7.083		
9,200.00	9,183.26	9,201.83	9,193.08	21.02	20.42	-117.23	118.98	-177.99	288.74	248.31	40.43	7.142		
9,250.00	9,231.25	9,266.81	9,257.55	21.12	20.53	-118.75	111.23	-177.93	292.62	252.06	40.56	7.215		
9,300.00	9,277.84	9,333.20	9,322.09	21.21	20.63	-119.99	95.83	-177.82	295.99	255.45	40.54	7.301		
9,350.00	9,322.67	9,400.79	9,385.53	21.31	20.72	-120.96	72.59	-177.65	298.71	258.32	40.39	7.396		
9,400.00	9,365.40	9,469.33	9,446.59	21.41	20.81	-121.63	41.57	-177.42	300.68	260.56	40.11	7.496		
9,450.00	9,405.71	9,538.48	9,504.02	21.52	20.90	-122.01	3.11	-177.14	301.80	262.04	39.76	7.590		
9,500.00	9,443.29	9,607.92	9,556.59	21.63	20.99	-122.09	-42.18	-176.81	302.04	262.63	39.40	7.665		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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			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				
9,550.00	9,477.85	9,677.26	9,603.25	21.75	21.08	-121.87	-93.42	-176.43	301.37	262.26	39.12	7.704				
9,600.00	9,509.14	9,746.16	9,643.15	21.89	21.19	-121.35	-149.54	-176.02	299.84	260.86	38.98	7.692				
9,650.00	9,536.90	9,814.29	9,675.69	22.04	21.34	-120.53	-209.34	-175.58	297.51	258.44	39.06	7.616				
9,700.00	9,560.95	9,881.34	9,700.58	22.22	21.55	-119.43	-271.57	-175.12	294.46	255.06	39.40	7.473				
9,750.00	9,581.08	9,947.08	9,717.76	22.42	21.81	-118.06	-334.98	-174.66	290.83	250.82	40.01	7.269				
9,800.00	9,597.14	10,011.33	9,727.42	22.64	22.10	-116.43	-398.46	-174.19	286.77	245.89	40.87	7.016				
9,850.00	9,609.02	10,071.66	9,730.04	22.89	22.42	-114.65	-458.71	-173.75	282.46	240.57	41.89	6.743				
9,900.00	9,616.62	10,121.10	9,730.29	23.17	22.71	-113.57	-508.15	-173.39	279.42	236.69	42.74	6.538				
9,950.00	9,619.89	10,170.99	9,730.53	23.47	23.02	-113.12	-558.04	-173.02	278.22	234.77	43.46	6.402				
9,959.67	9,620.02	10,180.66	9,730.58	23.53	23.08	-113.10	-567.71	-172.95	278.19	234.61	43.58	6.383				
9,968.21	9,620.00	10,189.21	9,730.62	23.59	23.13	-113.11	-576.25	-172.89	278.22	234.53	43.68	6.369				
10,000.00	9,619.68	10,220.99	9,730.78	27.08	23.35	-113.20	-608.03	-172.65	278.40	234.41	43.99	6.329				
10,100.00	9,618.68	10,320.98	9,731.27	27.16	24.09	-113.48	-708.02	-171.92	278.99	234.34	44.65	6.248				
10,200.00	9,617.68	10,420.97	9,731.76	27.23	24.92	-113.76	-808.00	-171.18	279.59	234.17	45.42	6.156				
10,300.00	9,616.68	10,520.95	9,732.25	27.31	25.83	-114.04	-907.99	-170.45	280.20	233.91	46.28	6.054				
10,400.00	9,615.69	10,620.94	9,732.74	27.39	26.80	-114.32	-1,007.97	-169.71	280.81	233.57	47.23	5.945				
10,500.00	9,614.69	10,720.93	9,733.23	27.48	27.83	-114.60	-1,107.96	-168.98	281.42	233.16	48.26	5.831				
10,600.00	9,613.69	10,820.92	9,733.72	27.56	28.93	-114.87	-1,207.94	-168.25	282.05	232.68	49.36	5.714				
10,700.00	9,612.69	10,920.91	9,734.21	27.65	30.07	-115.15	-1,307.93	-167.51	282.68	232.14	50.53	5.594				
10,800.00	9,611.69	11,020.90	9,734.70	27.75	31.25	-115.42	-1,407.91	-166.78	283.32	231.55	51.76	5.473				
10,900.00	9,610.69	11,120.89	9,735.19	27.84	32.48	-115.69	-1,507.90	-166.04	283.96	230.91	53.05	5.353				
11,000.00	9,609.69	11,220.88	9,735.68	27.94	33.74	-115.96	-1,607.88	-165.31	284.61	230.22	54.39	5.233				
11,100.00	9,608.69	11,320.87	9,736.17	28.04	35.03	-116.23	-1,707.87	-164.57	285.26	229.49	55.77	5.115				
11,200.00	9,607.69	11,420.85	9,736.66	28.15	36.35	-116.50	-1,807.85	-163.84	285.93	228.72	57.20	4.998				
11,300.00	9,606.69	11,520.84	9,737.16	28.26	37.69	-116.76	-1,907.84	-163.10	286.60	227.92	58.67	4.885				
11,400.00	9,605.69	11,620.83	9,737.65	28.37	39.06	-117.03	-2,007.82	-162.37	287.27	227.09	60.18	4.774				
11,500.00	9,604.69	11,720.82	9,738.14	28.50	40.45	-117.29	-2,107.81	-161.64	287.95	226.24	61.71	4.666				
11,600.00	9,603.69	11,820.81	9,738.63	28.63	41.85	-117.55	-2,207.79	-160.90	288.64	225.36	63.28	4.561				
11,700.00	9,602.70	11,920.80	9,739.12	28.77	43.27	-117.82	-2,307.78	-160.17	289.33	224.45	64.88	4.460				
11,800.00	9,601.70	12,020.79	9,739.61	28.92	44.71	-118.08	-2,407.76	-159.43	290.03	223.53	66.50	4.361				
11,900.00	9,600.70	12,120.78	9,740.10	29.08	46.16	-118.34	-2,507.75	-158.70	290.73	222.58	68.15	4.266				
12,000.00	9,599.70	12,220.77	9,740.59	29.27	47.62	-118.59	-2,607.73	-157.96	291.44	221.63	69.82	4.174				
12,100.00	9,598.70	12,320.75	9,741.08	29.48	49.10	-118.85	-2,707.72	-157.23	292.16	220.65	71.51	4.086				
12,200.00	9,597.70	12,420.74	9,741.57	29.72	50.58	-119.10	-2,807.70	-156.50	292.88	219.67	73.22	4.000				
12,300.00	9,596.70	12,520.73	9,742.06	29.99	52.07	-119.36	-2,907.69	-155.76	293.61	218.67	74.94	3.918				
12,400.00	9,595.70	12,620.72	9,742.55	30.31	53.57	-119.61	-3,007.67	-155.03	294.35	217.66	76.68	3.838				
12,500.00	9,594.70	12,720.71	9,743.04	30.66	55.08	-119.86	-3,107.66	-154.29	295.09	216.65	78.44	3.762				
12,600.00	9,593.70	12,820.70	9,743.53	31.04	56.60	-120.11	-3,207.64	-153.56	295.83	215.62	80.21	3.688				
12,700.00	9,592.70	12,920.69	9,744.03	31.46	58.12	-120.36	-3,307.63	-152.82	296.58	214.59	81.99	3.617				
12,800.00	9,591.70	13,020.68	9,744.52	31.91	59.65	-120.61	-3,407.61	-152.09	297.34	213.56	83.78	3.549				
12,900.00	9,590.71	13,120.67	9,745.01	32.38	61.19	-120.86	-3,507.60	-151.35	298.10	212.52	85.58	3.483				
13,000.00	9,589.71	13,220.65	9,745.50	32.87	62.73	-121.10	-3,607.58	-150.62	298.87	211.48	87.39	3.420				
13,100.00	9,588.71	13,320.64	9,745.99	33.38	64.27	-121.34	-3,707.57	-149.89	299.64	210.43	89.21	3.359				
13,200.00	9,587.71	13,420.63	9,746.48	33.91	65.82	-121.59	-3,807.55	-149.15	300.42	209.38	91.04	3.300				
13,300.00	9,586.71	13,520.62	9,746.97	34.44	67.38	-121.83	-3,907.54	-148.42	301.20	208.33	92.87	3.243				
13,400.00	9,585.71	13,620.61	9,747.46	34.99	68.93	-122.07	-4,007.52	-147.68	301.99	207.28	94.71	3.189				
13,500.00	9,584.71	13,720.60	9,747.95	35.56	70.49	-122.31	-4,107.51	-146.95	302.79	206.23	96.55	3.136				
13,600.00	9,583.71	13,820.59	9,748.44	36.13	72.06	-122.55	-4,207.49	-146.21	303.59	205.18	98.40	3.085				
13,700.00	9,582.71	13,920.58	9,748.93	36.71	73.63	-122.78	-4,307.48	-145.48	304.39	204.13	100.26	3.036				
13,800.00	9,581.71	14,020.57	9,749.42	37.29	75.20	-123.02	-4,407.46	-144.74	305.20	203.09	102.11	2.989				
13,900.00	9,580.71	14,120.55	9,749.91	37.89	76.77	-123.25	-4,507.45	-144.01	306.02	202.04	103.97	2.943				
14,000.00	9,579.71	14,220.54	9,750.40	38.49	78.35	-123.48	-4,607.43	-143.28	306.84	201.00	105.84	2.899				

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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	9,578.72	14,320.53	9,750.89	39.10	79.93	-123.71	-4,707.42	-142.54	307.66	199.96	107.70	2.857		
14,200.00	9,577.72	14,420.52	9,751.39	39.72	81.51	-123.94	-4,807.40	-141.81	308.49	198.92	109.57	2.815		
14,300.00	9,576.72	14,520.51	9,751.88	40.34	83.09	-124.17	-4,907.39	-141.07	309.33	197.88	111.44	2.776		
14,400.00	9,575.72	14,620.50	9,752.37	40.96	84.68	-124.40	-5,007.37	-140.34	310.17	196.85	113.31	2.737		
14,500.00	9,574.72	14,720.49	9,752.86	41.59	86.27	-124.63	-5,107.36	-139.60	311.01	195.83	115.18	2.700		
14,600.00	9,573.72	14,820.48	9,753.35	42.23	87.86	-124.85	-5,207.34	-138.87	311.86	194.80	117.06	2.664		
14,700.00	9,572.72	14,920.47	9,753.84	42.87	89.45	-125.08	-5,307.33	-138.14	312.72	193.79	118.93	2.629		
14,800.00	9,571.72	15,020.45	9,754.33	43.52	91.04	-125.30	-5,407.31	-137.40	313.57	192.77	120.80	2.596		
14,900.00	9,570.72	15,120.44	9,754.82	44.16	92.64	-125.52	-5,507.30	-136.67	314.44	191.76	122.68	2.563		
15,000.00	9,569.72	15,220.43	9,755.31	44.82	94.23	-125.74	-5,607.28	-135.93	315.31	190.76	124.55	2.532		
15,100.00	9,568.72	15,320.42	9,755.80	45.47	95.83	-125.96	-5,707.27	-135.20	316.18	189.76	126.42	2.501		
15,200.00	9,567.72	15,420.41	9,756.29	46.13	97.43	-126.18	-5,807.25	-134.46	317.06	188.77	128.29	2.471		
15,300.00	9,566.73	15,520.40	9,756.78	46.80	99.03	-126.39	-5,907.24	-133.73	317.94	187.78	130.16	2.443		
15,400.00	9,565.73	15,620.39	9,757.27	47.46	100.63	-126.61	-6,007.22	-132.99	318.83	186.79	132.03	2.415		
15,500.00	9,564.73	15,720.38	9,757.76	48.13	102.23	-126.82	-6,107.21	-132.26	319.72	185.82	133.90	2.388		
15,600.00	9,563.73	15,820.37	9,758.25	48.81	103.84	-127.04	-6,207.19	-131.53	320.61	184.85	135.77	2.361		
15,700.00	9,562.73	15,920.35	9,758.75	49.48	105.44	-127.25	-6,307.18	-130.79	321.51	183.88	137.63	2.336		
15,800.00	9,561.73	16,020.34	9,759.24	50.16	107.05	-127.46	-6,407.16	-130.06	322.42	182.92	139.50	2.311		
15,900.00	9,560.73	16,120.33	9,759.73	50.84	108.66	-127.67	-6,507.15	-129.32	323.33	181.97	141.36	2.287		
16,000.00	9,559.73	16,220.32	9,760.22	51.52	110.26	-127.88	-6,607.13	-128.59	324.24	181.02	143.22	2.264		
16,100.00	9,558.73	16,320.31	9,760.71	52.21	111.87	-128.08	-6,707.12	-127.85	325.16	180.08	145.08	2.241		
16,200.00	9,557.73	16,420.30	9,761.20	52.89	113.48	-128.29	-6,807.10	-127.12	326.08	179.15	146.93	2.219		
16,300.00	9,556.73	16,520.29	9,761.69	53.58	115.09	-128.50	-6,907.09	-126.38	327.01	178.22	148.79	2.198		
16,400.00	9,555.73	16,620.28	9,762.18	54.28	116.70	-128.70	-7,007.07	-125.65	327.94	177.30	150.64	2.177		
16,500.00	9,554.73	16,720.27	9,762.67	54.97	118.32	-128.90	-7,107.06	-124.92	328.87	176.38	152.49	2.157		
16,600.00	9,553.74	16,820.25	9,763.16	55.67	119.93	-129.10	-7,207.04	-124.18	329.81	175.47	154.34	2.137		
16,700.00	9,552.74	16,920.24	9,763.65	56.36	121.54	-129.30	-7,307.03	-123.45	330.75	174.57	156.18	2.118		
16,800.00	9,551.74	17,020.23	9,764.14	57.06	123.16	-129.50	-7,407.01	-122.71	331.70	173.68	158.02	2.099		
16,900.00	9,550.74	17,120.22	9,764.63	57.76	124.77	-129.70	-7,507.00	-121.98	332.65	172.79	159.86	2.081		
16,973.85	9,550.00	17,194.06	9,765.00	58.28	125.96	-129.85	-7,580.83	-121.44	333.35	172.14	161.22	2.068 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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)			
0.00	0.00	1.20	1.20	0.00	0.00	89.70	0.31	59.99	59.99					
100.00	100.00	101.20	101.20	0.09	0.09	89.70	0.31	59.99	59.99	59.82	0.17	343.504		
200.00	200.00	201.20	201.20	0.31	0.31	89.70	0.31	59.99	59.99	59.37	0.62	96.112		
300.00	300.00	301.20	301.20	0.54	0.54	89.70	0.31	59.99	59.99	58.92	1.07	55.873		
400.00	400.00	401.20	401.20	0.76	0.76	89.70	0.31	59.99	59.99	58.47	1.52	39.384		
500.00	500.00	501.20	501.20	0.99	0.99	89.70	0.31	59.99	59.99	58.02	1.97	30.409		
600.00	600.00	601.20	601.20	1.21	1.21	89.70	0.31	59.99	59.99	57.57	2.42	24.766		
700.00	700.00	701.20	701.20	1.43	1.44	89.70	0.31	59.99	59.99	57.12	2.87	20.889		
800.00	800.00	801.20	801.20	1.66	1.66	89.70	0.31	59.99	59.99	56.67	3.32	18.062		
900.00	900.00	901.20	901.20	1.88	1.89	89.70	0.31	59.99	59.99	56.22	3.77	15.909		
1,000.00	1,000.00	1,001.20	1,001.20	2.11	2.11	89.70	0.31	59.99	59.99	55.77	4.22	14.214		
1,100.00	1,100.00	1,101.20	1,101.20	2.33	2.34	89.70	0.31	59.99	59.99	55.32	4.67	12.846		
1,200.00	1,200.00	1,201.20	1,201.20	2.56	2.56	89.70	0.31	59.99	59.99	54.87	5.12	11.718		
1,300.00	1,300.00	1,301.20	1,301.20	2.78	2.79	89.70	0.31	59.99	59.99	54.42	5.57	10.772		
1,400.00	1,400.00	1,401.20	1,401.20	3.01	3.01	89.70	0.31	59.99	59.99	53.97	6.02	9.968		
1,500.00	1,500.00	1,501.20	1,501.20	3.23	3.24	89.70	0.31	59.99	59.99	53.52	6.47	9.275		
1,600.00	1,600.00	1,601.20	1,601.20	3.46	3.46	89.70	0.31	59.99	59.99	53.07	6.92	8.672		
1,700.00	1,700.00	1,701.20	1,701.20	3.68	3.68	89.70	0.31	59.99	59.99	52.62	7.37	8.143		
1,800.00	1,800.00	1,801.20	1,801.20	3.91	3.91	89.70	0.31	59.99	59.99	52.17	7.82	7.675		
1,900.00	1,900.00	1,901.20	1,901.20	4.13	4.13	89.70	0.31	59.99	59.99	51.72	8.27	7.257		
2,000.00	2,000.00	2,001.20	2,001.20	4.36	4.36	89.70	0.31	59.99	59.99	51.28	8.72	6.883		
2,100.00	2,100.00	2,101.20	2,101.20	4.58	4.58	89.70	0.31	59.99	59.99	50.83	9.17	6.545		
2,200.00	2,200.00	2,201.20	2,201.20	4.81	4.81	89.70	0.31	59.99	59.99	50.38	9.61	6.239		
2,300.00	2,300.00	2,301.20	2,301.20	5.03	5.03	89.70	0.31	59.99	59.99	49.93	10.06	5.961		
2,400.00	2,400.00	2,401.20	2,401.20	5.26	5.26	89.70	0.31	59.99	59.99	49.48	10.51	5.706		
2,500.00	2,500.00	2,501.20	2,501.20	5.48	5.48	89.70	0.31	59.99	59.99	49.03	10.96	5.472 CC, ES		
2,600.00	2,599.99	2,601.19	2,601.19	5.69	5.71	179.71	0.31	59.99	60.86	49.46	11.40	5.340		
2,700.00	2,699.96	2,701.16	2,701.16	5.89	5.93	179.72	0.31	59.99	63.48	51.66	11.82	5.370		
2,800.00	2,799.86	2,801.06	2,801.06	6.09	6.16	179.74	0.31	59.99	67.84	55.60	12.24	5.541		
2,900.00	2,899.68	2,900.88	2,900.88	6.30	6.38	179.76	0.31	59.99	73.95	61.28	12.67	5.836		
2,917.68	2,917.31	2,918.51	2,918.51	6.33	6.42	179.76	0.31	59.99	75.21	62.46	12.75	5.900		
3,000.00	2,999.41	3,000.61	3,000.61	6.51	6.61	179.78	0.31	59.99	81.20	68.11	13.10	6.200		
3,100.00	3,099.15	3,100.35	3,100.35	6.72	6.83	179.80	0.31	59.99	88.49	74.96	13.53	6.542		
3,200.00	3,198.88	3,200.08	3,200.08	6.94	7.05	179.81	0.31	59.99	95.77	81.81	13.96	6.862		
3,300.00	3,298.61	3,299.81	3,299.81	7.16	7.28	179.83	0.31	59.99	103.05	88.67	14.39	7.163		
3,400.00	3,398.35	3,399.55	3,399.55	7.38	7.50	179.84	0.31	59.99	110.34	95.52	14.82	7.445		
3,500.00	3,498.08	3,499.28	3,499.28	7.60	7.73	179.85	0.31	59.99	117.62	102.37	15.25	7.710		
3,600.00	3,597.82	3,599.02	3,599.02	7.82	7.95	179.86	0.31	59.99	124.90	109.21	15.69	7.961		
3,700.00	3,697.55	3,698.75	3,698.75	8.05	8.17	179.87	0.31	59.99	132.19	116.06	16.13	8.197		
3,800.00	3,797.29	3,798.49	3,798.49	8.28	8.40	179.87	0.31	59.99	139.47	122.91	16.56	8.420		
3,900.00	3,897.02	3,898.22	3,898.22	8.51	8.62	179.88	0.31	59.99	146.75	129.75	17.00	8.632		
4,000.00	3,996.76	3,997.96	3,997.96	8.74	8.85	179.88	0.31	59.99	154.04	136.60	17.44	8.832		
4,100.00	4,096.49	4,099.37	4,099.36	8.97	9.07	179.64	1.00	59.47	160.81	142.93	17.88	8.993		
4,200.00	4,196.22	4,200.91	4,200.87	9.20	9.30	178.93	3.12	57.86	166.54	148.22	18.32	9.091		
4,300.00	4,295.96	4,302.48	4,302.34	9.44	9.52	177.77	6.67	55.17	171.27	152.52	18.76	9.132		
4,400.00	4,395.69	4,404.02	4,403.69	9.67	9.74	176.18	11.66	51.39	175.09	155.90	19.19	9.123		
4,500.00	4,495.43	4,505.47	4,504.81	9.91	9.97	174.18	18.06	46.53	178.10	158.47	19.63	9.073		
4,600.00	4,595.16	4,605.26	4,604.21	10.15	10.19	172.01	25.12	41.18	180.85	160.78	20.07	9.009		
4,700.00	4,694.90	4,704.99	4,703.55	10.38	10.42	169.92	32.17	35.83	183.85	163.33	20.52	8.960		
4,800.00	4,794.63	4,804.72	4,802.89	10.62	10.65	167.89	39.22	30.48	187.09	166.12	20.97	8.922		
4,900.00	4,894.37	4,904.45	4,902.22	10.86	10.88	165.94	46.27	25.14	190.56	169.14	21.42	8.896		
5,000.00	4,994.10	5,004.19	5,001.56	11.10	11.11	164.05	53.32	19.79	194.24	172.36	21.88	8.879		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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		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	5,093.83	5,103.92	5,100.90	11.34	11.34	162.24	60.37	14.44	198.12	175.79	22.34	8.870		
5,200.00	5,193.57	5,203.65	5,200.24	11.58	11.57	160.50	67.42	9.09	202.19	179.40	22.80	8.869		
5,300.00	5,293.30	5,303.38	5,299.58	11.83	11.81	158.83	74.48	3.75	206.45	183.19	23.26	8.875		
5,400.00	5,393.04	5,403.11	5,398.92	12.07	12.04	157.23	81.53	-1.60	210.87	187.14	23.73	8.887		
5,500.00	5,492.77	5,502.84	5,498.25	12.31	12.28	155.70	88.58	-6.95	215.45	191.25	24.20	8.903		
5,600.00	5,592.51	5,602.57	5,597.59	12.56	12.52	154.23	95.63	-12.29	220.18	195.51	24.67	8.925		
5,700.00	5,692.24	5,702.27	5,696.89	12.80	12.75	152.82	102.68	-17.64	225.05	199.90	25.14	8.951		
5,800.00	5,791.97	5,801.39	5,795.70	13.04	12.94	151.71	108.93	-22.38	230.19	204.63	25.56	9.005		
5,900.00	5,891.71	5,900.60	5,894.72	13.29	13.12	151.07	113.83	-26.09	235.66	209.68	25.98	9.071		
6,000.00	5,991.44	6,000.00	5,994.02	13.53	13.30	150.86	117.36	-28.77	241.40	215.00	26.39	9.147		
6,100.00	6,091.18	6,099.06	6,093.04	13.78	13.48	151.05	119.51	-30.41	247.38	220.58	26.80	9.232		
6,200.00	6,190.91	6,198.19	6,192.17	14.02	13.66	151.62	120.31	-31.01	253.63	226.43	27.19	9.327		
6,300.00	6,290.65	6,297.87	6,291.85	14.27	13.85	152.38	120.31	-31.01	260.06	232.45	27.61	9.419		
6,400.00	6,390.38	6,397.61	6,391.58	14.51	14.07	153.11	120.31	-31.01	266.54	238.49	28.05	9.502		
6,500.00	6,490.12	6,497.34	6,491.32	14.76	14.29	153.80	120.31	-31.01	273.06	244.56	28.49	9.584		
6,600.00	6,589.85	6,597.07	6,591.05	15.01	14.51	154.46	120.31	-31.01	279.61	250.68	28.93	9.664		
6,700.00	6,689.58	6,696.81	6,690.78	15.25	14.73	155.08	120.31	-31.01	286.21	256.83	29.38	9.743		
6,800.00	6,789.32	6,796.54	6,790.52	15.50	14.95	155.68	120.31	-31.01	292.83	263.01	29.82	9.820		
6,900.00	6,889.05	6,896.28	6,890.25	15.75	15.17	156.26	120.31	-31.01	299.49	269.22	30.26	9.896		
7,000.00	6,988.79	6,996.01	6,989.99	16.00	15.39	156.81	120.31	-31.01	306.17	275.46	30.71	9.971		
7,100.00	7,088.52	7,095.75	7,089.72	16.24	15.61	157.33	120.31	-31.01	312.88	281.73	31.15	10.044		
7,200.00	7,188.26	7,195.48	7,189.46	16.49	15.84	157.83	120.31	-31.01	319.62	288.02	31.59	10.117		
7,300.00	7,287.99	7,295.22	7,289.19	16.74	16.06	158.32	120.31	-31.01	326.37	294.34	32.04	10.187		
7,400.00	7,387.73	7,394.95	7,388.93	16.99	16.28	158.78	120.31	-31.01	333.16	300.67	32.48	10.257		
7,500.00	7,487.46	7,494.68	7,488.66	17.24	16.50	159.22	120.31	-31.01	339.96	307.03	32.93	10.325		
7,600.00	7,587.19	7,594.42	7,588.39	17.48	16.72	159.65	120.31	-31.01	346.78	313.41	33.37	10.391		
7,700.00	7,686.93	7,694.15	7,688.13	17.73	16.94	160.06	120.31	-31.01	353.62	319.80	33.82	10.457		
7,800.00	7,786.66	7,793.89	7,787.66	17.98	17.16	160.46	120.31	-31.01	360.48	326.21	34.26	10.521		
7,900.00	7,886.40	7,893.62	7,887.60	18.23	17.39	160.84	120.31	-31.01	367.35	332.64	34.71	10.584		
8,000.00	7,986.13	7,993.36	7,987.33	18.48	17.61	161.20	120.31	-31.01	374.24	339.09	35.16	10.645		
8,100.00	8,085.87	8,093.09	8,087.07	18.73	17.83	161.55	120.31	-31.01	381.14	345.54	35.60	10.706		
8,200.00	8,185.60	8,192.83	8,186.80	18.98	18.05	161.89	120.31	-31.01	388.06	352.01	36.05	10.765		
8,300.00	8,285.34	8,292.56	8,286.54	19.23	18.27	162.22	120.31	-31.01	394.99	358.50	36.50	10.823		
8,400.00	8,385.07	8,392.29	8,386.27	19.48	18.49	162.54	120.31	-31.01	401.94	364.99	36.94	10.880		
8,444.81	8,429.76	8,436.98	8,430.96	19.59	18.59	162.68	120.31	-31.01	405.05	367.91	37.14	10.905		
8,500.00	8,484.82	8,492.05	8,486.02	19.71	18.72	162.85	120.31	-31.01	408.64	371.26	37.38	10.932		
8,600.00	8,584.67	8,591.90	8,585.87	19.90	18.94	163.08	120.31	-31.01	413.85	376.07	37.78	10.953		
8,700.00	8,684.60	8,691.83	8,685.80	20.08	19.16	163.24	120.31	-31.01	417.40	379.21	38.19	10.930		
8,800.00	8,784.58	8,791.81	8,785.78	20.26	19.38	163.32	120.31	-31.01	419.28	380.69	38.59	10.864		
8,862.49	8,847.07	8,854.29	8,848.27	20.37	19.52	73.34	120.31	-31.01	419.61	380.76	38.85	10.801		
8,900.00	8,884.58	8,891.81	8,885.78	20.44	19.61	73.34	120.31	-31.01	419.61	380.60	39.01	10.757		
9,000.00	8,984.58	8,991.81	8,985.78	20.64	19.83	73.34	120.31	-31.01	419.61	380.17	39.44	10.640		
9,062.49	9,047.07	9,054.29	9,048.27	20.77	19.97	73.34	120.31	-31.01	419.61	379.90	39.71	10.567		
9,100.00	9,084.55	9,091.78	9,085.75	20.84	20.05	-106.37	120.31	-31.01	419.95	380.09	39.87	10.534		
9,150.00	9,134.24	9,141.47	9,135.44	20.93	20.16	-106.92	120.31	-31.01	421.52	381.45	40.07	10.519		
9,200.00	9,183.26	9,190.49	9,184.46	21.02	20.27	-107.88	120.31	-31.01	424.49	384.22	40.28	10.540		
9,250.00	9,231.25	9,238.48	9,232.45	21.12	20.38	-109.15	120.31	-31.01	429.11	388.63	40.48	10.601		
9,300.00	9,277.84	9,285.06	9,279.04	21.21	20.48	-110.65	120.31	-31.01	435.68	395.00	40.68	10.711		
9,350.00	9,322.67	9,329.89	9,323.87	21.31	20.58	-112.25	120.31	-31.01	444.57	403.70	40.87	10.878		
9,400.00	9,365.40	9,372.62	9,366.60	21.41	20.68	-113.82	120.31	-31.01	456.14	415.08	41.06	11.110		
9,450.00	9,405.71	9,412.93	9,406.91	21.52	20.77	-115.24	120.31	-31.01	470.72	429.49	41.24	11.416		
9,500.00	9,443.29	9,450.51	9,444.49	21.63	20.85	-116.37	120.31	-31.01	488.59	447.18	41.41	11.800		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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		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		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
9,550.00	9,477.85	9,485.07	9,479.05	21.75	20.93	-117.09	120.31	-31.01	509.88	468.32	41.56	12.267		
9,600.00	9,509.14	9,516.36	9,510.34	21.89	21.00	-117.29	120.31	-31.01	534.67	492.96	41.71	12.819		
9,650.00	9,536.90	9,576.92	9,570.84	22.04	21.11	-119.82	118.31	-31.00	562.43	520.56	41.87	13.433		
9,700.00	9,560.95	9,689.40	9,681.29	22.22	21.29	-125.77	98.03	-30.85	590.26	548.67	41.59	14.191		
9,750.00	9,581.08	9,861.68	9,837.29	22.42	21.52	-133.22	26.45	-30.32	615.22	575.31	39.91	15.416		
9,800.00	9,597.14	10,131.96	10,020.68	22.64	21.92	-139.57	-168.66	-28.89	631.47	595.54	35.93	17.574		
9,850.00	9,609.02	10,431.60	10,096.04	22.89	23.09	-139.82	-455.15	-26.78	631.13	596.29	34.84	18.115		
9,900.00	9,616.62	10,481.05	10,096.35	23.17	23.37	-139.76	-504.60	-26.42	625.54	590.11	35.42	17.660		
9,950.00	9,619.89	10,530.94	10,096.66	23.47	23.67	-139.73	-554.50	-26.05	623.28	587.33	35.95	17.340		
9,958.87	9,620.02	10,539.81	10,096.72	23.53	23.73	-139.73	-563.37	-25.99	623.23	587.20	36.03	17.297		
9,968.21	9,620.00	10,549.16	10,096.78	23.59	23.79	-139.73	-572.71	-25.92	623.28	587.17	36.12	17.256		
10,000.00	9,619.68	10,580.94	10,096.98	27.08	23.99	-139.76	-604.49	-25.69	623.68	587.28	36.40	17.135		
10,100.00	9,618.68	10,680.92	10,097.61	27.16	24.70	-139.86	-704.47	-24.95	624.93	588.03	36.89	16.938		
10,200.00	9,617.68	10,780.91	10,098.24	27.23	25.50	-139.95	-804.45	-24.22	626.17	588.69	37.48	16.705		
10,300.00	9,616.68	10,880.90	10,098.87	27.31	26.38	-140.05	-904.43	-23.49	627.42	589.26	38.16	16.442		
10,400.00	9,615.69	10,980.88	10,099.50	27.39	27.33	-140.14	-1,004.42	-22.75	628.67	589.76	38.92	16.155		
10,500.00	9,614.69	11,080.87	10,100.13	27.48	28.34	-140.24	-1,104.40	-22.02	629.93	590.18	39.75	15.848		
10,600.00	9,613.69	11,180.86	10,100.76	27.56	29.41	-140.33	-1,204.38	-21.28	631.18	590.53	40.65	15.527		
10,700.00	9,612.69	11,280.84	10,101.39	27.65	30.53	-140.43	-1,304.36	-20.55	632.44	590.82	41.62	15.196		
10,800.00	9,611.69	11,380.83	10,102.02	27.75	31.69	-140.52	-1,404.34	-19.81	633.69	591.05	42.65	14.859		
10,900.00	9,610.69	11,480.82	10,102.66	27.84	32.89	-140.61	-1,504.33	-19.08	634.95	591.22	43.73	14.519		
11,000.00	9,609.69	11,580.80	10,103.29	27.94	34.13	-140.71	-1,604.31	-18.35	636.21	591.34	44.87	14.179		
11,100.00	9,608.69	11,680.79	10,103.92	28.04	35.40	-140.80	-1,704.29	-17.61	637.48	591.42	46.06	13.841		
11,200.00	9,607.69	11,780.78	10,104.55	28.15	36.71	-140.89	-1,804.27	-16.88	638.74	591.46	47.29	13.508		
11,300.00	9,606.69	11,880.76	10,105.18	28.26	38.03	-140.98	-1,904.25	-16.14	640.01	591.45	48.56	13.181		
11,400.00	9,605.69	11,980.75	10,105.81	28.37	39.39	-141.08	-2,004.24	-15.41	641.28	591.41	49.86	12.860		
11,500.00	9,604.69	12,080.74	10,106.44	28.50	40.76	-141.17	-2,104.22	-14.68	642.55	591.34	51.21	12.548		
11,600.00	9,603.69	12,180.72	10,107.07	28.63	42.15	-141.26	-2,204.20	-13.94	643.82	591.23	52.58	12.244		
11,700.00	9,602.70	12,280.71	10,107.70	28.77	43.56	-141.35	-2,304.18	-13.21	645.09	591.10	53.99	11.949		
11,800.00	9,601.70	12,380.70	10,108.33	28.92	44.98	-141.44	-2,404.16	-12.47	646.36	590.94	55.42	11.663		
11,900.00	9,600.70	12,480.68	10,108.97	29.08	46.42	-141.53	-2,504.15	-11.74	647.64	590.76	56.88	11.386		
12,000.00	9,599.70	12,580.67	10,109.60	29.27	47.87	-141.62	-2,604.13	-11.00	648.92	590.56	58.36	11.119		
12,100.00	9,598.70	12,680.66	10,110.23	29.48	49.33	-141.71	-2,704.11	-10.27	650.20	590.33	59.86	10.861		
12,200.00	9,597.70	12,780.65	10,110.86	29.72	50.81	-141.80	-2,804.09	-9.54	651.48	590.09	61.39	10.613		
12,300.00	9,596.70	12,880.63	10,111.49	29.99	52.29	-141.88	-2,904.07	-8.80	652.76	589.83	62.93	10.374		
12,400.00	9,595.70	12,980.62	10,112.12	30.31	53.78	-141.97	-3,004.06	-8.07	654.04	589.56	64.48	10.143		
12,500.00	9,594.70	13,080.61	10,112.75	30.66	55.28	-142.06	-3,104.04	-7.33	655.33	589.27	66.06	9.921		
12,600.00	9,593.70	13,180.59	10,113.38	31.04	56.79	-142.15	-3,204.02	-6.60	656.61	588.97	67.64	9.707		
12,700.00	9,592.70	13,280.58	10,114.01	31.46	58.31	-142.24	-3,304.00	-5.87	657.90	588.66	69.24	9.502		
12,800.00	9,591.70	13,380.57	10,114.64	31.91	59.83	-142.32	-3,403.98	-5.13	659.19	588.34	70.85	9.304		
12,900.00	9,590.71	13,480.55	10,115.27	32.38	61.36	-142.41	-3,503.97	-4.40	660.48	588.01	72.48	9.113		
13,000.00	9,589.71	13,580.54	10,115.91	32.87	62.89	-142.49	-3,603.95	-3.66	661.78	587.67	74.11	8.930		
13,100.00	9,588.71	13,680.53	10,116.54	33.38	64.43	-142.58	-3,703.93	-2.93	663.07	587.32	75.75	8.753		
13,200.00	9,587.71	13,780.51	10,117.17	33.91	65.97	-142.67	-3,803.91	-2.19	664.37	586.96	77.40	8.583		
13,300.00	9,586.71	13,880.50	10,117.80	34.44	67.52	-142.75	-3,903.89	-1.46	665.66	586.60	79.06	8.419		
13,400.00	9,585.71	13,980.49	10,118.43	34.99	69.07	-142.84	-4,003.88	-0.73	666.96	586.23	80.73	8.262		
13,500.00	9,584.71	14,080.47	10,119.06	35.56	70.63	-142.92	-4,103.86	0.01	668.26	585.86	82.40	8.110		
13,600.00	9,583.71	14,180.46	10,119.69	36.13	72.19	-143.00	-4,203.84	0.74	669.56	585.48	84.08	7.963		
13,700.00	9,582.71	14,280.45	10,120.32	36.71	73.75	-143.09	-4,303.82	1.48	670.87	585.10	85.77	7.822		
13,800.00	9,581.71	14,380.43	10,120.95	37.29	75.32	-143.17	-4,403.80	2.21	672.17	584.71	87.46	7.685		
13,900.00	9,580.71	14,480.42	10,121.58	37.89	76.89	-143.25	-4,503.79	2.95	673.48	584.32	89.16	7.554		
14,000.00	9,579.71	14,580.41	10,122.21	38.49	78.46	-143.34	-4,603.77	3.68	674.78	583.93	90.86	7.427		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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
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	
14,100.00	9,578.72	14,680.39	10,122.85	39.10	80.04	-143.42	-4,703.75	4.41	676.09	583.53	92.56	7.304		
14,200.00	9,577.72	14,780.38	10,123.48	39.72	81.61	-143.50	-4,803.73	5.15	677.40	583.13	94.27	7.186		
14,300.00	9,576.72	14,880.37	10,124.11	40.34	83.19	-143.58	-4,903.72	5.88	678.71	582.73	95.98	7.071		
14,400.00	9,575.72	14,980.35	10,124.74	40.96	84.78	-143.66	-5,003.70	6.62	680.03	582.33	97.70	6.961		
14,500.00	9,574.72	15,080.34	10,125.37	41.59	86.36	-143.75	-5,103.68	7.35	681.34	581.93	99.41	6.854		
14,600.00	9,573.72	15,180.33	10,126.00	42.23	87.95	-143.83	-5,203.66	8.08	682.66	581.52	101.13	6.750		
14,700.00	9,572.72	15,280.31	10,126.63	42.87	89.54	-143.91	-5,303.64	8.82	683.97	581.12	102.86	6.650		
14,800.00	9,571.72	15,380.30	10,127.26	43.52	91.13	-143.99	-5,403.63	9.55	685.29	580.71	104.58	6.553		
14,900.00	9,570.72	15,480.29	10,127.89	44.16	92.72	-144.07	-5,503.61	10.29	686.61	580.31	106.31	6.459		
15,000.00	9,569.72	15,580.27	10,128.52	44.82	94.31	-144.15	-5,603.59	11.02	687.93	579.90	108.03	6.368		
15,100.00	9,568.72	15,680.26	10,129.15	45.47	95.90	-144.23	-5,703.57	11.76	689.26	579.49	109.76	6.279		
15,200.00	9,567.72	15,780.25	10,129.79	46.13	97.50	-144.31	-5,803.55	12.49	690.58	579.08	111.50	6.194		
15,300.00	9,566.73	15,880.23	10,130.42	46.80	99.10	-144.38	-5,903.54	13.22	691.90	578.68	113.23	6.111		
15,400.00	9,565.73	15,980.22	10,131.05	47.46	100.70	-144.46	-6,003.52	13.96	693.23	578.27	114.96	6.030		
15,500.00	9,564.73	16,080.21	10,131.68	48.13	102.30	-144.54	-6,103.50	14.69	694.56	577.86	116.70	5.952		
15,600.00	9,563.73	16,180.19	10,132.31	48.81	103.90	-144.62	-6,203.48	15.43	695.89	577.46	118.43	5.876		
15,700.00	9,562.73	16,280.18	10,132.94	49.48	105.50	-144.70	-6,303.46	16.16	697.22	577.05	120.17	5.802		
15,800.00	9,561.73	16,380.17	10,133.57	50.16	107.11	-144.77	-6,403.45	16.89	698.55	576.64	121.90	5.730		
15,900.00	9,560.73	16,480.15	10,134.20	50.84	108.71	-144.85	-6,503.43	17.63	699.88	576.24	123.64	5.661		
16,000.00	9,559.73	16,580.14	10,134.83	51.52	110.32	-144.93	-6,603.41	18.36	701.21	575.84	125.38	5.593		
16,100.00	9,558.73	16,680.13	10,135.46	52.21	111.92	-145.00	-6,703.39	19.10	702.55	575.43	127.12	5.527		
16,200.00	9,557.73	16,780.11	10,136.09	52.89	113.53	-145.08	-6,803.37	19.83	703.89	575.03	128.85	5.463		
16,300.00	9,556.73	16,880.10	10,136.73	53.58	115.14	-145.16	-6,903.36	20.57	705.22	574.63	130.59	5.400		
16,400.00	9,555.73	16,980.09	10,137.36	54.28	116.75	-145.23	-7,003.34	21.30	706.56	574.23	132.33	5.339		
16,500.00	9,554.73	17,080.07	10,137.99	54.97	118.36	-145.31	-7,103.32	22.03	707.90	573.84	134.07	5.280		
16,600.00	9,553.74	17,180.06	10,138.62	55.67	119.97	-145.38	-7,203.30	22.77	709.24	573.44	135.80	5.223		
16,700.00	9,552.74	17,280.05	10,139.25	56.36	121.58	-145.46	-7,303.28	23.50	710.59	573.04	137.54	5.166		
16,800.00	9,551.74	17,380.03	10,139.88	57.06	123.19	-145.53	-7,403.27	24.24	711.93	572.65	139.28	5.112		
16,900.00	9,550.74	17,480.02	10,140.51	57.76	124.81	-145.60	-7,503.25	24.97	713.27	572.26	141.02	5.058		
16,973.85	9,550.00	17,553.86	10,140.98	58.28	126.00	-145.66	-7,577.08	25.51	714.27	571.97	142.30	5.020 SF		

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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		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
0.00	0.00	0.30	0.30	0.00	0.00	89.69	0.65	119.95	119.95				
100.00	100.00	100.30	100.30	0.09	0.09	89.69	0.65	119.95	119.95	119.78	0.17	694.887	
200.00	200.00	200.30	200.30	0.31	0.31	89.69	0.65	119.95	119.95	119.33	0.62	192.801	
300.00	300.00	300.30	300.30	0.54	0.54	89.69	0.65	119.95	119.95	118.88	1.07	111.928	
400.00	400.00	400.30	400.30	0.76	0.76	89.69	0.65	119.95	119.95	118.43	1.52	78.853	
500.00	500.00	500.30	500.30	0.99	0.99	89.69	0.65	119.95	119.95	117.98	1.97	60.866	
600.00	600.00	600.30	600.30	1.21	1.21	89.69	0.65	119.95	119.95	117.53	2.42	49.561	
700.00	700.00	700.30	700.30	1.43	1.44	89.69	0.65	119.95	119.95	117.08	2.87	41.798	
800.00	800.00	800.30	800.30	1.66	1.66	89.69	0.65	119.95	119.95	116.63	3.32	36.137	
900.00	900.00	900.30	900.30	1.88	1.88	89.69	0.65	119.95	119.95	116.18	3.77	31.827	
1,000.00	1,000.00	1,000.30	1,000.30	2.11	2.11	89.69	0.65	119.95	119.95	115.73	4.22	28.435	
1,100.00	1,100.00	1,100.30	1,100.30	2.33	2.33	89.69	0.65	119.95	119.95	115.28	4.67	25.697	
1,200.00	1,200.00	1,200.30	1,200.30	2.56	2.56	89.69	0.65	119.95	119.95	114.83	5.12	23.440	
1,300.00	1,300.00	1,300.30	1,300.30	2.78	2.78	89.69	0.65	119.95	119.95	114.38	5.57	21.547	
1,400.00	1,400.00	1,400.30	1,400.30	3.01	3.01	89.69	0.65	119.95	119.95	113.94	6.02	19.937	
1,500.00	1,500.00	1,500.30	1,500.30	3.23	3.23	89.69	0.65	119.95	119.95	113.49	6.47	18.551	
1,600.00	1,600.00	1,600.30	1,600.30	3.46	3.46	89.69	0.65	119.95	119.95	113.04	6.92	17.345	
1,700.00	1,700.00	1,700.30	1,700.30	3.68	3.68	89.69	0.65	119.95	119.95	112.59	7.37	16.286	
1,800.00	1,800.00	1,800.30	1,800.30	3.91	3.91	89.69	0.65	119.95	119.95	112.14	7.81	15.350	
1,900.00	1,900.00	1,900.30	1,900.30	4.13	4.13	89.69	0.65	119.95	119.95	111.69	8.26	14.515	
2,000.00	2,000.00	2,000.30	2,000.30	4.36	4.36	89.69	0.65	119.95	119.95	111.24	8.71	13.766	
2,100.00	2,100.00	2,100.30	2,100.30	4.58	4.58	89.69	0.65	119.95	119.95	110.79	9.16	13.091	
2,200.00	2,200.00	2,200.30	2,200.30	4.81	4.81	89.69	0.65	119.95	119.95	110.34	9.61	12.478	
2,300.00	2,300.00	2,300.30	2,300.30	5.03	5.03	89.69	0.65	119.95	119.95	109.89	10.06	11.921	
2,400.00	2,400.00	2,400.30	2,400.30	5.26	5.26	89.69	0.65	119.95	119.95	109.44	10.51	11.411	
2,500.00	2,500.00	2,500.30	2,500.30	5.48	5.48	89.69	0.65	119.95	119.95	108.99	10.96	10.943 CC, ES	
2,600.00	2,599.99	2,600.29	2,600.29	5.69	5.71	179.69	0.65	119.95	120.82	109.43	11.40	10.602	
2,700.00	2,699.96	2,700.26	2,700.26	5.89	5.93	179.70	0.65	119.95	123.44	111.62	11.82	10.445	
2,800.00	2,799.86	2,800.16	2,800.16	6.09	6.16	179.71	0.65	119.95	127.80	115.56	12.24	10.439	
2,900.00	2,899.68	2,899.98	2,899.98	6.30	6.38	179.72	0.65	119.95	133.91	121.24	12.67	10.570	
2,917.68	2,917.31	2,917.61	2,917.61	6.33	6.42	179.72	0.65	119.95	135.17	122.42	12.74	10.606	
3,000.00	2,999.41	2,999.71	2,999.71	6.51	6.60	179.74	0.65	119.95	141.16	128.07	13.10	10.779	
3,100.00	3,099.15	3,097.87	3,097.86	6.72	6.82	179.49	1.31	120.46	148.97	135.46	13.52	11.021	
3,200.00	3,198.88	3,195.81	3,195.77	6.94	7.04	178.80	3.29	122.01	157.86	143.93	13.93	11.329	
3,300.00	3,298.61	3,293.49	3,293.36	7.16	7.25	177.74	6.58	124.57	167.86	153.51	14.35	11.698	
3,400.00	3,398.35	3,392.00	3,391.71	7.38	7.47	176.45	11.00	128.02	178.84	164.07	14.77	12.109	
3,500.00	3,498.08	3,491.30	3,490.85	7.60	7.69	175.27	15.58	131.59	190.01	174.82	15.20	12.504	
3,600.00	3,597.82	3,590.61	3,589.98	7.82	7.91	174.21	20.16	135.17	201.26	185.63	15.62	12.881	
3,700.00	3,697.55	3,689.91	3,689.11	8.05	8.13	173.27	24.74	138.74	212.56	196.51	16.05	13.240	
3,800.00	3,797.29	3,789.21	3,788.24	8.28	8.36	172.43	29.32	142.31	223.92	207.43	16.49	13.581	
3,900.00	3,897.02	3,888.51	3,887.37	8.51	8.58	171.66	33.90	145.88	235.31	218.39	16.92	13.907	
4,000.00	3,996.76	3,987.81	3,986.50	8.74	8.80	170.97	38.48	149.46	246.75	229.39	17.36	14.217	
4,100.00	4,096.49	4,087.11	4,085.64	8.97	9.03	170.34	43.06	153.03	258.22	240.42	17.79	14.512	
4,200.00	4,196.22	4,186.42	4,184.77	9.20	9.26	169.76	47.64	156.60	269.71	251.48	18.23	14.794	
4,300.00	4,295.96	4,285.72	4,283.90	9.44	9.48	169.23	52.22	160.17	281.24	262.57	18.67	15.063	
4,400.00	4,395.69	4,385.02	4,383.03	9.67	9.71	168.74	56.80	163.74	292.78	273.67	19.11	15.321	
4,500.00	4,495.43	4,484.32	4,482.16	9.91	9.94	168.29	61.38	167.32	304.34	284.79	19.55	15.566	
4,600.00	4,595.16	4,583.62	4,581.29	10.15	10.17	167.87	65.96	170.89	315.92	295.93	19.99	15.801	
4,700.00	4,694.90	4,682.92	4,680.43	10.38	10.40	167.48	70.53	174.46	327.52	307.08	20.44	16.026	
4,800.00	4,794.63	4,782.23	4,779.56	10.62	10.63	167.11	75.11	178.03	339.13	318.25	20.88	16.242	
4,900.00	4,894.37	4,881.53	4,878.69	10.86	10.86	166.78	79.69	181.60	350.75	329.43	21.32	16.448	
5,000.00	4,994.10	4,980.83	4,977.82	11.10	11.09	166.46	84.27	185.18	362.38	340.61	21.77	16.646	

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
5,100.00	5,093.83	5,080.13	5,076.95	11.34	11.32	166.16	88.85	188.75	374.03	351.81	22.22	16.836		
5,200.00	5,193.57	5,180.06	5,176.71	11.58	11.55	165.88	93.45	192.34	385.67	363.01	22.66	17.018		
5,300.00	5,293.30	5,285.13	5,281.67	11.83	11.74	165.71	97.37	195.39	396.45	373.36	23.09	17.170		
5,400.00	5,393.04	5,390.53	5,387.01	12.07	11.93	165.71	99.77	197.26	405.79	382.28	23.51	17.261		
5,500.00	5,492.77	5,496.17	5,492.65	12.31	12.11	165.88	100.65	197.95	413.68	389.75	23.92	17.293		
5,600.00	5,592.51	5,596.33	5,592.81	12.56	12.31	166.12	100.65	197.95	420.75	396.41	24.34	17.285		
5,700.00	5,692.24	5,696.06	5,692.54	12.80	12.53	166.36	100.65	197.95	427.82	403.04	24.79	17.261		
5,800.00	5,791.97	5,795.80	5,792.27	13.04	12.75	166.58	100.65	197.95	434.91	409.68	25.23	17.237		
5,900.00	5,891.71	5,895.53	5,892.01	13.29	12.97	166.80	100.65	197.95	442.00	416.32	25.68	17.214		
6,000.00	5,991.44	5,995.26	5,991.74	13.53	13.19	167.02	100.65	197.95	449.09	422.97	26.12	17.193		
6,100.00	6,091.18	6,095.00	6,091.48	13.78	13.41	167.22	100.65	197.95	456.19	429.62	26.57	17.171		
6,200.00	6,190.91	6,194.73	6,191.21	14.02	13.63	167.42	100.65	197.95	463.30	436.29	27.01	17.151		
6,300.00	6,290.65	6,294.47	6,290.95	14.27	13.85	167.61	100.65	197.95	470.41	442.95	27.46	17.131		
6,400.00	6,390.38	6,394.20	6,390.68	14.51	14.07	167.80	100.65	197.95	477.53	449.62	27.91	17.112		
6,500.00	6,490.12	6,493.94	6,490.42	14.76	14.30	167.98	100.65	197.95	484.65	456.30	28.35	17.094		
6,600.00	6,589.85	6,593.67	6,590.15	15.01	14.52	168.16	100.65	197.95	491.78	462.98	28.80	17.076		
6,700.00	6,689.58	6,693.41	6,689.88	15.25	14.74	168.33	100.65	197.95	498.91	469.66	29.25	17.058		
6,800.00	6,789.32	6,793.14	6,789.62	15.50	14.96	168.50	100.65	197.95	506.04	476.35	29.69	17.042		
6,900.00	6,889.05	6,892.87	6,889.35	15.75	15.18	168.66	100.65	197.95	513.18	483.04	30.14	17.026		
7,000.00	6,988.79	6,992.61	6,989.09	16.00	15.40	168.82	100.65	197.95	520.33	489.74	30.59	17.010		
7,100.00	7,088.52	7,092.34	7,088.82	16.24	15.62	168.97	100.65	197.95	527.48	496.44	31.04	16.995		
7,200.00	7,188.26	7,192.08	7,188.56	16.49	15.85	169.12	100.65	197.95	534.63	503.14	31.49	16.980		
7,300.00	7,287.99	7,291.81	7,288.29	16.74	16.07	169.27	100.65	197.95	541.78	509.85	31.93	16.965		
7,400.00	7,387.73	7,391.55	7,388.03	16.99	16.29	169.41	100.65	197.95	548.94	516.56	32.38	16.952		
7,500.00	7,487.46	7,491.28	7,487.76	17.24	16.51	169.55	100.65	197.95	556.10	523.27	32.83	16.938		
7,600.00	7,587.19	7,591.01	7,587.49	17.48	16.73	169.68	100.65	197.95	563.27	529.99	33.28	16.925		
7,700.00	7,686.93	7,690.75	7,687.23	17.73	16.96	169.81	100.65	197.95	570.43	536.71	33.73	16.912		
7,800.00	7,786.66	7,790.48	7,786.96	17.98	17.18	169.94	100.65	197.95	577.61	543.43	34.18	16.900		
7,900.00	7,886.40	7,890.22	7,886.70	18.23	17.40	170.06	100.65	197.95	584.78	550.15	34.63	16.888		
8,000.00	7,986.13	7,989.95	7,986.43	18.48	17.62	170.18	100.65	197.95	591.95	556.88	35.08	16.876		
8,100.00	8,085.87	8,089.69	8,086.17	18.73	17.84	170.30	100.65	197.95	599.13	563.61	35.53	16.864		
8,200.00	8,185.60	8,189.42	8,185.90	18.98	18.07	170.42	100.65	197.95	606.31	570.34	35.98	16.853		
8,300.00	8,285.34	8,289.16	8,285.64	19.23	18.29	170.53	100.65	197.95	613.50	577.07	36.43	16.842		
8,400.00	8,385.07	8,388.89	8,385.37	19.48	18.51	170.64	100.65	197.95	620.68	583.81	36.88	16.832		
8,444.81	8,429.76	8,433.58	8,430.06	19.59	18.61	170.69	100.65	197.95	623.90	586.83	37.08	16.827		
8,500.00	8,484.82	8,488.64	8,485.12	19.71	18.73	170.75	100.65	197.95	627.61	590.30	37.31	16.820		
8,600.00	8,584.67	8,588.49	8,584.97	19.90	18.96	170.84	100.65	197.95	632.99	595.27	37.72	16.780		
8,700.00	8,684.60	8,688.42	8,684.90	20.08	19.18	170.90	100.65	197.95	636.65	598.52	38.13	16.697		
8,800.00	8,784.58	8,788.40	8,784.88	20.26	19.40	170.93	100.65	197.95	638.59	600.06	38.53	16.572		
8,862.49	8,847.07	8,850.89	8,847.37	20.37	19.54	80.94	100.65	197.95	638.93	600.14	38.79	16.471		
8,900.00	8,884.58	8,888.40	8,884.88	20.44	19.63	80.94	100.65	197.95	638.93	599.98	38.95	16.404		
9,000.00	8,984.58	8,988.40	8,984.88	20.64	19.85	80.94	100.65	197.95	638.93	599.55	39.38	16.224		
9,062.49	9,047.07	9,050.95	9,047.43	20.77	19.99	80.94	100.65	197.95	638.93	599.28	39.65	16.114		
9,100.00	9,084.55	9,096.00	9,092.43	20.84	20.08	-98.62	98.85	197.96	638.89	599.07	39.81	16.047		
9,150.00	9,134.24	9,155.95	9,151.84	20.93	20.17	-98.52	90.99	198.02	638.72	598.72	40.00	15.969		
9,200.00	9,183.26	9,215.68	9,209.88	21.02	20.27	-98.33	77.03	198.12	638.43	598.27	40.16	15.897		
9,250.00	9,231.25	9,275.06	9,265.84	21.12	20.36	-98.08	57.24	198.27	638.03	597.71	40.32	15.826		
9,300.00	9,277.84	9,333.99	9,319.05	21.21	20.44	-97.75	31.99	198.46	637.53	597.06	40.47	15.754		
9,350.00	9,322.67	9,392.36	9,368.93	21.31	20.53	-97.35	1.71	198.68	636.95	596.33	40.63	15.678		
9,400.00	9,365.40	9,450.10	9,414.99	21.41	20.61	-96.89	-33.07	198.93	636.32	595.52	40.80	15.595		
9,450.00	9,405.71	9,507.13	9,456.82	21.52	20.68	-96.37	-71.81	199.22	635.66	594.65	41.01	15.501		
9,500.00	9,443.29	9,563.41	9,494.12	21.63	20.77	-95.80	-113.92	199.53	634.99	593.74	41.25	15.395		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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		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		
9,550.00	9,477.85	9,618.90	9,526.67	21.75	20.89	-95.19	-158.82	199.86	634.33	592.80	41.53	15.274		
9,600.00	9,509.14	9,673.56	9,554.35	21.89	21.04	-94.54	-205.93	200.21	633.71	591.85	41.86	15.139		
9,650.00	9,536.90	9,727.39	9,577.11	22.04	21.22	-93.86	-254.69	200.57	633.15	590.92	42.24	14.991		
9,700.00	9,560.95	9,780.39	9,594.94	22.22	21.42	-93.15	-304.58	200.93	632.66	590.01	42.66	14.831		
9,750.00	9,581.08	9,832.57	9,607.92	22.42	21.64	-92.43	-355.10	201.31	632.26	589.14	43.13	14.661		
9,800.00	9,597.14	9,883.94	9,616.17	22.64	21.89	-91.69	-405.79	201.68	631.96	588.33	43.63	14.483		
9,850.00	9,609.02	9,934.54	9,619.81	22.89	22.15	-90.94	-456.23	202.05	631.77	587.59	44.18	14.301		
9,900.00	9,616.62	9,984.27	9,619.70	23.17	22.44	-90.25	-505.96	202.42	631.69	586.94	44.75	14.115		
9,926.47	9,618.90	10,010.61	9,619.40	23.33	22.60	-90.02	-532.30	202.61	631.69	586.61	45.08	14.013		
9,950.00	9,619.89	10,034.11	9,619.13	23.47	22.76	-89.90	-555.79	202.78	631.69	586.31	45.38	13.919		
9,968.21	9,620.00	10,052.32	9,618.93	23.59	22.88	-89.88	-574.00	202.92	631.69	586.07	45.62	13.846		
10,000.00	9,619.68	10,084.10	9,618.57	27.08	23.09	-89.87	-605.78	203.15	631.69	585.75	45.94	13.750		
10,100.00	9,618.68	10,184.10	9,617.44	27.16	23.83	-89.86	-705.77	203.89	631.69	584.99	46.70	13.525		
10,200.00	9,617.68	10,284.10	9,616.32	27.23	24.66	-89.85	-805.77	204.62	631.70	584.11	47.58	13.276		
10,300.00	9,616.68	10,384.10	9,615.19	27.31	25.57	-89.84	-905.76	205.36	631.70	583.14	48.56	13.008		
10,400.00	9,615.69	10,484.10	9,614.06	27.39	26.55	-89.83	-1,005.75	206.10	631.70	582.07	49.64	12.727		
10,500.00	9,614.69	10,584.10	9,612.94	27.48	27.59	-89.81	-1,105.74	206.83	631.70	580.91	50.80	12.436		
10,600.00	9,613.69	10,684.10	9,611.81	27.56	28.69	-89.80	-1,205.73	207.57	631.71	579.67	52.04	12.139		
10,700.00	9,612.69	10,784.10	9,610.68	27.65	29.83	-89.79	-1,305.72	208.30	631.71	578.35	53.36	11.839		
10,800.00	9,611.69	10,884.10	9,609.56	27.75	31.02	-89.78	-1,405.71	209.04	631.71	576.97	54.74	11.540		
10,900.00	9,610.69	10,984.10	9,608.43	27.84	32.25	-89.77	-1,505.70	209.78	631.71	575.53	56.19	11.243		
11,000.00	9,609.69	11,084.10	9,607.30	27.94	33.52	-89.76	-1,605.69	210.51	631.72	574.03	57.69	10.950		
11,100.00	9,608.69	11,184.10	9,606.18	28.04	34.81	-89.74	-1,705.68	211.25	631.72	572.47	59.25	10.662		
11,200.00	9,607.69	11,284.10	9,605.05	28.15	36.14	-89.73	-1,805.67	211.98	631.72	570.87	60.85	10.381		
11,300.00	9,606.69	11,384.10	9,603.93	28.26	37.49	-89.72	-1,905.67	212.72	631.73	569.22	62.51	10.107		
11,400.00	9,605.69	11,484.10	9,602.80	28.37	38.86	-89.71	-2,005.66	213.46	631.73	567.53	64.20	9.840		
11,500.00	9,604.69	11,584.10	9,601.67	28.50	40.25	-89.70	-2,105.65	214.19	631.73	565.80	65.93	9.582		
11,600.00	9,603.69	11,684.10	9,600.55	28.63	41.66	-89.69	-2,205.64	214.93	631.74	564.04	67.70	9.332		
11,700.00	9,602.70	11,784.10	9,599.42	28.77	43.08	-89.68	-2,305.63	215.66	631.74	562.24	69.50	9.090		
11,800.00	9,601.70	11,884.10	9,598.29	28.92	44.52	-89.66	-2,405.62	216.40	631.74	560.41	71.33	8.857		
11,900.00	9,600.70	11,984.10	9,597.17	29.08	45.98	-89.65	-2,505.61	217.14	631.75	558.56	73.19	8.632		
12,000.00	9,599.70	12,084.10	9,596.04	29.27	47.44	-89.64	-2,605.60	217.87	631.75	556.67	75.08	8.415		
12,100.00	9,598.70	12,184.10	9,594.91	29.48	48.92	-89.63	-2,705.59	218.61	631.75	554.76	76.99	8.205		
12,200.00	9,597.70	12,284.10	9,593.79	29.72	50.41	-89.62	-2,805.58	219.35	631.75	552.82	78.93	8.004		
12,300.00	9,596.70	12,384.10	9,592.66	29.99	51.90	-89.61	-2,905.57	220.08	631.76	550.87	80.89	7.810		
12,400.00	9,595.70	12,484.10	9,591.53	30.31	53.41	-89.59	-3,005.56	220.82	631.76	548.89	82.87	7.623		
12,500.00	9,594.70	12,584.10	9,590.41	30.66	54.92	-89.58	-3,105.56	221.55	631.76	546.89	84.87	7.444		
12,600.00	9,593.70	12,684.10	9,589.28	31.04	56.44	-89.57	-3,205.55	222.29	631.77	544.88	86.89	7.271		
12,700.00	9,592.70	12,784.10	9,588.15	31.46	57.96	-89.56	-3,305.54	223.03	631.77	542.84	88.93	7.104		
12,800.00	9,591.70	12,884.10	9,587.03	31.91	59.50	-89.55	-3,405.53	223.76	631.77	540.79	90.98	6.944		
12,900.00	9,590.71	12,984.10	9,585.90	32.38	61.03	-89.54	-3,505.52	224.50	631.78	538.73	93.05	6.790		
13,000.00	9,589.71	13,084.10	9,584.77	32.87	62.58	-89.53	-3,605.51	225.23	631.78	536.65	95.13	6.641		
13,100.00	9,588.71	13,184.10	9,583.65	33.38	64.12	-89.51	-3,705.50	225.97	631.78	534.56	97.23	6.498		
13,200.00	9,587.71	13,284.10	9,582.52	33.91	65.67	-89.50	-3,805.49	226.71	631.79	532.45	99.34	6.360		
13,300.00	9,586.71	13,384.10	9,581.39	34.44	67.23	-89.49	-3,905.48	227.44	631.79	530.33	101.46	6.227		
13,400.00	9,585.71	13,484.10	9,580.27	34.99	68.79	-89.48	-4,005.47	228.18	631.80	528.21	103.59	6.099		
13,500.00	9,584.71	13,584.10	9,579.14	35.56	70.35	-89.47	-4,105.46	228.91	631.80	526.07	105.73	5.975		
13,600.00	9,583.71	13,684.10	9,578.01	36.13	71.92	-89.46	-4,205.46	229.65	631.80	523.91	107.89	5.856		
13,700.00	9,582.71	13,784.10	9,576.89	36.71	73.49	-89.44	-4,305.45	230.39	631.81	521.75	110.05	5.741		
13,800.00	9,581.71	13,884.10	9,575.76	37.29	75.06	-89.43	-4,405.44	231.12	631.81	519.59	112.22	5.630		
13,900.00	9,580.71	13,984.10	9,574.63	37.89	76.64	-89.42	-4,505.43	231.86	631.81	517.41	114.41	5.523		
14,000.00	9,579.71	14,084.10	9,573.51	38.49	78.22	-89.41	-4,605.42	232.60	631.82	515.22	116.60	5.419		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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			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		
14,100.00	9,578.72	14,184.10	9,572.38	39.10	79.80	-89.40	-4,705.41	233.33	631.82	513.03	118.79	5.319		
14,200.00	9,577.72	14,284.10	9,571.26	39.72	81.38	-89.39	-4,805.40	234.07	631.82	510.83	121.00	5.222		
14,300.00	9,576.72	14,384.10	9,570.13	40.34	82.96	-89.38	-4,905.39	234.80	631.83	508.62	123.21	5.128		
14,400.00	9,575.72	14,484.10	9,569.00	40.96	84.55	-89.36	-5,005.38	235.54	631.83	506.40	125.43	5.037		
14,500.00	9,574.72	14,584.10	9,567.88	41.59	86.14	-89.35	-5,105.37	236.28	631.84	504.18	127.65	4.950		
14,600.00	9,573.72	14,684.10	9,566.75	42.23	87.73	-89.34	-5,205.36	237.01	631.84	501.95	129.89	4.865		
14,700.00	9,572.72	14,784.10	9,565.62	42.87	89.32	-89.33	-5,305.35	237.75	631.84	499.72	132.12	4.782		
14,800.00	9,571.72	14,884.10	9,564.50	43.52	90.92	-89.32	-5,405.35	238.48	631.85	497.48	134.37	4.702		
14,900.00	9,570.72	14,984.10	9,563.37	44.16	92.51	-89.31	-5,505.34	239.22	631.85	495.24	136.61	4.625		
15,000.00	9,569.72	15,084.10	9,562.24	44.82	94.11	-89.29	-5,605.33	239.96	631.85	492.99	138.87	4.550		
15,100.00	9,568.72	15,184.10	9,561.12	45.47	95.71	-89.28	-5,705.32	240.69	631.86	490.73	141.13	4.477		
15,200.00	9,567.72	15,284.10	9,559.99	46.13	97.31	-89.27	-5,805.31	241.43	631.86	488.48	143.39	4.407		
15,300.00	9,566.73	15,384.10	9,558.86	46.80	98.91	-89.26	-5,905.30	242.16	631.87	486.21	145.65	4.338		
15,400.00	9,565.73	15,484.10	9,557.74	47.46	100.51	-89.25	-6,005.29	242.90	631.87	483.95	147.93	4.272		
15,500.00	9,564.73	15,584.10	9,556.61	48.13	102.12	-89.24	-6,105.28	243.64	631.87	481.67	150.20	4.207		
15,600.00	9,563.73	15,684.10	9,555.48	48.81	103.72	-89.23	-6,205.27	244.37	631.88	479.40	152.48	4.144		
15,700.00	9,562.73	15,784.10	9,554.36	49.48	105.33	-89.21	-6,305.26	245.11	631.88	477.12	154.76	4.083		
15,800.00	9,561.73	15,884.10	9,553.23	50.16	106.93	-89.20	-6,405.25	245.85	631.89	474.84	157.05	4.024		
15,900.00	9,560.73	15,984.10	9,552.10	50.84	108.54	-89.19	-6,505.25	246.58	631.89	472.55	159.34	3.966		
16,000.00	9,559.73	16,084.10	9,550.98	51.52	110.15	-89.18	-6,605.24	247.32	631.90	470.26	161.63	3.909		
16,100.00	9,558.73	16,184.10	9,549.85	52.21	111.76	-89.17	-6,705.23	248.05	631.90	467.97	163.93	3.855		
16,200.00	9,557.73	16,284.10	9,548.72	52.89	113.37	-89.16	-6,805.22	248.79	631.90	465.68	166.23	3.801		
16,300.00	9,556.73	16,384.10	9,547.60	53.58	114.98	-89.14	-6,905.21	249.53	631.91	463.38	168.53	3.750		
16,400.00	9,555.73	16,484.10	9,546.47	54.28	116.59	-89.13	-7,005.20	250.26	631.91	461.08	170.83	3.699		
16,500.00	9,554.73	16,584.10	9,545.34	54.97	118.21	-89.12	-7,105.19	251.00	631.92	458.78	173.14	3.650		
16,600.00	9,553.74	16,684.10	9,544.22	55.67	119.82	-89.11	-7,205.18	251.73	631.92	456.47	175.45	3.602		
16,700.00	9,552.74	16,784.10	9,543.09	56.36	121.43	-89.10	-7,305.17	252.47	631.93	454.16	177.76	3.555		
16,800.00	9,551.74	16,884.10	9,541.96	57.06	123.05	-89.09	-7,405.16	253.21	631.93	451.85	180.08	3.509		
16,900.00	9,550.74	16,984.10	9,540.84	57.76	124.66	-89.08	-7,505.15	253.94	631.93	449.54	182.39	3.465		
16,973.85	9,550.00	17,057.94	9,540.01	58.28	125.86	-89.07	-7,578.99	254.49	631.94	447.83	184.10	3.432 SF		

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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	0.40	0.40	0.00	0.00	89.69	0.49	90.01	90.01					
100.00	100.00	100.40	100.40	0.09	0.09	89.69	0.49	90.01	90.01	89.84	0.17	520.762		
200.00	200.00	200.40	200.40	0.31	0.31	89.69	0.49	90.01	90.01	89.39	0.62	144.625		
300.00	300.00	300.40	300.40	0.54	0.54	89.69	0.49	90.01	90.01	88.94	1.07	83.973		
400.00	400.00	400.40	400.40	0.76	0.76	89.69	0.49	90.01	90.01	88.49	1.52	59.162		
500.00	500.00	500.40	500.40	0.99	0.99	89.69	0.49	90.01	90.01	88.04	1.97	45.668		
600.00	600.00	600.40	600.40	1.21	1.21	89.69	0.49	90.01	90.01	87.59	2.42	37.187		
700.00	700.00	700.40	700.40	1.43	1.44	89.69	0.49	90.01	90.01	87.14	2.87	31.362		
800.00	800.00	800.40	800.40	1.66	1.66	89.69	0.49	90.01	90.01	86.69	3.32	27.115		
900.00	900.00	900.40	900.40	1.88	1.89	89.69	0.49	90.01	90.01	86.24	3.77	23.881		
1,000.00	1,000.00	1,000.40	1,000.40	2.11	2.11	89.69	0.49	90.01	90.01	85.79	4.22	21.337		
1,100.00	1,100.00	1,100.40	1,100.40	2.33	2.33	89.69	0.49	90.01	90.01	85.34	4.67	19.282		
1,200.00	1,200.00	1,200.40	1,200.40	2.56	2.56	89.69	0.49	90.01	90.01	84.89	5.12	17.588		
1,300.00	1,300.00	1,300.40	1,300.40	2.78	2.78	89.69	0.49	90.01	90.01	84.44	5.57	16.168		
1,400.00	1,400.00	1,400.40	1,400.40	3.01	3.01	89.69	0.49	90.01	90.01	83.99	6.02	14.960		
1,500.00	1,500.00	1,500.40	1,500.40	3.23	3.23	89.69	0.49	90.01	90.01	83.55	6.47	13.920		
1,600.00	1,600.00	1,600.40	1,600.40	3.46	3.46	89.69	0.49	90.01	90.01	83.10	6.92	13.015		
1,700.00	1,700.00	1,700.40	1,700.40	3.68	3.68	89.69	0.49	90.01	90.01	82.65	7.37	12.221		
1,800.00	1,800.00	1,800.40	1,800.40	3.91	3.91	89.69	0.49	90.01	90.01	82.20	7.81	11.518		
1,900.00	1,900.00	1,900.40	1,900.40	4.13	4.13	89.69	0.49	90.01	90.01	81.75	8.26	10.891		
2,000.00	2,000.00	2,000.40	2,000.40	4.36	4.36	89.69	0.49	90.01	90.01	81.30	8.71	10.330		
2,100.00	2,100.00	2,100.40	2,100.40	4.58	4.58	89.69	0.49	90.01	90.01	80.85	9.16	9.823		
2,200.00	2,200.00	2,200.40	2,200.40	4.81	4.81	89.69	0.49	90.01	90.01	80.40	9.61	9.363		
2,300.00	2,300.00	2,300.40	2,300.40	5.03	5.03	89.69	0.49	90.01	90.01	79.95	10.06	8.945		
2,400.00	2,400.00	2,400.40	2,400.40	5.26	5.26	89.69	0.49	90.01	90.01	79.50	10.51	8.563		
2,500.00	2,500.00	2,500.40	2,500.40	5.48	5.48	89.69	0.49	90.01	90.01	79.05	10.96	8.212 CC, ES		
2,600.00	2,599.99	2,600.39	2,600.39	5.69	5.71	179.69	0.49	90.01	90.88	79.49	11.40	7.975		
2,700.00	2,699.96	2,700.36	2,700.36	5.89	5.93	179.70	0.49	90.01	93.50	81.68	11.82	7.911 SF		
2,800.00	2,799.86	2,800.26	2,800.26	6.09	6.16	179.71	0.49	90.01	97.86	85.62	12.24	7.993		
2,900.00	2,899.68	2,900.08	2,900.08	6.30	6.38	179.73	0.49	90.01	103.97	91.30	12.67	8.206		
2,917.68	2,917.31	2,917.71	2,917.71	6.33	6.42	179.73	0.49	90.01	105.23	92.48	12.74	8.257		
3,000.00	2,999.41	2,999.81	2,999.81	6.51	6.60	179.75	0.49	90.01	111.22	98.13	13.10	8.493		
3,100.00	3,099.15	3,099.55	3,099.55	6.72	6.83	179.76	0.49	90.01	118.51	104.98	13.52	8.762		
3,200.00	3,198.88	3,199.28	3,199.28	6.94	7.05	179.78	0.49	90.01	125.79	111.84	13.95	9.014		
3,300.00	3,298.61	3,299.01	3,299.01	7.16	7.28	179.79	0.49	90.01	133.07	118.69	14.39	9.250		
3,400.00	3,398.35	3,398.75	3,398.75	7.38	7.50	179.80	0.49	90.01	140.36	125.54	14.82	9.472		
3,500.00	3,498.08	3,498.48	3,498.48	7.60	7.72	179.81	0.49	90.01	147.64	132.39	15.25	9.679		
3,600.00	3,597.82	3,597.21	3,597.20	7.82	7.95	179.54	1.25	90.32	155.24	139.56	15.68	9.898		
3,700.00	3,697.55	3,695.76	3,695.73	8.05	8.17	178.74	3.59	91.27	163.53	147.41	16.11	10.149		
3,800.00	3,797.29	3,794.11	3,793.98	8.28	8.38	177.51	7.48	92.86	172.55	156.01	16.54	10.432		
3,900.00	3,897.02	3,892.87	3,892.58	8.51	8.61	175.97	12.76	95.02	182.30	165.33	16.97	10.743		
4,000.00	3,996.76	3,992.26	3,991.79	8.74	8.83	174.52	18.29	97.28	192.27	174.87	17.40	11.047		
4,100.00	4,096.49	4,091.65	4,091.00	8.97	9.05	173.21	23.81	99.53	202.35	184.51	17.84	11.342		
4,200.00	4,196.22	4,191.04	4,190.21	9.20	9.27	172.03	29.33	101.79	212.53	194.25	18.28	11.627		
4,300.00	4,295.96	4,290.43	4,289.42	9.44	9.50	170.95	34.85	104.04	222.79	204.07	18.72	11.902		
4,400.00	4,395.69	4,389.82	4,388.63	9.67	9.72	169.97	40.37	106.30	233.12	213.96	19.16	12.168		
4,500.00	4,495.43	4,489.21	4,487.84	9.91	9.95	169.08	45.90	108.55	243.51	223.91	19.60	12.423		
4,600.00	4,595.16	4,588.60	4,587.05	10.15	10.17	168.25	51.42	110.81	253.96	233.92	20.05	12.669		
4,700.00	4,694.90	4,687.99	4,686.26	10.38	10.40	167.50	56.94	113.06	264.45	243.96	20.49	12.907		
4,800.00	4,794.63	4,787.38	4,785.47	10.62	10.63	166.80	62.46	115.32	274.99	254.06	20.94	13.135		
4,900.00	4,894.37	4,886.77	4,884.68	10.86	10.86	166.15	67.99	117.57	285.56	264.18	21.38	13.355		
5,000.00	4,994.10	4,986.16	4,983.89	11.10	11.08	165.55	73.51	119.83	296.17	274.34	21.83	13.568		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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		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		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
5,100.00	5,093.83	5,085.55	5,083.10	11.34	11.31	164.99	79.03	122.08	306.81	284.53	22.28	13.772		
5,200.00	5,193.57	5,184.94	5,182.31	11.58	11.54	164.46	84.55	124.34	317.47	294.75	22.73	13.969		
5,300.00	5,293.30	5,284.32	5,281.52	11.83	11.77	163.97	90.08	126.59	328.16	304.99	23.18	14.159		
5,400.00	5,393.04	5,383.71	5,380.73	12.07	12.00	163.52	95.60	128.85	338.87	315.25	23.63	14.343		
5,500.00	5,492.77	5,483.10	5,479.94	12.31	12.23	163.09	101.12	131.10	349.61	325.53	24.08	14.519		
5,600.00	5,592.51	5,582.49	5,579.15	12.56	12.47	162.68	106.64	133.36	360.35	335.82	24.53	14.690		
5,700.00	5,692.24	5,682.85	5,679.33	12.80	12.69	162.30	112.18	135.62	371.09	346.11	24.98	14.855		
5,800.00	5,791.97	5,786.72	5,783.09	13.04	12.88	162.09	116.69	137.46	381.03	355.63	25.40	14.999		
5,900.00	5,891.71	5,890.85	5,887.17	13.29	13.06	162.09	119.46	138.59	389.81	363.99	25.82	15.098		
6,000.00	5,991.44	5,995.15	5,991.46	13.53	13.25	162.31	120.48	139.01	397.43	371.20	26.23	15.153		
6,100.00	6,091.18	6,095.26	6,091.58	13.78	13.44	162.62	120.49	139.01	404.38	377.73	26.65	15.175		
6,200.00	6,190.91	6,195.00	6,191.31	14.02	13.66	162.92	120.49	139.01	411.34	384.24	27.09	15.183		
6,300.00	6,290.65	6,294.73	6,291.05	14.27	13.88	163.22	120.49	139.01	418.31	390.77	27.54	15.190		
6,400.00	6,390.38	6,394.47	6,390.78	14.51	14.10	163.50	120.49	139.01	425.29	397.30	27.99	15.197		
6,500.00	6,490.12	6,494.20	6,490.52	14.76	14.32	163.77	120.49	139.01	432.28	403.84	28.43	15.204		
6,600.00	6,589.85	6,593.94	6,590.25	15.01	14.55	164.04	120.49	139.01	439.27	410.40	28.88	15.211		
6,700.00	6,689.58	6,693.67	6,689.98	15.25	14.77	164.30	120.49	139.01	446.28	416.96	29.33	15.218		
6,800.00	6,789.32	6,793.41	6,789.72	15.50	14.99	164.55	120.49	139.01	453.30	423.53	29.77	15.225		
6,900.00	6,889.05	6,893.14	6,889.45	15.75	15.21	164.79	120.49	139.01	460.33	430.10	30.22	15.232		
7,000.00	6,988.79	6,992.87	6,989.19	16.00	15.43	165.02	120.49	139.01	467.36	436.69	30.67	15.239		
7,100.00	7,088.52	7,092.61	7,088.92	16.24	15.65	165.25	120.49	139.01	474.40	443.28	31.12	15.246		
7,200.00	7,188.26	7,192.34	7,188.66	16.49	15.88	165.47	120.49	139.01	481.45	449.88	31.57	15.253		
7,300.00	7,287.99	7,292.08	7,288.39	16.74	16.10	165.68	120.49	139.01	488.50	456.49	32.01	15.259		
7,400.00	7,387.73	7,391.81	7,388.13	16.99	16.32	165.89	120.49	139.01	495.57	463.10	32.46	15.266		
7,500.00	7,487.46	7,491.55	7,487.86	17.24	16.54	166.09	120.49	139.01	502.63	469.72	32.91	15.273		
7,600.00	7,587.19	7,591.28	7,587.59	17.48	16.76	166.29	120.49	139.01	509.71	476.35	33.36	15.279		
7,700.00	7,686.93	7,691.01	7,687.33	17.73	16.99	166.48	120.49	139.01	516.79	482.98	33.81	15.286		
7,800.00	7,786.66	7,790.75	7,787.06	17.98	17.21	166.67	120.49	139.01	523.87	489.62	34.26	15.292		
7,900.00	7,886.40	7,890.48	7,886.80	18.23	17.43	166.85	120.49	139.01	530.96	496.26	34.71	15.299		
8,000.00	7,986.13	7,990.22	7,986.53	18.48	17.65	167.03	120.49	139.01	538.06	502.90	35.16	15.305		
8,100.00	8,085.87	8,089.95	8,086.27	18.73	17.88	167.20	120.49	139.01	545.16	509.56	35.60	15.311		
8,200.00	8,185.60	8,189.69	8,186.00	18.98	18.10	167.37	120.49	139.01	552.27	516.21	36.05	15.318		
8,300.00	8,285.34	8,289.42	8,285.74	19.23	18.32	167.53	120.49	139.01	559.38	522.87	36.50	15.324		
8,400.00	8,385.07	8,389.16	8,385.47	19.48	18.54	167.69	120.49	139.01	566.49	529.54	36.95	15.330		
8,444.81	8,429.76	8,433.85	8,430.16	19.59	18.64	167.76	120.49	139.01	569.68	532.53	37.16	15.333		
8,500.00	8,484.82	8,488.91	8,485.22	19.71	18.77	167.85	120.49	139.01	573.35	535.96	37.39	15.334		
8,600.00	8,584.67	8,588.76	8,585.07	19.90	18.99	167.97	120.49	139.01	578.68	540.88	37.80	15.309		
8,700.00	8,684.60	8,688.69	8,685.00	20.08	19.21	168.05	120.49	139.01	582.31	544.10	38.21	15.241		
8,800.00	8,784.58	8,788.67	8,784.98	20.26	19.44	168.10	120.49	139.01	584.23	545.62	38.61	15.131		
8,862.49	8,847.07	8,851.16	8,847.47	20.37	19.58	78.10	120.49	139.01	584.56	545.69	38.87	15.040		
8,900.00	8,884.58	8,888.67	8,884.98	20.44	19.66	78.10	120.49	139.01	584.56	545.54	39.03	14.978		
9,000.00	8,984.58	8,988.67	8,984.98	20.64	19.88	78.10	120.49	139.01	584.56	545.10	39.46	14.815		
9,062.49	9,047.07	9,051.16	9,047.47	20.77	20.02	78.10	120.49	139.01	584.56	544.83	39.73	14.714		
9,100.00	9,084.55	9,088.64	9,084.95	20.84	20.11	-101.57	120.49	139.01	584.81	544.92	39.89	14.662		
9,150.00	9,134.24	9,138.33	9,134.64	20.93	20.22	-101.98	120.49	139.01	585.93	545.84	40.09	14.616		
9,200.00	9,183.26	9,187.35	9,183.66	21.02	20.33	-102.68	120.49	139.01	588.05	547.76	40.29	14.596		
9,250.00	9,231.25	9,235.34	9,231.65	21.12	20.43	-103.63	120.49	139.01	591.36	550.88	40.48	14.608		
9,300.00	9,277.84	9,281.92	9,278.24	21.21	20.54	-104.75	120.49	139.01	596.12	555.45	40.67	14.657		
9,350.00	9,322.67	9,326.75	9,323.07	21.31	20.64	-105.96	120.49	139.01	602.60	561.75	40.85	14.751		
9,400.00	9,365.40	9,369.48	9,365.80	21.41	20.73	-107.17	120.49	139.01	611.14	570.12	41.03	14.896		
9,450.00	9,405.71	9,409.79	9,406.11	21.52	20.82	-108.26	120.49	139.01	622.06	580.86	41.20	15.099		
9,500.00	9,443.29	9,447.37	9,443.69	21.63	20.91	-109.15	120.49	139.01	635.62	594.27	41.36	15.368		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
9,550.00	9,477.85	9,481.94	9,478.25	21.75	20.98	-109.72	120.49	139.01	652.08	610.57	41.51	15.708		
9,600.00	9,509.14	9,513.22	9,509.54	21.89	21.05	-109.89	120.49	139.01	671.57	629.92	41.66	16.122		
9,650.00	9,536.90	9,540.99	9,537.30	22.04	21.12	-109.54	120.49	139.01	694.17	652.38	41.79	16.612		
9,700.00	9,560.95	9,565.03	9,561.35	22.22	21.17	-108.60	120.49	139.01	719.83	677.92	41.90	17.178		
9,750.00	9,581.08	9,585.16	9,581.48	22.42	21.22	-106.94	120.49	139.01	748.41	706.41	42.00	17.817		
9,800.00	9,597.14	9,601.23	9,597.54	22.64	21.25	-104.49	120.49	139.01	779.71	737.63	42.09	18.526		
9,850.00	9,609.02	9,613.11	9,609.42	22.89	21.28	-101.12	120.49	139.01	813.43	771.28	42.15	19.297		
9,900.00	9,616.62	9,620.71	9,617.02	23.17	21.30	-96.79	120.49	139.01	849.22	807.02	42.20	20.124		
9,950.00	9,619.89	9,623.98	9,620.29	23.47	21.30	-91.47	120.49	139.01	886.67	844.45	42.23	20.998		
9,968.21	9,620.00	9,624.09	9,620.40	23.59	21.30	-89.31	120.49	139.01	900.65	858.42	42.23	21.326		
10,000.00	9,619.68	9,623.77	9,620.08	27.08	21.30	-89.27	120.49	139.01	925.40	880.10	45.30	20.430		
10,100.00	9,618.68	9,622.77	9,619.08	27.16	21.30	-89.17	120.49	139.01	1,005.84	960.20	45.64	22.039		
10,200.00	9,617.68	9,621.77	9,618.08	27.23	21.30	-89.07	120.49	139.01	1,089.52	1,043.56	45.96	23.707		
10,300.00	9,616.68	11,382.44	10,600.95	27.31	27.39	-149.79	-904.15	146.53	1,138.50	1,103.56	34.95	32.580		
10,400.00	9,615.69	11,482.43	10,601.16	27.39	28.31	-149.82	-1,004.14	147.26	1,139.55	1,103.94	35.60	32.006		
10,500.00	9,614.69	11,582.43	10,601.37	27.48	29.28	-149.85	-1,104.13	147.99	1,140.59	1,104.25	36.34	31.388		
10,600.00	9,613.69	11,682.42	10,601.58	27.56	30.32	-149.88	-1,204.12	148.73	1,141.64	1,104.50	37.14	30.736		
10,700.00	9,612.69	11,782.41	10,601.79	27.65	31.40	-149.91	-1,304.11	149.46	1,142.68	1,104.67	38.01	30.060		
10,800.00	9,611.69	11,882.40	10,602.00	27.75	32.53	-149.94	-1,404.10	150.19	1,143.73	1,104.78	38.95	29.366		
10,900.00	9,610.69	11,982.40	10,602.21	27.84	33.71	-149.97	-1,504.09	150.93	1,144.78	1,104.84	39.94	28.664		
11,000.00	9,609.69	12,082.39	10,602.42	27.94	34.92	-150.00	-1,604.08	151.66	1,145.83	1,104.84	40.98	27.959		
11,100.00	9,608.69	12,182.38	10,602.63	28.04	36.16	-150.03	-1,704.07	152.39	1,146.87	1,104.80	42.08	27.257		
11,200.00	9,607.69	12,282.38	10,602.84	28.15	37.44	-150.06	-1,804.06	153.13	1,147.92	1,104.70	43.22	26.562		
11,300.00	9,606.69	12,382.37	10,603.05	28.26	38.74	-150.09	-1,904.05	153.86	1,148.97	1,104.57	44.40	25.878		
11,400.00	9,605.69	12,482.36	10,603.26	28.37	40.07	-150.12	-2,004.04	154.60	1,150.02	1,104.40	45.62	25.208		
11,500.00	9,604.69	12,582.35	10,603.48	28.50	41.42	-150.15	-2,104.03	155.33	1,151.07	1,104.19	46.88	24.553		
11,600.00	9,603.69	12,682.35	10,603.69	28.63	42.79	-150.18	-2,204.02	156.06	1,152.12	1,103.94	48.17	23.917		
11,700.00	9,602.70	12,782.34	10,603.90	28.77	44.17	-150.21	-2,304.01	156.80	1,153.17	1,103.67	49.49	23.299		
11,800.00	9,601.70	12,882.33	10,604.11	28.92	45.58	-150.24	-2,404.00	157.53	1,154.22	1,103.37	50.85	22.700		
11,900.00	9,600.70	12,982.32	10,604.32	29.08	47.00	-150.27	-2,503.99	158.26	1,155.27	1,103.04	52.22	22.122		
12,000.00	9,599.70	13,082.32	10,604.53	29.27	48.43	-150.30	-2,603.98	159.00	1,156.32	1,102.69	53.63	21.563		
12,100.00	9,598.70	13,182.31	10,604.74	29.48	49.88	-150.33	-2,703.97	159.73	1,157.37	1,102.32	55.05	21.024		
12,200.00	9,597.70	13,282.30	10,604.95	29.72	51.34	-150.36	-2,803.96	160.46	1,158.42	1,101.92	56.49	20.505		
12,300.00	9,596.70	13,382.30	10,605.16	29.99	52.81	-150.39	-2,903.95	161.20	1,159.47	1,101.51	57.96	20.006		
12,400.00	9,595.70	13,482.29	10,605.37	30.31	54.28	-150.42	-3,003.94	161.93	1,160.52	1,101.08	59.44	19.525		
12,500.00	9,594.70	13,582.28	10,605.58	30.66	55.77	-150.45	-3,103.93	162.66	1,161.57	1,100.64	60.94	19.062		
12,600.00	9,593.70	13,682.27	10,605.79	31.04	57.27	-150.48	-3,203.92	163.40	1,162.63	1,100.18	62.45	18.618		
12,700.00	9,592.70	13,782.27	10,606.00	31.46	58.77	-150.51	-3,303.91	164.13	1,163.68	1,099.70	63.97	18.190		
12,800.00	9,591.70	13,882.26	10,606.21	31.91	60.28	-150.54	-3,403.90	164.86	1,164.73	1,099.22	65.51	17.779		
12,900.00	9,590.71	13,982.25	10,606.42	32.38	61.80	-150.57	-3,503.89	165.60	1,165.78	1,098.72	67.06	17.383		
13,000.00	9,589.71	14,082.24	10,606.63	32.87	63.32	-150.59	-3,603.88	166.33	1,166.84	1,098.21	68.62	17.003		
13,100.00	9,588.71	14,182.24	10,606.84	33.38	64.85	-150.62	-3,703.87	167.07	1,167.89	1,097.69	70.20	16.637		
13,200.00	9,587.71	14,282.23	10,607.05	33.91	66.38	-150.65	-3,803.86	167.80	1,168.95	1,097.17	71.78	16.285		
13,300.00	9,586.71	14,382.22	10,607.26	34.44	67.92	-150.68	-3,903.85	168.53	1,170.00	1,096.63	73.37	15.947		
13,400.00	9,585.71	14,482.21	10,607.47	34.99	69.47	-150.71	-4,003.84	169.27	1,171.06	1,096.09	74.97	15.621		
13,500.00	9,584.71	14,582.21	10,607.68	35.56	71.01	-150.74	-4,103.83	170.00	1,172.11	1,095.54	76.57	15.307		
13,600.00	9,583.71	14,682.20	10,607.89	36.13	72.57	-150.77	-4,203.82	170.73	1,173.17	1,094.98	78.19	15.005		
13,700.00	9,582.71	14,782.19	10,608.11	36.71	74.12	-150.80	-4,303.81	171.47	1,174.22	1,094.41	79.81	14.713		
13,800.00	9,581.71	14,882.19	10,608.32	37.29	75.68	-150.83	-4,403.80	172.20	1,175.28	1,093.84	81.43	14.432		
13,900.00	9,580.71	14,982.18	10,608.53	37.89	77.24	-150.85	-4,503.79	172.93	1,176.33	1,093.27	83.07	14.162		
14,000.00	9,579.71	15,082.17	10,608.74	38.49	78.81	-150.88	-4,603.78	173.67	1,177.39	1,092.69	84.70	13.900		
14,100.00	9,578.72	15,182.16	10,608.95	39.10	80.38	-150.91	-4,703.77	174.40	1,178.45	1,092.10	86.34	13.648		

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 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset		Between Centres (usft)	Between Ellipses (usft)						
14,200.00	9,577.72	15,282.16	10,609.16	39.72	81.95	-150.94	-4,803.76	175.13	1,179.50	1,091.51	87.99	13.405		
14,300.00	9,576.72	15,382.15	10,609.37	40.34	83.52	-150.97	-4,903.74	175.87	1,180.56	1,090.92	89.64	13.170		
14,400.00	9,575.72	15,482.14	10,609.58	40.96	85.10	-151.00	-5,003.73	176.60	1,181.62	1,090.32	91.30	12.942		
14,500.00	9,574.72	15,582.13	10,609.79	41.59	86.68	-151.03	-5,103.72	177.33	1,182.68	1,089.72	92.96	12.723		
14,600.00	9,573.72	15,682.13	10,610.00	42.23	88.26	-151.05	-5,203.71	178.07	1,183.74	1,089.11	94.62	12.510		
14,700.00	9,572.72	15,782.12	10,610.21	42.87	89.84	-151.08	-5,303.70	178.80	1,184.79	1,088.51	96.29	12.305		
14,800.00	9,571.72	15,882.11	10,610.42	43.52	91.42	-151.11	-5,403.69	179.54	1,185.85	1,087.90	97.96	12.106		
14,900.00	9,570.72	15,982.10	10,610.63	44.16	93.01	-151.14	-5,503.68	180.27	1,186.91	1,087.28	99.63	11.913		
15,000.00	9,569.72	16,082.10	10,610.84	44.82	94.60	-151.17	-5,603.67	181.00	1,187.97	1,086.67	101.30	11.727		
15,100.00	9,568.72	16,182.09	10,611.05	45.47	96.19	-151.20	-5,703.66	181.74	1,189.03	1,086.05	102.98	11.546		
15,200.00	9,567.72	16,282.08	10,611.26	46.13	97.78	-151.22	-5,803.65	182.47	1,190.09	1,085.43	104.66	11.371		
15,300.00	9,566.73	16,382.08	10,611.47	46.80	99.37	-151.25	-5,903.64	183.20	1,191.15	1,084.81	106.34	11.201		
15,400.00	9,565.73	16,482.07	10,611.68	47.46	100.97	-151.28	-6,003.63	183.94	1,192.21	1,084.18	108.03	11.036		
15,500.00	9,564.73	16,582.06	10,611.89	48.13	102.56	-151.31	-6,103.62	184.67	1,193.27	1,083.56	109.72	10.876		
15,600.00	9,563.73	16,682.05	10,612.10	48.81	104.16	-151.34	-6,203.61	185.40	1,194.33	1,082.93	111.40	10.721		
15,700.00	9,562.73	16,782.05	10,612.31	49.48	105.76	-151.36	-6,303.60	186.14	1,195.40	1,082.30	113.09	10.570		
15,800.00	9,561.73	16,882.04	10,612.52	50.16	107.36	-151.39	-6,403.59	186.87	1,196.46	1,081.67	114.79	10.423		
15,900.00	9,560.73	16,982.03	10,612.73	50.84	108.96	-151.42	-6,503.58	187.60	1,197.52	1,081.04	116.48	10.281		
16,000.00	9,559.73	17,082.02	10,612.95	51.52	110.56	-151.45	-6,603.57	188.34	1,198.58	1,080.41	118.17	10.143		
16,100.00	9,558.73	17,182.02	10,613.16	52.21	112.17	-151.47	-6,703.56	189.07	1,199.64	1,079.78	119.87	10.008		
16,200.00	9,557.73	17,282.01	10,613.37	52.89	113.77	-151.50	-6,803.55	189.80	1,200.71	1,079.14	121.57	9.877		
16,300.00	9,556.73	17,382.00	10,613.58	53.58	115.38	-151.53	-6,903.54	190.54	1,201.77	1,078.51	123.26	9.750		
16,400.00	9,555.73	17,482.00	10,613.79	54.28	116.98	-151.56	-7,003.53	191.27	1,202.83	1,077.87	124.96	9.625		
16,500.00	9,554.73	17,581.99	10,614.00	54.97	118.59	-151.58	-7,103.52	192.01	1,203.90	1,077.23	126.66	9.505		
16,600.00	9,553.74	17,681.98	10,614.21	55.67	120.20	-151.61	-7,203.51	192.74	1,204.96	1,076.60	128.37	9.387		
16,700.00	9,552.74	17,781.97	10,614.42	56.36	121.81	-151.64	-7,303.50	193.47	1,206.03	1,075.96	130.07	9.272		
16,800.00	9,551.74	17,881.97	10,614.63	57.06	123.42	-151.67	-7,403.49	194.21	1,207.09	1,075.32	131.77	9.161		
16,900.00	9,550.74	17,981.96	10,614.84	57.76	125.03	-151.69	-7,503.48	194.94	1,208.15	1,074.68	133.47	9.052		
16,973.85	9,550.00	18,055.80	10,614.99	58.28	126.22	-151.71	-7,577.32	195.48	1,208.94	1,074.21	134.73	8.973		

LEAM Drilling Systems LLC

Anticollision Report

Company: Devon Energy
 Project: Lea County, NM (NAD-83)
 Reference Site: Thistle Unit Sec 22-27 Trac Pad
 Site Error: 0.00 usft
 Reference Well: Thistle Unit 142H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #2

Local Co-ordinate Reference: Well Thistle Unit 142H
 TVD Reference: 3710' GE + 23.5' KB @ 3733.50usft
 MD Reference: 3710' GE + 23.5' KB @ 3733.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Multi User Db
 Offset TVD Reference: Offset Datum

Reference Depths are relative to 3710' GE + 23.5' KB @ 3733.50usft

Offset Depths are relative to Offset Datum

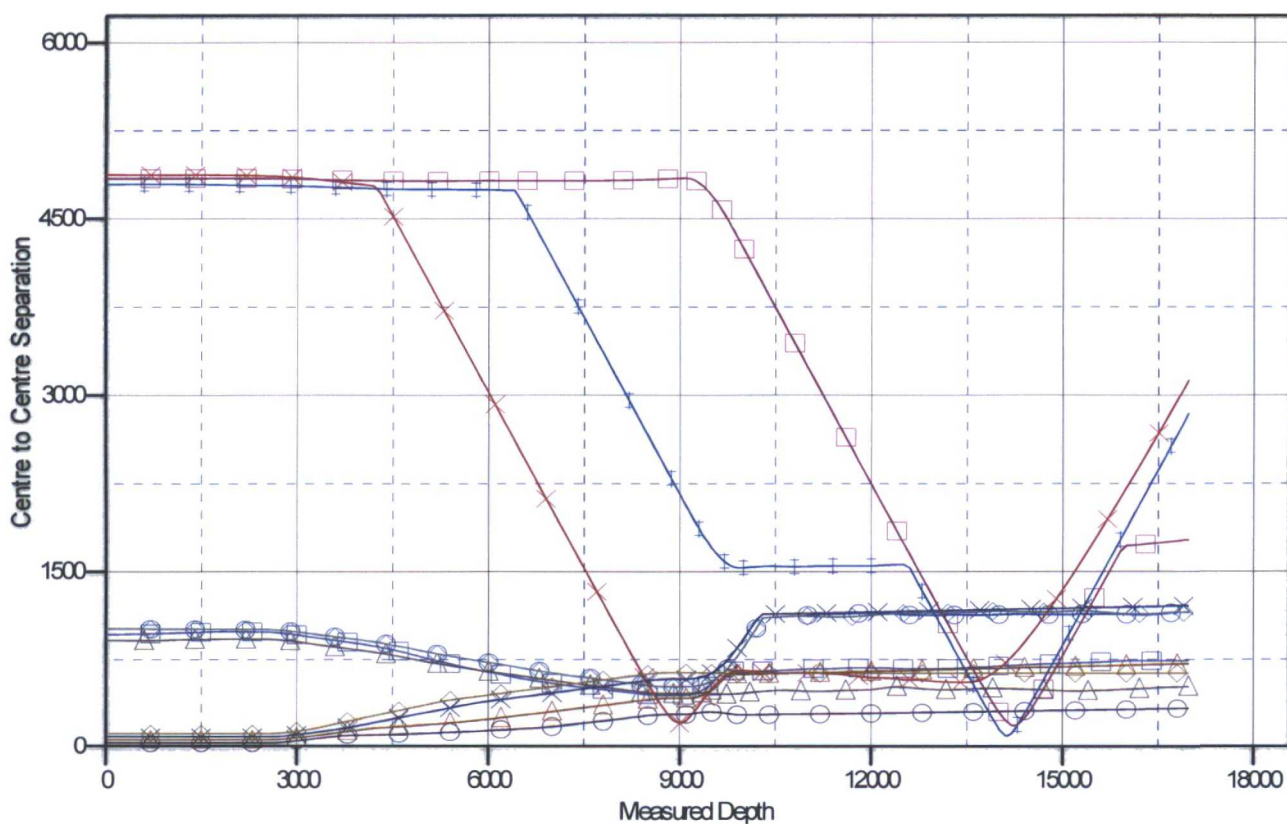
Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: Thistle Unit 142H

Coordinate System is US State Plane 1983, New Mexico Eastern Zone

Grid Convergence at Surface is: 0.41°

Ladder Plot



LEGEND

- 109H, OH, OH V0
- 124H, OH, OH V0
- 94H, ST, ST V0
- 94H, OH, OH V0
- 26H, OH, OH V0
- Thistle Unit 110H, OH, Plan #2 V0
- Thistle Unit 160H, OH, Plan #2 V0
- Thistle Unit 86H, OH, Plan #2 V0
- 61H, OH, OH V0
- 55H, OH, OH V0
- Thistle Unit 125H, OH, Plan #2 V0

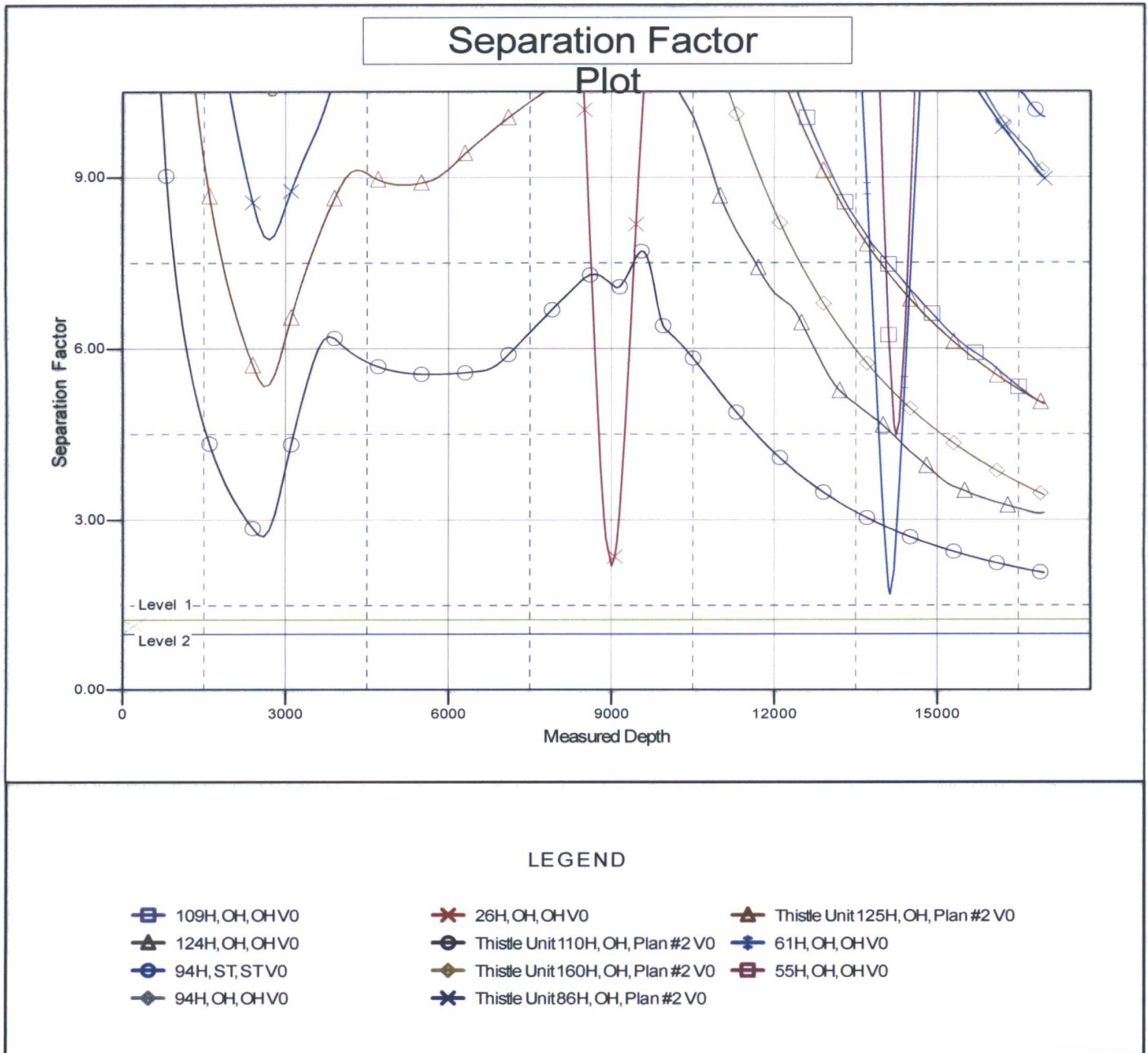
LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 142H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3710' GE + 23.5' KB @ 3733.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 142H	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 3710' GE + 23.5' KB @ 3733.50usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: Thistle Unit 142H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.41°



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