

Devon Energy

Lea County, NM (NAD-83)

Thistle Unit Sec 22-27 Trac Pad

Thistle Unit 165H

OH

Plan #2

Anticollision Report

20 September, 2017

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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	17,080.26	Plan #2 (OH)	LEAM MWD+HDGM	MWD+HDGM	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Thistle Unit						
62H - OH - OH	14,265.38	9,460.00	1,506.47	1,396.15	13.656	CC
62H - OH - OH	14,300.00	9,460.00	1,506.87	1,396.03	13.595	ES
62H - OH - OH	14,500.00	9,460.00	1,524.63	1,411.52	13.479	SF
63H - OH - OH	13,912.59	6,929.00	2,716.84	2,672.61	61.423	CC, ES
63H - OH - OH	14,600.00	6,929.00	2,802.45	2,754.04	57.889	SF
63H - ST 1 - ST 1	13,981.02	9,563.04	646.95	568.59	8.256	CC, ES
63H - ST 1 - ST 1	14,000.00	9,563.31	647.23	568.60	8.232	SF
64H - OH - OH	14,351.22	9,623.43	530.28	427.65	5.167	CC, ES
64H - OH - OH	14,400.00	9,624.34	532.52	428.65	5.127	SF
Thistle Unit (Offsets)						
56H - OH - OH	14,315.60	9,556.39	515.59	416.25	5.191	CC, ES, SF
57H - OH - OH	14,242.70	9,508.50	1,347.31	1,249.46	13.770	CC, ES
57H - OH - OH	14,400.00	9,508.31	1,356.46	1,256.92	13.627	SF
58H - OH - OH	14,224.74	9,577.47	330.77	232.93	3.381	CC, ES, SF
Thistle Unit Sec 22-27 Trac Pad						
Thistle Unit 100H - OH - Plan #2	3,500.00	3,500.10	29.99	14.53	1.940	CC, ES
Thistle Unit 100H - OH - Plan #2	3,600.00	3,600.10	30.68	14.78	1.930	SF
Thistle Unit 115H - OH - Plan #2	2,203.20	2,203.30	149.93	140.31	15.575	CC
Thistle Unit 115H - OH - Plan #2	2,300.00	2,298.82	150.15	140.09	14.938	ES
Thistle Unit 115H - OH - Plan #2	17,080.26	17,107.82	1,141.02	893.44	4.609	SF
Thistle Unit 116H - OH - Plan #2	3,500.00	3,500.20	59.97	44.51	3.880	CC, ES
Thistle Unit 116H - OH - Plan #2	17,080.26	17,203.72	443.55	273.69	2.611	SF
Thistle Unit 126H - OH - Plan #2	9,496.71	9,478.51	226.91	185.63	5.497	CC, ES
Thistle Unit 126H - OH - Plan #2	17,080.26	17,404.08	638.71	511.07	5.004	SF
Thistle Unit 127H - OH - Plan #2	3,416.63	3,416.73	89.96	74.88	5.965	CC
Thistle Unit 127H - OH - Plan #2	3,500.00	3,500.00	89.96	74.51	5.820	ES
Thistle Unit 127H - OH - Plan #2	17,080.26	17,480.22	736.13	590.05	5.039	SF
Thistle Unit 128H - OH - Plan #2	2,500.00	2,500.00	30.01	19.05	2.738	CC, ES
Thistle Unit 128H - OH - Plan #2	2,600.00	2,599.48	30.86	19.46	2.708	SF
Thistle Unit 162H - OH - Plan #2	2,916.60	2,916.80	119.97	107.14	9.348	CC
Thistle Unit 162H - OH - Plan #2	3,000.00	3,000.00	119.97	106.76	9.083	ES
Thistle Unit 162H - OH - Plan #2	17,080.26	16,979.53	753.12	568.97	4.090	SF

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

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Reference Well:	Thistle Unit 165H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 62H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 85-ISCWSA-GYRO-3, 1447-LEAM_MWD, 15750-Project													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.00	0.00	0.00	0.00	0.00	0.00	-172.58	-4,455.66	-580.10	4,493.31					
100.00	100.00	60.23	60.23	0.09	0.06	-172.58	-4,455.80	-580.01	4,493.43	4,493.30	0.13	N/A		
200.00	200.00	162.21	162.21	0.31	0.20	-172.59	-4,456.34	-579.72	4,493.92	4,493.42	0.50	8,969.519		
300.00	300.00	274.38	274.38	0.54	0.39	-172.59	-4,456.58	-579.96	4,494.16	4,493.24	0.92	4,878.217		
400.00	400.00	389.29	389.28	0.76	0.59	-172.58	-4,456.41	-580.62	4,494.09	4,492.74	1.35	3,334.891		
500.00	500.00	499.28	499.28	0.99	0.78	-172.57	-4,455.93	-581.29	4,493.73	4,491.97	1.76	2,546.423		
600.00	600.00	613.41	613.40	1.21	0.98	-172.56	-4,455.16	-581.93	4,493.14	4,490.95	2.19	2,051.723		
700.00	700.00	721.60	721.58	1.43	1.17	-172.55	-4,454.17	-582.34	4,492.28	4,489.67	2.60	1,725.112		
800.00	800.00	822.34	822.32	1.66	1.34	-172.55	-4,453.16	-582.44	4,491.29	4,488.29	3.00	1,494.958		
900.00	900.00	914.68	914.65	1.88	1.50	-172.55	-4,452.36	-582.52	4,490.45	4,487.06	3.39	1,324.906		
1,000.00	1,000.00	1,022.87	1,022.84	2.11	1.69	-172.55	-4,451.40	-582.36	4,489.55	4,485.75	3.80	1,180.329		
1,100.00	1,100.00	1,129.22	1,129.18	2.33	1.88	-172.55	-4,450.34	-581.97	4,488.51	4,484.29	4.21	1,064.982		
1,200.00	1,200.00	1,235.55	1,235.50	2.56	2.07	-172.55	-4,449.11	-581.53	4,487.31	4,482.69	4.63	970.095		
1,300.00	1,300.00	1,334.84	1,334.79	2.78	2.24	-172.56	-4,447.89	-581.12	4,486.04	4,481.01	5.02	892.938		
1,400.00	1,400.00	1,416.00	1,415.94	3.01	2.38	-172.56	-4,447.01	-580.82	4,484.94	4,479.55	5.39	832.150		
1,500.00	1,500.00	1,489.07	1,489.01	3.23	2.42	-172.56	-4,446.55	-580.89	4,484.34	4,478.69	5.65	793.591		
1,521.31	1,521.31	1,500.37	1,500.31	3.28	2.42	-172.56	-4,446.53	-580.97	4,484.32	4,478.62	5.70	786.401		
1,600.00	1,600.00	1,549.19	1,549.12	3.46	2.45	-172.55	-4,446.59	-581.85	4,484.60	4,478.70	5.90	759.753		
1,700.00	1,700.00	1,610.60	1,610.48	3.68	2.49	-172.51	-4,446.92	-584.40	4,485.68	4,479.50	6.17	726.473		
1,800.00	1,800.00	1,668.00	1,667.75	3.91	2.56	-172.47	-4,447.55	-588.08	4,487.64	4,481.18	6.46	694.616		
1,900.00	1,900.00	1,708.15	1,707.76	4.13	2.61	-172.43	-4,448.44	-591.34	4,490.84	4,484.10	6.74	666.458		
2,000.00	2,000.00	1,763.00	1,762.37	4.36	2.70	-172.37	-4,450.16	-596.16	4,495.14	4,488.09	7.05	637.910		
2,100.00	2,100.00	1,812.12	1,811.23	4.58	2.79	-172.32	-4,452.27	-600.69	4,500.58	4,493.22	7.36	611.697		
2,200.00	2,200.00	1,896.45	1,895.07	4.81	2.97	-172.22	-4,456.43	-608.77	4,506.77	4,499.02	7.76	580.999		
2,300.00	2,300.00	1,996.81	1,994.85	5.03	3.21	-172.11	-4,461.50	-618.29	4,513.09	4,504.88	8.22	549.203		
2,400.00	2,400.00	2,094.06	2,091.55	5.26	3.48	-172.00	-4,466.40	-627.46	4,519.41	4,510.71	8.70	519.644		
2,500.00	2,500.00	2,196.16	2,193.04	5.48	3.78	-171.89	-4,471.54	-637.21	4,525.76	4,516.55	9.21	491.315		
2,600.00	2,600.00	2,299.61	2,295.89	5.71	4.10	-171.77	-4,476.66	-647.14	4,532.05	4,522.30	9.75	464.892		
2,700.00	2,700.00	2,415.68	2,411.32	5.93	4.48	-171.65	-4,482.11	-658.02	4,538.06	4,527.72	10.34	438.811		
2,800.00	2,800.00	2,513.60	2,508.72	6.15	4.81	-171.54	-4,486.67	-666.99	4,544.02	4,533.13	10.89	417.456		
2,900.00	2,900.00	2,618.39	2,612.97	6.38	5.17	-171.43	-4,491.42	-676.50	4,549.87	4,538.41	11.46	397.037		
3,000.00	3,000.00	2,741.94	2,735.90	6.60	5.61	-171.31	-4,496.90	-687.62	4,555.66	4,543.55	12.11	376.285		
3,100.00	3,100.00	2,851.38	2,844.82	6.83	6.00	-171.19	-4,501.06	-697.40	4,560.79	4,548.08	12.71	358.802		
3,200.00	3,200.00	2,969.29	2,962.22	7.05	6.42	-171.07	-4,505.33	-707.53	4,565.70	4,552.35	13.35	342.021		
3,300.00	3,300.00	3,053.00	3,045.60	7.28	6.72	-171.00	-4,508.49	-714.24	4,570.68	4,556.81	13.87	329.641		
3,400.00	3,400.00	3,176.03	3,168.07	7.50	7.17	-170.87	-4,512.74	-725.17	4,575.50	4,560.96	14.53	314.865		
3,500.00	3,500.00	3,285.90	3,277.40	7.73	7.58	-170.75	-4,516.20	-735.36	4,580.11	4,564.96	15.15	302.223		
3,600.00	3,600.00	3,390.57	3,381.61	7.95	7.97	137.81	-4,519.11	-744.79	4,584.97	4,569.21	15.75	291.030		
3,700.00	3,699.96	3,476.25	3,466.92	8.16	8.29	137.87	-4,521.72	-752.35	4,591.38	4,575.10	16.28	282.021		
3,800.00	3,799.86	3,584.84	3,574.98	8.38	8.69	137.98	-4,525.13	-762.43	4,599.27	4,582.37	16.90	272.224		
3,850.45	3,850.23	3,640.79	3,630.67	8.49	8.90	138.03	-4,526.68	-767.59	4,603.57	4,586.35	17.21	267.475		
3,900.00	3,899.69	3,682.48	3,672.16	8.60	9.06	138.10	-4,527.87	-771.47	4,608.00	4,590.53	17.47	263.736		
4,000.00	3,999.50	3,758.29	3,747.60	8.82	9.35	138.22	-4,530.22	-778.68	4,617.26	4,599.29	17.97	256.969		
4,100.00	4,099.31	3,839.88	3,828.74	9.04	9.66	138.35	-4,533.18	-786.70	4,627.10	4,608.61	18.49	250.278		
4,200.00	4,199.13	3,956.34	3,944.60	9.26	10.11	138.54	-4,537.40	-797.72	4,636.93	4,617.79	19.14	242.237		
4,300.00	4,298.94	4,032.52	4,020.41	9.48	10.40	138.66	-4,540.04	-804.68	4,646.63	4,626.98	19.64	236.563		
4,400.00	4,398.75	4,092.00	4,079.55	9.70	10.63	138.75	-4,542.67	-810.44	4,657.27	4,637.20	20.08	231.962		
4,500.00	4,498.57	4,164.34	4,151.45	9.93	10.91	138.86	-4,546.36	-817.55	4,668.67	4,648.10	20.56	227.029		
4,600.00	4,598.38	4,297.32	4,283.68	10.15	11.43	139.07	-4,553.02	-830.03	4,679.97	4,658.69	21.29	219.835		
4,700.00	4,698.19	4,393.51	4,379.40	10.38	11.80	139.20	-4,557.54	-838.33	4,690.85	4,668.98	21.87	214.525		
4,800.00	4,798.01	4,471.00	4,456.52	10.60	12.09	139.31	-4,561.51	-844.78	4,702.10	4,679.73	22.37	210.198		
4,900.00	4,897.82	4,545.03	4,530.18	10.83	12.38	139.41	-4,565.69	-850.89	4,713.85	4,690.99	22.86	206.212		

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

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Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 62H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 85-ISCWSA-GYRO-3, 1447-LEAM_MWD, 15750-Project													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
				(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)						
5,000.00	4,997.63	4,644.34	4,628.97	11.06	12.76	139.54	-4,571.53	-859.19	4,725.90	4,702.45	23.45	201.537		
5,100.00	5,097.45	4,743.03	4,727.11	11.29	13.14	139.68	-4,577.18	-867.81	4,737.90	4,713.86	24.04	197.092		
5,200.00	5,197.26	4,824.10	4,807.76	11.52	13.46	139.79	-4,582.03	-874.58	4,750.10	4,725.54	24.56	193.432		
5,300.00	5,297.07	4,898.48	4,881.76	11.75	13.74	139.88	-4,586.94	-880.17	4,762.76	4,737.71	25.05	190.163		
5,400.00	5,396.88	5,129.07	5,111.15	11.98	14.64	140.18	-4,600.42	-899.14	4,775.51	4,749.36	26.15	182.586		
5,500.00	5,496.70	5,230.88	5,212.55	12.21	15.03	140.31	-4,604.44	-907.33	4,785.75	4,758.99	26.76	178.852		
5,600.00	5,596.51	5,338.68	5,319.88	12.44	15.44	140.46	-4,608.32	-916.63	4,795.79	4,768.40	27.39	175.105		
5,700.00	5,696.32	5,422.88	5,403.58	12.67	15.77	140.60	-4,611.08	-925.44	4,805.95	4,778.02	27.93	172.053		
5,800.00	5,796.14	5,499.52	5,479.59	12.90	16.08	140.74	-4,613.62	-934.88	4,816.59	4,788.14	28.45	169.285		
5,900.00	5,895.95	5,591.00	5,570.25	13.14	16.46	140.91	-4,616.78	-946.73	4,827.54	4,798.51	29.04	166.252		
6,000.00	5,995.76	5,676.00	5,654.45	13.37	16.80	141.07	-4,619.79	-957.88	4,838.68	4,809.09	29.60	163.490		
6,100.00	6,095.58	5,747.64	5,725.43	13.60	17.10	141.20	-4,622.64	-967.20	4,850.28	4,820.18	30.10	161.152		
6,200.00	6,195.39	5,805.68	5,782.94	13.84	17.34	141.31	-4,625.45	-974.46	4,862.63	4,832.09	30.54	159.230		
6,300.00	6,295.20	5,866.00	5,842.71	14.07	17.59	141.41	-4,629.03	-981.77	4,875.92	4,844.93	30.99	157.357		
6,400.00	6,395.01	5,971.23	5,947.09	14.31	18.02	141.57	-4,635.91	-993.22	4,889.58	4,857.96	31.62	154.641		
6,500.00	6,494.83	6,067.08	6,042.28	14.54	18.40	141.70	-4,642.35	-1,002.38	4,903.13	4,870.93	32.21	152.244		
6,600.00	6,594.64	15,750.00	11,082.01	14.77	85.39	-148.24	41.61	-1,678.88	4,861.94	4,808.08	53.87	90.257		
6,655.23	6,649.77	15,750.00	11,082.01	14.90	85.39	-148.24	41.61	-1,678.88	4,811.90	4,757.72	54.18	88.812		
6,700.00	6,694.46	15,750.00	11,082.01	15.00	85.39	-147.74	41.61	-1,678.88	4,771.36	4,716.92	54.44	87.652		
6,800.00	6,794.36	15,750.00	11,082.01	15.18	85.39	-146.57	41.61	-1,678.88	4,680.62	4,625.61	55.00	85.098		
6,900.00	6,894.32	15,750.00	11,082.01	15.36	85.39	-145.34	41.61	-1,678.88	4,589.64	4,534.06	55.58	82.579		
7,005.68	7,000.00	15,750.00	11,082.01	15.55	85.39	-92.45	41.61	-1,678.88	4,493.25	4,437.06	56.19	79.959		
7,100.00	7,094.32	15,750.00	11,082.01	15.73	85.39	-92.45	41.61	-1,678.88	4,407.29	4,350.53	56.76	77.642		
7,200.00	7,194.32	15,750.00	11,082.01	15.95	85.39	-92.45	41.61	-1,678.88	4,316.54	4,259.14	57.40	75.202		
7,300.00	7,294.32	15,750.00	11,082.01	16.17	85.39	-92.45	41.61	-1,678.88	4,226.20	4,168.14	58.06	72.787		
7,400.00	7,394.32	15,750.00	11,082.01	16.39	85.39	-92.45	41.61	-1,678.88	4,136.31	4,077.55	58.76	70.398		
7,500.00	7,494.32	15,750.00	11,082.01	16.61	85.39	-92.45	41.61	-1,678.88	4,046.89	3,987.40	59.48	68.036		
7,600.00	7,594.32	15,750.00	11,082.01	16.83	85.39	-92.45	41.61	-1,678.88	3,957.97	3,897.73	60.24	65.704		
7,700.00	7,694.32	15,750.00	11,082.01	17.05	85.39	-92.45	41.61	-1,678.88	3,869.60	3,808.57	61.03	63.401		
7,800.00	7,794.32	15,750.00	11,082.01	17.27	85.39	-92.45	41.61	-1,678.88	3,781.81	3,719.94	61.87	61.130		
7,900.00	7,894.32	15,750.00	11,082.01	17.48	85.39	-92.45	41.61	-1,678.88	3,694.64	3,631.90	62.74	58.892		
8,000.00	7,994.32	15,750.00	11,082.01	17.70	85.39	-92.45	41.61	-1,678.88	3,608.13	3,544.48	63.65	56.688		
8,100.00	8,094.32	15,748.53	11,082.05	17.92	85.39	-92.50	40.14	-1,678.75	3,522.34	3,457.73	64.60	54.521		
8,200.00	8,194.32	15,746.08	11,082.11	18.14	85.39	-92.58	37.71	-1,678.55	3,437.31	3,371.70	65.61	52.392		
8,300.00	8,294.32	15,743.64	11,082.17	18.36	85.39	-92.65	35.27	-1,678.34	3,353.11	3,286.45	66.66	50.301		
8,400.00	8,394.32	15,741.20	11,082.23	18.58	85.39	-92.73	32.84	-1,678.14	3,269.79	3,202.03	67.77	48.252		
8,500.00	8,494.32	15,738.75	11,082.29	18.80	85.38	-92.80	30.41	-1,677.94	3,187.44	3,118.51	68.92	46.245		
8,600.00	8,594.32	15,736.31	11,082.35	19.03	85.38	-92.88	27.97	-1,677.73	3,106.12	3,035.98	70.14	44.284		
8,700.00	8,694.32	15,733.87	11,082.41	19.25	85.38	-92.96	25.54	-1,677.53	3,025.91	2,954.50	71.42	42.370		
8,800.00	8,794.32	15,731.42	11,082.47	19.47	85.38	-93.03	23.10	-1,677.32	2,946.92	2,874.17	72.75	40.506		
8,900.00	8,894.32	15,728.98	11,082.53	19.69	85.38	-93.11	20.67	-1,677.12	2,869.23	2,795.08	74.15	38.693		
9,000.00	8,994.32	15,726.54	11,082.59	19.91	85.38	-93.19	18.24	-1,676.91	2,792.96	2,717.35	75.62	36.935		
9,052.74	9,047.06	15,725.25	11,082.62	20.02	85.37	-93.23	16.95	-1,676.81	2,753.35	2,676.93	76.42	36.031		
9,100.00	9,094.26	15,722.15	11,082.70	20.12	85.37	-92.36	13.87	-1,676.55	2,718.21	2,641.07	77.14	35.237		
9,150.00	9,143.85	15,714.68	11,082.88	20.20	85.37	-97.50	6.42	-1,675.92	2,681.54	2,603.63	77.91	34.418		
9,200.00	9,192.70	15,702.93	11,083.16	20.27	85.36	-102.23	-5.28	-1,674.94	2,645.67	2,567.01	78.66	33.634		
9,250.00	9,240.44	15,689.02	11,083.50	20.35	85.26	-106.55	-19.14	-1,673.78	2,610.86	2,531.55	79.30	32.922		
9,300.00	9,286.71	15,674.12	11,083.85	20.42	85.03	-110.46	-33.98	-1,672.59	2,577.36	2,497.54	79.83	32.286		
9,350.00	9,331.16	15,656.38	11,084.25	20.49	84.76	-113.89	-51.67	-1,671.24	2,545.43	2,465.14	80.29	31.702		
9,400.00	9,373.45	15,618.18	11,084.98	20.55	84.17	-116.54	-89.76	-1,668.45	2,515.24	2,434.73	80.51	31.240		
9,450.00	9,413.25	15,562.17	11,085.68	20.62	83.31	-118.59	-145.59	-1,664.09	2,486.68	2,406.17	80.51	30.886		
9,500.00	9,450.26	15,524.89	11,085.90	20.68	82.73	-120.72	-182.76	-1,661.09	2,459.94	2,379.28	80.66	30.497		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 62H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 85-ISCWSA-GYRO-3, 1447-LEAM_MWD, 15750-Project													Offset Well Error:	0.00 usft
Reference	Offset		Semi Major Axis		Distance		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		
9,550.00	9,484.20	15,489.07	11,085.93	20.75	82.19	122.60	-218.47	-1,658.37	2,435.36	2,354.57	80.79	30.146		
9,600.00	9,514.82	15,459.00	11,085.83	20.84	81.73	124.30	-248.46	-1,656.21	2,413.08	2,332.16	80.92	29.819		
9,650.00	9,541.88	15,428.72	11,085.81	20.94	81.27	125.73	-278.67	-1,654.15	2,393.39	2,312.37	81.01	29.543		
9,700.00	9,565.17	15,401.96	11,086.01	21.07	80.86	126.94	-305.38	-1,652.41	2,376.50	2,295.42	81.08	29.309		
9,750.00	9,584.52	15,364.00	11,086.66	21.24	80.28	127.86	-343.26	-1,650.08	2,362.57	2,281.58	80.99	29.172		
9,800.00	9,599.78	15,329.13	11,087.44	21.43	79.76	128.60	-378.06	-1,647.99	2,351.48	2,270.61	80.87	29.077		
9,850.00	9,610.83	15,275.16	11,088.61	21.64	78.94	129.10	-431.91	-1,644.67	2,343.05	2,262.53	80.51	29.101		
9,900.00	9,617.59	15,225.50	11,089.61	21.88	78.20	129.48	-481.47	-1,641.59	2,337.28	2,257.13	80.15	29.161		
9,950.00	9,620.01	15,176.16	11,090.52	22.14	77.46	129.73	-530.71	-1,638.62	2,334.29	2,254.55	79.74	29.273		
9,957.57	9,620.00	15,169.32	11,090.64	22.19	77.35	129.75	-537.54	-1,638.21	2,334.08	2,254.40	79.68	29.293		
10,000.00	9,619.64	15,131.56	11,091.23	22.43	76.79	129.80	-575.23	-1,636.09	2,333.15	2,253.79	79.36	29.399		
10,100.00	9,618.80	15,038.79	11,092.42	23.08	75.42	129.90	-667.88	-1,631.46	2,331.24	2,252.60	78.64	29.644		
10,200.00	9,617.96	14,935.03	11,094.61	23.82	73.88	130.03	-771.46	-1,625.69	2,329.44	2,251.55	77.88	29.910		
10,300.00	9,617.11	14,826.06	11,096.04	24.65	72.29	130.16	-880.26	-1,619.84	2,327.28	2,250.11	77.17	30.158		
10,400.00	9,616.27	14,735.21	11,096.66	25.56	70.97	130.24	-970.99	-1,615.34	2,325.05	2,248.34	76.71	30.311		
10,500.00	9,615.43	14,627.76	11,097.60	26.54	69.42	130.35	-1,078.32	-1,610.28	2,323.14	2,246.98	76.16	30.503		
10,600.00	9,614.59	14,525.45	11,097.96	27.58	67.96	130.44	-1,180.50	-1,605.30	2,320.77	2,245.04	75.73	30.646		
10,700.00	9,613.74	14,428.84	11,097.89	28.68	66.60	130.51	-1,277.03	-1,601.04	2,318.48	2,243.07	75.41	30.744		
10,800.00	9,612.90	14,319.48	11,097.70	29.83	65.07	130.59	-1,386.27	-1,596.19	2,316.11	2,241.07	75.04	30.865		
10,900.00	9,612.06	14,200.40	11,096.68	31.02	63.42	130.66	-1,505.22	-1,590.68	2,313.15	2,238.51	74.64	30.989		
11,000.00	9,611.22	14,079.79	11,094.61	32.25	61.77	130.73	-1,625.65	-1,584.35	2,309.14	2,234.86	74.28	31.087		
11,100.00	9,610.37	13,965.29	11,091.95	33.52	60.21	130.79	-1,739.94	-1,578.01	2,304.55	2,230.53	74.01	31.137		
11,200.00	9,609.53	13,855.80	11,089.24	34.81	58.74	130.85	-1,849.18	-1,571.24	2,299.35	2,225.53	73.82	31.150		
11,300.00	9,608.69	13,758.19	11,087.10	36.14	57.45	130.92	-1,946.56	-1,564.77	2,294.02	2,220.27	73.74	31.108		
11,400.00	9,607.85	13,674.35	11,085.29	37.49	56.36	130.97	-2,030.22	-1,559.64	2,289.08	2,215.26	73.83	31.007		
11,500.00	9,607.01	13,567.00	11,082.69	38.86	54.98	131.03	-2,137.37	-1,553.66	2,284.41	2,210.64	73.77	30.968		
11,600.00	9,606.16	13,483.98	11,080.58	40.25	53.94	131.06	-2,220.25	-1,549.27	2,279.85	2,205.92	73.93	30.837		
11,700.00	9,605.32	13,391.48	11,078.38	41.66	52.80	131.09	-2,312.63	-1,544.96	2,275.89	2,201.82	74.07	30.727		
11,800.00	9,604.48	13,283.00	11,075.75	43.09	51.48	131.14	-2,420.94	-1,539.63	2,271.69	2,197.57	74.11	30.651		
11,900.00	9,603.64	13,206.74	11,074.51	44.53	50.58	131.18	-2,497.08	-1,535.61	2,267.82	2,193.40	74.41	30.476		
12,000.00	9,602.79	13,119.97	11,074.19	45.98	49.58	131.25	-2,583.76	-1,531.43	2,265.04	2,190.39	74.65	30.341		
12,100.00	9,601.95	13,047.51	11,073.96	47.45	48.77	131.30	-2,656.15	-1,528.49	2,262.94	2,187.91	75.03	30.161		
12,195.52	9,601.15	12,985.01	11,074.67	48.86	48.08	131.35	-2,718.61	-1,526.42	2,262.35	2,186.91	75.44	29.988		
12,200.00	9,601.11	12,981.94	11,074.73	48.92	48.04	131.35	-2,721.68	-1,526.34	2,262.35	2,186.89	75.46	29.981		
12,300.00	9,600.27	12,905.00	11,076.17	50.41	47.22	131.40	-2,798.59	-1,524.88	2,263.23	2,187.38	75.85	29.838		
12,400.00	9,599.42	12,793.26	11,077.84	51.90	46.07	131.46	-2,910.31	-1,523.47	2,264.41	2,188.31	76.09	29.758		
12,500.00	9,598.58	12,686.62	11,079.12	53.41	45.01	131.53	-3,016.92	-1,521.33	2,264.80	2,188.40	76.40	29.643		
12,600.00	9,597.74	9,432.54	9,390.71	54.92	31.57	83.45	-4,774.40	-1,309.78	2,245.47	2,174.68	70.79	31.719		
12,700.00	9,596.90	9,434.44	9,392.60	56.44	31.58	83.52	-4,774.45	-1,309.96	2,172.37	2,099.68	72.68	29.889		
12,800.00	9,596.05	9,436.33	9,394.49	57.97	31.58	83.59	-4,774.51	-1,310.13	2,101.47	2,026.78	74.70	28.133		
12,900.00	9,595.21	9,438.22	9,396.36	59.50	31.59	83.66	-4,774.56	-1,310.31	2,033.03	1,956.19	76.84	26.458		
13,000.00	9,594.37	9,440.10	9,398.24	61.04	31.60	83.73	-4,774.61	-1,310.48	1,967.29	1,888.18	79.11	24.868		
13,100.00	9,593.53	9,441.98	9,400.11	62.58	31.60	83.80	-4,774.67	-1,310.65	1,904.52	1,823.03	81.50	23.369		
13,200.00	9,592.69	9,443.85	9,401.97	64.13	31.61	83.88	-4,774.72	-1,310.83	1,845.05	1,761.05	84.00	21.965		
13,300.00	9,591.84	9,445.72	9,403.83	65.68	31.62	83.95	-4,774.78	-1,311.00	1,789.19	1,702.59	86.60	20.661		
13,400.00	9,591.00	9,447.59	9,405.69	67.23	31.63	84.02	-4,774.83	-1,311.17	1,737.29	1,648.01	89.27	19.460		
13,500.00	9,590.16	9,449.45	9,407.54	68.79	31.63	84.09	-4,774.88	-1,311.35	1,689.71	1,597.71	92.00	18.366		
13,600.00	9,589.32	9,451.30	9,409.39	70.36	31.64	84.16	-4,774.94	-1,311.52	1,646.84	1,552.09	94.75	17.380		
13,700.00	9,588.47	9,453.15	9,411.23	71.92	31.65	84.23	-4,774.99	-1,311.69	1,609.05	1,511.56	97.49	16.505		
13,800.00	9,587.63	9,455.00	9,413.07	73.49	31.66	84.30	-4,775.04	-1,311.86	1,576.70	1,476.54	100.16	15.742		
13,900.00	9,586.79	9,456.84	9,414.90	75.06	31.66	84.37	-4,775.09	-1,312.03	1,550.14	1,447.42	102.72	15.091		
14,000.00	9,585.95	9,460.00	9,418.05	76.64	31.67	84.49	-4,775.18	-1,312.33	1,529.66	1,424.53	105.13	14.550		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 62H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 85-ISCWSA-GYRO-3, 1447-LEAM_MWD, 15750-Project													Offset Well Error:	0.00 usft
Reference	Offset		Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
14,100.00	9,585.10	9,460.00	9,418.05	78.22	31.67	84.49	-4,775.18	-1,312.33	1,515.52	1,408.22	107.30	14.124		
14,200.00	9,584.26	9,460.00	9,418.05	79.80	31.67	84.49	-4,775.18	-1,312.33	1,507.89	1,398.67	109.22	13.806		
14,265.38	9,583.71	9,460.00	9,418.05	80.83	31.67	84.49	-4,775.18	-1,312.33	1,506.47	1,396.15	110.31	13.656 CC		
14,300.00	9,583.42	9,460.00	9,418.05	81.38	31.67	84.49	-4,775.18	-1,312.33	1,506.87	1,396.03	110.84	13.595 ES		
14,400.00	9,582.58	9,460.00	9,418.05	82.97	31.67	84.49	-4,775.18	-1,312.33	1,512.47	1,400.33	112.14	13.487		
14,500.00	9,581.73	9,460.00	9,418.05	84.55	31.67	84.49	-4,775.18	-1,312.33	1,524.63	1,411.52	113.11	13.479 SF		
14,600.00	9,580.89	9,460.00	9,418.05	86.14	31.67	84.49	-4,775.18	-1,312.33	1,543.18	1,429.43	113.75	13.566		
14,700.00	9,580.05	9,469.78	9,427.78	87.73	31.71	84.86	-4,775.48	-1,313.25	1,567.87	1,453.71	114.16	13.734		
14,800.00	9,579.21	9,471.57	9,429.56	89.33	31.72	84.93	-4,775.53	-1,313.42	1,598.47	1,484.26	114.21	13.996		
14,900.00	9,578.37	9,473.44	9,431.41	90.92	31.73	85.00	-4,775.59	-1,313.60	1,634.62	1,520.63	113.99	14.340		
15,000.00	9,577.52	9,475.38	9,433.35	92.52	31.74	85.07	-4,775.65	-1,313.79	1,675.96	1,562.41	113.55	14.760		
15,100.00	9,576.68	9,477.42	9,435.37	94.11	31.74	85.15	-4,775.72	-1,313.99	1,722.12	1,609.21	112.91	15.252		
15,200.00	9,575.84	9,479.54	9,437.49	95.71	31.75	85.23	-4,775.79	-1,314.20	1,772.72	1,660.60	112.12	15.810		
15,300.00	9,575.00	9,481.76	9,439.70	97.31	31.76	85.32	-4,775.87	-1,314.42	1,827.39	1,716.18	111.22	16.431		
15,400.00	9,574.15	9,484.09	9,442.01	98.91	31.77	85.41	-4,775.95	-1,314.64	1,885.79	1,775.57	110.22	17.110		
15,500.00	9,573.31	9,486.53	9,444.44	100.52	31.78	85.50	-4,776.03	-1,314.89	1,947.56	1,838.40	109.16	17.842		
15,600.00	9,572.47	9,489.09	9,446.98	102.12	31.79	85.60	-4,776.12	-1,315.14	2,012.41	1,904.35	108.06	18.623		
15,700.00	9,571.63	9,491.78	9,449.66	103.73	31.80	85.70	-4,776.22	-1,315.41	2,080.04	1,973.10	106.94	19.450		
15,800.00	9,570.78	9,494.61	9,452.47	105.33	31.81	85.80	-4,776.32	-1,315.70	2,150.20	2,044.38	105.82	20.320		
15,900.00	9,569.94	9,497.59	9,455.44	106.94	31.83	85.92	-4,776.44	-1,316.00	2,222.63	2,117.93	104.70	21.228		
16,000.00	9,569.10	9,500.74	9,458.56	108.55	31.84	86.04	-4,776.56	-1,316.33	2,297.13	2,193.53	103.60	22.172		
16,100.00	9,568.26	9,504.06	9,461.86	110.16	31.85	86.16	-4,776.69	-1,316.67	2,373.51	2,270.98	102.53	23.149		
16,200.00	9,567.42	9,507.58	9,465.36	111.76	31.87	86.30	-4,776.83	-1,317.03	2,451.58	2,350.09	101.49	24.156		
16,300.00	9,566.57	9,511.30	9,469.06	113.38	31.88	86.44	-4,776.98	-1,317.43	2,531.19	2,430.71	100.48	25.191		
16,400.00	9,565.73	9,515.26	9,472.99	114.99	31.90	86.59	-4,777.15	-1,317.84	2,612.19	2,512.69	99.50	26.252		
16,500.00	9,564.89	9,519.47	9,477.17	116.60	31.91	86.75	-4,777.33	-1,318.29	2,694.47	2,595.90	98.57	27.335		
16,600.00	9,564.05	9,523.95	9,481.63	118.21	31.93	86.92	-4,777.53	-1,318.78	2,777.90	2,680.23	97.68	28.440		
16,700.00	9,563.20	9,528.74	9,486.39	119.83	31.95	87.10	-4,777.75	-1,319.30	2,862.40	2,765.58	96.82	29.564		
16,800.00	9,562.36	9,533.87	9,491.48	121.44	31.97	87.29	-4,777.99	-1,319.86	2,947.85	2,851.85	96.00	30.705		
16,900.00	9,561.52	9,539.37	9,496.94	123.05	31.99	87.50	-4,778.25	-1,320.48	3,034.19	2,938.96	95.23	31.862		
17,000.00	9,560.68	9,545.29	9,502.81	124.67	32.02	87.73	-4,778.54	-1,321.14	3,121.34	3,026.84	94.49	33.033		
17,080.26	9,560.00	9,550.37	9,507.85	125.97	32.04	87.92	-4,778.80	-1,321.72	3,191.82	3,097.89	93.93	33.981		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 - 63H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100- VES GyroFlex V2													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	-173.21	-4,455.38	-530.11	4,486.86					
100.00	100.00	64.57	64.57	0.09	0.04	-173.21	-4,455.48	-530.12	4,486.93	4,486.80	0.13	N/A		
200.00	200.00	153.16	153.16	0.31	0.13	-173.21	-4,455.90	-530.16	4,487.40	4,486.96	0.45	N/A		
300.00	300.00	244.47	244.46	0.54	0.23	-173.21	-4,456.49	-530.26	4,488.06	4,487.29	0.76	5,882.372		
400.00	400.00	340.09	340.09	0.76	0.29	-173.22	-4,457.31	-530.29	4,488.91	4,487.86	1.05	4,256.136		
500.00	500.00	448.61	448.60	0.99	0.36	-173.21	-4,458.14	-530.52	4,489.69	4,488.35	1.34	3,343.506		
600.00	600.00	563.72	563.71	1.21	0.42	-173.21	-4,458.73	-530.61	4,490.22	4,488.59	1.63	2,759.643		
700.00	700.00	678.26	678.25	1.43	0.47	-173.21	-4,458.89	-530.80	4,490.37	4,488.47	1.90	2,365.065		
765.78	765.78	744.49	744.48	1.58	0.49	-173.21	-4,458.86	-530.93	4,490.36	4,488.29	2.07	2,171.731		
800.00	800.00	777.23	777.22	1.66	0.50	-173.21	-4,458.85	-531.04	4,490.37	4,488.21	2.15	2,084.442		
900.00	900.00	879.58	879.57	1.88	0.54	-173.20	-4,458.84	-531.35	4,490.39	4,487.98	2.41	1,865.118		
1,000.00	1,000.00	988.37	988.36	2.11	0.56	-173.20	-4,458.72	-531.35	4,490.28	4,487.62	2.66	1,689.770		
1,100.00	1,100.00	1,101.56	1,101.54	2.33	0.58	-173.21	-4,458.37	-530.91	4,489.92	4,487.02	2.91	1,544.933		
1,200.00	1,200.00	1,210.99	1,210.97	2.56	0.60	-173.22	-4,457.76	-530.25	4,489.30	4,486.15	3.15	1,423.200		
1,300.00	1,300.00	1,313.43	1,313.41	2.78	0.62	-173.22	-4,457.07	-529.56	4,488.55	4,485.15	3.40	1,319.827		
1,400.00	1,400.00	1,413.94	1,413.91	3.01	0.64	-173.23	-4,456.34	-528.94	4,487.76	4,484.11	3.65	1,230.478		
1,500.00	1,500.00	1,505.84	1,505.81	3.23	0.66	-173.24	-4,455.76	-528.46	4,487.07	4,483.18	3.89	1,152.974		
1,600.00	1,600.00	1,604.42	1,604.38	3.46	0.68	-173.24	-4,455.25	-527.87	4,486.49	4,482.35	4.14	1,084.109		
1,700.00	1,700.00	1,734.70	1,734.66	3.68	0.71	-173.26	-4,454.40	-526.55	4,485.76	4,481.37	4.39	1,021.106		
1,800.00	1,800.00	1,878.13	1,878.06	3.91	0.75	-173.27	-4,451.71	-525.54	4,483.73	4,479.07	4.65	963.813		
1,900.00	1,900.00	1,978.47	1,978.37	4.13	0.77	-173.26	-4,449.42	-525.85	4,481.49	4,476.59	4.90	914.439		
2,000.00	2,000.00	2,064.81	2,064.69	4.36	0.79	-173.25	-4,447.49	-526.63	4,479.39	4,474.24	5.15	870.456		
2,100.00	2,100.00	2,142.23	2,142.08	4.58	0.81	-173.23	-4,446.03	-527.82	4,477.70	4,472.31	5.39	830.973		
2,200.00	2,200.00	2,200.00	2,199.83	4.81	0.82	-173.21	-4,445.20	-528.96	4,476.61	4,470.99	5.63	795.712		
2,283.15	2,283.15	2,262.04	2,261.85	4.99	0.83	-173.20	-4,444.74	-530.38	4,476.27	4,470.45	5.82	768.509		
2,300.00	2,300.00	2,272.05	2,271.86	5.03	0.83	-173.19	-4,444.72	-530.62	4,476.28	4,470.42	5.86	763.300		
2,400.00	2,400.00	2,335.10	2,334.90	5.26	0.85	-173.17	-4,444.91	-532.17	4,476.87	4,470.77	6.10	733.932		
2,500.00	2,500.00	2,400.00	2,399.77	5.48	0.86	-173.16	-4,445.63	-533.55	4,478.22	4,471.89	6.33	707.024		
2,600.00	2,600.00	2,486.96	2,486.71	5.71	0.87	-173.14	-4,447.13	-534.80	4,480.11	4,473.54	6.57	681.915		
2,700.00	2,700.00	2,583.02	2,582.75	5.93	0.88	-173.14	-4,449.12	-535.27	4,482.23	4,475.42	6.81	658.448		
2,800.00	2,800.00	2,683.60	2,683.30	6.15	0.90	-173.14	-4,451.26	-535.44	4,484.37	4,477.32	7.05	636.421		
2,900.00	2,900.00	2,798.47	2,798.15	6.38	0.92	-173.13	-4,453.43	-536.50	4,486.35	4,479.06	7.29	615.499		
3,000.00	3,000.00	2,991.48	2,991.12	6.60	0.95	-173.09	-4,454.94	-539.91	4,487.55	4,480.01	7.55	594.643		
3,100.00	3,100.00	3,176.92	3,176.51	6.83	0.99	-173.05	-4,452.00	-542.63	4,486.01	4,478.21	7.80	575.060		
3,200.00	3,200.00	3,261.71	3,261.28	7.05	1.01	-173.04	-4,450.14	-542.93	4,483.90	4,475.86	8.04	557.644		
3,300.00	3,300.00	3,350.13	3,349.69	7.28	1.02	-173.04	-4,448.69	-543.04	4,482.27	4,473.99	8.28	541.217		
3,400.00	3,400.00	3,450.24	3,449.79	7.50	1.04	-173.04	-4,447.09	-542.86	4,480.67	4,472.14	8.53	525.560		
3,500.00	3,500.00	3,543.55	3,543.09	7.73	1.06	-173.04	-4,445.66	-542.74	4,479.13	4,470.36	8.77	510.801		
3,600.00	3,600.00	3,637.35	3,636.88	7.95	1.08	135.45	-4,444.41	-542.63	4,478.42	4,469.41	9.01	497.182		
3,604.57	3,604.56	3,641.97	3,641.50	7.96	1.08	135.45	-4,444.35	-542.63	4,478.42	4,469.40	9.02	496.587		
3,700.00	3,699.96	3,748.54	3,748.05	8.16	1.10	135.47	-4,442.93	-542.32	4,478.93	4,469.68	9.25	484.429		
3,800.00	3,799.86	3,858.23	3,857.73	8.38	1.12	135.50	-4,441.05	-542.06	4,480.30	4,470.82	9.49	472.319		
3,850.45	3,850.23	3,909.40	3,908.90	8.49	1.14	135.52	-4,440.15	-541.96	4,481.46	4,471.85	9.61	466.486		
3,900.00	3,899.69	3,970.34	3,969.82	8.60	1.15	135.55	-4,438.99	-541.83	4,482.67	4,472.95	9.73	460.786		
4,000.00	3,999.50	4,056.45	4,055.91	8.82	1.17	135.60	-4,437.30	-541.50	4,485.06	4,475.09	9.97	449.992		
4,100.00	4,099.31	4,139.48	4,138.93	9.04	1.18	135.64	-4,436.14	-540.86	4,487.94	4,477.73	10.21	439.739		
4,200.00	4,199.13	4,245.24	4,244.68	9.26	1.21	135.69	-4,434.74	-540.57	4,490.97	4,480.52	10.45	429.712		
4,300.00	4,298.94	4,346.03	4,345.46	9.48	1.23	135.75	-4,433.12	-540.40	4,493.73	4,483.04	10.70	420.090		
4,400.00	4,398.75	4,430.45	4,429.87	9.70	1.25	135.80	-4,432.01	-540.28	4,496.80	4,485.86	10.94	411.042		
4,500.00	4,498.57	4,522.99	4,522.40	9.93	1.27	135.84	-4,431.12	-539.67	4,500.14	4,488.95	11.18	402.374		
4,600.00	4,598.38	4,627.32	4,626.72	10.15	1.29	135.88	-4,430.19	-538.05	4,503.45	4,492.02	11.43	394.069		
4,700.00	4,698.19	4,719.01	4,718.39	10.38	1.31	135.91	-4,429.44	-536.37	4,506.79	4,495.12	11.67	386.228		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 - 63H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 100- VES GyroFlex V2													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)				Offset +N/-S (usft)	Offset +E/-W (usft)	
4,800.00	4,798.01	4,800.00	4,799.36	10.60	1.32	135.93	-4,429.12	-534.63	4,510.50	4,498.60	11.91	378.852		
4,900.00	4,897.82	4,881.02	4,880.35	10.83	1.33	135.95	-4,429.19	-532.41	4,514.63	4,502.49	12.14	371.875		
5,000.00	4,997.63	4,981.65	4,980.92	11.06	1.34	135.95	-4,429.61	-528.87	4,518.98	4,506.60	12.38	365.113		
5,100.00	5,097.45	5,103.11	5,102.26	11.29	1.35	135.95	-4,429.90	-523.72	4,523.06	4,510.45	12.62	358.481		
5,200.00	5,197.26	5,213.32	5,212.38	11.52	1.37	135.95	-4,429.76	-518.96	4,526.76	4,513.91	12.86	352.055		
5,300.00	5,297.07	5,300.00	5,298.98	11.75	1.38	135.96	-4,429.47	-515.42	4,530.33	4,517.23	13.10	345.913		
5,400.00	5,396.88	5,380.39	5,379.32	11.98	1.39	135.96	-4,429.45	-512.52	4,534.27	4,520.94	13.33	340.072		
5,500.00	5,496.70	5,488.09	5,486.97	12.21	1.41	135.98	-4,429.83	-509.27	4,538.63	4,525.05	13.57	334.393		
5,600.00	5,596.51	5,584.19	5,583.02	12.44	1.43	136.00	-4,429.98	-506.36	4,542.78	4,528.97	13.81	328.915		
5,700.00	5,696.32	5,679.73	5,678.53	12.67	1.44	136.01	-4,430.24	-503.52	4,547.06	4,533.01	14.05	323.636		
5,800.00	5,796.14	5,773.24	5,772.00	12.90	1.46	136.03	-4,430.59	-500.85	4,551.45	4,537.17	14.29	318.552		
5,900.00	5,895.95	5,875.86	5,874.56	13.14	1.47	136.04	-4,431.07	-497.74	4,555.92	4,541.39	14.53	313.615		
6,000.00	5,995.76	5,985.34	5,984.00	13.37	1.49	136.06	-4,431.36	-494.72	4,560.23	4,545.46	14.77	308.792		
6,100.00	6,095.58	6,100.00	6,098.62	13.60	1.52	136.08	-4,431.14	-491.57	4,564.05	4,549.04	15.01	304.028		
6,200.00	6,195.39	6,181.26	6,179.84	13.84	1.53	136.10	-4,431.01	-489.24	4,567.95	4,552.70	15.25	299.517		
6,300.00	6,295.20	6,929.00	6,914.46	14.07	1.77	135.56	-4,394.61	-410.01	4,571.34	4,555.63	15.71	290.988		
6,400.00	6,395.01	6,929.00	6,914.46	14.31	1.77	135.56	-4,394.61	-410.01	4,562.74	4,546.84	15.90	286.881		
6,500.00	6,494.83	6,929.00	6,914.46	14.54	1.77	135.56	-4,394.61	-410.01	4,556.32	4,540.21	16.11	282.892		
6,600.00	6,594.64	6,929.00	6,914.46	14.77	1.77	135.56	-4,394.61	-410.01	4,552.09	4,535.77	16.32	279.003		
6,655.23	6,649.77	6,929.00	6,914.46	14.90	1.77	135.56	-4,394.61	-410.01	4,550.69	4,534.25	16.43	276.892		
6,700.00	6,694.46	6,929.00	6,914.46	15.00	1.77	135.56	-4,394.61	-410.01	4,549.92	4,533.40	16.52	275.389		
6,800.00	6,794.36	6,929.00	6,914.46	15.18	1.77	135.55	-4,394.61	-410.01	4,548.90	4,532.20	16.70	272.452		
6,857.39	6,851.72	6,929.00	6,914.46	15.28	1.77	135.55	-4,394.61	-410.01	4,548.74	4,531.94	16.80	270.762		
6,900.00	6,894.32	6,929.00	6,914.46	15.36	1.77	135.55	-4,394.61	-410.01	4,548.83	4,531.95	16.88	269.501		
7,005.68	7,000.00	6,929.00	6,914.46	15.55	1.77	-172.92	-4,394.61	-410.01	4,549.79	4,532.71	17.08	266.392		
7,100.00	7,094.32	6,929.00	6,914.46	15.73	1.77	-172.92	-4,394.61	-410.01	4,552.10	4,534.81	17.29	263.330		
7,200.00	7,194.32	6,929.00	6,914.46	15.95	1.77	-172.92	-4,394.61	-410.01	4,556.68	4,539.14	17.54	259.837		
7,300.00	7,294.32	6,929.00	6,914.46	16.17	1.77	-172.92	-4,394.61	-410.01	4,563.44	4,545.65	17.79	256.479		
7,400.00	7,394.32	6,929.00	6,914.46	16.39	1.77	-172.92	-4,394.61	-410.01	4,572.39	4,554.34	18.05	253.278		
7,500.00	7,494.32	6,929.00	6,914.46	16.61	1.77	-172.92	-4,394.61	-410.01	4,583.50	4,565.18	18.32	250.248		
7,600.00	7,594.32	6,929.00	6,914.46	16.83	1.77	-172.92	-4,394.61	-410.01	4,596.76	4,578.18	18.58	247.403		
7,700.00	7,694.32	6,929.00	6,914.46	17.05	1.77	-172.92	-4,394.61	-410.01	4,612.14	4,593.30	18.84	244.752		
7,800.00	7,794.32	6,929.00	6,914.46	17.27	1.77	-172.92	-4,394.61	-410.01	4,629.64	4,610.54	19.11	242.302		
7,900.00	7,894.32	6,929.00	6,914.46	17.48	1.77	-172.92	-4,394.61	-410.01	4,649.23	4,629.86	19.37	240.054		
8,000.00	7,994.32	6,929.00	6,914.46	17.70	1.77	-172.92	-4,394.61	-410.01	4,670.87	4,651.24	19.62	238.008		
8,100.00	8,094.32	6,929.00	6,914.46	17.92	1.77	-172.92	-4,394.61	-410.01	4,694.54	4,674.66	19.88	236.162		
8,200.00	8,194.32	6,929.00	6,914.46	18.14	1.77	-172.92	-4,394.61	-410.01	4,720.22	4,700.09	20.13	234.511		
8,300.00	8,294.32	6,929.00	6,914.46	18.36	1.77	-172.92	-4,394.61	-410.01	4,747.86	4,727.48	20.37	233.049		
8,400.00	8,394.32	6,929.00	6,914.46	18.58	1.77	-172.92	-4,394.61	-410.01	4,777.43	4,756.82	20.61	231.770		
8,500.00	8,494.32	6,929.00	6,914.46	18.80	1.77	-172.92	-4,394.61	-410.01	4,808.91	4,788.06	20.85	230.666		
8,600.00	8,594.32	6,929.00	6,914.46	19.03	1.77	-172.92	-4,394.61	-410.01	4,842.24	4,821.16	21.08	229.729		
8,700.00	8,694.32	6,929.00	6,914.46	19.25	1.77	-172.92	-4,394.61	-410.01	4,877.40	4,856.09	21.30	228.951		
8,800.00	8,794.32	6,929.00	6,914.46	19.47	1.77	-172.92	-4,394.61	-410.01	4,914.34	4,892.81	21.52	228.324		
8,900.00	8,894.32	6,929.00	6,914.46	19.69	1.77	-172.92	-4,394.61	-410.01	4,953.02	4,931.28	21.74	227.840		
9,000.00	8,994.32	6,929.00	6,914.46	19.91	1.77	-172.92	-4,394.61	-410.01	4,993.41	4,971.46	21.95	227.489		
9,052.74	9,047.06	6,929.00	6,914.46	20.02	1.77	-172.92	-4,394.61	-410.01	5,015.38	4,993.32	22.06	227.355		
9,100.00	9,094.26	6,929.00	6,914.46	20.12	1.77	7.25	-4,394.61	-410.01	5,033.69	5,011.55	22.14	227.333		
9,150.00	9,143.85	6,929.00	6,914.46	20.20	1.77	7.04	-4,394.61	-410.01	5,049.55	5,027.33	22.21	227.307		
9,200.00	9,192.70	6,929.00	6,914.46	20.27	1.77	6.89	-4,394.61	-410.01	5,061.70	5,039.42	22.29	227.134		
9,250.00	9,240.44	6,929.00	6,914.46	20.35	1.77	6.79	-4,394.61	-410.01	5,070.10	5,047.74	22.35	226.815		
9,300.00	9,286.71	6,929.00	6,914.46	20.42	1.77	6.74	-4,394.61	-410.01	5,074.68	5,052.26	22.42	226.357		
9,350.00	9,331.16	6,929.00	6,914.46	20.49	1.77	6.73	-4,394.61	-410.01	5,075.43	5,052.95	22.48	225.762		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 - 63H - OH - OH													Offset Site Error: 0.00 usft	
Survey Program: 100- VES GyroFlex V2													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)			
9,400.00	9,373.45	6,929.00	6,914.46	20.55	1.77	6.76	-4,394.61	-410.01	5,072.34	5,049.80	22.54	225.033		
9,450.00	9,413.25	6,929.00	6,914.46	20.62	1.77	6.85	-4,394.61	-410.01	5,065.43	5,042.83	22.60	224.172		
9,500.00	9,450.26	6,929.00	6,914.46	20.68	1.77	6.98	-4,394.61	-410.01	5,054.73	5,032.09	22.65	223.178		
9,550.00	9,484.20	6,929.00	6,914.46	20.75	1.77	7.16	-4,394.61	-410.01	5,040.31	5,017.61	22.70	222.054		
9,600.00	9,514.82	6,929.00	6,914.46	20.84	1.77	7.41	-4,394.61	-410.01	5,022.24	4,999.50	22.75	220.803		
9,650.00	9,541.88	6,929.00	6,914.46	20.94	1.77	7.73	-4,394.61	-410.01	5,000.62	4,977.83	22.79	219.427		
9,700.00	9,565.17	6,929.00	6,914.46	21.07	1.77	8.13	-4,394.61	-410.01	4,975.57	4,952.74	22.83	217.932		
9,750.00	9,584.52	6,929.00	6,914.46	21.24	1.77	8.63	-4,394.61	-410.01	4,947.23	4,924.36	22.87	216.325		
9,800.00	9,599.78	6,929.00	6,914.46	21.43	1.77	9.26	-4,394.61	-410.01	4,915.76	4,892.85	22.91	214.614		
9,850.00	9,610.83	6,929.00	6,914.46	21.64	1.77	10.05	-4,394.61	-410.01	4,881.34	4,858.40	22.94	212.809		
9,900.00	9,617.59	6,929.00	6,914.46	21.88	1.77	11.07	-4,394.61	-410.01	4,844.17	4,821.21	22.97	210.922		
9,950.00	9,620.01	6,929.00	6,914.46	22.14	1.77	12.40	-4,394.61	-410.01	4,804.49	4,781.49	22.99	208.964		
9,957.57	9,620.00	6,929.00	6,914.46	22.19	1.77	12.64	-4,394.61	-410.01	4,798.27	4,775.27	23.00	208.615		
10,000.00	9,619.64	6,929.00	6,914.46	22.43	1.77	12.64	-4,394.61	-410.01	4,763.36	4,740.35	23.01	206.991		
10,100.00	9,618.80	6,929.00	6,914.46	23.08	1.77	12.64	-4,394.61	-410.01	4,681.57	4,658.52	23.05	203.121		
10,200.00	9,617.96	6,929.00	6,914.46	23.82	1.77	12.64	-4,394.61	-410.01	4,600.50	4,577.40	23.10	199.165		
10,300.00	9,617.11	6,929.00	6,914.46	24.65	1.77	12.64	-4,394.61	-410.01	4,520.18	4,497.02	23.17	195.120		
10,400.00	9,616.27	6,929.00	6,914.46	25.56	1.77	12.64	-4,394.61	-410.01	4,440.67	4,417.42	23.25	190.986		
10,500.00	9,615.43	6,929.00	6,914.46	26.54	1.77	12.64	-4,394.61	-410.01	4,362.00	4,338.64	23.36	186.763		
10,600.00	9,614.59	6,929.00	6,914.46	27.58	1.77	12.64	-4,394.61	-410.01	4,284.21	4,260.73	23.48	182.450		
10,700.00	9,613.74	6,929.00	6,914.46	28.68	1.77	12.64	-4,394.61	-410.01	4,207.37	4,183.74	23.63	178.050		
10,800.00	9,612.90	6,929.00	6,914.46	29.83	1.77	12.64	-4,394.61	-410.01	4,131.52	4,107.72	23.80	173.567		
10,900.00	9,612.06	6,929.00	6,914.46	31.02	1.77	12.64	-4,394.61	-410.01	4,056.71	4,032.71	24.00	169.006		
11,000.00	9,611.22	6,929.00	6,914.46	32.25	1.77	12.64	-4,394.61	-410.01	3,983.02	3,958.78	24.23	164.373		
11,100.00	9,610.37	6,929.00	6,914.46	33.52	1.77	12.64	-4,394.61	-410.01	3,910.49	3,886.00	24.49	159.678		
11,200.00	9,609.53	6,929.00	6,914.46	34.81	1.77	12.64	-4,394.61	-410.01	3,839.19	3,814.41	24.78	154.932		
11,300.00	9,608.69	6,929.00	6,914.46	36.14	1.77	12.64	-4,394.61	-410.01	3,769.20	3,744.09	25.10	150.146		
11,400.00	9,607.85	6,929.00	6,914.46	37.49	1.77	12.64	-4,394.61	-410.01	3,700.59	3,675.12	25.46	145.335		
11,500.00	9,607.01	6,929.00	6,914.46	38.86	1.77	12.64	-4,394.61	-410.01	3,633.43	3,607.57	25.86	140.515		
11,600.00	9,606.16	6,929.00	6,914.46	40.25	1.77	12.64	-4,394.61	-410.01	3,567.81	3,541.52	26.29	135.702		
11,700.00	9,605.32	6,929.00	6,914.46	41.66	1.77	12.64	-4,394.61	-410.01	3,503.82	3,477.06	26.76	130.917		
11,800.00	9,604.48	6,929.00	6,914.46	43.09	1.77	12.64	-4,394.61	-410.01	3,441.55	3,414.27	27.28	126.176		
11,900.00	9,603.64	6,929.00	6,914.46	44.53	1.77	12.64	-4,394.61	-410.01	3,381.09	3,353.26	27.83	121.500		
12,000.00	9,602.79	6,929.00	6,914.46	45.98	1.77	12.64	-4,394.61	-410.01	3,322.53	3,294.11	28.42	116.908		
12,100.00	9,601.95	6,929.00	6,914.46	47.45	1.77	12.64	-4,394.61	-410.01	3,265.99	3,236.94	29.05	112.418		
12,200.00	9,601.11	6,929.00	6,914.46	48.92	1.77	12.64	-4,394.61	-410.01	3,211.57	3,181.85	29.72	108.048		
12,300.00	9,600.27	6,929.00	6,914.46	50.41	1.77	12.64	-4,394.61	-410.01	3,159.38	3,128.95	30.43	103.815		
12,400.00	9,599.42	6,929.00	6,914.46	51.90	1.77	12.64	-4,394.61	-410.01	3,109.53	3,078.35	31.18	99.734		
12,500.00	9,598.58	6,929.00	6,914.46	53.41	1.77	12.64	-4,394.61	-410.01	3,062.13	3,030.17	31.96	95.818		
12,600.00	9,597.74	6,929.00	6,914.46	54.92	1.77	12.64	-4,394.61	-410.01	3,017.30	2,984.53	32.77	92.079		
12,700.00	9,596.90	6,929.00	6,914.46	56.44	1.77	12.64	-4,394.61	-410.01	2,975.16	2,941.55	33.61	88.526		
12,800.00	9,596.05	6,929.00	6,914.46	57.97	1.77	12.64	-4,394.61	-410.01	2,935.83	2,901.35	34.47	85.168		
12,900.00	9,595.21	6,929.00	6,914.46	59.50	1.77	12.64	-4,394.61	-410.01	2,899.41	2,864.05	35.35	82.009		
13,000.00	9,594.37	6,929.00	6,914.46	61.04	1.77	12.64	-4,394.61	-410.01	2,866.01	2,829.76	36.25	79.054		
13,100.00	9,593.53	6,929.00	6,914.46	62.58	1.77	12.64	-4,394.61	-410.01	2,835.76	2,798.59	37.16	76.305		
13,200.00	9,592.69	6,929.00	6,914.46	64.13	1.77	12.64	-4,394.61	-410.01	2,808.74	2,770.66	38.08	73.763		
13,300.00	9,591.84	6,929.00	6,914.46	65.68	1.77	12.64	-4,394.61	-410.01	2,785.05	2,746.05	38.99	71.426		
13,400.00	9,591.00	6,929.00	6,914.46	67.23	1.77	12.64	-4,394.61	-410.01	2,764.77	2,724.87	39.90	69.294		
13,500.00	9,590.16	6,929.00	6,914.46	68.79	1.77	12.64	-4,394.61	-410.01	2,747.99	2,707.19	40.79	67.363		
13,600.00	9,589.32	6,929.00	6,914.46	70.36	1.77	12.64	-4,394.61	-410.01	2,734.76	2,693.09	41.67	65.629		
13,700.00	9,588.47	6,929.00	6,914.46	71.92	1.77	12.64	-4,394.61	-410.01	2,725.14	2,682.62	42.52	64.087		
13,800.00	9,587.63	6,929.00	6,914.46	73.49	1.77	12.64	-4,394.61	-410.01	2,719.17	2,675.82	43.35	62.732		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 - 63H - OH - OH													Offset Site Error: 0.00 usft	
Survey Program: 100- VES GyroFlex V2													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)				
13,900.00	9,586.79	6,929.00	6,914.46	75.06	1.77	12.64	-4,394.61	-410.01	2,716.87	2,672.73	44.13	61.558	CC, ES	
13,912.59	9,586.68	6,929.00	6,914.46	75.26	1.77	12.64	-4,394.61	-410.01	2,716.84	2,672.61	44.23	61.423		
14,000.00	9,585.95	6,929.00	6,914.46	76.64	1.77	12.64	-4,394.61	-410.01	2,718.24	2,673.36	44.89	60.560		
14,100.00	9,585.10	6,929.00	6,914.46	78.22	1.77	12.64	-4,394.61	-410.01	2,723.29	2,677.70	45.59	59.731		
14,200.00	9,584.26	6,929.00	6,914.46	79.80	1.77	12.64	-4,394.61	-410.01	2,732.00	2,685.74	46.26	59.064		
14,300.00	9,583.42	6,929.00	6,914.46	81.38	1.77	12.64	-4,394.61	-410.01	2,744.32	2,697.45	46.87	58.553		
14,400.00	9,582.58	6,929.00	6,914.46	82.97	1.77	12.64	-4,394.61	-410.01	2,760.21	2,712.78	47.43	58.191	SF	
14,500.00	9,581.73	6,929.00	6,914.46	84.55	1.77	12.64	-4,394.61	-410.01	2,779.61	2,731.67	47.95	57.972		
14,600.00	9,580.89	6,929.00	6,914.46	86.14	1.77	12.64	-4,394.61	-410.01	2,802.45	2,754.04	48.41	57.889		
14,700.00	9,580.05	6,929.00	6,914.46	87.73	1.77	12.64	-4,394.61	-410.01	2,828.64	2,779.82	48.82	57.937		
14,800.00	9,579.21	6,929.00	6,914.46	89.33	1.77	12.64	-4,394.61	-410.01	2,858.09	2,808.91	49.19	58.108		
14,900.00	9,578.37	6,929.00	6,914.46	90.92	1.77	12.64	-4,394.61	-410.01	2,890.71	2,841.20	49.50	58.397		
15,000.00	9,577.52	6,929.00	6,914.46	92.52	1.77	12.64	-4,394.61	-410.01	2,926.37	2,876.60	49.77	58.798		
15,100.00	9,576.68	6,929.00	6,914.46	94.11	1.77	12.64	-4,394.61	-410.01	2,964.99	2,914.99	50.00	59.305		
15,200.00	9,575.84	6,929.00	6,914.46	95.71	1.77	12.64	-4,394.61	-410.01	3,006.43	2,956.25	50.18	59.913		
15,300.00	9,575.00	6,929.00	6,914.46	97.31	1.77	12.64	-4,394.61	-410.01	3,050.59	3,000.27	50.33	60.618		
15,400.00	9,574.15	6,929.00	6,914.46	98.91	1.77	12.64	-4,394.61	-410.01	3,097.35	3,046.92	50.44	61.412		
15,500.00	9,573.31	6,929.00	6,914.46	100.52	1.77	12.64	-4,394.61	-410.01	3,146.60	3,096.08	50.51	62.293		
15,600.00	9,572.47	6,929.00	6,914.46	102.12	1.77	12.64	-4,394.61	-410.01	3,198.21	3,147.65	50.56	63.255		
15,700.00	9,571.63	6,929.00	6,914.46	103.73	1.77	12.64	-4,394.61	-410.01	3,252.08	3,201.50	50.58	64.294		
15,800.00	9,570.78	6,929.00	6,914.46	105.33	1.77	12.64	-4,394.61	-410.01	3,308.10	3,257.52	50.58	65.406		
15,900.00	9,569.94	6,929.00	6,914.46	106.94	1.77	12.64	-4,394.61	-410.01	3,366.15	3,315.60	50.55	66.586		
16,000.00	9,569.10	6,929.00	6,914.46	108.55	1.77	12.64	-4,394.61	-410.01	3,426.15	3,375.64	50.51	67.832		
16,100.00	9,568.26	6,929.00	6,914.46	110.16	1.77	12.64	-4,394.61	-410.01	3,487.97	3,437.52	50.45	69.139		
16,200.00	9,567.42	6,929.00	6,914.46	111.76	1.77	12.64	-4,394.61	-410.01	3,551.54	3,501.17	50.37	70.504		
16,300.00	9,566.57	6,929.00	6,914.46	113.38	1.77	12.64	-4,394.61	-410.01	3,616.75	3,566.47	50.29	71.923		
16,400.00	9,565.73	6,929.00	6,914.46	114.99	1.77	12.64	-4,394.61	-410.01	3,683.53	3,633.34	50.19	73.394		
16,500.00	9,564.89	6,929.00	6,914.46	116.60	1.77	12.64	-4,394.61	-410.01	3,751.78	3,701.70	50.08	74.913		
16,600.00	9,564.05	6,929.00	6,914.46	118.21	1.77	12.64	-4,394.61	-410.01	3,821.43	3,771.47	49.97	76.477		
16,700.00	9,563.20	6,929.00	6,914.46	119.83	1.77	12.64	-4,394.61	-410.01	3,892.41	3,842.56	49.85	78.085		
16,800.00	9,562.36	6,929.00	6,914.46	121.44	1.77	12.64	-4,394.61	-410.01	3,964.63	3,914.91	49.72	79.733		
16,900.00	9,561.52	6,929.00	6,914.46	123.05	1.77	12.64	-4,394.61	-410.01	4,038.04	3,988.45	49.60	81.419		
17,000.00	9,560.68	6,929.00	6,914.46	124.67	1.77	12.64	-4,394.61	-410.01	4,112.58	4,063.11	49.47	83.140		
17,080.26	9,560.00	6,929.00	6,914.46	125.97	1.77	12.64	-4,394.61	-410.01	4,173.16	4,123.80	49.36	84.545		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 - 63H - ST 1 - ST 1													Offset Site Error:	0.00 usft
Survey Program: 100- VES GyroFlex V2, 6733- VES GyroFlex V2, 10621-LEAM_MWD, 14962-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	
0.00	0.00	0.00	0.00	0.00	0.00	-173.21	-4,455.38	-530.11	4,486.86					
100.00	100.00	64.57	64.57	0.09	0.04	-173.21	-4,455.48	-530.12	4,486.93	4,486.80	0.13	N/A		
200.00	200.00	153.16	153.16	0.31	0.13	-173.21	-4,455.90	-530.16	4,487.40	4,486.96	0.45	N/A		
300.00	300.00	244.47	244.46	0.54	0.23	-173.21	-4,456.49	-530.26	4,488.06	4,487.29	0.76	5,882.372		
400.00	400.00	340.09	340.09	0.76	0.29	-173.22	-4,457.31	-530.29	4,488.91	4,487.86	1.05	4,256.136		
500.00	500.00	448.61	448.60	0.99	0.36	-173.21	-4,458.14	-530.52	4,489.69	4,488.35	1.34	3,343.506		
600.00	600.00	563.72	563.71	1.21	0.42	-173.21	-4,458.73	-530.61	4,490.22	4,488.59	1.63	2,759.643		
700.00	700.00	678.26	678.25	1.43	0.47	-173.21	-4,458.89	-530.80	4,490.37	4,488.47	1.90	2,365.065		
765.78	765.78	744.49	744.48	1.58	0.49	-173.21	-4,458.86	-530.93	4,490.36	4,488.29	2.07	2,171.731		
800.00	800.00	777.23	777.22	1.66	0.50	-173.21	-4,458.85	-531.04	4,490.37	4,488.21	2.15	2,084.442		
900.00	900.00	879.58	879.57	1.88	0.54	-173.20	-4,458.84	-531.35	4,490.39	4,487.98	2.41	1,865.118		
1,000.00	1,000.00	988.37	988.36	2.11	0.56	-173.20	-4,458.72	-531.35	4,490.28	4,487.62	2.66	1,689.770		
1,100.00	1,100.00	1,101.56	1,101.54	2.33	0.58	-173.21	-4,458.37	-530.91	4,489.92	4,487.02	2.91	1,544.933		
1,200.00	1,200.00	1,210.99	1,210.97	2.56	0.60	-173.22	-4,457.76	-530.25	4,489.30	4,486.15	3.15	1,423.200		
1,300.00	1,300.00	1,313.43	1,313.41	2.78	0.62	-173.22	-4,457.07	-529.56	4,488.55	4,485.15	3.40	1,319.827		
1,400.00	1,400.00	1,413.94	1,413.91	3.01	0.64	-173.23	-4,456.34	-528.94	4,487.76	4,484.11	3.65	1,230.478		
1,500.00	1,500.00	1,505.84	1,505.81	3.23	0.66	-173.24	-4,455.76	-528.46	4,487.07	4,483.18	3.89	1,152.974		
1,600.00	1,600.00	1,604.42	1,604.38	3.46	0.68	-173.24	-4,455.25	-527.87	4,486.49	4,482.35	4.14	1,084.109		
1,700.00	1,700.00	1,734.70	1,734.66	3.68	0.71	-173.26	-4,454.40	-526.55	4,485.76	4,481.37	4.39	1,021.106		
1,800.00	1,800.00	1,878.13	1,878.06	3.91	0.75	-173.27	-4,451.71	-525.54	4,483.73	4,479.07	4.65	963.813		
1,900.00	1,900.00	1,978.47	1,978.37	4.13	0.77	-173.26	-4,449.42	-525.85	4,481.49	4,476.59	4.90	914.439		
2,000.00	2,000.00	2,064.81	2,064.69	4.36	0.79	-173.25	-4,447.49	-526.63	4,479.39	4,474.24	5.15	870.456		
2,100.00	2,100.00	2,142.23	2,142.08	4.58	0.81	-173.23	-4,446.03	-527.82	4,477.70	4,472.31	5.39	830.973		
2,200.00	2,200.00	2,200.00	2,199.83	4.81	0.82	-173.21	-4,445.20	-528.96	4,476.61	4,470.99	5.63	795.712		
2,283.15	2,283.15	2,262.04	2,261.85	4.99	0.83	-173.20	-4,444.74	-530.38	4,476.27	4,470.45	5.82	768.509		
2,300.00	2,300.00	2,272.05	2,271.86	5.03	0.83	-173.19	-4,444.72	-530.62	4,476.28	4,470.42	5.86	763.300		
2,400.00	2,400.00	2,335.10	2,334.90	5.26	0.85	-173.17	-4,444.91	-532.17	4,476.87	4,470.77	6.10	733.932		
2,500.00	2,500.00	2,400.00	2,399.77	5.48	0.86	-173.16	-4,445.63	-533.55	4,478.22	4,471.89	6.33	707.024		
2,600.00	2,600.00	2,486.96	2,486.71	5.71	0.87	-173.14	-4,447.13	-534.80	4,480.11	4,473.54	6.57	681.915		
2,700.00	2,700.00	2,583.02	2,582.75	5.93	0.88	-173.14	-4,449.12	-535.27	4,482.23	4,475.42	6.81	658.448		
2,800.00	2,800.00	2,683.60	2,683.30	6.15	0.90	-173.14	-4,451.26	-535.44	4,484.37	4,477.32	7.05	636.421		
2,900.00	2,900.00	2,798.47	2,798.15	6.38	0.92	-173.13	-4,453.43	-536.50	4,486.35	4,479.06	7.29	615.499		
3,000.00	3,000.00	2,991.48	2,991.12	6.60	0.95	-173.09	-4,454.94	-539.91	4,487.55	4,480.01	7.55	594.643		
3,100.00	3,100.00	3,176.92	3,176.51	6.83	0.99	-173.05	-4,452.00	-542.63	4,486.01	4,478.21	7.80	575.060		
3,200.00	3,200.00	3,261.71	3,261.28	7.05	1.01	-173.04	-4,450.14	-542.93	4,483.90	4,475.86	8.04	557.644		
3,300.00	3,300.00	3,350.13	3,349.69	7.28	1.02	-173.04	-4,448.69	-543.04	4,482.27	4,473.99	8.28	541.217		
3,400.00	3,400.00	3,450.24	3,449.79	7.50	1.04	-173.04	-4,447.09	-542.86	4,480.67	4,472.14	8.53	525.560		
3,500.00	3,500.00	3,543.55	3,543.09	7.73	1.06	-173.04	-4,445.66	-542.74	4,479.13	4,470.36	8.77	510.801		
3,600.00	3,600.00	3,637.35	3,636.88	7.95	1.08	135.45	-4,444.41	-542.63	4,478.42	4,469.41	9.01	497.182		
3,604.57	3,604.56	3,641.97	3,641.50	7.96	1.08	135.45	-4,444.35	-542.63	4,478.42	4,469.40	9.02	496.587		
3,700.00	3,699.96	3,748.54	3,748.05	8.16	1.10	135.47	-4,442.93	-542.32	4,478.93	4,469.68	9.25	484.429		
3,800.00	3,799.86	3,858.23	3,857.73	8.38	1.12	135.50	-4,441.05	-542.06	4,480.30	4,470.82	9.49	472.319		
3,850.45	3,850.23	3,909.40	3,908.90	8.49	1.14	135.52	-4,440.15	-541.96	4,481.46	4,471.85	9.61	466.486		
3,900.00	3,899.69	3,970.34	3,969.82	8.60	1.15	135.55	-4,438.99	-541.83	4,482.67	4,472.95	9.73	460.786		
4,000.00	3,999.50	4,056.45	4,055.91	8.82	1.17	135.60	-4,437.30	-541.50	4,485.06	4,475.09	9.97	449.992		
4,100.00	4,099.31	4,139.48	4,138.93	9.04	1.18	135.64	-4,436.14	-540.86	4,487.94	4,477.73	10.21	439.739		
4,200.00	4,199.13	4,245.24	4,244.68	9.26	1.21	135.69	-4,434.74	-540.57	4,490.97	4,480.52	10.45	429.712		
4,300.00	4,298.94	4,346.03	4,345.46	9.48	1.23	135.75	-4,433.12	-540.40	4,493.73	4,483.04	10.70	420.090		
4,400.00	4,398.75	4,430.45	4,429.87	9.70	1.25	135.80	-4,432.01	-540.28	4,496.80	4,485.86	10.94	411.042		
4,500.00	4,498.57	4,522.99	4,522.40	9.93	1.27	135.84	-4,431.12	-539.67	4,500.14	4,488.95	11.18	402.374		
4,600.00	4,598.38	4,627.32	4,626.72	10.15	1.29	135.88	-4,430.19	-538.05	4,503.45	4,492.02	11.43	394.069		
4,700.00	4,698.19	4,719.01	4,718.39	10.38	1.31	135.91	-4,429.44	-536.37	4,506.79	4,495.12	11.67	386.228		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 - 63H - ST 1 - ST 1													Offset Site Error: 0.00 usft	
Survey Program: 100- VES GyroFlex V2, 6733- VES GyroFlex V2, 10621-LEAM_MWD, 14962-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		
4,800.00	4,798.01	4,800.00	4,799.36	10.60	1.32	135.93	-4,429.12	-534.63	4,510.50	4,498.60	11.91	378.852		
4,900.00	4,897.82	4,881.02	4,880.35	10.83	1.33	135.95	-4,429.19	-532.41	4,514.63	4,502.49	12.14	371.875		
5,000.00	4,997.63	4,981.65	4,980.92	11.06	1.34	135.95	-4,429.61	-528.87	4,518.98	4,506.60	12.38	365.113		
5,100.00	5,097.45	5,103.11	5,102.26	11.29	1.35	135.95	-4,429.90	-523.72	4,523.06	4,510.45	12.62	358.481		
5,200.00	5,197.26	5,213.32	5,212.38	11.52	1.37	135.95	-4,429.76	-518.96	4,526.76	4,513.91	12.86	352.055		
5,300.00	5,297.07	5,300.00	5,298.98	11.75	1.38	135.96	-4,429.47	-515.42	4,530.33	4,517.23	13.10	345.913		
5,400.00	5,396.88	5,380.39	5,379.32	11.98	1.39	135.96	-4,429.45	-512.52	4,534.27	4,520.94	13.33	340.072		
5,500.00	5,496.70	5,488.09	5,486.97	12.21	1.41	135.98	-4,429.83	-509.27	4,538.63	4,525.05	13.57	334.393		
5,600.00	5,596.51	5,584.19	5,583.02	12.44	1.43	136.00	-4,429.98	-506.36	4,542.78	4,528.97	13.81	328.915		
5,700.00	5,696.32	5,679.73	5,678.53	12.67	1.44	136.01	-4,430.24	-503.52	4,547.06	4,533.01	14.05	323.636		
5,800.00	5,796.14	5,773.24	5,772.00	12.90	1.46	136.03	-4,430.59	-500.85	4,551.45	4,537.17	14.29	318.552		
5,900.00	5,895.95	5,875.86	5,874.56	13.14	1.47	136.04	-4,431.07	-497.74	4,555.92	4,541.39	14.53	313.615		
6,000.00	5,995.76	5,985.34	5,984.00	13.37	1.49	136.06	-4,431.36	-494.72	4,560.23	4,545.46	14.77	308.792		
6,100.00	6,095.58	6,100.00	6,098.62	13.60	1.52	136.08	-4,431.14	-491.57	4,564.05	4,549.04	15.01	304.028		
6,200.00	6,195.39	6,181.26	6,179.84	13.84	1.53	136.10	-4,431.01	-489.24	4,567.95	4,552.70	15.25	299.517		
6,300.00	6,295.20	6,308.98	6,307.52	14.07	1.56	136.12	-4,431.06	-485.70	4,572.06	4,556.56	15.50	295.040		
6,400.00	6,395.01	6,400.00	6,398.50	14.31	1.58	136.14	-4,430.85	-483.19	4,575.87	4,560.13	15.74	290.754		
6,500.00	6,494.83	6,481.29	6,479.76	14.54	1.60	136.16	-4,430.91	-481.00	4,579.98	4,564.00	15.98	286.662		
6,600.00	6,594.64	14,962.00	11,030.40	14.77	66.20	173.03	-425.03	-341.93	4,514.99	4,474.31	40.68	110.988		
6,655.23	6,649.77	14,962.00	11,030.40	14.90	66.20	173.03	-425.03	-341.93	4,461.12	4,420.31	40.81	109.320		
6,700.00	6,694.46	14,962.00	11,030.40	15.00	66.20	172.79	-425.03	-341.93	4,417.44	4,376.53	40.91	107.974		
6,800.00	6,794.36	14,962.00	11,030.40	15.18	66.20	172.18	-425.03	-341.93	4,319.67	4,278.53	41.14	104.994		
6,900.00	6,894.32	14,962.00	11,030.40	15.36	66.20	171.47	-425.03	-341.93	4,221.65	4,180.28	41.37	102.040		
7,005.68	7,000.00	14,962.00	11,030.40	15.55	66.20	-137.87	-425.03	-341.93	4,117.80	4,076.18	41.62	98.950		
7,100.00	7,094.32	14,962.00	11,030.40	15.73	66.20	-137.87	-425.03	-341.93	4,025.03	3,983.20	41.83	96.213		
7,200.00	7,194.32	14,962.00	11,030.40	15.95	66.20	-137.87	-425.03	-341.93	3,926.75	3,884.68	42.07	93.329		
7,300.00	7,294.32	14,962.00	11,030.40	16.17	66.20	-137.87	-425.03	-341.93	3,828.57	3,786.24	42.32	90.464		
7,400.00	7,394.32	14,962.00	11,030.40	16.39	66.20	-137.87	-425.03	-341.93	3,730.47	3,687.90	42.58	87.619		
7,500.00	7,494.32	14,962.00	11,030.40	16.61	66.20	-137.87	-425.03	-341.93	3,632.49	3,589.65	42.84	84.795		
7,600.00	7,594.32	14,962.00	11,030.40	16.83	66.20	-137.87	-425.03	-341.93	3,534.61	3,491.50	43.11	81.992		
7,700.00	7,694.32	14,962.00	11,030.40	17.05	66.20	-137.87	-425.03	-341.93	3,436.86	3,393.47	43.39	79.212		
7,800.00	7,794.32	14,962.00	11,030.40	17.27	66.20	-137.87	-425.03	-341.93	3,339.24	3,295.57	43.68	76.453		
7,900.00	7,894.32	14,962.00	11,030.40	17.48	66.20	-137.87	-425.03	-341.93	3,241.77	3,197.79	43.98	73.718		
8,000.00	7,994.32	14,962.00	11,030.40	17.70	66.20	-137.87	-425.03	-341.93	3,144.45	3,100.17	44.28	71.007		
8,100.00	8,094.32	14,962.00	11,030.40	17.92	66.20	-137.87	-425.03	-341.93	3,047.31	3,002.71	44.60	68.319		
8,200.00	8,194.32	14,962.00	11,030.40	18.14	66.20	-137.87	-425.03	-341.93	2,950.36	2,905.43	44.94	65.657		
8,300.00	8,294.32	14,962.00	11,030.40	18.36	66.20	-137.87	-425.03	-341.93	2,853.62	2,808.34	45.28	63.020		
8,400.00	8,394.32	14,962.00	11,030.40	18.58	66.20	-137.87	-425.03	-341.93	2,757.12	2,711.47	45.64	60.409		
8,500.00	8,494.32	14,962.00	11,030.40	18.80	66.20	-137.87	-425.03	-341.93	2,660.87	2,614.85	46.02	57.825		
8,600.00	8,594.32	14,962.00	11,030.40	19.03	66.20	-137.87	-425.03	-341.93	2,564.90	2,518.50	46.41	55.269		
8,700.00	8,694.32	14,962.00	11,030.40	19.25	66.20	-137.87	-425.03	-341.93	2,469.26	2,422.44	46.82	52.741		
8,800.00	8,794.32	14,962.00	11,030.40	19.47	66.20	-137.87	-425.03	-341.93	2,373.98	2,326.73	47.25	50.243		
8,900.00	8,894.32	14,962.00	11,030.40	19.69	66.20	-137.87	-425.03	-341.93	2,279.10	2,231.40	47.70	47.775		
9,000.00	8,994.32	14,962.00	11,030.40	19.91	66.20	-137.87	-425.03	-341.93	2,184.68	2,136.50	48.19	45.339		
9,052.74	9,047.06	14,962.00	11,030.40	20.02	66.20	-137.87	-425.03	-341.93	2,135.09	2,086.64	48.45	44.068		
9,100.00	9,094.26	14,962.00	11,030.40	20.12	66.20	52.87	-425.03	-341.93	2,090.33	2,041.63	48.69	42.929		
9,150.00	9,143.85	14,962.00	11,030.40	20.20	66.20	67.76	-425.03	-341.93	2,042.32	1,993.37	48.95	41.723		
9,200.00	9,192.70	14,962.00	11,030.40	20.27	66.20	86.22	-425.03	-341.93	1,993.96	1,944.75	49.20	40.524		
9,250.00	9,240.44	14,962.00	11,030.40	20.35	66.20	105.02	-425.03	-341.93	1,945.61	1,896.15	49.46	39.340		
9,300.00	9,286.71	14,962.00	11,030.40	20.42	66.20	120.63	-425.03	-341.93	1,897.65	1,847.94	49.71	38.178		
9,350.00	9,331.16	14,962.00	11,030.40	20.49	66.20	132.06	-425.03	-341.93	1,850.49	1,800.54	49.95	37.046		
9,400.00	9,373.45	14,962.00	11,030.40	20.55	66.20	140.13	-425.03	-341.93	1,804.57	1,754.38	50.19	35.953		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 - 63H - ST 1 - ST 1													Offset Site Error:	0.00 usft
Survey Program: 100- VES GyroFlex V2, 6733- VES GyroFlex V2, 10621-LEAM_MWD, 14962-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	9,413.25	14,962.00	11,030.40	20.62	66.20	145.85	-425.03	-341.93	1,760.35	1,709.92	50.43	34.908		
9,500.00	9,450.26	14,962.00	11,030.40	20.68	66.20	149.98	-425.03	-341.93	1,718.30	1,667.64	50.66	33.919		
9,550.00	9,484.20	14,962.00	11,030.40	20.75	66.20	153.04	-425.03	-341.93	1,678.92	1,628.04	50.88	32.997		
9,600.00	9,514.82	14,962.00	11,030.40	20.84	66.20	155.33	-425.03	-341.93	1,642.71	1,591.62	51.09	32.151		
9,650.00	9,541.88	14,962.00	11,030.40	20.94	66.20	157.06	-425.03	-341.93	1,610.18	1,558.89	51.30	31.390		
9,700.00	9,565.17	14,962.00	11,030.40	21.07	66.20	158.37	-425.03	-341.93	1,581.80	1,530.32	51.48	30.725		
9,750.00	9,584.52	14,962.00	11,030.40	21.24	66.20	159.35	-425.03	-341.93	1,558.02	1,506.37	51.65	30.164		
9,800.00	9,599.78	14,962.00	11,030.40	21.43	66.20	160.05	-425.03	-341.93	1,539.24	1,487.44	51.80	29.715		
9,850.00	9,610.83	14,962.00	11,030.40	21.64	66.20	160.52	-425.03	-341.93	1,525.79	1,473.87	51.92	29.387		
9,900.00	9,617.59	14,962.00	11,030.40	21.88	66.20	160.79	-425.03	-341.93	1,517.91	1,465.90	52.01	29.184		
9,944.07	9,619.95	14,960.75	11,030.38	22.11	66.20	160.86	-426.27	-342.01	1,515.71	1,463.65	52.06	29.116		
9,950.00	9,620.01	14,954.84	11,030.32	22.14	66.20	160.84	-432.17	-342.41	1,515.74	1,463.69	52.05	29.123		
9,957.57	9,620.00	14,947.29	11,030.24	22.19	66.20	160.81	-439.70	-342.91	1,515.86	1,463.82	52.04	29.129		
10,000.00	9,619.64	14,904.97	11,029.80	22.43	66.19	160.70	-481.92	-345.71	1,516.81	1,464.64	52.16	29.078		
10,100.00	9,618.80	14,801.99	11,028.72	23.08	64.77	160.44	-584.69	-352.26	1,518.98	1,467.09	51.89	29.271		
10,200.00	9,617.96	14,738.79	11,028.60	23.82	63.73	160.28	-647.75	-356.49	1,522.15	1,470.22	51.93	29.309		
10,300.00	9,617.11	14,640.76	11,030.17	24.65	62.14	159.99	-745.42	-364.64	1,527.52	1,475.82	51.70	29.546		
10,400.00	9,616.27	14,525.61	11,030.68	25.56	60.25	159.71	-860.31	-372.47	1,531.29	1,479.97	51.32	29.837		
10,500.00	9,615.43	14,456.31	11,031.64	26.54	59.12	159.57	-929.47	-376.60	1,535.78	1,484.40	51.38	29.888		
10,600.00	9,614.59	14,370.93	11,034.52	27.58	57.72	159.38	-1,014.60	-382.55	1,542.35	1,491.03	51.33	30.049		
10,700.00	9,613.74	14,260.81	11,037.66	28.68	55.92	159.15	-1,124.43	-389.95	1,548.44	1,497.36	51.08	30.312		
10,800.00	9,612.90	14,177.53	11,040.48	29.83	54.56	159.01	-1,207.52	-394.66	1,554.72	1,503.64	51.08	30.438		
10,900.00	9,612.06	14,086.49	11,044.80	31.02	53.07	158.87	-1,298.29	-400.18	1,562.35	1,511.32	51.02	30.620		
11,000.00	9,611.22	13,983.71	11,049.48	32.25	51.39	158.72	-1,400.81	-405.79	1,569.61	1,518.73	50.89	30.846		
11,100.00	9,610.37	13,868.37	11,054.95	33.52	49.49	158.60	-1,515.89	-411.19	1,576.83	1,526.18	50.65	31.133		
11,200.00	9,609.53	13,760.96	11,059.21	34.81	47.73	158.51	-1,623.15	-414.97	1,582.86	1,532.37	50.48	31.354		
11,300.00	9,608.69	13,616.53	11,062.40	36.14	45.35	158.39	-1,767.48	-419.15	1,586.88	1,536.86	50.03	31.721		
11,400.00	9,607.85	13,522.33	11,063.80	37.49	43.80	158.33	-1,861.65	-421.04	1,590.06	1,540.05	50.01	31.793		
11,500.00	9,607.01	13,431.81	11,065.88	38.86	42.30	158.30	-1,952.13	-422.65	1,593.90	1,543.86	50.04	31.853		
11,600.00	9,606.16	13,314.63	11,068.45	40.25	40.37	158.24	-2,069.26	-425.02	1,597.80	1,547.94	49.87	32.042		
11,700.00	9,605.32	13,214.49	11,069.22	41.66	38.72	158.15	-2,169.37	-427.43	1,600.47	1,550.59	49.88	32.089		
11,800.00	9,604.48	13,121.55	11,070.71	43.09	37.19	158.10	-2,262.28	-429.20	1,603.72	1,553.78	49.95	32.109		
11,900.00	9,603.64	13,032.08	11,072.74	44.53	35.72	158.07	-2,351.71	-430.44	1,607.41	1,557.36	50.05	32.119		
12,000.00	9,602.79	12,935.12	11,076.01	45.98	34.11	158.10	-2,448.62	-430.70	1,611.68	1,561.61	50.07	32.185		
12,100.00	9,601.95	12,817.36	11,079.13	47.45	32.17	158.09	-2,566.33	-431.62	1,615.51	1,565.53	49.98	32.321		
12,200.00	9,601.11	12,718.25	11,080.52	48.92	30.54	158.03	-2,665.41	-433.67	1,618.65	1,568.56	50.09	32.315		
12,300.00	9,600.27	12,622.00	11,081.62	50.41	28.96	157.95	-2,761.62	-436.02	1,621.69	1,571.44	50.25	32.275		
12,400.00	9,599.42	12,527.00	11,083.28	51.90	27.40	157.89	-2,856.58	-438.18	1,625.22	1,574.79	50.42	32.231		
12,500.00	9,598.58	9,543.85	9,541.47	53.41	4.79	87.93	-4,485.29	-461.76	1,616.03	1,581.54	34.50	46.844		
12,600.00	9,597.74	9,545.08	9,542.70	54.92	4.79	88.04	-4,485.32	-461.77	1,524.93	1,489.13	35.80	42.601		
12,700.00	9,596.90	9,546.32	9,543.94	56.44	4.79	88.15	-4,485.35	-461.78	1,435.01	1,397.72	37.29	38.480		
12,800.00	9,596.05	9,547.57	9,545.19	57.97	4.79	88.26	-4,485.38	-461.78	1,346.51	1,307.49	39.02	34.507		
12,900.00	9,595.21	9,548.83	9,546.44	59.50	4.79	88.37	-4,485.40	-461.79	1,259.73	1,218.72	41.02	30.712		
13,000.00	9,594.37	9,550.09	9,547.71	61.04	4.79	88.49	-4,485.43	-461.80	1,175.06	1,131.73	43.32	27.122		
13,100.00	9,593.53	9,551.37	9,548.99	62.58	4.80	88.60	-4,485.46	-461.81	1,092.97	1,046.99	45.98	23.770		
13,200.00	9,592.69	9,552.66	9,550.27	64.13	4.80	88.71	-4,485.49	-461.81	1,014.11	965.08	49.03	20.684		
13,300.00	9,591.84	9,553.95	9,551.57	65.68	4.80	88.83	-4,485.52	-461.82	939.28	886.79	52.49	17.894		
13,400.00	9,591.00	9,555.26	9,552.87	67.23	4.80	88.94	-4,485.54	-461.83	869.52	813.15	56.37	15.426		
13,500.00	9,590.16	9,556.57	9,554.19	68.79	4.80	89.06	-4,485.57	-461.84	806.15	745.55	60.60	13.302		
13,600.00	9,589.32	9,557.90	9,555.51	70.36	4.80	89.18	-4,485.60	-461.84	750.79	685.74	65.06	11.541		
13,700.00	9,588.47	9,559.24	9,556.85	71.92	4.81	89.30	-4,485.63	-461.85	705.34	635.87	69.47	10.153		
13,800.00	9,587.63	9,560.58	9,558.19	73.49	4.81	89.41	-4,485.66	-461.86	671.79	598.31	73.48	9.142		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 - 63H - ST 1 - ST 1													Offset Site Error:	0.00 usft
Survey Program: 100- VES GyroFlex V2, 6733- VES GyroFlex V2, 10621-LEAM_MWD, 14962-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		
13,900.00	9,586.79	9,561.94	9,559.55	75.06	4.81	89.53	-4,485.69	-461.87	652.00	575.33	76.67	8.504		
13,981.02	9,586.11	9,563.04	9,560.66	76.34	4.81	89.63	-4,485.72	-461.88	646.95	568.59	78.36	8.256 CC, ES		
14,000.00	9,585.95	9,563.31	9,560.92	76.64	4.81	89.66	-4,485.72	-461.88	647.23	568.60	78.62	8.232 SF		
14,100.00	9,585.10	9,564.68	9,562.29	78.22	4.81	89.78	-4,485.76	-461.89	657.80	578.70	79.10	8.316		
14,200.00	9,584.26	9,566.07	9,563.68	79.80	4.81	89.90	-4,485.79	-461.90	683.00	604.87	78.13	8.742		
14,300.00	9,583.42	9,567.47	9,565.08	81.38	4.82	90.02	-4,485.82	-461.90	721.30	645.28	76.02	9.488		
14,400.00	9,582.58	9,568.88	9,566.49	82.97	4.82	90.15	-4,485.85	-461.91	770.75	697.53	73.22	10.527		
14,500.00	9,581.73	9,570.30	9,567.91	84.55	4.82	90.28	-4,485.88	-461.92	829.36	759.26	70.09	11.832		
14,600.00	9,580.89	9,571.74	9,569.35	86.14	4.82	90.40	-4,485.92	-461.93	895.32	828.39	66.93	13.376		
14,700.00	9,580.05	9,573.18	9,570.79	87.73	4.82	90.53	-4,485.95	-461.94	967.15	903.24	63.91	15.133		
14,800.00	9,579.21	9,574.64	9,572.25	89.33	4.83	90.66	-4,485.98	-461.95	1,043.62	982.51	61.11	17.078		
14,900.00	9,578.37	9,576.11	9,573.72	90.92	4.83	90.79	-4,486.02	-461.96	1,123.79	1,065.22	58.57	19.188		
15,000.00	9,577.52	9,577.59	9,575.20	92.52	4.83	90.92	-4,486.05	-461.97	1,206.92	1,150.64	56.28	21.443		
15,100.00	9,576.68	9,579.08	9,576.69	94.11	4.83	91.05	-4,486.08	-461.98	1,292.44	1,238.20	54.25	23.825		
15,200.00	9,575.84	9,580.58	9,578.19	95.71	4.83	91.19	-4,486.12	-461.99	1,379.91	1,327.48	52.44	26.316		
15,300.00	9,575.00	9,582.10	9,579.71	97.31	4.83	91.32	-4,486.15	-462.00	1,468.98	1,418.15	50.83	28.902		
15,400.00	9,574.15	9,583.63	9,581.24	98.91	4.84	91.45	-4,486.19	-462.01	1,559.37	1,509.97	49.40	31.569		
15,500.00	9,573.31	9,585.17	9,582.78	100.52	4.84	91.59	-4,486.23	-462.02	1,650.87	1,602.75	48.12	34.304		
15,600.00	9,572.47	9,586.73	9,584.33	102.12	4.84	91.73	-4,486.26	-462.03	1,743.30	1,696.31	46.99	37.098		
15,700.00	9,571.63	9,588.29	9,585.90	103.73	4.84	91.87	-4,486.30	-462.05	1,836.53	1,790.55	45.98	39.941		
15,800.00	9,570.78	9,589.88	9,587.48	105.33	4.84	92.01	-4,486.34	-462.06	1,930.43	1,885.35	45.08	42.825		
15,900.00	9,569.94	9,591.47	9,589.07	106.94	4.85	92.15	-4,486.37	-462.07	2,024.91	1,980.64	44.27	45.742		
16,000.00	9,569.10	9,593.08	9,590.68	108.55	4.85	92.29	-4,486.41	-462.08	2,119.90	2,076.36	43.54	48.687		
16,100.00	9,568.26	9,594.70	9,592.30	110.16	4.85	92.43	-4,486.45	-462.09	2,215.33	2,172.44	42.89	51.652		
16,200.00	9,567.42	9,596.33	9,593.94	111.76	4.85	92.58	-4,486.49	-462.10	2,311.14	2,268.84	42.30	54.634		
16,300.00	9,566.57	9,597.98	9,595.58	113.38	4.85	92.72	-4,486.53	-462.12	2,407.30	2,365.52	41.77	57.628		
16,400.00	9,565.73	9,599.65	9,597.25	114.99	4.86	92.87	-4,486.57	-462.13	2,503.75	2,462.45	41.30	60.630		
16,500.00	9,564.89	9,601.32	9,598.92	116.60	4.86	93.02	-4,486.61	-462.14	2,600.47	2,559.61	40.86	63.637		
16,600.00	9,564.05	9,603.02	9,600.62	118.21	4.86	93.17	-4,486.65	-462.15	2,697.43	2,656.96	40.47	66.644		
16,700.00	9,563.20	9,604.72	9,602.32	119.83	4.86	93.32	-4,486.69	-462.17	2,794.60	2,754.48	40.12	69.651		
16,800.00	9,562.36	9,606.44	9,604.04	121.44	4.87	93.47	-4,486.73	-462.18	2,891.97	2,852.16	39.80	72.655		
16,900.00	9,561.52	9,608.18	9,605.78	123.05	4.87	93.62	-4,486.77	-462.19	2,989.51	2,949.99	39.52	75.652		
17,000.00	9,560.68	9,609.93	9,607.53	124.67	4.87	93.78	-4,486.82	-462.21	3,087.20	3,047.94	39.26	78.642		
17,080.26	9,560.00	9,611.35	9,608.95	125.97	4.87	93.90	-4,486.85	-462.22	3,165.71	3,126.64	39.07	81.036		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 - 64H - OH - OH													Offset Site Error: 0.00 usft	
Survey Program: 62-ISCWSA-GYRO-3, 1483-LEAM MWD-ADJ, 15937-Project													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-173.85	-4,455.10	-480.18	4,480.95					
100.00	100.00	90.65	90.65	0.09	0.09	-173.85	-4,454.93	-480.36	4,480.77	4,480.60	0.17	N/A		
200.00	200.00	193.21	193.21	0.31	0.26	-173.84	-4,454.59	-480.79	4,480.48	4,479.91	0.57	7,818.936		
300.00	300.00	297.47	297.47	0.54	0.45	-173.83	-4,454.15	-481.35	4,480.12	4,479.14	0.98	4,570.708		
400.00	400.00	401.50	401.49	0.76	0.63	-173.82	-4,453.60	-481.99	4,479.66	4,478.27	1.39	3,229.602		
500.00	500.00	502.01	502.00	0.99	0.80	-173.81	-4,452.99	-482.75	4,479.14	4,477.35	1.79	2,505.671		
600.00	600.00	600.68	600.66	1.21	0.98	-173.80	-4,452.39	-483.72	4,478.64	4,476.46	2.18	2,049.872		
700.00	700.00	687.48	687.45	1.43	1.13	-173.79	-4,451.95	-484.71	4,478.27	4,475.71	2.56	1,748.629		
750.92	750.92	729.95	729.92	1.55	1.20	-173.78	-4,451.86	-485.25	4,478.22	4,475.47	2.75	1,628.624		
800.00	800.00	774.68	774.65	1.66	1.28	-173.77	-4,451.81	-485.87	4,478.25	4,475.31	2.94	1,524.207		
900.00	900.00	867.57	867.52	1.88	1.45	-173.75	-4,451.82	-487.34	4,478.43	4,475.11	3.32	1,346.928		
1,000.00	1,000.00	965.17	965.12	2.11	1.62	-173.73	-4,451.95	-488.85	4,478.73	4,475.01	3.72	1,204.008		
1,100.00	1,100.00	1,064.30	1,064.23	2.33	1.79	-173.71	-4,452.10	-490.37	4,479.05	4,474.93	4.12	1,087.828		
1,200.00	1,200.00	1,164.18	1,164.09	2.56	1.97	-173.70	-4,452.27	-491.88	4,479.39	4,474.87	4.52	991.818		
1,300.00	1,300.00	1,266.24	1,266.15	2.78	2.14	-173.68	-4,452.43	-493.41	4,479.70	4,474.78	4.92	910.675		
1,400.00	1,400.00	1,377.25	1,377.15	3.01	2.29	-173.66	-4,452.49	-494.91	4,479.91	4,474.62	5.29	846.614		
1,500.00	1,500.00	1,491.25	1,491.15	3.23	2.39	-173.64	-4,452.18	-495.99	4,479.74	4,474.12	5.61	797.865		
1,534.89	1,534.89	1,514.00	1,513.89	3.31	2.40	-173.64	-4,452.12	-496.15	4,479.68	4,473.99	5.70	786.287		
1,600.00	1,600.00	1,546.00	1,545.89	3.46	2.40	-173.64	-4,452.28	-496.17	4,479.96	4,474.11	5.85	765.642		
1,700.00	1,700.00	1,577.00	1,576.88	3.68	2.41	-173.65	-4,452.83	-495.78	4,481.51	4,475.42	6.09	736.409		
1,800.00	1,800.00	1,632.14	1,631.96	3.91	2.44	-173.67	-4,454.57	-493.87	4,484.28	4,477.95	6.33	708.124		
1,900.00	1,900.00	1,684.55	1,684.21	4.13	2.47	-173.72	-4,456.95	-490.64	4,488.10	4,481.51	6.58	681.572		
2,000.00	2,000.00	1,746.70	1,746.13	4.36	2.51	-173.77	-4,460.39	-486.59	4,492.89	4,486.04	6.85	655.992		
2,100.00	2,100.00	1,979.15	1,976.42	4.58	2.79	-174.15	-4,472.66	-458.56	4,497.28	4,489.93	7.35	611.658		
2,200.00	2,200.00	2,091.22	2,086.80	4.81	3.00	-174.39	-4,477.04	-439.64	4,499.52	4,491.73	7.79	577.900		
2,300.00	2,300.00	2,190.24	2,184.38	5.03	3.20	-174.60	-4,480.63	-423.20	4,501.56	4,493.35	8.21	548.259		
2,400.00	2,400.00	2,291.41	2,284.14	5.26	3.43	-174.82	-4,484.28	-406.80	4,503.70	4,495.03	8.67	519.667		
2,500.00	2,500.00	2,372.99	2,364.58	5.48	3.64	-174.99	-4,487.23	-393.52	4,505.90	4,496.80	9.10	495.259		
2,600.00	2,600.00	2,428.66	2,419.45	5.71	3.79	-175.11	-4,489.66	-384.42	4,508.91	4,499.44	9.47	476.114		
2,700.00	2,700.00	2,496.34	2,486.10	5.93	3.99	-175.25	-4,493.32	-373.22	4,512.92	4,503.04	9.88	456.770		
2,800.00	2,800.00	2,595.93	2,584.21	6.15	4.27	-175.46	-4,498.87	-357.09	4,517.22	4,506.84	10.38	435.005		
2,900.00	2,900.00	2,696.30	2,683.16	6.38	4.57	-175.67	-4,504.48	-341.17	4,521.62	4,510.72	10.90	414.834		
3,000.00	3,000.00	2,813.87	2,799.09	6.60	4.93	-175.91	-4,510.57	-322.59	4,525.67	4,514.20	11.48	394.366		
3,100.00	3,100.00	2,936.62	2,920.18	6.83	5.31	-176.16	-4,516.52	-303.40	4,529.48	4,517.41	12.07	375.149		
3,200.00	3,200.00	3,045.28	3,027.48	7.05	5.65	-176.37	-4,521.27	-286.93	4,532.90	4,520.27	12.63	358.937		
3,300.00	3,300.00	3,142.52	3,123.50	7.28	5.95	-176.56	-4,525.39	-272.16	4,536.23	4,523.08	13.15	344.918		
3,400.00	3,400.00	3,214.00	3,194.06	7.50	6.18	-176.70	-4,528.60	-261.16	4,539.89	4,526.30	13.60	333.921		
3,500.00	3,500.00	3,286.84	3,265.90	7.73	6.42	-176.85	-4,532.31	-249.74	4,544.18	4,530.13	14.05	323.433		
3,600.00	3,600.00	3,401.81	3,379.21	7.95	6.80	-131.36	-4,538.63	-231.33	4,549.48	4,534.84	14.64	310.679		
3,700.00	3,699.96	3,492.13	3,468.25	8.16	7.11	131.15	-4,543.36	-216.94	4,555.71	4,540.56	15.15	300.704		
3,800.00	3,799.86	3,628.02	3,602.29	8.38	7.56	130.88	-4,550.00	-195.62	4,562.77	4,546.96	15.81	288.613		
3,850.45	3,850.23	3,684.89	3,658.45	8.49	7.74	130.78	-4,552.52	-186.96	4,566.56	4,550.46	16.10	283.589		
3,900.00	3,899.69	3,727.31	3,700.34	8.60	7.88	130.72	-4,554.39	-180.64	4,570.43	4,554.09	16.34	279.647		
4,000.00	3,999.50	3,812.17	3,784.21	8.82	8.16	130.61	-4,558.32	-168.27	4,578.49	4,561.66	16.83	272.073		
4,100.00	4,099.31	3,900.85	3,871.75	9.04	8.45	130.49	-4,562.71	-154.77	4,586.87	4,569.54	17.33	264.695		
4,200.00	4,199.13	3,996.66	3,966.35	9.26	8.77	130.36	-4,567.54	-140.38	4,595.36	4,577.51	17.86	257.347		
4,300.00	4,298.94	4,083.77	4,052.37	9.48	9.06	130.25	-4,572.09	-127.43	4,604.07	4,585.72	18.35	250.845		
4,400.00	4,398.75	4,160.00	4,127.65	9.70	9.31	130.15	-4,576.25	-116.20	4,613.07	4,594.25	18.82	245.173		
4,500.00	4,498.57	4,254.00	4,220.45	9.93	9.62	130.03	-4,581.80	-102.32	4,622.51	4,603.17	19.34	239.026		
4,600.00	4,598.38	4,388.25	4,353.17	10.15	10.06	129.87	-4,589.23	-83.53	4,631.60	4,611.61	19.99	231.737		
4,700.00	4,698.19	4,475.22	4,439.19	10.38	10.34	129.77	-4,593.80	-71.60	4,640.46	4,619.98	20.48	226.612		
4,800.00	4,798.01	4,552.26	4,515.26	10.60	10.60	129.68	-4,598.19	-60.17	4,649.74	4,628.80	20.94	221.999		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 - 64H - OH - OH													Offset Site Error: 0.00 usft	
Survey Program: 62-ISCWSA-GYRO-3, 1483-LEAM MWD-ADJ, 15937-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		
4,900.00	4,897.82	4,632.00	4,593.82	10.83	10.88	129.56	-4,603.12	-47.42	4,659.51	4,638.07	21.43	217.386		
5,000.00	4,997.63	4,749.22	4,709.33	11.06	11.29	129.40	-4,610.24	-28.80	4,669.19	4,647.13	22.06	211.662		
5,100.00	5,097.45	4,821.00	4,780.06	11.29	11.55	129.30	-4,614.66	-17.40	4,679.03	4,656.51	22.52	207.766		
5,200.00	5,197.26	4,889.04	4,846.97	11.52	11.80	129.20	-4,619.28	-5.93	4,689.51	4,666.53	22.98	204.055		
5,300.00	5,297.07	4,962.48	4,918.99	11.75	12.09	129.08	-4,624.82	7.31	4,700.72	4,677.25	23.47	200.285		
5,400.00	5,396.88	5,135.21	5,088.49	11.98	12.75	128.80	-4,637.27	38.13	4,711.85	4,687.50	24.35	193.534		
5,500.00	5,496.70	5,264.91	5,216.27	12.21	13.21	128.61	-4,644.70	59.07	4,721.32	4,696.30	25.02	188.700		
5,600.00	5,596.51	5,365.97	5,316.04	12.44	13.56	128.49	-4,650.25	74.15	4,730.61	4,705.03	25.58	184.939		
5,700.00	5,696.32	5,462.56	5,411.27	12.67	13.90	128.36	-4,655.56	89.41	4,739.93	4,713.79	26.13	181.381		
5,800.00	5,796.14	5,567.92	5,515.00	12.90	14.28	128.21	-4,661.32	106.92	4,749.26	4,722.53	26.73	177.701		
5,900.00	5,895.95	5,678.82	5,624.22	13.14	14.68	128.05	-4,667.14	125.27	4,758.40	4,731.06	27.34	174.047		
6,000.00	5,995.76	5,782.17	5,726.05	13.37	15.05	127.91	-4,672.45	142.15	4,767.45	4,739.53	27.92	170.733		
6,100.00	6,095.58	5,896.87	5,839.11	13.60	15.45	127.75	-4,677.88	160.68	4,776.11	4,747.57	28.54	167.321		
6,200.00	6,195.39	5,988.32	5,929.27	13.84	15.78	127.63	-4,682.36	175.30	4,784.97	4,755.89	29.08	164.534		
6,300.00	6,295.20	6,093.84	6,033.29	14.07	16.15	127.48	-4,687.33	192.31	4,793.68	4,764.01	29.67	161.566		
6,400.00	6,395.01	6,193.70	6,133.15	14.31	16.52	127.33	-4,692.30	209.32	4,791.87	4,747.05	30.26	158.598		
6,500.00	6,494.83	6,293.56	6,233.01	14.54	16.89	127.18	-4,697.27	226.33	4,791.57	4,747.05	30.85	155.630		
6,600.00	6,594.64	6,393.41	6,332.86	14.77	17.26	127.03	-4,702.24	243.34	4,791.57	4,747.05	31.44	152.662		
6,655.23	6,649.77	6,443.26	6,382.71	14.90	17.59	126.88	-4,707.21	260.35	4,791.57	4,747.05	32.03	149.694		
6,700.00	6,694.46	6,443.11	6,382.56	15.00	17.92	126.73	-4,712.18	277.36	4,791.57	4,747.05	32.62	146.726		
6,800.00	6,794.36	6,542.96	6,482.41	15.18	18.29	126.58	-4,717.15	294.37	4,791.57	4,747.05	33.21	143.758		
6,900.00	6,894.32	6,642.81	6,582.26	15.36	18.66	126.43	-4,722.12	311.38	4,791.57	4,747.05	33.80	140.790		
7,005.68	7,000.00	6,742.66	6,682.11	15.55	19.03	126.28	-4,727.09	328.39	4,791.57	4,747.05	34.39	137.822		
7,100.00	7,094.32	6,842.51	6,781.96	15.73	19.40	126.13	-4,732.06	345.40	4,791.57	4,747.05	34.98	134.854		
7,200.00	7,194.32	6,942.36	6,881.81	15.95	19.77	125.98	-4,737.03	362.41	4,791.57	4,747.05	35.57	131.886		
7,300.00	7,294.32	7,042.21	6,981.66	16.17	20.14	125.83	-4,742.00	379.42	4,791.57	4,747.05	36.16	128.918		
7,400.00	7,394.32	7,142.06	7,081.51	16.39	20.51	125.68	-4,746.97	396.43	4,791.57	4,747.05	36.75	125.950		
7,500.00	7,494.32	7,241.91	7,181.36	16.61	20.88	125.53	-4,751.94	413.44	4,791.57	4,747.05	37.34	122.982		
7,600.00	7,594.32	7,341.76	7,281.21	16.83	21.25	125.38	-4,756.91	430.45	4,791.57	4,747.05	37.93	120.014		
7,700.00	7,694.32	7,441.61	7,381.06	17.05	21.62	125.23	-4,761.88	447.46	4,791.57	4,747.05	38.52	117.046		
7,800.00	7,794.32	7,541.46	7,480.91	17.27	21.99	125.08	-4,766.85	464.47	4,791.57	4,747.05	39.11	114.078		
7,900.00	7,894.32	7,641.31	7,580.76	17.48	22.36	124.93	-4,771.82	481.48	4,791.57	4,747.05	39.70	111.110		
8,000.00	7,994.32	7,741.16	7,680.61	17.70	22.73	124.78	-4,776.79	498.49	4,791.57	4,747.05	40.29	108.142		
8,100.00	8,094.32	7,841.01	7,780.46	17.92	23.10	124.63	-4,781.76	515.50	4,791.57	4,747.05	40.88	105.174		
8,200.00	8,194.32	7,940.86	7,880.31	18.14	23.47	124.48	-4,786.73	532.51	4,791.57	4,747.05	41.47	102.206		
8,300.00	8,294.32	8,040.71	7,980.16	18.36	23.84	124.33	-4,791.70	549.52	4,791.57	4,747.05	42.06	99.238		
8,400.00	8,394.32	8,140.56	8,079.61	18.58	24.21	124.18	-4,796.67	566.53	4,791.57	4,747.05	42.65	96.270		
8,500.00	8,494.32	8,240.41	8,179.86	18.80	24.58	124.03	-4,801.64	583.54	4,791.57	4,747.05	43.24	93.302		
8,600.00	8,594.32	8,340.26	8,279.71	19.03	24.95	123.88	-4,806.61	600.55	4,791.57	4,747.05	43.83	90.334		
8,700.00	8,694.32	8,440.11	8,379.56	19.25	25.32	123.73	-4,811.58	617.56	4,791.57	4,747.05	44.42	87.366		
8,800.00	8,794.32	8,540.06	8,479.41	19.47	25.69	123.58	-4,816.55	634.57	4,791.57	4,747.05	45.01	84.398		
8,900.00	8,894.32	8,640.01	8,579.26	19.69	26.06	123.43	-4,821.52	651.58	4,791.57	4,747.05	45.60	81.430		
9,000.00	8,994.32	8,740.06	8,679.41	19.91	26.43	123.28	-4,826.49	668.59	4,791.57	4,747.05	46.19	78.462		
9,052.74	9,047.06	8,839.91	8,779.26	20.02	26.76	123.13	-4,831.46	685.60	4,791.57	4,747.05	46.78	75.494		
9,100.00	9,094.26	8,939.86	8,879.21	20.12	27.09	122.98	-4,836.43	702.61	4,791.57	4,747.05	47.37	72.526		
9,150.00	9,143.85	9,039.71	8,979.06	20.20	27.42	122.83	-4,841.40	719.62	4,791.57	4,747.05	47.96	69.558		
9,200.00	9,192.70	9,139.56	9,078.91	20.27	27.75	122.68	-4,846.37	736.63	4,791.57	4,747.05	48.55	66.590		
9,250.00	9,240.44	9,239.41	9,178.76	20.35	28.08	122.53	-4,851.34	753.64	4,791.57	4,747.05	49.14	63.622		
9,300.00	9,286.71	9,339.26	9,278.61	20.42	28.41	122.38	-4,856.31	770.65	4,791.57	4,747.05	49.73	60.654		
9,350.00	9,331.16	9,389.21	9,327.96	20.49	28.74	122.23	-4,861.28	787.66	4,791.57	4,747.05	50.32	57.686		
9,400.00	9,373.45	9,439.16	9,378.01	20.55	29.07	122.08	-4,866.25	804.67	4,791.57	4,747.05	50.91	54.718		
9,450.00	9,413.25	9,489.11	9,427.86	20.62	29.40	121.93	-4,871.22	821.68	4,791.57	4,747.05	51.50	51.750		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 - 64H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 62-ISCWSA-GYRO-3, 1483-LEAM MWD-ADJ, 15937-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		
9,500.00	9,450.26	15,898.24	11,090.74	20.68	82.86	-145.55	17.93	981.98	1,858.24	1,799.24	59.00	31.495		
9,550.00	9,484.20	15,860.45	11,091.99	20.75	82.77	-147.01	-19.84	982.37	1,829.09	1,769.71	59.38	30.802		
9,600.00	9,514.82	15,819.95	11,093.33	20.84	82.67	-148.17	-60.32	982.80	1,803.10	1,743.32	59.77	30.166		
9,650.00	9,541.88	15,774.40	11,094.83	20.94	82.16	-149.06	-105.84	983.26	1,780.41	1,720.50	59.91	29.719		
9,700.00	9,565.17	15,725.09	11,096.36	21.07	81.39	-149.74	-155.12	983.67	1,761.09	1,701.27	59.82	29.442		
9,750.00	9,584.52	15,681.18	11,097.71	21.24	80.70	-150.30	-199.01	983.99	1,745.30	1,685.62	59.68	29.244		
9,800.00	9,599.78	15,639.00	11,099.15	21.43	80.05	-150.72	-241.16	984.28	1,733.32	1,673.82	59.50	29.133		
9,850.00	9,610.83	15,594.43	11,100.84	21.64	79.35	-150.98	-285.70	984.60	1,725.25	1,665.99	59.26	29.114		
9,900.00	9,617.59	15,547.45	11,102.68	21.88	78.62	-151.11	-332.65	985.00	1,721.06	1,662.09	58.97	29.185		
9,928.81	9,619.52	15,520.11	11,103.77	22.03	78.19	-151.13	-359.96	985.28	1,720.41	1,661.63	58.79	29.265		
9,950.00	9,620.01	15,496.33	11,104.70	22.14	77.82	-151.12	-383.72	985.54	1,720.74	1,662.10	58.64	29.346		
9,957.57	9,620.00	15,487.84	11,105.02	22.19	77.69	-151.11	-392.20	985.63	1,721.01	1,662.43	58.58	29.378		
10,000.00	9,619.64	15,440.26	11,106.68	22.43	76.95	-151.13	-439.75	986.23	1,722.73	1,664.45	58.28	29.559		
10,100.00	9,618.80	15,338.28	11,109.67	23.08	75.38	-151.16	-541.67	988.01	1,726.52	1,668.87	57.65	29.948		
10,200.00	9,617.96	15,245.83	11,112.23	23.82	73.95	-151.17	-634.06	990.25	1,730.50	1,673.39	57.10	30.304		
10,300.00	9,617.11	15,138.28	11,115.24	24.65	72.31	-151.18	-741.54	992.88	1,734.51	1,677.91	56.60	30.644		
10,400.00	9,616.27	15,037.43	11,118.08	25.56	70.79	-151.21	-842.32	994.65	1,738.21	1,682.06	56.16	30.953		
10,500.00	9,615.43	14,942.97	11,121.18	26.54	69.37	-151.26	-936.73	995.97	1,742.14	1,686.39	55.75	31.249		
10,600.00	9,614.59	14,830.27	11,124.46	27.58	67.68	-151.30	-1,049.37	997.51	1,745.72	1,690.35	55.37	31.528		
10,700.00	9,613.74	14,731.14	11,127.21	28.68	66.22	-151.35	-1,148.46	998.38	1,748.96	1,693.91	55.05	31.772		
10,800.00	9,612.90	14,640.05	11,130.04	29.83	64.90	-151.40	-1,239.49	999.27	1,752.54	1,697.76	54.78	31.995		
10,900.00	9,612.06	14,549.03	11,133.40	31.02	63.58	-151.46	-1,330.46	1,000.24	1,756.67	1,702.13	54.53	32.213		
11,000.00	9,611.22	14,428.03	11,137.83	32.25	61.80	-151.53	-1,451.36	1,001.73	1,760.96	1,706.69	54.27	32.448		
11,100.00	9,610.37	14,271.76	11,138.70	33.52	59.56	-151.56	-1,607.61	1,003.11	1,762.11	1,708.08	54.03	32.614		
11,174.40	9,609.75	14,198.00	11,138.01	34.48	58.53	-151.55	-1,681.36	1,003.73	1,762.08	1,708.14	53.94	32.667		
11,200.00	9,609.53	14,176.14	11,137.83	34.81	58.23	-151.55	-1,703.22	1,003.91	1,762.10	1,708.19	53.91	32.683		
11,300.00	9,608.69	14,093.52	11,137.50	36.14	57.11	-151.54	-1,785.83	1,005.07	1,762.80	1,708.96	53.84	32.738		
11,400.00	9,607.85	14,009.00	11,137.68	37.49	55.98	-151.52	-1,870.33	1,007.12	1,764.52	1,710.71	53.81	32.789		
11,500.00	9,607.01	13,926.07	11,138.69	38.86	54.86	-151.50	-1,953.23	1,009.19	1,767.16	1,713.36	53.79	32.852		
11,600.00	9,606.16	13,814.54	11,140.55	40.25	53.37	-151.51	-2,064.71	1,011.34	1,769.94	1,716.19	53.75	32.931		
11,700.00	9,605.32	13,715.89	11,141.75	41.66	52.07	-151.50	-2,163.34	1,013.43	1,772.41	1,718.66	53.75	32.977		
11,800.00	9,604.48	13,601.13	11,142.45	43.09	50.58	-151.47	-2,278.07	1,016.04	1,774.41	1,720.65	53.76	33.005		
11,900.00	9,603.64	13,504.25	11,142.48	44.53	49.39	-151.44	-2,374.92	1,018.26	1,775.92	1,722.08	53.84	32.987		
12,000.00	9,602.79	13,423.55	11,143.20	45.98	48.43	-151.42	-2,455.59	1,020.31	1,778.29	1,724.35	53.95	32.962		
12,100.00	9,601.95	13,333.41	11,144.71	47.45	47.36	-151.40	-2,545.68	1,022.97	1,781.56	1,727.49	54.07	32.950		
12,200.00	9,601.11	13,170.14	11,146.65	48.92	45.45	-151.42	-2,708.90	1,025.47	1,784.03	1,729.90	54.13	32.959		
12,276.58	9,600.46	13,095.48	11,146.92	50.06	44.61	-151.49	-2,783.54	1,024.00	1,783.85	1,729.64	54.22	32.903		
12,300.00	9,600.27	13,074.66	11,147.12	50.41	44.38	-151.51	-2,804.36	1,023.49	1,783.87	1,729.63	54.24	32.887		
12,400.00	9,599.42	12,989.49	11,148.37	51.90	43.47	-151.62	-2,889.50	1,021.47	1,784.42	1,730.03	54.39	32.807		
12,500.00	9,598.58	12,909.90	11,150.19	53.41	42.62	-151.72	-2,969.05	1,019.97	1,785.94	1,731.37	54.57	32.726		
12,600.00	9,597.74	12,815.89	11,153.25	54.92	41.65	-151.84	-3,063.00	1,018.46	1,788.43	1,733.67	54.76	32.661		
12,700.00	9,596.90	9,596.40	9,492.42	56.44	28.05	-82.47	-4,846.21	714.12	1,734.05	1,682.94	51.10	33.931		
12,800.00	9,596.05	9,597.84	9,493.86	57.97	28.05	-82.63	-4,846.25	714.24	1,639.14	1,587.32	51.82	31.631		
12,900.00	9,595.21	9,599.31	9,495.32	59.50	28.05	-82.78	-4,846.28	714.36	1,544.87	1,492.19	52.67	29.330		
13,000.00	9,594.37	9,600.80	9,496.81	61.04	28.06	-82.94	-4,846.32	714.48	1,451.36	1,397.67	53.69	27.032		
13,100.00	9,593.53	9,602.31	9,498.31	62.58	28.06	-83.11	-4,846.35	714.60	1,358.78	1,303.87	54.91	24.747		
13,200.00	9,592.69	9,603.85	9,499.85	64.13	28.07	-83.27	-4,846.39	714.73	1,267.32	1,210.96	56.36	22.485		
13,300.00	9,591.84	9,605.41	9,501.40	65.68	28.07	-83.44	-4,846.43	714.86	1,177.25	1,119.14	58.11	20.259		
13,400.00	9,591.00	9,607.00	9,502.98	67.23	28.07	-83.61	-4,846.46	714.99	1,088.92	1,028.71	60.21	18.086		
13,500.00	9,590.16	9,608.61	9,504.59	68.79	28.08	-83.79	-4,846.50	715.12	1,002.77	940.04	62.73	15.987		
13,600.00	9,589.32	9,610.24	9,506.22	70.36	28.08	-83.96	-4,846.54	715.25	919.43	853.69	65.74	13.985		
13,700.00	9,588.47	9,611.91	9,507.87	71.92	28.09	-84.14	-4,846.58	715.39	839.73	770.39	69.34	12.110		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 - 64H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 62-ISCWSA-GYRO-3, 1483-LEAM MWD-ADJ, 15937-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)						
13,800.00	9,587.63	9,613.60	9,509.56	73.49	28.09	-84.33	-4,846.63	715.53	764.82	691.22	73.59	10.393		
13,900.00	9,586.79	9,615.31	9,511.27	75.06	28.09	-84.51	-4,846.67	715.67	696.23	617.70	78.53	8.866		
14,000.00	9,585.95	9,617.06	9,513.01	76.64	28.10	-84.70	-4,846.71	715.81	636.01	551.92	84.09	7.564		
14,100.00	9,585.10	9,618.84	9,514.78	78.22	28.10	-84.89	-4,846.76	715.95	586.76	496.72	90.04	6.517		
14,200.00	9,584.26	9,620.64	9,516.57	79.80	28.11	-85.09	-4,846.80	716.10	551.41	455.55	95.86	5.752		
14,300.00	9,583.42	9,622.48	9,518.40	81.38	28.11	-85.29	-4,846.85	716.25	532.74	431.98	100.77	5.287		
14,351.22	9,582.99	9,623.43	9,519.35	82.19	28.11	-85.39	-4,846.88	716.32	530.28	427.65	102.63	5.167 CC, ES		
14,400.00	9,582.58	9,624.34	9,520.26	82.97	28.12	-85.49	-4,846.90	716.40	532.52	428.65	103.87	5.127 SF		
14,500.00	9,581.73	9,626.24	9,522.16	84.55	28.12	-85.69	-4,846.95	716.55	550.75	446.08	104.67	5.262		
14,600.00	9,580.89	9,628.17	9,524.08	86.14	28.13	-85.90	-4,847.00	716.71	585.72	482.37	103.35	5.667		
14,700.00	9,580.05	9,630.14	9,526.04	87.73	28.13	-86.11	-4,847.05	716.86	634.66	534.09	100.58	6.310		
14,800.00	9,579.21	9,632.14	9,528.03	89.33	28.14	-86.33	-4,847.10	717.02	694.64	597.55	97.09	7.154		
14,900.00	9,578.37	9,634.18	9,530.06	90.92	28.14	-86.55	-4,847.16	717.19	763.05	669.62	93.43	8.167		
15,000.00	9,577.52	9,636.25	9,532.13	92.52	28.15	-86.77	-4,847.21	717.35	837.83	747.92	89.91	9.319		
15,100.00	9,576.68	9,638.36	9,534.23	94.11	28.15	-87.00	-4,847.27	717.52	917.42	830.75	86.68	10.585		
15,200.00	9,575.84	9,640.51	9,536.37	95.71	28.16	-87.23	-4,847.33	717.69	1,000.68	916.90	83.78	11.944		
15,300.00	9,575.00	9,642.54	9,538.39	97.31	28.16	-87.45	-4,847.38	717.85	1,086.76	1,005.54	81.22	13.380		
15,400.00	9,574.15	9,644.51	9,540.36	98.91	28.17	-87.66	-4,847.43	718.00	1,175.05	1,096.07	78.97	14.879		
15,500.00	9,573.31	9,646.47	9,542.31	100.52	28.17	-87.88	-4,847.49	718.16	1,265.07	1,188.07	77.00	16.430		
15,600.00	9,572.47	9,648.41	9,544.24	102.12	28.17	-88.08	-4,847.54	718.31	1,356.49	1,281.22	75.27	18.022		
15,700.00	9,571.63	9,650.33	9,546.16	103.73	28.18	-88.29	-4,847.59	718.46	1,449.04	1,375.30	73.75	19.649		
15,800.00	9,570.78	9,652.24	9,548.07	105.33	28.18	-88.50	-4,847.64	718.61	1,542.52	1,470.12	72.41	21.303		
15,900.00	9,569.94	9,654.14	9,549.95	106.94	28.19	-88.70	-4,847.69	718.76	1,636.77	1,565.55	71.23	22.980		
16,000.00	9,569.10	9,656.02	9,551.83	108.55	28.19	-88.90	-4,847.74	718.90	1,731.66	1,661.48	70.18	24.675		
16,100.00	9,568.26	9,657.88	9,553.69	110.16	28.20	-89.11	-4,847.79	719.05	1,827.10	1,757.85	69.25	26.384		
16,200.00	9,567.42	9,659.73	9,555.53	111.76	28.20	-89.30	-4,847.84	719.19	1,923.00	1,854.57	68.42	28.105		
16,300.00	9,566.57	9,661.57	9,557.36	113.38	28.21	-89.50	-4,847.89	719.33	2,019.29	1,951.61	67.68	29.834		
16,400.00	9,565.73	9,663.39	9,559.18	114.99	28.21	-89.70	-4,847.94	719.47	2,115.93	2,048.90	67.02	31.570		
16,500.00	9,564.89	9,665.20	9,560.98	116.60	28.21	-89.89	-4,847.98	719.61	2,212.86	2,146.43	66.43	33.310		
16,600.00	9,564.05	9,666.99	9,562.77	118.21	28.22	-90.08	-4,848.03	719.74	2,310.05	2,244.15	65.90	35.054		
16,700.00	9,563.20	9,668.78	9,564.54	119.83	28.22	-90.28	-4,848.08	719.88	2,407.47	2,342.05	65.42	36.800		
16,800.00	9,562.36	9,670.54	9,566.31	121.44	28.23	-90.47	-4,848.12	720.01	2,505.10	2,440.11	64.99	38.546		
16,900.00	9,561.52	9,672.30	9,568.05	123.05	28.23	-90.65	-4,848.17	720.14	2,602.90	2,538.30	64.60	40.292		
17,000.00	9,560.68	9,674.04	9,569.79	124.67	28.23	-90.84	-4,848.21	720.28	2,700.86	2,636.61	64.25	42.036		
17,080.26	9,560.00	9,675.42	9,571.17	125.97	28.24	-90.99	-4,848.25	720.38	2,779.59	2,715.60	63.99	43.435		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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) - 56H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 83-ISCWSA-GYRO-3, 1470-MWD-ISCWSA, 15982-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	-173.67	-4,755.32	-527.66	4,784.56					
100.00	100.00	76.52	76.52	0.09	0.06	-173.67	-4,755.31	-527.88	4,784.52	4,784.39	0.13	N/A		
200.00	200.00	182.38	182.38	0.31	0.23	-173.66	-4,755.20	-528.62	4,784.50	4,783.96	0.54	8,938.940		
300.00	300.00	288.78	288.77	0.54	0.41	-173.65	-4,754.95	-529.47	4,784.35	4,783.40	0.95	5,056.751		
400.00	400.00	391.87	391.86	0.76	0.59	-173.64	-4,754.56	-530.29	4,784.06	4,782.71	1.35	3,541.058		
500.00	500.00	489.93	489.91	0.99	0.77	-173.63	-4,754.23	-531.03	4,783.81	4,782.06	1.75	2,738.504		
600.00	600.00	597.00	596.98	1.21	0.95	-173.62	-4,753.83	-531.84	4,783.52	4,781.36	2.16	2,215.609		
700.00	700.00	692.51	692.49	1.43	1.12	-173.61	-4,753.37	-532.49	4,783.13	4,780.58	2.55	1,875.417		
800.00	800.00	785.67	785.65	1.66	1.28	-173.60	-4,753.11	-533.09	4,782.91	4,779.98	2.94	1,628.098		
900.00	900.00	883.99	883.96	1.88	1.46	-173.60	-4,752.93	-533.54	4,782.79	4,779.45	3.33	1,434.494		
1,000.00	1,000.00	985.11	985.09	2.11	1.63	-173.59	-4,752.76	-533.90	4,782.66	4,778.92	3.74	1,280.324		
1,100.00	1,100.00	1,085.07	1,085.05	2.33	1.81	-173.59	-4,752.58	-534.18	4,782.51	4,778.38	4.13	1,156.629		
1,200.00	1,200.00	1,191.35	1,191.32	2.56	2.00	-173.58	-4,752.33	-534.44	4,782.31	4,777.76	4.55	1,052.114		
1,300.00	1,300.00	1,292.25	1,292.22	2.78	2.14	-173.58	-4,752.03	-534.68	4,782.04	4,777.12	4.92	972.855		
1,400.00	1,400.00	1,396.00	1,395.97	3.01	2.24	-173.58	-4,751.66	-534.88	4,781.70	4,776.47	5.24	913.024		
1,500.00	1,500.00	1,498.90	1,498.87	3.23	2.32	-173.58	-4,751.24	-534.91	4,781.30	4,775.75	5.54	862.905		
1,600.00	1,600.00	1,613.80	1,613.74	3.46	2.36	-173.60	-4,750.92	-532.51	4,780.80	4,774.99	5.81	822.198		
1,700.00	1,700.00	1,723.14	1,722.86	3.68	2.44	-173.68	-4,750.65	-525.77	4,779.86	4,773.75	6.11	781.904		
1,800.00	1,800.00	1,810.62	1,809.94	3.91	2.52	-173.78	-4,750.85	-517.37	4,779.04	4,772.61	6.42	743.982		
1,900.00	1,900.00	1,894.36	1,893.21	4.13	2.61	-173.89	-4,751.38	-508.57	4,778.55	4,771.80	6.75	708.414		
2,000.00	2,000.00	2,157.17	2,154.12	4.36	3.03	-174.26	-4,749.50	-477.28	4,776.66	4,769.27	7.39	646.745		
2,100.00	2,100.00	2,223.00	2,219.34	4.58	3.17	-174.36	-4,748.00	-468.56	4,773.15	4,765.41	7.74	616.487		
2,200.00	2,200.00	2,296.94	2,292.76	4.81	3.30	-174.47	-4,746.70	-459.90	4,770.30	4,762.20	8.10	588.816		
2,300.00	2,300.00	2,362.36	2,357.90	5.03	3.41	-174.54	-4,745.96	-453.90	4,768.28	4,759.84	8.44	565.100		
2,400.00	2,400.00	2,430.47	2,425.85	5.26	3.53	-174.59	-4,745.48	-449.37	4,766.95	4,758.17	8.77	543.251		
2,500.00	2,500.00	2,507.00	2,502.32	5.48	3.65	-174.63	-4,745.28	-446.38	4,766.29	4,757.17	9.13	522.321		
2,571.75	2,571.75	2,554.63	2,549.95	5.64	3.72	-174.64	-4,745.30	-445.50	4,766.17	4,756.82	9.36	509.466		
2,600.00	2,600.00	2,577.18	2,572.49	5.71	3.75	-174.64	-4,745.34	-445.28	4,766.19	4,756.74	9.45	504.293		
2,700.00	2,700.00	2,667.29	2,662.60	5.93	3.88	-174.64	-4,745.57	-445.33	4,766.44	4,756.64	9.80	486.180		
2,800.00	2,800.00	2,790.20	2,785.51	6.15	4.06	-174.63	-4,745.70	-445.99	4,766.62	4,756.41	10.21	466.904		
2,900.00	2,900.00	2,890.51	2,885.82	6.38	4.22	-174.63	-4,745.52	-446.22	4,766.46	4,755.87	10.59	449.902		
3,000.00	3,000.00	2,991.67	2,986.98	6.60	4.38	-174.63	-4,745.35	-446.24	4,766.30	4,755.31	10.98	434.025		
3,100.00	3,100.00	3,098.06	3,093.37	6.83	4.56	-174.62	-4,745.05	-446.61	4,766.04	4,754.66	11.38	418.818		
3,200.00	3,200.00	3,204.89	3,200.20	7.05	4.73	-174.61	-4,744.58	-447.30	4,765.67	4,753.89	11.78	404.532		
3,300.00	3,300.00	3,308.71	3,304.02	7.28	4.91	-174.61	-4,743.97	-447.80	4,765.13	4,752.94	12.18	391.124		
3,400.00	3,400.00	3,402.48	3,397.78	7.50	5.07	-174.60	-4,743.47	-448.14	4,764.64	4,752.07	12.57	379.030		
3,500.00	3,500.00	3,500.65	3,495.95	7.73	5.25	-174.60	-4,743.10	-448.44	4,764.28	4,751.31	12.97	367.377		
3,534.22	3,534.22	3,536.84	3,532.14	7.80	5.31	133.88	-4,742.95	-448.49	4,764.22	4,751.11	13.11	363.454		
3,600.00	3,600.00	3,597.69	3,592.99	7.95	5.42	133.88	-4,742.71	-448.58	4,764.51	4,751.15	13.36	356.578		
3,700.00	3,699.96	3,703.27	3,698.56	8.16	5.61	133.90	-4,742.36	-448.87	4,766.02	4,752.26	13.77	346.182		
3,800.00	3,799.86	3,799.09	3,794.38	8.38	5.79	133.92	-4,741.92	-448.98	4,768.61	4,754.45	14.16	336.785		
3,850.45	3,850.23	3,848.82	3,844.11	8.49	5.88	133.93	-4,741.77	-449.07	4,770.44	4,756.08	14.36	332.190		
3,900.00	3,899.69	3,906.12	3,901.42	8.60	5.99	133.96	-4,741.52	-449.16	4,772.34	4,757.77	14.57	327.450		
4,000.00	3,999.50	3,993.68	3,988.97	8.82	6.15	134.01	-4,741.14	-449.34	4,776.19	4,761.23	14.96	319.369		
4,100.00	4,099.31	4,092.69	4,087.98	9.04	6.33	134.07	-4,740.94	-449.60	4,780.26	4,764.90	15.36	311.210		
4,200.00	4,199.13	4,176.17	4,171.46	9.26	6.49	134.11	-4,740.84	-449.79	4,784.43	4,768.69	15.74	304.010		
4,300.00	4,298.94	4,269.99	4,265.28	9.48	6.67	134.17	-4,741.01	-450.37	4,788.93	4,772.80	16.13	296.823		
4,400.00	4,398.75	4,371.92	4,367.21	9.70	6.86	134.23	-4,741.19	-450.85	4,793.42	4,776.87	16.55	289.643		
4,500.00	4,498.57	4,458.51	4,453.80	9.93	7.03	134.27	-4,741.50	-450.43	4,798.00	4,781.05	16.94	283.202		
4,600.00	4,598.38	4,550.82	4,546.10	10.15	7.21	134.30	-4,742.19	-449.23	4,802.88	4,785.52	17.35	276.810		
4,700.00	4,698.19	4,652.27	4,647.54	10.38	7.42	134.33	-4,742.99	-447.56	4,807.77	4,789.99	17.78	270.384		
4,800.00	4,798.01	4,746.27	4,741.51	10.60	7.61	134.36	-4,743.78	-445.75	4,812.69	4,794.49	18.20	264.458		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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) - 56H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 83-ISCWSA-GYRO-3, 1470-MWD-ISCWSA, 15982-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	
4,900.00	4,897.82	4,837.25	4,832.46	10.83	7.80	134.38	-4,744.74	-443.68	4,817.78	4,799.16	18.61	258.852		
5,000.00	4,997.63	4,927.83	4,922.99	11.06	7.99	134.40	-4,745.94	-440.90	4,823.05	4,804.03	19.03	253.464		
5,100.00	5,097.45	5,020.34	5,015.45	11.29	8.18	134.41	-4,747.32	-438.18	4,828.51	4,809.07	19.45	248.310		
5,200.00	5,197.26	5,129.27	5,124.37	11.52	8.40	134.45	-4,748.79	-436.84	4,834.01	4,814.12	19.89	243.061		
5,300.00	5,297.07	5,248.43	5,243.51	11.75	8.63	134.50	-4,749.94	-435.69	4,839.15	4,818.80	20.35	237.769		
5,400.00	5,396.88	5,344.06	5,339.13	11.98	8.83	134.53	-4,750.67	-434.72	4,844.10	4,823.33	20.77	233.204		
5,500.00	5,496.70	5,429.98	5,425.04	12.21	9.00	134.56	-4,751.54	-433.71	4,849.27	4,828.09	21.17	229.016		
5,600.00	5,596.51	5,519.05	5,514.09	12.44	9.19	134.59	-4,752.71	-432.44	4,854.71	4,833.13	21.59	224.911		
5,700.00	5,696.32	5,618.64	5,613.67	12.67	9.39	134.63	-4,754.14	-431.06	4,860.29	4,838.28	22.02	220.765		
5,800.00	5,796.14	5,719.61	5,714.61	12.90	9.59	134.66	-4,755.52	-429.87	4,865.82	4,843.37	22.45	216.749		
5,900.00	5,895.95	5,835.71	5,830.70	13.14	9.83	134.70	-4,756.98	-428.20	4,871.22	4,848.30	22.92	212.529		
6,000.00	5,995.76	5,938.40	5,933.37	13.37	10.04	134.73	-4,758.04	-426.61	4,876.38	4,853.02	23.36	208.757		
6,100.00	6,095.58	6,039.82	6,034.77	13.60	10.25	134.77	-4,759.03	-425.10	4,881.50	4,857.70	23.80	205.142		
6,200.00	6,195.39	6,134.82	6,129.75	13.84	10.44	134.80	-4,760.00	-423.68	4,886.65	4,862.43	24.22	201.770		
6,300.00	6,295.20	6,236.31	6,231.23	14.07	10.65	134.83	-4,761.13	-422.14	4,891.90	4,867.24	24.66	198.402		
6,400.00	6,395.01	6,366.03	6,360.93	14.31	10.92	134.87	-4,762.07	-420.25	4,896.77	4,871.61	25.16	194.658		
6,500.00	6,494.83	6,478.69	6,473.58	14.54	11.15	134.91	-4,762.34	-418.62	4,901.16	4,875.54	25.62	191.293		
6,600.00	6,594.64	6,585.06	6,579.94	14.77	11.37	134.94	-4,762.46	-416.82	4,905.40	4,879.33	26.07	188.129		
6,655.23	6,649.77	6,643.83	6,638.69	14.90	11.50	134.96	-4,762.48	-415.71	4,907.69	4,881.37	26.33	186.426		
6,700.00	6,694.46	6,691.47	6,686.32	15.00	11.60	134.98	-4,762.47	-414.75	4,909.39	4,882.88	26.52	185.145		
6,800.00	6,794.36	6,797.97	6,792.80	15.18	11.82	135.01	-4,762.37	-412.44	4,912.20	4,885.29	26.92	182.493		
6,900.00	6,894.32	6,911.49	6,906.30	15.36	12.05	135.02	-4,762.01	-410.28	4,913.59	4,886.27	27.33	179.798		
7,005.68	7,000.00	7,032.90	7,027.69	15.55	12.30	-173.47	-4,761.21	-408.11	4,913.37	4,885.61	27.76	176.974		
7,100.00	7,094.32	7,128.62	7,123.39	15.73	12.50	-173.49	-4,760.43	-406.29	4,912.41	4,884.26	28.15	174.502		
7,200.00	7,194.32	7,230.10	7,224.84	15.95	12.72	-173.51	-4,759.61	-404.09	4,911.36	4,882.78	28.59	171.814		
7,300.00	7,294.32	7,325.95	7,320.65	16.17	12.92	-173.54	-4,758.85	-401.76	4,910.30	4,881.29	29.01	169.271		
7,400.00	7,394.32	7,410.92	7,405.60	16.39	13.10	-173.56	-4,758.39	-399.55	4,909.47	4,880.06	29.41	166.931		
7,500.00	7,494.32	7,495.89	7,490.53	16.61	13.28	-173.59	-4,758.21	-397.24	4,908.95	4,879.14	29.81	164.665		
7,600.00	7,594.32	7,580.85	7,575.46	16.83	13.47	-173.62	-4,758.30	-394.81	4,908.74	4,878.53	30.21	162.470		
7,619.53	7,613.85	7,597.44	7,592.05	16.87	13.50	-173.62	-4,758.35	-394.33	4,908.73	4,878.44	30.29	162.050		
7,700.00	7,694.32	7,683.00	7,677.56	17.05	13.68	-173.65	-4,758.77	-391.75	4,908.87	4,878.22	30.65	160.148		
7,705.05	7,699.36	7,683.00	7,677.56	17.06	13.68	-173.65	-4,758.77	-391.75	4,908.87	4,878.20	30.66	160.091		
7,800.00	7,794.32	7,747.36	7,741.89	17.27	13.82	-173.68	-4,759.30	-389.73	4,909.26	4,878.25	31.01	158.320		
7,900.00	7,894.32	7,828.04	7,822.52	17.48	13.99	-173.71	-4,760.26	-387.07	4,910.08	4,878.68	31.40	156.370		
8,000.00	7,994.32	7,908.26	7,902.69	17.70	14.17	-173.74	-4,761.54	-384.30	4,911.30	4,879.51	31.79	154.486		
8,100.00	8,094.32	7,987.94	7,982.30	17.92	14.34	-173.78	-4,763.15	-381.51	4,912.93	4,880.74	32.19	152.620		
8,200.00	8,194.32	8,071.17	8,065.45	18.14	14.52	-173.81	-4,765.18	-378.57	4,914.97	4,882.36	32.60	150.745		
8,300.00	8,294.32	8,168.98	8,163.16	18.36	14.73	-173.86	-4,767.75	-374.81	4,917.17	4,884.13	33.04	148.817		
8,400.00	8,394.32	8,266.76	8,260.80	18.58	14.95	-173.91	-4,770.41	-370.60	4,919.41	4,885.94	33.48	146.940		
8,500.00	8,494.32	8,353.51	8,347.43	18.80	15.14	-173.96	-4,772.91	-366.56	4,921.80	4,887.89	33.90	145.169		
8,600.00	8,594.32	8,443.11	8,436.88	19.03	15.34	-174.01	-4,775.77	-362.30	4,924.47	4,890.14	34.33	143.439		
8,700.00	8,694.32	8,538.43	8,532.04	19.25	15.55	-174.07	-4,778.92	-357.81	4,927.28	4,892.51	34.77	141.730		
8,800.00	8,794.32	8,633.76	8,627.21	19.47	15.76	-174.13	-4,782.15	-353.38	4,930.18	4,894.98	35.20	140.064		
8,900.00	8,894.32	8,717.85	8,711.17	19.69	15.95	-174.17	-4,785.14	-349.51	4,933.24	4,897.62	35.62	138.498		
9,000.00	8,994.32	8,795.91	8,789.08	19.91	16.12	-174.22	-4,788.24	-345.90	4,936.74	4,900.71	36.03	137.008		
9,052.74	9,047.06	8,837.07	8,830.16	20.02	16.21	-174.24	-4,790.02	-343.99	4,938.76	4,902.51	36.25	136.239		
9,100.00	9,094.26	8,873.97	8,866.98	20.12	16.29	6.16	-4,791.69	-342.28	4,938.74	4,902.30	36.43	135.552		
9,150.00	9,143.85	8,912.90	8,905.82	20.20	16.38	6.19	-4,793.54	-340.46	4,934.61	4,898.00	36.62	134.767		
9,200.00	9,192.70	8,951.43	8,944.26	20.27	16.47	6.27	-4,795.46	-338.66	4,926.29	4,889.50	36.80	133.880		
9,250.00	9,240.44	9,006.00	8,998.69	20.35	16.59	6.40	-4,798.32	-336.11	4,913.87	4,876.88	36.99	132.828		
9,300.00	9,286.71	9,033.14	9,025.76	20.42	16.65	6.59	-4,799.78	-334.87	4,897.32	4,860.17	37.15	131.817		
9,350.00	9,331.16	9,080.96	9,073.48	20.49	16.75	6.86	-4,802.31	-332.86	4,876.77	4,839.44	37.33	130.638		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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) - 56H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 83-ISCWSA-GYRO-3, 1470-MWD-ISCWSA, 15982-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	9,373.45	9,126.70	9,119.13	20.55	16.85	7.22	-4,804.69	-331.15	4,852.34	4,814.83	37.50	129.393		
9,450.00	9,413.25	9,170.01	9,162.35	20.62	16.94	7.69	-4,806.91	-329.71	4,824.20	4,786.54	37.66	128.092		
9,500.00	9,450.26	9,210.53	9,202.80	20.68	17.03	8.29	-4,808.96	-328.52	4,792.59	4,754.78	37.81	126.743		
9,550.00	9,484.20	9,247.96	9,240.17	20.75	17.11	9.08	-4,810.82	-327.57	4,757.75	4,719.80	37.95	125.357		
9,600.00	9,514.82	9,391.63	9,383.71	20.84	17.41	10.39	-4,816.37	-325.75	4,719.89	4,681.70	38.18	123.612		
9,650.00	9,541.88	9,429.34	9,421.42	20.94	17.48	11.93	-4,817.19	-325.88	4,678.72	4,640.41	38.31	122.134		
9,700.00	9,565.17	9,461.76	9,453.83	21.07	17.54	14.08	-4,817.82	-326.17	4,635.24	4,596.83	38.42	120.655		
9,750.00	9,584.52	9,488.68	9,480.74	21.24	17.59	17.23	-4,818.29	-326.52	4,589.81	4,551.30	38.51	119.185		
9,800.00	9,599.78	9,509.96	9,502.02	21.43	17.63	22.17	-4,818.62	-326.88	4,542.79	4,504.20	38.59	117.730		
9,850.00	9,610.83	9,525.52	9,517.57	21.64	17.66	30.71	-4,818.84	-327.18	4,494.54	4,455.90	38.65	116.298		
9,900.00	9,617.59	9,535.30	9,527.34	21.88	17.68	47.37	-4,818.97	-327.39	4,445.46	4,406.77	38.69	114.895		
9,950.00	9,620.01	9,539.31	9,531.35	22.14	17.69	80.33	-4,819.02	-327.48	4,395.92	4,357.20	38.72	113.528		
9,957.57	9,620.00	9,539.41	9,531.46	22.19	17.69	86.66	-4,819.03	-327.48	4,388.40	4,349.68	38.72	113.323		
10,000.00	9,619.64	9,539.65	9,531.69	22.43	17.69	86.69	-4,819.03	-327.49	4,346.27	4,307.53	38.74	112.186		
10,100.00	9,618.80	9,540.18	9,532.23	23.08	17.69	86.75	-4,819.04	-327.50	4,246.99	4,208.21	38.78	109.502		
10,200.00	9,617.96	9,540.71	9,532.76	23.82	17.69	86.81	-4,819.04	-327.51	4,147.75	4,108.92	38.83	106.809		
10,300.00	9,617.11	9,541.23	9,533.28	24.65	17.69	86.87	-4,819.05	-327.53	4,048.54	4,009.66	38.89	104.109		
10,400.00	9,616.27	9,541.74	9,533.79	25.56	17.69	86.92	-4,819.06	-327.54	3,949.38	3,910.43	38.95	101.400		
10,500.00	9,615.43	9,542.25	9,534.29	26.54	17.70	86.98	-4,819.06	-327.55	3,850.26	3,811.24	39.02	98.683		
10,600.00	9,614.59	9,542.74	9,534.78	27.58	17.70	87.03	-4,819.07	-327.56	3,751.18	3,712.09	39.09	95.959		
10,700.00	9,613.74	9,543.22	9,535.27	28.68	17.70	87.09	-4,819.07	-327.57	3,652.16	3,612.98	39.18	93.226		
10,800.00	9,612.90	9,543.70	9,535.74	29.83	17.70	87.14	-4,819.08	-327.58	3,553.19	3,513.92	39.27	90.485		
10,900.00	9,612.06	9,544.16	9,536.21	31.02	17.70	87.19	-4,819.09	-327.59	3,454.28	3,414.91	39.37	87.737		
11,000.00	9,611.22	9,544.62	9,536.67	32.25	17.70	87.24	-4,819.09	-327.60	3,355.43	3,315.95	39.48	84.980		
11,100.00	9,610.37	9,545.08	9,537.12	33.52	17.70	87.29	-4,819.10	-327.61	3,256.66	3,217.05	39.61	82.216		
11,200.00	9,609.53	9,545.52	9,537.56	34.81	17.70	87.34	-4,819.10	-327.63	3,157.96	3,118.21	39.75	79.443		
11,300.00	9,608.69	9,545.96	9,538.00	36.14	17.70	87.39	-4,819.11	-327.64	3,059.35	3,019.44	39.91	76.662		
11,400.00	9,607.85	9,546.39	9,538.43	37.49	17.70	87.44	-4,819.11	-327.65	2,960.82	2,920.75	40.08	73.874		
11,500.00	9,607.01	9,546.81	9,538.85	38.86	17.70	87.48	-4,819.12	-327.66	2,862.41	2,822.13	40.27	71.077		
11,600.00	9,606.16	9,547.22	9,539.27	40.25	17.70	87.53	-4,819.12	-327.67	2,764.10	2,723.61	40.49	68.273		
11,700.00	9,605.32	9,547.63	9,539.68	41.66	17.71	87.58	-4,819.13	-327.68	2,665.92	2,625.20	40.73	65.461		
11,800.00	9,604.48	9,548.03	9,540.08	43.09	17.71	87.62	-4,819.13	-327.69	2,567.88	2,526.89	40.99	62.641		
11,900.00	9,603.64	9,548.43	9,540.47	44.53	17.71	87.66	-4,819.14	-327.69	2,470.00	2,428.71	41.29	59.815		
12,000.00	9,602.79	9,548.82	9,540.86	45.98	17.71	87.71	-4,819.14	-327.70	2,372.30	2,330.66	41.63	56.981		
12,100.00	9,601.95	9,549.20	9,541.25	47.45	17.71	87.75	-4,819.15	-327.71	2,274.79	2,232.78	42.01	54.143		
12,200.00	9,601.11	9,549.58	9,541.62	48.92	17.71	87.79	-4,819.15	-327.72	2,177.51	2,135.07	42.45	51.300		
12,300.00	9,600.27	9,549.95	9,542.00	50.41	17.71	87.83	-4,819.16	-327.73	2,080.49	2,037.55	42.94	48.454		
12,400.00	9,599.42	9,550.32	9,542.36	51.90	17.71	87.87	-4,819.16	-327.74	1,983.77	1,940.27	43.50	45.607		
12,500.00	9,598.58	9,550.68	9,542.72	53.41	17.71	87.91	-4,819.17	-327.75	1,887.38	1,843.25	44.14	42.762		
12,600.00	9,597.74	9,551.03	9,543.08	54.92	17.71	87.95	-4,819.17	-327.76	1,791.39	1,746.52	44.87	39.923		
12,700.00	9,596.90	9,551.38	9,543.43	56.44	17.71	87.99	-4,819.17	-327.77	1,695.87	1,650.15	45.72	37.095		
12,800.00	9,596.05	9,551.73	9,543.77	57.97	17.71	88.03	-4,819.18	-327.77	1,600.89	1,554.19	46.70	34.281		
12,900.00	9,595.21	9,552.07	9,544.11	59.50	17.71	88.07	-4,819.18	-327.78	1,506.57	1,458.72	47.85	31.488		
13,000.00	9,594.37	9,552.40	9,544.45	61.04	17.71	88.11	-4,819.19	-327.79	1,413.02	1,363.84	49.18	28.729		
13,100.00	9,593.53	9,552.73	9,544.78	62.58	17.72	88.14	-4,819.19	-327.80	1,320.42	1,269.67	50.75	26.017		
13,200.00	9,592.69	9,553.06	9,545.10	64.13	17.72	88.18	-4,819.19	-327.81	1,228.98	1,176.38	52.60	23.365		
13,300.00	9,591.84	9,553.38	9,545.42	65.68	17.72	88.21	-4,819.20	-327.82	1,138.98	1,084.20	54.78	20.792		
13,400.00	9,591.00	9,553.69	9,545.74	67.23	17.72	88.25	-4,819.20	-327.82	1,050.79	993.42	57.37	18.317		
13,500.00	9,590.16	9,554.01	9,546.05	68.79	17.72	88.28	-4,819.20	-327.83	964.90	904.46	60.44	15.966		
13,600.00	9,589.32	9,554.31	9,546.36	70.36	17.72	88.32	-4,819.21	-327.84	881.99	817.92	64.08	13.765		
13,700.00	9,588.47	9,554.62	9,546.66	71.92	17.72	88.35	-4,819.21	-327.85	802.99	734.62	68.37	11.744		
13,800.00	9,587.63	9,554.92	9,546.96	73.49	17.72	88.38	-4,819.22	-327.85	729.16	655.78	73.37	9.938		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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) - 56H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 83-ISCWSA-GYRO-3, 1470-MWD-ISCWSA, 15982-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		
13,900.00	9,586.79	9,555.21	9,547.25	75.06	17.72	88.42	-4,819.22	-327.86	662.23	583.19	79.04	8.378		
14,000.00	9,585.95	9,555.50	9,547.54	76.64	17.72	88.45	-4,819.22	-327.87	604.51	519.36	85.16	7.099		
14,100.00	9,585.10	9,555.79	9,547.83	78.22	17.72	88.48	-4,819.23	-327.88	558.85	467.68	91.16	6.130		
14,200.00	9,584.26	9,556.07	9,548.11	79.80	17.72	88.51	-4,819.23	-327.88	528.39	432.22	96.17	5.494		
14,300.00	9,583.42	9,556.35	9,548.39	81.38	17.72	88.54	-4,819.23	-327.89	515.82	416.71	99.11	5.205		
14,315.60	9,583.29	9,556.39	9,548.43	81.63	17.72	88.55	-4,819.23	-327.89	515.59	416.25	99.33	5.191 CC, ES, SF		
14,400.00	9,582.58	9,556.62	9,548.67	82.97	17.72	88.57	-4,819.24	-327.90	522.45	423.11	99.34	5.259		
14,500.00	9,581.73	9,556.90	9,548.94	84.55	17.72	88.61	-4,819.24	-327.90	547.57	450.53	97.03	5.643		
14,600.00	9,580.89	9,557.16	9,549.21	86.14	17.72	88.63	-4,819.24	-327.91	588.82	495.80	93.02	6.330		
14,700.00	9,580.05	9,557.43	9,549.47	87.73	17.72	88.66	-4,819.24	-327.92	643.11	554.86	88.25	7.287		
14,800.00	9,579.21	9,557.69	9,549.73	89.33	17.72	88.69	-4,819.25	-327.92	707.44	624.00	83.44	8.478		
14,900.00	9,578.37	9,557.95	9,549.99	90.92	17.73	88.72	-4,819.25	-327.93	779.32	700.36	78.96	9.870		
15,000.00	9,577.52	9,558.20	9,550.24	92.52	17.73	88.75	-4,819.25	-327.94	856.87	781.90	74.97	11.429		
15,100.00	9,576.68	9,558.45	9,550.49	94.11	17.73	88.78	-4,819.26	-327.94	938.67	867.17	71.50	13.128		
15,200.00	9,575.84	9,558.70	9,550.74	95.71	17.73	88.81	-4,819.26	-327.95	1,023.71	955.20	68.51	14.943		
15,300.00	9,575.00	9,558.95	9,550.99	97.31	17.73	88.83	-4,819.26	-327.96	1,111.24	1,045.31	65.94	16.853		
15,400.00	9,574.15	9,559.19	9,551.23	98.91	17.73	88.86	-4,819.26	-327.96	1,200.72	1,136.99	63.73	18.840		
15,500.00	9,573.31	9,559.43	9,551.47	100.52	17.73	88.89	-4,819.27	-327.97	1,291.75	1,229.91	61.84	20.890		
15,600.00	9,572.47	9,559.67	9,551.71	102.12	17.73	88.91	-4,819.27	-327.97	1,384.01	1,323.81	60.20	22.990		
15,700.00	9,571.63	9,559.90	9,551.94	103.73	17.73	88.94	-4,819.27	-327.98	1,477.28	1,418.50	58.79	25.130		
15,800.00	9,570.78	9,560.13	9,552.17	105.33	17.73	88.96	-4,819.28	-327.99	1,571.38	1,513.83	57.56	27.301		
15,900.00	9,569.94	9,560.36	9,552.40	106.94	17.73	88.99	-4,819.28	-327.99	1,666.17	1,609.68	56.49	29.497		
16,000.00	9,569.10	9,560.58	9,552.62	108.55	17.73	89.01	-4,819.28	-328.00	1,761.53	1,705.98	55.55	31.710		
16,100.00	9,568.26	12,742.00	11,281.23	110.16	39.25	162.19	-6,621.88	-356.49	1,822.20	1,746.43	75.77	24.049		
16,103.33	9,568.23	12,742.00	11,281.23	110.21	39.25	162.19	-6,621.88	-356.49	1,822.20	1,746.40	75.80	24.040		
16,200.00	9,567.42	12,808.60	11,282.01	111.76	40.21	162.28	-6,688.40	-353.28	1,822.89	1,745.90	76.99	23.676		
16,300.00	9,566.57	12,911.52	11,284.57	113.38	41.70	162.43	-6,791.18	-348.60	1,824.92	1,746.47	78.45	23.262		
16,400.00	9,565.73	13,001.64	11,286.44	114.99	43.03	162.57	-6,881.18	-344.32	1,826.52	1,746.70	79.82	22.883		
16,500.00	9,564.89	13,110.63	11,289.14	116.60	44.66	162.73	-6,990.02	-339.22	1,828.53	1,747.21	81.32	22.486		
16,600.00	9,564.05	13,232.10	11,290.76	118.21	46.60	162.89	-7,111.34	-333.63	1,829.46	1,746.52	82.94	22.057		
16,700.00	9,563.20	13,344.15	11,291.20	119.83	48.41	163.03	-7,223.28	-328.71	1,829.57	1,745.05	84.52	21.646		
16,800.00	9,562.36	13,466.12	11,290.60	121.44	50.40	163.18	-7,345.12	-323.00	1,828.77	1,742.61	86.16	21.225		
16,900.00	9,561.52	13,559.54	11,289.62	123.05	51.89	163.30	-7,438.40	-318.00	1,827.27	1,739.69	87.58	20.864		
16,977.72	9,560.86	13,617.32	11,289.61	124.31	52.77	163.40	-7,496.09	-314.66	1,826.77	1,738.22	88.56	20.628		
17,000.00	9,560.68	13,631.97	11,289.72	124.67	52.99	163.42	-7,510.71	-313.89	1,826.82	1,738.00	88.82	20.567		
17,080.26	9,560.00	13,687.00	11,290.55	125.97	53.81	163.49	-7,565.68	-311.44	1,827.76	1,737.96	89.80	20.353		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 57H - OH - OH													Offset Site Error: 0.00 usft
Survey Program: 172- VES GyroFlex V2, 1519-MWD-ISCWSA, 16135-Project													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		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)				Between Centres (usft)	Between Ellipses (usft)
0.00	0.00	0.00	0.00	0.00	0.00	-174.26	-4,755.07	-477.70	4,779.06				
100.00	100.00	61.30	61.30	0.09	0.05	-174.26	-4,755.17	-477.76	4,779.14	0.13	N/A		
200.00	200.00	140.28	140.28	0.31	0.11	-174.26	-4,755.59	-478.00	4,779.70	0.42	N/A		
300.00	300.00	228.49	228.48	0.54	0.19	-174.26	-4,756.39	-478.43	4,780.64	0.72	6,648.277		
400.00	400.00	333.33	333.32	0.76	0.26	-174.25	-4,757.42	-478.85	4,781.66	1.02	4,678.764		
500.00	500.00	441.17	441.15	0.99	0.33	-174.25	-4,758.29	-479.18	4,782.50	1.31	3,647.363		
600.00	600.00	544.79	544.77	1.21	0.38	-174.25	-4,759.03	-479.35	4,783.23	1.58	3,021.767		
700.00	700.00	651.74	651.72	1.43	0.43	-174.25	-4,759.67	-479.54	4,783.83	1.86	2,570.429		
800.00	800.00	752.87	752.84	1.66	0.48	-174.25	-4,760.17	-479.66	4,784.34	2.13	2,242.484		
900.00	900.00	849.90	849.87	1.88	0.52	-174.25	-4,760.69	-479.79	4,784.89	2.40	1,992.010		
1,000.00	1,000.00	956.71	956.69	2.11	0.57	-174.24	-4,761.28	-479.88	4,785.45	2.67	1,790.243		
1,100.00	1,100.00	1,059.32	1,059.29	2.33	0.61	-174.25	-4,761.67	-479.76	4,785.82	2.94	1,627.608		
1,200.00	1,200.00	1,154.24	1,154.21	2.56	0.65	-174.25	-4,762.10	-479.62	4,786.25	3.20	1,494.005		
1,300.00	1,300.00	1,269.97	1,269.94	2.78	0.69	-174.25	-4,762.55	-479.47	4,786.63	3.47	1,378.100		
1,400.00	1,400.00	1,372.14	1,372.11	3.01	0.73	-174.25	-4,762.69	-479.36	4,786.76	3.73	1,281.802		
1,500.00	1,500.00	1,469.63	1,469.60	3.23	0.75	-174.25	-4,762.83	-479.28	4,786.89	3.98	1,201.608		
1,600.00	1,600.00	1,605.58	1,605.55	3.46	0.81	-174.25	-4,762.71	-479.81	4,786.90	4.27	1,120.918		
1,673.79	1,673.79	1,651.46	1,651.43	3.62	0.85	-174.24	-4,762.48	-480.35	4,786.64	4.48	1,069.428		
1,700.00	1,700.00	1,665.68	1,665.64	3.68	0.87	-174.24	-4,762.48	-480.52	4,786.68	4.55	1,052.399		
1,800.00	1,800.00	1,709.00	1,708.96	3.91	0.91	-174.23	-4,762.70	-481.03	4,787.43	4.82	993.902		
1,900.00	1,900.00	1,757.09	1,757.04	4.13	0.97	-174.23	-4,763.52	-481.43	4,789.30	5.11	938.153		
2,000.00	2,000.00	1,804.00	1,803.93	4.36	1.04	-174.23	-4,765.05	-481.46	4,792.46	5.39	889.345		
2,100.00	2,100.00	1,836.17	1,836.06	4.58	1.09	-174.23	-4,766.51	-481.39	4,796.84	5.66	847.028		
2,200.00	2,200.00	1,899.00	1,898.77	4.81	1.19	-174.24	-4,770.33	-481.48	4,802.67	5.98	802.457		
2,300.00	2,300.00	1,920.69	1,920.40	5.03	1.23	-174.24	-4,771.90	-481.59	4,809.43	6.25	770.110		
2,400.00	2,400.00	1,994.00	1,993.48	5.26	1.38	-174.23	-4,777.71	-482.45	4,817.35	6.60	729.999		
2,500.00	2,500.00	2,049.61	2,048.87	5.48	1.53	-174.22	-4,782.46	-483.71	4,825.94	6.93	696.619		
2,600.00	2,600.00	2,655.00	2,650.60	5.71	3.25	-173.61	-4,804.05	-538.40	4,834.68	8.76	552.129		
2,700.00	2,700.00	2,749.00	2,744.14	5.93	3.46	-173.50	-4,801.65	-547.40	4,833.21	9.24	523.330		
2,800.00	2,800.00	2,839.81	2,834.58	6.15	3.68	-173.40	-4,799.68	-555.32	4,832.04	9.70	497.936		
2,900.00	2,900.00	2,913.01	2,907.48	6.38	3.88	-173.32	-4,798.26	-561.77	4,831.13	10.14	476.440		
3,000.00	3,000.00	2,998.49	2,992.53	6.60	4.13	-173.22	-4,796.92	-570.23	4,830.71	10.62	454.889		
3,096.73	3,096.73	3,080.70	3,074.35	6.82	4.36	-173.12	-4,795.80	-578.24	4,830.54	11.08	435.969		
3,100.00	3,100.00	3,083.34	3,076.97	6.83	4.37	-173.12	-4,795.77	-578.48	4,830.54	11.10	435.379		
3,200.00	3,200.00	3,172.58	3,165.87	7.05	4.63	-173.03	-4,795.00	-586.23	4,830.71	11.58	417.056		
3,300.00	3,300.00	3,263.38	3,256.25	7.28	4.90	-172.93	-4,794.20	-594.88	4,831.01	12.09	399.668		
3,400.00	3,400.00	3,360.38	3,352.77	7.50	5.21	-172.81	-4,793.55	-604.53	4,831.58	12.62	382.939		
3,500.00	3,500.00	3,467.70	3,459.67	7.73	5.52	-172.70	-4,792.75	-614.05	4,831.96	13.16	367.183		
3,600.00	3,600.00	3,569.03	3,560.64	7.95	5.81	135.88	-4,792.06	-622.44	4,832.97	13.67	353.418		
3,700.00	3,699.96	3,694.24	3,685.34	8.16	6.18	136.02	-4,790.76	-633.71	4,835.01	14.27	338.832		
3,800.00	3,799.86	3,788.00	3,778.76	8.38	6.45	136.13	-4,789.53	-641.55	4,837.96	14.76	327.758		
3,850.45	3,850.23	3,830.64	3,821.26	8.49	6.57	136.18	-4,789.04	-644.97	4,840.02	14.99	322.793		
3,900.00	3,899.69	3,865.83	3,856.32	8.60	6.67	136.23	-4,788.74	-647.91	4,842.34	15.20	318.491		
4,000.00	3,999.50	3,937.31	3,927.50	8.82	6.89	136.34	-4,788.37	-654.40	4,847.50	15.64	309.869		
4,100.00	4,099.31	4,009.88	3,999.68	9.04	7.13	136.47	-4,788.26	-661.99	4,853.24	16.10	301.501		
4,200.00	4,199.13	4,096.04	4,085.36	9.26	7.42	136.61	-4,788.56	-671.11	4,859.52	16.60	292.754		
4,300.00	4,298.94	4,221.22	4,209.96	9.48	7.81	136.81	-4,788.76	-683.02	4,865.50	17.21	282.748		
4,400.00	4,398.75	4,346.36	4,334.70	9.70	8.17	136.99	-4,788.71	-693.16	4,871.14	17.79	273.737		
4,500.00	4,498.57	4,447.90	4,435.82	9.93	8.48	137.15	-4,788.16	-702.31	4,876.44	18.33	266.053		
4,600.00	4,598.38	4,532.68	4,520.21	10.15	8.75	137.29	-4,787.75	-710.37	4,881.92	18.82	259.451		
4,700.00	4,698.19	4,631.80	4,618.91	10.38	9.06	137.44	-4,787.47	-719.54	4,887.59	19.35	252.622		
4,800.00	4,798.01	4,754.90	4,741.51	10.60	9.43	137.63	-4,786.67	-730.57	4,892.85	19.94	245.320		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 57H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 172- VES GyroFlex V2, 1519-MWD-ISCWSA, 16135-Project														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)							
4,900.00	4,897.82	4,827.00	4,813.42	10.83	9.63	137.72	-4,786.60	-735.75	4,898.42	4,878.05	20.37	240.493			
5,000.00	4,997.63	4,903.68	4,889.97	11.06	9.82	137.81	-4,787.09	-740.22	4,904.51	4,883.73	20.78	236.005			
5,100.00	5,097.45	4,989.91	4,976.10	11.29	10.02	137.90	-4,788.09	-744.07	4,910.93	4,889.73	21.20	231.659			
5,200.00	5,197.26	5,140.71	5,126.85	11.52	10.32	138.00	-4,789.93	-747.43	4,917.08	4,895.36	21.72	226.388			
5,300.00	5,297.07	5,266.78	5,252.91	11.75	10.55	138.09	-4,790.44	-749.58	4,922.31	4,900.14	22.18	221.959			
5,400.00	5,396.88	5,473.96	5,459.86	11.98	11.01	138.28	-4,788.29	-757.73	4,926.82	4,903.95	22.87	215.432			
5,500.00	5,496.70	5,582.74	5,568.17	12.21	11.34	138.45	-4,784.72	-767.21	4,929.66	4,906.23	23.43	210.403			
5,600.00	5,596.51	5,685.45	5,670.14	12.44	11.69	138.64	-4,780.54	-778.71	4,932.18	4,908.17	24.01	205.425			
5,700.00	5,696.32	5,769.92	5,753.94	12.67	11.99	138.80	-4,777.22	-788.85	4,935.02	4,910.47	24.55	201.053			
5,800.00	5,796.14	5,852.79	5,836.14	12.90	12.28	138.96	-4,774.12	-798.85	4,938.14	4,913.06	25.07	196.950			
5,900.00	5,895.95	5,923.96	5,906.78	13.14	12.53	139.09	-4,771.88	-807.19	4,941.80	4,916.25	25.55	193.386			
6,000.00	5,995.76	6,031.34	6,013.39	13.37	12.91	139.29	-4,768.69	-819.66	4,945.67	4,919.51	26.16	189.040			
6,100.00	6,095.58	6,125.54	6,106.94	13.60	13.24	139.46	-4,765.89	-830.31	4,949.54	4,922.82	26.72	185.237			
6,200.00	6,195.39	6,204.00	6,184.88	13.84	13.51	139.60	-4,763.78	-839.15	4,953.72	4,926.50	27.22	181.979			
6,300.00	6,295.20	6,393.00	6,372.54	14.07	14.17	139.94	-4,757.72	-860.47	4,957.62	4,929.51	28.11	176.354			
6,400.00	6,395.01	6,456.06	6,434.87	14.31	14.42	140.08	-4,754.41	-869.40	4,960.24	4,931.64	28.60	173.450			
6,500.00	6,494.83	6,508.72	6,487.03	14.54	14.63	140.19	-4,752.66	-876.50	4,964.29	4,935.25	29.04	170.963			
6,600.00	6,594.64	6,618.04	6,595.28	14.77	15.06	140.41	-4,749.04	-891.24	4,968.52	4,938.82	29.70	167.317			
6,655.23	6,649.77	6,665.33	6,642.11	14.90	15.25	140.51	-4,747.49	-897.63	4,970.91	4,940.90	30.01	165.650			
6,700.00	6,694.46	6,720.09	6,696.35	15.00	15.46	140.63	-4,745.72	-904.96	4,972.74	4,942.42	30.31	164.052			
6,800.00	6,794.36	6,828.73	6,804.04	15.18	15.87	140.85	-4,741.97	-918.81	4,975.52	4,944.62	30.90	161.022			
6,900.00	6,894.32	6,904.02	6,878.75	15.36	16.14	140.98	-4,739.63	-927.78	4,977.17	4,945.82	31.35	158.748			
7,005.68	7,000.00	6,960.00	6,934.32	15.55	16.35	-167.41	-4,738.25	-934.42	4,978.21	4,946.47	31.74	156.846			
7,100.00	7,094.32	7,029.63	7,003.45	15.73	16.61	-167.31	-4,737.05	-942.73	4,979.14	4,946.96	32.18	154.730			
7,200.00	7,194.32	7,093.00	7,066.36	15.95	16.84	-167.22	-4,736.47	-950.29	4,980.90	4,948.27	32.63	152.668			
7,300.00	7,294.32	7,184.06	7,156.83	16.17	17.17	-167.11	-4,736.40	-960.66	4,983.33	4,950.17	33.17	150.252			
7,400.00	7,394.32	7,299.02	7,271.11	16.39	17.56	-166.97	-4,735.77	-973.05	4,985.19	4,951.41	33.78	147.559			
7,500.00	7,494.32	7,392.28	7,363.72	16.61	17.89	-166.84	-4,735.30	-984.06	4,987.39	4,953.06	34.33	145.281			
7,600.00	7,594.32	7,505.80	7,476.61	16.83	18.28	-166.71	-4,734.86	-996.00	4,989.42	4,954.49	34.93	142.821			
7,700.00	7,694.32	7,592.07	7,562.46	17.05	18.57	-166.61	-4,734.60	-1,004.50	4,991.43	4,955.99	35.43	140.863			
7,800.00	7,794.32	7,660.75	7,630.81	17.27	18.79	-166.54	-4,734.72	-1,011.23	4,993.89	4,958.02	35.87	139.212			
7,900.00	7,894.32	7,726.74	7,696.49	17.48	19.01	-166.47	-4,735.36	-1,017.61	4,997.10	4,960.80	36.30	137.674			
8,000.00	7,994.32	7,823.66	7,793.06	17.70	19.30	-166.38	-4,736.96	-1,025.58	5,000.64	4,963.83	36.80	135.878			
8,100.00	8,094.32	7,923.95	7,893.06	17.92	19.59	-166.31	-4,738.91	-1,032.95	5,004.27	4,966.97	37.30	134.161			
8,200.00	8,194.32	8,041.68	8,010.39	18.14	19.93	-166.20	-4,740.52	-1,042.55	5,007.53	4,969.67	37.86	132.268			
8,300.00	8,294.32	8,137.82	8,106.21	18.36	20.21	-166.12	-4,741.92	-1,050.18	5,010.84	4,972.49	38.35	130.657			
8,400.00	8,394.32	8,281.00	8,248.99	18.58	20.61	-166.01	-4,743.67	-1,060.77	5,013.86	4,974.88	38.97	128.648			
8,500.00	8,494.32	8,375.00	8,342.73	18.80	20.87	-165.93	-4,744.33	-1,067.76	5,016.35	4,976.90	39.45	127.156			
8,600.00	8,594.32	8,490.73	8,458.19	19.03	21.19	-165.85	-4,745.15	-1,075.60	5,018.68	4,978.70	39.98	125.516			
8,700.00	8,694.32	8,569.50	8,536.72	19.25	21.41	-165.78	-4,745.63	-1,081.71	5,021.17	4,980.75	40.42	124.231			
8,800.00	8,794.32	8,668.80	8,635.67	19.47	21.70	-165.69	-4,746.26	-1,090.06	5,023.88	4,982.95	40.93	122.743			
8,900.00	8,894.32	8,769.07	8,735.61	19.69	22.00	-165.61	-4,747.01	-1,098.08	5,026.58	4,985.14	41.44	121.288			
9,000.00	8,994.32	8,876.21	8,842.37	19.91	22.32	-165.51	-4,747.67	-1,107.14	5,029.31	4,987.33	41.98	119.815			
9,052.74	9,047.06	8,942.00	8,907.91	20.02	22.51	-165.45	-4,747.81	-1,112.77	5,030.54	4,988.26	42.29	118.964			
9,100.00	9,094.26	8,985.85	8,951.62	20.12	22.64	15.04	-4,747.89	-1,116.40	5,029.73	4,987.23	42.50	118.334			
9,150.00	9,143.85	9,024.69	8,990.33	20.20	22.76	15.22	-4,748.09	-1,119.50	5,024.90	4,982.20	42.70	117.677			
9,200.00	9,192.70	9,069.81	9,035.30	20.27	22.89	15.53	-4,748.39	-1,123.09	5,015.99	4,973.08	42.92	116.875			
9,250.00	9,240.44	9,116.61	9,081.93	20.35	23.03	15.98	-4,748.61	-1,127.19	5,003.01	4,959.87	43.14	115.974			
9,300.00	9,286.71	9,157.83	9,122.96	20.42	23.16	16.59	-4,748.76	-1,131.04	4,986.05	4,942.71	43.34	115.036			
9,350.00	9,331.16	9,195.88	9,160.85	20.49	23.28	17.36	-4,748.98	-1,134.51	4,965.31	4,921.77	43.54	114.049			
9,400.00	9,373.45	9,235.26	9,200.08	20.55	23.40	18.34	-4,749.27	-1,138.00	4,940.92	4,897.19	43.73	112.985			
9,450.00	9,413.25	9,284.14	9,248.78	20.62	23.55	19.63	-4,749.66	-1,142.12	4,913.00	4,869.05	43.95	111.786			

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 57H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 172- VES GyroFlex V2, 1519-MWD-ISCWSA, 16135-Project													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
9,500.00	9,450.26	9,327.48	9,291.99	20.68	23.68	21.23	-4,749.98	-1,145.55	4,881.73	4,837.58	44.15	110.579		
9,550.00	9,484.20	9,360.87	9,325.29	20.75	23.77	23.20	-4,750.27	-1,147.99	4,847.41	4,803.11	44.30	109.414		
9,600.00	9,514.82	9,391.21	9,355.55	20.84	23.86	25.69	-4,750.59	-1,150.02	4,810.33	4,765.88	44.45	108.223		
9,650.00	9,541.88	9,419.18	9,383.47	20.94	23.93	28.90	-4,750.94	-1,151.74	4,770.76	4,726.18	44.58	107.007		
9,700.00	9,565.17	9,447.70	9,411.94	21.07	24.01	33.13	-4,751.27	-1,153.48	4,729.00	4,684.29	44.71	105.759		
9,750.00	9,584.52	9,471.36	9,435.55	21.24	24.07	38.72	-4,751.51	-1,154.96	4,685.37	4,640.54	44.83	104.513		
9,800.00	9,599.78	9,490.03	9,454.18	21.43	24.12	46.19	-4,751.68	-1,156.16	4,640.22	4,595.29	44.93	103.274		
9,850.00	9,610.83	9,503.59	9,467.71	21.64	24.15	56.13	-4,751.79	-1,157.04	4,593.89	4,548.87	45.02	102.049		
9,900.00	9,617.59	9,512.01	9,476.11	21.88	24.17	68.94	-4,751.86	-1,157.59	4,546.75	4,501.66	45.09	100.843		
9,950.00	9,620.01	9,515.26	9,479.36	22.14	24.18	84.11	-4,751.88	-1,157.81	4,499.17	4,454.02	45.14	99.662		
9,957.57	9,620.00	9,515.31	9,479.40	22.19	24.18	86.51	-4,751.88	-1,157.81	4,491.95	4,446.79	45.15	99.485		
10,000.00	9,619.64	9,515.22	9,479.31	22.43	24.18	86.50	-4,751.88	-1,157.81	4,451.49	4,406.29	45.19	98.498		
10,100.00	9,618.80	9,515.02	9,479.11	23.08	24.18	86.49	-4,751.88	-1,157.79	4,356.28	4,310.98	45.30	96.155		
10,200.00	9,617.96	9,514.82	9,478.91	23.82	24.18	86.49	-4,751.88	-1,157.78	4,261.30	4,215.86	45.44	93.789		
10,300.00	9,617.11	9,514.62	9,478.72	24.65	24.18	86.48	-4,751.88	-1,157.77	4,166.55	4,120.96	45.59	91.397		
10,400.00	9,616.27	9,514.43	9,478.53	25.56	24.18	86.47	-4,751.88	-1,157.75	4,072.05	4,026.29	45.76	88.981		
10,500.00	9,615.43	9,514.24	9,478.33	26.54	24.18	86.46	-4,751.87	-1,157.74	3,977.82	3,931.85	45.96	86.542		
10,600.00	9,614.59	9,514.05	9,478.15	27.58	24.18	86.45	-4,751.87	-1,157.73	3,883.88	3,837.68	46.19	84.079		
10,700.00	9,613.74	9,513.86	9,477.96	28.68	24.18	86.44	-4,751.87	-1,157.72	3,790.25	3,743.79	46.45	81.593		
10,800.00	9,612.90	9,513.68	9,477.78	29.83	24.18	86.44	-4,751.87	-1,157.70	3,696.95	3,650.20	46.75	79.086		
10,900.00	9,612.06	9,513.50	9,477.60	31.02	24.18	86.43	-4,751.87	-1,157.69	3,604.01	3,556.93	47.07	76.560		
11,000.00	9,611.22	9,513.32	9,477.42	32.25	24.18	86.42	-4,751.87	-1,157.68	3,511.46	3,464.02	47.44	74.015		
11,100.00	9,610.37	9,513.14	9,477.24	33.52	24.18	86.41	-4,751.87	-1,157.67	3,419.33	3,371.48	47.85	71.455		
11,200.00	9,609.53	9,512.97	9,477.06	34.81	24.18	86.41	-4,751.87	-1,157.66	3,327.65	3,279.34	48.31	68.883		
11,300.00	9,608.69	9,512.79	9,476.89	36.14	24.18	86.40	-4,751.86	-1,157.65	3,236.47	3,187.65	48.81	66.301		
11,400.00	9,607.85	9,512.62	9,476.72	37.49	24.17	86.39	-4,751.86	-1,157.63	3,145.82	3,096.45	49.37	63.714		
11,500.00	9,607.01	9,512.45	9,476.55	38.86	24.17	86.38	-4,751.86	-1,157.62	3,055.76	3,005.76	49.99	61.125		
11,600.00	9,606.16	9,512.29	9,476.39	40.25	24.17	86.38	-4,751.86	-1,157.61	2,966.33	2,915.66	50.67	58.539		
11,700.00	9,605.32	9,512.12	9,476.22	41.66	24.17	86.37	-4,751.86	-1,157.60	2,877.60	2,826.18	51.42	55.962		
11,800.00	9,604.48	9,511.96	9,476.06	43.09	24.17	86.36	-4,751.86	-1,157.59	2,789.63	2,737.39	52.24	53.400		
11,900.00	9,603.64	9,511.80	9,475.90	44.53	24.17	86.36	-4,751.86	-1,157.58	2,702.50	2,649.36	53.14	50.857		
12,000.00	9,602.79	9,511.64	9,475.74	45.98	24.17	86.35	-4,751.86	-1,157.57	2,616.28	2,562.16	54.12	48.342		
12,100.00	9,601.95	9,511.48	9,475.58	47.45	24.17	86.34	-4,751.85	-1,157.56	2,531.09	2,475.90	55.19	45.861		
12,200.00	9,601.11	9,511.32	9,475.43	48.92	24.17	86.34	-4,751.85	-1,157.55	2,447.01	2,390.66	56.36	43.420		
12,300.00	9,600.27	9,511.17	9,475.27	50.41	24.17	86.33	-4,751.85	-1,157.54	2,364.18	2,306.55	57.62	41.028		
12,400.00	9,599.42	9,511.02	9,475.12	51.90	24.17	86.32	-4,751.85	-1,157.53	2,282.71	2,223.72	59.00	38.693		
12,500.00	9,598.58	9,510.87	9,474.97	53.41	24.17	86.32	-4,751.85	-1,157.52	2,202.78	2,142.30	60.48	36.421		
12,600.00	9,597.74	9,510.72	9,474.82	54.92	24.17	86.31	-4,751.85	-1,157.51	2,124.55	2,062.46	62.08	34.221		
12,700.00	9,596.90	9,510.57	9,474.68	56.44	24.17	86.31	-4,751.85	-1,157.50	2,048.21	1,984.40	63.81	32.100		
12,800.00	9,596.05	9,510.43	9,474.53	57.97	24.17	86.30	-4,751.85	-1,157.49	1,973.99	1,908.33	65.66	30.066		
12,900.00	9,595.21	9,510.28	9,474.39	59.50	24.17	86.29	-4,751.85	-1,157.48	1,902.13	1,834.50	67.63	28.126		
13,000.00	9,594.37	9,510.14	9,474.25	61.04	24.17	86.29	-4,751.84	-1,157.47	1,832.91	1,763.18	69.73	26.287		
13,100.00	9,593.53	9,510.00	9,474.11	62.58	24.17	86.28	-4,751.84	-1,157.46	1,766.64	1,694.69	71.94	24.556		
13,200.00	9,592.69	9,509.86	9,473.97	64.13	24.17	86.27	-4,751.84	-1,157.45	1,703.66	1,629.39	74.27	22.939		
13,300.00	9,591.84	9,509.73	9,473.83	65.68	24.17	86.27	-4,751.84	-1,157.44	1,644.36	1,567.67	76.69	21.441		
13,400.00	9,591.00	9,509.59	9,473.70	67.23	24.17	86.26	-4,751.84	-1,157.43	1,589.15	1,509.96	79.19	20.067		
13,500.00	9,590.16	9,509.46	9,473.56	68.79	24.17	86.26	-4,751.84	-1,157.43	1,538.45	1,456.72	81.74	18.822		
13,600.00	9,589.32	9,509.32	9,473.43	70.36	24.17	86.25	-4,751.84	-1,157.42	1,492.75	1,408.46	84.29	17.709		
13,700.00	9,588.47	9,509.19	9,473.30	71.92	24.17	86.25	-4,751.84	-1,157.41	1,452.50	1,365.68	86.82	16.730		
13,800.00	9,587.63	9,509.06	9,473.17	73.49	24.17	86.24	-4,751.84	-1,157.40	1,418.18	1,328.91	89.27	15.886		
13,900.00	9,586.79	9,508.93	9,473.04	75.06	24.17	86.24	-4,751.84	-1,157.39	1,390.21	1,298.62	91.59	15.179		
14,000.00	9,585.95	9,508.80	9,472.91	76.64	24.16	86.23	-4,751.83	-1,157.38	1,368.99	1,275.27	93.72	14.607		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 57H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 172- VES GyroFlex V2, 1519-MWD-ISCWSA, 16135-Project														Offset Well Error:	0.00 usft
Reference	Offset		Semi Major Axis		Distance		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)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
14,100.00	9,585.10	9,508.68	9,472.79	78.22	24.16	86.22	-4,751.83	-1,157.37	1,354.84	1,259.22	95.62	14.169			
14,200.00	9,584.26	9,508.55	9,472.66	79.80	24.16	86.22	-4,751.83	-1,157.37	1,347.98	1,250.74	97.24	13.862			
14,242.70	9,583.90	9,508.50	9,472.61	80.48	24.16	86.22	-4,751.83	-1,157.36	1,347.31	1,249.46	97.84	13.770 CC, ES			
14,300.00	9,583.42	9,508.43	9,472.54	81.38	24.16	86.21	-4,751.83	-1,157.36	1,348.52	1,249.97	98.56	13.683			
14,400.00	9,582.58	9,508.31	9,472.42	82.97	24.16	86.21	-4,751.83	-1,157.35	1,356.46	1,256.92	99.54	13.627 SF			
14,500.00	9,581.73	9,508.19	9,472.30	84.55	24.16	86.20	-4,751.83	-1,157.34	1,371.65	1,271.46	100.19	13.690			
14,600.00	9,580.89	9,508.07	9,472.18	86.14	24.16	86.20	-4,751.83	-1,157.33	1,393.88	1,293.36	100.52	13.866			
14,700.00	9,580.05	9,507.95	9,472.06	87.73	24.16	86.19	-4,751.83	-1,157.33	1,422.80	1,322.25	100.55	14.151			
14,800.00	9,579.21	9,507.83	9,471.94	89.33	24.16	86.19	-4,751.83	-1,157.32	1,458.02	1,357.72	100.30	14.537			
14,900.00	9,578.37	9,507.71	9,471.82	90.92	24.16	86.18	-4,751.83	-1,157.31	1,499.09	1,399.28	99.81	15.019			
15,000.00	9,577.52	9,507.60	9,471.71	92.52	24.16	86.18	-4,751.83	-1,157.30	1,545.55	1,446.42	99.13	15.591			
15,100.00	9,576.68	9,507.48	9,471.60	94.11	24.16	86.17	-4,751.82	-1,157.30	1,596.93	1,498.64	98.30	16.246			
15,200.00	9,575.84	9,507.37	9,471.48	95.71	24.16	86.17	-4,751.82	-1,157.29	1,652.77	1,555.43	97.34	16.979			
15,300.00	9,575.00	9,507.26	9,471.37	97.31	24.16	86.16	-4,751.82	-1,157.28	1,712.63	1,616.33	96.30	17.784			
15,400.00	9,574.15	9,507.15	9,471.26	98.91	24.16	86.16	-4,751.82	-1,157.27	1,776.11	1,680.91	95.20	18.656			
15,500.00	9,573.31	9,507.04	9,471.15	100.52	24.16	86.15	-4,751.82	-1,157.27	1,842.83	1,748.76	94.07	19.589			
15,600.00	9,572.47	9,506.93	9,471.04	102.12	24.16	86.15	-4,751.82	-1,157.26	1,912.46	1,819.52	92.93	20.579			
15,700.00	9,571.63	9,506.82	9,470.94	103.73	24.16	86.15	-4,751.82	-1,157.25	1,984.68	1,892.88	91.80	21.620			
15,800.00	9,570.78	9,506.72	9,470.83	105.33	24.16	86.14	-4,751.82	-1,157.25	2,059.22	1,968.55	90.68	22.710			
15,900.00	9,569.94	9,506.61	9,470.72	106.94	24.16	86.14	-4,751.82	-1,157.24	2,135.85	2,046.26	89.59	23.840			
16,000.00	9,569.10	9,506.51	9,470.62	108.55	24.16	86.13	-4,751.82	-1,157.23	2,214.34	2,125.81	88.54	25.011			
16,100.00	9,568.26	9,506.40	9,470.52	110.16	24.16	86.13	-4,751.82	-1,157.22	2,294.51	2,206.99	87.52	26.218			
16,200.00	9,567.42	12,899.00	11,276.60	111.76	58.21	137.03	-6,629.45	-1,411.71	2,367.62	2,246.82	120.81	19.599			
16,300.00	9,566.57	12,960.75	11,278.00	113.38	59.50	137.02	-6,691.16	-1,413.48	2,372.42	2,249.12	123.31	19.240			
16,400.00	9,565.73	13,048.92	11,280.91	114.99	61.37	137.00	-6,779.20	-1,417.15	2,378.74	2,252.68	126.06	18.871			
16,500.00	9,564.89	13,199.85	11,282.56	116.60	64.99	136.91	-6,929.94	-1,424.22	2,383.86	2,254.06	129.80	18.366			
16,600.00	9,564.05	13,298.30	11,281.42	118.21	67.43	136.79	-7,028.24	-1,429.51	2,387.81	2,254.74	133.07	17.944			
16,700.00	9,563.20	13,371.00	11,281.34	119.83	69.09	136.73	-7,100.84	-1,433.27	2,392.42	2,256.55	135.87	17.608			
16,800.00	9,562.36	13,445.91	11,282.68	121.44	70.61	136.69	-7,175.66	-1,436.82	2,398.12	2,259.63	138.49	17.316			
16,900.00	9,561.52	13,504.85	11,284.98	123.05	71.81	136.68	-7,234.49	-1,439.46	2,405.20	2,264.29	140.91	17.069			
17,000.00	9,560.68	13,560.00	11,288.39	124.67	72.93	136.69	-7,289.47	-1,442.13	2,414.12	2,270.91	143.22	16.856			
17,080.26	9,560.00	13,711.92	11,296.00	125.97	76.53	136.68	-7,440.99	-1,449.86	2,420.68	2,274.20	146.47	16.526			

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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) - 58H - OH - OH													Offset Site Error: 0.00 usft	
Survey Program: 1629-MWD-ISCWSA, 16290-Project													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	1,535.00	1,534.97	0.00	0.00	-174.90	-4,757.53	-424.61	5,023.98					
100.00	100.00	1,535.00	1,534.97	0.09	0.00	-174.90	-4,757.53	-424.61	4,993.89	4,992.52	1.37	3,651.925		
200.00	200.00	1,535.00	1,534.97	0.31	0.00	-174.90	-4,757.53	-424.61	4,965.62	4,964.33	1.29	3,857.053		
300.00	300.00	1,535.00	1,534.97	0.54	0.00	-174.90	-4,757.53	-424.61	4,939.22	4,937.96	1.25	3,939.029		
400.00	400.00	1,535.00	1,534.97	0.76	0.00	-174.90	-4,757.53	-424.61	4,914.71	4,913.44	1.27	3,866.393		
500.00	500.00	1,535.00	1,534.97	0.99	0.00	-174.90	-4,757.53	-424.61	4,892.12	4,890.78	1.34	3,657.932		
600.00	600.00	1,535.00	1,534.97	1.21	0.00	-174.90	-4,757.53	-424.61	4,871.48	4,870.03	1.45	3,368.703		
700.00	700.00	1,535.00	1,534.97	1.43	0.00	-174.90	-4,757.53	-424.61	4,852.81	4,851.23	1.59	3,054.969		
800.00	800.00	1,535.00	1,534.97	1.66	0.00	-174.90	-4,757.53	-424.61	4,836.15	4,834.39	1.76	2,753.704		
900.00	900.00	1,535.00	1,534.97	1.88	0.00	-174.90	-4,757.53	-424.61	4,821.49	4,819.55	1.94	2,482.177		
1,000.00	1,000.00	1,535.00	1,534.97	2.11	0.00	-174.90	-4,757.53	-424.61	4,808.87	4,806.73	2.14	2,245.126		
1,100.00	1,100.00	1,535.00	1,534.97	2.33	0.00	-174.90	-4,757.53	-424.61	4,798.31	4,795.96	2.35	2,041.146		
1,200.00	1,200.00	1,535.00	1,534.97	2.56	0.00	-174.90	-4,757.53	-424.61	4,789.81	4,787.24	2.57	1,866.484		
1,300.00	1,300.00	1,535.00	1,534.97	2.78	0.00	-174.90	-4,757.53	-424.61	4,783.38	4,780.59	2.79	1,716.890		
1,400.00	1,400.00	1,535.00	1,534.97	3.01	0.00	-174.90	-4,757.53	-424.61	4,779.04	4,776.03	3.01	1,588.391		
1,500.00	1,500.00	1,535.00	1,534.97	3.23	0.00	-174.90	-4,757.53	-424.61	4,776.79	4,773.55	3.23	1,477.542		
1,600.00	1,600.00	1,648.55	1,648.41	3.46	0.19	-174.96	-4,756.77	-419.76	4,775.78	4,772.16	3.63	1,317.255		
1,700.00	1,700.00	1,764.12	1,763.53	3.68	0.48	-175.08	-4,755.76	-409.78	4,774.15	4,769.99	4.16	1,147.203		
1,800.00	1,800.00	1,865.96	1,864.77	3.91	0.77	-175.21	-4,754.76	-398.71	4,772.25	4,767.58	4.67	1,021.952		
1,900.00	1,900.00	1,963.56	1,961.78	4.13	1.03	-175.33	-4,753.95	-388.11	4,770.51	4,765.35	5.16	924.764		
2,000.00	2,000.00	2,066.88	2,064.21	4.36	1.40	-175.51	-4,752.72	-373.38	4,768.56	4,762.81	5.75	829.076		
2,100.00	2,100.00	2,205.95	2,202.17	4.58	1.77	-175.70	-4,751.05	-357.20	4,766.09	4,759.75	6.34	751.257		
2,200.00	2,200.00	2,289.00	2,284.48	4.81	2.01	-175.83	-4,749.74	-346.25	4,763.54	4,756.73	6.81	699.525		
2,300.00	2,300.00	2,361.81	2,356.70	5.03	2.22	-175.94	-4,748.88	-337.04	4,761.49	4,754.25	7.24	657.488		
2,400.00	2,400.00	2,439.86	2,434.16	5.26	2.45	-176.05	-4,748.49	-327.49	4,760.11	4,752.42	7.69	618.922		
2,500.00	2,500.00	2,536.93	2,530.54	5.48	2.72	-176.19	-4,748.21	-315.96	4,759.01	4,750.82	8.19	580.848		
2,600.00	2,600.00	2,653.27	2,646.17	5.71	3.05	-176.35	-4,747.60	-303.09	4,757.76	4,749.02	8.74	544.191		
2,700.00	2,700.00	2,740.92	2,733.34	5.93	3.29	-176.46	-4,746.99	-293.98	4,756.41	4,747.21	9.21	516.528		
2,800.00	2,800.00	2,834.48	2,826.44	6.15	3.54	-176.57	-4,746.55	-284.75	4,755.33	4,745.65	9.69	490.955		
2,900.00	2,900.00	2,946.18	2,937.61	6.38	3.84	-176.70	-4,745.94	-273.90	4,754.22	4,744.01	10.21	465.667		
3,000.00	3,000.00	3,013.02	3,004.02	6.60	4.03	-176.79	-4,745.75	-266.32	4,753.29	4,742.66	10.63	447.317		
3,100.00	3,100.00	3,091.35	3,081.69	6.83	4.27	-176.91	-4,746.11	-256.26	4,753.03	4,741.94	11.08	428.797		
3,141.93	3,141.93	3,129.30	3,119.33	6.92	4.38	-176.97	-4,746.36	-251.38	4,753.01	4,741.72	11.29	420.823		
3,200.00	3,200.00	3,185.35	3,174.93	7.05	4.55	-177.05	-4,746.75	-244.30	4,753.03	4,741.43	11.59	409.942		
3,300.00	3,300.00	3,295.19	3,283.97	7.28	4.88	-177.21	-4,747.42	-231.05	4,753.05	4,740.90	12.15	391.336		
3,400.00	3,400.00	3,414.41	3,402.40	7.50	5.22	-177.38	-4,747.67	-217.40	4,752.71	4,739.99	12.72	373.757		
3,500.00	3,500.00	3,530.66	3,518.01	7.73	5.55	-177.52	-4,747.36	-205.23	4,751.97	4,738.70	13.27	358.207		
3,558.32	3,558.32	3,580.28	3,567.38	7.86	5.68	130.89	-4,747.19	-200.26	4,751.72	4,738.19	13.53	351.235		
3,600.00	3,600.00	3,610.00	3,596.95	7.95	5.76	130.86	-4,747.14	-197.26	4,751.85	4,738.15	13.70	346.832		
3,700.00	3,699.96	3,688.15	3,674.64	8.16	5.98	130.77	-4,747.29	-188.88	4,753.33	4,739.19	14.13	336.377		
3,800.00	3,799.86	3,768.63	3,754.55	8.38	6.21	130.66	-4,747.90	-179.28	4,756.46	4,741.88	14.58	326.257		
3,850.45	3,850.23	3,817.11	3,802.64	8.49	6.35	130.59	-4,748.41	-173.11	4,758.60	4,743.77	14.83	320.845		
3,900.00	3,899.69	3,882.72	3,867.70	8.60	6.55	130.53	-4,748.96	-164.72	4,760.75	4,745.62	15.14	314.515		
4,000.00	3,999.50	3,975.19	3,959.47	8.82	6.82	130.44	-4,749.59	-153.37	4,764.97	4,749.34	15.63	304.863		
4,100.00	4,099.31	4,075.61	4,059.19	9.04	7.11	130.36	-4,750.38	-141.60	4,769.32	4,753.18	16.14	295.467		
4,200.00	4,199.13	4,177.10	4,159.88	9.26	7.41	130.26	-4,751.17	-128.86	4,773.64	4,756.98	16.66	286.484		
4,300.00	4,298.94	4,279.13	4,261.01	9.48	7.72	130.15	-4,751.93	-115.33	4,777.93	4,760.73	17.20	277.843		
4,400.00	4,398.75	4,378.88	4,359.93	9.70	8.03	130.06	-4,752.59	-102.53	4,782.15	4,764.43	17.72	269.849		
4,500.00	4,498.57	4,459.00	4,439.42	9.93	8.27	129.98	-4,753.38	-92.58	4,786.71	4,768.52	18.18	263.238		
4,600.00	4,598.38	4,560.47	4,540.12	10.15	8.57	129.89	-4,754.60	-80.14	4,791.52	4,772.81	18.71	256.099		
4,700.00	4,698.19	4,735.24	4,713.61	10.38	9.08	129.73	-4,754.68	-58.99	4,795.02	4,775.57	19.45	246.520		
4,800.00	4,798.01	4,813.55	4,791.29	10.60	9.32	129.66	-4,754.43	-49.10	4,798.34	4,778.43	19.91	240.998		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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) - 58H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 1629-MWD-ISCWSA, 16290-Project													Offset Well Error:	0.00 usft
Reference	Offset		Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
4,900.00	4,897.82	4,925.36	4,902.15	10.83	9.66	129.55	-4,754.35	-34.61	4,801.91	4,781.44	20.48	234.520		
5,000.00	4,997.63	5,047.78	5,023.52	11.06	10.03	129.43	-4,753.67	-18.60	4,805.00	4,783.92	21.08	227.991		
5,100.00	5,097.45	5,144.44	5,119.51	11.29	10.31	129.35	-4,752.81	-7.27	4,807.80	4,786.21	21.59	222.735		
5,200.00	5,197.26	5,246.50	5,221.01	11.52	10.59	129.28	-4,752.15	3.31	4,810.87	4,788.78	22.09	217.780		
5,300.00	5,297.07	5,337.50	5,311.61	11.75	10.84	129.23	-4,751.30	11.90	4,813.69	4,791.12	22.56	213.326		
5,400.00	5,396.88	5,408.00	5,381.68	11.98	11.03	129.17	-4,751.33	19.61	4,817.34	4,794.35	22.99	209.567		
5,500.00	5,496.70	5,465.23	5,438.49	12.21	11.20	129.12	-4,751.78	26.53	4,821.70	4,798.31	23.38	206.222		
5,600.00	5,596.51	5,565.03	5,537.53	12.44	11.49	129.03	-4,752.72	38.75	4,826.36	4,802.46	23.90	201.906		
5,700.00	5,696.32	5,663.00	5,634.75	12.67	11.78	128.95	-4,753.57	50.80	4,830.96	4,806.53	24.42	197.799		
5,800.00	5,796.14	5,878.33	5,848.38	12.90	12.43	128.75	-4,752.77	77.78	4,834.22	4,808.91	25.30	191.061		
5,900.00	5,895.95	5,967.08	5,936.41	13.14	12.70	128.66	-4,751.56	88.98	4,836.61	4,810.81	25.80	187.466		
6,000.00	5,995.76	6,091.31	6,059.64	13.37	13.07	128.55	-4,749.62	104.59	4,838.81	4,812.41	26.40	183.267		
6,100.00	6,095.58	6,178.82	6,146.42	13.60	13.33	128.47	-4,748.20	115.75	4,840.97	4,814.08	26.90	179.979		
6,200.00	6,195.39	6,268.98	6,235.91	13.84	13.60	128.39	-4,746.92	126.67	4,843.36	4,815.96	27.39	176.798		
6,300.00	6,295.20	6,352.00	6,318.40	14.07	13.84	128.32	-4,745.98	136.05	4,846.04	4,818.17	27.86	173.913		
6,400.00	6,395.01	6,446.00	6,411.85	14.31	14.10	128.26	-4,744.97	146.13	4,848.79	4,820.43	28.36	170.973		
6,500.00	6,494.83	6,541.00	6,506.20	14.54	14.37	128.18	-4,744.22	157.14	4,851.82	4,822.96	28.87	168.083		
6,600.00	6,594.64	6,620.99	6,585.51	14.77	14.62	128.10	-4,743.94	167.55	4,855.27	4,825.93	29.34	165.482		
6,655.23	6,649.77	6,669.88	6,633.96	14.90	14.77	128.05	-4,743.79	174.08	4,857.23	4,827.61	29.62	163.997		
6,700.00	6,694.46	6,707.98	6,671.73	15.00	14.88	128.03	-4,743.73	179.07	4,858.78	4,828.95	29.83	162.901		
6,800.00	6,794.36	6,809.19	6,772.06	15.18	15.19	127.93	-4,743.66	192.36	4,861.57	4,831.25	30.32	160.353		
6,900.00	6,894.32	6,906.36	6,868.41	15.36	15.49	127.82	-4,743.55	205.05	4,863.25	4,832.46	30.79	157.943		
7,005.68	7,000.00	7,001.47	6,962.87	15.55	15.77	179.23	-4,743.58	216.11	4,864.04	4,832.78	31.25	155.634		
7,100.00	7,094.32	7,084.70	7,045.59	15.73	16.00	179.12	-4,743.79	225.29	4,864.43	4,832.75	31.67	153.577		
7,200.00	7,194.32	7,169.12	7,129.52	15.95	16.24	179.02	-4,744.22	234.35	4,865.12	4,832.99	32.13	151.424		
7,300.00	7,294.32	7,412.45	7,371.15	16.17	16.94	178.68	-4,741.57	262.76	4,863.87	4,830.82	33.05	147.145		
7,400.00	7,394.32	7,496.47	7,454.55	16.39	17.19	178.56	-4,739.78	272.81	4,862.01	4,828.49	33.52	145.031		
7,500.00	7,494.32	7,580.00	7,537.50	16.61	17.43	178.45	-4,738.16	282.47	4,860.39	4,826.40	33.99	143.000		
7,600.00	7,594.32	7,674.00	7,630.88	16.83	17.70	178.32	-4,736.62	293.18	4,859.06	4,824.58	34.48	140.924		
7,700.00	7,694.32	7,769.00	7,725.29	17.05	17.97	178.20	-4,735.25	303.62	4,857.94	4,822.97	34.97	138.917		
7,800.00	7,794.32	7,842.86	7,798.79	17.27	18.17	178.11	-4,734.39	310.89	4,857.10	4,821.71	35.39	137.247		
7,900.00	7,894.32	7,933.17	7,888.68	17.48	18.41	178.01	-4,733.74	319.46	4,856.69	4,820.84	35.85	135.461		
8,000.00	7,994.32	8,027.17	7,982.09	17.70	18.68	177.89	-4,733.09	329.98	4,856.40	4,820.07	36.34	133.650		
8,035.05	8,029.37	8,052.00	8,006.77	17.78	18.75	177.86	-4,732.94	332.71	4,856.34	4,819.86	36.48	133.109		
8,100.00	8,094.32	8,087.48	8,042.02	17.92	18.85	177.81	-4,732.87	336.76	4,856.51	4,819.78	36.73	132.221		
8,200.00	8,194.32	8,147.00	8,101.06	18.14	19.03	177.72	-4,733.33	344.29	4,857.69	4,820.56	37.12	130.855		
8,300.00	8,294.32	8,212.49	8,165.97	18.36	19.23	177.62	-4,734.31	352.92	4,859.66	4,822.12	37.54	129.459		
8,400.00	8,394.32	8,313.87	8,266.51	18.58	19.54	177.47	-4,736.00	365.80	4,861.88	4,823.82	38.07	127.718		
8,500.00	8,494.32	8,524.00	8,474.84	18.80	20.18	177.14	-4,735.73	393.19	4,861.77	4,822.83	38.94	124.838		
8,533.98	8,528.30	8,555.13	8,505.70	18.88	20.28	177.10	-4,735.50	397.24	4,861.74	4,822.63	39.12	124.293		
8,600.00	8,594.32	8,607.55	8,557.69	19.03	20.44	177.02	-4,735.24	403.93	4,861.84	4,822.42	39.42	123.328		
8,700.00	8,694.32	8,688.68	8,638.21	19.25	20.68	176.90	-4,735.10	413.93	4,862.33	4,822.44	39.89	121.906		
8,800.00	8,794.32	8,912.76	8,860.51	19.47	21.36	176.57	-4,731.58	441.81	4,861.10	4,820.33	40.78	119.208		
8,900.00	8,894.32	8,996.00	8,943.13	19.69	21.60	176.45	-4,729.58	451.74	4,859.42	4,818.17	41.25	117.805		
9,000.00	8,994.32	9,082.44	9,028.99	19.91	21.85	176.33	-4,727.78	461.55	4,858.06	4,816.33	41.72	116.434		
9,052.74	9,047.06	9,129.10	9,075.37	20.02	21.99	176.27	-4,726.94	466.59	4,857.47	4,815.50	41.97	115.732		
9,100.00	9,094.26	9,171.54	9,117.59	20.12	22.10	-3.37	-4,726.24	470.84	4,855.06	4,812.88	42.18	115.097		
9,150.00	9,143.85	9,210.69	9,156.55	20.20	22.21	-3.46	-4,725.65	474.63	4,848.36	4,805.98	42.38	114.412		
9,200.00	9,192.70	9,246.88	9,192.54	20.27	22.31	-3.58	-4,725.18	478.43	4,837.50	4,794.94	42.56	113.664		
9,250.00	9,240.44	9,279.00	9,224.45	20.35	22.40	-3.73	-4,724.83	482.06	4,822.57	4,779.84	42.73	112.865		
9,300.00	9,286.71	9,319.25	9,264.44	20.42	22.51	-3.94	-4,724.46	486.64	4,803.65	4,760.73	42.92	111.924		
9,350.00	9,331.16	9,354.71	9,299.69	20.49	22.61	-4.19	-4,724.22	490.50	4,780.87	4,737.77	43.09	110.948		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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) - 58H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 1629-MWD-ISCWSA, 16290-Project													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
9,400.00	9,373.45	9,420.25	9,364.87	20.55	22.80	-4.56	-4,723.77	497.36	4,754.32	4,710.98	43.34	109.693		
9,450.00	9,413.25	9,468.00	9,412.34	20.62	22.93	-4.99	-4,723.12	502.41	4,723.90	4,680.36	43.54	108.502		
9,500.00	9,450.26	9,504.23	9,448.35	20.68	23.03	-5.51	-4,722.58	506.39	4,690.14	4,646.44	43.70	107.332		
9,550.00	9,484.20	9,525.53	9,469.50	20.75	23.09	-6.14	-4,722.33	508.84	4,653.43	4,609.62	43.81	106.220		
9,600.00	9,514.82	9,544.78	9,488.62	20.84	23.15	-6.95	-4,722.14	511.12	4,614.00	4,570.09	43.91	105.081		
9,650.00	9,541.88	9,562.00	9,505.71	20.94	23.19	-8.04	-4,722.01	513.22	4,572.13	4,528.14	44.00	103.920		
9,700.00	9,565.17	9,583.48	9,527.03	21.07	23.26	-9.62	-4,721.87	515.86	4,528.10	4,484.01	44.09	102.698		
9,750.00	9,584.52	9,601.50	9,544.92	21.24	23.31	-11.95	-4,721.76	518.03	4,482.20	4,438.03	44.17	101.477		
9,800.00	9,599.78	9,615.69	9,559.01	21.43	23.35	-15.72	-4,721.67	519.72	4,434.80	4,390.57	44.23	100.266		
9,850.00	9,610.83	9,625.92	9,569.17	21.64	23.38	-22.70	-4,721.62	520.92	4,386.24	4,341.96	44.27	99.073		
9,900.00	9,617.59	9,632.11	9,575.31	21.88	23.40	-38.76	-4,721.58	521.64	4,336.89	4,292.59	44.30	97.902		
9,950.00	9,620.01	9,634.19	9,577.37	22.14	23.40	-83.11	-4,721.57	521.89	4,287.13	4,242.82	44.31	96.760		
9,957.57	9,620.00	9,634.14	9,577.33	22.19	23.40	-92.71	-4,721.57	521.88	4,279.58	4,235.27	44.31	96.589		
10,000.00	9,619.64	9,633.62	9,576.81	22.43	23.40	-92.62	-4,721.57	521.82	4,237.28	4,192.98	44.31	95.638		
10,100.00	9,618.80	9,632.39	9,575.59	23.08	23.40	-92.42	-4,721.58	521.68	4,137.60	4,093.30	44.30	93.396		
10,200.00	9,617.96	9,631.16	9,574.36	23.82	23.40	-92.21	-4,721.59	521.53	4,037.94	3,993.64	44.30	91.149		
10,300.00	9,617.11	9,629.92	9,573.13	24.65	23.39	-92.00	-4,721.59	521.39	3,938.29	3,893.99	44.30	88.898		
10,400.00	9,616.27	9,628.68	9,571.90	25.56	23.39	-91.79	-4,721.60	521.24	3,838.66	3,794.36	44.30	86.642		
10,500.00	9,615.43	9,627.43	9,570.66	26.54	23.38	-91.58	-4,721.61	521.10	3,739.05	3,694.74	44.31	84.382		
10,600.00	9,614.59	9,626.18	9,569.42	27.58	23.38	-91.36	-4,721.61	520.95	3,639.47	3,595.15	44.32	82.119		
10,700.00	9,613.74	9,624.92	9,568.17	28.68	23.38	-91.15	-4,721.62	520.80	3,539.90	3,495.57	44.33	79.851		
10,800.00	9,612.90	9,623.66	9,566.92	29.83	23.37	-90.94	-4,721.63	520.66	3,440.36	3,396.01	44.35	77.579		
10,900.00	9,612.06	9,622.39	9,565.66	31.02	23.37	-90.72	-4,721.63	520.51	3,340.84	3,296.48	44.37	75.303		
11,000.00	9,611.22	9,621.12	9,564.40	32.25	23.37	-90.50	-4,721.64	520.36	3,241.36	3,196.97	44.39	73.024		
11,100.00	9,610.37	9,619.84	9,563.13	33.52	23.36	-90.29	-4,721.65	520.21	3,141.91	3,097.49	44.42	70.740		
11,200.00	9,609.53	9,618.56	9,561.86	34.81	23.36	-90.07	-4,721.66	520.06	3,042.49	2,998.04	44.45	68.452		
11,300.00	9,608.69	9,617.28	9,560.58	36.14	23.36	-89.85	-4,721.66	519.90	2,943.11	2,898.63	44.48	66.160		
11,400.00	9,607.85	9,615.99	9,559.30	37.49	23.35	-89.63	-4,721.67	519.75	2,843.78	2,799.25	44.53	63.863		
11,500.00	9,607.01	9,614.69	9,558.02	38.86	23.35	-89.41	-4,721.68	519.60	2,744.49	2,699.91	44.58	61.562		
11,600.00	9,606.16	9,613.40	9,556.73	40.25	23.34	-89.18	-4,721.69	519.44	2,645.25	2,600.61	44.64	59.257		
11,700.00	9,605.32	9,612.09	9,555.43	41.66	23.34	-88.96	-4,721.69	519.29	2,546.08	2,501.37	44.71	56.946		
11,800.00	9,604.48	9,610.78	9,554.13	43.09	23.34	-88.74	-4,721.70	519.13	2,446.97	2,402.18	44.79	54.630		
11,900.00	9,603.64	9,609.47	9,552.83	44.53	23.33	-88.51	-4,721.71	518.98	2,347.93	2,303.05	44.89	52.307		
12,000.00	9,602.79	9,608.15	9,551.52	45.98	23.33	-88.28	-4,721.72	518.82	2,248.99	2,203.99	45.00	49.979		
12,100.00	9,601.95	9,606.83	9,550.20	47.45	23.32	-88.06	-4,721.72	518.66	2,150.13	2,105.00	45.13	47.644		
12,200.00	9,601.11	9,605.50	9,548.88	48.92	23.32	-87.83	-4,721.73	518.51	2,051.39	2,006.11	45.28	45.301		
12,300.00	9,600.27	9,604.16	9,547.56	50.41	23.32	-87.60	-4,721.74	518.35	1,952.77	1,907.31	45.47	42.950		
12,400.00	9,599.42	9,602.82	9,546.23	51.90	23.31	-87.37	-4,721.75	518.19	1,854.30	1,808.62	45.68	40.591		
12,500.00	9,598.58	9,601.48	9,544.90	53.41	23.31	-87.14	-4,721.76	518.03	1,756.01	1,710.07	45.94	38.221		
12,600.00	9,597.74	9,600.13	9,543.56	54.92	23.31	-86.90	-4,721.76	517.86	1,657.91	1,611.66	46.26	35.842		
12,700.00	9,596.90	9,598.78	9,542.21	56.44	23.30	-86.67	-4,721.77	517.70	1,560.06	1,513.43	46.64	33.452		
12,800.00	9,596.05	9,597.42	9,540.86	57.97	23.30	-86.44	-4,721.78	517.54	1,462.50	1,415.40	47.10	31.051		
12,900.00	9,595.21	9,596.05	9,539.51	59.50	23.29	-86.20	-4,721.79	517.37	1,365.29	1,317.62	47.67	28.640		
13,000.00	9,594.37	9,594.68	9,538.15	61.04	23.29	-85.96	-4,721.80	517.21	1,268.51	1,220.13	48.38	26.221		
13,100.00	9,593.53	9,593.31	9,536.78	62.58	23.29	-85.73	-4,721.81	517.04	1,172.26	1,123.00	49.26	23.796		
13,200.00	9,592.69	9,591.93	9,535.41	64.13	23.28	-85.49	-4,721.81	516.88	1,076.71	1,026.33	50.38	21.371		
13,300.00	9,591.84	9,590.54	9,534.04	65.68	23.28	-85.25	-4,721.82	516.71	982.03	930.23	51.80	18.957		
13,400.00	9,591.00	9,589.15	9,532.66	67.23	23.27	-85.01	-4,721.83	516.54	888.52	834.89	53.63	16.567		
13,500.00	9,590.16	9,587.76	9,531.27	68.79	23.27	-84.77	-4,721.84	516.37	796.59	740.59	56.00	14.224		
13,600.00	9,589.32	9,586.35	9,529.88	70.36	23.26	-84.52	-4,721.85	516.20	706.85	647.75	59.09	11.961		
13,700.00	9,588.47	9,584.95	9,528.48	71.92	23.26	-84.28	-4,721.86	516.03	620.25	557.10	63.15	9.822		
13,800.00	9,587.63	9,583.53	9,527.08	73.49	23.26	-84.04	-4,721.87	515.86	538.31	469.87	68.44	7.866		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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) - 58H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 1629-MWD-ISCWSA, 16290-Project													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 +NI-S (usft)	+EJ-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
13,900.00	9,586.79	9,582.12	9,525.67	75.06	23.25	-83.79	-4,721.88	515.69	463.51	388.33	75.18	6.165		
14,000.00	9,585.95	9,580.69	9,524.26	76.64	23.25	-83.54	-4,721.88	515.52	399.88	316.64	83.25	4.804		
14,100.00	9,585.10	9,579.26	9,522.84	78.22	23.24	-83.30	-4,721.89	515.34	353.50	262.05	91.46	3.865		
14,200.00	9,584.26	9,577.83	9,521.42	79.80	23.24	-83.05	-4,721.90	515.17	331.69	234.53	97.16	3.414		
14,224.74	9,584.05	9,577.47	9,521.07	80.19	23.24	-82.99	-4,721.90	515.12	330.77	232.93	97.83	3.381 CC, ES, SF		
14,300.00	9,583.42	9,576.39	9,519.99	81.38	23.24	-82.80	-4,721.91	514.99	339.22	241.29	97.93	3.464		
14,400.00	9,582.58	9,574.94	9,518.55	82.97	23.23	-82.55	-4,721.92	514.82	374.32	280.26	94.06	3.980		
14,500.00	9,581.73	9,573.49	9,517.11	84.55	23.23	-82.30	-4,721.93	514.64	430.30	342.24	88.06	4.886		
14,600.00	9,580.89	9,572.04	9,515.67	86.14	23.22	-82.04	-4,721.94	514.46	500.20	418.16	82.04	6.097		
14,700.00	9,580.05	9,570.57	9,514.22	87.73	23.22	-81.79	-4,721.95	514.28	578.99	502.15	76.84	7.535		
14,800.00	9,579.21	9,569.10	9,512.76	89.33	23.21	-81.54	-4,721.96	514.10	663.52	590.93	72.60	9.140		
14,900.00	9,578.37	9,567.63	9,511.29	90.92	23.21	-81.28	-4,721.97	513.92	751.86	682.66	69.19	10.866		
15,000.00	9,577.52	9,566.15	9,509.83	92.52	23.21	-81.03	-4,721.98	513.74	842.80	776.33	66.47	12.680		
15,100.00	9,576.68	9,564.66	9,508.35	94.11	23.20	-80.77	-4,721.99	513.55	935.59	871.32	64.27	14.556		
15,200.00	9,575.84	9,563.17	9,506.87	95.71	23.20	-80.51	-4,722.00	513.37	1,029.73	967.24	62.49	16.478		
15,300.00	9,575.00	9,561.67	9,505.38	97.31	23.19	-80.25	-4,722.01	513.18	1,124.88	1,063.85	61.03	18.431		
15,400.00	9,574.15	9,560.14	9,503.87	98.91	23.19	-79.99	-4,722.02	512.99	1,220.80	1,160.98	59.82	20.407		
15,500.00	9,573.31	9,558.58	9,502.32	100.52	23.18	-79.72	-4,722.03	512.80	1,317.33	1,258.51	58.82	22.397		
15,600.00	9,572.47	9,556.98	9,500.73	102.12	23.18	-79.44	-4,722.04	512.61	1,414.34	1,356.37	57.97	24.397		
15,700.00	9,571.63	9,555.34	9,499.10	103.73	23.18	-79.16	-4,722.05	512.40	1,511.74	1,454.48	57.26	26.402		
15,800.00	9,570.78	9,553.66	9,497.43	105.33	23.17	-78.87	-4,722.07	512.20	1,609.45	1,552.80	56.65	28.410		
15,900.00	9,569.94	9,551.94	9,495.72	106.94	23.17	-78.57	-4,722.08	511.99	1,707.43	1,651.29	56.13	30.417		
16,000.00	9,569.10	9,550.17	9,493.97	108.55	23.16	-78.27	-4,722.09	511.78	1,805.63	1,749.94	55.69	32.423		
16,100.00	9,568.26	12,999.57	11,254.57	110.16	45.58	-154.73	-6,549.64	1,006.69	1,890.10	1,807.17	82.94	22.789		
16,200.00	9,567.42	13,174.63	11,255.47	111.76	47.80	-154.78	-6,724.68	1,007.31	1,891.13	1,806.50	84.63	22.346		
16,300.00	9,566.57	13,264.05	11,254.14	113.38	48.96	-154.80	-6,814.09	1,006.99	1,890.12	1,803.64	86.48	21.855		
16,315.44	9,566.44	13,273.65	11,254.07	113.62	49.08	-154.81	-6,823.69	1,007.00	1,890.10	1,803.32	86.78	21.781		
16,400.00	9,565.73	13,323.00	11,254.14	114.99	49.72	-154.81	-6,873.04	1,007.25	1,890.82	1,802.43	88.38	21.393		
16,500.00	9,564.89	13,380.76	11,255.40	116.60	50.47	-154.83	-6,930.78	1,007.81	1,893.71	1,803.47	90.24	20.984		
16,600.00	9,564.05	13,447.34	11,258.58	118.21	51.33	-154.87	-6,997.28	1,008.60	1,898.89	1,806.85	92.04	20.631		
16,700.00	9,563.20	13,567.25	11,265.22	119.83	52.93	-154.97	-7,117.00	1,009.53	1,904.77	1,811.02	93.76	20.316		
16,800.00	9,562.36	13,706.28	11,269.47	121.44	54.86	-155.04	-7,255.96	1,010.59	1,908.23	1,812.71	95.53	19.976		
16,900.00	9,561.52	13,832.96	11,270.85	123.05	56.66	-155.02	-7,382.60	1,013.35	1,910.67	1,813.25	97.43	19.612		
17,000.00	9,560.68	13,945.37	11,269.92	124.67	58.28	-154.99	-7,494.99	1,015.26	1,911.02	1,811.67	99.35	19.234		
17,080.26	9,560.00	14,017.17	11,269.53	125.97	59.33	-154.95	-7,566.76	1,017.22	1,911.89	1,810.95	100.94	18.940		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 100H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.00	0.00	0.10	0.10	0.00	0.00	-90.40	-0.21	-29.99	29.99					
100.00	100.00	100.10	100.10	0.09	0.09	-90.40	-0.21	-29.99	29.99	29.82	0.17	174.192		
200.00	200.00	200.10	200.10	0.31	0.31	-90.40	-0.21	-29.99	29.99	29.37	0.62	48.240		
300.00	300.00	300.10	300.10	0.54	0.54	-90.40	-0.21	-29.99	29.99	28.92	1.07	27.996		
400.00	400.00	400.10	400.10	0.76	0.76	-90.40	-0.21	-29.99	29.99	28.47	1.52	19.721		
500.00	500.00	500.10	500.10	0.99	0.99	-90.40	-0.21	-29.99	29.99	28.02	1.97	15.221		
600.00	600.00	600.10	600.10	1.21	1.21	-90.40	-0.21	-29.99	29.99	27.57	2.42	12.394		
700.00	700.00	700.10	700.10	1.43	1.43	-90.40	-0.21	-29.99	29.99	27.12	2.87	10.452		
800.00	800.00	800.10	800.10	1.66	1.66	-90.40	-0.21	-29.99	29.99	26.67	3.32	9.036		
900.00	900.00	900.10	900.10	1.88	1.88	-90.40	-0.21	-29.99	29.99	26.22	3.77	7.958		
1,000.00	1,000.00	1,000.10	1,000.10	2.11	2.11	-90.40	-0.21	-29.99	29.99	25.77	4.22	7.110		
1,100.00	1,100.00	1,100.10	1,100.10	2.33	2.33	-90.40	-0.21	-29.99	29.99	25.32	4.67	6.425		
1,200.00	1,200.00	1,200.10	1,200.10	2.56	2.56	-90.40	-0.21	-29.99	29.99	24.87	5.12	5.861		
1,300.00	1,300.00	1,300.10	1,300.10	2.78	2.78	-90.40	-0.21	-29.99	29.99	24.42	5.57	5.388		
1,400.00	1,400.00	1,400.10	1,400.10	3.01	3.01	-90.40	-0.21	-29.99	29.99	23.97	6.02	4.985		
1,500.00	1,500.00	1,500.10	1,500.10	3.23	3.23	-90.40	-0.21	-29.99	29.99	23.53	6.47	4.638		
1,600.00	1,600.00	1,600.10	1,600.10	3.46	3.46	-90.40	-0.21	-29.99	29.99	23.08	6.92	4.337		
1,700.00	1,700.00	1,700.10	1,700.10	3.68	3.68	-90.40	-0.21	-29.99	29.99	22.63	7.36	4.072		
1,800.00	1,800.00	1,800.10	1,800.10	3.91	3.91	-90.40	-0.21	-29.99	29.99	22.18	7.81	3.838		
1,900.00	1,900.00	1,900.10	1,900.10	4.13	4.13	-90.40	-0.21	-29.99	29.99	21.73	8.26	3.629		
2,000.00	2,000.00	2,000.10	2,000.10	4.36	4.36	-90.40	-0.21	-29.99	29.99	21.28	8.71	3.442		
2,100.00	2,100.00	2,100.10	2,100.10	4.58	4.58	-90.40	-0.21	-29.99	29.99	20.83	9.16	3.273		
2,200.00	2,200.00	2,200.10	2,200.10	4.81	4.81	-90.40	-0.21	-29.99	29.99	20.38	9.61	3.120		
2,300.00	2,300.00	2,300.10	2,300.10	5.03	5.03	-90.40	-0.21	-29.99	29.99	19.93	10.06	2.981		
2,400.00	2,400.00	2,400.10	2,400.10	5.26	5.26	-90.40	-0.21	-29.99	29.99	19.48	10.51	2.853		
2,500.00	2,500.00	2,500.10	2,500.10	5.48	5.48	-90.40	-0.21	-29.99	29.99	19.03	10.96	2.736		
2,600.00	2,600.00	2,600.10	2,600.10	5.71	5.71	-90.40	-0.21	-29.99	29.99	18.58	11.41	2.628		
2,700.00	2,700.00	2,700.10	2,700.10	5.93	5.93	-90.40	-0.21	-29.99	29.99	18.13	11.86	2.529		
2,800.00	2,800.00	2,800.10	2,800.10	6.15	6.15	-90.40	-0.21	-29.99	29.99	17.68	12.31	2.436		
2,900.00	2,900.00	2,900.10	2,900.10	6.38	6.38	-90.40	-0.21	-29.99	29.99	17.23	12.76	2.351		
3,000.00	3,000.00	3,000.10	3,000.10	6.60	6.60	-90.40	-0.21	-29.99	29.99	16.78	13.21	2.271		
3,100.00	3,100.00	3,100.10	3,100.10	6.83	6.83	-90.40	-0.21	-29.99	29.99	16.33	13.66	2.196		
3,200.00	3,200.00	3,200.10	3,200.10	7.05	7.05	-90.40	-0.21	-29.99	29.99	15.88	14.11	2.126		
3,300.00	3,300.00	3,300.10	3,300.10	7.28	7.28	-90.40	-0.21	-29.99	29.99	15.43	14.56	2.060		
3,400.00	3,400.00	3,400.10	3,400.10	7.50	7.50	-90.40	-0.21	-29.99	29.99	14.98	15.01	1.998		
3,500.00	3,500.00	3,500.10	3,500.10	7.73	7.73	-90.40	-0.21	-29.99	29.99	14.53	15.46	1.940 CC, ES		
3,600.00	3,600.00	3,600.10	3,600.10	7.95	7.95	-142.93	-0.21	-29.99	30.68	14.78	15.90	1.930 SF		
3,700.00	3,699.96	3,700.06	3,700.06	8.16	8.18	-145.67	-0.21	-29.99	32.81	16.47	16.34	2.008		
3,800.00	3,799.96	3,799.96	3,799.96	8.38	8.40	-149.52	-0.21	-29.99	36.49	19.72	16.78	2.175		
3,850.45	3,850.23	3,850.33	3,850.33	8.49	8.52	-151.64	-0.21	-29.99	38.99	21.99	17.00	2.294		
3,900.00	3,899.69	3,899.79	3,899.79	8.60	8.63	-153.62	-0.21	-29.99	41.68	24.46	17.22	2.421		
4,000.00	3,999.50	3,999.60	3,999.60	8.82	8.85	-156.91	-0.21	-29.99	47.24	29.58	17.66	2.675		
4,100.00	4,099.31	4,099.62	4,099.61	9.04	9.08	-158.60	0.65	-30.06	52.72	34.63	18.10	2.914		
4,200.00	4,199.13	4,199.69	4,199.65	9.26	9.30	-158.28	3.26	-30.28	57.86	39.32	18.54	3.122		
4,300.00	4,298.94	4,299.76	4,299.62	9.48	9.53	-156.44	7.60	-30.64	62.66	43.69	18.98	3.302		
4,400.00	4,398.75	4,399.64	4,399.35	9.70	9.75	-153.93	13.06	-31.10	67.37	47.95	19.42	3.469		
4,500.00	4,498.57	4,499.49	4,499.05	9.93	9.97	-151.73	18.54	-31.55	72.18	52.32	19.86	3.634		
4,600.00	4,598.38	4,599.33	4,598.74	10.15	10.20	-149.81	24.01	-32.01	77.08	56.78	20.30	3.797		
4,700.00	4,698.19	4,699.18	4,698.44	10.38	10.42	-148.12	29.49	-32.47	82.06	61.31	20.75	3.955		
4,800.00	4,798.01	4,799.03	4,798.14	10.60	10.65	-146.62	34.97	-32.92	87.10	65.91	21.19	4.110		
4,900.00	4,897.82	4,898.88	4,897.84	10.83	10.87	-145.29	40.44	-33.38	92.20	70.56	21.64	4.260		
5,000.00	4,997.63	4,998.73	4,997.53	11.06	11.10	-144.10	45.92	-33.83	97.34	75.25	22.09	4.406		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 100H - 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		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
							+N/-S (usft)	+E/-W (usft)						
5,100.00	5,097.45	5,098.58	5,097.23	11.29	11.33	-143.03	51.40	-34.29	102.51	79.97	22.54	4.548		
5,200.00	5,197.26	5,198.42	5,196.93	11.52	11.55	-142.06	56.87	-34.75	107.72	84.73	22.99	4.686		
5,300.00	5,297.07	5,298.27	5,296.62	11.75	11.78	-141.18	62.35	-35.20	112.96	89.52	23.44	4.819		
5,400.00	5,396.88	5,398.12	5,396.32	11.98	12.01	-140.38	67.83	-35.66	118.23	94.33	23.90	4.948		
5,500.00	5,496.70	5,497.97	5,496.02	12.21	12.24	-139.65	73.30	-36.12	123.51	99.16	24.35	5.072		
5,600.00	5,596.51	5,597.82	5,595.71	12.44	12.47	-138.97	78.78	-36.57	128.81	104.01	24.80	5.193		
5,700.00	5,696.32	5,697.67	5,695.41	12.67	12.70	-138.36	84.26	-37.03	134.13	108.87	25.26	5.310		
5,800.00	5,796.14	5,797.51	5,795.11	12.90	12.92	-137.78	89.74	-37.49	139.46	113.75	25.72	5.423		
5,900.00	5,895.95	5,897.36	5,894.81	13.14	13.15	-137.25	95.21	-37.94	144.81	118.63	26.17	5.533		
6,000.00	5,995.76	5,997.21	5,994.50	13.37	13.39	-136.76	100.69	-38.40	150.16	123.53	26.63	5.639		
6,100.00	6,095.58	6,097.06	6,094.20	13.60	13.62	-136.30	106.17	-38.85	155.53	128.44	27.09	5.742		
6,200.00	6,195.39	6,196.96	6,193.94	13.84	13.84	-135.88	111.64	-39.31	160.90	133.36	27.54	5.842		
6,300.00	6,295.20	6,297.34	6,294.22	14.07	14.02	-135.83	116.11	-39.68	166.10	138.15	27.95	5.943		
6,400.00	6,395.01	6,397.73	6,394.58	14.31	14.20	-136.37	118.82	-39.91	170.98	142.63	28.35	6.031		
6,500.00	6,494.83	6,498.06	6,494.90	14.54	14.37	-137.44	119.79	-39.99	175.61	146.86	28.75	6.109		
6,600.00	6,594.64	6,597.90	6,594.74	14.77	14.56	-138.75	119.79	-39.99	180.16	151.00	29.17	6.177		
6,655.23	6,649.77	6,653.03	6,649.87	14.90	14.68	-139.45	119.79	-39.99	182.72	153.30	29.41	6.212		
6,700.00	6,694.46	6,697.72	6,694.56	15.00	14.78	-139.98	119.79	-39.99	184.67	155.07	29.60	6.238		
6,800.00	6,794.36	6,797.62	6,794.46	15.18	15.01	-140.87	119.79	-39.99	188.11	158.11	30.00	6.270		
6,900.00	6,894.32	6,897.58	6,894.42	15.36	15.23	-141.40	119.79	-39.99	190.23	159.82	30.40	6.257		
7,005.68	7,000.00	7,003.26	7,000.10	15.55	15.46	-90.06	119.79	-39.99	190.99	160.16	30.83	6.196		
7,100.00	7,094.32	7,097.58	7,094.42	15.73	15.67	-90.06	119.79	-39.99	190.99	159.77	31.22	6.117		
7,200.00	7,194.32	7,197.58	7,194.42	15.95	15.90	-90.06	119.79	-39.99	190.99	159.32	31.67	6.031		
7,300.00	7,294.32	7,297.58	7,294.42	16.17	16.12	-90.06	119.79	-39.99	190.99	158.88	32.11	5.948		
7,400.00	7,394.32	7,397.58	7,394.42	16.39	16.34	-90.06	119.79	-39.99	190.99	158.44	32.55	5.867		
7,500.00	7,494.32	7,497.58	7,494.42	16.61	16.57	-90.06	119.79	-39.99	190.99	157.99	33.00	5.788		
7,600.00	7,594.32	7,597.58	7,594.42	16.83	16.79	-90.06	119.79	-39.99	190.99	157.55	33.44	5.711		
7,700.00	7,694.32	7,697.58	7,694.42	17.05	17.01	-90.06	119.79	-39.99	190.99	157.11	33.88	5.637		
7,800.00	7,794.32	7,797.58	7,794.42	17.27	17.24	-90.06	119.79	-39.99	190.99	156.66	34.33	5.564		
7,900.00	7,894.32	7,897.58	7,894.42	17.48	17.46	-90.06	119.79	-39.99	190.99	156.22	34.77	5.493		
8,000.00	7,994.32	7,997.58	7,994.42	17.70	17.68	-90.06	119.79	-39.99	190.99	155.77	35.22	5.423		
8,100.00	8,094.32	8,097.58	8,094.42	17.92	17.91	-90.06	119.79	-39.99	190.99	155.33	35.66	5.356		
8,200.00	8,194.32	8,197.58	8,194.42	18.14	18.13	-90.06	119.79	-39.99	190.99	154.89	36.10	5.290		
8,300.00	8,294.32	8,297.58	8,294.42	18.36	18.35	-90.06	119.79	-39.99	190.99	154.44	36.55	5.226		
8,400.00	8,394.32	8,397.58	8,394.42	18.58	18.58	-90.06	119.79	-39.99	190.99	154.00	36.99	5.163		
8,500.00	8,494.32	8,497.58	8,494.42	18.80	18.80	-90.06	119.79	-39.99	190.99	153.55	37.44	5.101		
8,600.00	8,594.32	8,597.58	8,594.42	19.03	19.02	-90.06	119.79	-39.99	190.99	153.11	37.88	5.041		
8,700.00	8,694.32	8,697.58	8,694.42	19.25	19.25	-90.06	119.79	-39.99	190.99	152.66	38.33	4.983		
8,800.00	8,794.32	8,797.58	8,794.42	19.47	19.47	-90.06	119.79	-39.99	190.99	152.22	38.77	4.926		
8,900.00	8,894.32	8,897.58	8,894.42	19.69	19.69	-90.06	119.79	-39.99	190.99	151.77	39.22	4.870		
9,000.00	8,994.32	8,997.58	8,994.42	19.91	19.92	-90.06	119.79	-39.99	190.99	151.33	39.66	4.815		
9,052.74	9,047.06	9,050.32	9,047.16	20.02	20.04	-90.06	119.79	-39.99	190.99	151.09	39.90	4.787		
9,100.00	9,094.26	9,097.52	9,094.36	20.12	20.14	90.94	119.79	-39.99	191.01	150.92	40.10	4.764		
9,150.00	9,143.85	9,147.11	9,143.95	20.20	20.25	92.79	119.79	-39.99	191.22	150.93	40.29	4.746		
9,200.00	9,192.70	9,195.96	9,192.80	20.27	20.36	95.79	119.79	-39.99	192.03	151.56	40.48	4.744		
9,250.00	9,240.44	9,243.70	9,240.54	20.35	20.47	99.74	119.79	-39.99	194.14	153.48	40.66	4.775		
9,300.00	9,286.71	9,289.97	9,286.81	20.42	20.57	104.33	119.79	-39.99	198.40	157.57	40.83	4.859		
9,350.00	9,331.16	9,334.42	9,331.26	20.49	20.67	109.20	119.79	-39.99	205.77	164.77	41.00	5.019		
9,400.00	9,373.45	9,376.70	9,373.55	20.55	20.77	113.96	119.79	-39.99	217.11	175.95	41.16	5.274		
9,450.00	9,413.25	9,416.50	9,413.35	20.62	20.85	118.26	119.79	-39.99	233.01	191.69	41.32	5.639		
9,500.00	9,450.26	9,453.52	9,450.36	20.68	20.94	121.86	119.79	-39.99	253.76	212.29	41.47	6.119		
9,550.00	9,484.20	9,487.46	9,484.30	20.75	21.01	124.60	119.79	-39.99	279.28	237.68	41.61	6.713		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 100H - 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
9,600.00	9,514.82	9,518.08	9,514.92	20.84	21.08	126.34	119.79	-39.99	309.29	267.56	41.73	7.412	
9,650.00	9,541.88	9,545.14	9,541.98	20.94	21.14	126.98	119.79	-39.99	343.33	301.49	41.84	8.206	
9,700.00	9,565.17	9,568.43	9,565.27	21.07	21.19	126.38	119.79	-39.99	380.88	338.95	41.94	9.083	
9,750.00	9,584.52	9,587.78	9,584.62	21.24	21.24	124.27	119.79	-39.99	421.39	379.38	42.01	10.030	
9,800.00	9,599.78	9,603.04	9,599.88	21.43	21.27	120.28	119.79	-39.99	464.32	422.24	42.08	11.035	
9,850.00	9,610.83	9,614.09	9,610.93	21.64	21.30	113.79	119.79	-39.99	509.15	467.03	42.12	12.088	
9,900.00	9,617.59	9,620.85	9,617.69	21.88	21.31	104.09	119.79	-39.99	555.37	513.22	42.15	13.176	
9,950.00	9,620.01	9,623.27	9,620.11	22.14	21.32	90.82	119.79	-39.99	602.49	560.33	42.16	14.289	
9,957.57	9,620.00	9,623.25	9,620.10	22.19	21.32	88.54	119.79	-39.99	609.67	567.51	42.17	14.459	
10,000.00	9,619.64	9,622.90	9,619.74	22.43	21.32	88.43	119.79	-39.99	650.10	607.93	42.17	15.417	
10,100.00	9,618.80	9,622.05	9,618.90	23.08	21.31	88.18	119.79	-39.99	746.27	704.09	42.18	17.693	
10,200.00	9,617.96	9,621.21	9,618.06	23.82	21.31	87.93	119.79	-39.99	843.32	801.13	42.19	19.989	
10,300.00	9,617.11	9,620.37	9,617.21	24.65	21.31	87.67	119.79	-39.99	940.99	898.79	42.20	22.297	
10,400.00	9,616.27	9,619.53	9,616.37	25.56	21.31	87.42	119.79	-39.99	1,039.11	996.89	42.22	24.613	
10,500.00	9,615.43	11,538.09	10,644.96	26.54	28.48	169.49	-1,010.97	-31.62	1,047.04	1,017.08	29.96	34.950	
10,600.00	9,614.59	11,638.09	10,644.05	27.58	29.45	169.49	-1,110.97	-30.88	1,046.97	1,016.15	30.82	33.968	
10,700.00	9,613.74	11,738.09	10,643.14	28.68	30.49	169.49	-1,210.96	-30.14	1,046.90	1,015.16	31.74	32.984	
10,800.00	9,612.90	11,838.09	10,642.22	29.83	31.57	169.49	-1,310.95	-29.40	1,046.83	1,014.13	32.71	32.008	
10,900.00	9,612.06	11,938.09	10,641.31	31.02	32.70	169.49	-1,410.95	-28.66	1,046.76	1,013.05	33.72	31.047	
11,000.00	9,611.22	12,038.09	10,640.40	32.25	33.88	169.49	-1,510.94	-27.92	1,046.70	1,011.93	34.77	30.106	
11,100.00	9,610.37	12,138.09	10,639.49	33.52	35.09	169.49	-1,610.93	-27.18	1,046.63	1,010.77	35.85	29.191	
11,200.00	9,609.53	12,238.09	10,638.57	34.81	36.33	169.49	-1,710.93	-26.44	1,046.56	1,009.58	36.98	28.303	
11,300.00	9,608.69	12,338.09	10,637.66	36.14	37.60	169.48	-1,810.92	-25.70	1,046.49	1,008.36	38.13	27.446	
11,400.00	9,607.85	12,438.09	10,636.75	37.49	38.91	169.48	-1,910.91	-24.96	1,046.42	1,007.11	39.31	26.619	
11,500.00	9,607.01	12,538.09	10,635.84	38.86	40.23	169.48	-2,010.90	-24.22	1,046.35	1,005.83	40.52	25.825	
11,600.00	9,606.16	12,638.09	10,634.92	40.25	41.58	169.48	-2,110.90	-23.48	1,046.28	1,004.53	41.75	25.062	
11,700.00	9,605.32	12,738.09	10,634.01	41.66	42.95	169.48	-2,210.89	-22.74	1,046.21	1,003.21	43.00	24.331	
11,800.00	9,604.48	12,838.09	10,633.10	43.09	44.34	169.48	-2,310.88	-22.00	1,046.14	1,001.87	44.27	23.631	
11,900.00	9,603.64	12,938.09	10,632.19	44.53	45.74	169.48	-2,410.88	-21.26	1,046.07	1,000.51	45.56	22.961	
12,000.00	9,602.79	13,038.09	10,631.27	45.98	47.16	169.48	-2,510.87	-20.52	1,046.00	999.14	46.87	22.319	
12,100.00	9,601.95	13,138.09	10,630.36	47.45	48.59	169.48	-2,610.86	-19.78	1,045.93	997.75	48.19	21.706	
12,200.00	9,601.11	13,238.09	10,629.45	48.92	50.04	169.48	-2,710.86	-19.04	1,045.87	996.34	49.52	21.120	
12,300.00	9,600.27	13,338.09	10,628.53	50.41	51.50	169.48	-2,810.85	-18.30	1,045.80	994.93	50.87	20.559	
12,400.00	9,599.42	13,438.09	10,627.62	51.90	52.96	169.48	-2,910.84	-17.56	1,045.73	993.50	52.23	20.022	
12,500.00	9,598.58	13,538.09	10,626.71	53.41	54.44	169.48	-3,010.84	-16.82	1,045.66	992.06	53.60	19.509	
12,600.00	9,597.74	13,638.09	10,625.80	54.92	55.93	169.48	-3,110.83	-16.08	1,045.59	990.61	54.98	19.017	
12,700.00	9,596.90	13,738.09	10,624.88	56.44	57.42	169.48	-3,210.82	-15.34	1,045.52	989.15	56.37	18.547	
12,800.00	9,596.05	13,838.09	10,623.97	57.97	58.93	169.47	-3,310.81	-14.60	1,045.45	987.68	57.77	18.097	
12,900.00	9,595.21	13,938.09	10,623.06	59.50	60.43	169.47	-3,410.81	-13.86	1,045.38	986.20	59.18	17.665	
13,000.00	9,594.37	14,038.09	10,622.15	61.04	61.95	169.47	-3,510.80	-13.12	1,045.31	984.72	60.59	17.251	
13,100.00	9,593.53	14,138.09	10,621.23	62.58	63.47	169.47	-3,610.79	-12.38	1,045.24	983.23	62.01	16.855	
13,200.00	9,592.69	14,238.09	10,620.32	64.13	65.00	169.47	-3,710.79	-11.64	1,045.17	981.73	63.44	16.474	
13,300.00	9,591.84	14,338.09	10,619.41	65.68	66.53	169.47	-3,810.78	-10.90	1,045.11	980.23	64.88	16.109	
13,400.00	9,591.00	14,438.09	10,618.50	67.23	68.07	169.47	-3,910.77	-10.16	1,045.04	978.72	66.32	15.758	
13,500.00	9,590.16	14,538.09	10,617.58	68.79	69.62	169.47	-4,010.77	-9.42	1,044.97	977.20	67.77	15.420	
13,600.00	9,589.32	14,638.09	10,616.67	70.36	71.16	169.47	-4,110.76	-8.68	1,044.90	975.68	69.22	15.096	
13,700.00	9,588.47	14,738.09	10,615.76	71.92	72.71	169.47	-4,210.75	-7.94	1,044.83	974.16	70.67	14.784	
13,800.00	9,587.63	14,838.09	10,614.85	73.49	74.27	169.47	-4,310.75	-7.20	1,044.76	972.63	72.13	14.484	
13,900.00	9,586.79	14,938.09	10,613.93	75.06	75.83	169.47	-4,410.74	-6.46	1,044.69	971.09	73.60	14.195	
14,000.00	9,585.95	15,038.09	10,613.02	76.64	77.39	169.47	-4,510.73	-5.72	1,044.62	969.56	75.07	13.916	
14,100.00	9,585.10	15,138.09	10,612.11	78.22	78.95	169.47	-4,610.72	-4.98	1,044.55	968.01	76.54	13.648	
14,200.00	9,584.26	15,238.09	10,611.20	79.80	80.52	169.46	-4,710.72	-4.24	1,044.48	966.47	78.01	13.388	

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 100H - 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)						
14,300.00	9,583.42	15,338.09	10,610.28	81.38	82.09	169.46	-4,810.71	-3.50	1,044.41	964.92	79.49	13.138		
14,400.00	9,582.58	15,438.09	10,609.37	82.97	83.67	169.46	-4,910.70	-2.76	1,044.35	963.37	80.98	12.897		
14,500.00	9,581.73	15,538.09	10,608.46	84.55	85.24	169.46	-5,010.70	-2.02	1,044.28	961.82	82.46	12.664		
14,600.00	9,580.89	15,638.09	10,607.55	86.14	86.82	169.46	-5,110.69	-1.28	1,044.21	960.26	83.95	12.439		
14,700.00	9,580.05	15,738.09	10,606.63	87.73	88.40	169.46	-5,210.68	-0.54	1,044.14	958.70	85.44	12.221		
14,800.00	9,579.21	15,838.09	10,605.72	89.33	89.98	169.46	-5,310.68	0.21	1,044.07	957.14	86.93	12.010		
14,900.00	9,578.37	15,938.09	10,604.81	90.92	91.57	169.46	-5,410.67	0.95	1,044.00	955.57	88.43	11.806		
15,000.00	9,577.52	16,038.09	10,603.90	92.52	93.15	169.46	-5,510.66	1.69	1,043.93	954.00	89.93	11.609		
15,100.00	9,576.68	16,138.09	10,602.98	94.11	94.74	169.46	-5,610.66	2.43	1,043.86	952.43	91.43	11.417		
15,200.00	9,575.84	16,238.09	10,602.07	95.71	96.33	169.46	-5,710.65	3.17	1,043.79	950.86	92.93	11.232		
15,300.00	9,575.00	16,338.09	10,601.16	97.31	97.92	169.46	-5,810.64	3.91	1,043.72	949.29	94.43	11.052		
15,400.00	9,574.15	16,438.09	10,600.25	98.91	99.51	169.46	-5,910.63	4.65	1,043.65	947.71	95.94	10.878		
15,500.00	9,573.31	16,538.09	10,599.33	100.52	101.11	169.46	-6,010.63	5.39	1,043.59	946.14	97.45	10.709		
15,600.00	9,572.47	16,638.09	10,598.42	102.12	102.70	169.46	-6,110.62	6.13	1,043.52	944.56	98.96	10.545		
15,700.00	9,571.63	16,738.09	10,597.51	103.73	104.30	169.45	-6,210.61	6.87	1,043.45	942.98	100.47	10.386		
15,800.00	9,570.78	16,838.09	10,596.59	105.33	105.90	169.45	-6,310.61	7.61	1,043.38	941.40	101.98	10.231		
15,900.00	9,569.94	16,938.09	10,595.68	106.94	107.50	169.45	-6,410.60	8.35	1,043.31	939.81	103.50	10.081		
16,000.00	9,569.10	17,038.09	10,594.77	108.55	109.10	169.45	-6,510.59	9.09	1,043.24	938.23	105.01	9.934		
16,100.00	9,568.26	17,138.09	10,593.86	110.16	110.70	169.45	-6,610.59	9.83	1,043.17	936.64	106.53	9.792		
16,200.00	9,567.42	17,238.09	10,592.94	111.76	112.31	169.45	-6,710.58	10.57	1,043.10	935.05	108.05	9.654		
16,300.00	9,566.57	17,338.09	10,592.03	113.38	113.91	169.45	-6,810.57	11.31	1,043.03	933.46	109.57	9.519		
16,400.00	9,565.73	17,438.09	10,591.12	114.99	115.51	169.45	-6,910.57	12.05	1,042.96	931.87	111.09	9.388		
16,500.00	9,564.89	17,538.09	10,590.21	116.60	117.12	169.45	-7,010.56	12.79	1,042.89	930.28	112.61	9.261		
16,600.00	9,564.05	17,638.09	10,589.29	118.21	118.73	169.45	-7,110.55	13.53	1,042.83	928.69	114.14	9.137		
16,700.00	9,563.20	17,738.09	10,588.38	119.83	120.33	169.45	-7,210.54	14.27	1,042.76	927.09	115.66	9.016		
16,800.00	9,562.36	17,838.09	10,587.47	121.44	121.94	169.45	-7,310.54	15.01	1,042.69	925.50	117.19	8.898		
16,900.00	9,561.52	17,938.09	10,586.56	123.05	123.55	169.45	-7,410.53	15.75	1,042.62	923.90	118.71	8.783		
17,000.00	9,560.68	18,038.09	10,585.64	124.67	125.16	169.45	-7,510.52	16.49	1,042.55	922.31	120.24	8.670		
17,072.19	9,560.07	18,109.56	10,584.99	125.84	126.31	169.45	-7,581.99	17.02	1,042.50	921.16	121.33	8.592		
17,080.26	9,560.00	18,109.56	10,584.99	125.97	126.31	169.45	-7,581.99	17.02	1,042.53	921.15	121.38	8.589		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 115H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						
0.00	0.00	0.10	0.10	0.00	0.00	-90.34	-0.88	-149.93	149.93					
100.00	100.00	100.10	100.10	0.09	0.09	-90.34	-0.88	-149.93	149.93	149.76	0.17	870.835		
200.00	200.00	200.10	200.10	0.31	0.31	-90.34	-0.88	-149.93	149.93	149.31	0.62	241.164		
300.00	300.00	300.10	300.10	0.54	0.54	-90.34	-0.88	-149.93	149.93	148.86	1.07	139.962		
400.00	400.00	400.10	400.10	0.76	0.76	-90.34	-0.88	-149.93	149.93	148.41	1.52	98.590		
500.00	500.00	500.10	500.10	0.99	0.99	-90.34	-0.88	-149.93	149.93	147.96	1.97	76.096		
600.00	600.00	600.10	600.10	1.21	1.21	-90.34	-0.88	-149.93	149.93	147.51	2.42	61.960		
700.00	700.00	700.10	700.10	1.43	1.43	-90.34	-0.88	-149.93	149.93	147.06	2.87	52.253		
800.00	800.00	800.10	800.10	1.66	1.66	-90.34	-0.88	-149.93	149.93	146.61	3.32	45.175		
900.00	900.00	900.10	900.10	1.88	1.88	-90.34	-0.88	-149.93	149.93	146.16	3.77	39.787		
1,000.00	1,000.00	1,000.10	1,000.10	2.11	2.11	-90.34	-0.88	-149.93	149.93	145.71	4.22	35.546		
1,100.00	1,100.00	1,100.10	1,100.10	2.33	2.33	-90.34	-0.88	-149.93	149.93	145.27	4.67	32.123		
1,200.00	1,200.00	1,200.10	1,200.10	2.56	2.56	-90.34	-0.88	-149.93	149.93	144.82	5.12	29.301		
1,300.00	1,300.00	1,300.10	1,300.10	2.78	2.78	-90.34	-0.88	-149.93	149.93	144.37	5.57	26.935		
1,400.00	1,400.00	1,400.10	1,400.10	3.01	3.01	-90.34	-0.88	-149.93	149.93	143.92	6.02	24.922		
1,500.00	1,500.00	1,500.10	1,500.10	3.23	3.23	-90.34	-0.88	-149.93	149.93	143.47	6.47	23.189		
1,600.00	1,600.00	1,600.10	1,600.10	3.46	3.46	-90.34	-0.88	-149.93	149.93	143.02	6.92	21.682		
1,700.00	1,700.00	1,700.10	1,700.10	3.68	3.68	-90.34	-0.88	-149.93	149.93	142.57	7.36	20.358		
1,800.00	1,800.00	1,800.10	1,800.10	3.91	3.91	-90.34	-0.88	-149.93	149.93	142.12	7.81	19.187		
1,900.00	1,900.00	1,900.10	1,900.10	4.13	4.13	-90.34	-0.88	-149.93	149.93	141.67	8.26	18.143		
2,000.00	2,000.00	2,000.10	2,000.10	4.36	4.36	-90.34	-0.88	-149.93	149.93	141.22	8.71	17.207		
2,100.00	2,100.00	2,100.10	2,100.10	4.58	4.58	-90.34	-0.88	-149.93	149.93	140.77	9.16	16.363		
2,200.00	2,200.00	2,200.10	2,200.10	4.81	4.81	-90.34	-0.88	-149.93	149.93	140.32	9.61	15.598		
2,203.20	2,203.20	2,203.30	2,203.30	4.81	4.81	-90.34	-0.88	-149.93	149.93	140.31	9.63	15.575 CC		
2,300.00	2,300.00	2,298.82	2,298.82	5.03	5.02	-90.34	-0.88	-150.14	150.15	140.09	10.05	14.938 ES		
2,400.00	2,400.00	2,396.24	2,396.22	5.26	5.21	-90.33	-0.88	-151.80	151.85	141.38	10.47	14.509		
2,500.00	2,500.00	2,493.58	2,493.50	5.48	5.41	-90.33	-0.88	-155.11	155.25	144.37	10.88	14.270		
2,600.00	2,600.00	2,590.77	2,590.57	5.71	5.61	-90.32	-0.88	-160.06	160.35	149.06	11.29	14.201		
2,700.00	2,700.00	2,687.77	2,687.34	5.93	5.81	-90.30	-0.88	-166.65	167.14	155.43	11.70	14.283		
2,800.00	2,800.00	2,784.52	2,783.74	6.15	6.02	-90.29	-0.88	-174.84	175.61	163.50	12.11	14.502		
2,900.00	2,900.00	2,880.96	2,879.68	6.38	6.23	-90.27	-0.88	-184.64	185.76	173.25	12.51	14.844		
3,000.00	3,000.00	2,977.04	2,975.10	6.60	6.45	-90.26	-0.88	-196.00	197.59	184.67	12.92	15.298		
3,100.00	3,100.00	3,073.34	3,070.51	6.83	6.68	-90.24	-0.88	-208.96	211.05	197.72	13.32	15.842		
3,200.00	3,200.00	3,172.35	3,168.54	7.05	6.92	-90.23	-0.88	-222.84	225.07	211.31	13.76	16.362		
3,300.00	3,300.00	3,271.36	3,266.58	7.28	7.17	-90.21	-0.88	-236.72	239.09	224.89	14.19	16.847		
3,400.00	3,400.00	3,370.37	3,364.61	7.50	7.43	-90.20	-0.88	-250.60	253.11	238.48	14.63	17.301		
3,500.00	3,500.00	3,469.39	3,462.65	7.73	7.69	-90.19	-0.88	-264.49	267.13	252.06	15.07	17.727		
3,600.00	3,600.00	3,568.30	3,560.58	7.95	7.95	-141.73	-0.88	-278.35	281.83	266.32	15.51	18.176		
3,700.00	3,699.96	3,666.99	3,658.30	8.16	8.22	-141.93	-0.88	-292.19	297.88	281.94	15.94	18.691		
3,800.00	3,799.86	3,765.43	3,755.76	8.38	8.49	-142.29	-0.88	-305.99	315.31	298.94	16.37	19.262		
3,850.45	3,850.23	3,814.98	3,804.83	8.49	8.62	-142.52	-0.88	-312.94	324.62	308.03	16.59	19.570		
3,900.00	3,899.69	3,863.62	3,852.99	8.60	8.76	-142.81	-0.88	-319.76	333.95	317.15	16.80	19.875		
4,000.00	3,999.50	3,961.78	3,950.17	8.82	9.03	-143.35	-0.88	-333.52	352.80	335.56	17.24	20.468		
4,100.00	4,099.31	4,059.93	4,047.36	9.04	9.31	-143.84	-0.88	-347.28	371.67	354.00	17.67	21.032		
4,200.00	4,199.13	4,158.09	4,144.55	9.26	9.59	-144.27	-0.88	-361.05	390.57	372.46	18.11	21.568		
4,300.00	4,298.94	4,256.24	4,241.73	9.48	9.87	-144.67	-0.88	-374.81	409.49	390.94	18.55	22.077		
4,400.00	4,398.75	4,354.40	4,338.92	9.70	10.16	-145.04	-0.88	-388.57	428.42	409.44	18.99	22.562		
4,500.00	4,498.57	4,452.56	4,436.11	9.93	10.44	-145.37	-0.88	-402.33	447.38	427.94	19.43	23.024		
4,600.00	4,598.38	4,550.71	4,533.29	10.15	10.73	-145.67	-0.88	-416.09	466.34	446.47	19.87	23.464		
4,700.00	4,698.19	4,648.87	4,630.48	10.38	11.02	-145.96	-0.88	-429.86	485.32	465.00	20.32	23.884		
4,800.00	4,798.01	4,747.02	4,727.67	10.60	11.31	-146.22	-0.88	-443.62	504.30	483.54	20.77	24.285		
4,900.00	4,897.82	4,845.18	4,824.85	10.83	11.60	-146.46	-0.88	-457.38	523.30	502.09	21.21	24.669		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 115H - OH - Plan #2		Offset Site Error:		0.00 usft	
Survey Program:		O-LEAM MWD+HDGM											Offset Well Error:		0.00 usft			
Reference		Offset		Semi Major Axis			Distance											
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning					
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	+N/-S (usft)	+E/-W (usft)	(usft)	(usft)	(usft)							
5,000.00	4,997.63	4,943.34	4,922.04	11.06	11.89	-146.68	-0.88	-471.14	542.30	520.64	21.66	25.036						
5,100.00	5,097.45	5,041.49	5,019.23	11.29	12.19	-146.89	-0.88	-484.90	561.32	539.20	22.11	25.387						
5,200.00	5,197.26	5,139.65	5,116.41	11.52	12.48	-147.09	-0.88	-498.67	580.33	557.77	22.56	25.723						
5,300.00	5,297.07	5,237.81	5,213.60	11.75	12.78	-147.27	-0.88	-512.43	599.36	576.35	23.01	26.046						
5,400.00	5,396.88	5,335.96	5,310.79	11.98	13.08	-147.44	-0.88	-526.19	618.39	594.92	23.46	26.355						
5,500.00	5,496.70	5,434.12	5,407.97	12.21	13.37	-147.61	-0.88	-539.95	637.42	613.51	23.92	26.652						
5,600.00	5,596.51	5,532.27	5,505.16	12.44	13.67	-147.76	-0.88	-553.71	656.46	632.09	24.37	26.937						
5,700.00	5,696.32	5,630.43	5,602.35	12.67	13.97	-147.90	-0.88	-567.48	675.51	650.68	24.82	27.211						
5,800.00	5,796.14	5,728.59	5,699.53	12.90	14.27	-148.04	-0.88	-581.24	694.56	669.28	25.28	27.475						
5,900.00	5,895.95	5,826.74	5,796.72	13.14	14.57	-148.17	-0.88	-595.00	713.61	687.87	25.74	27.729						
6,000.00	5,995.76	5,924.90	5,893.90	13.37	14.87	-148.29	-0.88	-608.76	732.66	706.47	26.19	27.973						
6,100.00	6,095.58	6,023.05	5,991.09	13.60	15.18	-148.40	-0.88	-622.52	751.72	725.07	26.65	28.209						
6,200.00	6,195.39	6,121.21	6,088.28	13.84	15.48	-148.51	-0.88	-636.29	770.78	743.68	27.11	28.436						
6,300.00	6,295.20	6,219.37	6,185.46	14.07	15.78	-148.62	-0.88	-650.05	789.84	762.28	27.56	28.656						
6,400.00	6,395.01	6,317.52	6,282.65	14.31	16.09	-148.72	-0.88	-663.81	808.91	780.89	28.02	28.867						
6,500.00	6,494.83	6,415.68	6,379.84	14.54	16.39	-148.81	-0.88	-677.57	827.98	799.50	28.48	29.071						
6,600.00	6,594.64	6,513.84	6,477.02	14.77	16.69	-148.91	-0.88	-691.33	847.05	818.11	28.94	29.269						
6,655.23	6,649.77	6,568.05	6,530.70	14.90	16.86	-148.95	-0.88	-698.93	857.58	828.39	29.19	29.375						
6,700.00	6,694.46	6,612.02	6,574.24	15.00	17.00	-149.03	-0.88	-705.10	865.97	836.58	29.39	29.465						
6,800.00	6,794.36	6,710.44	6,671.69	15.18	17.31	-149.15	-0.88	-718.90	883.65	853.85	29.80	29.648						
6,900.00	6,894.32	6,809.12	6,769.39	15.36	17.61	-149.20	-0.88	-732.73	899.85	869.63	30.22	29.777						
7,005.68	7,000.00	6,913.64	6,872.88	15.55	17.94	-97.66	-0.88	-747.39	915.37	884.71	30.66	29.858						
7,100.00	7,094.32	7,007.03	6,965.35	15.73	18.23	-97.55	-0.88	-760.48	928.48	897.41	31.07	29.886						
7,200.00	7,194.32	7,106.04	7,063.38	15.95	18.54	-97.44	-0.88	-774.36	942.38	910.86	31.53	29.893						
7,300.00	7,294.32	7,205.06	7,161.42	16.17	18.85	-97.33	-0.88	-788.25	956.29	924.30	31.98	29.900						
7,400.00	7,394.32	7,304.07	7,259.45	16.39	19.16	-97.23	-0.88	-802.13	970.20	937.76	32.44	29.906						
7,500.00	7,494.32	7,403.08	7,357.49	16.61	19.47	-97.13	-0.88	-816.01	984.11	951.21	32.90	29.912						
7,600.00	7,594.32	7,502.09	7,455.52	16.83	19.78	-97.03	-0.88	-829.89	998.03	964.67	33.36	29.918						
7,700.00	7,694.32	7,601.10	7,553.55	17.05	20.09	-96.93	-0.88	-843.77	1,011.94	978.13	33.82	29.924						
7,800.00	7,794.32	7,700.12	7,651.59	17.27	20.40	-96.83	-0.88	-857.66	1,025.87	991.59	34.28	29.929						
7,900.00	7,894.32	7,799.13	7,749.62	17.48	20.71	-96.74	-0.88	-871.54	1,039.79	1,005.05	34.74	29.934						
8,000.00	7,994.32	7,898.14	7,847.66	17.70	21.02	-96.65	-0.88	-885.42	1,053.72	1,018.52	35.20	29.939						
8,100.00	8,094.32	7,997.15	7,945.69	17.92	21.34	-96.57	-0.88	-899.30	1,067.65	1,031.99	35.66	29.943						
8,200.00	8,194.32	8,097.56	8,045.11	18.14	21.65	-96.48	-0.88	-913.38	1,081.57	1,045.45	36.12	29.943						
8,300.00	8,294.32	8,219.81	8,166.34	18.36	21.93	-96.39	-0.88	-929.06	1,094.33	1,057.68	36.64	29.963						
8,400.00	8,394.32	8,342.67	8,288.50	18.58	22.20	-96.31	-0.88	-942.22	1,104.98	1,067.82	37.15	29.742						
8,500.00	8,494.32	8,466.05	8,411.42	18.80	22.46	-96.25	-0.88	-952.80	1,113.50	1,075.85	37.64	29.581						
8,600.00	8,594.32	8,589.83	8,534.94	19.03	22.69	-96.21	-0.88	-960.75	1,119.88	1,081.76	38.12	29.381						
8,700.00	8,694.32	8,713.89	8,658.89	19.25	22.91	-96.18	-0.88	-966.03	1,124.12	1,085.55	38.57	29.144						
8,800.00	8,794.32	8,838.13	8,783.09	19.47	23.12	-96.16	-0.88	-968.64	1,126.20	1,087.19	39.01	28.870						
8,900.00	8,894.32	8,949.45	8,894.42	19.69	23.30	-96.16	-0.88	-968.93	1,126.43	1,087.00	39.43	28.565						
9,000.00	8,994.32	9,049.45	8,994.42	19.91	23.48	-96.16	-0.88	-968.93	1,126.43	1,086.58	39.86	28.262						
9,052.74	9,047.06	9,102.20	9,047.16	20.02	23.57	-96.16	-0.88	-968.93	1,126.43	1,086.35	40.08	28.104						
9,100.00	9,094.26	9,149.40	9,094.36	20.12	23.66	84.38	-0.88	-968.93	1,126.24	1,085.98	40.27	27.970						
9,150.00	9,143.85	9,198.54	9,143.50	20.20	23.75	84.75	-0.89	-968.93	1,125.64	1,085.20	40.44	27.834						
9,200.00	9,192.70	9,240.47	9,185.39	20.27	23.81	85.19	-2.60	-968.92	1,124.88	1,084.29	40.59	27.712						
9,250.00	9,240.44	9,282.86	9,227.49	20.35	23.88	85.67	-7.44	-968.88	1,124.13	1,083.39	40.74	27.595						
9,300.00	9,286.71	9,325.76	9,269.62	20.42	23.95	86.17	-15.49	-968.82	1,123.41	1,082.54	40.87	27.484						
9,350.00	9,331.16	9,369.23	9,311.58	20.49	24.02	86.70	-26.84	-968.74	1,122.74	1,081.73	41.01	27.375						
9,400.00	9,373.45	9,413.34	9,353.13	20.55	24.09	87.25	-41.58	-968.63	1,122.15	1,080.99	41.16	27.266						
9,450.00	9,413.25	9,458.14	9,394.06	20.62	24.17	87.83	-59.77	-968.49	1,121.64	1,080.34	41.31	27.153						
9,500.00	9,450.26	9,503.71	9,434.10	20.68	24.25	88.42	-81.49	-968.33	1,121.24	1,079.77	41.48	27.034						

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 115H - 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	9,484.20	9,550.00	9,472.88	20.75	24.33	89.03	-106.75	-968.15	1,120.96	1,079.30	41.66	26.905		
9,600.00	9,514.82	9,597.42	9,510.36	20.84	24.41	89.65	-135.78	-967.93	1,120.81	1,078.94	41.88	26.763		
9,628.12	9,530.49	9,624.46	9,530.62	20.89	24.47	90.00	-153.69	-967.80	1,120.79	1,078.77	42.02	26.674		
9,650.00	9,541.88	9,645.73	9,545.94	20.94	24.51	90.28	-168.44	-967.69	1,120.81	1,078.68	42.13	26.606		
9,700.00	9,565.17	9,695.10	9,579.33	21.07	24.61	90.91	-204.79	-967.42	1,120.94	1,078.53	42.41	26.432		
9,750.00	9,584.52	9,745.63	9,610.13	21.24	24.73	91.54	-244.82	-967.12	1,121.22	1,078.50	42.73	26.240		
9,800.00	9,599.78	9,797.39	9,637.90	21.43	24.86	92.17	-288.48	-966.80	1,121.65	1,078.56	43.09	26.029		
9,850.00	9,610.83	9,850.45	9,662.15	21.64	25.01	92.79	-335.64	-966.45	1,122.20	1,078.71	43.50	25.799		
9,900.00	9,617.59	9,904.88	9,682.40	21.88	25.19	93.40	-386.15	-966.08	1,122.88	1,078.93	43.95	25.549		
9,950.00	9,620.01	9,960.74	9,698.10	22.14	25.40	93.98	-439.73	-965.68	1,123.66	1,079.21	44.45	25.282		
9,957.57	9,620.00	9,969.32	9,700.04	22.19	25.44	94.07	-448.09	-965.62	1,123.78	1,079.26	44.53	25.239		
10,000.00	9,619.64	10,018.38	9,708.75	22.43	25.65	94.54	-496.36	-965.26	1,124.38	1,079.39	45.00	24.989		
10,100.00	9,618.80	10,130.32	9,714.17	23.08	26.23	94.86	-608.06	-964.43	1,124.83	1,078.54	46.28	24.302		
10,200.00	9,617.96	10,230.32	9,714.63	23.82	26.85	94.92	-708.05	-963.69	1,124.94	1,077.21	47.73	23.568		
10,300.00	9,617.11	10,330.31	9,715.08	24.65	27.56	94.99	-808.04	-962.95	1,125.05	1,075.70	49.35	22.796		
10,400.00	9,616.27	10,430.30	9,715.54	25.56	28.35	95.06	-908.02	-962.21	1,125.16	1,074.03	51.13	22.006		
10,500.00	9,615.43	10,530.29	9,716.00	26.54	29.21	95.12	-1,008.01	-961.47	1,125.28	1,072.23	53.05	21.212		
10,600.00	9,614.59	10,630.28	9,716.46	27.58	30.15	95.19	-1,108.00	-960.73	1,125.39	1,070.30	55.09	20.427		
10,700.00	9,613.74	10,730.27	9,716.91	28.68	31.14	95.25	-1,207.99	-959.99	1,125.51	1,068.26	57.25	19.660		
10,800.00	9,612.90	10,830.27	9,717.37	29.83	32.19	95.32	-1,307.97	-959.25	1,125.63	1,066.12	59.51	18.916		
10,900.00	9,612.06	10,930.26	9,717.83	31.02	33.28	95.39	-1,407.96	-958.50	1,125.75	1,063.90	61.85	18.200		
11,000.00	9,611.22	11,030.25	9,718.28	32.25	34.42	95.45	-1,507.95	-957.76	1,125.87	1,061.59	64.28	17.515		
11,100.00	9,610.37	11,130.24	9,718.74	33.52	35.60	95.52	-1,607.94	-957.02	1,125.99	1,059.22	66.78	16.862		
11,200.00	9,609.53	11,230.23	9,719.20	34.81	36.82	95.58	-1,707.93	-956.28	1,126.12	1,056.78	69.33	16.242		
11,300.00	9,608.69	11,330.22	9,719.65	36.14	38.07	95.65	-1,807.91	-955.54	1,126.24	1,054.30	71.95	15.653		
11,400.00	9,607.85	11,430.22	9,720.11	37.49	39.34	95.71	-1,907.90	-954.80	1,126.37	1,051.76	74.61	15.096		
11,500.00	9,607.01	11,530.21	9,720.57	38.86	40.65	95.78	-2,007.89	-954.06	1,126.50	1,049.18	77.32	14.568		
11,600.00	9,606.16	11,630.20	9,721.02	40.25	41.97	95.85	-2,107.88	-953.32	1,126.63	1,046.56	80.07	14.070		
11,700.00	9,605.32	11,730.19	9,721.48	41.66	43.32	95.91	-2,207.86	-952.58	1,126.76	1,043.90	82.86	13.598		
11,800.00	9,604.48	11,830.18	9,721.94	43.09	44.69	95.98	-2,307.85	-951.84	1,126.90	1,041.22	85.68	13.152		
11,900.00	9,603.64	11,930.17	9,722.39	44.53	46.07	96.04	-2,407.84	-951.10	1,127.03	1,038.50	88.53	12.731		
12,000.00	9,602.79	12,030.16	9,722.85	45.98	47.48	96.11	-2,507.83	-950.36	1,127.17	1,035.77	91.40	12.332		
12,100.00	9,601.95	12,130.16	9,723.31	47.45	48.89	96.17	-2,607.82	-949.61	1,127.31	1,033.01	94.30	11.954		
12,200.00	9,601.11	12,230.15	9,723.77	48.92	50.32	96.24	-2,707.80	-948.87	1,127.45	1,030.23	97.22	11.597		
12,300.00	9,600.27	12,330.14	9,724.22	50.41	51.77	96.31	-2,807.79	-948.13	1,127.59	1,027.43	100.16	11.258		
12,400.00	9,599.42	12,430.13	9,724.68	51.90	53.22	96.37	-2,907.78	-947.39	1,127.73	1,024.61	103.12	10.936		
12,500.00	9,598.58	12,530.12	9,725.14	53.41	54.68	96.44	-3,007.77	-946.65	1,127.87	1,021.78	106.09	10.631		
12,600.00	9,597.74	12,630.11	9,725.59	54.92	56.16	96.50	-3,107.75	-945.91	1,128.02	1,018.94	109.08	10.341		
12,700.00	9,596.90	12,730.11	9,726.05	56.44	57.64	96.57	-3,207.74	-945.17	1,128.17	1,016.08	112.09	10.065		
12,800.00	9,596.05	12,830.10	9,726.51	57.97	59.13	96.63	-3,307.73	-944.43	1,128.31	1,013.21	115.10	9.803		
12,900.00	9,595.21	12,930.09	9,726.96	59.50	60.63	96.70	-3,407.72	-943.69	1,128.46	1,010.34	118.13	9.553		
13,000.00	9,594.37	13,030.08	9,727.42	61.04	62.14	96.76	-3,507.71	-942.95	1,128.62	1,007.45	121.17	9.315		
13,100.00	9,593.53	13,130.07	9,727.88	62.58	63.65	96.83	-3,607.69	-942.21	1,128.77	1,004.55	124.21	9.087		
13,200.00	9,592.69	13,230.06	9,728.33	64.13	65.17	96.90	-3,707.68	-941.47	1,128.92	1,001.65	127.27	8.870		
13,300.00	9,591.84	13,330.05	9,728.79	65.68	66.69	96.96	-3,807.67	-940.72	1,129.08	998.74	130.33	8.663		
13,400.00	9,591.00	13,430.05	9,729.25	67.23	68.22	97.03	-3,907.66	-939.98	1,129.23	995.83	133.41	8.465		
13,500.00	9,590.16	13,530.04	9,729.71	68.79	69.75	97.09	-4,007.64	-939.24	1,129.39	992.91	136.49	8.275		
13,600.00	9,589.32	13,630.03	9,730.16	70.36	71.29	97.16	-4,107.63	-938.50	1,129.55	989.98	139.57	8.093		
13,700.00	9,588.47	13,730.02	9,730.62	71.92	72.84	97.22	-4,207.62	-937.76	1,129.72	987.05	142.66	7.919		
13,800.00	9,587.63	13,830.01	9,731.08	73.49	74.38	97.29	-4,307.61	-937.02	1,129.88	984.12	145.76	7.752		
13,900.00	9,586.79	13,930.00	9,731.53	75.06	75.94	97.35	-4,407.60	-936.28	1,130.04	981.18	148.86	7.591		
14,000.00	9,585.95	14,030.00	9,731.99	76.64	77.49	97.42	-4,507.58	-935.54	1,130.21	978.24	151.97	7.437		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 115H - 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									
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	9,585.10	14,129.99	9,732.45	78.22	79.05	97.48	-4,607.57	-934.80	1,130.38	975.29	155.08	7.289				
14,200.00	9,584.26	14,229.98	9,732.90	79.80	80.61	97.55	-4,707.56	-934.06	1,130.55	972.35	158.20	7.146				
14,300.00	9,583.42	14,329.97	9,733.36	81.38	82.18	97.61	-4,807.55	-933.32	1,130.72	969.40	161.32	7.009				
14,400.00	9,582.58	14,429.96	9,733.82	82.97	83.74	97.68	-4,907.53	-932.58	1,130.89	966.45	164.44	6.877				
14,500.00	9,581.73	14,528.37	9,734.57	84.55	85.11	97.76	-5,005.93	-931.85	1,131.10	963.73	167.37	6.758				
14,600.00	9,580.89	14,628.26	9,736.09	86.14	86.54	97.88	-5,105.81	-931.11	1,131.43	961.10	170.33	6.643				
14,700.00	9,580.05	14,728.23	9,737.62	87.73	88.11	98.00	-5,205.77	-930.37	1,131.76	958.31	173.44	6.525				
14,800.00	9,579.21	14,828.20	9,739.15	89.33	89.69	98.12	-5,305.73	-929.63	1,132.09	955.53	176.56	6.412				
14,900.00	9,578.37	14,928.18	9,740.68	90.92	91.26	98.23	-5,405.68	-928.90	1,132.43	952.76	179.67	6.303				
15,000.00	9,577.52	15,028.15	9,742.20	92.52	92.85	98.35	-5,505.64	-928.16	1,132.77	949.99	182.78	6.197				
15,100.00	9,576.68	15,128.12	9,743.73	94.11	94.43	98.47	-5,605.60	-927.42	1,133.12	947.22	185.90	6.095				
15,200.00	9,575.84	15,228.09	9,745.26	95.71	96.01	98.59	-5,705.56	-926.68	1,133.47	944.46	189.02	5.997				
15,300.00	9,575.00	15,328.06	9,746.79	97.31	97.60	98.71	-5,805.51	-925.94	1,133.83	941.70	192.13	5.901				
15,400.00	9,574.15	15,428.03	9,748.31	98.91	99.19	98.83	-5,905.47	-925.21	1,134.20	938.94	195.25	5.809				
15,500.00	9,573.31	15,528.01	9,749.84	100.52	100.78	98.94	-6,005.43	-924.47	1,134.56	936.19	198.37	5.719				
15,600.00	9,572.47	15,627.98	9,751.37	102.12	102.37	99.06	-6,105.39	-923.73	1,134.94	933.45	201.49	5.633				
15,700.00	9,571.63	15,727.95	9,752.90	103.73	103.96	99.18	-6,205.34	-922.99	1,135.31	930.71	204.61	5.549				
15,800.00	9,570.78	15,827.92	9,754.42	105.33	105.55	99.30	-6,305.30	-922.26	1,135.70	927.97	207.72	5.467				
15,900.00	9,569.94	15,927.89	9,755.95	106.94	107.15	99.42	-6,405.26	-921.52	1,136.08	925.24	210.84	5.388				
16,000.00	9,569.10	16,027.87	9,757.48	108.55	108.75	99.53	-6,505.22	-920.78	1,136.48	922.52	213.96	5.312				
16,100.00	9,568.26	16,127.84	9,759.01	110.16	110.35	99.65	-6,605.17	-920.04	1,136.87	919.80	217.08	5.237				
16,200.00	9,567.42	16,227.81	9,760.53	111.76	111.94	99.77	-6,705.13	-919.30	1,137.27	917.08	220.19	5.165				
16,300.00	9,566.57	16,327.78	9,762.06	113.38	113.54	99.89	-6,805.09	-918.57	1,137.68	914.37	223.31	5.095				
16,400.00	9,565.73	16,427.75	9,763.59	114.99	115.15	100.01	-6,905.05	-917.83	1,138.09	911.67	226.42	5.026				
16,500.00	9,564.89	16,527.73	9,765.12	116.60	116.75	100.12	-7,005.00	-917.09	1,138.51	908.97	229.53	4.960				
16,600.00	9,564.05	16,627.70	9,766.65	118.21	118.35	100.24	-7,104.96	-916.35	1,138.93	906.28	232.65	4.896				
16,700.00	9,563.20	16,727.67	9,768.17	119.83	119.96	100.36	-7,204.92	-915.61	1,139.35	903.60	235.76	4.833				
16,800.00	9,562.36	16,827.64	9,769.70	121.44	121.56	100.47	-7,304.88	-914.88	1,139.78	900.92	238.87	4.772				
16,900.00	9,561.52	16,927.61	9,771.23	123.05	123.17	100.59	-7,404.83	-914.14	1,140.22	898.24	241.98	4.712				
17,000.00	9,560.68	17,027.59	9,772.76	124.67	124.77	100.71	-7,504.79	-913.40	1,140.66	895.58	245.08	4.654				
17,080.26	9,560.00	17,107.82	9,773.98	125.97	126.06	100.80	-7,585.01	-912.81	1,141.02	893.44	247.58	4.609 SF				

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 116H - OH - Plan #2													Offset Site Error: 0.00 usft	
Survey Program: O-LEAM MWD+HDGM, 10071-MWD+IFR1+MS													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 +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0.00	0.20	0.20	0.00	0.00	-90.37	-0.39	-59.97	59.97					
100.00	100.00	100.20	100.20	0.09	0.09	-90.37	-0.39	-59.97	59.97	59.80	0.17	347.870		
200.00	200.00	200.20	200.20	0.31	0.31	-90.37	-0.39	-59.97	59.97	59.35	0.62	96.428		
300.00	300.00	300.20	300.20	0.54	0.54	-90.37	-0.39	-59.97	59.97	58.90	1.07	55.972		
400.00	400.00	400.20	400.20	0.76	0.76	-90.37	-0.39	-59.97	59.97	58.45	1.52	39.429		
500.00	500.00	500.20	500.20	0.99	0.99	-90.37	-0.39	-59.97	59.97	58.00	1.97	30.434		
600.00	600.00	600.20	600.20	1.21	1.21	-90.37	-0.39	-59.97	59.97	57.55	2.42	24.781		
700.00	700.00	700.20	700.20	1.43	1.44	-90.37	-0.39	-59.97	59.97	57.10	2.87	20.899		
800.00	800.00	800.20	800.20	1.66	1.66	-90.37	-0.39	-59.97	59.97	56.65	3.32	18.068		
900.00	900.00	900.20	900.20	1.88	1.88	-90.37	-0.39	-59.97	59.97	56.20	3.77	15.913		
1,000.00	1,000.00	1,000.20	1,000.20	2.11	2.11	-90.37	-0.39	-59.97	59.97	55.75	4.22	14.217		
1,100.00	1,100.00	1,100.20	1,100.20	2.33	2.33	-90.37	-0.39	-59.97	59.97	55.30	4.67	12.848		
1,200.00	1,200.00	1,200.20	1,200.20	2.56	2.56	-90.37	-0.39	-59.97	59.97	54.85	5.12	11.719		
1,300.00	1,300.00	1,300.20	1,300.20	2.78	2.78	-90.37	-0.39	-59.97	59.97	54.40	5.57	10.773		
1,400.00	1,400.00	1,400.20	1,400.20	3.01	3.01	-90.37	-0.39	-59.97	59.97	53.95	6.02	9.968		
1,500.00	1,500.00	1,500.20	1,500.20	3.23	3.23	-90.37	-0.39	-59.97	59.97	53.51	6.47	9.275		
1,600.00	1,600.00	1,600.20	1,600.20	3.46	3.46	-90.37	-0.39	-59.97	59.97	53.06	6.92	8.672		
1,700.00	1,700.00	1,700.20	1,700.20	3.68	3.68	-90.37	-0.39	-59.97	59.97	52.61	7.36	8.143		
1,800.00	1,800.00	1,800.20	1,800.20	3.91	3.91	-90.37	-0.39	-59.97	59.97	52.16	7.81	7.674		
1,900.00	1,900.00	1,900.20	1,900.20	4.13	4.13	-90.37	-0.39	-59.97	59.97	51.71	8.26	7.257		
2,000.00	2,000.00	2,000.20	2,000.20	4.36	4.36	-90.37	-0.39	-59.97	59.97	51.26	8.71	6.883		
2,100.00	2,100.00	2,100.20	2,100.20	4.58	4.58	-90.37	-0.39	-59.97	59.97	50.81	9.16	6.545		
2,200.00	2,200.00	2,200.20	2,200.20	4.81	4.81	-90.37	-0.39	-59.97	59.97	50.36	9.61	6.239		
2,300.00	2,300.00	2,300.20	2,300.20	5.03	5.03	-90.37	-0.39	-59.97	59.97	49.91	10.06	5.960		
2,400.00	2,400.00	2,400.20	2,400.20	5.26	5.26	-90.37	-0.39	-59.97	59.97	49.46	10.51	5.705		
2,500.00	2,500.00	2,500.20	2,500.20	5.48	5.48	-90.37	-0.39	-59.97	59.97	49.01	10.96	5.471		
2,600.00	2,600.00	2,600.20	2,600.20	5.71	5.71	-90.37	-0.39	-59.97	59.97	48.56	11.41	5.256		
2,700.00	2,700.00	2,700.20	2,700.20	5.93	5.93	-90.37	-0.39	-59.97	59.97	48.11	11.86	5.057		
2,800.00	2,800.00	2,800.20	2,800.20	6.15	6.16	-90.37	-0.39	-59.97	59.97	47.66	12.31	4.872		
2,900.00	2,900.00	2,900.20	2,900.20	6.38	6.38	-90.37	-0.39	-59.97	59.97	47.21	12.76	4.700		
3,000.00	3,000.00	3,000.20	3,000.20	6.60	6.60	-90.37	-0.39	-59.97	59.97	46.76	13.21	4.540		
3,100.00	3,100.00	3,100.20	3,100.20	6.83	6.83	-90.37	-0.39	-59.97	59.97	46.31	13.66	4.391		
3,200.00	3,200.00	3,200.20	3,200.20	7.05	7.05	-90.37	-0.39	-59.97	59.97	45.86	14.11	4.251		
3,300.00	3,300.00	3,300.20	3,300.20	7.28	7.28	-90.37	-0.39	-59.97	59.97	45.41	14.56	4.120		
3,400.00	3,400.00	3,400.20	3,400.20	7.50	7.50	-90.37	-0.39	-59.97	59.97	44.96	15.01	3.996		
3,500.00	3,500.00	3,500.20	3,500.20	7.73	7.73	-90.37	-0.39	-59.97	59.97	44.51	15.46	3.880 CC, ES		
3,600.00	3,600.00	3,600.20	3,600.20	7.95	7.95	-142.40	-0.39	-59.97	60.66	44.76	15.90	3.815		
3,700.00	3,699.96	3,700.16	3,700.16	8.16	8.18	-143.85	-0.39	-59.97	62.75	46.42	16.34	3.841		
3,800.00	3,799.86	3,800.06	3,800.06	8.38	8.40	-146.05	-0.39	-59.97	66.33	49.55	16.78	3.953		
3,850.45	3,850.23	3,850.43	3,850.43	8.49	8.52	-147.37	-0.39	-59.97	68.72	51.72	17.00	4.043		
3,900.00	3,899.69	3,899.89	3,899.89	8.60	8.63	-148.68	-0.39	-59.97	71.29	54.08	17.22	4.141		
4,000.00	3,999.50	3,999.70	3,999.70	8.82	8.85	-151.06	-0.39	-59.97	76.58	58.93	17.66	4.338		
4,100.00	4,099.31	4,098.55	4,098.55	9.04	9.07	-152.67	0.11	-60.66	82.57	64.48	18.09	4.565		
4,200.00	4,199.13	4,197.29	4,197.25	9.26	9.28	-153.25	1.60	-62.72	89.76	71.25	18.51	4.850		
4,300.00	4,298.94	4,295.84	4,295.71	9.48	9.49	-153.00	4.08	-66.16	98.11	79.19	18.93	5.183		
4,400.00	4,398.75	4,394.17	4,393.86	9.70	9.70	-152.13	7.55	-70.95	107.64	88.29	19.35	5.564		
4,500.00	4,498.57	4,492.21	4,491.61	9.93	9.92	-150.82	11.99	-77.09	118.38	98.62	19.76	5.991		
4,600.00	4,598.38	4,589.91	4,588.87	10.15	10.14	-149.21	17.39	-84.56	130.40	110.23	20.17	6.464		
4,700.00	4,698.19	4,688.92	4,687.34	10.38	10.36	-147.59	23.40	-92.89	143.21	122.61	20.60	6.951		
4,800.00	4,798.01	4,788.02	4,785.91	10.60	10.59	-146.24	29.43	-101.22	156.11	135.07	21.04	7.421		
4,900.00	4,897.82	4,887.12	4,884.48	10.83	10.81	-145.10	35.46	-109.56	169.08	147.61	21.47	7.875		
5,000.00	4,997.63	4,986.22	4,983.04	11.06	11.04	-144.12	41.48	-117.90	182.12	160.21	21.91	8.312		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 116H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 10071-MWD+IFR1+MS													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	
5,100.00	5,097.45	5,085.33	5,081.61	11.29	11.28	-143.27	47.51	-126.23	195.19	172.84	22.35	8.733		
5,200.00	5,197.26	5,184.43	5,180.18	11.52	11.51	-142.53	53.54	-134.57	208.31	185.51	22.79	9.140		
5,300.00	5,297.07	5,283.53	5,278.74	11.75	11.75	-141.87	59.56	-142.91	221.45	198.22	23.23	9.531		
5,400.00	5,396.88	5,382.63	5,377.31	11.98	11.98	-141.29	65.59	-151.24	234.62	210.94	23.68	9.908		
5,500.00	5,496.70	5,481.74	5,475.88	12.21	12.22	-140.77	71.62	-159.58	247.81	223.68	24.12	10.272		
5,600.00	5,596.51	5,580.84	5,574.45	12.44	12.46	-140.30	77.64	-167.92	261.02	236.45	24.57	10.623		
5,700.00	5,696.32	5,679.94	5,673.01	12.67	12.71	-139.88	83.67	-176.25	274.24	249.22	25.02	10.961		
5,800.00	5,796.14	5,779.05	5,771.58	12.90	12.95	-139.50	89.70	-184.59	287.48	262.01	25.47	11.287		
5,900.00	5,895.95	5,878.15	5,870.15	13.14	13.19	-139.15	95.72	-192.92	300.73	274.81	25.92	11.602		
6,000.00	5,995.76	5,977.46	5,968.93	13.37	13.44	-138.83	101.76	-201.28	313.98	287.61	26.37	11.906		
6,100.00	6,095.58	6,081.55	6,072.55	13.60	13.65	-138.62	107.49	-209.20	326.43	299.60	26.83	12.168		
6,200.00	6,195.39	6,186.02	6,176.72	13.84	13.85	-138.60	112.13	-215.62	337.36	310.09	27.27	12.370		
6,300.00	6,295.20	6,290.82	6,281.34	14.07	14.05	-138.76	115.67	-220.51	346.77	319.06	27.71	12.514		
6,400.00	6,395.01	6,395.86	6,386.30	14.31	14.25	-139.08	118.08	-223.86	354.66	326.52	28.15	12.601		
6,500.00	6,494.83	6,501.08	6,491.50	14.54	14.44	-139.55	119.38	-225.65	361.05	332.47	28.57	12.636		
6,600.00	6,594.64	6,604.42	6,594.84	14.77	14.63	-140.16	119.61	-225.97	366.03	337.04	29.00	12.624		
6,655.23	6,649.77	6,659.55	6,649.97	14.90	14.75	-140.50	119.61	-225.97	368.64	339.39	29.24	12.606		
6,700.00	6,694.46	6,704.25	6,694.66	15.00	14.85	-140.76	119.61	-225.97	370.62	341.18	29.43	12.592		
6,800.00	6,794.36	6,804.15	6,794.56	15.18	15.07	-141.22	119.61	-225.97	374.08	344.25	29.84	12.538		
6,900.00	6,894.32	6,904.11	6,894.52	15.36	15.29	-141.49	119.61	-225.97	376.21	345.97	30.24	12.442		
7,005.68	7,000.00	7,009.78	7,000.20	15.55	15.52	-90.06	119.61	-225.97	376.97	346.31	30.66	12.296		
7,100.00	7,094.32	7,104.10	7,094.52	15.73	15.72	-90.06	119.61	-225.97	376.97	345.92	31.05	12.139		
7,200.00	7,194.32	7,204.10	7,194.52	15.95	15.94	-90.06	119.61	-225.97	376.97	345.48	31.49	11.969		
7,300.00	7,294.32	7,304.10	7,294.52	16.17	16.16	-90.06	119.61	-225.97	376.97	345.03	31.94	11.804		
7,400.00	7,394.32	7,404.10	7,394.52	16.39	16.38	-90.06	119.61	-225.97	376.97	344.59	32.38	11.643		
7,500.00	7,494.32	7,504.10	7,494.52	16.61	16.60	-90.06	119.61	-225.97	376.97	344.15	32.82	11.486		
7,600.00	7,594.32	7,604.10	7,594.52	16.83	16.82	-90.06	119.61	-225.97	376.97	343.71	33.26	11.333		
7,700.00	7,694.32	7,704.10	7,694.52	17.05	17.04	-90.06	119.61	-225.97	376.97	343.27	33.70	11.185		
7,800.00	7,794.32	7,804.10	7,794.52	17.27	17.26	-90.06	119.61	-225.97	376.97	342.82	34.15	11.040		
7,900.00	7,894.32	7,904.10	7,894.52	17.48	17.48	-90.06	119.61	-225.97	376.97	342.38	34.59	10.899		
8,000.00	7,994.32	8,004.10	7,994.52	17.70	17.70	-90.06	119.61	-225.97	376.97	341.94	35.03	10.761		
8,100.00	8,094.32	8,104.10	8,094.52	17.92	17.92	-90.06	119.61	-225.97	376.97	341.50	35.47	10.626		
8,200.00	8,194.32	8,204.10	8,194.52	18.14	18.14	-90.06	119.61	-225.97	376.97	341.05	35.92	10.495		
8,300.00	8,294.32	8,304.10	8,294.52	18.36	18.36	-90.06	119.61	-225.97	376.97	340.61	36.36	10.367		
8,400.00	8,394.32	8,404.10	8,394.52	18.58	18.58	-90.06	119.61	-225.97	376.97	340.17	36.80	10.242		
8,500.00	8,494.32	8,504.10	8,494.52	18.80	18.80	-90.06	119.61	-225.97	376.97	339.72	37.25	10.120		
8,600.00	8,594.32	8,604.10	8,594.52	19.03	19.02	-90.06	119.61	-225.97	376.97	339.28	37.69	10.001		
8,700.00	8,694.32	8,704.10	8,694.52	19.25	19.24	-90.06	119.61	-225.97	376.97	338.83	38.14	9.885		
8,800.00	8,794.32	8,804.10	8,794.52	19.47	19.47	-90.06	119.61	-225.97	376.97	338.39	38.58	9.771		
8,900.00	8,894.32	8,904.10	8,894.52	19.69	19.69	-90.06	119.61	-225.97	376.97	337.95	39.02	9.660		
9,000.00	8,994.32	9,004.10	8,994.52	19.91	19.91	-90.06	119.61	-225.97	376.97	337.50	39.47	9.551		
9,052.74	9,047.06	9,056.84	9,047.26	20.02	20.02	-90.06	119.61	-225.97	376.97	337.27	39.70	9.495		
9,100.00	9,094.26	9,104.05	9,094.46	20.12	20.13	90.66	119.61	-225.97	376.99	337.09	39.90	9.449		
9,150.00	9,143.85	9,153.64	9,144.05	20.20	20.24	91.59	119.61	-225.97	377.11	337.03	40.08	9.408		
9,200.00	9,192.70	9,203.50	9,193.90	20.27	20.34	93.06	118.93	-225.96	377.52	337.27	40.26	9.378		
9,250.00	9,240.44	9,254.73	9,244.89	20.35	20.42	94.58	114.16	-225.93	378.22	337.83	40.40	9.362		
9,300.00	9,286.71	9,306.97	9,296.23	20.42	20.50	96.08	104.63	-225.86	379.19	338.66	40.53	9.356		
9,350.00	9,331.16	9,360.25	9,347.49	20.49	20.58	97.55	90.13	-225.75	380.39	339.75	40.64	9.360		
9,400.00	9,373.45	9,414.62	9,398.16	20.55	20.66	98.96	70.49	-225.61	381.79	341.06	40.73	9.373		
9,450.00	9,413.25	9,470.08	9,447.70	20.62	20.73	100.31	45.61	-225.42	383.35	342.54	40.81	9.394		
9,500.00	9,450.26	9,526.63	9,495.50	20.68	20.80	101.58	15.43	-225.20	385.02	344.15	40.87	9.421		
9,550.00	9,484.20	9,584.28	9,540.92	20.75	20.87	102.76	-20.03	-224.94	386.73	345.81	40.92	9.451		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 116H - OH - Plan #2													Offset Site Error: 0.00 usft
Survey Program: O-LEAM MWD+HDGM, 10071-MWD+IFR1+MS													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
9,600.00	9,514.82	9,642.97	9,583.26	20.84	20.94	103.83	-60.63	-224.64	388.44	347.47	40.97	9.482	
9,650.00	9,541.88	9,702.65	9,621.83	20.94	21.02	104.79	-106.14	-224.30	390.07	349.03	41.04	9.506	
9,700.00	9,565.17	9,763.23	9,655.93	21.07	21.12	105.61	-156.18	-223.93	391.56	350.42	41.14	9.518	
9,750.00	9,584.52	9,824.62	9,684.90	21.24	21.27	106.30	-210.27	-223.53	392.86	351.57	41.29	9.514	
9,800.00	9,599.78	9,886.67	9,708.14	21.43	21.48	106.84	-267.77	-223.10	393.91	352.39	41.52	9.486	
9,850.00	9,610.83	9,949.24	9,725.13	21.64	21.72	107.22	-327.96	-222.66	394.68	352.83	41.85	9.431	
9,900.00	9,617.59	10,012.15	9,735.50	21.88	22.01	107.44	-389.97	-222.20	395.13	352.85	42.28	9.346	
9,950.00	9,620.01	10,074.39	9,739.03	22.14	22.39	107.49	-452.08	-221.74	395.24	352.44	42.81	9.233	
9,957.57	9,620.00	10,081.96	9,739.08	22.19	23.27	107.50	-459.64	-221.68	395.26	352.40	42.87	9.221	
10,000.00	9,619.64	10,124.38	9,739.41	22.43	26.54	107.60	-502.07	-221.37	395.47	352.33	43.14	9.168	
10,100.00	9,618.80	10,224.37	9,740.18	23.08	26.62	107.82	-602.05	-220.63	395.96	352.20	43.76	9.049	
10,200.00	9,617.96	10,324.36	9,740.95	23.82	26.71	108.04	-702.03	-219.89	396.46	351.96	44.50	8.910	
10,300.00	9,617.11	10,424.34	9,741.72	24.65	26.79	108.26	-802.01	-219.15	396.96	351.62	45.34	8.755	
10,400.00	9,616.27	10,524.33	9,742.49	25.56	26.88	108.48	-901.99	-218.41	397.47	351.18	46.29	8.587	
10,500.00	9,615.43	10,624.32	9,743.27	26.54	26.97	108.70	-1,001.97	-217.67	397.98	350.66	47.32	8.410	
10,600.00	9,614.59	10,724.30	9,744.04	27.58	27.06	108.92	-1,101.95	-216.93	398.50	350.06	48.44	8.226	
10,700.00	9,613.74	10,824.29	9,744.81	28.68	27.15	109.14	-1,201.94	-216.19	399.03	349.39	49.64	8.039	
10,800.00	9,612.90	10,924.28	9,745.58	29.83	27.24	109.36	-1,301.92	-215.45	399.56	348.65	50.91	7.849	
10,900.00	9,612.06	11,024.26	9,746.35	31.02	27.33	109.58	-1,401.90	-214.71	400.10	347.86	52.23	7.660	
11,000.00	9,611.22	11,124.25	9,747.12	32.25	27.43	109.80	-1,501.88	-213.97	400.64	347.02	53.62	7.471	
11,100.00	9,610.37	11,224.24	9,747.89	33.52	27.52	110.01	-1,601.86	-213.22	401.19	346.12	55.06	7.286	
11,200.00	9,609.53	11,324.23	9,748.66	34.81	27.62	110.23	-1,701.84	-212.48	401.74	345.19	56.55	7.104	
11,300.00	9,608.69	11,424.21	9,749.43	36.14	27.71	110.45	-1,801.82	-211.74	402.30	344.21	58.09	6.926	
11,400.00	9,607.85	11,524.20	9,750.20	37.49	27.81	110.66	-1,901.80	-211.00	402.87	343.20	59.66	6.752	
11,500.00	9,607.01	11,624.19	9,750.97	38.86	27.91	110.87	-2,001.79	-210.26	403.44	342.16	61.28	6.584	
11,600.00	9,606.16	11,724.17	9,751.75	40.25	28.02	111.09	-2,101.77	-209.52	404.02	341.09	62.93	6.421	
11,700.00	9,605.32	11,824.16	9,752.52	41.66	28.12	111.30	-2,201.75	-208.78	404.60	339.99	64.61	6.263	
11,800.00	9,604.48	11,924.15	9,753.29	43.09	28.23	111.51	-2,301.73	-208.04	405.19	338.87	66.32	6.110	
11,900.00	9,603.64	12,024.13	9,754.06	44.53	28.34	111.73	-2,401.71	-207.30	405.78	337.73	68.05	5.963	
12,000.00	9,602.79	12,124.12	9,754.83	45.98	28.45	111.94	-2,501.69	-206.56	406.38	336.57	69.81	5.821	
12,100.00	9,601.95	12,224.11	9,755.60	47.45	28.58	112.15	-2,601.67	-205.82	406.99	335.39	71.60	5.684	
12,200.00	9,601.11	12,324.10	9,756.37	48.92	28.74	112.36	-2,701.65	-205.08	407.60	334.20	73.40	5.553	
12,300.00	9,600.27	12,424.08	9,757.14	50.41	28.97	112.57	-2,801.64	-204.34	408.21	332.99	75.23	5.426	
12,400.00	9,599.42	12,524.07	9,757.91	51.90	29.32	112.78	-2,901.62	-203.60	408.84	331.77	77.07	5.305	
12,500.00	9,598.58	12,624.06	9,758.68	53.41	29.75	112.98	-3,001.60	-202.86	409.46	330.53	78.93	5.188	
12,600.00	9,597.74	12,724.04	9,759.45	54.92	30.23	113.19	-3,101.58	-202.12	410.09	329.29	80.80	5.075	
12,700.00	9,596.90	12,824.03	9,760.22	56.44	30.74	113.40	-3,201.56	-201.38	410.73	328.04	82.69	4.967	
12,800.00	9,596.05	12,924.02	9,761.00	57.97	31.26	113.61	-3,301.54	-200.64	411.38	326.78	84.59	4.863	
12,900.00	9,595.21	13,024.00	9,761.77	59.50	31.79	113.81	-3,401.52	-199.90	412.02	325.52	86.50	4.763	
13,000.00	9,594.37	13,123.99	9,762.54	61.04	32.34	114.02	-3,501.50	-199.16	412.68	324.25	88.43	4.667	
13,100.00	9,593.53	13,223.98	9,763.31	62.58	32.89	114.22	-3,601.49	-198.42	413.34	322.98	90.36	4.574	
13,200.00	9,592.69	13,323.97	9,764.08	64.13	33.45	114.42	-3,701.47	-197.68	414.00	321.70	92.30	4.485	
13,300.00	9,591.84	13,423.95	9,764.85	65.68	34.03	114.63	-3,801.45	-196.94	414.67	320.42	94.25	4.400	
13,400.00	9,591.00	13,523.94	9,765.62	67.23	34.61	114.83	-3,901.43	-196.20	415.34	319.13	96.21	4.317	
13,500.00	9,590.16	13,623.93	9,766.39	68.79	35.19	115.03	-4,001.41	-195.46	416.02	317.85	98.18	4.238	
13,600.00	9,589.32	13,723.91	9,767.16	70.36	35.79	115.23	-4,101.39	-194.72	416.71	316.56	100.15	4.161	
13,700.00	9,588.47	13,823.90	9,767.93	71.92	36.39	115.43	-4,201.37	-193.98	417.40	315.27	102.12	4.087	
13,800.00	9,587.63	13,923.89	9,768.70	73.49	36.99	115.63	-4,301.35	-193.24	418.09	313.99	104.11	4.016	
13,900.00	9,586.79	14,023.87	9,769.48	75.06	37.61	115.83	-4,401.34	-192.50	418.79	312.70	106.09	3.947	
14,000.00	9,585.95	14,123.86	9,770.25	76.64	38.22	116.03	-4,501.32	-191.76	419.50	311.41	108.08	3.881	
14,100.00	9,585.10	14,223.85	9,771.02	78.22	38.85	116.23	-4,601.30	-191.02	420.21	310.13	110.08	3.817	
14,200.00	9,584.26	14,323.84	9,771.79	79.80	39.48	116.42	-4,701.28	-190.28	420.92	308.85	112.08	3.756	

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 116H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 10071-MWD+IFR1+MS													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,300.00	9,583.42	14,423.82	9,772.56	81.38	40.11	116.62	-4,801.26	-189.54	421.64	307.57	114.08	3.696		
14,400.00	9,582.58	14,523.81	9,773.33	82.97	40.75	116.82	-4,901.24	-188.80	422.37	306.29	116.08	3.639		
14,500.00	9,581.73	14,623.80	9,774.10	84.55	41.39	117.01	-5,001.22	-188.06	423.10	305.01	118.09	3.583		
14,600.00	9,580.89	14,723.78	9,774.87	86.14	42.04	117.20	-5,101.20	-187.32	423.83	303.74	120.09	3.529		
14,700.00	9,580.05	14,823.77	9,775.64	87.73	42.69	117.40	-5,201.19	-186.58	424.57	302.47	122.10	3.477		
14,800.00	9,579.21	14,923.76	9,776.41	89.33	43.34	117.59	-5,301.17	-185.84	425.32	301.20	124.11	3.427		
14,900.00	9,578.37	15,023.74	9,777.18	90.92	44.00	117.78	-5,401.15	-185.10	426.07	299.94	126.12	3.378		
15,000.00	9,577.52	15,123.73	9,777.96	92.52	44.66	117.98	-5,501.13	-184.36	426.82	298.68	128.14	3.331		
15,100.00	9,576.68	15,223.72	9,778.73	94.11	45.33	118.17	-5,601.11	-183.62	427.58	297.43	130.15	3.285		
15,200.00	9,575.84	15,323.71	9,779.50	95.71	45.99	118.36	-5,701.09	-182.88	428.34	296.18	132.16	3.241		
15,300.00	9,575.00	15,423.69	9,780.27	97.31	46.66	118.55	-5,801.07	-182.14	429.11	294.94	134.17	3.198		
15,400.00	9,574.15	15,523.68	9,781.04	98.91	47.34	118.74	-5,901.06	-181.40	429.88	293.70	136.19	3.157		
15,500.00	9,573.31	15,623.67	9,781.81	100.52	48.01	118.92	-6,001.04	-180.66	430.66	292.46	138.20	3.116		
15,600.00	9,572.47	15,723.65	9,782.58	102.12	48.69	119.11	-6,101.02	-179.92	431.44	291.23	140.21	3.077		
15,700.00	9,571.63	15,823.64	9,783.35	103.73	49.38	119.30	-6,201.00	-179.17	432.23	290.01	142.22	3.039		
15,800.00	9,570.78	15,923.63	9,784.12	105.33	50.06	119.48	-6,300.98	-178.43	433.02	288.79	144.24	3.002		
15,900.00	9,569.94	16,023.61	9,784.89	106.94	50.75	119.67	-6,400.96	-177.69	433.82	287.57	146.25	2.966		
16,000.00	9,569.10	16,123.60	9,785.66	108.55	51.43	119.85	-6,500.94	-176.95	434.62	286.36	148.25	2.932		
16,100.00	9,568.26	16,223.59	9,786.44	110.16	52.13	120.04	-6,600.92	-176.21	435.42	285.16	150.26	2.898		
16,200.00	9,567.42	16,323.58	9,787.21	111.76	52.82	120.22	-6,700.91	-175.47	436.23	283.96	152.27	2.865		
16,300.00	9,566.57	16,423.56	9,787.98	113.38	53.51	120.40	-6,800.89	-174.73	437.05	282.77	154.27	2.833		
16,400.00	9,565.73	16,523.55	9,788.75	114.99	54.21	120.59	-6,900.87	-173.99	437.86	281.59	156.28	2.802		
16,500.00	9,564.89	16,623.54	9,789.52	116.60	54.91	120.77	-7,000.85	-173.25	438.69	280.41	158.28	2.772		
16,600.00	9,564.05	16,723.52	9,790.29	118.21	55.61	120.95	-7,100.83	-172.51	439.51	279.23	160.28	2.742		
16,700.00	9,563.20	16,823.51	9,791.06	119.83	56.31	121.13	-7,200.81	-171.77	440.35	278.07	162.28	2.713		
16,800.00	9,562.36	16,923.50	9,791.83	121.44	57.01	121.31	-7,300.79	-171.03	441.18	276.91	164.28	2.686		
16,900.00	9,561.52	17,023.48	9,792.60	123.05	57.72	121.49	-7,400.77	-170.29	442.02	275.75	166.27	2.658		
17,000.00	9,560.68	17,123.47	9,793.37	124.67	58.43	121.66	-7,500.76	-169.55	442.87	274.60	168.26	2.632		
17,080.26	9,560.00	17,203.72	9,793.99	125.97	58.99	121.81	-7,581.00	-168.96	443.55	273.69	169.86	2.611 SF		

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 126H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 9994-MWD+IFR1+MS													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	83.82	108.11	999.11	1,004.95					
100.00	100.00	96.70	96.70	0.09	0.08	83.82	108.11	999.11	1,004.94	1,004.77	0.17	5,942.566		
200.00	200.00	196.70	196.70	0.31	0.30	83.82	108.11	999.11	1,004.94	1,004.33	0.61	1,636.551		
300.00	300.00	296.70	296.70	0.54	0.53	83.82	108.11	999.11	1,004.94	1,003.88	1.06	944.856		
400.00	400.00	396.70	396.70	0.76	0.75	83.82	108.11	999.11	1,004.94	1,003.43	1.51	664.150		
500.00	500.00	496.70	496.70	0.99	0.98	83.82	108.11	999.11	1,004.94	1,002.98	1.96	512.031		
600.00	600.00	596.70	596.70	1.21	1.20	83.82	108.11	999.11	1,004.94	1,002.53	2.41	416.610		
700.00	700.00	696.70	696.70	1.43	1.43	83.82	108.11	999.11	1,004.94	1,002.08	2.86	351.167		
800.00	800.00	796.70	796.70	1.66	1.65	83.82	108.11	999.11	1,004.94	1,001.63	3.31	303.493		
900.00	900.00	896.70	896.70	1.88	1.88	83.82	108.11	999.11	1,004.94	1,001.18	3.76	267.216		
1,000.00	1,000.00	996.70	996.70	2.11	2.10	83.82	108.11	999.11	1,004.94	1,000.73	4.21	238.686		
1,100.00	1,100.00	1,096.70	1,096.70	2.33	2.33	83.82	108.11	999.11	1,004.94	1,000.28	4.66	215.660		
1,200.00	1,200.00	1,196.70	1,196.70	2.56	2.55	83.82	108.11	999.11	1,004.94	999.83	5.11	196.686		
1,300.00	1,300.00	1,296.70	1,296.70	2.78	2.78	83.82	108.11	999.11	1,004.94	999.38	5.56	180.780		
1,400.00	1,400.00	1,396.70	1,396.70	3.01	3.00	83.82	108.11	999.11	1,004.94	998.93	6.01	167.255		
1,500.00	1,500.00	1,496.70	1,496.70	3.23	3.23	83.82	108.11	999.11	1,004.94	998.48	6.46	155.612		
1,600.00	1,600.00	1,596.70	1,596.70	3.46	3.45	83.82	108.11	999.11	1,004.94	998.03	6.91	145.485		
1,700.00	1,700.00	1,696.70	1,696.70	3.68	3.67	83.82	108.11	999.11	1,004.94	997.59	7.36	136.596		
1,800.00	1,800.00	1,796.70	1,796.70	3.91	3.90	83.82	108.11	999.11	1,004.94	997.14	7.81	128.730		
1,900.00	1,900.00	1,896.70	1,896.70	4.13	4.12	83.82	108.11	999.11	1,004.94	996.69	8.26	121.721		
2,000.00	2,000.00	1,996.70	1,996.70	4.36	4.35	83.82	108.11	999.11	1,004.94	996.24	8.71	115.436		
2,100.00	2,100.00	2,096.70	2,096.70	4.58	4.57	83.82	108.11	999.11	1,004.94	995.79	9.16	109.768		
2,200.00	2,200.00	2,196.70	2,196.70	4.81	4.80	83.82	108.11	999.11	1,004.94	995.34	9.60	104.630		
2,300.00	2,300.00	2,296.70	2,296.70	5.03	5.02	83.82	108.11	999.11	1,004.94	994.89	10.05	99.952		
2,400.00	2,400.00	2,396.70	2,396.70	5.26	5.25	83.82	108.11	999.11	1,004.94	994.44	10.50	95.674		
2,500.00	2,500.00	2,496.70	2,496.70	5.48	5.47	83.82	108.11	999.11	1,004.94	993.99	10.95	91.748		
2,600.00	2,600.00	2,617.04	2,617.04	5.71	5.72	83.83	107.83	997.95	1,003.96	992.54	11.42	87.890		
2,700.00	2,700.00	2,737.98	2,737.91	5.93	5.95	83.86	106.95	994.31	1,000.89	989.02	11.87	84.302		
2,800.00	2,800.00	2,858.70	2,858.46	6.15	6.19	83.91	105.47	988.20	995.73	983.41	12.32	80.820		
2,900.00	2,900.00	2,979.10	2,978.54	6.38	6.44	83.97	103.40	979.65	988.49	975.72	12.76	77.438		
3,000.00	3,000.00	3,099.08	3,097.99	6.60	6.69	84.06	100.75	968.70	979.17	965.97	13.21	74.146		
3,100.00	3,100.00	3,203.93	3,202.21	6.83	6.92	84.15	98.06	957.58	968.35	954.72	13.63	71.020		
3,200.00	3,200.00	3,303.33	3,301.01	7.05	7.14	84.24	95.49	946.96	957.46	943.39	14.06	68.089		
3,300.00	3,300.00	3,402.72	3,399.80	7.28	7.37	84.33	92.92	936.33	946.56	932.07	14.49	65.321		
3,400.00	3,400.00	3,502.11	3,498.59	7.50	7.60	84.43	90.35	925.71	935.67	920.75	14.92	62.704		
3,500.00	3,500.00	3,601.51	3,597.38	7.73	7.83	84.52	87.78	915.09	924.79	909.43	15.35	60.227		
3,600.00	3,600.00	3,700.81	3,696.08	7.95	8.07	33.19	85.21	904.48	913.17	897.39	15.78	57.854		
3,700.00	3,699.96	3,799.90	3,794.57	8.16	8.31	33.45	82.65	893.88	900.12	883.91	16.21	55.531		
3,800.00	3,799.86	3,898.77	3,892.84	8.38	8.55	33.79	80.10	883.32	885.64	869.00	16.64	53.237		
3,850.45	3,850.23	3,948.54	3,942.31	8.49	8.68	34.00	78.81	878.00	877.80	860.94	16.85	52.089		
3,900.00	3,899.69	3,997.40	3,990.87	8.60	8.80	34.16	77.55	872.78	869.92	852.86	17.06	50.982		
4,000.00	3,999.50	4,096.00	4,088.87	8.82	9.05	34.51	75.00	862.24	854.05	836.56	17.49	48.826		
4,100.00	4,099.31	4,194.60	4,186.87	9.04	9.30	34.87	72.45	851.70	838.21	820.29	17.92	46.769		
4,200.00	4,199.13	4,293.19	4,284.87	9.26	9.55	35.24	69.90	841.17	822.41	804.06	18.36	44.806		
4,300.00	4,298.94	4,391.79	4,382.87	9.48	9.80	35.63	67.35	830.63	806.64	787.85	18.79	42.929		
4,400.00	4,398.75	4,490.39	4,480.87	9.70	10.05	36.04	64.80	820.09	790.91	771.68	19.23	41.136		
4,500.00	4,498.57	4,588.99	4,578.87	9.93	10.31	36.46	62.25	809.55	775.22	755.56	19.67	39.420		
4,600.00	4,498.38	4,687.59	4,676.87	10.15	10.57	36.89	59.70	799.02	759.57	739.47	20.11	37.778		
4,700.00	4,498.19	4,786.18	4,774.87	10.38	10.83	37.35	57.15	788.48	743.97	723.42	20.55	36.204		
4,800.00	4,798.01	4,884.78	4,872.87	10.60	11.09	37.82	54.60	777.94	728.41	707.42	20.99	34.697		
4,900.00	4,897.82	4,983.38	4,970.87	10.83	11.35	38.32	52.05	767.40	712.91	691.47	21.44	33.251		
5,000.00	4,997.63	5,081.98	5,068.87	11.06	11.61	38.84	49.50	756.87	697.46	675.57	21.89	31.864		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 126H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 9994-MWD+IFR1+MS													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance		Warning						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,097.45	5,180.58	5,166.87	11.29	11.88	39.38	46.95	746.33	682.07	659.73	22.34	30.533		
5,200.00	5,197.26	5,279.17	5,264.87	11.52	12.14	39.94	44.40	735.79	666.74	643.95	22.79	29.254		
5,300.00	5,297.07	5,377.77	5,362.87	11.75	12.41	40.53	41.85	725.25	651.48	628.23	23.25	28.026		
5,400.00	5,396.88	5,476.37	5,460.87	11.98	12.67	41.15	39.30	714.72	636.29	612.59	23.70	26.845		
5,500.00	5,496.70	5,574.97	5,558.87	12.21	12.94	41.80	36.76	704.18	621.17	597.01	24.16	25.710		
5,600.00	5,596.51	5,673.57	5,656.87	12.44	13.21	42.49	34.21	693.64	606.14	581.52	24.62	24.618		
5,700.00	5,696.32	5,772.16	5,754.87	12.67	13.48	43.20	31.66	683.10	591.20	566.11	25.09	23.567		
5,800.00	5,796.14	5,870.76	5,852.88	12.90	13.75	43.96	29.11	672.57	576.35	550.80	25.55	22.556		
5,900.00	5,895.95	5,969.36	5,950.88	13.14	14.02	44.75	26.56	662.03	561.61	535.59	26.02	21.583		
6,000.00	5,995.76	6,067.96	6,048.88	13.37	14.29	45.59	24.01	651.49	546.98	520.48	26.49	20.646		
6,100.00	6,095.58	6,166.56	6,146.88	13.60	14.56	46.47	21.46	640.95	532.47	505.50	26.97	19.744		
6,200.00	6,195.39	6,265.15	6,244.88	13.84	14.83	47.40	18.91	630.42	518.09	490.64	27.45	18.876		
6,300.00	6,295.20	6,363.75	6,342.88	14.07	15.10	48.38	16.36	619.88	503.85	475.92	27.93	18.040		
6,400.00	6,395.01	6,462.35	6,440.88	14.31	15.37	49.42	13.81	609.34	489.77	461.35	28.42	17.235		
6,500.00	6,494.83	6,560.95	6,538.88	14.54	15.65	50.52	11.26	598.80	475.85	446.94	28.91	16.461		
6,600.00	6,594.64	6,659.55	6,636.88	14.77	15.92	51.68	8.71	588.27	462.12	432.72	29.40	15.716		
6,655.23	6,649.77	6,714.01	6,691.00	14.90	16.07	52.35	7.30	582.45	454.62	424.94	29.68	15.317		
6,700.00	6,694.46	6,758.17	6,734.90	15.00	16.19	52.85	6.16	577.73	448.69	418.80	29.90	15.009		
6,800.00	6,794.36	6,857.02	6,833.15	15.18	16.47	53.88	3.61	567.16	436.34	405.99	30.35	14.377		
6,900.00	6,894.32	6,956.11	6,931.64	15.36	16.74	54.80	1.04	556.57	425.16	394.36	30.80	13.802		
7,005.68	7,000.00	7,061.04	7,035.94	15.55	17.04	107.15	-1.67	545.36	414.56	383.28	31.28	13.255		
7,100.00	7,094.32	7,154.79	7,129.12	15.73	17.30	107.89	-4.09	535.34	405.67	373.95	31.72	12.790		
7,200.00	7,194.32	7,254.18	7,227.91	15.95	17.58	108.72	-6.66	524.72	396.32	364.11	32.21	12.304		
7,300.00	7,294.32	7,353.58	7,326.70	16.17	17.85	109.59	-9.23	514.09	387.05	354.35	32.71	11.834		
7,400.00	7,394.32	7,452.97	7,425.49	16.39	18.13	110.50	-11.80	503.47	377.88	344.68	33.21	11.380		
7,500.00	7,494.32	7,552.36	7,524.28	16.61	18.41	111.46	-14.37	492.85	368.81	335.10	33.71	10.941		
7,600.00	7,594.32	7,651.76	7,623.07	16.83	18.69	112.46	-16.94	482.23	359.85	325.63	34.21	10.517		
7,700.00	7,694.32	7,751.15	7,721.86	17.05	18.97	113.52	-19.51	471.60	351.00	316.27	34.73	10.108		
7,800.00	7,794.32	7,850.54	7,820.65	17.27	19.25	114.62	-22.08	460.98	342.28	307.04	35.24	9.712		
7,900.00	7,894.32	7,949.94	7,919.44	17.48	19.53	115.79	-24.65	450.36	333.69	297.93	35.76	9.331		
8,000.00	7,994.32	8,049.33	8,018.23	17.70	19.81	117.02	-27.22	439.74	325.24	288.96	36.29	8.963		
8,100.00	8,094.32	8,148.73	8,117.03	17.92	20.09	118.31	-29.79	429.11	316.96	280.14	36.82	8.609		
8,200.00	8,194.32	8,248.12	8,215.82	18.14	20.37	119.67	-32.36	418.49	308.84	271.49	37.35	8.269		
8,300.00	8,294.32	8,345.82	8,312.94	18.36	20.63	121.05	-34.85	408.22	301.03	263.15	37.88	7.947		
8,400.00	8,394.32	8,441.86	8,408.56	18.58	20.85	122.28	-36.96	399.47	294.42	256.04	38.38	7.672		
8,500.00	8,494.32	8,538.18	8,504.59	18.80	21.04	123.34	-38.71	392.25	289.10	250.25	38.84	7.443		
8,600.00	8,594.32	8,634.72	8,600.95	19.03	21.23	124.19	-40.08	386.60	285.01	245.72	39.29	7.254		
8,700.00	8,694.32	8,731.43	8,697.57	19.25	21.41	124.83	-41.07	382.52	282.11	242.39	39.72	7.103		
8,800.00	8,794.32	8,828.25	8,794.36	19.47	21.58	125.22	-41.67	380.02	280.36	240.23	40.12	6.987		
8,900.00	8,894.32	8,925.13	8,891.24	19.69	21.74	125.36	-41.89	379.11	279.72	239.21	40.51	6.904		
8,935.84	8,930.16	8,960.76	8,926.86	19.77	21.80	125.36	-41.89	379.11	279.72	239.06	40.66	6.880		
9,000.00	8,994.32	9,024.92	8,991.02	19.91	21.92	125.36	-41.89	379.11	279.72	238.80	40.92	6.836		
9,052.74	9,047.06	9,077.66	9,043.76	20.02	22.02	125.36	-41.89	379.11	279.72	238.58	41.14	6.800		
9,100.00	9,094.26	9,124.86	9,090.96	20.12	22.11	-54.63	-41.89	379.11	278.58	237.28	41.30	6.745		
9,150.00	9,143.85	9,174.45	9,140.55	20.20	22.20	-55.99	-41.89	379.11	274.98	233.55	41.43	6.637		
9,200.00	9,192.70	9,223.30	9,189.40	20.27	22.29	-58.33	-41.89	379.11	269.15	227.63	41.52	6.483		
9,250.00	9,240.44	9,271.04	9,237.14	20.35	22.38	-61.67	-41.89	379.11	261.48	219.92	41.56	6.292		
9,300.00	9,286.71	9,317.31	9,283.41	20.42	22.46	-66.03	-41.89	379.11	252.62	211.07	41.55	6.080		
9,350.00	9,331.16	9,361.76	9,327.86	20.49	22.55	-71.35	-41.89	379.11	243.44	201.94	41.50	5.866		
9,400.00	9,373.45	9,404.04	9,370.15	20.55	22.63	-77.44	-41.89	379.11	235.10	193.69	41.41	5.678		
9,450.00	9,413.25	9,443.84	9,409.95	20.62	22.70	-83.95	-41.89	379.11	229.05	187.74	41.32	5.544		
9,496.71	9,447.92	9,478.51	9,444.62	20.68	22.77	-90.00	-41.89	379.11	226.91	185.63	41.28	5.497 CC, ES		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 126H - OH - Plan #2		Offset Site Error:		0.00 usft	
Survey Program: O-LEAM MWD+HDGM, 9994-MWD+IFR1+MS													Offset Well Error:		0.00 usft			
Reference		Offset		Semi Major Axis		Distance								Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor						
9,500.00	9,450.26	9,480.86	9,446.96	20.68	22.77	-90.41	-41.89	379.11	226.92	185.64	41.28	5.498						
9,550.00	9,484.20	9,514.80	9,480.90	20.75	22.84	-96.34	-41.89	379.11	230.23	188.89	41.34	5.569						
9,600.00	9,514.82	9,545.42	9,511.52	20.84	22.89	-101.30	-41.89	379.11	240.10	198.56	41.55	5.779						
9,650.00	9,541.88	9,577.40	9,543.50	20.94	22.95	-105.93	-42.37	379.11	256.76	214.88	41.88	6.131						
9,700.00	9,565.17	9,612.45	9,578.45	21.07	23.02	-110.33	-44.87	379.13	279.16	236.94	42.23	6.611						
9,750.00	9,584.52	9,649.83	9,615.49	21.24	23.09	-114.30	-49.89	379.17	306.28	263.80	42.48	7.210						
9,800.00	9,599.78	9,690.54	9,655.35	21.43	23.18	-117.99	-58.09	379.23	337.10	294.54	42.55	7.922						
9,850.00	9,610.83	9,736.16	9,699.20	21.64	23.28	-121.65	-70.62	379.32	370.72	328.35	42.37	8.749						
9,900.00	9,617.59	9,789.45	9,748.98	21.88	23.40	-125.61	-89.61	379.46	406.33	364.48	41.85	9.709						
9,950.00	9,620.01	9,855.63	9,807.99	22.14	23.57	-130.36	-119.49	379.67	443.10	402.28	40.81	10.856						
9,957.57	9,620.00	9,867.32	9,818.03	22.19	23.60	-131.19	-125.47	379.72	448.70	408.11	40.60	11.052						
10,000.00	9,619.64	9,950.20	9,885.46	22.43	23.84	-139.58	-173.52	380.06	479.09	440.28	38.81	12.345						
10,100.00	9,618.80	10,357.11	10,084.85	23.08	26.36	-154.17	-518.45	382.57	527.41	499.06	28.35	18.607						
10,200.00	9,617.96	10,533.47	10,093.74	23.82	26.48	-154.66	-694.34	383.84	530.08	501.24	28.83	18.385						
10,300.00	9,617.11	10,633.45	10,094.61	24.65	26.55	-154.74	-794.32	384.57	531.62	502.15	29.47	18.037						
10,400.00	9,616.27	10,733.44	10,095.49	25.56	26.62	-154.82	-894.29	385.29	533.17	502.97	30.20	17.655						
10,500.00	9,615.43	10,833.42	10,096.37	26.54	26.70	-154.90	-994.27	386.02	534.72	503.72	31.00	17.248						
10,600.00	9,614.59	10,933.41	10,097.25	27.58	26.77	-154.98	-1,094.25	386.74	536.28	504.40	31.88	16.823						
10,700.00	9,613.74	11,033.39	10,098.12	28.68	26.85	-155.06	-1,194.23	387.47	537.83	505.01	32.82	16.389						
10,800.00	9,612.90	11,133.38	10,099.00	29.83	26.94	-155.14	-1,294.21	388.19	539.38	505.56	33.82	15.950						
10,900.00	9,612.06	11,233.36	10,099.88	31.02	27.02	-155.22	-1,394.19	388.92	540.94	506.06	34.87	15.512						
11,000.00	9,611.22	11,333.35	10,100.75	32.25	27.11	-155.30	-1,494.17	389.65	542.49	506.52	35.98	15.079						
11,100.00	9,610.37	11,433.33	10,101.63	33.52	27.21	-155.37	-1,594.15	390.37	544.05	506.92	37.12	14.655						
11,200.00	9,609.53	11,533.32	10,102.51	34.81	27.31	-155.45	-1,694.12	391.10	545.61	507.29	38.31	14.241						
11,300.00	9,608.69	11,633.31	10,103.38	36.14	27.43	-155.53	-1,794.10	391.82	547.16	507.63	39.54	13.839						
11,400.00	9,607.85	11,733.29	10,104.26	37.49	27.55	-155.60	-1,894.08	392.55	548.72	507.93	40.80	13.450						
11,500.00	9,607.01	11,833.28	10,105.14	38.86	27.69	-155.68	-1,994.06	393.27	550.28	508.20	42.09	13.075						
11,600.00	9,606.16	11,933.26	10,106.02	40.25	27.85	-155.75	-2,094.04	394.00	551.85	508.44	43.40	12.714						
11,700.00	9,605.32	12,033.25	10,106.89	41.66	28.04	-155.83	-2,194.02	394.72	553.41	508.66	44.74	12.368						
11,800.00	9,604.48	12,133.23	10,107.77	43.09	28.27	-155.90	-2,294.00	395.45	554.97	508.86	46.11	12.037						
11,900.00	9,603.64	12,233.22	10,108.65	44.53	28.55	-155.97	-2,393.98	396.17	556.53	509.04	47.49	11.719						
12,000.00	9,602.79	12,333.20	10,109.52	45.98	28.87	-156.05	-2,493.95	396.90	558.10	509.21	48.89	11.415						
12,100.00	9,601.95	12,433.19	10,110.40	47.45	29.24	-156.12	-2,593.93	397.62	559.67	509.36	50.31	11.124						
12,200.00	9,601.11	12,533.17	10,111.28	48.92	29.66	-156.19	-2,693.91	398.35	561.23	509.49	51.74	10.846						
12,300.00	9,600.27	12,633.16	10,112.15	50.41	30.10	-156.26	-2,793.89	399.07	562.80	509.61	53.19	10.581						
12,400.00	9,599.42	12,733.14	10,113.03	51.90	30.57	-156.34	-2,893.87	399.80	564.37	509.72	54.65	10.327						
12,500.00	9,598.58	12,833.13	10,113.91	53.41	31.06	-156.41	-2,993.85	400.52	565.94	509.82	56.12	10.084						
12,600.00	9,597.74	12,933.11	10,114.78	54.92	31.57	-156.48	-3,093.83	401.25	567.51	509.90	57.60	9.852						
12,700.00	9,596.90	13,033.10	10,115.66	56.44	32.10	-156.55	-3,193.81	401.97	569.08	509.98	59.10	9.630						
12,800.00	9,596.05	13,133.08	10,116.54	57.97	32.64	-156.62	-3,293.78	402.70	570.65	510.06	60.60	9.417						
12,900.00	9,595.21	13,233.07	10,117.42	59.50	33.19	-156.69	-3,393.76	403.42	572.23	510.12	62.10	9.214						
13,000.00	9,594.37	13,333.05	10,118.29	61.04	33.75	-156.76	-3,493.74	404.15	573.80	510.18	63.62	9.019						
13,100.00	9,593.53	13,433.04	10,119.17	62.58	34.32	-156.83	-3,593.72	404.88	575.37	510.23	65.14	8.833						
13,200.00	9,592.69	13,533.02	10,120.05	64.13	34.91	-156.89	-3,693.70	405.60	576.95	510.28	66.67	8.654						
13,300.00	9,591.84	13,633.01	10,120.92	65.68	35.49	-156.96	-3,793.68	406.33	578.53	510.32	68.20	8.483						
13,400.00	9,591.00	13,732.99	10,121.80	67.23	36.09	-157.03	-3,893.66	407.05	580.10	510.36	69.74	8.318						
13,500.00	9,590.16	13,832.98	10,122.68	68.79	36.69	-157.10	-3,993.64	407.78	581.68	510.40	71.28	8.160						
13,600.00	9,589.32	13,932.97	10,123.55	70.36	37.30	-157.17	-4,093.61	408.50	583.26	510.43	72.83	8.009						
13,700.00	9,588.47	14,032.95	10,124.43	71.92	37.92	-157.23	-4,193.59	409.23	584.84	510.46	74.38	7.863						
13,800.00	9,587.63	14,132.94	10,125.31	73.49	38.54	-157.30	-4,293.57	409.95	586.42	510.48	75.93	7.723						
13,900.00	9,586.79	14,232.92	10,126.19	75.06	39.16	-157.36	-4,393.55	410.68	588.00	510.51	77.49	7.588						
14,000.00	9,585.95	14,332.91	10,127.06	76.64	39.80	-157.43	-4,493.53	411.40	589.58	510.53	79.05	7.458						

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 126H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD+HDGM, 9994-MWD+IFR1+MS												Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,100.00	9,585.10	14,432.89	10,127.94	78.22	40.43	-157.49	-4,593.51	412.13	591.16	510.55	80.62	7.333	
14,200.00	9,584.26	14,532.88	10,128.82	79.80	41.07	-157.56	-4,693.49	412.85	592.75	510.56	82.18	7.213	
14,300.00	9,583.42	14,632.86	10,129.69	81.38	41.72	-157.62	-4,793.47	413.58	594.33	510.58	83.75	7.096	
14,400.00	9,582.58	14,732.85	10,130.57	82.97	42.37	-157.69	-4,893.44	414.30	595.92	510.59	85.32	6.984	
14,500.00	9,581.73	14,832.83	10,131.45	84.55	43.02	-157.75	-4,993.42	415.03	597.50	510.61	86.89	6.876	
14,600.00	9,580.89	14,932.82	10,132.32	86.14	43.68	-157.82	-5,093.40	415.75	599.09	510.62	88.47	6.772	
14,700.00	9,580.05	15,032.80	10,133.20	87.73	44.34	-157.88	-5,193.38	416.48	600.68	510.63	90.04	6.671	
14,800.00	9,579.21	15,132.79	10,134.08	89.33	45.01	-157.94	-5,293.36	417.20	602.26	510.64	91.62	6.574	
14,900.00	9,578.37	15,232.77	10,134.96	90.92	45.68	-158.00	-5,393.34	417.93	603.85	510.65	93.20	6.479	
15,000.00	9,577.52	15,332.76	10,135.83	92.52	46.35	-158.07	-5,493.32	418.66	605.44	510.66	94.78	6.388	
15,100.00	9,576.68	15,432.74	10,136.71	94.11	47.02	-158.13	-5,593.30	419.38	607.03	510.67	96.36	6.300	
15,200.00	9,575.84	15,532.73	10,137.59	95.71	47.70	-158.19	-5,693.27	420.11	608.62	510.68	97.94	6.214	
15,300.00	9,575.00	15,632.71	10,138.46	97.31	48.38	-158.25	-5,793.25	420.83	610.21	510.69	99.52	6.132	
15,400.00	9,574.15	15,732.70	10,139.34	98.91	49.06	-158.31	-5,893.23	421.56	611.80	510.70	101.10	6.051	
15,500.00	9,573.31	15,832.68	10,140.22	100.52	49.74	-158.37	-5,993.21	422.28	613.40	510.71	102.69	5.973	
15,600.00	9,572.47	15,932.67	10,141.09	102.12	50.43	-158.43	-6,093.19	423.01	614.99	510.72	104.27	5.898	
15,700.00	9,571.63	16,032.66	10,141.97	103.73	51.12	-158.49	-6,193.17	423.73	616.58	510.73	105.86	5.825	
15,800.00	9,570.78	16,132.64	10,142.85	105.33	51.81	-158.55	-6,293.15	424.46	618.18	510.74	107.44	5.754	
15,900.00	9,569.94	16,232.63	10,143.73	106.94	52.50	-158.61	-6,393.13	425.18	619.77	510.75	109.03	5.685	
16,000.00	9,569.10	16,332.61	10,144.60	108.55	53.20	-158.67	-6,493.10	425.91	621.37	510.76	110.61	5.618	
16,100.00	9,568.26	16,432.60	10,145.48	110.16	53.90	-158.73	-6,593.08	426.63	622.97	510.77	112.20	5.552	
16,200.00	9,567.42	16,532.58	10,146.36	111.76	54.59	-158.79	-6,693.06	427.36	624.57	510.78	113.78	5.489	
16,300.00	9,566.57	16,632.57	10,147.23	113.38	55.30	-158.85	-6,793.04	428.08	626.16	510.79	115.37	5.427	
16,400.00	9,565.73	16,732.55	10,148.11	114.99	56.00	-158.90	-6,893.02	428.81	627.76	510.81	116.96	5.368	
16,500.00	9,564.89	16,832.54	10,148.99	116.60	56.70	-158.96	-6,993.00	429.53	629.36	510.82	118.54	5.309	
16,600.00	9,564.05	16,932.52	10,149.86	118.21	57.41	-159.02	-7,092.98	430.26	630.96	510.83	120.13	5.252	
16,700.00	9,563.20	17,032.51	10,150.74	119.83	58.12	-159.08	-7,192.96	430.98	632.56	510.85	121.71	5.197	
16,800.00	9,562.36	17,132.49	10,151.62	121.44	58.82	-159.13	-7,292.93	431.71	634.16	510.86	123.30	5.143	
16,900.00	9,561.52	17,232.48	10,152.50	123.05	59.54	-159.19	-7,392.91	432.44	635.76	510.88	124.89	5.091	
17,000.00	9,560.68	17,332.46	10,153.37	124.67	60.25	-159.25	-7,492.89	433.16	637.37	510.89	126.47	5.040	
17,080.26	9,560.00	17,404.08	10,154.00	125.97	60.76	-159.29	-7,564.50	433.68	638.71	511.07	127.64	5.004 SF	

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 127H - OH - Plan #2													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 10515-MWD+IFR1+MS													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)
0.00	0.00	0.10	0.10	0.00	0.00	-90.36	-0.56	-89.96	89.96				
100.00	100.00	100.10	100.10	0.09	0.09	-90.36	-0.56	-89.96	89.96	89.79	0.17 522.514		
200.00	200.00	200.10	200.10	0.31	0.31	-90.36	-0.56	-89.96	89.96	89.34	0.62 144.702		
300.00	300.00	300.10	300.10	0.54	0.54	-90.36	-0.56	-89.96	89.96	88.89	1.07 83.979		
400.00	400.00	400.10	400.10	0.76	0.76	-90.36	-0.56	-89.96	89.96	88.44	1.52 59.155		
500.00	500.00	500.10	500.10	0.99	0.99	-90.36	-0.56	-89.96	89.96	87.99	1.97 45.659		
600.00	600.00	600.10	600.10	1.21	1.21	-90.36	-0.56	-89.96	89.96	87.54	2.42 37.177		
700.00	700.00	700.10	700.10	1.43	1.43	-90.36	-0.56	-89.96	89.96	87.09	2.87 31.353		
800.00	800.00	800.10	800.10	1.66	1.66	-90.36	-0.56	-89.96	89.96	86.64	3.32 27.106		
900.00	900.00	900.10	900.10	1.88	1.88	-90.36	-0.56	-89.96	89.96	86.19	3.77 23.872		
1,000.00	1,000.00	1,000.10	1,000.10	2.11	2.11	-90.36	-0.56	-89.96	89.96	85.74	4.22 21.328		
1,100.00	1,100.00	1,100.10	1,100.10	2.33	2.33	-90.36	-0.56	-89.96	89.96	85.29	4.67 19.274		
1,200.00	1,200.00	1,200.10	1,200.10	2.56	2.56	-90.36	-0.56	-89.96	89.96	84.84	5.12 17.581		
1,300.00	1,300.00	1,300.10	1,300.10	2.78	2.78	-90.36	-0.56	-89.96	89.96	84.40	5.57 16.161		
1,400.00	1,400.00	1,400.10	1,400.10	3.01	3.01	-90.36	-0.56	-89.96	89.96	83.95	6.02 14.954		
1,500.00	1,500.00	1,500.10	1,500.10	3.23	3.23	-90.36	-0.56	-89.96	89.96	83.50	6.47 13.914		
1,600.00	1,600.00	1,600.10	1,600.10	3.46	3.46	-90.36	-0.56	-89.96	89.96	83.05	6.92 13.009		
1,700.00	1,700.00	1,700.10	1,700.10	3.68	3.68	-90.36	-0.56	-89.96	89.96	82.60	7.36 12.215		
1,800.00	1,800.00	1,800.10	1,800.10	3.91	3.91	-90.36	-0.56	-89.96	89.96	82.15	7.81 11.513		
1,900.00	1,900.00	1,900.10	1,900.10	4.13	4.13	-90.36	-0.56	-89.96	89.96	81.70	8.26 10.886		
2,000.00	2,000.00	2,000.10	2,000.10	4.36	4.36	-90.36	-0.56	-89.96	89.96	81.25	8.71 10.325		
2,100.00	2,100.00	2,100.10	2,100.10	4.58	4.58	-90.36	-0.56	-89.96	89.96	80.80	9.16 9.818		
2,200.00	2,200.00	2,200.10	2,200.10	4.81	4.81	-90.36	-0.56	-89.96	89.96	80.35	9.61 9.359		
2,300.00	2,300.00	2,300.10	2,300.10	5.03	5.03	-90.36	-0.56	-89.96	89.96	79.90	10.06 8.941		
2,400.00	2,400.00	2,400.10	2,400.10	5.26	5.26	-90.36	-0.56	-89.96	89.96	79.45	10.51 8.558		
2,500.00	2,500.00	2,500.10	2,500.10	5.48	5.48	-90.36	-0.56	-89.96	89.96	79.00	10.96 8.207		
2,600.00	2,600.00	2,600.10	2,600.10	5.71	5.71	-90.36	-0.56	-89.96	89.96	78.55	11.41 7.884		
2,700.00	2,700.00	2,700.10	2,700.10	5.93	5.93	-90.36	-0.56	-89.96	89.96	78.10	11.86 7.585		
2,800.00	2,800.00	2,800.10	2,800.10	6.15	6.15	-90.36	-0.56	-89.96	89.96	77.65	12.31 7.308		
2,900.00	2,900.00	2,900.10	2,900.10	6.38	6.38	-90.36	-0.56	-89.96	89.96	77.20	12.76 7.051		
3,000.00	3,000.00	3,000.10	3,000.10	6.60	6.60	-90.36	-0.56	-89.96	89.96	76.75	13.21 6.811		
3,100.00	3,100.00	3,100.10	3,100.10	6.83	6.83	-90.36	-0.56	-89.96	89.96	76.30	13.66 6.587		
3,200.00	3,200.00	3,200.10	3,200.10	7.05	7.05	-90.36	-0.56	-89.96	89.96	75.85	14.11 6.377		
3,300.00	3,300.00	3,300.10	3,300.10	7.28	7.28	-90.36	-0.56	-89.96	89.96	75.40	14.56 6.180		
3,400.00	3,400.00	3,400.10	3,400.10	7.50	7.50	-90.36	-0.56	-89.96	89.96	74.96	15.01 5.995		
3,416.63	3,416.63	3,416.73	3,416.73	7.54	7.54	-90.36	-0.56	-89.96	89.96	74.88	15.08 5.965 CC		
3,500.00	3,500.00	3,500.00	3,500.00	7.73	7.73	-90.36	-0.56	-89.96	89.96	74.51	15.46 5.820 ES		
3,600.00	3,600.00	3,598.57	3,598.57	7.95	7.94	-142.08	-0.36	-90.78	91.49	75.60	15.88 5.760		
3,700.00	3,699.96	3,696.90	3,696.87	8.16	8.14	-142.63	0.23	-93.25	96.06	79.76	16.29 5.896		
3,800.00	3,799.86	3,795.27	3,795.14	8.38	8.34	-143.44	1.20	-97.33	103.65	86.96	16.70 6.208		
3,850.45	3,850.23	3,845.49	3,845.30	8.49	8.45	-143.97	1.77	-99.69	108.31	91.40	16.91 6.405		
3,900.00	3,899.69	3,894.80	3,894.55	8.60	8.55	-144.54	2.32	-102.01	113.06	95.94	17.12 6.605		
4,000.00	3,999.50	3,994.31	3,993.95	8.82	8.76	-145.55	3.44	-106.68	122.68	105.15	17.54 6.996		
4,100.00	4,099.31	4,093.83	4,093.35	9.04	8.97	-146.42	4.56	-111.36	132.34	114.38	17.96 7.369		
4,200.00	4,199.13	4,193.34	4,192.75	9.26	9.18	-147.17	5.68	-116.04	142.02	123.64	18.38 7.726		
4,300.00	4,298.94	4,292.86	4,292.15	9.48	9.40	-147.82	6.80	-120.71	151.72	132.92	18.81 8.067		
4,400.00	4,398.75	4,392.37	4,391.54	9.70	9.61	-148.39	7.92	-125.39	161.44	142.21	19.23 8.394		
4,500.00	4,498.57	4,491.88	4,490.94	9.93	9.82	-148.90	9.04	-130.07	171.18	151.52	19.66 8.706		
4,600.00	4,498.38	4,491.40	4,490.34	10.15	10.04	-149.35	10.15	-134.74	180.93	160.83	20.09 9.005		
4,700.00	4,498.19	4,490.91	4,489.74	10.38	10.26	-149.76	11.27	-139.42	190.68	170.16	20.52 9.292		
4,800.00	4,498.01	4,490.43	4,489.14	10.60	10.48	-150.13	12.39	-144.10	200.45	179.49	20.95 9.566		
4,900.00	4,497.82	4,489.94	4,488.53	10.83	10.69	-150.46	13.51	-148.77	210.22	188.83	21.39 9.830		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 127H - OH - Plan #2												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 10515-MWD+IFR1+MS												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
5,000.00	4,997.63	4,989.46	4,987.93	11.06	10.91	-150.77	14.63	-153.45	220.00	198.18	21.82	10.082	
5,100.00	5,097.45	5,088.97	5,087.33	11.29	11.13	-151.04	15.75	-158.13	229.78	207.53	22.25	10.325	
5,200.00	5,197.26	5,188.48	5,186.73	11.52	11.35	-151.30	16.87	-162.80	239.57	216.88	22.69	10.558	
5,300.00	5,297.07	5,288.00	5,286.13	11.75	11.57	-151.53	17.99	-167.48	249.36	226.24	23.13	10.782	
5,400.00	5,396.88	5,387.51	5,385.52	11.98	11.80	-151.75	19.10	-172.16	259.16	235.60	23.56	10.998	
5,500.00	5,496.70	5,487.03	5,484.92	12.21	12.02	-151.95	20.22	-176.83	268.96	244.96	24.00	11.206	
5,600.00	5,596.51	5,586.54	5,584.32	12.44	12.24	-152.14	21.34	-181.51	278.77	254.33	24.44	11.406	
5,700.00	5,696.32	5,686.06	5,683.72	12.67	12.47	-152.32	22.46	-186.19	288.57	263.69	24.88	11.598	
5,800.00	5,796.14	5,785.57	5,783.12	12.90	12.69	-152.48	23.58	-190.86	298.38	273.06	25.32	11.784	
5,900.00	5,895.95	5,885.08	5,882.51	13.14	12.91	-152.63	24.70	-195.54	308.19	282.43	25.76	11.963	
6,000.00	5,995.76	5,984.60	5,981.91	13.37	13.14	-152.78	25.82	-200.22	318.01	291.81	26.20	12.137	
6,100.00	6,095.58	6,084.11	6,081.31	13.60	13.36	-152.91	26.94	-204.89	327.82	301.18	26.64	12.304	
6,200.00	6,195.39	6,183.63	6,180.71	13.84	13.59	-153.04	28.06	-209.57	337.64	310.55	27.09	12.465	
6,300.00	6,295.20	6,283.14	6,280.11	14.07	13.82	-153.16	29.17	-214.25	347.46	319.93	27.53	12.621	
6,400.00	6,395.01	6,382.66	6,379.50	14.31	14.04	-153.27	30.29	-218.93	357.28	329.31	27.97	12.772	
6,500.00	6,494.83	6,482.17	6,478.90	14.54	14.27	-153.38	31.41	-223.60	367.10	338.68	28.42	12.918	
6,600.00	6,594.64	6,581.68	6,578.30	14.77	14.50	-153.48	32.53	-228.28	376.92	348.06	28.86	13.060	
6,655.23	6,649.77	6,636.65	6,633.20	14.90	14.62	-153.53	33.15	-230.86	382.35	353.24	29.11	13.136	
6,700.00	6,694.46	6,681.21	6,677.71	15.00	14.72	-153.58	33.65	-232.96	386.59	357.29	29.30	13.196	
6,800.00	6,794.36	6,780.86	6,777.25	15.18	14.95	-153.60	34.77	-237.64	394.94	365.24	29.69	13.300	
6,900.00	6,894.32	6,880.63	6,876.89	15.36	15.18	-153.51	35.89	-242.33	401.73	371.64	30.09	13.349	
7,005.68	7,000.00	6,986.15	6,982.29	15.55	15.42	-101.76	37.08	-247.29	407.22	376.70	30.51	13.345	
7,100.00	7,094.32	7,080.36	7,076.39	15.73	15.64	-101.49	38.14	-251.71	411.35	380.43	30.91	13.307	
7,200.00	7,194.32	7,180.24	7,176.16	15.95	15.87	-101.21	39.26	-256.41	415.73	384.38	31.35	13.260	
7,300.00	7,294.32	7,280.12	7,275.92	16.17	16.10	-100.93	40.38	-261.10	420.13	388.33	31.80	13.214	
7,400.00	7,394.32	7,380.01	7,375.69	16.39	16.33	-100.67	41.51	-265.80	424.54	392.30	32.24	13.169	
7,500.00	7,494.32	7,479.89	7,475.46	16.61	16.56	-100.40	42.63	-270.49	428.95	396.27	32.68	13.126	
7,600.00	7,594.32	7,579.77	7,575.22	16.83	16.79	-100.14	43.75	-275.18	433.38	400.25	33.12	13.084	
7,700.00	7,694.32	7,679.66	7,674.99	17.05	17.02	-99.89	44.88	-279.88	437.81	404.24	33.57	13.043	
7,800.00	7,794.32	7,779.54	7,774.76	17.27	17.25	-99.64	46.00	-284.57	442.25	408.24	34.01	13.003	
7,900.00	7,894.32	7,879.42	7,874.52	17.48	17.48	-99.40	47.12	-289.27	446.70	412.25	34.45	12.965	
8,000.00	7,994.32	7,981.83	7,976.81	17.70	17.71	-99.16	48.25	-293.98	451.07	416.17	34.90	12.923	
8,100.00	8,094.32	8,089.64	8,084.57	17.92	17.91	-98.99	49.07	-297.42	454.11	418.77	35.34	12.849	
8,200.00	8,194.32	8,197.55	8,192.46	18.14	18.10	-98.92	49.43	-298.90	455.41	419.64	35.77	12.733	
8,300.00	8,294.32	8,299.51	8,294.42	18.36	18.30	-98.91	49.44	-298.96	455.46	419.27	36.19	12.586	
8,400.00	8,394.32	8,399.51	8,394.42	18.58	18.52	-98.91	49.44	-298.96	455.46	418.83	36.63	12.436	
8,500.00	8,494.32	8,499.51	8,494.42	18.80	18.73	-98.91	49.44	-298.96	455.46	418.39	37.06	12.288	
8,600.00	8,594.32	8,599.51	8,594.42	19.03	18.95	-98.91	49.44	-298.96	455.46	417.96	37.50	12.144	
8,700.00	8,694.32	8,699.51	8,694.42	19.25	19.16	-98.91	49.44	-298.96	455.46	417.52	37.94	12.004	
8,800.00	8,794.32	8,799.51	8,794.42	19.47	19.38	-98.91	49.44	-298.96	455.46	417.08	38.38	11.866	
8,900.00	8,894.32	8,899.51	8,894.42	19.69	19.59	-98.91	49.44	-298.96	455.46	416.64	38.82	11.732	
9,000.00	8,994.32	8,999.51	8,994.42	19.91	19.81	-98.91	49.44	-298.96	455.46	416.20	39.26	11.600	
9,052.74	9,047.06	9,052.25	9,047.16	20.02	19.92	-98.91	49.44	-298.96	455.46	415.96	39.49	11.532	
9,100.00	9,094.26	9,099.45	9,094.36	20.12	20.03	81.78	49.44	-298.96	455.18	415.49	39.69	11.469	
9,150.00	9,143.85	9,149.04	9,143.95	20.20	20.13	82.64	49.44	-298.96	454.32	414.44	39.87	11.394	
9,200.00	9,192.70	9,197.89	9,192.80	20.27	20.24	84.07	49.44	-298.96	453.06	413.01	40.05	11.312	
9,250.00	9,240.44	9,245.63	9,240.54	20.35	20.34	85.98	49.44	-298.96	451.72	411.50	40.22	11.230	
9,300.00	9,286.71	9,291.90	9,286.81	20.42	20.44	88.30	49.44	-298.96	450.71	410.32	40.39	11.159	
9,333.09	9,316.35	9,321.54	9,316.45	20.46	20.51	90.00	49.44	-298.96	450.47	409.97	40.49	11.124	
9,350.00	9,331.16	9,336.35	9,331.26	20.49	20.54	90.90	49.44	-298.96	450.54	410.00	40.55	11.111	
9,400.00	9,373.45	9,378.63	9,373.55	20.55	20.63	93.64	49.44	-298.96	451.81	411.11	40.70	11.100	
9,450.00	9,413.25	9,418.43	9,413.35	20.62	20.72	96.34	49.44	-298.96	455.14	414.28	40.86	11.139	

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 127H - OH - Plan #2		Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM MWD+HDGM, 10515-MWD+IFR1+MS												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		
9,500.00	9,450.26	9,455.45	9,450.36	20.68	20.80	98.84	49.44	-298.96	461.15	420.13	41.01	11.244			
9,550.00	9,484.20	9,489.39	9,484.30	20.75	20.87	100.99	49.44	-298.96	470.36	429.19	41.17	11.425			
9,600.00	9,514.82	9,520.01	9,514.92	20.84	20.94	102.63	49.44	-298.96	483.21	441.89	41.33	11.692			
9,650.00	9,541.88	9,560.97	9,555.86	20.94	21.02	105.00	48.26	-298.95	499.64	458.15	41.49	12.043			
9,700.00	9,565.17	9,608.43	9,603.04	21.07	21.10	107.61	43.25	-298.91	518.97	477.38	41.60	12.476			
9,750.00	9,584.52	9,662.71	9,656.27	21.24	21.20	110.44	32.77	-298.84	540.79	499.19	41.60	12.999			
9,800.00	9,599.78	9,727.39	9,718.07	21.43	21.31	113.74	13.77	-298.70	564.56	523.15	41.41	13.632			
9,850.00	9,610.83	9,808.81	9,792.15	21.64	21.44	117.84	-19.83	-298.45	589.49	548.61	40.88	14.420			
9,900.00	9,617.59	9,918.51	9,883.01	21.88	21.63	123.12	-81.00	-298.00	614.33	574.58	39.76	15.452			
9,950.00	9,620.01	10,077.05	9,990.06	22.14	21.95	129.49	-197.26	-297.15	636.77	598.99	37.78	16.856			
9,957.57	9,620.00	10,107.04	10,006.48	22.19	22.03	130.47	-222.35	-296.96	639.72	602.30	37.42	17.096			
10,000.00	9,619.64	10,311.81	10,081.04	22.43	22.81	135.63	-411.88	-295.57	651.26	615.45	35.82	18.183			
10,100.00	9,618.80	10,500.80	10,092.57	23.08	23.88	136.43	-600.15	-294.19	653.71	617.08	36.63	17.847			
10,200.00	9,617.96	10,600.78	10,093.28	23.82	28.10	136.53	-700.13	-293.46	654.84	617.44	37.40	17.508			
10,300.00	9,617.11	10,700.77	10,093.99	24.65	28.19	136.62	-800.11	-292.72	655.97	617.94	38.03	17.248			
10,400.00	9,616.27	10,800.76	10,094.70	25.56	28.28	136.71	-900.10	-291.99	657.10	618.35	38.75	16.958			
10,500.00	9,615.43	10,900.75	10,095.41	26.54	28.37	136.80	-1,000.08	-291.25	658.23	618.68	39.55	16.643			
10,600.00	9,614.59	11,000.74	10,096.11	27.58	28.46	136.90	-1,100.06	-290.52	659.37	618.94	40.43	16.310			
10,700.00	9,613.74	11,100.72	10,096.82	28.68	28.55	136.99	-1,200.04	-289.78	660.50	619.13	41.37	15.964			
10,800.00	9,612.90	11,200.71	10,097.53	29.83	28.65	137.08	-1,300.03	-289.05	661.64	619.25	42.39	15.609			
10,900.00	9,612.06	11,300.70	10,098.24	31.02	28.74	137.17	-1,400.01	-288.32	662.78	619.32	43.46	15.250			
11,000.00	9,611.22	11,400.69	10,098.94	32.25	28.84	137.26	-1,499.99	-287.58	663.92	619.33	44.59	14.889			
11,100.00	9,610.37	11,500.68	10,099.65	33.52	28.94	137.35	-1,599.97	-286.85	665.06	619.29	45.77	14.530			
11,200.00	9,609.53	11,600.66	10,100.36	34.81	29.04	137.44	-1,699.96	-286.11	666.21	619.21	47.00	14.174			
11,300.00	9,608.69	11,700.65	10,101.07	36.14	29.14	137.53	-1,799.94	-285.38	667.36	619.08	48.28	13.824			
11,400.00	9,607.85	11,800.64	10,101.77	37.49	29.25	137.62	-1,899.92	-284.64	668.50	618.91	49.59	13.480			
11,500.00	9,607.01	11,900.63	10,102.48	38.86	29.35	137.71	-1,999.91	-283.91	669.65	618.71	50.94	13.145			
11,600.00	9,606.16	12,000.62	10,103.19	40.25	29.46	137.80	-2,099.89	-283.18	670.80	618.47	52.33	12.818			
11,700.00	9,605.32	12,100.60	10,103.90	41.66	29.57	137.89	-2,199.87	-282.44	671.96	618.21	53.75	12.501			
11,800.00	9,604.48	12,200.59	10,104.61	43.09	29.69	137.97	-2,299.85	-281.71	673.11	617.91	55.20	12.194			
11,900.00	9,603.64	12,300.58	10,105.31	44.53	29.80	138.06	-2,399.84	-280.97	674.27	617.59	56.68	11.896			
12,000.00	9,602.79	12,400.57	10,106.02	45.98	29.93	138.15	-2,499.82	-280.24	675.43	617.24	58.18	11.609			
12,100.00	9,601.95	12,500.56	10,106.73	47.45	30.06	138.24	-2,599.80	-279.51	676.58	616.88	59.71	11.331			
12,200.00	9,601.11	12,600.54	10,107.44	48.92	30.20	138.32	-2,699.79	-278.77	677.75	616.49	61.26	11.064			
12,300.00	9,600.27	12,700.53	10,108.14	50.41	30.36	138.41	-2,799.77	-278.04	678.91	616.08	62.83	10.806			
12,400.00	9,599.42	12,800.52	10,108.85	51.90	30.54	138.50	-2,899.75	-277.30	680.07	615.66	64.41	10.558			
12,500.00	9,598.58	12,900.51	10,109.56	53.41	30.77	138.58	-2,999.73	-276.57	681.24	615.22	66.02	10.319			
12,600.00	9,597.74	13,000.50	10,110.27	54.92	31.04	138.67	-3,099.72	-275.83	682.40	614.77	67.64	10.089			
12,700.00	9,596.90	13,100.48	10,110.97	56.44	31.39	138.75	-3,199.70	-275.10	683.57	614.30	69.27	9.868			
12,800.00	9,596.05	13,200.47	10,111.68	57.97	31.79	138.84	-3,299.68	-274.37	684.74	613.82	70.92	9.655			
12,900.00	9,595.21	13,300.46	10,112.39	59.50	32.22	138.92	-3,399.66	-273.63	685.91	613.33	72.58	9.451			
13,000.00	9,594.37	13,400.45	10,113.10	61.04	32.69	139.01	-3,499.65	-272.90	687.09	612.84	74.25	9.254			
13,100.00	9,593.53	13,500.44	10,113.81	62.58	33.19	139.09	-3,599.63	-272.16	688.26	612.33	75.93	9.064			
13,200.00	9,592.69	13,600.42	10,114.51	64.13	33.69	139.18	-3,699.61	-271.43	689.44	611.81	77.63	8.882			
13,300.00	9,591.84	13,700.41	10,115.22	65.68	34.22	139.26	-3,799.60	-270.69	690.61	611.29	79.33	8.706			
13,400.00	9,591.00	13,800.40	10,115.93	67.23	34.75	139.34	-3,899.58	-269.96	691.79	610.76	81.04	8.537			
13,500.00	9,590.16	13,900.39	10,116.64	68.79	35.30	139.43	-3,999.56	-269.23	692.97	610.22	82.75	8.374			
13,600.00	9,589.32	14,000.38	10,117.34	70.36	35.85	139.51	-4,099.54	-268.49	694.15	609.68	84.48	8.217			
13,700.00	9,588.47	14,100.36	10,118.05	71.92	36.42	139.59	-4,199.53	-267.76	695.34	609.13	86.21	8.066			
13,800.00	9,587.63	14,200.35	10,118.76	73.49	36.99	139.67	-4,299.51	-267.02	696.52	608.58	87.95	7.920			
13,900.00	9,586.79	14,300.34	10,119.47	75.06	37.57	139.76	-4,399.49	-266.29	697.71	608.02	89.69	7.779			
14,000.00	9,585.95	14,400.33	10,120.17	76.64	38.16	139.84	-4,499.48	-265.56	698.90	607.46	91.44	7.644			

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 127H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD+HDGM, 10515-MWD+IFR1+MS													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	
14,100.00	9,585.10	14,500.32	10,120.88	78.22	38.75	139.92	-4,599.46	-264.82	700.09	606.90	93.19	7.513		
14,200.00	9,584.26	14,600.30	10,121.59	79.80	39.35	140.00	-4,699.44	-264.09	701.28	606.33	94.94	7.386		
14,300.00	9,583.42	14,700.29	10,122.30	81.38	39.96	140.08	-4,799.42	-263.35	702.47	605.76	96.71	7.264		
14,400.00	9,582.58	14,800.28	10,123.00	82.97	40.57	140.16	-4,899.41	-262.62	703.66	605.19	98.47	7.146		
14,500.00	9,581.73	14,900.27	10,123.71	84.55	41.19	140.24	-4,999.39	-261.88	704.85	604.62	100.24	7.032		
14,600.00	9,580.89	15,000.26	10,124.42	86.14	41.81	140.32	-5,099.37	-261.15	706.05	604.04	102.01	6.922		
14,700.00	9,580.05	15,100.24	10,125.13	87.73	42.44	140.40	-5,199.36	-260.42	707.25	603.47	103.78	6.815		
14,800.00	9,579.21	15,200.23	10,125.84	89.33	43.07	140.48	-5,299.34	-259.68	708.45	602.89	105.56	6.712		
14,900.00	9,578.37	15,300.22	10,126.54	90.92	43.70	140.56	-5,399.32	-258.95	709.65	602.31	107.33	6.612		
15,000.00	9,577.52	15,400.21	10,127.25	92.52	44.34	140.64	-5,499.30	-258.21	710.85	601.73	109.11	6.515		
15,100.00	9,576.68	15,500.20	10,127.96	94.11	44.99	140.72	-5,599.29	-257.48	712.05	601.15	110.90	6.421		
15,200.00	9,575.84	15,600.18	10,128.67	95.71	45.64	140.80	-5,699.27	-256.74	713.25	600.57	112.68	6.330		
15,300.00	9,575.00	15,700.17	10,129.37	97.31	46.29	140.88	-5,799.25	-256.01	714.46	599.99	114.47	6.242		
15,400.00	9,574.15	15,800.16	10,130.08	98.91	46.94	140.95	-5,899.23	-255.28	715.67	599.41	116.25	6.156		
15,500.00	9,573.31	15,900.15	10,130.79	100.52	47.60	141.03	-5,999.22	-254.54	716.87	598.83	118.04	6.073		
15,600.00	9,572.47	16,000.14	10,131.50	102.12	48.26	141.11	-6,099.20	-253.81	718.08	598.26	119.83	5.993		
15,700.00	9,571.63	16,100.12	10,132.20	103.73	48.93	141.19	-6,199.18	-253.07	719.29	597.68	121.62	5.914		
15,800.00	9,570.78	16,200.11	10,132.91	105.33	49.60	141.26	-6,299.17	-252.34	720.51	597.10	123.41	5.838		
15,900.00	9,569.94	16,300.10	10,133.62	106.94	50.27	141.34	-6,399.15	-251.60	721.72	596.52	125.20	5.765		
16,000.00	9,569.10	16,400.09	10,134.33	108.55	50.94	141.42	-6,499.13	-250.87	722.93	595.94	126.99	5.693		
16,100.00	9,568.26	16,500.08	10,135.04	110.16	51.61	141.49	-6,599.11	-250.14	724.15	595.37	128.78	5.623		
16,200.00	9,567.42	16,600.06	10,135.74	111.76	52.29	141.57	-6,699.10	-249.40	725.37	594.79	130.58	5.555		
16,300.00	9,566.57	16,700.05	10,136.45	113.38	52.97	141.64	-6,799.08	-248.67	726.59	594.22	132.37	5.489		
16,400.00	9,565.73	16,800.04	10,137.16	114.99	53.66	141.72	-6,899.06	-247.93	727.81	593.64	134.16	5.425		
16,500.00	9,564.89	16,900.03	10,137.87	116.60	54.34	141.79	-6,999.05	-247.20	729.03	593.07	135.95	5.362		
16,600.00	9,564.05	17,000.02	10,138.57	118.21	55.03	141.87	-7,099.03	-246.47	730.25	592.50	137.75	5.301		
16,700.00	9,563.20	17,100.00	10,139.28	119.83	55.72	141.94	-7,199.01	-245.73	731.47	591.93	139.54	5.242		
16,800.00	9,562.36	17,199.99	10,139.99	121.44	56.41	142.02	-7,298.99	-245.00	732.70	591.36	141.33	5.184		
16,900.00	9,561.52	17,299.98	10,140.70	123.05	57.10	142.09	-7,398.98	-244.26	733.92	590.80	143.13	5.128		
17,000.00	9,560.68	17,399.97	10,141.40	124.67	57.80	142.17	-7,498.96	-243.53	735.15	590.23	144.92	5.073		
17,080.26	9,560.00	17,480.22	10,141.97	125.97	58.14	142.23	-7,579.20	-242.94	736.13	590.05	146.09	5.039 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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 128H - 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							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.73	0.14	30.01	30.01				
100.00	100.00	100.00	100.00	0.09	0.09	89.73	0.14	30.01	30.01	29.84	0.17	174.533	
200.00	200.00	200.00	200.00	0.31	0.31	89.73	0.14	30.01	30.01	29.39	0.62	48.289	
300.00	300.00	300.00	300.00	0.54	0.54	89.73	0.14	30.01	30.01	28.94	1.07	28.021	
400.00	400.00	400.00	400.00	0.76	0.76	89.73	0.14	30.01	30.01	28.49	1.52	19.737	
500.00	500.00	500.00	500.00	0.99	0.99	89.73	0.14	30.01	30.01	28.04	1.97	15.233	
600.00	600.00	600.00	600.00	1.21	1.21	89.73	0.14	30.01	30.01	27.59	2.42	12.403	
700.00	700.00	700.00	700.00	1.43	1.43	89.73	0.14	30.01	30.01	27.14	2.87	10.460	
800.00	800.00	800.00	800.00	1.66	1.66	89.73	0.14	30.01	30.01	26.69	3.32	9.043	
900.00	900.00	900.00	900.00	1.88	1.88	89.73	0.14	30.01	30.01	26.24	3.77	7.964	
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	89.73	0.14	30.01	30.01	25.79	4.22	7.115	
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	89.73	0.14	30.01	30.01	25.34	4.67	6.430	
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	89.73	0.14	30.01	30.01	24.89	5.12	5.865	
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	89.73	0.14	30.01	30.01	24.44	5.57	5.391	
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	89.73	0.14	30.01	30.01	23.99	6.02	4.989	
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	89.73	0.14	30.01	30.01	23.54	6.47	4.642	
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	89.73	0.14	30.01	30.01	23.10	6.91	4.340	
1,700.00	1,700.00	1,700.00	1,700.00	3.68	3.68	89.73	0.14	30.01	30.01	22.65	7.36	4.075	
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	89.73	0.14	30.01	30.01	22.20	7.81	3.841	
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	89.73	0.14	30.01	30.01	21.75	8.26	3.632	
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	89.73	0.14	30.01	30.01	21.30	8.71	3.444	
2,100.00	2,100.00	2,100.00	2,100.00	4.58	4.58	89.73	0.14	30.01	30.01	20.85	9.16	3.275	
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	89.73	0.14	30.01	30.01	20.40	9.61	3.122	
2,300.00	2,300.00	2,300.00	2,300.00	5.03	5.03	89.73	0.14	30.01	30.01	19.95	10.06	2.983	
2,400.00	2,400.00	2,400.00	2,400.00	5.26	5.26	89.73	0.14	30.01	30.01	19.50	10.51	2.855	
2,500.00	2,500.00	2,500.00	2,500.00	5.48	5.48	89.73	0.14	30.01	30.01	19.05	10.96	2.738 CC, ES	
2,600.00	2,600.00	2,599.48	2,599.48	5.71	5.69	89.38	0.33	30.85	30.86	19.46	11.40	2.708 SF	
2,700.00	2,700.00	2,698.90	2,698.86	5.93	5.90	88.44	0.91	33.38	33.41	21.59	11.82	2.827	
2,800.00	2,800.00	2,798.20	2,798.07	6.15	6.10	87.16	1.86	37.57	37.67	25.43	12.24	3.078	
2,900.00	2,900.00	2,897.80	2,897.50	6.38	6.31	85.85	3.13	43.12	43.31	30.64	12.67	3.420	
3,000.00	3,000.00	2,997.63	2,997.16	6.60	6.52	84.82	4.42	48.80	49.08	35.98	13.10	3.747	
3,100.00	3,100.00	3,097.46	3,096.82	6.83	6.74	84.01	5.72	54.47	54.86	41.33	13.53	4.055	
3,200.00	3,200.00	3,197.29	3,196.49	7.05	6.96	83.35	7.01	60.15	60.65	46.69	13.96	4.344	
3,300.00	3,300.00	3,297.12	3,296.15	7.28	7.17	82.81	8.30	65.82	66.45	52.05	14.40	4.615	
3,400.00	3,400.00	3,396.95	3,395.81	7.50	7.39	82.36	9.59	71.49	72.25	57.42	14.84	4.870	
3,500.00	3,500.00	3,496.78	3,495.47	7.73	7.61	81.97	10.89	77.17	78.06	62.79	15.27	5.111	
3,600.00	3,600.00	3,596.65	3,595.17	7.95	7.84	81.39	12.18	82.84	83.12	67.41	15.71	5.292	
3,700.00	3,699.96	3,696.58	3,694.93	8.16	8.06	80.92	13.48	88.52	86.68	70.54	16.13	5.372	
3,800.00	3,799.86	3,796.55	3,794.72	8.38	8.28	82.01	14.77	94.20	88.76	72.19	16.56	5.359	
3,850.45	3,850.23	3,846.98	3,845.07	8.49	8.40	82.77	15.42	97.07	89.26	72.48	16.78	5.320	
3,900.00	3,899.69	3,896.51	3,894.52	8.60	8.51	83.59	16.07	99.88	89.59	72.60	16.99	5.272	
4,000.00	3,999.50	3,996.48	3,994.31	8.82	8.74	84.23	17.36	105.56	90.31	72.88	17.43	5.182	
4,100.00	4,099.31	4,096.44	4,094.11	9.04	8.96	84.83	18.65	111.24	91.10	73.24	17.86	5.101	
4,200.00	4,199.13	4,196.41	4,193.90	9.26	9.19	85.41	19.95	116.93	91.96	73.66	18.30	5.026	
4,300.00	4,298.94	4,296.37	4,293.70	9.48	9.42	85.96	21.24	122.61	92.89	74.15	18.73	4.958	
4,400.00	4,398.75	4,396.34	4,393.49	9.70	9.65	86.47	22.54	128.29	93.88	74.71	19.17	4.897	
4,500.00	4,498.57	4,496.30	4,493.29	9.93	9.88	86.95	23.83	133.97	94.94	75.33	19.61	4.840	
4,600.00	4,498.38	4,496.27	4,493.08	10.15	10.11	87.44	25.13	139.65	96.07	76.01	20.06	4.790	
4,700.00	4,498.19	4,496.23	4,492.87	10.38	10.34	87.92	26.42	145.33	97.25	76.74	20.50	4.743	
4,800.00	4,498.01	4,496.19	4,492.67	10.60	10.58	88.40	27.72	151.01	98.49	77.54	20.95	4.701	
4,900.00	4,497.82	4,496.16	4,492.46	10.83	10.81	88.84	29.01	156.69	99.78	78.39	21.40	4.663	
5,000.00	4,997.63	4,996.12	4,992.26	11.06	11.04	89.35	30.31	162.37	101.13	79.29	21.85	4.629	

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 128H - 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	5,097.45	5,096.09	5,092.05	11.29	11.27	51.13	31.60	168.05	102.53	80.23	22.30	4.598		
5,200.00	5,197.26	5,196.05	5,191.85	11.52	11.51	52.36	32.90	173.74	103.98	81.23	22.75	4.570		
5,300.00	5,297.07	5,296.02	5,291.64	11.75	11.74	53.57	34.19	179.42	105.48	82.27	23.21	4.545		
5,400.00	5,396.88	5,395.98	5,391.44	11.98	11.98	54.74	35.49	185.10	107.02	83.36	23.66	4.523		
5,500.00	5,496.70	5,495.95	5,491.23	12.21	12.21	55.88	36.78	190.78	108.61	84.49	24.12	4.503		
5,600.00	5,596.51	5,595.91	5,591.03	12.44	12.45	56.98	38.08	196.46	110.24	85.66	24.58	4.485		
5,700.00	5,696.32	5,695.88	5,690.82	12.67	12.68	58.05	39.37	202.14	111.90	86.87	25.04	4.470		
5,800.00	5,796.14	5,795.84	5,790.61	12.90	12.92	59.09	40.67	207.82	113.61	88.11	25.50	4.456		
5,900.00	5,895.95	5,895.80	5,890.41	13.14	13.15	60.10	41.96	213.50	115.35	89.39	25.96	4.443		
6,000.00	5,995.76	5,995.77	5,990.20	13.37	13.39	61.08	43.26	219.18	117.13	90.70	26.42	4.433		
6,100.00	6,095.58	6,095.73	6,090.00	13.60	13.62	62.03	44.55	224.87	118.94	92.05	26.89	4.423		
6,200.00	6,195.39	6,195.70	6,189.79	13.84	13.86	62.95	45.85	230.55	120.78	93.42	27.35	4.415		
6,300.00	6,295.20	6,295.66	6,289.59	14.07	14.10	63.84	47.14	236.23	122.65	94.83	27.82	4.409		
6,400.00	6,395.01	6,395.63	6,389.38	14.31	14.33	64.70	48.44	241.91	124.55	96.26	28.29	4.403		
6,500.00	6,494.83	6,495.59	6,489.18	14.54	14.57	65.54	49.73	247.59	126.48	97.72	28.76	4.398		
6,600.00	6,594.64	6,595.56	6,588.97	14.77	14.81	66.36	51.03	253.27	128.43	99.20	29.23	4.394		
6,655.23	6,649.77	6,650.77	6,644.09	14.90	14.94	66.80	51.74	256.41	129.52	100.04	29.49	4.393		
6,700.00	6,694.46	6,695.52	6,688.77	15.00	15.05	67.08	52.32	258.95	130.48	100.79	29.68	4.396		
6,800.00	6,794.36	6,795.49	6,788.56	15.18	15.28	67.22	53.62	264.63	133.11	103.01	30.10	4.422		
6,900.00	6,894.32	6,895.42	6,888.33	15.36	15.52	66.67	54.91	270.31	136.43	105.92	30.50	4.473		
7,005.68	7,000.00	7,000.97	6,993.69	15.55	15.77	116.95	56.28	276.31	140.72	109.81	30.92	4.552		
7,100.00	7,094.32	7,095.12	7,087.69	15.73	16.00	115.56	57.50	281.66	144.99	113.69	31.30	4.632		
7,200.00	7,194.32	7,194.95	7,187.35	15.95	16.23	114.18	58.79	287.33	149.61	117.87	31.73	4.715		
7,300.00	7,294.32	7,294.78	7,287.01	16.17	16.47	112.88	60.08	293.01	154.30	122.14	32.17	4.797		
7,400.00	7,394.32	7,394.61	7,386.67	16.39	16.71	111.65	61.38	298.68	159.08	126.48	32.60	4.880		
7,500.00	7,494.32	7,494.44	7,486.33	16.61	16.95	110.50	62.67	304.35	163.92	130.88	33.03	4.962		
7,600.00	7,594.32	7,594.27	7,585.99	16.83	17.19	109.41	63.96	310.03	168.82	135.35	33.47	5.044		
7,700.00	7,694.32	7,694.10	7,685.65	17.05	17.43	108.39	65.25	315.70	173.78	139.87	33.90	5.126		
7,800.00	7,794.32	7,793.93	7,785.31	17.27	17.66	107.42	66.55	321.38	178.79	144.45	34.34	5.207		
7,900.00	7,894.32	7,893.76	7,884.97	17.48	17.90	106.50	67.84	327.05	183.85	149.07	34.78	5.287		
8,000.00	7,994.32	7,993.59	7,984.63	17.70	18.14	105.64	69.13	332.72	188.95	153.74	35.21	5.366		
8,100.00	8,094.32	8,093.42	8,084.29	17.92	18.38	104.82	70.43	338.40	194.10	158.45	35.65	5.444		
8,200.00	8,194.32	8,193.25	8,183.95	18.14	18.62	104.04	71.72	344.07	199.28	163.19	36.09	5.522		
8,300.00	8,294.32	8,293.08	8,283.61	18.36	18.86	103.30	73.01	349.74	204.50	167.97	36.53	5.598		
8,400.00	8,394.32	8,392.91	8,383.27	18.58	19.10	102.60	74.31	355.42	209.75	172.78	36.97	5.673		
8,500.00	8,494.32	8,492.74	8,482.93	18.80	19.34	101.93	75.60	361.09	215.03	177.62	37.41	5.747		
8,600.00	8,594.32	8,592.57	8,582.59	19.03	19.58	101.30	76.89	366.76	220.34	182.48	37.85	5.821		
8,700.00	8,694.32	8,693.01	8,682.86	19.25	19.81	100.69	78.19	372.45	225.65	187.35	38.30	5.892		
8,800.00	8,794.32	8,796.69	8,786.43	19.47	20.01	100.21	79.26	377.13	229.90	191.19	38.71	5.939		
8,900.00	8,894.32	8,900.51	8,890.21	19.69	20.19	99.93	79.91	379.98	232.50	193.38	39.12	5.943		
9,000.00	8,994.32	9,004.41	8,994.10	19.91	20.38	99.83	80.14	381.01	233.44	193.91	39.52	5.906		
9,052.74	9,047.06	9,057.37	9,047.06	20.02	20.48	99.83	80.14	381.01	233.44	193.70	39.74	5.874		
9,100.00	9,094.26	9,104.58	9,094.26	20.12	20.57	-80.25	80.14	381.01	233.10	193.18	39.92	5.839		
9,150.00	9,143.85	9,154.16	9,143.85	20.20	20.67	-81.86	80.14	381.01	232.11	192.03	40.09	5.790		
9,200.00	9,192.70	9,203.01	9,192.70	20.27	20.77	-84.53	80.14	381.01	230.83	190.59	40.24	5.737		
9,250.00	9,240.44	9,250.76	9,240.44	20.35	20.87	-88.14	80.14	381.01	229.85	189.47	40.38	5.692		
9,272.31	9,261.30	9,271.61	9,261.30	20.38	20.91	-90.00	80.14	381.01	229.71	189.27	40.44	5.680		
9,300.00	9,286.71	9,297.03	9,286.71	20.42	20.97	-92.48	80.14	381.01	229.97	189.45	40.52	5.676		
9,350.00	9,331.16	9,341.47	9,331.16	20.49	21.06	-97.29	80.14	381.01	232.19	191.52	40.67	5.709		
9,400.00	9,373.45	9,383.76	9,373.45	20.55	21.15	-102.21	80.14	381.01	237.54	196.69	40.85	5.815		
9,450.00	9,413.25	9,423.56	9,413.25	20.62	21.23	-106.90	80.14	381.01	246.98	205.92	41.06	6.015		
9,500.00	9,450.26	9,460.57	9,450.26	20.68	21.31	-111.03	80.14	381.01	261.19	219.90	41.30	6.325		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 128H - 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		
9,550.00	9,484.20	9,494.52	9,484.20	20.75	21.38	-114.38	80.14	381.01	280.52	238.97	41.55	6.751		
9,600.00	9,514.82	9,525.13	9,514.82	20.84	21.44	-116.75	80.14	381.01	304.92	263.11	41.81	7.293		
9,650.00	9,541.88	9,552.19	9,541.88	20.94	21.50	-118.03	80.14	381.01	334.06	292.01	42.05	7.945		
9,700.00	9,565.17	9,575.48	9,565.17	21.07	21.54	-118.06	80.14	381.01	367.43	325.17	42.26	8.695		
9,750.00	9,584.52	9,618.93	9,608.58	21.24	21.63	-120.88	78.64	381.02	403.91	361.52	42.39	9.529		
9,800.00	9,599.78	9,673.79	9,663.02	21.43	21.72	-124.71	72.05	381.07	442.07	399.78	42.29	10.454		
9,850.00	9,610.83	9,746.66	9,733.90	21.64	21.85	-130.07	55.32	381.19	481.08	439.33	41.75	11.524		
9,900.00	9,617.59	9,859.35	9,837.80	21.88	22.03	-138.21	12.16	381.51	519.58	479.49	40.09	12.959		
9,950.00	9,620.01	10,078.20	10,006.52	22.14	22.41	-149.38	-125.14	382.51	553.82	518.86	34.96	15.842		
9,957.57	9,620.00	10,129.84	10,037.82	22.19	22.53	-151.06	-166.18	382.81	558.01	524.41	33.60	16.607		
10,000.00	9,619.64	10,489.72	10,139.94	22.43	23.96	-156.19	-505.12	385.28	568.76	540.75	28.01	20.304		
10,100.00	9,618.80	10,589.72	10,138.67	23.08	24.58	-156.17	-605.11	386.01	568.37	539.74	28.63	19.849		
10,200.00	9,617.96	10,689.72	10,137.40	23.82	25.28	-156.15	-705.10	386.74	567.98	538.61	29.36	19.343		
10,300.00	9,617.11	10,789.72	10,136.13	24.65	26.08	-156.14	-805.09	387.47	567.58	537.39	30.19	18.799		
10,400.00	9,616.27	10,889.72	10,134.86	25.56	26.94	-156.12	-905.07	388.20	567.19	536.08	31.11	18.229		
10,500.00	9,615.43	10,989.72	10,133.60	26.54	27.88	-156.10	-1,005.06	388.93	566.80	534.67	32.12	17.645		
10,600.00	9,614.59	11,089.72	10,132.33	27.58	28.88	-156.09	-1,105.05	389.66	566.40	533.20	33.21	17.057		
10,700.00	9,613.74	11,189.71	10,131.06	28.68	29.94	-156.07	-1,205.04	390.39	566.01	531.65	34.36	16.472		
10,800.00	9,612.90	11,289.71	10,129.79	29.83	31.04	-156.05	-1,305.03	391.12	565.62	530.04	35.58	15.897		
10,900.00	9,612.06	11,389.71	10,128.52	31.02	32.20	-156.04	-1,405.02	391.85	565.22	528.37	36.86	15.335		
11,000.00	9,611.22	11,489.71	10,127.25	32.25	33.39	-156.02	-1,505.00	392.58	564.83	526.64	38.19	14.792		
11,100.00	9,610.37	11,589.71	10,125.99	33.52	34.62	-156.00	-1,604.99	393.31	564.44	524.87	39.56	14.267		
11,200.00	9,609.53	11,689.71	10,124.72	34.81	35.88	-155.99	-1,704.98	394.04	564.04	523.06	40.98	13.764		
11,300.00	9,608.69	11,789.71	10,123.45	36.14	37.17	-155.97	-1,804.97	394.77	563.65	521.21	42.44	13.283		
11,400.00	9,607.85	11,889.71	10,122.18	37.49	38.49	-155.95	-1,904.96	395.50	563.26	519.33	43.93	12.823		
11,500.00	9,607.01	11,989.71	10,120.91	38.86	39.83	-155.94	-2,004.95	396.23	562.86	517.42	45.45	12.385		
11,600.00	9,606.16	12,089.71	10,119.64	40.25	41.19	-155.92	-2,104.93	396.96	562.47	515.47	47.00	11.968		
11,700.00	9,605.32	12,189.71	10,118.38	41.66	42.57	-155.90	-2,204.92	397.69	562.08	513.50	48.57	11.572		
11,800.00	9,604.48	12,289.70	10,117.11	43.09	43.97	-155.89	-2,304.91	398.42	561.68	511.51	50.17	11.195		
11,900.00	9,603.64	12,389.70	10,115.84	44.53	45.39	-155.87	-2,404.90	399.15	561.29	509.50	51.79	10.837		
12,000.00	9,602.79	12,489.70	10,114.57	45.98	46.82	-155.85	-2,504.89	399.88	560.90	507.46	53.43	10.497		
12,100.00	9,601.95	12,589.70	10,113.30	47.45	48.26	-155.84	-2,604.88	400.61	560.51	505.41	55.09	10.174		
12,200.00	9,601.11	12,689.70	10,112.03	48.92	49.72	-155.82	-2,704.87	401.34	560.11	503.35	56.77	9.867		
12,300.00	9,600.27	12,789.70	10,110.77	50.41	51.19	-155.80	-2,804.85	402.07	559.72	501.26	58.46	9.575		
12,400.00	9,599.42	12,889.70	10,109.50	51.90	52.66	-155.78	-2,904.84	402.80	559.33	499.17	60.16	9.297		
12,500.00	9,598.58	12,989.70	10,108.23	53.41	54.15	-155.77	-3,004.83	403.53	558.94	497.06	61.88	9.033		
12,600.00	9,597.74	13,089.70	10,106.96	54.92	55.65	-155.75	-3,104.82	404.26	558.54	494.94	63.61	8.781		
12,700.00	9,596.90	13,189.70	10,105.69	56.44	57.15	-155.73	-3,204.81	404.99	558.15	492.80	65.35	8.541		
12,800.00	9,596.05	13,289.70	10,104.42	57.97	58.66	-155.72	-3,304.80	405.72	557.76	490.66	67.10	8.313		
12,900.00	9,595.21	13,389.69	10,103.16	59.50	60.18	-155.70	-3,404.78	406.45	557.37	488.51	68.86	8.095		
13,000.00	9,594.37	13,489.69	10,101.89	61.04	61.70	-155.68	-3,504.77	407.18	556.97	486.35	70.63	7.886		
13,100.00	9,593.53	13,589.69	10,100.62	62.58	63.23	-155.67	-3,604.76	407.91	556.58	484.18	72.40	7.687		
13,200.00	9,592.69	13,689.69	10,099.35	64.13	64.76	-155.65	-3,704.75	408.64	556.19	482.00	74.19	7.497		
13,300.00	9,591.84	13,789.69	10,098.08	65.68	66.30	-155.63	-3,804.74	409.37	555.80	479.82	75.98	7.315		
13,400.00	9,591.00	13,889.69	10,096.81	67.23	67.85	-155.61	-3,904.73	410.10	555.40	477.62	77.78	7.141		
13,500.00	9,590.16	13,989.69	10,095.54	68.79	69.39	-155.60	-4,004.71	410.83	555.01	475.43	79.59	6.974		
13,600.00	9,589.32	14,089.69	10,094.28	70.36	70.95	-155.58	-4,104.70	411.56	554.62	473.22	81.40	6.814		
13,700.00	9,588.47	14,189.69	10,093.01	71.92	72.50	-155.56	-4,204.69	412.29	554.23	471.01	83.22	6.660		
13,800.00	9,587.63	14,289.69	10,091.74	73.49	74.06	-155.54	-4,304.68	413.02	553.84	468.79	85.04	6.513		
13,900.00	9,586.79	14,389.69	10,090.47	75.06	75.62	-155.53	-4,404.67	413.75	553.44	466.57	86.87	6.371		
14,000.00	9,585.95	14,489.68	10,089.20	76.64	77.19	-155.51	-4,504.66	414.48	553.05	464.35	88.70	6.235		
14,100.00	9,585.10	14,589.68	10,087.93	78.22	78.76	-155.49	-4,604.64	415.21	552.66	462.12	90.54	6.104		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 128H - 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)					
14,200.00	9,584.26	14,689.68	10,086.67	79.80	80.33	-155.48	-4,704.63	415.94	552.27	459.88	92.39	5.978	
14,300.00	9,583.42	14,789.68	10,085.40	81.38	81.91	-155.46	-4,804.62	416.67	551.88	457.64	94.24	5.856	
14,400.00	9,582.58	14,889.68	10,084.13	82.97	83.48	-155.44	-4,904.61	417.40	551.49	455.40	96.09	5.739	
14,500.00	9,581.73	14,989.68	10,082.86	84.55	85.06	-155.42	-5,004.60	418.13	551.09	453.15	97.95	5.627	
14,600.00	9,580.89	15,089.68	10,081.59	86.14	86.64	-155.41	-5,104.59	418.86	550.70	450.90	99.81	5.518	
14,700.00	9,580.05	15,189.68	10,080.32	87.73	88.23	-155.39	-5,204.57	419.59	550.31	448.64	101.67	5.413	
14,800.00	9,579.21	15,289.68	10,079.06	89.33	89.81	-155.37	-5,304.56	420.32	549.92	446.38	103.54	5.311	
14,900.00	9,578.37	15,389.68	10,077.79	90.92	91.40	-155.35	-5,404.55	421.05	549.53	444.12	105.41	5.213	
15,000.00	9,577.52	15,489.68	10,076.52	92.52	92.99	-155.34	-5,504.54	421.78	549.14	441.85	107.28	5.119	
15,100.00	9,576.68	15,589.67	10,075.25	94.11	94.58	-155.32	-5,604.53	422.51	548.75	439.58	109.16	5.027	
15,200.00	9,575.84	15,689.67	10,073.98	95.71	96.17	-155.30	-5,704.52	423.24	548.35	437.31	111.04	4.938	
15,300.00	9,575.00	15,789.67	10,072.71	97.31	97.77	-155.28	-5,804.51	423.97	547.96	435.04	112.93	4.852	
15,400.00	9,574.15	15,889.67	10,071.45	98.91	99.36	-155.26	-5,904.49	424.70	547.57	432.76	114.81	4.769	
15,500.00	9,573.31	15,989.67	10,070.18	100.52	100.96	-155.25	-6,004.48	425.43	547.18	430.48	116.70	4.689	
15,600.00	9,572.47	16,089.67	10,068.91	102.12	102.56	-155.23	-6,104.47	426.16	546.79	428.19	118.60	4.611	
15,700.00	9,571.63	16,189.67	10,067.64	103.73	104.16	-155.21	-6,204.46	426.89	546.40	425.91	120.49	4.535	
15,800.00	9,570.78	16,289.67	10,066.37	105.33	105.76	-155.19	-6,304.45	427.62	546.01	423.62	122.39	4.461	
15,900.00	9,569.94	16,389.67	10,065.10	106.94	107.36	-155.18	-6,404.44	428.35	545.62	421.33	124.29	4.390	
16,000.00	9,569.10	16,489.67	10,063.84	108.55	108.96	-155.16	-6,504.42	429.08	545.23	419.03	126.19	4.321	
16,100.00	9,568.26	16,589.67	10,062.57	110.16	110.57	-155.14	-6,604.41	429.81	544.84	416.74	128.10	4.253	
16,200.00	9,567.42	16,689.66	10,061.30	111.76	112.17	-155.12	-6,704.40	430.54	544.44	414.44	130.01	4.188	
16,300.00	9,566.57	16,789.66	10,060.03	113.38	113.78	-155.10	-6,804.39	431.27	544.05	412.14	131.92	4.124	
16,400.00	9,565.73	16,889.66	10,058.76	114.99	115.39	-155.09	-6,904.38	432.00	543.66	409.84	133.83	4.062	
16,500.00	9,564.89	16,989.66	10,057.49	116.60	116.99	-155.07	-7,004.37	432.73	543.27	407.53	135.74	4.002	
16,600.00	9,564.05	17,089.66	10,056.23	118.21	118.60	-155.05	-7,104.35	433.46	542.88	405.22	137.66	3.944	
16,700.00	9,563.20	17,189.66	10,054.96	119.83	120.21	-155.03	-7,204.34	434.19	542.49	402.91	139.58	3.887	
16,800.00	9,562.36	17,289.66	10,053.69	121.44	121.82	-155.01	-7,304.33	434.92	542.10	400.60	141.50	3.831	
16,900.00	9,561.52	17,389.66	10,052.42	123.05	123.43	-155.00	-7,404.32	435.65	541.71	398.29	143.42	3.777	
17,000.00	9,560.68	17,489.66	10,051.15	124.67	125.04	-154.98	-7,504.31	436.38	541.32	395.97	145.35	3.724	
17,080.26	9,560.00	17,569.91	10,050.13	125.97	126.08	-154.96	-7,584.56	436.96	541.01	394.35	146.66	3.689	

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 162H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 9981-MWD+IFR1+MS													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.20	0.20	0.00	0.00	-90.33	-0.70	-119.97	119.97					
100.00	100.00	100.20	100.20	0.09	0.09	-90.33	-0.70	-119.97	119.97	119.80	0.17	695.911		
200.00	200.00	200.20	200.20	0.31	0.31	-90.33	-0.70	-119.97	119.97	119.35	0.62	192.903		
300.00	300.00	300.20	300.20	0.54	0.54	-90.33	-0.70	-119.97	119.97	118.90	1.07	111.971		
400.00	400.00	400.20	400.20	0.76	0.76	-90.33	-0.70	-119.97	119.97	118.45	1.52	78.878		
500.00	500.00	500.20	500.20	0.99	0.99	-90.33	-0.70	-119.97	119.97	118.00	1.97	60.883		
600.00	600.00	600.20	600.20	1.21	1.21	-90.33	-0.70	-119.97	119.97	117.55	2.42	49.574		
700.00	700.00	700.20	700.20	1.43	1.44	-90.33	-0.70	-119.97	119.97	117.10	2.87	41.808		
800.00	800.00	800.20	800.20	1.66	1.66	-90.33	-0.70	-119.97	119.97	116.65	3.32	36.146		
900.00	900.00	900.20	900.20	1.88	1.88	-90.33	-0.70	-119.97	119.97	116.20	3.77	31.834		
1,000.00	1,000.00	1,000.20	1,000.20	2.11	2.11	-90.33	-0.70	-119.97	119.97	115.75	4.22	28.442		
1,100.00	1,100.00	1,100.20	1,100.20	2.33	2.33	-90.33	-0.70	-119.97	119.97	115.30	4.67	25.703		
1,200.00	1,200.00	1,200.20	1,200.20	2.56	2.56	-90.33	-0.70	-119.97	119.97	114.85	5.12	23.445		
1,300.00	1,300.00	1,300.20	1,300.20	2.78	2.78	-90.33	-0.70	-119.97	119.97	114.41	5.57	21.551		
1,400.00	1,400.00	1,400.20	1,400.20	3.01	3.01	-90.33	-0.70	-119.97	119.97	113.96	6.02	19.941		
1,500.00	1,500.00	1,500.20	1,500.20	3.23	3.23	-90.33	-0.70	-119.97	119.97	113.51	6.47	18.555		
1,600.00	1,600.00	1,600.20	1,600.20	3.46	3.46	-90.33	-0.70	-119.97	119.97	113.06	6.92	17.349		
1,700.00	1,700.00	1,700.20	1,700.20	3.68	3.68	-90.33	-0.70	-119.97	119.97	112.61	7.36	16.290		
1,800.00	1,800.00	1,800.20	1,800.20	3.91	3.91	-90.33	-0.70	-119.97	119.97	112.16	7.81	15.353		
1,900.00	1,900.00	1,900.20	1,900.20	4.13	4.13	-90.33	-0.70	-119.97	119.97	111.71	8.26	14.517		
2,000.00	2,000.00	2,000.20	2,000.20	4.36	4.36	-90.33	-0.70	-119.97	119.97	111.26	8.71	13.769		
2,100.00	2,100.00	2,100.20	2,100.20	4.58	4.58	-90.33	-0.70	-119.97	119.97	110.81	9.16	13.093		
2,200.00	2,200.00	2,200.20	2,200.20	4.81	4.81	-90.33	-0.70	-119.97	119.97	110.36	9.61	12.481		
2,300.00	2,300.00	2,300.20	2,300.20	5.03	5.03	-90.33	-0.70	-119.97	119.97	109.91	10.06	11.923		
2,400.00	2,400.00	2,400.20	2,400.20	5.26	5.26	-90.33	-0.70	-119.97	119.97	109.46	10.51	11.413		
2,500.00	2,500.00	2,500.20	2,500.20	5.48	5.48	-90.33	-0.70	-119.97	119.97	109.01	10.96	10.945		
2,600.00	2,600.00	2,600.20	2,600.20	5.71	5.71	-90.33	-0.70	-119.97	119.97	108.56	11.41	10.514		
2,700.00	2,700.00	2,700.20	2,700.20	5.93	5.93	-90.33	-0.70	-119.97	119.97	108.11	11.86	10.115		
2,800.00	2,800.00	2,800.20	2,800.20	6.15	6.16	-90.33	-0.70	-119.97	119.97	107.66	12.31	9.746		
2,900.00	2,900.00	2,900.20	2,900.20	6.38	6.38	-90.33	-0.70	-119.97	119.97	107.21	12.76	9.403		
2,916.60	2,916.60	2,916.80	2,916.80	6.42	6.42	-90.33	-0.70	-119.97	119.97	107.14	12.83	9.348 CC		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	-90.33	-0.70	-119.97	119.97	106.76	13.21	9.083 ES		
3,100.00	3,100.00	3,098.14	3,098.13	6.83	6.81	-90.33	-0.70	-120.81	120.83	107.19	13.64	8.860		
3,200.00	3,200.00	3,196.02	3,195.98	7.05	7.01	-90.33	-0.70	-123.32	123.40	109.35	14.05	8.783		
3,300.00	3,300.00	3,293.79	3,293.66	7.28	7.20	-90.31	-0.70	-127.50	127.67	113.21	14.46	8.830		
3,400.00	3,400.00	3,391.38	3,391.08	7.50	7.40	-90.30	-0.70	-133.33	133.65	118.78	14.86	8.991		
3,500.00	3,500.00	3,488.75	3,488.16	7.73	7.60	-90.28	-0.70	-140.80	141.32	126.05	15.27	9.257		
3,600.00	3,600.00	3,587.37	3,586.37	7.95	7.81	-141.94	-0.70	-149.72	151.04	135.36	15.68	9.634		
3,700.00	3,699.96	3,686.72	3,685.31	8.16	8.03	-142.42	-0.70	-158.81	162.25	146.15	16.09	10.081		
3,800.00	3,799.86	3,785.89	3,784.06	8.38	8.25	-143.16	-0.70	-167.89	174.86	158.35	16.51	10.589		
3,850.45	3,850.23	3,835.84	3,833.81	8.49	8.36	-143.62	-0.70	-172.46	181.76	165.04	16.72	10.868		
3,900.00	3,899.69	3,884.88	3,882.63	8.60	8.47	-144.11	-0.70	-176.95	188.73	171.80	16.93	11.146		
4,000.00	3,999.50	3,983.83	3,981.17	8.82	8.69	-145.00	-0.70	-186.01	202.82	185.47	17.35	11.688		
4,100.00	4,099.31	4,082.79	4,079.71	9.04	8.92	-145.77	-0.70	-195.07	216.96	199.19	17.78	12.206		
4,200.00	4,199.13	4,181.75	4,178.25	9.26	9.14	-146.45	-0.70	-204.13	231.13	212.93	18.20	12.700		
4,300.00	4,298.94	4,280.70	4,276.79	9.48	9.37	-147.05	-0.70	-213.18	245.33	226.71	18.63	13.172		
4,400.00	4,398.75	4,379.66	4,375.33	9.70	9.61	-147.58	-0.70	-222.24	259.56	240.50	19.05	13.622		
4,500.00	4,498.57	4,478.61	4,473.88	9.93	9.84	-148.06	-0.70	-231.30	273.80	254.32	19.48	14.053		
4,600.00	4,598.38	4,577.57	4,572.42	10.15	10.07	-148.49	-0.70	-240.36	288.06	268.15	19.91	14.465		
4,700.00	4,698.19	4,676.53	4,670.96	10.38	10.31	-148.89	-0.70	-249.42	302.34	281.99	20.35	14.859		
4,800.00	4,798.01	4,775.48	4,769.50	10.60	10.55	-149.24	-0.70	-258.48	316.62	295.84	20.78	15.237		
4,900.00	4,897.82	4,874.44	4,868.04	10.83	10.79	-149.57	-0.70	-267.54	330.92	309.71	21.21	15.598		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 162H - OH - Plan #2													Offset Site Error: 0.00 usft	
Survey Program: O-LEAM MWD+HDGM, 9981-MWD+IFR1+MS													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,997.63	4,973.39	4,966.58	11.06	11.03	-149.86	-0.70	-276.59	345.23	323.58	21.65	15.945		
5,100.00	5,097.45	5,072.35	5,065.12	11.29	11.27	-150.14	-0.70	-285.65	359.55	337.46	22.09	16.278		
5,200.00	5,197.26	5,171.30	5,163.66	11.52	11.51	-150.39	-0.70	-294.71	373.87	351.34	22.53	16.597		
5,300.00	5,297.07	5,270.26	5,262.20	11.75	11.76	-150.63	-0.70	-303.77	388.20	365.23	22.97	16.904		
5,400.00	5,396.88	5,369.22	5,360.74	11.98	12.00	-150.84	-0.70	-312.83	402.54	379.13	23.40	17.199		
5,500.00	5,496.70	5,468.17	5,459.28	12.21	12.25	-151.05	-0.70	-321.89	416.88	393.03	23.85	17.482		
5,600.00	5,596.51	5,567.13	5,557.82	12.44	12.49	-151.24	-0.70	-330.95	431.22	406.94	24.29	17.755		
5,700.00	5,696.32	5,666.08	5,656.36	12.67	12.74	-151.41	-0.70	-340.01	445.57	420.84	24.73	18.018		
5,800.00	5,796.14	5,765.04	5,754.90	12.90	12.99	-151.58	-0.70	-349.06	459.93	434.76	25.17	18.271		
5,900.00	5,895.95	5,864.00	5,853.44	13.14	13.24	-151.74	-0.70	-358.12	474.29	448.67	25.62	18.515		
6,000.00	5,995.76	5,962.95	5,951.98	13.37	13.49	-151.88	-0.70	-367.18	488.65	462.59	26.06	18.750		
6,100.00	6,095.58	6,061.91	6,050.52	13.60	13.74	-152.02	-0.70	-376.24	503.01	476.51	26.51	18.977		
6,200.00	6,195.39	6,160.86	6,149.06	13.84	13.99	-152.15	-0.70	-385.30	517.38	490.43	26.95	19.197		
6,300.00	6,295.20	6,259.82	6,247.60	14.07	14.24	-152.28	-0.70	-394.36	531.75	504.35	27.40	19.408		
6,400.00	6,395.01	6,358.77	6,346.14	14.31	14.49	-152.39	-0.70	-403.42	546.12	518.28	27.84	19.613		
6,500.00	6,494.83	6,457.73	6,444.68	14.54	14.75	-152.50	-0.70	-412.47	560.50	532.20	28.29	19.811		
6,600.00	6,594.64	6,556.69	6,543.22	14.77	15.00	-152.61	-0.70	-421.53	574.87	546.13	28.74	20.003		
6,655.23	6,649.77	6,611.34	6,597.65	14.90	15.14	-152.67	-0.70	-426.54	582.81	553.83	28.99	20.106		
6,700.00	6,694.46	6,655.66	6,641.79	15.00	15.25	-152.73	-0.70	-430.59	589.10	559.92	29.18	20.190		
6,800.00	6,794.36	6,754.82	6,740.53	15.18	15.51	-152.82	-0.70	-439.67	602.02	572.44	29.58	20.352		
6,900.00	6,894.32	6,854.17	6,839.46	15.36	15.76	-152.82	-0.70	-448.76	613.40	583.41	29.98	20.458		
7,005.68	7,000.00	6,959.33	6,944.18	15.55	16.03	-101.20	-0.70	-458.39	623.75	593.34	30.41	20.512		
7,100.00	7,094.32	7,053.26	7,037.71	15.73	16.28	-101.05	-0.70	-466.99	632.22	601.41	30.81	20.521		
7,200.00	7,194.32	7,152.84	7,136.87	15.95	16.53	-100.89	-0.70	-476.11	641.21	609.96	31.26	20.515		
7,300.00	7,294.32	7,252.42	7,236.03	16.17	16.79	-100.74	-0.70	-485.22	650.20	618.50	31.70	20.510		
7,400.00	7,394.32	7,352.00	7,335.19	16.39	17.05	-100.59	-0.70	-494.34	659.20	627.05	32.15	20.505		
7,500.00	7,494.32	7,451.58	7,434.36	16.61	17.31	-100.45	-0.70	-503.45	668.20	635.61	32.60	20.499		
7,600.00	7,594.32	7,551.16	7,533.52	16.83	17.57	-100.31	-0.70	-512.57	677.21	644.17	33.04	20.494		
7,700.00	7,694.32	7,650.74	7,632.68	17.05	17.82	-100.17	-0.70	-521.68	686.22	652.73	33.49	20.489		
7,800.00	7,794.32	7,750.32	7,731.84	17.27	18.08	-100.04	-0.70	-530.80	695.23	661.29	33.94	20.484		
7,900.00	7,894.32	7,849.90	7,831.00	17.48	18.34	-99.91	-0.70	-539.92	704.25	669.86	34.39	20.480		
8,000.00	7,994.32	7,949.48	7,930.17	17.70	18.60	-99.78	-0.70	-549.03	713.27	678.43	34.84	20.475		
8,100.00	8,094.32	8,049.06	8,029.33	17.92	18.86	-99.66	-0.70	-558.15	722.29	687.01	35.29	20.470		
8,200.00	8,194.32	8,148.64	8,128.49	18.14	19.12	-99.54	-0.70	-567.26	731.32	695.59	35.73	20.466		
8,300.00	8,294.32	8,248.96	8,228.39	18.36	19.38	-99.42	-0.70	-576.44	740.35	704.16	36.19	20.460		
8,400.00	8,394.32	8,363.29	8,342.35	18.58	19.63	-99.31	-0.70	-585.66	748.30	711.63	36.67	20.405		
8,500.00	8,494.32	8,477.95	8,456.80	18.80	19.85	-99.22	-0.70	-592.61	754.29	717.15	37.14	20.311		
8,600.00	8,594.32	8,592.84	8,571.59	19.03	20.07	-99.16	-0.70	-597.28	758.30	720.71	37.59	20.174		
8,700.00	8,694.32	8,707.87	8,686.59	19.25	20.27	-99.13	-0.70	-599.65	760.33	722.31	38.03	19.995		
8,800.00	8,794.32	8,815.80	8,794.52	19.47	20.47	-99.13	-0.70	-599.97	760.61	722.15	38.45	19.779		
8,900.00	8,894.32	8,915.80	8,894.52	19.69	20.67	-99.13	-0.70	-599.97	760.61	721.72	38.89	19.560		
9,000.00	8,994.32	9,015.80	8,994.52	19.91	20.87	-99.13	-0.70	-599.97	760.61	721.29	39.32	19.345		
9,052.74	9,047.06	9,068.36	9,047.08	20.02	20.97	-99.13	-0.70	-599.97	760.61	721.06	39.55	19.233		
9,061.74	9,056.05	9,076.00	9,054.72	20.04	20.99	81.29	-0.75	-599.97	760.61	721.03	39.58	19.217		
9,100.00	9,094.26	9,107.86	9,086.55	20.12	21.05	81.32	-2.06	-599.96	760.56	720.84	39.72	19.150		
9,150.00	9,143.85	9,150.00	9,128.44	20.20	21.12	81.40	-6.51	-599.93	760.41	720.53	39.87	19.072		
9,200.00	9,192.70	9,191.26	9,169.04	20.27	21.20	81.53	-13.83	-599.87	760.14	720.13	40.01	18.999		
9,250.00	9,240.44	9,233.09	9,209.55	20.35	21.27	81.72	-24.22	-599.80	759.78	719.64	40.14	18.927		
9,300.00	9,286.71	9,275.07	9,249.34	20.42	21.35	81.97	-37.59	-599.70	759.33	719.06	40.27	18.855		
9,350.00	9,331.16	9,317.23	9,288.20	20.49	21.43	82.27	-53.90	-599.58	758.80	718.40	40.40	18.782		
9,400.00	9,373.45	9,359.60	9,325.94	20.55	21.51	82.61	-73.14	-599.44	758.20	717.67	40.53	18.705		
9,450.00	9,413.25	9,400.00	9,360.51	20.62	21.59	82.99	-94.03	-599.29	757.56	716.88	40.67	18.625		

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 162H - OH - Plan #2													Offset Site Error: 0.00 usft
Survey Program: O-LEAM MWD+HDGM, 9981-MWD+IFR1+MS													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset (usft)		+N/-S (usft)	+E/-W (usft)					
9,500.00	9,450.26	9,445.14	9,397.29	20.68	21.68	83.46	-120.19	-599.10	756.86	716.02	40.85	18.529	
9,550.00	9,484.20	9,488.40	9,430.49	20.75	21.77	83.94	-147.89	-598.90	756.16	715.12	41.04	18.424	
9,600.00	9,514.82	9,532.04	9,461.78	20.84	21.87	84.48	-178.30	-598.68	755.45	714.18	41.27	18.307	
9,650.00	9,541.88	9,576.10	9,490.92	20.94	21.98	85.05	-211.32	-598.44	754.76	713.23	41.53	18.174	
9,700.00	9,565.17	9,620.63	9,517.72	21.07	22.10	85.65	-246.87	-598.18	754.11	712.27	41.83	18.027	
9,750.00	9,584.52	9,665.67	9,541.93	21.24	22.23	86.29	-284.85	-597.91	753.51	711.33	42.18	17.864	
9,800.00	9,599.78	9,711.29	9,563.33	21.43	22.39	86.96	-325.11	-597.61	752.98	710.41	42.58	17.686	
9,850.00	9,610.83	9,757.52	9,581.68	21.64	22.57	87.65	-367.53	-597.30	752.55	709.53	43.02	17.495	
9,900.00	9,617.59	9,804.42	9,596.74	21.88	22.77	88.36	-411.93	-596.98	752.22	708.72	43.50	17.292	
9,950.00	9,620.01	9,852.04	9,608.27	22.14	23.00	89.09	-458.12	-596.65	752.00	707.98	44.03	17.081	
9,957.57	9,620.00	9,859.31	9,609.69	22.19	23.04	89.20	-465.26	-596.59	751.98	707.87	44.11	17.047	
10,000.00	9,619.64	9,900.67	9,616.04	22.43	23.26	89.71	-506.11	-596.30	751.92	707.32	44.60	16.860	
10,025.04	9,619.43	9,925.46	9,618.43	22.59	23.40	89.91	-530.79	-596.12	751.91	707.00	44.91	16.741	
10,100.00	9,618.80	10,000.38	9,619.71	23.08	27.27	90.05	-605.66	-595.57	751.92	706.12	45.80	16.418	
10,200.00	9,617.96	10,100.38	9,618.57	23.82	27.34	90.03	-705.65	-594.85	751.94	705.37	46.57	16.148	
10,300.00	9,617.11	10,200.38	9,617.43	24.65	27.42	90.01	-805.64	-594.12	751.95	704.50	47.44	15.849	
10,400.00	9,616.27	10,300.38	9,616.28	25.56	27.49	89.99	-905.63	-593.39	751.96	703.54	48.43	15.528	
10,500.00	9,615.43	10,400.38	9,615.14	26.54	27.57	89.96	-1,005.62	-592.67	751.98	702.47	49.50	15.190	
10,600.00	9,614.59	10,500.38	9,614.00	27.58	27.66	89.94	-1,105.61	-591.94	751.99	701.32	50.67	14.841	
10,700.00	9,613.74	10,600.38	9,612.86	28.68	27.74	89.92	-1,205.60	-591.22	752.00	700.09	51.92	14.485	
10,800.00	9,612.90	10,700.38	9,611.71	29.83	27.83	89.89	-1,305.60	-590.49	752.02	698.78	53.23	14.126	
10,900.00	9,612.06	10,800.38	9,610.57	31.02	27.93	89.87	-1,405.59	-589.76	752.03	697.41	54.62	13.768	
11,000.00	9,611.22	10,900.38	9,609.43	32.25	28.02	89.85	-1,505.58	-589.04	752.05	695.97	56.07	13.412	
11,100.00	9,610.37	11,000.38	9,608.29	33.52	28.12	89.83	-1,605.57	-588.31	752.06	694.48	57.58	13.062	
11,200.00	9,609.53	11,100.38	9,607.15	34.81	28.22	89.80	-1,705.56	-587.58	752.07	692.94	59.14	12.718	
11,300.00	9,608.69	11,200.38	9,606.00	36.14	28.32	89.78	-1,805.55	-586.86	752.09	691.34	60.74	12.381	
11,400.00	9,607.85	11,300.38	9,604.86	37.49	28.43	89.76	-1,905.54	-586.13	752.10	689.71	62.40	12.054	
11,500.00	9,607.01	11,400.38	9,603.72	38.86	28.55	89.73	-2,005.53	-585.40	752.12	688.03	64.09	11.735	
11,600.00	9,606.16	11,500.38	9,602.58	40.25	28.67	89.71	-2,105.52	-584.68	752.13	686.31	65.82	11.427	
11,700.00	9,605.32	11,600.38	9,601.44	41.66	28.80	89.69	-2,205.51	-583.95	752.15	684.55	67.59	11.128	
11,800.00	9,604.48	11,700.38	9,600.29	43.09	28.94	89.67	-2,305.50	-583.22	752.16	682.77	69.39	10.839	
11,900.00	9,603.64	11,800.37	9,599.15	44.53	29.08	89.64	-2,405.49	-582.50	752.18	680.95	71.23	10.560	
12,000.00	9,602.79	11,900.37	9,598.01	45.98	29.24	89.62	-2,505.48	-581.77	752.19	679.10	73.09	10.291	
12,100.00	9,601.95	12,000.37	9,596.87	47.45	29.42	89.60	-2,605.47	-581.04	752.21	677.23	74.98	10.032	
12,200.00	9,601.11	12,100.37	9,595.73	48.92	29.62	89.57	-2,705.46	-580.32	752.22	675.33	76.90	9.782	
12,300.00	9,600.27	12,200.37	9,594.58	50.41	29.85	89.55	-2,805.45	-579.59	752.24	673.40	78.84	9.542	
12,400.00	9,599.42	12,300.37	9,593.44	51.90	30.11	89.53	-2,905.44	-578.86	752.25	671.46	80.80	9.310	
12,500.00	9,598.58	12,400.37	9,592.30	53.41	30.40	89.51	-3,005.43	-578.14	752.27	669.49	82.78	9.088	
12,600.00	9,597.74	12,500.37	9,591.16	54.92	30.73	89.48	-3,105.42	-577.41	752.29	667.50	84.78	8.873	
12,700.00	9,596.90	12,600.37	9,590.01	56.44	31.09	89.46	-3,205.41	-576.69	752.30	665.50	86.80	8.667	
12,800.00	9,596.05	12,700.37	9,588.87	57.97	31.50	89.44	-3,305.40	-575.96	752.32	663.48	88.84	8.468	
12,900.00	9,595.21	12,800.37	9,587.73	59.50	31.93	89.41	-3,405.39	-575.23	752.33	661.44	90.89	8.277	
13,000.00	9,594.37	12,900.37	9,586.59	61.04	32.39	89.39	-3,505.38	-574.51	752.35	659.39	92.96	8.093	
13,100.00	9,593.53	13,000.37	9,585.45	62.58	32.87	89.37	-3,605.37	-573.78	752.37	657.32	95.05	7.916	
13,200.00	9,592.69	13,100.37	9,584.30	64.13	33.37	89.35	-3,705.36	-573.05	752.38	655.24	97.14	7.745	
13,300.00	9,591.84	13,200.37	9,583.16	65.68	33.89	89.32	-3,805.35	-572.33	752.40	653.15	99.25	7.581	
13,400.00	9,591.00	13,300.37	9,582.02	67.23	34.42	89.30	-3,905.35	-571.60	752.42	651.04	101.37	7.422	
13,500.00	9,590.16	13,400.37	9,580.88	68.79	34.97	89.28	-4,005.34	-570.87	752.43	648.93	103.51	7.269	
13,600.00	9,589.32	13,500.37	9,579.74	70.36	35.52	89.26	-4,105.33	-570.15	752.45	646.80	105.65	7.122	
13,700.00	9,588.47	13,600.37	9,578.59	71.92	36.09	89.23	-4,205.32	-569.42	752.47	644.66	107.81	6.980	
13,800.00	9,587.63	13,700.37	9,577.45	73.49	36.67	89.21	-4,305.31	-568.69	752.49	642.52	109.97	6.843	
13,900.00	9,586.79	13,800.37	9,576.31	75.06	37.25	89.19	-4,405.30	-567.97	752.50	640.36	112.14	6.710	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 162H - OH - Plan #2												Offset Well Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 9981-MWD+IFR1+MS													
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
14,000.00	9,585.95	13,900.37	9,575.17	76.64	37.85	89.16	-4,505.29	-567.24	752.52	638.20	114.33	6.582	
14,100.00	9,585.10	14,000.36	9,574.03	78.22	38.45	89.14	-4,605.28	-566.51	752.54	636.02	116.52	6.459	
14,200.00	9,584.26	14,100.36	9,572.88	79.80	39.06	89.12	-4,705.27	-565.79	752.56	633.84	118.71	6.339	
14,300.00	9,583.42	14,200.36	9,571.74	81.38	39.67	89.10	-4,805.26	-565.06	752.57	631.66	120.92	6.224	
14,400.00	9,582.58	14,300.36	9,570.60	82.97	40.29	89.07	-4,905.25	-564.33	752.59	629.46	123.13	6.112	
14,500.00	9,581.73	14,400.36	9,569.46	84.55	40.91	89.05	-5,005.24	-563.61	752.61	627.26	125.35	6.004	
14,600.00	9,580.89	14,500.36	9,568.31	86.14	41.55	89.03	-5,105.23	-562.88	752.63	625.05	127.58	5.899	
14,700.00	9,580.05	14,600.36	9,567.17	87.73	42.18	89.00	-5,205.22	-562.15	752.65	622.84	129.81	5.798	
14,800.00	9,579.21	14,700.36	9,566.03	89.33	42.82	88.98	-5,305.21	-561.43	752.67	620.62	132.04	5.700	
14,900.00	9,578.37	14,800.36	9,564.89	90.92	43.47	88.96	-5,405.20	-560.70	752.68	618.40	134.29	5.605	
15,000.00	9,577.52	14,900.36	9,563.75	92.52	44.11	88.94	-5,505.19	-559.98	752.70	616.17	136.54	5.513	
15,100.00	9,576.68	15,000.36	9,562.60	94.11	44.77	88.91	-5,605.18	-559.25	752.72	613.93	138.79	5.424	
15,200.00	9,575.84	15,100.36	9,561.46	95.71	45.42	88.89	-5,705.17	-558.52	752.74	611.70	141.05	5.337	
15,300.00	9,575.00	15,200.36	9,560.32	97.31	46.08	88.87	-5,805.16	-557.80	752.76	609.45	143.31	5.253	
15,400.00	9,574.15	15,300.36	9,559.18	98.91	46.75	88.84	-5,905.15	-557.07	752.78	607.21	145.57	5.171	
15,500.00	9,573.31	15,400.36	9,558.04	100.52	47.41	88.82	-6,005.14	-556.34	752.80	604.95	147.85	5.092	
15,600.00	9,572.47	15,500.36	9,556.89	102.12	48.08	88.80	-6,105.13	-555.62	752.82	602.70	150.12	5.015	
15,700.00	9,571.63	15,600.36	9,555.75	103.73	48.75	88.78	-6,205.12	-554.89	752.84	600.44	152.40	4.940	
15,800.00	9,570.78	15,700.36	9,554.61	105.33	49.43	88.75	-6,305.11	-554.16	752.86	598.18	154.68	4.867	
15,900.00	9,569.94	15,800.36	9,553.47	106.94	50.11	88.73	-6,405.11	-553.44	752.88	595.91	156.97	4.796	
16,000.00	9,569.10	15,900.36	9,552.33	108.55	50.79	88.71	-6,505.10	-552.71	752.90	593.64	159.26	4.728	
16,100.00	9,568.26	16,000.36	9,551.18	110.16	51.47	88.69	-6,605.09	-551.98	752.92	591.37	161.55	4.661	
16,200.00	9,567.42	16,100.36	9,550.04	111.76	52.16	88.66	-6,705.08	-551.26	752.94	589.10	163.84	4.595	
16,300.00	9,566.57	16,200.35	9,548.90	113.38	52.84	88.64	-6,805.07	-550.53	752.96	586.82	166.14	4.532	
16,400.00	9,565.73	16,300.35	9,547.76	114.99	53.53	88.62	-6,905.06	-549.80	752.98	584.54	168.44	4.470	
16,500.00	9,564.89	16,400.35	9,546.62	116.60	54.22	88.59	-7,005.05	-549.08	753.00	582.25	170.75	4.410	
16,600.00	9,564.05	16,500.35	9,545.47	118.21	54.92	88.57	-7,105.04	-548.35	753.02	579.97	173.05	4.351	
16,700.00	9,563.20	16,600.35	9,544.33	119.83	55.61	88.55	-7,205.03	-547.62	753.04	577.68	175.36	4.294	
16,800.00	9,562.36	16,700.35	9,543.19	121.44	56.31	88.53	-7,305.02	-546.90	753.06	575.39	177.67	4.238	
16,900.00	9,561.52	16,800.35	9,542.05	123.05	57.01	88.50	-7,405.01	-546.17	753.08	573.10	179.99	4.184	
17,000.00	9,560.68	16,900.35	9,540.90	124.67	57.71	88.48	-7,505.00	-545.45	753.10	570.80	182.30	4.131	
17,001.54	9,560.66	16,901.90	9,540.89	124.69	57.72	88.48	-7,506.54	-545.43	753.10	570.77	182.34	4.130	
17,080.26	9,560.00	16,979.53	9,540.00	125.97	58.27	88.46	-7,584.17	-544.87	753.12	568.97	184.15	4.090 SF	

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 165H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #2

Local Co-ordinate Reference: Well Thistle Unit 165H
 TVD Reference: 3713.1' GE + 23.5' KB @ 3736.60usft
 MD Reference: 3713.1' GE + 23.5' KB @ 3736.60usft
 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 3713.1' GE + 23.5' KB @ 3736.60usft

Offset Depths are relative to Offset Datum

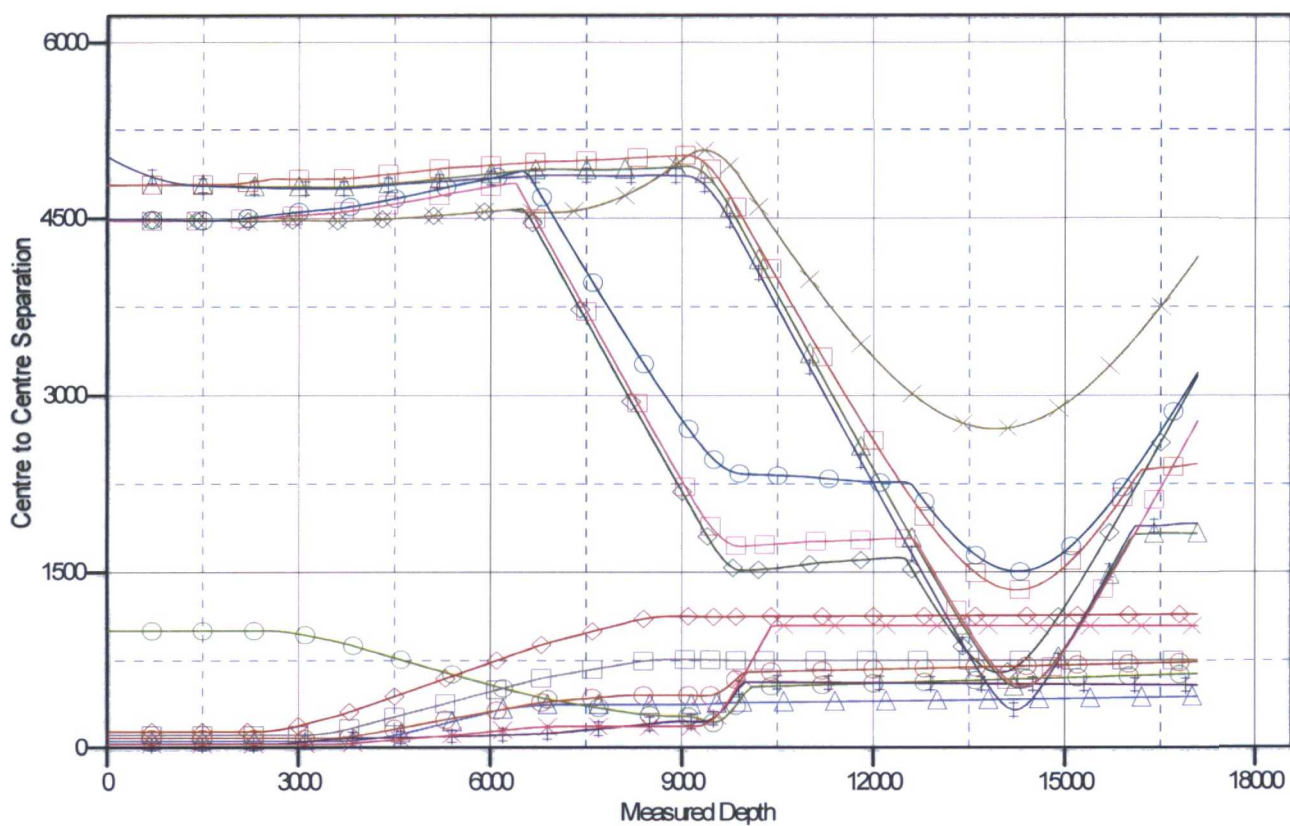
Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: Thistle Unit 165H

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

Grid Convergence at Surface is: 0.41°

Ladder Plot



LEGEND

- 63H, ST 1, ST 1 V0
- 63H, OH, OHV0
- Thistle Unit 116H, OH, Plan #2 V0
- Thistle Unit 126H, OH, Plan #2 V0
- Thistle Unit 128H, OH, Plan #2 V0
- Thistle Unit 115H, OH, Plan #2 V0
- Thistle Unit 162H, OH, Plan #2 V0
- Thistle Unit 100H, OH, Plan #2 V0
- Thistle Unit 127H, OH, Plan #2 V0
- 57H, OH, OHV0
- 58H, OH, OHV0
- 64H, OH, OHV0
- 62H, OH, OHV0
- 56H, OH, OHV0

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 165H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3713.1' GE + 23.5' KB @ 3736.60usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 165H	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 3713.1' GE + 23.5' KB @ 3736.60usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 19' 60.0000 W

Coordinates are relative to: Thistle Unit 165H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.41°

