

Devon Energy

Project: Lea County, NM (NAD-83)
 Site: Thistle Unit Sec 22-27 Trac Pad
 Well: Thistle Unit 99H
 Wellbore: OH
 Design: Plan #2

3711.5' GE +23.5' KB @ 3735.00usft
 Ground Level: 3711.50



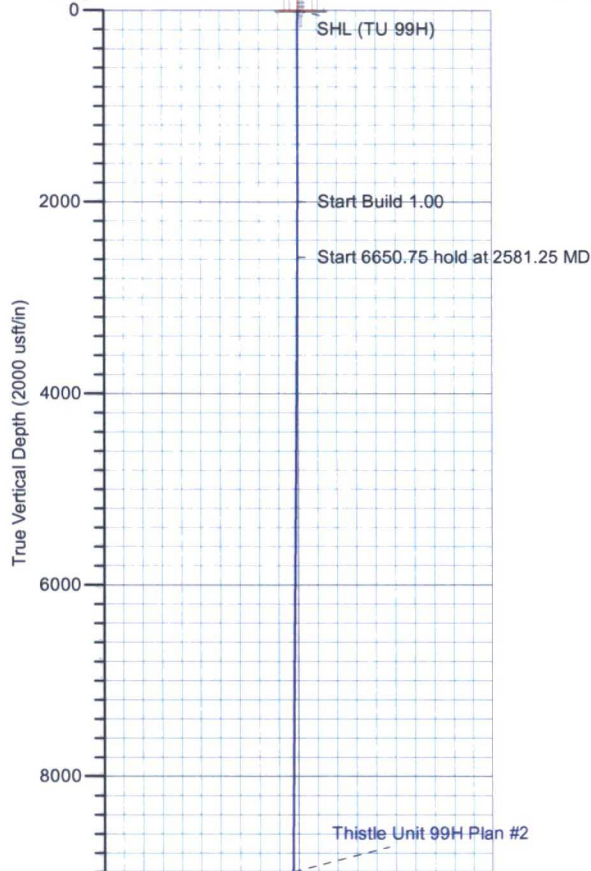
Azimuths to Grid North
 True North: -0.41°
 Magnetic North: 6.42°
 Magnetic Field
 Strength: 48166.5nT
 Dip Angle: 60.12°
 Date: 9/19/2017
 Model: HDGM

PROJECT DETAILS: Lea County, NM (NAD-83)

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone

devon

30-025-44066

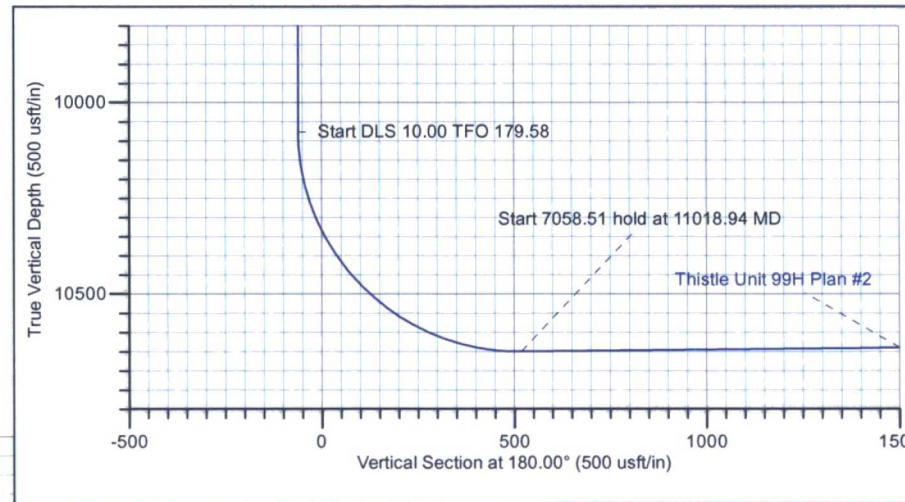


SECTION DETAILS

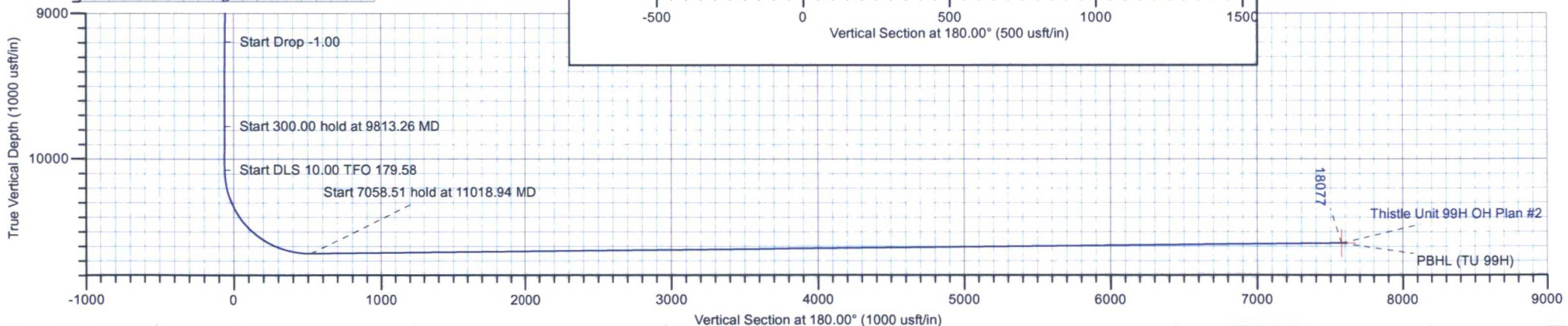
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	Start Build 1.00
2581.25	5.81	85.30	2580.25	2.41	29.36	1.00	85.30	-2.41	Start 6650.75 hold at 2581.25 MD
9232.01	5.81	85.30	9196.82	57.59	700.64	0.00	0.00	-57.59	Start Drop -1.00
9813.26	0.00	0.00	9777.07	60.00	730.00	1.00	180.00	-60.00	Start 300.00 hold at 9813.26 MD
10113.26	0.00	0.00	10077.07	60.00	730.00	0.00	0.00	-60.00	Start DLS 10.00 TFO 179.58
11018.94	90.57	179.58	10650.00	-518.62	734.20	10.00	179.58	518.62	Start 7058.51 hold at 11018.94 MD
18077.45	90.57	179.58	10580.00	-7576.60	785.45	0.00	0.00	7576.60	TD at 18077.45

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
PBHL (TU 99H)	10580.00	-7576.60	785.45	32° 16' 32.5445 N	103° 33' 38.1690 W
SHL (TU 99H)	0.00	0.00	0.00	32° 17' 47.5713 N	103° 33' 46.6835 W



HOBBS OCD
OCT 02 2017
RECEIVED



LEAM DRILLING SYSTEMS LLC
 2010 East Davis, Conroe, Texas 77301

Plan: Plan #2 (Thistle Unit 99H/OH)
 Thistle Unit Sec 22-27 Trac Pad
 Created By: Dustin Ault
 Date: 13:31, September 20 2017

Devon Energy

Project: Lea County, NM (NAD-83)
Site: Thistle Unit Sec 22-27 Trac Pad
Well: Thistle Unit 99H
Wellbore: OH
Design: Plan #2



Azimuths to Grid North
True North: -0.41°
Magnetic North: 6.42°

Magnetic Field
Strength: 48166.5snT
Dip Angle: 60.12°
Date: 9/19/2017
Model: HDGM

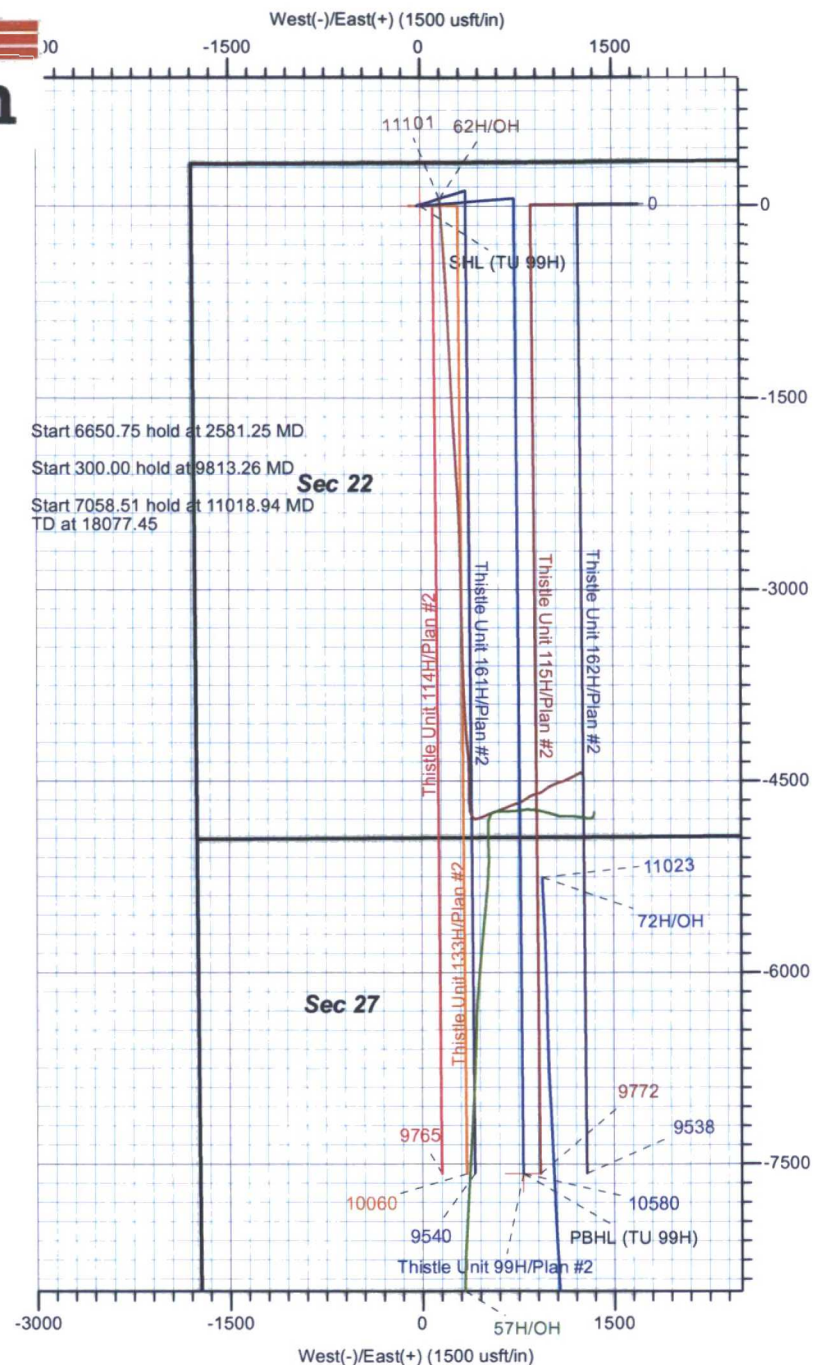
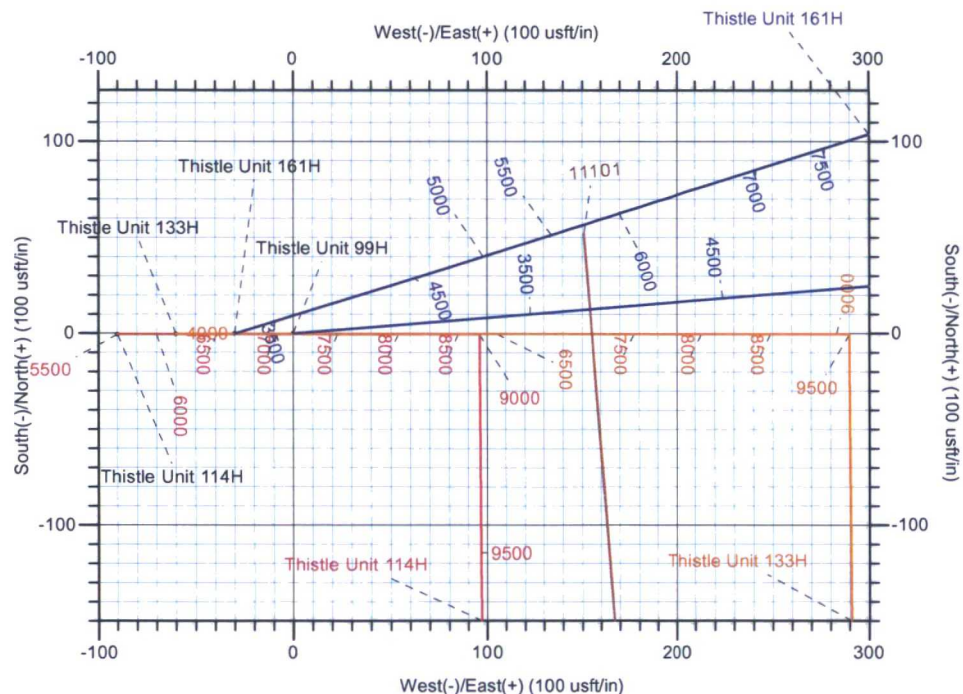
PROJECT DETAILS: Lea County, NM (NAD-83)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone



MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
2581.25	5.81	85.30	2580.25	2.41	29.36	1.00	85.30	-2.41	
9232.01	5.81	85.30	9196.82	57.59	700.64	0.00	0.00	-57.59	
9813.26	0.00	0.00	9777.07	60.00	730.00	1.00	180.00	-60.00	
10113.26	0.00	0.00	10077.07	60.00	730.00	0.00	0.00	-60.00	
11018.94	90.57	179.58	10650.00	-518.62	734.20	10.00	179.58	518.62	PBHL (TU 99H)
18077.45	90.57	179.58	10580.00	-7576.60	785.45	0.00	0.00	7576.60	

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
PBHL (TU 99H)	10580.00	-7576.60	785.45	464895.05	780158.42	32° 16' 32.5445 N	103° 33' 38.1690 W
SHL (TU 99H)	0.00	0.00	0.00	472471.65	779372.97	32° 17' 47.5713 N	103° 33' 46.6835 W



LEAM DRILLING SYSTEMS LLC
2010 East Davis, Conroe, Texas 77301

Plan: Plan #2 (Thistle Unit 99H/OH)
Thistle Unit Sec 22-27 Trac Pad
Created By: Dustin Ault
Date: 13:32, September 20 2017

Devon Energy

Lea County, NM (NAD-83)

Thistle Unit Sec 22-27 Trac Pad

Thistle Unit 99H

OH

Plan: Plan #2

Standard Planning Report

20 September, 2017

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Thistle Unit 99H
Company:	Devon Energy	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site:	Thistle Unit Sec 22-27 Trac Pad	North Reference:	Grid
Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Project	Lea County, NM (NAD-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Thistle Unit Sec 22-27 Trac Pad		
Site Position:		Northing:	472,548.43 usft
From:	Map	Easting:	777,932.69 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 17' 48.4331 N
		Longitude:	103° 34' 3.4563 W
		Grid Convergence:	0.41 °

Well	Thistle Unit 99H		
Well Position	+N/-S	-76.78 usft	Northing:
	+E/-W	1,440.28 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	32° 17' 47.5713 N
		Longitude:	103° 33' 46.6835 W
		Ground Level:	3,711.50 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	9/19/2017	6.83
			Dip Angle
			(°)
			60.12
			Field Strength
			(nT)
			48,167

Design	Plan #2		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			180.00

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,581.25	5.81	85.30	2,580.25	2.41	29.36	1.00	1.00	0.00	85.30	
9,232.01	5.81	85.30	9,196.82	57.59	700.64	0.00	0.00	0.00	0.00	
9,813.26	0.00	0.01	9,777.07	60.00	730.00	1.00	-1.00	0.00	180.00	
10,113.26	0.00	0.01	10,077.07	60.00	730.00	0.00	0.00	0.00	0.01	
11,018.94	90.57	179.58	10,650.00	-518.62	734.20	10.00	10.00	19.83	179.58	
18,077.45	90.57	179.58	10,580.00	-7,576.60	785.45	0.00	0.00	0.00	0.00	PBHL (TU 99H)

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Thistle Unit 99H
Company:	Devon Energy	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site:	Thistle Unit Sec 22-27 Trac Pad	North Reference:	Grid
Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (TU 99H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.00									
2,100.00	1.00	85.30	2,099.99	0.07	0.87	-0.07	1.00	1.00	0.00
2,200.00	2.00	85.30	2,199.96	0.29	3.48	-0.29	1.00	1.00	0.00
2,300.00	3.00	85.30	2,299.86	0.64	7.83	-0.64	1.00	1.00	0.00
2,400.00	4.00	85.30	2,399.68	1.14	13.91	-1.14	1.00	1.00	0.00
2,500.00	5.00	85.30	2,499.37	1.79	21.73	-1.79	1.00	1.00	0.00
2,581.25	5.81	85.30	2,580.25	2.41	29.36	-2.41	1.00	1.00	0.00
Start 6650.75 hold at 2581.25 MD									
2,600.00	5.81	85.30	2,598.91	2.57	31.25	-2.57	0.00	0.00	0.00
2,700.00	5.81	85.30	2,698.39	3.40	41.34	-3.40	0.00	0.00	0.00
2,800.00	5.81	85.30	2,797.88	4.23	51.44	-4.23	0.00	0.00	0.00
2,900.00	5.81	85.30	2,897.36	5.06	61.53	-5.06	0.00	0.00	0.00
3,000.00	5.81	85.30	2,996.85	5.89	71.62	-5.89	0.00	0.00	0.00
3,100.00	5.81	85.30	3,096.34	6.72	81.72	-6.72	0.00	0.00	0.00
3,200.00	5.81	85.30	3,195.82	7.55	91.81	-7.55	0.00	0.00	0.00
3,300.00	5.81	85.30	3,295.31	8.38	101.90	-8.38	0.00	0.00	0.00
3,400.00	5.81	85.30	3,394.79	9.21	112.00	-9.21	0.00	0.00	0.00
3,500.00	5.81	85.30	3,494.28	10.03	122.09	-10.03	0.00	0.00	0.00
3,600.00	5.81	85.30	3,593.77	10.86	132.18	-10.86	0.00	0.00	0.00
3,700.00	5.81	85.30	3,693.25	11.69	142.28	-11.69	0.00	0.00	0.00
3,800.00	5.81	85.30	3,792.74	12.52	152.37	-12.52	0.00	0.00	0.00
3,900.00	5.81	85.30	3,892.22	13.35	162.46	-13.35	0.00	0.00	0.00
4,000.00	5.81	85.30	3,991.71	14.18	172.56	-14.18	0.00	0.00	0.00
4,100.00	5.81	85.30	4,091.20	15.01	182.65	-15.01	0.00	0.00	0.00
4,200.00	5.81	85.30	4,190.68	15.84	192.74	-15.84	0.00	0.00	0.00
4,300.00	5.81	85.30	4,290.17	16.67	202.84	-16.67	0.00	0.00	0.00
4,400.00	5.81	85.30	4,389.65	17.50	212.93	-17.50	0.00	0.00	0.00
4,500.00	5.81	85.30	4,489.14	18.33	223.02	-18.33	0.00	0.00	0.00
4,600.00	5.81	85.30	4,588.62	19.16	233.12	-19.16	0.00	0.00	0.00
4,700.00	5.81	85.30	4,688.11	19.99	243.21	-19.99	0.00	0.00	0.00
4,800.00	5.81	85.30	4,787.60	20.82	253.30	-20.82	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Thistle Unit 99H
Company:	Devon Energy	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site:	Thistle Unit Sec 22-27 Trac Pad	North Reference:	Grid
Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,900.00	5.81	85.30	4,887.08	21.65	263.40	-21.65	0.00	0.00	0.00
5,000.00	5.81	85.30	4,986.57	22.48	273.49	-22.48	0.00	0.00	0.00
5,100.00	5.81	85.30	5,086.05	23.31	283.58	-23.31	0.00	0.00	0.00
5,200.00	5.81	85.30	5,185.54	24.14	293.68	-24.14	0.00	0.00	0.00
5,300.00	5.81	85.30	5,285.03	24.97	303.77	-24.97	0.00	0.00	0.00
5,400.00	5.81	85.30	5,384.51	25.80	313.86	-25.80	0.00	0.00	0.00
5,500.00	5.81	85.30	5,484.00	26.63	323.96	-26.63	0.00	0.00	0.00
5,600.00	5.81	85.30	5,583.48	27.46	334.05	-27.46	0.00	0.00	0.00
5,700.00	5.81	85.30	5,682.97	28.29	344.14	-28.29	0.00	0.00	0.00
5,800.00	5.81	85.30	5,782.45	29.12	354.24	-29.12	0.00	0.00	0.00
5,900.00	5.81	85.30	5,881.94	29.95	364.33	-29.95	0.00	0.00	0.00
6,000.00	5.81	85.30	5,981.43	30.77	374.42	-30.77	0.00	0.00	0.00
6,100.00	5.81	85.30	6,080.91	31.60	384.52	-31.60	0.00	0.00	0.00
6,200.00	5.81	85.30	6,180.40	32.43	394.61	-32.43	0.00	0.00	0.00
6,300.00	5.81	85.30	6,279.88	33.26	404.70	-33.26	0.00	0.00	0.00
6,400.00	5.81	85.30	6,379.37	34.09	414.80	-34.09	0.00	0.00	0.00
6,500.00	5.81	85.30	6,478.86	34.92	424.89	-34.92	0.00	0.00	0.00
6,600.00	5.81	85.30	6,578.34	35.75	434.98	-35.75	0.00	0.00	0.00
6,700.00	5.81	85.30	6,677.83	36.58	445.08	-36.58	0.00	0.00	0.00
6,800.00	5.81	85.30	6,777.31	37.41	455.17	-37.41	0.00	0.00	0.00
6,900.00	5.81	85.30	6,876.80	38.24	465.26	-38.24	0.00	0.00	0.00
7,000.00	5.81	85.30	6,976.29	39.07	475.36	-39.07	0.00	0.00	0.00
7,100.00	5.81	85.30	7,075.77	39.90	485.45	-39.90	0.00	0.00	0.00
7,200.00	5.81	85.30	7,175.26	40.73	495.54	-40.73	0.00	0.00	0.00
7,300.00	5.81	85.30	7,274.74	41.56	505.64	-41.56	0.00	0.00	0.00
7,400.00	5.81	85.30	7,374.23	42.39	515.73	-42.39	0.00	0.00	0.00
7,500.00	5.81	85.30	7,473.71	43.22	525.82	-43.22	0.00	0.00	0.00
7,600.00	5.81	85.30	7,573.20	44.05	535.92	-44.05	0.00	0.00	0.00
7,700.00	5.81	85.30	7,672.69	44.88	546.01	-44.88	0.00	0.00	0.00
7,800.00	5.81	85.30	7,772.17	45.71	556.10	-45.71	0.00	0.00	0.00
7,900.00	5.81	85.30	7,871.66	46.54	566.20	-46.54	0.00	0.00	0.00
8,000.00	5.81	85.30	7,971.14	47.37	576.29	-47.37	0.00	0.00	0.00
8,100.00	5.81	85.30	8,070.63	48.20	586.38	-48.20	0.00	0.00	0.00
8,200.00	5.81	85.30	8,170.12	49.03	596.48	-49.03	0.00	0.00	0.00
8,300.00	5.81	85.30	8,269.60	49.86	606.57	-49.86	0.00	0.00	0.00
8,400.00	5.81	85.30	8,369.09	50.68	616.66	-50.68	0.00	0.00	0.00
8,500.00	5.81	85.30	8,468.57	51.51	626.76	-51.51	0.00	0.00	0.00
8,600.00	5.81	85.30	8,568.06	52.34	636.85	-52.34	0.00	0.00	0.00
8,700.00	5.81	85.30	8,667.54	53.17	646.94	-53.17	0.00	0.00	0.00
8,800.00	5.81	85.30	8,767.03	54.00	657.04	-54.00	0.00	0.00	0.00
8,900.00	5.81	85.30	8,866.52	54.83	667.13	-54.83	0.00	0.00	0.00
9,000.00	5.81	85.30	8,966.00	55.66	677.22	-55.66	0.00	0.00	0.00
9,100.00	5.81	85.30	9,065.49	56.49	687.32	-56.49	0.00	0.00	0.00
9,200.00	5.81	85.30	9,164.97	57.32	697.41	-57.32	0.00	0.00	0.00
9,232.01	5.81	85.30	9,196.82	57.59	700.64	-57.59	0.00	0.00	0.00
Start Drop -1.00									
9,300.00	5.13	85.30	9,264.50	58.12	707.10	-58.12	1.00	-1.00	0.00
9,400.00	4.13	85.30	9,364.17	58.78	715.15	-58.78	1.00	-1.00	0.00
9,500.00	3.13	85.30	9,463.97	59.30	721.47	-59.30	1.00	-1.00	0.00
9,600.00	2.13	85.30	9,563.86	59.67	726.05	-59.67	1.00	-1.00	0.00
9,700.00	1.13	85.30	9,663.82	59.91	728.88	-59.91	1.00	-1.00	0.00
9,800.00	0.13	85.30	9,763.81	60.00	729.98	-60.00	1.00	-1.00	0.00
9,813.26	0.00	0.01	9,777.07	60.00	730.00	-60.00	1.00	-1.00	0.00
Start 300.00 hold at 9813.26 MD									

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Thistle Unit 99H
Company:	Devon Energy	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site:	Thistle Unit Sec 22-27 Trac Pad	North Reference:	Grid
Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,900.00	0.00	0.00	9,863.81	60.00	730.00	-60.00	0.00	0.00	0.00
10,000.00	0.00	0.00	9,963.81	60.00	730.00	-60.00	0.00	0.00	0.00
10,100.00	0.00	0.00	10,063.81	60.00	730.00	-60.00	0.00	0.00	0.00
10,113.26	0.00	0.00	10,077.07	60.00	730.00	-60.00	0.00	0.00	0.00
Start DLS 10.00 TFO 179.58									
10,150.00	3.67	179.58	10,113.79	58.82	730.01	-58.82	10.00	10.00	0.00
10,200.00	8.67	179.58	10,163.48	53.45	730.05	-53.45	10.00	10.00	0.00
10,250.00	13.67	179.58	10,212.52	43.76	730.12	-43.76	10.00	10.00	0.00
10,300.00	18.67	179.58	10,260.52	29.84	730.22	-29.84	10.00	10.00	0.00
10,350.00	23.67	179.58	10,307.13	11.78	730.35	-11.78	10.00	10.00	0.00
10,400.00	28.67	179.58	10,351.99	-10.26	730.51	10.26	10.00	10.00	0.00
10,450.00	33.67	179.58	10,394.76	-36.14	730.70	36.14	10.00	10.00	0.00
10,500.00	38.67	179.58	10,435.11	-65.64	730.91	65.64	10.00	10.00	0.00
10,550.00	43.67	179.58	10,472.73	-98.55	731.15	98.55	10.00	10.00	0.00
10,600.00	48.67	179.58	10,507.34	-134.61	731.41	134.61	10.00	10.00	0.00
10,650.00	53.67	179.58	10,538.68	-173.55	731.70	173.55	10.00	10.00	0.00
10,700.00	58.67	179.58	10,566.51	-215.07	732.00	215.07	10.00	10.00	0.00
10,750.00	63.67	179.58	10,590.61	-258.86	732.32	258.86	10.00	10.00	0.00
10,800.00	68.67	179.58	10,610.80	-304.58	732.65	304.58	10.00	10.00	0.00
10,850.00	73.67	179.58	10,626.93	-351.89	732.99	351.89	10.00	10.00	0.00
10,900.00	78.67	179.58	10,638.87	-400.42	733.34	400.42	10.00	10.00	0.00
10,950.00	83.67	179.58	10,646.54	-449.82	733.70	449.82	10.00	10.00	0.00
11,000.00	88.67	179.58	10,649.87	-499.69	734.06	499.69	10.00	10.00	0.00
11,018.94	90.57	179.58	10,650.00	-518.62	734.20	518.62	10.00	10.00	0.00
Start 7058.51 hold at 11018.94 MD									
11,100.00	90.57	179.58	10,649.20	-599.68	734.79	599.68	0.00	0.00	0.00
11,200.00	90.57	179.58	10,648.20	-699.67	735.52	699.67	0.00	0.00	0.00
11,300.00	90.57	179.58	10,647.21	-799.66	736.24	799.66	0.00	0.00	0.00
11,400.00	90.57	179.58	10,646.22	-899.66	736.97	899.66	0.00	0.00	0.00
11,500.00	90.57	179.58	10,645.23	-999.65	737.69	999.65	0.00	0.00	0.00
11,600.00	90.57	179.58	10,644.24	-1,099.64	738.42	1,099.64	0.00	0.00	0.00
11,700.00	90.57	179.58	10,643.25	-1,199.63	739.15	1,199.63	0.00	0.00	0.00
11,800.00	90.57	179.58	10,642.25	-1,299.63	739.87	1,299.63	0.00	0.00	0.00
11,900.00	90.57	179.58	10,641.26	-1,399.62	740.60	1,399.62	0.00	0.00	0.00
12,000.00	90.57	179.58	10,640.27	-1,499.61	741.32	1,499.61	0.00	0.00	0.00
12,100.00	90.57	179.58	10,639.28	-1,599.60	742.05	1,599.60	0.00	0.00	0.00
12,200.00	90.57	179.58	10,638.29	-1,699.60	742.78	1,699.60	0.00	0.00	0.00
12,300.00	90.57	179.58	10,637.30	-1,799.59	743.50	1,799.59	0.00	0.00	0.00
12,400.00	90.57	179.58	10,636.30	-1,899.58	744.23	1,899.58	0.00	0.00	0.00
12,500.00	90.57	179.58	10,635.31	-1,999.57	744.95	1,999.57	0.00	0.00	0.00
12,600.00	90.57	179.58	10,634.32	-2,099.57	745.68	2,099.57	0.00	0.00	0.00
12,700.00	90.57	179.58	10,633.33	-2,199.56	746.41	2,199.56	0.00	0.00	0.00
12,800.00	90.57	179.58	10,632.34	-2,299.55	747.13	2,299.55	0.00	0.00	0.00
12,900.00	90.57	179.58	10,631.35	-2,399.54	747.86	2,399.54	0.00	0.00	0.00
13,000.00	90.57	179.58	10,630.35	-2,499.54	748.59	2,499.54	0.00	0.00	0.00
13,100.00	90.57	179.58	10,629.36	-2,599.53	749.31	2,599.53	0.00	0.00	0.00
13,200.00	90.57	179.58	10,628.37	-2,699.52	750.04	2,699.52	0.00	0.00	0.00
13,300.00	90.57	179.58	10,627.38	-2,799.51	750.76	2,799.51	0.00	0.00	0.00
13,400.00	90.57	179.58	10,626.39	-2,899.51	751.49	2,899.51	0.00	0.00	0.00
13,500.00	90.57	179.58	10,625.40	-2,999.50	752.22	2,999.50	0.00	0.00	0.00
13,600.00	90.57	179.58	10,624.40	-3,099.49	752.94	3,099.49	0.00	0.00	0.00
13,700.00	90.57	179.58	10,623.41	-3,199.48	753.67	3,199.48	0.00	0.00	0.00
13,800.00	90.57	179.58	10,622.42	-3,299.48	754.39	3,299.48	0.00	0.00	0.00
13,900.00	90.57	179.58	10,621.43	-3,399.47	755.12	3,399.47	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Thistle Unit 99H
Company:	Devon Energy	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site:	Thistle Unit Sec 22-27 Trac Pad	North Reference:	Grid
Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,000.00	90.57	179.58	10,620.44	-3,499.46	755.85	3,499.46	0.00	0.00	0.00
14,100.00	90.57	179.58	10,619.44	-3,599.45	756.57	3,599.45	0.00	0.00	0.00
14,200.00	90.57	179.58	10,618.45	-3,699.45	757.30	3,699.45	0.00	0.00	0.00
14,300.00	90.57	179.58	10,617.46	-3,799.44	758.02	3,799.44	0.00	0.00	0.00
14,400.00	90.57	179.58	10,616.47	-3,899.43	758.75	3,899.43	0.00	0.00	0.00
14,500.00	90.57	179.58	10,615.48	-3,999.42	759.48	3,999.42	0.00	0.00	0.00
14,600.00	90.57	179.58	10,614.49	-4,099.41	760.20	4,099.41	0.00	0.00	0.00
14,700.00	90.57	179.58	10,613.49	-4,199.41	760.93	4,199.41	0.00	0.00	0.00
14,800.00	90.57	179.58	10,612.50	-4,299.40	761.65	4,299.40	0.00	0.00	0.00
14,900.00	90.57	179.58	10,611.51	-4,399.39	762.38	4,399.39	0.00	0.00	0.00
15,000.00	90.57	179.58	10,610.52	-4,499.38	763.11	4,499.38	0.00	0.00	0.00
15,100.00	90.57	179.58	10,609.53	-4,599.38	763.83	4,599.38	0.00	0.00	0.00
15,200.00	90.57	179.58	10,608.54	-4,699.37	764.56	4,699.37	0.00	0.00	0.00
15,300.00	90.57	179.58	10,607.54	-4,799.36	765.28	4,799.36	0.00	0.00	0.00
15,400.00	90.57	179.58	10,606.55	-4,899.35	766.01	4,899.35	0.00	0.00	0.00
15,500.00	90.57	179.58	10,605.56	-4,999.35	766.74	4,999.35	0.00	0.00	0.00
15,600.00	90.57	179.58	10,604.57	-5,099.34	767.46	5,099.34	0.00	0.00	0.00
15,700.00	90.57	179.58	10,603.58	-5,199.33	768.19	5,199.33	0.00	0.00	0.00
15,800.00	90.57	179.58	10,602.59	-5,299.32	768.91	5,299.32	0.00	0.00	0.00
15,900.00	90.57	179.58	10,601.59	-5,399.32	769.64	5,399.32	0.00	0.00	0.00
16,000.00	90.57	179.58	10,600.60	-5,499.31	770.37	5,499.31	0.00	0.00	0.00
16,100.00	90.57	179.58	10,599.61	-5,599.30	771.09	5,599.30	0.00	0.00	0.00
16,200.00	90.57	179.58	10,598.62	-5,699.29	771.82	5,699.29	0.00	0.00	0.00
16,300.00	90.57	179.58	10,597.63	-5,799.29	772.54	5,799.29	0.00	0.00	0.00
16,400.00	90.57	179.58	10,596.64	-5,899.28	773.27	5,899.28	0.00	0.00	0.00
16,500.00	90.57	179.58	10,595.64	-5,999.27	774.00	5,999.27	0.00	0.00	0.00
16,600.00	90.57	179.58	10,594.65	-6,099.26	774.72	6,099.26	0.00	0.00	0.00
16,700.00	90.57	179.58	10,593.66	-6,199.26	775.45	6,199.26	0.00	0.00	0.00
16,800.00	90.57	179.58	10,592.67	-6,299.25	776.18	6,299.25	0.00	0.00	0.00
16,900.00	90.57	179.58	10,591.68	-6,399.24	776.90	6,399.24	0.00	0.00	0.00
17,000.00	90.57	179.58	10,590.69	-6,499.23	777.63	6,499.23	0.00	0.00	0.00
17,100.00	90.57	179.58	10,589.69	-6,599.23	778.35	6,599.23	0.00	0.00	0.00
17,200.00	90.57	179.58	10,588.70	-6,699.22	779.08	6,699.22	0.00	0.00	0.00
17,300.00	90.57	179.58	10,587.71	-6,799.21	779.81	6,799.21	0.00	0.00	0.00
17,400.00	90.57	179.58	10,586.72	-6,899.20	780.53	6,899.20	0.00	0.00	0.00
17,500.00	90.57	179.58	10,585.73	-6,999.20	781.26	6,999.20	0.00	0.00	0.00
17,600.00	90.57	179.58	10,584.74	-7,099.19	781.98	7,099.19	0.00	0.00	0.00
17,700.00	90.57	179.58	10,583.74	-7,199.18	782.71	7,199.18	0.00	0.00	0.00
17,800.00	90.57	179.58	10,582.75	-7,299.17	783.44	7,299.17	0.00	0.00	0.00
17,900.00	90.57	179.58	10,581.76	-7,399.17	784.16	7,399.17	0.00	0.00	0.00
18,000.00	90.57	179.58	10,580.77	-7,499.16	784.89	7,499.16	0.00	0.00	0.00
18,077.45	90.57	179.58	10,580.00	-7,576.60	785.45	7,576.60	0.00	0.00	0.00
TD at 18077.45 - PBHL (TU 99H)									

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Multi User Db	Local Co-ordinate Reference:	Well Thistle Unit 99H
Company:	Devon Energy	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site:	Thistle Unit Sec 22-27 Trac Pad	North Reference:	Grid
Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
SHL (TU 99H)	0.00	0.00	0.00	0.00	0.00	472,471.65	779,372.97	32° 17' 47.5713 N	103° 33' 46.6835 W
- plan hits target center									
- Point									
PBHL (TU 99H)	0.00	0.00	10,580.00	-7,576.60	785.45	464,895.05	780,158.42	32° 16' 32.5445 N	103° 33' 38.1690 W
- plan hits target center									
- Point									

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W		
		(usft)	(usft)	Comment	
2,000.00	2,000.00	0.00	0.00	Start Build 1.00	
2,581.25	2,580.25	2.41	29.36	Start 6650.75 hold at 2581.25 MD	
9,232.01	9,196.82	57.59	700.64	Start Drop -1.00	
9,813.26	9,777.07	60.00	730.00	Start 300.00 hold at 9813.26 MD	
10,113.26	10,077.07	60.00	730.00	Start DLS 10.00 TFO 179.58	
11,018.94	10,650.00	-518.62	734.20	Start 7058.51 hold at 11018.94 MD	
18,077.45	10,580.00	-7,576.60	785.45	TD at 18077.45	

Devon Energy

Lea County, NM (NAD-83)

Thistle Unit Sec 22-27 Trac Pad

Thistle Unit 99H

OH

Plan #2

Anticollision Report

20 September, 2017

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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	18,076.53	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
Offset Well - Wellbore - Design						
Thistle Unit						
62H - OH - OH	15,297.44	10,590.00	359.56	244.36	3.121	CC, ES, SF
72H - OH - OH	15,753.35	15,490.00	452.88	352.99	4.534	CC, ES, SF
Thistle Unit (Offsets)						
57H - OH - OH	15,245.26	10,605.57	207.54	106.88	2.062	CC, ES, SF
Thistle Unit Sec 22-27 Trac Pad						
Thistle Unit 114H - OH - Plan #2	2,000.00	2,000.00	89.94	81.23	10.323	CC, ES
Thistle Unit 114H - OH - Plan #2	18,077.45	17,069.55	1,032.49	856.34	5.862	SF
Thistle Unit 115H - OH - Plan #2	9,306.23	9,315.18	165.50	123.15	3.908	CC, ES, SF
Thistle Unit 133H - OH - Plan #2	2,000.00	2,000.00	59.94	51.23	6.879	CC, ES
Thistle Unit 133H - OH - Plan #2	18,077.45	17,489.94	681.10	533.83	4.625	SF
Thistle Unit 161H - OH - Plan #2	2,000.00	2,000.00	29.95	21.24	3.437	CC, ES
Thistle Unit 161H - OH - Plan #2	2,100.00	2,099.99	30.82	21.67	3.369	SF
Thistle Unit 162H - OH - Plan #2	9,347.81	9,300.00	529.22	488.01	12.842	CC, ES
Thistle Unit 162H - OH - Plan #2	18,077.45	16,966.78	1,155.27	1,022.35	8.692	SF

Offset Design												
Thistle Unit - 62H - OH - OH												
Survey Program: 85-ISCWSA-GYRO-3, 1447-LEAM_MWD, 15750-Project												
Reference												
Offset												
Semi Major Axis												
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)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor
0.00	0.00	0.00	0.00	0.00	0.00	164.30	-4,445.31	1,249.67	4,617.67			
100.00	100.00	57.58	57.58	0.09	0.05	164.30	-4,445.44	1,249.75	4,617.83	4,617.70	0.13	N/A
200.00	200.00	161.60	161.60	0.31	0.20	164.30	-4,445.98	1,250.05	4,618.42	4,617.91	0.50	9,215.615
300.00	300.00	287.53	287.53	0.54	0.41	164.30	-4,446.23	1,249.74	4,618.53	4,617.59	0.95	4,873.506
400.00	400.00	403.66	403.65	0.76	0.61	164.31	-4,446.01	1,249.06	4,618.19	4,616.82	1.38	3,355.886
500.00	500.00	512.24	512.23	0.99	0.80	164.31	-4,445.51	1,248.41	4,617.59	4,615.80	1.79	2,579.259
600.00	600.00	626.02	626.01	1.21	1.00	164.32	-4,444.71	1,247.77	4,616.75	4,614.54	2.21	2,084.378
700.00	700.00	726.51	726.50	1.43	1.18	164.32	-4,443.77	1,247.43	4,615.76	4,613.15	2.61	1,765.600
800.00	800.00	824.68	824.65	1.66	1.35	164.32	-4,442.78	1,247.32	4,614.77	4,611.76	3.01	1,533.332
900.00	900.00	916.91	916.88	1.88	1.51	164.32	-4,441.99	1,247.25	4,613.92	4,610.52	3.39	1,359.294
1,000.00	1,000.00	1,019.07	1,019.03	2.11	1.69	164.31	-4,441.09	1,247.40	4,613.11	4,609.31	3.80	1,214.715
1,100.00	1,100.00	1,122.86	1,122.82	2.33	1.87	164.30	-4,440.06	1,247.78	4,612.25	4,608.04	4.20	1,097.096

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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)	Offset Wellbore Centre +E/-W (usft)						
1,200.00	1,200.00	1,229.11	1,229.06	2.56	2.05	164.29	-4,438.84	1,248.21	4,611.26	4,606.64	4.61	999.194		
1,300.00	1,300.00	1,328.99	1,328.93	2.78	2.23	164.28	-4,437.61	1,248.63	4,610.18	4,605.17	5.01	919.392		
1,400.00	1,400.00	1,416.00	1,415.94	3.01	2.38	164.28	-4,436.66	1,248.95	4,609.24	4,603.85	5.39	855.045		
1,500.00	1,500.00	1,498.18	1,498.12	3.23	2.42	164.28	-4,436.18	1,248.82	4,608.64	4,602.98	5.65	815.008		
1,600.00	1,600.00	1,613.63	1,613.50	3.46	2.50	164.32	-4,436.59	1,245.20	4,608.14	4,602.19	5.95	773.986		
1,700.00	1,700.00	1,685.00	1,684.70	3.68	2.58	164.38	-4,437.52	1,240.37	4,607.61	4,601.35	6.26	736.080		
1,708.15	1,708.15	1,689.07	1,688.75	3.70	2.58	164.39	-4,437.61	1,240.04	4,607.61	4,601.33	6.28	733.305		
1,800.00	1,800.00	1,744.29	1,743.74	3.91	2.66	164.45	-4,439.15	1,235.28	4,607.96	4,601.39	6.57	701.175		
1,900.00	1,900.00	1,794.00	1,793.21	4.13	2.75	164.51	-4,441.09	1,230.78	4,609.31	4,602.43	6.88	669.759		
2,000.00	2,000.00	1,876.42	1,875.16	4.36	2.92	164.62	-4,445.08	1,222.92	4,611.44	4,604.16	7.28	633.613		
2,100.00	2,099.99	1,971.87	1,970.05	4.57	3.15	79.43	-4,449.90	1,213.83	4,613.64	4,605.93	7.71	598.044		
2,200.00	2,199.96	2,070.98	2,068.60	4.77	3.41	79.57	-4,454.89	1,204.50	4,615.58	4,607.40	8.18	564.393		
2,300.00	2,299.86	2,172.68	2,169.71	4.97	3.71	79.74	-4,460.02	1,194.81	4,617.22	4,608.54	8.68	532.180		
2,400.00	2,399.68	2,275.93	2,272.35	5.18	4.03	79.94	-4,465.15	1,184.91	4,618.51	4,609.31	9.20	501.873		
2,500.00	2,499.37	2,385.43	2,381.23	5.40	4.38	80.18	-4,470.38	1,174.54	4,619.41	4,609.64	9.77	472.862		
2,581.25	2,580.25	2,460.66	2,456.06	5.58	4.63	80.35	-4,473.84	1,167.62	4,619.90	4,609.70	10.20	453.059		
2,600.00	2,598.91	2,477.72	2,473.04	5.62	4.69	80.39	-4,474.64	1,166.06	4,620.01	4,609.72	10.30	448.733		
2,700.00	2,698.39	2,582.00	2,576.77	5.85	5.05	80.65	-4,479.43	1,156.56	4,620.60	4,609.72	10.88	424.845		
2,800.00	2,797.88	2,676.00	2,670.29	6.08	5.38	80.88	-4,483.71	1,148.08	4,621.24	4,609.81	11.43	404.253		
2,900.00	2,897.36	2,809.85	2,803.48	6.31	5.85	81.20	-4,489.14	1,136.05	4,621.46	4,609.33	12.14	380.733		
3,000.00	2,996.85	2,912.18	2,905.35	6.55	6.22	81.45	-4,492.99	1,127.07	4,621.58	4,608.84	12.74	362.774		
3,100.00	3,096.34	3,001.11	2,993.91	6.79	6.54	81.66	-4,496.13	1,119.63	4,621.66	4,608.37	13.30	347.578		
3,200.00	3,195.82	3,135.54	3,127.78	7.03	7.02	81.97	-4,501.13	1,108.46	4,622.13	4,608.11	14.03	329.558		
3,300.00	3,295.31	3,230.73	3,222.50	7.28	7.38	82.21	-4,504.12	1,099.47	4,621.76	4,607.14	14.62	316.110		
3,400.00	3,394.79	3,349.67	3,340.89	7.53	7.82	82.49	-4,507.62	1,088.63	4,621.33	4,606.02	15.31	301.908		
3,500.00	3,494.28	3,430.00	3,420.87	7.78	8.11	82.68	-4,509.93	1,081.52	4,620.99	4,605.14	15.85	291.494		
3,600.00	3,593.77	3,525.00	3,515.43	8.03	8.47	82.91	-4,512.93	1,072.92	4,620.95	4,604.50	16.46	280.782		
3,621.18	3,614.84	3,552.21	3,542.52	8.08	8.57	82.98	-4,513.80	1,070.38	4,620.95	4,604.33	16.61	278.151		
3,700.00	3,693.25	3,642.95	3,632.82	8.28	8.91	83.20	-4,516.39	1,061.98	4,620.73	4,603.57	17.15	269.387		
3,796.64	3,789.39	3,725.31	3,714.79	8.53	9.22	83.40	-4,518.80	1,054.26	4,620.57	4,602.87	17.71	260.926		
3,800.00	3,792.74	3,727.84	3,717.30	8.54	9.23	83.41	-4,518.88	1,054.02	4,620.58	4,602.85	17.73	260.659		
3,900.00	3,892.22	3,809.00	3,798.03	8.79	9.54	83.61	-4,521.67	1,046.11	4,620.92	4,602.63	18.29	252.648		
4,000.00	3,991.71	3,898.92	3,887.47	9.05	9.89	83.84	-4,525.01	1,037.40	4,621.62	4,602.73	18.89	244.669		
4,100.00	4,091.20	3,997.00	3,985.07	9.31	10.26	84.08	-4,528.41	1,028.35	4,622.28	4,602.76	19.52	236.808		
4,200.00	4,190.68	4,062.26	4,050.00	9.57	10.51	84.24	-4,530.93	1,022.25	4,623.41	4,603.38	20.03	230.876		
4,300.00	4,290.17	4,129.70	4,117.02	9.83	10.77	84.41	-4,534.21	1,015.59	4,625.45	4,604.90	20.54	225.175		
4,400.00	4,389.65	4,226.91	4,213.65	10.09	11.15	84.65	-4,539.30	1,006.25	4,627.99	4,606.81	21.18	218.546		
4,500.00	4,489.14	4,336.71	4,322.87	10.36	11.58	84.92	-4,544.51	996.25	4,630.22	4,608.36	21.86	211.828		
4,600.00	4,588.62	4,416.73	4,402.51	10.62	11.88	85.11	-4,548.33	989.51	4,632.70	4,610.28	22.42	206.614		
4,700.00	4,688.11	4,490.38	4,475.80	10.88	12.17	85.29	-4,552.23	983.38	4,635.75	4,612.79	22.96	201.905		
4,800.00	4,787.60	4,567.61	4,552.65	11.15	12.46	85.47	-4,556.68	977.03	4,639.37	4,615.86	23.51	197.316		
4,900.00	4,887.08	4,681.71	4,666.14	11.41	12.91	85.74	-4,563.32	967.32	4,643.06	4,618.85	24.21	191.754		
5,000.00	4,986.57	4,770.85	4,754.78	11.68	13.25	85.95	-4,568.44	959.54	4,646.75	4,621.93	24.82	187.241		
5,100.00	5,086.05	4,849.00	4,832.53	11.95	13.55	86.14	-4,573.27	953.28	4,651.01	4,625.63	25.37	183.297		
5,200.00	5,185.54	4,907.55	4,890.78	12.21	13.78	86.27	-4,577.22	948.94	4,655.93	4,630.08	25.85	180.114		
5,300.00	5,285.03	5,157.28	5,139.24	12.48	14.74	86.85	-4,591.14	928.19	4,659.86	4,632.77	27.09	172.012		
5,400.00	5,384.51	5,260.33	5,241.89	12.75	15.14	87.09	-4,595.22	920.07	4,662.24	4,634.49	27.75	168.027		
5,500.00	5,484.00	5,396.72	5,377.59	13.02	15.67	87.42	-4,599.88	907.24	4,663.94	4,635.40	28.54	163.412		
5,600.00	5,583.48	5,499.64	5,479.70	13.28	16.08	87.70	-4,603.28	894.87	4,665.33	4,636.11	29.22	159.662		
5,700.00	5,682.97	5,590.33	5,569.57	13.55	16.45	87.96	-4,606.41	883.13	4,666.88	4,637.02	29.86	156.314		
5,800.00	5,782.45	5,676.00	5,654.45	13.82	16.80	88.20	-4,609.44	871.89	4,668.61	4,638.14	30.47	153.211		
5,900.00	5,881.94	5,744.13	5,721.95	14.09	17.09	88.40	-4,612.14	863.02	4,670.91	4,639.90	31.01	150.603		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 62H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 85-ISCWSA-GYRO-3, 1447-LEAM_MWD, 15750-Project													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
6,000.00	5,981.43	5,799.30	5,776.62	14.36	17.31	88.56	-4,614.76	856.10	4,674.12	4,642.62	31.50	148.380		
6,100.00	6,080.91	5,866.00	5,842.71	14.63	17.59	88.74	-4,618.68	848.00	4,678.45	4,646.41	32.03	146.050		
6,200.00	6,180.40	5,926.49	5,902.69	14.90	17.83	88.90	-4,622.63	841.16	4,683.56	4,651.03	32.53	143.962		
6,300.00	6,279.88	6,011.64	5,987.22	15.17	18.18	89.12	-4,626.24	832.59	4,689.07	4,655.94	33.13	141.524		
6,400.00	6,379.37	6,107.71	6,082.64	15.44	18.56	89.35	-4,634.75	823.61	4,694.91	4,661.13	33.77	139.009		
6,500.00	6,478.86	15,750.00	11,082.01	15.72	85.39	-176.94	51.96	150.89	4,630.70	4,585.45	45.25	102.330		
6,600.00	6,578.34	15,750.00	11,082.01	15.99	85.39	-176.94	51.96	150.89	4,532.02	4,486.59	45.42	99.773		
6,700.00	6,677.83	15,750.00	11,082.01	16.26	85.39	-176.94	51.96	150.89	4,433.39	4,387.79	45.60	97.224		
6,800.00	6,777.31	15,750.00	11,082.01	16.53	85.39	-176.94	51.96	150.89	4,334.82	4,289.04	45.78	94.682		
6,900.00	6,876.80	15,750.00	11,082.01	16.80	85.39	-176.94	51.96	150.89	4,236.32	4,190.35	45.97	92.149		
7,000.00	6,976.29	15,750.00	11,082.01	17.07	85.39	-176.94	51.96	150.89	4,137.89	4,091.72	46.17	89.624		
7,100.00	7,075.77	15,750.00	11,082.01	17.35	85.39	-176.94	51.96	150.89	4,039.54	3,993.17	46.37	87.108		
7,200.00	7,175.26	15,750.00	11,082.01	17.62	85.39	-176.94	51.96	150.89	3,941.27	3,894.69	46.59	84.602		
7,300.00	7,274.74	15,750.00	11,082.01	17.89	85.39	-176.94	51.96	150.89	3,843.09	3,796.29	46.81	82.105		
7,400.00	7,374.23	15,750.00	11,082.01	18.16	85.39	-176.94	51.96	150.89	3,745.01	3,697.97	47.04	79.618		
7,500.00	7,473.71	15,750.00	11,082.01	18.44	85.39	-176.94	51.96	150.89	3,647.03	3,599.76	47.28	77.140		
7,600.00	7,573.20	15,750.00	11,082.01	18.71	85.39	-176.94	51.96	150.89	3,549.17	3,501.64	47.53	74.673		
7,700.00	7,672.69	15,750.00	11,082.01	18.98	85.39	-176.94	51.96	150.89	3,451.43	3,403.63	47.79	72.216		
7,800.00	7,772.17	15,750.00	11,082.01	19.26	85.39	-176.94	51.96	150.89	3,353.82	3,305.75	48.07	69.769		
7,900.00	7,871.66	15,750.00	11,082.01	19.53	85.39	-176.94	51.96	150.89	3,256.35	3,207.99	48.36	67.333		
8,000.00	7,971.14	15,750.00	11,082.01	19.80	85.39	-176.94	51.96	150.89	3,159.05	3,110.38	48.67	64.907		
8,100.00	8,070.63	15,750.00	11,082.01	20.08	85.39	-176.94	51.96	150.89	3,061.92	3,012.92	49.00	62.492		
8,200.00	8,170.12	15,750.00	11,082.01	20.35	85.39	-176.94	51.96	150.89	2,964.97	2,915.63	49.34	60.088		
8,300.00	8,269.60	15,750.00	11,082.01	20.63	85.39	-176.94	51.96	150.89	2,868.24	2,818.53	49.71	57.694		
8,400.00	8,369.09	15,750.00	11,082.01	20.90	85.39	-176.94	51.96	150.89	2,771.74	2,721.63	50.11	55.311		
8,500.00	8,468.57	15,750.00	11,082.01	21.17	85.39	-176.94	51.96	150.89	2,675.50	2,624.96	50.54	52.939		
8,600.00	8,568.06	15,750.00	11,082.01	21.45	85.39	-176.94	51.96	150.89	2,579.54	2,528.54	51.00	50.578		
8,700.00	8,667.54	15,750.00	11,082.01	21.72	85.39	-176.94	51.96	150.89	2,483.91	2,432.40	51.50	48.228		
8,800.00	8,767.03	15,750.00	11,082.01	22.00	85.39	-176.94	51.96	150.89	2,388.63	2,336.58	52.05	45.891		
8,900.00	8,866.52	15,750.00	11,082.01	22.27	85.39	-176.94	51.96	150.89	2,293.75	2,241.10	52.65	43.565		
9,000.00	8,966.00	15,750.00	11,082.01	22.55	85.39	-176.94	51.96	150.89	2,199.32	2,146.01	53.31	41.252		
9,100.00	9,065.49	15,750.00	11,082.01	22.82	85.39	-176.94	51.96	150.89	2,105.41	2,051.37	54.05	38.954		
9,200.00	9,164.97	15,750.00	11,082.01	23.09	85.39	-176.94	51.96	150.89	2,012.09	1,957.22	54.87	36.672		
9,232.01	9,196.82	15,750.00	11,082.01	23.18	85.39	-176.94	51.96	150.89	1,982.36	1,927.21	55.15	35.945		
9,300.00	9,264.50	15,750.00	11,082.01	23.35	85.39	-176.85	51.96	150.89	1,919.29	1,863.51	55.78	34.411		
9,400.00	9,364.17	15,750.00	11,082.01	23.55	85.39	-176.71	51.96	150.89	1,826.60	1,769.84	56.76	32.182		
9,500.00	9,463.97	15,749.59	11,082.03	23.74	85.39	-176.61	51.55	150.93	1,734.02	1,676.19	57.83	29.985		
9,600.00	9,563.86	15,747.14	11,082.08	23.92	85.39	-176.68	49.11	151.13	1,641.62	1,582.61	59.01	27.818		
9,700.00	9,663.82	15,744.69	11,082.14	24.09	85.39	-176.77	46.67	151.34	1,549.45	1,489.14	60.31	25.691		
9,800.00	9,763.81	15,742.25	11,082.20	24.25	85.39	-176.88	44.24	151.54	1,457.58	1,395.83	61.74	23.607		
9,813.26	9,777.07	15,741.92	11,082.21	24.27	85.39	-91.59	43.91	151.57	1,445.42	1,383.48	61.95	23.333		
9,900.00	9,863.81	15,739.80	11,082.26	24.43	85.39	-91.80	41.80	151.75	1,366.38	1,303.01	63.36	21.564		
10,000.00	9,963.81	15,737.36	11,082.32	24.61	85.38	-92.04	39.37	151.95	1,276.48	1,211.24	65.24	19.565		
10,100.00	10,063.81	15,734.92	11,082.38	24.80	85.38	-92.29	36.93	152.16	1,188.20	1,120.77	67.43	17.620		
10,113.26	10,077.07	15,734.59	11,082.39	24.83	85.38	-92.32	36.61	152.18	1,176.64	1,108.89	67.75	17.367		
10,150.00	10,113.79	15,732.52	11,082.44	24.89	85.38	94.28	34.55	152.36	1,144.78	1,076.12	68.66	16.673		
10,200.00	10,163.48	15,725.95	11,082.60	24.97	85.37	101.79	28.00	152.91	1,102.07	1,032.10	69.97	15.751		
10,250.00	10,212.52	15,715.10	11,082.87	25.06	85.37	108.11	17.19	153.81	1,060.42	989.05	71.36	14.859		
10,300.00	10,260.52	15,700.04	11,083.24	25.14	85.36	113.27	2.19	155.07	1,020.15	947.35	72.80	14.012		
10,350.00	10,307.13	15,682.07	11,083.67	25.22	85.15	117.46	-15.71	156.55	981.59	907.44	74.14	13.239		
10,400.00	10,351.99	15,661.00	11,084.15	25.30	84.83	120.78	-36.72	158.19	945.03	869.60	75.43	12.528		
10,450.00	10,394.76	15,632.98	11,084.72	25.38	84.40	123.17	-64.65	160.23	910.74	834.06	76.68	11.877		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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		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		
10,500.00	10,435.11	15,596.99	11,085.30	25.46	83.84	124.76	-100.53	162.93	878.74	800.87	77.86	11.286		
10,550.00	10,472.73	15,557.53	11,085.72	25.55	83.23	125.93	-139.87	166.06	849.09	770.12	78.97	10.752		
10,600.00	10,507.34	15,520.48	11,085.91	25.64	82.67	126.99	-176.80	169.02	821.97	741.94	80.03	10.271		
10,650.00	10,538.68	15,481.53	11,085.92	25.75	82.07	127.77	-215.65	171.95	797.60	716.61	80.98	9.849		
10,700.00	10,566.51	15,443.60	11,085.79	25.86	81.49	128.42	-253.48	174.62	776.10	694.27	81.83	9.485		
10,750.00	10,590.61	15,407.57	11,085.95	25.99	80.95	128.98	-289.43	177.00	757.81	675.30	82.51	9.185		
10,800.00	10,610.80	15,364.00	11,086.66	26.14	80.28	129.29	-332.91	179.69	742.87	659.90	82.97	8.953		
10,850.00	10,626.93	15,321.90	11,087.60	26.31	79.65	129.58	-374.92	182.22	731.00	647.76	83.24	8.782		
10,900.00	10,638.87	15,271.74	11,088.68	26.50	78.89	129.76	-424.98	185.31	721.87	638.58	83.28	8.668		
10,950.00	10,646.54	15,222.34	11,089.67	26.71	78.15	129.98	-474.27	188.37	715.48	632.36	83.13	8.607		
11,000.00	10,649.87	15,172.71	11,090.58	26.94	77.40	130.25	-523.80	191.36	711.90	629.14	82.76	8.602		
11,018.94	10,650.00	15,154.46	11,090.88	27.04	77.13	130.35	-542.02	192.41	711.30	628.72	82.58	8.614		
11,100.00	10,649.20	15,076.19	11,091.90	27.48	75.97	130.64	-620.18	196.45	709.77	628.00	81.77	8.680		
11,200.00	10,648.20	14,976.85	11,093.73	28.11	74.50	131.06	-719.36	201.72	708.15	627.34	80.81	8.763		
11,300.00	10,647.21	14,873.84	11,095.55	28.82	72.99	131.49	-822.19	207.42	706.36	626.44	79.92	8.839		
11,400.00	10,646.22	14,773.43	11,096.37	29.60	71.52	131.84	-922.47	212.59	704.25	625.10	79.15	8.898		
11,500.00	10,645.23	14,676.00	11,097.23	30.45	70.12	132.17	-1,019.78	217.17	702.54	624.10	78.44	8.957		
11,600.00	10,644.24	14,572.44	11,097.86	31.37	68.63	132.50	-1,123.22	222.24	700.53	622.72	77.82	9.002		
11,700.00	10,643.25	14,473.06	11,097.94	32.34	67.22	132.78	-1,222.49	226.82	698.41	621.14	77.26	9.039		
11,800.00	10,642.25	14,372.39	11,097.80	33.37	65.81	133.03	-1,323.07	231.15	696.36	619.57	76.79	9.069		
11,900.00	10,641.26	14,268.71	11,097.45	34.44	64.37	133.30	-1,426.64	235.94	693.97	617.60	76.37	9.087		
12,000.00	10,640.27	14,162.19	11,096.11	35.55	62.90	133.53	-1,533.03	240.99	690.87	614.82	76.05	9.085		
12,100.00	10,639.28	14,058.32	11,094.15	36.71	61.47	133.75	-1,636.74	246.58	686.89	611.14	75.75	9.068		
12,200.00	10,638.29	13,954.14	11,091.66	37.90	60.06	133.96	-1,740.72	252.41	682.40	606.90	75.49	9.039		
12,300.00	10,637.30	13,852.15	11,089.16	39.12	58.69	134.20	-1,842.48	258.77	677.41	602.18	75.23	9.004		
12,400.00	10,636.30	13,753.27	11,087.00	40.38	57.38	134.47	-1,941.11	265.33	672.36	597.42	74.94	8.972		
12,500.00	10,635.31	13,658.20	11,084.92	41.66	56.15	134.70	-2,036.00	271.01	667.77	593.08	74.69	8.941		
12,600.00	10,634.32	13,555.81	11,082.40	42.96	54.84	134.91	-2,138.19	276.74	663.27	588.72	74.55	8.897		
12,700.00	10,633.33	13,461.15	11,080.02	44.29	53.65	135.08	-2,232.69	281.59	659.09	584.68	74.41	8.858		
12,800.00	10,632.34	13,361.70	11,077.70	45.63	52.43	135.24	-2,332.01	286.17	655.39	581.04	74.36	8.814		
12,900.00	10,631.35	13,260.27	11,075.22	47.00	51.22	135.43	-2,433.29	291.36	651.27	576.94	74.33	8.762		
13,000.00	10,630.35	13,170.45	11,074.40	48.38	50.16	135.68	-2,522.97	295.99	648.21	574.06	74.15	8.742		
13,100.00	10,629.36	13,074.85	11,073.93	49.78	49.07	135.93	-2,618.49	300.24	645.98	571.92	74.06	8.722		
13,174.09	10,628.63	13,011.12	11,074.27	50.83	48.36	136.11	-2,682.17	302.54	645.31	571.37	73.94	8.727		
13,200.00	10,628.37	12,988.46	11,074.62	51.19	48.11	136.18	-2,704.81	303.25	645.35	571.45	73.90	8.733		
13,300.00	10,627.38	12,898.42	11,076.31	52.62	47.15	136.41	-2,794.82	304.96	646.60	572.77	73.84	8.757		
13,400.00	10,626.39	12,791.81	11,077.85	54.05	46.05	136.60	-2,901.41	306.32	647.99	573.94	74.05	8.751		
13,500.00	10,625.40	12,690.30	11,079.07	55.50	45.04	136.82	-3,002.90	308.36	648.70	574.49	74.21	8.741		
13,600.00	10,624.40	12,593.64	11,080.74	56.96	44.12	137.08	-3,099.51	310.52	649.66	575.34	74.32	8.741		
13,700.00	10,623.41	12,494.14	11,082.48	58.43	43.21	137.30	-3,198.98	312.13	651.06	576.53	74.53	8.735		
13,800.00	10,622.42	12,396.35	11,083.85	59.91	42.36	137.50	-3,296.75	313.78	652.19	577.40	74.79	8.721		
13,900.00	10,621.43	12,302.18	11,087.16	61.39	41.58	137.82	-3,390.85	315.62	654.66	579.74	74.92	8.738		
14,000.00	10,620.44	12,195.45	11,090.80	62.88	40.75	138.24	-3,497.47	318.59	656.55	581.38	75.17	8.734		
14,100.00	10,619.44	12,092.03	11,093.75	64.38	40.00	138.63	-3,600.80	321.80	657.85	582.40	75.45	8.719		
14,200.00	10,618.45	11,988.20	11,096.49	65.89	39.31	139.05	-3,704.52	325.72	658.58	582.84	75.74	8.695		
14,300.00	10,617.46	11,883.60	11,098.66	67.40	38.69	139.47	-3,809.01	329.99	658.71	582.61	76.11	8.655		
14,349.33	10,616.97	11,835.71	11,099.66	68.15	38.44	139.68	-3,856.84	332.24	658.60	582.35	76.25	8.637		
14,400.00	10,616.47	11,789.17	11,101.03	68.92	38.21	139.91	-3,903.30	334.52	658.76	582.40	76.37	8.626		
14,500.00	10,615.48	11,689.39	11,104.59	70.45	37.78	140.44	-4,002.89	339.44	659.57	582.92	76.65	8.605		
14,600.00	10,614.49	11,576.29	11,107.79	71.98	37.44	141.05	-4,115.77	345.74	659.48	582.41	77.07	8.557		
14,700.00	10,613.49	11,379.00	11,095.47	73.51	37.16	141.76	-4,311.21	365.73	648.12	569.79	78.33	8.274		
14,800.00	10,612.50	10,894.80	10,820.25	75.05	36.89	120.47	-4,689.36	371.95	596.27	504.39	91.88	6.490		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 62H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 85-ISCWSA-GYRO-3, 1447-LEAM_MWD, 15750-Project													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (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	
14,900.00	10,611.51	10,684.27	10,633.19	76.59	36.43	96.89	-4,781.08	393.90	532.12	435.46	96.66	5.505		
15,000.00	10,610.52	10,639.11	10,590.13	78.14	36.28	90.30	-4,792.00	401.92	464.84	362.63	102.21	4.548		
15,100.00	10,609.53	10,616.70	10,568.29	79.69	36.20	86.83	-4,795.76	405.25	409.42	300.86	108.56	3.772		
15,200.00	10,608.54	10,602.57	10,554.41	81.24	36.15	84.61	-4,797.61	407.13	372.30	258.53	113.77	3.272		
15,297.44	10,607.57	10,590.00	10,542.01	82.76	36.11	82.62	-4,798.94	408.68	359.56	244.36	115.20	3.121 CC, ES, SF		
15,300.00	10,607.54	10,590.00	10,542.01	82.80	36.11	82.62	-4,798.94	408.68	359.57	244.39	115.19	3.122		
15,400.00	10,606.55	10,585.06	10,537.12	84.36	36.09	81.84	-4,799.37	409.26	373.86	262.08	111.78	3.345		
15,500.00	10,605.56	10,579.49	10,531.60	85.92	36.07	80.96	-4,799.80	409.90	412.47	307.64	104.83	3.935		
15,600.00	10,604.57	10,575.24	10,527.39	87.48	36.05	80.28	-4,800.08	410.37	469.48	372.43	97.05	4.837		
15,700.00	10,603.58	10,571.90	10,524.08	89.05	36.04	79.75	-4,800.27	410.73	539.11	449.06	90.06	5.986		
15,800.00	10,602.59	10,569.21	10,521.40	90.62	36.03	79.33	-4,800.40	411.02	617.12	532.78	84.33	7.318		
15,900.00	10,601.59	10,559.00	10,511.25	92.20	35.99	77.72	-4,800.76	412.07	700.83	621.12	79.71	8.792		
16,000.00	10,600.60	10,559.00	10,511.25	93.77	35.99	77.72	-4,800.76	412.07	788.19	711.91	76.27	10.334		
16,100.00	10,599.61	10,559.00	10,511.25	95.35	35.99	77.72	-4,800.76	412.07	878.25	804.64	73.61	11.931		
16,200.00	10,598.62	10,559.00	10,511.25	96.93	35.99	77.72	-4,800.76	412.07	970.26	898.72	71.54	13.562		
16,300.00	10,597.63	10,559.00	10,511.25	98.51	35.99	77.72	-4,800.76	412.07	1,063.71	993.78	69.93	15.212		
16,400.00	10,596.64	10,559.00	10,511.25	100.09	35.99	77.72	-4,800.76	412.07	1,158.26	1,089.60	68.66	16.869		
16,500.00	10,595.64	10,559.00	10,511.25	101.68	35.99	77.72	-4,800.76	412.07	1,253.65	1,185.99	67.67	18.527		
16,600.00	10,594.65	10,559.00	10,511.25	103.26	35.99	77.72	-4,800.76	412.07	1,349.71	1,282.84	66.88	20.182		
16,700.00	10,593.66	10,559.00	10,511.25	104.85	35.99	77.72	-4,800.76	412.07	1,446.31	1,380.06	66.25	21.831		
16,800.00	10,592.67	10,559.00	10,511.25	106.44	35.99	77.72	-4,800.76	412.07	1,543.34	1,477.58	65.75	23.472		
16,900.00	10,591.68	10,559.00	10,511.25	108.03	35.99	77.72	-4,800.76	412.07	1,640.72	1,575.36	65.36	25.104		
17,000.00	10,590.69	10,559.00	10,511.25	109.63	35.99	77.72	-4,800.76	412.07	1,738.40	1,673.36	65.04	26.727		
17,100.00	10,589.69	10,559.00	10,511.25	111.22	35.99	77.72	-4,800.76	412.07	1,836.34	1,771.54	64.80	28.340		
17,200.00	10,588.70	10,559.00	10,511.25	112.82	35.99	77.72	-4,800.76	412.07	1,934.48	1,869.88	64.60	29.944		
17,300.00	10,587.71	10,559.00	10,511.25	114.41	35.99	77.72	-4,800.76	412.07	2,032.80	1,968.35	64.45	31.539		
17,400.00	10,586.72	10,559.00	10,511.25	116.01	35.99	77.72	-4,800.76	412.07	2,131.28	2,066.94	64.34	33.124		
17,500.00	10,585.73	10,559.00	10,511.25	117.61	35.99	77.72	-4,800.76	412.07	2,229.90	2,165.64	64.26	34.701		
17,600.00	10,584.74	10,559.00	10,511.25	119.21	35.99	77.72	-4,800.76	412.07	2,328.63	2,264.43	64.21	36.268		
17,700.00	10,583.74	10,559.00	10,511.25	120.81	35.99	77.72	-4,800.76	412.07	2,427.47	2,363.30	64.17	37.828		
17,800.00	10,582.75	10,547.19	10,499.50	122.41	35.95	75.87	-4,800.97	413.24	2,526.30	2,462.18	64.11	39.403		
17,900.00	10,581.76	10,546.63	10,498.95	124.01	35.95	75.78	-4,800.97	413.29	2,625.30	2,561.18	64.11	40.947		
18,000.00	10,580.77	10,546.10	10,498.42	125.62	35.94	75.70	-4,800.98	413.34	2,724.37	2,660.24	64.13	42.484		
18,077.45	10,580.00	10,545.71	10,498.03	126.59	35.94	75.64	-4,800.98	413.38	2,801.15	2,733.22	67.93	41.236		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 72H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 62- VES GyroFlex V2, 10428-LEAM MWD+HDGM, 15490-Project													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	174.60	-9,893.46	934.42	9,937.58					
100.00	100.00	97.25	97.25	0.09	0.09	174.61	-9,893.23	934.03	9,937.30	9,937.13	0.17	N/A		
200.00	200.00	187.74	187.74	0.31	0.20	174.61	-9,892.95	933.35	9,936.92	9,936.42	0.50	N/A		
300.00	300.00	269.07	269.06	0.54	0.26	174.61	-9,892.85	932.69	9,936.72	9,935.94	0.78	N/A		
400.00	400.00	346.52	346.51	0.76	0.31	174.62	-9,892.84	932.03	9,936.65	9,935.60	1.05	9,441.570		
404.52	404.52	361.32	361.31	0.77	0.32	174.62	-9,892.85	931.90	9,936.64	9,935.57	1.07	9,294.257		
500.00	500.00	441.29	441.28	0.99	0.36	174.62	-9,893.06	931.24	9,936.80	9,935.48	1.32	7,524.825		
600.00	600.00	512.52	512.50	1.21	0.39	174.63	-9,893.40	930.76	9,937.18	9,935.61	1.57	6,312.846		
700.00	700.00	598.89	598.87	1.43	0.43	174.63	-9,893.88	930.34	9,937.70	9,935.87	1.83	5,425.736		
800.00	800.00	742.89	742.87	1.66	0.49	174.63	-9,894.53	929.77	9,938.13	9,936.03	2.11	4,721.155		
900.00	900.00	838.85	838.83	1.88	0.53	174.63	-9,894.70	929.50	9,938.28	9,935.92	2.36	4,209.440		
1,000.00	1,000.00	915.14	915.12	2.11	0.56	174.63	-9,894.91	929.40	9,938.55	9,935.94	2.61	3,807.068		
1,100.00	1,100.00	995.17	995.14	2.33	0.59	174.63	-9,895.30	929.45	9,939.04	9,936.18	2.86	3,473.198		
1,200.00	1,200.00	1,100.98	1,100.95	2.56	0.61	174.63	-9,895.92	929.86	9,939.67	9,936.55	3.12	3,185.554		
1,300.00	1,300.00	1,193.91	1,193.88	2.78	0.63	174.63	-9,896.42	930.47	9,940.27	9,936.90	3.37	2,946.335		
1,400.00	1,400.00	1,307.64	1,307.61	3.01	0.65	174.63	-9,897.00	931.18	9,940.83	9,937.20	3.63	2,736.269		
1,500.00	1,500.00	1,398.87	1,398.84	3.23	0.68	174.62	-9,897.45	931.63	9,941.37	9,937.49	3.89	2,558.386		
1,600.00	1,600.00	1,483.76	1,483.72	3.46	0.70	174.62	-9,897.97	932.17	9,942.04	9,937.90	4.14	2,403.468		
1,700.00	1,700.00	1,612.28	1,612.24	3.68	0.73	174.62	-9,898.67	932.99	9,942.65	9,938.25	4.40	2,260.283		
1,800.00	1,800.00	1,728.61	1,728.57	3.91	0.76	174.61	-9,899.00	933.51	9,942.96	9,938.31	4.66	2,135.346		
1,900.00	1,900.00	1,814.36	1,814.31	4.13	0.78	174.61	-9,899.26	933.82	9,943.30	9,938.40	4.91	2,026.710		
2,000.00	2,000.00	1,899.18	1,899.14	4.36	0.80	174.61	-9,899.69	934.11	9,943.83	9,938.68	5.16	1,928.276		
2,100.00	2,099.99	2,039.53	2,039.48	4.57	0.84	89.31	-9,900.33	934.51	9,944.34	9,938.93	5.41	1,837.861		
2,200.00	2,199.96	2,136.45	2,136.40	4.77	0.87	89.32	-9,900.47	934.67	9,944.47	9,938.83	5.64	1,763.236		
2,300.00	2,299.86	2,261.36	2,261.31	4.97	0.90	89.35	-9,900.55	934.85	9,944.50	9,938.63	5.87	1,694.168		
2,400.00	2,399.68	2,366.61	2,366.56	5.18	0.90	89.39	-9,900.50	934.86	9,944.38	9,938.30	6.09	1,634.049		
2,500.00	2,499.37	2,493.94	2,493.89	5.40	0.91	89.45	-9,900.23	934.66	9,944.08	9,937.78	6.30	1,577.228		
2,581.25	2,580.25	2,580.08	2,580.03	5.58	0.91	89.50	-9,899.88	934.36	9,943.66	9,937.17	6.49	1,532.598		
2,600.00	2,598.91	2,597.72	2,597.67	5.62	0.91	89.51	-9,899.82	934.29	9,943.56	9,937.03	6.53	1,522.492		
2,700.00	2,698.39	15,490.00	10,980.34	5.85	101.62	94.12	-5,255.61	937.98	9,887.41	9,846.43	40.98	241.285		
2,800.00	2,797.88	15,490.00	10,980.34	6.08	101.62	94.12	-5,255.61	937.98	9,803.32	9,762.31	41.01	239.020		
2,900.00	2,897.36	15,490.00	10,980.34	6.31	101.62	94.12	-5,255.61	937.98	9,719.54	9,678.48	41.06	236.723		
3,000.00	2,996.85	15,490.00	10,980.34	6.55	101.62	94.12	-5,255.61	937.98	9,636.06	9,594.95	41.11	234.398		
3,100.00	3,096.34	15,490.00	10,980.34	6.79	101.62	94.12	-5,255.61	937.98	9,552.90	9,511.73	41.17	232.048		
3,200.00	3,195.82	15,490.00	10,980.34	7.03	101.62	94.12	-5,255.61	937.98	9,470.07	9,428.83	41.23	229.677		
3,300.00	3,295.31	15,490.00	10,980.34	7.28	101.62	94.12	-5,255.61	937.98	9,387.57	9,346.26	41.30	227.290		
3,400.00	3,394.79	15,490.00	10,980.34	7.53	101.62	94.12	-5,255.61	937.98	9,305.41	9,264.03	41.38	224.888		
3,500.00	3,494.28	15,490.00	10,980.34	7.78	101.62	94.12	-5,255.61	937.98	9,223.61	9,182.15	41.46	222.477		
3,600.00	3,593.77	15,490.00	10,980.34	8.03	101.62	94.12	-5,255.61	937.98	9,142.16	9,100.62	41.54	220.058		
3,700.00	3,693.25	15,490.00	10,980.34	8.28	101.62	94.12	-5,255.61	937.98	9,061.09	9,019.46	41.63	217.636		
3,800.00	3,792.74	15,490.00	10,980.34	8.54	101.62	94.12	-5,255.61	937.98	8,980.40	8,938.68	41.73	215.212		
3,900.00	3,892.22	15,490.00	10,980.34	8.79	101.62	94.12	-5,255.61	937.98	8,900.11	8,858.28	41.83	212.789		
4,000.00	3,991.71	15,490.00	10,980.34	9.05	101.62	94.12	-5,255.61	937.98	8,820.21	8,778.29	41.93	210.371		
4,100.00	4,091.20	15,490.00	10,980.34	9.31	101.62	94.12	-5,255.61	937.98	8,740.73	8,698.70	42.03	207.958		
4,200.00	4,190.68	15,490.00	10,980.34	9.57	101.62	94.12	-5,255.61	937.98	8,661.68	8,619.54	42.14	205.554		
4,300.00	4,290.17	15,490.00	10,980.34	9.83	101.62	94.12	-5,255.61	937.98	8,583.06	8,540.81	42.25	203.161		
4,400.00	4,389.65	15,490.00	10,980.34	10.09	101.62	94.12	-5,255.61	937.98	8,504.89	8,462.53	42.36	200.779		
4,500.00	4,489.14	15,490.00	10,980.34	10.36	101.62	94.12	-5,255.61	937.98	8,427.19	8,384.71	42.47	198.412		
4,600.00	4,588.62	15,490.00	10,980.34	10.62	101.62	94.12	-5,255.61	937.98	8,349.95	8,307.36	42.59	196.060		
4,700.00	4,688.11	15,490.00	10,980.34	10.88	101.62	94.12	-5,255.61	937.98	8,273.21	8,230.50	42.71	193.725		
4,800.00	4,787.60	15,490.00	10,980.34	11.15	101.62	94.12	-5,255.61	937.98	8,196.97	8,154.14	42.82	191.409		
4,900.00	4,887.08	15,490.00	10,980.34	11.41	101.62	94.12	-5,255.61	937.98	8,121.24	8,078.29	42.94	189.112		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 72H - OH - OH														Offset Site Error:	0.00 usft
Survey Program: 62- VES GyroFlex V2, 10428-LEAM MWD+HDGM, 15490-Project														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
5,000.00	4,986.57	15,490.00	10,980.34	11.68	101.62	94.12	-5,255.61	937.98	8,046.04	8,002.97	43.06	186.837			
5,100.00	5,086.05	15,490.00	10,980.34	11.95	101.62	94.12	-5,255.61	937.98	7,971.39	7,928.20	43.19	184.585			
5,200.00	5,185.54	15,490.00	10,980.34	12.21	101.62	94.12	-5,255.61	937.98	7,897.29	7,853.99	43.31	182.357			
5,300.00	5,285.03	15,490.00	10,980.34	12.48	101.62	94.12	-5,255.61	937.98	7,823.78	7,780.35	43.43	180.153			
5,400.00	5,384.51	15,490.00	10,980.34	12.75	101.62	94.12	-5,255.61	937.98	7,750.86	7,707.31	43.55	177.975			
5,500.00	5,484.00	15,490.00	10,980.34	13.02	101.62	94.12	-5,255.61	937.98	7,678.54	7,634.87	43.67	175.825			
5,600.00	5,583.48	15,490.00	10,980.34	13.28	101.62	94.12	-5,255.61	937.98	7,606.86	7,563.07	43.79	173.702			
5,700.00	5,682.97	15,490.00	10,980.34	13.55	101.62	94.12	-5,255.61	937.98	7,535.82	7,491.90	43.91	171.609			
5,800.00	5,782.45	15,490.00	10,980.34	13.82	101.62	94.12	-5,255.61	937.98	7,465.44	7,421.41	44.03	169.546			
5,900.00	5,881.94	15,490.00	10,980.34	14.09	101.62	94.12	-5,255.61	937.98	7,395.75	7,351.60	44.15	167.513			
6,000.00	5,981.43	15,490.00	10,980.34	14.36	101.62	94.12	-5,255.61	937.98	7,326.75	7,282.49	44.27	165.513			
6,100.00	6,080.91	15,490.00	10,980.34	14.63	101.62	94.12	-5,255.61	937.98	7,258.48	7,214.10	44.38	163.546			
6,200.00	6,180.40	15,490.00	10,980.34	14.90	101.62	94.12	-5,255.61	937.98	7,190.95	7,146.46	44.50	161.612			
6,300.00	6,279.88	15,490.00	10,980.34	15.17	101.62	94.12	-5,255.61	937.98	7,124.19	7,079.58	44.61	159.713			
6,400.00	6,379.37	15,490.00	10,980.34	15.44	101.62	94.12	-5,255.61	937.98	7,058.21	7,013.50	44.71	157.850			
6,500.00	6,478.86	15,490.00	10,980.34	15.72	101.62	94.12	-5,255.61	937.98	6,993.04	6,948.22	44.82	156.024			
6,600.00	6,578.34	15,490.00	10,980.34	15.99	101.62	94.12	-5,255.61	937.98	6,928.70	6,883.77	44.92	154.234			
6,700.00	6,677.83	15,490.00	10,980.34	16.26	101.62	94.12	-5,255.61	937.98	6,865.21	6,820.19	45.02	152.483			
6,800.00	6,777.31	15,490.00	10,980.34	16.53	101.62	94.12	-5,255.61	937.98	6,802.60	6,757.48	45.12	150.771			
6,900.00	6,876.80	15,490.00	10,980.34	16.80	101.62	94.12	-5,255.61	937.98	6,740.89	6,695.68	45.21	149.099			
7,000.00	6,976.29	15,490.00	10,980.34	17.07	101.62	94.12	-5,255.61	937.98	6,680.11	6,634.81	45.30	147.468			
7,100.00	7,075.77	15,490.00	10,980.34	17.35	101.62	94.12	-5,255.61	937.98	6,620.28	6,574.90	45.38	145.878			
7,200.00	7,175.26	15,490.00	10,980.34	17.62	101.62	94.12	-5,255.61	937.98	6,561.43	6,515.97	45.46	144.331			
7,300.00	7,274.74	15,490.00	10,980.34	17.89	101.62	94.12	-5,255.61	937.98	6,503.59	6,458.05	45.53	142.828			
7,400.00	7,374.23	15,490.00	10,980.34	18.16	101.62	94.12	-5,255.61	937.98	6,446.77	6,401.17	45.60	141.368			
7,500.00	7,473.71	15,490.00	10,980.34	18.44	101.62	94.12	-5,255.61	937.98	6,391.02	6,345.36	45.67	139.954			
7,600.00	7,573.20	15,490.00	10,980.34	18.71	101.62	94.12	-5,255.61	937.98	6,336.36	6,290.64	45.72	138.586			
7,700.00	7,672.69	15,490.00	10,980.34	18.98	101.62	94.12	-5,255.61	937.98	6,282.81	6,237.04	45.77	137.265			
7,800.00	7,772.17	15,490.00	10,980.34	19.26	101.62	94.12	-5,255.61	937.98	6,230.40	6,184.59	45.81	135.992			
7,900.00	7,871.66	15,490.00	10,980.34	19.53	101.62	94.12	-5,255.61	937.98	6,179.17	6,133.32	45.85	134.767			
8,000.00	7,971.14	15,490.00	10,980.34	19.80	101.62	94.12	-5,255.61	937.98	6,129.15	6,083.27	45.88	133.592			
8,100.00	8,070.63	15,490.00	10,980.34	20.08	101.62	94.12	-5,255.61	937.98	6,080.35	6,034.45	45.90	132.468			
8,200.00	8,170.12	15,490.00	10,980.34	20.35	101.62	94.12	-5,255.61	937.98	6,032.82	5,986.91	45.91	131.394			
8,300.00	8,269.60	15,490.00	10,980.34	20.63	101.62	94.12	-5,255.61	937.98	5,986.59	5,940.67	45.92	130.373			
8,400.00	8,369.09	15,490.00	10,980.34	20.90	101.62	94.12	-5,255.61	937.98	5,941.67	5,895.76	45.92	129.404			
8,500.00	8,468.57	15,490.00	10,980.34	21.17	101.62	94.12	-5,255.61	937.98	5,898.11	5,852.21	45.90	128.489			
8,600.00	8,568.06	15,490.00	10,980.34	21.45	101.62	94.12	-5,255.61	937.98	5,855.94	5,810.05	45.88	127.629			
8,700.00	8,667.54	15,490.00	10,980.34	21.72	101.62	94.12	-5,255.61	937.98	5,815.17	5,769.32	45.85	126.824			
8,800.00	8,767.03	15,490.00	10,980.34	22.00	101.62	94.12	-5,255.61	937.98	5,775.85	5,730.04	45.81	126.075			
8,900.00	8,866.52	15,490.00	10,980.34	22.27	101.62	94.12	-5,255.61	937.98	5,738.01	5,692.24	45.76	125.382			
9,000.00	8,966.00	15,490.00	10,980.34	22.55	101.62	94.12	-5,255.61	937.98	5,701.67	5,655.96	45.71	124.746			
9,100.00	9,065.49	15,490.00	10,980.34	22.82	101.62	94.12	-5,255.61	937.98	5,666.86	5,621.22	45.64	124.168			
9,200.00	9,164.97	15,490.00	10,980.34	23.09	101.62	94.12	-5,255.61	937.98	5,633.61	5,588.04	45.56	123.648			
9,232.01	9,196.82	15,490.00	10,980.34	23.18	101.62	94.12	-5,255.61	937.98	5,623.30	5,577.76	45.53	123.494			
9,300.00	9,264.50	15,490.00	10,980.34	23.35	101.62	93.89	-5,255.61	937.98	5,601.92	5,556.46	45.45	123.243			
9,400.00	9,364.17	15,490.00	10,980.34	23.55	101.62	93.58	-5,255.61	937.98	5,571.74	5,526.44	45.30	123.003			
9,500.00	9,463.97	15,490.00	10,980.34	23.74	101.62	93.28	-5,255.61	937.98	5,543.09	5,497.96	45.13	122.822			
9,600.00	9,563.86	15,490.00	10,980.34	23.92	101.62	93.00	-5,255.61	937.98	5,516.01	5,471.05	44.96	122.699			
9,700.00	9,663.82	15,490.00	10,980.34	24.09	101.62	92.73	-5,255.61	937.98	5,490.53	5,445.76	44.77	122.634			
9,800.00	9,763.81	15,490.00	10,980.34	24.25	101.62	92.49	-5,255.61	937.98	5,466.68	5,422.10	44.58	122.624			
9,813.26	9,777.07	15,490.00	10,980.34	24.27	101.62	177.76	-5,255.61	937.98	5,463.64	5,419.09	44.56	122.625			
9,900.00	9,863.81	15,490.00	10,980.34	24.43	101.62	177.76	-5,255.61	937.98	5,444.52	5,400.12	44.40	122.624			

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 72H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 62- VES GyroFlex V2, 10428-LEAM MWD+HDGM, 15490-Project													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,000.00	9,963.81	15,490.00	10,980.34	24.61	101.62	177.76	-5,255.61	937.98	5,424.11	5,379.88	44.23	122.644		
10,100.00	10,063.81	15,490.00	10,980.34	24.80	101.62	177.76	-5,255.61	937.98	5,405.47	5,361.42	44.05	122.716		
10,113.26	10,077.07	15,490.00	10,980.34	24.83	101.62	177.76	-5,255.61	937.98	5,403.13	5,359.11	44.02	122.730		
10,150.00	10,113.79	15,490.00	10,980.34	24.89	101.62	-1.85	-5,255.61	937.98	5,395.66	5,351.71	43.96	122.750		
10,200.00	10,163.48	15,490.00	10,980.34	24.97	101.62	-1.89	-5,255.61	937.98	5,382.21	5,338.35	43.86	122.709		
10,250.00	10,212.52	15,490.00	10,980.34	25.06	101.62	-1.96	-5,255.61	937.98	5,365.02	5,321.25	43.77	122.573		
10,300.00	10,260.52	15,490.00	10,980.34	25.14	101.62	-2.04	-5,255.61	937.98	5,344.21	5,300.53	43.68	122.345		
10,350.00	10,307.13	15,490.00	10,980.34	25.22	101.62	-2.14	-5,255.61	937.98	5,319.87	5,276.28	43.60	122.027		
10,400.00	10,351.99	15,490.00	10,980.34	25.30	101.62	-2.27	-5,255.61	937.98	5,292.16	5,248.65	43.51	121.619		
10,450.00	10,394.76	15,490.00	10,980.34	25.38	101.62	-2.43	-5,255.61	937.98	5,261.23	5,217.80	43.44	121.125		
10,500.00	10,435.11	15,490.00	10,980.34	25.46	101.62	-2.63	-5,255.61	937.98	5,227.27	5,183.90	43.36	120.545		
10,550.00	10,472.73	15,490.00	10,980.34	25.55	101.62	-2.89	-5,255.61	937.98	5,190.46	5,147.17	43.30	119.883		
10,600.00	10,507.34	15,490.00	10,980.34	25.64	101.62	-3.24	-5,255.61	937.98	5,151.05	5,107.81	43.23	119.142		
10,650.00	10,538.68	15,490.00	10,980.34	25.75	101.62	-3.70	-5,255.61	937.98	5,109.26	5,066.08	43.18	118.326		
10,700.00	10,566.51	15,490.00	10,980.34	25.86	101.62	-4.34	-5,255.61	937.98	5,065.36	5,022.23	43.13	117.439		
10,750.00	10,590.61	15,490.00	10,980.34	25.99	101.62	-5.29	-5,255.61	937.98	5,019.64	4,976.55	43.09	116.487		
10,800.00	10,610.80	15,490.00	10,980.34	26.14	101.62	-6.82	-5,255.61	937.98	4,972.40	4,929.34	43.06	115.475		
10,850.00	10,626.93	15,490.00	10,980.34	26.31	101.62	-9.63	-5,255.61	937.98	4,923.96	4,880.92	43.04	114.408		
10,900.00	10,638.87	15,490.00	10,980.34	26.50	101.62	-16.36	-5,255.61	937.98	4,874.66	4,831.63	43.03	113.292		
10,950.00	10,646.54	15,490.00	10,980.34	26.71	101.62	-47.46	-5,255.61	937.98	4,824.85	4,781.82	43.03	112.132		
11,000.00	10,649.87	15,490.00	10,980.34	26.94	101.62	-147.22	-5,255.61	937.98	4,774.90	4,731.85	43.04	110.936		
11,018.94	10,650.00	15,490.00	10,980.34	27.04	101.62	-158.04	-5,255.61	937.98	4,756.02	4,712.97	43.05	110.474		
11,100.00	10,649.20	15,490.00	10,980.34	27.48	101.62	-158.04	-5,255.61	937.98	4,675.33	4,632.24	43.10	108.485		
11,200.00	10,648.20	15,490.00	10,980.34	28.11	101.62	-158.04	-5,255.61	937.98	4,575.81	4,532.66	43.16	106.028		
11,300.00	10,647.21	15,490.00	10,980.34	28.82	101.62	-158.04	-5,255.61	937.98	4,476.32	4,433.09	43.22	103.568		
11,400.00	10,646.22	15,490.00	10,980.34	29.60	101.62	-158.04	-5,255.61	937.98	4,376.84	4,333.55	43.29	101.105		
11,500.00	10,645.23	15,490.00	10,980.34	30.45	101.62	-158.04	-5,255.61	937.98	4,277.39	4,234.03	43.36	98.640		
11,600.00	10,644.24	15,490.00	10,980.34	31.37	101.62	-158.04	-5,255.61	937.98	4,177.96	4,134.52	43.44	96.173		
11,700.00	10,643.25	15,490.00	10,980.34	32.34	101.62	-158.04	-5,255.61	937.98	4,078.57	4,035.04	43.53	93.703		
11,800.00	10,642.25	15,490.00	10,980.34	33.37	101.62	-158.04	-5,255.61	937.98	3,979.20	3,935.59	43.62	91.233		
11,900.00	10,641.26	15,490.00	10,980.34	34.44	101.62	-158.04	-5,255.61	937.98	3,879.87	3,836.16	43.71	88.760		
12,000.00	10,640.27	15,490.00	10,980.34	35.55	101.62	-158.04	-5,255.61	937.98	3,780.57	3,736.76	43.81	86.287		
12,100.00	10,639.28	15,490.00	10,980.34	36.71	101.62	-158.04	-5,255.61	937.98	3,681.31	3,637.39	43.92	83.812		
12,200.00	10,638.29	15,490.00	10,980.34	37.90	101.62	-158.04	-5,255.61	937.98	3,582.09	3,538.05	44.04	81.337		
12,300.00	10,637.30	15,490.00	10,980.34	39.12	101.62	-158.04	-5,255.61	937.98	3,482.92	3,438.75	44.16	78.862		
12,400.00	10,636.30	15,490.00	10,980.34	40.38	101.62	-158.04	-5,255.61	937.98	3,383.79	3,339.49	44.30	76.386		
12,500.00	10,635.31	15,490.00	10,980.34	41.66	101.62	-158.04	-5,255.61	937.98	3,284.72	3,240.28	44.44	73.911		
12,600.00	10,634.32	15,490.00	10,980.34	42.96	101.62	-158.04	-5,255.61	937.98	3,185.70	3,141.11	44.60	71.436		
12,700.00	10,633.33	15,490.00	10,980.34	44.29	101.62	-158.04	-5,255.61	937.98	3,086.75	3,041.99	44.76	68.962		
12,800.00	10,632.34	15,490.00	10,980.34	45.63	101.62	-158.04	-5,255.61	937.98	2,987.87	2,942.93	44.94	66.488		
12,900.00	10,631.35	15,490.00	10,980.34	47.00	101.62	-158.04	-5,255.61	937.98	2,889.06	2,843.93	45.13	64.016		
13,000.00	10,630.35	15,490.00	10,980.34	48.38	101.62	-158.04	-5,255.61	937.98	2,790.34	2,745.01	45.34	61.546		
13,100.00	10,629.36	15,490.00	10,980.34	49.78	101.62	-158.04	-5,255.61	937.98	2,691.72	2,646.16	45.56	59.077		
13,200.00	10,628.37	15,490.00	10,980.34	51.19	101.62	-158.04	-5,255.61	937.98	2,593.20	2,547.39	45.81	56.611		
13,300.00	10,627.38	15,490.00	10,980.34	52.62	101.62	-158.04	-5,255.61	937.98	2,494.80	2,448.72	46.07	54.148		
13,400.00	10,626.39	15,490.00	10,980.34	54.05	101.62	-158.04	-5,255.61	937.98	2,396.53	2,350.16	46.37	51.687		
13,500.00	10,625.40	15,490.00	10,980.34	55.50	101.62	-158.04	-5,255.61	937.98	2,298.41	2,251.72	46.69	49.231		
13,600.00	10,624.40	15,490.00	10,980.34	56.96	101.62	-158.04	-5,255.61	937.98	2,200.45	2,153.41	47.04	46.778		
13,700.00	10,623.41	15,490.00	10,980.34	58.43	101.62	-158.04	-5,255.61	937.98	2,102.70	2,055.26	47.43	44.331		
13,800.00	10,622.42	15,490.00	10,980.34	59.91	101.62	-158.04	-5,255.61	937.98	2,005.16	1,957.29	47.87	41.890		
13,900.00	10,621.43	15,490.00	10,980.34	61.39	101.62	-158.04	-5,255.61	937.98	1,907.88	1,859.52	48.36	39.455		
14,000.00	10,620.44	15,490.00	10,980.34	62.88	101.62	-158.04	-5,255.61	937.98	1,810.89	1,761.98	48.91	37.028		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit - 72H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 62- VES GyroFlex V2, 10428-LEAM MWD+HDGM, 15490-Project													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						
14,100.00	10,619.44	15,490.00	10,980.34	64.38	101.62	-158.04	-5,255.61	937.98	1,714.25	1,664.72	49.53	34.611		
14,200.00	10,618.45	15,490.00	10,980.34	65.89	101.62	-158.04	-5,255.61	937.98	1,618.02	1,567.78	50.24	32.205		
14,300.00	10,617.46	15,490.00	10,980.34	67.40	101.62	-158.04	-5,255.61	937.98	1,522.27	1,471.21	51.06	29.814		
14,400.00	10,616.47	15,490.00	10,980.34	68.92	101.62	-158.04	-5,255.61	937.98	1,427.11	1,375.10	52.01	27.440		
14,500.00	10,615.48	15,490.00	10,980.34	70.45	101.62	-158.04	-5,255.61	937.98	1,332.66	1,279.54	53.12	25.088		
14,600.00	10,614.49	15,490.00	10,980.34	71.98	101.62	-158.04	-5,255.61	937.98	1,239.07	1,184.64	54.43	22.763		
14,700.00	10,613.49	15,490.00	10,980.34	73.51	101.62	-158.04	-5,255.61	937.98	1,146.58	1,090.57	56.00	20.473		
14,800.00	10,612.50	15,490.00	10,980.34	75.05	101.62	-158.04	-5,255.61	937.98	1,055.45	997.55	57.90	18.230		
14,900.00	10,611.51	15,490.00	10,980.34	76.59	101.62	-158.04	-5,255.61	937.98	966.07	905.87	60.20	16.047		
15,000.00	10,610.52	15,490.00	10,980.34	78.14	101.62	-158.04	-5,255.61	937.98	878.99	815.96	63.03	13.945		
15,100.00	10,609.53	15,490.00	10,980.34	79.69	101.62	-158.04	-5,255.61	937.98	794.96	728.43	66.53	11.949		
15,200.00	10,608.54	15,490.00	10,980.34	81.24	101.62	-158.04	-5,255.61	937.98	715.05	644.21	70.84	10.094		
15,300.00	10,607.54	15,490.00	10,980.34	82.80	101.62	-158.04	-5,255.61	937.98	640.80	564.72	76.08	8.423		
15,400.00	10,606.55	15,490.00	10,980.34	84.36	101.62	-158.04	-5,255.61	937.98	574.41	492.20	82.21	6.987		
15,500.00	10,605.56	15,490.00	10,980.34	85.92	101.62	-158.04	-5,255.61	937.98	518.92	430.06	88.86	5.840		
15,600.00	10,604.57	15,490.00	10,980.34	87.48	101.62	-158.04	-5,255.61	937.98	478.13	383.11	95.03	5.032		
15,700.00	10,603.58	15,490.00	10,980.34	89.05	101.62	-158.04	-5,255.61	937.98	456.01	356.90	99.11	4.601		
15,753.35	10,603.05	15,490.00	10,980.34	89.89	101.62	-158.04	-5,255.61	937.98	452.88	352.99	99.89	4.534	CC, ES, SF	
15,800.00	10,602.59	15,475.16	10,981.12	90.62	101.62	-158.02	-5,270.42	938.57	455.03	354.89	100.14	4.544		
15,900.00	10,601.59	15,370.94	10,986.09	92.20	100.13	-157.87	-5,374.42	943.05	461.72	361.12	100.60	4.590		
16,000.00	10,600.60	15,270.82	10,989.93	93.77	98.11	-157.65	-5,474.36	947.74	467.69	366.78	100.91	4.635		
16,100.00	10,599.61	15,173.77	10,993.97	95.35	96.20	-157.44	-5,571.21	952.34	473.98	372.76	101.22	4.683		
16,200.00	10,598.62	15,074.72	10,998.61	96.93	94.01	-157.29	-5,670.06	956.73	480.65	379.31	101.35	4.743		
16,300.00	10,597.63	14,973.49	11,003.43	98.51	91.68	-157.19	-5,771.08	960.84	487.24	385.90	101.34	4.808		
16,400.00	10,596.64	14,869.06	11,007.99	100.09	89.29	-157.11	-5,875.35	964.74	493.35	392.07	101.28	4.871		
16,500.00	10,595.64	14,763.02	11,011.17	101.68	86.91	-157.02	-5,981.29	968.15	497.99	396.77	101.22	4.920		
16,600.00	10,594.65	14,662.33	11,014.24	103.26	84.73	-157.08	-6,081.91	969.99	502.14	401.17	100.96	4.973		
16,700.00	10,593.66	14,563.94	11,017.26	104.85	82.82	-157.15	-6,180.24	971.74	506.28	405.48	100.80	5.022		
16,800.00	10,592.67	14,466.39	11,020.67	106.44	80.90	-157.20	-6,277.71	973.75	510.94	410.27	100.67	5.075		
16,900.00	10,591.68	14,366.58	11,024.41	108.03	78.67	-157.26	-6,377.42	975.90	515.86	415.42	100.44	5.136		
17,000.00	10,590.69	14,261.87	11,027.85	109.63	76.35	-157.30	-6,482.05	978.21	520.38	420.19	100.20	5.194		
17,100.00	10,589.69	14,161.90	11,030.49	111.22	74.29	-157.33	-6,581.96	980.08	524.18	424.12	100.06	5.239		
17,200.00	10,588.70	14,065.27	11,033.02	112.82	72.20	-157.26	-6,678.52	982.99	528.39	428.27	100.12	5.277		
17,300.00	10,587.71	13,966.01	11,035.62	114.41	70.09	-157.07	-6,777.66	987.12	533.05	432.69	100.36	5.311		
17,400.00	10,586.72	13,868.46	11,038.38	116.01	68.16	-156.89	-6,875.08	991.20	537.92	437.27	100.65	5.345		
17,500.00	10,585.73	13,769.59	11,041.26	117.61	66.02	-156.65	-6,973.79	996.00	543.14	442.17	100.96	5.380		
17,600.00	10,584.74	13,669.06	11,043.89	119.21	63.77	-156.34	-7,074.14	1,001.62	548.39	447.01	101.37	5.410		
17,700.00	10,583.74	13,568.86	11,046.52	120.81	61.62	-156.05	-7,174.16	1,006.94	553.54	451.78	101.76	5.439		
17,800.00	10,582.75	13,469.46	11,049.43	122.41	59.62	-155.85	-7,273.41	1,011.53	558.71	456.64	102.06	5.474		
17,900.00	10,581.76	13,368.44	11,052.89	124.01	57.42	-155.74	-7,374.30	1,015.44	564.02	461.88	102.15	5.522		
18,000.00	10,580.77	13,258.35	11,054.49	125.62	55.04	-155.47	-7,484.25	1,020.39	567.78	465.41	102.38	5.546		
18,077.45	10,580.00	13,181.02	11,055.28	126.59	53.39	-155.28	-7,561.51	1,023.77	570.37	467.93	102.44	5.568		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 57H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 172- VES GyroFlex V2, 1519-MWD-ISCWSA, 16135-Project													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	164.09	-4,744.72	1,352.07	4,933.65					
100.00	100.00	65.48	65.48	0.09	0.05	164.10	-4,744.83	1,352.00	4,933.72	4,933.58	0.14	N/A		
200.00	200.00	148.16	148.15	0.31	0.12	164.10	-4,745.30	1,351.73	4,934.17	4,933.75	0.42	N/A		
300.00	300.00	237.72	237.71	0.54	0.19	164.11	-4,746.13	1,351.30	4,934.92	4,934.20	0.72	6,810.888		
400.00	400.00	342.74	342.73	0.76	0.27	164.12	-4,747.15	1,350.88	4,935.75	4,934.73	1.02	4,823.402		
500.00	500.00	446.60	446.59	0.99	0.33	164.12	-4,747.98	1,350.58	4,936.44	4,935.14	1.31	3,777.665		
600.00	600.00	549.95	549.93	1.21	0.38	164.13	-4,748.72	1,350.41	4,937.08	4,935.51	1.57	3,134.979		
700.00	700.00	656.32	656.30	1.43	0.43	164.13	-4,749.34	1,350.23	4,937.60	4,935.75	1.85	2,670.006		
800.00	800.00	756.64	756.61	1.66	0.48	164.13	-4,749.84	1,350.11	4,938.04	4,935.93	2.12	2,331.450		
900.00	900.00	853.97	853.95	1.88	0.53	164.14	-4,750.37	1,349.98	4,938.53	4,936.15	2.38	2,071.999		
1,000.00	1,000.00	957.70	957.67	2.11	0.57	164.14	-4,750.93	1,349.89	4,939.03	4,936.38	2.65	1,863.325		
1,100.00	1,100.00	1,058.46	1,058.43	2.33	0.61	164.14	-4,751.32	1,350.01	4,939.43	4,936.52	2.92	1,693.450		
1,200.00	1,200.00	1,153.35	1,153.32	2.56	0.65	164.14	-4,751.74	1,350.15	4,939.90	4,936.72	3.18	1,553.390		
1,300.00	1,300.00	1,269.34	1,269.31	2.78	0.69	164.14	-4,752.20	1,350.30	4,940.32	4,936.87	3.45	1,431.596		
1,400.00	1,400.00	1,371.99	1,371.96	3.01	0.73	164.14	-4,752.34	1,350.41	4,940.49	4,936.77	3.72	1,329.868		
1,500.00	1,500.00	1,470.94	1,470.92	3.23	0.75	164.14	-4,752.48	1,350.49	4,940.65	4,936.68	3.97	1,245.442		
1,600.00	1,600.00	1,614.00	1,613.97	3.46	0.81	164.14	-4,752.30	1,349.87	4,940.42	4,936.15	4.26	1,159.523		
1,698.24	1,698.24	1,677.46	1,677.42	3.68	0.88	164.15	-4,752.16	1,349.11	4,939.95	4,935.41	4.54	1,087.396		
1,700.00	1,700.00	1,678.42	1,678.38	3.68	0.88	164.15	-4,752.16	1,349.10	4,939.95	4,935.40	4.55	1,086.231		
1,800.00	1,800.00	1,709.00	1,708.96	3.91	0.91	164.16	-4,752.35	1,348.74	4,940.54	4,935.73	4.80	1,028.445		
1,900.00	1,900.00	1,760.60	1,760.55	4.13	0.98	164.16	-4,753.26	1,348.33	4,942.22	4,937.12	5.10	969.333		
2,000.00	2,000.00	1,804.00	1,803.93	4.36	1.04	164.17	-4,754.70	1,348.31	4,945.28	4,939.90	5.38	919.310		
2,100.00	2,099.99	1,836.37	1,836.26	4.57	1.09	78.83	-4,756.17	1,348.38	4,949.41	4,943.77	5.64	876.797		
2,200.00	2,199.96	1,899.00	1,898.77	4.77	1.19	78.82	-4,759.98	1,348.29	4,954.52	4,948.58	5.95	833.270		
2,300.00	2,299.86	1,930.27	1,929.96	4.97	1.25	78.79	-4,762.27	1,348.11	4,960.20	4,953.99	6.21	799.093		
2,400.00	2,399.68	1,998.53	1,998.00	5.18	1.39	78.80	-4,767.74	1,347.24	4,966.40	4,959.85	6.55	758.542		
2,500.00	2,499.37	2,719.68	2,714.96	5.40	3.40	80.21	-4,791.98	1,285.11	4,963.09	4,954.33	8.76	566.832		
2,581.25	2,580.25	2,780.85	2,775.85	5.58	3.54	80.38	-4,790.61	1,279.49	4,958.09	4,949.00	9.09	545.447		
2,600.00	2,598.91	2,796.45	2,791.39	5.62	3.58	80.41	-4,790.27	1,278.12	4,956.96	4,947.79	9.17	540.492		
2,700.00	2,698.39	2,884.74	2,879.34	5.85	3.80	80.59	-4,788.43	1,270.61	4,951.10	4,941.47	9.63	514.079		
2,800.00	2,797.88	2,977.78	2,971.93	6.08	4.07	80.80	-4,786.88	1,261.60	4,945.42	4,935.29	10.13	488.271		
2,900.00	2,897.36	3,057.87	3,051.61	6.31	4.30	80.98	-4,785.72	1,253.67	4,939.98	4,929.38	10.60	466.130		
3,000.00	2,996.85	3,127.00	3,120.46	6.55	4.49	81.12	-4,785.02	1,247.48	4,935.21	4,924.18	11.03	447.387		
3,100.00	3,096.34	3,237.70	3,230.69	6.79	4.82	81.36	-4,784.06	1,237.41	4,930.64	4,919.05	11.60	425.152		
3,200.00	3,195.82	3,326.76	3,319.31	7.03	5.10	81.56	-4,783.42	1,228.53	4,926.08	4,913.96	12.12	406.344		
3,300.00	3,295.31	3,418.32	3,410.46	7.28	5.38	81.77	-4,782.77	1,219.94	4,921.74	4,909.10	12.64	389.332		
3,400.00	3,394.79	3,505.00	3,496.84	7.53	5.62	81.95	-4,782.16	1,212.68	4,917.70	4,904.57	13.13	374.633		
3,500.00	3,494.28	3,629.21	3,620.58	7.78	5.98	82.21	-4,781.17	1,201.89	4,913.58	4,899.85	13.74	357.716		
3,600.00	3,593.77	3,734.99	3,725.93	8.03	6.30	82.44	-4,779.87	1,192.54	4,909.06	4,894.76	14.29	343.428		
3,700.00	3,693.25	3,818.15	3,808.82	8.28	6.53	82.61	-4,778.82	1,185.82	4,904.75	4,889.97	14.78	331.799		
3,800.00	3,792.74	3,899.92	3,890.29	8.54	6.78	82.78	-4,778.18	1,178.89	4,900.88	4,885.60	15.28	320.826		
3,900.00	3,892.22	3,991.82	3,981.72	8.79	7.07	82.99	-4,777.90	1,169.70	4,897.23	4,881.40	15.83	309.426		
4,000.00	3,991.71	4,071.00	4,060.45	9.05	7.34	83.18	-4,778.09	1,161.28	4,894.03	4,877.68	16.35	299.317		
4,100.00	4,091.20	4,165.00	4,153.98	9.31	7.64	83.40	-4,778.37	1,151.83	4,891.09	4,874.18	16.91	289.289		
4,200.00	4,190.68	4,250.95	4,239.59	9.57	7.89	83.59	-4,778.45	1,144.29	4,888.31	4,870.89	17.42	280.637		
4,300.00	4,290.17	4,389.61	4,377.79	9.83	8.30	83.88	-4,778.16	1,132.92	4,885.41	4,867.33	18.08	270.174		
4,400.00	4,389.65	4,491.05	4,478.77	10.09	8.62	84.11	-4,777.56	1,123.28	4,881.94	4,863.29	18.66	261.662		
4,500.00	4,489.14	4,576.57	4,563.92	10.36	8.89	84.30	-4,777.29	1,115.40	4,878.88	4,859.69	19.19	254.288		
4,600.00	4,588.62	4,692.90	4,679.74	10.62	9.25	84.56	-4,776.81	1,104.56	4,875.79	4,855.98	19.81	246.178		
4,700.00	4,688.11	4,767.76	4,754.33	10.88	9.47	84.72	-4,776.25	1,098.18	4,872.63	4,852.34	20.29	240.154		
4,800.00	4,787.60	4,827.00	4,813.42	11.15	9.63	84.84	-4,776.25	1,094.02	4,870.40	4,849.69	20.72	235.066		
4,900.00	4,887.08	4,888.49	4,874.80	11.41	9.78	84.96	-4,776.61	1,090.38	4,869.01	4,847.87	21.14	230.326		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit (Offsets) - 57H - OH - OH													Offset Site Error:	0.00 usft
Survey Program: 172- VES GyroFlex V2, 1519-MWD-ISCWSA, 16135-Project													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N-S (usft)	Offset Wellbore Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,000.00	4,986.57	4,955.55	4,941.77	11.68	9.94	85.08	-4,777.28	1,087.02	4,868.27	4,846.71	21.56	225.752		
5,050.18	5,036.49	4,987.62	4,973.82	11.81	10.01	85.13	-4,777.71	1,085.78	4,868.18	4,846.41	21.77	223.618		
5,100.00	5,086.05	5,024.87	5,011.04	11.95	10.09	85.19	-4,778.29	1,084.65	4,868.26	4,846.28	21.98	221.453		
5,200.00	5,185.54	5,167.58	5,153.72	12.21	10.37	85.39	-4,779.74	1,081.86	4,868.12	4,845.60	22.53	216.103		
5,300.00	5,285.03	5,278.55	5,264.68	12.48	10.57	85.55	-4,780.12	1,080.04	4,867.39	4,844.39	23.00	211.633		
5,400.00	5,384.51	5,366.38	5,351.22	12.75	11.62	86.30	-4,770.98	1,053.30	4,861.94	4,837.68	24.26	200.372		
5,500.00	5,484.00	5,753.70	5,737.85	13.02	11.93	86.52	-4,767.49	1,042.88	4,855.50	4,830.66	24.84	195.507		
5,600.00	5,583.48	5,826.00	5,809.56	13.28	12.19	86.70	-4,764.74	1,034.14	4,849.35	4,823.99	25.36	191.200		
5,700.00	5,682.97	5,903.92	5,886.89	13.55	12.46	86.90	-4,762.11	1,024.90	4,843.74	4,817.84	25.90	186.992		
5,800.00	5,782.45	6,003.26	5,985.51	13.82	12.81	87.15	-4,759.20	1,013.38	4,838.65	4,812.13	26.51	182.493		
5,900.00	5,881.94	6,093.72	6,075.34	14.09	13.13	87.37	-4,756.47	1,003.00	4,833.59	4,806.49	27.09	178.405		
6,000.00	5,981.43	6,177.12	6,158.18	14.36	13.42	87.58	-4,754.12	993.67	4,828.85	4,801.20	27.65	174.642		
6,100.00	6,080.91	6,393.00	6,372.54	14.63	14.17	88.11	-4,747.37	969.30	4,824.74	4,796.12	28.62	168.570		
6,200.00	6,180.40	6,456.52	6,435.33	14.90	14.42	88.29	-4,744.04	960.31	4,817.75	4,788.60	29.15	165.272		
6,300.00	6,279.88	6,502.26	6,480.62	15.17	14.61	88.41	-4,742.51	954.13	4,812.37	4,782.76	29.61	162.506		
6,400.00	6,379.37	6,614.28	6,591.56	15.44	15.04	88.72	-4,738.81	939.04	4,807.26	4,776.95	30.31	158.600		
6,500.00	6,478.86	6,707.53	6,683.91	15.72	15.41	88.98	-4,735.79	926.47	4,802.32	4,771.38	30.94	155.209		
6,600.00	6,578.34	6,806.58	6,782.07	15.99	15.78	89.24	-4,732.37	913.69	4,797.35	4,765.77	31.58	151.908		
6,700.00	6,677.83	6,881.56	6,856.46	16.26	16.06	89.44	-4,729.93	904.64	4,792.76	4,760.63	32.13	149.171		
6,800.00	6,777.31	6,960.00	6,934.32	16.53	16.35	89.64	-4,727.90	895.35	4,788.90	4,756.21	32.69	146.496		
6,900.00	6,876.80	7,008.12	6,982.09	16.80	16.53	89.76	-4,727.01	889.62	4,785.77	4,752.62	33.15	144.364		
7,000.00	6,976.29	7,054.00	7,027.64	17.07	16.70	89.88	-4,726.42	884.12	4,783.53	4,749.93	33.60	142.366		
7,100.00	7,075.77	7,129.13	7,102.25	17.35	16.97	90.08	-4,726.02	875.29	4,782.08	4,747.92	34.15	140.018		
7,200.00	7,175.26	7,254.55	7,226.92	17.62	17.41	90.39	-4,725.70	861.62	4,781.02	4,746.15	34.87	137.124		
7,300.00	7,274.74	7,347.62	7,319.37	17.89	17.74	90.63	-4,725.15	850.92	4,779.65	4,744.18	35.47	134.753		
7,400.00	7,374.23	7,434.34	7,405.53	18.16	18.04	90.85	-4,724.79	841.12	4,778.55	4,742.50	36.06	132.533		
7,500.00	7,473.71	7,526.00	7,496.71	18.44	18.35	91.07	-4,724.43	831.77	4,777.65	4,741.01	36.64	130.402		
7,600.00	7,573.20	7,610.70	7,581.00	18.71	18.63	91.28	-4,724.25	823.44	4,777.04	4,739.84	37.20	128.432		
7,649.92	7,622.86	7,643.35	7,613.49	18.85	18.74	91.35	-4,724.29	820.24	4,776.94	4,739.49	37.44	127.581		
7,700.00	7,672.69	7,673.65	7,643.65	18.98	18.84	91.43	-4,724.45	817.28	4,777.04	4,739.36	37.68	126.773		
7,800.00	7,772.17	7,737.54	7,707.24	19.26	19.04	91.58	-4,725.16	811.16	4,777.89	4,739.72	38.17	125.190		
7,900.00	7,871.66	7,810.00	7,779.44	19.53	19.26	91.74	-4,726.35	805.19	4,779.40	4,740.74	38.66	123.613		
8,000.00	7,971.14	7,904.00	7,873.17	19.80	19.53	91.93	-4,728.18	798.30	4,781.33	4,742.11	39.21	121.932		
8,100.00	8,070.63	8,036.94	8,005.67	20.08	19.91	92.22	-4,730.11	787.62	4,782.75	4,742.86	39.89	119.907		
8,200.00	8,170.12	8,122.30	8,090.74	20.35	20.16	92.41	-4,731.33	780.78	4,784.27	4,743.85	40.42	118.378		
8,300.00	8,269.60	8,252.47	8,220.54	20.63	20.53	92.68	-4,733.12	771.17	4,785.89	4,744.82	41.07	116.535		
8,400.00	8,369.09	8,352.82	8,320.61	20.90	20.81	92.89	-4,733.80	763.61	4,786.82	4,745.19	41.63	114.992		
8,500.00	8,468.57	8,459.15	8,426.68	21.17	21.10	93.11	-4,734.61	756.26	4,787.93	4,745.73	42.20	113.463		
8,600.00	8,568.06	8,560.03	8,527.29	21.45	21.38	93.32	-4,735.22	748.86	4,788.91	4,746.15	42.76	112.000		
8,700.00	8,667.54	8,655.80	8,622.72	21.72	21.67	93.53	-4,735.83	740.79	4,789.98	4,746.66	43.32	110.564		
8,800.00	8,767.03	8,748.04	8,714.65	22.00	21.94	93.73	-4,736.49	733.34	4,791.21	4,747.33	43.88	109.197		
8,900.00	8,866.52	8,860.04	8,826.26	22.27	22.27	93.97	-4,737.25	724.04	4,792.46	4,747.97	44.49	107.724		
9,000.00	8,966.00	8,971.10	8,936.91	22.55	22.60	94.22	-4,737.50	714.57	4,793.31	4,748.22	45.10	106.291		
9,100.00	9,065.49	9,048.11	9,013.68	22.82	22.83	94.39	-4,737.90	708.45	4,794.54	4,748.94	45.60	105.144		
9,200.00	9,164.97	9,157.23	9,122.37	23.09	23.16	94.63	-4,738.41	698.78	4,795.78	4,749.57	46.21	103.778		
9,232.01	9,196.82	9,182.30	9,147.33	23.18	23.24	94.69	-4,738.54	696.48	4,796.22	4,749.84	46.38	103.415		
9,300.00	9,264.50	9,238.97	9,203.78	23.35	23.41	94.82	-4,738.95	691.44	4,797.26	4,750.54	46.72	102.686		
9,400.00	9,364.17	9,336.53	9,301.01	23.55	23.71	95.03	-4,739.70	683.54	4,798.77	4,751.56	47.21	101.644		
9,500.00	9,463.97	9,414.95	9,379.25	23.74	23.92	95.16	-4,740.53	678.29	4,800.45	4,752.83	47.62	100.812		
9,600.00	9,563.86	9,561.43	9,525.41	23.92	24.30	95.37	-4,741.78	668.82	4,801.83	4,753.64	48.19	99.644		
9,700.00	9,663.82	9,713.90	9,677.39	24.09	24.74	95.57	-4,741.02	656.64	4,801.59	4,752.79	48.80	98.398		
9,800.00	9,763.81	9,789.77	9,752.91	24.25	24.97	95.66	-4,740.51	649.33	4,801.19	4,752.00	49.20	97.591		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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							
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	
9,813.26	9,777.07	9,799.21	9,762.31	24.27	25.00	-179.03	-4,740.48	648.50	4,801.17	4,751.93	49.25	97.490		
9,827.62	9,791.44	9,809.44	9,772.51	24.30	25.03	-179.02	-4,740.46	647.61	4,801.16	4,751.86	49.31	97.377		
9,900.00	9,863.81	9,863.52	9,826.38	24.43	25.20	-178.96	-4,740.46	643.00	4,801.28	4,751.68	49.60	96.798		
10,000.00	9,963.81	9,944.60	9,907.08	24.61	25.46	-178.87	-4,740.79	635.17	4,801.86	4,751.82	50.05	95.950		
10,100.00	10,063.81	10,105.00	10,066.60	24.80	25.99	-178.67	-4,741.03	618.41	4,802.39	4,751.62	50.77	94.592		
10,113.26	10,077.07	10,122.01	10,083.53	24.83	26.05	-178.65	-4,740.89	616.77	4,802.30	4,751.45	50.85	94.443		
10,150.00	10,113.79	10,148.99	10,110.39	24.89	26.14	1.80	-4,740.70	614.21	4,800.95	4,749.95	51.00	94.136		
10,200.00	10,163.48	10,185.51	10,146.76	24.97	26.25	1.86	-4,740.54	610.83	4,795.47	4,744.27	51.20	93.660		
10,250.00	10,212.52	10,242.04	10,203.01	25.06	26.45	1.97	-4,740.34	605.30	4,785.75	4,734.27	51.48	92.963		
10,300.00	10,260.52	10,305.15	10,265.62	25.14	26.67	2.13	-4,739.87	597.44	4,771.63	4,719.84	51.79	92.132		
10,350.00	10,307.13	10,353.69	10,313.71	25.22	26.86	2.30	-4,739.41	590.79	4,753.33	4,701.26	52.06	91.297		
10,400.00	10,351.99	10,382.00	10,341.73	25.30	26.97	2.46	-4,739.13	586.82	4,731.06	4,678.81	52.26	90.538		
10,450.00	10,394.76	10,382.00	10,341.73	25.38	26.97	2.59	-4,739.13	586.82	4,705.31	4,652.98	52.33	89.919		
10,500.00	10,435.11	10,416.36	10,375.76	25.46	27.11	2.85	-4,739.02	582.09	4,675.91	4,623.38	52.54	89.005		
10,550.00	10,472.73	10,429.39	10,388.68	25.55	27.16	3.11	-4,739.11	580.36	4,643.44	4,590.79	52.65	88.191		
10,600.00	10,507.34	10,441.53	10,400.71	25.64	27.21	3.43	-4,739.25	578.77	4,607.97	4,555.22	52.76	87.339		
10,650.00	10,538.68	10,476.00	10,434.90	25.75	27.34	3.93	-4,739.98	574.42	4,569.90	4,516.94	52.96	86.295		
10,700.00	10,566.51	10,476.00	10,434.90	25.86	27.34	4.45	-4,739.98	574.42	4,529.01	4,476.01	53.00	85.446		
10,750.00	10,590.61	10,476.00	10,434.90	25.99	27.34	5.16	-4,739.98	574.42	4,485.94	4,432.89	53.05	84.567		
10,800.00	10,610.80	10,476.00	10,434.90	26.14	27.34	6.19	-4,739.98	574.42	4,440.93	4,387.85	53.08	83.661		
10,850.00	10,626.93	10,476.00	10,434.90	26.31	27.34	7.76	-4,739.98	574.42	4,394.30	4,341.18	53.11	82.733		
10,900.00	10,638.87	10,476.00	10,434.90	26.50	27.34	10.46	-4,739.98	574.42	4,346.33	4,293.17	53.16	81.752		
10,950.00	10,646.54	10,476.00	10,434.90	26.71	27.34	16.04	-4,739.98	574.42	4,297.36	4,244.15	53.21	80.762		
11,000.00	10,649.87	10,476.00	10,434.90	26.94	27.34	33.09	-4,739.98	574.42	4,247.74	4,194.50	53.24	79.778		
11,018.94	10,650.00	10,476.00	10,434.90	27.04	27.34	51.32	-4,739.98	574.42	4,228.85	4,175.59	53.25	79.408		
11,100.00	10,649.20	10,476.00	10,434.90	27.48	27.34	51.32	-4,739.98	574.42	4,147.93	4,094.63	53.29	77.832		
11,200.00	10,648.20	10,502.39	10,461.07	28.11	27.44	56.90	-4,740.83	571.19	4,047.92	3,994.52	53.40	75.804		
11,300.00	10,647.21	10,503.57	10,462.24	28.82	27.45	57.16	-4,740.87	571.04	3,948.08	3,894.63	53.46	73.856		
11,400.00	10,646.22	10,504.78	10,463.45	29.60	27.45	57.43	-4,740.92	570.89	3,848.26	3,794.74	53.52	71.906		
11,500.00	10,645.23	10,506.02	10,464.68	30.45	27.45	57.71	-4,740.96	570.74	3,748.44	3,694.86	53.58	69.956		
11,600.00	10,644.24	10,507.31	10,465.95	31.37	27.46	58.00	-4,741.01	570.58	3,648.64	3,594.98	53.65	68.005		
11,700.00	10,643.25	10,508.62	10,467.26	32.34	27.46	58.30	-4,741.06	570.42	3,548.84	3,495.11	53.73	66.054		
11,800.00	10,642.25	10,509.98	10,468.60	33.37	27.47	58.61	-4,741.11	570.26	3,449.05	3,395.25	53.81	64.102		
11,900.00	10,641.26	10,511.37	10,469.99	34.44	27.48	58.93	-4,741.16	570.08	3,349.28	3,295.39	53.89	62.151		
12,000.00	10,640.27	10,512.81	10,471.41	35.55	27.48	59.26	-4,741.22	569.91	3,249.51	3,195.53	53.98	60.199		
12,100.00	10,639.28	10,514.29	10,472.88	36.71	27.49	59.61	-4,741.28	569.73	3,149.76	3,095.69	54.08	58.247		
12,200.00	10,638.29	10,515.82	10,474.39	37.90	27.49	59.96	-4,741.34	569.54	3,050.03	2,995.85	54.18	56.296		
12,300.00	10,637.30	10,517.39	10,475.95	39.12	27.50	60.33	-4,741.40	569.35	2,950.31	2,896.02	54.29	54.345		
12,400.00	10,636.30	10,519.01	10,477.56	40.38	27.50	60.71	-4,741.47	569.15	2,850.61	2,796.21	54.41	52.396		
12,500.00	10,635.31	10,520.69	10,479.22	41.66	27.51	61.11	-4,741.53	568.95	2,750.93	2,696.40	54.53	50.447		
12,600.00	10,634.32	10,522.42	10,480.94	42.96	27.52	61.52	-4,741.61	568.73	2,651.28	2,596.61	54.67	48.499		
12,700.00	10,633.33	10,524.20	10,482.71	44.29	27.52	61.95	-4,741.68	568.52	2,551.64	2,496.83	54.81	46.552		
12,800.00	10,632.34	10,526.05	10,484.54	45.63	27.53	62.40	-4,741.76	568.29	2,452.04	2,397.07	54.97	44.607		
12,900.00	10,631.35	10,527.96	10,486.44	47.00	27.54	62.86	-4,741.84	568.06	2,352.46	2,297.32	55.14	42.663		
13,000.00	10,630.35	10,529.94	10,488.40	48.38	27.55	63.34	-4,741.93	567.82	2,252.93	2,197.60	55.33	40.721		
13,100.00	10,629.36	10,531.99	10,490.43	49.78	27.55	63.84	-4,742.02	567.57	2,153.43	2,097.90	55.53	38.781		
13,200.00	10,628.37	10,534.11	10,492.53	51.19	27.56	64.37	-4,742.11	567.31	2,053.97	1,998.22	55.75	36.844		
13,300.00	10,627.38	10,536.31	10,494.71	52.62	27.57	64.91	-4,742.21	567.04	1,954.57	1,898.58	55.99	34.908		
13,400.00	10,626.39	10,538.59	10,496.97	54.05	27.58	65.48	-4,742.32	566.76	1,855.23	1,798.97	56.26	32.975		
13,500.00	10,625.40	10,540.96	10,499.32	55.50	27.59	66.08	-4,742.43	566.47	1,755.96	1,699.39	56.56	31.045		
13,600.00	10,624.40	10,543.42	10,501.77	56.96	27.60	66.70	-4,742.54	566.17	1,656.77	1,599.87	56.90	29.118		
13,700.00	10,623.41	10,545.98	10,504.30	58.43	27.61	67.36	-4,742.67	565.86	1,557.67	1,500.40	57.28	27.195		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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										
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning			
13,800.00	10,622.42	10,548.64	10,506.94	59.91	27.62	68.04	-4,742.80	565.54	1,458.70	1,400.99	57.71	25.276				
13,900.00	10,621.43	10,551.42	10,509.69	61.39	27.63	68.76	-4,742.93	565.20	1,359.87	1,301.66	58.21	23.361				
14,000.00	10,620.44	10,554.31	10,512.56	62.88	27.64	69.51	-4,743.08	564.85	1,261.21	1,202.42	58.79	21.451				
14,100.00	10,619.44	10,557.33	10,515.55	64.38	27.65	70.30	-4,743.23	564.48	1,162.77	1,103.29	59.48	19.549				
14,200.00	10,618.45	10,570.00	10,528.11	65.89	27.70	73.66	-4,743.91	562.94	1,064.67	1,004.34	60.33	17.648				
14,300.00	10,617.46	10,570.00	10,528.11	67.40	27.70	73.66	-4,743.91	562.94	966.84	905.52	61.33	15.765				
14,400.00	10,616.47	10,570.00	10,528.11	68.92	27.70	73.66	-4,743.91	562.94	869.51	806.95	62.56	13.898				
14,500.00	10,615.48	10,571.01	10,529.12	70.45	27.70	73.93	-4,743.96	562.81	772.86	708.72	64.14	12.050				
14,600.00	10,614.49	10,575.57	10,533.63	71.98	27.72	75.16	-4,744.22	562.26	677.17	610.97	66.20	10.229				
14,700.00	10,613.49	10,580.15	10,538.17	73.51	27.73	76.41	-4,744.47	561.71	582.88	513.93	68.95	8.454				
14,800.00	10,612.50	10,584.76	10,542.74	75.05	27.75	77.66	-4,744.73	561.16	490.82	418.10	72.73	6.749				
14,900.00	10,611.51	10,589.39	10,547.33	76.59	27.77	78.93	-4,744.98	560.62	402.52	324.49	78.03	5.159				
15,000.00	10,610.52	10,594.04	10,551.95	78.14	27.78	80.21	-4,745.24	560.07	321.09	235.68	85.41	3.759				
15,100.00	10,609.53	10,598.73	10,556.59	79.69	27.80	81.50	-4,745.50	559.53	253.23	158.67	94.56	2.678				
15,200.00	10,608.54	10,603.43	10,561.26	81.24	27.82	82.79	-4,745.77	558.98	212.40	111.40	101.01	2.103				
15,245.26	10,608.09	10,605.57	10,563.38	81.94	27.82	83.38	-4,745.89	558.74	207.54	106.88	100.65	2.062 CC, ES, SF				
15,300.00	10,607.54	10,608.17	10,565.95	82.80	27.83	84.10	-4,746.03	558.44	214.62	117.68	96.94	2.214				
15,400.00	10,606.55	10,612.93	10,570.67	84.36	27.85	85.41	-4,746.30	557.90	258.77	173.40	85.37	3.031				
15,500.00	10,605.56	10,617.71	10,575.42	85.92	27.87	86.73	-4,746.57	557.36	328.36	253.62	74.75	4.393				
15,600.00	10,604.57	10,622.52	10,580.19	87.48	27.89	88.05	-4,746.84	556.82	410.65	343.22	67.44	6.089				
15,700.00	10,603.58	10,627.36	10,585.00	89.05	27.90	89.37	-4,747.12	556.28	499.41	436.64	62.77	7.957				
15,800.00	10,602.59	10,632.23	10,589.82	90.62	27.92	90.70	-4,747.39	555.75	591.72	531.92	59.80	9.895				
15,900.00	10,601.59	10,637.12	10,594.68	92.20	27.94	92.02	-4,747.67	555.21	686.16	628.26	57.90	11.850				
16,000.00	10,600.60	11,757.94	11,266.05	93.77	36.43	158.34	-5,481.59	497.78	738.62	673.87	64.75	11.407				
16,100.00	10,599.61	11,860.56	11,263.80	95.35	38.34	157.46	-5,583.60	486.82	741.80	674.17	67.63	10.968				
16,200.00	10,598.62	11,956.00	11,261.73	96.93	39.97	156.69	-5,678.52	477.08	745.00	674.61	70.39	10.584				
16,300.00	10,597.63	12,036.91	11,261.77	98.51	41.22	156.17	-5,759.11	469.92	749.90	677.03	72.86	10.292				
16,400.00	10,596.64	12,145.00	11,263.62	100.09	43.17	155.58	-5,866.80	460.88	756.10	680.59	75.52	10.012				
16,500.00	10,595.64	12,239.00	11,264.58	101.68	44.95	155.02	-5,960.42	452.57	761.94	683.68	78.26	9.736				
16,600.00	10,594.65	12,347.26	11,265.63	103.26	47.06	154.38	-6,068.25	442.92	767.86	686.70	81.16	9.461				
16,700.00	10,593.66	12,450.69	11,265.68	104.85	49.28	153.79	-6,171.32	434.37	772.73	688.57	84.17	9.181				
16,800.00	10,592.67	12,548.08	11,266.74	106.44	51.18	153.37	-6,268.48	427.73	777.95	691.08	86.87	8.955				
16,900.00	10,591.68	12,652.67	11,268.60	108.03	53.22	153.14	-6,372.97	423.58	782.53	693.25	89.28	8.765				
17,000.00	10,590.69	12,745.55	11,271.37	109.63	55.04	153.07	-6,465.78	421.21	787.55	696.03	91.52	8.605				
17,100.00	10,589.69	12,850.03	11,275.44	111.22	57.15	153.05	-6,570.15	419.09	793.18	699.52	93.66	8.469				
17,200.00	10,588.70	12,948.26	11,277.65	112.82	59.24	152.96	-6,668.32	416.72	797.50	701.50	96.00	8.307				
17,300.00	10,587.71	13,041.89	11,280.70	114.41	61.22	152.80	-6,761.83	412.92	803.43	704.96	98.46	8.160				
17,400.00	10,586.72	13,161.38	11,282.81	116.01	64.02	152.51	-6,881.17	407.54	808.32	707.12	101.20	7.987				
17,500.00	10,585.73	13,268.54	11,281.79	117.61	66.73	152.11	-6,988.18	401.88	811.14	706.84	104.30	7.777				
17,600.00	10,584.74	13,357.36	11,281.27	119.21	68.78	151.79	-7,076.87	397.19	814.33	707.09	107.24	7.593				
17,700.00	10,583.74	13,442.19	11,282.58	120.81	70.53	151.57	-7,161.59	393.12	819.19	709.28	109.91	7.453				
17,800.00	10,582.75	13,519.94	11,285.79	122.41	72.11	151.46	-7,239.19	389.61	826.22	713.86	112.36	7.353				
17,900.00	10,581.76	13,619.98	11,292.23	124.01	74.28	151.36	-7,338.90	384.63	835.47	720.67	114.80	7.278				
18,000.00	10,580.77	13,744.18	11,296.71	125.62	77.36	151.10	-7,462.84	378.08	842.37	724.65	117.72	7.156				
18,077.45	10,580.00	13,812.41	11,298.11	126.59	78.94	150.89	-7,530.92	373.91	847.01	727.21	119.81	7.070				

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 114H - OH - Plan #2													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	-90.32	-0.50	-89.94	89.94				
100.00	100.00	100.00	100.00	0.09	0.09	-90.32	-0.50	-89.94	89.94	89.77	0.17	523.079	
200.00	200.00	200.00	200.00	0.31	0.31	-90.32	-0.50	-89.94	89.94	89.32	0.62	144.722	
300.00	300.00	300.00	300.00	0.54	0.54	-90.32	-0.50	-89.94	89.94	88.87	1.07	83.978	
400.00	400.00	400.00	400.00	0.76	0.76	-90.32	-0.50	-89.94	89.94	88.42	1.52	59.151	
500.00	500.00	500.00	500.00	0.99	0.99	-90.32	-0.50	-89.94	89.94	87.97	1.97	45.654	
600.00	600.00	600.00	600.00	1.21	1.21	-90.32	-0.50	-89.94	89.94	87.52	2.42	37.172	
700.00	700.00	700.00	700.00	1.43	1.43	-90.32	-0.50	-89.94	89.94	87.07	2.87	31.348	
800.00	800.00	800.00	800.00	1.66	1.66	-90.32	-0.50	-89.94	89.94	86.62	3.32	27.102	
900.00	900.00	900.00	900.00	1.88	1.88	-90.32	-0.50	-89.94	89.94	86.17	3.77	23.869	
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	-90.32	-0.50	-89.94	89.94	85.72	4.22	21.325	
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	-90.32	-0.50	-89.94	89.94	85.27	4.67	19.271	
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	-90.32	-0.50	-89.94	89.94	84.82	5.12	17.578	
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	-90.32	-0.50	-89.94	89.94	84.38	5.57	16.158	
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-90.32	-0.50	-89.94	89.94	83.93	6.02	14.951	
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	-90.32	-0.50	-89.94	89.94	83.48	6.47	13.911	
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-90.32	-0.50	-89.94	89.94	83.03	6.91	13.007	
1,700.00	1,700.00	1,700.00	1,700.00	3.68	3.68	-90.32	-0.50	-89.94	89.94	82.58	7.36	12.213	
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-90.32	-0.50	-89.94	89.94	82.13	7.81	11.510	
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	-90.32	-0.50	-89.94	89.94	81.68	8.26	10.884	
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-90.32	-0.50	-89.94	89.94	81.23	8.71	10.323 CC, ES	
2,100.00	2,099.99	2,099.99	2,099.99	4.57	4.58	-175.66	-0.50	-89.94	90.81	81.66	9.15	9.925	
2,200.00	2,199.96	2,199.96	2,199.96	4.77	4.81	-175.78	-0.50	-89.94	93.42	83.85	9.57	9.757	
2,300.00	2,299.86	2,299.86	2,299.86	4.97	5.03	-175.97	-0.50	-89.94	97.77	87.77	10.00	9.776	
2,400.00	2,399.68	2,399.68	2,399.68	5.18	5.25	-176.20	-0.50	-89.94	103.86	93.43	10.43	9.957	
2,500.00	2,499.37	2,499.37	2,499.37	5.40	5.48	-176.46	-0.50	-89.94	111.69	100.83	10.86	10.283	
2,581.25	2,580.25	2,580.25	2,580.25	5.58	5.66	-176.68	-0.50	-89.94	119.33	108.12	11.21	10.642	
2,600.00	2,598.91	2,598.91	2,598.91	5.62	5.70	-176.74	-0.50	-89.94	121.23	109.94	11.30	10.733	
2,700.00	2,698.39	2,698.39	2,698.39	5.85	5.93	-176.99	-0.50	-89.94	131.34	119.61	11.73	11.199	
2,800.00	2,797.88	2,797.88	2,797.88	6.08	6.15	-177.20	-0.50	-89.94	141.46	129.29	12.16	11.630	
2,900.00	2,897.36	2,897.36	2,897.36	6.31	6.37	-177.39	-0.50	-89.94	151.57	138.97	12.60	12.030	
3,000.00	2,996.85	2,996.85	2,996.85	6.55	6.60	-177.55	-0.50	-89.94	161.69	148.65	13.04	12.402	
3,100.00	3,096.34	3,096.34	3,096.34	6.79	6.82	-177.70	-0.50	-89.94	171.81	158.33	13.48	12.748	
3,200.00	3,195.82	3,195.82	3,195.82	7.03	7.04	-177.82	-0.50	-89.94	181.93	168.01	13.92	13.071	
3,300.00	3,295.31	3,295.31	3,295.31	7.28	7.27	-177.94	-0.50	-89.94	192.05	177.69	14.36	13.374	
3,400.00	3,394.79	3,394.79	3,394.79	7.53	7.49	-178.04	-0.50	-89.94	202.17	187.37	14.80	13.657	
3,500.00	3,494.28	3,494.28	3,494.28	7.78	7.72	-178.14	-0.50	-89.94	212.29	197.05	15.25	13.924	
3,600.00	3,593.77	3,593.77	3,593.77	8.03	7.94	-178.22	-0.50	-89.94	222.42	206.72	15.69	14.174	
3,700.00	3,693.25	3,693.25	3,693.25	8.28	8.16	-178.30	-0.50	-89.94	232.54	216.40	16.14	14.410	
3,800.00	3,792.74	3,792.74	3,792.74	8.54	8.39	-178.37	-0.50	-89.94	242.66	226.08	16.58	14.632	
3,900.00	3,892.22	3,892.22	3,892.22	8.79	8.61	-178.43	-0.50	-89.94	252.78	235.75	17.03	14.843	
4,000.00	3,991.71	3,991.71	3,991.71	9.05	8.83	-178.50	-0.50	-89.94	262.91	245.43	17.48	15.042	
4,100.00	4,091.20	4,091.20	4,091.20	9.31	9.06	-178.55	-0.50	-89.94	273.03	255.11	17.93	15.231	
4,200.00	4,190.68	4,190.68	4,190.68	9.57	9.28	-178.60	-0.50	-89.94	283.16	264.78	18.38	15.410	
4,300.00	4,290.17	4,290.17	4,290.17	9.83	9.50	-178.65	-0.50	-89.94	293.28	274.46	18.82	15.580	
4,400.00	4,389.65	4,389.65	4,389.65	10.09	9.73	-178.70	-0.50	-89.94	303.41	284.13	19.27	15.741	
4,500.00	4,489.14	4,489.14	4,489.14	10.36	9.95	-178.74	-0.50	-89.94	313.53	293.81	19.72	15.895	
4,600.00	4,588.62	4,588.62	4,588.62	10.62	10.17	-178.78	-0.50	-89.94	323.66	303.48	20.18	16.042	
4,700.00	4,688.11	4,688.11	4,688.11	10.88	10.40	-178.81	-0.50	-89.94	333.78	313.15	20.63	16.182	
4,800.00	4,787.60	4,787.60	4,787.60	11.15	10.62	-178.85	-0.50	-89.94	343.91	322.83	21.08	16.316	
4,900.00	4,887.08	4,887.08	4,887.08	11.41	10.85	-178.88	-0.50	-89.94	354.03	332.50	21.53	16.444	
5,000.00	4,986.57	4,986.57	4,986.57	11.68	11.07	-178.91	-0.50	-89.94	364.16	342.18	21.98	16.567	

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 114H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						
5,100.00	5,086.05	5,086.05	5,086.05	11.95	11.29	-178.94	-0.50	-89.94	374.28	351.85	22.43	16.684		
5,200.00	5,185.54	5,185.54	5,185.54	12.21	11.52	-178.97	-0.50	-89.94	384.41	361.52	22.89	16.797		
5,300.00	5,285.03	5,285.03	5,285.03	12.48	11.74	-179.00	-0.50	-89.94	394.53	371.20	23.34	16.905		
5,400.00	5,384.51	5,384.51	5,384.51	12.75	11.96	-179.02	-0.50	-89.94	404.66	380.87	23.79	17.009		
5,500.00	5,484.00	5,484.00	5,484.00	13.02	12.19	-179.05	-0.50	-89.94	414.79	390.54	24.24	17.108		
5,600.00	5,583.48	5,590.15	5,590.14	13.28	12.41	-179.08	-0.50	-89.23	424.26	399.55	24.71	17.171		
5,700.00	5,682.97	5,697.89	5,697.85	13.55	12.63	-179.12	-0.50	-86.52	431.88	406.73	25.15	17.171		
5,800.00	5,782.45	5,805.90	5,805.76	13.82	12.84	-179.19	-0.50	-81.78	437.64	412.05	25.59	17.103		
5,900.00	5,881.94	5,909.52	5,909.19	14.09	13.05	-179.26	-0.50	-75.57	441.80	415.78	26.02	16.980		
6,000.00	5,981.43	6,009.44	6,008.92	14.36	13.26	-179.33	-0.50	-69.40	445.77	419.32	26.45	16.853		
6,100.00	6,080.91	6,109.36	6,108.65	14.63	13.46	-179.40	-0.50	-63.22	449.74	422.86	26.88	16.731		
6,200.00	6,180.40	6,209.28	6,208.38	14.90	13.67	-179.47	-0.50	-57.04	453.71	426.40	27.31	16.611		
6,300.00	6,279.88	6,309.20	6,308.11	15.17	13.87	-179.54	-0.50	-50.86	457.69	429.94	27.75	16.495		
6,400.00	6,379.37	6,409.12	6,407.83	15.44	14.08	-179.61	-0.50	-44.68	461.66	433.48	28.18	16.381		
6,500.00	6,478.86	6,509.04	6,507.56	15.72	14.29	-179.67	-0.50	-38.51	465.63	437.02	28.62	16.271		
6,600.00	6,578.34	6,608.96	6,607.29	15.99	14.50	-179.74	-0.50	-32.33	469.61	440.55	29.05	16.163		
6,700.00	6,677.83	6,708.88	6,707.02	16.26	14.71	-179.80	-0.50	-26.15	473.58	444.09	29.49	16.058		
6,800.00	6,777.31	6,808.80	6,806.75	16.53	14.93	-179.86	-0.50	-19.97	477.56	447.63	29.93	15.956		
6,900.00	6,876.80	6,908.72	6,906.48	16.80	15.14	-179.92	-0.50	-13.79	481.54	451.17	30.37	15.856		
7,000.00	6,976.29	7,008.64	7,006.21	17.07	15.36	-179.99	-0.50	-7.62	485.51	454.71	30.81	15.759		
7,100.00	7,075.77	7,108.56	7,105.93	17.35	15.57	179.96	-0.50	-1.44	489.49	458.24	31.25	15.664		
7,200.00	7,175.26	7,208.48	7,205.66	17.62	15.79	179.90	-0.50	4.74	493.47	461.78	31.69	15.571		
7,300.00	7,274.74	7,308.40	7,305.39	17.89	16.01	179.84	-0.50	10.92	497.45	465.32	32.13	15.481		
7,400.00	7,374.23	7,408.32	7,405.12	18.16	16.22	179.78	-0.50	17.10	501.43	468.85	32.58	15.393		
7,500.00	7,473.71	7,508.24	7,504.85	18.44	16.44	179.73	-0.50	23.28	505.41	472.39	33.02	15.307		
7,600.00	7,573.20	7,608.16	7,604.58	18.71	16.66	179.67	-0.50	29.45	509.39	475.92	33.46	15.223		
7,700.00	7,672.69	7,708.08	7,704.30	18.98	16.88	179.62	-0.50	35.63	513.37	479.46	33.91	15.141		
7,800.00	7,772.17	7,808.00	7,804.03	19.26	17.10	179.57	-0.50	41.81	517.35	483.00	34.35	15.060		
7,900.00	7,871.66	7,907.92	7,903.76	19.53	17.33	179.51	-0.50	47.99	521.33	486.53	34.80	14.982		
8,000.00	7,971.14	8,007.84	8,003.49	19.80	17.55	179.46	-0.50	54.17	525.31	490.07	35.24	14.905		
8,100.00	8,070.63	8,107.76	8,103.22	20.08	17.77	179.41	-0.50	60.34	529.29	493.60	35.69	14.830		
8,200.00	8,170.12	8,207.67	8,202.95	20.35	18.00	179.36	-0.50	66.52	533.28	497.14	36.14	14.757		
8,300.00	8,269.60	8,307.59	8,302.67	20.63	18.22	179.31	-0.50	72.70	537.26	500.67	36.58	14.685		
8,400.00	8,369.09	8,407.51	8,402.40	20.90	18.44	179.26	-0.50	78.88	541.24	504.21	37.03	14.615		
8,500.00	8,468.57	8,507.43	8,502.13	21.17	18.67	179.21	-0.50	85.06	545.23	507.74	37.48	14.547		
8,600.00	8,568.06	8,606.00	8,594.56	21.45	18.86	179.18	-0.50	90.04	549.99	512.08	37.91	14.508		
8,700.00	8,667.54	8,689.75	8,684.25	21.72	19.04	179.16	-0.50	93.45	556.34	518.02	38.31	14.520		
8,800.00	8,767.03	8,780.59	8,775.07	22.00	19.21	179.15	-0.50	95.47	564.26	525.55	38.71	14.575		
8,900.00	8,866.52	8,872.05	8,866.52	22.27	19.38	179.16	-0.50	96.06	573.75	534.64	39.11	14.672		
9,000.00	8,966.00	8,971.53	8,966.00	22.55	19.60	179.17	-0.50	96.06	583.87	544.32	39.55	14.761		
9,100.00	9,065.49	9,071.02	9,065.49	22.82	19.82	179.19	-0.50	96.06	594.00	553.99	40.01	14.847		
9,200.00	9,164.97	9,169.83	9,164.30	23.09	20.03	179.20	-0.55	96.06	604.13	563.67	40.46	14.933		
9,232.01	9,196.82	9,200.00	9,194.44	23.18	20.09	179.09	-1.72	96.07	607.48	566.89	40.59	14.967		
9,300.00	9,264.50	9,259.81	9,253.81	23.35	20.20	178.45	-8.73	96.12	614.72	573.90	40.82	15.058		
9,400.00	9,364.17	9,345.19	9,336.59	23.55	20.36	176.57	-29.35	96.27	625.73	584.61	41.12	15.216		
9,500.00	9,463.97	9,422.98	9,408.57	23.74	20.51	173.97	-58.66	96.49	638.42	597.07	41.35	15.438		
9,600.00	9,563.86	9,491.71	9,468.38	23.92	20.64	171.05	-92.46	96.73	654.44	613.00	41.45	15.790		
9,700.00	9,663.82	9,550.00	9,515.62	24.09	20.76	168.20	-126.56	96.98	675.30	633.99	41.32	16.344		
9,800.00	9,763.81	9,600.00	9,553.20	24.25	20.87	165.56	-159.51	97.22	702.09	661.15	40.94	17.151		
9,813.26	9,777.07	9,600.00	9,553.20	24.27	20.87	-109.13	-159.51	97.22	706.19	665.42	40.77	17.322		
9,900.00	9,863.81	9,650.00	9,587.77	24.43	20.99	-112.01	-195.62	97.49	735.94	695.49	40.45	18.196		
10,000.00	9,963.81	9,683.24	9,608.95	24.61	21.09	-113.98	-221.23	97.68	777.72	738.12	39.59	19.642		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 114H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		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)						
10,100.00	10,063.81	9,715.18	9,627.88	24.80	21.18	-115.90	-246.95	97.87	826.95	788.27	38.68	21.378		
10,113.26	10,077.07	9,719.06	9,630.08	24.83	21.19	-116.14	-250.15	97.89	834.00	795.44	38.56	21.631		
10,150.00	10,113.79	9,729.92	9,636.12	24.89	21.23	61.57	-259.17	97.95	853.68	815.48	38.20	22.348		
10,200.00	10,163.48	9,750.00	9,646.84	24.97	21.30	57.82	-276.15	98.08	880.31	842.51	37.79	23.292		
10,250.00	10,212.52	9,750.00	9,646.84	25.06	21.30	55.25	-276.15	98.08	906.54	869.52	37.01	24.491		
10,300.00	10,260.52	9,777.78	9,660.67	25.14	21.40	51.73	-300.23	98.26	931.75	895.00	36.74	25.358		
10,350.00	10,307.13	9,800.00	9,670.89	25.22	21.48	48.81	-319.97	98.40	956.15	919.78	36.37	26.289		
10,400.00	10,351.99	9,800.00	9,670.89	25.30	21.48	46.86	-319.97	98.40	979.48	943.87	35.62	27.501		
10,450.00	10,394.76	9,829.72	9,683.34	25.38	21.61	44.33	-346.95	98.60	1,001.14	965.74	35.39	28.287		
10,500.00	10,435.11	9,850.00	9,691.02	25.46	21.69	42.36	-365.71	98.74	1,021.45	986.43	35.02	29.171		
10,550.00	10,472.73	9,865.90	9,696.58	25.55	21.77	40.73	-380.60	98.84	1,040.09	1,005.49	34.59	30.065		
10,600.00	10,507.34	9,884.32	9,702.50	25.64	21.85	39.29	-398.05	98.97	1,056.96	1,022.72	34.24	30.869		
10,650.00	10,538.68	9,900.00	9,707.10	25.75	21.93	38.10	-413.04	99.08	1,071.96	1,038.08	33.88	31.643		
10,700.00	10,566.51	9,921.69	9,712.77	25.86	22.04	37.04	-433.97	99.24	1,084.97	1,051.33	33.64	32.252		
10,750.00	10,590.61	9,950.00	9,718.98	25.99	22.19	36.13	-461.59	99.44	1,096.07	1,062.54	33.52	32.695		
10,800.00	10,610.80	9,950.00	9,718.98	26.14	22.19	35.60	-461.59	99.44	1,104.96	1,071.86	33.10	33.381		
10,850.00	10,626.93	9,978.63	9,723.87	26.31	22.35	35.05	-489.80	99.64	1,111.60	1,078.52	33.08	33.602		
10,900.00	10,638.87	10,000.00	9,726.59	26.50	22.48	34.72	-510.99	99.80	1,116.18	1,083.15	33.02	33.799		
10,950.00	10,646.54	10,016.91	9,728.19	26.71	22.58	34.56	-527.82	99.92	1,118.54	1,085.56	32.98	33.914		
11,000.00	10,649.87	10,050.00	9,729.87	26.94	22.78	34.55	-560.86	100.16	1,118.92	1,085.78	33.14	33.762		
11,018.94	10,650.00	10,050.00	9,729.87	27.04	22.78	34.59	-560.86	100.16	1,118.22	1,085.12	33.11	33.774		
11,100.00	10,649.20	10,098.05	9,730.19	27.48	23.10	34.62	-608.91	100.52	1,116.67	1,083.25	33.42	33.414		
11,200.00	10,648.20	10,198.04	9,730.69	28.11	23.83	34.66	-708.90	101.25	1,115.44	1,081.22	34.23	32.590		
11,300.00	10,647.21	10,298.03	9,731.19	28.82	24.64	34.70	-808.88	101.98	1,114.21	1,079.06	35.16	31.693		
11,400.00	10,646.22	10,398.02	9,731.69	29.60	25.54	34.75	-908.87	102.71	1,112.98	1,076.78	36.20	30.744		
11,500.00	10,645.23	10,498.01	9,732.19	30.45	26.50	34.79	-1,008.85	103.45	1,111.75	1,074.40	37.35	29.763		
11,600.00	10,644.24	10,598.00	9,732.69	31.37	27.53	34.83	-1,108.84	104.18	1,110.53	1,071.93	38.60	28.770		
11,700.00	10,643.25	10,697.99	9,733.19	32.34	28.61	34.88	-1,208.82	104.91	1,109.30	1,069.36	39.94	27.776		
11,800.00	10,642.25	10,797.97	9,733.69	33.37	29.75	34.92	-1,308.81	105.64	1,108.07	1,066.72	41.35	26.796		
11,900.00	10,641.26	10,897.96	9,734.19	34.44	30.93	34.97	-1,408.79	106.38	1,106.85	1,064.01	42.84	25.836		
12,000.00	10,640.27	10,997.95	9,734.69	35.55	32.15	35.01	-1,508.78	107.11	1,105.62	1,061.23	44.40	24.904		
12,100.00	10,639.28	11,097.94	9,735.18	36.71	33.41	35.05	-1,608.76	107.84	1,104.40	1,058.39	46.01	24.004		
12,200.00	10,638.29	11,197.93	9,735.68	37.90	34.70	35.10	-1,708.75	108.57	1,103.17	1,055.50	47.68	23.139		
12,300.00	10,637.30	11,297.92	9,736.18	39.12	36.02	35.14	-1,808.73	109.31	1,101.95	1,052.56	49.39	22.310		
12,400.00	10,636.30	11,397.91	9,736.68	40.38	37.36	35.19	-1,908.72	110.04	1,100.73	1,049.57	51.15	21.518		
12,500.00	10,635.31	11,497.90	9,737.18	41.66	38.73	35.23	-2,008.70	110.77	1,099.51	1,046.55	52.96	20.763		
12,600.00	10,634.32	11,597.89	9,737.68	42.96	40.11	35.28	-2,108.69	111.50	1,098.28	1,043.49	54.79	20.044		
12,700.00	10,633.33	11,697.87	9,738.18	44.29	41.52	35.32	-2,208.67	112.23	1,097.06	1,040.40	56.66	19.361		
12,800.00	10,632.34	11,797.86	9,738.68	45.63	42.94	35.37	-2,308.66	112.97	1,095.84	1,037.28	58.57	18.711		
12,900.00	10,631.35	11,897.85	9,739.18	47.00	44.38	35.41	-2,408.64	113.70	1,094.62	1,034.13	60.50	18.094		
13,000.00	10,630.35	11,997.84	9,739.68	48.38	45.83	35.46	-2,508.63	114.43	1,093.41	1,030.95	62.45	17.508		
13,100.00	10,629.36	12,097.83	9,740.18	49.78	47.29	35.50	-2,608.61	115.16	1,092.19	1,027.76	64.43	16.951		
13,200.00	10,628.37	12,197.82	9,740.68	51.19	48.76	35.55	-2,708.60	115.90	1,090.97	1,024.54	66.43	16.422		
13,300.00	10,627.38	12,297.81	9,741.18	52.62	50.25	35.59	-2,808.58	116.63	1,089.75	1,021.30	68.45	15.919		
13,400.00	10,626.39	12,397.80	9,741.67	54.05	51.74	35.64	-2,908.57	117.36	1,088.54	1,018.04	70.49	15.441		
13,500.00	10,625.40	12,497.79	9,742.17	55.50	53.24	35.68	-3,008.55	118.09	1,087.32	1,014.77	72.55	14.987		
13,600.00	10,624.40	12,597.77	9,742.67	56.96	54.75	35.73	-3,108.54	118.83	1,086.11	1,011.48	74.63	14.554		
13,700.00	10,623.41	12,697.76	9,743.17	58.43	56.27	35.77	-3,208.52	119.56	1,084.89	1,008.18	76.72	14.141		
13,800.00	10,622.42	12,797.75	9,743.67	59.91	57.79	35.82	-3,308.51	120.29	1,083.68	1,004.86	78.82	13.748		
13,900.00	10,621.43	12,897.74	9,744.17	61.39	59.32	35.86	-3,408.49	121.02	1,082.47	1,001.53	80.94	13.374		
14,000.00	10,620.44	12,997.73	9,744.67	62.88	60.85	35.91	-3,508.48	121.76	1,081.26	998.19	83.07	13.016		
14,100.00	10,619.44	13,097.72	9,745.17	64.38	62.40	35.96	-3,608.46	122.49	1,080.05	994.83	85.21	12.675		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 114H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						
14,200.00	10,618.45	13,197.71	9,745.67	65.89	63.94	36.00	-3,708.45	123.22	1,078.84	991.47	87.37	12.348		
14,300.00	10,617.46	13,297.70	9,746.17	67.40	65.49	36.05	-3,808.43	123.95	1,077.63	988.09	89.53	12.036		
14,400.00	10,616.47	13,397.69	9,746.67	68.92	67.05	36.10	-3,908.42	124.69	1,076.42	984.71	91.71	11.737		
14,500.00	10,615.48	13,497.67	9,747.17	70.45	68.60	36.14	-4,008.40	125.42	1,075.21	981.32	93.89	11.451		
14,600.00	10,614.49	13,597.66	9,747.67	71.98	70.17	36.19	-4,108.39	126.15	1,074.00	977.91	96.09	11.177		
14,700.00	10,613.49	13,697.65	9,748.16	73.51	71.73	36.24	-4,208.37	126.88	1,072.80	974.50	98.29	10.914		
14,800.00	10,612.50	13,797.64	9,748.66	75.05	73.30	36.28	-4,308.36	127.61	1,071.59	971.08	100.50	10.662		
14,900.00	10,611.51	13,897.63	9,749.16	76.59	74.87	36.33	-4,408.34	128.35	1,070.38	967.66	102.73	10.420		
15,000.00	10,610.52	13,997.62	9,749.66	78.14	76.44	36.38	-4,508.33	129.08	1,069.18	964.23	104.95	10.187		
15,100.00	10,609.53	14,097.61	9,750.16	79.69	78.02	36.42	-4,608.31	129.81	1,067.98	960.79	107.19	9.963		
15,200.00	10,608.54	14,197.60	9,750.66	81.24	79.60	36.47	-4,708.30	130.54	1,066.77	957.34	109.43	9.748		
15,300.00	10,607.54	14,297.59	9,751.16	82.80	81.18	36.52	-4,808.28	131.28	1,065.57	953.89	111.68	9.541		
15,400.00	10,606.55	14,397.57	9,751.66	84.36	82.77	36.57	-4,908.27	132.01	1,064.37	950.43	113.94	9.341		
15,500.00	10,605.56	14,497.56	9,752.16	85.92	84.35	36.61	-5,008.25	132.74	1,063.17	946.96	116.21	9.149		
15,600.00	10,604.57	14,597.55	9,752.66	87.48	85.94	36.66	-5,108.24	133.47	1,061.97	943.49	118.48	8.963		
15,700.00	10,603.58	14,697.54	9,753.16	89.05	87.53	36.71	-5,208.22	134.21	1,060.77	940.01	120.76	8.784		
15,800.00	10,602.59	14,797.53	9,753.66	90.62	89.12	36.76	-5,308.21	134.94	1,059.57	936.53	123.04	8.612		
15,900.00	10,601.59	14,897.52	9,754.16	92.20	90.72	36.81	-5,408.19	135.67	1,058.37	933.04	125.33	8.445		
16,000.00	10,600.60	14,997.51	9,754.65	93.77	92.31	36.85	-5,508.18	136.40	1,057.17	929.55	127.63	8.283		
16,100.00	10,599.61	15,097.50	9,755.15	95.35	93.91	36.90	-5,608.16	137.14	1,055.98	926.05	129.93	8.127		
16,200.00	10,598.62	15,197.49	9,755.65	96.93	95.51	36.95	-5,708.15	137.87	1,054.78	922.55	132.23	7.977		
16,300.00	10,597.63	15,297.47	9,756.15	98.51	97.11	37.00	-5,808.13	138.60	1,053.59	919.04	134.55	7.831		
16,400.00	10,596.64	15,397.46	9,756.65	100.09	98.71	37.05	-5,908.12	139.33	1,052.39	915.53	136.87	7.689		
16,500.00	10,595.64	15,497.45	9,757.15	101.68	100.31	37.10	-6,008.10	140.07	1,051.20	912.01	139.19	7.552		
16,600.00	10,594.65	15,597.44	9,757.65	103.26	101.91	37.14	-6,108.09	140.80	1,050.01	908.49	141.52	7.420		
16,700.00	10,593.66	15,697.43	9,758.15	104.85	103.52	37.19	-6,208.07	141.53	1,048.81	904.96	143.85	7.291		
16,800.00	10,592.67	15,797.42	9,758.65	106.44	105.12	37.24	-6,308.06	142.26	1,047.62	901.43	146.19	7.166		
16,900.00	10,591.68	15,897.41	9,759.15	108.03	106.73	37.29	-6,408.04	142.99	1,046.43	897.90	148.54	7.045		
17,000.00	10,590.69	15,997.40	9,759.65	109.63	108.33	37.34	-6,508.03	143.73	1,045.24	894.36	150.89	6.927		
17,100.00	10,589.69	16,097.39	9,760.15	111.22	109.94	37.39	-6,608.01	144.46	1,044.05	890.81	153.24	6.813		
17,200.00	10,588.70	16,197.37	9,760.65	112.82	111.55	37.44	-6,708.00	145.19	1,042.87	887.27	155.60	6.702		
17,300.00	10,587.71	16,297.36	9,761.14	114.41	113.16	37.49	-6,807.98	145.92	1,041.68	883.71	157.96	6.594		
17,400.00	10,586.72	16,397.35	9,761.64	116.01	114.77	37.54	-6,907.97	146.66	1,040.49	880.16	160.33	6.490		
17,500.00	10,585.73	16,497.34	9,762.14	117.61	116.38	37.59	-7,007.95	147.39	1,039.31	876.60	162.71	6.388		
17,600.00	10,584.74	16,597.33	9,762.64	119.21	118.00	37.64	-7,107.94	148.12	1,038.12	873.04	165.08	6.288		
17,700.00	10,583.74	16,697.32	9,763.14	120.81	119.61	37.69	-7,207.92	148.85	1,036.94	869.47	167.47	6.192		
17,800.00	10,582.75	16,797.31	9,763.64	122.41	121.22	37.74	-7,307.91	149.59	1,035.75	865.90	169.85	6.098		
17,900.00	10,581.76	16,897.30	9,764.14	124.01	122.84	37.79	-7,407.89	150.32	1,034.57	862.32	172.25	6.006		
18,000.00	10,580.77	16,997.29	9,764.64	125.62	124.45	37.84	-7,507.88	151.05	1,033.39	858.75	174.64	5.917		
18,077.45	10,580.00	17,069.55	9,765.00	126.59	125.62	37.88	-7,580.14	151.58	1,032.49	856.34	176.14	5.862 SF		

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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	1.70	1.70	0.00	0.00	89.68	9.47	1,679.84	1,679.87					
100.00	100.00	101.70	101.70	0.09	0.09	89.68	9.47	1,679.84	1,679.87	1,679.69	0.18	9,557.336		
200.00	200.00	201.70	201.70	0.31	0.31	89.68	9.47	1,679.84	1,679.87	1,679.24	0.63	2,686.500		
300.00	300.00	301.70	301.70	0.54	0.54	89.68	9.47	1,679.84	1,679.87	1,678.79	1.07	1,562.912		
400.00	400.00	401.70	401.70	0.76	0.76	89.68	9.47	1,679.84	1,679.87	1,678.34	1.52	1,102.012		
500.00	500.00	501.70	501.70	0.99	0.99	89.68	9.47	1,679.84	1,679.87	1,677.89	1.97	851.041		
600.00	600.00	601.70	601.70	1.21	1.21	89.68	9.47	1,679.84	1,679.87	1,677.44	2.42	693.178		
700.00	700.00	701.70	701.70	1.43	1.44	89.68	9.47	1,679.84	1,679.87	1,676.99	2.87	584.716		
800.00	800.00	801.70	801.70	1.66	1.66	89.68	9.47	1,679.84	1,679.87	1,676.54	3.32	505.604		
900.00	900.00	901.70	901.70	1.88	1.89	89.68	9.47	1,679.84	1,679.87	1,676.09	3.77	445.349		
1,000.00	1,000.00	1,001.70	1,001.70	2.11	2.11	89.68	9.47	1,679.84	1,679.87	1,675.65	4.22	397.926		
1,100.00	1,100.00	1,101.70	1,101.70	2.33	2.34	89.68	9.47	1,679.84	1,679.87	1,675.20	4.67	359.631		
1,200.00	1,200.00	1,201.70	1,201.70	2.56	2.56	89.68	9.47	1,679.84	1,679.87	1,674.75	5.12	328.059		
1,300.00	1,300.00	1,301.70	1,301.70	2.78	2.79	89.68	9.47	1,679.84	1,679.87	1,674.30	5.57	301.584		
1,400.00	1,400.00	1,401.70	1,401.70	3.01	3.01	89.68	9.47	1,679.84	1,679.87	1,673.85	6.02	279.062		
1,500.00	1,500.00	1,501.70	1,501.70	3.23	3.24	89.68	9.47	1,679.84	1,679.87	1,673.40	6.47	259.671		
1,600.00	1,600.00	1,601.70	1,601.70	3.46	3.46	89.68	9.47	1,679.84	1,679.87	1,672.95	6.92	242.799		
1,700.00	1,700.00	1,701.70	1,701.70	3.68	3.69	89.68	9.47	1,679.84	1,679.87	1,672.50	7.37	227.986		
1,800.00	1,800.00	1,801.70	1,801.70	3.91	3.91	89.68	9.47	1,679.84	1,679.87	1,672.05	7.82	214.877		
1,900.00	1,900.00	1,901.70	1,901.70	4.13	4.14	89.68	9.47	1,679.84	1,679.87	1,671.60	8.27	203.193		
2,000.00	2,000.00	2,001.70	2,001.70	4.36	4.36	89.68	9.47	1,679.84	1,679.87	1,671.15	8.72	192.714		
2,100.00	2,099.99	2,101.69	2,101.69	4.57	4.59	4.38	9.47	1,679.84	1,679.00	1,669.84	9.15	183.433		
2,200.00	2,199.96	2,201.66	2,201.66	4.77	4.81	4.39	9.47	1,679.84	1,676.39	1,666.81	9.58	175.021		
2,300.00	2,299.86	2,322.81	2,322.80	4.97	5.07	4.41	9.47	1,679.38	1,671.71	1,661.67	10.04	166.516		
2,400.00	2,399.68	2,463.33	2,463.28	5.18	5.35	4.43	9.47	1,675.87	1,663.13	1,652.61	10.52	158.120		
2,500.00	2,499.37	2,602.87	2,602.64	5.40	5.63	4.47	9.47	1,668.98	1,650.39	1,639.40	10.99	150.106		
2,581.25	2,580.25	2,715.24	2,714.73	5.58	5.87	4.51	9.47	1,660.96	1,637.01	1,625.63	11.38	143.849		
2,600.00	2,598.91	2,741.04	2,740.43	5.62	5.93	4.52	9.47	1,658.81	1,633.57	1,622.10	11.47	142.431		
2,700.00	2,698.39	2,877.83	2,876.58	5.85	6.23	4.56	9.47	1,645.48	1,613.82	1,601.89	11.93	135.220		
2,800.00	2,797.88	3,013.25	3,010.99	6.08	6.54	4.59	9.47	1,629.08	1,591.75	1,579.36	12.39	128.419		
2,900.00	2,897.36	3,122.20	3,118.89	6.31	6.80	4.63	9.47	1,613.96	1,567.92	1,555.10	12.82	122.280		
3,000.00	2,996.85	3,219.29	3,215.02	6.55	7.04	4.65	9.47	1,600.35	1,543.98	1,530.74	13.24	116.621		
3,100.00	3,096.34	3,316.38	3,311.15	6.79	7.29	4.68	9.47	1,586.74	1,520.03	1,506.37	13.66	111.279		
3,200.00	3,195.82	3,413.47	3,407.28	7.03	7.54	4.72	9.47	1,573.12	1,496.09	1,482.01	14.08	106.234		
3,300.00	3,295.31	3,510.56	3,503.41	7.28	7.80	4.75	9.47	1,559.51	1,472.15	1,457.64	14.51	101.463		
3,400.00	3,394.79	3,607.64	3,599.54	7.53	8.06	4.78	9.47	1,545.90	1,448.21	1,433.27	14.94	96.947		
3,500.00	3,494.28	3,704.73	3,695.67	7.78	8.32	4.82	9.47	1,532.29	1,424.26	1,408.89	15.37	92.669		
3,600.00	3,593.77	3,801.82	3,791.80	8.03	8.59	4.85	9.47	1,518.67	1,400.32	1,384.52	15.80	88.612		
3,700.00	3,693.25	3,898.91	3,887.93	8.28	8.86	4.89	9.47	1,505.06	1,376.38	1,360.14	16.24	84.761		
3,800.00	3,792.74	3,996.00	3,984.06	8.54	9.13	4.93	9.47	1,491.45	1,352.44	1,335.77	16.68	81.103		
3,900.00	3,892.22	4,093.08	4,080.19	8.79	9.40	4.96	9.47	1,477.84	1,328.50	1,311.39	17.11	77.623		
4,000.00	3,991.71	4,190.17	4,176.31	9.05	9.68	5.01	9.47	1,464.23	1,304.56	1,287.01	17.56	74.311		
4,100.00	4,091.20	4,287.26	4,272.44	9.31	9.96	5.05	9.47	1,450.61	1,280.62	1,262.63	18.00	71.155		
4,200.00	4,190.68	4,384.35	4,368.57	9.57	10.24	5.09	9.47	1,437.00	1,256.69	1,238.24	18.44	68.145		
4,300.00	4,290.17	4,481.44	4,464.70	9.83	10.53	5.14	9.47	1,423.39	1,232.75	1,213.86	18.89	65.272		
4,400.00	4,389.65	4,578.52	4,560.83	10.09	10.81	5.18	9.47	1,409.78	1,208.81	1,189.48	19.33	62.528		
4,500.00	4,489.14	4,675.61	4,656.96	10.36	11.10	5.23	9.47	1,396.16	1,184.88	1,165.10	19.78	59.903		
4,600.00	4,588.62	4,772.70	4,753.09	10.62	11.38	5.28	9.47	1,382.55	1,160.94	1,140.71	20.23	57.392		
4,700.00	4,688.11	4,869.79	4,849.22	10.88	11.67	5.34	9.47	1,368.94	1,137.01	1,116.33	20.68	54.988		
4,800.00	4,787.60	4,966.88	4,945.35	11.15	11.96	5.39	9.47	1,355.33	1,113.07	1,091.95	21.13	52.683		
4,900.00	4,887.08	5,063.97	5,041.48	11.41	12.25	5.45	9.47	1,341.72	1,089.14	1,067.56	21.58	50.472		
5,000.00	4,986.57	5,161.05	5,137.60	11.68	12.55	5.51	9.47	1,328.10	1,065.21	1,043.18	22.03	48.350		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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	Offset		+N/-S (usft)	+E/-W (usft)						
5,100.00	5,086.05	5,258.14	5,233.73	11.95	12.84	5.58	9.47	1,314.49	1,041.28	1,018.80	22.48	46.312		
5,200.00	5,185.54	5,355.23	5,329.86	12.21	13.13	5.64	9.47	1,300.88	1,017.35	994.42	22.94	44.352		
5,300.00	5,285.03	5,452.32	5,425.99	12.48	13.43	5.71	9.47	1,287.27	993.43	970.04	23.39	42.468		
5,400.00	5,384.51	5,549.41	5,522.12	12.75	13.72	5.79	9.47	1,273.65	969.50	945.65	23.85	40.654		
5,500.00	5,484.00	5,646.49	5,618.25	13.02	14.02	5.86	9.47	1,260.04	945.58	921.27	24.30	38.907		
5,600.00	5,583.48	5,743.58	5,714.38	13.28	14.32	5.94	9.47	1,246.43	921.66	896.90	24.76	37.223		
5,700.00	5,682.97	5,840.67	5,810.51	13.55	14.62	6.03	9.47	1,232.82	897.74	872.52	25.22	35.600		
5,800.00	5,782.45	5,937.76	5,906.64	13.82	14.91	6.12	9.47	1,219.21	873.82	848.14	25.68	34.033		
5,900.00	5,881.94	6,034.85	6,002.77	14.09	15.21	6.21	9.47	1,205.59	849.90	823.77	26.13	32.521		
6,000.00	5,981.43	6,131.93	6,098.90	14.36	15.51	6.31	9.47	1,191.98	825.99	799.39	26.59	31.060		
6,100.00	6,080.91	6,229.02	6,195.02	14.63	15.81	6.42	9.47	1,178.37	802.08	775.02	27.05	29.649		
6,200.00	6,180.40	6,326.11	6,291.15	14.90	16.11	6.53	9.47	1,164.76	778.17	750.65	27.51	28.284		
6,300.00	6,279.88	6,423.20	6,387.28	15.17	16.41	6.65	9.47	1,151.14	754.26	726.29	27.97	26.963		
6,400.00	6,379.37	6,520.29	6,483.41	15.44	16.71	6.78	9.47	1,137.53	730.36	701.92	28.44	25.685		
6,500.00	6,478.86	6,617.37	6,579.54	15.72	17.02	6.92	9.47	1,123.92	706.46	677.56	28.90	24.447		
6,600.00	6,578.34	6,714.46	6,675.67	15.99	17.32	7.06	9.47	1,110.31	682.57	653.21	29.36	23.248		
6,700.00	6,677.83	6,811.55	6,771.80	16.26	17.62	7.22	9.47	1,096.70	658.68	628.85	29.82	22.086		
6,800.00	6,777.31	6,908.64	6,867.93	16.53	17.92	7.39	9.47	1,083.08	634.79	604.50	30.29	20.959		
6,900.00	6,876.80	7,005.73	6,964.06	16.80	18.23	7.57	9.47	1,069.47	610.91	580.16	30.75	19.866		
7,000.00	6,976.29	7,102.81	7,060.19	17.07	18.53	7.77	9.47	1,055.86	587.04	555.82	31.22	18.805		
7,100.00	7,075.77	7,199.90	7,156.32	17.35	18.83	7.98	9.47	1,042.25	563.17	531.49	31.68	17.775		
7,200.00	7,175.26	7,296.99	7,252.44	17.62	19.14	8.21	9.47	1,028.63	539.31	507.16	32.15	16.774		
7,300.00	7,274.74	7,394.08	7,348.57	17.89	19.44	8.47	9.47	1,015.02	515.47	482.85	32.62	15.802		
7,400.00	7,374.23	7,491.17	7,444.70	18.16	19.75	8.75	9.47	1,001.41	491.63	458.54	33.09	14.858		
7,500.00	7,473.71	7,588.25	7,540.83	18.44	20.05	9.05	9.47	987.80	467.80	434.24	33.56	13.939		
7,600.00	7,573.20	7,685.34	7,636.96	18.71	20.36	9.39	9.47	974.19	443.99	409.96	34.03	13.046		
7,700.00	7,672.69	7,782.43	7,733.09	18.98	20.66	9.77	9.47	960.57	420.19	385.69	34.51	12.177		
7,800.00	7,772.17	7,879.52	7,829.22	19.26	20.97	10.19	9.47	946.96	396.42	361.43	34.98	11.332		
7,900.00	7,871.66	7,976.61	7,925.35	19.53	21.27	10.67	9.47	933.35	372.66	337.20	35.46	10.509		
8,000.00	7,971.14	8,073.69	8,021.48	19.80	21.58	11.21	9.47	919.74	348.94	312.99	35.94	9.708		
8,100.00	8,070.63	8,166.47	8,113.41	20.08	21.81	11.79	9.47	907.23	325.78	289.34	36.43	8.941		
8,200.00	8,170.12	8,259.01	8,205.28	20.35	22.02	12.42	9.47	896.22	304.19	267.27	36.92	8.239		
8,300.00	8,269.60	8,352.19	8,297.97	20.63	22.22	13.09	9.47	886.64	284.22	246.82	37.40	7.599		
8,400.00	8,369.09	8,445.97	8,391.40	20.90	22.42	13.82	9.47	878.51	265.87	227.99	37.88	7.019		
8,500.00	8,468.57	8,540.32	8,485.51	21.17	22.60	14.59	9.47	871.88	249.17	210.82	38.35	6.498		
8,600.00	8,568.06	8,635.18	8,580.24	21.45	22.78	15.41	9.47	866.78	234.13	195.31	38.81	6.032		
8,700.00	8,667.54	8,730.51	8,675.50	21.72	22.94	16.25	9.47	863.23	220.75	181.47	39.27	5.621		
8,800.00	8,767.03	8,826.25	8,771.22	22.00	23.10	17.10	9.47	861.27	209.04	169.31	39.73	5.262		
8,900.00	8,866.52	8,923.25	8,868.22	22.27	23.26	17.97	9.47	860.84	198.95	158.76	40.19	4.951		
9,000.00	8,966.00	9,022.74	8,967.70	22.55	23.43	18.91	9.47	860.84	189.34	148.67	40.67	4.655		
9,100.00	9,065.49	9,122.22	9,067.19	22.82	23.61	19.96	9.47	860.84	179.78	138.62	41.17	4.367		
9,200.00	9,164.97	9,219.68	9,164.63	23.09	23.78	21.25	8.98	860.84	170.44	128.77	41.67	4.090		
9,232.01	9,196.82	9,250.00	9,194.88	23.18	23.83	22.30	6.94	860.86	168.07	126.21	41.86	4.015		
9,300.00	9,264.50	9,309.72	9,253.94	23.35	23.92	25.89	-1.76	860.92	165.52	123.21	42.31	3.912		
9,306.23	9,270.70	9,315.18	9,259.29	23.36	23.93	26.32	-2.86	860.93	165.50	123.15	42.35	3.908 CC, ES, SF		
9,400.00	9,364.17	9,394.41	9,335.44	23.55	24.06	34.06	-24.51	861.09	170.77	127.81	42.95	3.976		
9,500.00	9,463.97	9,471.00	9,405.54	23.74	24.19	43.34	-55.23	861.32	190.50	147.46	43.04	4.426		
9,600.00	9,563.86	9,538.30	9,463.27	23.92	24.31	51.66	-89.72	861.57	226.16	183.98	42.19	5.361		
9,700.00	9,663.82	9,600.00	9,512.33	24.09	24.42	58.64	-127.10	861.85	275.90	234.96	40.94	6.739		
9,800.00	9,763.81	9,650.00	9,548.95	24.25	24.52	63.74	-161.12	862.10	336.52	297.31	39.21	8.583		
9,813.26	9,777.07	9,650.00	9,548.95	24.27	24.52	149.14	-161.12	862.10	345.20	306.63	38.56	8.951		
9,900.00	9,863.81	9,688.49	9,575.04	24.43	24.60	152.05	-189.40	862.31	405.07	367.79	37.29	10.864		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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		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)						
10,000.00	9,963.81	9,724.68	9,597.79	24.61	24.68	154.48	-217.54	862.52	479.39	443.57	35.82	13.383		
10,100.00	10,063.81	9,750.00	9,612.62	24.80	24.74	156.00	-238.06	862.67	558.17	523.88	34.29	16.278		
10,113.26	10,077.07	9,750.00	9,612.62	24.83	24.74	156.00	-238.06	862.67	568.98	535.01	33.97	16.750		
10,150.00	10,113.79	9,770.04	9,623.72	24.89	24.79	-20.70	-254.75	862.80	598.16	564.19	33.98	17.604		
10,200.00	10,163.48	9,785.04	9,631.63	24.97	24.83	-18.13	-267.49	862.89	636.65	603.27	33.38	19.071		
10,250.00	10,212.52	9,800.00	9,639.19	25.06	24.87	-16.11	-280.40	862.99	673.34	640.59	32.75	20.559		
10,300.00	10,260.52	9,816.82	9,647.29	25.14	24.91	-14.47	-295.14	863.10	708.11	675.95	32.16	22.018		
10,350.00	10,307.13	9,833.45	9,654.86	25.22	24.96	-13.16	-309.94	863.21	740.84	709.30	31.54	23.487		
10,400.00	10,351.99	9,850.00	9,661.97	25.30	25.01	-12.10	-324.89	863.32	771.43	740.52	30.91	24.954		
10,450.00	10,394.76	9,867.86	9,669.15	25.38	25.07	-11.22	-341.24	863.44	799.80	769.48	30.33	26.373		
10,500.00	10,435.11	9,900.00	9,680.78	25.46	25.18	-10.39	-371.20	863.66	826.17	796.02	30.16	27.396		
10,550.00	10,472.73	9,900.00	9,680.78	25.55	25.18	-9.93	-371.20	863.66	849.57	820.48	29.09	29.203		
10,600.00	10,507.34	9,921.65	9,687.66	25.64	25.25	-9.41	-391.72	863.81	870.81	842.15	28.66	30.386		
10,650.00	10,538.68	9,950.00	9,695.49	25.75	25.36	-8.97	-418.97	864.01	889.71	861.31	28.40	31.329		
10,700.00	10,566.51	9,950.00	9,695.49	25.86	25.36	-8.71	-418.97	864.01	905.89	878.32	27.57	32.858		
10,750.00	10,590.61	9,977.18	9,701.71	25.99	25.47	-8.42	-445.42	864.21	919.43	892.07	27.36	33.603		
10,800.00	10,610.80	10,000.00	9,705.97	26.14	25.57	-8.22	-467.84	864.38	930.48	903.37	27.11	34.319		
10,850.00	10,626.93	10,000.00	9,705.97	26.31	25.57	-8.09	-467.84	864.38	939.15	912.53	26.62	35.283		
10,900.00	10,638.87	10,033.66	9,710.61	26.50	25.73	-7.98	-501.17	864.62	944.57	917.93	26.64	35.454		
10,950.00	10,646.54	10,050.00	9,712.16	26.71	25.80	-7.92	-517.44	864.74	947.63	921.09	26.54	35.710		
11,000.00	10,649.87	10,071.54	9,713.48	26.94	25.91	-7.92	-538.93	864.90	947.99	921.43	26.56	35.693		
11,018.94	10,650.00	10,078.71	9,713.74	27.04	25.95	-7.93	-546.10	864.96	947.42	920.84	26.58	35.641		
11,100.00	10,649.20	10,135.61	9,714.19	27.48	26.26	-7.94	-602.99	865.38	945.77	918.88	26.88	35.183		
11,200.00	10,648.20	10,235.60	9,714.65	28.11	26.89	-7.95	-702.98	866.12	944.33	916.90	27.43	34.424		
11,300.00	10,647.21	10,335.59	9,715.11	28.82	27.60	-7.96	-802.96	866.86	942.90	914.84	28.06	33.608		
11,400.00	10,646.22	10,435.58	9,715.57	29.60	28.39	-7.97	-902.95	867.60	941.47	912.72	28.75	32.748		
11,500.00	10,645.23	10,535.57	9,716.02	30.45	29.26	-7.99	-1,002.94	868.34	940.04	910.53	29.50	31.861		
11,600.00	10,644.24	10,635.56	9,716.48	31.37	30.20	-8.00	-1,102.92	869.08	938.60	908.28	30.32	30.958		
11,700.00	10,643.25	10,735.54	9,716.94	32.34	31.19	-8.01	-1,202.91	869.82	937.17	905.98	31.19	30.050		
11,800.00	10,642.25	10,835.53	9,717.39	33.37	32.24	-8.03	-1,302.89	870.56	935.74	903.63	32.11	29.146		
11,900.00	10,641.26	10,935.52	9,717.85	34.44	33.34	-8.04	-1,402.88	871.30	934.31	901.24	33.07	28.253		
12,000.00	10,640.27	11,035.51	9,718.31	35.55	34.49	-8.05	-1,502.86	872.05	932.87	898.80	34.07	27.378		
12,100.00	10,639.28	11,135.50	9,718.76	36.71	35.67	-8.07	-1,602.85	872.79	931.44	896.32	35.12	26.524		
12,200.00	10,638.29	11,235.49	9,719.22	37.90	36.88	-8.08	-1,702.84	873.53	930.01	893.81	36.20	25.694		
12,300.00	10,637.30	11,335.48	9,719.68	39.12	38.13	-8.09	-1,802.82	874.27	928.58	891.27	37.30	24.892		
12,400.00	10,636.30	11,435.47	9,720.13	40.38	39.41	-8.11	-1,902.81	875.01	927.15	888.70	38.44	24.117		
12,500.00	10,635.31	11,535.46	9,720.59	41.66	40.72	-8.12	-2,002.79	875.75	925.71	886.10	39.61	23.372		
12,600.00	10,634.32	11,635.45	9,721.05	42.96	42.04	-8.14	-2,102.78	876.49	924.28	883.48	40.80	22.655		
12,700.00	10,633.33	11,735.44	9,721.51	44.29	43.39	-8.15	-2,202.76	877.23	922.85	880.84	42.01	21.968		
12,800.00	10,632.34	11,835.43	9,721.96	45.63	44.76	-8.16	-2,302.75	877.97	921.42	878.18	43.24	21.309		
12,900.00	10,631.35	11,935.42	9,722.42	47.00	46.15	-8.18	-2,402.74	878.71	919.99	875.49	44.49	20.678		
13,000.00	10,630.35	12,035.41	9,722.88	48.38	47.55	-8.19	-2,502.72	879.45	918.55	872.79	45.76	20.074		
13,100.00	10,629.36	12,135.40	9,723.33	49.78	48.97	-8.20	-2,602.71	880.19	917.12	870.08	47.04	19.495		
13,200.00	10,628.37	12,235.39	9,723.79	51.19	50.40	-8.22	-2,702.69	880.94	915.69	867.35	48.34	18.942		
13,300.00	10,627.38	12,335.38	9,724.25	52.62	51.84	-8.23	-2,802.68	881.68	914.26	864.61	49.65	18.413		
13,400.00	10,626.39	12,435.37	9,724.70	54.05	53.30	-8.25	-2,902.66	882.42	912.83	861.85	50.98	17.906		
13,500.00	10,625.40	12,535.36	9,725.16	55.50	54.76	-8.26	-3,002.65	883.16	911.40	859.08	52.31	17.422		
13,600.00	10,624.40	12,635.35	9,725.62	56.96	56.23	-8.27	-3,102.64	883.90	909.96	856.30	53.66	16.958		
13,700.00	10,623.41	12,735.33	9,726.07	58.43	57.72	-8.29	-3,202.62	884.64	908.53	853.52	55.02	16.514		
13,800.00	10,622.42	12,835.32	9,726.53	59.91	59.21	-8.30	-3,302.61	885.38	907.10	850.72	56.38	16.088		
13,900.00	10,621.43	12,935.31	9,726.99	61.39	60.71	-8.32	-3,402.59	886.12	905.67	847.91	57.76	15.680		
14,000.00	10,620.44	13,035.30	9,727.44	62.88	62.21	-8.33	-3,502.58	886.86	904.24	845.10	59.14	15.289		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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)						
14,100.00	10,619.44	13,135.29	9,727.90	64.38	63.73	-8.34	-3,602.56	887.60	902.81	842.28	60.53	14.914		
14,200.00	10,618.45	13,235.28	9,728.36	65.89	65.25	-8.36	-3,702.55	888.34	901.38	839.45	61.93	14.555		
14,300.00	10,617.46	13,335.27	9,728.82	67.40	66.77	-8.37	-3,802.54	889.08	899.95	836.61	63.34	14.209		
14,400.00	10,616.47	13,435.26	9,729.27	68.92	68.30	-8.39	-3,902.52	889.82	898.51	833.77	64.75	13.877		
14,500.00	10,615.48	13,535.25	9,729.73	70.45	69.83	-8.40	-4,002.51	890.57	897.08	830.92	66.16	13.559		
14,600.00	10,614.49	13,635.24	9,730.19	71.98	71.37	-8.42	-4,102.49	891.31	895.65	828.07	67.59	13.252		
14,700.00	10,613.49	13,735.23	9,730.64	73.51	72.92	-8.43	-4,202.48	892.05	894.22	825.21	69.01	12.957		
14,800.00	10,612.50	13,835.22	9,731.10	75.05	74.47	-8.45	-4,302.46	892.79	892.79	822.34	70.45	12.673		
14,900.00	10,611.51	13,935.21	9,731.56	76.59	76.02	-8.46	-4,402.45	893.53	891.36	819.48	71.88	12.400		
15,000.00	10,610.52	14,035.20	9,732.01	78.14	77.57	-8.47	-4,502.44	894.27	889.93	816.60	73.33	12.137		
15,100.00	10,609.53	14,135.19	9,732.47	79.69	79.13	-8.49	-4,602.42	895.01	888.50	813.73	74.77	11.883		
15,200.00	10,608.54	14,235.18	9,732.93	81.24	80.69	-8.50	-4,702.41	895.75	887.07	810.85	76.22	11.638		
15,300.00	10,607.54	14,335.17	9,733.38	82.80	82.26	-8.52	-4,802.39	896.49	885.64	807.96	77.68	11.402		
15,400.00	10,606.55	14,435.16	9,733.84	84.36	83.82	-8.53	-4,902.38	897.23	884.21	805.07	79.13	11.173		
15,500.00	10,605.56	14,544.50	9,734.81	85.92	85.33	-8.55	-5,011.71	898.04	882.36	801.72	80.64	10.943		
15,600.00	10,604.57	14,644.47	9,736.34	87.48	86.79	-8.58	-5,111.67	898.78	879.87	797.77	82.10	10.717		
15,700.00	10,603.58	14,744.43	9,737.87	89.05	88.36	-8.61	-5,211.62	899.52	877.38	793.80	83.58	10.498		
15,800.00	10,602.59	14,844.40	9,739.40	90.62	89.94	-8.63	-5,311.57	900.26	874.89	789.83	85.06	10.286		
15,900.00	10,601.59	14,944.37	9,740.92	92.20	91.52	-8.66	-5,411.53	900.99	872.40	785.86	86.54	10.081		
16,000.00	10,600.60	15,044.34	9,742.45	93.77	93.10	-8.68	-5,511.48	901.73	869.91	781.89	88.03	9.882		
16,100.00	10,599.61	15,144.31	9,743.98	95.35	94.68	-8.71	-5,611.43	902.47	867.43	777.91	89.52	9.690		
16,200.00	10,598.62	15,244.28	9,745.51	96.93	96.27	-8.73	-5,711.39	903.21	864.94	773.93	91.01	9.504		
16,300.00	10,597.63	15,344.24	9,747.03	98.51	97.86	-8.76	-5,811.34	903.94	862.45	769.94	92.50	9.323		
16,400.00	10,596.64	15,444.21	9,748.56	100.09	99.44	-8.79	-5,911.30	904.68	859.96	765.96	94.00	9.148		
16,500.00	10,595.64	15,544.18	9,750.09	101.68	101.03	-8.81	-6,011.25	905.42	857.47	761.97	95.50	8.978		
16,600.00	10,594.65	15,644.15	9,751.62	103.26	102.63	-8.84	-6,111.20	906.16	854.98	757.98	97.01	8.814		
16,700.00	10,593.66	15,744.12	9,753.14	104.85	104.22	-8.87	-6,211.16	906.90	852.50	753.98	98.51	8.654		
16,800.00	10,592.67	15,844.09	9,754.67	106.44	105.81	-8.89	-6,311.11	907.63	850.01	749.99	100.02	8.498		
16,900.00	10,591.68	15,944.05	9,756.20	108.03	107.41	-8.92	-6,411.07	908.37	847.52	745.99	101.53	8.347		
17,000.00	10,590.69	16,044.02	9,757.73	109.63	109.01	-8.95	-6,511.02	909.11	845.03	741.99	103.05	8.200		
17,100.00	10,589.69	16,143.99	9,759.25	111.22	110.60	-8.98	-6,610.97	909.85	842.55	737.98	104.56	8.058		
17,200.00	10,588.70	16,243.96	9,760.78	112.82	112.20	-9.00	-6,710.93	910.59	840.06	733.98	106.08	7.919		
17,300.00	10,587.71	16,343.93	9,762.31	114.41	113.80	-9.03	-6,810.88	911.32	837.57	729.97	107.60	7.784		
17,400.00	10,586.72	16,443.89	9,763.84	116.01	115.40	-9.06	-6,910.83	912.06	835.09	725.96	109.13	7.652		
17,500.00	10,585.73	16,543.86	9,765.36	117.61	117.01	-9.09	-7,010.79	912.80	832.60	721.95	110.65	7.524		
17,600.00	10,584.74	16,643.83	9,766.89	119.21	118.61	-9.12	-7,110.74	913.54	830.12	717.93	112.18	7.400		
17,700.00	10,583.74	16,743.80	9,768.42	120.81	120.21	-9.14	-7,210.70	914.27	827.63	713.92	113.71	7.278		
17,800.00	10,582.75	16,843.77	9,769.95	122.41	121.82	-9.17	-7,310.65	915.01	825.14	709.90	115.24	7.160		
17,900.00	10,581.76	16,943.74	9,771.47	124.01	123.43	-9.20	-7,410.60	915.75	822.66	705.88	116.78	7.045		
18,000.00	10,580.77	17,043.70	9,773.00	125.62	125.03	-9.23	-7,510.56	916.49	820.17	701.86	118.31	6.932		
18,077.45	10,580.00	17,109.02	9,774.00	126.59	126.08	-9.25	-7,575.86	916.97	818.34	699.14	119.20	6.865		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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 133H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 10500-MWD+HFR1+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		
0.00	0.00	0.00	0.00	0.00	0.00	-90.32	-0.33	-59.94	59.94					
100.00	100.00	100.00	100.00	0.09	0.09	-90.32	-0.33	-59.94	59.94	59.77	0.17	348.603		
200.00	200.00	200.00	200.00	0.31	0.31	-90.32	-0.33	-59.94	59.94	59.32	0.62	96.449		
300.00	300.00	300.00	300.00	0.54	0.54	-90.32	-0.33	-59.94	59.94	58.87	1.07	55.967		
400.00	400.00	400.00	400.00	0.76	0.76	-90.32	-0.33	-59.94	59.94	58.42	1.52	39.421		
500.00	500.00	500.00	500.00	0.99	0.99	-90.32	-0.33	-59.94	59.94	57.97	1.97	30.426		
600.00	600.00	600.00	600.00	1.21	1.21	-90.32	-0.33	-59.94	59.94	57.52	2.42	24.773		
700.00	700.00	700.00	700.00	1.43	1.43	-90.32	-0.33	-59.94	59.94	57.07	2.87	20.892		
800.00	800.00	800.00	800.00	1.66	1.66	-90.32	-0.33	-59.94	59.94	56.62	3.32	18.062		
900.00	900.00	900.00	900.00	1.88	1.88	-90.32	-0.33	-59.94	59.94	56.17	3.77	15.907		
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	-90.32	-0.33	-59.94	59.94	55.72	4.22	14.212		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	-90.32	-0.33	-59.94	59.94	55.27	4.67	12.843		
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	-90.32	-0.33	-59.94	59.94	54.82	5.12	11.715		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	-90.32	-0.33	-59.94	59.94	54.37	5.57	10.768		
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-90.32	-0.33	-59.94	59.94	53.93	6.02	9.964		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	-90.32	-0.33	-59.94	59.94	53.48	6.47	9.271		
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-90.32	-0.33	-59.94	59.94	53.03	6.91	8.668		
1,700.00	1,700.00	1,700.00	1,700.00	3.68	3.68	-90.32	-0.33	-59.94	59.94	52.58	7.36	8.139		
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-90.32	-0.33	-59.94	59.94	52.13	7.81	7.671		
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	-90.32	-0.33	-59.94	59.94	51.68	8.26	7.254		
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-90.32	-0.33	-59.94	59.94	51.23	8.71	6.879 CC, ES		
2,100.00	2,099.99	2,099.99	2,099.99	4.57	4.58	-175.68	-0.33	-59.94	60.81	51.66	9.15	6.646		
2,200.00	2,199.96	2,199.96	2,199.96	4.77	4.81	-175.86	-0.33	-59.94	63.42	53.85	9.57	6.624		
2,300.00	2,299.86	2,299.86	2,299.86	4.97	5.03	-176.12	-0.33	-59.94	67.77	57.77	10.00	6.776		
2,400.00	2,399.68	2,399.68	2,399.68	5.18	5.25	-176.44	-0.33	-59.94	73.86	63.43	10.43	7.081		
2,500.00	2,499.37	2,499.37	2,499.37	5.40	5.48	-176.77	-0.33	-59.94	81.70	70.83	10.86	7.521		
2,581.25	2,580.25	2,580.25	2,580.25	5.58	5.66	-177.05	-0.33	-59.94	89.34	78.13	11.21	7.967		
2,600.00	2,598.91	2,598.91	2,598.91	5.62	5.70	-177.11	-0.33	-59.94	91.24	79.94	11.30	8.078		
2,700.00	2,698.39	2,698.39	2,698.39	5.85	5.93	-177.40	-0.33	-59.94	101.35	89.63	11.73	8.642		
2,800.00	2,797.88	2,797.88	2,797.88	6.08	6.15	-177.63	-0.33	-59.94	111.47	99.31	12.16	9.165		
2,900.00	2,897.36	2,897.36	2,897.36	6.31	6.37	-177.83	-0.33	-59.94	121.59	108.99	12.60	9.650		
3,000.00	2,996.85	2,996.85	2,996.85	6.55	6.60	-178.00	-0.33	-59.94	131.71	118.67	13.04	10.102		
3,100.00	3,096.34	3,096.34	3,096.34	6.79	6.82	-178.14	-0.33	-59.94	141.83	128.36	13.48	10.524		
3,200.00	3,195.82	3,195.82	3,195.82	7.03	7.04	-178.26	-0.33	-59.94	151.96	138.04	13.92	10.918		
3,300.00	3,295.31	3,295.31	3,295.31	7.28	7.27	-178.37	-0.33	-59.94	162.08	147.72	14.36	11.287		
3,400.00	3,394.79	3,394.79	3,394.79	7.53	7.49	-178.47	-0.33	-59.94	172.20	157.40	14.80	11.633		
3,500.00	3,494.28	3,494.28	3,494.28	7.78	7.72	-178.55	-0.33	-59.94	182.33	167.08	15.25	11.958		
3,600.00	3,593.77	3,593.77	3,593.77	8.03	7.94	-178.63	-0.33	-59.94	192.45	176.76	15.69	12.264		
3,700.00	3,693.25	3,693.25	3,693.25	8.28	8.16	-178.70	-0.33	-59.94	202.58	186.44	16.14	12.553		
3,800.00	3,792.74	3,792.74	3,792.74	8.54	8.39	-178.76	-0.33	-59.94	212.70	196.12	16.58	12.826		
3,900.00	3,892.22	3,892.22	3,892.22	8.79	8.61	-178.82	-0.33	-59.94	222.83	205.79	17.03	13.083		
4,000.00	3,991.71	3,991.71	3,991.71	9.05	8.83	-178.87	-0.33	-59.94	232.95	215.47	17.48	13.328		
4,100.00	4,091.20	4,091.20	4,091.20	9.31	9.05	-178.93	-0.33	-59.15	242.32	224.39	17.93	13.518		
4,200.00	4,190.68	4,190.68	4,190.68	9.57	9.26	-179.01	-0.33	-56.47	249.89	231.54	18.35	13.614		
4,300.00	4,290.17	4,303.83	4,303.83	9.83	9.47	-179.12	-0.33	-51.89	255.65	236.87	18.78	13.612		
4,400.00	4,389.65	4,408.44	4,408.10	10.09	9.68	-179.25	-0.33	-45.39	259.59	240.39	19.20	13.518		
4,500.00	4,489.14	4,508.53	4,507.93	10.36	9.89	-179.39	-0.33	-38.21	262.57	242.94	19.63	13.375		
4,600.00	4,588.62	4,608.49	4,607.63	10.62	10.10	-179.52	-0.33	-31.04	265.55	245.49	20.06	13.238		
4,700.00	4,688.11	4,708.44	4,707.32	10.88	10.31	-179.65	-0.33	-23.86	268.53	248.04	20.49	13.104		
4,800.00	4,787.60	4,808.40	4,807.02	11.15	10.52	-179.78	-0.33	-16.69	271.52	250.59	20.92	12.976		
4,900.00	4,887.08	4,908.35	4,906.71	11.41	10.73	-179.91	-0.33	-9.52	274.50	253.15	21.36	12.852		
5,000.00	4,986.57	5,008.30	5,006.41	11.68	10.95	179.97	-0.33	-2.35	277.49	255.70	21.79	12.732		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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 133H - OH - Plan #2													Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM MWD+HDGM, 10500-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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,086.05	5,108.26	5,106.11	11.95	11.16	179.85	-0.33	4.82	280.48	258.25	22.23	12.616		
5,200.00	5,185.54	5,208.21	5,205.80	12.21	11.38	179.73	-0.33	11.99	283.47	260.80	22.67	12.504		
5,300.00	5,285.03	5,308.16	5,305.50	12.48	11.60	179.62	-0.33	19.17	286.46	263.35	23.11	12.396		
5,400.00	5,384.51	5,408.12	5,405.19	12.75	11.82	179.51	-0.33	26.34	289.45	265.90	23.55	12.291		
5,500.00	5,484.00	5,508.07	5,504.89	13.02	12.05	179.40	-0.33	33.51	292.44	268.45	23.99	12.190		
5,600.00	5,583.48	5,608.02	5,604.59	13.28	12.27	179.29	-0.33	40.68	295.44	271.00	24.43	12.091		
5,700.00	5,682.97	5,707.98	5,704.28	13.55	12.49	179.18	-0.33	47.85	298.43	273.55	24.88	11.996		
5,800.00	5,782.45	5,807.93	5,803.98	13.82	12.72	179.08	-0.33	55.02	301.43	276.11	25.32	11.904		
5,900.00	5,881.94	5,907.89	5,903.67	14.09	12.95	178.98	-0.33	62.20	304.42	278.66	25.77	11.815		
6,000.00	5,981.43	6,007.84	6,003.37	14.36	13.17	178.88	-0.33	69.37	307.42	281.21	26.21	11.728		
6,100.00	6,080.91	6,107.79	6,103.07	14.63	13.40	178.78	-0.33	76.54	310.42	283.76	26.66	11.644		
6,200.00	6,180.40	6,207.75	6,202.76	14.90	13.63	178.69	-0.33	83.71	313.42	286.31	27.11	11.562		
6,300.00	6,279.88	6,307.70	6,302.46	15.17	13.86	178.59	-0.33	90.88	316.42	288.87	27.56	11.483		
6,400.00	6,379.37	6,407.65	6,402.16	15.44	14.09	178.50	-0.33	98.06	319.42	291.42	28.00	11.406		
6,500.00	6,478.86	6,507.61	6,501.85	15.72	14.32	178.41	-0.33	105.23	322.42	293.97	28.45	11.332		
6,600.00	6,578.34	6,607.56	6,601.55	15.99	14.56	178.32	-0.33	112.40	325.43	296.52	28.90	11.259		
6,700.00	6,677.83	6,707.51	6,701.24	16.26	14.79	178.23	-0.33	119.57	328.43	299.08	29.35	11.188		
6,800.00	6,777.31	6,807.47	6,800.94	16.53	15.02	178.15	-0.33	126.74	331.43	301.63	29.81	11.120		
6,900.00	6,876.80	6,907.42	6,900.64	16.80	15.26	178.06	-0.33	133.91	334.44	304.18	30.26	11.053		
7,000.00	6,976.29	7,007.38	7,000.33	17.07	15.49	177.98	-0.33	141.09	337.44	306.73	30.71	10.988		
7,100.00	7,075.77	7,107.33	7,100.03	17.35	15.73	177.90	-0.33	148.26	340.45	309.29	31.16	10.925		
7,200.00	7,175.26	7,207.28	7,199.72	17.62	15.96	177.82	-0.33	155.43	343.46	311.84	31.62	10.864		
7,300.00	7,274.74	7,307.24	7,299.42	17.89	16.20	177.74	-0.33	162.60	346.47	314.40	32.07	10.804		
7,400.00	7,374.23	7,407.19	7,399.12	18.16	16.44	177.66	-0.33	169.77	349.47	316.95	32.52	10.745		
7,500.00	7,473.71	7,507.14	7,498.81	18.44	16.67	177.59	-0.33	176.94	352.48	319.50	32.98	10.688		
7,600.00	7,573.20	7,607.10	7,598.51	18.71	16.91	177.51	-0.33	184.12	355.49	322.06	33.43	10.633		
7,700.00	7,672.69	7,707.05	7,698.20	18.98	17.15	177.44	-0.33	191.29	358.50	324.61	33.89	10.579		
7,800.00	7,772.17	7,807.00	7,797.90	19.26	17.39	177.37	-0.33	198.46	361.51	327.17	34.34	10.526		
7,900.00	7,871.66	7,906.96	7,897.60	19.53	17.63	177.30	-0.33	205.63	364.52	329.72	34.80	10.475		
8,000.00	7,971.14	8,006.91	7,997.29	19.80	17.87	177.23	-0.33	212.80	367.54	332.28	35.26	10.424		
8,100.00	8,070.63	8,106.87	8,096.99	20.08	18.11	177.16	-0.33	219.97	370.55	334.83	35.71	10.375		
8,200.00	8,170.12	8,206.82	8,196.68	20.35	18.35	177.09	-0.33	227.15	373.56	337.39	36.17	10.328		
8,300.00	8,269.60	8,306.77	8,296.38	20.63	18.59	177.03	-0.33	234.32	376.57	339.95	36.63	10.281		
8,400.00	8,369.09	8,406.73	8,396.08	20.90	18.83	176.96	-0.33	241.49	379.59	342.50	37.09	10.235		
8,500.00	8,468.57	8,506.68	8,495.77	21.17	19.07	176.90	-0.33	248.66	382.60	345.06	37.54	10.191		
8,600.00	8,568.06	8,606.63	8,595.47	21.45	19.31	176.83	-0.33	255.83	385.62	347.61	38.00	10.147		
8,700.00	8,667.54	8,706.59	8,695.16	21.72	19.55	176.77	-0.33	263.00	388.63	350.17	38.46	10.104		
8,800.00	8,767.03	8,806.54	8,794.86	22.00	19.79	176.71	-0.33	270.18	391.65	352.73	38.92	10.063		
8,900.00	8,866.52	8,904.67	8,892.74	22.27	20.02	176.65	-0.33	277.15	394.73	355.36	39.37	10.025		
9,000.00	8,966.00	9,000.00	8,987.90	22.55	20.21	176.62	-0.33	282.76	399.02	359.23	39.79	10.028		
9,100.00	9,065.49	9,091.51	9,079.33	22.82	20.38	176.62	-0.33	286.65	404.92	364.72	40.20	10.074		
9,200.00	9,164.97	9,184.65	9,172.43	23.09	20.56	176.65	-0.33	289.10	412.42	371.83	40.59	10.160		
9,232.01	9,196.82	9,214.41	9,202.19	23.18	20.61	176.67	-0.33	289.57	415.17	374.45	40.72	10.196		
9,300.00	9,264.50	9,277.57	9,265.35	23.35	20.73	176.71	-0.33	290.05	421.13	380.17	40.96	10.281		
9,400.00	9,364.17	9,376.39	9,364.17	23.55	20.93	176.77	-0.33	290.06	429.18	387.83	41.35	10.379		
9,500.00	9,463.97	9,476.19	9,463.97	23.74	21.14	176.82	-0.33	290.06	435.51	393.76	41.75	10.432		
9,600.00	9,563.86	9,576.08	9,563.86	23.92	21.35	176.86	-0.33	290.06	440.09	397.95	42.14	10.444		
9,700.00	9,663.82	9,667.70	9,655.23	24.09	21.52	176.19	-5.68	290.10	443.74	401.27	42.47	10.448		
9,800.00	9,763.81	9,754.38	9,739.89	24.25	21.69	173.89	-23.95	290.23	448.33	405.56	42.77	10.483		
9,813.26	9,777.07	9,765.40	9,750.42	24.27	21.71	-101.21	-27.18	290.26	449.09	406.29	42.80	10.492		
9,900.00	9,863.81	9,834.00	9,814.41	24.43	21.84	-104.27	-51.79	290.44	456.24	413.24	42.99	10.612		
10,000.00	9,963.81	9,900.00	9,872.78	24.61	21.97	-107.97	-82.52	290.66	470.76	427.82	42.94	10.963		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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 133H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 10500-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)	Separation (usft)			
10,100.00	10,063.81	9,966.17	9,927.36	24.80	22.11	-112.28	-119.86	290.94	493.71	450.97	42.74	11.551		
10,113.26	10,077.07	9,973.64	9,933.24	24.83	22.12	-112.79	-124.47	290.97	497.46	454.78	42.68	11.656		
10,150.00	10,113.79	10,000.00	9,953.51	24.89	22.18	64.84	-141.32	291.09	508.33	465.72	42.61	11.931		
10,200.00	10,163.48	10,021.74	9,969.62	24.97	22.23	62.11	-155.91	291.20	523.45	481.33	42.12	12.428		
10,250.00	10,212.52	10,050.00	9,989.72	25.06	22.30	59.16	-175.77	291.34	538.85	497.11	41.73	12.912		
10,300.00	10,260.52	10,076.55	10,007.69	25.14	22.37	56.52	-195.31	291.49	554.17	512.90	41.26	13.430		
10,350.00	10,307.13	10,100.00	10,022.80	25.22	22.43	54.22	-213.25	291.62	569.18	528.51	40.67	13.993		
10,400.00	10,351.99	10,130.86	10,041.53	25.30	22.52	51.86	-237.76	291.80	583.62	543.34	40.27	14.491		
10,450.00	10,394.76	10,150.00	10,052.48	25.38	22.58	50.12	-253.46	291.91	597.42	557.88	39.54	15.109		
10,500.00	10,435.11	10,184.80	10,071.02	25.46	22.69	48.13	-282.90	292.13	610.16	570.92	39.24	15.549		
10,550.00	10,472.73	10,211.66	10,084.08	25.55	22.78	46.60	-306.37	292.30	621.96	583.22	38.74	16.056		
10,600.00	10,507.34	10,238.46	10,096.01	25.64	22.88	45.28	-330.37	292.48	632.60	594.35	38.25	16.537		
10,650.00	10,538.68	10,265.22	10,106.78	25.75	22.99	44.16	-354.86	292.66	642.00	604.20	37.80	16.983		
10,700.00	10,566.51	10,300.00	10,119.06	25.86	23.14	43.12	-387.39	292.89	650.17	612.58	37.59	17.299		
10,750.00	10,590.61	10,318.62	10,124.81	25.99	23.23	42.48	-405.10	293.02	656.76	619.71	37.04	17.730		
10,800.00	10,610.80	10,350.00	10,133.20	26.14	23.38	41.87	-435.34	293.24	662.02	625.18	36.85	17.967		
10,850.00	10,626.93	10,371.91	10,138.06	26.31	23.49	41.50	-456.70	293.40	665.74	629.21	36.53	18.226		
10,900.00	10,638.87	10,400.00	10,143.10	26.50	23.64	41.26	-484.33	293.60	667.98	631.57	36.41	18.348		
10,950.00	10,646.54	10,425.16	10,146.46	26.71	23.78	41.19	-509.26	293.79	668.68	632.36	36.32	18.410		
11,000.00	10,649.87	10,450.00	10,148.70	26.94	23.92	41.27	-534.00	293.97	667.86	631.54	36.32	18.386		
11,018.94	10,650.00	10,461.87	10,149.39	27.04	23.99	41.35	-545.84	294.05	667.14	630.76	36.39	18.335		
11,082.71	10,649.37	10,496.68	10,150.00	27.38	24.21	41.40	-580.64	294.31	665.80	629.25	36.55	18.218		
11,100.00	10,649.20	10,512.52	10,149.80	27.48	24.49	41.40	-596.48	294.42	665.83	629.20	36.64	18.175		
11,200.00	10,648.20	10,612.52	10,148.51	28.11	28.68	41.38	-696.47	295.16	666.05	628.83	37.22	17.896		
11,300.00	10,647.21	10,712.52	10,147.23	28.82	28.76	41.37	-796.46	295.89	666.27	628.55	37.72	17.664		
11,400.00	10,646.22	10,812.52	10,145.94	29.60	28.85	41.35	-896.45	296.62	666.48	628.17	38.31	17.396		
11,500.00	10,645.23	10,912.52	10,144.65	30.45	28.93	41.33	-996.44	297.35	666.70	627.70	39.00	17.096		
11,600.00	10,644.24	11,012.52	10,143.37	31.37	29.02	41.32	-1,096.42	298.08	666.92	627.15	39.77	16.770		
11,700.00	10,643.25	11,112.52	10,142.08	32.34	29.12	41.30	-1,196.41	298.82	667.13	626.52	40.62	16.425		
11,800.00	10,642.25	11,212.52	10,140.80	33.37	29.21	41.28	-1,296.40	299.55	667.35	625.81	41.54	16.065		
11,900.00	10,641.26	11,312.52	10,139.51	34.44	29.30	41.26	-1,396.39	300.28	667.57	625.04	42.53	15.696		
12,000.00	10,640.27	11,412.52	10,138.22	35.55	29.40	41.25	-1,496.38	301.01	667.78	624.20	43.59	15.320		
12,100.00	10,639.28	11,512.51	10,136.94	36.71	29.50	41.23	-1,596.37	301.74	668.00	623.30	44.70	14.943		
12,200.00	10,638.29	11,612.51	10,135.65	37.90	29.60	41.21	-1,696.36	302.48	668.22	622.34	45.88	14.566		
12,300.00	10,637.30	11,712.51	10,134.37	39.12	29.71	41.20	-1,796.34	303.21	668.44	621.34	47.10	14.192		
12,400.00	10,636.30	11,812.51	10,133.08	40.38	29.81	41.18	-1,896.33	303.94	668.65	620.29	48.37	13.824		
12,500.00	10,635.31	11,912.51	10,131.79	41.66	29.92	41.16	-1,996.32	304.67	668.87	619.19	49.68	13.463		
12,600.00	10,634.32	12,012.51	10,130.51	42.96	30.04	41.15	-2,096.31	305.40	669.09	618.05	51.04	13.110		
12,700.00	10,633.33	12,112.51	10,129.22	44.29	30.15	41.13	-2,196.30	306.14	669.31	616.88	52.43	12.766		
12,800.00	10,632.34	12,212.51	10,127.94	45.63	30.27	41.11	-2,296.29	306.87	669.52	615.67	53.86	12.432		
12,900.00	10,631.35	12,312.51	10,126.65	47.00	30.40	41.09	-2,396.28	307.60	669.74	614.43	55.32	12.108		
13,000.00	10,630.35	12,412.51	10,125.37	48.38	30.53	41.08	-2,496.26	308.33	669.96	613.16	56.80	11.794		
13,100.00	10,629.36	12,512.51	10,124.08	49.78	30.67	41.06	-2,596.25	309.06	670.18	611.86	58.32	11.491		
13,200.00	10,628.37	12,612.51	10,122.79	51.19	30.83	41.04	-2,696.24	309.80	670.40	610.53	59.86	11.199		
13,300.00	10,627.38	12,712.51	10,121.51	52.62	30.99	41.03	-2,796.23	310.53	670.61	609.18	61.43	10.917		
13,400.00	10,626.39	12,812.51	10,120.22	54.05	31.18	41.01	-2,896.22	311.26	670.83	607.81	63.02	10.645		
13,500.00	10,625.40	12,912.51	10,118.94	55.50	31.39	40.99	-2,996.21	311.99	671.05	606.42	64.63	10.384		
13,600.00	10,624.40	13,012.51	10,117.65	56.96	31.64	40.98	-3,096.20	312.72	671.27	605.02	66.25	10.132		
13,700.00	10,623.41	13,112.51	10,116.36	58.43	31.92	40.96	-3,196.18	313.46	671.49	603.59	67.90	9.890		
13,800.00	10,622.42	13,212.51	10,115.08	59.91	32.25	40.94	-3,296.17	314.19	671.71	602.15	69.56	9.657		
13,900.00	10,621.43	13,312.51	10,113.79	61.39	32.62	40.93	-3,396.16	314.92	671.92	600.69	71.24	9.432		
14,000.00	10,620.44	13,412.51	10,112.51	62.88	33.03	40.91	-3,496.15	315.65	672.14	599.21	72.93	9.217		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 133H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 10500-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)		+N-S (usft)	+E-W (usft)						
14,100.00	10,619.44	13,512.51	10,111.22	64.38	33.48	40.89	-3,596.14	316.38	672.36	597.73	74.63	9.009		
14,200.00	10,618.45	13,612.51	10,109.94	65.89	33.95	40.88	-3,696.13	317.12	672.58	596.23	76.35	8.809		
14,300.00	10,617.46	13,712.51	10,108.65	67.40	34.44	40.86	-3,796.12	317.85	672.80	594.72	78.08	8.617		
14,400.00	10,616.47	13,812.51	10,107.36	68.92	34.95	40.84	-3,896.11	318.58	673.02	593.20	79.81	8.432		
14,500.00	10,615.48	13,912.50	10,106.08	70.45	35.48	40.83	-3,996.09	319.31	673.23	591.67	81.56	8.254		
14,600.00	10,614.49	14,012.50	10,104.79	71.98	36.02	40.81	-4,096.08	320.04	673.45	590.13	83.32	8.083		
14,700.00	10,613.49	14,112.50	10,103.51	73.51	36.57	40.79	-4,196.07	320.77	673.67	588.58	85.09	7.917		
14,800.00	10,612.50	14,212.50	10,102.22	75.05	37.13	40.78	-4,296.06	321.51	673.89	587.03	86.86	7.758		
14,900.00	10,611.51	14,312.50	10,100.93	76.59	37.70	40.76	-4,396.05	322.24	674.11	585.46	88.65	7.605		
15,000.00	10,610.52	14,412.50	10,099.65	78.14	38.28	40.74	-4,496.04	322.97	674.33	583.89	90.44	7.456		
15,100.00	10,609.53	14,512.50	10,098.36	79.69	38.87	40.72	-4,596.03	323.70	674.55	582.32	92.23	7.314		
15,200.00	10,608.54	14,612.50	10,097.08	81.24	39.46	40.71	-4,696.01	324.43	674.77	580.73	94.04	7.176		
15,300.00	10,607.54	14,712.50	10,095.79	82.80	40.06	40.69	-4,796.00	325.17	674.99	579.14	95.84	7.043		
15,400.00	10,606.55	14,812.50	10,094.50	84.36	40.67	40.67	-4,895.99	325.90	675.21	577.55	97.66	6.914		
15,500.00	10,605.56	14,912.50	10,093.22	85.92	41.28	40.66	-4,995.98	326.63	675.42	575.95	99.48	6.790		
15,600.00	10,604.57	15,012.50	10,091.93	87.48	41.90	40.64	-5,095.97	327.36	675.64	574.34	101.30	6.669		
15,700.00	10,603.58	15,112.50	10,090.65	89.05	42.52	40.63	-5,195.96	328.09	675.86	572.73	103.13	6.553		
15,800.00	10,602.59	15,212.50	10,089.36	90.62	43.15	40.61	-5,295.95	328.83	676.08	571.11	104.97	6.441		
15,900.00	10,601.59	15,312.50	10,088.08	92.20	43.79	40.59	-5,395.93	329.56	676.30	569.50	106.81	6.332		
16,000.00	10,600.60	15,412.50	10,086.79	93.77	44.42	40.58	-5,495.92	330.29	676.52	567.87	108.65	6.227		
16,100.00	10,599.61	15,512.50	10,085.50	95.35	45.06	40.56	-5,595.91	331.02	676.74	566.25	110.50	6.125		
16,200.00	10,598.62	15,612.50	10,084.22	96.93	45.71	40.54	-5,695.90	331.75	676.96	564.62	112.35	6.026		
16,300.00	10,597.63	15,712.50	10,082.93	98.51	46.36	40.53	-5,795.89	332.49	677.18	562.98	114.20	5.930		
16,400.00	10,596.64	15,812.50	10,081.65	100.09	47.01	40.51	-5,895.88	333.22	677.40	561.35	116.05	5.837		
16,500.00	10,595.64	15,912.50	10,080.36	101.68	47.67	40.49	-5,995.87	333.95	677.62	559.71	117.91	5.747		
16,600.00	10,594.65	16,012.50	10,079.07	103.26	48.33	40.48	-6,095.85	334.68	677.84	558.06	119.78	5.659		
16,700.00	10,593.66	16,112.50	10,077.79	104.85	48.99	40.46	-6,195.84	335.41	678.06	556.42	121.64	5.574		
16,800.00	10,592.67	16,212.49	10,076.50	106.44	49.66	40.44	-6,295.83	336.15	678.28	554.77	123.51	5.492		
16,900.00	10,591.68	16,312.49	10,075.22	108.03	50.33	40.43	-6,395.82	336.88	678.50	553.12	125.38	5.412		
17,000.00	10,590.69	16,412.49	10,073.93	109.63	51.00	40.41	-6,495.81	337.61	678.72	551.47	127.25	5.334		
17,100.00	10,589.69	16,512.49	10,072.65	111.22	51.68	40.39	-6,595.80	338.34	678.94	549.82	129.12	5.258		
17,200.00	10,588.70	16,612.49	10,071.36	112.82	52.35	40.38	-6,695.79	339.07	679.16	548.16	131.00	5.184		
17,300.00	10,587.71	16,712.49	10,070.07	114.41	53.03	40.36	-6,795.78	339.81	679.38	546.51	132.88	5.113		
17,400.00	10,586.72	16,812.49	10,068.79	116.01	53.71	40.34	-6,895.76	340.54	679.60	544.85	134.76	5.043		
17,500.00	10,585.73	16,912.49	10,067.50	117.61	54.40	40.33	-6,995.75	341.27	679.82	543.19	136.64	4.975		
17,600.00	10,584.74	17,012.49	10,066.22	119.21	55.08	40.31	-7,095.74	342.00	680.04	541.52	138.52	4.909		
17,700.00	10,583.74	17,112.49	10,064.93	120.81	55.77	40.29	-7,195.73	342.73	680.26	539.86	140.40	4.845		
17,800.00	10,582.75	17,212.49	10,063.64	122.41	56.46	40.28	-7,295.72	343.47	680.48	538.19	142.29	4.782		
17,900.00	10,581.76	17,312.49	10,062.36	124.01	57.16	40.26	-7,395.71	344.20	680.70	536.53	144.18	4.721		
18,000.00	10,580.77	17,412.49	10,061.07	125.62	57.85	40.25	-7,495.70	344.93	680.93	534.86	146.07	4.662		
18,077.45	10,580.00	17,489.94	10,060.08	126.59	58.39	40.23	-7,573.13	345.50	681.10	533.83	147.27	4.625 SF		

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 161H - OH - Plan #2													Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM MWD+HDGM, 9996-MWD+IFR1+MS													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-90.33	-0.17	-29.95	29.95					
100.00	100.00	100.00	100.00	0.09	0.09	-90.33	-0.17	-29.95	29.95	29.78	0.17	174.185		
200.00	200.00	200.00	200.00	0.31	0.31	-90.33	-0.17	-29.95	29.95	29.33	0.62	48.192		
300.00	300.00	300.00	300.00	0.54	0.54	-90.33	-0.17	-29.95	29.95	28.88	1.07	27.965		
400.00	400.00	400.00	400.00	0.76	0.76	-90.33	-0.17	-29.95	29.95	28.43	1.52	19.697		
500.00	500.00	500.00	500.00	0.99	0.99	-90.33	-0.17	-29.95	29.95	27.98	1.97	15.203		
600.00	600.00	600.00	600.00	1.21	1.21	-90.33	-0.17	-29.95	29.95	27.53	2.42	12.378		
700.00	700.00	700.00	700.00	1.43	1.43	-90.33	-0.17	-29.95	29.95	27.08	2.87	10.439		
800.00	800.00	800.00	800.00	1.66	1.66	-90.33	-0.17	-29.95	29.95	26.63	3.32	9.025		
900.00	900.00	900.00	900.00	1.88	1.88	-90.33	-0.17	-29.95	29.95	26.18	3.77	7.948		
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	-90.33	-0.17	-29.95	29.95	25.73	4.22	7.101		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	-90.33	-0.17	-29.95	29.95	25.28	4.67	6.417		
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	-90.33	-0.17	-29.95	29.95	24.83	5.12	5.853		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	-90.33	-0.17	-29.95	29.95	24.38	5.57	5.381		
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-90.33	-0.17	-29.95	29.95	23.93	6.02	4.979		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	-90.33	-0.17	-29.95	29.95	23.49	6.47	4.632		
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-90.33	-0.17	-29.95	29.95	23.04	6.91	4.331		
1,700.00	1,700.00	1,700.00	1,700.00	3.68	3.68	-90.33	-0.17	-29.95	29.95	22.59	7.36	4.067		
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-90.33	-0.17	-29.95	29.95	22.14	7.81	3.833		
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	-90.33	-0.17	-29.95	29.95	21.69	8.26	3.624		
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-90.33	-0.17	-29.95	29.95	21.24	8.71	3.437 CC, ES		
2,100.00	2,099.99	2,099.99	2,099.99	4.57	4.58	-175.75	-0.17	-29.95	30.82	21.67	9.15	3.369 SF		
2,200.00	2,199.96	2,199.96	2,199.96	4.77	4.81	-176.08	-0.17	-29.95	33.43	23.86	9.57	3.492		
2,300.00	2,299.86	2,299.86	2,299.86	4.97	5.03	-176.53	-0.17	-29.95	37.78	27.78	10.00	3.778		
2,400.00	2,399.68	2,399.68	2,399.68	5.18	5.25	-177.01	-0.17	-29.95	43.88	33.45	10.43	4.207		
2,500.00	2,499.37	2,499.37	2,499.37	5.40	5.48	-177.46	-0.17	-29.95	51.72	40.85	10.86	4.761		
2,581.25	2,580.25	2,580.25	2,580.25	5.58	5.66	-177.78	-0.17	-29.95	59.37	48.15	11.21	5.294		
2,600.00	2,598.91	2,598.91	2,598.91	5.62	5.70	-177.85	-0.17	-29.95	61.26	49.97	11.30	5.424		
2,700.00	2,698.39	2,698.39	2,698.39	5.85	5.93	-178.16	-0.17	-29.95	71.38	59.66	11.73	6.086		
2,800.00	2,797.88	2,797.88	2,797.88	6.08	6.15	-178.39	-0.17	-29.95	81.51	69.34	12.16	6.701		
2,900.00	2,897.36	2,897.36	2,897.36	6.31	6.37	-178.56	-0.17	-29.95	91.63	79.03	12.60	7.272		
3,000.00	2,996.85	2,996.85	2,996.85	6.55	6.60	-178.71	-0.17	-29.95	101.76	88.72	13.04	7.804		
3,100.00	3,096.34	3,098.19	3,098.18	6.79	6.82	-178.72	0.08	-29.15	111.08	97.61	13.47	8.245		
3,200.00	3,195.82	3,199.88	3,199.83	7.03	7.03	-178.52	0.88	-26.63	118.69	104.80	13.89	8.542		
3,300.00	3,295.31	3,301.79	3,301.66	7.28	7.24	-178.14	2.22	-22.37	124.59	110.27	14.32	8.702		
3,400.00	3,394.79	3,403.88	3,403.55	7.53	7.45	-177.58	4.10	-16.38	128.78	114.04	14.74	8.737		
3,500.00	3,494.28	3,504.39	3,503.77	7.78	7.67	-176.92	6.35	-9.25	131.74	116.57	15.17	8.686		
3,600.00	3,593.77	3,604.33	3,603.44	8.03	7.89	-176.28	8.60	-2.11	134.66	119.06	15.60	8.633		
3,700.00	3,693.25	3,704.28	3,703.11	8.28	8.11	-175.66	10.85	5.03	137.60	121.57	16.03	8.583		
3,800.00	3,792.74	3,804.23	3,802.77	8.54	8.33	-175.08	13.10	12.17	140.56	124.09	16.47	8.535		
3,900.00	3,892.22	3,904.17	3,902.44	8.79	8.55	-174.52	15.35	19.31	143.53	126.62	16.91	8.490		
4,000.00	3,991.71	4,004.12	4,002.10	9.05	8.78	-173.98	17.60	26.45	146.51	129.17	17.35	8.446		
4,100.00	4,091.20	4,104.06	4,101.77	9.31	9.00	-173.46	19.84	33.60	149.51	131.72	17.79	8.405		
4,200.00	4,190.68	4,204.01	4,201.43	9.57	9.23	-172.96	22.09	40.74	152.51	134.28	18.23	8.366		
4,300.00	4,290.17	4,303.96	4,301.10	9.83	9.46	-172.48	24.34	47.88	155.53	136.86	18.67	8.328		
4,400.00	4,389.65	4,403.90	4,400.76	10.09	9.69	-172.02	26.59	55.02	158.56	139.44	19.12	8.293		
4,500.00	4,489.14	4,503.85	4,500.43	10.36	9.92	-171.58	28.84	62.16	161.60	142.03	19.57	8.258		
4,600.00	4,588.62	4,603.79	4,600.09	10.62	10.15	-171.15	31.09	69.30	164.65	144.63	20.02	8.226		
4,700.00	4,688.11	4,703.74	4,699.76	10.88	10.39	-170.74	33.34	76.44	167.71	147.24	20.47	8.194		
4,800.00	4,787.60	4,803.69	4,799.42	11.15	10.62	-170.35	35.59	83.59	170.77	149.85	20.92	8.164		
4,900.00	4,887.08	4,903.63	4,899.09	11.41	10.86	-169.96	37.84	90.73	173.84	152.47	21.37	8.135		
5,000.00	4,986.57	5,003.58	4,998.75	11.68	11.09	-169.60	40.09	97.87	176.92	155.10	21.82	8.107		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 161H - OH - Plan #2													Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM MWD+HDGM, 9996-MWD+IFR1+MS													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Distance							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		
5,100.00	5,086.05	5,103.53	5,098.42	11.95	11.33	-169.24	42.34	105.01	180.01	157.73	22.28	8.081		
5,200.00	5,185.54	5,203.47	5,198.09	12.21	11.57	-168.90	44.59	112.15	183.10	160.37	22.73	8.055		
5,300.00	5,285.03	5,303.42	5,297.75	12.48	11.80	-168.56	46.84	119.29	186.21	163.02	23.19	8.030		
5,400.00	5,384.51	5,403.36	5,397.42	12.75	12.04	-168.24	49.08	126.43	189.31	165.67	23.64	8.007		
5,500.00	5,484.00	5,503.31	5,497.08	13.02	12.28	-167.93	51.33	133.58	192.42	168.32	24.10	7.984		
5,600.00	5,583.48	5,603.26	5,596.75	13.28	12.52	-167.63	53.58	140.72	195.54	170.98	24.56	7.962		
5,700.00	5,682.97	5,703.20	5,696.41	13.55	12.76	-167.34	55.83	147.86	198.67	173.65	25.02	7.940		
5,800.00	5,782.45	5,803.15	5,796.08	13.82	13.00	-167.05	58.08	155.00	201.79	176.31	25.48	7.920		
5,900.00	5,881.94	5,903.10	5,895.74	14.09	13.25	-166.78	60.33	162.14	204.93	178.99	25.94	7.900		
6,000.00	5,981.43	6,003.04	5,995.41	14.36	13.49	-166.51	62.58	169.28	208.06	181.66	26.40	7.881		
6,100.00	6,080.91	6,102.99	6,095.07	14.63	13.73	-166.25	64.83	176.42	211.21	184.34	26.86	7.862		
6,200.00	6,180.40	6,202.93	6,194.74	14.90	13.97	-166.00	67.08	183.56	214.35	187.02	27.33	7.844		
6,300.00	6,279.88	6,302.88	6,294.40	15.17	14.22	-165.76	69.33	190.71	217.50	189.71	27.79	7.826		
6,400.00	6,379.37	6,402.83	6,394.07	15.44	14.46	-165.52	71.58	197.85	220.65	192.40	28.25	7.810		
6,500.00	6,478.86	6,502.77	6,493.73	15.72	14.70	-165.29	73.83	204.99	223.81	195.09	28.72	7.793		
6,600.00	6,578.34	6,602.72	6,593.40	15.99	14.95	-165.07	76.08	212.13	226.97	197.79	29.18	7.777		
6,700.00	6,677.83	6,702.66	6,693.07	16.26	15.19	-164.85	78.33	219.27	230.14	200.49	29.65	7.762		
6,800.00	6,777.31	6,802.61	6,792.73	16.53	15.44	-164.64	80.57	226.41	233.30	203.19	30.12	7.747		
6,900.00	6,876.80	6,902.56	6,892.40	16.80	15.68	-164.44	82.82	233.55	236.47	205.89	30.58	7.732		
7,000.00	6,976.29	7,002.50	6,992.06	17.07	15.93	-164.24	85.07	240.70	239.65	208.60	31.05	7.718		
7,100.00	7,075.77	7,102.45	7,091.73	17.35	16.17	-164.04	87.32	247.84	242.82	211.31	31.52	7.705		
7,200.00	7,175.26	7,202.40	7,191.39	17.62	16.42	-163.85	89.57	254.98	246.00	214.02	31.98	7.691		
7,300.00	7,274.74	7,302.34	7,291.06	17.89	16.67	-163.67	91.82	262.12	249.18	216.73	32.45	7.678		
7,400.00	7,374.23	7,402.29	7,390.72	18.16	16.91	-163.49	94.07	269.26	252.37	219.45	32.92	7.666		
7,500.00	7,473.71	7,502.23	7,490.39	18.44	17.16	-163.31	96.32	276.40	255.56	222.16	33.39	7.653		
7,600.00	7,573.20	7,602.18	7,590.05	18.71	17.41	-163.14	98.57	283.54	258.74	224.88	33.86	7.641		
7,700.00	7,672.69	7,702.13	7,689.72	18.98	17.65	-162.97	100.82	290.69	261.94	227.61	34.33	7.630		
7,800.00	7,772.17	7,802.07	7,789.38	19.26	17.90	-162.81	103.07	297.83	265.13	230.33	34.80	7.618		
7,900.00	7,871.66	7,902.02	7,889.05	19.53	18.15	-162.65	105.32	304.97	268.32	233.05	35.27	7.607		
8,000.00	7,971.14	8,001.96	7,988.71	19.80	18.40	-162.49	107.57	312.11	271.52	235.78	35.74	7.597		
8,100.00	8,070.63	8,101.91	8,088.38	20.08	18.64	-162.34	109.81	319.25	274.72	238.51	36.21	7.586		
8,200.00	8,170.12	8,201.86	8,188.05	20.35	18.89	-162.19	112.06	326.39	277.92	241.24	36.69	7.576		
8,300.00	8,269.60	8,301.80	8,287.71	20.63	19.14	-162.05	114.31	333.53	281.13	243.97	37.16	7.566		
8,400.00	8,369.09	8,400.00	8,385.66	20.90	19.36	-161.95	116.40	340.17	284.68	247.07	37.61	7.569		
8,500.00	8,468.57	8,494.65	8,480.17	21.17	19.54	-162.01	117.96	345.12	289.60	251.58	38.02	7.617		
8,600.00	8,568.06	8,590.24	8,575.69	21.45	19.72	-162.23	119.06	348.60	295.96	257.54	38.42	7.703		
8,700.00	8,667.54	8,685.61	8,671.03	21.72	19.89	-162.59	119.68	350.57	303.77	264.96	38.81	7.828		
8,800.00	8,767.03	8,781.61	8,767.03	22.00	20.06	-163.08	119.83	351.05	312.99	273.80	39.19	7.987		
8,900.00	8,866.52	8,881.10	8,866.52	22.27	20.26	-163.60	119.83	351.05	322.69	283.08	39.62	8.145		
9,000.00	8,966.00	8,980.58	8,966.00	22.55	20.47	-164.09	119.83	351.05	332.43	292.38	40.05	8.300		
9,100.00	9,065.49	9,082.45	9,067.86	22.82	20.68	-164.63	119.45	351.05	342.12	301.62	40.49	8.449		
9,200.00	9,164.97	9,192.34	9,176.63	23.09	20.86	-167.44	104.99	351.16	349.71	308.86	40.85	8.560		
9,232.01	9,196.82	9,225.84	9,209.03	23.18	20.91	-168.94	96.47	351.22	351.79	310.85	40.94	8.592		
9,300.00	9,264.50	9,293.11	9,272.28	23.35	21.01	-172.78	73.72	351.39	356.14	315.04	41.11	8.664		
9,400.00	9,364.17	9,380.76	9,349.93	23.55	21.13	-179.32	33.25	351.68	364.64	323.37	41.27	8.834		
9,500.00	9,463.97	9,454.45	9,409.82	23.74	21.23	174.08	-9.62	352.00	379.72	338.53	41.19	9.218		
9,600.00	9,563.86	9,515.41	9,454.87	23.92	21.32	168.12	-50.64	352.30	404.64	364.02	40.62	9.962		
9,700.00	9,663.82	9,565.63	9,488.53	24.09	21.40	163.11	-87.88	352.57	440.66	401.17	39.49	11.159		
9,800.00	9,763.81	9,600.00	9,509.63	24.25	21.46	159.78	-115.00	352.77	487.36	449.61	37.76	12.908		
9,813.26	9,777.07	9,612.08	9,516.66	24.27	21.48	-116.11	-124.83	352.84	494.19	456.43	37.76	13.088		
9,900.00	9,863.81	9,650.00	9,537.34	24.43	21.56	-119.88	-156.60	353.08	543.66	507.07	36.59	14.857		
10,000.00	9,963.81	9,670.61	9,547.69	24.61	21.60	-121.89	-174.43	353.21	608.35	573.56	34.79	17.488		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 161H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 9996-MWD+IFR1+MS													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum		Separation		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		
10,100.00	10,063.81	9,700.00	9,561.32	24.80	21.68	-124.67	-200.46	353.40	679.83	646.28	33.55	20.264		
10,113.26	10,077.07	9,700.00	9,561.32	24.83	21.68	-124.67	-200.46	353.40	689.68	656.38	33.30	20.711		
10,150.00	10,113.79	9,700.00	9,561.32	24.89	21.68	52.41	-200.46	353.40	717.13	684.50	32.63	21.976		
10,200.00	10,163.48	9,718.78	9,569.32	24.97	21.73	46.86	-217.45	353.52	753.78	721.56	32.22	23.396		
10,250.00	10,212.52	9,731.91	9,574.59	25.06	21.76	42.46	-229.47	353.61	789.54	757.88	31.66	24.936		
10,300.00	10,260.52	9,750.00	9,581.39	25.14	21.82	38.47	-246.24	353.73	824.13	792.90	31.23	26.389		
10,350.00	10,307.13	9,750.00	9,581.39	25.22	21.82	35.78	-246.24	353.73	857.40	826.97	30.42	28.185		
10,400.00	10,351.99	9,775.29	9,589.99	25.30	21.90	32.63	-270.02	353.91	888.79	858.62	30.16	29.467		
10,450.00	10,394.76	9,800.00	9,597.38	25.38	21.99	30.05	-293.59	354.08	918.66	888.77	29.89	30.737		
10,500.00	10,435.11	9,800.00	9,597.38	25.46	21.99	28.42	-293.59	354.08	946.44	917.25	29.19	32.428		
10,550.00	10,472.73	9,823.04	9,603.35	25.55	22.08	26.61	-315.85	354.24	972.16	943.24	28.92	33.616		
10,600.00	10,507.34	9,850.00	9,609.19	25.64	22.19	25.05	-342.16	354.44	995.92	967.20	28.72	34.673		
10,650.00	10,538.68	9,850.00	9,609.19	25.75	22.19	24.07	-342.16	354.44	1,017.20	989.02	28.18	36.095		
10,700.00	10,566.51	9,873.64	9,613.29	25.86	22.29	23.01	-365.44	354.61	1,036.17	1,008.17	28.00	37.002		
10,750.00	10,590.61	9,900.00	9,616.72	25.99	22.41	22.13	-391.57	354.80	1,052.89	1,025.01	27.88	37.763		
10,800.00	10,610.80	9,900.00	9,616.72	26.14	22.41	21.58	-391.57	354.80	1,067.01	1,039.47	27.55	38.732		
10,850.00	10,626.93	9,926.00	9,618.93	26.31	22.54	21.02	-417.48	354.99	1,078.54	1,051.03	27.51	39.203		
10,900.00	10,638.87	9,950.00	9,619.92	26.50	22.66	20.60	-441.45	355.16	1,087.64	1,060.15	27.49	39.558		
10,950.00	10,646.54	9,961.47	9,620.04	26.71	22.73	20.35	-452.93	355.25	1,094.05	1,066.59	27.46	39.843		
11,000.00	10,649.87	9,999.43	9,619.65	26.94	26.67	20.18	-490.88	355.53	1,097.60	1,070.04	27.56	39.820		
11,018.94	10,650.00	10,018.37	9,619.44	27.04	26.77	20.16	-509.82	355.67	1,097.92	1,070.32	27.60	39.776		
11,100.00	10,649.20	10,099.43	9,618.53	27.48	26.83	20.16	-590.87	356.26	1,098.02	1,070.22	27.80	39.500		
11,200.00	10,648.20	10,199.43	9,617.40	28.11	26.91	20.16	-690.86	356.99	1,098.14	1,070.01	28.13	39.036		
11,300.00	10,647.21	10,299.43	9,616.28	28.82	26.99	20.16	-790.85	357.73	1,098.26	1,069.70	28.56	38.458		
11,400.00	10,646.22	10,399.43	9,615.15	29.60	27.07	20.15	-890.84	358.46	1,098.38	1,069.31	29.07	37.779		
11,500.00	10,645.23	10,499.43	9,614.03	30.45	27.16	20.15	-990.83	359.19	1,098.50	1,068.83	29.67	37.018		
11,600.00	10,644.24	10,599.43	9,612.91	31.37	27.24	20.15	-1,090.82	359.93	1,098.63	1,068.27	30.36	36.191		
11,700.00	10,643.25	10,699.43	9,611.78	32.34	27.33	20.15	-1,190.82	360.66	1,098.75	1,067.64	31.11	35.316		
11,800.00	10,642.25	10,799.43	9,610.66	33.37	27.42	20.14	-1,290.81	361.39	1,098.87	1,066.93	31.94	34.407		
11,900.00	10,641.26	10,899.43	9,609.54	34.44	27.51	20.14	-1,390.80	362.12	1,098.99	1,066.16	32.83	33.477		
12,000.00	10,640.27	10,999.43	9,608.41	35.55	27.61	20.14	-1,490.79	362.86	1,099.11	1,065.34	33.78	32.540		
12,100.00	10,639.28	11,099.43	9,607.29	36.71	27.70	20.13	-1,590.78	363.59	1,099.23	1,064.45	34.78	31.604		
12,200.00	10,638.29	11,199.43	9,606.16	37.90	27.80	20.13	-1,690.77	364.32	1,099.36	1,063.52	35.84	30.678		
12,300.00	10,637.30	11,299.43	9,605.04	39.12	27.90	20.13	-1,790.76	365.06	1,099.48	1,062.54	36.94	29.768		
12,400.00	10,636.30	11,399.43	9,603.92	40.38	28.01	20.13	-1,890.75	365.79	1,099.60	1,061.52	38.08	28.879		
12,500.00	10,635.31	11,499.43	9,602.79	41.66	28.11	20.12	-1,990.74	366.52	1,099.72	1,060.46	39.26	28.014		
12,600.00	10,634.32	11,599.43	9,601.67	42.96	28.23	20.12	-2,090.73	367.26	1,099.84	1,059.37	40.47	27.176		
12,700.00	10,633.33	11,699.43	9,600.54	44.29	28.35	20.12	-2,190.72	367.99	1,099.96	1,058.25	41.72	26.368		
12,800.00	10,632.34	11,799.43	9,599.42	45.63	28.47	20.12	-2,290.72	368.72	1,100.09	1,057.09	42.99	25.588		
12,900.00	10,631.35	11,899.43	9,598.30	47.00	28.61	20.11	-2,390.71	369.46	1,100.21	1,055.91	44.29	24.839		
13,000.00	10,630.35	11,999.43	9,597.17	48.38	28.76	20.11	-2,490.70	370.19	1,100.33	1,054.71	45.62	24.120		
13,100.00	10,629.36	12,099.43	9,596.05	49.78	28.94	20.11	-2,590.69	370.92	1,100.45	1,053.49	46.97	23.431		
13,200.00	10,628.37	12,199.43	9,594.93	51.19	29.14	20.10	-2,690.68	371.65	1,100.57	1,052.24	48.33	22.770		
13,300.00	10,627.38	12,299.43	9,593.80	52.62	29.38	20.10	-2,790.67	372.39	1,100.69	1,050.97	49.72	22.138		
13,400.00	10,626.39	12,399.43	9,592.68	54.05	29.67	20.10	-2,890.66	373.12	1,100.82	1,049.69	51.12	21.533		
13,500.00	10,625.40	12,499.43	9,591.55	55.50	30.02	20.10	-2,990.65	373.85	1,100.94	1,048.40	52.54	20.953		
13,600.00	10,624.40	12,599.43	9,590.43	56.96	30.41	20.09	-3,090.64	374.59	1,101.06	1,047.08	53.98	20.399		
13,700.00	10,623.41	12,699.43	9,589.31	58.43	30.84	20.09	-3,190.63	375.32	1,101.18	1,045.76	55.42	19.869		
13,800.00	10,622.42	12,799.43	9,588.18	59.91	31.31	20.09	-3,290.62	376.05	1,101.30	1,044.42	56.88	19.362		
13,900.00	10,621.43	12,899.43	9,587.06	61.39	31.80	20.09	-3,390.62	376.79	1,101.42	1,043.07	58.35	18.876		
14,000.00	10,620.44	12,999.43	9,585.93	62.88	32.32	20.08	-3,490.61	377.52	1,101.55	1,041.71	59.83	18.411		
14,100.00	10,619.44	13,099.43	9,584.81	64.38	32.85	20.08	-3,590.60	378.25	1,101.67	1,040.35	61.32	17.965		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Thistle Unit Sec 22-27 Trac Pad - Thistle Unit 161H - OH - Plan #2													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM, 9996-MWD+HFR1+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)		+N/-S (usft)	+E/-W (usft)						
14,200.00	10,618.45	13,199.43	9,583.69	65.89	33.39	20.08	-3,690.59	378.98	1,101.79	1,038.97	62.82	17.538		
14,300.00	10,617.46	13,299.43	9,582.56	67.40	33.94	20.08	-3,790.58	379.72	1,101.91	1,037.58	64.33	17.129		
14,400.00	10,616.47	13,399.43	9,581.44	68.92	34.51	20.07	-3,890.57	380.45	1,102.03	1,036.19	65.84	16.737		
14,500.00	10,615.48	13,499.43	9,580.32	70.45	35.08	20.07	-3,990.56	381.18	1,102.15	1,034.79	67.37	16.360		
14,600.00	10,614.49	13,599.43	9,579.19	71.98	35.67	20.07	-4,090.55	381.92	1,102.28	1,033.38	68.90	15.999		
14,700.00	10,613.49	13,699.43	9,578.07	73.51	36.26	20.06	-4,190.54	382.65	1,102.40	1,031.97	70.43	15.652		
14,800.00	10,612.50	13,799.43	9,576.94	75.05	36.86	20.06	-4,290.53	383.38	1,102.52	1,030.55	71.97	15.318		
14,900.00	10,611.51	13,899.43	9,575.82	76.59	37.46	20.06	-4,390.52	384.12	1,102.64	1,029.12	73.52	14.998		
15,000.00	10,610.52	13,999.43	9,574.70	78.14	38.08	20.06	-4,490.52	384.85	1,102.76	1,027.69	75.07	14.689		
15,100.00	10,609.53	14,099.43	9,573.57	79.69	38.69	20.05	-4,590.51	385.58	1,102.89	1,026.25	76.63	14.392		
15,200.00	10,608.54	14,199.43	9,572.45	81.24	39.32	20.05	-4,690.50	386.32	1,103.01	1,024.81	78.19	14.106		
15,300.00	10,607.54	14,299.43	9,571.32	82.80	39.95	20.05	-4,790.49	387.05	1,103.13	1,023.37	79.76	13.831		
15,400.00	10,606.55	14,399.43	9,570.20	84.36	40.58	20.05	-4,890.48	387.78	1,103.25	1,021.92	81.33	13.565		
15,500.00	10,605.56	14,499.43	9,569.08	85.92	41.22	20.04	-4,990.47	388.51	1,103.37	1,020.47	82.90	13.309		
15,600.00	10,604.57	14,599.43	9,567.95	87.48	41.86	20.04	-5,090.46	389.25	1,103.49	1,019.01	84.48	13.062		
15,700.00	10,603.58	14,699.43	9,566.83	89.05	42.51	20.04	-5,190.45	389.98	1,103.62	1,017.56	86.06	12.824		
15,800.00	10,602.59	14,799.43	9,565.71	90.62	43.16	20.03	-5,290.44	390.71	1,103.74	1,016.09	87.64	12.593		
15,900.00	10,601.59	14,899.43	9,564.58	92.20	43.82	20.03	-5,390.43	391.45	1,103.86	1,014.63	89.23	12.371		
16,000.00	10,600.60	14,999.43	9,563.46	93.77	44.48	20.03	-5,490.42	392.18	1,103.98	1,013.16	90.82	12.156		
16,100.00	10,599.61	15,099.43	9,562.33	95.35	45.14	20.03	-5,590.42	392.91	1,104.10	1,011.69	92.41	11.947		
16,200.00	10,598.62	15,199.43	9,561.21	96.93	45.80	20.02	-5,690.41	393.65	1,104.22	1,010.22	94.01	11.746		
16,300.00	10,597.63	15,299.43	9,560.09	98.51	46.47	20.02	-5,790.40	394.38	1,104.35	1,008.74	95.61	11.551		
16,400.00	10,596.64	15,399.43	9,558.96	100.09	47.14	20.02	-5,890.39	395.11	1,104.47	1,007.26	97.21	11.362		
16,500.00	10,595.64	15,499.43	9,557.84	101.68	47.82	20.02	-5,990.38	395.84	1,104.59	1,005.78	98.81	11.179		
16,600.00	10,594.65	15,599.43	9,556.71	103.26	48.50	20.01	-6,090.37	396.58	1,104.71	1,004.30	100.41	11.002		
16,700.00	10,593.66	15,699.43	9,555.59	104.85	49.18	20.01	-6,190.36	397.31	1,104.83	1,002.82	102.02	10.830		
16,800.00	10,592.67	15,799.43	9,554.47	106.44	49.86	20.01	-6,290.35	398.04	1,104.96	1,001.33	103.63	10.663		
16,900.00	10,591.68	15,899.43	9,553.34	108.03	50.54	20.01	-6,390.34	398.78	1,105.08	999.84	105.24	10.501		
17,000.00	10,590.69	15,999.43	9,552.22	109.63	51.23	20.00	-6,490.33	399.51	1,105.20	998.35	106.85	10.344		
17,100.00	10,589.69	16,099.43	9,551.10	111.22	51.92	20.00	-6,590.32	400.24	1,105.32	996.86	108.46	10.191		
17,200.00	10,588.70	16,199.43	9,549.97	112.82	52.61	20.00	-6,690.32	400.98	1,105.44	995.37	110.08	10.043		
17,300.00	10,587.71	16,299.43	9,548.85	114.41	53.31	19.99	-6,790.31	401.71	1,105.56	993.87	111.69	9.898		
17,400.00	10,586.72	16,399.42	9,547.72	116.01	54.00	19.99	-6,890.30	402.44	1,105.69	992.38	113.31	9.758		
17,500.00	10,585.73	16,499.42	9,546.60	117.61	54.70	19.99	-6,990.29	403.18	1,105.81	990.88	114.93	9.622		
17,600.00	10,584.74	16,599.42	9,545.48	119.21	55.40	19.99	-7,090.28	403.91	1,105.93	989.38	116.55	9.489		
17,700.00	10,583.74	16,699.42	9,544.35	120.81	56.10	19.98	-7,190.27	404.64	1,106.05	987.88	118.17	9.360		
17,800.00	10,582.75	16,799.42	9,543.23	122.41	56.80	19.98	-7,290.26	405.37	1,106.17	986.38	119.79	9.234		
17,900.00	10,581.76	16,899.42	9,542.10	124.01	57.51	19.98	-7,390.25	406.11	1,106.29	984.88	121.42	9.112		
18,000.00	10,580.77	16,999.42	9,540.98	125.62	58.21	19.98	-7,490.24	406.84	1,106.42	983.38	123.04	8.992		
18,077.45	10,580.00	17,076.87	9,540.11	126.59	58.76	19.97	-7,567.68	407.41	1,106.51	982.47	124.04	8.921		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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		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)		Between Centres (usft)	Between Ellipses (usft)						
0.00	0.00	1.80	1.80	0.00	0.00	89.68	9.65	1,709.80	1,709.83					
100.00	100.00	101.80	101.80	0.09	0.09	89.68	9.65	1,709.80	1,709.83	1,709.65	0.18	9,715.368		
200.00	200.00	201.80	201.80	0.31	0.31	89.68	9.65	1,709.80	1,709.83	1,709.20	0.63	2,733.431		
300.00	300.00	301.80	301.80	0.54	0.54	89.68	9.65	1,709.80	1,709.83	1,708.75	1.08	1,590.454		
400.00	400.00	401.80	401.80	0.76	0.76	89.68	9.65	1,709.80	1,709.83	1,708.30	1.52	1,121.501		
500.00	500.00	501.80	501.80	0.99	0.99	89.68	9.65	1,709.80	1,709.83	1,707.85	1.97	866.121		
600.00	600.00	601.80	601.80	1.21	1.21	89.68	9.65	1,709.80	1,709.83	1,707.40	2.42	705.475		
700.00	700.00	701.80	701.80	1.43	1.44	89.68	9.65	1,709.80	1,709.83	1,706.95	2.87	595.098		
800.00	800.00	801.80	801.80	1.66	1.66	89.68	9.65	1,709.80	1,709.83	1,706.50	3.32	514.587		
900.00	900.00	901.80	901.80	1.88	1.89	89.68	9.65	1,709.80	1,709.83	1,706.06	3.77	453.265		
1,000.00	1,000.00	1,001.80	1,001.80	2.11	2.11	89.68	9.65	1,709.80	1,709.83	1,705.61	4.22	405.001		
1,100.00	1,100.00	1,101.80	1,101.80	2.33	2.34	89.68	9.65	1,709.80	1,709.83	1,705.16	4.67	366.027		
1,200.00	1,200.00	1,201.80	1,201.80	2.56	2.56	89.68	9.65	1,709.80	1,709.83	1,704.71	5.12	333.896		
1,300.00	1,300.00	1,301.80	1,301.80	2.78	2.79	89.68	9.65	1,709.80	1,709.83	1,704.26	5.57	306.950		
1,400.00	1,400.00	1,401.80	1,401.80	3.01	3.01	89.68	9.65	1,709.80	1,709.83	1,703.81	6.02	284.029		
1,500.00	1,500.00	1,501.80	1,501.80	3.23	3.24	89.68	9.65	1,709.80	1,709.83	1,703.36	6.47	264.293		
1,600.00	1,600.00	1,601.80	1,601.80	3.46	3.46	89.68	9.65	1,709.80	1,709.83	1,702.91	6.92	247.122		
1,700.00	1,700.00	1,701.80	1,701.80	3.68	3.69	89.68	9.65	1,709.80	1,709.83	1,702.46	7.37	232.045		
1,800.00	1,800.00	1,801.80	1,801.80	3.91	3.91	89.68	9.65	1,709.80	1,709.83	1,702.01	7.82	218.703		
1,900.00	1,900.00	1,901.80	1,901.80	4.13	4.14	89.68	9.65	1,709.80	1,709.83	1,701.56	8.27	206.811		
2,000.00	2,000.00	2,001.80	2,001.80	4.36	4.36	89.68	9.65	1,709.80	1,709.83	1,701.11	8.72	196.146		
2,100.00	2,099.99	2,101.79	2,101.79	4.57	4.59	4.38	9.65	1,709.80	1,708.96	1,699.80	9.15	186.702		
2,200.00	2,199.96	2,201.76	2,201.76	4.77	4.81	4.39	9.65	1,709.80	1,706.35	1,696.77	9.58	178.144		
2,300.00	2,299.86	2,301.66	2,301.66	4.97	5.03	4.40	9.65	1,709.80	1,702.00	1,691.99	10.01	170.103		
2,400.00	2,399.68	2,401.48	2,401.48	5.18	5.26	4.42	9.65	1,709.80	1,695.91	1,685.48	10.43	162.523		
2,500.00	2,499.37	2,501.17	2,501.17	5.40	5.48	4.45	9.65	1,709.80	1,688.09	1,677.22	10.87	155.356		
2,581.25	2,580.25	2,582.05	2,582.05	5.58	5.66	4.47	9.65	1,709.80	1,680.46	1,669.24	11.22	149.807		
2,600.00	2,598.91	2,600.71	2,600.71	5.62	5.71	4.48	9.65	1,709.80	1,678.56	1,667.26	11.30	148.557		
2,700.00	2,698.39	2,700.19	2,700.19	5.85	5.93	4.51	9.65	1,709.80	1,668.47	1,656.73	11.73	142.214		
2,800.00	2,797.88	2,799.68	2,799.68	6.08	6.15	4.53	9.65	1,709.80	1,658.37	1,646.20	12.17	136.301		
2,900.00	2,897.36	2,899.16	2,899.16	6.31	6.38	4.56	9.65	1,709.80	1,648.28	1,635.67	12.60	130.779		
3,000.00	2,996.85	2,998.65	2,998.65	6.55	6.60	4.59	9.65	1,709.80	1,638.18	1,625.14	13.04	125.611		
3,100.00	3,096.34	3,137.07	3,137.05	6.79	6.89	4.63	9.65	1,708.16	1,626.91	1,613.37	13.54	120.176		
3,200.00	3,195.82	3,275.18	3,275.07	7.03	7.16	4.67	9.65	1,703.19	1,613.24	1,599.23	14.01	115.122		
3,300.00	3,295.31	3,412.30	3,411.94	7.28	7.44	4.71	9.65	1,694.97	1,597.20	1,582.72	14.48	110.290		
3,400.00	3,394.79	3,541.93	3,541.12	7.53	7.72	4.75	9.65	1,684.21	1,578.85	1,563.91	14.94	105.708		
3,500.00	3,494.28	3,640.07	3,638.86	7.78	7.93	4.78	9.65	1,675.23	1,559.69	1,544.33	15.35	101.589		
3,600.00	3,593.77	3,738.22	3,736.59	8.03	8.14	4.81	9.65	1,666.25	1,540.53	1,524.76	15.77	97.668		
3,700.00	3,693.25	3,836.36	3,834.32	8.28	8.36	4.85	9.65	1,657.26	1,521.37	1,505.18	16.20	93.939		
3,800.00	3,792.74	3,934.51	3,932.05	8.54	8.58	4.88	9.65	1,648.28	1,502.22	1,485.60	16.62	90.387		
3,900.00	3,892.22	4,032.65	4,029.79	8.79	8.80	4.91	9.65	1,639.29	1,483.06	1,466.01	17.05	87.003		
4,000.00	3,991.71	4,130.80	4,127.52	9.05	9.03	4.95	9.65	1,630.31	1,463.90	1,446.43	17.47	83.774		
4,100.00	4,091.20	4,228.94	4,225.25	9.31	9.25	4.98	9.65	1,621.32	1,444.75	1,426.84	17.90	80.693		
4,200.00	4,190.68	4,327.08	4,322.98	9.57	9.48	5.02	9.65	1,612.34	1,425.59	1,407.26	18.34	77.749		
4,300.00	4,290.17	4,425.23	4,420.71	9.83	9.71	5.06	9.65	1,603.36	1,406.44	1,387.67	18.77	74.935		
4,400.00	4,389.65	4,523.37	4,518.45	10.09	9.94	5.10	9.65	1,594.37	1,387.29	1,368.08	19.20	72.243		
4,500.00	4,489.14	4,621.52	4,616.18	10.36	10.18	5.14	9.65	1,585.39	1,368.13	1,348.50	19.64	69.665		
4,600.00	4,588.62	4,719.66	4,713.91	10.62	10.41	5.18	9.65	1,576.40	1,348.98	1,328.91	20.08	67.195		
4,700.00	4,688.11	4,817.80	4,811.64	10.88	10.65	5.22	9.65	1,567.42	1,329.83	1,309.32	20.51	64.826		
4,800.00	4,787.60	4,915.95	4,909.37	11.15	10.89	5.26	9.65	1,558.43	1,310.68	1,289.73	20.95	62.554		
4,900.00	4,887.08	5,014.09	5,007.11	11.41	11.13	5.31	9.65	1,549.45	1,291.53	1,270.14	21.39	60.372		
5,000.00	4,986.57	5,112.24	5,104.84	11.68	11.37	5.36	9.65	1,540.47	1,272.38	1,250.55	21.83	58.275		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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+HDM, 9981-MWD+IFR1+MS													Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,100.00	5,086.05	5,210.38	5,202.57	11.95	11.61	5.40	9.65	1,531.48	1,253.23	1,230.96	22.28	56.259		
5,200.00	5,185.54	5,308.53	5,300.30	12.21	11.85	5.45	9.65	1,522.50	1,234.09	1,211.37	22.72	54.319		
5,300.00	5,285.03	5,406.67	5,398.03	12.48	12.09	5.50	9.65	1,513.51	1,214.94	1,191.78	23.16	52.452		
5,400.00	5,384.51	5,504.81	5,495.77	12.75	12.34	5.56	9.65	1,504.53	1,195.79	1,172.19	23.61	50.654		
5,500.00	5,484.00	5,602.96	5,593.50	13.02	12.58	5.61	9.65	1,495.54	1,176.65	1,152.60	24.05	48.920		
5,600.00	5,583.48	5,701.10	5,691.23	13.28	12.83	5.67	9.65	1,486.56	1,157.50	1,133.01	24.50	47.248		
5,700.00	5,682.97	5,799.25	5,788.96	13.55	13.08	5.72	9.65	1,477.58	1,138.36	1,113.42	24.95	45.635		
5,800.00	5,782.45	5,897.39	5,886.70	13.82	13.32	5.78	9.65	1,468.59	1,119.22	1,093.83	25.39	44.077		
5,900.00	5,881.94	5,995.53	5,984.43	14.09	13.57	5.84	9.65	1,459.61	1,100.08	1,074.24	25.84	42.572		
6,000.00	5,981.43	6,093.68	6,082.16	14.36	13.82	5.91	9.65	1,450.62	1,080.94	1,054.65	26.29	41.118		
6,100.00	6,080.91	6,191.82	6,179.89	14.63	14.07	5.97	9.65	1,441.64	1,061.80	1,035.07	26.74	39.712		
6,200.00	6,180.40	6,289.97	6,277.62	14.90	14.32	6.04	9.65	1,432.65	1,042.67	1,015.48	27.19	38.351		
6,300.00	6,279.88	6,388.11	6,375.36	15.17	14.57	6.11	9.65	1,423.67	1,023.53	995.90	27.64	37.034		
6,400.00	6,379.37	6,486.26	6,473.09	15.44	14.82	6.19	9.65	1,414.68	1,004.40	976.31	28.09	35.759		
6,500.00	6,478.86	6,584.40	6,570.82	15.72	15.07	6.26	9.65	1,405.70	985.27	956.73	28.54	34.523		
6,600.00	6,578.34	6,682.54	6,668.55	15.99	15.32	6.34	9.65	1,396.72	966.14	937.15	28.99	33.325		
6,700.00	6,677.83	6,780.69	6,766.28	16.26	15.57	6.43	9.65	1,387.73	947.01	917.57	29.44	32.164		
6,800.00	6,777.31	6,878.83	6,864.02	16.53	15.83	6.51	9.65	1,378.75	927.89	897.99	29.90	31.037		
6,900.00	6,876.80	6,976.98	6,961.75	16.80	16.08	6.60	9.65	1,369.76	908.76	878.41	30.35	29.944		
7,000.00	6,976.29	7,075.12	7,059.48	17.07	16.33	6.70	9.65	1,360.78	889.64	858.84	30.80	28.882		
7,100.00	7,075.77	7,173.26	7,157.21	17.35	16.59	6.80	9.65	1,351.79	870.52	839.27	31.26	27.851		
7,200.00	7,175.26	7,271.41	7,254.94	17.62	16.84	6.90	9.65	1,342.81	851.41	819.70	31.71	26.849		
7,300.00	7,274.74	7,369.55	7,352.68	17.89	17.09	7.01	9.65	1,333.83	832.29	800.13	32.17	25.875		
7,400.00	7,374.23	7,467.70	7,450.41	18.16	17.35	7.12	9.65	1,324.84	813.18	780.56	32.62	24.928		
7,500.00	7,473.71	7,565.84	7,548.14	18.44	17.60	7.24	9.65	1,315.86	794.07	761.00	33.08	24.007		
7,600.00	7,573.20	7,663.99	7,645.87	18.71	17.86	7.36	9.65	1,306.87	774.97	741.44	33.53	23.111		
7,700.00	7,672.69	7,762.13	7,743.60	18.98	18.11	7.49	9.65	1,297.89	755.87	721.88	33.99	22.238		
7,800.00	7,772.17	7,860.27	7,841.34	19.26	18.37	7.63	9.65	1,288.90	736.77	702.33	34.45	21.389		
7,900.00	7,871.66	7,958.42	7,939.07	19.53	18.63	7.77	9.65	1,279.92	717.68	682.78	34.90	20.562		
8,000.00	7,971.14	8,056.56	8,036.80	19.80	18.88	7.92	9.65	1,270.94	698.59	663.23	35.36	19.756		
8,100.00	8,070.63	8,154.71	8,134.53	20.08	19.14	8.08	9.65	1,261.95	679.51	643.69	35.82	18.970		
8,200.00	8,170.12	8,251.85	8,231.27	20.35	19.39	8.25	9.65	1,253.07	660.44	624.16	36.28	18.204		
8,300.00	8,269.60	8,340.15	8,319.26	20.63	19.58	8.40	9.65	1,245.79	642.27	605.54	36.73	17.485		
8,400.00	8,369.09	8,428.93	8,407.85	20.90	19.76	8.56	9.65	1,239.85	625.63	588.46	37.17	16.832		
8,500.00	8,468.57	8,518.16	8,496.96	21.17	19.93	8.72	9.65	1,235.26	610.52	572.92	37.60	16.237		
8,600.00	8,568.06	8,607.80	8,586.54	21.45	20.09	8.87	9.65	1,232.05	596.96	558.94	38.02	15.700		
8,700.00	8,667.54	8,700.00	8,678.72	21.72	20.26	9.03	9.65	1,230.21	584.96	546.52	38.44	15.217		
8,800.00	8,767.03	8,790.11	8,768.83	22.00	20.42	9.17	9.65	1,229.80	574.48	535.62	38.86	14.784		
8,900.00	8,866.52	8,889.60	8,868.32	22.27	20.62	9.34	9.65	1,229.80	564.48	525.18	39.30	14.363		
9,000.00	8,966.00	8,989.08	8,967.80	22.55	20.81	9.51	9.65	1,229.80	554.49	514.74	39.75	13.951		
9,100.00	9,065.49	9,086.92	9,065.63	22.82	21.01	9.71	9.35	1,229.80	544.53	504.34	40.19	13.549		
9,200.00	9,164.97	9,176.86	9,154.93	23.09	21.17	10.94	-0.59	1,229.87	535.73	495.12	40.62	13.190		
9,232.01	9,196.82	9,204.70	9,182.14	23.18	21.22	11.62	-6.50	1,229.92	533.40	492.64	40.76	13.088		
9,300.00	9,264.50	9,261.58	9,236.66	23.35	21.33	13.46	-22.62	1,230.03	529.96	488.92	41.03	12.915		
9,347.81	9,312.14	9,300.00	9,272.46	23.44	21.40	15.02	-36.54	1,230.14	529.22	488.01	41.21	12.842 CC, ES		
9,400.00	9,364.17	9,338.37	9,307.21	23.55	21.47	16.83	-52.80	1,230.25	530.31	488.94	41.37	12.819		
9,500.00	9,463.97	9,405.99	9,365.51	23.74	21.60	20.55	-86.98	1,230.50	539.04	497.50	41.54	12.976		
9,600.00	9,563.86	9,464.46	9,412.37	23.92	21.72	24.25	-121.89	1,230.76	557.85	516.43	41.43	13.466		
9,700.00	9,663.82	9,514.54	9,449.51	24.09	21.83	27.71	-155.47	1,231.00	587.55	546.59	40.96	14.345		
9,800.00	9,763.81	9,550.00	9,473.97	24.25	21.91	30.36	-181.14	1,231.19	628.02	588.02	40.00	15.699		
9,813.26	9,777.07	9,562.49	9,482.19	24.27	21.94	116.56	-190.53	1,231.25	634.07	594.01	40.06	15.829		
9,900.00	9,863.81	9,600.00	9,505.65	24.43	22.04	119.16	-219.80	1,231.47	677.74	638.39	39.35	17.225		

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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
10,000.00	9,963.81	9,625.21	9,520.31	24.61	22.11	120.91	-240.30	1,231.62	734.91	696.79	38.12	19.280	
10,100.00	10,063.81	9,650.00	9,533.84	24.80	22.18	122.61	-261.07	1,231.77	798.52	761.55	36.97	21.599	
10,113.26	10,077.07	9,650.00	9,533.84	24.83	22.18	122.61	-261.07	1,231.77	807.41	770.66	36.75	21.970	
10,150.00	10,113.79	9,664.81	9,541.49	24.89	22.23	-53.30	-273.75	1,231.86	831.89	795.41	36.48	22.802	
10,200.00	10,163.48	9,678.14	9,548.09	24.97	22.27	-49.17	-285.33	1,231.94	864.63	828.70	35.94	24.061	
10,250.00	10,212.52	9,700.00	9,558.33	25.06	22.35	-45.13	-304.64	1,232.08	896.48	860.92	35.56	25.210	
10,300.00	10,260.52	9,700.00	9,558.33	25.14	22.35	-42.46	-304.64	1,232.08	927.01	892.31	34.71	26.711	
10,350.00	10,307.13	9,721.99	9,567.88	25.22	22.43	-39.36	-324.45	1,232.23	956.08	921.76	34.32	27.857	
10,400.00	10,351.99	9,750.00	9,578.93	25.30	22.54	-36.57	-350.19	1,232.41	983.80	949.75	34.05	28.894	
10,450.00	10,394.76	9,750.00	9,578.93	25.38	22.54	-34.83	-350.19	1,232.41	1,009.39	976.13	33.25	30.355	
10,500.00	10,435.11	9,770.02	9,586.05	25.46	22.62	-32.92	-368.90	1,232.55	1,033.23	1,000.37	32.86	31.443	
10,550.00	10,472.73	9,800.00	9,595.48	25.55	22.75	-31.17	-397.35	1,232.76	1,055.28	1,022.63	32.65	32.318	
10,600.00	10,507.34	9,800.00	9,595.48	25.64	22.75	-30.09	-397.35	1,232.76	1,074.78	1,042.79	32.00	33.591	
10,650.00	10,538.68	9,820.79	9,601.14	25.75	22.85	-28.94	-417.35	1,232.90	1,092.25	1,060.53	31.72	34.438	
10,700.00	10,566.51	9,850.00	9,607.86	25.86	22.99	-27.92	-445.78	1,233.11	1,107.61	1,076.02	31.59	35.065	
10,750.00	10,590.61	9,850.00	9,607.86	25.99	22.99	-27.32	-445.78	1,233.11	1,120.30	1,089.15	31.15	35.965	
10,800.00	10,610.80	9,873.23	9,612.16	26.14	23.11	-26.70	-468.60	1,233.27	1,130.67	1,099.61	31.06	36.404	
10,850.00	10,626.93	9,900.00	9,615.96	26.31	23.25	-26.24	-495.10	1,233.47	1,138.71	1,107.66	31.05	36.670	
10,900.00	10,638.87	9,900.00	9,615.96	26.50	23.25	-26.00	-495.10	1,233.47	1,144.16	1,113.27	30.90	37.033	
10,950.00	10,646.54	9,926.53	9,618.51	26.71	23.41	-25.83	-521.50	1,233.66	1,147.01	1,115.99	31.02	36.972	
11,000.00	10,649.87	9,950.00	9,619.74	26.94	23.55	-25.81	-544.94	1,233.83	1,147.47	1,116.28	31.19	36.791	
11,018.94	10,650.00	9,950.00	9,619.74	27.04	23.55	-25.83	-544.94	1,233.83	1,146.94	1,115.70	31.23	36.723	
11,084.01	10,649.35	9,974.90	9,620.00	27.39	23.70	-25.84	-569.84	1,234.01	1,145.78	1,114.22	31.55	36.313	
11,100.00	10,649.20	9,989.34	9,619.84	27.48	25.46	-25.84	-584.27	1,234.12	1,145.80	1,114.14	31.66	36.194	
11,200.00	10,648.20	10,089.34	9,618.69	28.11	27.33	-25.84	-684.26	1,234.84	1,145.93	1,113.83	32.11	35.693	
11,300.00	10,647.21	10,189.34	9,617.55	28.82	27.41	-25.83	-784.25	1,235.57	1,146.07	1,113.43	32.64	35.112	
11,400.00	10,646.22	10,289.34	9,616.41	29.60	27.48	-25.83	-884.25	1,236.29	1,146.21	1,112.95	33.26	34.465	
11,500.00	10,645.23	10,389.34	9,615.27	30.45	27.57	-25.83	-984.24	1,237.02	1,146.34	1,112.39	33.95	33.764	
11,600.00	10,644.24	10,489.34	9,614.13	31.37	27.65	-25.82	-1,084.23	1,237.75	1,146.48	1,111.76	34.72	33.022	
11,700.00	10,643.25	10,589.34	9,612.98	32.34	27.73	-25.82	-1,184.22	1,238.47	1,146.61	1,111.06	35.56	32.249	
11,800.00	10,642.25	10,689.34	9,611.84	33.37	27.82	-25.82	-1,284.21	1,239.20	1,146.75	1,110.29	36.46	31.455	
11,900.00	10,641.26	10,789.34	9,610.70	34.44	27.91	-25.81	-1,384.20	1,239.93	1,146.88	1,109.47	37.42	30.650	
12,000.00	10,640.27	10,889.34	9,609.56	35.55	28.01	-25.81	-1,484.19	1,240.65	1,147.02	1,108.58	38.44	29.842	
12,100.00	10,639.28	10,989.34	9,608.41	36.71	28.11	-25.81	-1,584.18	1,241.38	1,147.15	1,107.65	39.51	29.037	
12,200.00	10,638.29	11,089.34	9,607.27	37.90	28.21	-25.81	-1,684.17	1,242.11	1,147.29	1,106.67	40.62	28.242	
12,300.00	10,637.30	11,189.34	9,606.13	39.12	28.31	-25.80	-1,784.16	1,242.83	1,147.43	1,105.64	41.79	27.459	
12,400.00	10,636.30	11,289.34	9,604.99	40.38	28.42	-25.80	-1,884.15	1,243.56	1,147.56	1,104.57	42.99	26.694	
12,500.00	10,635.31	11,389.34	9,603.85	41.66	28.54	-25.80	-1,984.14	1,244.29	1,147.70	1,103.47	44.23	25.948	
12,600.00	10,634.32	11,489.34	9,602.70	42.96	28.66	-25.79	-2,084.13	1,245.01	1,147.83	1,102.33	45.51	25.224	
12,700.00	10,633.33	11,589.34	9,601.56	44.29	28.78	-25.79	-2,184.12	1,245.74	1,147.97	1,101.16	46.81	24.523	
12,800.00	10,632.34	11,689.34	9,600.42	45.63	28.92	-25.79	-2,284.12	1,246.47	1,148.10	1,099.96	48.15	23.846	
12,900.00	10,631.35	11,789.34	9,599.28	47.00	29.07	-25.78	-2,384.11	1,247.19	1,148.24	1,098.73	49.51	23.192	
13,000.00	10,630.35	11,889.34	9,598.14	48.38	29.23	-25.78	-2,484.10	1,247.92	1,148.38	1,097.48	50.90	22.563	
13,100.00	10,629.36	11,989.34	9,596.99	49.78	29.40	-25.78	-2,584.09	1,248.65	1,148.51	1,096.21	52.31	21.958	
13,200.00	10,628.37	12,089.34	9,595.85	51.19	29.60	-25.77	-2,684.08	1,249.37	1,148.65	1,094.91	53.73	21.376	
13,300.00	10,627.38	12,189.34	9,594.71	52.62	29.82	-25.77	-2,784.07	1,250.10	1,148.78	1,093.60	55.18	20.817	
13,400.00	10,626.39	12,289.34	9,593.57	54.05	30.08	-25.77	-2,884.06	1,250.83	1,148.92	1,092.27	56.65	20.281	
13,500.00	10,625.40	12,389.34	9,592.43	55.50	30.36	-25.76	-2,984.05	1,251.55	1,149.05	1,090.92	58.13	19.766	
13,600.00	10,624.40	12,489.34	9,591.28	56.96	30.69	-25.76	-3,084.04	1,252.28	1,149.19	1,089.56	59.63	19.272	
13,700.00	10,623.41	12,589.34	9,590.14	58.43	31.05	-25.76	-3,184.03	1,253.00	1,149.32	1,088.18	61.14	18.798	
13,800.00	10,622.42	12,689.34	9,589.00	59.91	31.45	-25.75	-3,284.02	1,253.73	1,149.46	1,086.80	62.67	18.343	
13,900.00	10,621.43	12,789.34	9,587.86	61.39	31.88	-25.75	-3,384.01	1,254.46	1,149.60	1,085.40	64.20	17.906	

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 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	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 (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)							
14,000.00	10,620.44	12,889.34	9,586.71	62.88	32.33	-25.75	-3,484.00	1,255.18	1,149.73	1,083.98	65.75	17.487			
14,100.00	10,619.44	12,989.34	9,585.57	64.38	32.81	-25.74	-3,584.00	1,255.91	1,149.87	1,082.56	67.30	17.084			
14,200.00	10,618.45	13,089.34	9,584.43	65.89	33.31	-25.74	-3,683.99	1,256.64	1,150.00	1,081.13	68.87	16.698			
14,300.00	10,617.46	13,189.34	9,583.29	67.40	33.83	-25.74	-3,783.98	1,257.36	1,150.14	1,079.69	70.45	16.326			
14,400.00	10,616.47	13,289.34	9,582.15	68.92	34.36	-25.73	-3,883.97	1,258.09	1,150.27	1,078.24	72.03	15.969			
14,500.00	10,615.48	13,389.34	9,581.00	70.45	34.91	-25.73	-3,983.96	1,258.82	1,150.41	1,076.79	73.62	15.626			
14,600.00	10,614.49	13,489.34	9,579.86	71.98	35.46	-25.73	-4,083.95	1,259.54	1,150.55	1,075.33	75.22	15.296			
14,700.00	10,613.49	13,589.34	9,578.72	73.51	36.03	-25.72	-4,183.94	1,260.27	1,150.68	1,073.86	76.82	14.978			
14,800.00	10,612.50	13,689.34	9,577.58	75.05	36.60	-25.72	-4,283.93	1,261.00	1,150.82	1,072.38	78.44	14.672			
14,900.00	10,611.51	13,789.34	9,576.44	76.59	37.19	-25.72	-4,383.92	1,261.72	1,150.95	1,070.90	80.05	14.377			
15,000.00	10,610.52	13,889.34	9,575.29	78.14	37.78	-25.71	-4,483.91	1,262.45	1,151.09	1,069.41	81.68	14.093			
15,100.00	10,609.53	13,989.34	9,574.15	79.69	38.38	-25.71	-4,583.90	1,263.18	1,151.22	1,067.92	83.30	13.820			
15,200.00	10,608.54	14,089.34	9,573.01	81.24	38.99	-25.71	-4,683.89	1,263.90	1,151.36	1,066.42	84.94	13.555			
15,300.00	10,607.54	14,189.34	9,571.87	82.80	39.60	-25.70	-4,783.88	1,264.63	1,151.50	1,064.92	86.57	13.301			
15,400.00	10,606.55	14,289.34	9,570.73	84.36	40.22	-25.70	-4,883.87	1,265.36	1,151.63	1,063.42	88.22	13.055			
15,500.00	10,605.56	14,389.34	9,569.58	85.92	40.85	-25.70	-4,983.87	1,266.08	1,151.77	1,061.91	89.86	12.817			
15,600.00	10,604.57	14,489.34	9,568.44	87.48	41.48	-25.70	-5,083.86	1,266.81	1,151.90	1,060.39	91.51	12.587			
15,700.00	10,603.58	14,589.34	9,567.30	89.05	42.11	-25.69	-5,183.85	1,267.53	1,152.04	1,058.87	93.17	12.366			
15,800.00	10,602.59	14,689.34	9,566.16	90.62	42.75	-25.69	-5,283.84	1,268.26	1,152.17	1,057.35	94.82	12.151			
15,900.00	10,601.59	14,789.34	9,565.01	92.20	43.39	-25.69	-5,383.83	1,268.99	1,152.31	1,055.83	96.48	11.943			
16,000.00	10,600.60	14,889.34	9,563.87	93.77	44.04	-25.68	-5,483.82	1,269.71	1,152.45	1,054.30	98.14	11.742			
16,100.00	10,599.61	14,989.34	9,562.73	95.35	44.69	-25.68	-5,583.81	1,270.44	1,152.58	1,052.77	99.81	11.548			
16,200.00	10,598.62	15,089.34	9,561.59	96.93	45.35	-25.68	-5,683.80	1,271.17	1,152.72	1,051.24	101.48	11.359			
16,300.00	10,597.63	15,189.34	9,560.45	98.51	46.01	-25.67	-5,783.79	1,271.89	1,152.85	1,049.70	103.15	11.176			
16,400.00	10,596.64	15,289.34	9,559.30	100.09	46.67	-25.67	-5,883.78	1,272.62	1,152.99	1,048.16	104.82	10.999			
16,500.00	10,595.64	15,389.34	9,558.16	101.68	47.34	-25.67	-5,983.77	1,273.35	1,153.13	1,046.62	106.50	10.827			
16,600.00	10,594.65	15,489.34	9,557.02	103.26	48.01	-25.66	-6,083.76	1,274.07	1,153.26	1,045.08	108.18	10.661			
16,700.00	10,593.66	15,589.34	9,555.88	104.85	48.68	-25.66	-6,183.75	1,274.80	1,153.40	1,043.54	109.86	10.499			
16,800.00	10,592.67	15,689.34	9,554.74	106.44	49.35	-25.66	-6,283.74	1,275.53	1,153.53	1,041.99	111.54	10.342			
16,900.00	10,591.68	15,789.34	9,553.59	108.03	50.03	-25.65	-6,383.74	1,276.25	1,153.67	1,040.44	113.23	10.189			
17,000.00	10,590.69	15,889.34	9,552.45	109.63	50.71	-25.65	-6,483.73	1,276.98	1,153.80	1,038.89	114.91	10.041			
17,100.00	10,589.69	15,989.34	9,551.31	111.22	51.40	-25.65	-6,583.72	1,277.71	1,153.94	1,037.34	116.60	9.896			
17,200.00	10,588.70	16,089.34	9,550.17	112.82	52.08	-25.64	-6,683.71	1,278.43	1,154.08	1,035.78	118.29	9.756			
17,300.00	10,587.71	16,189.34	9,549.03	114.41	52.77	-25.64	-6,783.70	1,279.16	1,154.21	1,034.23	119.98	9.620			
17,400.00	10,586.72	16,289.34	9,547.88	116.01	53.46	-25.64	-6,883.69	1,279.89	1,154.35	1,032.67	121.68	9.487			
17,500.00	10,585.73	16,389.34	9,546.74	117.61	54.15	-25.63	-6,983.68	1,280.61	1,154.48	1,031.11	123.37	9.358			
17,600.00	10,584.74	16,489.34	9,545.60	119.21	54.84	-25.63	-7,083.67	1,281.34	1,154.62	1,029.55	125.07	9.232			
17,700.00	10,583.74	16,589.34	9,544.46	120.81	55.54	-25.63	-7,183.66	1,282.07	1,154.75	1,027.99	126.76	9.109			
17,800.00	10,582.75	16,689.34	9,543.31	122.41	56.23	-25.62	-7,283.65	1,282.79	1,154.89	1,026.43	128.46	8.990			
17,900.00	10,581.76	16,789.33	9,542.17	124.01	56.93	-25.62	-7,383.64	1,283.52	1,155.03	1,024.86	130.16	8.874			
18,000.00	10,580.77	16,889.33	9,541.03	125.62	57.63	-25.62	-7,483.63	1,284.24	1,155.16	1,023.30	131.86	8.760			
18,077.45	10,580.00	16,966.78	9,540.15	126.59	58.18	-25.62	-7,561.07	1,284.81	1,155.27	1,022.35	132.92	8.692 SF			

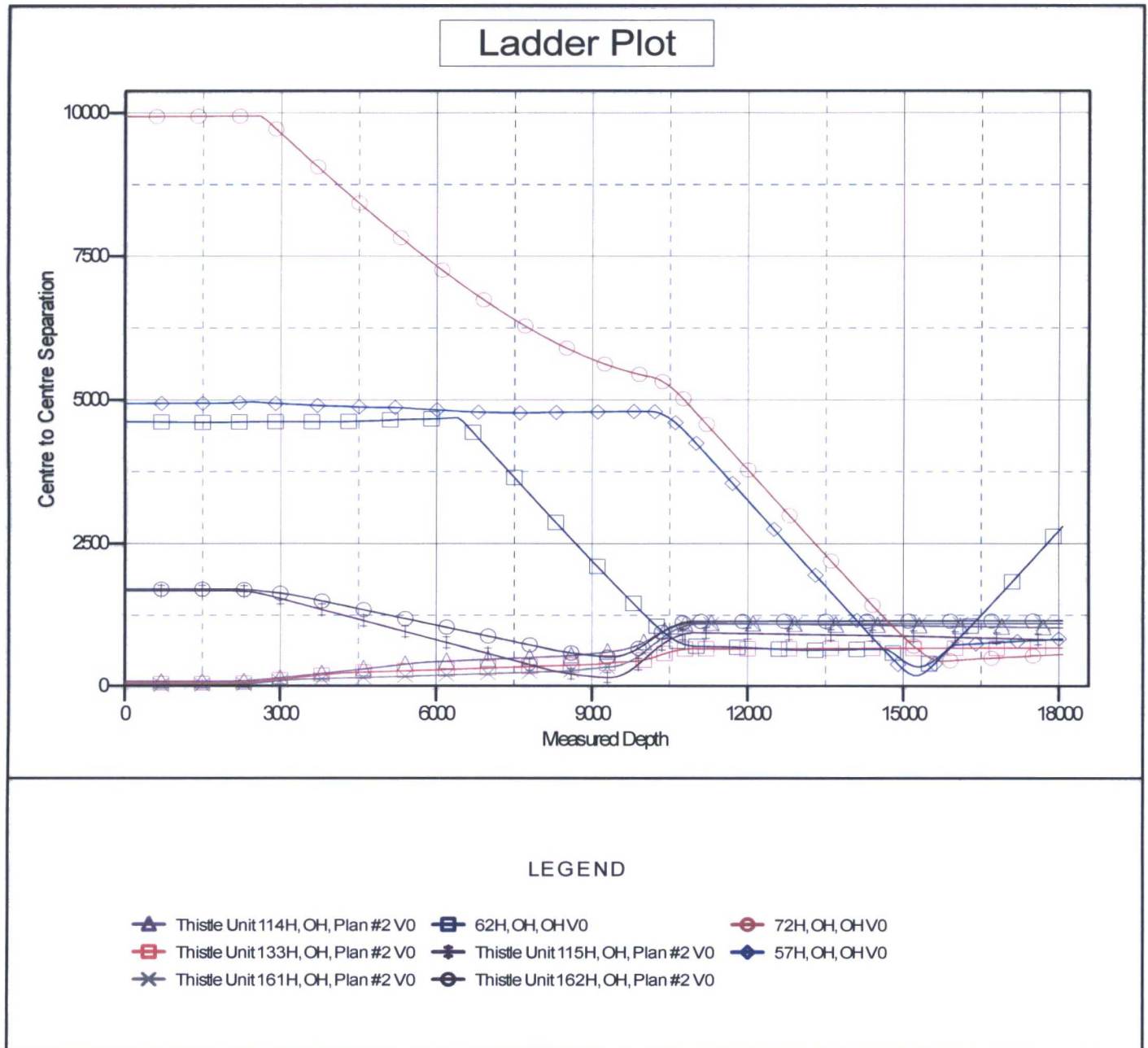
LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

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

Coordinates are relative to: Thistle Unit 99H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.41°



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

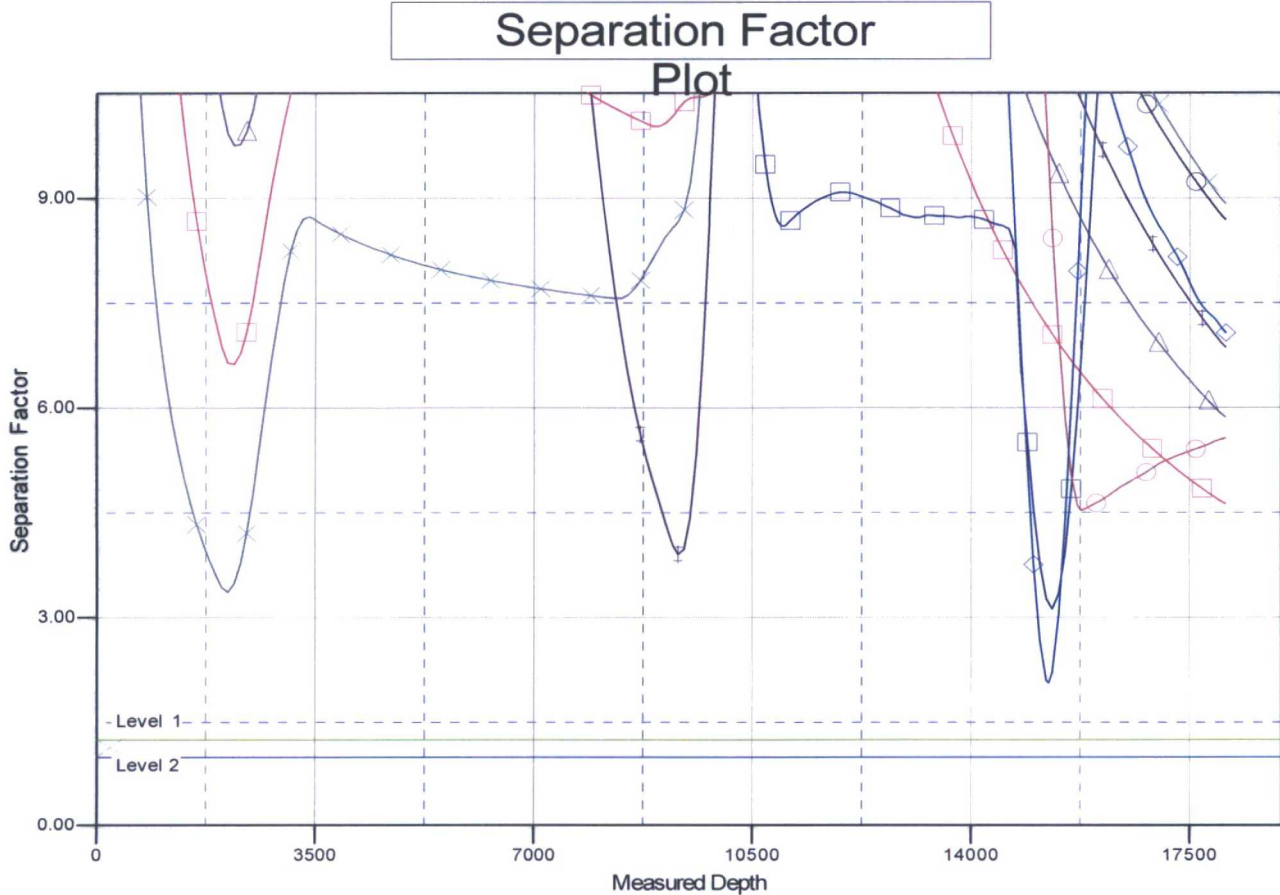
LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well Thistle Unit 99H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Reference Site:	Thistle Unit Sec 22-27 Trac Pad	MD Reference:	3711.5' GE + 23.5' KB @ 3735.00usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	Thistle Unit 99H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

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

Coordinates are relative to: Thistle Unit 99H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.41°



LEGEND

- ▲ Thistle Unit 114H, OH, Plan #2 V0
- 62H, OH, OH V0
- 72H, OH, OH V0
- Thistle Unit 133H, OH, Plan #2 V0
- ✕ Thistle Unit 115H, OH, Plan #2 V0
- ◆ 57H, OH, OH V0
- ✕ Thistle Unit 161H, OH, Plan #2 V0
- Thistle Unit 162H, OH, Plan #2 V0