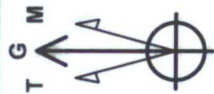




Project: Lea County, NM (NAD-83)
Site: Cotton Draw Unit
Well: 327H (SIMOPS)
Wellbore: OH
Design: Plan #1



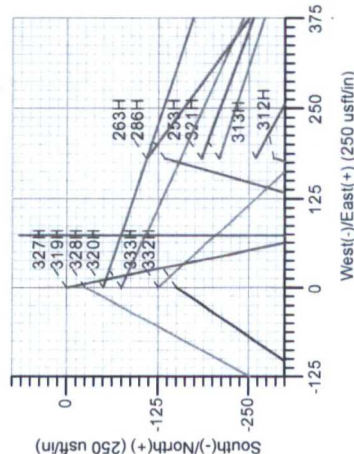
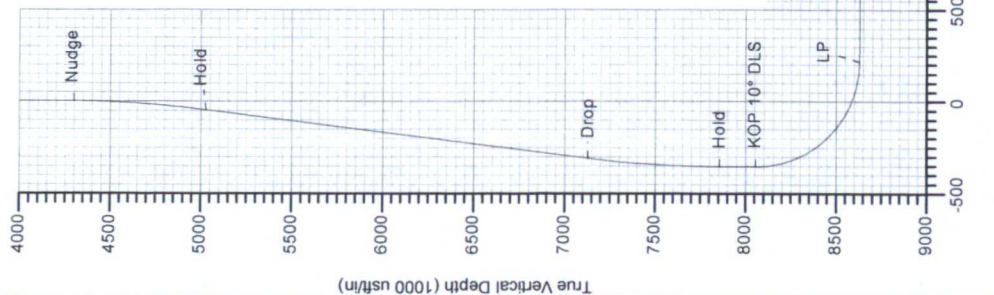
Azimuths to Grid North
True North: -0.33°
Magnetic North: 6.95°
Magnetic Field
Strength: 48101.3nT
Dip Angle: 60.03°
Date: 12/16/2015
Model: BGGM2015



DESIGN TARGET DETAILS				
Name	TVD	+N/-S	+E/-W	Northing
SHL (CDU 327H)	0.00	0.00	0.00	415077.38
PBHL (CDU 327H)	8630.00	4215.07	72.96	419292.45
				734232.45

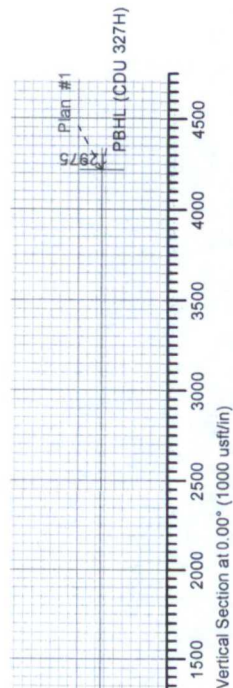
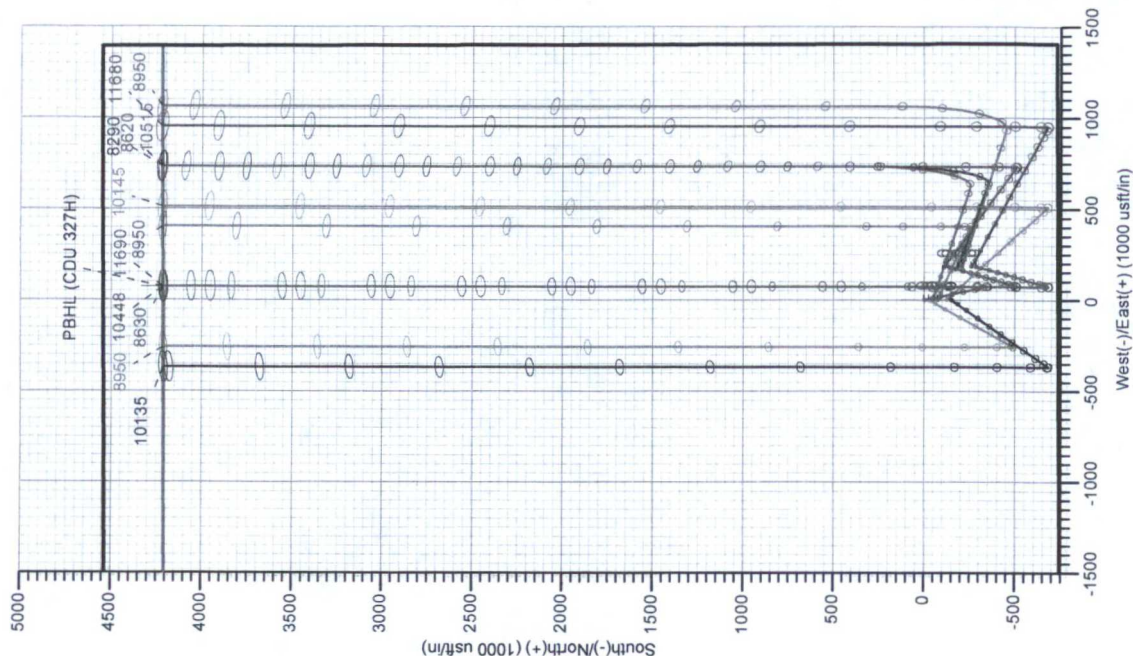
SECTION DETAILS				
MD	Inc	Azi	TVD	+N/-S
0.00	0.00	0.00	0.00	0.00
4300.00	0.00	0.00	0.00	0.00
5030.89	7.31	168.38	5028.91	-45.60
7147.27	7.31	168.38	7128.09	-309.33
7878.16	0.00	0.00	7857.00	-354.93
8078.16	0.00	0.00	8057.00	-354.93
8978.15	90.00	360.00	8629.96	218.02
12975.20	90.00	360.00	8630.00	4215.07

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				



LEGEND

- △ 320H (SIMOPS), OH, Plan #1 V0
- 253H (SIMOPS), OH, Plan #1 V0
- ⊕ 312H (SIMOPS), OH, Plan #1 V0
- ⊕ 286H (SIMOPS), OH, Plan #1 V0
- ⊕ 313H (SIMOPS), OH, Plan #1 V0
- ⊕ 263H (SIMOPS), OH, Plan #1 V0
- ⊕ 321H (SIMOPS), OH, Plan #1 V0
- ⊕ 333H (SIMOPS), OH, Plan #1 V0
- ⊕ 319H (SIMOPS), OH, Plan #1 V0
- ⊕ 332H (SIMOPS), OH, Plan #1 V0
- ⊕ 328H (SIMOPS), OH, Plan #1 V0
- ⊕ Plan #1





DEVON ENERGY

Lea County, NM (NAD-83)

Cotton Draw Unit

327H (SIMOPS)

OH

Plan: Plan #1

Standard Planning Report

17 December, 2015





LEAM Drilling Systems LLC
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 327H (SIMOPS)
Company:	DEVON ENERGY	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site:	Cotton Draw Unit	North Reference:	Grid
Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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	Cotton Draw Unit		
Site Position:		Northing:	414,142.25 usft
From:	Map	Easting:	733,967.43 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 8' 13.293 N
		Longitude:	103° 42' 39.602 W
		Grid Convergence:	0.33 °

Well	327H (SIMOPS)		
Well Position	+N-S	935.13 usft	Northing:
	+E-W	192.06 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	3,461.40 usft
		Latitude:	32° 8' 22.536 N
		Longitude:	103° 42' 37.305 W
		Ground Level:	3,431.40 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	12/16/2015	7.29	60.03	48,101

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	0.00

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	
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,030.89	7.31	168.38	5,028.91	-45.60	9.37	1.00	1.00	0.00	168.38	
7,147.27	7.31	168.38	7,128.09	-309.33	63.59	0.00	0.00	0.00	0.00	
7,878.16	0.00	0.00	7,857.00	-354.93	72.96	1.00	-1.00	0.00	180.00	
8,078.16	0.00	0.00	8,057.00	-354.93	72.96	0.00	0.00	0.00	0.00	
8,978.15	90.00	360.00	8,629.96	218.02	72.96	10.00	10.00	0.00	360.00	
12,975.20	90.00	360.00	8,630.00	4,215.07	72.96	0.00	0.00	0.00	0.00	PBHL (CDU 327H)



LEAM Drilling Systems LLC
Planning Report



Database: EDM 5000.1 Single User Db
Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Site: Cotton Draw Unit
Well: 327H (SIMOPS)
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 327H (SIMOPS)
TVD Reference: 3431.4' GE + 30' KB @ 3461.40usft
MD Reference: 3431.4' GE + 30' KB @ 3461.40usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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 (CDU 327H)									
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
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
Nudge									
4,400.00	1.00	168.38	4,400.00	-0.85	0.18	-0.85	1.00	1.00	0.00
4,500.00	2.00	168.38	4,499.96	-3.42	0.70	-3.42	1.00	1.00	0.00
4,600.00	3.00	168.38	4,599.86	-7.69	1.58	-7.69	1.00	1.00	0.00
4,700.00	4.00	168.38	4,699.68	-13.67	2.81	-13.67	1.00	1.00	0.00
4,800.00	5.00	168.38	4,799.37	-21.36	4.39	-21.36	1.00	1.00	0.00
4,900.00	6.00	168.38	4,898.90	-30.74	6.32	-30.74	1.00	1.00	0.00
5,000.00	7.00	168.38	4,998.26	-41.83	8.60	-41.83	1.00	1.00	0.00
5,030.89	7.31	168.38	5,028.91	-45.60	9.37	-45.60	1.00	1.00	0.00



LEAM Drilling Systems LLC

Planning Report



Database: EDM 5000.1 Single User Db
Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Site: Cotton Draw Unit
Well: 327H (SIMOPS)
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference:
TVD Reference: 3431.4' GE + 30' KB @ 3461.40usft
MD Reference: 3431.4' GE + 30' KB @ 3461.40usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
Hold									
5,100.00	7.31	168.38	5,097.46	-54.21	11.14	-54.21	0.00	0.00	0.00
5,200.00	7.31	168.38	5,196.65	-66.67	13.71	-66.67	0.00	0.00	0.00
5,300.00	7.31	168.38	5,295.83	-79.14	16.27	-79.14	0.00	0.00	0.00
5,400.00	7.31	168.38	5,395.02	-91.60	18.83	-91.60	0.00	0.00	0.00
5,500.00	7.31	168.38	5,494.21	-104.06	21.39	-104.06	0.00	0.00	0.00
5,600.00	7.31	168.38	5,593.40	-116.52	23.95	-116.52	0.00	0.00	0.00
5,700.00	7.31	168.38	5,692.58	-128.98	26.51	-128.98	0.00	0.00	0.00
5,800.00	7.31	168.38	5,791.77	-141.44	29.08	-141.44	0.00	0.00	0.00
5,900.00	7.31	168.38	5,890.96	-153.90	31.64	-153.90	0.00	0.00	0.00
6,000.00	7.31	168.38	5,990.15	-166.36	34.20	-166.36	0.00	0.00	0.00
6,100.00	7.31	168.38	6,089.33	-178.83	36.76	-178.83	0.00	0.00	0.00
6,200.00	7.31	168.38	6,188.52	-191.29	39.32	-191.29	0.00	0.00	0.00
6,300.00	7.31	168.38	6,287.71	-203.75	41.88	-203.75	0.00	0.00	0.00
6,400.00	7.31	168.38	6,386.90	-216.21	44.44	-216.21	0.00	0.00	0.00
6,500.00	7.31	168.38	6,486.08	-228.67	47.01	-228.67	0.00	0.00	0.00
6,600.00	7.31	168.38	6,585.27	-241.13	49.57	-241.13	0.00	0.00	0.00
6,700.00	7.31	168.38	6,684.46	-253.59	52.13	-253.59	0.00	0.00	0.00
6,800.00	7.31	168.38	6,783.65	-266.05	54.69	-266.05	0.00	0.00	0.00
6,900.00	7.31	168.38	6,882.83	-278.52	57.25	-278.52	0.00	0.00	0.00
7,000.00	7.31	168.38	6,982.02	-290.98	59.81	-290.98	0.00	0.00	0.00
7,100.00	7.31	168.38	7,081.21	-303.44	62.38	-303.44	0.00	0.00	0.00
7,147.27	7.31	168.38	7,128.09	-309.33	63.59	-309.33	0.00	0.00	0.00
Drop									
7,200.00	6.78	168.38	7,180.43	-315.66	64.89	-315.66	1.00	-1.00	0.00
7,300.00	5.78	168.38	7,279.82	-326.38	67.09	-326.38	1.00	-1.00	0.00
7,400.00	4.78	168.38	7,379.40	-335.40	68.94	-335.40	1.00	-1.00	0.00
7,500.00	3.78	168.38	7,479.12	-342.71	70.45	-342.71	1.00	-1.00	0.00
7,600.00	2.78	168.38	7,578.95	-348.32	71.60	-348.32	1.00	-1.00	0.00
7,700.00	1.78	168.38	7,678.87	-352.22	72.40	-352.22	1.00	-1.00	0.00
7,800.00	0.78	168.38	7,778.85	-354.41	72.85	-354.41	1.00	-1.00	0.00
7,878.16	0.00	0.00	7,857.00	-354.93	72.96	-354.93	1.00	-1.00	0.00
Hold									
7,900.00	0.00	0.00	7,878.84	-354.93	72.96	-354.93	0.00	0.00	0.00
8,000.00	0.00	0.00	7,978.84	-354.93	72.96	-354.93	0.00	0.00	0.00
8,078.16	0.00	0.00	8,057.00	-354.93	72.96	-354.93	0.00	0.00	0.00
KOP 10° DLS									
8,100.00	2.18	360.00	8,078.84	-354.51	72.96	-354.51	10.00	10.00	0.00
8,150.00	7.18	360.00	8,128.65	-350.43	72.96	-350.43	10.00	10.00	0.00
8,200.00	12.18	360.00	8,177.93	-342.02	72.96	-342.02	10.00	10.00	0.00
8,250.00	17.18	360.00	8,226.28	-329.35	72.96	-329.35	10.00	10.00	0.00
8,300.00	22.18	360.00	8,273.34	-312.52	72.96	-312.52	10.00	10.00	0.00
8,350.00	27.18	360.00	8,318.76	-291.64	72.96	-291.64	10.00	10.00	0.00
8,400.00	32.18	360.00	8,362.18	-266.89	72.96	-266.89	10.00	10.00	0.00
8,450.00	37.18	360.00	8,403.28	-238.45	72.96	-238.45	10.00	10.00	0.00
8,500.00	42.18	360.00	8,441.75	-206.53	72.96	-206.53	10.00	10.00	0.00
8,550.00	47.18	360.00	8,477.29	-171.38	72.96	-171.38	10.00	10.00	0.00
8,600.00	52.18	360.00	8,509.63	-133.27	72.96	-133.27	10.00	10.00	0.00
8,650.00	57.18	360.00	8,538.52	-92.48	72.96	-92.48	10.00	10.00	0.00
8,700.00	62.18	360.00	8,563.75	-49.33	72.96	-49.33	10.00	10.00	0.00
8,750.00	67.18	360.00	8,585.13	-4.15	72.96	-4.15	10.00	10.00	0.00
8,800.00	72.18	360.00	8,602.48	42.73	72.96	42.73	10.00	10.00	0.00
8,850.00	77.18	360.00	8,615.68	90.94	72.96	90.94	10.00	10.00	0.00



LEAM Drilling Systems LLC

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MD Reference: 3431.4' GE + 30' KB @ 3461.40usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
8,900.00	82.18	360.00	8,624.64	140.11	72.96	140.11	10.00	10.00	0.00
8,950.00	87.18	360.00	8,629.27	189.88	72.96	189.88	10.00	10.00	0.00
8,978.15	90.00	360.00	8,629.96	218.02	72.96	218.02	10.00	10.00	0.00
LP									
9,000.00	90.00	360.00	8,629.96	239.87	72.96	239.87	0.00	0.00	0.00
9,100.00	90.00	360.00	8,629.96	339.87	72.96	339.87	0.00	0.00	0.00
9,200.00	90.00	360.00	8,629.96	439.87	72.96	439.87	0.00	0.00	0.00
9,300.00	90.00	360.00	8,629.96	539.87	72.96	539.87	0.00	0.00	0.00
9,400.00	90.00	360.00	8,629.96	639.87	72.96	639.87	0.00	0.00	0.00
9,500.00	90.00	360.00	8,629.96	739.87	72.96	739.87	0.00	0.00	0.00
9,600.00	90.00	360.00	8,629.96	839.87	72.96	839.87	0.00	0.00	0.00
9,700.00	90.00	360.00	8,629.97	939.87	72.96	939.87	0.00	0.00	0.00
9,800.00	90.00	360.00	8,629.97	1,039.87	72.96	1,039.87	0.00	0.00	0.00
9,900.00	90.00	360.00	8,629.97	1,139.87	72.96	1,139.87	0.00	0.00	0.00
10,000.00	90.00	360.00	8,629.97	1,239.87	72.96	1,239.87	0.00	0.00	0.00
10,100.00	90.00	360.00	8,629.97	1,339.87	72.96	1,339.87	0.00	0.00	0.00
10,200.00	90.00	360.00	8,629.97	1,439.87	72.96	1,439.87	0.00	0.00	0.00
10,300.00	90.00	360.00	8,629.97	1,539.87	72.96	1,539.87	0.00	0.00	0.00
10,400.00	90.00	360.00	8,629.97	1,639.87	72.96	1,639.87	0.00	0.00	0.00
10,500.00	90.00	360.00	8,629.97	1,739.87	72.96	1,739.87	0.00	0.00	0.00
10,600.00	90.00	360.00	8,629.98	1,839.87	72.96	1,839.87	0.00	0.00	0.00
10,700.00	90.00	360.00	8,629.98	1,939.87	72.96	1,939.87	0.00	0.00	0.00
10,800.00	90.00	360.00	8,629.98	2,039.87	72.96	2,039.87	0.00	0.00	0.00
10,900.00	90.00	360.00	8,629.98	2,139.87	72.96	2,139.87	0.00	0.00	0.00
11,000.00	90.00	360.00	8,629.98	2,239.87	72.96	2,239.87	0.00	0.00	0.00
11,100.00	90.00	360.00	8,629.98	2,339.87	72.96	2,339.87	0.00	0.00	0.00
11,200.00	90.00	360.00	8,629.98	2,439.87	72.96	2,439.87	0.00	0.00	0.00
11,300.00	90.00	360.00	8,629.98	2,539.87	72.96	2,539.87	0.00	0.00	0.00
11,400.00	90.00	360.00	8,629.98	2,639.87	72.96	2,639.87	0.00	0.00	0.00
11,500.00	90.00	360.00	8,629.98	2,739.87	72.96	2,739.87	0.00	0.00	0.00
11,600.00	90.00	360.00	8,629.99	2,839.87	72.96	2,839.87	0.00	0.00	0.00
11,700.00	90.00	360.00	8,629.99	2,939.87	72.96	2,939.87	0.00	0.00	0.00
11,800.00	90.00	360.00	8,629.99	3,039.87	72.96	3,039.87	0.00	0.00	0.00
11,900.00	90.00	360.00	8,629.99	3,139.87	72.96	3,139.87	0.00	0.00	0.00
12,000.00	90.00	360.00	8,629.99	3,239.87	72.96	3,239.87	0.00	0.00	0.00
12,100.00	90.00	360.00	8,629.99	3,339.87	72.96	3,339.87	0.00	0.00	0.00
12,200.00	90.00	360.00	8,629.99	3,439.87	72.96	3,439.87	0.00	0.00	0.00
12,300.00	90.00	360.00	8,629.99	3,539.87	72.96	3,539.87	0.00	0.00	0.00
12,400.00	90.00	360.00	8,629.99	3,639.87	72.96	3,639.87	0.00	0.00	0.00
12,500.00	90.00	360.00	8,630.00	3,739.87	72.96	3,739.87	0.00	0.00	0.00
12,600.00	90.00	360.00	8,630.00	3,839.87	72.96	3,839.87	0.00	0.00	0.00
12,700.00	90.00	360.00	8,630.00	3,939.87	72.96	3,939.87	0.00	0.00	0.00
12,800.00	90.00	360.00	8,630.00	4,039.87	72.96	4,039.87	0.00	0.00	0.00
12,900.00	90.00	360.00	8,630.00	4,139.87	72.96	4,139.87	0.00	0.00	0.00
12,975.20	90.00	360.00	8,630.00	4,215.07	72.96	4,215.07	0.00	0.00	0.00

TD - PBHL (CDU 327H)



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 327H (SIMOPS)
Company:	DEVON ENERGY	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site:	Cotton Draw Unit	North Reference:	Grid
Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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 (CDU 327H)	0.00	0.00	0.00	0.00	0.00	415,077.38	734,159.49	32° 8' 22.536 N	103° 42' 37.305 W
- plan hits target center									
- Point									
PBHL (CDU 327H)	0.00	0.00	8,630.00	4,215.07	72.96	419,292.45	734,232.45	32° 9' 4.243 N	103° 42' 36.173 W
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
4,300.00	4,300.00	0.00	0.00	Nudge
5,030.89	5,028.91	-45.60	9.37	Hold
7,147.27	7,128.09	-309.33	63.59	Drop
7,878.16	7,857.00	-354.93	72.96	Hold
8,078.16	8,057.00	-354.93	72.96	KOP 10° DLS
8,978.15	8,629.96	218.02	72.96	LP
12,975.20	8,630.00	4,215.07	72.96	TD



DEVON ENERGY

Lea County, NM (NAD-83)
Cotton Draw Unit
327H (SIMOPS)

OH
Plan #1

Anticollision Report

17 December, 2015





LEAM Drilling Systems LLC

Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

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

Survey Tool Program		Date	12/17/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	12,975.20	Plan #1 (OH)	LEAM MWD-ADJ	MWD - Standard	

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						
Cotton Draw Unit						
253H (SIMOPS) - OH - Plan #1	4,300.00	4,300.00	257.88	238.85	13.546	CC
253H (SIMOPS) - OH - Plan #1	4,600.00	4,588.10	258.21	238.10	12.839	ES
253H (SIMOPS) - OH - Plan #1	12,975.20	12,658.84	742.42	593.45	4.984	SF
263H (SIMOPS) - OH - Plan #1	5,320.78	5,308.15	173.54	150.50	7.532	CC, ES
263H (SIMOPS) - OH - Plan #1	5,500.00	5,481.96	176.70	152.95	7.440	SF
286H (SIMOPS) - OH - Plan #1	7,575.54	7,563.24	53.86	21.36	1.657	CC
286H (SIMOPS) - OH - Plan #1	7,600.00	7,587.68	53.91	21.34	1.655	ES, SF
312H (SIMOPS) - OH - Plan #1	7,401.82	7,375.91	206.82	175.69	6.642	CC, ES
312H (SIMOPS) - OH - Plan #1	7,600.00	7,573.88	210.42	178.40	6.572	SF
313H (SIMOPS) - OH - Plan #1	4,909.00	4,879.32	314.86	293.73	14.903	CC
313H (SIMOPS) - OH - Plan #1	5,030.89	4,994.72	315.07	293.53	14.629	ES
313H (SIMOPS) - OH - Plan #1	5,300.00	5,248.56	323.06	300.50	14.322	SF
319H (SIMOPS) - OH - Plan #1	4,556.39	4,555.36	24.69	4.74	1.238	Level 2, CC
319H (SIMOPS) - OH - Plan #1	4,600.00	4,598.76	24.73	4.64	1.231	Level 2, ES, SF
320H (SIMOPS) - OH - Plan #1	5,057.84	5,051.09	58.29	36.59	2.686	CC, ES
320H (SIMOPS) - OH - Plan #1	5,100.00	5,092.57	58.64	36.77	2.681	SF
321H (SIMOPS) - OH - Plan #1	4,719.80	4,702.67	275.93	255.40	13.445	CC
321H (SIMOPS) - OH - Plan #1	4,800.00	4,779.35	276.00	255.20	13.271	ES
321H (SIMOPS) - OH - Plan #1	12,975.20	13,470.02	1,040.42	883.92	6.648	SF
328H (SIMOPS) - OH - Plan #1	4,774.90	4,771.79	44.15	23.41	2.129	CC
328H (SIMOPS) - OH - Plan #1	4,800.00	4,796.58	44.22	23.39	2.123	ES, SF
332H (SIMOPS) - OH - Plan #1	5,017.90	5,001.17	146.00	124.54	6.802	CC
332H (SIMOPS) - OH - Plan #1	5,030.89	5,013.80	146.01	124.50	6.788	ES
332H (SIMOPS) - OH - Plan #1	5,100.00	5,080.94	146.61	124.85	6.735	SF
333H (SIMOPS) - OH - Plan #1	5,141.24	5,126.76	113.89	91.98	5.197	CC, ES
333H (SIMOPS) - OH - Plan #1	5,200.00	5,184.32	114.24	92.11	5.161	SF

Cotton Draw Unit - 253H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference				Offset			Semi Major Axis		Distance					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	135.54	-184.05	180.84	257.88					
100.00	100.00	100.00	100.00	0.08	0.08	135.54	-184.05	180.84	257.88	257.73	0.16	1,639.067		

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 253H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														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)							
200.00	200.00	200.00	200.00	0.30	0.30	135.54	-184.05	180.64	257.88	257.28	0.61	424.944			
300.00	300.00	300.00	300.00	0.53	0.53	135.54	-184.05	180.64	257.88	256.83	1.06	244.117			
400.00	400.00	400.00	400.00	0.75	0.75	135.54	-184.05	180.64	257.88	256.38	1.51	171.246			
500.00	500.00	500.00	500.00	0.98	0.98	135.54	-184.05	180.64	257.88	255.93	1.96	131.879			
600.00	600.00	600.00	600.00	1.20	1.20	135.54	-184.05	180.64	257.88	255.48	2.40	107.229			
700.00	700.00	700.00	700.00	1.43	1.43	135.54	-184.05	180.64	257.88	255.03	2.85	90.342			
800.00	800.00	800.00	800.00	1.65	1.65	135.54	-184.05	180.64	257.88	254.58	3.30	78.051			
900.00	900.00	900.00	900.00	1.88	1.88	135.54	-184.05	180.64	257.88	254.13	3.75	68.703			
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	135.54	-184.05	180.64	257.88	253.68	4.20	61.356			
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	135.54	-184.05	180.64	257.88	253.23	4.65	55.427			
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	135.54	-184.05	180.64	257.88	252.78	5.10	50.544			
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	135.54	-184.05	180.64	257.88	252.33	5.55	46.451			
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	135.54	-184.05	180.64	257.88	251.88	6.00	42.972			
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	135.54	-184.05	180.64	257.88	251.43	6.45	39.977			
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	135.54	-184.05	180.64	257.88	250.98	6.90	37.373			
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	135.54	-184.05	180.64	257.88	250.54	7.35	35.087			
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	135.54	-184.05	180.64	257.88	250.09	7.80	33.065			
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	135.54	-184.05	180.64	257.88	249.64	8.25	31.263			
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	135.54	-184.05	180.64	257.88	249.19	8.70	29.647			
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	135.54	-184.05	180.64	257.88	248.74	9.15	28.190			
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	135.54	-184.05	180.64	257.88	248.29	9.60	26.870			
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	135.54	-184.05	180.64	257.88	247.84	10.05	25.668			
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	135.54	-184.05	180.64	257.88	247.39	10.50	24.568			
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	135.54	-184.05	180.64	257.88	246.94	10.95	23.560			
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	135.54	-184.05	180.64	257.88	246.49	11.40	22.630			
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	135.54	-184.05	180.64	257.88	246.04	11.85	21.771			
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	135.54	-184.05	180.64	257.88	245.59	12.29	20.975			
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	135.54	-184.05	180.64	257.88	245.14	12.74	20.235			
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	135.54	-184.05	180.64	257.88	244.69	13.19	19.546			
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	135.54	-184.05	180.64	257.88	244.24	13.64	18.902			
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	135.54	-184.05	180.64	257.88	243.79	14.09	18.299			
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	135.54	-184.05	180.64	257.88	243.34	14.54	17.733			
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	135.54	-184.05	180.64	257.88	242.89	14.99	17.202			
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	135.54	-184.05	180.64	257.88	242.44	15.44	16.701			
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	135.54	-184.05	180.64	257.88	241.99	15.89	16.228			
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	135.54	-184.05	180.64	257.88	241.54	16.34	15.782			
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	135.54	-184.05	180.64	257.88	241.09	16.79	15.359			
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	135.54	-184.05	180.64	257.88	240.65	17.24	14.959			
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	135.54	-184.05	180.64	257.88	240.20	17.69	14.579			
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	135.54	-184.05	180.64	257.88	239.75	18.14	14.217			
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	135.54	-184.05	180.64	257.88	239.30	18.59	13.874			
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	135.54	-184.05	180.64	257.88	238.85	19.04	13.546 CC			
4,400.00	4,400.00	4,396.08	4,396.08	9.71	9.72	-33.03	-184.33	181.39	257.91	238.48	19.43	13.275			
4,500.00	4,499.96	4,492.13	4,492.09	9.88	9.90	-33.56	-185.16	183.66	258.01	238.23	19.77	13.050			
4,600.00	4,599.86	4,588.10	4,587.97	10.05	10.08	-34.44	-186.55	187.43	258.21	238.10	20.11	12.839 ES			
4,700.00	4,699.68	4,683.95	4,683.66	10.23	10.27	-35.67	-188.50	192.70	258.61	238.16	20.45	12.644			
4,800.00	4,799.37	4,779.64	4,779.08	10.40	10.45	-37.24	-190.99	199.47	259.31	238.51	20.80	12.469			
4,900.00	4,898.90	4,875.15	4,874.18	10.58	10.65	-39.14	-194.02	207.70	260.43	239.29	21.14	12.319			
5,000.00	4,998.26	4,970.43	4,968.90	10.77	10.84	-41.35	-197.60	217.40	262.15	240.66	21.49	12.198			
5,030.89	5,028.91	5,000.00	4,998.26	10.83	10.91	-42.10	-198.82	220.71	262.83	241.23	21.60	12.168			
5,100.00	5,097.46	5,065.46	5,063.19	10.96	11.05	-43.80	-201.71	228.54	264.94	243.07	21.86	12.118			
5,200.00	5,196.65	5,160.28	5,157.06	11.16	11.26	-46.28	-206.34	241.13	269.80	247.55	22.25	12.126			

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 253H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														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)							
5,300.00	5,295.83	5,255.03	5,250.61	11.37	11.48	-48.71	-211.51	255.15	276.82	254.18	12.226				
5,400.00	5,395.02	5,353.96	5,348.18	11.58	11.72	-51.15	-217.16	270.49	285.12	262.07	12.369				
5,500.00	5,494.21	5,452.89	5,445.76	11.79	11.96	-53.44	-222.82	285.83	293.90	270.43	12.525				
5,600.00	5,593.40	5,551.83	5,543.33	12.01	12.21	-55.60	-228.47	301.16	303.13	279.24	12.690				
5,700.00	5,692.58	5,650.76	5,640.90	12.24	12.47	-57.63	-234.12	316.50	312.76	288.45	12.863				
5,800.00	5,791.77	5,749.69	5,738.48	12.47	12.74	-59.54	-239.78	331.84	322.77	298.01	13.040				
5,900.00	5,890.96	5,848.63	5,836.05	12.71	13.00	-61.33	-245.43	347.18	333.11	307.91	13.222				
6,000.00	5,990.15	5,947.56	5,933.62	12.94	13.28	-63.01	-251.08	362.52	343.75	318.11	13.405				
6,100.00	6,089.33	6,046.49	6,031.20	13.19	13.56	-64.60	-256.74	377.86	354.68	328.58	13.589				
6,200.00	6,188.52	6,145.43	6,128.77	13.43	13.84	-66.09	-262.39	393.20	365.86	339.30	13.772				
6,300.00	6,287.71	6,244.36	6,226.34	13.68	14.13	-67.49	-268.04	408.54	377.27	350.24	13.955				
6,400.00	6,386.90	6,343.29	6,323.92	13.93	14.42	-68.80	-273.70	423.88	388.89	361.38	14.135				
6,500.00	6,486.08	6,442.23	6,421.49	14.19	14.72	-70.04	-279.35	439.21	400.71	372.71	14.313				
6,600.00	6,585.27	6,541.16	6,519.06	14.44	15.02	-71.21	-285.00	454.55	412.70	384.21	14.488				
6,700.00	6,684.46	6,640.09	6,616.64	14.71	15.32	-72.32	-290.66	469.89	424.85	395.87	14.660				
6,800.00	6,783.65	6,739.03	6,714.21	14.97	15.62	-73.36	-296.31	485.23	437.15	407.67	14.828				
6,900.00	6,882.83	6,837.96	6,811.78	15.23	15.93	-74.35	-301.96	500.57	449.59	419.60	14.992				
7,000.00	6,982.02	6,936.89	6,909.36	15.50	16.24	-75.28	-307.62	515.91	462.15	431.65	15.152				
7,100.00	7,081.21	7,035.82	7,006.93	15.77	16.56	-76.16	-313.27	531.25	474.82	443.80	15.309				
7,147.27	7,128.09	7,082.59	7,053.05	15.90	16.71	-76.56	-315.94	538.50	480.85	449.59	15.381				
7,200.00	7,180.43	7,134.77	7,104.51	16.04	16.87	-77.04	-318.92	546.59	487.65	456.12	15.464				
7,300.00	7,279.82	7,233.75	7,202.14	16.30	17.19	-77.76	-324.58	561.93	500.91	468.87	15.633				
7,400.00	7,379.40	7,332.76	7,299.78	16.54	17.52	-78.27	-330.24	577.28	514.56	482.02	15.814				
7,500.00	7,479.12	7,431.76	7,397.42	16.78	17.84	-78.58	-335.89	592.63	528.58	495.56	16.007				
7,600.00	7,578.95	7,530.72	7,495.02	17.01	18.16	-78.69	-341.55	607.98	542.95	509.45	16.211				
7,700.00	7,678.87	7,629.62	7,592.56	17.24	18.49	-78.64	-347.20	623.31	557.65	523.70	16.425				
7,800.00	7,778.85	7,728.41	7,689.99	17.45	18.82	-78.42	-352.85	638.63	572.71	538.32	16.651				
7,878.16	7,857.00	7,805.41	7,766.00	17.60	19.05	-78.74	-352.30	650.58	584.75	550.02	16.838				
7,900.00	7,878.84	7,826.76	7,787.00	17.64	19.11	-78.55	-350.32	653.88	588.15	553.33	16.893				
8,000.00	7,978.84	7,921.45	7,878.68	17.85	19.34	-78.80	-332.07	668.29	604.13	568.90	17.146				
8,078.16	8,057.00	7,990.00	7,942.56	18.00	19.49	-78.50	-309.44	678.33	617.77	582.23	17.380				
8,100.00	8,078.84	8,008.23	7,959.06	18.05	19.53	-78.65	-302.13	680.92	621.86	586.22	17.448				
8,150.00	8,128.65	8,050.00	7,995.94	18.12	19.61	-78.29	-283.41	686.72	631.51	595.68	17.622				
8,200.00	8,177.93	8,089.51	8,029.49	18.18	19.68	-78.07	-263.25	692.00	641.44	605.46	17.826				
8,250.00	8,226.28	8,128.99	8,061.57	18.22	19.74	-77.95	-240.82	697.04	651.49	615.41	18.056				
8,300.00	8,273.34	8,167.84	8,091.58	18.24	19.80	-75.94	-216.61	701.76	661.53	625.41	18.314				
8,350.00	8,318.76	8,206.12	8,119.50	18.24	19.86	-74.07	-190.79	706.15	671.42	635.32	18.599				
8,400.00	8,362.18	8,243.93	8,145.33	18.23	19.92	-72.33	-163.50	710.21	681.03	645.01	18.906				
8,450.00	8,403.28	8,281.31	8,169.08	18.22	19.98	-70.73	-134.88	713.94	690.24	654.36	19.234				
8,500.00	8,441.75	8,318.33	8,190.72	18.20	20.04	-69.28	-105.05	717.34	698.96	663.23	19.564				
8,550.00	8,477.29	8,350.00	8,207.70	18.19	20.10	-68.04	-78.45	720.01	707.10	671.58	19.908				
8,600.00	8,509.63	8,391.47	8,227.69	18.19	20.19	-66.81	-42.26	723.15	714.51	679.19	20.227				
8,650.00	8,538.52	8,427.68	8,242.99	18.21	20.27	-65.80	-9.54	725.56	721.18	686.04	20.518				
8,700.00	8,563.75	8,463.70	8,256.15	18.25	20.37	-64.93	23.92	727.63	727.03	692.01	20.762				
8,750.00	8,585.13	8,500.00	8,267.29	18.31	20.49	-64.21	58.42	729.38	732.00	697.04	20.939				
8,800.00	8,602.48	8,535.31	8,276.04	18.41	20.62	-63.63	92.60	730.76	736.04	701.03	21.027				
8,850.00	8,615.68	8,570.96	8,282.74	18.55	20.77	-63.20	127.59	731.81	739.11	703.94	21.018				
8,900.00	8,624.64	8,600.00	8,286.60	18.73	20.91	-62.92	156.36	732.42	741.23	705.81	20.927				
8,950.00	8,629.27	8,642.09	8,289.63	18.94	21.13	-62.77	198.33	732.89	742.25	706.36	20.681				
8,978.15	8,629.96	8,662.85	8,290.00	19.07	21.25	-62.75	219.08	732.95	742.40	706.20	20.509				
8,980.21	8,629.96	8,663.85	8,290.00	19.08	21.25	-62.75	220.08	732.95	742.40	706.18	20.499				
9,000.00	8,629.96	8,663.64	8,290.00	19.18	21.37	-62.75	239.87	732.95	742.40	705.95	20.368				

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



LEAM Drilling Systems LLC

Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 253H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
9,100.00	8,629.96	8,783.64	8,290.00	19.79	22.08	62.75	339.87	732.95	742.40	704.63	37.78	19.653		
9,200.00	8,629.96	8,883.64	8,290.00	20.54	22.92	62.75	439.87	732.95	742.40	703.07	39.33	18.877		
9,300.00	8,629.96	8,983.64	8,290.00	21.42	23.89	62.75	539.87	732.95	742.40	701.31	41.09	18.066		
9,400.00	8,629.96	9,083.64	8,290.00	22.42	24.95	62.75	639.87	732.95	742.40	699.36	43.04	17.249		
9,500.00	8,629.96	9,183.64	8,290.00	23.51	26.11	62.75	739.87	732.95	742.40	697.25	45.15	16.443		
9,600.00	8,629.96	9,283.64	8,290.00	24.69	27.33	62.75	839.87	732.95	742.40	695.01	47.40	15.663		
9,700.00	8,629.97	9,383.64	8,290.00	25.95	28.63	62.75	939.87	732.95	742.40	692.64	49.77	14.918		
9,800.00	8,629.97	9,483.64	8,290.00	27.27	29.98	62.75	1,039.87	732.95	742.40	690.17	52.24	14.212		
9,900.00	8,629.97	9,583.64	8,290.00	28.64	31.37	62.75	1,139.87	732.95	742.41	687.61	54.80	13.548		
10,000.00	8,629.97	9,683.64	8,290.00	30.07	32.81	62.75	1,239.87	732.95	742.41	684.97	57.44	12.925		
10,100.00	8,629.97	9,783.64	8,290.00	31.53	34.29	62.75	1,339.87	732.95	742.41	682.26	60.14	12.344		
10,200.00	8,629.97	9,883.64	8,290.00	33.03	35.79	62.75	1,439.87	732.95	742.41	679.50	62.91	11.801		
10,300.00	8,629.97	9,983.64	8,290.00	34.57	37.33	62.75	1,539.87	732.95	742.41	676.68	65.73	11.295		
10,400.00	8,629.97	10,083.64	8,290.00	36.13	38.89	62.75	1,639.87	732.95	742.41	673.82	68.59	10.824		
10,500.00	8,629.97	10,183.64	8,290.00	37.71	40.48	62.75	1,739.87	732.95	742.41	670.92	71.49	10.385		
10,600.00	8,629.98	10,283.64	8,290.00	39.32	42.08	62.75	1,839.87	732.95	742.41	667.98	74.43	9.975		
10,700.00	8,629.98	10,383.64	8,290.00	40.94	43.70	62.75	1,939.87	732.95	742.41	665.01	77.39	9.592		
10,800.00	8,629.98	10,483.64	8,290.00	42.58	45.34	62.75	2,039.87	732.95	742.41	662.02	80.39	9.235		
10,900.00	8,629.98	10,583.64	8,290.00	44.24	46.99	62.75	2,139.87	732.95	742.41	659.00	83.41	8.901		
11,000.00	8,629.98	10,683.64	8,290.00	45.91	48.65	62.75	2,239.87	732.95	742.41	655.96	86.45	8.588		
11,100.00	8,629.98	10,783.64	8,290.00	47.58	50.32	62.75	2,339.87	732.95	742.41	652.90	89.51	8.294		
11,200.00	8,629.98	10,883.64	8,290.00	49.28	52.01	62.75	2,439.87	732.95	742.41	649.82	92.59	8.018		
11,300.00	8,629.98	10,983.64	8,290.00	50.97	53.70	62.75	2,539.87	732.95	742.41	646.73	95.69	7.759		
11,400.00	8,629.98	11,083.64	8,290.00	52.68	55.40	62.75	2,639.87	732.95	742.41	643.62	98.79	7.515		
11,500.00	8,629.98	11,183.64	8,290.00	54.40	57.11	62.75	2,739.87	732.95	742.41	640.50	101.92	7.284		
11,600.00	8,629.99	11,283.64	8,290.00	56.12	58.83	62.75	2,839.87	732.95	742.41	637.36	105.05	7.067		
11,700.00	8,629.99	11,383.64	8,290.00	57.85	60.55	62.75	2,939.87	732.95	742.41	634.22	108.20	6.862		
11,800.00	8,629.99	11,483.64	8,290.00	59.59	62.28	62.75	3,039.87	732.95	742.41	631.06	111.35	6.667		
11,900.00	8,629.99	11,583.64	8,290.00	61.33	64.02	62.75	3,139.87	732.95	742.42	627.90	114.52	6.483		
12,000.00	8,629.99	11,683.64	8,290.00	63.07	65.76	62.75	3,239.87	732.95	742.42	624.72	117.69	6.308		
12,100.00	8,629.99	11,783.64	8,290.00	64.82	67.50	62.74	3,339.87	732.95	742.42	621.54	120.87	6.142		
12,200.00	8,629.99	11,883.64	8,290.00	66.58	69.25	62.74	3,439.87	732.95	742.42	618.36	124.06	5.984		
12,300.00	8,629.99	11,983.64	8,290.00	68.33	71.00	62.74	3,539.87	732.95	742.42	615.16	127.25	5.834		
12,400.00	8,629.99	12,083.64	8,290.00	70.10	72.76	62.74	3,639.87	732.95	742.42	611.96	130.46	5.691		
12,500.00	8,630.00	12,183.64	8,290.00	71.86	74.52	62.74	3,739.87	732.95	742.42	608.76	133.66	5.554		
12,600.00	8,630.00	12,283.64	8,290.00	73.63	76.28	62.74	3,839.87	732.95	742.42	605.54	136.87	5.424		
12,700.00	8,630.00	12,383.64	8,290.00	75.40	78.04	62.74	3,939.87	732.95	742.42	602.33	140.09	5.300		
12,800.00	8,630.00	12,483.64	8,290.00	77.17	79.81	62.74	4,039.87	732.95	742.42	599.11	143.31	5.180		
12,900.00	8,630.00	12,583.64	8,290.00	78.95	81.58	62.74	4,139.87	732.95	742.42	595.88	146.54	5.066		
12,975.20	8,630.00	12,658.84	8,290.00	80.29	82.92	62.74	4,215.07	732.95	742.42	593.45	148.97	4.984 SF		



LEAM Drilling Systems LLC

Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 263H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													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	121.15	-109.06	180.41	210.81					
100.00	100.00	100.00	100.00	0.08	0.08	121.15	-109.06	180.41	210.81	210.65	0.16	1,339.875		
200.00	200.00	200.00	200.00	0.30	0.30	121.15	-109.06	180.41	210.81	210.20	0.61	347.375		
300.00	300.00	300.00	300.00	0.53	0.53	121.15	-109.06	180.41	210.81	209.75	1.06	199.556		
400.00	400.00	400.00	400.00	0.75	0.75	121.15	-109.06	180.41	210.81	209.31	1.51	139.987		
500.00	500.00	500.00	500.00	0.98	0.98	121.15	-109.06	180.41	210.81	208.86	1.96	107.806		
600.00	600.00	600.00	600.00	1.20	1.20	121.15	-109.06	180.41	210.81	208.41	2.40	87.655		
700.00	700.00	700.00	700.00	1.43	1.43	121.15	-109.06	180.41	210.81	207.96	2.85	73.851		
800.00	800.00	800.00	800.00	1.65	1.65	121.15	-109.06	180.41	210.81	207.51	3.30	63.804		
900.00	900.00	900.00	900.00	1.88	1.88	121.15	-109.06	180.41	210.81	207.06	3.75	56.162		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	121.15	-109.06	180.41	210.81	206.61	4.20	50.156		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	121.15	-109.06	180.41	210.81	206.16	4.65	45.310		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	121.15	-109.06	180.41	210.81	205.71	5.10	41.318		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	121.15	-109.06	180.41	210.81	205.26	5.55	37.972		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	121.15	-109.06	180.41	210.81	204.81	6.00	35.128		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	121.15	-109.06	180.41	210.81	204.36	6.45	32.680		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	121.15	-109.06	180.41	210.81	203.91	6.90	30.551		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	121.15	-109.06	180.41	210.81	203.46	7.35	28.682		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	121.15	-109.06	180.41	210.81	203.01	7.80	27.029		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	121.15	-109.06	180.41	210.81	202.56	8.25	25.556		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	121.15	-109.06	180.41	210.81	202.11	8.70	24.235		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	121.15	-109.06	180.41	210.81	201.66	9.15	23.045		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	121.15	-109.06	180.41	210.81	201.21	9.60	21.965		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	121.15	-109.06	180.41	210.81	200.76	10.05	20.982		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	121.15	-109.06	180.41	210.81	200.31	10.50	20.084		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	121.15	-109.06	180.41	210.81	199.87	10.95	19.259		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	121.15	-109.06	180.41	210.81	199.42	11.40	18.499		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	121.15	-109.06	180.41	210.81	198.97	11.85	17.797		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	121.15	-109.06	180.41	210.81	198.52	12.29	17.147		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	121.15	-109.06	180.41	210.81	198.07	12.74	16.542		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	121.15	-109.06	180.41	210.81	197.62	13.19	15.978		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	121.15	-109.06	180.41	210.81	197.17	13.64	15.452		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	121.15	-109.06	180.41	210.81	196.72	14.09	14.959		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	121.15	-109.06	180.41	210.81	196.27	14.54	14.496		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	121.15	-109.06	180.41	210.81	195.82	14.99	14.062		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	121.15	-109.06	180.41	210.81	195.37	15.44	13.652		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	121.15	-109.06	180.41	210.81	194.92	15.89	13.266		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	121.15	-109.06	180.41	210.81	194.47	16.34	12.901		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	121.15	-109.06	180.41	210.81	194.02	16.79	12.556		
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	121.15	-109.06	180.41	210.81	193.57	17.24	12.228		
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	121.15	-109.06	180.41	210.81	193.12	17.69	11.918		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	121.15	-109.06	180.41	210.81	192.67	18.14	11.622		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	121.15	-109.06	180.41	210.81	192.22	18.59	11.341		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	121.15	-109.06	180.41	210.81	191.77	19.04	11.073		
4,400.00	4,400.00	4,400.00	4,400.00	9.71	9.74	-47.41	-109.06	180.41	210.22	190.76	19.46	10.805		
4,500.00	4,499.96	4,499.96	4,499.96	9.88	9.97	-47.95	-109.06	180.41	208.46	188.61	19.85	10.504		
4,600.00	4,599.86	4,599.86	4,599.86	10.05	10.19	-48.88	-109.06	180.41	205.56	185.33	20.23	10.160		
4,700.00	4,699.68	4,699.68	4,699.68	10.23	10.42	-50.21	-109.06	180.41	201.59	180.97	20.62	9.776		
4,800.00	4,799.37	4,799.37	4,799.37	10.40	10.64	-52.00	-109.06	180.41	196.66	175.65	21.01	9.360		
4,900.00	4,898.90	4,898.90	4,898.90	10.58	10.86	-54.31	-109.06	180.41	190.89	169.49	21.41	8.918		
5,000.00	4,998.26	4,998.26	4,998.26	10.77	11.09	-57.21	-109.06	180.41	184.49	162.69	21.81	8.461		
5,030.89	5,028.91	5,028.05	5,028.05	10.83	11.15	-58.20	-109.10	180.46	182.50	160.57	21.92	8.325		

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 263H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
5,100.00	5,097.46	5,094.65	5,094.65	10.96	11.28	-80.45	-109.52	181.04	178.69	156.50	22.19	8.051		
5,200.00	5,196.65	5,191.24	5,191.20	11.16	11.46	-83.71	-110.93	182.99	175.06	152.49	22.57	7.755		
5,300.00	5,295.83	5,288.02	5,287.90	11.37	11.64	-86.88	-113.30	186.27	173.59	150.63	22.96	7.561		
5,320.78	5,316.44	5,308.15	5,308.00	11.41	11.67	-87.52	-113.92	187.12	173.54	150.50	23.04	7.532 CC, ES		
5,400.00	5,395.02	5,384.94	5,384.66	11.58	11.82	-89.84	-116.64	190.88	174.17	150.82	23.35	7.459		
5,500.00	5,494.21	5,481.96	5,481.39	11.79	12.00	-72.51	-120.94	196.82	176.70	152.95	23.75	7.440 SF		
5,600.00	5,593.40	5,579.01	5,578.02	12.01	12.19	-74.82	-126.20	204.09	181.05	156.89	24.16	7.495		
5,700.00	5,692.58	5,678.04	5,674.47	12.24	12.38	-76.73	-132.42	212.68	187.07	162.51	24.57	7.614		
5,800.00	5,791.77	5,772.99	5,770.64	12.47	12.58	-78.24	-139.59	222.58	194.66	169.68	24.99	7.790		
5,900.00	5,890.96	5,869.80	5,866.46	12.71	12.78	-79.35	-147.70	233.78	203.72	178.31	25.41	8.016		
6,000.00	5,990.15	5,966.43	5,961.85	12.94	12.99	-80.10	-156.74	246.27	214.17	188.32	25.85	8.286		
6,100.00	6,089.33	6,062.82	6,056.73	13.19	13.22	-80.51	-166.70	260.03	225.96	199.67	26.29	8.595		
6,200.00	6,188.52	6,162.00	6,154.21	13.43	13.46	-80.77	-177.44	274.86	238.42	211.68	26.74	8.915		
6,300.00	6,287.71	6,261.21	6,251.72	13.68	13.70	-81.00	-188.18	289.69	250.89	223.69	27.21	9.222		
6,400.00	6,386.90	6,360.43	6,349.23	13.93	13.96	-81.21	-198.92	304.53	263.37	235.69	27.68	9.516		
6,500.00	6,486.08	6,459.64	6,446.74	14.19	14.22	-81.40	-209.66	319.37	275.84	247.69	28.15	9.798		
6,600.00	6,585.27	6,558.86	6,544.24	14.44	14.49	-81.57	-220.40	334.20	288.32	259.68	28.64	10.067		
6,700.00	6,684.46	6,658.07	6,641.75	14.71	14.76	-81.73	-231.15	349.04	300.80	271.67	29.13	10.326		
6,800.00	6,783.65	6,757.29	6,739.26	14.97	15.05	-81.88	-241.89	363.88	313.29	283.66	29.63	10.573		
6,900.00	6,882.83	6,856.50	6,836.77	15.23	15.33	-82.01	-252.63	378.71	325.77	295.64	30.14	10.810		
7,000.00	6,982.02	6,955.71	6,934.28	15.50	15.63	-82.14	-263.37	393.55	338.26	307.61	30.65	11.038		
7,100.00	7,081.21	7,054.93	7,031.79	15.77	15.92	-82.26	-274.11	408.39	350.75	319.59	31.16	11.255		
7,147.27	7,128.09	7,101.83	7,077.88	15.90	16.06	-82.31	-279.19	415.40	356.65	325.25	31.41	11.355		
7,200.00	7,180.43	7,154.14	7,129.30	16.04	16.22	-82.39	-284.85	423.22	363.27	331.59	31.68	11.466		
7,300.00	7,279.82	7,253.32	7,226.77	16.30	16.53	-82.35	-295.59	438.05	376.00	343.81	32.19	11.682		
7,400.00	7,379.40	7,352.44	7,324.18	16.54	16.84	-82.06	-306.32	452.88	388.97	356.29	32.68	11.902		
7,500.00	7,479.12	7,451.46	7,421.50	16.78	17.16	-81.56	-317.04	467.68	402.21	369.05	33.16	12.128		
7,600.00	7,578.95	7,550.36	7,518.70	17.01	17.47	-80.86	-327.75	482.47	415.77	382.14	33.63	12.362		
7,700.00	7,678.87	7,649.10	7,615.75	17.24	17.79	-79.99	-338.44	497.24	429.72	395.64	34.08	12.608		
7,800.00	7,778.85	7,747.66	7,712.61	17.45	18.12	-78.96	-349.11	511.98	444.12	409.80	34.52	12.865		
7,878.16	7,857.00	7,824.54	7,788.18	17.60	18.37	90.32	-357.43	523.47	455.75	420.90	34.84	13.079		
7,900.00	7,878.84	7,846.01	7,809.27	17.64	18.44	90.61	-359.76	526.68	459.05	424.12	34.93	13.141		
8,000.00	7,978.84	7,944.29	7,905.87	17.85	18.77	91.89	-370.40	541.38	474.32	438.98	35.35	13.420		
8,078.16	8,057.00	8,021.11	7,981.36	18.00	19.03	92.84	-378.71	552.87	486.41	450.75	35.67	13.637		
8,100.00	8,078.84	8,042.52	8,002.41	18.05	19.10	92.80	-381.03	556.07	489.84	454.07	35.77	13.695		
8,150.00	8,128.65	8,091.04	8,050.09	18.12	19.27	93.01	-386.28	563.33	497.91	461.95	35.96	13.846		
8,200.00	8,177.93	8,138.56	8,096.79	18.18	19.43	93.59	-391.43	570.43	506.46	470.35	36.11	14.024		
8,250.00	8,226.28	8,184.70	8,142.15	18.22	19.59	94.45	-396.43	577.33	515.72	479.49	36.23	14.235		
8,300.00	8,273.34	8,229.14	8,185.81	18.24	19.74	95.49	-401.24	583.98	525.99	489.69	36.31	14.487		
8,350.00	8,318.76	8,271.51	8,227.46	18.24	19.89	96.60	-405.82	590.31	537.61	501.26	36.36	14.787		
8,400.00	8,362.18	8,311.51	8,266.77	18.23	20.03	97.66	-410.15	596.30	550.92	514.53	36.38	15.143		
8,450.00	8,403.28	8,348.83	8,303.45	18.22	20.16	98.57	-414.19	601.88	566.22	529.83	36.40	15.558		
8,500.00	8,441.75	8,383.18	8,337.21	18.20	20.28	99.19	-417.91	607.01	583.80	547.39	36.41	16.033		
8,550.00	8,477.29	8,414.30	8,367.79	18.19	20.38	99.44	-421.28	611.67	603.86	567.41	36.45	16.565		
8,600.00	8,509.63	8,441.96	8,394.98	18.19	20.48	99.19	-424.28	615.80	626.51	589.96	36.54	17.145		
8,650.00	8,538.52	8,465.94	8,418.55	18.21	20.56	98.37	-426.87	619.39	651.76	615.07	36.69	17.762		
8,700.00	8,563.75	8,486.06	8,438.33	18.25	20.63	96.88	-429.05	622.40	679.56	642.64	36.92	18.407		
8,750.00	8,585.13	8,502.18	8,454.16	18.31	20.69	94.63	-430.80	624.81	709.73	672.53	37.21	19.076		
8,800.00	8,602.48	8,514.16	8,465.94	18.41	20.73	91.58	-432.09	626.60	742.04	704.53	37.51	19.784		
8,850.00	8,615.68	8,521.92	8,473.56	18.55	20.76	87.69	-432.93	627.76	776.17	738.42	37.75	20.562		
8,900.00	8,624.64	8,525.39	8,476.97	18.73	20.77	82.99	-433.31	628.28	811.79	773.96	37.82	21.462		
8,950.00	8,629.27	8,524.55	8,476.15	18.94	20.77	77.58	-433.22	628.15	848.49	810.87	37.62	22.551		

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 263H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														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)							
8,978.15	8,629.96	8,522.18	8,473.83	19.07	20.76	74.28	-432.96	627.80	869.49	832.12	37.36	23.270			
9,000.00	8,629.96	8,519.82	8,471.50	19.18	20.75	74.05	-432.71	627.45	885.96	848.52	37.44	23.665			
9,100.00	8,629.96	8,508.99	8,460.86	19.79	20.71	72.99	-431.53	625.83	964.01	926.16	37.86	25.464			
9,200.00	8,629.96	8,498.17	8,450.22	20.54	20.68	71.94	-430.36	624.21	1,045.70	1,007.30	38.40	27.230			
9,300.00	8,629.96	8,487.34	8,439.58	21.42	20.64	70.90	-429.19	622.59	1,130.23	1,091.17	39.06	28.939			
9,400.00	8,629.96	8,476.52	8,428.94	22.42	20.60	69.86	-428.02	620.97	1,217.01	1,177.21	39.80	30.578			
9,500.00	8,629.96	8,465.69	8,418.30	23.51	20.56	68.83	-426.85	619.35	1,305.59	1,264.97	40.62	32.141			
9,600.00	8,629.96	8,454.87	8,407.66	24.69	20.53	67.80	-425.67	617.73	1,395.64	1,354.13	41.50	33.628			
9,700.00	8,629.97	8,444.04	8,397.03	25.95	20.49	66.79	-424.50	616.11	1,486.87	1,444.44	42.43	35.041			
9,800.00	8,629.97	8,433.22	8,386.39	27.27	20.45	65.78	-423.33	614.50	1,579.10	1,535.70	43.40	36.384			
9,900.00	8,629.97	8,422.39	8,375.75	28.64	20.41	64.79	-422.16	612.88	1,672.15	1,627.75	44.40	37.664			
10,000.00	8,629.97	8,411.57	8,365.11	30.07	20.37	63.80	-420.99	611.26	1,765.89	1,720.48	45.41	38.886			
10,100.00	8,629.97	8,400.74	8,354.47	31.53	20.34	62.83	-419.81	609.64	1,860.22	1,813.78	46.44	40.055			
10,200.00	8,629.97	8,389.91	8,343.83	33.03	20.30	61.86	-418.64	608.02	1,955.05	1,907.58	47.48	41.177			
10,300.00	8,629.97	12,311.90	10,486.48	34.57	39.03	160.43	1,520.25	732.93	1,970.42	1,929.66	40.76	48.341			
10,400.00	8,629.97	12,411.90	10,487.54	36.13	40.50	160.44	1,620.23	732.93	1,971.42	1,929.19	42.23	46.685			
10,500.00	8,629.97	12,511.89	10,488.59	37.71	41.99	160.45	1,720.22	732.93	1,972.41	1,928.69	43.72	45.112			
10,600.00	8,629.98	12,611.89	10,489.65	39.32	43.51	160.46	1,820.21	732.93	1,973.41	1,928.17	45.24	43.619			
10,700.00	8,629.98	12,711.88	10,490.71	40.94	45.06	160.47	1,920.20	732.93	1,974.40	1,927.62	46.78	42.204			
10,800.00	8,629.98	12,811.88	10,491.76	42.58	46.62	160.48	2,020.19	732.93	1,975.40	1,927.05	48.34	40.862			
10,900.00	8,629.98	12,911.87	10,492.82	44.24	48.20	160.49	2,120.18	732.93	1,976.39	1,926.47	49.92	39.589			
11,000.00	8,629.98	13,011.87	10,493.88	45.91	49.79	160.50	2,220.17	732.93	1,977.39	1,925.87	51.52	38.383			
11,100.00	8,629.98	13,111.86	10,494.93	47.58	51.41	160.51	2,320.16	732.93	1,978.38	1,925.26	53.13	37.238			
11,200.00	8,629.98	13,211.85	10,495.99	49.28	53.03	160.52	2,420.15	732.93	1,979.38	1,924.63	54.75	36.152			
11,300.00	8,629.98	13,311.85	10,497.05	50.97	54.67	160.53	2,520.13	732.94	1,980.38	1,923.99	56.39	35.121			
11,400.00	8,629.98	13,411.84	10,498.10	52.68	56.32	160.54	2,620.12	732.94	1,981.37	1,923.34	58.03	34.142			
11,500.00	8,629.98	13,511.84	10,499.16	54.40	57.98	160.55	2,720.11	732.94	1,982.37	1,922.68	59.69	33.210			
11,600.00	8,629.99	13,611.83	10,500.22	56.12	59.65	160.56	2,820.10	732.94	1,983.36	1,922.00	61.36	32.325			
11,700.00	8,629.99	13,711.83	10,501.27	57.85	61.33	160.57	2,920.09	732.94	1,984.36	1,921.33	63.03	31.482			
11,800.00	8,629.99	13,811.82	10,502.33	59.59	63.02	160.58	3,020.08	732.94	1,985.35	1,920.64	64.71	30.679			
11,900.00	8,629.99	13,911.81	10,503.39	61.33	64.71	160.59	3,120.07	732.94	1,986.35	1,919.95	66.40	29.913			
12,000.00	8,629.99	14,011.81	10,504.44	63.07	66.41	160.60	3,220.06	732.94	1,987.35	1,919.25	68.10	29.182			
12,100.00	8,629.99	14,111.80	10,505.50	64.82	68.12	160.61	3,320.05	732.94	1,988.34	1,918.54	69.80	28.485			
12,200.00	8,629.99	14,211.80	10,506.56	66.58	69.83	160.62	3,420.03	732.94	1,989.34	1,917.83	71.51	27.819			
12,300.00	8,629.99	14,311.79	10,507.61	68.33	71.55	160.63	3,520.02	732.94	1,990.33	1,917.11	73.22	27.181			
12,400.00	8,629.99	14,411.79	10,508.67	70.10	73.28	160.64	3,620.01	732.95	1,991.33	1,916.39	74.94	26.572			
12,500.00	8,630.00	14,511.78	10,509.73	71.86	75.01	160.65	3,720.00	732.95	1,992.33	1,915.66	76.66	25.988			
12,600.00	8,630.00	14,611.78	10,510.78	73.63	76.74	160.66	3,819.99	732.95	1,993.32	1,914.93	78.39	25.428			
12,700.00	8,630.00	14,711.77	10,511.84	75.40	78.48	160.67	3,919.98	732.95	1,994.32	1,914.20	80.12	24.891			
12,800.00	8,630.00	14,811.76	10,512.90	77.17	80.22	160.68	4,019.97	732.95	1,995.32	1,913.46	81.85	24.376			
12,900.00	8,630.00	14,911.76	10,513.95	78.95	81.97	160.69	4,119.96	732.95	1,996.31	1,912.72	83.59	23.882			
12,975.20	8,630.00	14,986.95	10,514.75	80.29	83.28	160.70	4,195.15	732.95	1,997.06	1,912.16	84.90	23.523			

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 286H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														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	126.60	-134.06	180.49	224.83						
100.00	100.00	100.00	100.00	0.08	0.08	126.60	-134.06	180.49	224.83	224.87	0.16	1,428.971			
200.00	200.00	200.00	200.00	0.30	0.30	126.60	-134.06	180.49	224.83	224.22	0.81	370.474			
300.00	300.00	300.00	300.00	0.53	0.53	126.60	-134.06	180.49	224.83	223.77	1.06	212.826			
400.00	400.00	400.00	400.00	0.75	0.75	126.60	-134.06	180.49	224.83	223.32	1.51	149.296			
500.00	500.00	500.00	500.00	0.98	0.98	126.60	-134.06	180.49	224.83	222.87	1.96	114.975			
600.00	600.00	600.00	600.00	1.20	1.20	126.60	-134.06	180.49	224.83	222.42	2.40	93.484			
700.00	700.00	700.00	700.00	1.43	1.43	126.60	-134.06	180.49	224.83	221.97	2.85	78.762			
800.00	800.00	800.00	800.00	1.65	1.65	126.60	-134.06	180.49	224.83	221.53	3.30	68.046			
900.00	900.00	900.00	900.00	1.88	1.88	126.60	-134.06	180.49	224.83	221.08	3.75	59.897			
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	126.60	-134.06	180.49	224.83	220.63	4.20	53.491			
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	126.60	-134.06	180.49	224.83	220.18	4.65	48.323			
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	126.60	-134.06	180.49	224.83	219.73	5.10	44.065			
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	126.60	-134.06	180.49	224.83	219.28	5.55	40.497			
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	126.60	-134.06	180.49	224.83	218.83	6.00	37.464			
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	126.60	-134.06	180.49	224.83	218.38	6.45	34.853			
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	126.60	-134.06	180.49	224.83	217.93	6.90	32.582			
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	126.60	-134.06	180.49	224.83	217.48	7.35	30.590			
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	126.60	-134.06	180.49	224.83	217.03	7.80	28.827			
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	126.60	-134.06	180.49	224.83	216.58	8.25	27.256			
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	126.60	-134.06	180.49	224.83	216.13	8.70	25.847			
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	126.60	-134.06	180.49	224.83	215.68	9.15	24.577			
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	126.60	-134.06	180.49	224.83	215.23	9.60	23.426			
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	126.60	-134.06	180.49	224.83	214.78	10.05	22.378			
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	126.60	-134.06	180.49	224.83	214.33	10.50	21.419			
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	126.60	-134.06	180.49	224.83	213.88	10.95	20.540			
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	126.60	-134.06	180.49	224.83	213.43	11.40	19.729			
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	126.60	-134.06	180.49	224.83	212.98	11.85	18.981			
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	126.60	-134.06	180.49	224.83	212.53	12.29	18.287			
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	126.60	-134.06	180.49	224.83	212.09	12.74	17.642			
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	126.60	-134.06	180.49	224.83	211.64	13.19	17.041			
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	126.60	-134.06	180.49	224.83	211.19	13.64	16.479			
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	126.60	-134.06	180.49	224.83	210.74	14.09	15.953			
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	126.60	-134.06	180.49	224.83	210.29	14.54	15.460			
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	126.60	-134.06	180.49	224.83	209.84	14.99	14.997			
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	126.60	-134.06	180.49	224.83	209.39	15.44	14.560			
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	126.60	-134.06	180.49	224.83	208.94	15.89	14.148			
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	126.60	-134.06	180.49	224.83	208.49	16.34	13.759			
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	126.60	-134.06	180.49	224.83	208.04	16.79	13.391			
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	126.60	-134.06	180.49	224.83	207.59	17.24	13.041			
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	126.60	-134.06	180.49	224.83	207.14	17.69	12.710			
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	126.60	-134.06	180.49	224.83	206.69	18.14	12.395			
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	126.60	-134.06	180.49	224.83	206.24	18.59	12.095			
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	126.60	-134.06	180.49	224.83	205.79	19.04	11.810			
4,400.00	4,400.00	4,398.64	4,398.63	9.71	9.71	-41.73	-134.88	180.25	224.48	205.06	19.42	11.556			
4,500.00	4,499.96	4,497.27	4,497.23	9.88	9.88	-41.56	-137.32	179.55	223.44	203.68	19.75	11.311			
4,600.00	4,599.86	4,595.88	4,595.74	10.05	10.05	-41.29	-141.40	178.38	221.70	201.62	20.08	11.039			
4,700.00	4,699.68	4,694.46	4,694.14	10.23	10.22	-40.89	-147.10	176.74	219.29	198.87	20.41	10.742			
4,800.00	4,799.37	4,793.00	4,792.39	10.40	10.39	-40.37	-154.43	174.64	216.20	195.45	20.75	10.421			
4,900.00	4,898.90	4,892.79	4,891.81	10.58	10.57	-39.90	-162.79	172.24	212.17	191.08	21.08	10.062			
5,000.00	4,998.26	4,992.65	4,991.28	10.77	10.75	-39.71	-171.16	169.83	208.81	185.38	21.43	9.652			
5,030.89	5,028.91	5,023.47	5,021.99	10.83	10.81	-39.72	-173.74	169.09	204.88	183.35	21.53	9.515			

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



LEAM Drilling Systems LLC

Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 286H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
5,100.00	5,097.46	5,092.44	5,090.70	10.96	10.94	-39.73	-179.52	167.43	200.43	178.64	21.79	9.198		
5,200.00	5,196.65	5,192.24	5,190.11	11.16	11.13	-39.76	-187.88	165.03	193.99	171.82	22.17	8.749		
5,300.00	5,295.83	5,292.03	5,289.52	11.37	11.33	-39.79	-196.24	162.63	187.55	164.99	22.56	8.314		
5,400.00	5,395.02	5,391.82	5,388.93	11.58	11.53	-39.82	-204.60	160.22	181.11	158.15	22.95	7.890		
5,500.00	5,494.21	5,491.61	5,488.35	11.79	11.73	-39.86	-212.96	157.82	174.67	151.31	23.35	7.479		
5,600.00	5,593.40	5,591.40	5,587.76	12.01	11.93	-39.90	-221.32	155.42	168.22	144.46	23.76	7.080		
5,700.00	5,692.58	5,691.20	5,687.17	12.24	12.14	-39.94	-229.68	153.02	161.78	137.61	24.17	6.693		
5,800.00	5,791.77	5,790.99	5,786.58	12.47	12.35	-39.98	-238.04	150.62	155.34	130.75	24.59	6.317		
5,900.00	5,890.96	5,890.78	5,885.99	12.71	12.56	-40.03	-246.40	148.22	148.90	123.89	25.01	5.953		
6,000.00	5,990.15	5,990.57	5,985.41	12.94	12.78	-40.08	-254.77	145.81	142.46	117.02	25.44	5.600		
6,100.00	6,089.33	6,090.37	6,084.82	13.19	13.00	-40.13	-263.13	143.41	136.02	110.15	25.87	5.257		
6,200.00	6,188.52	6,190.16	6,184.23	13.43	13.22	-40.20	-271.49	141.01	129.58	103.27	26.31	4.925		
6,300.00	6,287.71	6,289.95	6,283.64	13.68	13.44	-40.26	-279.85	138.61	123.14	96.39	26.75	4.603		
6,400.00	6,386.90	6,389.74	6,383.06	13.93	13.66	-40.34	-288.21	136.21	116.70	89.50	27.20	4.291		
6,500.00	6,486.08	6,489.54	6,482.47	14.19	13.89	-40.42	-296.57	133.80	110.26	82.61	27.65	3.988		
6,600.00	6,585.27	6,589.33	6,581.88	14.44	14.12	-40.52	-304.93	131.40	103.82	75.72	28.10	3.694		
6,700.00	6,684.46	6,689.12	6,681.29	14.71	14.35	-40.63	-313.29	129.00	97.38	68.82	28.56	3.409		
6,800.00	6,783.65	6,788.91	6,780.71	14.97	14.58	-40.75	-321.65	126.60	90.94	61.92	29.02	3.133		
6,900.00	6,882.83	6,888.70	6,880.12	15.23	14.81	-40.89	-330.01	124.20	84.50	55.01	29.49	2.865		
7,000.00	6,982.02	6,988.50	6,979.53	15.50	15.04	-41.06	-338.38	121.79	78.07	48.11	29.96	2.606		
7,100.00	7,081.21	7,088.29	7,078.94	15.77	15.28	-41.25	-346.74	119.39	71.63	41.20	30.43	2.354		
7,147.27	7,128.09	7,135.46	7,125.93	15.90	15.39	-41.36	-350.69	118.26	68.59	37.93	30.86	2.237		
7,200.00	7,180.43	7,188.09	7,178.37	16.04	15.52	-41.32	-355.10	116.99	65.38	34.45	30.92	2.114		
7,300.00	7,279.82	7,287.96	7,277.85	16.30	15.76	-40.42	-363.47	114.59	60.29	28.89	31.40	1.920		
7,400.00	7,379.40	7,387.86	7,377.38	16.54	15.99	-38.25	-371.84	112.18	56.58	24.75	31.83	1.777		
7,500.00	7,479.12	7,487.78	7,476.91	16.78	16.24	-34.72	-380.21	109.78	54.38	22.16	32.23	1.688		
7,575.54	7,554.52	7,563.24	7,552.09	16.96	16.42	-31.23	-386.53	107.96	53.86	21.36	32.50	1.657 CC		
7,600.00	7,578.95	7,587.68	7,576.43	17.01	16.48	-29.97	-388.58	107.37	53.91	21.34	32.58	1.655 ES, SF		
7,700.00	7,678.87	7,687.52	7,675.90	17.24	16.72	-24.42	-396.94	104.97	55.41	22.50	32.90	1.684		
7,800.00	7,778.85	7,787.29	7,775.28	17.45	16.97	-18.65	-405.30	102.57	59.04	25.83	33.22	1.777		
7,878.16	7,857.00	7,865.19	7,852.88	17.60	17.16	154.01	-411.83	100.69	63.43	29.97	33.46	1.896		
7,900.00	7,878.84	7,886.95	7,874.56	17.64	17.21	155.14	-413.65	100.17	64.86	31.33	33.53	1.934		
8,000.00	7,978.84	7,986.57	7,973.80	17.85	17.46	159.70	-422.00	97.77	71.69	37.80	33.88	2.116		
8,078.16	8,057.00	8,064.43	8,051.37	18.00	17.65	162.69	-428.52	95.90	77.29	43.11	34.18	2.261		
8,100.00	8,078.84	8,086.15	8,073.00	18.05	17.70	163.47	-430.34	95.38	79.29	45.07	34.21	2.317		
8,150.00	8,128.65	8,135.43	8,122.10	18.12	17.82	165.58	-434.47	94.19	86.93	52.78	34.15	2.545		
8,200.00	8,177.93	8,183.81	8,170.30	18.18	17.94	167.79	-438.52	93.03	98.86	64.98	33.88	2.918		
8,250.00	8,226.28	8,230.92	8,217.22	18.22	18.06	169.82	-442.47	91.89	115.05	81.65	33.40	3.445		
8,300.00	8,273.34	8,276.39	8,262.52	18.24	18.17	171.53	-446.28	90.80	135.38	102.65	32.73	4.137		
8,350.00	8,318.76	8,319.89	8,305.85	18.24	18.28	172.91	-449.92	89.75	159.69	127.82	31.87	5.011		
8,400.00	8,362.18	8,361.07	8,346.88	18.23	18.39	173.97	-453.37	88.76	187.78	156.94	30.84	6.089		
8,450.00	8,403.28	8,399.63	8,385.30	18.22	18.48	174.79	-456.61	87.83	219.40	189.74	29.66	7.396		
8,500.00	8,441.75	8,435.28	8,420.81	18.20	18.57	175.38	-459.59	86.97	254.32	225.95	28.37	8.966		
8,550.00	8,477.29	8,467.74	8,453.14	18.19	18.65	175.80	-462.31	86.19	292.23	265.26	26.97	10.834		
8,600.00	8,509.63	8,496.76	8,482.05	18.19	18.73	176.05	-464.74	85.49	332.86	307.33	25.53	13.037		
8,650.00	8,538.52	8,522.33	8,507.53	18.21	18.79	176.14	-466.88	84.88	375.87	351.79	24.08	15.608		
8,700.00	8,563.75	8,544.66	8,529.77	18.25	18.84	176.07	-468.72	84.35	420.92	398.23	22.69	18.555		
8,750.00	8,585.13	8,562.99	8,548.04	18.31	18.89	175.72	-470.20	83.93	467.65	446.24	21.41	21.838		
8,800.00	8,602.48	8,577.15	8,562.15	18.41	18.92	174.88	-471.32	83.60	515.74	495.37	20.37	25.323		
8,850.00	8,615.68	8,586.98	8,571.95	18.55	18.95	172.78	-472.09	83.38	564.82	545.09	19.73	28.631		
8,900.00	8,624.64	8,592.35	8,577.30	18.73	18.96	164.20	-472.51	83.26	614.53	593.77	20.76	29.597		
8,950.00	8,629.27	8,593.16	8,578.11	18.94	18.96	29.00	-472.57	83.24	664.50	639.96	24.54	27.074		

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 286H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														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)							
8,978.15	8,829.96	8,591.58	8,576.53	19.07	18.96	10.93	-472.45	83.28	692.61	672.86	19.75	35.075			
9,000.00	8,829.96	8,589.78	8,574.74	19.18	18.95	10.63	-472.31	83.32	714.39	694.64	19.75	36.168			
9,100.00	8,829.96	8,581.45	8,566.44	19.79	18.93	9.43	-471.66	83.51	814.08	794.22	19.86	40.999			
9,200.00	8,829.96	8,572.98	8,557.99	20.54	18.91	8.49	-470.99	83.70	913.76	893.71	20.06	45.553			
9,300.00	8,829.96	8,564.35	8,549.39	21.42	18.89	7.73	-470.31	83.89	1,013.44	993.11	20.34	49.832			
9,400.00	8,829.96	8,555.56	8,540.63	22.42	18.87	7.11	-469.60	84.10	1,113.12	1,092.45	20.67	53.843			
9,500.00	8,829.96	8,546.60	8,531.71	23.51	18.85	6.59	-468.88	84.30	1,212.79	1,191.73	21.06	57.597			
9,600.00	8,829.96	8,537.48	8,522.62	24.69	18.83	6.15	-468.14	84.52	1,312.45	1,290.98	21.48	61.106			
9,700.00	8,829.97	8,528.18	8,513.36	25.95	18.80	5.77	-467.37	84.74	1,412.11	1,390.18	21.93	64.386			
9,800.00	8,829.97	8,518.71	8,503.92	27.27	18.78	5.44	-466.58	84.96	1,511.76	1,489.35	22.41	67.450			
9,900.00	8,829.97	8,509.97	8,495.22	28.64	18.76	5.18	-465.85	85.17	1,611.41	1,588.49	22.92	70.298			
10,000.00	8,829.97	8,501.60	8,486.87	30.07	18.74	4.96	-465.15	85.38	1,711.06	1,687.60	23.45	72.953			
10,100.00	8,829.97	8,493.22	8,478.52	31.53	18.72	4.76	-464.45	85.58	1,810.71	1,786.70	24.00	75.437			
10,200.00	8,829.97	12,185.01	10,456.68	33.03	37.40	180.00	1,445.60	72.98	1,826.72	1,792.10	34.62	52.768			
10,300.00	8,829.97	12,285.01	10,456.37	34.57	38.89	180.00	1,545.60	72.98	1,826.41	1,790.66	35.75	51.088			
10,400.00	8,829.97	12,385.01	10,456.06	36.13	40.41	180.00	1,645.59	72.98	1,826.09	1,789.19	36.91	49.480			
10,500.00	8,829.97	12,485.01	10,455.74	37.71	41.94	180.00	1,745.59	72.97	1,825.78	1,787.69	38.08	47.943			
10,600.00	8,829.98	12,585.01	10,455.43	39.32	43.51	180.00	1,845.59	72.97	1,825.46	1,786.18	39.28	46.476			
10,700.00	8,829.98	12,685.01	10,455.11	40.94	45.09	180.00	1,945.59	72.97	1,825.15	1,784.66	40.49	45.076			
10,800.00	8,829.98	12,785.01	10,454.80	42.58	46.69	180.00	2,045.59	72.97	1,824.83	1,783.11	41.72	43.741			
10,900.00	8,829.98	12,885.01	10,454.49	44.24	48.30	180.00	2,145.59	72.97	1,824.52	1,781.56	42.96	42.467			
11,000.00	8,829.98	12,985.01	10,454.17	45.91	49.93	180.00	2,245.59	72.97	1,824.20	1,779.98	44.22	41.253			
11,100.00	8,829.98	13,085.01	10,453.86	47.58	51.58	180.00	2,345.59	72.97	1,823.89	1,778.40	45.49	40.095			
11,200.00	8,829.98	13,185.01	10,453.55	49.28	53.23	180.00	2,445.59	72.97	1,823.57	1,776.80	46.77	38.990			
11,300.00	8,829.98	13,285.01	10,453.23	50.97	54.90	180.00	2,545.59	72.97	1,823.26	1,775.20	48.06	37.936			
11,400.00	8,829.98	13,385.01	10,452.92	52.68	56.58	180.00	2,645.58	72.97	1,822.95	1,773.58	49.36	36.930			
11,500.00	8,829.98	13,485.01	10,452.61	54.40	58.26	180.00	2,745.58	72.97	1,822.63	1,771.96	50.67	35.969			
11,600.00	8,829.99	13,585.01	10,452.29	56.12	59.96	180.00	2,845.58	72.97	1,822.32	1,770.33	51.99	35.051			
11,700.00	8,829.99	13,685.01	10,451.98	57.85	61.66	180.00	2,945.58	72.97	1,822.00	1,768.69	53.32	34.174			
11,800.00	8,829.99	13,785.01	10,451.67	59.59	63.37	180.00	3,045.58	72.97	1,821.69	1,767.04	54.65	33.335			
11,900.00	8,829.99	13,885.01	10,451.35	61.33	65.08	180.00	3,145.58	72.97	1,821.37	1,765.39	55.99	32.532			
12,000.00	8,829.99	13,985.01	10,451.04	63.07	66.80	180.00	3,245.58	72.97	1,821.06	1,763.73	57.33	31.763			
12,100.00	8,829.99	14,085.01	10,450.73	64.82	68.53	180.00	3,345.58	72.96	1,820.74	1,762.06	58.68	31.026			
12,200.00	8,829.99	14,185.00	10,450.41	66.58	70.26	180.00	3,445.58	72.96	1,820.43	1,760.39	60.04	30.320			
12,300.00	8,829.99	14,285.00	10,450.10	68.33	72.00	180.00	3,545.58	72.96	1,820.11	1,758.71	61.40	29.643			
12,400.00	8,829.99	14,385.00	10,449.79	70.10	73.74	180.00	3,645.58	72.96	1,819.80	1,757.03	62.77	28.993			
12,500.00	8,830.00	14,485.00	10,449.47	71.86	75.48	180.00	3,745.57	72.96	1,819.49	1,755.35	64.14	28.368			
12,600.00	8,830.00	14,585.00	10,449.16	73.63	77.23	180.00	3,845.57	72.96	1,819.17	1,753.66	65.51	27.768			
12,700.00	8,830.00	14,685.00	10,448.85	75.40	78.98	180.00	3,945.57	72.96	1,818.86	1,751.97	66.89	27.191			
12,800.00	8,830.00	14,785.00	10,448.53	77.17	80.74	180.00	4,045.57	72.96	1,818.54	1,750.27	68.27	26.636			
12,900.00	8,830.00	14,885.00	10,448.22	78.95	82.50	180.00	4,145.57	72.96	1,818.23	1,748.57	69.66	26.102			
12,975.20	8,830.00	14,954.50	10,448.00	80.29	83.72	180.00	4,215.07	72.96	1,818.00	1,747.34	70.66	25.727			

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



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 312H (SIMOPS) - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD-ADJ													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)					
0.00	0.00	0.00	0.00	0.00	0.00	147.50	-284.02	180.95	336.76				
100.00	100.00	100.00	100.00	0.08	0.08	147.50	-284.02	180.95	336.76	0.16	2,140.403		
200.00	200.00	200.00	200.00	0.30	0.30	147.50	-284.02	180.95	336.76	0.61	554.920		
300.00	300.00	300.00	300.00	0.53	0.53	147.50	-284.02	180.95	336.76	1.06	318.784		
400.00	400.00	400.00	400.00	0.75	0.75	147.50	-284.02	180.95	336.76	1.51	223.624		
500.00	500.00	500.00	500.00	0.98	0.98	147.50	-284.02	180.95	336.76	1.96	172.217		
600.00	600.00	600.00	600.00	1.20	1.20	147.50	-284.02	180.95	336.76	2.40	140.027		
700.00	700.00	700.00	700.00	1.43	1.43	147.50	-284.02	180.95	336.76	2.85	117.975		
800.00	800.00	800.00	800.00	1.65	1.65	147.50	-284.02	180.95	336.76	3.30	101.924		
900.00	900.00	900.00	900.00	1.88	1.88	147.50	-284.02	180.95	336.76	3.75	89.718		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	147.50	-284.02	180.95	336.76	4.20	80.122		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	147.50	-284.02	180.95	336.76	4.65	72.381		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	147.50	-284.02	180.95	336.76	5.10	66.004		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	147.50	-284.02	180.95	336.76	5.55	60.659		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	147.50	-284.02	180.95	336.76	6.00	56.116		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	147.50	-284.02	180.95	336.76	6.45	52.205		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	147.50	-284.02	180.95	336.76	6.90	48.804		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	147.50	-284.02	180.95	336.76	7.35	45.819		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	147.50	-284.02	180.95	336.76	7.80	43.178		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	147.50	-284.02	180.95	336.76	8.25	40.825		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	147.50	-284.02	180.95	336.76	8.70	38.715		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	147.50	-284.02	180.95	336.76	9.15	36.813		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	147.50	-284.02	180.95	336.76	9.60	35.089		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	147.50	-284.02	180.95	336.76	10.05	33.519		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	147.50	-284.02	180.95	336.76	10.50	32.083		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	147.50	-284.02	180.95	336.76	10.95	30.766		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	147.50	-284.02	180.95	336.76	11.40	29.552		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	147.50	-284.02	180.95	336.76	11.85	28.430		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	147.50	-284.02	180.95	336.76	12.29	27.391		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	147.50	-284.02	180.95	336.76	12.74	26.425		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	147.50	-284.02	180.95	336.76	13.19	25.524		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	147.50	-284.02	180.95	336.76	13.64	24.683		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	147.50	-284.02	180.95	336.76	14.09	23.896		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	147.50	-284.02	180.95	336.76	14.54	23.157		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	147.50	-284.02	180.95	336.76	14.99	22.463		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	147.50	-284.02	180.95	336.76	15.44	21.809		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	147.50	-284.02	180.95	336.76	15.89	21.192		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	147.50	-284.02	180.95	336.76	16.34	20.609		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	147.50	-284.02	180.95	336.76	16.79	20.057		
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	147.50	-284.02	180.95	336.76	17.24	19.534		
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	147.50	-284.02	180.95	336.76	17.69	19.038		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	147.50	-284.02	180.95	336.76	18.14	18.566		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	147.50	-284.02	180.95	336.76	18.59	18.117		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	147.50	-284.02	180.95	336.76	19.04	17.689		
4,400.00	4,400.00	4,396.19	4,396.19	9.71	9.71	-20.84	-284.80	180.74	336.51	19.42	17.329		
4,500.00	4,499.96	4,492.38	4,492.34	9.88	9.87	-20.69	-287.14	180.10	335.76	19.74	17.007		
4,600.00	4,599.86	4,588.55	4,588.42	10.05	10.04	-20.43	-291.03	179.05	334.52	20.06	16.672		
4,700.00	4,699.68	4,684.69	4,684.40	10.23	10.20	-20.08	-296.48	177.57	332.80	20.39	16.325		
4,800.00	4,799.37	4,780.80	4,780.24	10.40	10.37	-19.62	-303.48	175.67	330.60	20.71	15.967		
4,900.00	4,898.90	4,878.52	4,877.55	10.58	10.55	-19.05	-312.03	173.35	327.83	21.03	15.590		
5,000.00	4,998.26	4,978.38	4,976.98	10.77	10.73	-18.54	-321.03	170.90	323.64	21.35	15.156		
5,030.89	5,028.91	5,009.22	5,007.68	10.83	10.79	-18.39	-323.81	170.15	322.02	21.45	15.009		

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 312H (SIMOPS) - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,097.46	5,078.20	5,076.36	10.96	10.92	-18.07	-330.02	168.46	318.22	296.51	21.71	14.659	
5,200.00	5,196.65	5,178.02	5,175.74	11.16	11.11	-17.59	-339.02	166.02	312.74	290.66	22.08	14.163	
5,300.00	5,295.83	5,277.83	5,275.12	11.37	11.30	-17.09	-348.01	163.58	307.28	284.82	22.46	13.683	
5,400.00	5,395.02	5,377.64	5,374.50	11.58	11.50	-16.57	-357.00	161.14	301.85	279.01	22.84	13.216	
5,500.00	5,494.21	5,477.46	5,473.88	11.79	11.71	-16.03	-366.00	158.69	296.44	273.22	23.23	12.763	
5,600.00	5,593.40	5,577.27	5,573.25	12.01	11.91	-15.47	-374.99	156.25	291.06	267.45	23.62	12.325	
5,700.00	5,692.58	5,677.09	5,672.63	12.24	12.12	-14.90	-383.99	153.81	285.71	261.70	24.01	11.900	
5,800.00	5,791.77	5,776.90	5,772.01	12.47	12.33	-14.30	-392.98	151.37	280.39	255.98	24.41	11.488	
5,900.00	5,890.96	5,876.72	5,871.39	12.71	12.55	-13.67	-401.97	148.93	275.10	250.29	24.81	11.090	
6,000.00	5,990.15	5,976.53	5,970.77	12.94	12.77	-13.03	-410.97	146.49	269.84	244.63	25.21	10.704	
6,100.00	6,089.33	6,076.34	6,070.15	13.19	12.99	-12.35	-419.96	144.04	264.62	239.01	25.62	10.331	
6,200.00	6,188.52	6,176.16	6,169.52	13.43	13.21	-11.65	-428.96	141.60	259.44	233.42	26.02	9.970	
6,300.00	6,287.71	6,275.97	6,268.90	13.68	13.44	-10.92	-437.95	139.16	254.30	227.86	26.43	9.621	
6,400.00	6,386.90	6,375.79	6,368.28	13.93	13.66	-10.17	-446.94	136.72	249.20	222.35	26.84	9.283	
6,500.00	6,486.08	6,475.60	6,467.66	14.19	13.89	-9.38	-455.94	134.28	244.14	216.89	27.26	8.957	
6,600.00	6,585.27	6,575.42	6,567.04	14.44	14.12	-8.55	-464.93	131.84	239.14	211.47	27.67	8.642	
6,700.00	6,684.46	6,675.23	6,666.42	14.71	14.36	-7.70	-473.92	129.39	234.18	206.10	28.09	8.338	
6,800.00	6,783.65	6,775.05	6,765.79	14.97	14.59	-6.80	-482.92	126.95	229.28	200.78	28.50	8.044	
6,900.00	6,882.83	6,874.86	6,865.17	15.23	14.83	-5.87	-491.91	124.51	224.44	195.52	28.92	7.761	
7,000.00	6,982.02	6,974.67	6,964.55	15.50	15.07	-4.89	-500.91	122.07	219.66	190.32	29.34	7.487	
7,100.00	7,081.21	7,074.49	7,063.93	15.77	15.31	-3.87	-509.90	119.63	214.95	185.19	29.76	7.223	
7,147.27	7,128.09	7,121.67	7,110.90	15.90	15.42	-3.38	-514.15	118.47	212.75	182.79	29.96	7.102	
7,200.00	7,180.43	7,174.31	7,163.32	16.04	15.55	-2.81	-518.90	117.19	210.55	180.35	30.20	6.971	
7,300.00	7,279.82	7,274.19	7,262.76	16.30	15.79	-1.68	-527.90	114.74	207.77	177.10	30.67	6.774	
7,400.00	7,379.40	7,374.10	7,362.23	16.54	16.04	-0.52	-536.90	112.30	206.82	175.70	31.13	6.644	
7,401.82	7,381.21	7,375.91	7,364.04	16.55	16.04	-0.50	-537.06	112.25	206.82	175.69	31.14	6.642	CC, ES
7,500.00	7,479.12	7,474.00	7,461.70	16.78	16.28	0.64	-545.90	109.86	207.71	176.13	31.58	6.578	
7,600.00	7,578.95	7,573.88	7,561.14	17.01	16.53	1.78	-554.90	107.41	210.42	178.40	32.02	6.572	SF
7,700.00	7,678.87	7,673.69	7,660.51	17.24	16.78	2.86	-563.89	104.97	214.95	182.50	32.45	6.624	
7,800.00	7,778.85	7,773.42	7,759.80	17.45	17.03	3.88	-572.88	102.53	221.30	188.43	32.87	6.732	
7,878.16	7,857.00	7,851.27	7,837.32	17.60	17.22	172.99	-579.89	100.63	227.51	194.32	33.19	6.855	
7,900.00	7,878.84	7,873.02	7,858.97	17.64	17.28	173.18	-581.85	100.09	229.40	196.12	33.28	6.893	
8,000.00	7,978.84	7,972.58	7,958.10	17.85	17.53	174.02	-590.83	97.66	238.09	204.38	33.71	7.064	
8,078.16	8,057.00	8,050.40	8,035.58	18.00	17.72	174.64	-597.84	95.76	244.91	210.87	34.04	7.195	
8,100.00	8,078.84	8,072.10	8,057.19	18.05	17.78	174.79	-599.79	95.22	247.24	213.16	34.08	7.254	
8,150.00	8,128.65	8,121.34	8,106.20	18.12	17.90	175.17	-604.23	94.02	255.66	221.63	34.03	7.514	
8,200.00	8,177.93	8,169.63	8,154.29	18.18	18.02	175.55	-608.58	92.84	268.34	234.58	33.76	7.948	
8,250.00	8,226.28	8,216.63	8,201.08	18.22	18.14	175.93	-612.82	91.69	285.20	251.90	33.29	8.567	
8,300.00	8,273.34	8,261.97	8,246.23	18.24	18.26	176.29	-616.90	90.58	306.10	273.47	32.63	9.382	
8,350.00	8,318.76	8,305.31	8,289.37	18.24	18.37	176.61	-620.81	89.52	330.89	299.11	31.77	10.414	
8,400.00	8,362.18	8,346.32	8,330.20	18.23	18.47	176.88	-624.50	88.52	359.38	328.63	30.75	11.687	
8,450.00	8,403.28	8,384.68	8,368.39	18.22	18.57	177.11	-627.96	87.58	391.35	361.77	29.58	13.231	
8,500.00	8,441.75	8,420.10	8,403.66	18.20	18.66	177.28	-631.15	86.71	426.55	398.27	28.28	15.082	
8,550.00	8,477.29	8,452.54	8,435.96	18.19	18.75	177.39	-634.07	85.92	464.72	437.82	26.89	17.281	
8,600.00	8,509.63	8,482.60	8,465.89	18.19	18.82	177.44	-636.73	85.20	505.50	480.06	25.45	19.865	
8,650.00	8,538.52	8,509.04	8,492.23	18.21	18.88	177.41	-639.00	84.58	548.60	524.60	24.00	22.862	
8,700.00	8,563.75	8,531.63	8,514.74	18.25	18.94	177.27	-640.90	84.07	593.70	571.10	22.59	26.276	
8,750.00	8,585.13	8,550.17	8,533.21	18.31	18.98	176.93	-642.42	83.65	640.47	619.16	21.31	30.052	
8,800.00	8,602.48	8,564.48	8,547.46	18.41	19.01	176.23	-643.58	83.34	688.58	668.35	20.24	34.027	
8,850.00	8,615.68	8,574.38	8,557.33	18.55	19.04	174.53	-644.37	83.12	737.69	718.17	19.51	37.804	
8,900.00	8,624.64	8,579.75	8,562.68	18.73	19.05	167.51	-644.79	83.01	787.41	767.38	20.03	39.312	
8,950.00	8,629.27	8,580.49	8,563.42	18.94	19.05	22.06	-644.85	82.99	837.39	815.02	22.37	37.440	

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 312H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)	
8,978.15	8,629.96	8,578.84	8,561.77	19.07	19.05	8.40	-644.72	83.03	865.49	846.18		19.31	44.823	
9,000.00	8,629.96	8,576.97	8,559.92	19.18	19.04	8.21	-644.57	83.07	887.27	867.93		19.34	45.874	
9,100.00	8,629.96	8,568.34	8,551.31	19.79	19.02	7.46	-643.89	83.25	986.95	967.41		19.54	50.512	
9,200.00	8,629.96	8,559.55	8,542.55	20.54	19.00	6.84	-643.18	83.45	1,086.62 ^c	1,066.82		19.80	54.868	
9,300.00	8,629.96	8,550.59	8,533.63	21.42	18.98	6.33	-642.45	83.64	1,186.29	1,166.17		20.12	58.948	
9,400.00	8,629.96	8,541.47	8,524.54	22.42	18.96	5.90	-641.71	83.85	1,285.95	1,265.46		20.49	62.757	
9,500.00	8,629.96	8,532.17	8,515.28	23.51	18.94	5.53	-640.94	84.05	1,385.61	1,364.71		20.90	66.309	
9,600.00	8,629.96	8,522.70	8,505.84	24.69	18.92	5.21	-640.15	84.27	1,485.26	1,463.93		21.33	69.618	
9,700.00	8,629.97	8,513.04	8,496.21	25.95	18.89	4.93	-639.34	84.49	1,584.91	1,563.10		21.80	72.699	
9,800.00	8,629.97	8,503.19	8,486.41	27.27	18.87	4.68	-638.50	84.72	1,684.54	1,662.25		22.29	75.567	
9,900.00	8,629.97	8,493.15	8,476.40	28.64	18.85	4.47	-637.64	84.95	1,784.17	1,761.37		22.80	78.238	
10,000.00	8,629.97	8,482.91	8,466.20	30.07	18.82	4.27	-636.75	85.19	1,883.80	1,860.46		23.34	80.728	
10,100.00	8,629.97	8,472.46	8,455.80	31.53	18.79	4.10	-635.84	85.44	1,983.41	1,959.53		23.88	83.051	
10,200.00	8,629.97	8,461.80	8,445.18	33.03	18.77	3.94	-634.90	85.70	2,083.02	2,058.58		24.44	85.220	
10,300.00	8,629.97	8,450.92	8,434.35	34.57	18.74	3.80	-633.93	85.96	2,182.62	2,157.60		25.02	87.249	
10,400.00	8,629.97	8,441.12	8,424.59	36.13	18.72	3.69	-633.04	86.20	2,282.21	2,256.61		25.60	89.133	
10,500.00	8,629.97	8,432.11	8,415.62	37.71	18.69	3.59	-632.23	86.42	2,381.81	2,355.60		26.21	90.889	
10,600.00	8,629.98	8,423.11	8,406.65	39.32	18.67	3.51	-631.42	86.64	2,481.40	2,454.58		26.82	92.536	
10,700.00	8,629.98	8,414.10	8,397.68	40.94	18.65	3.42	-630.61	86.86	2,580.99	2,553.56		27.43	94.082	
10,800.00	8,629.98	8,405.09	8,388.71	42.58	18.62	3.35	-629.80	87.08	2,680.58	2,652.53		28.06	95.537	
10,900.00	8,629.98	8,396.08	8,379.74	44.24	18.60	3.28	-628.98	87.30	2,780.18	2,751.49		28.69	96.906	
11,000.00	8,629.98	8,387.07	8,370.77	45.91	18.58	3.22	-628.17	87.52	2,879.77	2,850.44		29.33	98.197	
11,100.00	8,629.98	8,378.06	8,361.80	47.58	18.56	3.16	-627.36	87.74	2,979.36	2,949.39		29.97	99.416	
11,200.00	8,629.98	14,583.92	11,690.00	49.28	56.72	-180.00	2,439.87	72.96	3,060.02	3,010.10		49.92	61.303	
11,300.00	8,629.98	14,683.92	11,690.00	50.97	58.37	-180.00	2,539.87	72.96	3,060.02	3,008.85		51.17	59.799	
11,400.00	8,629.98	14,783.92	11,690.00	52.68	60.02	-180.00	2,639.87	72.96	3,060.02	3,007.58		52.44	58.355	
11,500.00	8,629.98	14,883.92	11,690.00	54.40	61.69	-180.00	2,739.87	72.96	3,060.01	3,006.30		53.71	56.968	
11,600.00	8,629.99	14,983.92	11,690.00	56.12	63.37	-180.00	2,839.87	72.96	3,060.01	3,005.01		55.00	55.637	
11,700.00	8,629.99	15,083.92	11,690.00	57.85	65.06	180.00	2,939.87	72.96	3,060.01	3,003.72		56.29	54.359	
11,800.00	8,629.99	15,183.92	11,690.00	59.59	66.75	180.00	3,039.87	72.96	3,060.01	3,002.42		57.59	53.130	
11,900.00	8,629.99	15,283.92	11,690.00	61.33	68.45	180.00	3,139.87	72.96	3,060.01	3,001.11		58.90	51.950	
12,000.00	8,629.99	15,383.92	11,690.00	63.07	70.16	180.00	3,239.87	72.96	3,060.01	2,999.79		60.22	50.814	
12,100.00	8,629.99	15,483.92	11,690.00	64.82	71.87	180.00	3,339.87	72.96	3,060.01	2,998.47		61.54	49.722	
12,200.00	8,629.99	15,583.92	11,690.00	66.58	73.59	180.00	3,439.87	72.96	3,060.01	2,997.14		62.87	48.672	
12,300.00	8,629.99	15,683.92	11,690.00	68.33	75.31	180.00	3,539.87	72.96	3,060.01	2,995.80		64.20	47.660	
12,400.00	8,629.99	15,783.92	11,690.00	70.10	77.04	180.00	3,639.87	72.96	3,060.01	2,994.46		65.54	46.686	
12,500.00	8,630.00	15,883.92	11,690.00	71.86	78.77	180.00	3,739.87	72.96	3,060.00	2,993.12		66.89	45.747	
12,600.00	8,630.00	15,983.92	11,690.00	73.63	80.50	180.00	3,839.87	72.96	3,060.00	2,991.76		68.24	44.842	
12,700.00	8,630.00	16,083.92	11,690.00	75.40	82.24	180.00	3,939.87	72.96	3,060.00	2,990.41		69.59	43.970	
12,800.00	8,630.00	16,183.92	11,690.00	77.17	83.99	180.00	4,039.87	72.96	3,060.00	2,989.05		70.95	43.128	
12,900.00	8,630.00	16,283.92	11,690.00	78.95	85.74	180.00	4,139.87	72.96	3,060.00	2,987.69		72.32	42.315	
12,975.20	8,630.00	16,359.11	11,690.00	80.29	87.05	180.00	4,215.07	72.96	3,060.00	2,986.66		73.34	41.722	

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



LEAM Drilling Systems LLC

Anticollision Report



Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Reference Site: Cotton Draw Unit
Site Error: 0.00 usft
Reference Well: 327H (SIMOPS)
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 327H (SIMOPS)
TVD Reference: 3431.4' GE + 30' KB @ 3461.40usft
MD Reference: 3431.4' GE + 30' KB @ 3461.40usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Cotton Draw Unit - 313H (SIMOPS) - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: O-LEAM MWD-ADJ													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	145.07	-259.03	180.88	315.93				
100.00	100.00	100.00	100.00	0.08	0.08	145.07	-259.03	180.88	315.93	315.78	0.16	2,008.007	
200.00	200.00	200.00	200.00	0.30	0.30	145.07	-259.03	180.88	315.93	315.33	0.61	520.595	
300.00	300.00	300.00	300.00	0.53	0.53	145.07	-259.03	180.88	315.93	314.88	1.06	299.065	
400.00	400.00	400.00	400.00	0.75	0.75	145.07	-259.03	180.88	315.93	314.43	1.51	209.792	
500.00	500.00	500.00	500.00	0.98	0.98	145.07	-259.03	180.88	315.93	313.98	1.96	161.564	
600.00	600.00	600.00	600.00	1.20	1.20	145.07	-259.03	180.88	315.93	313.53	2.40	131.365	
700.00	700.00	700.00	700.00	1.43	1.43	145.07	-259.03	180.88	315.93	313.08	2.85	110.678	
800.00	800.00	800.00	800.00	1.65	1.65	145.07	-259.03	180.88	315.93	312.63	3.30	95.620	
900.00	900.00	900.00	900.00	1.88	1.88	145.07	-259.03	180.88	315.93	312.18	3.75	84.168	
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	145.07	-259.03	180.88	315.93	311.73	4.20	75.166	
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	145.07	-259.03	180.88	315.93	311.28	4.65	67.904	
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	145.07	-259.03	180.88	315.93	310.83	5.10	61.921	
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	145.07	-259.03	180.88	315.93	310.38	5.55	56.907	
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	145.07	-259.03	180.88	315.93	309.93	6.00	52.644	
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	145.07	-259.03	180.88	315.93	309.48	6.45	48.976	
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	145.07	-259.03	180.88	315.93	309.03	6.90	45.785	
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	145.07	-259.03	180.88	315.93	308.58	7.35	42.985	
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	145.07	-259.03	180.88	315.93	308.13	7.80	40.507	
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	145.07	-259.03	180.88	315.93	307.68	8.25	38.300	
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	145.07	-259.03	180.88	315.93	307.23	8.70	36.321	
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	145.07	-259.03	180.88	315.93	306.78	9.15	34.536	
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	145.07	-259.03	180.88	315.93	306.34	9.60	32.918	
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	145.07	-259.03	180.88	315.93	305.89	10.05	31.445	
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	145.07	-259.03	180.88	315.93	305.44	10.50	30.099	
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	145.07	-259.03	180.88	315.93	304.99	10.95	28.863	
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	145.07	-259.03	180.88	315.93	304.54	11.40	27.724	
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	145.07	-259.03	180.88	315.93	304.09	11.85	26.672	
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	145.07	-259.03	180.88	315.93	303.64	12.29	25.697	
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	145.07	-259.03	180.88	315.93	303.19	12.74	24.790	
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	145.07	-259.03	180.88	315.93	302.74	13.19	23.946	
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	145.07	-259.03	180.88	315.93	302.29	13.64	23.157	
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	145.07	-259.03	180.88	315.93	301.84	14.09	22.418	
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	145.07	-259.03	180.88	315.93	301.39	14.54	21.725	
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	145.07	-259.03	180.88	315.93	300.94	14.99	21.074	
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	145.07	-259.03	180.88	315.93	300.49	15.44	20.460	
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	145.07	-259.03	180.88	315.93	300.04	15.89	19.881	
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	145.07	-259.03	180.88	315.93	299.59	16.34	19.334	
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	145.07	-259.03	180.88	315.93	299.14	16.79	18.817	
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	145.07	-259.03	180.88	315.93	298.69	17.24	18.326	
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	145.07	-259.03	180.88	315.93	298.24	17.69	17.860	
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	145.07	-259.03	180.88	315.93	297.79	18.14	17.418	
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	145.07	-259.03	180.88	315.93	297.34	18.59	16.996	
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	145.07	-259.03	180.88	315.93	296.90	19.04	16.595	
4,400.00	4,400.00	4,395.30	4,395.29	9.71	9.71	-23.43	-259.41	181.58	315.88	296.45	19.42	16.262	
4,500.00	4,499.96	4,490.56	4,490.53	9.88	9.89	-23.81	-260.54	183.66	315.71	295.95	19.76	15.976	
4,600.00	4,599.86	4,585.78	4,585.66	10.05	10.07	-24.43	-262.43	187.14	315.48	295.38	20.10	15.699	
4,700.00	4,699.68	4,680.90	4,680.62	10.23	10.25	-25.30	-265.06	192.00	315.21	294.78	20.43	15.429	
4,800.00	4,799.37	4,775.92	4,775.37	10.40	10.43	-26.42	-268.45	198.24	314.97	294.21	20.76	15.170	
4,900.00	4,898.90	4,870.79	4,869.85	10.58	10.62	-27.78	-272.57	205.85	314.86	293.76	21.10	14.925	
4,909.00	4,907.85	4,879.32	4,878.34	10.60	10.64	-27.92	-272.98	206.60	314.86	293.73	21.13	14.903 CC	
5,000.00	4,998.26	4,965.50	4,964.00	10.77	10.81	-29.39	-277.43	214.82	314.97	293.54	21.43	14.696	

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 313H (SIMOPS) - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: O-LEAM MWD-ADJ													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (")	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
5,030.89	5,028.91	4,994.72	4,993.01	10.83	10.87	-29.93	-279.08	217.86	315.07	293.53	21.54	14.629 ES	
5,100.00	5,097.46	5,060.03	5,057.80	10.96	11.01	-31.19	-283.03	225.13	315.78	293.98	21.79	14.489	
5,200.00	5,196.65	5,154.40	5,151.24	11.16	11.22	-33.07	-289.34	236.77	318.44	296.27	22.17	14.362	
5,300.00	5,295.83	5,248.56	5,244.24	11.37	11.43	-34.99	-296.38	249.74	323.06	300.50	22.56	14.322 SF	
5,400.00	5,395.02	5,346.84	5,341.13	11.58	11.66	-36.97	-304.22	264.20	329.12	306.17	22.95	14.338	
5,500.00	5,494.21	5,446.00	5,438.88	11.79	11.91	-38.89	-312.14	278.81	335.59	312.23	23.36	14.366	
5,600.00	5,593.40	5,545.15	5,536.64	12.01	12.16	-40.75	-320.06	293.41	342.43	318.66	23.77	14.405	
5,700.00	5,692.58	5,644.31	5,634.39	12.24	12.41	-42.52	-327.98	308.02	349.62	325.43	24.19	14.454	
5,800.00	5,791.77	5,743.47	5,732.15	12.47	12.68	-44.23	-335.91	322.63	357.13	332.52	24.61	14.510	
5,900.00	5,890.96	5,842.63	5,829.90	12.71	12.94	-45.87	-343.83	337.24	364.95	339.91	25.04	14.573	
6,000.00	5,990.15	5,941.79	5,927.66	12.94	13.22	-47.43	-351.75	351.84	373.06	347.58	25.48	14.642	
6,100.00	6,089.33	6,040.94	6,025.41	13.19	13.50	-48.93	-359.67	366.45	381.43	355.51	25.92	14.715	
6,200.00	6,188.52	6,140.10	6,123.17	13.43	13.78	-50.37	-367.59	381.06	390.05	363.68	26.37	14.791	
6,300.00	6,287.71	6,239.26	6,220.92	13.68	14.07	-51.74	-375.52	395.66	398.90	372.08	26.83	14.870	
6,400.00	6,386.90	6,338.42	6,318.68	13.93	14.36	-53.05	-383.44	410.27	407.98	380.69	27.29	14.951	
6,500.00	6,486.08	6,437.57	6,416.44	14.19	14.66	-54.30	-391.36	424.88	417.26	389.50	27.76	15.033	
6,600.00	6,585.27	6,536.73	6,514.19	14.44	14.96	-55.50	-399.28	439.48	426.73	398.50	28.23	15.117	
6,700.00	6,684.46	6,635.89	6,611.95	14.71	15.26	-56.65	-407.20	454.09	436.38	407.67	28.71	15.200	
6,800.00	6,783.65	6,735.05	6,709.70	14.97	15.57	-57.75	-415.13	468.70	446.20	417.00	29.20	15.283	
6,900.00	6,882.83	6,834.20	6,807.46	15.23	15.88	-58.80	-423.05	483.30	456.17	426.48	29.69	15.366	
7,000.00	6,982.02	6,933.36	6,905.21	15.50	16.20	-59.81	-430.97	497.91	466.29	436.11	30.18	15.448	
7,100.00	7,081.21	7,032.52	7,002.97	15.77	16.51	-60.77	-438.89	512.52	476.55	445.86	30.69	15.529	
7,147.27	7,128.09	7,079.39	7,049.18	15.90	16.66	-61.21	-442.64	519.42	481.44	450.52	30.93	15.567	
7,200.00	7,180.43	7,131.68	7,100.73	16.04	16.83	-61.72	-446.81	527.13	487.05	455.85	31.20	15.612	
7,300.00	7,279.82	7,230.85	7,198.50	16.30	17.15	-62.52	-454.74	541.74	498.37	466.68	31.70	15.723	
7,400.00	7,379.40	7,330.01	7,296.26	16.54	17.48	-63.13	-462.66	556.34	510.55	478.37	32.19	15.862	
7,500.00	7,479.12	7,429.13	7,393.97	16.78	17.80	-63.54	-470.58	570.94	523.54	490.88	32.67	16.027	
7,600.00	7,578.95	7,528.17	7,491.61	17.01	18.13	-63.79	-478.49	585.53	537.31	504.18	33.13	16.218	
7,700.00	7,678.87	7,627.11	7,589.15	17.24	18.46	-63.87	-486.40	600.11	551.84	518.26	33.58	16.432	
7,800.00	7,778.85	7,725.91	7,686.55	17.45	18.79	-63.79	-494.29	614.66	567.13	533.11	34.02	16.670	
7,878.16	7,857.00	7,803.01	7,762.57	17.60	19.05	104.74	-500.45	626.02	579.63	545.28	34.35	16.875	
7,900.00	7,878.84	7,824.55	7,783.80	17.64	19.12	104.83	-502.17	629.19	583.19	548.75	34.44	16.934	
8,000.00	7,978.84	7,923.13	7,880.99	17.85	19.46	105.20	-510.05	643.71	599.50	564.63	34.86	17.196	
8,078.16	8,057.00	8,000.19	7,956.95	18.00	19.72	105.49	-516.20	655.07	612.26	577.07	35.20	17.396	
8,100.00	8,078.84	8,021.68	7,978.14	18.05	19.79	105.24	-517.92	658.23	615.94	580.66	35.29	17.456	
8,150.00	8,128.65	8,070.47	8,026.24	18.12	19.96	104.86	-521.82	665.42	625.20	589.73	35.47	17.628	
8,200.00	8,177.93	8,118.37	8,073.46	18.18	20.12	104.71	-525.64	672.48	635.65	600.04	35.80	17.853	
8,250.00	8,226.28	8,165.03	8,119.46	18.22	20.28	104.74	-529.37	679.35	647.40	611.69	35.71	18.131	
8,300.00	8,273.34	8,210.08	8,163.88	18.24	20.44	104.87	-532.97	685.98	660.59	624.82	35.77	18.466	
8,350.00	8,318.76	8,253.19	8,206.37	18.24	20.59	105.04	-536.42	692.33	675.40	639.59	35.81	18.860	
8,400.00	8,362.18	8,294.02	8,246.63	18.23	20.73	105.15	-539.68	698.35	692.01	656.18	35.83	19.313	
8,450.00	8,403.28	8,332.27	8,284.34	18.22	20.86	105.12	-542.73	703.98	710.59	674.73	35.85	19.821	
8,500.00	8,441.75	8,367.64	8,319.21	18.20	20.98	104.87	-545.56	709.20	731.27	695.38	35.89	20.378	
8,550.00	8,477.29	8,399.87	8,350.98	18.19	21.09	104.30	-548.13	713.94	754.16	718.20	35.96	20.971	
8,600.00	8,509.63	8,428.71	8,379.41	18.19	21.19	103.33	-550.44	718.19	779.30	743.20	36.10	21.586	
8,650.00	8,538.52	8,453.93	8,404.28	18.21	21.28	101.87	-552.45	721.91	806.68	770.35	36.32	22.208	
8,700.00	8,563.75	8,475.36	8,425.40	18.25	21.35	99.85	-554.17	725.06	836.20	799.57	36.63	22.826	
8,750.00	8,585.13	8,492.82	8,442.62	18.31	21.41	97.18	-555.56	727.64	867.74	830.72	37.01	23.444	
8,800.00	8,602.48	8,506.18	8,455.79	18.41	21.46	93.81	-556.63	729.60	901.07	863.65	37.41	24.083	
8,850.00	8,615.88	8,515.35	8,464.83	18.55	21.49	89.71	-557.36	730.95	935.95	898.19	37.76	24.787	
8,900.00	8,624.64	8,520.24	8,469.65	18.73	21.51	84.91	-557.75	731.68	972.08	934.13	37.95	25.618	
8,950.00	8,629.27	8,520.83	8,470.23	18.94	21.51	79.50	-557.80	731.76	1,009.13	971.26	37.87	26.650	

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 313H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD-ADJ														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)							
8,978.15	8,629.96	8,519.27	8,468.69	19.07	21.51	76.24	-557.67	731.53	1,030.26	992.58	27.344				
9,000.00	8,629.96	8,517.52	8,466.97	19.18	21.50	76.09	-557.53	731.27	1,046.80	1,009.04	27.717				
9,100.00	8,629.96	8,509.53	8,459.10	19.79	21.47	75.43	-556.90	730.10	1,124.82	1,086.55	29.395				
9,200.00	8,629.96	8,501.55	8,451.22	20.54	21.45	74.76	-556.26	728.92	1,206.03	1,167.13	31.005				
9,300.00	8,629.96	8,493.56	8,443.34	21.42	21.42	74.09	-555.62	727.74	1,289.83	1,250.18	32.532				
9,400.00	8,629.96	8,485.57	8,435.47	22.42	21.39	73.43	-554.98	726.57	1,375.75	1,335.25	33.969				
9,500.00	8,629.96	8,477.58	8,427.59	23.51	21.36	72.77	-554.34	725.39	1,463.42	1,421.98	35.315				
9,600.00	8,629.96	8,469.59	8,419.72	24.69	21.33	72.11	-553.70	724.21	1,552.54	1,510.09	36.572				
9,700.00	8,629.97	8,461.60	8,411.84	25.95	21.31	71.45	-553.07	723.04	1,642.87	1,599.35	37.746				
9,800.00	8,629.97	8,453.62	8,403.97	27.27	21.28	70.80	-552.43	721.86	1,734.23	1,689.59	38.843				
9,900.00	8,629.97	8,445.63	8,396.09	28.64	21.25	70.15	-551.79	720.68	1,826.46	1,780.65	39.870				
10,000.00	8,629.97	8,437.64	8,388.22	30.07	21.22	69.50	-551.15	719.51	1,919.43	1,872.43	40.834				
10,100.00	8,629.97	8,429.65	8,380.34	31.53	21.20	68.86	-550.51	718.33	2,013.05	1,964.82	41.740				
10,200.00	8,629.97	8,421.66	8,372.47	33.03	21.17	68.21	-549.88	717.15	2,107.22	2,057.75	42.596				
10,300.00	8,629.97	8,413.67	8,364.59	34.57	21.14	67.58	-549.24	715.98	2,201.88	2,151.15	43.407				
10,400.00	8,629.97	8,405.69	8,356.72	36.13	21.11	66.94	-548.60	714.80	2,296.96	2,244.96	44.177				
10,500.00	8,629.97	8,397.70	8,348.84	37.71	21.08	66.31	-547.96	713.62	2,392.42	2,339.15	44.911				
10,600.00	8,629.98	8,389.71	8,340.97	39.32	21.06	65.68	-547.32	712.45	2,488.20	2,433.65	45.613				
10,700.00	8,629.98	8,381.72	8,333.09	40.94	21.03	65.06	-546.68	711.27	2,584.29	2,528.45	46.288				
10,800.00	8,629.98	8,373.73	8,325.22	42.58	21.00	64.44	-546.05	710.09	2,680.63	2,623.52	46.937				
10,900.00	8,629.98	8,365.75	8,317.34	44.24	20.97	63.82	-545.41	708.92	2,777.21	2,718.82	47.563				
11,000.00	8,629.98	8,357.76	8,309.46	45.91	20.95	63.21	-544.77	707.74	2,874.00	2,814.34	48.170				
11,100.00	8,629.98	8,349.77	8,301.59	47.58	20.92	62.60	-544.13	706.56	2,970.99	2,910.06	48.760				
11,200.00	8,629.98	8,341.78	8,293.71	49.28	20.89	62.00	-543.49	705.39	3,068.14	3,005.95	49.334				
11,300.00	8,629.98	8,333.79	8,285.84	50.97	20.86	61.40	-542.85	704.21	3,165.46	3,102.01	49.894				
11,400.00	8,629.98	14,835.98	11,683.64	52.68	20.86	163.92	2,646.92	952.93	3,177.92	3,119.52	54.411				
11,500.00	8,629.98	14,935.98	11,683.41	54.40	20.89	163.92	2,746.92	952.93	3,177.70	3,117.76	59.94				
11,600.00	8,629.99	15,035.98	11,683.18	56.12	20.92	163.92	2,846.92	952.93	3,177.48	3,116.00	61.48				
11,700.00	8,629.99	15,135.98	11,682.94	57.85	20.95	163.92	2,946.92	952.93	3,177.25	3,114.22	63.03				
11,800.00	8,629.99	15,235.98	11,682.71	59.59	20.98	163.92	3,046.92	952.93	3,177.03	3,112.44	64.59				
11,900.00	8,629.99	15,335.98	11,682.48	61.33	21.01	163.92	3,146.92	952.93	3,176.81	3,110.65	66.16				
12,000.00	8,629.99	15,435.98	11,682.25	63.07	21.04	163.92	3,246.91	952.93	3,176.59	3,108.85	67.74				
12,100.00	8,629.99	15,535.98	11,682.02	64.82	21.07	163.92	3,346.91	952.94	3,176.36	3,107.04	69.32				
12,200.00	8,629.99	15,635.98	11,681.79	66.58	21.10	163.92	3,446.91	952.94	3,176.14	3,105.23	70.91				
12,300.00	8,629.99	15,735.98	11,681.56	68.33	21.13	163.91	3,546.91	952.94	3,175.92	3,103.41	72.51				
12,400.00	8,629.99	15,835.98	11,681.33	70.10	21.16	163.91	3,646.91	952.94	3,175.70	3,101.58	74.11				
12,500.00	8,630.00	15,935.98	11,681.09	71.86	21.19	163.91	3,746.91	952.94	3,175.47	3,099.75	75.72				
12,600.00	8,630.00	16,035.98	11,680.86	73.63	21.22	163.91	3,846.91	952.94	3,175.25	3,097.91	77.34				
12,700.00	8,630.00	16,135.98	11,680.63	75.40	21.25	163.91	3,946.91	952.94	3,175.03	3,096.07	78.96				
12,800.00	8,630.00	16,235.98	11,680.40	77.17	21.28	163.91	4,046.91	952.94	3,174.80	3,094.22	80.58				
12,900.00	8,630.00	16,335.98	11,680.17	78.95	21.31	163.91	4,146.91	952.95	3,174.58	3,092.37	82.21				
12,975.20	8,630.00	16,410.43	11,680.00	80.29	21.34	163.91	4,221.37	952.95	3,174.41	3,090.98	83.44				

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 319H (SIMOPS) - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: O-LEAM MWD-ADJ													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	179.84	-25.00	0.07	25.00				
100.00	100.00	100.00	100.00	0.08	0.08	179.84	-25.00	0.07	25.00	24.84	0.16	158.896	
200.00	200.00	200.00	200.00	0.30	0.30	179.84	-25.00	0.07	25.00	24.39	0.61	41.195	
300.00	300.00	300.00	300.00	0.53	0.53	179.84	-25.00	0.07	25.00	23.94	1.06	23.665	
400.00	400.00	400.00	400.00	0.75	0.75	179.84	-25.00	0.07	25.00	23.49	1.51	16.601	
500.00	500.00	500.00	500.00	0.98	0.98	179.84	-25.00	0.07	25.00	23.04	1.96	12.785	
600.00	600.00	600.00	600.00	1.20	1.20	179.84	-25.00	0.07	25.00	22.60	2.40	10.395	
700.00	700.00	700.00	700.00	1.43	1.43	179.84	-25.00	0.07	25.00	22.15	2.85	8.758	
800.00	800.00	800.00	800.00	1.65	1.65	179.84	-25.00	0.07	25.00	21.70	3.30	7.566	
900.00	900.00	900.00	900.00	1.88	1.88	179.84	-25.00	0.07	25.00	21.25	3.75	6.660	
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	179.84	-25.00	0.07	25.00	20.80	4.20	5.948	
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	179.84	-25.00	0.07	25.00	20.35	4.65	5.373	
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	179.84	-25.00	0.07	25.00	19.90	5.10	4.900	
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	179.84	-25.00	0.07	25.00	19.45	5.55	4.503	
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	179.84	-25.00	0.07	25.00	19.00	6.00	4.166	
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	179.84	-25.00	0.07	25.00	18.55	6.45	3.876	
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	179.84	-25.00	0.07	25.00	18.10	6.90	3.623	
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	179.84	-25.00	0.07	25.00	17.65	7.35	3.401	
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	179.84	-25.00	0.07	25.00	17.20	7.80	3.205	
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	179.84	-25.00	0.07	25.00	16.75	8.25	3.031	
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	179.84	-25.00	0.07	25.00	16.30	8.70	2.874	
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	179.84	-25.00	0.07	25.00	15.85	9.15	2.733	
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	179.84	-25.00	0.07	25.00	15.40	9.60	2.605	
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	179.84	-25.00	0.07	25.00	14.95	10.05	2.488	
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	179.84	-25.00	0.07	25.00	14.50	10.50	2.382	
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	179.84	-25.00	0.07	25.00	14.05	10.95	2.284	
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	179.84	-25.00	0.07	25.00	13.60	11.40	2.194	
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	179.84	-25.00	0.07	25.00	13.15	11.85	2.111	
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	179.84	-25.00	0.07	25.00	12.71	12.29	2.033	
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	179.84	-25.00	0.07	25.00	12.26	12.74	1.962	
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	179.84	-25.00	0.07	25.00	11.81	13.19	1.895	
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	179.84	-25.00	0.07	25.00	11.36	13.64	1.832	
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	179.84	-25.00	0.07	25.00	10.91	14.09	1.774	
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	179.84	-25.00	0.07	25.00	10.46	14.54	1.719	
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	179.84	-25.00	0.07	25.00	10.01	14.99	1.668	
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	179.84	-25.00	0.07	25.00	9.56	15.44	1.619	
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	179.84	-25.00	0.07	25.00	9.11	15.89	1.573	
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	179.84	-25.00	0.07	25.00	8.66	16.34	1.530	
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	179.84	-25.00	0.07	25.00	8.21	16.79	1.489 Level 3	
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	179.84	-25.00	0.07	25.00	7.76	17.24	1.450 Level 3	
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	179.84	-25.00	0.07	25.00	7.31	17.69	1.413 Level 3	
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	179.84	-25.00	0.07	25.00	6.86	18.14	1.378 Level 3	
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	179.84	-25.00	0.07	25.00	6.41	18.59	1.345 Level 3	
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	179.84	-25.00	0.07	25.00	5.96	19.04	1.313 Level 3	
4,400.00	4,400.00	4,399.62	4,399.61	9.71	9.72	12.82	-25.76	-0.35	24.91	5.48	19.43	1.282 Level 3	
4,500.00	4,499.96	4,499.21	4,499.17	9.88	9.89	16.95	-28.03	-1.80	24.73	4.98	19.76	1.252 Level 3	
4,556.39	4,556.31	4,555.36	4,555.27	9.98	9.98	20.53	-29.98	-2.67	24.69	4.74	19.95	1.238 Level 2, CC	
4,600.00	4,599.86	4,598.76	4,598.63	10.05	10.06	23.90	-31.82	-3.69	24.73	4.64	20.09	1.231 Level 2, ES, SF	
4,700.00	4,699.68	4,698.25	4,697.93	10.23	10.24	33.40	-37.12	-6.60	25.33	4.90	20.43	1.240 Level 2	
4,800.00	4,799.37	4,797.65	4,797.03	10.40	10.41	44.57	-43.92	-10.35	27.05	6.28	20.78	1.302 Level 3	
4,900.00	4,898.90	4,896.95	4,895.87	10.58	10.60	55.95	-52.21	-14.92	30.35	9.21	21.14	1.436 Level 3	
5,000.00	4,998.26	4,996.11	4,994.40	10.77	10.78	66.17	-62.00	-20.30	35.45	13.94	21.51	1.648	

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



LEAM Drilling Systems LLC

Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 319H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance		Minimum Separation		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,030.89	5,028.91	5,026.71	5,024.77	10.83	10.84	68.97	-65.31	-22.13	37.40	15.76	21.63	1.729		
5,100.00	5,097.46	5,095.14	5,092.59	10.96	10.98	74.10	-73.25	-26.50	42.47	20.57	21.90	1.939		
5,200.00	5,196.65	5,194.03	5,190.40	11.16	11.18	78.59	-85.97	-33.51	51.39	29.09	22.30	2.305		
5,300.00	5,295.83	5,292.71	5,287.75	11.37	11.40	80.69	-100.14	-41.31	61.82	39.12	22.70	2.723		
5,400.00	5,395.02	5,391.25	5,384.67	11.58	11.62	81.30	-115.74	-49.90	73.58	50.47	23.12	3.183		
5,500.00	5,494.21	5,490.50	5,482.16	11.79	11.86	81.45	-132.02	-58.87	85.84	62.30	23.54	3.646		
5,600.00	5,593.40	5,589.74	5,579.65	12.01	12.11	81.56	-148.30	-67.84	98.10	74.13	23.98	4.092		
5,700.00	5,692.58	5,688.99	5,677.14	12.24	12.36	81.64	-164.58	-76.80	110.36	85.94	24.42	4.519		
5,800.00	5,791.77	5,788.23	5,774.63	12.47	12.63	81.71	-180.86	-85.77	122.62	97.74	24.88	4.929		
5,900.00	5,890.96	5,887.48	5,872.12	12.71	12.90	81.77	-197.14	-94.73	134.88	109.54	25.34	5.323		
6,000.00	5,990.15	5,986.72	5,969.61	12.94	13.18	81.82	-213.41	-103.70	147.14	121.33	25.81	5.700		
6,100.00	6,089.33	6,085.97	6,067.10	13.19	13.46	81.86	-229.69	-112.67	159.40	133.11	26.29	6.062		
6,200.00	6,188.52	6,185.21	6,164.59	13.43	13.75	81.89	-245.97	-121.63	171.67	144.88	26.78	6.409		
6,300.00	6,287.71	6,284.46	6,262.08	13.68	14.05	81.92	-262.25	-130.60	183.93	156.65	27.28	6.743		
6,400.00	6,386.90	6,383.71	6,359.57	13.93	14.35	81.95	-278.53	-139.56	196.19	168.41	27.78	7.062		
6,500.00	6,486.08	6,482.95	6,457.06	14.19	14.66	81.97	-294.81	-148.53	208.45	180.16	28.29	7.369		
6,600.00	6,585.27	6,582.20	6,554.55	14.44	14.97	81.99	-311.09	-157.49	220.71	191.91	28.80	7.663		
6,700.00	6,684.46	6,681.44	6,652.04	14.71	15.29	82.01	-327.37	-166.46	232.97	203.65	29.32	7.945		
6,800.00	6,783.65	6,780.69	6,749.53	14.97	15.61	82.02	-343.65	-175.43	245.23	215.38	29.85	8.215		
6,900.00	6,882.83	6,879.93	6,847.02	15.23	15.93	82.04	-359.93	-184.39	257.49	227.11	30.38	8.475		
7,000.00	6,982.02	6,979.18	6,944.51	15.50	16.26	82.05	-376.20	-193.36	269.75	238.84	30.92	8.725		
7,100.00	7,081.21	7,078.42	7,042.00	15.77	16.60	82.07	-392.48	-202.32	282.01	250.56	31.46	8.965		
7,147.27	7,128.09	7,125.34	7,088.08	15.90	16.75	82.07	-400.18	-206.56	287.81	256.09	31.71	9.075		
7,200.00	7,180.43	7,179.09	7,140.91	16.04	16.93	82.11	-408.89	-211.36	294.22	262.22	32.00	9.194		
7,300.00	7,279.82	7,282.47	7,242.74	16.30	17.24	82.09	-424.46	-219.93	305.58	273.05	32.53	9.394		
7,400.00	7,379.40	7,386.12	7,345.16	16.54	17.54	81.97	-438.45	-227.64	315.84	282.80	33.04	9.560		
7,500.00	7,479.12	7,490.04	7,448.10	16.78	17.84	81.75	-450.85	-234.47	325.01	291.48	33.53	9.693		
7,600.00	7,578.95	7,594.19	7,551.52	17.01	18.12	81.44	-461.64	-240.41	333.08	299.08	34.01	9.795		
7,700.00	7,678.87	7,698.55	7,655.36	17.24	18.39	81.04	-470.79	-245.45	340.06	305.60	34.46	9.868		
7,800.00	7,778.85	7,803.10	7,759.55	17.45	18.64	80.56	-478.29	-249.58	345.95	311.06	34.90	9.914		
7,878.16	7,857.00	7,884.93	7,841.21	17.60	18.83	-111.50	-483.00	-252.18	349.81	314.59	35.22	9.933		
7,900.00	7,878.84	7,907.82	7,864.06	17.64	18.89	-111.63	-484.14	-252.80	350.76	315.46	35.30	9.935		
8,000.00	7,978.84	8,012.71	7,968.84	17.85	19.12	-112.13	-488.32	-255.10	354.28	318.57	35.71	9.920		
8,078.16	8,057.00	8,094.80	8,050.89	18.00	19.29	-112.37	-490.41	-256.26	356.06	320.02	36.04	9.881		
8,100.00	8,078.84	8,117.74	8,073.82	18.05	19.33	-112.43	-490.82	-256.48	356.56	320.45	36.11	9.874		
8,150.00	8,128.65	8,170.06	8,126.15	18.12	19.44	-112.94	-491.43	-256.82	358.67	322.44	36.23	9.900		
8,200.00	8,177.93	8,221.84	8,177.93	18.18	19.53	-113.91	-491.63	-256.93	362.23	325.96	36.27	9.987		
8,250.00	8,226.28	8,270.20	8,226.28	18.22	19.62	-115.17	-491.63	-256.93	367.64	331.42	36.22	10.149		
8,300.00	8,273.34	8,317.26	8,273.34	18.24	19.71	-116.69	-491.63	-256.93	375.38	339.29	36.09	10.401		
8,350.00	8,318.76	8,362.68	8,318.76	18.24	19.80	-118.34	-491.63	-256.93	385.77	349.91	35.87	10.756		
8,400.00	8,362.18	8,406.10	8,362.18	18.23	19.88	-119.97	-491.63	-256.93	399.17	363.61	35.56	11.226		
8,450.00	8,403.28	8,467.91	8,423.94	18.22	19.98	-122.81	-489.70	-256.93	415.19	380.15	35.04	11.849		
8,500.00	8,441.75	8,547.69	8,502.74	18.20	20.06	-126.25	-477.66	-256.93	431.35	397.05	34.29	12.578		
8,550.00	8,477.29	8,637.38	8,588.34	18.19	20.07	-129.47	-451.23	-256.93	446.63	413.24	33.39	13.378		
8,600.00	8,509.63	8,738.09	8,678.22	18.19	20.00	-132.33	-406.06	-256.93	460.07	427.70	32.37	14.211		
8,650.00	8,538.52	8,849.93	8,767.03	18.21	19.86	-134.60	-338.38	-256.93	470.65	439.28	31.37	15.005		
8,700.00	8,563.75	8,971.12	8,846.46	18.25	19.67	-136.06	-247.14	-256.93	477.37	446.85	30.52	15.641		
8,750.00	8,585.13	9,097.63	8,907.00	18.31	19.49	-136.53	-136.35	-256.94	479.49	449.47	30.02	15.975		
8,800.00	8,602.48	9,223.76	8,941.74	18.41	19.36	-135.93	-15.37	-256.94	476.76	446.75	30.01	15.886		
8,850.00	8,615.68	9,330.52	8,949.96	18.55	19.59	-134.65	90.93	-256.94	469.65	439.23	30.42	15.439		
8,900.00	8,624.64	9,379.69	8,949.96	18.73	19.81	-134.33	140.10	-256.94	463.33	432.72	30.61	15.137		
8,950.00	8,629.27	9,429.46	8,949.96	18.94	20.06	-134.15	189.87	-256.94	460.09	429.15	30.94	14.872		

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 319H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													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		
8,978.14	8,629.96	9,457.59	8,949.96	19.07	20.21	-134.13	218.00	-256.94	459.61	428.43	31.17	14.743		
8,978.15	8,629.96	9,457.60	8,949.96	19.07	20.22	-134.13	218.01	-256.94	459.61	428.43	31.17	14.743		
9,000.00	8,629.96	9,479.45	8,949.96	19.18	20.34	-134.13	239.86	-256.95	459.61	428.25	31.35	14.659		
9,100.00	8,629.96	9,579.45	8,949.96	19.79	21.00	-134.13	339.86	-256.95	459.61	427.27	32.33	14.214		
9,200.00	8,629.96	9,679.45	8,949.96	20.54	21.78	-134.13	439.86	-256.95	459.61	426.09	33.52	13.710		
9,300.00	8,629.96	9,779.45	8,949.96	21.42	22.68	-134.13	539.86	-256.95	459.61	424.71	34.90	13.169		
9,400.00	8,629.96	9,879.45	8,949.96	22.42	23.68	-134.13	639.86	-256.95	459.61	423.17	36.44	12.612		
9,500.00	8,629.96	9,979.45	8,949.96	23.51	24.78	-134.13	739.86	-256.96	459.61	421.48	38.13	12.054		
9,600.00	8,629.96	10,079.45	8,949.97	24.69	25.95	-134.13	839.86	-256.96	459.62	419.67	39.95	11.506		
9,700.00	8,629.97	10,179.45	8,949.97	25.95	27.19	-134.13	939.86	-256.96	459.62	417.75	41.87	10.977		
9,800.00	8,629.97	10,279.45	8,949.97	27.27	28.50	-134.13	1,039.86	-256.96	459.62	415.72	43.90	10.471		
9,900.00	8,629.97	10,379.45	8,949.97	28.64	29.86	-134.13	1,139.86	-256.97	459.62	413.62	46.00	9.991		
10,000.00	8,629.97	10,479.45	8,949.97	30.07	31.27	-134.12	1,239.86	-256.97	459.62	411.44	48.18	9.540		
10,100.00	8,629.97	10,579.45	8,949.97	31.53	32.71	-134.12	1,339.86	-256.97	459.62	409.20	50.42	9.116		
10,200.00	8,629.97	10,679.45	8,949.97	33.03	34.20	-134.12	1,439.86	-256.97	459.63	406.91	52.72	8.718		
10,300.00	8,629.97	10,779.45	8,949.97	34.57	35.71	-134.12	1,539.86	-256.98	459.63	404.56	55.06	8.347		
10,400.00	8,629.97	10,879.45	8,949.97	36.13	37.26	-134.12	1,639.86	-256.98	459.63	402.18	57.45	8.000		
10,500.00	8,629.97	10,979.45	8,949.97	37.71	38.83	-134.12	1,739.86	-256.98	459.63	399.75	59.88	7.676		
10,600.00	8,629.98	11,079.45	8,949.98	39.32	40.41	-134.12	1,839.86	-256.98	459.63	397.30	62.34	7.374		
10,700.00	8,629.98	11,179.45	8,949.98	40.94	42.02	-134.12	1,939.86	-256.98	459.63	394.81	64.82	7.091		
10,800.00	8,629.98	11,279.45	8,949.98	42.58	43.65	-134.12	2,039.86	-256.99	459.64	392.30	67.34	6.826		
10,900.00	8,629.98	11,379.45	8,949.98	44.24	45.29	-134.12	2,139.86	-256.99	459.64	389.77	69.87	6.578		
11,000.00	8,629.98	11,479.45	8,949.98	45.91	46.95	-134.12	2,239.86	-256.99	459.64	387.21	72.43	6.346		
11,100.00	8,629.98	11,579.45	8,949.98	47.58	48.61	-134.12	2,339.86	-256.99	459.64	384.64	75.00	6.128		
11,200.00	8,629.98	11,679.45	8,949.98	49.28	50.29	-134.12	2,439.86	-257.00	459.64	382.05	77.60	5.924		
11,300.00	8,629.98	11,779.45	8,949.98	50.97	51.98	-134.12	2,539.86	-257.00	459.64	379.44	80.20	5.731		
11,400.00	8,629.98	11,879.45	8,949.98	52.68	53.68	-134.12	2,639.86	-257.00	459.65	376.82	82.82	5.550		
11,500.00	8,629.98	11,979.45	8,949.99	54.40	55.38	-134.12	2,739.86	-257.00	459.65	374.19	85.46	5.379		
11,600.00	8,629.99	12,079.45	8,949.99	56.12	57.09	-134.12	2,839.86	-257.01	459.65	371.55	88.10	5.217		
11,700.00	8,629.99	12,179.45	8,949.99	57.85	58.81	-134.12	2,939.86	-257.01	459.65	368.89	90.76	5.065		
11,800.00	8,629.99	12,279.45	8,949.99	59.59	60.54	-134.12	3,039.86	-257.01	459.65	366.23	93.42	4.920		
11,900.00	8,629.99	12,379.45	8,949.99	61.33	62.27	-134.12	3,139.86	-257.01	459.65	363.56	96.10	4.783		
12,000.00	8,629.99	12,479.45	8,949.99	63.07	64.01	-134.12	3,239.86	-257.01	459.66	360.88	98.78	4.653		
12,100.00	8,629.99	12,579.45	8,949.99	64.82	65.75	-134.12	3,339.86	-257.02	459.66	358.19	101.47	4.530		
12,200.00	8,629.99	12,679.45	8,949.99	66.58	67.50	-134.12	3,439.86	-257.02	459.66	355.50	104.16	4.413		
12,300.00	8,629.99	12,779.45	8,949.99	68.33	69.25	-134.12	3,539.86	-257.02	459.66	352.80	106.86	4.301		
12,400.00	8,629.99	12,879.45	8,949.99	70.10	71.00	-134.12	3,639.86	-257.02	459.66	350.09	109.57	4.195		
12,500.00	8,630.00	12,979.45	8,950.00	71.86	72.76	-134.12	3,739.86	-257.03	459.66	347.38	112.28	4.094		
12,600.00	8,630.00	13,079.45	8,950.00	73.63	74.52	-134.12	3,839.86	-257.03	459.66	344.66	115.00	3.997		
12,700.00	8,630.00	13,179.45	8,950.00	75.40	76.29	-134.12	3,939.86	-257.03	459.67	341.94	117.72	3.905		
12,800.00	8,630.00	13,279.45	8,950.00	77.17	78.06	-134.12	4,039.86	-257.03	459.67	339.22	120.45	3.816		
12,900.00	8,630.00	13,379.45	8,950.00	78.95	79.83	-134.12	4,139.86	-257.03	459.67	336.49	123.18	3.732		
12,943.75	8,630.00	13,423.20	8,950.00	79.73	80.60	-134.12	4,183.61	-257.04	459.67	335.29	124.38	3.696		
12,975.20	8,630.00	13,452.65	8,950.00	80.29	81.12	-134.12	4,213.06	-257.04	459.68	334.47	125.21	3.671		

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 320H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													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	179.84	-75.00	0.21	75.00					
100.00	100.00	100.00	100.00	0.08	0.08	179.84	-75.00	0.21	75.00	74.84	0.16	476.687		
200.00	200.00	200.00	200.00	0.30	0.30	179.84	-75.00	0.21	75.00	74.39	0.61	123.586		
300.00	300.00	300.00	300.00	0.53	0.53	179.84	-75.00	0.21	75.00	73.94	1.06	70.996		
400.00	400.00	400.00	400.00	0.75	0.75	179.84	-75.00	0.21	75.00	73.49	1.51	49.803		
500.00	500.00	500.00	500.00	0.98	0.98	179.84	-75.00	0.21	75.00	73.04	1.96	38.354		
600.00	600.00	600.00	600.00	1.20	1.20	179.84	-75.00	0.21	75.00	72.60	2.40	31.185		
700.00	700.00	700.00	700.00	1.43	1.43	179.84	-75.00	0.21	75.00	72.15	2.85	26.274		
800.00	800.00	800.00	800.00	1.65	1.65	179.84	-75.00	0.21	75.00	71.70	3.30	22.699		
900.00	900.00	900.00	900.00	1.88	1.88	179.84	-75.00	0.21	75.00	71.25	3.75	19.981		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	179.84	-75.00	0.21	75.00	70.80	4.20	17.844		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	179.84	-75.00	0.21	75.00	70.35	4.65	16.120		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	179.84	-75.00	0.21	75.00	69.90	5.10	14.700		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	179.84	-75.00	0.21	75.00	69.45	5.55	13.509		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	179.84	-75.00	0.21	75.00	69.00	6.00	12.497		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	179.84	-75.00	0.21	75.00	68.55	6.45	11.627		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	179.84	-75.00	0.21	75.00	68.10	6.90	10.869		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	179.84	-75.00	0.21	75.00	67.65	7.35	10.204		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	179.84	-75.00	0.21	75.00	67.20	7.80	9.616		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	179.84	-75.00	0.21	75.00	66.75	8.25	9.092		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	179.84	-75.00	0.21	75.00	66.30	8.70	8.622		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	179.84	-75.00	0.21	75.00	65.85	9.15	8.199		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	179.84	-75.00	0.21	75.00	65.40	9.60	7.815		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	179.84	-75.00	0.21	75.00	64.95	10.05	7.465		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	179.84	-75.00	0.21	75.00	64.50	10.50	7.145		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	179.84	-75.00	0.21	75.00	64.05	10.95	6.852		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	179.84	-75.00	0.21	75.00	63.60	11.40	6.581		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	179.84	-75.00	0.21	75.00	63.16	11.85	6.332		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	179.84	-75.00	0.21	75.00	62.71	12.29	6.100		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	179.84	-75.00	0.21	75.00	62.26	12.74	5.885		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	179.84	-75.00	0.21	75.00	61.81	13.19	5.685		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	179.84	-75.00	0.21	75.00	61.36	13.64	5.497		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	179.84	-75.00	0.21	75.00	60.91	14.09	5.322		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	179.84	-75.00	0.21	75.00	60.46	14.54	5.157		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	179.84	-75.00	0.21	75.00	60.01	14.99	5.003		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	179.84	-75.00	0.21	75.00	59.56	15.44	4.857		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	179.84	-75.00	0.21	75.00	59.11	15.89	4.720		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	179.84	-75.00	0.21	75.00	58.66	16.34	4.590		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	179.84	-75.00	0.21	75.00	58.21	16.79	4.467		
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	179.84	-75.00	0.21	75.00	57.76	17.24	4.350		
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	179.84	-75.00	0.21	75.00	57.31	17.69	4.240		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	179.84	-75.00	0.21	75.00	56.86	18.14	4.135		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	179.84	-75.00	0.21	75.00	56.41	18.59	4.035		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	179.84	-75.00	0.21	75.00	55.96	19.04	3.940		
4,400.00	4,400.00	4,399.46	4,399.45	9.71	9.72	10.98	-75.35	1.00	74.50	55.07	19.43	3.834		
4,500.00	4,499.96	4,498.88	4,498.84	9.88	9.91	9.53	-76.41	3.36	73.05	53.27	19.78	3.693		
4,600.00	4,599.86	4,598.23	4,598.09	10.05	10.09	6.98	-78.17	7.30	70.73	50.61	20.12	3.515		
4,700.00	4,699.68	4,697.46	4,697.14	10.23	10.29	3.13	-80.63	12.79	67.74	47.28	20.46	3.310		
4,800.00	4,799.37	4,796.55	4,795.93	10.40	10.48	-2.29	-83.78	19.84	64.40	43.59	20.80	3.095		
4,900.00	4,898.90	4,895.45	4,894.38	10.58	10.68	-9.61	-87.62	28.43	61.19	40.05	21.14	2.894		
5,000.00	4,998.26	4,994.13	4,992.43	10.77	10.88	-19.05	-92.15	38.55	58.84	37.35	21.49	2.738		
5,030.89	5,028.91	5,024.56	5,022.63	10.83	10.95	-22.39	-93.68	41.98	58.43	36.83	21.60	2.705		

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 320H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													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)						
5,057.84	5,055.64	5,051.09	5,048.94	10.88	11.00	-25.42	-95.07	45.09	58.29	36.59	21.70	2.686	CC, ES	
5,100.00	5,097.46	5,092.57	5,090.05	10.96	11.09	-30.26	-97.35	50.18	58.64	36.77	21.87	2.681	SF	
5,200.00	5,196.65	5,191.52	5,187.98	11.16	11.31	-41.49	-103.10	63.03	61.92	39.64	22.28	2.779		
5,300.00	5,295.83	5,290.75	5,286.19	11.37	11.54	-51.30	-108.89	76.00	67.42	44.72	22.70	2.970		
5,400.00	5,395.02	5,389.97	5,384.40	11.58	11.77	-59.45	-114.69	88.96	74.60	51.46	23.13	3.224		
5,500.00	5,494.21	5,489.20	5,482.61	11.79	12.01	-66.08	-120.49	101.93	83.01	59.44	23.57	3.521		
5,600.00	5,593.40	5,588.43	5,580.81	12.01	12.25	-71.43	-126.29	114.89	92.32	68.30	24.02	3.844		
5,700.00	5,692.58	5,687.66	5,679.02	12.24	12.50	-75.79	-132.09	127.85	102.29	77.82	24.47	4.180		
5,800.00	5,791.77	5,786.89	5,777.23	12.47	12.75	-79.35	-137.89	140.82	112.74	87.81	24.94	4.521		
5,900.00	5,890.96	5,886.12	5,875.44	12.71	13.01	-82.31	-143.69	153.78	123.55	98.15	25.40	4.864		
6,000.00	5,990.15	5,985.35	5,973.64	12.94	13.27	-84.78	-149.49	166.75	134.64	108.76	25.88	5.202		
6,100.00	6,089.33	6,084.58	6,071.85	13.19	13.54	-86.88	-155.28	179.71	145.93	119.57	26.36	5.536		
6,200.00	6,188.52	6,183.81	6,170.06	13.43	13.80	-88.67	-161.08	192.68	157.39	130.54	26.85	5.862		
6,300.00	6,287.71	6,283.04	6,268.27	13.68	14.07	-90.22	-166.88	205.64	168.98	141.64	27.35	6.179		
6,400.00	6,386.90	6,382.27	6,366.47	13.93	14.35	-91.57	-172.68	218.61	180.68	152.83	27.85	6.489		
6,500.00	6,486.08	6,481.49	6,464.68	14.19	14.62	-92.75	-178.48	231.57	192.46	164.11	28.35	6.789		
6,600.00	6,585.27	6,580.72	6,562.89	14.44	14.90	-93.80	-184.28	244.54	204.32	175.46	28.86	7.079		
6,700.00	6,684.46	6,679.95	6,661.10	14.71	15.19	-94.73	-190.08	257.50	216.24	186.86	29.38	7.361		
6,800.00	6,783.65	6,779.18	6,759.30	14.97	15.47	-95.57	-195.88	270.47	228.20	198.31	29.90	7.633		
6,900.00	6,882.83	6,878.41	6,857.51	15.23	15.76	-96.32	-201.68	283.43	240.22	209.79	30.42	7.896		
7,000.00	6,982.02	6,977.64	6,955.72	15.50	16.05	-97.00	-207.47	296.40	252.26	221.31	30.95	8.151		
7,100.00	7,081.21	7,076.87	7,053.93	15.77	16.34	-97.62	-213.27	309.36	264.34	232.86	31.48	8.397		
7,147.27	7,128.09	7,123.77	7,100.35	15.90	16.48	-97.90	-216.01	315.49	270.06	238.33	31.73	8.510		
7,200.00	7,180.43	7,176.11	7,152.14	16.04	16.63	-98.20	-219.07	322.33	276.42	244.40	32.02	8.634		
7,300.00	7,279.82	7,275.40	7,250.41	16.30	16.93	-98.48	-224.87	335.30	288.28	255.74	32.54	8.860		
7,400.00	7,379.40	7,374.72	7,348.70	16.54	17.23	-98.42	-230.68	348.28	299.89	266.85	33.04	9.075		
7,500.00	7,479.12	7,477.73	7,450.77	16.78	17.50	-98.12	-236.38	361.03	310.72	277.20	33.52	9.269		
7,600.00	7,578.95	7,581.39	7,553.70	17.01	17.75	-97.74	-241.37	372.17	320.03	286.05	33.98	9.417		
7,700.00	7,678.87	7,685.32	7,657.12	17.24	18.00	-97.29	-245.60	381.64	327.82	293.39	34.43	9.522		
7,800.00	7,778.85	7,789.49	7,760.94	17.45	18.24	-96.75	-249.07	389.41	334.10	299.24	34.86	9.585		
7,878.16	7,857.00	7,871.05	7,842.31	17.60	18.42	-72.12	-251.26	394.28	337.95	302.78	35.17	9.608		
7,900.00	7,878.84	7,893.86	7,865.09	17.64	18.47	72.26	-251.78	395.46	338.87	303.61	35.26	9.611		
8,000.00	7,978.84	7,998.41	7,969.53	17.85	18.69	72.79	-253.72	399.78	342.26	306.60	35.66	9.597		
8,078.16	8,057.00	8,080.22	8,051.31	18.00	18.85	73.05	-254.69	401.96	343.98	308.00	35.98	9.560		
8,100.00	8,078.84	8,103.09	8,074.17	18.05	18.90	73.15	-254.87	402.37	344.18	308.12	36.07	9.543		
8,150.00	8,128.65	8,155.26	8,126.33	18.12	18.99	73.97	-255.16	403.01	343.53	307.31	36.22	9.485		
8,200.00	8,177.93	8,206.85	8,177.93	18.18	19.09	75.60	-255.25	403.21	341.46	305.15	36.32	9.403		
8,250.00	8,226.28	8,255.20	8,226.28	18.22	19.18	77.90	-255.25	403.21	338.47	302.09	36.37	9.306		
8,300.00	8,273.34	8,302.26	8,273.34	18.24	19.27	80.88	-255.25	403.21	335.18	298.78	36.40	9.207		
8,350.00	8,318.76	8,347.68	8,318.76	18.24	19.36	84.40	-255.25	403.21	332.25	295.83	36.42	9.122		
8,400.00	8,362.18	8,391.11	8,362.18	18.23	19.44	88.29	-255.25	403.21	330.46	294.04	36.42	9.073		
8,421.25	8,379.95	8,408.88	8,379.95	18.23	19.48	90.00	-255.24	403.21	330.25	293.85	36.41	9.071		
8,450.00	8,403.28	8,432.98	8,404.05	18.22	19.53	92.31	-254.61	403.21	330.65	294.27	36.38	9.089		
8,500.00	8,441.75	8,476.34	8,447.24	18.20	19.60	96.32	-250.93	403.21	333.27	296.99	36.28	9.187		
8,550.00	8,477.29	8,521.81	8,492.10	18.19	19.68	100.28	-243.57	403.21	338.38	302.28	36.09	9.375		
8,600.00	8,509.63	8,569.81	8,538.66	18.19	19.75	104.18	-231.97	403.21	345.91	310.09	35.81	9.659		
8,650.00	8,538.52	8,620.87	8,586.94	18.21	19.81	108.00	-215.40	403.21	355.70	320.27	35.42	10.041		
8,700.00	8,563.75	8,675.61	8,636.84	18.25	19.87	111.73	-192.94	403.21	367.47	332.55	34.92	10.523		
8,750.00	8,585.13	8,734.82	8,688.13	18.31	19.93	115.38	-163.41	403.21	380.84	346.53	34.32	11.098		
8,800.00	8,602.48	8,799.46	8,740.31	18.41	19.98	118.94	-125.33	403.21	395.35	361.72	33.63	11.756		
8,850.00	8,615.68	8,870.61	8,792.39	18.55	20.04	122.40	-76.92	403.20	410.44	377.54	32.90	12.474		
8,900.00	8,624.64	8,949.48	8,842.62	18.73	20.11	125.69	-16.18	403.20	425.44	393.25	32.19	13.215		

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 320H (SIMOPS) - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
8,950.00	8,829.27	9,037.24	8,888.11	18.94	20.22	128.74	58.76	403.20	439.60	408.00	31.59	13.914	
8,978.15	8,829.96	9,090.87	8,910.07	19.07	20.33	130.31	107.67	403.19	446.87	415.53	31.35	14.257	
9,000.00	8,829.96	9,134.93	8,924.63	19.18	20.45	131.74	149.24	403.19	451.77	420.66	31.12	14.519	
9,100.00	8,829.96	9,328.10	8,949.96	19.79	21.43	134.10	339.89	403.18	459.83	428.23	31.60	14.553	
9,200.00	8,829.96	9,428.10	8,949.96	20.54	22.17	134.10	439.89	403.17	459.83	427.11	32.72	14.054	
9,300.00	8,829.96	9,528.10	8,949.96	21.42	23.03	134.10	539.89	403.17	459.82	425.79	34.03	13.511	
9,400.00	8,829.96	9,628.10	8,949.96	22.42	24.01	134.10	639.89	403.16	459.82	424.30	35.52	12.945	
9,500.00	8,829.96	9,728.10	8,949.96	23.51	25.08	134.10	739.89	403.16	459.81	422.65	37.16	12.372	
9,600.00	8,829.96	9,828.10	8,949.96	24.69	26.23	134.10	839.89	403.15	459.81	420.87	38.94	11.807	
9,700.00	8,829.97	9,928.10	8,949.96	25.95	27.45	134.10	939.89	403.14	459.81	418.97	40.84	11.260	
9,800.00	8,829.97	10,028.10	8,949.97	27.27	28.74	134.10	1,039.89	403.14	459.80	416.97	42.83	10.735	
9,900.00	8,829.97	10,128.10	8,949.97	28.64	30.08	134.10	1,139.89	403.13	459.80	414.88	44.92	10.237	
10,000.00	8,829.97	10,228.10	8,949.97	30.07	31.48	134.10	1,239.89	403.13	459.79	412.72	47.08	9.767	
10,100.00	8,829.97	10,328.10	8,949.97	31.53	32.91	134.10	1,339.89	403.12	459.79	410.49	49.30	9.326	
10,200.00	8,829.97	10,428.10	8,949.97	33.03	34.38	134.10	1,439.89	403.12	459.79	408.20	51.58	8.913	
10,300.00	8,829.97	10,528.10	8,949.97	34.57	35.88	134.11	1,539.89	403.11	459.78	405.86	53.92	8.527	
10,400.00	8,829.97	10,628.10	8,949.97	36.13	37.42	134.11	1,639.89	403.10	459.78	403.48	56.30	8.167	
10,500.00	8,829.97	10,728.10	8,949.97	37.71	38.97	134.11	1,739.89	403.10	459.77	401.06	58.71	7.831	
10,600.00	8,829.98	10,828.10	8,949.97	39.32	40.55	134.11	1,839.89	403.09	459.77	398.61	61.16	7.517	
10,700.00	8,829.98	10,928.10	8,949.98	40.94	42.15	134.11	1,939.89	403.09	459.76	396.12	63.64	7.224	
10,800.00	8,829.98	11,028.10	8,949.98	42.58	43.77	134.11	2,039.89	403.08	459.76	393.61	66.15	6.950	
10,900.00	8,829.98	11,128.10	8,949.98	44.24	45.40	134.11	2,139.89	403.08	459.76	391.08	68.68	6.694	
11,000.00	8,829.98	11,228.10	8,949.98	45.91	47.05	134.11	2,239.89	403.07	459.75	388.52	71.23	6.454	
11,100.00	8,829.98	11,328.10	8,949.98	47.58	48.71	134.11	2,339.89	403.06	459.75	385.95	73.80	6.229	
11,200.00	8,829.98	11,428.10	8,949.98	49.28	50.38	134.11	2,439.89	403.06	459.74	383.35	76.39	6.018	
11,300.00	8,829.98	11,528.10	8,949.98	50.97	52.07	134.11	2,539.89	403.05	459.74	380.75	78.99	5.820	
11,400.00	8,829.98	11,628.10	8,949.98	52.68	53.76	134.11	2,639.89	403.05	459.74	378.12	81.61	5.633	
11,500.00	8,829.98	11,728.10	8,949.98	54.40	55.46	134.11	2,739.89	403.04	459.73	375.49	84.24	5.457	
11,600.00	8,829.99	11,828.10	8,949.99	56.12	57.16	134.11	2,839.89	403.03	459.73	372.84	86.88	5.291	
11,700.00	8,829.99	11,928.10	8,949.99	57.85	58.88	134.11	2,939.89	403.03	459.72	370.19	89.54	5.135	
11,800.00	8,829.99	12,028.10	8,949.99	59.59	60.60	134.11	3,039.89	403.02	459.72	367.52	92.20	4.986	
11,900.00	8,829.99	12,128.10	8,949.99	61.33	62.33	134.11	3,139.89	403.02	459.72	364.85	94.87	4.846	
12,000.00	8,829.99	12,228.10	8,949.99	63.07	64.06	134.11	3,239.89	403.01	459.71	362.16	97.55	4.713	
12,100.00	8,829.99	12,328.10	8,949.99	64.82	65.80	134.11	3,339.89	403.01	459.71	359.47	100.23	4.586	
12,200.00	8,829.99	12,428.10	8,949.99	66.58	67.54	134.12	3,439.89	403.00	459.70	356.78	102.93	4.466	
12,300.00	8,829.99	12,528.10	8,949.99	68.33	69.29	134.12	3,539.89	402.99	459.70	354.07	105.62	4.352	
12,400.00	8,829.99	12,628.10	8,949.99	70.10	71.04	134.12	3,639.89	402.99	459.69	351.37	108.33	4.244	
12,500.00	8,830.00	12,728.10	8,950.00	71.86	72.80	134.12	3,739.89	402.98	459.69	348.65	111.04	4.140	
12,600.00	8,830.00	12,828.10	8,950.00	73.63	74.55	134.12	3,839.89	402.98	459.69	345.93	113.75	4.041	
12,700.00	8,830.00	12,928.10	8,950.00	75.40	76.32	134.12	3,939.89	402.97	459.68	343.21	116.47	3.947	
12,800.00	8,830.00	13,028.10	8,950.00	77.17	78.08	134.12	4,039.89	402.96	459.68	340.48	119.20	3.856	
12,900.00	8,830.00	13,128.10	8,950.00	78.95	79.85	134.12	4,139.89	402.96	459.67	337.75	121.93	3.770	
12,975.20	8,830.00	13,203.30	8,950.00	80.29	81.18	134.12	4,215.09	402.95	459.67	335.69	123.98	3.708	

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 321H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													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)						
0.00	0.00	0.00	0.00	0.00	0.00	139.16	-209.04	180.72	276.33					
100.00	100.00	100.00	100.00	0.08	0.08	139.16	-209.04	180.72	276.33	276.17	0.16	1,756.284		
200.00	200.00	200.00	200.00	0.30	0.30	139.16	-209.04	180.72	276.33	275.72	0.61	455.333		
300.00	300.00	300.00	300.00	0.53	0.53	139.16	-209.04	180.72	276.33	275.27	1.06	261.574		
400.00	400.00	400.00	400.00	0.75	0.75	139.16	-209.04	180.72	276.33	274.82	1.51	183.493		
500.00	500.00	500.00	500.00	0.98	0.98	139.16	-209.04	180.72	276.33	274.37	1.96	141.310		
600.00	600.00	600.00	600.00	1.20	1.20	139.16	-209.04	180.72	276.33	273.92	2.40	114.897		
700.00	700.00	700.00	700.00	1.43	1.43	139.16	-209.04	180.72	276.33	273.47	2.85	96.803		
800.00	800.00	800.00	800.00	1.65	1.65	139.16	-209.04	180.72	276.33	273.02	3.30	83.633		
900.00	900.00	900.00	900.00	1.88	1.88	139.16	-209.04	180.72	276.33	272.57	3.75	73.617		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	139.16	-209.04	180.72	276.33	272.12	4.20	65.743		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	139.16	-209.04	180.72	276.33	271.67	4.65	59.391		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	139.16	-209.04	180.72	276.33	271.23	5.10	54.159		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	139.16	-209.04	180.72	276.33	270.78	5.55	49.773		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	139.16	-209.04	180.72	276.33	270.33	6.00	46.045		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	139.16	-209.04	180.72	276.33	269.88	6.45	42.836		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	139.16	-209.04	180.72	276.33	269.43	6.90	40.046		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	139.16	-209.04	180.72	276.33	268.98	7.35	37.596		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	139.16	-209.04	180.72	276.33	268.53	7.80	35.429		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	139.16	-209.04	180.72	276.33	268.08	8.25	33.499		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	139.16	-209.04	180.72	276.33	267.63	8.70	31.767		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	139.16	-209.04	180.72	276.33	267.18	9.15	30.206		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	139.16	-209.04	180.72	276.33	266.73	9.60	28.792		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	139.16	-209.04	180.72	276.33	266.28	10.05	27.503		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	139.16	-209.04	180.72	276.33	265.83	10.50	26.325		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	139.16	-209.04	180.72	276.33	265.38	10.95	25.244		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	139.16	-209.04	180.72	276.33	264.93	11.40	24.249		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	139.16	-209.04	180.72	276.33	264.48	11.85	23.328		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	139.16	-209.04	180.72	276.33	264.03	12.29	22.475		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	139.16	-209.04	180.72	276.33	263.58	12.74	21.683		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	139.16	-209.04	180.72	276.33	263.13	13.19	20.944		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	139.16	-209.04	180.72	276.33	262.68	13.64	20.254		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	139.16	-209.04	180.72	276.33	262.23	14.09	19.608		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	139.16	-209.04	180.72	276.33	261.79	14.54	19.002		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	139.16	-209.04	180.72	276.33	261.34	14.99	18.432		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	139.16	-209.04	180.72	276.33	260.89	15.44	17.895		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	139.16	-209.04	180.72	276.33	260.44	15.89	17.389		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	139.16	-209.04	180.72	276.33	259.99	16.34	16.911		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	139.16	-209.04	180.72	276.33	259.54	16.79	16.458		
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	139.16	-209.04	180.72	276.33	259.09	17.24	16.029		
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	139.16	-209.04	180.72	276.33	258.64	17.69	15.621		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	139.16	-209.04	180.72	276.33	258.19	18.14	15.234		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	139.16	-209.04	180.72	276.33	257.74	18.59	14.866		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	139.16	-209.04	180.72	276.33	257.29	19.04	14.515		
4,400.00	4,400.00	4,396.04	4,396.03	9.71	9.72	-29.40	-209.29	181.48	276.28	256.85	19.43	14.220		
4,500.00	4,499.96	4,492.03	4,491.99	9.88	9.90	-29.92	-210.03	183.78	276.17	256.39	19.77	13.968		
4,600.00	4,599.86	4,587.94	4,587.82	10.05	10.08	-30.77	-211.26	187.60	276.02	255.91	20.11	13.723		
4,700.00	4,699.68	4,683.73	4,683.44	10.23	10.27	-31.97	-212.98	192.95	275.93	255.48	20.45	13.490		
4,719.80	4,719.42	4,702.67	4,702.34	10.26	10.31	-32.25	-213.37	194.18	275.93	255.40	20.52	13.445 CC		
4,800.00	4,799.37	4,779.35	4,778.79	10.40	10.46	-33.51	-215.18	199.79	276.00	255.20	20.80	13.271 ES		
4,900.00	4,898.90	4,874.76	4,873.80	10.58	10.65	-35.38	-217.87	208.14	276.36	255.22	21.14	13.072		
5,000.00	4,998.26	4,969.93	4,968.40	10.77	10.85	-37.57	-221.03	217.96	277.19	255.70	21.49	12.899		

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 321H (SIMOPS) - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: O-LEAM MWD-ADJ													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N-S (usft)	+E-W (usft)					
5,030.89	5,028.91	5,000.00	4,998.26	10.83	10.91	-38.32	-222.13	221.37	277.57	255.97	21.60	12.851	
5,100.00	5,097.46	5,064.84	5,062.57	10.96	11.05	-40.01	-224.66	229.24	278.99	257.13	21.86	12.762	
5,200.00	5,196.65	5,159.52	5,156.30	11.16	11.27	-42.53	-228.76	241.97	282.85	260.60	22.25	12.714	
5,300.00	5,295.83	5,253.92	5,249.52	11.37	11.49	-45.04	-233.32	256.13	288.88	266.24	22.64	12.760	
5,400.00	5,395.02	5,348.01	5,342.18	11.58	11.72	-47.52	-238.33	271.70	297.10	274.06	23.04	12.895	
5,500.00	5,494.21	5,441.73	5,434.19	11.79	11.96	-49.90	-243.78	288.64	307.49	284.05	23.44	13.116	
5,600.00	5,593.40	5,535.02	5,525.48	12.01	12.21	-52.16	-249.67	306.93	320.03	296.17	23.85	13.416	
5,700.00	5,692.58	5,629.10	5,617.22	12.24	12.48	-54.29	-256.05	326.76	334.63	310.35	24.27	13.786	
5,800.00	5,791.77	5,727.14	5,712.72	12.47	12.77	-56.34	-262.84	347.86	350.15	325.45	24.71	14.172	
5,900.00	5,890.96	5,825.17	5,808.22	12.71	13.08	-58.21	-269.63	368.95	366.09	340.94	25.15	14.558	
6,000.00	5,990.15	5,923.21	5,903.72	12.94	13.39	-59.93	-276.42	390.05	382.37	356.78	25.59	14.940	
6,100.00	6,089.33	6,021.24	5,999.21	13.19	13.71	-61.51	-283.21	411.14	398.97	372.92	26.05	15.316	
6,200.00	6,188.52	6,119.27	6,094.71	13.43	14.04	-62.96	-290.00	432.23	415.84	389.33	26.51	15.686	
6,300.00	6,287.71	6,217.31	6,190.21	13.68	14.38	-64.30	-296.79	453.33	432.96	405.98	26.98	16.048	
6,400.00	6,386.90	6,315.34	6,285.70	13.93	14.73	-65.53	-303.59	474.42	450.28	422.83	27.45	16.402	
6,500.00	6,486.08	6,413.38	6,381.20	14.19	15.08	-66.68	-310.38	495.52	467.80	439.87	27.94	16.746	
6,600.00	6,585.27	6,511.41	6,476.70	14.44	15.44	-67.74	-317.17	516.61	485.49	457.07	28.42	17.080	
6,700.00	6,684.46	6,609.45	6,572.19	14.71	15.81	-68.73	-323.96	537.71	503.33	474.41	28.92	17.405	
6,800.00	6,783.65	6,707.48	6,667.69	14.97	16.18	-69.65	-330.75	558.80	521.30	491.88	29.42	17.720	
6,900.00	6,882.83	6,805.52	6,763.19	15.23	16.55	-70.51	-337.54	579.90	539.40	509.48	29.93	18.024	
7,000.00	6,982.02	6,903.55	6,858.68	15.50	16.93	-71.32	-344.33	600.99	557.61	527.17	30.44	18.319	
7,100.00	7,081.21	7,001.58	6,954.18	15.77	17.31	-72.07	-351.12	622.09	575.92	544.96	30.96	18.604	
7,147.27	7,128.09	7,047.92	6,999.32	15.90	17.50	-72.41	-354.33	632.06	584.61	553.40	31.20	18.735	
7,200.00	7,180.43	7,099.62	7,049.68	16.04	17.70	-72.85	-357.91	643.18	594.39	562.91	31.48	18.882	
7,300.00	7,279.82	7,197.66	7,145.19	16.30	18.10	-73.54	-364.70	664.28	613.37	581.38	31.99	19.173	
7,400.00	7,379.40	7,295.68	7,240.67	16.54	18.49	-74.05	-371.49	685.37	632.87	600.38	32.49	19.477	
7,500.00	7,479.12	7,393.65	7,336.10	16.78	18.89	-74.40	-378.28	706.45	652.85	619.87	32.99	19.792	
7,600.00	7,578.95	7,491.54	7,431.45	17.01	19.29	-74.59	-385.06	727.51	673.29	639.83	33.46	20.120	
7,700.00	7,678.87	7,589.32	7,526.70	17.24	19.70	-74.65	-391.83	748.55	694.19	660.26	33.93	20.459	
7,800.00	7,778.85	7,686.95	7,621.81	17.45	20.10	-74.59	-398.59	769.56	715.55	681.17	34.38	20.811	
7,878.16	7,857.00	7,763.14	7,696.03	17.60	20.42	93.93	-403.87	785.95	732.58	697.85	34.72	21.098	
7,900.00	7,878.84	7,784.42	7,716.75	17.64	20.51	94.02	-405.34	790.53	737.38	702.56	34.82	21.179	
8,000.00	7,978.84	7,881.83	7,811.64	17.85	20.92	94.43	-412.09	811.49	759.38	724.13	35.25	21.543	
8,078.16	8,057.00	7,957.96	7,885.81	18.00	21.25	94.73	-417.36	827.87	776.60	741.01	35.59	21.822	
8,100.00	8,078.84	7,979.21	7,906.50	18.05	21.34	94.35	-418.83	832.44	781.44	745.75	35.70	21.891	
8,150.00	8,128.65	8,027.45	7,953.50	18.12	21.54	93.66	-422.18	842.83	792.79	756.87	35.93	22.067	
8,200.00	8,177.93	8,074.87	7,999.68	18.18	21.74	93.22	-425.46	853.03	804.51	768.39	36.12	22.272	
8,250.00	8,226.28	8,121.09	8,044.71	18.22	21.94	92.99	-428.66	862.97	816.67	780.38	36.29	22.506	
8,300.00	8,273.34	8,165.77	8,088.23	18.24	22.13	92.90	-431.76	872.59	829.39	792.97	36.42	22.771	
8,350.00	8,318.76	8,208.56	8,129.92	18.24	22.32	92.90	-434.72	881.80	842.82	806.29	36.54	23.068	
8,400.00	8,362.18	8,249.15	8,169.45	18.23	22.49	92.92	-437.53	890.53	857.14	820.50	36.63	23.398	
8,450.00	8,403.28	8,287.22	8,206.54	18.22	22.66	92.90	-440.17	898.72	872.52	835.79	36.72	23.760	
8,500.00	8,441.75	8,322.48	8,240.88	18.20	22.81	92.75	-442.61	906.31	889.13	852.32	36.81	24.153	
8,550.00	8,477.29	8,354.66	8,272.23	18.19	22.95	92.42	-444.84	913.23	907.13	870.22	36.92	24.573	
8,600.00	8,509.63	8,383.52	8,300.35	18.19	23.07	91.82	-446.84	919.44	926.64	889.60	37.04	25.017	
8,650.00	8,538.52	8,408.85	8,325.02	18.21	23.18	90.91	-448.59	924.89	947.73	910.54	37.19	25.485	
8,700.00	8,563.75	8,430.43	8,346.05	18.25	23.28	89.63	-450.09	929.54	970.43	933.07	37.36	25.977	
8,750.00	8,585.13	8,490.40	8,404.56	18.31	23.51	90.47	-451.69	942.46	994.45	956.91	37.54	26.489	
8,800.00	8,602.48	8,519.82	8,529.46	18.41	23.93	94.86	-433.93	970.05	1,018.48	980.86	37.62	27.073	
8,850.00	8,615.68	8,951.71	8,803.46	18.55	24.63	105.31	-265.50	1,030.58	1,038.91	1,002.03	36.88	28.172	
8,900.00	8,624.64	9,395.06	8,950.00	18.73	25.47	108.04	140.11	1,062.95	1,042.08	1,004.12	37.96	27.453	
8,950.00	8,629.27	9,444.83	8,950.00	18.94	25.65	107.93	189.88	1,062.95	1,040.65	1,002.29	38.36	27.129	

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 321H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)		
8,978.15	8,629.96	9,472.97	8,950.00	19.07	25.76	107.91	218.02	1,062.95	1,040.43	1,001.84	38.59	26.958			
9,000.00	8,629.96	9,494.82	8,950.00	19.18	25.87	107.91	239.87	1,062.95	1,040.43	1,001.60	38.83	26.796			
9,100.00	8,629.96	9,594.82	8,950.00	19.79	26.41	107.91	339.87	1,062.95	1,040.43	1,000.32	40.11	25.938			
9,200.00	8,629.96	9,694.82	8,950.00	20.54	27.08	107.91	439.87	1,062.95	1,040.43	998.78	41.65	24.978			
9,300.00	8,629.96	9,794.82	8,950.00	21.42	27.88	107.91	539.87	1,062.95	1,040.43	997.01	43.42	23.960			
9,400.00	8,629.96	9,894.82	8,950.00	22.42	28.79	107.91	639.87	1,062.95	1,040.43	995.03	45.40	22.918			
9,500.00	8,629.96	9,994.82	8,950.00	23.51	29.80	107.91	739.87	1,062.95	1,040.43	992.88	47.55	21.881			
9,600.00	8,629.96	10,094.82	8,950.00	24.69	30.89	107.91	839.87	1,062.95	1,040.43	990.58	49.86	20.869			
9,700.00	8,629.97	10,194.82	8,950.00	25.95	32.05	107.91	939.87	1,062.95	1,040.43	988.14	52.30	19.895			
9,800.00	8,629.97	10,294.82	8,950.00	27.27	33.29	107.91	1,039.87	1,062.95	1,040.43	985.58	54.85	18.968			
9,900.00	8,629.97	10,394.82	8,950.00	28.64	34.57	107.91	1,139.87	1,062.95	1,040.43	982.92	57.51	18.092			
10,000.00	8,629.97	10,494.82	8,950.00	30.07	35.91	107.91	1,239.87	1,062.95	1,040.43	980.18	60.25	17.268			
10,100.00	8,629.97	10,594.82	8,950.00	31.53	37.29	107.91	1,339.87	1,062.95	1,040.43	977.36	63.07	16.496			
10,200.00	8,629.97	10,694.82	8,950.00	33.03	38.71	107.91	1,439.87	1,062.95	1,040.43	974.47	65.96	15.775			
10,300.00	8,629.97	10,794.82	8,950.00	34.57	40.16	107.91	1,539.87	1,062.95	1,040.43	971.53	68.90	15.101			
10,400.00	8,629.97	10,894.82	8,950.00	36.13	41.64	107.91	1,639.87	1,062.95	1,040.43	968.54	71.89	14.472			
10,500.00	8,629.97	10,994.82	8,950.00	37.71	43.15	107.91	1,739.87	1,062.95	1,040.43	965.50	74.93	13.885			
10,600.00	8,629.98	11,094.82	8,950.00	39.32	44.68	107.91	1,839.87	1,062.95	1,040.43	962.42	78.01	13.337			
10,700.00	8,629.98	11,194.82	8,950.00	40.94	46.24	107.91	1,939.87	1,062.95	1,040.43	959.31	81.12	12.826			
10,800.00	8,629.98	11,294.82	8,950.00	42.58	47.81	107.91	2,039.87	1,062.95	1,040.43	956.16	84.26	12.347			
10,900.00	8,629.98	11,394.82	8,950.00	44.24	49.40	107.91	2,139.87	1,062.95	1,040.43	952.99	87.43	11.900			
11,000.00	8,629.98	11,494.82	8,950.00	45.91	51.01	107.91	2,239.87	1,062.95	1,040.43	949.80	90.63	11.480			
11,100.00	8,629.98	11,594.82	8,950.00	47.58	52.63	107.91	2,339.87	1,062.95	1,040.43	946.58	93.85	11.086			
11,200.00	8,629.98	11,694.82	8,950.00	49.28	54.27	107.91	2,439.87	1,062.95	1,040.43	943.34	97.09	10.717			
11,300.00	8,629.98	11,794.82	8,950.00	50.97	55.92	107.91	2,539.87	1,062.95	1,040.43	940.08	100.34	10.369			
11,400.00	8,629.98	11,894.82	8,950.00	52.68	57.57	107.91	2,639.87	1,062.95	1,040.42	936.81	103.61	10.041			
11,500.00	8,629.98	11,994.82	8,950.00	54.40	59.24	107.91	2,739.87	1,062.95	1,040.42	933.52	106.90	9.733			
11,600.00	8,629.99	12,094.82	8,950.00	56.12	60.92	107.91	2,839.87	1,062.95	1,040.42	930.22	110.20	9.441			
11,700.00	8,629.99	12,194.82	8,950.00	57.85	62.60	107.91	2,939.87	1,062.95	1,040.42	926.91	113.51	9.166			
11,800.00	8,629.99	12,294.82	8,950.00	59.59	64.30	107.91	3,039.87	1,062.95	1,040.42	923.59	116.84	8.905			
11,900.00	8,629.99	12,394.82	8,950.00	61.33	66.00	107.91	3,139.87	1,062.95	1,040.42	920.25	120.17	8.658			
12,000.00	8,629.99	12,494.82	8,950.00	63.07	67.70	107.91	3,239.87	1,062.95	1,040.42	916.91	123.52	8.423			
12,100.00	8,629.99	12,594.82	8,950.00	64.82	69.42	107.91	3,339.87	1,062.95	1,040.42	913.55	126.87	8.201			
12,200.00	8,629.99	12,694.82	8,950.00	66.58	71.14	107.91	3,439.87	1,062.95	1,040.42	910.19	130.23	7.989			
12,300.00	8,629.99	12,794.82	8,950.00	68.33	72.86	107.91	3,539.87	1,062.95	1,040.42	906.83	133.60	7.788			
12,400.00	8,629.99	12,894.82	8,950.00	70.10	74.59	107.91	3,639.87	1,062.95	1,040.42	903.45	136.97	7.596			
12,500.00	8,630.00	12,994.82	8,950.00	71.86	76.32	107.91	3,739.87	1,062.95	1,040.42	900.07	140.35	7.413			
12,600.00	8,630.00	13,094.82	8,950.00	73.63	78.06	107.91	3,839.87	1,062.95	1,040.42	896.68	143.74	7.238			
12,700.00	8,630.00	13,194.82	8,950.00	75.40	79.80	107.91	3,939.87	1,062.95	1,040.42	893.29	147.13	7.071			
12,800.00	8,630.00	13,294.82	8,950.00	77.17	81.55	107.91	4,039.87	1,062.95	1,040.42	889.89	150.53	6.912			
12,900.00	8,630.00	13,394.82	8,950.00	78.95	83.29	107.91	4,139.87	1,062.95	1,040.42	886.49	153.93	6.759			
12,975.20	8,630.00	13,470.02	8,950.00	80.29	84.61	107.91	4,215.07	1,062.95	1,040.42	883.92	156.50	6.648 SF			

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



LEAM Drilling Systems LLC

Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 328H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	179.84	-50.00	0.14	50.00						
100.00	100.00	100.00	100.00	0.08	0.08	179.84	-50.00	0.14	50.00	49.84	0.16	317.792			
200.00	200.00	200.00	200.00	0.30	0.30	179.84	-50.00	0.14	50.00	49.39	0.61	82.391			
300.00	300.00	300.00	300.00	0.53	0.53	179.84	-50.00	0.14	50.00	48.94	1.06	47.331			
400.00	400.00	400.00	400.00	0.75	0.75	179.84	-50.00	0.14	50.00	48.49	1.51	33.202			
500.00	500.00	500.00	500.00	0.98	0.98	179.84	-50.00	0.14	50.00	48.04	1.96	25.569			
600.00	600.00	600.00	600.00	1.20	1.20	179.84	-50.00	0.14	50.00	47.60	2.40	20.790			
700.00	700.00	700.00	700.00	1.43	1.43	179.84	-50.00	0.14	50.00	47.15	2.85	17.516			
800.00	800.00	800.00	800.00	1.65	1.65	179.84	-50.00	0.14	50.00	46.70	3.30	15.133			
900.00	900.00	900.00	900.00	1.88	1.88	179.84	-50.00	0.14	50.00	46.25	3.75	13.321			
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	179.84	-50.00	0.14	50.00	45.80	4.20	11.896			
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	179.84	-50.00	0.14	50.00	45.35	4.65	10.747			
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	179.84	-50.00	0.14	50.00	44.90	5.10	9.800			
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	179.84	-50.00	0.14	50.00	44.45	5.55	9.006			
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	179.84	-50.00	0.14	50.00	44.00	6.00	8.332			
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	179.84	-50.00	0.14	50.00	43.55	6.45	7.751			
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	179.84	-50.00	0.14	50.00	43.10	6.90	7.246			
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	179.84	-50.00	0.14	50.00	42.65	7.35	6.803			
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	179.84	-50.00	0.14	50.00	42.20	7.80	6.411			
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	179.84	-50.00	0.14	50.00	41.75	8.25	6.061			
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	179.84	-50.00	0.14	50.00	41.30	8.70	5.748			
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	179.84	-50.00	0.14	50.00	40.85	9.15	5.466			
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	179.84	-50.00	0.14	50.00	40.40	9.60	5.210			
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	179.84	-50.00	0.14	50.00	39.95	10.05	4.977			
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	179.84	-50.00	0.14	50.00	39.50	10.50	4.763			
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	179.84	-50.00	0.14	50.00	39.05	10.95	4.568			
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	179.84	-50.00	0.14	50.00	38.60	11.40	4.388			
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	179.84	-50.00	0.14	50.00	38.16	11.85	4.221			
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	179.84	-50.00	0.14	50.00	37.71	12.29	4.067			
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	179.84	-50.00	0.14	50.00	37.26	12.74	3.923			
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	179.84	-50.00	0.14	50.00	36.81	13.19	3.790			
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	179.84	-50.00	0.14	50.00	36.36	13.64	3.665			
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	179.84	-50.00	0.14	50.00	35.91	14.09	3.548			
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	179.84	-50.00	0.14	50.00	35.46	14.54	3.438			
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	179.84	-50.00	0.14	50.00	35.01	14.99	3.335			
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	179.84	-50.00	0.14	50.00	34.56	15.44	3.238			
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	179.84	-50.00	0.14	50.00	34.11	15.89	3.146			
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	179.84	-50.00	0.14	50.00	33.66	16.34	3.060			
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	179.84	-50.00	0.14	50.00	33.21	16.79	2.978			
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	179.84	-50.00	0.14	50.00	32.76	17.24	2.900			
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	179.84	-50.00	0.14	50.00	32.31	17.69	2.827			
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	179.84	-50.00	0.14	50.00	31.86	18.14	2.757			
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	179.84	-50.00	0.14	50.00	31.41	18.59	2.690			
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	179.84	-50.00	0.14	50.00	30.96	19.04	2.626			
4,400.00	4,400.00	4,399.82	4,399.81	9.71	9.72	10.39	-50.36	1.24	49.52	30.08	19.44	2.548			
4,500.00	4,499.96	4,499.17	4,499.10	9.88	9.91	7.07	-51.44	4.52	48.18	28.40	19.78	2.435			
4,600.00	4,599.86	4,598.56	4,598.32	10.05	10.10	1.17	-53.24	9.98	46.34	26.21	20.13	2.302			
4,700.00	4,699.68	4,697.72	4,697.15	10.23	10.30	-7.73	-55.74	17.60	44.67	24.19	20.48	2.181			
4,774.90	4,774.35	4,771.79	4,770.85	10.36	10.45	-16.44	-58.08	24.69	44.15	23.41	20.74	2.129 CC			
4,800.00	4,799.37	4,796.58	4,795.47	10.40	10.50	-19.71	-58.95	27.34	44.22	23.39	20.82	2.123 ES, SF			
4,900.00	4,898.90	4,895.06	4,893.16	10.58	10.71	-33.78	-62.85	39.18	46.30	25.11	21.18	2.186			
5,000.00	4,998.26	4,993.09	4,990.09	10.77	10.92	-47.85	-67.42	53.07	51.95	30.39	21.56	2.410			

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 328H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
5,030.89	5,028.91	5,023.27	5,019.87	10.83	10.99	-51.87	-68.97	57.77	54.49	32.81	21.68	2.514			
5,100.00	5,097.46	5,090.62	5,086.18	10.96	11.15	-59.72	-72.65	68.97	61.73	39.77	21.96	2.810			
5,200.00	5,196.65	5,188.48	5,182.24	11.16	11.39	-68.02	-78.50	86.71	75.35	52.97	22.38	3.367			
5,300.00	5,295.83	5,287.02	5,278.91	11.37	11.64	-73.73	-84.46	104.82	90.32	67.52	22.80	3.961			
5,400.00	5,395.02	5,385.56	5,375.59	11.58	11.90	-77.79	-90.42	122.94	105.91	82.68	23.23	4.560			
5,500.00	5,494.21	5,484.10	5,472.27	11.79	12.17	-80.80	-96.38	141.05	121.89	98.23	23.67	5.151			
5,600.00	5,593.40	5,582.63	5,568.94	12.01	12.45	-83.11	-102.34	159.16	138.13	114.02	24.11	5.729			
5,700.00	5,692.58	5,681.17	5,665.62	12.24	12.74	-84.94	-108.30	177.27	154.54	129.97	24.57	6.290			
5,800.00	5,791.77	5,779.71	5,762.29	12.47	13.03	-86.41	-114.26	195.38	171.07	146.04	25.03	6.833			
5,900.00	5,890.96	5,878.25	5,858.97	12.71	13.33	-87.62	-120.23	213.49	187.69	162.18	25.51	7.358			
6,000.00	5,990.15	5,976.79	5,955.64	12.94	13.64	-88.64	-126.19	231.60	204.38	178.39	25.99	7.864			
6,100.00	6,089.33	6,075.32	6,052.32	13.19	13.95	-89.50	-132.15	249.71	221.13	194.65	26.48	8.351			
6,200.00	6,188.52	6,173.86	6,148.99	13.43	14.26	-90.24	-138.11	267.82	237.91	210.94	26.98	8.820			
6,300.00	6,287.71	6,272.40	6,245.67	13.68	14.59	-90.89	-144.07	285.93	254.73	227.26	27.48	9.270			
6,400.00	6,386.90	6,370.94	6,342.34	13.93	14.91	-91.45	-150.03	304.05	271.58	243.59	27.99	9.703			
6,500.00	6,486.08	6,469.47	6,439.02	14.19	15.24	-91.95	-155.99	322.16	288.45	259.95	28.50	10.119			
6,600.00	6,585.27	6,568.01	6,535.69	14.44	15.58	-92.39	-161.96	340.27	305.34	276.31	29.03	10.519			
6,700.00	6,684.46	6,666.55	6,632.37	14.71	15.92	-92.79	-167.92	358.38	322.25	292.69	29.55	10.904			
6,800.00	6,783.65	6,765.09	6,729.04	14.97	16.26	-93.15	-173.88	376.49	339.16	309.08	30.09	11.273			
6,900.00	6,882.83	6,863.62	6,825.72	15.23	16.61	-93.47	-179.84	394.60	356.09	325.47	30.62	11.628			
7,000.00	6,982.02	6,962.16	6,922.39	15.50	16.96	-93.76	-185.80	412.71	373.03	341.87	31.17	11.970			
7,100.00	7,081.21	7,060.70	7,019.07	15.77	17.31	-94.03	-191.76	430.82	389.98	358.27	31.71	12.298			
7,147.27	7,128.09	7,107.28	7,064.77	15.90	17.48	-94.15	-194.58	439.38	398.00	366.02	31.97	12.449			
7,200.00	7,180.43	7,159.24	7,115.75	16.04	17.67	-94.33	-197.73	448.93	406.92	374.66	32.26	12.613			
7,300.00	7,279.82	7,257.82	7,212.46	16.30	18.02	-94.48	-203.69	467.05	423.74	390.95	32.80	12.920			
7,400.00	7,379.40	7,356.39	7,309.18	16.54	18.38	-94.41	-209.65	485.17	440.44	407.12	33.32	13.219			
7,500.00	7,479.12	7,454.95	7,405.87	16.78	18.75	-94.13	-215.62	503.28	457.02	423.19	33.83	13.511			
7,600.00	7,578.95	7,553.45	7,502.51	17.01	19.11	-93.66	-221.57	521.39	473.52	439.20	34.32	13.799			
7,700.00	7,678.87	7,651.86	7,599.06	17.24	19.48	-93.04	-227.53	539.48	489.98	455.19	34.79	14.085			
7,800.00	7,778.85	7,750.16	7,695.50	17.45	19.85	-92.26	-233.48	557.54	506.45	471.21	35.24	14.371			
7,878.16	7,857.00	7,826.89	7,770.78	17.60	20.14	-76.82	-238.12	571.65	519.39	483.81	35.58	14.598			
7,900.00	7,878.84	7,848.32	7,791.80	17.64	20.22	77.06	-239.41	575.59	523.02	487.35	35.67	14.663			
8,000.00	7,978.84	7,946.43	7,888.06	17.85	20.59	78.11	-245.35	593.62	539.75	503.66	36.09	14.955			
8,078.16	8,057.00	8,023.11	7,963.29	18.00	20.88	78.90	-249.99	607.71	552.95	516.53	36.42	15.182			
8,100.00	8,078.84	8,044.51	7,984.29	18.05	20.96	78.79	-251.28	611.64	556.58	520.04	36.53	15.235			
8,150.00	8,128.65	8,093.14	8,032.00	18.12	21.15	78.89	-254.23	620.58	564.35	527.60	36.75	15.358			
8,200.00	8,177.93	8,134.84	8,072.96	18.18	21.29	79.10	-255.31	628.26	571.75	534.86	36.89	15.501			
8,250.00	8,226.28	8,176.91	8,114.26	18.22	21.42	79.36	-253.33	636.00	579.08	542.10	36.98	15.660			
8,300.00	8,273.34	8,219.59	8,155.89	18.24	21.55	79.68	-248.17	643.80	586.34	549.31	37.03	15.834			
8,350.00	8,318.76	8,262.94	8,197.67	18.24	21.67	80.05	-239.73	651.63	593.48	556.43	37.05	16.019			
8,400.00	8,362.18	8,307.07	8,239.43	18.23	21.79	80.47	-227.85	659.46	600.48	563.44	37.04	16.211			
8,450.00	8,403.28	8,352.05	8,280.95	18.22	21.89	80.95	-212.42	667.25	607.31	570.29	37.02	16.406			
8,500.00	8,441.75	8,397.98	8,321.98	18.20	21.99	81.48	-193.30	674.95	613.93	576.94	36.99	16.597			
8,550.00	8,477.29	8,444.95	8,362.25	18.19	22.08	82.05	-170.35	682.50	620.30	583.33	36.97	16.776			
8,600.00	8,509.63	8,493.08	8,401.44	18.19	22.17	82.68	-143.43	689.86	626.40	589.42	36.98	16.938			
8,650.00	8,538.52	8,542.47	8,439.21	18.21	22.25	83.36	-112.44	696.95	632.16	595.14	37.02	17.075			
8,700.00	8,563.75	8,593.20	8,475.13	18.25	22.32	84.09	-77.27	703.70	637.55	600.43	37.11	17.179			
8,750.00	8,585.13	8,645.39	8,508.74	18.31	22.40	84.86	-37.87	710.02	642.50	605.25	37.26	17.244			
8,800.00	8,602.48	8,699.12	8,539.51	18.41	22.49	85.67	5.76	715.80	646.98	609.50	37.47	17.266			
8,850.00	8,615.68	8,754.46	8,566.87	18.55	22.58	86.53	53.57	720.95	650.90	613.14	37.76	17.238			
8,900.00	8,624.64	8,811.48	8,590.18	18.73	22.68	87.42	105.40	725.34	654.22	616.09	38.12	17.161			
8,950.00	8,629.27	8,870.20	8,606.77	18.94	22.82	88.34	160.96	728.85	656.85	618.29	38.56	17.034			

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



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 328H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)		
8,978.15	8,629.96	8,904.01	8,616.90	19.07	22.91	88.86	193.74	730.40	658.01	619.17		38.84	16.942		
9,000.00	8,629.96	8,930.72	8,621.98	19.18	22.98	89.31	219.94	731.36	658.75	619.67		39.08	16.858		
9,100.00	8,629.96	9,051.13	8,630.16	19.79	23.44	90.02	339.87	732.95	659.99	619.62		40.37	16.349		
9,156.02	8,629.96	9,107.16	8,630.01	20.21	23.72	90.00	395.89	732.95	659.99	618.81		41.18	16.028		
9,200.00	8,629.96	9,151.13	8,629.89	20.54	23.98	89.99	439.87	732.95	659.99	618.14		41.85	15.770		
9,300.00	8,629.96	9,251.13	8,629.63	21.42	24.67	89.97	539.87	732.95	659.99	616.42		43.57	15.146		
9,400.00	8,629.96	9,351.13	8,629.37	22.42	25.49	89.95	639.87	732.95	659.99	614.46		45.53	14.497		
9,500.00	8,629.96	9,451.13	8,629.11	23.51	26.43	89.93	739.87	732.95	659.99	612.31		47.68	13.842		
9,600.00	8,629.96	9,551.13	8,628.85	24.69	27.46	89.90	839.87	732.95	659.99	609.98		50.01	13.198		
9,700.00	8,629.97	9,651.13	8,628.59	25.95	28.59	89.88	939.87	732.95	659.99	607.50		52.49	12.574		
9,800.00	8,629.97	9,751.13	8,628.32	27.27	29.78	89.86	1,039.87	732.95	659.99	604.89		55.10	11.978		
9,900.00	8,629.97	9,851.13	8,628.06	28.64	31.04	89.83	1,139.87	732.95	659.99	602.17		57.82	11.414		
10,000.00	8,629.97	9,951.13	8,627.80	30.07	32.36	89.81	1,239.86	732.95	659.99	599.35		60.64	10.883		
10,100.00	8,629.97	10,051.13	8,627.54	31.53	33.73	89.79	1,339.86	732.95	660.00	596.44		63.55	10.385		
10,200.00	8,629.97	10,151.13	8,627.28	33.03	35.14	89.77	1,439.86	732.95	660.00	593.46		66.53	9.920		
10,300.00	8,629.97	10,251.13	8,627.01	34.57	36.58	89.74	1,539.86	732.95	660.00	590.42		69.58	9.486		
10,400.00	8,629.97	10,351.13	8,626.75	36.13	38.06	89.72	1,639.86	732.95	660.00	587.32		72.68	9.081		
10,500.00	8,629.97	10,451.13	8,626.49	37.71	39.57	89.70	1,739.86	732.95	660.00	584.17		75.83	8.704		
10,600.00	8,629.98	10,551.13	8,626.23	39.32	41.10	89.67	1,839.86	732.95	660.00	580.98		79.02	8.352		
10,700.00	8,629.98	10,651.13	8,625.97	40.94	42.66	89.65	1,939.86	732.95	660.00	577.75		82.26	8.024		
10,800.00	8,629.98	10,751.13	8,625.71	42.58	44.24	89.63	2,039.86	732.95	660.00	574.48		85.52	7.717		
10,900.00	8,629.98	10,851.13	8,625.44	44.24	45.83	89.61	2,139.86	732.95	660.01	571.19		88.82	7.431		
11,000.00	8,629.98	10,951.13	8,625.18	45.91	47.45	89.58	2,239.86	732.95	660.01	567.86		92.14	7.163		
11,100.00	8,629.98	11,051.13	8,624.92	47.58	49.07	89.56	2,339.86	732.95	660.01	564.52		95.49	6.912		
11,200.00	8,629.98	11,151.13	8,624.66	49.28	50.71	89.54	2,439.86	732.95	660.01	561.15		98.86	6.676		
11,300.00	8,629.98	11,251.13	8,624.40	50.97	52.37	89.52	2,539.86	732.95	660.01	557.76		102.25	6.455		
11,400.00	8,629.98	11,351.13	8,624.13	52.68	54.03	89.49	2,639.86	732.95	660.02	554.36		105.66	6.247		
11,500.00	8,629.98	11,451.13	8,623.87	54.40	55.71	89.47	2,739.85	732.95	660.02	550.94		109.08	6.051		
11,600.00	8,629.99	11,551.12	8,623.61	56.12	57.39	89.45	2,839.85	732.95	660.02	547.50		112.52	5.866		
11,700.00	8,629.99	11,651.12	8,623.35	57.85	59.08	89.42	2,939.85	732.95	660.02	544.05		115.97	5.691		
11,800.00	8,629.99	11,751.12	8,623.09	59.59	60.79	89.40	3,039.85	732.95	660.03	540.59		119.43	5.526		
11,900.00	8,629.99	11,851.12	8,622.83	61.33	62.49	89.38	3,139.85	732.95	660.03	537.12		122.91	5.370		
12,000.00	8,629.99	11,951.12	8,622.56	63.07	64.21	89.36	3,239.85	732.95	660.03	533.64		126.39	5.222		
12,100.00	8,629.99	12,051.12	8,622.30	64.82	65.93	89.33	3,339.85	732.95	660.04	530.15		129.89	5.082		
12,200.00	8,629.99	12,151.12	8,622.04	66.58	67.65	89.31	3,439.85	732.95	660.04	526.65		133.39	4.948		
12,300.00	8,629.99	12,251.12	8,621.78	68.33	69.38	89.29	3,539.85	732.95	660.04	523.14		136.90	4.821		
12,400.00	8,629.99	12,351.12	8,621.52	70.10	71.12	89.26	3,639.85	732.95	660.05	519.63		140.42	4.701		
12,500.00	8,630.00	12,451.12	8,621.25	71.86	72.86	89.24	3,739.85	732.95	660.05	516.11		143.94	4.586		
12,600.00	8,630.00	12,551.12	8,620.99	73.63	74.60	89.22	3,839.85	732.95	660.05	512.58		147.47	4.476		
12,700.00	8,630.00	12,651.12	8,620.73	75.40	76.35	89.20	3,939.85	732.95	660.06	509.05		151.01	4.371		
12,800.00	8,630.00	12,751.12	8,620.47	77.17	78.10	89.17	4,039.85	732.95	660.06	505.51		154.55	4.271		
12,900.00	8,630.00	12,851.12	8,620.21	78.95	79.86	89.15	4,139.84	732.95	660.06	501.97		158.09	4.175		
12,975.20	8,630.00	12,926.32	8,620.01	80.29	81.18	89.13	4,215.04	732.95	660.07	499.30		160.77	4.106		



LEAM Drilling Systems LLC

Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 332H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: O-LEAM MWD-ADJ														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)							
0.00	0.00	0.00	0.00	0.00	0.00	179.84	-150.00	0.43	150.00						
100.00	100.00	100.00	100.00	0.08	0.08	179.84	-150.00	0.43	150.00	149.84	0.16	953.375			
200.00	200.00	200.00	200.00	0.30	0.30	179.84	-150.00	0.43	150.00	149.39	0.61	247.172			
300.00	300.00	300.00	300.00	0.53	0.53	179.84	-150.00	0.43	150.00	148.94	1.06	141.992			
400.00	400.00	400.00	400.00	0.75	0.75	179.84	-150.00	0.43	150.00	148.49	1.51	99.607			
500.00	500.00	500.00	500.00	0.98	0.98	179.84	-150.00	0.43	150.00	148.05	1.96	76.708			
600.00	600.00	600.00	600.00	1.20	1.20	179.84	-150.00	0.43	150.00	147.60	2.40	62.370			
700.00	700.00	700.00	700.00	1.43	1.43	179.84	-150.00	0.43	150.00	147.15	2.85	52.548			
800.00	800.00	800.00	800.00	1.65	1.65	179.84	-150.00	0.43	150.00	146.70	3.30	45.399			
900.00	900.00	900.00	900.00	1.88	1.88	179.84	-150.00	0.43	150.00	146.25	3.75	39.962			
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	179.84	-150.00	0.43	150.00	145.80	4.20	35.688			
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	179.84	-150.00	0.43	150.00	145.35	4.65	32.240			
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	179.84	-150.00	0.43	150.00	144.90	5.10	29.399			
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	179.84	-150.00	0.43	150.00	144.45	5.55	27.019			
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	179.84	-150.00	0.43	150.00	144.00	6.00	24.995			
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	179.84	-150.00	0.43	150.00	143.55	6.45	23.253			
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	179.84	-150.00	0.43	150.00	143.10	6.90	21.738			
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	179.84	-150.00	0.43	150.00	142.65	7.35	20.409			
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	179.84	-150.00	0.43	150.00	142.20	7.80	19.232			
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	179.84	-150.00	0.43	150.00	141.75	8.25	18.184			
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	179.84	-150.00	0.43	150.00	141.30	8.70	17.245			
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	179.84	-150.00	0.43	150.00	140.85	9.15	16.397			
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	179.84	-150.00	0.43	150.00	140.40	9.60	15.629			
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	179.84	-150.00	0.43	150.00	139.95	10.05	14.930			
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	179.84	-150.00	0.43	150.00	139.50	10.50	14.290			
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	179.84	-150.00	0.43	150.00	139.05	10.95	13.704			
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	179.84	-150.00	0.43	150.00	138.61	11.40	13.163			
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	179.84	-150.00	0.43	150.00	138.16	11.85	12.663			
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	179.84	-150.00	0.43	150.00	137.71	12.29	12.200			
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	179.84	-150.00	0.43	150.00	137.26	12.74	11.770			
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	179.84	-150.00	0.43	150.00	136.81	13.19	11.369			
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	179.84	-150.00	0.43	150.00	136.36	13.64	10.994			
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	179.84	-150.00	0.43	150.00	135.91	14.09	10.644			
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	179.84	-150.00	0.43	150.00	135.46	14.54	10.315			
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	179.84	-150.00	0.43	150.00	135.01	14.99	10.005			
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	179.84	-150.00	0.43	150.00	134.56	15.44	9.714			
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	179.84	-150.00	0.43	150.00	134.11	15.89	9.439			
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	179.84	-150.00	0.43	150.00	133.66	16.34	9.180			
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	179.84	-150.00	0.43	150.00	133.21	16.79	8.934			
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	179.84	-150.00	0.43	150.00	132.76	17.24	8.701			
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	179.84	-150.00	0.43	150.00	132.31	17.69	8.480			
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	179.84	-150.00	0.43	150.00	131.86	18.14	8.270			
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	179.84	-150.00	0.43	150.00	131.41	18.59	8.070			
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	179.84	-150.00	0.43	150.00	130.96	19.04	7.879			
4,400.00	4,400.00	4,397.89	4,397.89	9.71	9.71	11.70	-150.69	-0.05	149.85	130.42	19.42	7.714			
4,500.00	4,499.96	4,495.76	4,495.72	9.88	9.88	12.45	-152.75	-1.47	149.41	129.65	19.76	7.563			
4,600.00	4,599.86	4,593.57	4,593.44	10.05	10.06	13.70	-156.19	-3.84	148.73	128.65	20.08	7.405			
4,700.00	4,699.68	4,691.30	4,691.00	10.23	10.23	15.46	-160.99	-7.16	147.91	127.50	20.41	7.246			
4,800.00	4,799.37	4,788.93	4,788.33	10.40	10.41	17.75	-167.16	-11.42	147.07	126.33	20.74	7.091			
4,900.00	4,898.90	4,886.43	4,885.40	10.58	10.59	20.58	-174.67	-16.61	146.37	125.30	21.07	6.946			
5,000.00	4,998.26	4,983.77	4,982.14	10.77	10.77	23.93	-183.53	-22.73	146.01	124.61	21.41	6.821			
5,017.90	5,016.02	5,001.17	4,999.42	10.80	10.81	24.58	-185.26	-23.92	146.00	124.54	21.47	6.802 CC			

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 332H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
5,030.89	5,028.91	5,013.80	5,011.95	10.83	10.83	25.07	-186.54	-24.81	146.01	124.50	21.51	6.788	ES	
5,100.00	5,097.46	5,080.94	5,078.52	10.96	10.97	27.71	-193.73	-29.77	146.61	124.85	21.77	6.735	SF	
5,200.00	5,196.65	5,177.95	5,174.52	11.16	11.17	31.61	-205.24	-37.72	149.45	127.30	22.15	6.747		
5,300.00	5,295.83	5,277.29	5,272.69	11.37	11.38	35.50	-217.73	-46.35	153.84	131.29	22.55	6.824		
5,400.00	5,395.02	5,376.65	5,370.89	11.58	11.60	39.17	-230.23	-54.98	158.90	135.96	22.95	6.925		
5,500.00	5,494.21	5,476.02	5,469.09	11.79	11.83	42.59	-242.73	-63.61	164.58	141.23	23.35	7.048		
5,600.00	5,593.40	5,575.39	5,567.29	12.01	12.06	45.78	-255.23	-72.24	170.81	147.04	23.77	7.187		
5,700.00	5,692.58	5,674.75	5,665.48	12.24	12.30	48.74	-267.73	-80.88	177.53	153.34	24.19	7.340		
5,800.00	5,791.77	5,774.12	5,763.68	12.47	12.55	51.47	-280.23	-89.51	184.69	160.08	24.62	7.502		
5,900.00	5,890.96	5,873.49	5,861.88	12.71	12.80	54.00	-292.72	-98.14	192.25	167.19	25.06	7.672		
6,000.00	5,990.15	5,972.85	5,960.08	12.94	13.06	56.34	-305.22	-106.77	200.14	174.64	25.50	7.848		
6,100.00	6,089.33	6,072.22	6,058.28	13.19	13.32	58.49	-317.72	-115.40	208.35	182.39	25.96	8.027		
6,200.00	6,188.52	6,171.59	6,156.48	13.43	13.58	60.48	-330.22	-124.03	216.83	190.41	26.42	8.207		
6,300.00	6,287.71	6,270.95	6,254.68	13.68	13.85	62.32	-342.72	-132.66	225.54	198.66	26.89	8.388		
6,400.00	6,386.90	6,370.32	6,352.88	13.93	14.13	64.02	-355.22	-141.30	234.48	207.11	27.37	8.568		
6,500.00	6,486.08	6,469.69	6,451.08	14.19	14.40	65.60	-367.71	-149.93	243.60	215.75	27.85	8.747		
6,600.00	6,585.27	6,569.05	6,549.27	14.44	14.69	67.06	-380.21	-158.56	252.89	224.55	28.34	8.923		
6,700.00	6,684.46	6,668.42	6,647.47	14.71	14.97	68.42	-392.71	-167.19	262.34	233.50	28.84	9.097		
6,800.00	6,783.65	6,767.79	6,745.67	14.97	15.26	69.68	-405.21	-175.82	271.92	242.58	29.34	9.267		
6,900.00	6,882.83	6,867.15	6,843.87	15.23	15.55	70.86	-417.71	-184.45	281.63	251.77	29.85	9.434		
7,000.00	6,982.02	6,966.52	6,942.07	15.50	15.84	71.95	-430.21	-193.08	291.44	261.07	30.37	9.597		
7,100.00	7,081.21	7,065.89	7,040.27	15.77	16.14	72.98	-442.70	-201.72	301.36	270.47	30.89	9.758		
7,147.27	7,128.09	7,112.86	7,086.69	15.90	16.28	73.44	-448.61	-205.80	306.07	274.94	31.14	9.830		
7,200.00	7,180.43	7,165.26	7,138.47	16.04	16.44	73.95	-455.20	-210.35	311.43	280.01	31.41	9.914		
7,300.00	7,279.82	7,264.65	7,236.69	16.30	16.74	74.64	-467.70	-218.98	321.98	290.06	31.92	10.087		
7,400.00	7,379.40	7,364.02	7,334.90	16.54	17.04	75.02	-480.20	-227.61	333.01	300.59	32.42	10.273		
7,500.00	7,479.12	7,463.36	7,433.07	16.78	17.34	75.09	-492.70	-236.24	344.49	311.60	32.89	10.473		
7,600.00	7,578.95	7,562.63	7,531.17	17.01	17.65	74.90	-505.18	-244.86	356.43	323.07	33.36	10.685		
7,700.00	7,678.87	7,661.79	7,629.17	17.24	17.96	74.47	-517.66	-253.48	368.83	335.03	33.81	10.911		
7,800.00	7,778.85	7,760.83	7,727.04	17.45	18.27	73.83	-530.11	-262.08	381.76	347.52	34.23	11.151		
7,878.16	7,857.00	7,838.12	7,803.43	17.60	18.51	-118.42	-539.84	-268.80	392.25	357.69	34.55	11.352		
7,900.00	7,878.84	7,859.71	7,824.76	17.64	18.58	-118.63	-542.55	-270.67	395.23	360.59	34.64	11.410		
8,000.00	7,978.84	7,958.53	7,922.42	17.85	18.89	-119.60	-554.98	-279.25	408.97	373.92	35.05	11.669		
8,078.16	8,057.00	8,035.77	7,998.75	18.00	19.14	-120.30	-564.70	-285.96	419.79	384.42	35.37	11.869		
8,100.00	8,078.84	8,057.30	8,020.03	18.05	19.21	-120.26	-567.40	-287.83	423.03	387.58	35.45	11.935		
8,150.00	8,128.65	8,106.02	8,068.17	18.12	19.36	-120.36	-573.53	-292.07	432.06	396.50	35.56	12.149		
8,200.00	8,177.93	8,153.65	8,115.25	18.18	19.52	-120.67	-579.52	-296.20	443.41	407.81	35.80	12.455		
8,250.00	8,226.28	8,199.84	8,160.90	18.22	19.66	-121.11	-585.33	-300.22	457.23	421.67	35.56	12.859		
8,300.00	8,273.34	8,244.23	8,204.77	18.24	19.81	-121.59	-590.92	-304.07	473.67	438.23	35.44	13.364		
8,350.00	8,318.76	8,286.49	8,246.53	18.24	19.94	-122.01	-596.23	-307.74	492.88	457.61	35.26	13.977		
8,400.00	8,362.18	8,326.29	8,285.86	18.23	20.07	-122.24	-601.24	-311.20	514.97	479.92	35.05	14.693		
8,450.00	8,403.28	8,363.33	8,322.47	18.22	20.19	-122.20	-605.90	-314.42	540.01	505.19	34.83	15.505		
8,500.00	8,441.75	8,397.33	8,356.07	18.20	20.30	-121.75	-610.17	-317.37	568.01	533.36	34.65	16.393		
8,550.00	8,477.29	8,428.03	8,386.41	18.19	20.40	-120.79	-614.04	-320.04	598.88	564.30	34.58	17.321		
8,600.00	8,509.63	8,455.20	8,413.25	18.19	20.49	-119.17	-617.45	-322.40	632.48	597.81	34.67	18.243		
8,650.00	8,538.52	8,478.62	8,436.40	18.21	20.56	-116.75	-620.40	-324.43	668.62	633.62	35.00	19.105		
8,700.00	8,563.75	8,498.13	8,455.68	18.25	20.63	-113.32	-622.85	-326.13	707.02	671.42	35.60	19.862		
8,750.00	8,585.13	8,513.57	8,470.94	18.31	20.68	-108.68	-624.79	-327.47	747.39	710.93	36.45	20.504		
8,800.00	8,602.48	8,524.82	8,482.06	18.41	20.71	-102.64	-626.21	-328.45	789.37	751.93	37.44	21.084		
8,850.00	8,615.68	8,532.28	8,489.43	18.55	20.74	-95.14	-627.15	-329.09	832.60	794.31	38.29	21.742		
8,900.00	8,624.64	8,535.45	8,492.56	18.73	20.75	-86.24	-627.54	-329.37	876.70	838.06	38.64	22.690		
8,950.00	8,629.27	8,533.50	8,490.64	18.94	20.74	-76.26	-627.30	-329.20	921.27	883.17	38.10	24.182		

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 332H (SIMOPS) - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
8,978.15	8,629.96	8,530.11	8,487.28	19.07	20.73	-70.45	-626.87	-328.90	946.41	909.07	37.35	25.340	
9,000.00	8,629.96	8,527.18	8,484.39	19.18	20.72	-70.08	-626.51	-328.85	965.97	928.59	37.38	25.842	
9,100.00	8,629.96	8,514.60	8,471.96	19.79	20.68	-68.47	-624.92	-327.56	1,056.51	1,018.88	37.62	28.082	
9,200.00	8,629.96	8,502.03	8,459.53	20.54	20.64	-66.89	-623.34	-326.47	1,148.48	1,110.51	37.98	30.243	
9,300.00	8,629.96	8,489.45	8,447.10	21.42	20.60	-65.34	-621.76	-325.37	1,241.57	1,203.15	38.42	32.315	
9,400.00	8,629.96	8,476.87	8,434.67	22.42	20.56	-63.82	-620.18	-324.28	1,335.54	1,296.60	38.94	34.295	
9,500.00	8,629.96	8,464.30	8,422.24	23.51	20.52	-62.33	-618.60	-323.19	1,430.21	1,390.69	39.52	36.185	
9,600.00	8,629.96	8,451.72	8,409.81	24.69	20.48	-60.87	-617.01	-322.10	1,525.47	1,485.31	40.15	37.990	
9,700.00	8,629.97	11,557.30	10,134.97	25.95	31.13	-163.70	939.86	-367.06	1,568.01	1,535.70	32.31	48.527	
9,800.00	8,629.97	11,657.30	10,134.97	27.27	32.43	-163.70	1,039.86	-367.06	1,568.01	1,534.48	33.53	46.762	
9,900.00	8,629.97	11,757.30	10,134.97	28.64	33.78	-163.70	1,139.86	-367.06	1,568.01	1,533.21	34.80	45.063	
10,000.00	8,629.97	11,857.30	10,134.97	30.07	35.18	-163.70	1,239.86	-367.06	1,568.01	1,531.91	36.10	43.435	
10,100.00	8,629.97	11,957.30	10,134.97	31.53	36.61	-163.70	1,339.86	-367.06	1,568.01	1,530.57	37.44	41.881	
10,200.00	8,629.97	12,057.30	10,134.97	33.03	38.07	-163.70	1,439.86	-367.06	1,568.01	1,529.20	38.81	40.401	
10,300.00	8,629.97	12,157.30	10,134.97	34.57	39.57	-163.70	1,539.86	-367.05	1,568.01	1,527.79	40.21	38.993	
10,400.00	8,629.97	12,257.30	10,134.98	36.13	41.09	-163.70	1,639.86	-367.05	1,568.01	1,526.37	41.64	37.658	
10,500.00	8,629.97	12,357.30	10,134.98	37.71	42.63	-163.70	1,739.86	-367.05	1,568.01	1,524.92	43.09	36.391	
10,600.00	8,629.98	12,457.30	10,134.98	39.32	44.20	-163.70	1,839.86	-367.05	1,568.01	1,523.45	44.56	35.190	
10,700.00	8,629.98	12,557.30	10,134.98	40.94	45.78	-163.70	1,939.86	-367.05	1,568.01	1,521.96	46.05	34.052	
10,800.00	8,629.98	12,657.30	10,134.98	42.58	47.39	-163.70	2,039.86	-367.05	1,568.01	1,520.45	47.55	32.973	
10,900.00	8,629.98	12,757.30	10,134.98	44.24	49.00	-163.70	2,139.86	-367.05	1,568.01	1,518.93	49.08	31.951	
11,000.00	8,629.98	12,857.30	10,134.98	45.91	50.64	-163.70	2,239.86	-367.05	1,568.01	1,517.39	50.61	30.981	
11,100.00	8,629.98	12,957.30	10,134.98	47.58	52.28	-163.70	2,339.86	-367.05	1,568.01	1,515.84	52.16	30.061	
11,200.00	8,629.98	13,057.30	10,134.98	49.28	53.94	-163.70	2,439.86	-367.05	1,568.01	1,514.28	53.72	29.188	
11,300.00	8,629.98	13,157.30	10,134.98	50.97	55.60	-163.70	2,539.86	-367.05	1,568.01	1,512.71	55.29	28.358	
11,400.00	8,629.98	13,257.30	10,134.98	52.68	57.28	-163.70	2,639.86	-367.05	1,568.01	1,511.13	56.87	27.570	
11,500.00	8,629.98	13,357.30	10,134.99	54.40	58.97	-163.70	2,739.86	-367.05	1,568.01	1,509.54	58.46	26.820	
11,600.00	8,629.99	13,457.30	10,134.99	56.12	60.66	-163.70	2,839.86	-367.05	1,568.01	1,507.94	60.06	26.106	
11,700.00	8,629.99	13,557.30	10,134.99	57.85	62.36	-163.70	2,939.86	-367.04	1,568.01	1,506.33	61.67	25.426	
11,800.00	8,629.99	13,657.30	10,134.99	59.59	64.07	-163.70	3,039.86	-367.04	1,568.01	1,504.72	63.28	24.777	
11,900.00	8,629.99	13,757.30	10,134.99	61.33	65.78	-163.70	3,139.86	-367.04	1,568.01	1,503.10	64.90	24.159	
12,000.00	8,629.99	13,857.30	10,134.99	63.07	67.50	-163.70	3,239.86	-367.04	1,568.01	1,501.47	66.53	23.568	
12,100.00	8,629.99	13,957.30	10,134.99	64.82	69.23	-163.70	3,339.86	-367.04	1,568.01	1,499.84	68.16	23.004	
12,200.00	8,629.99	14,057.30	10,134.99	66.58	70.96	-163.70	3,439.86	-367.04	1,568.01	1,498.20	69.80	22.464	
12,300.00	8,629.99	14,157.30	10,134.99	68.33	72.70	-163.70	3,539.86	-367.04	1,568.01	1,496.56	71.44	21.948	
12,400.00	8,629.99	14,257.30	10,134.99	70.10	74.44	-163.70	3,639.86	-367.04	1,568.01	1,494.91	73.09	21.453	
12,500.00	8,630.00	14,357.30	10,135.00	71.86	76.18	-163.70	3,739.86	-367.04	1,568.01	1,493.26	74.74	20.979	
12,600.00	8,630.00	14,457.30	10,135.00	73.63	77.93	-163.70	3,839.86	-367.04	1,568.01	1,491.60	76.40	20.525	
12,700.00	8,630.00	14,557.30	10,135.00	75.40	79.68	-163.70	3,939.86	-367.04	1,568.01	1,489.94	78.05	20.088	
12,800.00	8,630.00	14,657.30	10,135.00	77.17	81.43	-163.70	4,039.86	-367.04	1,568.01	1,488.28	79.72	19.670	
12,900.00	8,630.00	14,757.30	10,135.00	78.95	83.19	-163.70	4,139.86	-367.04	1,568.01	1,486.62	81.38	19.267	
12,954.32	8,630.00	14,811.62	10,135.00	79.91	84.15	-163.70	4,194.18	-367.04	1,568.01	1,485.71	82.29	19.055	
12,975.20	8,630.00	14,829.84	10,135.00	80.29	84.47	-163.70	4,212.40	-367.04	1,568.01	1,485.39	82.62	18.979	

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 333H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	179.84	-125.00	0.36	125.00						
100.00	100.00	100.00	100.00	0.08	0.08	179.84	-125.00	0.36	125.00	124.84	0.16	794.480			
200.00	200.00	200.00	200.00	0.30	0.30	179.84	-125.00	0.36	125.00	124.39	0.61	205.976			
300.00	300.00	300.00	300.00	0.53	0.53	179.84	-125.00	0.36	125.00	123.94	1.06	118.327			
400.00	400.00	400.00	400.00	0.75	0.75	179.84	-125.00	0.36	125.00	123.49	1.51	83.005			
500.00	500.00	500.00	500.00	0.98	0.98	179.84	-125.00	0.36	125.00	123.05	1.96	63.924			
600.00	600.00	600.00	600.00	1.20	1.20	179.84	-125.00	0.36	125.00	122.60	2.40	51.975			
700.00	700.00	700.00	700.00	1.43	1.43	179.84	-125.00	0.36	125.00	122.15	2.85	43.790			
800.00	800.00	800.00	800.00	1.65	1.65	179.84	-125.00	0.36	125.00	121.70	3.30	37.832			
900.00	900.00	900.00	900.00	1.88	1.88	179.84	-125.00	0.36	125.00	121.25	3.75	33.302			
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	179.84	-125.00	0.36	125.00	120.80	4.20	29.740			
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	179.84	-125.00	0.36	125.00	120.35	4.65	26.866			
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	179.84	-125.00	0.36	125.00	119.90	5.10	24.499			
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	179.84	-125.00	0.36	125.00	119.45	5.55	22.516			
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	179.84	-125.00	0.36	125.00	119.00	6.00	20.829			
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	179.84	-125.00	0.36	125.00	118.55	6.45	19.378			
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	179.84	-125.00	0.36	125.00	118.10	6.90	18.115			
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	179.84	-125.00	0.36	125.00	117.65	7.35	17.007			
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	179.84	-125.00	0.36	125.00	117.20	7.80	16.027			
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	179.84	-125.00	0.36	125.00	116.75	8.25	15.154			
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	179.84	-125.00	0.36	125.00	116.30	8.70	14.370			
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	179.84	-125.00	0.36	125.00	115.85	9.15	13.664			
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	179.84	-125.00	0.36	125.00	115.40	9.60	13.024			
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	179.84	-125.00	0.36	125.00	114.95	10.05	12.442			
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	179.84	-125.00	0.36	125.00	114.50	10.50	11.909			
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	179.84	-125.00	0.36	125.00	114.05	10.95	11.420			
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	179.84	-125.00	0.36	125.00	113.60	11.40	10.969			
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	179.84	-125.00	0.36	125.00	113.16	11.85	10.553			
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	179.84	-125.00	0.36	125.00	112.71	12.29	10.167			
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	179.84	-125.00	0.36	125.00	112.26	12.74	9.808			
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	179.84	-125.00	0.36	125.00	111.81	13.19	9.474			
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	179.84	-125.00	0.36	125.00	111.36	13.64	9.162			
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	179.84	-125.00	0.36	125.00	110.91	14.09	8.870			
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	179.84	-125.00	0.36	125.00	110.46	14.54	8.596			
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	179.84	-125.00	0.36	125.00	110.01	14.99	8.338			
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	179.84	-125.00	0.36	125.00	109.56	15.44	8.095			
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	179.84	-125.00	0.36	125.00	109.11	15.89	7.866			
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	179.84	-125.00	0.36	125.00	108.66	16.34	7.650			
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	179.84	-125.00	0.36	125.00	108.21	16.79	7.445			
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	179.84	-125.00	0.36	125.00	107.76	17.24	7.251			
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	179.84	-125.00	0.36	125.00	107.31	17.69	7.067			
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	179.84	-125.00	0.36	125.00	106.86	18.14	6.891			
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	179.84	-125.00	0.36	125.00	106.41	18.59	6.725			
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	179.84	-125.00	0.36	125.00	105.96	19.04	6.566			
4,400.00	4,400.00	4,398.42	4,398.42	9.71	9.72	11.27	-125.62	0.93	124.78	105.35	19.43	6.423			
4,500.00	4,499.96	4,496.83	4,496.79	9.88	9.89	10.71	-127.48	2.66	124.11	104.35	19.76	6.281			
4,600.00	4,599.86	4,595.21	4,595.08	10.05	10.07	9.77	-130.57	5.53	123.04	102.94	20.09	6.123			
4,700.00	4,699.68	4,693.56	4,693.25	10.23	10.24	8.42	-134.90	9.55	121.58	101.16	20.42	5.953			
4,800.00	4,799.37	4,791.86	4,791.25	10.40	10.43	6.64	-140.46	14.72	119.82	99.07	20.75	5.773			
4,900.00	4,898.90	4,890.09	4,889.05	10.58	10.61	4.41	-147.24	21.02	117.83	96.75	21.08	5.589			
5,000.00	4,998.26	4,988.25	4,986.60	10.77	10.81	1.67	-155.24	28.46	115.73	94.32	21.41	5.406			
5,030.89	5,028.91	5,018.56	5,016.68	10.83	10.87	0.72	-157.96	30.99	115.07	93.57	21.51	5.350			

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 333H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: Q-LEAM MWD-ADJ														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)							
5,100.00	5,097.46	5,086.34	5,083.87	10.96	11.01	-1.59	-164.46	37.03	114.06	92.30	21.76	5.241			
5,141.24	5,138.36	5,126.76	5,123.90	11.04	11.09	-3.07	-168.62	40.89	113.89	91.98	21.92	5.197 CC, ES			
5,200.00	5,196.65	5,184.32	5,180.82	11.16	11.21	-5.30	-174.89	46.72	114.24	92.11	22.14	5.161 SF			
5,300.00	5,295.83	5,282.16	5,277.35	11.37	11.43	-9.29	-186.51	57.52	116.50	93.99	22.52	5.175			
5,400.00	5,395.02	5,380.09	5,373.70	11.58	11.66	-13.35	-199.34	69.44	120.93	98.03	22.90	5.281			
5,500.00	5,494.21	5,479.57	5,471.48	11.79	11.91	-17.24	-212.80	81.96	126.53	103.24	23.29	5.433			
5,600.00	5,593.40	5,579.06	5,569.25	12.01	12.16	-20.78	-226.27	94.47	132.67	108.98	23.69	5.600			
5,700.00	5,692.58	5,678.55	5,667.03	12.24	12.42	-24.00	-239.74	106.98	139.27	115.17	24.09	5.780			
5,800.00	5,791.77	5,778.04	5,764.80	12.47	12.69	-26.93	-253.20	119.50	146.27	121.76	24.51	5.969			
5,900.00	5,890.96	5,877.53	5,862.58	12.71	12.97	-29.58	-266.67	132.01	153.62	128.69	24.93	6.163			
6,000.00	5,990.15	5,977.02	5,960.35	12.94	13.25	-31.99	-280.14	144.53	161.26	135.91	25.35	6.360			
6,100.00	6,089.33	6,076.50	6,058.13	13.19	13.54	-34.17	-293.60	157.04	169.16	143.37	25.79	6.559			
6,200.00	6,188.52	6,175.99	6,155.90	13.43	13.84	-36.16	-307.07	169.56	177.29	151.06	26.23	6.758			
6,300.00	6,287.71	6,275.48	6,253.68	13.68	14.14	-37.97	-320.54	182.07	185.61	158.93	26.68	6.956			
6,400.00	6,386.90	6,374.97	6,351.45	13.93	14.45	-39.63	-334.00	194.59	194.10	166.96	27.14	7.151			
6,500.00	6,486.08	6,474.46	6,449.23	14.19	14.76	-41.15	-347.47	207.10	202.74	175.13	27.61	7.343			
6,600.00	6,585.27	6,573.95	6,547.00	14.44	15.08	-42.54	-360.94	219.62	211.50	183.42	28.08	7.531			
6,700.00	6,684.46	6,673.43	6,644.78	14.71	15.40	-43.82	-374.40	232.13	220.39	191.82	28.56	7.715			
6,800.00	6,783.65	6,772.92	6,742.55	14.97	15.72	-45.00	-387.87	244.65	229.37	200.32	29.05	7.895			
6,900.00	6,882.83	6,872.41	6,840.33	15.23	16.05	-46.10	-401.34	257.16	238.44	208.90	29.55	8.070			
7,000.00	6,982.02	6,971.90	6,938.10	15.50	16.38	-47.11	-414.80	269.68	247.60	217.55	30.05	8.240			
7,100.00	7,081.21	7,071.39	7,035.88	15.77	16.72	-48.05	-428.27	282.19	256.82	226.27	30.55	8.408			
7,147.27	7,128.09	7,118.41	7,082.10	15.90	16.88	-48.47	-434.63	288.11	261.20	230.41	30.79	8.482			
7,200.00	7,180.43	7,170.87	7,133.65	16.04	17.06	-48.92	-441.73	294.70	266.27	235.20	31.07	8.570			
7,300.00	7,279.82	7,270.28	7,231.35	16.30	17.40	-49.53	-455.19	307.21	276.76	245.18	31.58	8.764			
7,400.00	7,379.40	7,369.59	7,328.95	16.54	17.74	-49.85	-468.63	319.70	288.40	256.33	32.07	8.962			
7,500.00	7,479.12	7,468.78	7,426.42	16.78	18.09	-49.90	-482.06	332.18	301.16	268.61	32.55	9.252			
7,600.00	7,578.95	7,567.79	7,523.74	17.01	18.44	-49.72	-495.46	344.63	315.04	282.03	33.01	9.545			
7,700.00	7,678.87	7,666.62	7,620.86	17.24	18.79	-49.34	-508.84	357.07	330.04	296.60	33.45	9.868			
7,800.00	7,778.85	7,765.23	7,717.77	17.45	19.14	-48.79	-522.19	369.47	346.21	312.34	33.87	10.222			
7,878.16	7,857.00	7,842.12	7,793.34	17.60	19.42	-48.12	-532.59	379.14	359.67	325.49	34.18	10.523			
7,900.00	7,878.84	7,863.59	7,814.44	17.64	19.49	-48.12	-535.50	381.84	363.54	329.27	34.27	10.609			
8,000.00	7,978.84	7,961.87	7,911.02	17.85	19.85	-48.11	-548.80	394.20	381.29	346.61	34.68	10.995			
8,078.16	8,057.00	8,038.68	7,986.51	18.00	20.13	-48.11	-559.20	403.87	395.21	360.21	35.00	11.292			
8,100.00	8,078.84	8,060.08	8,007.55	18.05	20.20	-48.11	-562.10	406.56	399.33	364.25	35.07	11.385			
8,150.00	8,128.65	8,108.49	8,055.12	18.12	20.38	-48.11	-568.65	412.65	410.38	375.20	35.19	11.663			
8,200.00	8,177.93	8,155.77	8,101.59	18.18	20.55	-48.11	-575.05	418.80	423.78	388.56	35.22	12.032			
8,250.00	8,226.28	8,201.58	8,146.61	18.22	20.72	-48.11	-581.25	424.36	439.64	404.46	35.18	12.497			
8,300.00	8,273.34	8,245.55	8,189.82	18.24	20.88	-48.11	-587.20	429.89	458.07	423.00	35.07	13.061			
8,350.00	8,318.76	8,287.36	8,230.91	18.24	21.03	-48.11	-592.86	435.15	479.20	444.29	34.91	13.726			
8,400.00	8,362.18	8,326.69	8,269.56	18.23	21.18	-48.11	-598.18	440.10	503.11	468.39	34.73	14.488			
8,450.00	8,403.28	8,363.23	8,305.48	18.22	21.31	-48.11	-603.13	444.69	529.86	495.30	34.55	15.334			
8,500.00	8,441.75	8,399.48	8,341.11	18.20	21.44	-48.11	-607.99	449.21	559.34	524.92	34.42	16.252			
8,550.00	8,477.29	8,433.29	8,374.39	18.19	21.54	-48.11	-612.37	453.28	591.36	556.98	34.38	17.201			
8,600.00	8,509.63	8,463.58	8,404.23	18.19	21.63	-48.11	-616.18	456.82	625.82	591.31	34.51	18.132			
8,650.00	8,538.52	8,490.05	8,430.33	18.21	21.72	-48.11	-619.41	459.82	662.58	627.69	34.89	18.991			
8,700.00	8,563.75	8,512.46	8,452.44	18.25	21.78	-48.11	-622.07	462.30	701.43	665.88	35.55	19.731			
8,750.00	8,585.13	8,530.54	8,470.30	18.31	21.84	-48.11	-624.18	464.25	742.12	705.63	36.49	20.339			
8,800.00	8,602.48	8,544.09	8,483.68	18.41	21.87	-48.11	-625.73	465.69	784.34	746.75	37.59	20.864			
8,850.00	8,615.68	8,552.89	8,492.37	18.55	21.90	-48.11	-626.72	466.62	827.77	789.17	38.60	21.442			
8,900.00	8,624.64	8,556.78	8,496.21	18.73	21.91	-48.11	-627.16	467.02	872.06	832.95	39.11	22.297			
8,950.00	8,629.27	8,555.60	8,495.05	18.94	21.91	-48.11	-627.03	466.90	916.81	878.12	38.70	23.692			

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 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 333H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance			Minimum Separation (usft)	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)	
8,978.15	8,629.96	8,552.67	8,492.15	19.07	21.90	70.71	-626.70	466.59	942.07	904.08	37.99	24.798		
9,000.00	8,629.96	8,549.75	8,489.27	19.18	21.89	70.32	-626.37	466.29	961.70	923.68	38.03	25.290		
9,100.00	8,629.96	8,536.12	8,475.80	19.79	21.85	68.53	-624.82	464.85	1,052.60	1,014.34	38.26	27.511		
9,200.00	8,629.96	8,522.07	8,461.93	20.54	21.81	66.71	-623.20	463.34	1,144.88	1,106.29	38.59	29.670		
9,300.00	8,629.96	8,507.57	8,447.62	21.42	21.77	64.88	-621.50	461.76	1,238.22	1,199.24	38.98	31.763		
9,400.00	8,629.96	8,492.62	8,432.86	22.42	21.72	63.02	-619.72	460.11	1,332.40	1,292.97	39.43	33.792		
9,500.00	8,629.96	8,477.17	8,417.63	23.51	21.68	61.15	-617.85	458.37	1,427.24	1,387.34	39.91	35.765		
9,600.00	8,629.96	8,461.22	8,401.91	24.69	21.63	59.27	-615.88	456.54	1,522.62	1,482.22	40.40	37.691		
9,700.00	8,629.97	11,579.38	10,144.97	25.95	31.39	163.81	939.85	512.89	1,577.58	1,545.65	31.93	49.407		
9,800.00	8,629.97	11,679.38	10,144.97	27.27	32.67	163.81	1,039.85	512.89	1,577.58	1,544.45	33.14	47.605		
9,900.00	8,629.97	11,779.38	10,144.97	28.64	34.00	163.81	1,139.85	512.89	1,577.58	1,543.19	34.39	45.869		
10,000.00	8,629.97	11,879.38	10,144.97	30.07	35.37	163.81	1,239.85	512.89	1,577.59	1,541.90	35.69	44.205		
10,100.00	8,629.97	11,979.38	10,144.97	31.53	36.78	163.81	1,339.85	512.90	1,577.59	1,540.57	37.02	42.616		
10,200.00	8,629.97	12,079.38	10,144.97	33.03	38.23	163.81	1,439.85	512.90	1,577.59	1,539.20	38.38	41.102		
10,300.00	8,629.97	12,179.38	10,144.97	34.57	39.70	163.81	1,539.85	512.90	1,577.59	1,537.81	39.78	39.662		
10,400.00	8,629.97	12,279.38	10,144.98	36.13	41.21	163.81	1,639.85	512.90	1,577.59	1,536.39	41.19	38.296		
10,500.00	8,629.97	12,379.38	10,144.98	37.71	42.74	163.81	1,739.85	512.90	1,577.59	1,534.95	42.64	37.001		
10,600.00	8,629.98	12,479.38	10,144.98	39.32	44.29	163.81	1,839.85	512.91	1,577.59	1,533.49	44.10	35.773		
10,700.00	8,629.98	12,579.38	10,144.98	40.94	45.86	163.81	1,939.85	512.91	1,577.59	1,532.01	45.58	34.609		
10,800.00	8,629.98	12,679.38	10,144.98	42.58	47.44	163.81	2,039.85	512.91	1,577.59	1,530.51	47.08	33.506		
10,900.00	8,629.98	12,779.38	10,144.98	44.24	49.05	163.81	2,139.85	512.91	1,577.59	1,528.99	48.60	32.461		
11,000.00	8,629.98	12,879.38	10,144.98	45.91	50.67	163.81	2,239.85	512.91	1,577.59	1,527.46	50.13	31.471		
11,100.00	8,629.98	12,979.38	10,144.98	47.58	52.30	163.81	2,339.85	512.92	1,577.59	1,525.92	51.67	30.531		
11,200.00	8,629.98	13,079.38	10,144.98	49.28	53.95	163.81	2,439.85	512.92	1,577.59	1,524.36	53.23	29.639		
11,300.00	8,629.98	13,179.38	10,144.98	50.97	55.60	163.81	2,539.85	512.92	1,577.59	1,522.80	54.79	28.792		
11,400.00	8,629.98	13,279.38	10,144.98	52.68	57.27	163.81	2,639.85	512.92	1,577.59	1,521.22	56.37	27.987		
11,500.00	8,629.98	13,379.38	10,144.99	54.40	58.94	163.81	2,739.85	512.92	1,577.59	1,519.64	57.95	27.221		
11,600.00	8,629.99	13,479.38	10,144.99	56.12	60.63	163.81	2,839.85	512.93	1,577.59	1,518.05	59.55	26.493		
11,700.00	8,629.99	13,579.38	10,144.99	57.85	62.32	163.81	2,939.85	512.93	1,577.59	1,516.44	61.15	25.799		
11,800.00	8,629.99	13,679.38	10,144.99	59.59	64.02	163.81	3,039.85	512.93	1,577.59	1,514.84	62.76	25.138		
11,900.00	8,629.99	13,779.38	10,144.99	61.33	65.73	163.81	3,139.85	512.93	1,577.59	1,513.22	64.37	24.507		
12,000.00	8,629.99	13,879.38	10,144.99	63.07	67.44	163.81	3,239.85	512.93	1,577.59	1,511.60	65.99	23.905		
12,100.00	8,629.99	13,979.38	10,144.99	64.82	69.16	163.81	3,339.85	512.94	1,577.60	1,509.97	67.62	23.330		
12,200.00	8,629.99	14,079.38	10,144.99	66.58	70.88	163.81	3,439.85	512.94	1,577.60	1,508.34	69.25	22.780		
12,300.00	8,629.99	14,179.38	10,144.99	68.33	72.61	163.81	3,539.85	512.94	1,577.60	1,506.70	70.89	22.254		
12,400.00	8,629.99	14,279.38	10,144.99	70.10	74.34	163.81	3,639.85	512.94	1,577.60	1,505.06	72.53	21.750		
12,500.00	8,630.00	14,379.38	10,145.00	71.86	76.08	163.81	3,739.85	512.94	1,577.60	1,503.42	74.18	21.267		
12,600.00	8,630.00	14,479.38	10,145.00	73.63	77.82	163.81	3,839.85	512.95	1,577.60	1,501.77	75.83	20.804		
12,700.00	8,630.00	14,579.38	10,145.00	75.40	79.57	163.81	3,939.85	512.95	1,577.60	1,500.11	77.48	20.360		
12,800.00	8,630.00	14,679.38	10,145.00	77.17	81.32	163.81	4,039.85	512.95	1,577.60	1,498.46	79.14	19.934		
12,900.00	8,630.00	14,779.38	10,145.00	78.95	83.07	163.81	4,139.85	512.95	1,577.60	1,496.80	80.80	19.524		
12,975.20	8,630.00	14,854.58	10,145.00	80.29	84.39	163.81	4,215.05	512.95	1,577.60	1,495.54	82.05	19.226		

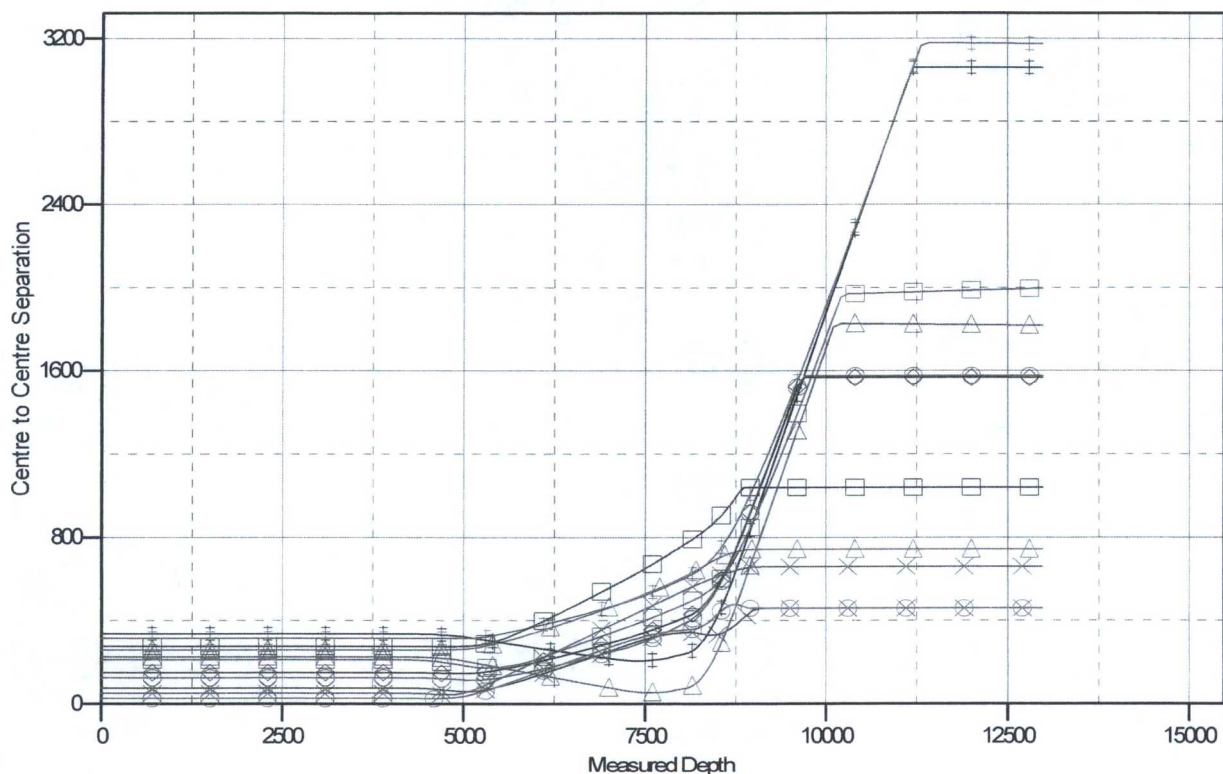
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 327H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	327H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3431.4' GE + 30' KB @ 3461.40usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 327H (SIMOPS)
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.33°

Ladder Plot



LEGEND

✕ 320H (SIMOPS), OH, Plan #1 V0	✕ 313H (SIMOPS), OH, Plan #1 V0	✕ 319H (SIMOPS), OH, Plan #1 V0
△ 253H (SIMOPS), OH, Plan #1 V0	△ 263H (SIMOPS), OH, Plan #1 V0	△ 332H (SIMOPS), OH, Plan #1 V0
✕ 312H (SIMOPS), OH, Plan #1 V0	✕ 321H (SIMOPS), OH, Plan #1 V0	✕ 328H (SIMOPS), OH, Plan #1 V0
△ 286H (SIMOPS), OH, Plan #1 V0	△ 333H (SIMOPS), OH, Plan #1 V0	

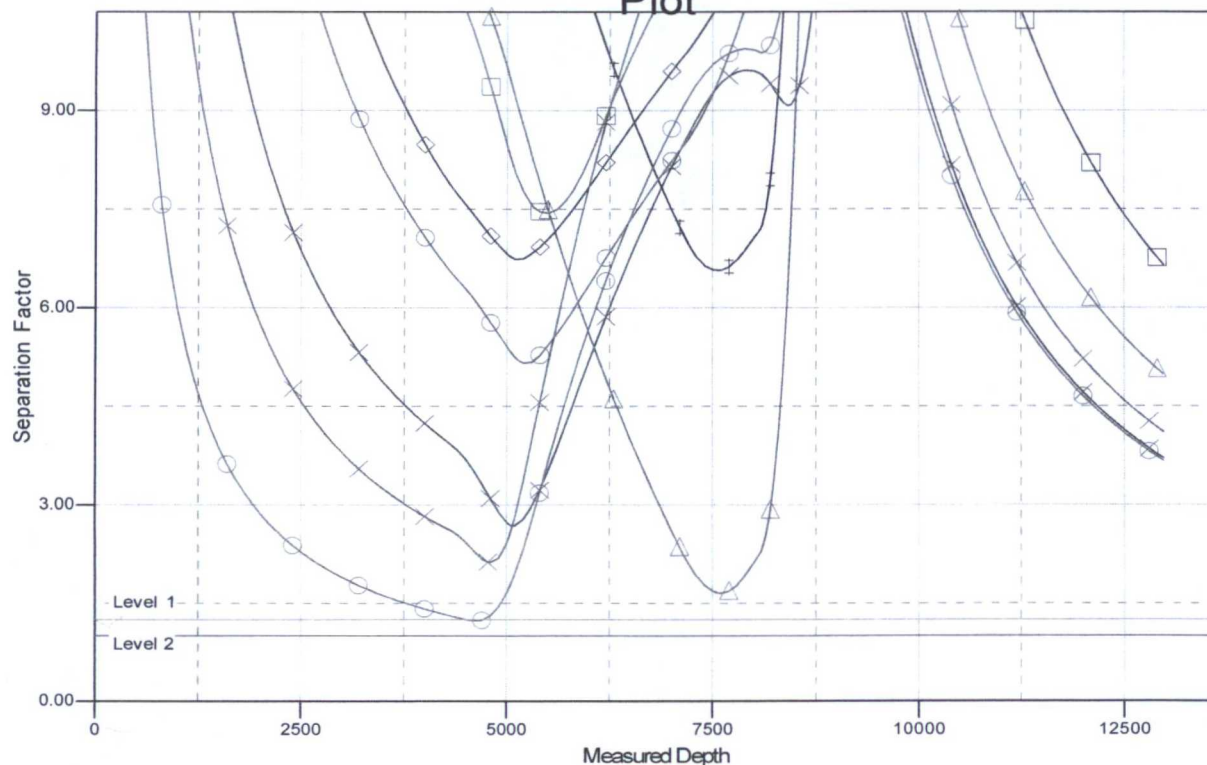
Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Reference Site: Cotton Draw Unit
 Site Error: 0.00 usft
 Reference Well: 327H (SIMOPS)
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference:
 TVD Reference: 3431.4' GE + 30' KB @ 3461.40usft
 MD Reference: 3431.4' GE + 30' KB @ 3461.40usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Offset Datum

Reference Depths are relative to 3431.4' GE + 30' KB @ 3461.40usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 327H (SIMOPS)
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.33°

Separation Factor Plot



LEGEND

✕ 320H(SIMOPS), OH, Plan #1 V0	✕ 313H(SIMOPS), OH, Plan #1 V0	✕ 319H(SIMOPS), OH, Plan #1 V0
△ 253H(SIMOPS), OH, Plan #1 V0	△ 263H(SIMOPS), OH, Plan #1 V0	△ 332H(SIMOPS), OH, Plan #1 V0
✕ 312H(SIMOPS), OH, Plan #1 V0	✕ 321H(SIMOPS), OH, Plan #1 V0	✕ 328H(SIMOPS), OH, Plan #1 V0
△ 286H(SIMOPS), OH, Plan #1 V0	△ 333H(SIMOPS), OH, Plan #1 V0	