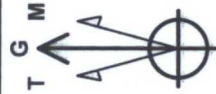




Project: Lea County, NM (NAD-83)
Site: Cotton Draw Unit
Well: 333H (SIMOPS)
Wellbore: OH
Design: Plan #1



Azimuths to Grid North
True North: -0.33°
Magnetic North: 6.95°
Strength: 48101.1snT
Dip Angle: 60.03°
Date: 12/16/2015
Model: BGGM2015



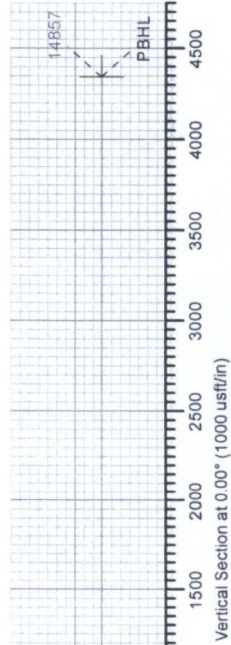
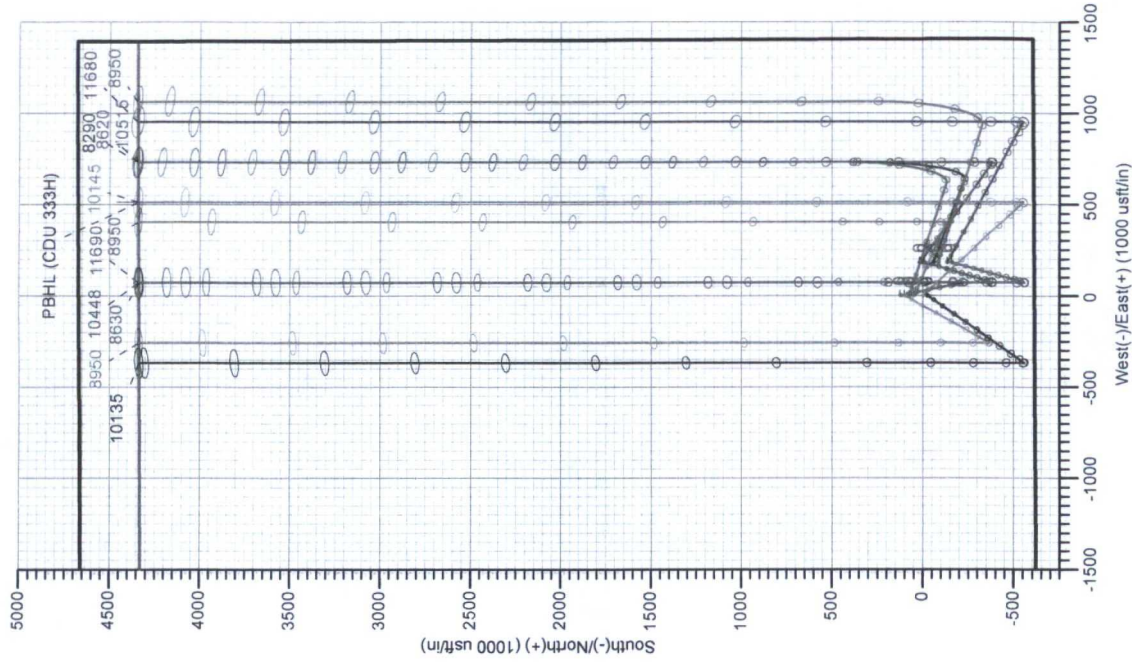
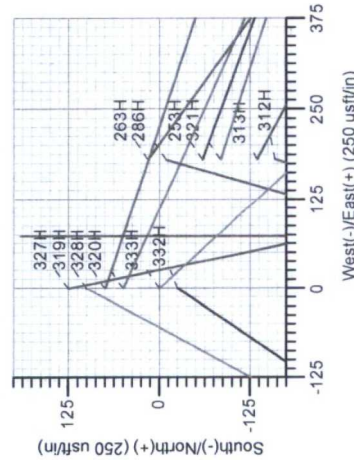
DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
SHL (CDU 333H)	0.00	0.00	0.00	414952.38	734159.85
PBHL (CDU 333H)	10145.00	4342.74	512.60	419295.12	734672.44

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4300.00	0.00	0.00	4300.00	0.00	0.00	0.00	0.00	0.00	
5364.85	10.65	137.10	5368.73	-72.28	67.17	1.00	137.10	-72.28	
8371.16	10.65	137.10	8313.27	-479.20	445.33	0.00	0.00	-479.20	
9436.01	0.00	0.00	9372.00	-551.48	512.50	1.00	180.00	-551.48	
9636.01	0.00	0.00	9572.00	-551.48	512.50	0.00	0.00	-551.48	
10536.00	90.00	0.00	10144.96	21.47	512.51	10.00	0.00	21.47	
14857.28	90.00	0.00	10145.00	4342.74	512.60	0.00	0.00	4342.74	

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

- ✱ 327H (SIMOPS), OH, Plan #1 V0
- △ 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
- ◇ 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
333H (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 333H (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:	333H (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	Latitude:	32° 8' 13.293 N
From:	Map	Easting:	733,967.43 usft	Longitude:	103° 42' 39.602 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.33 °

Well	333H (SIMOPS)					
Well Position	+N-S	810.13 usft	Northing:	414,952.38 usft	Latitude:	32° 8' 21.299 N
	+E-W	192.42 usft	Easting:	734,159.84 usft	Longitude:	103° 42' 37.310 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	3,461.40 usft	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	
5,364.85	10.65	137.10	5,358.73	-72.28	67.17	1.00	1.00	0.00	137.10	
8,371.16	10.65	137.10	8,313.27	-479.20	445.33	0.00	0.00	0.00	0.00	
9,436.01	0.00	0.00	9,372.00	-551.48	512.50	1.00	-1.00	0.00	180.00	
9,636.01	0.00	0.00	9,572.00	-551.48	512.50	0.00	0.00	0.00	0.00	
10,536.00	90.00	0.00	10,144.96	21.47	512.51	10.00	10.00	0.00	0.00	
14,857.28	90.00	0.00	10,145.00	4,342.74	512.60	0.00	0.00	0.00	0.00	PBHL (CDU 333H)



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: 333H (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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (CDU 333H)									
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	137.10	4,400.00	-0.64	0.59	-0.64	1.00	1.00	0.00
4,500.00	2.00	137.10	4,499.96	-2.56	2.38	-2.56	1.00	1.00	0.00
4,600.00	3.00	137.10	4,599.86	-5.75	5.35	-5.75	1.00	1.00	0.00
4,700.00	4.00	137.10	4,699.68	-10.22	9.50	-10.22	1.00	1.00	0.00
4,800.00	5.00	137.10	4,799.37	-15.97	14.84	-15.97	1.00	1.00	0.00
4,900.00	6.00	137.10	4,898.90	-22.99	21.37	-22.99	1.00	1.00	0.00
5,000.00	7.00	137.10	4,998.26	-31.28	29.07	-31.28	1.00	1.00	0.00
5,100.00	8.00	137.10	5,097.40	-40.85	37.96	-40.85	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: 333H (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)
5,200.00	9.00	137.10	5,196.30	-51.67	48.02	-51.67	1.00	1.00	0.00
5,300.00	10.00	137.10	5,294.93	-63.76	59.26	-63.76	1.00	1.00	0.00
5,364.85	10.65	137.10	5,358.73	-72.28	67.17	-72.28	1.00	1.00	0.00
Hold									
5,400.00	10.65	137.10	5,393.28	-77.03	71.59	-77.03	0.00	0.00	0.00
5,500.00	10.65	137.10	5,491.55	-90.57	84.17	-90.57	0.00	0.00	0.00
5,600.00	10.65	137.10	5,589.83	-104.11	96.75	-104.11	0.00	0.00	0.00
5,700.00	10.65	137.10	5,688.11	-117.64	109.33	-117.64	0.00	0.00	0.00
5,800.00	10.65	137.10	5,786.39	-131.18	121.91	-131.18	0.00	0.00	0.00
5,900.00	10.65	137.10	5,884.66	-144.71	134.48	-144.71	0.00	0.00	0.00
6,000.00	10.65	137.10	5,982.94	-158.25	147.06	-158.25	0.00	0.00	0.00
6,100.00	10.65	137.10	6,081.22	-171.78	159.64	-171.78	0.00	0.00	0.00
6,200.00	10.65	137.10	6,179.50	-185.32	172.22	-185.32	0.00	0.00	0.00
6,300.00	10.65	137.10	6,277.78	-198.86	184.80	-198.86	0.00	0.00	0.00
6,400.00	10.65	137.10	6,376.05	-212.39	197.38	-212.39	0.00	0.00	0.00
6,500.00	10.65	137.10	6,474.33	-225.93	209.96	-225.93	0.00	0.00	0.00
6,600.00	10.65	137.10	6,572.61	-239.46	222.54	-239.46	0.00	0.00	0.00
6,700.00	10.65	137.10	6,670.89	-253.00	235.12	-253.00	0.00	0.00	0.00
6,800.00	10.65	137.10	6,769.17	-266.53	247.70	-266.53	0.00	0.00	0.00
6,900.00	10.65	137.10	6,867.44	-280.07	260.27	-280.07	0.00	0.00	0.00
7,000.00	10.65	137.10	6,965.72	-293.61	272.85	-293.61	0.00	0.00	0.00
7,100.00	10.65	137.10	7,064.00	-307.14	285.43	-307.14	0.00	0.00	0.00
7,200.00	10.65	137.10	7,162.28	-320.68	298.01	-320.68	0.00	0.00	0.00
7,300.00	10.65	137.10	7,260.56	-334.21	310.59	-334.21	0.00	0.00	0.00
7,400.00	10.65	137.10	7,358.83	-347.75	323.17	-347.75	0.00	0.00	0.00
7,500.00	10.65	137.10	7,457.11	-361.29	335.75	-361.29	0.00	0.00	0.00
7,600.00	10.65	137.10	7,555.39	-374.82	348.33	-374.82	0.00	0.00	0.00
7,700.00	10.65	137.10	7,653.67	-388.36	360.91	-388.36	0.00	0.00	0.00
7,800.00	10.65	137.10	7,751.95	-401.89	373.49	-401.89	0.00	0.00	0.00
7,900.00	10.65	137.10	7,850.22	-415.43	386.07	-415.43	0.00	0.00	0.00
8,000.00	10.65	137.10	7,948.50	-428.96	398.64	-428.96	0.00	0.00	0.00
8,100.00	10.65	137.10	8,046.78	-442.50	411.22	-442.50	0.00	0.00	0.00
8,200.00	10.65	137.10	8,145.06	-456.04	423.80	-456.04	0.00	0.00	0.00
8,300.00	10.65	137.10	8,243.34	-469.57	436.38	-469.57	0.00	0.00	0.00
8,371.16	10.65	137.10	8,313.27	-479.20	445.33	-479.20	0.00	0.00	0.00
Drop									
8,400.00	10.36	137.10	8,341.63	-483.06	448.91	-483.06	1.00	-1.00	0.00
8,500.00	9.36	137.10	8,440.15	-495.60	460.57	-495.60	1.00	-1.00	0.00
8,600.00	8.36	137.10	8,538.95	-506.88	471.05	-506.88	1.00	-1.00	0.00
8,700.00	7.36	137.10	8,638.01	-516.90	480.36	-516.90	1.00	-1.00	0.00
8,800.00	6.36	137.10	8,737.30	-525.65	488.49	-525.65	1.00	-1.00	0.00
8,900.00	5.36	137.10	8,836.77	-533.13	495.44	-533.13	1.00	-1.00	0.00
9,000.00	4.36	137.10	8,936.41	-539.33	501.21	-539.33	1.00	-1.00	0.00
9,100.00	3.36	137.10	9,036.18	-544.26	505.79	-544.26	1.00	-1.00	0.00
9,200.00	2.36	137.10	9,136.06	-547.92	509.19	-547.92	1.00	-1.00	0.00
9,300.00	1.36	137.10	9,236.00	-550.30	511.40	-550.30	1.00	-1.00	0.00
9,400.00	0.36	137.10	9,335.99	-551.40	512.42	-551.40	1.00	-1.00	0.00
9,436.01	0.00	0.00	9,372.00	-551.48	512.50	-551.48	1.00	-1.00	0.00
Hold									
9,500.00	0.00	0.00	9,435.99	-551.48	512.50	-551.48	0.00	0.00	0.00
9,600.00	0.00	0.00	9,535.99	-551.48	512.50	-551.48	0.00	0.00	0.00
9,636.01	0.00	0.00	9,572.00	-551.48	512.50	-551.48	0.00	0.00	0.00
KOP 10° DLS									



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: 333H (SIMOPS)
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 333H (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)
9,650.00	1.40	0.00	9,585.99	-551.31	512.50	-551.31	10.00	10.00	0.00
9,700.00	6.40	0.00	9,635.86	-547.91	512.50	-547.91	10.00	10.00	0.00
9,750.00	11.40	0.00	9,685.24	-540.18	512.50	-540.18	10.00	10.00	0.00
9,800.00	16.40	0.00	9,733.76	-528.17	512.50	-528.17	10.00	10.00	0.00
9,850.00	21.40	0.00	9,781.05	-511.98	512.50	-511.98	10.00	10.00	0.00
9,900.00	26.40	0.00	9,826.75	-491.73	512.50	-491.73	10.00	10.00	0.00
9,950.00	31.40	0.00	9,870.51	-467.58	512.50	-467.58	10.00	10.00	0.00
10,000.00	36.40	0.00	9,912.00	-439.70	512.50	-439.70	10.00	10.00	0.00
10,050.00	41.40	0.00	9,950.90	-408.31	512.50	-408.31	10.00	10.00	0.00
10,100.00	46.40	0.00	9,986.91	-373.65	512.50	-373.65	10.00	10.00	0.00
10,150.00	51.40	0.00	10,019.77	-335.99	512.50	-335.99	10.00	10.00	0.00
10,200.00	56.40	0.00	10,049.22	-295.60	512.51	-295.60	10.00	10.00	0.00
10,250.00	61.40	0.00	10,075.04	-252.80	512.51	-252.80	10.00	10.00	0.00
10,300.00	66.40	0.00	10,097.03	-207.91	512.51	-207.91	10.00	10.00	0.00
10,350.00	71.40	0.00	10,115.03	-161.28	512.51	-161.28	10.00	10.00	0.00
10,400.00	76.40	0.00	10,128.89	-113.26	512.51	-113.26	10.00	10.00	0.00
10,450.00	81.40	0.00	10,138.51	-64.21	512.51	-64.21	10.00	10.00	0.00
10,500.00	86.40	0.00	10,143.83	-14.51	512.51	-14.51	10.00	10.00	0.00
10,536.00	90.00	0.00	10,144.96	21.47	512.51	21.47	10.00	10.00	0.00
LP									
10,600.00	90.00	0.00	10,144.96	85.47	512.51	85.47	0.00	0.00	0.00
10,700.00	90.00	0.00	10,144.96	185.47	512.51	185.47	0.00	0.00	0.00
10,800.00	90.00	0.00	10,144.96	285.47	512.52	285.47	0.00	0.00	0.00
10,900.00	90.00	0.00	10,144.96	385.47	512.52	385.47	0.00	0.00	0.00
11,000.00	90.00	0.00	10,144.96	485.47	512.52	485.47	0.00	0.00	0.00
11,100.00	90.00	0.00	10,144.96	585.47	512.52	585.47	0.00	0.00	0.00
11,200.00	90.00	0.00	10,144.96	685.47	512.52	685.47	0.00	0.00	0.00
11,300.00	90.00	0.00	10,144.97	785.47	512.53	785.47	0.00	0.00	0.00
11,400.00	90.00	0.00	10,144.97	885.47	512.53	885.47	0.00	0.00	0.00
11,500.00	90.00	0.00	10,144.97	985.47	512.53	985.47	0.00	0.00	0.00
11,600.00	90.00	0.00	10,144.97	1,085.47	512.53	1,085.47	0.00	0.00	0.00
11,700.00	90.00	0.00	10,144.97	1,185.47	512.53	1,185.47	0.00	0.00	0.00
11,800.00	90.00	0.00	10,144.97	1,285.47	512.54	1,285.47	0.00	0.00	0.00
11,900.00	90.00	0.00	10,144.97	1,385.47	512.54	1,385.47	0.00	0.00	0.00
12,000.00	90.00	0.00	10,144.97	1,485.47	512.54	1,485.47	0.00	0.00	0.00
12,100.00	90.00	0.00	10,144.97	1,585.47	512.54	1,585.47	0.00	0.00	0.00
12,200.00	90.00	0.00	10,144.97	1,685.47	512.54	1,685.47	0.00	0.00	0.00
12,300.00	90.00	0.00	10,144.98	1,785.47	512.55	1,785.47	0.00	0.00	0.00
12,400.00	90.00	0.00	10,144.98	1,885.47	512.55	1,885.47	0.00	0.00	0.00
12,500.00	90.00	0.00	10,144.98	1,985.47	512.55	1,985.47	0.00	0.00	0.00
12,600.00	90.00	0.00	10,144.98	2,085.47	512.55	2,085.47	0.00	0.00	0.00
12,700.00	90.00	0.00	10,144.98	2,185.47	512.55	2,185.47	0.00	0.00	0.00
12,800.00	90.00	0.00	10,144.98	2,285.47	512.56	2,285.47	0.00	0.00	0.00
12,900.00	90.00	0.00	10,144.98	2,385.47	512.56	2,385.47	0.00	0.00	0.00
13,000.00	90.00	0.00	10,144.98	2,485.47	512.56	2,485.47	0.00	0.00	0.00
13,100.00	90.00	0.00	10,144.98	2,585.47	512.56	2,585.47	0.00	0.00	0.00
13,200.00	90.00	0.00	10,144.98	2,685.47	512.56	2,685.47	0.00	0.00	0.00
13,300.00	90.00	0.00	10,144.99	2,785.47	512.57	2,785.47	0.00	0.00	0.00
13,400.00	90.00	0.00	10,144.99	2,885.47	512.57	2,885.47	0.00	0.00	0.00
13,500.00	90.00	0.00	10,144.99	2,985.47	512.57	2,985.47	0.00	0.00	0.00
13,600.00	90.00	0.00	10,144.99	3,085.47	512.57	3,085.47	0.00	0.00	0.00
13,700.00	90.00	0.00	10,144.99	3,185.47	512.57	3,185.47	0.00	0.00	0.00
13,800.00	90.00	0.00	10,144.99	3,285.47	512.58	3,285.47	0.00	0.00	0.00
13,900.00	90.00	0.00	10,144.99	3,385.47	512.58	3,385.47	0.00	0.00	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: 333H (SIMOPS)
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 333H (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)
14,000.00	90.00	0.00	10,144.99	3,485.47	512.58	3,485.47	0.00	0.00	0.00
14,100.00	90.00	0.00	10,144.99	3,585.47	512.58	3,585.47	0.00	0.00	0.00
14,200.00	90.00	0.00	10,144.99	3,685.47	512.58	3,685.47	0.00	0.00	0.00
14,300.00	90.00	0.00	10,144.99	3,785.47	512.59	3,785.47	0.00	0.00	0.00
14,400.00	90.00	0.00	10,145.00	3,885.47	512.59	3,885.47	0.00	0.00	0.00
14,500.00	90.00	0.00	10,145.00	3,985.47	512.59	3,985.47	0.00	0.00	0.00
14,600.00	90.00	0.00	10,145.00	4,085.47	512.59	4,085.47	0.00	0.00	0.00
14,700.00	90.00	0.00	10,145.00	4,185.47	512.59	4,185.47	0.00	0.00	0.00
14,800.00	90.00	0.00	10,145.00	4,285.47	512.59	4,285.47	0.00	0.00	0.00
14,857.28	90.00	0.00	10,145.00	4,342.74	512.60	4,342.74	0.00	0.00	0.00
TD - PBHL (CDU 333H)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (CDU 333H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	414,952.38	734,159.84	32° 8' 21.299 N	103° 42' 37.310 W
PBHL (CDU 333H) - plan hits target center - Point	0.00	0.01	10,145.00	4,342.74	512.60	419,295.12	734,672.44	32° 9' 4.244 N	103° 42' 31.055 W

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,300.00	4,300.00	0.00	0.00	Nudge
5,364.85	5,358.73	-72.28	67.17	Hold
8,371.16	8,313.27	-479.20	445.33	Drop
9,436.01	9,372.00	-551.48	512.50	Hold
9,636.01	9,572.00	-551.48	512.50	KOP 10° DLS
10,536.00	10,144.96	21.47	512.51	LP
14,857.28	10,145.00	4,342.74	512.60	TD



DEVON ENERGY

Lea County, NM (NAD-83)
Cotton Draw Unit
333H (SIMOPS)

OH
Plan #1

Anticollision Report

17 December, 2015





LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 333H (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:	333H (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	14,857.28	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	189.71	170.67	9.965 CC	
253H (SIMOPS) - OH - Plan #1	4,500.00	4,493.58	190.03	170.25	9.606 ES	
253H (SIMOPS) - OH - Plan #1	6,600.00	6,562.59	249.77	220.39	8.500 SF	
263H (SIMOPS) - OH - Plan #1	5,415.67	5,405.83	146.55	122.96	6.213 CC, ES	
263H (SIMOPS) - OH - Plan #1	14,857.28	15,005.64	430.43	325.64	4.107 SF	
286H (SIMOPS) - OH - Plan #1	5,930.72	5,922.06	26.44	0.98	1.039 Level 2, CC, ES, SF	
312H (SIMOPS) - OH - Plan #1	6,234.96	6,209.17	122.89	96.04	4.578 CC, ES	
312H (SIMOPS) - OH - Plan #1	6,400.00	6,372.16	125.59	97.76	4.513 SF	
313H (SIMOPS) - OH - Plan #1	5,869.45	5,830.39	221.63	196.80	8.928 CC	
313H (SIMOPS) - OH - Plan #1	6,200.00	6,160.35	222.50	196.13	8.439 ES	
313H (SIMOPS) - OH - Plan #1	8,500.00	8,456.29	272.10	231.37	6.681 SF	
319H (SIMOPS) - OH - Plan #1	4,652.95	4,657.94	99.16	78.85	4.883 CC	
319H (SIMOPS) - OH - Plan #1	4,700.00	4,705.51	99.23	78.76	4.848 ES	
319H (SIMOPS) - OH - Plan #1	4,800.00	4,806.40	100.01	79.20	4.806 SF	
320H (SIMOPS) - OH - Plan #1	4,300.00	4,300.00	50.00	30.96	2.626 CC	
320H (SIMOPS) - OH - Plan #1	4,400.00	4,400.36	50.28	30.84	2.586 ES	
320H (SIMOPS) - OH - Plan #1	4,500.00	4,500.71	51.13	31.33	2.582 SF	
321H (SIMOPS) - OH - Plan #1	4,300.00	4,300.00	198.98	179.94	10.452 CC	
321H (SIMOPS) - OH - Plan #1	4,700.00	4,686.57	199.55	179.08	9.745 ES	
321H (SIMOPS) - OH - Plan #1	5,400.00	5,361.17	208.93	185.95	9.093 SF	
327H (SIMOPS) - OH - Plan #1	5,126.76	5,141.24	113.89	91.98	5.197 CC, ES	
327H (SIMOPS) - OH - Plan #1	5,200.00	5,214.26	114.45	92.30	5.166 SF	
328H (SIMOPS) - OH - Plan #1	4,300.00	4,300.00	75.00	55.96	3.940 CC	
328H (SIMOPS) - OH - Plan #1	4,400.00	4,400.42	75.36	55.92	3.876 ES	
328H (SIMOPS) - OH - Plan #1	4,500.00	4,500.82	76.46	56.65	3.861 SF	
332H (SIMOPS) - OH - Plan #1	4,300.00	4,300.00	25.00	5.96	1.313 Level 3, CC	
332H (SIMOPS) - OH - Plan #1	4,400.00	4,399.63	25.10	5.66	1.291 Level 3, ES, SF	

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				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	108.14	-59.05	180.28	189.71								

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 333H (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:	333H (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)						
100.00	100.00	100.00	100.00	0.08	0.08	108.14	-59.05	180.28	189.71	189.55	0.16	1,205.734		
200.00	200.00	200.00	200.00	0.30	0.30	108.14	-59.05	180.28	189.71	189.10	0.81	312.598		
300.00	300.00	300.00	300.00	0.53	0.53	108.14	-59.05	180.28	189.71	188.65	1.06	179.578		
400.00	400.00	400.00	400.00	0.75	0.75	108.14	-59.05	180.28	189.71	188.20	1.51	125.972		
500.00	500.00	500.00	500.00	0.98	0.98	108.14	-59.05	180.28	189.71	187.75	1.96	97.013		
600.00	600.00	600.00	600.00	1.20	1.20	108.14	-59.05	180.28	189.71	187.30	2.40	78.880		
700.00	700.00	700.00	700.00	1.43	1.43	108.14	-59.05	180.28	189.71	186.85	2.85	66.458		
800.00	800.00	800.00	800.00	1.65	1.65	108.14	-59.05	180.28	189.71	186.40	3.30	57.416		
900.00	900.00	900.00	900.00	1.88	1.88	108.14	-59.05	180.28	189.71	185.95	3.75	50.540		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	108.14	-59.05	180.28	189.71	185.50	4.20	45.134		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	108.14	-59.05	180.28	189.71	185.05	4.65	40.774		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	108.14	-59.05	180.28	189.71	184.60	5.10	37.181		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	108.14	-59.05	180.28	189.71	184.15	5.55	34.171		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	108.14	-59.05	180.28	189.71	183.70	6.00	31.611		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	108.14	-59.05	180.28	189.71	183.26	6.45	29.408		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	108.14	-59.05	180.28	189.71	182.81	6.90	27.492		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	108.14	-59.05	180.28	189.71	182.36	7.35	25.811		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	108.14	-59.05	180.28	189.71	181.91	7.80	24.323		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	108.14	-59.05	180.28	189.71	181.46	8.25	22.998		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	108.14	-59.05	180.28	189.71	181.01	8.70	21.809		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	108.14	-59.05	180.28	189.71	180.56	9.15	20.737		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	108.14	-59.05	180.28	189.71	180.11	9.60	19.766		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	108.14	-59.05	180.28	189.71	179.66	10.05	18.882		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	108.14	-59.05	180.28	189.71	179.21	10.50	18.073		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	108.14	-59.05	180.28	189.71	178.76	10.95	17.331		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	108.14	-59.05	180.28	189.71	178.31	11.40	16.647		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	108.14	-59.05	180.28	189.71	177.86	11.85	16.015		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	108.14	-59.05	180.28	189.71	177.41	12.29	15.430		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	108.14	-59.05	180.28	189.71	176.96	12.74	14.886		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	108.14	-59.05	180.28	189.71	176.51	13.19	14.378		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	108.14	-59.05	180.28	189.71	176.06	13.64	13.905		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	108.14	-59.05	180.28	189.71	175.61	14.09	13.461		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	108.14	-59.05	180.28	189.71	175.16	14.54	13.045		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	108.14	-59.05	180.28	189.71	174.71	14.99	12.654		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	108.14	-59.05	180.28	189.71	174.26	15.44	12.286		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	108.14	-59.05	180.28	189.71	173.81	15.89	11.938		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	108.14	-59.05	180.28	189.71	173.37	16.34	11.610		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	108.14	-59.05	180.28	189.71	172.92	16.79	11.299		
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	108.14	-59.05	180.28	189.71	172.47	17.24	11.004		
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	108.14	-59.05	180.28	189.71	172.02	17.69	10.724		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	108.14	-59.05	180.28	189.71	171.57	18.14	10.459		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	108.14	-59.05	180.28	189.71	171.12	18.59	10.206		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	108.14	-59.05	180.28	189.71	170.67	19.04	9.965 CC		
4,400.00	4,400.00	4,396.80	4,396.79	9.72	9.72	-29.08	-59.33	181.05	189.79	170.35	19.43	9.766		
4,500.00	4,499.96	4,493.58	4,493.55	9.89	9.90	-29.42	-60.18	183.35	190.03	170.25	19.78	9.606 ES		
4,600.00	4,599.86	4,590.35	4,590.23	10.07	10.08	-29.98	-61.59	187.18	190.46	170.33	20.13	9.461		
4,700.00	4,699.68	4,687.10	4,686.81	10.26	10.27	-30.77	-63.57	192.55	191.09	170.62	20.48	9.332		
4,800.00	4,799.37	4,783.81	4,783.24	10.44	10.46	-31.78	-66.11	199.44	191.96	171.14	20.83	9.218		
4,900.00	4,898.90	4,880.48	4,879.49	10.63	10.66	-32.99	-69.21	207.85	193.10	171.93	21.17	9.120		
5,000.00	4,998.26	4,977.10	4,975.53	10.83	10.86	-34.40	-72.87	217.78	194.57	173.04	21.53	9.039		
5,100.00	5,097.40	5,073.67	5,071.32	11.03	11.07	-36.00	-77.09	229.22	196.40	174.52	21.88	8.976		
5,200.00	5,196.30	5,170.17	5,166.83	11.25	11.28	-37.78	-81.86	242.16	198.67	176.43	22.25	8.931		

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 333H (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:	333H (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		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)						
5,300.00	5,294.93	5,267.12	5,262.54	11.47	11.51	-39.72	-87.20	256.67	201.42	178.80	22.62	8.904		
5,364.85	5,358.73	5,331.76	5,326.29	11.63	11.66	-41.12	-90.90	266.69	203.00	180.12	22.88	8.873		
5,400.00	5,393.28	5,366.78	5,360.83	11.71	11.75	-41.92	-92.90	272.12	203.75	180.72	23.03	8.847		
5,500.00	5,491.55	5,466.44	5,459.11	11.96	12.00	-44.15	-98.59	287.57	206.13	182.65	23.48	8.779		
5,600.00	5,589.83	5,566.09	5,557.39	12.21	12.25	-46.33	-104.29	303.02	208.81	184.86	23.94	8.721		
5,700.00	5,688.11	5,665.74	5,655.68	12.48	12.51	-48.45	-109.98	318.47	211.78	187.36	24.42	8.672		
5,800.00	5,786.39	5,765.39	5,753.96	12.75	12.78	-50.51	-115.67	333.92	215.04	190.12	24.91	8.631		
5,900.00	5,884.66	5,865.04	5,852.24	13.03	13.05	-52.51	-121.37	349.37	218.57	193.14	25.42	8.597		
6,000.00	5,982.94	5,964.69	5,950.52	13.32	13.33	-54.44	-127.06	364.82	222.35	196.41	25.95	8.570		
6,100.00	6,081.22	6,064.34	6,048.80	13.61	13.61	-56.30	-132.76	380.27	226.39	199.90	26.49	8.547		
6,200.00	6,179.50	6,163.99	6,147.08	13.91	13.90	-58.10	-138.45	395.72	230.65	203.61	27.04	8.530		
6,300.00	6,277.78	6,263.64	6,245.36	14.21	14.19	-59.83	-144.15	411.17	235.13	207.53	27.61	8.517		
6,400.00	6,376.05	6,363.29	6,343.64	14.52	14.48	-61.49	-149.84	426.62	239.82	211.63	28.19	8.508		
6,500.00	6,474.33	6,462.94	6,441.92	14.84	14.78	-63.09	-155.53	442.07	244.71	215.93	28.78	8.503		
6,600.00	6,572.61	6,562.59	6,540.20	15.16	15.08	-64.63	-161.23	457.52	249.77	220.39	29.38	8.500 SF		
6,700.00	6,670.89	6,662.24	6,638.48	15.48	15.39	-66.11	-166.92	472.97	255.02	225.02	30.00	8.500		
6,800.00	6,769.17	6,761.89	6,736.77	15.81	15.70	-67.52	-172.62	488.42	260.42	229.79	30.63	8.503		
6,900.00	6,867.44	6,861.55	6,835.05	16.14	16.01	-68.88	-178.31	503.87	265.98	234.71	31.26	8.507		
7,000.00	6,965.72	6,961.20	6,933.33	16.48	16.32	-70.18	-184.01	519.32	271.67	239.76	31.91	8.514		
7,100.00	7,064.00	7,060.85	7,031.61	16.82	16.64	-71.42	-189.70	534.77	277.51	244.94	32.56	8.522		
7,200.00	7,162.28	7,160.50	7,129.89	17.16	16.96	-72.62	-195.39	550.22	283.47	250.24	33.23	8.531		
7,300.00	7,260.56	7,260.15	7,228.17	17.50	17.28	-73.76	-201.09	565.67	289.55	255.65	33.90	8.542		
7,400.00	7,358.83	7,359.80	7,326.45	17.85	17.60	-74.86	-206.78	581.12	295.73	261.16	34.57	8.554		
7,500.00	7,457.11	7,459.45	7,424.73	18.20	17.93	-75.92	-212.48	596.57	302.03	266.77	35.25	8.567		
7,600.00	7,555.39	7,559.10	7,523.01	18.55	18.26	-76.93	-218.17	612.02	308.42	272.48	35.94	8.581		
7,700.00	7,653.67	7,658.75	7,621.29	18.91	18.59	-77.89	-223.87	627.47	314.90	278.27	36.63	8.596		
7,800.00	7,751.95	7,750.00	7,711.30	19.27	18.89	-78.80	-228.73	641.62	321.76	284.46	37.30	8.626		
7,900.00	7,850.22	7,826.48	7,786.73	19.62	19.11	-80.61	-235.35	653.48	334.17	296.24	37.93	8.810		
8,000.00	7,948.50	7,900.00	7,858.19	19.99	19.30	-83.52	-242.54	664.71	354.66	316.10	38.56	9.198		
8,100.00	8,046.78	7,960.59	7,915.48	20.35	19.43	-86.55	-250.09	673.72	383.87	344.74	39.13	9.811		
8,200.00	8,145.06	8,017.95	7,967.76	20.71	19.55	-89.74	-257.02	681.94	422.10	382.44	39.85	10.645		
8,300.00	8,243.34	8,068.67	8,011.97	21.08	19.64	-92.69	-264.18	688.89	468.98	428.85	40.13	11.686		
8,371.16	8,313.27	8,100.00	8,038.16	21.34	19.69	-94.53	-271.51	693.00	507.17	466.72	40.45	12.538		
8,400.00	8,341.63	8,113.19	8,048.92	21.44	19.71	-95.49	-275.06	694.69	523.68	483.12	40.57	12.909		
8,500.00	8,440.15	8,150.00	8,078.00	21.75	19.78	-98.31	-282.98	699.27	585.04	544.12	40.92	14.296		
8,600.00	8,538.95	8,187.30	8,105.98	22.04	19.83	-101.11	-291.72	703.67	651.84	610.60	41.24	15.806		
8,700.00	8,638.01	8,218.32	8,128.02	22.32	19.88	-103.56	-299.18	707.13	723.09	681.56	41.52	17.414		
8,800.00	8,737.30	8,250.00	8,149.31	22.58	19.93	-106.00	-306.39	710.48	797.97	756.18	41.79	19.094		
8,900.00	8,836.77	8,271.03	8,162.73	22.84	19.96	-108.00	-313.17	712.59	875.75	833.74	42.01	20.849		
9,000.00	8,936.41	8,300.00	8,180.24	23.07	20.01	-110.27	-320.00	715.34	956.00	913.76	42.24	22.631		
9,100.00	9,036.18	8,300.00	8,180.24	23.30	20.01	-111.63	-326.87	715.34	1,038.38	995.93	42.46	24.458		
9,200.00	9,136.06	8,332.94	8,198.74	23.51	20.07	-113.98	-333.72	718.25	1,121.92	1,079.29	42.63	26.318		
9,300.00	9,236.00	8,350.00	8,207.70	23.70	20.10	-115.87	-340.65	719.66	1,207.06	1,164.28	42.78	28.214		
9,400.00	9,335.99	8,350.00	8,207.70	23.89	20.10	-117.41	-347.65	719.66	1,293.65	1,250.71	42.94	30.129		
9,436.01	9,372.00	8,371.64	8,218.46	23.95	20.15	18.71	65.25	721.35	1,324.63	1,281.66	42.97	30.826		
9,500.00	9,435.99	8,380.94	8,222.86	24.06	20.17	18.54	73.41	722.04	1,380.61	1,337.53	43.08	32.050		
9,600.00	9,535.99	8,400.00	8,231.48	24.23	20.21	18.19	90.36	723.39	1,469.08	1,425.83	43.24	33.973		
9,636.01	9,572.00	8,400.00	8,231.48	24.30	20.21	18.19	90.36	723.39	1,501.14	1,457.83	43.31	34.661		
9,650.00	9,585.99	8,400.00	8,231.48	24.32	20.21	17.36	90.36	723.39	1,513.58	1,470.27	43.31	34.951		
9,700.00	9,635.86	8,400.00	8,231.48	24.39	20.21	14.93	90.36	723.39	1,556.97	1,513.83	43.13	36.099		
9,750.00	9,685.24	8,400.00	8,231.48	24.43	20.21	13.11	90.36	723.39	1,598.58	1,555.88	42.70	37.436		
9,800.00	9,733.76	8,423.49	8,241.32	24.45	20.26	11.60	111.62	724.94	1,637.63	1,595.61	42.03	38.968		

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



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 333H (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:	333H (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		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)					
9,850.00	9,781.05	8,450.00	8,251.39	24.44	20.34	10.44	136.09	726.52	1,675.01	1,633.89	41.12	40.731	
9,900.00	9,826.75	8,450.00	8,251.39	24.42	20.34	9.62	136.09	726.52	1,709.30	1,669.30	40.00	42.732	
9,950.00	9,870.51	8,450.00	8,251.39	24.37	20.34	8.95	136.09	726.52	1,741.20	1,702.52	38.68	45.021	
10,000.00	9,912.00	8,450.00	8,251.39	24.30	20.34	8.40	136.09	726.52	1,770.58	1,733.41	37.17	47.633	
10,050.00	9,950.90	8,472.40	8,259.02	24.23	20.40	7.94	157.12	727.72	1,796.80	1,761.26	35.54	50.559	
10,100.00	9,986.91	8,500.00	8,267.29	24.14	20.49	7.57	183.42	729.02	1,820.52	1,786.72	33.81	53.850	
10,150.00	10,019.77	8,500.00	8,267.29	24.04	20.49	7.29	183.42	729.02	1,840.61	1,808.63	31.98	57.547	
10,200.00	10,049.22	8,500.00	8,267.29	23.94	20.49	7.06	183.42	729.02	1,857.85	1,827.71	30.14	61.632	
10,250.00	10,075.04	8,500.00	8,267.29	23.83	20.49	6.87	183.42	729.02	1,872.20	1,843.85	28.35	66.039	
10,300.00	10,097.03	8,529.23	8,274.68	23.72	20.59	6.75	211.67	730.18	1,882.66	1,855.93	26.73	70.425	
10,350.00	10,115.03	8,550.00	8,279.06	23.62	20.68	6.68	231.96	730.87	1,890.27	1,864.95	25.32	74.666	
10,400.00	10,128.89	8,550.00	8,279.06	23.51	20.68	6.63	231.96	730.87	1,894.40	1,870.25	24.15	78.438	
10,450.00	10,138.51	8,550.00	8,279.06	23.42	20.68	6.62	231.96	730.87	1,895.52	1,872.15	23.37	81.116	
10,500.00	10,143.83	8,576.81	8,283.63	23.33	20.79	6.67	258.37	731.59	1,892.82	1,869.70	23.13	81.850	
10,536.00	10,144.96	8,600.00	8,286.60	23.27	20.91	6.74	281.36	732.06	1,889.24	1,865.97	23.27	81.178	
10,600.00	10,144.96	8,600.00	8,286.60	23.20	20.91	6.74	281.36	732.06	1,881.51	1,858.07	23.44	80.270	
10,700.00	10,144.96	8,624.58	8,288.74	23.30	21.03	6.76	305.84	732.39	1,873.07	1,849.26	23.82	78.650	
10,800.00	10,144.96	8,650.00	8,289.86	23.78	21.17	6.76	331.23	732.57	1,868.67	1,844.44	24.23	77.136	
10,872.02	10,144.96	8,676.26	8,290.00	24.25	21.33	6.77	357.49	732.59	1,867.97	1,843.40	24.57	76.013	
10,900.00	10,144.96	8,704.24	8,290.00	24.44	21.50	6.77	385.47	732.59	1,867.97	1,843.20	24.78	75.397	
11,000.00	10,144.96	8,804.24	8,290.00	25.22	22.24	6.77	485.47	732.59	1,867.97	1,842.42	25.55	73.113	
11,100.00	10,144.96	8,904.24	8,290.00	26.10	23.11	6.77	585.47	732.59	1,867.97	1,841.58	26.39	70.781	
11,200.00	10,144.96	9,004.24	8,290.00	27.06	24.10	6.77	685.47	732.59	1,867.97	1,840.68	27.29	68.442	
11,300.00	10,144.97	9,104.24	8,290.00	28.10	25.18	6.77	785.47	732.59	1,867.97	1,839.72	28.25	66.124	
11,400.00	10,144.97	9,204.24	8,290.00	29.22	26.35	6.77	885.47	732.59	1,867.97	1,838.72	29.25	63.853	
11,500.00	10,144.97	9,304.24	8,290.00	30.40	27.59	6.77	985.47	732.59	1,867.98	1,837.67	30.30	61.643	
11,600.00	10,144.97	9,404.24	8,290.00	31.64	28.90	6.77	1,085.47	732.59	1,867.98	1,836.59	31.39	59.507	
11,700.00	10,144.97	9,504.24	8,290.00	32.94	30.26	6.77	1,185.47	732.59	1,867.98	1,835.46	32.51	57.453	
11,800.00	10,144.97	9,604.24	8,290.00	34.28	31.66	6.77	1,285.47	732.59	1,867.98	1,834.31	33.67	55.484	
11,900.00	10,144.97	9,704.24	8,290.00	35.66	33.11	6.77	1,385.47	732.59	1,867.98	1,833.13	34.85	53.603	
12,000.00	10,144.97	9,804.24	8,290.00	37.08	34.59	6.77	1,485.47	732.59	1,867.98	1,831.92	36.06	51.809	
12,100.00	10,144.97	9,904.24	8,290.00	38.53	36.11	6.77	1,585.47	732.59	1,867.98	1,830.69	37.29	50.100	
12,200.00	10,144.97	10,004.24	8,290.00	40.01	37.65	6.77	1,685.47	732.59	1,867.98	1,829.45	38.54	48.475	
12,300.00	10,144.98	10,104.24	8,290.00	41.52	39.22	6.77	1,785.47	732.59	1,867.98	1,828.18	39.80	46.930	
12,400.00	10,144.98	10,204.24	8,290.00	43.05	40.80	6.77	1,885.47	732.59	1,867.98	1,826.89	41.09	45.461	
12,500.00	10,144.98	10,304.24	8,290.00	44.61	42.41	6.76	1,985.47	732.59	1,867.98	1,825.59	42.39	44.067	
12,600.00	10,144.98	10,404.24	8,290.00	46.18	44.03	6.76	2,085.47	732.59	1,867.98	1,824.28	43.70	42.741	
12,700.00	10,144.98	10,504.24	8,290.00	47.77	45.67	6.76	2,185.47	732.59	1,867.98	1,822.95	45.03	41.481	
12,800.00	10,144.98	10,604.24	8,290.00	49.38	47.33	6.76	2,285.47	732.59	1,867.98	1,821.61	46.37	40.283	
12,900.00	10,144.98	10,704.24	8,290.00	51.00	48.99	6.76	2,385.47	732.59	1,867.99	1,820.26	47.72	39.144	
13,000.00	10,144.98	10,804.24	8,290.00	52.64	50.67	6.76	2,485.47	732.59	1,867.99	1,818.91	49.08	38.060	
13,100.00	10,144.98	10,904.24	8,290.00	54.29	52.35	6.76	2,585.47	732.59	1,867.99	1,817.54	50.45	37.028	
13,200.00	10,144.98	11,004.24	8,290.00	55.94	54.05	6.76	2,685.47	732.59	1,867.99	1,816.16	51.82	36.044	
13,300.00	10,144.99	11,104.24	8,290.00	57.61	55.75	6.76	2,785.47	732.59	1,867.99	1,814.78	53.21	35.106	
13,400.00	10,144.99	11,204.24	8,290.00	59.29	57.47	6.76	2,885.47	732.59	1,867.99	1,813.39	54.60	34.212	
13,500.00	10,144.99	11,304.24	8,290.00	60.98	59.18	6.76	2,985.47	732.59	1,867.99	1,811.99	56.00	33.358	
13,600.00	10,144.99	11,404.24	8,290.00	62.67	60.91	6.76	3,085.47	732.59	1,867.99	1,810.59	57.40	32.542	
13,700.00	10,144.99	11,504.24	8,290.00	64.37	62.64	6.76	3,185.47	732.59	1,867.99	1,809.18	58.81	31.762	
13,800.00	10,144.99	11,604.24	8,290.00	66.08	64.37	6.76	3,285.47	732.59	1,867.99	1,807.77	60.23	31.016	
13,900.00	10,144.99	11,704.24	8,290.00	67.79	66.11	6.76	3,385.47	732.59	1,867.99	1,806.35	61.65	30.302	
14,000.00	10,144.99	11,804.24	8,290.00	69.51	67.86	6.76	3,485.47	732.59	1,867.99	1,804.92	63.07	29.618	
14,100.00	10,144.99	11,904.24	8,290.00	71.24	69.61	6.76	3,585.47	732.59	1,867.99	1,803.50	64.50	28.962	

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 333H (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:	333H (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			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,200.00	10,144.99	12,004.24	8,290.00	72.97	71.36	6.76	3,685.47	732.59	1,868.00	1,802.06	65.93	28.332	
14,300.00	10,144.99	12,104.24	8,290.00	74.70	73.12	6.76	3,785.47	732.59	1,868.00	1,800.63	67.37	27.728	
14,400.00	10,145.00	12,204.24	8,290.00	76.44	74.88	6.76	3,885.47	732.59	1,868.00	1,799.19	68.81	27.148	
14,500.00	10,145.00	12,304.24	8,290.00	78.18	76.64	6.76	3,985.47	732.59	1,868.00	1,797.75	70.25	26.590	
14,600.00	10,145.00	12,404.24	8,290.00	79.93	78.41	6.76	4,085.47	732.59	1,868.00	1,796.30	71.70	26.054	
14,700.00	10,145.00	12,504.24	8,290.00	81.68	80.18	6.76	4,185.47	732.59	1,868.00	1,794.85	73.15	25.538	
14,800.00	10,145.00	12,604.24	8,290.00	83.43	81.95	6.76	4,285.47	732.59	1,868.00	1,793.40	74.60	25.041	
14,857.28	10,145.00	12,661.51	8,290.00	84.44	82.96	6.76	4,342.74	732.59	1,868.00	1,792.57	75.43	24.765	



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 333H (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:	333H (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 Tooface (°)	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	84.94	15.94	180.05	180.76				
100.00	100.00	100.00	100.00	0.08	0.08	84.94	15.94	180.05	180.76	180.60	0.16	1,148.850	
200.00	200.00	200.00	200.00	0.30	0.30	84.94	15.94	180.05	180.76	180.15	0.61	297.850	
300.00	300.00	300.00	300.00	0.53	0.53	84.94	15.94	180.05	180.76	179.70	1.06	171.106	
400.00	400.00	400.00	400.00	0.75	0.75	84.94	15.94	180.05	180.76	179.25	1.51	120.029	
500.00	500.00	500.00	500.00	0.98	0.98	84.94	15.94	180.05	180.76	178.80	1.96	92.436	
600.00	600.00	600.00	600.00	1.20	1.20	84.94	15.94	180.05	180.76	178.35	2.40	75.159	
700.00	700.00	700.00	700.00	1.43	1.43	84.94	15.94	180.05	180.76	177.90	2.85	63.323	
800.00	800.00	800.00	800.00	1.65	1.65	84.94	15.94	180.05	180.76	177.45	3.30	54.707	
900.00	900.00	900.00	900.00	1.88	1.88	84.94	15.94	180.05	180.76	177.00	3.75	48.155	
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	84.94	15.94	180.05	180.76	176.55	4.20	43.005	
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	84.94	15.94	180.05	180.76	176.10	4.65	38.850	
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	84.94	15.94	180.05	180.76	175.65	5.10	35.427	
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	84.94	15.94	180.05	180.76	175.20	5.55	32.559	
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	84.94	15.94	180.05	180.76	174.75	6.00	30.120	
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	84.94	15.94	180.05	180.76	174.31	6.45	28.021	
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	84.94	15.94	180.05	180.76	173.86	6.90	26.195	
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	84.94	15.94	180.05	180.76	173.41	7.35	24.593	
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	84.94	15.94	180.05	180.76	172.96	7.80	23.176	
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	84.94	15.94	180.05	180.76	172.51	8.25	21.913	
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	84.94	15.94	180.05	180.76	172.06	8.70	20.780	
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	84.94	15.94	180.05	180.76	171.61	9.15	19.759	
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	84.94	15.94	180.05	180.76	171.16	9.60	18.834	
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	84.94	15.94	180.05	180.76	170.71	10.05	17.991	
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	84.94	15.94	180.05	180.76	170.26	10.50	17.220	
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	84.94	15.94	180.05	180.76	169.81	10.95	16.513	
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	84.94	15.94	180.05	180.76	169.36	11.40	15.862	
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	84.94	15.94	180.05	180.76	168.91	11.85	15.260	
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	84.94	15.94	180.05	180.76	168.46	12.29	14.702	
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	84.94	15.94	180.05	180.76	168.01	12.74	14.183	
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	84.94	15.94	180.05	180.76	167.56	13.19	13.700	
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	84.94	15.94	180.05	180.76	167.11	13.64	13.249	
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	84.94	15.94	180.05	180.76	166.66	14.09	12.826	
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	84.94	15.94	180.05	180.76	166.21	14.54	12.430	
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	84.94	15.94	180.05	180.76	165.76	14.99	12.057	
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	84.94	15.94	180.05	180.76	165.31	15.44	11.706	
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	84.94	15.94	180.05	180.76	164.86	15.89	11.375	
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	84.94	15.94	180.05	180.76	164.42	16.34	11.062	
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	84.94	15.94	180.05	180.76	163.97	16.79	10.766	
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	84.94	15.94	180.05	180.76	163.52	17.24	10.485	
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	84.94	15.94	180.05	180.76	163.07	17.69	10.219	
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	84.94	15.94	180.05	180.76	162.62	18.14	9.965	
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	84.94	15.94	180.05	180.76	162.17	18.59	9.724	
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	84.94	15.94	180.05	180.76	161.72	19.04	9.495	
4,400.00	4,400.00	4,400.00	4,400.00	9.72	9.74	-52.38	15.94	180.05	180.22	160.76	19.46	9.261	
4,500.00	4,499.96	4,499.96	4,499.96	9.89	9.97	-53.06	15.94	180.05	178.64	158.78	19.86	8.996	
4,600.00	4,599.86	4,599.86	4,599.86	10.07	10.19	-54.21	15.94	180.05	176.05	155.79	20.25	8.692	
4,700.00	4,699.68	4,699.68	4,699.68	10.26	10.42	-55.88	15.94	180.05	172.55	151.89	20.65	8.355	
4,800.00	4,799.37	4,799.37	4,799.37	10.44	10.64	-58.13	15.94	180.05	168.26	147.21	21.05	7.992	
4,900.00	4,898.90	4,898.90	4,898.90	10.63	10.86	-61.02	15.94	180.05	163.39	141.93	21.46	7.613	
5,000.00	4,998.26	4,998.26	4,998.26	10.83	11.09	-64.63	15.94	180.05	158.19	136.32	21.88	7.231	
5,100.00	5,097.40	5,096.02	5,096.02	11.03	11.29	-68.75	15.47	180.70	153.46	131.18	22.28	6.888	

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 333H (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:	333H (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			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,200.00	5,196.30	5,193.95	5,193.91	11.25	11.46	-73.16	14.02	182.71	149.87	127.20	22.67	6.610		
5,300.00	5,294.93	5,292.07	5,291.94	11.47	11.64	-77.79	11.58	186.08	147.54	124.46	23.09	6.391		
5,364.85	5,358.73	5,355.81	5,355.58	11.63	11.76	-80.89	9.46	189.00	146.74	123.38	23.36	6.281		
5,400.00	5,393.28	5,390.40	5,390.09	11.71	11.83	-82.54	8.14	190.82	146.57	123.05	23.52	6.232		
5,415.67	5,408.88	5,405.83	5,405.50	11.75	11.85	-83.25	7.52	191.69	146.55	122.96	23.59	6.213	CC, ES	
5,500.00	5,491.55	5,489.06	5,488.47	11.96	12.01	-86.82	3.71	196.95	147.03	123.07	23.96	6.137		
5,600.00	5,589.83	5,588.06	5,587.03	12.21	12.20	-90.43	-1.74	204.47	148.63	124.22	24.41	6.089		
5,700.00	5,688.11	5,687.33	5,685.68	12.48	12.40	-93.30	-8.21	213.41	151.04	126.17	24.87	6.073		
5,800.00	5,786.39	5,786.82	5,784.35	12.75	12.60	-95.45	-15.69	223.74	153.99	128.64	25.35	6.075		
5,900.00	5,884.66	5,886.46	5,882.93	13.03	12.82	-96.90	-24.19	235.49	157.26	131.42	25.84	6.087		
6,000.00	5,982.94	5,986.20	5,981.34	13.32	13.04	-97.66	-33.71	248.63	160.71	134.37	26.34	6.101		
6,100.00	6,081.22	6,086.01	6,079.53	13.61	13.27	-97.80	-44.21	263.14	164.28	137.42	26.87	6.115		
6,200.00	6,179.50	6,185.94	6,177.74	13.91	13.52	-97.76	-55.03	278.08	167.88	140.48	27.41	6.126		
6,300.00	6,277.78	6,285.88	6,275.96	14.21	13.77	-97.72	-65.85	293.03	171.48	143.52	27.96	6.133		
6,400.00	6,376.05	6,385.82	6,374.18	14.52	14.03	-97.68	-76.67	307.97	175.08	146.56	28.53	6.137		
6,500.00	6,474.33	6,485.75	6,472.40	14.84	14.29	-97.64	-87.49	322.91	178.68	149.58	29.11	6.139		
6,600.00	6,572.61	6,585.69	6,570.61	15.16	14.56	-97.60	-98.31	337.86	182.28	152.59	29.70	6.138		
6,700.00	6,670.89	6,685.62	6,668.83	15.48	14.84	-97.57	-109.13	352.80	185.88	155.59	30.30	6.136		
6,800.00	6,769.17	6,785.56	6,767.05	15.81	15.13	-97.53	-119.95	367.75	189.49	158.58	30.91	6.131		
6,900.00	6,867.44	6,885.49	6,865.26	16.14	15.42	-97.50	-130.77	382.69	193.09	161.56	31.53	6.125		
7,000.00	6,965.72	6,985.43	6,963.48	16.48	15.71	-97.47	-141.59	397.64	196.69	164.53	32.16	6.117		
7,100.00	7,064.00	7,085.36	7,061.70	16.82	16.01	-97.44	-152.41	412.58	200.29	167.49	32.79	6.108		
7,200.00	7,162.28	7,185.30	7,159.92	17.16	16.32	-97.41	-163.22	427.52	203.89	170.45	33.44	6.097		
7,300.00	7,260.56	7,285.23	7,258.13	17.50	16.63	-97.38	-174.04	442.47	207.49	173.40	34.09	6.086		
7,400.00	7,358.83	7,385.17	7,356.35	17.85	16.94	-97.35	-184.86	457.41	211.09	176.34	34.75	6.074		
7,500.00	7,457.11	7,485.10	7,454.57	18.20	17.26	-97.32	-195.68	472.36	214.69	179.27	35.42	6.062		
7,600.00	7,555.39	7,585.04	7,552.79	18.55	17.59	-97.30	-206.50	487.30	218.29	182.20	36.09	6.049		
7,700.00	7,653.67	7,684.97	7,651.00	18.91	17.91	-97.27	-217.32	502.25	221.89	185.12	36.77	6.035		
7,800.00	7,751.95	7,784.91	7,749.22	19.27	18.24	-97.25	-228.14	517.19	225.49	188.04	37.45	6.021		
7,900.00	7,850.22	7,884.84	7,847.44	19.62	18.57	-97.23	-238.96	532.13	229.10	190.95	38.14	6.006		
8,000.00	7,948.50	7,984.78	7,945.65	19.99	18.91	-97.20	-249.78	547.08	232.70	193.86	38.84	5.992		
8,100.00	8,046.78	8,084.71	8,043.87	20.35	19.25	-97.18	-260.60	562.02	236.30	196.76	39.54	5.977		
8,200.00	8,145.06	8,184.65	8,142.09	20.71	19.59	-97.16	-271.42	576.97	239.90	199.66	40.24	5.962		
8,300.00	8,243.34	8,284.58	8,240.31	21.08	19.93	-97.14	-282.24	591.91	243.50	202.55	40.95	5.946		
8,371.16	8,313.27	8,355.69	8,310.20	21.34	20.18	-97.13	-289.94	602.55	246.06	204.61	41.46	5.936		
8,400.00	8,341.63	8,384.52	8,338.52	21.44	20.28	-97.11	-293.06	606.86	247.09	205.44	41.65	5.932		
8,500.00	8,440.15	8,484.45	8,436.74	21.75	20.63	-96.82	-303.88	621.80	250.53	208.22	42.31	5.921		
8,600.00	8,538.95	8,584.34	8,534.91	22.04	20.98	-96.14	-314.69	636.74	253.78	210.82	42.96	5.908		
8,700.00	8,638.01	8,684.18	8,633.03	22.32	21.33	-95.08	-325.50	651.67	256.91	213.32	43.59	5.894		
8,800.00	8,737.30	8,784.46	8,731.72	22.58	21.64	-93.83	-335.92	666.06	259.92	215.76	44.16	5.886		
8,900.00	8,836.77	8,884.89	8,830.86	22.84	21.93	-92.61	-345.35	679.08	262.71	218.02	44.70	5.878		
9,000.00	8,936.41	8,985.43	8,930.37	23.07	22.21	-91.40	-353.76	690.70	265.29	220.09	45.20	5.869		
9,100.00	9,036.18	9,086.09	9,030.24	23.30	22.48	-90.20	-361.16	700.91	267.65	221.98	45.67	5.860		
9,200.00	9,136.06	9,186.86	9,130.42	23.51	22.74	-89.02	-367.53	709.72	269.78	223.67	46.11	5.851		
9,300.00	9,236.00	9,287.74	9,230.88	23.70	22.98	-87.85	-372.87	717.10	271.69	225.17	46.52	5.840		
9,400.00	9,335.99	9,388.73	9,331.60	23.89	23.21	-86.69	-377.18	723.05	273.38	226.48	46.90	5.829		
9,436.01	9,372.00	9,425.12	9,367.93	23.95	23.29	50.83	-378.48	724.84	273.93	226.90	47.03	5.825		
9,500.00	9,435.99	9,489.84	9,432.56	24.06	23.43	51.51	-380.45	727.56	274.80	227.55	47.25	5.816		
9,600.00	9,535.99	9,591.11	9,533.76	24.23	23.64	52.27	-382.68	730.64	275.84	228.23	47.61	5.794		
9,636.01	9,572.00	9,627.61	9,570.25	24.30	23.71	52.45	-383.22	731.40	276.10	228.36	47.73	5.784		
9,650.00	9,585.99	9,641.79	9,584.42	24.32	23.74	52.54	-383.40	731.64	276.08	228.30	47.78	5.778		
9,700.00	9,635.86	9,692.33	9,634.96	24.39	23.83	53.41	-383.86	732.27	274.25	226.40	47.85	5.732		

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



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 333H (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:	333H (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			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)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,750.00	9,885.24	9,742.42	9,885.04	24.43	23.92	55.17	-384.05	732.54	269.80	222.05	47.75	5.650		
9,800.00	9,733.76	9,791.13	9,733.76	24.45	24.01	57.86	-384.06	732.55	263.04	215.52	47.52	5.535		
9,850.00	9,781.05	9,838.42	9,781.05	24.44	24.09	61.57	-384.06	732.55	254.53	207.33	47.20	5.393		
9,900.00	9,826.75	9,884.12	9,826.75	24.42	24.18	66.33	-384.06	732.55	244.98	198.16	46.82	5.232		
9,950.00	9,870.51	9,927.88	9,870.51	24.37	24.26	72.05	-384.06	732.55	235.37	188.95	46.42	5.071		
10,000.00	9,912.00	9,968.14	9,910.76	24.30	24.34	78.28	-383.92	732.55	227.01	181.02	46.00	4.936		
10,050.00	9,950.90	10,006.00	9,948.56	24.23	24.40	84.44	-381.83	732.55	221.65	176.09	45.56	4.865		
10,094.34	9,982.99	10,040.68	9,982.99	24.15	24.45	90.00	-377.74	732.55	220.05	174.94	45.10	4.879		
10,100.00	9,986.91	10,045.19	9,987.45	24.14	24.45	90.71	-377.05	732.55	220.08	175.03	45.04	4.886		
10,150.00	10,019.77	10,085.98	10,027.48	24.04	24.49	96.94	-369.26	732.55	222.68	178.28	44.40	5.015		
10,200.00	10,049.22	10,128.71	10,068.71	23.94	24.53	103.00	-358.07	732.55	229.57	185.97	43.60	5.265		
10,250.00	10,075.04	10,173.78	10,111.16	23.83	24.55	108.79	-342.97	732.55	240.53	197.91	42.62	5.643		
10,300.00	10,097.03	10,221.73	10,154.88	23.72	24.55	114.27	-323.30	732.55	255.11	213.63	41.48	6.150		
10,350.00	10,115.03	10,273.25	10,199.83	23.62	24.55	119.41	-298.18	732.55	272.67	232.46	40.21	6.780		
10,400.00	10,128.89	10,329.20	10,245.88	23.51	24.52	124.23	-266.43	732.55	292.52	253.64	38.88	7.524		
10,450.00	10,138.51	10,390.74	10,292.69	23.42	24.49	128.77	-226.53	732.55	313.91	276.35	37.55	8.359		
10,500.00	10,143.83	10,459.30	10,339.46	23.33	24.43	133.03	-176.45	732.55	336.03	299.71	36.32	9.251		
10,536.00	10,144.96	10,514.01	10,372.28	23.27	24.38	135.93	-132.71	732.55	351.95	316.40	35.55	9.900		
10,600.00	10,144.96	10,628.14	10,426.55	23.20	24.28	141.99	-32.52	732.55	376.34	342.56	33.78	11.140		
10,700.00	10,144.96	10,847.51	10,471.00	23.30	24.25	145.99	180.93	732.56	393.37	360.32	33.06	11.900		
10,800.00	10,144.96	10,948.59	10,472.07	23.78	24.48	146.07	282.01	732.56	394.25	360.67	33.58	11.742		
10,900.00	10,144.96	11,048.59	10,473.13	24.44	24.94	146.16	382.00	732.56	395.13	360.88	34.24	11.540		
11,000.00	10,144.96	11,148.58	10,474.19	25.22	25.56	146.24	481.99	732.56	396.00	360.95	35.05	11.298		
11,100.00	10,144.96	11,248.57	10,475.24	26.10	26.32	146.33	581.98	732.56	396.88	360.89	35.99	11.026		
11,200.00	10,144.96	11,348.57	10,476.30	27.06	27.19	146.41	681.96	732.56	397.76	360.70	37.06	10.733		
11,300.00	10,144.97	11,448.56	10,477.36	28.10	28.14	146.50	781.95	732.56	398.64	360.40	38.24	10.426		
11,400.00	10,144.97	11,548.56	10,478.41	29.22	29.18	146.58	881.94	732.56	399.52	360.00	39.51	10.111		
11,500.00	10,144.97	11,648.55	10,479.47	30.40	30.30	146.66	981.93	732.56	400.40	359.52	40.88	9.794		
11,600.00	10,144.97	11,748.55	10,480.53	31.64	31.47	146.75	1,081.92	732.56	401.28	358.95	42.33	9.480		
11,700.00	10,144.97	11,848.54	10,481.58	32.94	32.71	146.83	1,181.91	732.57	402.16	358.32	43.85	9.172		
11,800.00	10,144.97	11,948.54	10,482.64	34.28	34.00	146.91	1,281.90	732.57	403.05	357.62	45.43	8.872		
11,900.00	10,144.97	12,048.53	10,483.70	35.66	35.33	146.99	1,381.89	732.57	403.93	356.86	47.07	8.582		
12,000.00	10,144.97	12,148.52	10,484.75	37.08	36.71	147.07	1,481.88	732.57	404.82	356.06	48.75	8.303		
12,100.00	10,144.97	12,248.52	10,485.81	38.53	38.12	147.16	1,581.86	732.57	405.70	355.22	50.48	8.036		
12,200.00	10,144.97	12,348.51	10,486.87	40.01	39.57	147.24	1,681.85	732.57	406.59	354.34	52.25	7.781		
12,300.00	10,144.98	12,448.51	10,487.92	41.52	41.05	147.32	1,781.84	732.57	407.48	353.42	54.06	7.538		
12,400.00	10,144.98	12,548.50	10,488.98	43.05	42.55	147.40	1,881.83	732.57	408.37	352.47	55.89	7.306		
12,500.00	10,144.98	12,648.50	10,490.04	44.61	44.08	147.48	1,981.82	732.57	409.25	351.50	57.75	7.086		
12,600.00	10,144.98	12,748.49	10,491.09	46.18	45.63	147.56	2,081.81	732.57	410.14	350.51	59.64	6.877		
12,700.00	10,144.98	12,848.49	10,492.15	47.77	47.19	147.64	2,181.80	732.57	411.04	349.49	61.54	6.679		
12,800.00	10,144.98	12,948.48	10,493.21	49.38	48.78	147.71	2,281.79	732.58	411.93	348.46	63.46	6.491		
12,900.00	10,144.98	13,048.47	10,494.26	51.00	50.38	147.79	2,381.77	732.58	412.82	347.42	65.40	6.312		
13,000.00	10,144.98	13,148.47	10,495.32	52.64	52.00	147.87	2,481.76	732.58	413.71	346.36	67.36	6.142		
13,100.00	10,144.98	13,248.46	10,496.38	54.29	53.63	147.95	2,581.75	732.58	414.61	345.28	69.32	5.981		
13,200.00	10,144.98	13,348.46	10,497.43	55.94	55.27	148.03	2,681.74	732.58	415.50	344.20	71.30	5.828		
13,300.00	10,144.99	13,448.45	10,498.49	57.61	56.93	148.10	2,781.73	732.58	416.40	343.11	73.28	5.682		
13,400.00	10,144.99	13,548.45	10,499.55	59.29	58.59	148.18	2,881.72	732.58	417.29	342.01	75.28	5.543		
13,500.00	10,144.99	13,648.44	10,500.60	60.98	60.26	148.26	2,981.71	732.58	418.19	340.91	77.28	5.411		
13,600.00	10,144.99	13,748.43	10,501.66	62.67	61.95	148.33	3,081.70	732.58	419.09	339.80	79.29	5.286		
13,700.00	10,144.99	13,848.43	10,502.72	64.37	63.64	148.41	3,181.69	732.58	419.99	338.68	81.30	5.166		
13,800.00	10,144.99	13,948.42	10,503.77	66.08	65.33	148.48	3,281.67	732.58	420.88	337.56	83.32	5.051		
13,900.00	10,144.99	14,048.42	10,504.83	67.79	67.04	148.56	3,381.66	732.58	421.78	336.44	85.34	4.942		

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 333H (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:	333H (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		Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,000.00	10,144.99	14,148.41	10,505.89	69.51	68.75	148.63	3,481.65	732.59	422.68	335.32	87.37	4.838	
14,100.00	10,144.99	14,248.41	10,506.94	71.24	70.46	148.71	3,581.64	732.59	423.59	334.19	89.40	4.738	
14,200.00	10,144.99	14,348.40	10,508.00	72.97	72.18	148.78	3,681.63	732.59	424.49	333.06	91.43	4.643	
14,300.00	10,144.99	14,448.40	10,509.06	74.70	73.91	148.86	3,781.62	732.59	425.39	331.93	93.46	4.552	
14,400.00	10,145.00	14,548.39	10,510.11	76.44	75.64	148.93	3,881.61	732.59	426.29	330.80	95.49	4.464	
14,500.00	10,145.00	14,648.38	10,511.17	78.18	77.38	149.00	3,981.60	732.59	427.20	329.67	97.52	4.380	
14,600.00	10,145.00	14,748.38	10,512.23	79.93	79.12	149.07	4,081.59	732.59	428.10	328.54	99.56	4.300	
14,700.00	10,145.00	14,848.37	10,513.28	81.68	80.86	149.15	4,181.57	732.59	429.01	327.42	101.59	4.223	
14,800.00	10,145.00	14,948.37	10,514.34	83.43	82.61	149.22	4,281.56	732.59	429.91	326.29	103.63	4.149	
14,857.28	10,145.00	15,005.64	10,514.94	84.44	83.61	149.26	4,338.83	732.59	430.43	325.64	104.79	4.107 SF	



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 333H (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:	333H (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 Tooface (")	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	92.88	-9.06	180.13	180.36				
100.00	100.00	100.00	100.00	0.08	0.08	92.88	-9.06	180.13	180.36	180.20	0.16	1,146.329	
200.00	200.00	200.00	200.00	0.30	0.30	92.88	-9.06	180.13	180.36	179.75	0.61	297.197	
300.00	300.00	300.00	300.00	0.53	0.53	92.88	-9.06	180.13	180.36	179.30	1.06	170.730	
400.00	400.00	400.00	400.00	0.75	0.75	92.88	-9.06	180.13	180.36	178.85	1.51	119.766	
500.00	500.00	500.00	500.00	0.98	0.98	92.88	-9.06	180.13	180.36	178.40	1.96	92.234	
600.00	600.00	600.00	600.00	1.20	1.20	92.88	-9.06	180.13	180.36	177.95	2.40	74.994	
700.00	700.00	700.00	700.00	1.43	1.43	92.88	-9.06	180.13	180.36	177.50	2.85	63.184	
800.00	800.00	800.00	800.00	1.65	1.65	92.88	-9.06	180.13	180.36	177.06	3.30	54.587	
900.00	900.00	900.00	900.00	1.88	1.88	92.88	-9.06	180.13	180.36	176.61	3.75	48.050	
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	92.88	-9.06	180.13	180.36	176.16	4.20	42.911	
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	92.88	-9.06	180.13	180.36	175.71	4.65	38.765	
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	92.88	-9.06	180.13	180.36	175.26	5.10	35.349	
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	92.88	-9.06	180.13	180.36	174.81	5.55	32.487	
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	92.88	-9.06	180.13	180.36	174.36	6.00	30.054	
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	92.88	-9.06	180.13	180.36	173.91	6.45	27.959	
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	92.88	-9.06	180.13	180.36	173.46	6.90	26.138	
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	92.88	-9.06	180.13	180.36	173.01	7.35	24.539	
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	92.88	-9.06	180.13	180.36	172.56	7.80	23.125	
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	92.88	-9.06	180.13	180.36	172.11	8.25	21.865	
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	92.88	-9.06	180.13	180.36	171.66	8.70	20.735	
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	92.88	-9.06	180.13	180.36	171.21	9.15	19.716	
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	92.88	-9.06	180.13	180.36	170.76	9.60	18.792	
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	92.88	-9.06	180.13	180.36	170.31	10.05	17.951	
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	92.88	-9.06	180.13	180.36	169.86	10.50	17.183	
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	92.88	-9.06	180.13	180.36	169.41	10.95	16.477	
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	92.88	-9.06	180.13	180.36	168.96	11.40	15.827	
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	92.88	-9.06	180.13	180.36	168.51	11.85	15.226	
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	92.88	-9.06	180.13	180.36	168.06	12.29	14.670	
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	92.88	-9.06	180.13	180.36	167.62	12.74	14.152	
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	92.88	-9.06	180.13	180.36	167.17	13.19	13.670	
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	92.88	-9.06	180.13	180.36	166.72	13.64	13.220	
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	92.88	-9.06	180.13	180.36	166.27	14.09	12.798	
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	92.88	-9.06	180.13	180.36	165.82	14.54	12.402	
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	92.88	-9.06	180.13	180.36	165.37	14.99	12.030	
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	92.88	-9.06	180.13	180.36	164.92	15.44	11.680	
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	92.88	-9.06	180.13	180.36	164.47	15.89	11.350	
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	92.88	-9.06	180.13	180.36	164.02	16.34	11.038	
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	92.88	-9.06	180.13	180.36	163.57	16.79	10.742	
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	92.88	-9.06	180.13	180.36	163.12	17.24	10.462	
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	92.88	-9.06	180.13	180.36	162.67	17.69	10.196	
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	92.88	-9.06	180.13	180.36	162.22	18.14	9.943	
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	92.88	-9.06	180.13	180.36	161.77	18.59	9.703	
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	92.88	-9.06	180.13	180.36	161.32	19.04	9.474	
4,400.00	4,400.00	4,400.71	4,400.71	9.72	9.72	-44.15	-9.91	179.89	179.53	160.10	19.43	9.239	
4,500.00	4,499.96	4,501.38	4,501.34	9.89	9.89	-43.92	-12.46	179.15	177.06	157.29	19.77	8.955	
4,600.00	4,599.86	4,601.96	4,601.82	10.07	10.06	-43.53	-16.71	177.94	172.95	152.84	20.11	8.599	
4,700.00	4,699.88	4,702.41	4,702.07	10.26	10.23	-42.95	-22.64	176.23	167.21	146.76	20.45	8.175	
4,800.00	4,799.37	4,802.66	4,802.01	10.44	10.41	-42.14	-30.24	174.05	159.87	139.07	20.80	7.687	
4,900.00	4,898.90	4,902.25	4,901.22	10.63	10.59	-41.39	-38.58	171.65	151.11	129.97	21.14	7.148	
5,000.00	4,998.26	5,001.73	5,000.33	10.83	10.77	-41.01	-46.92	169.26	141.07	119.58	21.49	6.565	
5,100.00	5,097.40	5,101.09	5,099.31	11.03	10.96	-41.08	-55.24	166.87	129.72	107.88	21.84	5.939	

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 333H (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:	333H (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 Tooface (")	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)						
5,200.00	5,196.30	5,200.28	5,198.12	11.25	11.15	-41.72	-63.55	164.48	117.08	94.87	22.20	5.273		
5,300.00	5,294.93	5,299.27	5,296.74	11.47	11.34	-43.16	-71.85	162.10	103.17	80.60	22.58	4.570		
5,364.85	5,358.73	5,363.35	5,360.57	11.63	11.47	-44.72	-77.21	160.55	93.53	70.70	22.83	4.097		
5,400.00	5,393.28	5,398.06	5,395.14	11.71	11.54	-45.75	-80.12	159.72	88.20	65.22	22.98	3.838		
5,500.00	5,491.55	5,496.79	5,493.50	11.96	11.74	-49.51	-88.39	157.34	73.23	49.80	23.43	3.125		
5,600.00	5,589.83	5,595.53	5,591.86	12.21	11.94	-55.15	-96.67	154.96	58.73	34.81	23.92	2.456		
5,700.00	5,688.11	5,694.26	5,690.22	12.48	12.15	-64.31	-104.94	152.59	45.14	20.70	24.44	1.847		
5,800.00	5,786.39	5,793.00	5,788.58	12.75	12.36	-80.36	-113.21	150.21	33.60	8.60	25.00	1.344 Level 3		
5,900.00	5,884.66	5,891.73	5,886.94	13.03	12.57	-107.79	-121.48	147.84	26.89	1.47	25.42	1.058 Level 2		
5,930.72	5,914.86	5,922.06	5,917.16	13.12	12.63	-118.10	-124.03	147.11	26.44	0.98	25.46	1.039 Level 2, CC, ES, SF		
6,000.00	5,982.94	5,990.47	5,985.30	13.32	12.78	-140.39	-129.76	145.46	28.63	3.15	25.49	1.123 Level 2		
6,100.00	6,081.22	6,089.20	6,083.66	13.61	12.99	-163.15	-138.03	143.08	37.68	12.02	25.66	1.468 Level 3		
6,200.00	6,179.50	6,187.94	6,182.02	13.91	13.21	-175.99	-146.30	140.71	50.22	24.20	26.02	1.930		
6,300.00	6,277.78	6,286.67	6,280.38	14.21	13.43	-176.49	-154.57	138.33	64.24	37.78	26.46	2.428		
6,400.00	6,376.05	6,385.41	6,378.74	14.52	13.65	-171.70	-162.85	135.95	78.96	52.04	26.92	2.933		
6,500.00	6,474.33	6,484.14	6,477.10	14.84	13.88	-168.43	-171.12	133.58	94.05	66.66	27.39	3.434		
6,600.00	6,572.61	6,582.88	6,575.46	15.16	14.10	-166.07	-179.39	131.20	109.36	81.50	27.86	3.925		
6,700.00	6,670.89	6,681.61	6,673.82	15.48	14.33	-164.29	-187.66	128.82	124.80	96.46	28.34	4.404		
6,800.00	6,769.17	6,780.35	6,772.17	15.81	14.56	-162.90	-195.94	126.45	140.34	111.52	28.82	4.870		
6,900.00	6,867.44	6,879.08	6,870.53	16.14	14.79	-161.79	-204.21	124.07	155.94	126.64	29.30	5.322		
7,000.00	6,965.72	6,977.82	6,968.89	16.48	15.02	-160.88	-212.48	121.69	171.58	141.80	29.78	5.761		
7,100.00	7,064.00	7,076.55	7,067.25	16.82	15.25	-160.13	-220.75	119.32	187.26	156.99	30.27	6.186		
7,200.00	7,162.28	7,175.29	7,165.61	17.16	15.49	-159.49	-229.03	116.94	202.97	172.21	30.76	6.598		
7,300.00	7,260.56	7,274.02	7,263.97	17.50	15.72	-158.94	-237.30	114.57	218.70	187.45	31.25	6.998		
7,400.00	7,358.83	7,372.76	7,362.33	17.85	15.96	-158.46	-245.57	112.19	234.45	202.70	31.75	7.385		
7,500.00	7,457.11	7,471.49	7,460.69	18.20	16.20	-158.05	-253.84	109.81	250.21	217.96	32.24	7.760		
7,600.00	7,555.39	7,570.23	7,559.05	18.55	16.44	-157.68	-262.11	107.44	265.98	233.24	32.74	8.123		
7,700.00	7,653.67	7,668.96	7,657.41	18.91	16.68	-157.36	-270.39	105.06	281.76	248.51	33.25	8.475		
7,800.00	7,751.95	7,767.70	7,755.77	19.27	16.92	-157.07	-278.66	102.68	297.55	263.80	33.75	8.816		
7,900.00	7,850.22	7,866.43	7,854.13	19.62	17.16	-156.81	-286.93	100.31	313.34	279.09	34.26	9.147		
8,000.00	7,948.50	7,965.17	7,952.49	19.99	17.40	-156.57	-295.20	97.93	329.15	294.38	34.76	9.468		
8,100.00	8,046.78	8,063.90	8,050.84	20.35	17.65	-156.36	-303.48	95.55	344.95	309.68	35.27	9.779		
8,200.00	8,145.06	8,162.64	8,149.20	20.71	17.89	-156.16	-311.75	93.18	360.76	324.98	35.78	10.081		
8,300.00	8,243.34	8,261.37	8,247.56	21.08	18.14	-155.98	-320.02	90.80	376.58	340.28	36.30	10.374		
8,371.16	8,313.27	8,331.63	8,317.55	21.34	18.31	-155.86	-325.91	89.11	387.83	351.17	36.67	10.578		
8,400.00	8,341.63	8,360.12	8,345.93	21.44	18.38	-155.83	-328.29	88.42	392.33	355.50	36.83	10.653		
8,500.00	8,440.15	8,459.04	8,444.47	21.75	18.63	-155.66	-336.58	86.04	406.91	369.53	37.38	10.886		
8,600.00	8,538.95	8,557.98	8,543.05	22.04	18.88	-155.41	-344.80	83.68	419.93	382.01	37.92	11.073		
8,700.00	8,638.01	8,656.87	8,641.62	22.32	19.11	-155.17	-352.33	81.52	431.48	393.03	38.44	11.224		
8,800.00	8,737.30	8,755.92	8,740.43	22.58	19.34	-154.95	-359.05	79.59	441.55	402.61	38.94	11.338		
8,900.00	8,836.77	8,855.13	8,839.45	22.84	19.56	-154.76	-364.96	77.89	450.15	410.72	39.43	11.417		
9,000.00	8,936.41	8,954.46	8,938.64	23.07	19.78	-154.58	-370.05	76.43	457.28	417.38	39.90	11.461		
9,100.00	9,036.18	9,053.90	9,037.98	23.30	20.00	-154.41	-374.31	75.20	462.92	422.57	40.35	11.472		
9,200.00	9,136.06	9,153.42	9,137.43	23.51	20.21	-154.25	-377.76	74.22	467.08	426.29	40.79	11.452		
9,300.00	9,236.00	9,253.00	9,236.98	23.70	20.42	-154.10	-380.37	73.47	469.75	428.54	41.21	11.400		
9,400.00	9,335.99	9,352.62	9,336.58	23.89	20.63	-153.96	-382.15	72.95	470.93	429.33	41.61	11.318		
9,436.01	9,372.00	9,388.50	9,372.46	23.95	20.70	-88.99	-382.59	72.83	471.00	429.25	41.75	11.282		
9,500.00	9,435.99	9,452.26	9,436.21	24.06	20.83	-69.05	-383.10	72.68	470.95	428.94	42.00	11.212		
9,592.26	9,528.25	9,544.30	9,528.25	24.22	21.01	-69.07	-383.27	72.63	470.93	428.56	42.37	11.114		
9,600.00	9,535.99	9,552.04	9,535.99	24.23	21.03	-69.07	-383.27	72.63	470.93	428.53	42.40	11.106		
9,636.01	9,572.00	9,588.05	9,572.00	24.30	21.10	-69.07	-383.27	72.63	470.93	428.39	42.55	11.069		
9,650.00	9,585.99	9,602.04	9,585.99	24.32	21.13	-69.10	-383.27	72.63	470.87	428.28	42.59	11.055		

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 333H (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:	333H (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		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)					
9,700.00	9,635.86	9,651.91	9,635.86	24.39	21.22	-69.60	-383.27	72.63	469.67	426.91	10.983		
9,750.00	9,685.24	9,701.29	9,685.24	24.43	21.32	-70.73	-383.27	72.63	467.02	424.09	10.878		
9,800.00	9,733.76	9,749.81	9,733.76	24.45	21.42	-72.46	-383.27	72.63	463.12	420.00	10.741		
9,850.00	9,781.05	9,797.10	9,781.05	24.44	21.52	-74.76	-383.27	72.63	458.31	414.98	10.577		
9,900.00	9,826.75	9,842.80	9,826.75	24.42	21.61	-77.55	-383.27	72.63	453.04	409.47	10.398		
9,950.00	9,870.51	9,886.56	9,870.51	24.37	21.70	-80.71	-383.27	72.63	447.88	404.04	10.218		
10,000.00	9,912.00	9,925.89	9,909.83	24.30	21.77	-83.90	-382.86	72.63	443.53	399.47	10.066		
10,050.00	9,950.90	9,964.09	9,947.93	24.23	21.84	-87.00	-380.13	72.63	440.78	396.54	9.963		
10,098.28	9,985.73	10,002.25	9,985.72	24.14	21.89	-90.00	-374.88	72.63	439.87	395.52	9.917		
10,100.00	9,986.91	10,003.63	9,987.09	24.14	21.89	-90.11	-374.65	72.63	439.87	395.52	9.917		
10,150.00	10,019.77	10,044.77	10,027.32	24.04	21.94	-93.21	-366.09	72.63	440.97	396.58	9.934		
10,200.00	10,049.22	10,087.82	10,068.64	23.94	21.97	-96.30	-354.07	72.63	444.17	399.84	10.020		
10,250.00	10,075.04	10,133.18	10,111.08	23.83	21.99	-99.36	-338.08	72.63	449.51	405.34	10.177		
10,300.00	10,097.03	10,181.37	10,154.62	23.72	22.00	-102.39	-317.48	72.63	456.96	413.05	10.407		
10,350.00	10,115.03	10,233.01	10,199.19	23.62	22.00	-105.41	-291.43	72.63	466.38	422.82	10.706		
10,400.00	10,128.89	10,288.94	10,244.60	23.51	22.00	-108.44	-258.81	72.63	477.56	434.42	11.070		
10,450.00	10,138.51	10,350.19	10,290.42	23.42	21.99	-111.50	-218.21	72.63	490.19	447.52	11.488		
10,500.00	10,143.83	10,418.08	10,335.81	23.33	21.99	-114.58	-167.79	72.63	503.83	461.65	11.943		
10,536.00	10,144.96	10,471.94	10,367.39	23.27	21.99	-116.82	-124.18	72.63	513.99	472.14	12.281		
10,600.00	10,144.96	10,583.28	10,418.98	23.20	22.07	-121.92	-25.70	72.63	530.04	489.00	12.913		
10,700.00	10,144.96	10,794.68	10,460.93	23.30	22.63	-125.69	180.27	72.63	541.63	500.65	13.215		
10,800.00	10,144.96	10,900.87	10,460.71	23.78	23.12	-125.67	286.45	72.63	541.48	499.62	12.935		
10,900.00	10,144.96	11,000.87	10,460.39	24.44	23.71	-125.64	386.45	72.63	541.30	498.37	12.609		
11,000.00	10,144.96	11,100.87	10,460.08	25.22	24.43	-125.62	486.45	72.63	541.12	496.93	12.246		
11,100.00	10,144.96	11,200.86	10,459.77	26.10	25.26	-125.59	586.45	72.63	540.94	495.31	11.857		
11,200.00	10,144.96	11,300.86	10,459.45	27.06	26.19	-125.56	686.45	72.62	540.75	493.54	11.452		
11,300.00	10,144.97	11,400.86	10,459.14	28.10	27.21	-125.53	786.45	72.62	540.57	491.62	11.041		
11,400.00	10,144.97	11,500.86	10,458.83	29.22	28.31	-125.51	886.45	72.62	540.39	489.56	10.631		
11,500.00	10,144.97	11,600.86	10,458.51	30.40	29.49	-125.48	986.45	72.62	540.21	487.39	10.228		
11,600.00	10,144.97	11,700.86	10,458.20	31.64	30.72	-125.45	1,086.45	72.62	540.03	485.12	9.834		
11,700.00	10,144.97	11,800.86	10,457.89	32.94	32.02	-125.42	1,186.45	72.62	539.85	482.75	9.455		
11,800.00	10,144.97	11,900.86	10,457.57	34.28	33.36	-125.40	1,286.44	72.62	539.67	480.30	9.090		
11,900.00	10,144.97	12,000.86	10,457.26	35.66	34.75	-125.37	1,386.44	72.62	539.49	477.78	8.742		
12,000.00	10,144.97	12,100.86	10,456.95	37.08	36.17	-125.34	1,486.44	72.62	539.31	475.19	8.410		
12,100.00	10,144.97	12,200.86	10,456.63	38.53	37.64	-125.32	1,586.44	72.62	539.13	472.54	8.096		
12,200.00	10,144.97	12,300.86	10,456.32	40.01	39.13	-125.29	1,686.44	72.62	538.95	469.84	7.798		
12,300.00	10,144.98	12,400.86	10,456.01	41.52	40.65	-125.26	1,786.44	72.62	538.77	467.08	7.515		
12,400.00	10,144.98	12,500.86	10,455.69	43.05	42.19	-125.23	1,886.44	72.62	538.59	464.29	7.249		
12,500.00	10,144.98	12,600.86	10,455.38	44.61	43.75	-125.21	1,986.44	72.62	538.42	461.46	6.996		
12,600.00	10,144.98	12,700.86	10,455.06	46.18	45.34	-125.18	2,086.44	72.62	538.24	458.59	6.758		
12,700.00	10,144.98	12,800.86	10,454.75	47.77	46.94	-125.15	2,186.44	72.62	538.06	455.69	6.533		
12,800.00	10,144.98	12,900.86	10,454.44	49.38	48.56	-125.12	2,286.44	72.61	537.88	452.76	6.319		
12,900.00	10,144.98	13,000.86	10,454.12	51.00	50.19	-125.10	2,386.43	72.61	537.70	449.81	6.118		
13,000.00	10,144.98	13,100.86	10,453.81	52.64	51.84	-125.07	2,486.43	72.61	537.52	446.83	5.927		
13,100.00	10,144.98	13,200.85	10,453.50	54.29	53.50	-125.04	2,586.43	72.61	537.34	443.83	5.746		
13,200.00	10,144.98	13,300.85	10,453.18	55.94	55.17	-125.01	2,686.43	72.61	537.16	440.81	5.575		
13,300.00	10,144.99	13,400.85	10,452.87	57.61	56.84	-124.98	2,786.43	72.61	536.99	437.77	5.412		
13,400.00	10,144.99	13,500.85	10,452.56	59.29	58.53	-124.96	2,886.43	72.61	536.81	434.71	5.258		
13,500.00	10,144.99	13,600.85	10,452.24	60.98	60.23	-124.93	2,986.43	72.61	536.63	431.64	5.111		
13,600.00	10,144.99	13,700.85	10,451.93	62.67	61.93	-124.90	3,086.43	72.61	536.45	428.55	4.972		
13,700.00	10,144.99	13,800.85	10,451.62	64.37	63.64	-124.87	3,186.43	72.61	536.27	425.45	4.839		
13,800.00	10,144.99	13,900.85	10,451.30	66.08	65.35	-124.85	3,286.43	72.61	536.10	422.34	4.712		

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 333H (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:	333H (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		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	
13,900.00	10,144.99	14,000.85	10,450.99	67.79	67.08	-124.82	3,386.42	72.61	535.92	419.21	116.71	4.592	
14,000.00	10,144.99	14,100.85	10,450.68	69.51	68.80	-124.79	3,486.42	72.61	535.74	416.07	119.67	4.477	
14,100.00	10,144.99	14,200.85	10,450.36	71.24	70.53	-124.76	3,586.42	72.61	535.56	412.92	122.64	4.367	
14,200.00	10,144.99	14,300.85	10,450.05	72.97	72.27	-124.74	3,686.42	72.61	535.39	409.77	125.62	4.262	
14,300.00	10,144.99	14,400.85	10,449.74	74.70	74.01	-124.71	3,786.42	72.61	535.21	406.60	128.61	4.161	
14,400.00	10,145.00	14,500.85	10,449.42	76.44	75.76	-124.68	3,886.42	72.60	535.03	403.42	131.61	4.065	
14,500.00	10,145.00	14,600.85	10,449.11	78.18	77.51	-124.65	3,986.42	72.60	534.86	400.24	134.62	3.973	
14,600.00	10,145.00	14,700.85	10,448.80	79.93	79.26	-124.62	4,086.42	72.60	534.68	397.05	137.63	3.885	
14,700.00	10,145.00	14,800.85	10,448.48	81.68	81.02	-124.60	4,186.42	72.60	534.50	393.85	140.66	3.800	
14,800.00	10,145.00	14,900.85	10,448.17	83.43	82.77	-124.57	4,286.42	72.60	534.33	390.64	143.69	3.719	
14,843.82	10,145.00	14,944.67	10,448.03	84.20	83.55	-124.56	4,330.24	72.60	534.25	389.23	145.02	3.684	
14,857.28	10,145.00	14,954.50	10,448.00	84.44	83.72	-124.55	4,340.07	72.60	534.24	388.87	145.37	3.675	



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 333H (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:	333H (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		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	131.37	-159.02	180.59	240.63					
100.00	100.00	100.00	100.00	0.08	0.08	131.37	-159.02	180.59	240.63	240.47	0.16	1,529.368		
200.00	200.00	200.00	200.00	0.30	0.30	131.37	-159.02	180.59	240.63	240.02	0.61	396.503		
300.00	300.00	300.00	300.00	0.53	0.53	131.37	-159.02	180.59	240.63	239.57	1.06	227.779		
400.00	400.00	400.00	400.00	0.75	0.75	131.37	-159.02	180.59	240.63	239.12	1.51	158.785		
500.00	500.00	500.00	500.00	0.98	0.98	131.37	-159.02	180.59	240.63	238.67	1.96	123.053		
600.00	600.00	600.00	600.00	1.20	1.20	131.37	-159.02	180.59	240.63	238.22	2.40	100.052		
700.00	700.00	700.00	700.00	1.43	1.43	131.37	-159.02	180.59	240.63	237.77	2.85	84.296		
800.00	800.00	800.00	800.00	1.65	1.65	131.37	-159.02	180.59	240.63	237.32	3.30	72.827		
900.00	900.00	900.00	900.00	1.88	1.88	131.37	-159.02	180.59	240.63	236.87	3.75	64.105		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	131.37	-159.02	180.59	240.63	236.42	4.20	57.249		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	131.37	-159.02	180.59	240.63	235.97	4.65	51.718		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	131.37	-159.02	180.59	240.63	235.52	5.10	47.161		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	131.37	-159.02	180.59	240.63	235.07	5.55	43.342		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	131.37	-159.02	180.59	240.63	234.62	6.00	40.096		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	131.37	-159.02	180.59	240.63	234.17	6.45	37.302		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	131.37	-159.02	180.59	240.63	233.73	6.90	34.872		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	131.37	-159.02	180.59	240.63	233.28	7.35	32.739		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	131.37	-159.02	180.59	240.63	232.83	7.80	30.852		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	131.37	-159.02	180.59	240.63	232.38	8.25	29.171		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	131.37	-159.02	180.59	240.63	231.93	8.70	27.663		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	131.37	-159.02	180.59	240.63	231.48	9.15	26.304		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	131.37	-159.02	180.59	240.63	231.03	9.60	25.072		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	131.37	-159.02	180.59	240.63	230.58	10.05	23.950		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	131.37	-159.02	180.59	240.63	230.13	10.50	22.924		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	131.37	-159.02	180.59	240.63	229.68	10.95	21.983		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	131.37	-159.02	180.59	240.63	229.23	11.40	21.116		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	131.37	-159.02	180.59	240.63	228.78	11.85	20.314		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	131.37	-159.02	180.59	240.63	228.33	12.29	19.571		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	131.37	-159.02	180.59	240.63	227.88	12.74	18.881		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	131.37	-159.02	180.59	240.63	227.43	13.19	18.238		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	131.37	-159.02	180.59	240.63	226.98	13.64	17.637		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	131.37	-159.02	180.59	240.63	226.53	14.09	17.074		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	131.37	-159.02	180.59	240.63	226.08	14.54	16.547		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	131.37	-159.02	180.59	240.63	225.63	14.99	16.050		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	131.37	-159.02	180.59	240.63	225.18	15.44	15.583		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	131.37	-159.02	180.59	240.63	224.73	15.89	15.142		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	131.37	-159.02	180.59	240.63	224.28	16.34	14.726		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	131.37	-159.02	180.59	240.63	223.84	16.79	14.331		
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	131.37	-159.02	180.59	240.63	223.39	17.24	13.958		
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	131.37	-159.02	180.59	240.63	222.94	17.69	13.603		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	131.37	-159.02	180.59	240.63	222.49	18.14	13.266		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	131.37	-159.02	180.59	240.63	222.04	18.59	12.945		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	131.37	-159.02	180.59	240.63	221.59	19.04	12.639		
4,400.00	4,400.00	4,398.17	4,398.17	9.72	9.71	-5.57	-159.83	180.37	240.14	220.71	19.43	12.361		
4,500.00	4,499.96	4,496.31	4,496.27	9.89	9.88	-5.09	-162.26	179.71	238.68	218.92	19.76	12.080		
4,600.00	4,599.86	4,594.36	4,594.23	10.07	10.05	-4.28	-166.32	178.61	236.29	216.20	20.09	11.762		
4,700.00	4,599.68	4,692.29	4,691.98	10.26	10.22	-3.11	-171.97	177.07	233.03	212.61	20.42	11.413		
4,800.00	4,799.37	4,790.05	4,789.46	10.44	10.39	-1.57	-179.23	175.10	228.99	208.25	20.74	11.039		
4,900.00	4,898.90	4,888.71	4,887.69	10.63	10.56	0.36	-187.95	172.74	224.16	203.09	21.07	10.638		
5,000.00	4,998.26	4,988.19	4,986.74	10.83	10.75	2.45	-196.91	170.31	217.97	196.57	21.40	10.184		
5,100.00	5,097.40	5,087.54	5,085.66	11.03	10.93	4.70	-205.86	167.87	210.35	188.62	21.73	9.679		

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 333H (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:	333H (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		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)						
5,200.00	5,196.30	5,186.74	5,184.43	11.25	11.12	7.17	-214.80	165.45	201.35	179.29	22.06	9.126		
5,300.00	5,294.93	5,285.75	5,283.00	11.47	11.32	9.97	-223.72	163.03	191.04	168.65	22.40	8.530		
5,364.85	5,358.73	5,349.85	5,346.82	11.63	11.45	12.01	-229.50	161.46	183.72	161.10	22.61	8.124		
5,400.00	5,393.28	5,384.56	5,381.38	11.71	11.52	13.19	-232.63	160.61	179.65	156.90	22.76	7.895		
5,500.00	5,491.55	5,483.32	5,479.71	11.96	11.72	16.84	-241.53	158.19	168.55	145.38	23.17	7.275		
5,600.00	5,589.83	5,582.08	5,578.04	12.21	11.92	20.98	-250.42	155.78	158.22	134.63	23.59	6.707		
5,700.00	5,688.11	5,680.84	5,676.37	12.48	12.13	25.66	-259.32	153.36	148.83	124.80	24.03	6.193		
5,800.00	5,786.39	5,779.60	5,774.70	12.75	12.34	30.92	-268.22	150.95	140.58	116.08	24.50	5.738		
5,900.00	5,884.66	5,878.36	5,873.03	13.03	12.55	36.77	-277.12	148.53	133.66	108.67	24.99	5.349		
6,000.00	5,982.94	5,977.12	5,971.36	13.32	12.77	43.16	-286.02	146.11	128.30	102.79	25.51	5.029		
6,100.00	6,081.22	6,075.88	6,069.69	13.61	12.99	50.01	-294.92	143.70	124.70	98.64	26.06	4.785		
6,200.00	6,179.50	6,174.64	6,168.01	13.91	13.21	57.15	-303.82	141.28	123.01	96.37	26.64	4.618		
6,234.96	6,213.86	6,209.17	6,202.39	14.02	13.29	59.67	-306.93	140.44	122.89	96.04	26.84	4.578 CC, ES		
6,300.00	6,277.78	6,273.40	6,266.34	14.21	13.43	64.36	-312.72	138.87	123.31	96.08	27.23	4.528		
6,400.00	6,376.05	6,372.16	6,364.67	14.52	13.66	71.43	-321.62	136.45	125.59	97.76	27.83	4.513 SF		
6,500.00	6,474.33	6,470.93	6,463.00	14.84	13.88	78.16	-330.52	134.04	129.74	101.32	28.42	4.565		
6,600.00	6,572.61	6,569.69	6,561.33	15.16	14.11	84.39	-339.41	131.62	135.59	106.59	29.00	4.676		
6,700.00	6,670.89	6,668.45	6,659.66	15.48	14.34	90.07	-348.31	129.20	142.93	113.37	29.56	4.835		
6,800.00	6,769.17	6,767.21	6,757.99	15.81	14.57	95.15	-357.21	126.79	151.55	121.44	30.11	5.034		
6,900.00	6,867.44	6,865.97	6,856.32	16.14	14.81	99.66	-366.11	124.37	161.23	130.59	30.64	5.262		
7,000.00	6,965.72	6,964.73	6,954.65	16.48	15.04	103.65	-375.01	121.96	171.81	140.65	31.17	5.513		
7,100.00	7,064.00	7,063.49	7,052.98	16.82	15.28	107.17	-383.91	119.54	183.13	151.44	31.68	5.780		
7,200.00	7,162.28	7,162.25	7,151.31	17.16	15.52	110.27	-392.81	117.12	195.05	162.85	32.20	6.058		
7,300.00	7,260.56	7,261.01	7,249.63	17.50	15.76	113.01	-401.71	114.71	207.47	174.76	32.71	6.343		
7,400.00	7,358.83	7,359.77	7,347.96	17.85	16.00	115.44	-410.61	112.29	220.31	187.10	33.22	6.633		
7,500.00	7,457.11	7,458.53	7,446.29	18.20	16.24	117.60	-419.51	109.88	233.51	199.78	33.73	6.924		
7,600.00	7,555.39	7,557.29	7,544.62	18.55	16.49	119.52	-428.40	107.46	246.99	212.75	34.24	7.214		
7,700.00	7,653.67	7,656.05	7,642.95	18.91	16.73	121.25	-437.30	105.05	260.72	225.98	34.75	7.504		
7,800.00	7,751.95	7,754.81	7,741.28	19.27	16.98	122.81	-446.20	102.63	274.66	239.41	35.26	7.790		
7,900.00	7,850.22	7,853.57	7,839.61	19.62	17.23	124.21	-455.10	100.21	288.79	253.01	35.77	8.073		
8,000.00	7,948.50	7,952.33	7,937.94	19.99	17.48	125.48	-464.00	97.80	303.06	266.77	36.29	8.351		
8,100.00	8,046.78	8,051.09	8,036.27	20.35	17.72	126.64	-472.90	95.38	317.48	280.67	36.81	8.625		
8,200.00	8,145.06	8,149.85	8,134.60	20.71	17.97	127.70	-481.80	92.97	332.00	294.68	37.33	8.894		
8,300.00	8,243.34	8,248.62	8,232.93	21.08	18.23	128.67	-490.70	90.55	346.63	308.78	37.85	9.158		
8,371.16	8,313.27	8,318.89	8,302.89	21.34	18.40	129.31	-497.03	88.83	357.10	318.88	38.22	9.343		
8,400.00	8,341.63	8,347.39	8,331.27	21.44	18.48	129.58	-499.60	88.13	361.31	322.93	38.37	9.415		
8,500.00	8,440.15	8,446.32	8,429.77	21.75	18.73	130.35	-508.51	85.71	375.22	336.33	38.89	9.649		
8,600.00	8,538.95	8,546.43	8,529.48	22.04	18.97	130.93	-517.12	83.38	387.93	348.54	39.39	9.848		
8,700.00	8,638.01	8,646.73	8,629.46	22.32	19.21	131.40	-524.89	81.27	399.27	359.39	39.88	10.012		
8,800.00	8,737.30	8,747.20	8,729.67	22.58	19.44	131.77	-531.83	79.38	409.23	368.87	40.36	10.140		
8,900.00	8,836.77	8,847.82	8,830.09	22.84	19.67	132.05	-537.94	77.73	417.80	376.98	40.82	10.235		
9,000.00	8,936.41	8,948.57	8,930.69	23.07	19.89	132.26	-543.19	76.30	424.97	383.69	41.28	10.296		
9,100.00	9,036.18	9,049.42	9,031.43	23.30	20.11	132.38	-547.60	75.10	430.73	389.01	41.72	10.325		
9,200.00	9,136.06	9,150.35	9,132.30	23.51	20.33	132.44	-551.15	74.14	435.08	392.94	42.14	10.324		
9,300.00	9,236.00	9,251.34	9,233.25	23.70	20.54	132.42	-553.85	73.41	438.02	395.46	42.56	10.292		
9,400.00	9,335.99	9,352.37	9,334.26	23.89	20.75	132.34	-555.69	72.91	439.54	396.58	42.96	10.232		
9,436.01	9,372.00	9,388.76	9,370.65	23.95	20.83	-90.61	-556.14	72.78	439.74	396.65	43.10	10.203		
9,500.00	9,435.99	9,453.43	9,435.31	24.06	20.96	-90.68	-556.67	72.64	439.89	396.54	43.35	10.148		
9,600.00	9,535.99	9,554.10	9,535.99	24.23	21.16	-90.70	-556.85	72.59	439.94	396.20	43.74	10.059		
9,636.01	9,572.00	9,590.11	9,572.00	24.30	21.23	-90.70	-556.85	72.59	439.94	396.06	43.88	10.027		
9,650.00	9,585.99	9,604.10	9,585.99	24.32	21.25	-90.72	-556.85	72.59	439.94	396.01	43.93	10.014		
9,700.00	9,635.86	9,653.97	9,635.86	24.39	21.35	-91.16	-556.85	72.59	440.00	395.87	44.12	9.972		

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 333H (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:	333H (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		Minimum Separation		Separation Factor		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,750.00	9,685.24	9,703.35	9,685.24	24.43	21.45	-92.13	-556.85	72.59	440.22	395.91	44.31	9.934	
9,800.00	9,733.76	9,751.87	9,733.76	24.45	21.55	-93.58	-556.85	72.59	440.84	396.35	44.49	9.909	
9,850.00	9,781.05	9,799.16	9,781.05	24.44	21.64	-95.43	-556.85	72.59	442.19	397.56	44.64	9.907	
9,900.00	9,826.75	9,844.86	9,826.75	24.42	21.74	-97.55	-556.85	72.59	444.70	399.97	44.74	9.941	
9,950.00	9,870.51	9,888.62	9,870.51	24.37	21.82	-99.83	-556.85	72.59	448.88	404.11	44.77	10.027	
10,000.00	9,912.00	9,930.11	9,912.00	24.30	21.91	-102.10	-556.85	72.59	455.24	410.52	44.72	10.180	
10,050.00	9,950.90	9,969.01	9,950.90	24.23	21.98	-104.21	-556.85	72.59	464.31	419.73	44.58	10.414	
10,100.00	9,986.91	10,005.03	9,986.91	24.14	22.06	-106.02	-556.85	72.59	476.53	432.16	44.38	10.738	
10,150.00	10,019.77	10,037.89	10,019.77	24.04	22.12	-107.39	-556.85	72.59	492.24	448.11	44.13	11.153	
10,200.00	10,049.22	10,067.34	10,049.22	23.94	22.18	-108.19	-556.85	72.59	511.64	467.74	43.90	11.654	
10,250.00	10,075.04	10,093.16	10,075.04	23.83	22.23	-108.31	-556.85	72.59	534.76	491.03	43.73	12.228	
10,300.00	10,097.03	10,115.15	10,097.03	23.72	22.28	-107.62	-556.85	72.59	561.50	517.81	43.68	12.854	
10,350.00	10,115.03	10,133.14	10,115.03	23.62	22.31	-106.00	-556.85	72.59	591.61	547.82	43.79	13.512	
10,400.00	10,128.89	10,147.01	10,128.89	23.51	22.34	-103.34	-556.85	72.59	624.74	580.71	44.03	14.188	
10,450.00	10,138.51	10,156.63	10,138.51	23.42	22.36	-99.51	-556.85	72.59	660.47	616.11	44.36	14.888	
10,500.00	10,143.83	10,161.94	10,143.83	23.33	22.37	-94.43	-556.85	72.59	698.33	653.68	44.65	15.642	
10,536.00	10,144.96	10,163.07	10,144.96	23.27	22.37	-90.00	-556.85	72.59	726.63	681.92	44.71	16.252	
10,600.00	10,144.96	10,163.07	10,144.96	23.20	22.37	-90.00	-556.85	72.59	778.53	733.67	44.85	17.357	
10,700.00	10,144.96	10,163.07	10,144.96	23.30	22.37	-90.00	-556.85	72.59	862.88	817.69	45.20	19.092	
10,800.00	10,144.96	10,163.08	10,144.96	23.78	22.37	-90.00	-556.85	72.59	950.28	904.60	45.68	20.804	
10,900.00	10,144.96	10,163.08	10,144.96	24.44	22.37	-90.00	-556.85	72.59	1,039.95	993.66	46.29	22.467	
11,000.00	10,144.96	10,163.08	10,144.96	25.22	22.37	-90.00	-556.85	72.59	1,131.35	1,084.33	47.02	24.061	
11,100.00	10,144.96	10,163.08	10,144.96	26.10	22.37	-90.00	-556.85	72.59	1,224.10	1,176.24	47.86	25.576	
11,200.00	10,144.96	10,163.08	10,144.96	27.06	22.37	-90.00	-556.85	72.59	1,317.91	1,269.11	48.80	27.005	
11,300.00	10,144.97	10,163.08	10,144.97	28.10	22.37	-90.00	-556.85	72.59	1,412.57	1,362.74	49.83	28.346	
11,400.00	10,144.97	10,163.08	10,144.97	29.22	22.37	-90.00	-556.85	72.59	1,507.92	1,456.98	50.94	29.600	
11,500.00	10,144.97	10,163.08	10,144.97	30.40	22.37	-90.00	-556.85	72.59	1,603.84	1,551.71	52.12	30.770	
11,600.00	10,144.97	13,104.51	11,690.00	31.64	34.49	-164.11	1,085.47	72.60	1,606.44	1,564.96	41.49	38.722	
11,700.00	10,144.97	13,204.51	11,690.00	32.94	35.78	-164.11	1,185.47	72.60	1,606.44	1,563.83	42.61	37.702	
11,800.00	10,144.97	13,304.51	11,690.00	34.28	37.12	-164.11	1,285.47	72.60	1,606.44	1,562.67	43.77	36.701	
11,900.00	10,144.97	13,404.51	11,690.00	35.66	38.50	-164.11	1,385.47	72.60	1,606.44	1,561.47	44.97	35.723	
12,000.00	10,144.97	13,504.51	11,690.00	37.08	39.92	-164.11	1,485.47	72.60	1,606.44	1,560.24	46.20	34.771	
12,100.00	10,144.97	13,604.51	11,690.00	38.53	41.37	-164.11	1,585.47	72.60	1,606.44	1,558.98	47.46	33.846	
12,200.00	10,144.97	13,704.51	11,690.00	40.01	42.84	-164.11	1,685.47	72.60	1,606.44	1,557.69	48.75	32.950	
12,300.00	10,144.98	13,804.51	11,690.00	41.52	44.35	-164.11	1,785.47	72.60	1,606.44	1,556.37	50.07	32.083	
12,400.00	10,144.98	13,904.51	11,690.00	43.05	45.87	-164.11	1,885.47	72.60	1,606.44	1,555.03	51.41	31.246	
12,500.00	10,144.98	14,004.51	11,690.00	44.61	47.42	-164.11	1,985.47	72.60	1,606.44	1,553.66	52.78	30.439	
12,600.00	10,144.98	14,104.51	11,690.00	46.18	48.99	-164.11	2,085.47	72.60	1,606.44	1,552.28	54.16	29.660	
12,700.00	10,144.98	14,204.51	11,690.00	47.77	50.57	-164.11	2,185.47	72.60	1,606.44	1,550.87	55.56	28.911	
12,800.00	10,144.98	14,304.51	11,690.00	49.38	52.17	-164.11	2,285.47	72.60	1,606.44	1,549.45	56.99	28.190	
12,900.00	10,144.98	14,404.51	11,690.00	51.00	53.79	-164.11	2,385.47	72.60	1,606.44	1,548.01	58.42	27.496	
13,000.00	10,144.98	14,504.51	11,690.00	52.64	55.41	-164.11	2,485.47	72.60	1,606.44	1,546.56	59.88	26.828	
13,100.00	10,144.98	14,604.51	11,690.00	54.29	57.05	-164.11	2,585.47	72.60	1,606.44	1,545.09	61.35	26.186	
13,200.00	10,144.98	14,704.51	11,690.00	55.94	58.71	-164.10	2,685.47	72.60	1,606.44	1,543.61	62.83	25.569	
13,300.00	10,144.99	14,804.51	11,690.00	57.61	60.37	-164.10	2,785.47	72.60	1,606.44	1,542.12	64.32	24.975	
13,400.00	10,144.99	14,904.51	11,690.00	59.29	62.04	-164.10	2,885.47	72.60	1,606.44	1,540.61	65.83	24.404	
13,500.00	10,144.99	15,004.51	11,690.00	60.98	63.72	-164.10	2,985.47	72.60	1,606.44	1,539.09	67.34	23.855	
13,600.00	10,144.99	15,104.51	11,690.00	62.67	65.40	-164.10	3,085.47	72.60	1,606.44	1,537.57	68.87	23.326	
13,700.00	10,144.99	15,204.51	11,690.00	64.37	67.10	-164.10	3,185.47	72.60	1,606.44	1,536.03	70.40	22.817	
13,800.00	10,144.99	15,304.51	11,690.00	66.08	68.80	-164.10	3,285.47	72.60	1,606.44	1,534.49	71.95	22.328	
13,900.00	10,144.99	15,404.51	11,690.00	67.79	70.51	-164.10	3,385.47	72.60	1,606.43	1,532.93	73.50	21.856	
14,000.00	10,144.99	15,504.51	11,690.00	69.51	72.22	-164.10	3,485.47	72.60	1,606.43	1,531.37	75.06	21.402	

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 333H (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:	333H (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
14,100.00	10,144.99	15,804.51	11,890.00	71.24	73.94	-164.10	3,585.47	72.60	1,806.43	1,529.81	76.63	20.964	
14,200.00	10,144.99	15,704.51	11,890.00	72.97	75.66	-164.10	3,685.47	72.60	1,806.43	1,528.23	78.20	20.542	
14,300.00	10,144.99	15,804.51	11,890.00	74.70	77.39	-164.10	3,785.47	72.60	1,806.43	1,526.65	79.78	20.135	
14,400.00	10,145.00	15,904.51	11,890.00	76.44	79.13	-164.10	3,885.47	72.60	1,806.43	1,525.06	81.37	19.742	
14,500.00	10,145.00	16,004.51	11,890.00	78.18	80.86	-164.10	3,985.47	72.60	1,806.43	1,523.47	82.96	19.363	
14,600.00	10,145.00	16,104.51	11,890.00	79.93	82.60	-164.10	4,085.47	72.60	1,806.43	1,521.87	84.56	18.997	
14,700.00	10,145.00	16,204.51	11,890.00	81.68	84.35	-164.10	4,185.47	72.60	1,806.43	1,520.27	86.16	18.644	
14,800.00	10,145.00	16,304.51	11,890.00	83.43	86.10	-164.10	4,285.47	72.60	1,806.43	1,518.66	87.77	18.302	
14,842.36	10,145.00	16,346.88	11,890.00	84.18	86.84	-164.10	4,327.83	72.60	1,806.43	1,517.98	88.46	18.161	
14,857.28	10,145.00	16,359.12	11,890.00	84.44	87.05	-164.10	4,340.07	72.60	1,806.43	1,517.76	88.67	18.116	

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 333H (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:	333H (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: 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	126.59	-134.03	180.52	224.84				
100.00	100.00	100.00	100.00	0.08	0.08	126.59	-134.03	180.52	224.84	0.16	1,429.025		
200.00	200.00	200.00	200.00	0.30	0.30	126.59	-134.03	180.52	224.84	0.61	370.488		
300.00	300.00	300.00	300.00	0.53	0.53	126.59	-134.03	180.52	224.84	1.06	212.834		
400.00	400.00	400.00	400.00	0.75	0.75	126.59	-134.03	180.52	224.84	1.51	149.301		
500.00	500.00	500.00	500.00	0.98	0.98	126.59	-134.03	180.52	224.84	1.96	114.979		
600.00	600.00	600.00	600.00	1.20	1.20	126.59	-134.03	180.52	224.84	2.40	93.488		
700.00	700.00	700.00	700.00	1.43	1.43	126.59	-134.03	180.52	224.84	2.85	78.765		
800.00	800.00	800.00	800.00	1.65	1.65	126.59	-134.03	180.52	224.84	3.30	68.049		
900.00	900.00	900.00	900.00	1.88	1.88	126.59	-134.03	180.52	224.84	3.75	59.899		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	126.59	-134.03	180.52	224.84	4.20	53.493		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	126.59	-134.03	180.52	224.84	4.65	48.325		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	126.59	-134.03	180.52	224.84	5.10	44.067		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	126.59	-134.03	180.52	224.84	5.55	40.499		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	126.59	-134.03	180.52	224.84	6.00	37.465		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	126.59	-134.03	180.52	224.84	6.45	34.854		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	126.59	-134.03	180.52	224.84	6.90	32.584		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	126.59	-134.03	180.52	224.84	7.35	30.591		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	126.59	-134.03	180.52	224.84	7.80	28.828		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	126.59	-134.03	180.52	224.84	8.25	27.257		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	126.59	-134.03	180.52	224.84	8.70	25.848		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	126.59	-134.03	180.52	224.84	9.15	24.578		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	126.59	-134.03	180.52	224.84	9.60	23.427		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	126.59	-134.03	180.52	224.84	10.05	22.378		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	126.59	-134.03	180.52	224.84	10.50	21.420		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	126.59	-134.03	180.52	224.84	10.95	20.540		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	126.59	-134.03	180.52	224.84	11.40	19.730		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	126.59	-134.03	180.52	224.84	11.85	18.981		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	126.59	-134.03	180.52	224.84	12.29	18.287		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	126.59	-134.03	180.52	224.84	12.74	17.642		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	126.59	-134.03	180.52	224.84	13.19	17.041		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	126.59	-134.03	180.52	224.84	13.64	16.480		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	126.59	-134.03	180.52	224.84	14.09	15.954		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	126.59	-134.03	180.52	224.84	14.54	15.461		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	126.59	-134.03	180.52	224.84	14.99	14.997		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	126.59	-134.03	180.52	224.84	15.44	14.561		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	126.59	-134.03	180.52	224.84	15.89	14.149		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	126.59	-134.03	180.52	224.84	16.34	13.760		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	126.59	-134.03	180.52	224.84	16.79	13.391		
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	126.59	-134.03	180.52	224.84	17.24	13.042		
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	126.59	-134.03	180.52	224.84	17.69	12.711		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	126.59	-134.03	180.52	224.84	18.14	12.396		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	126.59	-134.03	180.52	224.84	18.59	12.096		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	126.59	-134.03	180.52	224.84	19.04	11.810		
4,400.00	4,400.00	4,396.26	4,396.26	9.72	9.71	-10.57	-134.41	181.23	224.81	19.43	11.570		
4,500.00	4,499.96	4,492.52	4,492.48	9.89	9.89	-10.78	-135.57	183.36	224.73	19.77	11.365		
4,600.00	4,599.86	4,588.77	4,588.64	10.07	10.07	-11.12	-137.50	186.92	224.61	20.11	11.167		
4,700.00	4,699.68	4,685.01	4,684.72	10.26	10.25	-11.60	-140.19	191.89	224.46	20.45	10.974		
4,800.00	4,799.37	4,781.23	4,780.67	10.44	10.44	-12.21	-143.66	198.28	224.28	20.79	10.788		
4,900.00	4,898.90	4,877.44	4,876.46	10.63	10.63	-12.97	-147.89	206.08	224.10	21.12	10.609		
5,000.00	4,998.26	4,973.63	4,972.08	10.83	10.83	-13.86	-152.89	215.29	223.94	21.46	10.437		
5,100.00	5,097.40	5,069.79	5,067.48	11.03	11.03	-14.88	-158.65	225.91	223.83	21.79	10.272		

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 333H (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:	333H (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: 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)					
5,191.42	5,187.83	5,157.69	5,154.49	11.23	11.22	-15.94	-164.58	236.85	223.79	201.69	10.129		
5,200.00	5,196.30	5,165.93	5,162.64	11.25	11.24	-16.05	-165.17	237.93	223.79	201.67	10.116		
5,300.00	5,294.93	5,262.04	5,257.53	11.47	11.46	-17.34	-172.44	251.35	223.86	201.40	9.969		
5,364.85	5,358.73	5,326.68	5,321.25	11.63	11.61	-18.29	-177.61	260.87	223.66	200.98	9.862		
5,400.00	5,393.28	5,361.77	5,355.84	11.71	11.70	-18.82	-180.41	266.04	223.38	200.56	9.788		
5,500.00	5,491.55	5,461.59	5,454.25	11.96	11.94	-20.34	-188.39	280.75	222.72	199.49	9.587		
5,600.00	5,589.83	5,561.41	5,552.66	12.21	12.20	-21.86	-196.36	295.45	222.21	198.58	9.396		
5,700.00	5,688.11	5,661.23	5,651.07	12.48	12.46	-23.40	-204.34	310.16	221.86	197.78	9.214		
5,800.00	5,786.39	5,761.06	5,749.49	12.75	12.72	-24.93	-212.31	324.86	221.67	197.15	9.042		
5,869.45	5,854.64	5,830.39	5,817.83	12.95	12.91	-26.00	-217.85	335.08	221.63	196.80	8.928 CC		
5,900.00	5,884.66	5,860.88	5,847.90	13.03	12.99	-26.47	-220.29	339.57	221.64	196.67	8.879		
6,000.00	5,982.94	5,960.70	5,946.31	13.32	13.27	-28.00	-228.26	354.27	221.76	196.35	8.725		
6,100.00	6,081.22	6,060.52	6,044.72	13.61	13.55	-29.54	-236.24	368.98	222.05	196.17	8.578		
6,200.00	6,179.50	6,160.35	6,143.13	13.91	13.84	-31.06	-244.21	383.68	222.50	196.13	8.439 ES		
6,300.00	6,277.78	6,260.17	6,241.54	14.21	14.13	-32.59	-252.19	398.39	223.11	196.25	8.307		
6,400.00	6,376.05	6,359.99	6,339.95	14.52	14.43	-34.10	-260.16	413.09	223.87	196.51	8.181		
6,500.00	6,474.33	6,459.81	6,438.36	14.84	14.73	-35.60	-268.14	427.80	224.79	196.91	8.062		
6,600.00	6,572.61	6,559.64	6,536.77	15.16	15.03	-37.08	-276.11	442.50	225.86	197.45	7.949		
6,700.00	6,670.89	6,659.46	6,635.18	15.48	15.34	-38.56	-284.09	457.21	227.08	198.12	7.842		
6,800.00	6,769.17	6,759.28	6,733.59	15.81	15.65	-40.01	-292.06	471.91	228.45	198.94	7.740		
6,900.00	6,867.44	6,859.10	6,832.01	16.14	15.96	-41.45	-300.04	486.62	229.97	199.88	7.644		
7,000.00	6,965.72	6,958.93	6,930.42	16.48	16.28	-42.87	-308.01	501.32	231.63	200.96	7.552		
7,100.00	7,064.00	7,058.75	7,028.83	16.82	16.60	-44.26	-315.99	516.03	233.43	202.16	7.465		
7,200.00	7,162.28	7,158.57	7,127.24	17.16	16.92	-45.64	-323.96	530.73	235.36	203.49	7.383		
7,300.00	7,260.56	7,258.39	7,225.65	17.50	17.24	-46.99	-331.94	545.43	237.44	204.93	7.305		
7,400.00	7,358.83	7,358.22	7,324.06	17.85	17.57	-48.32	-339.91	560.14	239.64	206.50	7.231		
7,500.00	7,457.11	7,458.04	7,422.47	18.20	17.90	-49.62	-347.89	574.84	241.96	208.18	7.162		
7,600.00	7,555.39	7,557.86	7,520.88	18.55	18.23	-50.90	-355.86	589.55	244.41	209.97	7.096		
7,700.00	7,653.67	7,657.68	7,619.29	18.91	18.56	-52.15	-363.84	604.25	246.98	211.87	7.033		
7,800.00	7,751.95	7,757.51	7,717.70	19.27	18.90	-53.37	-371.81	618.96	249.67	213.87	6.975		
7,900.00	7,850.22	7,857.33	7,816.11	19.62	19.24	-54.57	-379.79	633.66	252.47	215.98	6.919		
8,000.00	7,948.50	7,957.15	7,914.53	19.99	19.57	-55.74	-387.76	648.37	255.37	218.18	6.867		
8,100.00	8,046.78	8,056.98	8,012.94	20.35	19.91	-56.89	-395.74	663.07	258.38	220.49	6.818		
8,200.00	8,145.06	8,156.80	8,111.35	20.71	20.26	-58.01	-403.71	677.78	261.49	222.88	6.773		
8,300.00	8,243.34	8,256.62	8,209.76	21.08	20.60	-59.10	-411.69	692.48	264.70	225.37	6.729		
8,371.16	8,313.27	8,327.65	8,279.78	21.34	20.84	-59.86	-417.36	702.95	267.04	227.19	6.700		
8,400.00	8,341.63	8,356.44	8,308.17	21.44	20.94	-60.16	-419.66	707.19	268.04	227.98	6.691		
8,500.00	8,440.15	8,456.29	8,406.61	21.75	21.29	-60.98	-427.64	721.90	272.10	231.37	6.681 SF		
8,600.00	8,538.95	8,556.15	8,505.05	22.04	21.64	-61.47	-435.62	736.61	277.03	235.68	6.700		
8,700.00	8,638.01	8,655.98	8,603.47	22.32	21.98	-61.84	-443.59	751.31	282.81	240.88	6.745		
8,800.00	8,737.30	8,755.75	8,701.83	22.58	22.33	-61.50	-451.57	766.01	289.42	246.95	6.815		
8,900.00	8,836.77	8,855.44	8,800.11	22.84	22.68	-61.09	-459.53	780.70	296.86	253.90	6.910		
9,000.00	8,936.41	8,955.02	8,898.28	23.07	23.03	-60.42	-467.49	795.36	305.19	261.78	7.031		
9,100.00	9,036.18	9,054.45	8,996.30	23.30	23.38	-59.52	-475.43	810.01	314.45	270.63	7.177		
9,200.00	9,136.06	9,155.90	9,096.40	23.51	23.69	-58.45	-483.33	824.57	324.36	280.21	7.346		
9,300.00	9,236.00	9,257.39	9,196.67	23.70	23.98	-57.28	-490.80	838.35	334.64	290.19	7.529		
9,400.00	9,335.99	9,358.90	9,297.09	23.89	24.26	-56.04	-497.85	851.36	345.34	300.62	7.723		
9,436.01	9,372.00	9,395.46	9,333.29	23.95	24.37	81.52	-500.29	855.85	349.30	304.49	7.796		
9,500.00	9,435.99	9,460.47	9,397.70	24.06	24.54	82.38	-504.49	863.59	356.28	311.32	7.923		
9,600.00	9,535.99	9,562.27	9,498.66	24.23	24.82	83.58	-510.71	875.06	366.75	321.51	8.107		
9,636.01	9,572.00	9,598.98	9,535.10	24.30	24.91	83.98	-512.85	879.00	370.38	325.04	8.169		
9,650.00	9,585.99	9,613.24	9,549.26	24.32	24.95	84.02	-513.66	880.51	371.75	326.35	8.189		

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 333H (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:	333H (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: 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		
9,700.00	9,835.86	9,863.95	9,599.62	24.39	25.08	84.60	-516.50	885.73	376.30	330.79	45.51	8.268		
9,750.00	9,885.24	9,714.00	9,649.35	24.43	25.21	85.81	-519.19	890.69	380.47	334.96	45.51	8.360		
9,800.00	9,733.76	9,763.03	9,698.08	24.45	25.33	87.57	-521.72	895.37	384.58	339.17	45.41	8.469		
9,850.00	9,781.05	9,810.67	9,745.47	24.44	25.45	89.75	-524.09	899.74	389.06	343.82	45.24	8.601		
9,900.00	9,826.75	9,856.60	9,791.16	24.42	25.57	92.21	-526.29	903.78	394.41	349.41	45.01	8.763		
9,950.00	9,870.51	9,900.46	9,834.82	24.37	25.67	94.81	-528.30	907.50	401.23	356.48	44.75	8.967		
10,000.00	9,912.00	9,941.94	9,876.12	24.30	25.77	97.37	-530.13	910.88	410.08	365.61	44.47	9.222		
10,050.00	9,950.90	9,980.72	9,914.75	24.23	25.87	99.71	-531.78	913.92	421.53	377.34	44.19	9.539		
10,100.00	9,986.91	10,016.50	9,950.40	24.14	25.95	101.69	-533.25	916.62	436.02	392.09	43.93	9.925		
10,150.00	10,019.77	10,049.02	9,982.80	24.04	26.03	103.15	-534.53	918.99	453.89	410.17	43.72	10.382		
10,200.00	10,049.22	10,078.00	10,011.69	23.94	26.09	103.96	-535.64	921.03	475.32	431.71	43.60	10.902		
10,250.00	10,075.04	10,103.22	10,036.84	23.83	26.15	104.00	-536.58	922.76	500.30	456.68	43.61	11.471		
10,300.00	10,097.03	10,124.47	10,058.02	23.72	26.20	103.15	-537.35	924.18	528.70	484.90	43.79	12.072		
10,350.00	10,115.03	10,141.56	10,075.06	23.62	26.24	101.27	-537.95	925.29	560.24	516.09	44.15	12.689		
10,400.00	10,128.89	10,154.33	10,087.81	23.51	26.27	98.26	-538.40	926.11	594.56	549.92	44.64	13.318		
10,450.00	10,138.51	10,162.67	10,096.12	23.42	26.29	94.01	-538.68	926.64	631.21	586.05	45.16	13.976		
10,500.00	10,143.83	10,166.48	10,099.92	23.33	26.29	88.49	-538.81	926.88	669.72	624.18	45.54	14.707		
10,536.00	10,144.96	10,166.38	10,099.82	23.27	26.29	83.78	-538.81	926.87	698.32	652.73	45.59	15.317		
10,600.00	10,144.96	10,164.07	10,097.51	23.20	26.29	83.47	-538.73	926.73	750.63	704.90	45.73	16.414		
10,700.00	10,144.96	10,160.43	10,093.89	23.30	26.28	82.97	-538.61	926.50	835.63	789.56	46.06	18.141		
10,800.00	10,144.96	10,156.77	10,090.23	23.78	26.27	82.47	-538.48	926.27	923.62	877.09	46.53	19.849		
10,900.00	10,144.96	10,153.07	10,086.54	24.44	26.26	81.96	-538.35	926.03	1,013.83	966.70	47.13	21.513		
11,000.00	10,144.96	10,149.34	10,082.82	25.22	26.26	81.45	-538.22	925.79	1,105.71	1,057.88	47.83	23.116		
11,100.00	10,144.96	10,145.57	10,079.07	26.10	26.25	80.94	-538.09	925.55	1,198.88	1,150.24	48.65	24.645		
11,200.00	10,144.96	10,141.77	10,075.28	27.06	26.24	80.42	-537.96	925.31	1,293.07	1,243.52	49.55	26.096		
11,300.00	10,144.97	10,137.94	10,071.45	28.10	26.23	79.90	-537.83	925.06	1,388.05	1,337.52	50.54	27.466		
11,400.00	10,144.97	10,134.07	10,067.59	29.22	26.22	79.37	-537.69	924.81	1,483.69	1,432.10	51.59	28.757		
11,500.00	10,144.97	10,130.16	10,063.70	30.40	26.21	78.84	-537.55	924.55	1,579.86	1,527.14	52.71	29.970		
11,600.00	10,144.97	13,153.09	11,687.53	31.64	36.18	164.08	1,089.03	952.54	1,604.09	1,564.61	39.48	40.631		
11,700.00	10,144.97	13,253.09	11,687.30	32.94	37.40	164.08	1,189.03	952.55	1,603.87	1,563.31	40.56	39.541		
11,800.00	10,144.97	13,353.09	11,687.07	34.28	38.67	164.07	1,289.03	952.55	1,603.65	1,561.96	41.69	38.468		
11,900.00	10,144.97	13,453.09	11,686.84	35.66	39.98	164.07	1,389.03	952.55	1,603.42	1,560.57	42.85	37.417		
12,000.00	10,144.97	13,553.09	11,686.60	37.08	41.33	164.07	1,489.03	952.55	1,603.20	1,559.14	44.06	36.390		
12,100.00	10,144.97	13,653.09	11,686.37	38.53	42.71	164.07	1,589.03	952.55	1,602.98	1,557.68	45.29	35.392		
12,200.00	10,144.97	13,753.08	11,686.14	40.01	44.12	164.07	1,689.02	952.55	1,602.75	1,556.19	46.56	34.423		
12,300.00	10,144.98	13,853.08	11,685.91	41.52	45.57	164.06	1,789.02	952.55	1,602.53	1,554.67	47.86	33.486		
12,400.00	10,144.98	13,953.08	11,685.68	43.05	47.04	164.06	1,889.02	952.56	1,602.31	1,553.13	49.18	32.580		
12,500.00	10,144.98	14,053.08	11,685.45	44.61	48.53	164.06	1,989.02	952.56	1,602.08	1,551.56	50.53	31.707		
12,600.00	10,144.98	14,153.08	11,685.22	46.18	50.05	164.06	2,089.02	952.56	1,601.86	1,549.96	51.90	30.865		
12,700.00	10,144.98	14,253.08	11,684.99	47.77	51.59	164.05	2,189.02	952.56	1,601.64	1,548.35	53.29	30.055		
12,800.00	10,144.98	14,353.08	11,684.75	49.38	53.14	164.05	2,289.02	952.56	1,601.41	1,546.71	54.70	29.276		
12,900.00	10,144.98	14,453.08	11,684.52	51.00	54.71	164.05	2,389.02	952.56	1,601.19	1,545.06	56.13	28.527		
13,000.00	10,144.98	14,553.08	11,684.29	52.64	56.30	164.05	2,489.02	952.56	1,600.97	1,543.39	57.57	27.807		
13,100.00	10,144.98	14,653.08	11,684.06	54.29	57.90	164.05	2,589.02	952.57	1,600.74	1,541.71	59.03	27.116		
13,200.00	10,144.98	14,753.08	11,683.83	55.94	59.51	164.04	2,689.02	952.57	1,600.52	1,540.01	60.51	26.451		
13,300.00	10,144.99	14,853.08	11,683.60	57.61	61.14	164.04	2,789.02	952.57	1,600.30	1,538.30	62.00	25.812		
13,400.00	10,144.99	14,953.08	11,683.37	59.29	62.78	164.04	2,889.02	952.57	1,600.07	1,536.57	63.50	25.199		
13,500.00	10,144.99	15,053.08	11,683.14	60.98	64.42	164.04	2,989.02	952.57	1,599.85	1,534.84	65.01	24.609		
13,600.00	10,144.99	15,153.08	11,682.90	62.67	66.08	164.03	3,089.02	952.57	1,599.63	1,533.09	66.53	24.043		
13,700.00	10,144.99	15,253.08	11,682.67	64.37	67.74	164.03	3,189.02	952.57	1,599.40	1,531.34	68.07	23.498		
13,800.00	10,144.99	15,353.08	11,682.44	66.08	69.41	164.03	3,289.02	952.58	1,599.18	1,529.57	69.61	22.974		
13,900.00	10,144.99	15,453.08	11,682.21	67.79	71.09	164.03	3,389.02	952.58	1,598.96	1,527.80	71.16	22.470		

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 333H (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:	333H (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: 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)					
14,000.00	10,144.99	15,553.08	11,681.98	69.51	72.78	164.02	3,489.01	952.58	1,598.73	1,526.01	72.72	21.985	
14,100.00	10,144.99	15,653.08	11,681.75	71.24	74.48	164.02	3,589.01	952.58	1,598.51	1,524.22	74.29	21.518	
14,200.00	10,144.99	15,753.08	11,681.52	72.97	76.18	164.02	3,689.01	952.58	1,598.29	1,522.43	75.86	21.069	
14,300.00	10,144.99	15,853.08	11,681.29	74.70	77.88	164.02	3,789.01	952.58	1,598.06	1,520.62	77.44	20.636	
14,400.00	10,145.00	15,953.08	11,681.06	76.44	79.59	164.02	3,889.01	952.58	1,597.84	1,518.81	79.03	20.218	
14,500.00	10,145.00	16,053.08	11,680.82	78.18	81.31	164.01	3,989.01	952.59	1,597.62	1,516.99	80.62	19.816	
14,600.00	10,145.00	16,153.08	11,680.59	79.93	83.03	164.01	4,089.01	952.59	1,597.39	1,515.17	82.22	19.428	
14,700.00	10,145.00	16,253.08	11,680.36	81.68	84.75	164.01	4,189.01	952.59	1,597.17	1,513.34	83.83	19.053	
14,800.00	10,145.00	16,353.08	11,680.13	83.43	86.48	164.01	4,289.01	952.59	1,596.95	1,511.51	85.44	18.691	
14,857.28	10,145.00	16,410.35	11,680.00	84.44	87.52	164.01	4,346.29	952.59	1,596.82	1,510.45	86.37	18.489	



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 333H (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:	333H (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		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	-0.16	100.00	-0.29	100.00				
100.00	100.00	100.00	100.00	0.08	0.08	-0.16	100.00	-0.29	100.00	99.84	0.16	635.584	
200.00	200.00	200.00	200.00	0.30	0.30	-0.16	100.00	-0.29	100.00	99.39	0.61	164.781	
300.00	300.00	300.00	300.00	0.53	0.53	-0.16	100.00	-0.29	100.00	98.94	1.06	94.662	
400.00	400.00	400.00	400.00	0.75	0.75	-0.16	100.00	-0.29	100.00	98.49	1.51	66.404	
500.00	500.00	500.00	500.00	0.98	0.98	-0.16	100.00	-0.29	100.00	98.05	1.96	51.139	
600.00	600.00	600.00	600.00	1.20	1.20	-0.16	100.00	-0.29	100.00	97.60	2.40	41.580	
700.00	700.00	700.00	700.00	1.43	1.43	-0.16	100.00	-0.29	100.00	97.15	2.85	35.032	
800.00	800.00	800.00	800.00	1.65	1.65	-0.16	100.00	-0.29	100.00	96.70	3.30	30.266	
900.00	900.00	900.00	900.00	1.88	1.88	-0.16	100.00	-0.29	100.00	96.25	3.75	26.641	
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	-0.16	100.00	-0.29	100.00	95.80	4.20	23.792	
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	-0.16	100.00	-0.29	100.00	95.35	4.65	21.493	
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	-0.16	100.00	-0.29	100.00	94.90	5.10	19.600	
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	-0.16	100.00	-0.29	100.00	94.45	5.55	18.013	
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	-0.16	100.00	-0.29	100.00	94.00	6.00	16.663	
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	-0.16	100.00	-0.29	100.00	93.55	6.45	15.502	
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	-0.16	100.00	-0.29	100.00	93.10	6.90	14.492	
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	-0.16	100.00	-0.29	100.00	92.65	7.35	13.606	
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	-0.16	100.00	-0.29	100.00	92.20	7.80	12.822	
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	-0.16	100.00	-0.29	100.00	91.75	8.25	12.123	
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	-0.16	100.00	-0.29	100.00	91.30	8.70	11.496	
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	-0.16	100.00	-0.29	100.00	90.85	9.15	10.931	
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	-0.16	100.00	-0.29	100.00	90.40	9.60	10.419	
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	-0.16	100.00	-0.29	100.00	89.95	10.05	9.953	
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	-0.16	100.00	-0.29	100.00	89.50	10.50	9.527	
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	-0.16	100.00	-0.29	100.00	89.05	10.95	9.136	
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	-0.16	100.00	-0.29	100.00	88.60	11.40	8.775	
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	-0.16	100.00	-0.29	100.00	88.16	11.85	8.442	
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	-0.16	100.00	-0.29	100.00	87.71	12.29	8.134	
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	-0.16	100.00	-0.29	100.00	87.26	12.74	7.847	
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	-0.16	100.00	-0.29	100.00	86.81	13.19	7.579	
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	-0.16	100.00	-0.29	100.00	86.36	13.64	7.330	
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	-0.16	100.00	-0.29	100.00	85.91	14.09	7.096	
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	-0.16	100.00	-0.29	100.00	85.46	14.54	6.876	
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	-0.16	100.00	-0.29	100.00	85.01	14.99	6.670	
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	-0.16	100.00	-0.29	100.00	84.56	15.44	6.476	
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	-0.16	100.00	-0.29	100.00	84.11	15.89	6.293	
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	-0.16	100.00	-0.29	100.00	83.66	16.34	6.120	
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	-0.16	100.00	-0.29	100.00	83.21	16.79	5.956	
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	-0.16	100.00	-0.29	100.00	82.76	17.24	5.801	
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	-0.16	100.00	-0.29	100.00	82.31	17.69	5.653	
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	-0.16	100.00	-0.29	100.00	81.86	18.14	5.513	
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	-0.16	100.00	-0.29	100.00	81.41	18.59	5.380	
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	-0.16	100.00	-0.29	100.00	80.96	19.04	5.253	
4,400.00	4,400.00	4,401.54	4,401.53	9.72	9.72	-137.86	99.21	-0.72	99.87	80.44	19.44	5.139	
4,500.00	4,499.96	4,503.01	4,502.97	9.89	9.89	-139.65	96.85	-2.02	99.55	79.77	19.78	5.033	
4,600.00	4,599.86	4,604.36	4,604.21	10.07	10.07	-142.66	92.92	-4.18	99.23	79.10	20.13	4.930	
4,652.95	4,652.73	4,657.94	4,657.71	10.17	10.16	-144.74	90.21	-5.68	99.16	78.85	20.31	4.883 CC	
4,700.00	4,699.68	4,705.51	4,705.17	10.26	10.25	-146.86	87.44	-7.21	99.23	78.76	20.47	4.848 ES	
4,800.00	4,799.37	4,806.40	4,805.74	10.44	10.43	-152.21	80.41	-11.07	100.01	79.20	20.81	4.806 SF	
4,900.00	4,898.90	4,906.97	4,905.83	10.63	10.62	-158.53	71.87	-15.78	102.11	80.96	21.14	4.829	
5,000.00	4,998.26	5,007.16	5,005.36	10.83	10.81	-165.53	61.82	-21.31	106.10	84.63	21.48	4.941	

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 333H (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:	333H (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		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	5,097.40	5,106.90	5,104.24	11.03	11.00	-172.83	50.31	-27.85	112.52	90.72	21.81	5.160		
5,200.00	5,196.30	5,206.14	5,202.37	11.25	11.21	179.98	37.37	-34.78	121.74	99.60	22.14	5.498		
5,300.00	5,294.93	5,304.83	5,299.89	11.47	11.42	173.25	23.02	-42.68	133.96	111.47	22.49	5.956		
5,364.85	5,358.73	5,368.50	5,362.32	11.63	11.57	169.23	12.98	-48.21	143.51	120.78	22.73	6.315		
5,400.00	5,393.28	5,402.85	5,396.06	11.71	11.65	167.21	7.36	-51.31	149.11	126.23	22.88	6.517		
5,500.00	5,491.55	5,500.48	5,491.96	11.96	11.88	162.20	-8.66	-60.13	165.93	142.60	23.33	7.112		
5,600.00	5,589.83	5,598.10	5,587.86	12.21	12.13	158.13	-24.67	-68.95	183.76	159.97	23.79	7.723		
5,700.00	5,688.11	5,695.72	5,683.75	12.48	12.38	154.78	-40.68	-77.77	202.35	178.08	24.27	8.337		
5,800.00	5,786.39	5,793.35	5,779.65	12.75	12.64	152.00	-56.70	-86.59	221.50	196.74	24.76	8.945		
5,900.00	5,884.66	5,890.97	5,875.55	13.03	12.91	149.66	-72.71	-95.41	241.08	215.81	25.26	9.542		
6,000.00	5,982.94	5,988.59	5,971.44	13.32	13.18	147.67	-88.72	-104.23	260.98	235.21	25.78	10.125		
6,100.00	6,081.22	6,086.22	6,067.34	13.61	13.46	145.96	-104.73	-113.04	281.15	254.86	26.30	10.692		
6,200.00	6,179.50	6,183.84	6,163.24	13.91	13.75	144.48	-120.75	-121.86	301.53	274.70	26.83	11.240		
6,300.00	6,277.78	6,281.46	6,259.13	14.21	14.04	143.19	-136.76	-130.88	322.08	294.71	27.36	11.770		
6,400.00	6,376.05	6,379.09	6,355.03	14.52	14.34	142.05	-152.77	-139.50	342.76	314.85	27.91	12.280		
6,500.00	6,474.33	6,476.71	6,450.92	14.84	14.64	141.05	-168.79	-148.32	363.56	335.10	28.47	12.772		
6,600.00	6,572.61	6,574.33	6,546.82	15.16	14.95	140.15	-184.80	-157.14	384.46	355.43	29.03	13.245		
6,700.00	6,670.89	6,671.96	6,642.72	15.48	15.26	139.34	-200.81	-165.96	405.44	375.84	29.60	13.699		
6,800.00	6,769.17	6,769.58	6,738.61	15.81	15.57	138.61	-216.82	-174.78	426.49	396.31	30.17	14.136		
6,900.00	6,867.44	6,867.20	6,834.51	16.14	15.89	137.95	-232.84	-183.60	447.59	416.84	30.75	14.555		
7,000.00	6,965.72	6,964.83	6,930.41	16.48	16.22	137.35	-248.85	-192.42	468.75	437.41	31.34	14.958		
7,100.00	7,064.00	7,062.45	7,026.30	16.82	16.54	136.81	-264.86	-201.24	489.95	458.02	31.93	15.344		
7,200.00	7,162.28	7,160.79	7,122.91	17.16	16.87	136.30	-280.97	-210.11	511.19	478.66	32.53	15.715		
7,300.00	7,260.56	7,262.46	7,223.01	17.50	17.18	135.95	-296.57	-218.70	531.96	498.84	33.12	16.063		
7,400.00	7,358.83	7,364.53	7,323.79	17.85	17.48	135.79	-310.67	-226.47	552.00	518.31	33.69	16.383		
7,500.00	7,457.11	7,466.92	7,425.18	18.20	17.77	135.81	-323.24	-233.39	571.30	537.03	34.26	16.674		
7,600.00	7,555.39	7,569.59	7,527.07	18.55	18.05	136.00	-334.24	-239.44	589.85	555.03	34.82	16.938		
7,700.00	7,653.67	7,672.46	7,629.38	18.91	18.32	136.33	-343.65	-244.63	607.67	572.30	35.37	17.179		
7,800.00	7,751.95	7,775.46	7,731.99	19.27	18.58	136.80	-351.47	-248.94	624.78	588.87	35.91	17.399		
7,900.00	7,850.22	7,878.54	7,834.82	19.62	18.82	137.40	-357.67	-252.35	641.21	604.78	36.43	17.601		
8,000.00	7,948.50	7,981.62	7,937.77	19.99	19.05	138.12	-362.25	-254.88	657.00	620.07	36.94	17.788		
8,100.00	8,046.78	8,084.63	8,040.73	20.35	19.27	138.95	-365.21	-256.50	672.21	634.79	37.42	17.962		
8,200.00	8,145.06	8,187.52	8,143.60	20.71	19.47	139.88	-366.54	-257.24	686.90	649.00	37.89	18.127		
8,300.00	8,243.34	8,287.25	8,243.34	21.08	19.65	140.86	-366.63	-257.29	701.26	662.92	38.34	18.291		
8,371.16	8,313.27	8,357.19	8,313.27	21.34	19.79	141.52	-366.63	-257.29	711.58	672.92	38.66	18.407		
8,400.00	8,341.63	8,385.54	8,341.63	21.44	19.84	141.81	-366.63	-257.29	715.73	676.93	38.80	18.449		
8,500.00	8,440.15	8,472.32	8,428.34	21.75	19.99	142.80	-364.33	-257.29	729.85	690.64	39.21	18.613		
8,600.00	8,538.95	8,550.00	8,504.99	22.04	20.06	144.38	-352.15	-257.29	745.37	705.85	39.51	18.863		
8,700.00	8,638.01	8,619.36	8,571.50	22.32	20.07	146.35	-332.61	-257.29	763.23	723.51	39.71	19.218		
8,800.00	8,737.30	8,682.99	8,630.03	22.58	20.05	148.58	-307.73	-257.29	784.34	744.48	39.85	19.681		
8,900.00	8,836.77	8,739.63	8,679.53	22.84	20.00	150.85	-280.25	-257.29	809.49	769.54	39.95	20.261		
9,000.00	8,936.41	8,789.69	8,720.84	23.07	19.94	153.06	-251.99	-257.29	839.26	799.23	40.03	20.964		
9,100.00	9,036.18	8,833.81	8,755.07	23.30	19.88	155.14	-224.18	-257.29	873.94	833.83	40.11	21.788		
9,200.00	9,136.06	8,872.73	8,783.42	23.51	19.82	157.07	-197.53	-257.29	913.57	873.39	40.19	22.733		
9,300.00	9,236.00	8,900.00	8,802.18	23.70	19.78	158.50	-177.74	-257.29	958.07	917.78	40.29	23.778		
9,400.00	9,335.99	8,950.00	8,834.03	23.89	19.71	161.00	-139.22	-257.29	1,007.13	966.82	40.31	24.984		
9,436.01	9,372.00	8,950.00	8,834.03	23.95	19.71	-61.83	-139.22	-257.29	1,025.64	985.27	40.37	25.403		
9,500.00	9,435.99	8,965.04	8,842.94	24.06	19.68	-61.13	-127.11	-257.29	1,060.37	1,019.91	40.45	26.213		
9,600.00	9,535.99	9,000.00	8,862.41	24.23	19.63	-59.50	-98.07	-257.29	1,118.87	1,078.32	40.55	27.594		
9,636.01	9,572.00	9,000.00	8,862.41	24.30	19.63	-59.50	-98.07	-257.29	1,140.91	1,100.29	40.62	28.087		
9,650.00	9,585.99	9,000.00	8,862.41	24.32	19.63	-58.55	-98.07	-257.29	1,149.60	1,108.99	40.61	28.309		
9,700.00	9,635.86	9,000.00	8,862.41	24.39	19.63	-55.29	-98.07	-257.29	1,180.32	1,139.80	40.52	29.129		

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 333H (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:	333H (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		
9,750.00	9,885.24	9,023.81	8,874.64	24.43	19.60	-51.44	-77.64	-257.29	1,209.79	1,169.52	40.28	30.037		
9,800.00	9,733.76	9,050.00	8,887.09	24.45	19.56	-47.99	-54.61	-257.29	1,238.42	1,198.51	39.91	31.030		
9,850.00	9,781.05	9,050.00	8,887.09	24.44	19.56	-45.67	-54.61	-257.29	1,265.28	1,225.81	39.47	32.057		
9,900.00	9,826.75	9,050.00	8,887.09	24.42	19.56	-43.57	-54.61	-257.29	1,290.97	1,252.09	38.88	33.202		
9,950.00	9,870.51	9,078.05	8,899.25	24.37	19.52	-41.18	-29.33	-257.29	1,314.53	1,276.44	38.09	34.513		
10,000.00	9,912.00	9,100.00	8,907.89	24.30	19.49	-39.24	-9.16	-257.29	1,336.48	1,299.30	37.18	35.943		
10,050.00	9,950.90	9,100.00	8,907.89	24.23	19.49	-37.89	-9.16	-257.29	1,356.38	1,320.16	36.22	37.444		
10,100.00	9,986.91	9,122.79	8,916.04	24.14	19.46	-36.47	12.13	-257.29	1,374.11	1,338.97	35.14	39.098		
10,150.00	10,019.77	9,150.00	8,924.65	24.04	19.43	-35.25	37.93	-257.29	1,389.85	1,355.82	34.03	40.840		
10,200.00	10,049.22	9,150.00	8,924.65	23.94	19.43	-34.47	37.93	-257.29	1,403.03	1,370.06	32.98	42.548		
10,250.00	10,075.04	9,169.61	8,930.09	23.83	19.41	-33.72	56.77	-257.30	1,413.98	1,382.02	31.96	44.249		
10,300.00	10,097.03	9,200.00	8,937.25	23.72	19.38	-33.11	86.31	-257.30	1,422.77	1,391.71	31.06	45.814		
10,350.00	10,115.03	9,200.00	8,937.25	23.62	19.38	-32.78	86.31	-257.30	1,428.66	1,398.33	30.33	47.106		
10,400.00	10,128.89	9,217.53	8,940.65	23.51	19.36	-32.55	103.50	-257.30	1,432.30	1,402.48	29.82	48.033		
10,450.00	10,138.51	9,250.00	8,945.57	23.42	19.36	-32.48	135.59	-257.30	1,433.75	1,404.15	29.60	48.445		
10,500.00	10,143.83	9,250.00	8,945.57	23.33	19.36	-32.57	135.59	-257.30	1,432.11	1,402.53	29.58	48.409		
10,536.00	10,144.96	9,250.00	8,945.57	23.27	19.36	-32.69	135.59	-257.30	1,429.74	1,400.00	29.73	48.086		
10,600.00	10,144.96	9,281.81	8,948.62	23.20	19.43	-32.76	167.25	-257.30	1,424.96	1,395.02	29.94	47.586		
10,700.00	10,144.96	9,320.91	8,949.96	23.30	19.55	-32.79	206.32	-257.30	1,421.65	1,391.35	30.30	46.925		
10,736.45	10,144.96	9,336.50	8,949.96	23.43	19.62	-32.79	221.91	-257.30	1,421.49	1,391.03	30.46	46.664		
10,800.00	10,144.96	9,400.05	8,949.96	23.78	19.90	-32.79	285.46	-257.30	1,421.49	1,390.62	30.88	46.037		
10,900.00	10,144.96	9,500.05	8,949.96	24.44	20.45	-32.79	385.46	-257.30	1,421.50	1,389.82	31.68	44.870		
11,000.00	10,144.96	9,600.05	8,949.96	25.22	21.14	-32.79	485.46	-257.31	1,421.50	1,388.87	32.63	43.564		
11,100.00	10,144.96	9,700.05	8,949.96	26.10	21.95	-32.79	585.46	-257.31	1,421.50	1,387.79	33.72	42.162		
11,200.00	10,144.96	9,800.05	8,949.96	27.06	22.87	-32.79	685.46	-257.31	1,421.50	1,386.58	34.92	40.704		
11,300.00	10,144.97	9,900.05	8,949.96	28.10	23.89	-32.79	785.46	-257.31	1,421.51	1,385.27	36.24	39.225		
11,400.00	10,144.97	10,000.05	8,949.96	29.22	25.00	-32.79	885.46	-257.31	1,421.51	1,383.85	37.66	37.750		
11,500.00	10,144.97	10,100.05	8,949.97	30.40	26.19	-32.79	985.46	-257.32	1,421.51	1,382.35	39.16	36.301		
11,600.00	10,144.97	10,200.05	8,949.97	31.64	27.45	-32.79	1,085.46	-257.32	1,421.51	1,380.77	40.74	34.893		
11,700.00	10,144.97	10,300.05	8,949.97	32.94	28.77	-32.79	1,185.46	-257.32	1,421.52	1,379.13	42.39	33.534		
11,800.00	10,144.97	10,400.05	8,949.97	34.28	30.14	-32.79	1,285.46	-257.32	1,421.52	1,377.42	44.10	32.233		
11,900.00	10,144.97	10,500.05	8,949.97	35.66	31.56	-32.79	1,385.46	-257.33	1,421.52	1,375.65	45.87	30.992		
12,000.00	10,144.97	10,600.05	8,949.97	37.08	33.01	-32.79	1,485.46	-257.33	1,421.52	1,373.84	47.68	29.813		
12,100.00	10,144.97	10,700.05	8,949.97	38.53	34.51	-32.79	1,585.46	-257.33	1,421.52	1,371.99	49.54	28.695		
12,200.00	10,144.97	10,800.05	8,949.97	40.01	36.03	-32.79	1,685.46	-257.33	1,421.53	1,370.09	51.44	27.637		
12,300.00	10,144.98	10,900.05	8,949.97	41.52	37.58	-32.79	1,785.46	-257.34	1,421.53	1,368.16	53.37	26.637		
12,400.00	10,144.98	11,000.05	8,949.98	43.05	39.15	-32.79	1,885.46	-257.34	1,421.53	1,366.20	55.33	25.693		
12,500.00	10,144.98	11,100.05	8,949.98	44.61	40.74	-32.79	1,985.46	-257.34	1,421.53	1,364.22	57.32	24.802		
12,600.00	10,144.98	11,200.05	8,949.98	46.18	42.36	-32.79	2,085.46	-257.34	1,421.54	1,362.21	59.33	23.960		
12,700.00	10,144.98	11,300.05	8,949.98	47.77	43.99	-32.79	2,185.46	-257.34	1,421.54	1,360.17	61.37	23.165		
12,800.00	10,144.98	11,400.05	8,949.98	49.38	45.63	-32.79	2,285.46	-257.35	1,421.54	1,358.12	63.42	22.414		
12,900.00	10,144.98	11,500.05	8,949.98	51.00	47.29	-32.79	2,385.46	-257.35	1,421.54	1,356.05	65.50	21.704		
13,000.00	10,144.98	11,600.05	8,949.98	52.64	48.96	-32.79	2,485.46	-257.35	1,421.54	1,353.96	67.59	21.032		
13,100.00	10,144.98	11,700.05	8,949.98	54.29	50.64	-32.79	2,585.46	-257.35	1,421.55	1,351.85	69.69	20.397		
13,200.00	10,144.98	11,800.05	8,949.98	55.94	52.33	-32.79	2,685.46	-257.36	1,421.55	1,349.73	71.82	19.795		
13,300.00	10,144.99	11,900.05	8,949.98	57.61	54.03	-32.79	2,785.46	-257.36	1,421.55	1,347.60	73.95	19.224		
13,400.00	10,144.99	12,000.05	8,949.99	59.29	55.73	-32.79	2,885.46	-257.36	1,421.55	1,345.46	76.09	18.682		
13,500.00	10,144.99	12,100.05	8,949.99	60.98	57.45	-32.79	2,985.46	-257.36	1,421.56	1,343.31	78.25	18.167		
13,600.00	10,144.99	12,200.05	8,949.99	62.67	59.17	-32.79	3,085.46	-257.36	1,421.56	1,341.14	80.41	17.678		
13,700.00	10,144.99	12,300.05	8,949.99	64.37	60.90	-32.79	3,185.46	-257.37	1,421.56	1,338.97	82.59	17.213		
13,800.00	10,144.99	12,400.05	8,949.99	66.08	62.63	-32.79	3,285.46	-257.37	1,421.56	1,336.79	84.77	16.770		
13,900.00	10,144.99	12,500.05	8,949.99	67.79	64.37	-32.79	3,385.46	-257.37	1,421.57	1,334.60	86.96	16.347		

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 333H (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:	333H (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		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)			
14,000.00	10,144.99	12,600.05	8,949.99	69.51	66.11	-32.79	3,485.46	-257.37	1,421.57	1,332.41	89.16	15.944	
14,100.00	10,144.99	12,700.05	8,949.99	71.24	67.86	-32.79	3,585.46	-257.38	1,421.57	1,330.21	91.36	15.560	
14,200.00	10,144.99	12,800.05	8,949.99	72.97	69.61	-32.79	3,685.46	-257.38	1,421.57	1,328.00	93.57	15.192	
14,300.00	10,144.99	12,900.05	8,949.99	74.70	71.37	-32.79	3,785.46	-257.38	1,421.57	1,325.79	95.79	14.841	
14,400.00	10,145.00	13,000.05	8,950.00	76.44	73.12	-32.79	3,885.46	-257.38	1,421.58	1,323.57	98.01	14.505	
14,500.00	10,145.00	13,100.05	8,950.00	78.18	74.89	-32.79	3,985.46	-257.39	1,421.58	1,321.34	100.24	14.182	
14,600.00	10,145.00	13,200.05	8,950.00	79.93	76.65	-32.80	4,085.46	-257.39	1,421.58	1,319.11	102.47	13.874	
14,700.00	10,145.00	13,300.05	8,950.00	81.68	78.42	-32.80	4,185.46	-257.39	1,421.58	1,316.88	104.70	13.577	
14,800.00	10,145.00	13,400.05	8,950.00	83.43	80.19	-32.80	4,285.46	-257.39	1,421.59	1,314.64	106.94	13.293	
14,830.71	10,145.00	13,430.76	8,950.00	83.97	80.73	-32.80	4,316.17	-257.39	1,421.59	1,313.96	107.63	13.208	
14,857.28	10,145.00	13,452.65	8,950.00	84.44	81.12	-32.80	4,338.06	-257.39	1,421.59	1,313.42	108.17	13.142	

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



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 333H (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:	333H (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		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	-0.16	50.00	-0.14	50.00				
100.00	100.00	100.00	100.00	0.08	0.08	-0.16	50.00	-0.14	50.00	49.84	0.16	317.792	
200.00	200.00	200.00	200.00	0.30	0.30	-0.16	50.00	-0.14	50.00	49.39	0.61	82.391	
300.00	300.00	300.00	300.00	0.53	0.53	-0.16	50.00	-0.14	50.00	48.94	1.06	47.331	
400.00	400.00	400.00	400.00	0.75	0.75	-0.16	50.00	-0.14	50.00	48.49	1.51	33.202	
500.00	500.00	500.00	500.00	0.98	0.98	-0.16	50.00	-0.14	50.00	48.04	1.96	25.570	
600.00	600.00	600.00	600.00	1.20	1.20	-0.16	50.00	-0.14	50.00	47.60	2.40	20.790	
700.00	700.00	700.00	700.00	1.43	1.43	-0.16	50.00	-0.14	50.00	47.15	2.85	17.516	
800.00	800.00	800.00	800.00	1.65	1.65	-0.16	50.00	-0.14	50.00	46.70	3.30	15.133	
900.00	900.00	900.00	900.00	1.88	1.88	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	50.00	-0.14	50.00	30.96	19.04	2.626 CC	
4,400.00	4,400.00	4,400.36	4,400.35	9.72	9.72	-137.02	49.64	0.66	50.28	30.84	19.44	2.586 ES	
4,500.00	4,499.96	4,500.71	4,500.67	9.89	9.91	-136.33	48.56	3.07	51.13	31.33	19.80	2.582 SF	
4,600.00	4,599.86	4,601.05	4,600.91	10.07	10.10	-135.21	46.77	7.08	52.56	32.40	20.16	2.607	
4,700.00	4,699.68	4,701.36	4,701.03	10.26	10.29	-133.76	44.26	12.68	54.60	34.07	20.53	2.660	
4,800.00	4,799.37	4,801.65	4,801.00	10.44	10.49	-132.03	41.04	19.89	57.26	36.36	20.90	2.740	
4,900.00	4,898.90	4,901.89	4,900.79	10.63	10.69	-130.14	37.10	28.69	60.57	39.29	21.28	2.847	
5,000.00	4,998.26	5,002.10	5,000.34	10.83	10.90	-128.15	32.46	39.08	64.56	42.89	21.67	2.979	
5,100.00	5,097.40	5,102.25	5,099.63	11.03	11.11	-126.14	27.11	51.04	69.24	47.16	22.07	3.137	

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 333H (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:	333H (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						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,200.00	5,196.30	5,202.14	5,198.49	11.25	11.34	-124.58	21.28	64.06	74.73	52.24	22.49	3.323	
5,300.00	5,294.93	5,301.92	5,297.25	11.47	11.57	-124.23	15.45	77.10	81.23	58.31	22.92	3.544	
5,364.85	5,358.73	5,366.60	5,361.26	11.63	11.72	-124.54	11.67	85.55	85.98	62.77	23.20	3.706	
5,400.00	5,393.28	5,401.64	5,395.94	11.71	11.80	-124.82	9.62	90.13	88.66	65.30	23.36	3.795	
5,500.00	5,491.55	5,501.34	5,494.62	11.96	12.04	-125.53	3.80	103.15	96.31	72.48	23.82	4.042	
5,600.00	5,589.83	5,601.04	5,593.29	12.21	12.29	-126.13	-2.03	116.18	103.97	79.67	24.30	4.279	
5,700.00	5,688.11	5,700.74	5,691.97	12.48	12.54	-126.65	-7.85	129.21	111.64	86.85	24.79	4.504	
5,800.00	5,786.39	5,800.44	5,790.64	12.75	12.79	-127.11	-13.68	142.23	119.32	94.04	25.28	4.720	
5,900.00	5,884.66	5,900.14	5,889.32	13.03	13.05	-127.51	-19.51	155.26	127.00	101.22	25.78	4.926	
6,000.00	5,982.94	5,999.84	5,987.99	13.32	13.31	-127.86	-25.33	168.29	134.69	108.40	26.29	5.122	
6,100.00	6,081.22	6,099.54	6,086.66	13.61	13.57	-128.18	-31.16	181.31	142.39	115.58	26.81	5.310	
6,200.00	6,179.50	6,199.25	6,185.34	13.91	13.84	-128.46	-36.99	194.34	150.09	122.75	27.34	5.490	
6,300.00	6,277.78	6,298.95	6,284.01	14.21	14.12	-128.71	-42.81	207.37	157.79	129.92	27.87	5.661	
6,400.00	6,376.05	6,398.65	6,382.69	14.52	14.39	-128.94	-48.64	220.39	165.50	137.08	28.41	5.825	
6,500.00	6,474.33	6,498.35	6,481.36	14.84	14.67	-129.16	-54.46	233.42	173.20	144.25	28.96	5.981	
6,600.00	6,572.61	6,598.05	6,580.03	15.16	14.95	-129.35	-60.29	246.44	180.91	151.41	29.51	6.131	
6,700.00	6,670.89	6,697.75	6,678.71	15.48	15.24	-129.53	-66.12	259.47	188.62	158.56	30.06	6.274	
6,800.00	6,769.17	6,797.45	6,777.38	15.81	15.52	-129.69	-71.94	272.50	196.34	165.71	30.62	6.411	
6,900.00	6,867.44	6,897.15	6,876.06	16.14	15.81	-129.84	-77.77	285.52	204.05	172.86	31.19	6.542	
7,000.00	6,965.72	6,996.85	6,974.73	16.48	16.10	-129.98	-83.60	298.55	211.77	180.01	31.76	6.668	
7,100.00	7,064.00	7,096.55	7,073.40	16.82	16.40	-130.11	-89.42	311.58	219.49	187.15	32.33	6.788	
7,200.00	7,162.28	7,196.25	7,172.08	17.16	16.69	-130.23	-95.25	324.60	227.20	194.29	32.91	6.903	
7,300.00	7,260.56	7,295.95	7,270.75	17.50	16.99	-130.35	-101.08	337.63	234.92	201.43	33.49	7.014	
7,400.00	7,358.83	7,395.49	7,369.27	17.85	17.29	-130.45	-106.89	350.62	242.65	208.57	34.08	7.121	
7,500.00	7,457.11	7,493.85	7,466.76	18.20	17.54	-130.78	-112.21	362.52	250.70	216.09	34.61	7.244	
7,600.00	7,555.39	7,592.06	7,564.31	18.55	17.78	-131.45	-116.84	372.87	259.30	224.19	35.11	7.385	
7,700.00	7,653.67	7,690.05	7,661.82	18.91	18.01	-132.40	-120.77	381.67	268.51	232.92	35.59	7.545	
7,800.00	7,751.95	7,787.76	7,759.21	19.27	18.24	-133.62	-124.02	388.93	278.39	242.36	36.04	7.726	
7,900.00	7,850.22	7,885.15	7,856.39	19.62	18.45	-135.06	-126.58	394.66	289.04	252.59	36.45	7.929	
8,000.00	7,948.50	7,982.15	7,953.29	19.99	18.66	-136.68	-128.47	398.87	300.54	263.70	36.84	8.158	
8,100.00	8,046.78	8,078.72	8,049.81	20.35	18.85	-138.44	-129.67	401.57	312.99	275.79	37.20	8.413	
8,200.00	8,145.06	8,174.81	8,145.88	20.71	19.03	-140.32	-130.22	402.78	326.50	288.97	37.53	8.699	
8,300.00	8,243.34	8,272.26	8,243.34	21.08	19.21	-142.26	-130.25	402.86	340.97	303.12	37.85	9.008	
8,371.16	8,313.27	8,342.19	8,313.27	21.34	19.35	-143.56	-130.25	402.86	351.53	313.44	38.09	9.230	
8,400.00	8,341.63	8,370.55	8,341.63	21.44	19.40	-144.09	-130.25	402.86	355.80	317.61	38.19	9.316	
8,500.00	8,440.15	8,450.00	8,421.03	21.75	19.56	-145.40	-128.56	402.86	372.04	333.50	38.54	9.652	
8,600.00	8,538.95	8,500.00	8,470.66	22.04	19.85	-146.06	-122.54	402.86	396.27	357.39	38.88	10.192	
8,700.00	8,638.01	8,550.00	8,519.56	22.32	19.72	-146.56	-112.23	402.86	428.71	389.49	39.22	10.931	
8,800.00	8,737.30	8,600.00	8,567.39	22.58	19.79	-146.90	-97.69	402.86	468.35	428.79	39.56	11.840	
8,900.00	8,836.77	8,650.00	8,613.76	22.84	19.85	-147.11	-79.04	402.85	514.29	474.40	39.89	12.892	
9,000.00	8,936.41	8,700.00	8,658.33	23.07	19.90	-147.20	-56.42	402.85	565.87	525.64	40.22	14.069	
9,100.00	9,036.18	8,750.00	8,700.77	23.30	19.94	-147.21	-30.00	402.85	622.55	582.01	40.54	15.356	
9,200.00	9,136.06	8,780.53	8,725.48	23.51	19.97	-147.34	-12.09	402.85	683.37	642.57	40.80	16.749	
9,300.00	9,236.00	8,814.54	8,751.85	23.70	19.99	-147.45	9.38	402.85	747.95	706.90	41.06	18.218	
9,400.00	9,335.99	8,850.00	8,777.93	23.89	20.02	-147.53	33.40	402.85	815.73	774.43	41.30	19.750	
9,436.01	9,372.00	8,850.00	8,777.93	23.95	20.02	-10.62	33.40	402.85	840.85	799.50	41.35	20.334	
9,500.00	9,435.99	8,874.00	8,794.72	24.06	20.04	-10.32	50.55	402.85	886.39	844.85	41.54	21.340	
9,600.00	9,535.99	8,900.00	8,812.08	24.23	20.07	-10.01	69.90	402.85	960.30	918.50	41.80	22.973	
9,636.01	9,572.00	8,900.00	8,812.08	24.30	20.07	-10.01	69.90	402.85	987.73	945.86	41.87	23.589	
9,650.00	9,585.99	8,900.00	8,812.08	24.32	20.07	-9.72	69.90	402.85	998.43	956.54	41.89	23.836	
9,700.00	9,635.86	8,923.92	8,827.26	24.39	20.09	-8.63	88.39	402.84	1,034.76	992.92	41.84	24.733	
9,750.00	9,685.24	8,950.00	8,842.92	24.43	20.11	-7.78	109.24	402.84	1,069.24	1,027.72	41.52	25.752	

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 333H (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:	333H (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: D-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)						
9,800.00	9,733.76	8,950.00	8,842.92	24.45	20.11	-7.24	109.24	402.84	1,100.87	1,059.96	40.91	26.907		
9,850.00	9,781.05	8,950.00	8,842.92	24.44	20.11	-6.79	109.24	402.84	1,130.50	1,090.42	40.08	28.209		
9,900.00	9,826.75	8,977.88	8,858.59	24.42	20.14	-6.33	132.30	402.84	1,157.05	1,117.99	39.07	29.616		
9,950.00	9,870.51	9,000.00	8,870.21	24.37	20.17	-5.97	151.12	402.84	1,181.27	1,143.41	37.86	31.203		
10,000.00	9,912.00	9,000.00	8,870.21	24.30	20.17	-5.73	151.12	402.84	1,202.67	1,166.23	36.44	33.009		
10,050.00	9,950.90	9,021.92	8,881.00	24.23	20.20	-5.49	170.19	402.84	1,221.22	1,186.31	34.91	34.985		
10,100.00	9,986.91	9,050.00	8,893.75	24.14	20.25	-5.29	195.21	402.84	1,237.19	1,203.91	33.28	37.170		
10,150.00	10,019.77	9,050.00	8,893.75	24.04	20.25	-5.17	195.21	402.84	1,249.85	1,218.30	31.55	39.613		
10,200.00	10,049.22	9,067.70	8,901.14	23.94	20.28	-5.07	211.29	402.84	1,259.78	1,229.94	29.84	42.218		
10,250.00	10,075.04	9,100.00	8,913.35	23.83	20.35	-4.99	241.19	402.84	1,267.12	1,238.91	28.21	44.924		
10,300.00	10,097.03	9,100.00	8,913.35	23.72	20.35	-4.96	241.19	402.84	1,270.76	1,244.13	26.63	47.712		
10,350.00	10,115.03	9,100.00	8,913.35	23.62	20.35	-4.95	241.19	402.84	1,272.02	1,246.76	25.26	50.356		
10,400.00	10,128.89	9,129.85	8,923.12	23.51	20.44	-4.97	269.39	402.83	1,269.78	1,245.55	24.23	52.403		
10,450.00	10,138.51	9,150.00	8,928.87	23.42	20.50	-5.02	288.70	402.83	1,264.84	1,241.30	23.54	53.733		
10,500.00	10,143.83	9,150.00	8,928.87	23.33	20.50	-5.09	288.70	402.83	1,257.01	1,233.79	23.23	54.120		
10,536.00	10,144.96	9,171.91	8,934.36	23.27	20.59	-5.18	309.91	402.83	1,249.31	1,225.99	23.32	53.562		
10,600.00	10,144.96	9,200.00	8,940.19	23.20	20.70	-5.20	337.39	402.83	1,235.70	1,212.17	23.53	52.521		
10,700.00	10,144.96	9,223.14	8,943.99	23.30	20.81	-5.22	360.21	402.83	1,218.56	1,194.73	23.84	51.119		
10,800.00	10,144.96	9,250.00	8,947.23	23.78	20.95	-5.23	386.87	402.83	1,207.01	1,182.82	24.19	49.895		
10,900.00	10,144.96	9,300.00	8,949.93	24.44	21.25	-5.24	436.79	402.82	1,201.15	1,176.52	24.64	48.751		
10,964.95	10,144.96	9,313.64	8,949.96	24.94	21.33	-5.24	450.42	402.82	1,200.03	1,175.12	24.91	48.181		
11,000.00	10,144.96	9,348.69	8,949.96	25.22	21.57	-5.24	485.47	402.82	1,200.03	1,174.90	25.13	47.755		
11,100.00	10,144.96	9,448.69	8,949.96	26.10	22.34	-5.25	585.47	402.82	1,200.03	1,174.22	25.81	46.490		
11,200.00	10,144.96	9,548.69	8,949.96	27.06	23.23	-5.25	685.47	402.81	1,200.03	1,173.47	26.56	45.174		
11,300.00	10,144.97	9,648.69	8,949.96	28.10	24.22	-5.25	785.47	402.80	1,200.03	1,172.65	27.38	43.828		
11,400.00	10,144.97	9,748.69	8,949.96	29.22	25.31	-5.25	885.47	402.80	1,200.03	1,171.78	28.25	42.472		
11,500.00	10,144.97	9,848.69	8,949.96	30.40	26.48	-5.25	985.47	402.79	1,200.03	1,170.85	29.18	41.124		
11,600.00	10,144.97	9,948.69	8,949.96	31.64	27.72	-5.25	1,085.47	402.79	1,200.03	1,169.88	30.15	39.797		
11,700.00	10,144.97	10,048.69	8,949.97	32.94	29.02	-5.25	1,185.47	402.78	1,200.03	1,168.86	31.17	38.499		
11,800.00	10,144.97	10,148.69	8,949.97	34.28	30.37	-5.25	1,285.47	402.78	1,200.03	1,167.81	32.23	37.239		
11,900.00	10,144.97	10,248.69	8,949.97	35.66	31.77	-5.25	1,385.47	402.77	1,200.03	1,166.72	33.32	36.021		
12,000.00	10,144.97	10,348.69	8,949.97	37.08	33.21	-5.25	1,485.47	402.76	1,200.03	1,165.60	34.44	34.848		
12,100.00	10,144.97	10,448.69	8,949.97	38.53	34.69	-5.25	1,585.47	402.76	1,200.04	1,164.45	35.59	33.722		
12,200.00	10,144.97	10,548.69	8,949.97	40.01	36.20	-5.25	1,685.47	402.75	1,200.04	1,163.28	36.76	32.645		
12,300.00	10,144.98	10,648.69	8,949.97	41.52	37.74	-5.25	1,785.47	402.75	1,200.04	1,162.08	37.96	31.615		
12,400.00	10,144.98	10,748.69	8,949.97	43.05	39.30	-5.25	1,885.47	402.74	1,200.04	1,160.86	39.18	30.631		
12,500.00	10,144.98	10,848.69	8,949.97	44.61	40.88	-5.25	1,985.47	402.73	1,200.04	1,159.62	40.42	29.693		
12,600.00	10,144.98	10,948.69	8,949.98	46.18	42.49	-5.25	2,085.47	402.73	1,200.04	1,158.37	41.67	28.799		
12,700.00	10,144.98	11,048.69	8,949.98	47.77	44.11	-5.25	2,185.47	402.72	1,200.04	1,157.10	42.94	27.946		
12,800.00	10,144.98	11,148.69	8,949.98	49.38	45.74	-5.25	2,285.47	402.72	1,200.04	1,155.81	44.23	27.134		
12,900.00	10,144.98	11,248.69	8,949.98	51.00	47.39	-5.25	2,385.47	402.71	1,200.04	1,154.52	45.52	26.361		
13,000.00	10,144.98	11,348.69	8,949.98	52.64	49.06	-5.25	2,485.47	402.71	1,200.04	1,153.21	46.83	25.623		
13,100.00	10,144.98	11,448.69	8,949.98	54.29	50.73	-5.25	2,585.47	402.70	1,200.04	1,151.89	48.16	24.920		
13,200.00	10,144.98	11,548.69	8,949.98	55.94	52.41	-5.25	2,685.47	402.69	1,200.04	1,150.56	49.49	24.250		
13,300.00	10,144.99	11,648.69	8,949.98	57.61	54.11	-5.25	2,785.47	402.69	1,200.04	1,149.22	50.83	23.610		
13,400.00	10,144.99	11,748.69	8,949.98	59.29	55.81	-5.25	2,885.47	402.68	1,200.04	1,147.87	52.18	23.000		
13,500.00	10,144.99	11,848.69	8,949.99	60.98	57.52	-5.25	2,985.47	402.68	1,200.04	1,146.51	53.53	22.417		
13,600.00	10,144.99	11,948.69	8,949.99	62.67	59.23	-5.25	3,085.47	402.67	1,200.04	1,145.15	54.90	21.860		
13,700.00	10,144.99	12,048.69	8,949.99	64.37	60.96	-5.25	3,185.47	402.66	1,200.04	1,143.78	56.27	21.327		
13,800.00	10,144.99	12,148.69	8,949.99	66.08	62.69	-5.26	3,285.47	402.66	1,200.05	1,142.40	57.65	20.817		
13,900.00	10,144.99	12,248.69	8,949.99	67.79	64.42	-5.26	3,385.47	402.65	1,200.05	1,141.02	59.03	20.330		
14,000.00	10,144.99	12,348.69	8,949.99	69.51	66.16	-5.26	3,485.47	402.65	1,200.05	1,139.63	60.42	19.862		

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 333H (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:	333H (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							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,100.00	10,144.99	12,448.69	8,949.99	71.24	67.90	-5.26	3,585.47	402.64	1,200.05	1,138.24	61.81	19.414		
14,200.00	10,144.99	12,548.69	8,949.99	72.97	69.65	-5.26	3,685.47	402.64	1,200.05	1,136.84	63.21	18.985		
14,300.00	10,144.99	12,648.69	8,949.99	74.70	71.40	-5.26	3,785.47	402.63	1,200.05	1,135.43	64.61	18.573		
14,400.00	10,145.00	12,748.69	8,950.00	76.44	73.16	-5.26	3,885.47	402.62	1,200.05	1,134.03	66.02	18.177		
14,500.00	10,145.00	12,848.69	8,950.00	78.18	74.92	-5.26	3,985.47	402.62	1,200.05	1,132.62	67.43	17.796		
14,600.00	10,145.00	12,948.69	8,950.00	79.93	76.68	-5.26	4,085.47	402.61	1,200.05	1,131.20	68.85	17.431		
14,700.00	10,145.00	13,048.69	8,950.00	81.68	78.44	-5.26	4,185.47	402.61	1,200.05	1,129.79	70.27	17.079		
14,800.00	10,145.00	13,148.69	8,950.00	83.43	80.21	-5.26	4,285.47	402.60	1,200.05	1,128.36	71.69	16.740		
14,832.08	10,145.00	13,180.77	8,950.00	84.00	80.78	-5.26	4,317.56	402.60	1,200.05	1,127.91	72.14	16.634		
14,857.28	10,145.00	13,205.29	8,950.00	84.44	81.21	-5.26	4,342.07	402.60	1,200.05	1,127.55	72.50	16.553		

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 333H (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:	333H (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		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	114.98	-84.04	180.36	198.98					
100.00	100.00	100.00	100.00	0.08	0.08	114.98	-84.04	180.36	198.98	198.82	0.16	1,264.677		
200.00	200.00	200.00	200.00	0.30	0.30	114.98	-84.04	180.36	198.98	198.37	0.61	327.880		
300.00	300.00	300.00	300.00	0.53	0.53	114.98	-84.04	180.36	198.98	197.92	1.06	188.356		
400.00	400.00	400.00	400.00	0.75	0.75	114.98	-84.04	180.36	198.98	197.47	1.51	132.131		
500.00	500.00	500.00	500.00	0.98	0.98	114.98	-84.04	180.36	198.98	197.02	1.96	101.756		
600.00	600.00	600.00	600.00	1.20	1.20	114.98	-84.04	180.36	198.98	196.57	2.40	82.736		
700.00	700.00	700.00	700.00	1.43	1.43	114.98	-84.04	180.36	198.98	196.13	2.85	69.707		
800.00	800.00	800.00	800.00	1.65	1.65	114.98	-84.04	180.36	198.98	195.68	3.30	60.223		
900.00	900.00	900.00	900.00	1.88	1.88	114.98	-84.04	180.36	198.98	195.23	3.75	53.011		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	114.98	-84.04	180.36	198.98	194.78	4.20	47.341		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	114.98	-84.04	180.36	198.98	194.33	4.65	42.767		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	114.98	-84.04	180.36	198.98	193.88	5.10	38.999		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	114.98	-84.04	180.36	198.98	193.43	5.55	35.841		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	114.98	-84.04	180.36	198.98	192.98	6.00	33.156		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	114.98	-84.04	180.36	198.98	192.53	6.45	30.846		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	114.98	-84.04	180.36	198.98	192.08	6.90	28.836		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	114.98	-84.04	180.36	198.98	191.63	7.35	27.073		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	114.98	-84.04	180.36	198.98	191.18	7.80	25.512		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	114.98	-84.04	180.36	198.98	190.73	8.25	24.122		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	114.98	-84.04	180.36	198.98	190.28	8.70	22.875		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	114.98	-84.04	180.36	198.98	189.83	9.15	21.751		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	114.98	-84.04	180.36	198.98	189.38	9.60	20.732		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	114.98	-84.04	180.36	198.98	188.93	10.05	19.805		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	114.98	-84.04	180.36	198.98	188.48	10.50	18.957		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	114.98	-84.04	180.36	198.98	188.03	10.95	18.178		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	114.98	-84.04	180.36	198.98	187.58	11.40	17.461		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	114.98	-84.04	180.36	198.98	187.13	11.85	16.798		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	114.98	-84.04	180.36	198.98	186.69	12.29	16.184		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	114.98	-84.04	180.36	198.98	186.24	12.74	15.613		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	114.98	-84.04	180.36	198.98	185.79	13.19	15.081		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	114.98	-84.04	180.36	198.98	185.34	13.64	14.584		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	114.98	-84.04	180.36	198.98	184.89	14.09	14.119		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	114.98	-84.04	180.36	198.98	184.44	14.54	13.683		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	114.98	-84.04	180.36	198.98	183.99	14.99	13.272		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	114.98	-84.04	180.36	198.98	183.54	15.44	12.886		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	114.98	-84.04	180.36	198.98	183.09	15.89	12.522		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	114.98	-84.04	180.36	198.98	182.64	16.34	12.177		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	114.98	-84.04	180.36	198.98	182.19	16.79	11.851		
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	114.98	-84.04	180.36	198.98	181.74	17.24	11.542		
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	114.98	-84.04	180.36	198.98	181.29	17.69	11.249		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	114.98	-84.04	180.36	198.98	180.84	18.14	10.970		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	114.98	-84.04	180.36	198.98	180.39	18.59	10.705		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	114.98	-84.04	180.36	198.98	179.94	19.04	10.452 CC		
4,400.00	4,400.00	4,396.67	4,396.66	9.72	9.72	-22.24	-84.29	181.14	199.01	179.58	19.43	10.241		
4,500.00	4,499.96	4,493.32	4,493.29	9.89	9.90	-22.60	-85.04	183.47	199.10	179.32	19.78	10.064		
4,600.00	4,599.86	4,589.96	4,589.84	10.07	10.09	-23.20	-86.29	187.34	199.27	179.14	20.13	9.899		
4,700.00	4,699.68	4,686.57	4,686.28	10.26	10.27	-24.04	-88.03	192.77	199.55	179.08	20.48	9.745 ES		
4,800.00	4,799.37	4,783.14	4,782.56	10.44	10.47	-25.11	-90.28	199.74	199.98	179.16	20.82	9.604		
4,900.00	4,898.90	4,879.66	4,878.67	10.63	10.66	-26.41	-93.02	208.25	200.59	179.43	21.17	9.477		
5,000.00	4,998.26	4,976.11	4,974.55	10.83	10.86	-27.94	-96.25	218.29	201.46	179.95	21.51	9.364		
5,100.00	5,097.40	5,072.50	5,070.17	11.03	11.07	-29.68	-99.97	229.86	202.64	180.78	21.86	9.269		

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 333H (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:	333H (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		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)						
5,200.00	5,196.30	5,168.82	5,165.49	11.25	11.29	-31.62	-104.19	242.95	204.21	181.99	22.22	9.191		
5,300.00	5,294.93	5,265.04	5,260.48	11.47	11.51	-33.74	-108.88	257.54	206.25	183.67	22.58	9.133		
5,364.85	5,358.73	5,327.39	5,321.90	11.63	11.66	-35.21	-112.19	267.81	207.86	185.04	22.83	9.106		
5,400.00	5,393.28	5,361.17	5,355.12	11.71	11.75	-36.02	-114.07	273.64	208.93	185.95	22.98	9.093 SF		
5,500.00	5,491.55	5,457.22	5,449.37	11.96	12.00	-38.23	-119.73	291.23	213.31	189.91	23.41	9.113		
5,600.00	5,589.83	5,553.14	5,543.17	12.21	12.26	-40.27	-125.86	310.29	219.66	195.81	23.85	9.209		
5,700.00	5,688.11	5,650.51	5,638.08	12.48	12.54	-42.14	-132.53	331.01	227.75	203.44	24.31	9.367		
5,800.00	5,786.39	5,749.89	5,734.89	12.75	12.84	-43.89	-139.42	352.40	236.32	211.53	24.79	9.532		
5,900.00	5,884.66	5,849.27	5,831.69	13.03	13.15	-45.53	-146.30	373.78	245.09	219.81	25.28	9.694		
6,000.00	5,982.94	5,948.65	5,928.50	13.32	13.47	-47.05	-153.19	395.16	254.05	228.27	25.79	9.851		
6,100.00	6,081.22	6,048.03	6,025.31	13.61	13.80	-48.46	-160.07	416.55	263.18	236.87	26.31	10.004		
6,200.00	6,179.50	6,147.41	6,122.11	13.91	14.14	-49.78	-166.95	437.93	272.46	245.62	26.84	10.151		
6,300.00	6,277.78	6,246.78	6,218.92	14.21	14.49	-51.02	-173.84	459.31	281.87	254.48	27.39	10.293		
6,400.00	6,376.05	6,346.16	6,315.72	14.52	14.84	-52.17	-180.72	480.70	291.40	263.45	27.94	10.428		
6,500.00	6,474.33	6,445.54	6,412.53	14.84	15.20	-53.25	-187.60	502.08	301.04	272.53	28.51	10.558		
6,600.00	6,572.61	6,544.92	6,509.34	15.16	15.56	-54.26	-194.49	523.47	310.78	281.69	29.09	10.682		
6,700.00	6,670.89	6,644.30	6,606.14	15.48	15.94	-55.22	-201.37	544.85	320.61	290.92	29.69	10.800		
6,800.00	6,769.17	6,743.68	6,702.95	15.81	16.31	-56.11	-208.25	566.23	330.53	300.24	30.29	10.912		
6,900.00	6,867.44	6,843.05	6,799.75	16.14	16.70	-56.95	-215.14	587.62	340.52	309.61	30.90	11.019		
7,000.00	6,965.72	6,942.43	6,896.56	16.48	17.08	-57.75	-222.02	609.00	350.57	319.05	31.53	11.120		
7,100.00	7,064.00	7,041.81	6,993.37	16.82	17.47	-58.50	-228.90	630.38	360.70	328.54	32.16	11.216		
7,200.00	7,162.28	7,141.19	7,090.17	17.16	17.87	-59.21	-235.79	651.77	370.88	338.08	32.80	11.307		
7,300.00	7,260.56	7,240.57	7,186.98	17.50	18.27	-59.88	-242.67	673.15	381.11	347.66	33.45	11.394		
7,400.00	7,358.83	7,339.95	7,283.78	17.85	18.67	-60.51	-249.56	694.53	391.39	357.29	34.10	11.476		
7,500.00	7,457.11	7,439.32	7,380.59	18.20	19.08	-61.12	-256.44	715.92	401.72	366.95	34.77	11.554		
7,600.00	7,555.39	7,538.70	7,477.40	18.55	19.49	-61.69	-263.32	737.30	412.09	376.65	35.44	11.628		
7,700.00	7,653.67	7,638.08	7,574.20	18.91	19.90	-62.23	-270.21	758.69	422.50	386.38	36.12	11.698		
7,800.00	7,751.95	7,737.46	7,671.01	19.27	20.32	-62.75	-277.09	780.07	432.94	396.14	36.80	11.764		
7,900.00	7,850.22	7,836.84	7,767.81	19.62	20.73	-63.25	-283.97	801.45	443.42	405.93	37.49	11.827		
8,000.00	7,948.50	7,936.22	7,864.62	19.99	21.15	-63.72	-290.86	822.84	453.93	415.74	38.19	11.887		
8,100.00	8,046.78	8,035.59	7,961.43	20.35	21.58	-64.17	-297.74	844.22	464.46	425.58	38.89	11.944		
8,200.00	8,145.06	8,134.97	8,058.23	20.71	22.00	-64.60	-304.62	865.60	475.03	435.44	39.59	11.997		
8,300.00	8,243.34	8,234.35	8,155.04	21.08	22.43	-65.01	-311.51	886.99	485.62	445.31	40.31	12.048		
8,371.16	8,313.27	8,305.07	8,223.92	21.34	22.73	-65.29	-316.41	902.20	493.17	452.36	40.81	12.083		
8,400.00	8,341.63	8,333.73	8,251.84	21.44	22.86	-65.43	-318.39	908.37	496.26	455.25	41.02	12.099		
8,500.00	8,440.15	8,433.08	8,348.62	21.75	23.29	-65.76	-325.27	929.75	507.46	465.79	41.67	12.178		
8,600.00	8,538.95	8,509.48	8,423.16	22.04	23.58	-66.42	-332.90	946.21	521.48	479.24	42.24	12.345		
8,700.00	8,638.01	8,581.99	8,493.41	22.32	23.82	-67.90	-337.10	961.73	540.87	498.04	42.83	12.628		
8,800.00	8,737.30	8,650.00	8,557.80	22.58	24.02	-69.98	-300.66	975.96	566.09	522.66	43.43	13.035		
8,900.00	8,836.77	8,711.81	8,614.31	22.84	24.18	-72.38	-279.04	988.44	597.57	553.58	43.99	13.584		
9,000.00	8,936.41	8,767.84	8,663.31	23.07	24.30	-74.93	-254.16	999.26	635.58	591.07	44.51	14.278		
9,100.00	9,036.18	8,817.98	8,704.96	23.30	24.40	-77.48	-227.83	1,008.46	680.09	635.09	44.99	15.116		
9,200.00	9,136.06	8,862.66	8,740.05	23.51	24.48	-79.97	-201.30	1,016.21	730.78	685.35	45.42	16.088		
9,300.00	9,236.00	8,900.00	8,767.76	23.70	24.55	-82.25	-177.04	1,022.33	787.16	741.35	45.81	17.184		
9,400.00	9,335.99	8,950.00	8,802.33	23.89	24.62	-85.17	-141.76	1,029.97	848.79	802.60	46.19	18.374		
9,436.01	9,372.00	8,950.00	8,802.33	23.95	24.62	51.63	-141.76	1,029.97	871.88	825.59	46.28	18.838		
9,500.00	9,435.99	8,969.52	8,814.99	24.06	24.65	50.80	-127.17	1,032.77	914.52	868.09	46.43	19.697		
9,600.00	9,535.99	9,000.00	8,833.77	24.23	24.69	49.50	-103.53	1,036.91	984.27	937.59	46.67	21.089		
9,636.01	9,572.00	9,000.00	8,833.77	24.30	24.69	49.50	-103.53	1,036.91	1,010.27	963.54	46.74	21.617		
9,650.00	9,585.99	9,000.00	8,833.77	24.32	24.69	48.37	-103.53	1,036.91	1,020.46	973.59	46.87	21.772		
9,700.00	9,635.86	9,023.67	8,847.49	24.39	24.72	43.88	-84.49	1,039.95	1,055.69	1,008.51	47.18	22.378		
9,750.00	9,685.24	9,050.00	8,861.84	24.43	24.76	40.07	-62.64	1,043.11	1,089.76	1,042.60	47.16	23.105		

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 333H (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:	333H (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		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)						
9,800.00	9,733.76	9,050.00	8,861.84	24.45	24.76	37.45	-62.64	1,043.11	1,121.84	1,074.99	46.84	23.949		
9,850.00	9,781.05	9,066.87	8,870.51	24.44	24.78	34.88	-48.30	1,045.03	1,152.25	1,106.07	46.18	24.950		
9,900.00	9,826.75	9,082.22	8,878.04	24.42	24.81	32.74	-35.02	1,046.69	1,180.68	1,135.41	45.27	26.080		
9,950.00	9,870.51	9,100.00	8,886.32	24.37	24.84	30.91	-19.39	1,048.52	1,206.99	1,162.85	44.13	27.350		
10,000.00	9,912.00	9,100.00	8,886.32	24.30	24.84	29.51	-19.39	1,048.52	1,231.25	1,188.47	42.78	28.781		
10,050.00	9,950.90	9,130.39	8,899.36	24.23	24.88	28.14	7.89	1,051.40	1,252.74	1,211.48	41.26	30.362		
10,100.00	9,986.91	9,150.00	8,907.03	24.14	24.91	27.07	25.87	1,053.10	1,272.01	1,232.47	39.54	32.168		
10,150.00	10,019.77	9,150.00	8,907.03	24.04	24.91	26.27	25.87	1,053.10	1,288.95	1,251.13	37.82	34.084		
10,200.00	10,049.22	9,180.80	8,917.83	23.94	24.96	25.54	54.60	1,055.48	1,302.89	1,266.81	36.08	36.112		
10,250.00	10,075.04	9,200.00	8,923.80	23.83	24.99	25.01	72.81	1,056.80	1,314.40	1,279.99	34.41	38.201		
10,300.00	10,097.03	9,200.00	8,923.80	23.72	24.99	24.62	72.81	1,056.80	1,323.46	1,290.58	32.87	40.259		
10,350.00	10,115.03	9,232.50	8,932.54	23.62	25.05	24.38	104.04	1,058.73	1,329.30	1,297.68	31.62	42.041		
10,400.00	10,128.89	9,250.00	8,936.52	23.51	25.09	24.26	121.06	1,059.61	1,332.66	1,301.99	30.67	43.458		
10,450.00	10,138.51	9,267.27	8,939.95	23.42	25.12	24.27	137.97	1,060.37	1,333.26	1,303.15	30.12	44.272		
10,500.00	10,143.83	9,300.00	8,945.08	23.33	25.20	24.44	170.27	1,061.50	1,331.36	1,301.28	30.08	44.254		
10,536.00	10,144.96	9,300.00	8,945.08	23.27	25.20	24.59	170.27	1,061.50	1,327.87	1,297.62	30.25	43.900		
10,600.00	10,144.96	9,319.45	8,947.27	23.20	25.25	24.64	189.59	1,061.99	1,321.82	1,291.29	30.54	43.288		
10,700.00	10,144.96	9,350.00	8,949.42	23.30	25.33	24.70	220.06	1,062.46	1,316.41	1,285.39	31.02	42.435		
10,794.42	10,144.96	9,409.84	8,950.00	23.74	25.52	24.72	279.89	1,062.59	1,315.49	1,283.82	31.67	41.537		
10,800.00	10,144.96	9,415.42	8,950.00	23.78	25.54	24.72	285.47	1,062.59	1,315.49	1,283.77	31.72	41.473		
10,900.00	10,144.96	9,515.42	8,950.00	24.48	25.97	24.72	385.47	1,062.59	1,315.49	1,282.83	32.66	40.283		
11,000.00	10,144.96	9,615.42	8,950.00	25.22	26.53	24.72	485.47	1,062.59	1,315.49	1,281.80	33.69	39.047		
11,100.00	10,144.96	9,715.42	8,950.00	26.10	27.24	24.72	585.47	1,062.59	1,315.49	1,280.68	34.81	37.790		
11,200.00	10,144.96	9,815.42	8,950.00	27.06	28.06	24.72	685.47	1,062.59	1,315.49	1,279.48	36.01	36.530		
11,300.00	10,144.97	9,915.42	8,950.00	28.10	28.99	24.72	785.47	1,062.59	1,315.49	1,278.21	37.28	35.284		
11,400.00	10,144.97	10,015.42	8,950.00	29.22	30.02	24.72	885.47	1,062.59	1,315.49	1,276.87	38.62	34.063		
11,500.00	10,144.97	10,115.42	8,950.00	30.40	31.12	24.72	985.47	1,062.59	1,315.49	1,275.48	40.01	32.876		
11,600.00	10,144.97	10,215.42	8,950.00	31.64	32.30	24.72	1,085.47	1,062.59	1,315.49	1,274.03	41.46	31.729		
11,700.00	10,144.97	10,315.42	8,950.00	32.94	33.55	24.72	1,185.47	1,062.59	1,315.49	1,272.54	42.95	30.626		
11,800.00	10,144.97	10,415.42	8,950.00	34.28	34.84	24.72	1,285.47	1,062.59	1,315.49	1,271.00	44.49	29.568		
11,900.00	10,144.97	10,515.42	8,950.00	35.66	36.19	24.72	1,385.47	1,062.59	1,315.49	1,269.43	46.06	28.558		
12,000.00	10,144.97	10,615.42	8,950.00	37.08	37.58	24.72	1,485.47	1,062.59	1,315.49	1,267.82	47.67	27.595		
12,100.00	10,144.97	10,715.42	8,950.00	38.53	39.00	24.72	1,585.47	1,062.59	1,315.49	1,266.18	49.31	26.678		
12,200.00	10,144.97	10,815.42	8,950.00	40.01	40.46	24.72	1,685.47	1,062.59	1,315.49	1,264.51	50.98	25.805		
12,300.00	10,144.98	10,915.42	8,950.00	41.52	41.95	24.72	1,785.47	1,062.59	1,315.49	1,262.82	52.67	24.976		
12,400.00	10,144.98	11,015.42	8,950.00	43.05	43.47	24.72	1,885.47	1,062.59	1,315.49	1,261.10	54.38	24.188		
12,500.00	10,144.98	11,115.42	8,950.00	44.61	45.00	24.72	1,985.47	1,062.59	1,315.49	1,259.37	56.12	23.440		
12,600.00	10,144.98	11,215.42	8,950.00	46.18	46.56	24.72	2,085.47	1,062.59	1,315.49	1,257.61	57.88	22.730		
12,700.00	10,144.98	11,315.42	8,950.00	47.77	48.14	24.72	2,185.47	1,062.59	1,315.49	1,255.84	59.65	22.054		
12,800.00	10,144.98	11,415.42	8,950.00	49.38	49.74	24.72	2,285.47	1,062.59	1,315.49	1,254.05	61.44	21.412		
12,900.00	10,144.98	11,515.42	8,950.00	51.00	51.35	24.72	2,385.47	1,062.59	1,315.49	1,252.25	63.24	20.802		
13,000.00	10,144.98	11,615.42	8,950.00	52.64	52.97	24.72	2,485.47	1,062.59	1,315.49	1,250.44	65.05	20.222		
13,100.00	10,144.98	11,715.42	8,950.00	54.29	54.61	24.72	2,585.47	1,062.59	1,315.49	1,248.61	66.88	19.669		
13,200.00	10,144.98	11,815.42	8,950.00	55.94	56.26	24.72	2,685.47	1,062.59	1,315.49	1,246.77	68.72	19.143		
13,300.00	10,144.99	11,915.42	8,950.00	57.61	57.92	24.72	2,785.47	1,062.59	1,315.49	1,244.92	70.57	18.641		
13,400.00	10,144.99	12,015.42	8,950.00	59.29	59.59	24.72	2,885.47	1,062.59	1,315.49	1,243.06	72.43	18.162		
13,500.00	10,144.99	12,115.42	8,950.00	60.98	61.27	24.72	2,985.47	1,062.59	1,315.49	1,241.19	74.30	17.706		
13,600.00	10,144.99	12,215.42	8,950.00	62.67	62.95	24.72	3,085.47	1,062.59	1,315.49	1,239.32	76.17	17.270		
13,700.00	10,144.99	12,315.42	8,950.00	64.37	64.65	24.72	3,185.47	1,062.59	1,315.49	1,237.43	78.06	16.853		
13,800.00	10,144.99	12,415.42	8,950.00	66.08	66.35	24.72	3,285.47	1,062.59	1,315.49	1,235.54	79.95	16.455		
13,900.00	10,144.99	12,515.42	8,950.00	67.79	68.06	24.71	3,385.47	1,062.59	1,315.49	1,233.65	81.84	16.073		
14,000.00	10,144.99	12,615.42	8,950.00	69.51	69.77	24.71	3,485.47	1,062.59	1,315.49	1,231.74	83.75	15.708		

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 333H (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:	333H (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			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,100.00	10,144.99	12,715.42	8,950.00	71.24	71.49	24.71	3,585.47	1,062.59	1,315.49	1,229.83	85.66	15.358	
14,200.00	10,144.99	12,815.42	8,950.00	72.97	73.22	24.71	3,685.47	1,062.59	1,315.49	1,227.92	87.57	15.022	
14,300.00	10,144.99	12,915.42	8,950.00	74.70	74.94	24.71	3,785.47	1,062.59	1,315.49	1,226.00	89.49	14.700	
14,400.00	10,145.00	13,015.42	8,950.00	76.44	76.68	24.71	3,885.47	1,062.59	1,315.49	1,224.08	91.41	14.390	
14,500.00	10,145.00	13,115.42	8,950.00	78.18	78.42	24.71	3,985.47	1,062.59	1,315.49	1,222.15	93.34	14.093	
14,600.00	10,145.00	13,215.42	8,950.00	79.93	80.16	24.71	4,085.47	1,062.59	1,315.49	1,220.22	95.28	13.807	
14,700.00	10,145.00	13,315.42	8,950.00	81.68	81.91	24.71	4,185.47	1,062.59	1,315.49	1,218.28	97.21	13.532	
14,800.00	10,145.00	13,415.42	8,950.00	83.43	83.65	24.71	4,285.47	1,062.59	1,315.49	1,216.34	99.15	13.267	
14,857.28	10,145.00	13,472.69	8,950.00	84.44	84.66	24.71	4,342.74	1,062.59	1,315.49	1,215.23	100.26	13.120	



LEAM Drilling Systems LLC
Anticollision Report



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Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	333H (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 - 327H (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 Tooface (")	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	-0.16	125.00	-0.36	125.00					
100.00	100.00	100.00	100.00	0.08	0.08	-0.16	125.00	-0.36	125.00	124.84	0.16	794.480		
200.00	200.00	200.00	200.00	0.30	0.30	-0.16	125.00	-0.36	125.00	124.39	0.61	205.976		
300.00	300.00	300.00	300.00	0.53	0.53	-0.16	125.00	-0.36	125.00	123.94	1.06	118.327		
400.00	400.00	400.00	400.00	0.75	0.75	-0.16	125.00	-0.36	125.00	123.49	1.51	83.005		
500.00	500.00	500.00	500.00	0.98	0.98	-0.16	125.00	-0.36	125.00	123.05	1.96	63.924		
600.00	600.00	600.00	600.00	1.20	1.20	-0.16	125.00	-0.36	125.00	122.60	2.40	51.975		
700.00	700.00	700.00	700.00	1.43	1.43	-0.16	125.00	-0.36	125.00	122.15	2.85	43.790		
800.00	800.00	800.00	800.00	1.65	1.65	-0.16	125.00	-0.36	125.00	121.70	3.30	37.832		
900.00	900.00	900.00	900.00	1.88	1.88	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	125.00	-0.36	125.00	105.96	19.04	6.566		
4,400.00	4,400.00	4,402.18	4,402.18	9.72	9.72	-137.46	124.11	-0.17	124.77	105.33	19.44	6.420		
4,500.00	4,499.96	4,504.35	4,504.31	9.89	9.89	-138.05	121.43	0.38	124.08	104.30	19.78	6.273		
4,600.00	4,599.86	4,606.49	4,606.34	10.07	10.07	-139.05	116.97	1.29	122.96	102.84	20.12	6.110		
4,700.00	4,699.68	4,708.58	4,708.24	10.26	10.24	-140.49	110.74	2.58	121.46	100.99	20.47	5.934		
4,800.00	4,799.37	4,810.62	4,809.95	10.44	10.42	-142.38	102.73	4.22	119.64	98.83	20.81	5.748		
4,900.00	4,898.90	4,912.59	4,911.42	10.63	10.61	-144.76	92.95	6.23	117.60	96.44	21.16	5.558		
5,000.00	4,998.26	5,014.47	5,012.61	10.83	10.80	-147.67	81.42	8.60	115.45	93.95	21.50	5.370		
5,100.00	5,097.40	5,114.55	5,111.89	11.03	10.99	-151.07	68.97	11.16	113.97	92.14	21.83	5.221		

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 333H (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:	333H (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 - 327H (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	
5,126.76	5,123.90	5,141.24	5,138.36	11.09	11.04	-152.06	65.65	11.84	113.89	91.98	21.92	5.197 CC, ES	
5,200.00	5,196.30	5,214.26	5,210.79	11.25	11.19	-154.90	56.55	13.71	114.45	92.30	22.15	5.166 SF	
5,300.00	5,294.93	5,313.88	5,309.60	11.47	11.40	-158.98	44.14	16.27	117.07	94.60	22.47	5.210	
5,364.85	5,358.73	5,378.42	5,373.62	11.63	11.53	-161.66	36.09	17.92	119.96	97.29	22.67	5.291	
5,400.00	5,393.28	5,413.39	5,408.30	11.71	11.61	-163.09	31.73	18.81	121.83	99.02	22.80	5.342	
5,500.00	5,491.55	5,512.88	5,506.98	11.96	11.82	-166.92	19.34	21.36	127.52	104.34	23.18	5.501	
5,600.00	5,589.83	5,612.37	5,605.66	12.21	12.04	-170.41	6.94	23.91	133.74	110.18	23.57	5.675	
5,700.00	5,688.11	5,711.86	5,704.34	12.48	12.27	-173.58	-5.46	26.46	140.41	116.45	23.96	5.860	
5,800.00	5,786.39	5,811.35	5,803.02	12.75	12.50	-176.46	-17.86	29.01	147.47	123.11	24.37	6.053	
5,900.00	5,884.66	5,910.83	5,901.70	13.03	12.73	-179.06	-30.25	31.56	154.87	130.09	24.78	6.250	
6,000.00	5,982.94	6,010.32	6,000.38	13.32	12.97	-178.57	-42.65	34.11	162.56	137.36	25.20	6.450	
6,100.00	6,081.22	6,109.81	6,099.06	13.61	13.21	-176.42	-55.05	36.65	170.50	144.87	25.64	6.651	
6,200.00	6,179.50	6,208.30	6,197.74	13.91	13.45	-174.46	-67.45	39.20	178.67	152.59	26.08	6.851	
6,300.00	6,277.78	6,308.79	6,296.42	14.21	13.70	-172.67	-79.84	41.75	187.02	160.48	26.53	7.049	
6,400.00	6,376.05	6,408.28	6,395.10	14.52	13.95	-171.04	-92.24	44.30	195.53	168.54	26.99	7.244	
6,500.00	6,474.33	6,507.76	6,493.78	14.84	14.21	-169.54	-104.64	46.85	204.19	176.73	27.46	7.436	
6,600.00	6,572.61	6,607.25	6,592.46	15.16	14.46	-168.17	-117.04	49.40	212.98	185.05	27.93	7.624	
6,700.00	6,670.89	6,706.74	6,691.14	15.48	14.72	-166.91	-129.43	51.94	221.88	193.46	28.42	7.808	
6,800.00	6,769.17	6,806.23	6,789.82	15.81	14.99	-165.74	-141.83	54.49	230.88	201.97	28.91	7.987	
6,900.00	6,867.44	6,905.72	6,888.50	16.14	15.25	-164.66	-154.23	57.04	239.97	210.56	29.40	8.161	
7,000.00	6,965.72	7,005.21	6,987.18	16.48	15.52	-163.66	-166.63	59.59	249.13	219.22	29.91	8.330	
7,100.00	7,064.00	7,104.69	7,085.86	16.82	15.78	-162.73	-179.02	62.14	258.37	227.95	30.42	8.494	
7,200.00	7,162.28	7,202.49	7,182.90	17.16	16.05	-161.93	-190.95	64.59	267.84	236.92	30.92	8.662	
7,300.00	7,260.56	7,300.00	7,279.82	17.50	16.30	-161.42	-201.38	66.73	278.36	246.94	31.42	8.859	
7,400.00	7,358.83	7,395.15	7,374.57	17.85	16.53	-161.20	-210.00	68.51	289.96	258.06	31.90	9.091	
7,500.00	7,457.11	7,491.15	7,470.28	18.20	16.76	-161.22	-217.13	69.97	302.64	270.28	32.36	9.352	
7,600.00	7,555.39	7,586.85	7,565.81	18.55	16.98	-161.47	-222.68	71.11	316.39	283.58	32.81	9.643	
7,700.00	7,653.67	7,682.20	7,661.08	18.91	17.20	-161.91	-226.65	71.93	331.23	297.98	33.25	9.962	
7,800.00	7,751.95	7,777.15	7,756.00	19.27	17.40	-162.52	-229.06	72.42	347.17	313.50	33.67	10.311	
7,900.00	7,850.22	7,871.66	7,850.50	19.62	17.59	-163.25	-229.93	72.60	364.24	330.17	34.07	10.690	
8,000.00	7,948.50	7,969.66	7,948.50	19.99	17.78	-164.04	-229.93	72.60	381.99	347.51	34.48	11.078	
8,100.00	8,046.78	8,067.94	8,046.78	20.35	17.98	-164.77	-229.93	72.60	399.81	364.92	34.90	11.457	
8,200.00	8,145.06	8,161.04	8,119.76	20.71	18.11	-165.68	-226.48	72.60	420.33	385.09	35.24	11.928	
8,300.00	8,243.34	8,260.00	8,177.93	21.08	18.18	-167.11	-217.02	72.60	447.65	412.14	35.51	12.606	
8,371.16	8,313.27	8,250.00	8,226.28	21.34	18.22	-168.73	-204.35	72.60	471.21	435.53	35.68	13.207	
8,400.00	8,341.63	8,268.27	8,243.64	21.44	18.22	-169.42	-198.68	72.60	481.75	445.99	35.76	13.473	
8,500.00	8,440.15	8,323.70	8,295.10	21.75	18.24	-171.70	-178.12	72.60	521.87	485.86	36.02	14.489	
8,600.00	8,538.95	8,373.72	8,339.63	22.04	18.23	-173.93	-155.37	72.60	567.50	531.22	36.27	15.645	
8,700.00	8,638.01	8,418.61	8,377.77	22.32	18.23	-176.00	-131.72	72.60	618.35	581.82	36.53	16.927	
8,800.00	8,737.30	8,450.00	8,403.28	22.58	18.22	-177.47	-113.45	72.60	674.12	637.34	36.78	18.327	
8,900.00	8,836.77	8,500.00	8,441.75	22.84	18.20	-179.77	-81.53	72.60	734.02	696.97	37.04	19.816	
9,000.00	8,936.41	8,527.20	8,461.46	23.07	18.20	-179.01	-62.79	72.60	797.73	760.44	37.29	21.392	
9,100.00	9,036.18	8,550.00	8,477.29	23.30	18.19	-178.02	-46.38	72.60	864.82	827.29	37.53	23.045	
9,200.00	9,136.06	8,582.70	8,498.82	23.51	18.19	-176.65	-21.77	72.60	934.62	896.85	37.77	24.746	
9,300.00	9,236.00	8,600.00	8,509.63	23.70	18.19	-175.99	-8.27	72.60	1,006.96	968.97	37.98	26.509	
9,400.00	9,335.99	8,628.50	8,526.54	23.89	18.20	-174.91	14.67	72.60	1,081.25	1,043.04	38.21	28.299	
9,436.01	9,372.00	8,650.00	8,538.52	23.95	18.21	-36.99	32.52	72.60	1,108.71	1,070.42	38.30	28.949	
9,500.00	9,435.99	8,650.00	8,538.52	24.06	18.21	-36.99	32.52	72.60	1,157.59	1,119.16	38.43	30.125	
9,600.00	9,535.99	8,650.00	8,538.52	24.23	18.21	-36.99	32.52	72.60	1,236.73	1,198.10	38.63	32.012	
9,636.01	9,572.00	8,672.57	8,550.38	24.30	18.22	-36.10	51.72	72.60	1,265.34	1,226.59	38.74	32.659	
9,650.00	9,585.99	8,674.92	8,551.57	24.32	18.23	-34.92	53.75	72.60	1,276.57	1,237.81	38.76	32.936	
9,700.00	9,635.86	8,700.00	8,563.75	24.39	18.25	-30.76	75.67	72.60	1,315.97	1,277.23	38.74	33.969	

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 333H (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:	333H (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 - 327H (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)						
9,750.00	9,885.24	8,700.00	8,563.75	24.43	18.25	-28.06	75.67	72.60	1,352.96	1,314.47	35.145			
9,800.00	9,733.76	8,700.00	8,563.75	24.45	18.25	-25.81	75.67	72.60	1,388.18	1,350.13	36.482			
9,850.00	9,781.05	8,700.00	8,563.75	24.44	18.25	-23.93	75.67	72.60	1,421.50	1,384.09	37.40			
9,900.00	9,826.75	8,725.63	8,575.20	24.42	18.28	-22.07	98.60	72.60	1,452.02	1,415.43	36.59			
9,950.00	9,870.51	8,750.00	8,585.13	24.37	18.31	-20.57	120.85	72.60	1,480.53	1,444.94	35.59			
10,000.00	9,912.00	8,750.00	8,585.13	24.30	18.31	-19.55	120.85	72.60	1,506.09	1,471.69	34.40			
10,050.00	9,950.90	8,750.00	8,585.13	24.23	18.31	-18.69	120.85	72.60	1,529.33	1,496.23	33.10			
10,100.00	9,986.91	8,774.43	8,594.12	24.14	18.36	-17.86	143.57	72.60	1,549.49	1,517.76	31.72			
10,150.00	10,019.77	8,800.00	8,602.48	24.04	18.41	-17.19	167.73	72.60	1,567.15	1,536.84	30.31			
10,200.00	10,049.22	8,800.00	8,602.48	23.94	18.41	-16.75	167.73	72.60	1,581.53	1,552.67	28.86			
10,250.00	10,075.04	8,800.00	8,602.48	23.83	18.41	-16.41	167.73	72.60	1,593.36	1,565.88	27.48			
10,300.00	10,097.03	8,827.03	8,610.14	23.72	18.49	-16.11	193.64	72.60	1,601.75	1,575.48	26.27			
10,350.00	10,115.03	8,850.00	8,615.68	23.62	18.55	-15.93	215.94	72.60	1,607.43	1,582.18	25.25			
10,400.00	10,128.89	8,850.00	8,615.68	23.51	18.55	-15.86	215.94	72.60	1,609.87	1,585.42	24.45			
10,450.00	10,138.51	8,850.00	8,615.68	23.42	18.55	-15.87	215.94	72.60	1,609.66	1,585.70	23.97			
10,500.00	10,143.83	8,880.94	8,621.73	23.33	18.66	-15.99	246.27	72.60	1,605.71	1,581.79	23.92			
10,536.00	10,144.96	8,900.00	8,624.64	23.27	18.73	-16.14	265.11	72.60	1,601.33	1,577.22	24.11			
10,600.00	10,144.96	8,900.00	8,624.64	23.20	18.73	-16.14	265.11	72.60	1,592.85	1,568.82	24.23			
10,700.00	10,144.96	8,950.00	8,629.27	23.30	18.94	-16.18	314.88	72.60	1,583.54	1,558.93	24.61			
10,800.00	10,144.96	8,962.37	8,629.74	23.78	19.00	-16.19	327.24	72.60	1,578.34	1,553.42	24.93			
10,872.89	10,144.96	8,993.50	8,629.96	24.25	19.15	-16.19	358.37	72.60	1,577.58	1,552.32	25.26			
10,900.00	10,144.96	9,020.61	8,629.96	24.44	19.31	-16.19	385.48	72.60	1,577.58	1,552.15	25.43			
11,000.00	10,144.96	9,120.61	8,629.96	25.22	19.95	-16.19	485.48	72.60	1,577.58	1,551.43	26.15			
11,100.00	10,144.96	9,220.61	8,629.96	26.10	20.72	-16.19	585.48	72.60	1,577.58	1,550.61	26.97			
11,200.00	10,144.96	9,320.61	8,629.96	27.06	21.63	-16.19	685.48	72.60	1,577.58	1,549.71	27.87			
11,300.00	10,144.97	9,420.61	8,629.96	28.10	22.64	-16.19	785.48	72.60	1,577.58	1,548.74	28.85			
11,400.00	10,144.97	9,520.61	8,629.96	29.22	23.75	-16.19	885.48	72.60	1,577.58	1,547.69	29.90			
11,500.00	10,144.97	9,620.61	8,629.96	30.40	24.95	-16.19	985.48	72.60	1,577.58	1,546.58	31.01			
11,600.00	10,144.97	9,720.61	8,629.97	31.64	26.22	-16.19	1,085.48	72.60	1,577.58	1,545.41	32.18			
11,700.00	10,144.97	9,820.61	8,629.97	32.94	27.55	-16.19	1,185.48	72.60	1,577.58	1,544.19	33.39			
11,800.00	10,144.97	9,920.61	8,629.97	34.28	28.94	-16.19	1,285.48	72.60	1,577.58	1,542.93	34.66			
11,900.00	10,144.97	10,020.61	8,629.97	35.66	30.37	-16.19	1,385.48	72.60	1,577.59	1,541.63	35.96			
12,000.00	10,144.97	10,120.61	8,629.97	37.08	31.84	-16.19	1,485.48	72.60	1,577.59	1,540.29	37.30			
12,100.00	10,144.97	10,220.61	8,629.97	38.53	33.35	-16.19	1,585.48	72.60	1,577.59	1,538.92	38.67			
12,200.00	10,144.97	10,320.61	8,629.97	40.01	34.89	-16.19	1,685.48	72.60	1,577.59	1,537.52	40.07			
12,300.00	10,144.98	10,420.61	8,629.97	41.52	36.45	-16.19	1,785.48	72.60	1,577.59	1,536.10	41.49			
12,400.00	10,144.98	10,520.61	8,629.97	43.05	38.04	-16.19	1,885.48	72.60	1,577.59	1,534.65	42.94			
12,500.00	10,144.98	10,620.61	8,629.98	44.61	39.65	-16.19	1,985.48	72.60	1,577.59	1,533.18	44.40			
12,600.00	10,144.98	10,720.61	8,629.98	46.18	41.28	-16.19	2,085.48	72.60	1,577.59	1,531.70	45.89			
12,700.00	10,144.98	10,820.61	8,629.98	47.77	42.92	-16.19	2,185.48	72.60	1,577.59	1,530.19	47.39			
12,800.00	10,144.98	10,920.61	8,629.98	49.38	44.58	-16.19	2,285.48	72.60	1,577.59	1,528.68	48.91			
12,900.00	10,144.98	11,020.61	8,629.98	51.00	46.25	-16.19	2,385.48	72.60	1,577.59	1,527.14	50.45			
13,000.00	10,144.98	11,120.61	8,629.98	52.64	47.93	-16.19	2,485.48	72.60	1,577.59	1,525.60	51.99			
13,100.00	10,144.98	11,220.61	8,629.98	54.29	49.63	-16.19	2,585.48	72.60	1,577.59	1,524.04	53.55			
13,200.00	10,144.98	11,320.61	8,629.98	55.94	51.33	-16.19	2,685.48	72.60	1,577.59	1,522.47	55.12			
13,300.00	10,144.99	11,420.61	8,629.98	57.61	53.04	-16.19	2,785.48	72.60	1,577.59	1,520.90	56.70			
13,400.00	10,144.99	11,520.61	8,629.98	59.29	54.75	-16.19	2,885.48	72.60	1,577.59	1,519.31	58.28			
13,500.00	10,144.99	11,620.61	8,629.99	60.98	56.48	-16.19	2,985.48	72.60	1,577.59	1,517.72	59.88			
13,600.00	10,144.99	11,720.61	8,629.99	62.67	58.21	-16.19	3,085.48	72.60	1,577.59	1,516.11	61.48			
13,700.00	10,144.99	11,820.61	8,629.99	64.37	59.95	-16.19	3,185.48	72.60	1,577.59	1,514.50	63.09			
13,800.00	10,144.99	11,920.61	8,629.99	66.08	61.69	-16.19	3,285.48	72.60	1,577.59	1,512.89	64.71			
13,900.00	10,144.99	12,020.61	8,629.99	67.79	63.43	-16.19	3,385.48	72.60	1,577.59	1,511.27	66.33			

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 333H (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:	333H (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 - 327H (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)						
14,000.00	10,144.99	12,120.61	8,629.99	69.51	65.18	-16.19	3,485.48	72.60	1,577.60	1,509.64	67.96	23.214		
14,100.00	10,144.99	12,220.61	8,629.99	71.24	66.94	-16.19	3,585.48	72.60	1,577.60	1,508.00	69.59	22.670		
14,200.00	10,144.99	12,320.61	8,629.99	72.97	68.70	-16.19	3,685.48	72.60	1,577.60	1,506.37	71.23	22.148		
14,300.00	10,144.99	12,420.61	8,629.99	74.70	70.46	-16.19	3,785.48	72.60	1,577.60	1,504.72	72.87	21.649		
14,400.00	10,145.00	12,520.61	8,630.00	76.44	72.23	-16.19	3,885.48	72.60	1,577.60	1,503.08	74.52	21.170		
14,500.00	10,145.00	12,620.61	8,630.00	78.18	73.99	-16.19	3,985.48	72.60	1,577.60	1,501.43	76.17	20.711		
14,600.00	10,145.00	12,720.61	8,630.00	79.93	75.77	-16.19	4,085.48	72.60	1,577.60	1,499.77	77.83	20.271		
14,700.00	10,145.00	12,820.61	8,630.00	81.68	77.54	-16.19	4,185.48	72.60	1,577.60	1,498.11	79.48	19.848		
14,800.00	10,145.00	12,920.61	8,630.00	83.43	79.32	-16.19	4,285.48	72.60	1,577.60	1,496.45	81.15	19.441		
14,831.60	10,145.00	12,952.21	8,630.00	83.99	79.88	-16.19	4,317.08	72.60	1,577.60	1,495.93	81.67	19.316		
14,857.28	10,145.00	12,975.20	8,630.00	84.44	80.29	-16.19	4,340.07	72.60	1,577.60	1,495.52	82.08	19.221		



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 333H (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:	333H (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			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	-0.16	75.00	-0.21	75.00				
100.00	100.00	100.00	100.00	0.08	0.08	-0.16	75.00	-0.21	75.00	74.84	0.16	476.688	
200.00	200.00	200.00	200.00	0.30	0.30	-0.16	75.00	-0.21	75.00	74.39	0.61	123.586	
300.00	300.00	300.00	300.00	0.53	0.53	-0.16	75.00	-0.21	75.00	73.94	1.06	70.996	
400.00	400.00	400.00	400.00	0.75	0.75	-0.16	75.00	-0.21	75.00	73.49	1.51	49.803	
500.00	500.00	500.00	500.00	0.98	0.98	-0.16	75.00	-0.21	75.00	73.04	1.96	38.354	
600.00	600.00	600.00	600.00	1.20	1.20	-0.16	75.00	-0.21	75.00	72.60	2.40	31.185	
700.00	700.00	700.00	700.00	1.43	1.43	-0.16	75.00	-0.21	75.00	72.15	2.85	26.274	
800.00	800.00	800.00	800.00	1.65	1.65	-0.16	75.00	-0.21	75.00	71.70	3.30	22.699	
900.00	900.00	900.00	900.00	1.88	1.88	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	75.00	-0.21	75.00	63.60	11.40	6.582	
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	75.00	-0.21	75.00	55.96	19.04	3.940 CC	
4,400.00	4,400.00	4,400.42	4,400.41	9.72	9.73	-137.08	74.72	0.62	75.36	55.92	19.44	3.876 ES	
4,500.00	4,499.96	4,500.82	4,500.78	9.89	9.92	-136.53	73.89	3.13	76.46	56.65	19.80	3.861 SF	
4,600.00	4,599.86	4,601.20	4,601.06	10.07	10.11	-135.66	72.51	7.30	78.29	58.13	20.17	3.882	
4,700.00	4,699.68	4,701.55	4,701.22	10.26	10.30	-134.51	70.57	13.14	80.89	60.36	20.54	3.939	
4,800.00	4,799.37	4,801.85	4,801.21	10.44	10.50	-133.13	68.09	20.63	84.28	63.37	20.91	4.031	
4,900.00	4,898.90	4,902.09	4,900.98	10.63	10.71	-131.59	65.05	29.78	88.47	67.18	21.29	4.156	
5,000.00	4,998.26	5,002.27	5,000.51	10.83	10.92	-129.94	61.47	40.58	93.49	71.81	21.68	4.312	
5,100.00	5,097.40	5,102.36	5,099.75	11.03	11.14	-128.25	57.34	53.02	99.36	77.28	22.08	4.499	

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 333H (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:	333H (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			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,200.00	5,196.30	5,202.37	5,198.65	11.25	11.36	-126.56	52.68	67.09	106.10	83.60	22.51	4.714		
5,300.00	5,294.93	5,302.28	5,297.17	11.47	11.60	-124.91	47.47	82.78	113.72	90.77	22.95	4.955		
5,364.85	5,358.73	5,367.01	5,360.85	11.63	11.76	-123.87	43.81	93.82	119.13	95.88	23.25	5.124		
5,400.00	5,393.28	5,402.07	5,395.29	11.71	11.85	-123.30	41.73	100.08	122.15	98.73	23.42	5.215		
5,500.00	5,491.55	5,501.72	5,492.95	11.96	12.11	-121.37	35.51	118.85	130.77	106.83	23.93	5.464		
5,600.00	5,589.83	5,601.24	5,590.43	12.21	12.39	-119.55	29.19	137.91	139.50	115.04	24.47	5.702		
5,700.00	5,688.11	5,700.77	5,687.91	12.48	12.67	-117.94	22.86	156.97	148.36	123.35	25.01	5.931		
5,800.00	5,786.39	5,800.29	5,785.38	12.75	12.96	-116.51	16.54	176.03	157.33	131.75	25.58	6.151		
5,900.00	5,884.66	5,899.82	5,882.86	13.03	13.26	-115.24	10.22	195.09	166.37	140.22	26.15	6.362		
6,000.00	5,982.94	5,999.34	5,980.34	13.32	13.57	-114.10	3.90	214.15	175.50	148.75	26.74	6.562		
6,100.00	6,081.22	6,098.87	6,077.82	13.61	13.88	-113.08	-2.42	233.21	184.68	157.34	27.34	6.754		
6,200.00	6,179.50	6,198.39	6,175.30	13.91	14.20	-112.15	-8.75	252.27	193.92	165.96	27.96	6.936		
6,300.00	6,277.78	6,297.92	6,272.78	14.21	14.53	-111.30	-15.07	271.33	203.20	174.62	28.58	7.109		
6,400.00	6,376.05	6,397.44	6,370.26	14.52	14.86	-110.53	-21.39	290.39	212.52	183.31	29.22	7.274		
6,500.00	6,474.33	6,496.97	6,467.73	14.84	15.20	-109.82	-27.71	309.45	221.88	192.02	29.86	7.431		
6,600.00	6,572.61	6,596.50	6,565.21	15.16	15.54	-109.18	-34.03	328.51	231.27	200.76	30.51	7.580		
6,700.00	6,670.89	6,696.02	6,662.69	15.48	15.88	-108.58	-40.36	347.57	240.69	209.51	31.17	7.721		
6,800.00	6,769.17	6,795.55	6,760.17	15.81	16.24	-108.02	-46.68	366.63	250.13	218.29	31.84	7.856		
6,900.00	6,867.44	6,895.07	6,857.65	16.14	16.59	-107.51	-53.00	385.69	259.59	227.07	32.51	7.984		
7,000.00	6,965.72	6,994.60	6,955.13	16.48	16.95	-107.03	-59.32	404.75	269.07	235.87	33.20	8.105		
7,100.00	7,064.00	7,094.12	7,052.61	16.82	17.31	-106.59	-65.64	423.81	278.57	244.68	33.89	8.221		
7,200.00	7,162.28	7,193.65	7,150.08	17.16	17.68	-106.17	-71.97	442.87	288.08	253.50	34.58	8.331		
7,300.00	7,260.56	7,293.17	7,247.56	17.50	18.04	-105.79	-78.29	461.93	297.61	262.33	35.28	8.436		
7,400.00	7,358.83	7,392.70	7,345.04	17.85	18.42	-105.42	-84.61	480.99	307.15	271.16	35.98	8.535		
7,500.00	7,457.11	7,492.22	7,442.52	18.20	18.79	-105.08	-90.93	500.05	316.70	280.00	36.70	8.631		
7,600.00	7,555.39	7,591.75	7,540.00	18.55	19.17	-104.76	-97.25	519.11	326.26	288.85	37.41	8.721		
7,700.00	7,653.67	7,691.28	7,637.48	18.91	19.55	-104.45	-103.58	538.17	335.83	297.70	38.13	8.808		
7,800.00	7,751.95	7,790.80	7,734.96	19.27	19.93	-104.17	-109.90	557.23	345.41	306.56	38.85	8.890		
7,900.00	7,850.22	7,890.33	7,832.43	19.62	20.31	-103.89	-116.22	576.29	355.00	315.42	39.58	8.969		
8,000.00	7,948.50	7,989.85	7,929.91	19.99	20.70	-103.64	-122.54	595.35	364.60	324.29	40.31	9.045		
8,100.00	8,046.78	8,089.38	8,027.39	20.35	21.08	-103.39	-128.86	614.41	374.20	333.16	41.05	9.117		
8,200.00	8,145.06	8,190.00	8,086.85	20.71	21.30	-103.17	-135.18	633.47	383.80	342.00	41.79	9.188		
8,300.00	8,243.34	8,291.80	8,181.12	21.08	21.50	-102.96	-141.50	652.53	393.40	350.80	42.53	9.258		
8,371.16	8,313.27	8,363.00	8,184.15	21.34	21.60	-102.75	-147.82	671.59	403.00	359.60	43.27	9.328		
8,400.00	8,341.63	8,393.35	8,206.47	21.44	21.67	-102.54	-154.14	690.65	412.60	368.40	44.01	9.398		
8,500.00	8,440.15	8,496.80	8,256.63	21.75	21.80	-102.33	-160.46	709.71	422.20	377.20	44.75	9.468		
8,600.00	8,538.95	8,597.97	8,301.33	22.04	21.92	-102.12	-166.78	728.77	431.80	386.00	45.49	9.538		
8,700.00	8,638.01	8,640.87	8,340.67	22.32	22.01	-101.91	-173.10	747.83	441.40	394.80	46.23	9.608		
8,800.00	8,737.30	8,745.00	8,365.30	22.58	22.07	-101.70	-179.42	766.89	451.00	403.60	46.97	9.678		
8,900.00	8,836.77	8,850.00	8,405.77	22.84	22.16	-101.49	-185.74	785.95	460.60	412.40	47.71	9.748		
9,000.00	8,936.41	8,952.45	8,430.67	23.07	22.21	-101.28	-192.06	805.01	470.20	421.20	48.45	9.818		
9,100.00	9,036.18	9,055.00	8,443.66	23.30	22.24	-101.07	-198.38	824.07	479.80	430.00	49.19	9.888		
9,200.00	9,136.06	9,060.00	8,478.69	23.51	22.32	-100.86	-204.70	843.13	489.40	438.80	49.93	9.958		
9,300.00	9,236.00	9,161.40	8,489.51	23.70	22.34	-100.65	-211.02	862.19	499.00	447.60	50.67	10.028		
9,400.00	9,335.99	9,160.00	8,510.59	23.89	22.40	-100.44	-217.34	881.25	508.60	456.40	51.41	10.098		
9,436.01	9,372.00	9,160.00	8,510.59	23.95	22.40	-100.23	-223.66	900.31	518.20	465.20	52.15	10.168		
9,500.00	9,435.99	9,160.00	8,510.59	24.06	22.40	-100.02	-229.98	919.37	527.80	474.00	52.89	10.238		
9,600.00	9,535.99	9,160.00	8,528.51	24.23	22.44	-99.81	-236.30	938.43	537.40	482.80	53.63	10.308		
9,636.01	9,572.00	9,160.00	8,539.12	24.30	22.48	-99.60	-242.62	957.49	547.00	491.60	54.37	10.378		
9,650.00	9,585.99	9,160.00	8,539.12	24.32	22.48	-99.39	-248.94	976.55	556.60	500.40	55.11	10.448		
9,700.00	9,635.86	9,160.00	8,539.12	24.39	22.48	-99.18	-255.26	995.61	566.20	509.20	55.85	10.518		
9,750.00	9,685.24	9,160.00	8,539.12	24.43	22.48	-98.97	-261.58	1,014.67	575.80	518.00	56.59	10.588		

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 333H (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:	333H (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)						
9,800.00	9,733.76	8,720.39	8,549.74	24.45	22.51	11.74	147.22	716.70	1,378.31	1,333.95	44.36	31.069		
9,850.00	9,781.05	8,731.70	8,555.37	24.44	22.53	10.86	156.97	717.81	1,411.36	1,367.95	43.41	32.514		
9,900.00	9,826.75	8,750.00	8,564.07	24.42	22.56	10.15	172.97	719.52	1,441.89	1,399.68	42.20	34.164		
9,950.00	9,870.51	8,750.00	8,564.07	24.37	22.56	9.57	172.97	719.52	1,469.67	1,428.88	40.80	36.026		
10,000.00	9,912.00	8,768.13	8,572.19	24.30	22.59	9.11	189.10	721.12	1,494.65	1,455.44	39.21	38.116		
10,050.00	9,950.90	8,780.93	8,577.63	24.23	22.61	8.73	200.84	722.19	1,516.79	1,479.32	37.47	40.480		
10,100.00	9,986.91	8,800.00	8,585.25	24.14	22.65	8.44	218.06	723.68	1,536.03	1,500.42	35.61	43.130		
10,150.00	10,019.77	8,800.00	8,585.25	24.04	22.65	8.19	218.06	723.68	1,552.23	1,518.57	33.67	46.105		
10,200.00	10,049.22	8,820.71	8,592.87	23.94	22.70	8.03	237.25	725.18	1,565.29	1,533.55	31.73	49.324		
10,250.00	10,075.04	8,850.00	8,602.48	23.83	22.76	7.93	264.85	727.08	1,575.58	1,545.71	29.87	52.754		
10,300.00	10,097.03	8,850.00	8,602.48	23.72	22.76	7.84	264.85	727.08	1,582.16	1,554.08	28.08	56.335		
10,350.00	10,115.03	8,850.00	8,602.48	23.62	22.76	7.78	264.85	727.08	1,586.01	1,559.49	26.52	59.811		
10,400.00	10,128.89	8,875.47	8,609.70	23.51	22.82	7.83	289.23	728.50	1,586.38	1,561.04	25.33	62.623		
10,450.00	10,138.51	8,900.00	8,615.65	23.42	22.89	7.91	313.00	729.68	1,583.85	1,559.28	24.57	64.461		
10,500.00	10,143.83	8,900.00	8,615.65	23.33	22.89	8.00	313.00	729.68	1,577.90	1,553.67	24.23	65.123		
10,536.00	10,144.96	8,900.00	8,615.65	23.27	22.89	8.08	313.00	729.68	1,571.92	1,547.61	24.31	64.662		
10,600.00	10,144.96	8,930.28	8,621.60	23.20	22.98	8.16	342.67	730.86	1,560.27	1,535.68	24.59	63.447		
10,700.00	10,144.96	8,950.00	8,624.64	23.30	23.04	8.19	362.14	731.46	1,546.13	1,521.17	24.96	61.951		
10,800.00	10,144.96	9,000.00	8,629.41	23.78	23.22	8.26	411.88	732.42	1,536.63	1,511.16	25.47	60.330		
10,900.00	10,144.96	9,014.45	8,629.99	24.44	23.28	8.26	426.32	732.54	1,531.41	1,505.53	25.88	59.163		
10,960.36	10,144.96	9,032.22	8,630.21	24.91	23.35	8.27	444.09	732.59	1,530.66	1,504.47	26.18	58.456		
11,000.00	10,144.96	9,069.63	8,630.11	25.22	23.52	8.27	481.50	732.59	1,530.76	1,504.28	26.48	57.808		
11,100.00	10,144.96	9,169.63	8,629.85	26.10	24.08	8.26	581.50	732.59	1,531.02	1,503.72	27.30	56.088		
11,200.00	10,144.96	9,269.63	8,629.59	27.06	24.79	8.26	681.50	732.59	1,531.28	1,503.10	28.17	54.351		
11,300.00	10,144.97	9,369.63	8,629.33	28.10	25.64	8.26	781.50	732.59	1,531.54	1,502.43	29.11	52.615		
11,400.00	10,144.97	9,469.63	8,629.07	29.22	26.59	8.26	881.50	732.59	1,531.80	1,501.70	30.09	50.900		
11,500.00	10,144.97	9,569.63	8,628.80	30.40	27.64	8.26	981.50	732.59	1,532.06	1,500.93	31.13	49.221		
11,600.00	10,144.97	9,669.63	8,628.54	31.64	28.78	8.26	1,081.50	732.59	1,532.32	1,500.12	32.20	47.588		
11,700.00	10,144.97	9,769.63	8,628.28	32.94	29.99	8.26	1,181.50	732.59	1,532.58	1,499.27	33.31	46.008		
11,800.00	10,144.97	9,869.63	8,628.02	34.28	31.26	8.25	1,281.50	732.59	1,532.84	1,498.38	34.46	44.487		
11,900.00	10,144.97	9,969.63	8,627.76	35.66	32.58	8.25	1,381.50	732.59	1,533.10	1,497.46	35.63	43.027		
12,000.00	10,144.97	10,069.63	8,627.49	37.08	33.95	8.25	1,481.49	732.59	1,533.36	1,496.52	36.83	41.630		
12,100.00	10,144.97	10,169.63	8,627.23	38.53	35.37	8.25	1,581.49	732.59	1,533.62	1,495.55	38.06	40.294		
12,200.00	10,144.97	10,269.63	8,626.97	40.01	36.82	8.25	1,681.49	732.59	1,533.87	1,494.57	39.31	39.020		
12,300.00	10,144.98	10,369.63	8,626.71	41.52	38.30	8.25	1,781.49	732.59	1,534.13	1,493.56	40.58	37.806		
12,400.00	10,144.98	10,469.63	8,626.45	43.05	39.82	8.25	1,881.49	732.59	1,534.39	1,492.53	41.87	36.649		
12,500.00	10,144.98	10,569.63	8,626.19	44.61	41.35	8.24	1,981.49	732.59	1,534.65	1,491.48	43.17	35.547		
12,600.00	10,144.98	10,669.63	8,625.92	46.18	42.91	8.24	2,081.49	732.59	1,534.91	1,490.42	44.49	34.499		
12,700.00	10,144.98	10,769.63	8,625.66	47.77	44.50	8.24	2,181.49	732.59	1,535.17	1,489.35	45.83	33.500		
12,800.00	10,144.98	10,869.63	8,625.40	49.38	46.09	8.24	2,281.49	732.59	1,535.43	1,488.26	47.17	32.550		
12,900.00	10,144.98	10,969.63	8,625.14	51.00	47.71	8.24	2,381.49	732.59	1,535.69	1,487.16	48.53	31.644		
13,000.00	10,144.98	11,069.63	8,624.88	52.64	49.34	8.24	2,481.49	732.59	1,535.95	1,486.05	49.90	30.781		
13,100.00	10,144.98	11,169.62	8,624.61	54.29	50.98	8.23	2,581.49	732.59	1,536.21	1,484.94	51.28	29.959		
13,200.00	10,144.98	11,269.62	8,624.35	55.94	52.64	8.23	2,681.49	732.59	1,536.47	1,483.81	52.66	29.175		
13,300.00	10,144.99	11,369.62	8,624.09	57.61	54.31	8.23	2,781.49	732.59	1,536.73	1,482.67	54.06	28.426		
13,400.00	10,144.99	11,469.62	8,623.83	59.29	55.98	8.23	2,881.49	732.59	1,536.99	1,481.53	55.46	27.712		
13,500.00	10,144.99	11,569.62	8,623.57	60.98	57.67	8.23	2,981.48	732.59	1,537.25	1,480.38	56.87	27.029		
13,600.00	10,144.99	11,669.62	8,623.31	62.67	59.36	8.23	3,081.48	732.59	1,537.51	1,479.22	58.29	26.376		
13,700.00	10,144.99	11,769.62	8,623.04	64.37	61.06	8.23	3,181.48	732.59	1,537.77	1,478.06	59.72	25.752		
13,800.00	10,144.99	11,869.62	8,622.78	66.08	62.77	8.22	3,281.48	732.59	1,538.03	1,476.89	61.14	25.154		
13,900.00	10,144.99	11,969.62	8,622.52	67.79	64.49	8.22	3,381.48	732.59	1,538.29	1,475.71	62.58	24.582		
14,000.00	10,144.99	12,069.62	8,622.26	69.51	66.21	8.22	3,481.48	732.59	1,538.55	1,474.53	64.02	24.033		

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 333H (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:	333H (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			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,100.00	10,144.99	12,169.62	8,622.00	71.24	67.93	8.22	3,581.48	732.59	1,538.81	1,473.35	65.46	23.507	
14,200.00	10,144.99	12,269.62	8,621.73	72.97	69.67	8.22	3,681.48	732.59	1,539.07	1,472.16	66.91	23.002	
14,300.00	10,144.99	12,369.62	8,621.47	74.70	71.40	8.22	3,781.48	732.59	1,539.33	1,470.97	68.36	22.517	
14,400.00	10,145.00	12,469.62	8,621.21	76.44	73.14	8.22	3,881.48	732.59	1,539.59	1,469.77	69.82	22.052	
14,500.00	10,145.00	12,569.62	8,620.95	78.18	74.89	8.21	3,981.48	732.59	1,539.85	1,468.57	71.28	21.604	
14,600.00	10,145.00	12,669.62	8,620.69	79.93	76.64	8.21	4,081.48	732.59	1,540.11	1,467.37	72.74	21.173	
14,700.00	10,145.00	12,769.62	8,620.43	81.68	78.39	8.21	4,181.48	732.59	1,540.37	1,466.16	74.21	20.758	
14,800.00	10,145.00	12,869.62	8,620.16	83.43	80.14	8.21	4,281.48	732.59	1,540.63	1,464.95	75.67	20.359	
14,857.28	10,145.00	12,926.89	8,620.01	84.44	81.15	8.21	4,338.75	732.59	1,540.78	1,464.26	76.52	20.136	



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 333H (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:	333H (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)					
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, CC	
4,400.00	4,400.00	4,399.63	4,399.63	9.72	9.72	45.21	-25.71	-0.42	25.10	5.66	19.43	1.291 Level 3, ES, SF	
4,500.00	4,499.96	4,499.19	4,499.15	9.89	9.89	52.46	-27.85	-1.90	25.66	5.88	19.78	1.297 Level 3	
4,600.00	4,599.86	4,598.61	4,598.47	10.07	10.06	63.50	-31.40	-4.35	27.46	7.32	20.13	1.364 Level 3	
4,700.00	4,699.68	4,697.82	4,697.50	10.26	10.24	76.13	-36.36	-7.77	31.40	10.91	20.49	1.533	
4,800.00	4,799.37	4,796.74	4,796.12	10.44	10.42	87.76	-42.71	-12.16	38.14	17.28	20.85	1.829	
4,900.00	4,898.90	4,895.32	4,894.25	10.63	10.60	97.05	-50.43	-17.49	47.79	26.57	21.22	2.252	
5,000.00	4,998.26	4,993.48	4,991.79	10.83	10.79	103.96	-59.49	-23.75	60.23	38.65	21.58	2.791	
5,100.00	5,097.40	5,091.16	5,088.64	11.03	10.99	108.98	-69.87	-30.92	75.26	53.30	21.95	3.428	

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 333H (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:	333H (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)					
5,200.00	5,196.30	5,188.41	5,184.85	11.25	11.19	112.65	-81.56	-38.99	92.70	70.38	22.33	4.152			
5,300.00	5,294.93	5,286.42	5,281.71	11.47	11.40	115.72	-93.88	-47.50	111.71	88.99	22.71	4.918			
5,364.85	5,358.73	5,349.86	5,344.40	11.63	11.54	117.56	-101.86	-53.01	124.59	101.62	22.97	5.425			
5,400.00	5,393.28	5,384.21	5,378.35	11.71	11.62	118.54	-106.18	-55.99	131.72	108.61	23.11	5.699			
5,500.00	5,491.55	5,481.94	5,474.94	11.96	11.84	120.82	-118.48	-64.48	152.16	128.63	23.53	6.466			
5,600.00	5,589.83	5,579.67	5,571.52	12.21	12.07	122.56	-130.77	-72.97	172.77	148.81	23.97	7.209			
5,700.00	5,688.11	5,677.41	5,668.10	12.48	12.31	123.93	-143.06	-81.46	193.51	169.10	24.41	7.927			
5,800.00	5,786.39	5,775.14	5,764.69	12.75	12.55	125.03	-155.35	-89.95	214.33	189.47	24.87	8.619			
5,900.00	5,884.66	5,872.87	5,861.27	13.03	12.80	125.94	-167.65	-98.44	235.22	209.88	25.34	9.284			
6,000.00	5,982.94	5,970.60	5,957.86	13.32	13.05	126.70	-179.94	-106.93	256.15	230.34	25.81	9.923			
6,100.00	6,081.22	6,068.34	6,054.44	13.61	13.31	127.34	-192.23	-115.42	277.12	250.82	26.30	10.538			
6,200.00	6,179.50	6,166.07	6,151.02	13.91	13.57	127.90	-204.53	-123.91	298.12	271.32	26.79	11.127			
6,300.00	6,277.78	6,263.80	6,247.61	14.21	13.83	128.38	-216.82	-132.40	319.14	291.84	27.29	11.692			
6,400.00	6,376.05	6,361.53	6,344.19	14.52	14.10	128.80	-229.11	-140.89	340.18	312.37	27.80	12.235			
6,500.00	6,474.33	6,459.27	6,440.78	14.84	14.38	129.17	-241.40	-149.38	361.23	332.91	28.32	12.756			
6,600.00	6,572.61	6,557.00	6,537.36	15.16	14.65	129.51	-253.70	-157.87	382.30	353.46	28.84	13.255			
6,700.00	6,670.89	6,654.73	6,633.95	15.48	14.93	129.80	-265.99	-166.36	403.38	374.01	29.37	13.734			
6,800.00	6,769.17	6,752.47	6,730.53	15.81	15.21	130.07	-278.28	-174.85	424.47	394.56	29.91	14.194			
6,900.00	6,867.44	6,850.20	6,827.11	16.14	15.50	130.31	-290.58	-183.34	445.56	415.12	30.44	14.635			
7,000.00	6,965.72	6,947.93	6,923.70	16.48	15.79	130.53	-302.87	-191.83	466.67	435.68	30.99	15.059			
7,100.00	7,064.00	7,045.66	7,020.28	16.82	16.08	130.73	-315.16	-200.32	487.78	456.24	31.54	15.465			
7,200.00	7,162.28	7,143.40	7,116.87	17.16	16.37	130.92	-327.45	-208.81	508.89	476.80	32.09	15.856			
7,300.00	7,260.56	7,241.13	7,213.45	17.50	16.66	131.09	-339.75	-217.30	530.01	497.36	32.65	16.231			
7,400.00	7,358.83	7,338.86	7,310.04	17.85	16.96	131.25	-352.04	-225.78	551.14	517.92	33.22	16.592			
7,500.00	7,457.11	7,436.60	7,406.62	18.20	17.26	131.39	-364.33	-234.27	572.26	538.48	33.78	16.939			
7,600.00	7,555.39	7,534.33	7,503.20	18.55	17.56	131.53	-376.63	-242.76	593.39	559.04	34.35	17.273			
7,700.00	7,653.67	7,632.06	7,599.79	18.91	17.87	131.65	-388.92	-251.25	614.53	579.60	34.93	17.594			
7,800.00	7,751.95	7,729.79	7,696.37	19.27	18.17	131.77	-401.21	-259.74	635.66	600.16	35.51	17.903			
7,900.00	7,850.22	7,827.53	7,792.96	19.62	18.48	131.88	-413.50	-268.23	656.80	620.71	36.09	18.200			
8,000.00	7,948.50	7,925.26	7,889.54	19.99	18.79	131.98	-425.80	-276.72	677.94	641.27	36.67	18.487			
8,100.00	8,046.78	8,022.99	7,986.13	20.35	19.10	132.08	-438.09	-285.21	699.08	661.83	37.26	18.763			
8,200.00	8,145.06	8,120.73	8,082.71	20.71	19.41	132.17	-450.38	-293.70	720.23	682.38	37.85	19.029			
8,300.00	8,243.34	8,218.46	8,179.29	21.08	19.72	132.26	-462.68	-302.19	741.38	702.93	38.44	19.286			
8,371.16	8,313.27	8,288.00	8,248.02	21.34	19.95	132.31	-471.42	-308.23	756.42	717.56	38.86	19.463			
8,400.00	8,341.63	8,316.20	8,275.89	21.44	20.04	132.38	-474.97	-310.68	762.47	723.43	39.04	19.530			
8,500.00	8,440.15	8,414.13	8,372.67	21.75	20.35	132.53	-487.29	-319.19	782.71	743.08	39.63	19.749			
8,600.00	8,538.95	8,512.28	8,469.67	22.04	20.67	132.58	-499.63	-327.71	801.80	761.58	40.22	19.936			
8,700.00	8,638.01	8,611.84	8,574.09	22.32	20.99	132.56	-512.35	-336.50	819.37	778.57	40.80	20.084			
8,800.00	8,737.30	8,725.46	8,680.82	22.58	21.27	132.54	-523.70	-344.34	834.75	793.40	41.34	20.191			
8,900.00	8,836.77	8,833.64	8,788.34	22.84	21.55	132.53	-533.45	-351.07	847.90	806.03	41.87	20.253			
9,000.00	8,936.41	8,942.27	8,896.53	23.07	21.81	132.52	-541.56	-356.67	858.81	816.44	42.37	20.271			
9,100.00	9,036.18	9,051.29	9,005.26	23.30	22.06	132.52	-547.99	-361.11	867.47	824.62	42.84	20.248			
9,200.00	9,136.06	9,160.60	9,114.41	23.51	22.29	132.52	-552.74	-364.39	873.86	830.57	43.29	20.184			
9,300.00	9,236.00	9,270.11	9,223.86	23.70	22.52	132.52	-555.77	-366.48	877.98	834.26	43.72	20.081			
9,400.00	9,335.99	9,379.74	9,333.48	23.89	22.72	132.53	-557.08	-367.39	879.83	835.71	44.12	19.941			
9,436.01	9,372.00	9,418.26	9,372.00	23.95	22.79	-90.37	-557.14	-367.43	879.95	835.69	44.26	19.882			
9,500.00	9,435.99	9,482.25	9,435.99	24.06	22.91	-90.37	-557.14	-367.43	879.95	835.45	44.49	19.776			
9,600.00	9,535.99	9,582.25	9,535.99	24.23	23.09	-90.37	-557.14	-367.43	879.95	835.08	44.87	19.611			
9,636.01	9,572.00	9,618.36	9,572.00	24.30	23.15	-90.36	-557.05	-367.43	879.95	834.94	45.00	19.552			
9,650.00	9,585.99	9,632.48	9,586.21	24.32	23.17	-90.35	-556.63	-367.43	879.94	834.89	45.05	19.531			
9,700.00	9,635.86	9,682.90	9,636.43	24.39	23.24	-90.29	-552.28	-367.43	879.94	834.75	45.19	19.472			
9,750.00	9,685.24	9,733.24	9,685.99	24.43	23.28	-90.23	-543.56	-367.43	879.94	834.66	45.27	19.437			

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



LEAM Drilling Systems LLC
Anticollision Report



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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		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)						
9,800.00	9,733.76	9,783.49	9,734.51	24.45	23.29	-90.16	-530.55	-367.43	879.93	834.63	45.30	19.425		
9,850.00	9,781.05	9,833.66	9,781.63	24.44	23.29	-90.10	-513.37	-367.43	879.93	834.65	45.28	19.435		
9,900.00	9,826.75	9,883.74	9,826.99	24.42	23.26	-90.03	-492.18	-367.43	879.93	834.72	45.21	19.463		
9,913.22	9,838.52	9,896.96	9,838.64	24.40	23.25	-90.02	-485.93	-367.43	879.93	834.74	45.19	19.473		
9,950.00	9,870.51	9,933.73	9,870.25	24.37	23.21	-89.97	-467.16	-367.43	879.93	834.82	45.11	19.506		
10,000.00	9,912.00	9,983.63	9,911.09	24.30	23.14	-89.90	-438.51	-367.43	879.93	834.95	44.98	19.561		
10,050.00	9,950.90	10,033.45	9,949.23	24.23	23.07	-89.84	-406.48	-367.43	879.93	835.10	44.84	19.625		
10,100.00	9,986.91	10,083.19	9,984.38	24.14	22.98	-89.78	-371.32	-367.43	879.94	835.25	44.69	19.691		
10,150.00	10,019.77	10,132.84	10,016.30	24.04	22.89	-89.72	-333.31	-367.43	879.94	835.40	44.54	19.757		
10,200.00	10,049.22	10,182.41	10,044.77	23.94	22.80	-89.66	-292.75	-367.43	879.95	835.54	44.41	19.816		
10,250.00	10,075.04	10,231.91	10,069.59	23.83	22.71	-89.60	-249.94	-367.43	879.95	835.66	44.30	19.865		
10,300.00	10,097.03	10,281.34	10,090.60	23.72	22.61	-89.55	-205.22	-367.43	879.96	835.74	44.22	19.899		
10,350.00	10,115.03	10,330.70	10,107.66	23.62	22.53	-89.50	-158.92	-367.43	879.97	835.78	44.19	19.915		
10,400.00	10,128.89	10,380.00	10,120.66	23.51	22.44	-89.45	-111.38	-367.43	879.97	835.77	44.20	19.908		
10,450.00	10,138.51	10,429.24	10,129.52	23.42	22.36	-89.41	-62.95	-367.42	879.98	835.71	44.27	19.878		
10,500.00	10,143.83	10,478.43	10,134.18	23.33	22.29	-89.37	-14.00	-367.42	879.99	835.60	44.39	19.823		
10,536.00	10,144.96	10,513.92	10,134.96	23.27	22.23	-89.35	21.48	-367.42	879.99	835.48	44.52	19.768		
10,600.00	10,144.96	10,577.92	10,134.96	23.20	22.29	-89.35	85.47	-367.42	879.99	835.16	44.83	19.629		
10,700.00	10,144.96	10,677.92	10,134.96	23.30	22.75	-89.35	185.47	-367.42	879.99	834.44	45.55	19.318		
10,800.00	10,144.96	10,777.92	10,134.96	23.78	23.34	-89.35	285.47	-367.42	880.00	833.45	46.55	18.905		
10,900.00	10,144.96	10,877.92	10,134.96	24.44	24.04	-89.35	385.47	-367.42	880.00	832.19	47.80	18.409		
11,000.00	10,144.96	10,977.92	10,134.96	25.22	24.84	-89.35	485.47	-367.42	880.00	830.70	49.30	17.851		
11,100.00	10,144.96	11,077.92	10,134.96	26.10	25.73	-89.35	585.47	-367.42	880.00	828.99	51.01	17.252		
11,200.00	10,144.96	11,177.92	10,134.96	27.06	26.72	-89.35	685.47	-367.42	880.00	827.08	52.92	16.629		
11,300.00	10,144.97	11,277.92	10,134.97	28.10	27.78	-89.35	785.47	-367.42	880.00	825.00	55.01	15.998		
11,400.00	10,144.97	11,377.92	10,134.97	29.22	28.92	-89.35	885.47	-367.42	880.00	822.75	57.25	15.371		
11,500.00	10,144.97	11,477.92	10,134.97	30.40	30.13	-89.35	985.47	-367.42	880.00	820.37	59.63	14.757		
11,600.00	10,144.97	11,577.92	10,134.97	31.64	31.39	-89.35	1,085.47	-367.42	880.01	817.87	62.14	14.162		
11,700.00	10,144.97	11,677.92	10,134.97	32.94	32.70	-89.35	1,185.47	-367.42	880.01	815.25	64.76	13.589		
11,800.00	10,144.97	11,777.92	10,134.97	34.28	34.07	-89.35	1,285.47	-367.41	880.01	812.54	67.47	13.043		
11,900.00	10,144.97	11,877.92	10,134.97	35.66	35.47	-89.35	1,385.47	-367.41	880.01	809.74	70.27	12.524		
12,000.00	10,144.97	11,977.92	10,134.97	37.08	36.91	-89.35	1,485.47	-367.41	880.01	806.87	73.14	12.032		
12,100.00	10,144.97	12,077.92	10,134.97	38.53	38.38	-89.35	1,585.47	-367.41	880.01	803.93	76.08	11.567		
12,200.00	10,144.97	12,177.92	10,134.97	40.01	39.88	-89.35	1,685.47	-367.41	880.01	800.93	79.08	11.128		
12,300.00	10,144.98	12,277.92	10,134.98	41.52	41.40	-89.35	1,785.47	-367.41	880.01	797.88	82.14	10.714		
12,400.00	10,144.98	12,377.92	10,134.98	43.05	42.95	-89.35	1,885.47	-367.41	880.02	794.78	85.24	10.324		
12,500.00	10,144.98	12,477.92	10,134.98	44.61	44.52	-89.35	1,985.47	-367.41	880.02	791.64	88.38	9.957		
12,600.00	10,144.98	12,577.92	10,134.98	46.18	46.11	-89.35	2,085.47	-367.41	880.02	788.46	91.56	9.611		
12,700.00	10,144.98	12,677.92	10,134.98	47.77	47.72	-89.35	2,185.47	-367.41	880.02	785.24	94.78	9.285		
12,800.00	10,144.98	12,777.92	10,134.98	49.38	49.34	-89.35	2,285.47	-367.41	880.02	782.00	98.02	8.978		
12,900.00	10,144.98	12,877.92	10,134.98	51.00	50.97	-89.35	2,385.47	-367.41	880.02	778.73	101.30	8.688		
13,000.00	10,144.98	12,977.92	10,134.98	52.64	52.62	-89.35	2,485.47	-367.41	880.02	775.43	104.59	8.414		
13,100.00	10,144.98	13,077.92	10,134.98	54.29	54.28	-89.35	2,585.47	-367.41	880.02	772.11	107.92	8.155		
13,200.00	10,144.98	13,177.92	10,134.98	55.94	55.95	-89.35	2,685.47	-367.40	880.02	768.77	111.26	7.910		
13,300.00	10,144.99	13,277.92	10,134.99	57.61	57.63	-89.35	2,785.47	-367.40	880.03	765.40	114.62	7.678		
13,400.00	10,144.99	13,377.92	10,134.99	59.29	59.31	-89.35	2,885.47	-367.40	880.03	762.03	118.00	7.458		
13,500.00	10,144.99	13,477.92	10,134.99	60.98	61.01	-89.35	2,985.47	-367.40	880.03	758.63	121.40	7.249		
13,600.00	10,144.99	13,577.92	10,134.99	62.67	62.71	-89.35	3,085.47	-367.40	880.03	755.22	124.81	7.051		
13,700.00	10,144.99	13,677.92	10,134.99	64.37	64.42	-89.35	3,185.47	-367.40	880.03	751.80	128.23	6.863		
13,800.00	10,144.99	13,777.92	10,134.99	66.08	66.14	-89.35	3,285.47	-367.40	880.03	748.37	131.66	6.684		
13,900.00	10,144.99	13,877.92	10,134.99	67.79	67.86	-89.35	3,385.47	-367.40	880.03	744.92	135.11	6.513		
14,000.00	10,144.99	13,977.92	10,134.99	69.51	69.59	-89.35	3,485.47	-367.40	880.03	741.47	138.57	6.351		

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 333H (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:	333H (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			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,100.00	10,144.99	14,077.92	10,134.99	71.24	71.32	-89.35	3,585.47	-367.40	880.04	738.00	142.04	6.196	
14,200.00	10,144.99	14,177.92	10,134.99	72.97	73.05	-89.35	3,685.47	-367.40	880.04	734.52	145.51	6.048	
14,300.00	10,144.99	14,277.92	10,134.99	74.70	74.80	-89.35	3,785.47	-367.40	880.04	731.04	149.00	5.906	
14,400.00	10,145.00	14,377.92	10,135.00	76.44	76.54	-89.35	3,885.47	-367.40	880.04	727.55	152.49	5.771	
14,500.00	10,145.00	14,477.92	10,135.00	78.18	78.29	-89.35	3,985.47	-367.39	880.04	724.05	155.99	5.642	
14,600.00	10,145.00	14,577.92	10,135.00	79.93	80.04	-89.35	4,085.47	-367.39	880.04	720.54	159.50	5.518	
14,700.00	10,145.00	14,677.92	10,135.00	81.68	81.80	-89.35	4,185.47	-367.39	880.04	717.03	163.01	5.399	
14,800.00	10,145.00	14,777.92	10,135.00	83.43	83.55	-89.35	4,285.47	-367.39	880.04	713.51	166.53	5.285	
14,830.59	10,145.00	14,808.51	10,135.00	83.97	84.09	-89.35	4,316.07	-367.39	880.04	712.43	167.61	5.251	
14,857.28	10,145.00	14,829.84	10,135.00	84.44	84.47	-89.35	4,337.40	-367.39	880.06	711.61	168.46	5.224	



LEAM Drilling Systems LLC
Anticollision Report

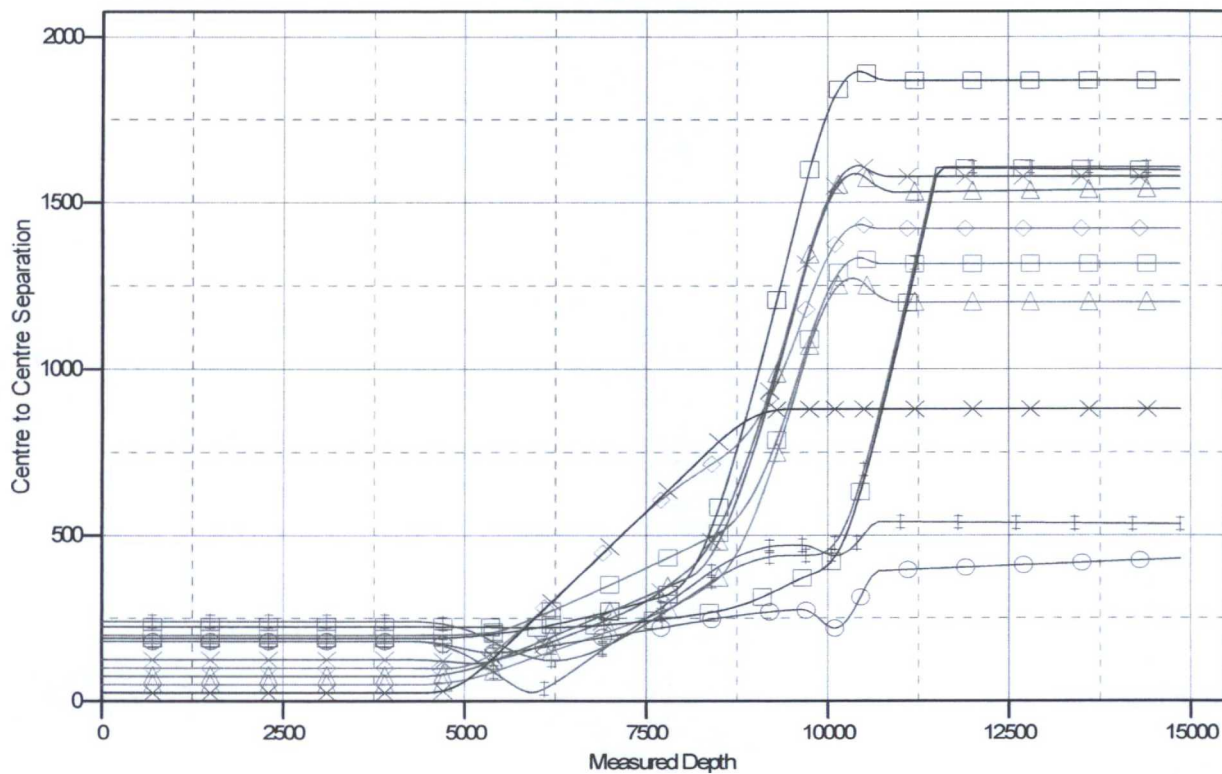


Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 333H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	333H (SIMOPS)	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: 333H (SIMOPS)
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.33°

Ladder Plot



LEGEND

✕ 327H (SIMOPS), OH, Plan #1 V0	✕ 286H (SIMOPS), OH, Plan #1 V0	✕ 319H (SIMOPS), OH, Plan #1 V0
△ 320H (SIMOPS), OH, Plan #1 V0	△ 313H (SIMOPS), OH, Plan #1 V0	✕ 332H (SIMOPS), OH, Plan #1 V0
△ 253H (SIMOPS), OH, Plan #1 V0	△ 263H (SIMOPS), OH, Plan #1 V0	△ 328H (SIMOPS), OH, Plan #1 V0
✕ 312H (SIMOPS), OH, Plan #1 V0	△ 321H (SIMOPS), OH, Plan #1 V0	

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 333H (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:	333H (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

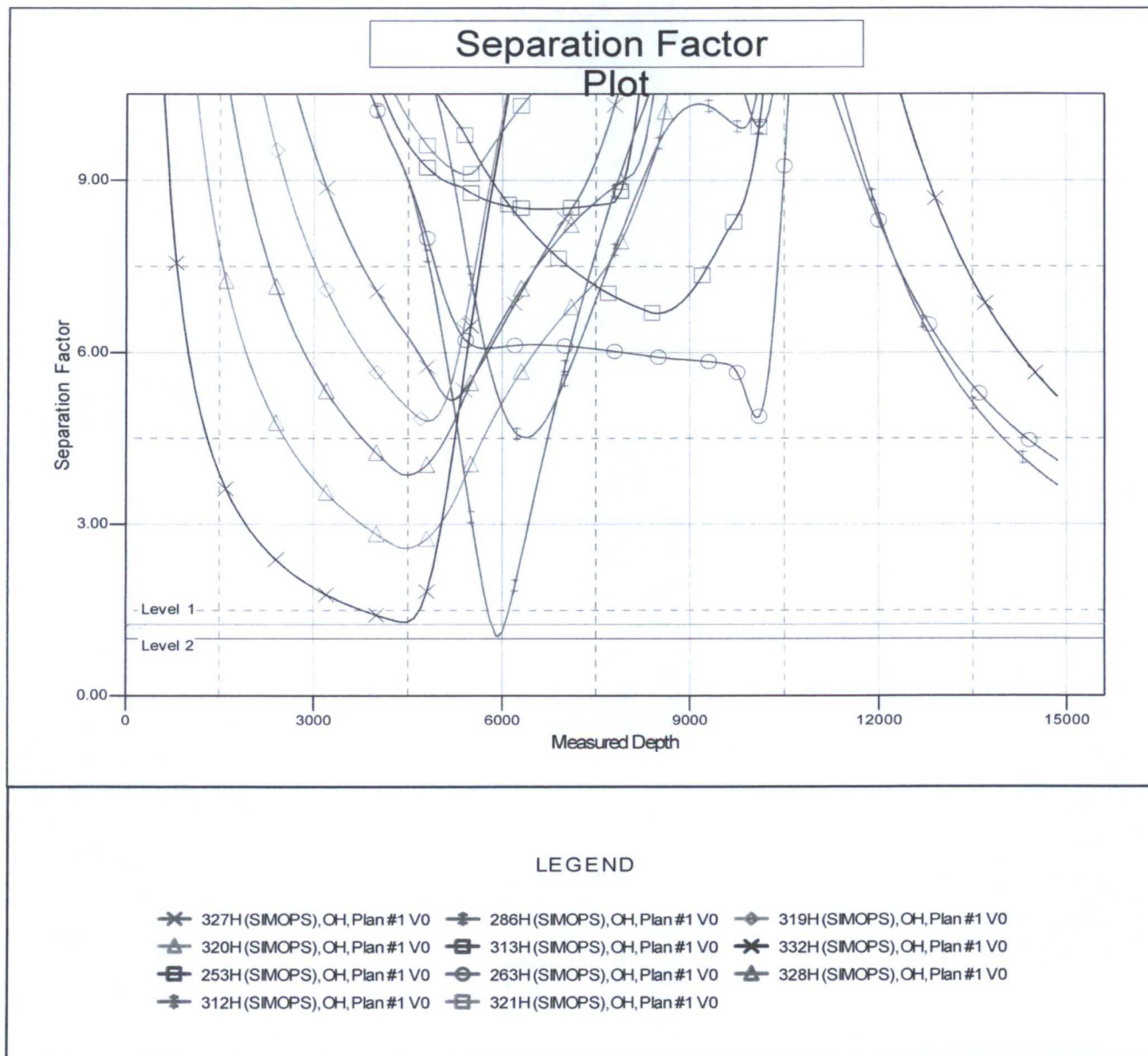
Offset Depths are relative to Offset Datum

Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 333H (SIMOPS)

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

Grid Convergence at Surface is: 0.33°



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