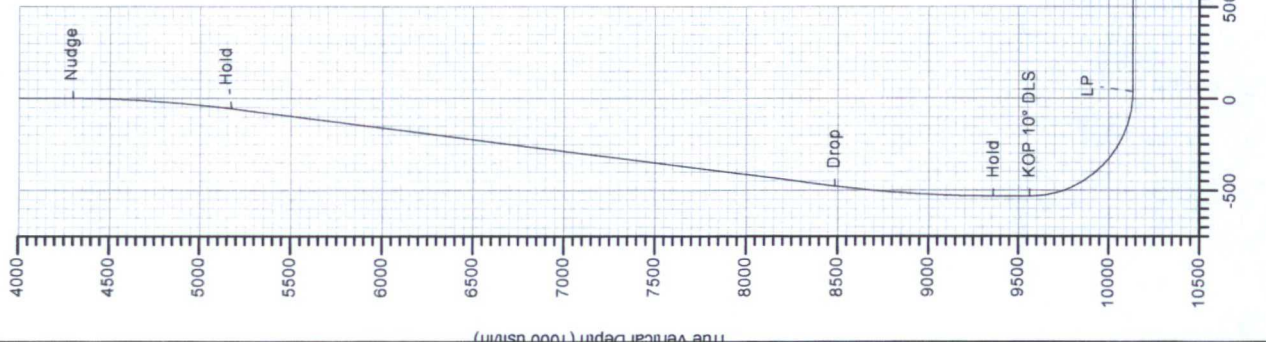




Project: Lea County, NM (NAD-83)
Site: Cotton Draw Unit
Well: 332H (SIMOPS)
Wellbore: OH
Design: Plan #1



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



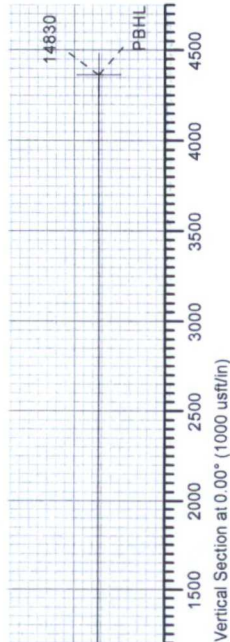
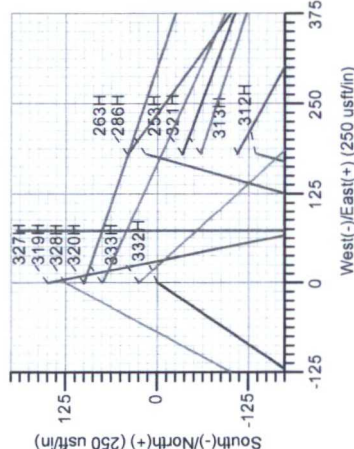
DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
SHL (CDU 332H)	0.00	0.00	0.00	414927.38	734159.92
PBHL (CDU 332H)	10135.00	4362.40	-367.46	419289.78	733792.46

SECTION DETAILS					
MD	Inc	Azi	TVD	+N/-S	+E/-W
0.00	0.00	0.00	0.00	0.00	0.00
4300.00	0.00	0.00	4300.00	0.00	0.00
5179.27	8.79	214.63	5175.82	-55.41	-38.26
8528.99	8.79	214.63	8486.18	-476.73	-329.24
9408.26	0.00	0.00	9362.00	-532.14	-367.50
9608.26	0.00	0.00	9562.00	-532.14	-367.50
10508.25	90.00	0.00	10134.96	40.81	-367.50
14829.84	90.00	0.00	10135.00	4362.40	-367.46

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
- 333H (SIMOPS), OH, Plan #1 V0
- ◇ 319H (SIMOPS), OH, Plan #1 V0
- △ 328H (SIMOPS), OH, Plan #1 V0
- ✱ Plan #1





DEVON ENERGY

Lea County, NM (NAD-83)

Cotton Draw Unit

332H (SIMOPS)

OH

Plan: Plan #1

Standard Planning Report

17 December, 2015



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 332H (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:	332H (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	332H (SIMOPS)					
Well Position	+N/-S	785.13 usft	Northing:	414,927.38 usft	Latitude:	32° 8' 21.052 N
	+E/-W	192.49 usft	Easting:	734,159.92 usft	Longitude:	103° 42' 37.311 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)	+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	
5,179.27	8.79	214.63	5,175.82	-55.41	-38.26	1.00	1.00	0.00	214.63	
8,528.99	8.79	214.63	8,486.18	-476.73	-329.24	0.00	0.00	0.00	0.00	
9,408.26	0.00	0.00	9,362.00	-532.14	-367.50	1.00	-1.00	0.00	180.00	
9,608.26	0.00	0.00	9,562.00	-532.14	-367.50	0.00	0.00	0.00	0.00	
10,508.26	90.00	0.00	10,134.96	40.81	-367.50	10.00	10.00	0.00	0.00	
14,829.84	90.00	0.00	10,135.00	4,362.40	-367.46	0.00	0.00	0.00	0.00	PBHL (CDU 332H)

Database: EDM 5000.1 Single User Db
Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Site: Cotton Draw Unit
Well: 332H (SIMOPS)
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 332H (SIMOPS)
TVD Reference: 3431.4' GE + 30' KB @ 3461.40usft
MD Reference: 3431.4' GE + 30' KB @ 3461.40usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (CDU 332H)									
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	214.63	4,400.00	-0.72	-0.50	-0.72	1.00	1.00	0.00
4,500.00	2.00	214.63	4,499.96	-2.87	-1.98	-2.87	1.00	1.00	0.00
4,600.00	3.00	214.63	4,599.86	-6.46	-4.46	-6.46	1.00	1.00	0.00
4,700.00	4.00	214.63	4,699.68	-11.48	-7.93	-11.48	1.00	1.00	0.00
4,800.00	5.00	214.63	4,799.37	-17.94	-12.39	-17.94	1.00	1.00	0.00
4,900.00	6.00	214.63	4,898.90	-25.83	-17.84	-25.83	1.00	1.00	0.00
5,000.00	7.00	214.63	4,998.26	-35.14	-24.27	-35.14	1.00	1.00	0.00
5,100.00	8.00	214.63	5,097.40	-45.88	-31.69	-45.88	1.00	1.00	0.00

Database: EDM 5000.1 Single User Db
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Well: 332H (SIMOPS)
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MD Reference: 3431.4' GE + 30' KB @ 3461.40usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,179.27	8.79	214.63	5,175.82	-55.41	-38.26	-55.41	1.00	1.00	0.00
Hold									
5,200.00	8.79	214.63	5,196.31	-58.01	-40.06	-58.01	0.00	0.00	0.00
5,300.00	8.79	214.63	5,295.13	-70.59	-48.75	-70.59	0.00	0.00	0.00
5,400.00	8.79	214.63	5,393.96	-83.17	-57.44	-83.17	0.00	0.00	0.00
5,500.00	8.79	214.63	5,492.78	-95.75	-66.12	-95.75	0.00	0.00	0.00
5,600.00	8.79	214.63	5,591.61	-108.33	-74.81	-108.33	0.00	0.00	0.00
5,700.00	8.79	214.63	5,690.43	-120.90	-83.50	-120.90	0.00	0.00	0.00
5,800.00	8.79	214.63	5,789.26	-133.48	-92.18	-133.48	0.00	0.00	0.00
5,900.00	8.79	214.63	5,888.08	-146.06	-100.87	-146.06	0.00	0.00	0.00
6,000.00	8.79	214.63	5,986.91	-158.64	-109.56	-158.64	0.00	0.00	0.00
6,100.00	8.79	214.63	6,085.73	-171.22	-118.24	-171.22	0.00	0.00	0.00
6,200.00	8.79	214.63	6,184.56	-183.79	-126.93	-183.79	0.00	0.00	0.00
6,300.00	8.79	214.63	6,283.38	-196.37	-135.62	-196.37	0.00	0.00	0.00
6,400.00	8.79	214.63	6,382.21	-208.95	-144.30	-208.95	0.00	0.00	0.00
6,500.00	8.79	214.63	6,481.03	-221.53	-152.99	-221.53	0.00	0.00	0.00
6,600.00	8.79	214.63	6,579.86	-234.11	-161.68	-234.11	0.00	0.00	0.00
6,700.00	8.79	214.63	6,678.68	-246.68	-170.36	-246.68	0.00	0.00	0.00
6,800.00	8.79	214.63	6,777.51	-259.26	-179.05	-259.26	0.00	0.00	0.00
6,900.00	8.79	214.63	6,876.33	-271.84	-187.73	-271.84	0.00	0.00	0.00
7,000.00	8.79	214.63	6,975.16	-284.42	-196.42	-284.42	0.00	0.00	0.00
7,100.00	8.79	214.63	7,073.98	-297.00	-205.11	-297.00	0.00	0.00	0.00
7,200.00	8.79	214.63	7,172.81	-309.57	-213.79	-309.57	0.00	0.00	0.00
7,300.00	8.79	214.63	7,271.63	-322.15	-222.48	-322.15	0.00	0.00	0.00
7,400.00	8.79	214.63	7,370.45	-334.73	-231.17	-334.73	0.00	0.00	0.00
7,500.00	8.79	214.63	7,469.28	-347.31	-239.85	-347.31	0.00	0.00	0.00
7,600.00	8.79	214.63	7,568.10	-359.89	-248.54	-359.89	0.00	0.00	0.00
7,700.00	8.79	214.63	7,666.93	-372.46	-257.23	-372.46	0.00	0.00	0.00
7,800.00	8.79	214.63	7,765.75	-385.04	-265.91	-385.04	0.00	0.00	0.00
7,900.00	8.79	214.63	7,864.58	-397.62	-274.60	-397.62	0.00	0.00	0.00
8,000.00	8.79	214.63	7,963.40	-410.20	-283.29	-410.20	0.00	0.00	0.00
8,100.00	8.79	214.63	8,062.23	-422.78	-291.97	-422.78	0.00	0.00	0.00
8,200.00	8.79	214.63	8,161.05	-435.35	-300.66	-435.35	0.00	0.00	0.00
8,300.00	8.79	214.63	8,259.88	-447.93	-309.34	-447.93	0.00	0.00	0.00
8,400.00	8.79	214.63	8,358.70	-460.51	-318.03	-460.51	0.00	0.00	0.00
8,500.00	8.79	214.63	8,457.53	-473.09	-326.72	-473.09	0.00	0.00	0.00
8,528.99	8.79	214.63	8,486.18	-476.73	-329.24	-476.73	0.00	0.00	0.00
Drop									
8,600.00	8.08	214.63	8,556.42	-485.31	-335.16	-485.31	1.00	-1.00	0.00
8,700.00	7.08	214.63	8,655.54	-496.17	-342.66	-496.17	1.00	-1.00	0.00
8,800.00	6.08	214.63	8,754.88	-505.60	-349.17	-505.60	1.00	-1.00	0.00
8,900.00	5.08	214.63	8,854.41	-513.60	-354.70	-513.60	1.00	-1.00	0.00
9,000.00	4.08	214.63	8,954.09	-520.18	-359.24	-520.18	1.00	-1.00	0.00
9,100.00	3.08	214.63	9,053.89	-525.32	-362.79	-525.32	1.00	-1.00	0.00
9,200.00	2.08	214.63	9,153.79	-529.03	-365.35	-529.03	1.00	-1.00	0.00
9,300.00	1.08	214.63	9,253.75	-531.30	-366.92	-531.30	1.00	-1.00	0.00
9,408.26	0.00	0.00	9,362.00	-532.14	-367.50	-532.14	1.00	-1.00	0.00
Hold									
9,500.00	0.00	0.00	9,453.74	-532.14	-367.50	-532.14	0.00	0.00	0.00
9,608.26	0.00	0.00	9,562.00	-532.14	-367.50	-532.14	0.00	0.00	0.00
KOP 10° DLS									
9,650.00	4.17	0.00	9,603.70	-530.62	-367.50	-530.62	10.00	10.00	0.00
9,700.00	9.17	0.00	9,653.35	-524.81	-367.50	-524.81	10.00	10.00	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: 332H (SIMOPS)
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 332H (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)
9,750.00	14.17	0.00	9,702.30	-514.70	-367.50	-514.70	10.00	10.00	0.00
9,800.00	19.17	0.00	9,750.18	-500.36	-367.50	-500.36	10.00	10.00	0.00
9,850.00	24.17	0.00	9,796.63	-481.90	-367.50	-481.90	10.00	10.00	0.00
9,900.00	29.17	0.00	9,841.30	-459.46	-367.50	-459.46	10.00	10.00	0.00
9,950.00	34.17	0.00	9,883.83	-433.21	-367.50	-433.21	10.00	10.00	0.00
10,000.00	39.17	0.00	9,923.92	-403.36	-367.50	-403.36	10.00	10.00	0.00
10,050.00	44.17	0.00	9,961.26	-370.12	-367.50	-370.12	10.00	10.00	0.00
10,100.00	49.17	0.00	9,995.56	-333.76	-367.50	-333.76	10.00	10.00	0.00
10,150.00	54.17	0.00	10,026.55	-294.55	-367.50	-294.55	10.00	10.00	0.00
10,200.00	59.17	0.00	10,054.01	-252.78	-367.50	-252.78	10.00	10.00	0.00
10,250.00	64.17	0.00	10,077.73	-208.79	-367.50	-208.79	10.00	10.00	0.00
10,300.00	69.17	0.00	10,097.52	-162.89	-367.50	-162.89	10.00	10.00	0.00
10,350.00	74.17	0.00	10,113.24	-115.44	-367.50	-115.44	10.00	10.00	0.00
10,400.00	79.17	0.00	10,124.76	-66.80	-367.50	-66.80	10.00	10.00	0.00
10,450.00	84.17	0.00	10,132.00	-17.34	-367.50	-17.34	10.00	10.00	0.00
10,500.00	89.17	0.00	10,134.90	32.56	-367.50	32.56	10.00	10.00	0.00
10,508.26	90.00	0.00	10,134.96	40.81	-367.50	40.81	10.00	10.00	0.00
LP									
10,600.00	90.00	0.00	10,134.96	132.56	-367.50	132.56	0.00	0.00	0.00
10,700.00	90.00	0.00	10,134.96	232.56	-367.49	232.56	0.00	0.00	0.00
10,800.00	90.00	0.00	10,134.96	332.56	-367.49	332.56	0.00	0.00	0.00
10,900.00	90.00	0.00	10,134.96	432.56	-367.49	432.56	0.00	0.00	0.00
11,000.00	90.00	0.00	10,134.96	532.56	-367.49	532.56	0.00	0.00	0.00
11,100.00	90.00	0.00	10,134.96	632.56	-367.49	632.56	0.00	0.00	0.00
11,200.00	90.00	0.00	10,134.96	732.56	-367.49	732.56	0.00	0.00	0.00
11,300.00	90.00	0.00	10,134.97	832.56	-367.49	832.56	0.00	0.00	0.00
11,400.00	90.00	0.00	10,134.97	932.56	-367.49	932.56	0.00	0.00	0.00
11,500.00	90.00	0.00	10,134.97	1,032.56	-367.49	1,032.56	0.00	0.00	0.00
11,600.00	90.00	0.00	10,134.97	1,132.56	-367.49	1,132.56	0.00	0.00	0.00
11,700.00	90.00	0.00	10,134.97	1,232.56	-367.49	1,232.56	0.00	0.00	0.00
11,800.00	90.00	0.00	10,134.97	1,332.56	-367.49	1,332.56	0.00	0.00	0.00
11,900.00	90.00	0.00	10,134.97	1,432.56	-367.49	1,432.56	0.00	0.00	0.00
12,000.00	90.00	0.00	10,134.97	1,532.56	-367.48	1,532.56	0.00	0.00	0.00
12,100.00	90.00	0.00	10,134.97	1,632.56	-367.48	1,632.56	0.00	0.00	0.00
12,200.00	90.00	0.00	10,134.97	1,732.56	-367.48	1,732.56	0.00	0.00	0.00
12,300.00	90.00	0.00	10,134.98	1,832.56	-367.48	1,832.56	0.00	0.00	0.00
12,400.00	90.00	0.00	10,134.98	1,932.56	-367.48	1,932.56	0.00	0.00	0.00
12,500.00	90.00	0.00	10,134.98	2,032.56	-367.48	2,032.56	0.00	0.00	0.00
12,600.00	90.00	0.00	10,134.98	2,132.56	-367.48	2,132.56	0.00	0.00	0.00
12,700.00	90.00	0.00	10,134.98	2,232.56	-367.48	2,232.56	0.00	0.00	0.00
12,800.00	90.00	0.00	10,134.98	2,332.56	-367.48	2,332.56	0.00	0.00	0.00
12,900.00	90.00	0.00	10,134.98	2,432.56	-367.48	2,432.56	0.00	0.00	0.00
13,000.00	90.00	0.00	10,134.98	2,532.56	-367.48	2,532.56	0.00	0.00	0.00
13,100.00	90.00	0.00	10,134.98	2,632.56	-367.48	2,632.56	0.00	0.00	0.00
13,200.00	90.00	0.00	10,134.98	2,732.56	-367.48	2,732.56	0.00	0.00	0.00
13,300.00	90.00	0.00	10,134.99	2,832.56	-367.48	2,832.56	0.00	0.00	0.00
13,400.00	90.00	0.00	10,134.99	2,932.56	-367.47	2,932.56	0.00	0.00	0.00
13,500.00	90.00	0.00	10,134.99	3,032.56	-367.47	3,032.56	0.00	0.00	0.00
13,600.00	90.00	0.00	10,134.99	3,132.56	-367.47	3,132.56	0.00	0.00	0.00
13,700.00	90.00	0.00	10,134.99	3,232.56	-367.47	3,232.56	0.00	0.00	0.00
13,800.00	90.00	0.00	10,134.99	3,332.56	-367.47	3,332.56	0.00	0.00	0.00
13,900.00	90.00	0.00	10,134.99	3,432.56	-367.47	3,432.56	0.00	0.00	0.00
14,000.00	90.00	0.00	10,134.99	3,532.56	-367.47	3,532.56	0.00	0.00	0.00
14,100.00	90.00	0.00	10,134.99	3,632.56	-367.47	3,632.56	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 332H (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:	332H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
14,200.00	90.00	0.00	10,134.99	3,732.56	-367.47	3,732.56	0.00	0.00	0.00
14,300.00	90.00	0.00	10,135.00	3,832.56	-367.47	3,832.56	0.00	0.00	0.00
14,400.00	90.00	0.00	10,135.00	3,932.56	-367.47	3,932.56	0.00	0.00	0.00
14,500.00	90.00	0.00	10,135.00	4,032.56	-367.47	4,032.56	0.00	0.00	0.00
14,600.00	90.00	0.00	10,135.00	4,132.56	-367.47	4,132.56	0.00	0.00	0.00
14,700.00	90.00	0.00	10,135.00	4,232.56	-367.46	4,232.56	0.00	0.00	0.00
14,800.00	90.00	0.00	10,135.00	4,332.56	-367.46	4,332.56	0.00	0.00	0.00
14,829.84	90.00	0.00	10,135.00	4,362.40	-367.46	4,362.40	0.00	0.00	0.00
TD - PBHL (CDU 332H)									

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 332H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	414,927.38	734,159.92	32° 8' 21.052 N	103° 42' 37.311 W
PBHL (CDU 332H) - plan hits target center - Point	0.00	0.00	10,135.00	4,362.40	-367.46	419,289.77	733,792.45	32° 9' 4.241 N	103° 42' 41.291 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
5,179.27	5,175.82	-55.41	-38.26	Hold
8,528.99	8,486.18	-476.73	-329.24	Drop
9,408.26	9,362.00	-532.14	-367.50	Hold
9,608.26	9,562.00	-532.14	-367.50	KOP 10° DLS
10,508.26	10,134.96	40.81	-367.50	LP
14,829.84	10,135.00	4,362.40	-367.46	TD



DEVON ENERGY

Lea County, NM (NAD-83)

Cotton Draw Unit

332H (SIMOPS)

OH

Plan #1

Anticollision Report

17 December, 2015





LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (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:	332H (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	14,829.84	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	183.40	164.36	9.633	CC, ES
253H (SIMOPS) - OH - Plan #1	4,400.00	4,396.92	184.59	165.15	9.498	SF
263H (SIMOPS) - OH - Plan #1	4,300.00	4,300.00	184.58	165.54	9.695	CC, ES
263H (SIMOPS) - OH - Plan #1	14,829.84	15,000.18	1,163.74	1,003.77	7.275	SF
286H (SIMOPS) - OH - Plan #1	4,300.00	4,300.00	180.76	161.73	9.495	CC
286H (SIMOPS) - OH - Plan #1	4,400.00	4,401.15	181.00	161.57	9.315	ES
286H (SIMOPS) - OH - Plan #1	14,829.84	14,952.81	539.97	395.61	3.741	SF
312H (SIMOPS) - OH - Plan #1	4,300.00	4,300.00	224.83	205.79	11.810	CC
312H (SIMOPS) - OH - Plan #1	4,400.00	4,398.59	225.11	205.69	11.587	ES
312H (SIMOPS) - OH - Plan #1	9,800.00	9,768.30	441.15	397.01	9.995	SF
313H (SIMOPS) - OH - Plan #1	4,300.00	4,300.00	210.83	191.79	11.074	CC, ES
313H (SIMOPS) - OH - Plan #1	4,500.00	4,492.79	214.44	194.65	10.841	SF
319H (SIMOPS) - OH - Plan #1	7,375.60	7,392.82	42.71	10.50	1.326	Level 3, CC
319H (SIMOPS) - OH - Plan #1	7,400.00	7,417.05	42.76	10.46	1.324	Level 3, ES, SF
320H (SIMOPS) - OH - Plan #1	4,300.00	4,300.00	75.00	55.96	3.940	CC
320H (SIMOPS) - OH - Plan #1	4,400.00	4,400.52	75.37	55.93	3.877	ES
320H (SIMOPS) - OH - Plan #1	4,500.00	4,500.94	76.60	56.81	3.870	SF
321H (SIMOPS) - OH - Plan #1	4,300.00	4,300.00	189.71	170.67	9.965	CC, ES
321H (SIMOPS) - OH - Plan #1	4,500.00	4,493.44	194.11	174.32	9.809	SF
327H (SIMOPS) - OH - Plan #1	5,000.35	5,017.06	146.00	124.54	6.803	CC, ES
327H (SIMOPS) - OH - Plan #1	5,100.00	5,116.51	146.95	125.17	6.745	SF
328H (SIMOPS) - OH - Plan #1	4,300.00	4,300.00	100.00	80.96	5.253	CC, ES
328H (SIMOPS) - OH - Plan #1	4,500.00	4,500.96	101.89	82.09	5.147	SF
333H (SIMOPS) - OH - Plan #1	4,300.00	4,300.00	25.00	5.96	1.313	Level 3, CC
333H (SIMOPS) - OH - Plan #1	4,400.00	4,400.31	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 us
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 us
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	Offset		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)				
0.00	0.00	0.00	0.00	0.00	0.00	100.70	-34.05	180.21	183.40					
100.00	100.00	100.00	100.00	0.08	0.08	100.70	-34.05	180.21	183.40	183.24	0.16	1,165.647		
200.00	200.00	200.00	200.00	0.30	0.30	100.70	-34.05	180.21	183.40	182.79	0.61	302.205		

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



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (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:	332H (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		
300.00	300.00	300.00	300.00	0.53	0.53	100.70	-34.05	180.21	183.40	182.34	1.06	173.607		
400.00	400.00	400.00	400.00	0.75	0.75	100.70	-34.05	180.21	183.40	181.89	1.51	121.784		
500.00	500.00	500.00	500.00	0.98	0.98	100.70	-34.05	180.21	183.40	181.44	1.96	93.788		
600.00	600.00	600.00	600.00	1.20	1.20	100.70	-34.05	180.21	183.40	180.99	2.40	76.257		
700.00	700.00	700.00	700.00	1.43	1.43	100.70	-34.05	180.21	183.40	180.54	2.85	64.248		
800.00	800.00	800.00	800.00	1.65	1.65	100.70	-34.05	180.21	183.40	180.09	3.30	55.507		
900.00	900.00	900.00	900.00	1.88	1.88	100.70	-34.05	180.21	183.40	179.65	3.75	48.860		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	100.70	-34.05	180.21	183.40	179.20	4.20	43.634		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	100.70	-34.05	180.21	183.40	178.75	4.65	39.418		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	100.70	-34.05	180.21	183.40	178.30	5.10	35.945		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	100.70	-34.05	180.21	183.40	177.85	5.55	33.035		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	100.70	-34.05	180.21	183.40	177.40	6.00	30.560		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	100.70	-34.05	180.21	183.40	176.95	6.45	28.430		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	100.70	-34.05	180.21	183.40	176.50	6.90	26.578		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	100.70	-34.05	180.21	183.40	176.05	7.35	24.953		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	100.70	-34.05	180.21	183.40	175.60	7.80	23.515		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	100.70	-34.05	180.21	183.40	175.15	8.25	22.233		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	100.70	-34.05	180.21	183.40	174.70	8.70	21.084		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	100.70	-34.05	180.21	183.40	174.25	9.15	20.048		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	100.70	-34.05	180.21	183.40	173.80	9.60	19.109		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	100.70	-34.05	180.21	183.40	173.35	10.05	18.254		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	100.70	-34.05	180.21	183.40	172.90	10.50	17.472		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	100.70	-34.05	180.21	183.40	172.45	10.95	16.755		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	100.70	-34.05	180.21	183.40	172.00	11.40	16.094		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	100.70	-34.05	180.21	183.40	171.55	11.85	15.483		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	100.70	-34.05	180.21	183.40	171.10	12.29	14.917		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	100.70	-34.05	180.21	183.40	170.65	12.74	14.391		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	100.70	-34.05	180.21	183.40	170.20	13.19	13.900		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	100.70	-34.05	180.21	183.40	169.76	13.64	13.442		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	100.70	-34.05	180.21	183.40	169.31	14.09	13.014		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	100.70	-34.05	180.21	183.40	168.86	14.54	12.611		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	100.70	-34.05	180.21	183.40	168.41	14.99	12.233		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	100.70	-34.05	180.21	183.40	167.96	15.44	11.877		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	100.70	-34.05	180.21	183.40	167.51	15.89	11.541		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	100.70	-34.05	180.21	183.40	167.06	16.34	11.224		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	100.70	-34.05	180.21	183.40	166.61	16.79	10.923		
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	100.70	-34.05	180.21	183.40	166.16	17.24	10.638		
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	100.70	-34.05	180.21	183.40	165.71	17.69	10.368		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	100.70	-34.05	180.21	183.40	165.26	18.14	10.111		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	100.70	-34.05	180.21	183.40	164.81	18.59	9.866		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	100.70	-34.05	180.21	183.40	164.36	19.04	9.633 CC, ES		
4,400.00	4,400.00	4,398.92	4,398.92	9.72	9.72	-114.12	-34.33	180.98	184.59	165.15	19.43	9.498 SF		
4,500.00	4,499.96	4,493.74	4,493.70	9.89	9.90	-114.66	-35.18	183.28	188.17	168.38	19.79	9.510		
4,600.00	4,599.86	4,490.34	4,490.22	10.07	10.08	-115.53	-36.59	187.11	194.17	174.03	20.14	9.642		
4,700.00	4,699.68	4,686.63	4,686.34	10.24	10.27	-116.64	-38.56	192.45	202.64	182.14	20.49	9.888		
4,800.00	4,799.37	4,782.50	4,781.93	10.43	10.46	-117.94	-41.07	199.26	213.62	192.78	20.85	10.246		
4,900.00	4,898.90	4,877.84	4,876.87	10.61	10.65	-119.34	-44.12	207.53	227.18	205.97	21.21	10.713		
5,000.00	4,998.26	4,972.57	4,971.03	10.80	10.85	-120.79	-47.69	217.21	243.33	221.77	21.57	11.283		
5,100.00	5,097.40	5,066.59	5,064.30	11.00	11.05	-122.22	-51.76	228.26	262.11	240.18	21.93	11.954		
5,179.27	5,175.82	5,140.54	5,137.53	11.17	11.21	-123.31	-55.33	237.96	278.86	256.65	22.21	12.553		
5,200.00	5,196.31	5,159.80	5,156.58	11.21	11.26	-123.62	-56.32	240.63	283.50	261.20	22.29	12.717		
5,300.00	5,295.13	5,252.41	5,248.03	11.43	11.47	-124.93	-61.36	254.31	306.84	284.16	22.68	13.530		

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 332H (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:	332H (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							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,400.00	5,393.96	5,349.24	5,343.53	11.65	11.71	-126.06	-66.89	269.33	331.03	307.95	23.08	14.343		
5,500.00	5,492.78	5,446.08	5,439.04	11.88	11.95	-127.03	-72.43	284.34	355.33	331.84	23.49	15.127		
5,600.00	5,591.61	5,542.92	5,534.55	12.12	12.19	-127.88	-77.96	299.35	379.71	355.80	23.91	15.883		
5,700.00	5,690.43	5,639.76	5,630.05	12.37	12.44	-128.63	-83.50	314.37	404.16	379.82	24.33	16.611		
5,800.00	5,789.26	5,736.60	5,725.56	12.61	12.70	-129.29	-89.03	329.38	428.66	403.90	24.76	17.311		
5,900.00	5,888.08	5,833.44	5,821.07	12.87	12.96	-129.88	-94.56	344.40	453.22	428.02	25.20	17.984		
6,000.00	5,986.91	5,930.27	5,916.58	13.13	13.23	-130.41	-100.10	359.41	477.81	452.17	25.65	18.631		
6,100.00	6,085.73	6,027.11	6,012.08	13.39	13.50	-130.89	-105.63	374.43	502.44	476.34	26.10	19.253		
6,200.00	6,184.56	6,123.95	6,107.59	13.66	13.78	-131.32	-111.16	389.44	527.10	500.55	26.55	19.850		
6,300.00	6,283.38	6,220.79	6,203.10	13.93	14.06	-131.72	-116.70	404.45	551.79	524.77	27.02	20.425		
6,400.00	6,382.21	6,317.63	6,298.60	14.21	14.35	-132.08	-122.23	419.47	576.49	549.01	27.48	20.977		
6,500.00	6,481.03	6,414.47	6,394.11	14.49	14.63	-132.41	-127.76	434.48	601.22	573.27	27.95	21.507		
6,600.00	6,579.86	6,511.30	6,489.62	14.77	14.93	-132.71	-133.30	449.50	625.97	597.54	28.43	22.017		
6,700.00	6,678.68	6,608.14	6,585.13	15.06	15.22	-133.00	-138.83	464.51	650.73	621.82	28.91	22.507		
6,800.00	6,777.51	6,704.98	6,680.63	15.35	15.52	-133.26	-144.36	479.52	675.50	646.10	29.40	22.978		
6,900.00	6,876.33	6,801.82	6,776.14	15.64	15.82	-133.50	-149.90	494.54	700.29	670.40	29.89	23.432		
7,000.00	6,975.16	6,898.66	6,871.65	15.94	16.12	-133.73	-155.43	509.55	725.09	694.71	30.38	23.868		
7,100.00	7,073.98	6,995.50	6,967.15	16.24	16.43	-133.94	-160.97	524.57	749.89	719.02	30.88	24.288		
7,200.00	7,172.81	7,092.33	7,062.66	16.54	16.74	-134.14	-166.50	539.58	774.71	743.33	31.38	24.691		
7,300.00	7,271.63	7,189.17	7,158.17	16.84	17.05	-134.32	-172.03	554.59	799.53	767.65	31.88	25.080		
7,400.00	7,370.45	7,286.01	7,253.68	17.15	17.36	-134.50	-177.57	569.61	824.37	791.98	32.39	25.455		
7,500.00	7,469.28	7,382.85	7,349.18	17.46	17.68	-134.66	-183.10	584.62	849.20	816.31	32.89	25.816		
7,600.00	7,568.10	7,479.69	7,444.69	17.77	18.00	-134.81	-188.63	599.64	874.05	840.64	33.41	26.164		
7,700.00	7,666.93	7,576.53	7,540.20	18.08	18.31	-134.96	-194.17	614.65	898.90	864.98	33.92	26.499		
7,800.00	7,765.75	7,673.36	7,635.70	18.39	18.64	-135.10	-199.70	629.66	923.75	889.32	34.44	26.823		
7,900.00	7,864.58	7,760.08	7,721.26	18.71	18.92	-135.26	-203.87	643.11	948.83	913.90	34.93	27.165		
8,000.00	7,963.40	7,830.59	7,790.76	19.02	19.12	-135.83	-199.88	654.04	976.02	940.68	35.35	27.614		
8,100.00	8,062.23	7,900.00	7,858.19	19.34	19.30	-136.86	-187.54	664.64	1,006.02	970.29	35.72	28.161		
8,200.00	8,161.05	7,950.00	7,905.61	19.66	19.41	-137.86	-173.58	672.09	1,039.24	1,003.19	36.05	28.829		
8,300.00	8,259.88	8,013.09	7,963.42	19.98	19.54	-139.39	-150.09	681.18	1,075.98	1,039.63	36.36	29.595		
8,400.00	8,358.70	8,062.18	8,006.43	20.31	19.63	-140.77	-127.45	687.94	1,116.70	1,080.06	36.64	30.480		
8,500.00	8,457.53	8,100.00	8,038.16	20.63	19.69	-141.92	-107.51	692.93	1,161.55	1,124.65	36.90	31.474		
8,528.99	8,486.18	8,117.20	8,052.15	20.73	19.72	-142.48	-97.75	695.13	1,175.30	1,138.33	36.98	31.784		
8,600.00	8,566.42	8,150.00	8,078.00	20.94	19.78	-143.80	-77.98	699.19	1,210.24	1,173.06	37.18	32.551		
8,700.00	8,655.54	8,178.44	8,099.48	21.21	19.82	-145.10	-59.65	702.57	1,261.84	1,224.40	37.45	33.697		
8,800.00	8,754.88	8,200.00	8,115.15	21.47	19.85	-146.20	-45.04	705.03	1,316.33	1,278.62	37.71	34.908		
8,900.00	8,854.41	8,250.00	8,149.31	21.71	19.93	-148.28	-8.96	710.41	1,373.41	1,335.47	37.94	36.199		
9,000.00	8,954.09	8,250.00	8,149.31	21.95	19.93	-148.67	-8.96	710.41	1,432.88	1,394.69	38.19	37.522		
9,100.00	9,053.89	8,300.00	8,180.24	22.17	20.01	-150.76	30.00	715.27	1,494.61	1,456.21	38.40	38.925		
9,200.00	9,153.79	8,300.00	8,180.24	22.38	20.01	-151.16	30.00	715.27	1,558.21	1,519.59	38.62	40.345		
9,300.00	9,253.75	8,326.67	8,195.34	22.57	20.06	-152.46	51.86	717.64	1,623.75	1,584.92	38.83	41.812		
9,408.26	9,362.00	8,350.00	8,207.70	22.77	20.10	60.96	71.55	719.58	1,696.64	1,657.62	39.03	43.473		
9,500.00	9,453.74	8,350.00	8,207.70	22.94	20.10	60.96	71.55	719.58	1,760.34	1,721.13	39.21	44.897		
9,608.26	9,562.00	8,377.68	8,221.33	23.14	20.16	60.05	95.54	721.73	1,837.88	1,798.46	39.42	46.622		
9,650.00	9,603.70	8,400.00	8,231.48	23.20	20.21	55.70	115.36	723.32	1,868.20	1,828.76	39.44	47.366		
9,700.00	9,653.35	8,400.00	8,231.48	23.26	20.21	51.79	115.36	723.32	1,903.00	1,863.59	39.41	48.284		
9,750.00	9,702.30	8,400.00	8,231.48	23.29	20.21	48.32	115.36	723.32	1,936.54	1,897.27	39.26	49.324		
9,800.00	9,750.18	8,400.00	8,231.48	23.30	20.21	45.28	115.36	723.32	1,968.62	1,929.66	38.95	50.536		
9,850.00	9,796.63	8,420.50	8,240.12	23.28	20.26	42.33	133.90	724.68	1,998.70	1,960.23	38.46	51.962		
9,900.00	9,841.30	8,431.01	8,244.29	23.24	20.28	39.94	143.51	725.34	2,026.89	1,989.09	37.81	53.614		
9,950.00	9,883.83	8,450.00	8,251.39	23.19	20.34	37.83	161.09	726.45	2,053.00	2,016.02	36.98	55.521		
10,000.00	9,923.92	8,450.00	8,251.39	23.12	20.34	36.21	161.09	726.45	2,076.70	2,040.68	36.02	57.647		

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 332H (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:	332H (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)						
10,050.00	9,961.26	8,450.00	8,251.39	23.04	20.34	34.83	161.09	726.45	2,098.23	2,063.27	34.96	60.017		
10,100.00	9,995.56	8,476.73	8,260.40	22.95	20.41	33.53	186.21	727.87	2,116.83	2,083.01	33.83	62.579		
10,150.00	10,026.55	8,500.00	8,267.29	22.86	20.49	32.50	208.42	728.95	2,133.11	2,100.44	32.68	65.280		
10,200.00	10,054.01	8,500.00	8,267.29	22.77	20.49	31.77	208.42	728.95	2,146.46	2,114.91	31.55	68.032		
10,250.00	10,077.73	8,500.00	8,267.29	22.67	20.49	31.19	208.42	728.95	2,157.30	2,126.80	30.50	70.725		
10,300.00	10,097.52	8,526.18	8,273.97	22.58	20.58	30.74	233.70	730.00	2,164.98	2,135.32	29.65	73.013		
10,350.00	10,113.24	8,550.00	8,279.06	22.49	20.68	30.48	256.96	730.80	2,170.06	2,141.04	29.02	74.778		
10,400.00	10,124.76	8,550.00	8,279.06	22.41	20.68	30.38	256.96	730.80	2,172.03	2,143.44	28.58	75.992		
10,450.00	10,132.00	8,550.00	8,279.06	22.33	20.68	30.41	256.96	730.80	2,171.38	2,142.95	28.43	76.386		
10,500.00	10,134.90	8,576.83	8,283.63	22.26	20.79	30.65	283.38	731.52	2,167.47	2,138.76	28.72	75.478		
10,508.26	10,134.96	8,578.91	8,283.94	22.25	20.80	30.70	285.44	731.57	2,166.58	2,137.79	28.78	75.270		
10,600.00	10,134.96	8,600.00	8,286.60	22.37	20.91	30.75	306.36	731.99	2,157.66	2,128.59	29.08	74.210		
10,700.00	10,134.96	8,627.73	8,288.94	22.87	21.05	30.79	333.99	732.35	2,151.22	2,121.73	29.49	72.937		
10,800.00	10,134.96	8,650.00	8,289.86	23.48	21.17	30.80	356.23	732.50	2,148.24	2,118.29	29.95	71.723		
10,853.67	10,134.96	8,679.99	8,290.00	23.86	21.35	30.80	386.23	732.52	2,148.00	2,117.67	30.33	70.821		
10,900.00	10,134.96	8,726.32	8,290.00	24.20	21.66	30.80	432.56	732.52	2,148.00	2,117.23	30.78	69.795		
11,000.00	10,134.96	8,826.32	8,290.00	25.02	22.42	30.80	532.56	732.52	2,148.00	2,116.16	31.84	67.465		
11,100.00	10,134.96	8,926.32	8,290.00	25.94	23.32	30.80	632.56	732.52	2,148.00	2,114.98	33.02	65.048		
11,200.00	10,134.96	9,026.32	8,290.00	26.94	24.33	30.80	732.56	732.52	2,148.00	2,113.69	34.31	62.602		
11,300.00	10,134.97	9,126.32	8,290.00	28.02	25.44	30.80	832.56	732.52	2,148.00	2,112.31	35.70	60.171		
11,400.00	10,134.97	9,226.32	8,290.00	29.18	26.62	30.80	932.56	732.52	2,148.00	2,110.84	37.17	57.789		
11,500.00	10,134.97	9,326.32	8,290.00	30.40	27.88	30.80	1,032.56	732.52	2,148.01	2,109.29	38.72	55.481		
11,600.00	10,134.97	9,426.32	8,290.00	31.67	29.20	30.80	1,132.56	732.52	2,148.01	2,107.68	40.33	53.262		
11,700.00	10,134.97	9,526.32	8,290.00	33.00	30.57	30.80	1,232.56	732.52	2,148.01	2,106.01	42.00	51.142		
11,800.00	10,134.97	9,626.32	8,290.00	34.37	31.98	30.80	1,332.56	732.52	2,148.01	2,104.28	43.73	49.125		
11,900.00	10,134.97	9,726.32	8,290.00	35.78	33.44	30.80	1,432.56	732.52	2,148.01	2,102.51	45.50	47.213		
12,000.00	10,134.97	9,826.32	8,290.00	37.23	34.93	30.80	1,532.56	732.52	2,148.01	2,100.70	47.31	45.405		
12,100.00	10,134.97	9,926.32	8,290.00	38.70	36.45	30.80	1,632.56	732.52	2,148.01	2,098.85	49.16	43.698		
12,200.00	10,134.97	10,026.32	8,290.00	40.21	37.99	30.80	1,732.56	732.52	2,148.01	2,096.97	51.04	42.087		
12,300.00	10,134.98	10,126.32	8,290.00	41.74	39.57	30.80	1,832.56	732.52	2,148.01	2,095.06	52.95	40.569		
12,400.00	10,134.98	10,226.32	8,290.00	43.30	41.16	30.80	1,932.56	732.52	2,148.01	2,093.13	54.88	39.137		
12,500.00	10,134.98	10,326.32	8,290.00	44.87	42.77	30.80	2,032.56	732.52	2,148.01	2,091.17	56.84	37.788		
12,600.00	10,134.98	10,426.32	8,290.00	46.46	44.40	30.80	2,132.56	732.52	2,148.01	2,089.19	58.82	36.515		
12,700.00	10,134.98	10,526.32	8,290.00	48.07	46.04	30.80	2,232.56	732.52	2,148.01	2,087.19	60.83	35.315		
12,800.00	10,134.98	10,626.32	8,290.00	49.70	47.69	30.80	2,332.56	732.52	2,148.01	2,085.17	62.84	34.181		
12,900.00	10,134.98	10,726.32	8,290.00	51.33	49.36	30.80	2,432.56	732.52	2,148.01	2,083.14	64.88	33.110		
13,000.00	10,134.98	10,826.32	8,290.00	52.98	51.04	30.80	2,532.56	732.52	2,148.01	2,081.09	66.92	32.097		
13,100.00	10,134.98	10,926.32	8,290.00	54.65	52.73	30.80	2,632.56	732.52	2,148.01	2,079.03	68.98	31.138		
13,200.00	10,134.98	11,026.32	8,290.00	56.32	54.43	30.80	2,732.56	732.52	2,148.01	2,076.96	71.06	30.230		
13,300.00	10,134.99	11,126.32	8,290.00	58.00	56.13	30.80	2,832.56	732.52	2,148.01	2,074.87	73.14	29.369		
13,400.00	10,134.99	11,226.32	8,290.00	59.69	57.84	30.80	2,932.56	732.52	2,148.01	2,072.78	75.23	28.552		
13,500.00	10,134.99	11,326.32	8,290.00	61.38	59.56	30.80	3,032.56	732.52	2,148.01	2,070.68	77.34	27.775		
13,600.00	10,134.99	11,426.32	8,290.00	63.09	61.29	30.80	3,132.56	732.52	2,148.02	2,068.57	79.45	27.037		
13,700.00	10,134.99	11,526.32	8,290.00	64.80	63.02	30.80	3,232.56	732.52	2,148.02	2,066.45	81.57	26.335		
13,800.00	10,134.99	11,626.32	8,290.00	66.52	64.76	30.80	3,332.56	732.52	2,148.02	2,064.33	83.69	25.666		
13,900.00	10,134.99	11,726.32	8,290.00	68.24	66.50	30.80	3,432.56	732.52	2,148.02	2,062.19	85.82	25.028		
14,000.00	10,134.99	11,826.32	8,290.00	69.97	68.25	30.80	3,532.56	732.52	2,148.02	2,060.05	87.96	24.420		
14,100.00	10,134.99	11,926.32	8,290.00	71.70	70.00	30.80	3,632.56	732.52	2,148.02	2,057.91	90.11	23.839		
14,200.00	10,134.99	12,026.32	8,290.00	73.44	71.75	30.80	3,732.56	732.52	2,148.02	2,055.76	92.26	23.283		
14,300.00	10,135.00	12,126.32	8,290.00	75.18	73.51	30.80	3,832.56	732.52	2,148.02	2,053.61	94.41	22.752		
14,400.00	10,135.00	12,226.32	8,290.00	76.93	75.27	30.80	3,932.56	732.52	2,148.02	2,051.45	96.57	22.243		
14,500.00	10,135.00	12,326.32	8,290.00	78.67	77.03	30.80	4,032.56	732.52	2,148.02	2,049.28	98.74	21.755		

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



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (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:	332H (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		
14,600.00	10,135.00	12,426.32	8,290.00	80.43	78.80	30.80	4,132.56	732.52	2,148.02	2,047.12	100.90	21.288		
14,700.00	10,135.00	12,526.32	8,290.00	82.18	80.57	30.80	4,232.56	732.52	2,148.02	2,044.95	103.07	20.839		
14,800.00	10,135.00	12,626.32	8,290.00	83.94	82.34	30.80	4,332.56	732.52	2,148.02	2,042.77	105.25	20.409		
14,829.84	10,135.00	12,656.16	8,290.00	84.47	82.87	30.80	4,362.40	732.52	2,148.02	2,042.12	105.90	20.283		



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (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:	332H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 263H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)						
0.00	0.00	0.00	0.00	0.00	0.00	77.18	40.94	179.98	184.58					
100.00	100.00	100.00	100.00	0.08	0.08	77.18	40.94	179.98	184.58	184.42	0.16	1,173.141		
200.00	200.00	200.00	200.00	0.30	0.30	77.18	40.94	179.98	184.58	183.97	0.61	304.148		
300.00	300.00	300.00	300.00	0.53	0.53	77.18	40.94	179.98	184.58	183.52	1.06	174.723		
400.00	400.00	400.00	400.00	0.75	0.75	77.18	40.94	179.98	184.58	183.07	1.51	122.567		
500.00	500.00	500.00	500.00	0.98	0.98	77.18	40.94	179.98	184.58	182.62	1.96	94.391		
600.00	600.00	600.00	600.00	1.20	1.20	77.18	40.94	179.98	184.58	182.17	2.40	76.748		
700.00	700.00	700.00	700.00	1.43	1.43	77.18	40.94	179.98	184.58	181.72	2.85	64.661		
800.00	800.00	800.00	800.00	1.65	1.65	77.18	40.94	179.98	184.58	181.27	3.30	55.864		
900.00	900.00	900.00	900.00	1.88	1.88	77.18	40.94	179.98	184.58	180.82	3.75	49.174		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	77.18	40.94	179.98	184.58	180.37	4.20	43.914		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	77.18	40.94	179.98	184.58	179.93	4.65	39.672		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	77.18	40.94	179.98	184.58	179.48	5.10	36.176		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	77.18	40.94	179.98	184.58	179.03	5.55	33.247		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	77.18	40.94	179.98	184.58	178.58	6.00	30.757		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	77.18	40.94	179.98	184.58	178.13	6.45	28.613		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	77.18	40.94	179.98	184.58	177.68	6.90	26.749		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	77.18	40.94	179.98	184.58	177.23	7.35	25.113		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	77.18	40.94	179.98	184.58	176.78	7.80	23.666		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	77.18	40.94	179.98	184.58	176.33	8.25	22.376		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	77.18	40.94	179.98	184.58	175.88	8.70	21.220		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	77.18	40.94	179.98	184.58	175.43	9.15	20.177		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	77.18	40.94	179.98	184.58	174.98	9.60	19.232		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	77.18	40.94	179.98	184.58	174.53	10.05	18.371		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	77.18	40.94	179.98	184.58	174.08	10.50	17.585		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	77.18	40.94	179.98	184.58	173.63	10.95	16.862		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	77.18	40.94	179.98	184.58	173.18	11.40	16.197		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	77.18	40.94	179.98	184.58	172.73	11.85	15.583		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	77.18	40.94	179.98	184.58	172.28	12.29	15.013		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	77.18	40.94	179.98	184.58	171.83	12.74	14.483		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	77.18	40.94	179.98	184.58	171.38	13.19	13.990		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	77.18	40.94	179.98	184.58	170.93	13.64	13.529		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	77.18	40.94	179.98	184.58	170.49	14.09	13.097		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	77.18	40.94	179.98	184.58	170.04	14.54	12.692		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	77.18	40.94	179.98	184.58	169.59	14.99	12.312		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	77.18	40.94	179.98	184.58	169.14	15.44	11.953		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	77.18	40.94	179.98	184.58	168.69	15.89	11.615		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	77.18	40.94	179.98	184.58	168.24	16.34	11.296		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	77.18	40.94	179.98	184.58	167.79	16.79	10.993		
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	77.18	40.94	179.98	184.58	167.34	17.24	10.707		
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	77.18	40.94	179.98	184.58	166.89	17.69	10.435		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	77.18	40.94	179.98	184.58	166.44	18.14	10.176		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	77.18	40.94	179.98	184.58	165.99	18.59	9.930		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	77.18	40.94	179.98	184.58	165.54	19.04	9.695 CC, ES		
4,400.00	4,400.00	4,400.00	4,400.00	9.74	9.74	-137.62	40.94	179.98	185.22	165.76	19.46	9.519		
4,500.00	4,499.96	4,499.96	4,499.96	9.89	9.97	-138.15	40.94	179.98	187.16	167.31	19.85	9.429		
4,600.00	4,599.86	4,599.86	4,599.86	10.07	10.19	-139.00	40.94	179.98	190.44	170.20	20.24	9.408		
4,700.00	4,699.68	4,699.68	4,699.68	10.24	10.42	-140.15	40.94	179.98	195.09	174.46	20.63	9.457		
4,800.00	4,799.37	4,799.37	4,799.37	10.43	10.64	-141.54	40.94	179.98	201.18	180.17	21.01	9.574		
4,900.00	4,898.90	4,898.90	4,898.90	10.61	10.86	-143.13	40.94	179.98	208.78	187.39	21.40	9.758		
5,000.00	4,998.26	4,998.26	4,998.26	10.80	11.09	-144.86	40.94	179.98	217.96	196.19	21.77	10.011		
5,100.00	5,097.40	5,095.39	5,095.38	11.00	11.28	-146.47	40.47	180.62	229.21	207.09	22.12	10.362		

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 332H (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:	332H (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			Minimum Separation			Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,179.27	5,175.82	5,172.15	5,172.13	11.17	11.42	-147.54	39.42	182.07	239.91	217.53	22.38	10.721		
5,200.00	5,196.31	5,192.20	5,192.17	11.21	11.46	-147.80	39.05	182.59	242.93	220.48	22.45	10.820		
5,300.00	5,295.13	5,288.84	5,288.72	11.43	11.64	-148.78	36.67	185.88	258.06	235.25	22.82	11.310		
5,400.00	5,393.96	5,385.33	5,385.04	11.65	11.82	-149.36	33.35	190.47	274.07	250.88	23.19	11.819		
5,500.00	5,492.78	5,481.60	5,481.04	11.88	12.00	-149.59	29.08	196.37	290.90	267.33	23.57	12.343		
5,600.00	5,591.61	5,577.62	5,576.64	12.12	12.18	-149.52	23.88	203.54	308.52	284.56	23.95	12.879		
5,700.00	5,690.43	5,673.33	5,671.78	12.37	12.37	-149.22	17.77	211.99	326.94	302.59	24.35	13.427		
5,800.00	5,789.26	5,768.66	5,766.36	12.61	12.57	-148.71	10.75	221.68	346.18	321.42	24.75	13.986		
5,900.00	5,888.08	5,863.59	5,860.32	12.87	12.77	-148.03	2.85	232.60	366.26	341.09	25.16	14.555		
6,000.00	5,986.91	5,958.05	5,953.59	13.13	12.98	-147.23	-5.92	244.71	387.22	361.63	25.59	15.134		
6,100.00	6,085.73	6,052.00	6,046.09	13.39	13.19	-146.32	-15.54	257.99	409.09	383.08	26.02	15.724		
6,200.00	6,184.56	6,148.73	6,141.17	13.66	13.42	-145.37	-26.00	272.44	431.60	405.14	26.47	16.308		
6,300.00	6,283.38	6,245.92	6,236.69	13.93	13.67	-144.50	-36.52	286.98	454.22	427.30	26.92	16.870		
6,400.00	6,382.21	6,343.11	6,332.21	14.21	13.91	-143.72	-47.05	301.51	476.93	449.54	27.39	17.413		
6,500.00	6,481.03	6,440.30	6,427.73	14.49	14.17	-143.00	-57.57	316.05	499.72	471.85	27.86	17.935		
6,600.00	6,579.86	6,537.49	6,523.25	14.77	14.43	-142.35	-68.09	330.58	522.57	494.23	28.34	18.437		
6,700.00	6,678.68	6,634.88	6,618.76	15.06	14.70	-141.76	-78.61	345.11	545.48	516.65	28.83	18.921		
6,800.00	6,777.51	6,731.87	6,714.28	15.35	14.97	-141.21	-89.13	359.65	568.45	539.12	29.32	19.386		
6,900.00	6,876.33	6,829.06	6,809.80	15.64	15.25	-140.70	-99.66	374.18	591.46	561.63	29.82	19.833		
7,000.00	6,975.16	6,926.24	6,905.32	15.94	15.54	-140.23	-110.18	388.71	614.51	584.18	30.33	20.263		
7,100.00	7,073.98	7,023.43	7,000.84	16.24	15.83	-139.80	-120.70	403.25	637.59	606.76	30.84	20.676		
7,200.00	7,172.81	7,120.62	7,096.35	16.54	16.12	-139.40	-131.22	417.78	660.71	629.36	31.35	21.074		
7,300.00	7,271.63	7,217.81	7,191.87	16.84	16.42	-139.02	-141.75	432.31	683.86	651.99	31.87	21.456		
7,400.00	7,370.45	7,315.00	7,287.39	17.15	16.72	-138.67	-152.27	446.85	707.03	674.64	32.40	21.824		
7,500.00	7,469.28	7,412.19	7,382.91	17.46	17.03	-138.34	-162.79	461.38	730.23	697.31	32.93	22.178		
7,600.00	7,568.10	7,509.38	7,478.43	17.77	17.34	-138.03	-173.31	475.92	753.45	719.99	33.46	22.519		
7,700.00	7,666.93	7,606.57	7,573.95	18.08	17.66	-137.74	-183.83	490.45	776.69	742.69	34.00	22.846		
7,800.00	7,765.75	7,703.75	7,669.46	18.39	17.97	-137.46	-194.36	504.98	799.95	765.41	34.54	23.162		
7,900.00	7,864.58	7,800.94	7,764.98	18.71	18.29	-137.21	-204.88	519.52	823.22	788.14	35.08	23.466		
8,000.00	7,963.40	7,898.13	7,860.50	19.02	18.62	-136.96	-215.40	534.05	846.51	810.88	35.63	23.759		
8,100.00	8,062.23	7,995.32	7,956.02	19.34	18.94	-136.73	-225.92	548.58	869.81	833.63	36.18	24.041		
8,200.00	8,161.05	8,092.51	8,051.54	19.66	19.27	-136.51	-236.44	563.12	893.12	856.39	36.73	24.313		
8,300.00	8,259.88	8,189.70	8,147.05	19.98	19.61	-136.30	-246.97	577.65	916.45	879.16	37.29	24.575		
8,400.00	8,358.70	8,286.89	8,242.57	20.31	19.94	-136.10	-257.49	592.18	939.79	901.93	37.85	24.828		
8,500.00	8,457.53	8,384.08	8,338.09	20.63	20.28	-135.92	-268.01	606.72	963.13	924.72	38.42	25.072		
8,528.99	8,486.18	8,412.25	8,365.78	20.73	20.38	-135.86	-271.06	610.93	969.90	931.32	38.58	25.141		
8,600.00	8,586.42	8,481.33	8,433.67	20.94	20.62	-135.83	-278.54	621.26	986.18	947.18	39.00	25.288		
8,700.00	8,685.54	8,578.80	8,529.47	21.21	20.96	-135.73	-289.09	635.84	1,008.08	968.51	39.57	25.477		
8,800.00	8,784.88	8,676.48	8,625.47	21.47	21.30	-135.57	-299.67	650.44	1,028.78	988.65	40.13	25.636		
8,900.00	8,884.41	8,766.20	8,733.44	21.71	21.64	-135.32	-311.10	666.23	1,047.82	1,007.14	40.69	25.753		
9,000.00	8,984.09	8,898.94	8,844.75	21.95	21.97	-135.07	-321.58	680.72	1,064.38	1,023.15	41.23	25.818		
9,100.00	9,083.89	9,012.48	8,957.18	22.17	22.28	-134.82	-330.85	693.51	1,078.40	1,036.65	41.74	25.834		
9,200.00	9,183.79	9,126.70	9,070.58	22.38	22.58	-134.58	-338.85	704.56	1,089.86	1,047.62	42.24	25.801		
9,300.00	9,283.75	9,241.49	9,184.80	22.57	22.87	-134.33	-345.55	713.82	1,098.75	1,056.03	42.72	25.722		
9,408.26	9,382.00	9,366.26	9,309.19	22.77	23.16	80.57	-351.31	721.78	1,105.45	1,062.24	43.21	25.586		
9,500.00	9,481.74	9,472.29	9,415.03	22.94	23.40	80.80	-354.96	726.81	1,109.24	1,065.63	43.61	25.438		
9,608.26	9,581.00	9,597.66	9,540.31	23.14	23.65	80.98	-357.79	730.72	1,112.19	1,068.12	44.07	25.237		
9,650.00	9,680.70	9,645.99	9,588.62	23.20	23.74	81.06	-358.45	731.63	1,112.64	1,068.40	44.23	25.154		
9,700.00	9,683.35	9,703.53	9,646.15	23.26	23.85	81.47	-358.92	732.29	1,112.25	1,067.86	44.40	25.052		
9,750.00	9,782.30	9,759.67	9,702.30	23.29	23.95	82.19	-359.06	732.48	1,110.94	1,066.41	44.52	24.951		
9,800.00	9,780.18	9,807.56	9,750.18	23.30	24.04	83.08	-359.06	732.48	1,109.02	1,064.41	44.61	24.860		
9,850.00	9,796.63	9,854.01	9,796.63	23.28	24.12	84.18	-359.06	732.48	1,106.82	1,062.14	44.68	24.773		

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 332H (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:	332H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 263H (SIMOPS) - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/S (usft)	+E/W (usft)							
9,900.00	9,841.30	9,898.67	9,841.30	23.24	24.21	85.44	-359.06	732.48	1,104.55	1,059.83	44.72	24.697			
9,950.00	9,883.83	9,941.21	9,883.83	23.19	24.29	86.81	-359.06	732.48	1,102.48	1,057.72	44.75	24.635			
10,000.00	9,923.92	9,979.43	9,922.05	23.12	24.36	88.13	-358.56	732.48	1,100.89	1,056.14	44.75	24.599			
10,050.00	9,961.26	10,017.20	9,959.70	23.04	24.41	89.41	-355.74	732.48	1,100.07	1,055.34	44.73	24.592			
10,073.38	9,977.69	10,035.32	9,977.69	23.00	24.44	90.00	-353.50	732.48	1,099.98	1,055.26	44.72	24.599			
10,100.00	9,995.56	10,056.37	9,998.48	22.95	24.46	90.67	-350.20	732.48	1,100.11	1,055.41	44.69	24.614			
10,150.00	10,026.55	10,097.26	10,038.44	22.86	24.50	91.94	-341.61	732.48	1,101.05	1,056.41	44.64	24.665			
10,200.00	10,054.01	10,140.21	10,079.65	22.77	24.53	93.19	-329.53	732.48	1,102.95	1,058.38	44.57	24.746			
10,250.00	10,077.73	10,185.71	10,122.19	22.67	24.55	94.45	-313.42	732.48	1,105.84	1,061.34	44.49	24.853			
10,300.00	10,097.52	10,234.38	10,166.12	22.58	24.55	95.72	-292.51	732.48	1,109.71	1,065.30	44.41	24.986			
10,350.00	10,113.24	10,287.01	10,211.44	22.49	24.54	97.02	-265.78	732.48	1,114.54	1,070.21	44.33	25.141			
10,400.00	10,124.76	10,344.67	10,258.05	22.41	24.52	98.37	-231.88	732.48	1,120.25	1,076.00	44.25	25.315			
10,450.00	10,132.00	10,408.74	10,305.54	22.33	24.47	99.80	-188.93	732.48	1,126.73	1,082.54	44.18	25.501			
10,500.00	10,134.90	10,481.01	10,352.98	22.26	24.41	101.33	-134.47	732.48	1,133.76	1,089.63	44.13	25.690			
10,508.26	10,134.96	10,493.88	10,360.69	22.25	24.40	101.60	-124.17	732.48	1,134.96	1,090.83	44.13	25.721			
10,600.00	10,134.96	10,665.92	10,439.99	22.37	24.25	105.50	27.78	732.48	1,146.29	1,102.28	44.01	26.049			
10,700.00	10,134.96	10,870.57	10,471.25	22.87	24.28	107.00	228.99	732.49	1,150.24	1,105.61	44.64	25.769			
10,800.00	10,134.96	10,970.57	10,472.31	23.48	24.56	107.05	328.98	732.49	1,150.55	1,104.99	45.57	25.250			
10,900.00	10,134.96	11,070.56	10,473.36	24.20	25.06	107.10	428.97	732.49	1,150.86	1,104.13	46.73	24.627			
11,000.00	10,134.96	11,170.55	10,474.42	25.02	25.72	107.15	528.96	732.49	1,151.17	1,103.05	48.13	23.920			
11,100.00	10,134.96	11,270.55	10,475.48	25.94	26.50	107.20	628.95	732.49	1,151.49	1,101.76	49.73	23.156			
11,200.00	10,134.96	11,370.54	10,476.53	26.94	27.39	107.25	728.94	732.49	1,151.80	1,100.28	51.52	22.357			
11,300.00	10,134.97	11,470.54	10,477.59	28.02	28.36	107.30	828.93	732.49	1,152.11	1,098.63	53.48	21.543			
11,400.00	10,134.97	11,570.53	10,478.65	29.18	29.42	107.35	928.92	732.49	1,152.43	1,096.83	55.59	20.730			
11,500.00	10,134.97	11,670.53	10,479.70	30.40	30.55	107.40	1,028.90	732.49	1,152.74	1,094.90	57.84	19.929			
11,600.00	10,134.97	11,770.52	10,480.76	31.67	31.74	107.45	1,128.89	732.49	1,153.06	1,092.85	60.21	19.151			
11,700.00	10,134.97	11,870.52	10,481.82	33.00	32.99	107.50	1,228.88	732.49	1,153.38	1,090.69	62.68	18.401			
11,800.00	10,134.97	11,970.51	10,482.87	34.37	34.29	107.55	1,328.87	732.50	1,153.69	1,088.45	65.25	17.682			
11,900.00	10,134.97	12,070.50	10,483.93	35.78	35.63	107.60	1,428.86	732.50	1,154.01	1,086.12	67.90	16.997			
12,000.00	10,134.97	12,170.50	10,484.99	37.23	37.02	107.65	1,528.85	732.50	1,154.33	1,083.71	70.62	16.346			
12,100.00	10,134.97	12,270.49	10,486.04	38.70	38.44	107.70	1,628.84	732.50	1,154.65	1,081.25	73.40	15.730			
12,200.00	10,134.97	12,370.49	10,487.10	40.21	39.89	107.75	1,728.83	732.50	1,154.97	1,078.73	76.25	15.148			
12,300.00	10,134.98	12,470.48	10,488.16	41.74	41.37	107.80	1,828.82	732.50	1,155.30	1,076.15	79.14	14.598			
12,400.00	10,134.98	12,570.48	10,489.21	43.30	42.88	107.85	1,928.80	732.50	1,155.62	1,073.54	82.08	14.079			
12,500.00	10,134.98	12,670.47	10,490.27	44.87	44.41	107.90	2,028.79	732.50	1,155.94	1,070.88	85.06	13.589			
12,600.00	10,134.98	12,770.47	10,491.33	46.46	45.97	107.95	2,128.78	732.50	1,156.27	1,068.19	88.08	13.128			
12,700.00	10,134.98	12,870.46	10,492.38	48.07	47.54	108.00	2,228.77	732.50	1,156.60	1,065.47	91.13	12.692			
12,800.00	10,134.98	12,970.45	10,493.44	49.70	49.13	108.05	2,328.76	732.50	1,156.92	1,062.72	94.21	12.281			
12,900.00	10,134.98	13,070.45	10,494.50	51.33	50.74	108.10	2,428.75	732.50	1,157.25	1,059.94	97.31	11.893			
13,000.00	10,134.98	13,170.44	10,495.55	52.98	52.36	108.15	2,528.74	732.51	1,157.58	1,057.14	100.44	11.526			
13,100.00	10,134.98	13,270.44	10,496.61	54.65	53.99	108.20	2,628.73	732.51	1,157.91	1,054.32	103.58	11.178			
13,200.00	10,134.98	13,370.43	10,497.67	56.32	55.64	108.25	2,728.72	732.51	1,158.24	1,051.49	106.75	10.850			
13,300.00	10,134.99	13,470.43	10,498.72	58.00	57.29	108.30	2,828.70	732.51	1,158.57	1,048.63	109.94	10.539			
13,400.00	10,134.99	13,570.42	10,499.78	59.69	58.96	108.35	2,928.69	732.51	1,158.90	1,045.76	113.14	10.243			
13,500.00	10,134.99	13,670.42	10,500.84	61.38	60.63	108.40	3,028.68	732.51	1,159.23	1,042.88	116.35	9.963			
13,600.00	10,134.99	13,770.41	10,501.89	63.09	62.32	108.45	3,128.67	732.51	1,159.57	1,039.99	119.58	9.697			
13,700.00	10,134.99	13,870.40	10,502.95	64.80	64.01	108.50	3,228.66	732.51	1,159.90	1,037.08	122.82	9.444			
13,800.00	10,134.99	13,970.40	10,504.01	66.52	65.71	108.55	3,328.65	732.51	1,160.24	1,034.17	126.07	9.203			
13,900.00	10,134.99	14,070.39	10,505.06	68.24	67.41	108.59	3,428.64	732.51	1,160.57	1,031.25	129.33	8.974			
14,000.00	10,134.99	14,170.39	10,506.12	69.97	69.12	108.64	3,528.63	732.51	1,160.91	1,028.31	132.60	8.755			
14,100.00	10,134.99	14,270.38	10,507.18	71.70	70.84	108.69	3,628.61	732.52	1,161.25	1,025.38	135.87	8.547			
14,200.00	10,134.99	14,370.38	10,508.23	73.44	72.56	108.74	3,728.60	732.52	1,161.59	1,022.43	139.16	8.347			

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

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (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:	332H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 263H (SIMOPS) - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	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)			
14,300.00	10,135.00	14,470.37	10,509.29	75.18	74.29	108.79	3,828.59	732.52	1,161.93	1,019.48	142.45	8.157	
14,400.00	10,135.00	14,570.37	10,510.35	76.93	76.02	108.84	3,928.58	732.52	1,162.27	1,016.52	145.75	7.975	
14,500.00	10,135.00	14,670.36	10,511.40	78.67	77.76	108.89	4,028.57	732.52	1,162.61	1,013.56	149.05	7.800	
14,600.00	10,135.00	14,770.35	10,512.46	80.43	79.50	108.94	4,128.56	732.52	1,162.95	1,010.60	152.36	7.633	
14,700.00	10,135.00	14,870.35	10,513.52	82.18	81.24	108.99	4,228.55	732.52	1,163.30	1,007.63	155.67	7.473	
14,800.00	10,135.00	14,970.34	10,514.57	83.94	82.99	109.04	4,328.54	732.52	1,163.64	1,004.65	158.99	7.319	
14,829.84	10,135.00	15,000.18	10,514.89	84.47	83.51	109.05	4,358.37	732.52	1,163.74	1,003.77	159.98	7.275 SF	



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (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:	332H (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)						
0.00	0.00	0.00	0.00	0.00	0.00	84.94	15.94	180.06	180.76					
100.00	100.00	100.00	100.00	0.08	0.08	84.94	15.94	180.06	180.76	180.61	0.16	1,148.904		
200.00	200.00	200.00	200.00	0.30	0.30	84.94	15.94	180.06	180.76	180.16	0.61	297.864		
300.00	300.00	300.00	300.00	0.53	0.53	84.94	15.94	180.06	180.76	179.71	1.06	171.114		
400.00	400.00	400.00	400.00	0.75	0.75	84.94	15.94	180.06	180.76	179.26	1.51	120.035		
500.00	500.00	500.00	500.00	0.98	0.98	84.94	15.94	180.06	180.76	178.81	1.96	92.441		
600.00	600.00	600.00	600.00	1.20	1.20	84.94	15.94	180.06	180.76	178.36	2.40	75.162		
700.00	700.00	700.00	700.00	1.43	1.43	84.94	15.94	180.06	180.76	177.91	2.85	63.325		
800.00	800.00	800.00	800.00	1.65	1.65	84.94	15.94	180.06	180.76	177.46	3.30	54.710		
900.00	900.00	900.00	900.00	1.88	1.88	84.94	15.94	180.06	180.76	177.01	3.75	48.158		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	84.94	15.94	180.06	180.76	176.56	4.20	43.007		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	84.94	15.94	180.06	180.76	176.11	4.65	38.852		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	84.94	15.94	180.06	180.76	175.66	5.10	35.429		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	84.94	15.94	180.06	180.76	175.21	5.55	32.560		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	84.94	15.94	180.06	180.76	174.76	6.00	30.121		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	84.94	15.94	180.06	180.76	174.31	6.45	28.022		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	84.94	15.94	180.06	180.76	173.86	6.90	26.197		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	84.94	15.94	180.06	180.76	173.41	7.35	24.594		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	84.94	15.94	180.06	180.76	172.97	7.80	23.177		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	84.94	15.94	180.06	180.76	172.52	8.25	21.914		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	84.94	15.94	180.06	180.76	172.07	8.70	20.781		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	84.94	15.94	180.06	180.76	171.62	9.15	19.760		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	84.94	15.94	180.06	180.76	171.17	9.60	18.835		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	84.94	15.94	180.06	180.76	170.72	10.05	17.992		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	84.94	15.94	180.06	180.76	170.27	10.50	17.221		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	84.94	15.94	180.06	180.76	169.82	10.95	16.514		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	84.94	15.94	180.06	180.76	169.37	11.40	15.863		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	84.94	15.94	180.06	180.76	168.92	11.85	15.261		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	84.94	15.94	180.06	180.76	168.47	12.29	14.703		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	84.94	15.94	180.06	180.76	168.02	12.74	14.184		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	84.94	15.94	180.06	180.76	167.57	13.19	13.701		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	84.94	15.94	180.06	180.76	167.12	13.64	13.249		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	84.94	15.94	180.06	180.76	166.67	14.09	12.827		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	84.94	15.94	180.06	180.76	166.22	14.54	12.430		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	84.94	15.94	180.06	180.76	165.77	14.99	12.057		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	84.94	15.94	180.06	180.76	165.32	15.44	11.706		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	84.94	15.94	180.06	180.76	164.87	15.89	11.375		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	84.94	15.94	180.06	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	180.06	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	180.06	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	180.06	180.76	163.08	17.69	10.219		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	84.94	15.94	180.06	180.76	162.63	18.14	9.966		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	84.94	15.94	180.06	180.76	162.18	18.59	9.725		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	84.94	15.94	180.06	180.76	161.73	19.04	9.495 CC		
4,400.00	4,400.00	4,401.15	4,401.14	9.72	9.72	-129.64	15.08	179.81	181.00	161.57	19.43	9.315 ES		
4,500.00	4,499.96	4,502.29	4,502.25	9.89	9.89	-129.49	12.51	179.07	181.72	161.95	19.77	9.192		
4,600.00	4,599.86	4,603.42	4,603.28	10.07	10.06	-129.24	8.22	177.84	182.93	162.82	20.11	9.096		
4,700.00	4,699.68	4,704.54	4,704.20	10.24	10.24	-128.90	2.22	176.12	184.61	164.16	20.45	9.026		
4,800.00	4,799.37	4,805.57	4,804.91	10.43	10.42	-128.47	-5.48	173.91	186.79	165.99	20.80	8.980		
4,900.00	4,898.90	4,905.52	4,904.49	10.61	10.59	-128.23	-13.86	171.50	189.80	168.65	21.15	8.973		
5,000.00	4,998.26	5,005.43	5,004.02	10.80	10.78	-128.40	-22.23	169.10	193.88	172.37	21.51	9.015		
5,100.00	5,097.40	5,105.28	5,103.48	11.00	10.97	-128.95	-30.59	166.69	199.06	177.19	21.87	9.103		

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 332H (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:	332H (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		
5,179.27	5,175.82	5,184.35	5,182.26	11.17	11.12	-129.83	-37.22	164.79	203.97	181.81	22.15	9.206		
5,200.00	5,196.31	5,205.03	5,202.85	11.21	11.16	-129.84	-38.95	164.29	205.35	183.11	22.24	9.235		
5,300.00	5,295.13	5,304.74	5,302.18	11.43	11.35	-130.82	-47.30	161.89	212.04	189.42	22.63	9.371		
5,400.00	5,393.96	5,404.45	5,401.51	11.65	11.55	-131.75	-55.66	159.49	218.80	195.77	23.03	9.502		
5,500.00	5,492.78	5,504.16	5,500.85	11.88	11.75	-132.62	-64.01	157.09	225.60	202.17	23.43	9.628		
5,600.00	5,591.61	5,603.87	5,600.18	12.12	11.96	-133.43	-72.37	154.69	232.46	208.62	23.84	9.749		
5,700.00	5,690.43	5,703.58	5,699.51	12.37	12.17	-134.20	-80.72	152.29	239.36	215.10	24.26	9.865		
5,800.00	5,789.26	5,803.30	5,798.84	12.61	12.38	-134.93	-89.07	149.89	246.30	221.62	24.69	9.977		
5,900.00	5,888.08	5,903.01	5,898.17	12.87	12.59	-135.62	-97.43	147.49	253.28	228.17	25.11	10.085		
6,000.00	5,986.91	6,002.72	5,997.51	13.13	12.81	-136.26	-105.78	145.09	260.29	234.74	25.55	10.189		
6,100.00	6,085.73	6,102.43	6,096.84	13.39	13.02	-136.88	-114.14	142.69	267.34	241.35	25.98	10.288		
6,200.00	6,184.56	6,202.14	6,196.17	13.66	13.24	-137.46	-122.49	140.29	274.41	247.98	26.43	10.384		
6,300.00	6,283.38	6,301.85	6,295.50	13.93	13.47	-138.02	-130.85	137.89	281.51	254.64	26.87	10.477		
6,400.00	6,382.21	6,401.56	6,394.83	14.21	13.69	-138.55	-139.20	135.49	288.63	261.32	27.32	10.566		
6,500.00	6,481.03	6,501.28	6,494.17	14.49	13.92	-139.05	-147.55	133.09	295.78	268.01	27.77	10.651		
6,600.00	6,579.86	6,600.99	6,593.50	14.77	14.14	-139.53	-155.91	130.69	302.95	274.73	28.22	10.734		
6,700.00	6,678.68	6,700.70	6,692.83	15.06	14.37	-139.98	-164.26	128.29	310.14	281.46	28.68	10.814		
6,800.00	6,777.51	6,800.41	6,792.16	15.35	14.60	-140.42	-172.62	125.89	317.35	288.21	29.14	10.891		
6,900.00	6,876.33	6,900.12	6,891.49	15.64	14.84	-140.83	-180.97	123.49	324.58	294.97	29.60	10.965		
7,000.00	6,975.16	6,999.83	6,990.82	15.94	15.07	-141.23	-189.32	121.09	331.82	301.75	30.07	11.036		
7,100.00	7,073.98	7,099.54	7,090.16	16.24	15.31	-141.61	-197.68	118.69	339.08	308.54	30.53	11.106		
7,200.00	7,172.81	7,199.26	7,189.49	16.54	15.54	-141.98	-206.03	116.29	346.35	315.35	31.00	11.172		
7,300.00	7,271.63	7,298.97	7,288.82	16.84	15.78	-142.33	-214.39	113.89	353.63	322.16	31.47	11.237		
7,400.00	7,370.45	7,398.68	7,388.15	17.15	16.02	-142.66	-222.74	111.49	360.93	328.99	31.94	11.299		
7,500.00	7,469.28	7,498.39	7,487.48	17.46	16.26	-142.99	-231.10	109.09	368.24	335.82	32.42	11.360		
7,600.00	7,568.10	7,598.10	7,586.82	17.77	16.50	-143.30	-239.45	106.69	375.56	342.67	32.89	11.418		
7,700.00	7,666.93	7,697.81	7,686.15	18.08	16.75	-143.59	-247.80	104.29	382.89	349.52	33.37	11.474		
7,800.00	7,765.75	7,797.53	7,785.48	18.39	16.99	-143.88	-256.16	101.89	390.23	356.39	33.85	11.529		
7,900.00	7,864.58	7,897.24	7,884.81	18.71	17.23	-144.16	-264.51	99.49	397.58	363.26	34.33	11.582		
8,000.00	7,963.40	7,996.95	7,984.14	19.02	17.48	-144.42	-272.87	97.09	404.94	370.13	34.81	11.634		
8,100.00	8,062.23	8,096.66	8,083.48	19.34	17.73	-144.68	-281.22	94.69	412.31	377.02	35.29	11.683		
8,200.00	8,161.05	8,196.37	8,182.81	19.66	17.98	-144.93	-289.58	92.29	419.69	383.91	35.77	11.732		
8,300.00	8,259.88	8,296.08	8,282.14	19.98	18.22	-145.17	-297.93	89.89	427.07	390.81	36.26	11.778		
8,400.00	8,358.70	8,395.79	8,381.47	20.31	18.47	-145.40	-306.28	87.49	434.46	397.72	36.74	11.824		
8,500.00	8,457.53	8,495.51	8,480.80	20.63	18.72	-145.62	-314.64	85.09	441.86	404.63	37.23	11.868		
8,528.99	8,486.18	8,524.22	8,509.41	20.73	18.79	-145.68	-317.04	84.40	444.00	406.63	37.37	11.881		
8,600.00	8,586.42	8,593.40	8,578.35	20.94	18.96	-145.86	-322.59	82.81	449.06	411.34	37.72	11.904		
8,700.00	8,685.54	8,690.85	8,675.52	21.21	19.19	-146.06	-329.72	80.76	455.39	417.19	38.20	11.922		
8,800.00	8,784.88	8,788.32	8,772.76	21.47	19.41	-146.21	-336.07	78.94	460.80	422.14	38.66	11.918		
8,900.00	8,884.41	8,885.81	8,870.07	21.71	19.63	-146.33	-341.62	77.34	465.28	426.16	39.12	11.895		
9,000.00	8,984.09	8,983.30	8,967.45	21.95	19.84	-146.40	-346.37	75.98	468.83	429.27	39.56	11.852		
9,100.00	9,083.89	9,080.82	9,064.87	22.17	20.05	-146.43	-350.33	74.84	471.45	431.46	39.99	11.789		
9,200.00	9,183.79	9,178.34	9,162.33	22.38	20.26	-146.41	-353.49	73.93	473.14	432.73	40.41	11.709		
9,300.00	9,283.75	9,275.86	9,259.83	22.57	20.47	-146.36	-355.85	73.26	473.89	433.08	40.81	11.611		
9,408.26	9,382.00	9,381.45	9,365.40	22.77	20.68	-146.36	-357.51	72.78	473.66	432.42	41.24	11.485		
9,500.00	9,481.74	9,470.93	9,454.88	22.94	20.86	-146.43	-358.18	72.58	473.22	431.61	41.61	11.374		
9,563.01	9,516.75	9,532.80	9,516.75	23.05	20.99	-146.44	-358.27	72.56	473.16	431.31	41.86	11.304		
9,608.26	9,562.00	9,578.05	9,562.00	23.14	21.08	-146.44	-358.27	72.56	473.16	431.13	42.04	11.256		
9,650.00	9,603.70	9,619.75	9,603.70	23.20	21.16	-146.44	-358.27	72.56	472.61	430.43	42.18	11.205		
9,700.00	9,653.35	9,669.40	9,653.35	23.26	21.26	-146.44	-358.27	72.56	470.52	428.17	42.35	11.110		
9,750.00	9,702.30	9,718.35	9,702.30	23.29	21.36	-146.44	-358.27	72.56	467.04	424.50	42.53	10.981		
9,800.00	9,750.18	9,766.23	9,750.18	23.30	21.45	-146.44	-358.27	72.56	462.43	419.69	42.74	10.820		

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 332H (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:	332H (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													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		
9,850.00	9,796.63	9,812.68	9,796.63	23.28	21.55	75.62	-358.27	72.56	457.10	414.12	42.98	10.635		
9,900.00	9,841.30	9,857.35	9,841.30	23.24	21.64	78.65	-358.27	72.56	451.54	408.30	43.25	10.441		
9,950.00	9,883.83	9,899.88	9,883.83	23.19	21.72	81.98	-358.27	72.56	446.40	402.87	43.52	10.256		
10,000.00	9,923.92	9,937.32	9,921.25	23.12	21.79	85.14	-357.31	72.56	442.47	398.73	43.74	10.115		
10,050.00	9,961.26	9,975.45	9,959.22	23.04	21.85	88.29	-353.83	72.56	440.37	396.46	43.91	10.030		
10,077.08	9,980.23	9,996.68	9,980.23	22.99	21.88	90.00	-350.81	72.56	440.06	396.09	43.97	10.009		
10,100.00	9,995.56	10,015.00	9,998.26	22.95	21.90	91.44	-347.57	72.56	440.28	396.29	44.00	10.007		
10,150.00	10,026.55	10,056.25	10,038.42	22.86	21.95	94.57	-338.18	72.56	442.38	398.37	44.00	10.053		
10,200.00	10,054.01	10,089.56	10,079.74	22.77	21.98	97.67	-325.25	72.56	446.73	402.82	43.91	10.174		
10,250.00	10,077.73	10,145.38	10,122.27	22.67	22.00	100.73	-308.21	72.56	453.34	409.63	43.71	10.371		
10,300.00	10,097.52	10,194.31	10,166.01	22.58	22.00	103.78	-286.33	72.56	462.15	418.73	43.42	10.644		
10,350.00	10,113.24	10,247.09	10,210.92	22.49	22.00	106.82	-258.64	72.56	472.97	429.92	43.04	10.988		
10,400.00	10,124.76	10,304.72	10,256.81	22.41	22.00	109.89	-223.83	72.56	485.54	442.93	42.60	11.397		
10,450.00	10,132.00	10,368.45	10,303.21	22.33	21.99	113.01	-180.18	72.56	499.48	457.36	42.12	11.858		
10,500.00	10,134.90	10,439.89	10,349.10	22.26	21.99	116.19	-125.48	72.56	514.30	472.66	41.64	12.351		
10,508.26	10,134.96	10,452.57	10,356.51	22.25	21.99	116.72	-115.20	72.56	516.79	475.23	41.56	12.434		
10,600.00	10,134.96	10,620.12	10,431.72	22.37	22.13	123.99	33.85	72.56	539.87	499.41	40.46	13.344		
10,700.00	10,134.96	10,822.99	10,460.95	22.87	22.75	126.53	233.58	72.56	547.65	506.85	40.80	13.423		
10,800.00	10,134.96	10,922.99	10,460.64	23.48	23.25	126.50	333.58	72.56	547.46	505.73	41.73	13.119		
10,900.00	10,134.96	11,022.99	10,460.32	24.20	23.87	126.48	433.58	72.56	547.27	504.41	42.86	12.768		
11,000.00	10,134.96	11,122.99	10,460.01	25.02	24.62	126.45	533.58	72.55	547.08	502.90	44.18	12.384		
11,100.00	10,134.96	11,222.99	10,459.70	25.94	25.47	126.43	633.58	72.55	546.89	501.23	45.66	11.977		
11,200.00	10,134.96	11,322.99	10,459.38	26.94	26.42	126.40	733.58	72.55	546.71	499.40	47.30	11.558		
11,300.00	10,134.97	11,422.99	10,459.07	28.02	27.46	126.37	833.58	72.55	546.52	497.44	49.08	11.135		
11,400.00	10,134.97	11,522.99	10,458.76	29.18	28.57	126.35	933.58	72.55	546.33	495.35	50.98	10.716		
11,500.00	10,134.97	11,622.99	10,458.44	30.40	29.76	126.32	1,033.57	72.55	546.14	493.15	52.99	10.306		
11,600.00	10,134.97	11,722.99	10,458.13	31.67	31.01	126.29	1,133.57	72.55	545.96	490.85	55.11	9.907		
11,700.00	10,134.97	11,822.99	10,457.82	33.00	32.31	126.27	1,233.57	72.55	545.77	488.46	57.31	9.524		
11,800.00	10,134.97	11,922.99	10,457.50	34.37	33.67	126.24	1,333.57	72.55	545.58	485.99	59.59	9.156		
11,900.00	10,134.97	12,022.99	10,457.19	35.78	35.06	126.21	1,433.57	72.55	545.40	483.46	61.94	8.805		
12,000.00	10,134.97	12,122.99	10,456.88	37.23	36.50	126.19	1,533.57	72.55	545.21	480.86	64.35	8.472		
12,100.00	10,134.97	12,222.99	10,456.56	38.70	37.97	126.16	1,633.57	72.55	545.02	478.20	66.82	8.156		
12,200.00	10,134.97	12,322.99	10,456.25	40.21	39.46	126.13	1,733.57	72.55	544.84	475.49	69.34	7.857		
12,300.00	10,134.98	12,422.99	10,455.94	41.74	40.99	126.11	1,833.57	72.55	544.65	472.74	71.91	7.574		
12,400.00	10,134.98	12,522.98	10,455.62	43.30	42.54	126.08	1,933.57	72.55	544.46	469.94	74.52	7.306		
12,500.00	10,134.98	12,622.98	10,455.31	44.87	44.11	126.05	2,033.56	72.55	544.28	467.11	77.16	7.054		
12,600.00	10,134.98	12,722.98	10,455.00	46.46	45.69	126.03	2,133.56	72.54	544.09	464.25	79.84	6.815		
12,700.00	10,134.98	12,822.98	10,454.68	48.07	47.30	126.00	2,233.56	72.54	543.90	461.35	82.55	6.589		
12,800.00	10,134.98	12,922.98	10,454.37	49.70	48.92	125.97	2,333.56	72.54	543.72	458.43	85.29	6.375		
12,900.00	10,134.98	13,022.98	10,454.06	51.33	50.56	125.95	2,433.56	72.54	543.53	455.48	88.05	6.173		
13,000.00	10,134.98	13,122.98	10,453.74	52.98	52.21	125.92	2,533.56	72.54	543.35	452.51	90.83	5.982		
13,100.00	10,134.98	13,222.98	10,453.43	54.65	53.87	125.89	2,633.56	72.54	543.16	449.52	93.64	5.801		
13,200.00	10,134.98	13,322.98	10,453.11	56.32	55.54	125.87	2,733.56	72.54	542.98	446.51	96.46	5.629		
13,300.00	10,134.99	13,422.98	10,452.80	58.00	57.22	125.84	2,833.56	72.54	542.79	443.48	99.31	5.466		
13,400.00	10,134.99	13,522.98	10,452.49	59.69	58.91	125.81	2,933.56	72.54	542.61	440.44	102.17	5.311		
13,500.00	10,134.99	13,622.98	10,452.17	61.38	60.60	125.79	3,033.55	72.54	542.42	437.38	105.05	5.164		
13,600.00	10,134.99	13,722.98	10,451.86	63.09	62.31	125.76	3,133.55	72.54	542.24	434.30	107.94	5.024		
13,700.00	10,134.99	13,822.98	10,451.55	64.80	64.02	125.73	3,233.55	72.54	542.05	431.21	110.84	4.890		
13,800.00	10,134.99	13,922.98	10,451.23	66.52	65.73	125.71	3,333.55	72.54	541.87	428.11	113.76	4.763		
13,900.00	10,134.99	14,022.98	10,450.92	68.24	67.46	125.68	3,433.55	72.54	541.68	425.00	116.68	4.642		
14,000.00	10,134.99	14,122.98	10,450.61	69.97	69.19	125.65	3,533.55	72.54	541.50	421.87	119.62	4.527		
14,100.00	10,134.99	14,222.98	10,450.29	71.70	70.92	125.62	3,633.55	72.54	541.31	418.74	122.57	4.416		

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 332H (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:	332H (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		
14,200.00	10,134.99	14,322.98	10,449.98	73.44	72.66	125.60	3,733.55	72.53	541.13	415.60	125.53	4.311		
14,300.00	10,135.00	14,422.98	10,449.87	75.18	74.40	125.57	3,833.55	72.53	540.94	412.45	128.50	4.210		
14,400.00	10,135.00	14,522.98	10,449.35	76.93	76.14	125.54	3,933.55	72.53	540.76	409.29	131.47	4.113		
14,500.00	10,135.00	14,622.97	10,449.04	78.67	77.89	125.52	4,033.54	72.53	540.58	406.12	134.46	4.020		
14,600.00	10,135.00	14,722.97	10,448.73	80.43	79.65	125.49	4,133.54	72.53	540.39	402.94	137.45	3.932		
14,700.00	10,135.00	14,822.97	10,448.41	82.18	81.40	125.46	4,233.54	72.53	540.21	399.76	140.45	3.846		
14,800.00	10,135.00	14,922.97	10,448.10	83.94	83.16	125.44	4,333.54	72.53	540.03	396.57	143.46	3.764		
14,829.84	10,135.00	14,952.81	10,448.01	84.47	83.69	125.43	4,363.38	72.53	539.97	395.61	144.36	3.741 SF		

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



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (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:	332H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 312H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Between Centres (usft)	Between Ellipses (usft)				Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)
0.00	0.00	0.00	0.00	0.00	0.00	126.59	-134.02	180.52	224.83					
100.00	100.00	100.00	100.00	0.08	0.08	126.59	-134.02	180.52	224.83	224.67	0.16	1,428.979		
200.00	200.00	200.00	200.00	0.30	0.30	126.59	-134.02	180.52	224.83	224.22	0.61	370.477		
300.00	300.00	300.00	300.00	0.53	0.53	126.59	-134.02	180.52	224.83	223.77	1.06	212.827		
400.00	400.00	400.00	400.00	0.75	0.75	126.59	-134.02	180.52	224.83	223.32	1.51	149.297		
500.00	500.00	500.00	500.00	0.98	0.98	126.59	-134.02	180.52	224.83	222.88	1.96	114.976		
600.00	600.00	600.00	600.00	1.20	1.20	126.59	-134.02	180.52	224.83	222.43	2.40	93.485		
700.00	700.00	700.00	700.00	1.43	1.43	126.59	-134.02	180.52	224.83	221.98	2.85	78.763		
800.00	800.00	800.00	800.00	1.65	1.65	126.59	-134.02	180.52	224.83	221.53	3.30	68.047		
900.00	900.00	900.00	900.00	1.88	1.88	126.59	-134.02	180.52	224.83	221.08	3.75	59.897		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	126.59	-134.02	180.52	224.83	220.63	4.20	53.491		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	126.59	-134.02	180.52	224.83	220.18	4.65	48.323		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	126.59	-134.02	180.52	224.83	219.73	5.10	44.066		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	126.59	-134.02	180.52	224.83	219.28	5.55	40.497		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	126.59	-134.02	180.52	224.83	218.83	6.00	37.464		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	126.59	-134.02	180.52	224.83	218.38	6.45	34.853		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	126.59	-134.02	180.52	224.83	217.93	6.90	32.583		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	126.59	-134.02	180.52	224.83	217.48	7.35	30.590		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	126.59	-134.02	180.52	224.83	217.03	7.80	28.827		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	126.59	-134.02	180.52	224.83	216.58	8.25	27.256		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	126.59	-134.02	180.52	224.83	216.13	8.70	25.847		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	126.59	-134.02	180.52	224.83	215.68	9.15	24.577		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	126.59	-134.02	180.52	224.83	215.23	9.60	23.426		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	126.59	-134.02	180.52	224.83	214.78	10.05	22.378		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	126.59	-134.02	180.52	224.83	214.33	10.50	21.419		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	126.59	-134.02	180.52	224.83	213.88	10.95	20.540		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	126.59	-134.02	180.52	224.83	213.43	11.40	19.730		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	126.59	-134.02	180.52	224.83	212.99	11.85	18.981		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	126.59	-134.02	180.52	224.83	212.54	12.29	18.287		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	126.59	-134.02	180.52	224.83	212.09	12.74	17.642		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	126.59	-134.02	180.52	224.83	211.64	13.19	17.041		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	126.59	-134.02	180.52	224.83	211.19	13.64	16.479		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	126.59	-134.02	180.52	224.83	210.74	14.09	15.954		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	126.59	-134.02	180.52	224.83	210.29	14.54	15.460		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	126.59	-134.02	180.52	224.83	209.84	14.99	14.997		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	126.59	-134.02	180.52	224.83	209.39	15.44	14.560		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	126.59	-134.02	180.52	224.83	208.94	15.89	14.148		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	126.59	-134.02	180.52	224.83	208.49	16.34	13.759		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	126.59	-134.02	180.52	224.83	208.04	16.79	13.391		
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	126.59	-134.02	180.52	224.83	207.59	17.24	13.042		
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	126.59	-134.02	180.52	224.83	207.14	17.69	12.710		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	126.59	-134.02	180.52	224.83	206.69	18.14	12.395		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	126.59	-134.02	180.52	224.83	206.24	18.59	12.095		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	126.59	-134.02	180.52	224.83	205.79	19.04	11.810 CC		
4,400.00	4,400.00	4,398.59	4,398.58	9.72	9.71	-88.05	-134.84	180.30	225.11	205.69	19.43	11.587 ES		
4,500.00	4,499.96	4,497.17	4,497.13	9.89	9.88	-88.10	-137.29	179.83	225.97	206.20	19.77	11.431		
4,600.00	4,599.86	4,595.74	4,595.61	10.07	10.05	-88.17	-141.38	178.52	227.39	207.28	20.11	11.307		
4,700.00	4,699.88	4,694.30	4,693.99	10.24	10.22	-88.27	-147.11	176.97	229.38	208.92	20.46	11.212		
4,800.00	4,799.37	4,792.84	4,792.24	10.43	10.39	-88.40	-154.46	174.97	231.93	211.12	20.81	11.144		
4,900.00	4,898.90	4,892.17	4,891.14	10.61	10.57	-88.62	-163.26	172.58	234.96	213.78	21.18	11.094		
5,000.00	4,998.26	4,992.09	4,990.63	10.80	10.75	-89.21	-172.26	170.14	238.02	216.47	21.56	11.042		
5,100.00	5,097.40	5,091.95	5,090.05	11.00	10.94	-90.21	-181.26	167.70	241.11	219.17	21.94	10.988		

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 332H (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:	332H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 312H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis					Distance					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,179.27	5,175.82	5,171.04	5,168.80	11.17	11.09	-91.26	-188.39	165.76	243.64	221.38	22.26	10.945		
5,200.00	5,196.31	5,191.72	5,189.39	11.21	11.13	-91.58	-190.25	165.26	244.32	221.97	22.34	10.935		
5,300.00	5,295.13	5,291.46	5,288.69	11.43	11.33	-93.06	-199.24	162.82	247.69	224.94	22.75	10.885		
5,400.00	5,393.96	5,391.20	5,387.99	11.65	11.53	-94.50	-208.22	160.38	251.23	228.05	23.18	10.840		
5,500.00	5,492.78	5,490.94	5,487.30	11.88	11.73	-95.91	-217.21	157.94	254.92	231.32	23.61	10.799		
5,600.00	5,591.61	5,590.68	5,586.60	12.12	11.94	-97.27	-226.20	155.50	258.77	234.72	24.05	10.761		
5,700.00	5,690.43	5,690.42	5,685.90	12.37	12.15	-98.59	-235.19	153.06	262.75	238.26	24.50	10.727		
5,800.00	5,789.26	5,790.16	5,785.21	12.61	12.36	-99.87	-244.17	150.62	266.87	241.92	24.95	10.696		
5,900.00	5,888.08	5,889.89	5,884.51	12.87	12.58	-101.12	-253.16	148.18	271.12	245.71	25.41	10.668		
6,000.00	5,986.91	5,989.63	5,983.81	13.13	12.80	-102.32	-262.15	145.74	275.50	249.61	25.88	10.644		
6,100.00	6,085.73	6,089.37	6,083.12	13.39	13.02	-103.49	-271.13	143.30	279.99	253.63	26.36	10.623		
6,200.00	6,184.56	6,189.11	6,182.42	13.66	13.24	-104.61	-280.12	140.86	284.59	257.76	26.84	10.604		
6,300.00	6,283.38	6,288.85	6,281.72	13.93	13.47	-105.71	-289.11	138.42	289.30	261.98	27.32	10.588		
6,400.00	6,382.21	6,388.59	6,381.03	14.21	13.69	-106.76	-298.10	135.98	294.12	266.30	27.81	10.575		
6,500.00	6,481.03	6,488.33	6,480.33	14.49	13.92	-107.79	-307.08	133.54	299.03	270.72	28.31	10.564		
6,600.00	6,579.86	6,588.07	6,579.63	14.77	14.15	-108.78	-316.07	131.10	304.03	275.23	28.80	10.555		
6,700.00	6,678.68	6,687.81	6,678.93	15.06	14.39	-109.73	-325.06	128.66	309.12	279.81	29.31	10.548		
6,800.00	6,777.51	6,787.54	6,778.24	15.35	14.62	-110.66	-334.05	126.22	314.29	284.48	29.81	10.543		
6,900.00	6,876.33	6,887.28	6,877.54	15.64	14.86	-111.55	-343.03	123.78	319.55	289.23	30.32	10.540		
7,000.00	6,975.16	6,987.02	6,976.84	15.94	15.10	-112.42	-352.02	121.34	324.88	294.05	30.83	10.539		
7,100.00	7,073.98	7,086.76	7,076.15	16.24	15.34	-113.26	-361.01	118.90	330.28	298.94	31.34	10.540		
7,200.00	7,172.81	7,186.50	7,175.45	16.54	15.58	-114.07	-369.99	116.46	335.75	303.90	31.85	10.541		
7,300.00	7,271.63	7,286.24	7,274.75	16.84	15.82	-114.86	-378.98	114.02	341.28	308.91	32.37	10.545		
7,400.00	7,370.45	7,385.98	7,374.06	17.15	16.07	-115.62	-387.97	111.58	346.88	313.99	32.88	10.549		
7,500.00	7,469.28	7,485.72	7,473.36	17.46	16.31	-116.35	-396.96	109.14	352.53	319.13	33.40	10.555		
7,600.00	7,568.10	7,585.46	7,572.66	17.77	16.56	-117.07	-405.94	106.70	358.24	324.32	33.92	10.562		
7,700.00	7,666.93	7,685.20	7,671.97	18.08	16.81	-117.76	-414.93	104.26	364.01	329.57	34.44	10.569		
7,800.00	7,765.75	7,784.93	7,771.27	18.39	17.06	-118.43	-423.92	101.82	369.82	334.86	34.96	10.578		
7,900.00	7,864.58	7,884.67	7,870.57	18.71	17.31	-119.07	-432.90	99.38	375.69	340.20	35.48	10.587		
8,000.00	7,963.40	7,984.41	7,969.88	19.02	17.56	-119.70	-441.89	96.94	381.60	345.59	36.01	10.598		
8,100.00	8,062.23	8,084.15	8,069.18	19.34	17.81	-120.31	-450.88	94.50	387.56	351.02	36.53	10.608		
8,200.00	8,161.05	8,183.89	8,168.48	19.66	18.06	-120.90	-459.87	92.06	393.55	356.50	37.06	10.620		
8,300.00	8,259.88	8,283.63	8,267.79	19.98	18.31	-121.47	-468.85	89.62	399.59	362.01	37.58	10.632		
8,400.00	8,358.70	8,383.37	8,367.09	20.31	18.57	-122.03	-477.84	87.18	405.67	367.56	38.11	10.645		
8,500.00	8,457.53	8,482.81	8,466.10	20.63	18.82	-122.58	-486.74	84.76	411.80	373.17	38.63	10.659		
8,528.99	8,486.18	8,511.48	8,494.66	20.73	18.89	-122.74	-489.21	84.10	413.61	374.83	38.78	10.665		
8,600.00	8,556.42	8,581.69	8,564.62	20.94	19.06	-123.18	-494.95	82.54	417.89	378.76	39.13	10.679		
8,700.00	8,655.54	8,680.59	8,663.22	21.21	19.29	-123.70	-502.33	80.54	423.31	383.70	39.60	10.688		
8,800.00	8,754.88	8,779.52	8,761.91	21.47	19.51	-124.12	-508.89	78.75	427.99	387.93	40.07	10.682		
8,900.00	8,854.41	8,878.46	8,860.67	21.71	19.74	-124.45	-514.62	77.20	431.94	391.42	40.52	10.660		
9,000.00	8,954.09	8,977.41	8,959.50	21.95	19.96	-124.69	-519.54	75.86	435.13	394.17	40.96	10.624		
9,100.00	9,053.89	9,076.38	9,058.37	22.17	20.17	-124.84	-523.63	74.75	437.57	396.18	41.39	10.572		
9,200.00	9,153.79	9,175.35	9,157.29	22.38	20.38	-124.90	-526.90	73.86	439.23	397.42	41.81	10.506		
9,300.00	9,253.75	9,274.34	9,256.24	22.57	20.59	-124.88	-529.35	73.20	440.13	397.92	42.21	10.426		
9,408.26	9,362.00	9,381.50	9,363.39	22.77	20.81	89.86	-531.06	72.73	440.24	397.60	42.64	10.324		
9,500.00	9,453.74	9,472.32	9,454.20	22.94	20.99	89.95	-531.76	72.54	440.04	397.04	43.00	10.234		
9,563.00	9,516.73	9,534.85	9,516.73	23.05	21.12	89.96	-531.85	72.52	440.02	396.78	43.24	10.175		
9,608.26	9,562.00	9,580.11	9,562.00	23.14	21.21	89.96	-531.85	72.52	440.02	396.60	43.42	10.134		
9,626.61	9,580.35	9,598.46	9,580.35	23.16	21.24	90.00	-531.85	72.52	440.02	396.53	43.49	10.118		
9,650.00	9,603.70	9,621.82	9,603.70	23.20	21.29	90.16	-531.85	72.52	440.02	396.44	43.58	10.097		
9,700.00	9,653.35	9,671.46	9,653.35	23.26	21.39	90.90	-531.85	72.52	440.08	396.30	43.78	10.053		
9,750.00	9,702.30	9,720.41	9,702.30	23.29	21.49	92.16	-531.85	72.52	440.35	396.39	43.96	10.016		

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 332H (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:	332H (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		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)	Factor		
9,800.00	9,750.18	9,768.30	9,750.18	23.30	21.58	93.87	-531.85	72.52	441.15	397.01	44.14	9.995 SF		
9,850.00	9,796.63	9,814.75	9,796.63	23.28	21.68	95.91	-531.85	72.52	442.85	398.58	44.27	10.003		
9,900.00	9,841.30	9,859.41	9,841.30	23.24	21.76	98.17	-531.85	72.52	445.93	401.58	44.35	10.055		
9,950.00	9,883.83	9,901.95	9,883.83	23.19	21.85	100.51	-531.85	72.52	450.94	406.58	44.38	10.166		
10,000.00	9,923.92	9,942.04	9,923.92	23.12	21.93	102.76	-531.85	72.52	458.40	414.12	44.28	10.352		
10,050.00	9,961.26	9,979.37	9,961.26	23.04	22.01	104.77	-531.85	72.52	468.80	424.68	44.12	10.625		
10,100.00	9,995.56	10,013.67	9,995.56	22.95	22.07	106.40	-531.85	72.52	482.55	438.64	43.91	10.989		
10,150.00	10,026.55	10,044.67	10,026.55	22.86	22.14	107.52	-531.85	72.52	499.93	456.24	43.68	11.445		
10,200.00	10,054.01	10,072.13	10,054.01	22.77	22.19	108.00	-531.85	72.52	521.05	477.56	43.49	11.981		
10,250.00	10,077.73	10,095.85	10,077.73	22.67	22.24	107.74	-531.85	72.52	545.88	502.49	43.39	12.582		
10,300.00	10,097.52	10,115.64	10,097.52	22.58	22.28	106.60	-531.85	72.52	574.24	530.82	43.41	13.227		
10,350.00	10,113.24	10,131.35	10,113.24	22.49	22.31	104.47	-531.85	72.52	605.82	562.23	43.59	13.899		
10,400.00	10,124.76	10,142.88	10,124.76	22.41	22.33	101.23	-531.85	72.52	640.22	596.34	43.88	14.590		
10,450.00	10,132.00	10,150.11	10,132.00	22.33	22.35	96.77	-531.85	72.52	677.00	632.81	44.20	15.318		
10,500.00	10,134.90	10,153.01	10,134.90	22.26	22.35	91.06	-531.85	72.52	715.66	671.28	44.38	16.127		
10,508.26	10,134.96	10,153.07	10,134.96	22.25	22.35	90.00	-531.85	72.52	722.19	677.81	44.38	16.273		
10,600.00	10,134.96	10,153.07	10,134.96	22.37	22.35	90.00	-531.85	72.52	796.90	752.27	44.63	17.857		
10,700.00	10,134.96	10,153.07	10,134.96	22.87	22.35	90.00	-531.85	72.52	882.00	836.97	45.04	19.585		
10,800.00	10,134.96	10,153.08	10,134.96	23.48	22.35	90.00	-531.85	72.52	969.95	924.37	45.58	21.280		
10,900.00	10,134.96	10,153.08	10,134.96	24.20	22.35	90.00	-531.85	72.52	1,060.04	1,013.79	46.25	22.919		
11,000.00	10,134.96	10,153.08	10,134.96	25.02	22.35	90.00	-531.85	72.52	1,151.77	1,104.73	47.04	24.485		
11,100.00	10,134.96	10,153.08	10,134.96	25.94	22.35	90.00	-531.85	72.52	1,244.77	1,196.84	47.94	25.968		
11,200.00	10,134.96	10,153.08	10,134.96	26.94	22.35	90.00	-531.85	72.52	1,338.78	1,289.86	48.93	27.364		
11,300.00	10,134.97	10,153.08	10,134.97	28.02	22.35	90.00	-531.85	72.52	1,433.60	1,383.60	50.00	28.672		
11,400.00	10,134.97	10,153.08	10,134.97	29.18	22.35	90.00	-531.85	72.52	1,529.08	1,477.93	51.15	29.893		
11,500.00	10,134.97	13,026.60	11,690.00	30.40	33.52	164.20	1,032.56	72.52	1,616.09	1,575.59	40.49	39.911		
11,600.00	10,134.97	13,126.60	11,690.00	31.67	34.77	164.20	1,132.56	72.52	1,616.08	1,574.50	41.58	38.865		
11,700.00	10,134.97	13,226.60	11,690.00	33.00	36.08	164.20	1,232.56	72.52	1,616.08	1,573.37	42.71	37.836		
11,800.00	10,134.97	13,326.60	11,690.00	34.37	37.43	164.20	1,332.56	72.52	1,616.08	1,572.20	43.88	36.827		
11,900.00	10,134.97	13,426.60	11,690.00	35.78	38.81	164.20	1,432.56	72.52	1,616.08	1,570.99	45.09	35.843		
12,000.00	10,134.97	13,526.60	11,690.00	37.23	40.24	164.20	1,532.56	72.52	1,616.08	1,569.75	46.33	34.885		
12,100.00	10,134.97	13,626.60	11,690.00	38.70	41.69	164.20	1,632.56	72.52	1,616.08	1,568.48	47.59	33.955		
12,200.00	10,134.97	13,726.60	11,690.00	40.21	43.17	164.20	1,732.56	72.52	1,616.08	1,567.19	48.89	33.056		
12,300.00	10,134.98	13,826.60	11,690.00	41.74	44.68	164.20	1,832.56	72.53	1,616.08	1,565.87	50.21	32.186		
12,400.00	10,134.98	13,926.60	11,690.00	43.30	46.21	164.20	1,932.56	72.53	1,616.08	1,564.52	51.56	31.346		
12,500.00	10,134.98	14,026.60	11,690.00	44.87	47.77	164.20	2,032.56	72.53	1,616.07	1,563.15	52.92	30.536		
12,600.00	10,134.98	14,126.60	11,690.00	46.46	49.34	164.20	2,132.56	72.53	1,616.07	1,561.76	54.31	29.756		
12,700.00	10,134.98	14,226.60	11,690.00	48.07	50.92	164.20	2,232.56	72.53	1,616.07	1,560.36	55.72	29.005		
12,800.00	10,134.98	14,326.60	11,690.00	49.70	52.53	164.20	2,332.56	72.53	1,616.07	1,558.93	57.14	28.283		
12,900.00	10,134.98	14,426.60	11,690.00	51.33	54.15	164.20	2,432.56	72.53	1,616.07	1,557.49	58.58	27.588		
13,000.00	10,134.98	14,526.60	11,690.00	52.98	55.78	164.20	2,532.56	72.53	1,616.07	1,556.04	60.03	26.919		
13,100.00	10,134.98	14,626.60	11,690.00	54.65	57.42	164.20	2,632.56	72.53	1,616.07	1,554.57	61.50	26.276		
13,200.00	10,134.98	14,726.60	11,690.00	56.32	59.07	164.20	2,732.56	72.53	1,616.07	1,553.08	62.98	25.658		
13,300.00	10,134.99	14,826.60	11,690.00	58.00	60.74	164.20	2,832.56	72.53	1,616.07	1,551.59	64.48	25.064		
13,400.00	10,134.99	14,926.60	11,690.00	59.69	62.41	164.20	2,932.56	72.53	1,616.07	1,550.08	65.98	24.492		
13,500.00	10,134.99	15,026.60	11,690.00	61.38	64.09	164.20	3,032.56	72.53	1,616.06	1,548.57	67.50	23.943		
13,600.00	10,134.99	15,126.60	11,690.00	63.09	65.78	164.20	3,132.56	72.53	1,616.06	1,547.04	69.02	23.414		
13,700.00	10,134.99	15,226.60	11,690.00	64.80	67.47	164.20	3,232.56	72.53	1,616.06	1,545.51	70.56	22.904		
13,800.00	10,134.99	15,326.60	11,690.00	66.52	69.18	164.20	3,332.56	72.53	1,616.06	1,543.96	72.10	22.414		
13,900.00	10,134.99	15,426.60	11,690.00	68.24	70.89	164.20	3,432.56	72.53	1,616.06	1,542.41	73.65	21.942		
14,000.00	10,134.99	15,526.60	11,690.00	69.97	72.60	164.20	3,532.56	72.53	1,616.06	1,540.85	75.21	21.488		
14,100.00	10,134.99	15,626.60	11,690.00	71.70	74.32	164.20	3,632.56	72.53	1,616.06	1,539.28	76.77	21.049		

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 332H (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:	332H (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 (°)	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)				
14,200.00	10,134.99	15,726.60	11,690.00	73.44	76.05	164.20	3,732.56	72.53	1,616.06	1,537.71	78.35	20.627		
14,300.00	10,135.00	15,826.60	11,690.00	75.18	77.78	164.20	3,832.56	72.53	1,616.06	1,536.13	79.93	20.219		
14,400.00	10,135.00	15,926.60	11,690.00	76.93	79.51	164.20	3,932.56	72.53	1,616.06	1,534.54	81.51	19.826		
14,500.00	10,135.00	16,026.60	11,690.00	78.67	81.25	164.20	4,032.56	72.53	1,616.05	1,532.95	83.10	19.447		
14,600.00	10,135.00	16,126.60	11,690.00	80.43	82.99	164.20	4,132.56	72.53	1,616.05	1,531.36	84.70	19.081		
14,700.00	10,135.00	16,226.60	11,690.00	82.18	84.73	164.20	4,232.56	72.53	1,616.05	1,529.76	86.30	18.727		
14,800.00	10,135.00	16,326.60	11,690.00	83.94	86.48	164.20	4,332.56	72.53	1,616.05	1,528.15	87.90	18.385		
14,829.84	10,135.00	16,356.44	11,690.00	84.47	87.01	164.20	4,362.39	72.53	1,616.05	1,527.67	88.38	18.285		

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 332H (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:	332H (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													Offset Site Error:	0.00 usft
Cotton Draw Unit - 313H (SIMOPS) - OH - Plan #1													Offset Well Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														
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)		+N/-S (usft)	+E/-W (usft)						
0.00	0.00	0.00	0.00	0.00	0.00	121.14	-109.03	180.45	210.83					
100.00	100.00	100.00	100.00	0.08	0.08	121.14	-109.03	180.45	210.83	210.67	0.16	1,340.001		
200.00	200.00	200.00	200.00	0.30	0.30	121.14	-109.03	180.45	210.83	210.22	0.61	347.408		
300.00	300.00	300.00	300.00	0.53	0.53	121.14	-109.03	180.45	210.83	209.77	1.06	199.575		
400.00	400.00	400.00	400.00	0.75	0.75	121.14	-109.03	180.45	210.83	209.33	1.51	140.000		
500.00	500.00	500.00	500.00	0.98	0.98	121.14	-109.03	180.45	210.83	208.88	1.96	107.816		
600.00	600.00	600.00	600.00	1.20	1.20	121.14	-109.03	180.45	210.83	208.43	2.40	87.664		
700.00	700.00	700.00	700.00	1.43	1.43	121.14	-109.03	180.45	210.83	207.98	2.85	73.858		
800.00	800.00	800.00	800.00	1.65	1.65	121.14	-109.03	180.45	210.83	207.53	3.30	63.810		
900.00	900.00	900.00	900.00	1.88	1.88	121.14	-109.03	180.45	210.83	207.08	3.75	56.168		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	121.14	-109.03	180.45	210.83	206.63	4.20	50.161		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	121.14	-109.03	180.45	210.83	206.18	4.65	45.314		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	121.14	-109.03	180.45	210.83	205.73	5.10	41.322		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	121.14	-109.03	180.45	210.83	205.28	5.55	37.976		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	121.14	-109.03	180.45	210.83	204.83	6.00	35.131		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	121.14	-109.03	180.45	210.83	204.38	6.45	32.683		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	121.14	-109.03	180.45	210.83	203.93	6.90	30.554		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	121.14	-109.03	180.45	210.83	203.48	7.35	28.685		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	121.14	-109.03	180.45	210.83	203.03	7.80	27.032		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	121.14	-109.03	180.45	210.83	202.58	8.25	25.559		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	121.14	-109.03	180.45	210.83	202.13	8.70	24.238		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	121.14	-109.03	180.45	210.83	201.68	9.15	23.047		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	121.14	-109.03	180.45	210.83	201.23	9.60	21.967		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	121.14	-109.03	180.45	210.83	200.78	10.05	20.984		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	121.14	-109.03	180.45	210.83	200.33	10.50	20.086		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	121.14	-109.03	180.45	210.83	199.88	10.95	19.261		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	121.14	-109.03	180.45	210.83	199.44	11.40	18.501		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	121.14	-109.03	180.45	210.83	198.99	11.85	17.799		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	121.14	-109.03	180.45	210.83	198.54	12.29	17.148		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	121.14	-109.03	180.45	210.83	198.09	12.74	16.543		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	121.14	-109.03	180.45	210.83	197.64	13.19	15.980		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	121.14	-109.03	180.45	210.83	197.19	13.64	15.453		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	121.14	-109.03	180.45	210.83	196.74	14.09	14.960		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	121.14	-109.03	180.45	210.83	196.29	14.54	14.498		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	121.14	-109.03	180.45	210.83	195.84	14.99	14.063		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	121.14	-109.03	180.45	210.83	195.39	15.44	13.654		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	121.14	-109.03	180.45	210.83	194.94	15.89	13.267		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	121.14	-109.03	180.45	210.83	194.49	16.34	12.902		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	121.14	-109.03	180.45	210.83	194.04	16.79	12.557		
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	121.14	-109.03	180.45	210.83	193.59	17.24	12.229		
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	121.14	-109.03	180.45	210.83	193.14	17.69	11.919		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	121.14	-109.03	180.45	210.83	192.69	18.14	11.623		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	121.14	-109.03	180.45	210.83	192.24	18.59	11.342		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	121.14	-109.03	180.45	210.83	191.79	19.04	11.074 CC, ES		
4,400.00	4,400.00	4,396.44	4,396.43	9.72	9.72	-93.72	-109.42	181.16	211.73	192.30	19.43	10.896		
4,500.00	4,499.96	4,492.79	4,492.75	9.89	9.89	-94.39	-110.58	183.30	214.44	194.65	19.78	10.841 SF		
4,600.00	4,599.86	4,588.95	4,588.82	10.07	10.07	-95.47	-112.50	186.85	219.02	198.88	20.13	10.879		
4,700.00	4,699.68	4,684.83	4,684.54	10.24	10.25	-96.91	-115.19	191.81	225.56	205.07	20.49	11.009		
4,800.00	4,799.37	4,780.34	4,779.78	10.43	10.44	-98.62	-118.62	198.14	234.19	213.34	20.85	11.234		
4,900.00	4,898.90	4,875.40	4,874.43	10.61	10.63	-100.54	-122.79	205.83	245.00	223.79	21.21	11.551		
5,000.00	4,998.26	4,969.92	4,968.39	10.80	10.82	-102.58	-127.68	214.84	258.12	236.55	21.58	11.963		
5,100.00	5,097.40	5,063.80	5,061.54	11.00	11.02	-104.67	-133.26	225.14	273.64	251.69	21.95	12.468		

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 332H (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:	332H (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													Offset Site Error:	0.00 usft
Cotton Draw Unit - 313H (SIMOPS) - OH - Plan #1													Offset Well Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														
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		
5,179.27	5,175.82	5,137.72	5,134.74	11.17	11.18	-106.32	-138.17	234.19	287.69	265.45	22.25	12.932		
5,200.00	5,196.31	5,156.98	5,153.79	11.21	11.22	-106.78	-139.53	236.68	291.62	269.29	22.33	13.062		
5,300.00	5,295.13	5,249.58	5,245.24	11.43	11.43	-108.79	-146.46	249.46	311.73	289.02	22.71	13.725		
5,400.00	5,393.96	5,345.93	5,340.23	11.65	11.66	-110.59	-154.15	263.64	333.19	310.07	23.12	14.414		
5,500.00	5,492.78	5,443.08	5,436.01	11.88	11.90	-112.18	-161.91	277.95	354.95	331.42	23.53	15.086		
5,600.00	5,591.61	5,540.24	5,531.79	12.12	12.14	-113.59	-169.67	292.26	376.94	352.99	23.95	15.740		
5,700.00	5,690.43	5,637.39	5,627.57	12.37	12.39	-114.84	-177.43	306.57	399.13	374.75	24.38	16.374		
5,800.00	5,789.26	5,734.54	5,723.35	12.61	12.65	-115.97	-185.19	320.88	421.48	396.67	24.81	16.987		
5,900.00	5,888.08	5,831.69	5,819.12	12.87	12.91	-116.98	-192.96	335.20	443.97	418.71	25.25	17.579		
6,000.00	5,986.91	5,928.85	5,914.90	13.13	13.18	-117.89	-200.72	349.51	466.58	440.87	25.71	18.151		
6,100.00	6,085.73	6,026.00	6,010.68	13.39	13.45	-118.72	-208.48	363.82	489.29	463.13	26.16	18.702		
6,200.00	6,184.56	6,123.15	6,106.46	13.66	13.73	-119.48	-216.24	378.13	512.09	485.47	26.63	19.233		
6,300.00	6,283.38	6,220.30	6,202.24	13.93	14.01	-120.17	-224.00	392.44	534.97	507.88	27.09	19.745		
6,400.00	6,382.21	6,317.46	6,298.02	14.21	14.30	-120.80	-231.76	406.75	557.92	530.35	27.57	20.237		
6,500.00	6,481.03	6,414.61	6,393.80	14.49	14.59	-121.39	-239.53	421.07	580.92	552.87	28.05	20.711		
6,600.00	6,579.86	6,511.76	6,489.57	14.77	14.88	-121.93	-247.29	435.38	603.98	575.45	28.53	21.166		
6,700.00	6,678.68	6,608.91	6,585.35	15.06	15.18	-122.43	-255.05	449.69	627.09	598.06	29.03	21.605		
6,800.00	6,777.51	6,706.07	6,681.13	15.35	15.48	-122.89	-262.81	464.00	650.24	620.72	29.52	22.027		
6,900.00	6,876.33	6,803.22	6,776.91	15.64	15.79	-123.33	-270.57	478.31	673.43	643.41	30.02	22.433		
7,000.00	6,975.16	6,900.37	6,872.69	15.94	16.09	-123.73	-278.33	492.62	696.65	666.12	30.52	22.823		
7,100.00	7,073.98	6,997.52	6,968.47	16.24	16.40	-124.11	-286.10	506.93	719.90	688.87	31.03	23.199		
7,200.00	7,172.81	7,094.68	7,064.25	16.54	16.71	-124.46	-293.86	521.25	743.18	711.64	31.54	23.561		
7,300.00	7,271.63	7,191.83	7,160.03	16.84	17.03	-124.80	-301.62	535.56	766.48	734.43	32.06	23.909		
7,400.00	7,370.45	7,288.98	7,255.80	17.15	17.34	-125.11	-309.38	549.87	789.81	757.24	32.58	24.245		
7,500.00	7,469.28	7,386.13	7,351.58	17.46	17.66	-125.40	-317.14	564.18	813.16	780.06	33.10	24.568		
7,600.00	7,568.10	7,483.29	7,447.36	17.77	17.98	-125.68	-324.91	578.49	836.53	802.91	33.62	24.879		
7,700.00	7,666.93	7,580.44	7,543.14	18.08	18.31	-125.95	-332.67	592.80	859.92	825.77	34.15	25.179		
7,800.00	7,765.75	7,677.59	7,638.92	18.39	18.63	-126.20	-340.43	607.12	883.32	848.64	34.68	25.468		
7,900.00	7,864.58	7,774.74	7,734.70	18.71	18.96	-126.43	-348.19	621.43	906.74	871.52	35.22	25.747		
8,000.00	7,963.40	7,871.90	7,830.48	19.02	19.28	-126.66	-355.95	635.74	930.17	894.42	35.75	26.016		
8,100.00	8,062.23	7,969.05	7,926.25	19.34	19.61	-126.87	-363.71	650.05	953.62	917.32	36.29	26.276		
8,200.00	8,161.05	8,066.20	8,022.03	19.66	19.94	-127.08	-371.48	664.36	977.07	940.24	36.83	26.526		
8,300.00	8,259.88	8,163.36	8,117.81	19.98	20.28	-127.27	-379.24	678.67	1,000.54	963.16	37.38	26.768		
8,400.00	8,358.70	8,260.51	8,213.59	20.31	20.61	-127.46	-387.00	692.98	1,024.02	986.09	37.92	27.002		
8,500.00	8,457.53	8,357.66	8,309.37	20.63	20.95	-127.63	-394.76	707.30	1,047.51	1,009.03	38.47	27.228		
8,528.99	8,486.18	8,385.83	8,337.14	20.73	21.04	-127.68	-397.01	711.45	1,054.32	1,015.69	38.63	27.292		
8,600.00	8,556.42	8,454.89	8,405.22	20.94	21.28	-127.92	-402.53	721.62	1,070.74	1,031.71	39.03	27.432		
8,700.00	8,655.54	8,552.37	8,501.33	21.21	21.62	-128.17	-410.32	735.98	1,092.98	1,053.40	39.58	27.616		
8,800.00	8,754.88	8,650.10	8,597.67	21.47	21.96	-128.34	-418.13	750.38	1,114.17	1,074.05	40.11	27.776		
8,900.00	8,854.41	8,748.04	8,694.23	21.71	22.31	-128.43	-425.95	764.80	1,134.29	1,093.66	40.64	27.912		
9,000.00	8,954.09	8,846.17	8,790.97	21.95	22.65	-128.44	-433.79	779.26	1,153.36	1,112.21	41.15	28.026		
9,100.00	9,053.89	8,944.45	8,887.86	22.17	23.00	-128.38	-441.64	793.74	1,171.37	1,129.72	41.66	28.120		
9,200.00	9,153.79	9,042.85	8,984.87	22.38	23.34	-128.25	-449.50	808.23	1,188.34	1,146.19	42.15	28.196		
9,300.00	9,253.75	9,149.84	9,090.41	22.57	23.67	-128.04	-457.87	823.65	1,203.96	1,161.34	42.62	28.249		
9,408.26	9,362.00	9,267.38	9,206.54	22.77	24.01	86.89	-466.51	839.60	1,218.83	1,175.73	43.10	28.276		
9,500.00	9,453.74	9,367.29	9,305.39	22.94	24.29	87.24	-473.42	852.33	1,230.22	1,186.71	43.50	28.278		
9,608.26	9,562.00	9,485.51	9,422.52	23.14	24.61	87.63	-481.06	866.41	1,242.82	1,198.85	43.98	28.262		
9,650.00	9,603.70	9,531.03	9,467.67	23.20	24.73	87.39	-483.85	871.55	1,247.38	1,203.22	44.16	28.250		
9,700.00	9,653.35	9,585.04	9,521.26	23.26	24.88	87.32	-487.04	877.45	1,252.50	1,208.16	44.34	28.248		
9,750.00	9,702.30	9,638.11	9,573.95	23.29	25.01	87.47	-490.07	883.02	1,257.33	1,212.85	44.49	28.263		
9,800.00	9,750.18	9,689.86	9,625.36	23.30	25.15	87.81	-492.90	888.25	1,261.96	1,217.36	44.60	28.294		
9,850.00	9,796.63	9,739.92	9,675.11	23.28	25.28	88.30	-495.54	893.12	1,266.53	1,221.85	44.68	28.344		

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 332H (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:	332H (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		
9,900.00	9,841.30	9,787.93	9,722.84	23.24	25.40	88.91	-497.97	897.60	1,271.22	1,226.48	44.74	28.414		
9,950.00	9,883.83	9,833.52	9,768.20	23.19	25.51	89.57	-500.20	901.70	1,276.21	1,231.44	44.77	28.506		
10,000.00	9,923.92	9,876.36	9,810.83	23.12	25.61	90.23	-502.20	905.40	1,281.74	1,236.95	44.78	28.622		
10,050.00	9,961.26	9,916.12	9,850.42	23.04	25.71	90.84	-504.00	908.72	1,288.00	1,243.22	44.78	28.764		
10,100.00	9,995.56	9,952.50	9,886.64	22.95	25.80	91.34	-505.59	911.64	1,295.22	1,250.45	44.77	28.932		
10,150.00	10,026.55	9,985.21	9,919.22	22.86	25.88	91.67	-506.97	914.19	1,303.60	1,258.84	44.76	29.125		
10,200.00	10,054.01	10,013.99	9,947.89	22.77	25.94	91.77	-508.15	916.36	1,313.30	1,268.54	44.76	29.342		
10,250.00	10,077.73	10,038.59	9,972.41	22.67	26.00	91.61	-509.13	918.17	1,324.47	1,279.70	44.77	29.581		
10,300.00	10,097.52	10,058.80	9,992.55	22.58	26.05	91.12	-509.91	919.62	1,337.20	1,292.39	44.81	29.842		
10,350.00	10,113.24	10,074.45	10,008.15	22.49	26.09	90.30	-510.51	920.72	1,351.52	1,306.66	44.86	30.127		
10,400.00	10,124.76	10,085.38	10,019.05	22.41	26.11	89.09	-510.92	921.47	1,367.43	1,322.51	44.92	30.441		
10,450.00	10,132.00	10,091.48	10,025.13	22.33	26.12	87.50	-511.15	921.89	1,384.84	1,339.87	44.97	30.797		
10,500.00	10,134.90	10,092.67	10,026.31	22.26	26.13	85.53	-511.19	921.97	1,403.63	1,358.66	44.98	31.209		
10,508.26	10,134.96	10,092.39	10,026.03	22.25	26.13	85.17	-511.18	921.95	1,406.85	1,361.88	44.97	31.283		
10,600.00	10,134.96	10,088.50	10,022.15	22.37	26.12	85.00	-511.04	921.69	1,445.31	1,400.12	45.20	31.978		
10,700.00	10,134.96	10,084.22	10,017.89	22.87	26.11	84.81	-510.88	921.39	1,492.52	1,446.94	45.58	32.746		
10,800.00	10,134.96	10,079.90	10,013.58	23.48	26.10	84.62	-510.71	921.09	1,544.76	1,498.67	46.10	33.511		
10,900.00	10,134.96	10,075.53	10,009.23	24.20	26.09	84.43	-510.55	920.79	1,601.54	1,554.80	46.74	34.263		
11,000.00	10,134.96	10,071.13	10,004.84	25.02	26.08	84.23	-510.38	920.48	1,662.39	1,614.89	47.50	34.996		
11,100.00	10,134.96	10,066.68	10,000.41	25.94	26.07	84.04	-510.21	920.17	1,726.88	1,678.51	48.37	35.703		
11,200.00	10,134.96	10,062.19	9,995.93	26.94	26.06	83.84	-510.04	919.86	1,794.61	1,745.29	49.33	36.382		
11,300.00	10,134.97	10,057.66	9,991.41	28.02	26.05	83.64	-509.87	919.53	1,865.25	1,814.88	50.37	37.030		
11,400.00	10,134.97	10,053.08	9,986.85	29.18	26.04	83.43	-509.69	919.21	1,938.46	1,886.97	51.49	37.648		
11,500.00	10,134.97	10,048.46	9,982.24	30.40	26.02	83.23	-509.51	918.88	2,013.96	1,961.29	52.67	38.236		
11,600.00	10,134.97	13,175.19	11,687.48	31.67	36.45	139.63	1,136.13	952.47	2,037.79	1,986.45	51.35	39.688		
11,700.00	10,134.97	13,275.19	11,687.25	33.00	37.68	139.62	1,236.13	952.47	2,037.62	1,984.49	53.12	38.355		
11,800.00	10,134.97	13,375.19	11,687.02	34.37	38.95	139.62	1,336.13	952.48	2,037.44	1,982.47	54.97	37.063		
11,900.00	10,134.97	13,475.19	11,686.78	35.78	40.27	139.62	1,436.13	952.48	2,037.26	1,980.38	56.88	35.817		
12,000.00	10,134.97	13,575.19	11,686.55	37.23	41.63	139.61	1,536.13	952.48	2,037.09	1,978.24	58.84	34.620		
12,100.00	10,134.97	13,675.19	11,686.32	38.70	43.02	139.61	1,636.13	952.48	2,036.91	1,976.06	60.85	33.473		
12,200.00	10,134.97	13,775.19	11,686.09	40.21	44.44	139.60	1,736.12	952.48	2,036.73	1,973.82	62.91	32.375		
12,300.00	10,134.98	13,875.19	11,685.86	41.74	45.89	139.60	1,836.12	952.48	2,036.56	1,971.55	65.01	31.328		
12,400.00	10,134.98	13,975.18	11,685.63	43.30	47.37	139.59	1,936.12	952.48	2,036.38	1,969.24	67.14	30.330		
12,500.00	10,134.98	14,075.18	11,685.40	44.87	48.87	139.59	2,036.12	952.49	2,036.20	1,966.89	69.31	29.379		
12,600.00	10,134.98	14,175.18	11,685.17	46.46	50.39	139.59	2,136.12	952.49	2,036.03	1,964.52	71.51	28.473		
12,700.00	10,134.98	14,275.18	11,684.93	48.07	51.93	139.58	2,236.12	952.49	2,035.85	1,962.12	73.73	27.611		
12,800.00	10,134.98	14,375.18	11,684.70	49.70	53.49	139.58	2,336.12	952.49	2,035.67	1,959.69	75.99	26.790		
12,900.00	10,134.98	14,475.18	11,684.47	51.33	55.06	139.57	2,436.12	952.49	2,035.50	1,957.24	78.26	26.009		
13,000.00	10,134.98	14,575.18	11,684.24	52.98	56.65	139.57	2,536.12	952.49	2,035.32	1,954.77	80.56	25.266		
13,100.00	10,134.98	14,675.18	11,684.01	54.65	58.26	139.56	2,636.12	952.49	2,035.15	1,952.27	82.87	24.558		
13,200.00	10,134.98	14,775.18	11,683.78	56.32	59.87	139.56	2,736.12	952.50	2,034.97	1,949.76	85.21	23.883		
13,300.00	10,134.99	14,875.18	11,683.55	58.00	61.50	139.56	2,836.12	952.50	2,034.79	1,947.24	87.56	23.240		
13,400.00	10,134.99	14,975.18	11,683.32	59.69	63.14	139.55	2,936.12	952.50	2,034.62	1,944.69	89.92	22.626		
13,500.00	10,134.99	15,075.18	11,683.09	61.38	64.79	139.55	3,036.12	952.50	2,034.44	1,942.14	92.30	22.041		
13,600.00	10,134.99	15,175.18	11,682.85	63.09	66.44	139.54	3,136.12	952.50	2,034.26	1,939.57	94.70	21.482		
13,700.00	10,134.99	15,275.18	11,682.62	64.80	68.11	139.54	3,236.12	952.50	2,034.09	1,936.99	97.10	20.948		
13,800.00	10,134.99	15,375.18	11,682.39	66.52	69.79	139.53	3,336.12	952.50	2,033.91	1,934.39	99.52	20.438		
13,900.00	10,134.99	15,475.18	11,682.16	68.24	71.47	139.53	3,436.12	952.51	2,033.74	1,931.79	101.95	19.949		
14,000.00	10,134.99	15,575.18	11,681.93	69.97	73.16	139.53	3,536.12	952.51	2,033.56	1,929.18	104.38	19.482		
14,100.00	10,134.99	15,675.18	11,681.70	71.70	74.85	139.52	3,636.11	952.51	2,033.38	1,926.55	106.83	19.034		
14,200.00	10,134.99	15,775.18	11,681.47	73.44	76.55	139.52	3,736.11	952.51	2,033.21	1,923.92	109.28	18.605		
14,300.00	10,135.00	15,875.18	11,681.24	75.18	78.26	139.51	3,836.11	952.51	2,033.03	1,921.28	111.75	18.193		

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 332H (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:	332H (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		
14,400.00	10,135.00	15,975.18	11,681.00	76.93	79.97	139.51	3,936.11	952.51	2,032.86	1,918.64	114.22	17.798		
14,500.00	10,135.00	16,075.18	11,680.77	78.67	81.69	139.51	4,036.11	952.51	2,032.68	1,915.98	116.70	17.418		
14,600.00	10,135.00	16,175.18	11,680.54	80.43	83.41	139.50	4,136.11	952.52	2,032.50	1,913.32	119.18	17.054		
14,700.00	10,135.00	16,275.18	11,680.31	82.18	85.14	139.50	4,236.11	952.52	2,032.33	1,910.65	121.67	16.703		
14,800.00	10,135.00	16,375.18	11,680.08	83.94	86.87	139.49	4,336.11	952.52	2,032.15	1,907.98	124.17	16.366		
14,829.84	10,135.00	16,405.02	11,680.01	84.47	87.38	139.49	4,365.95	952.52	2,032.10	1,907.18	124.92	16.268		



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (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:	332H (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							
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	-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	4,401.95	4,401.94	9.72	9.72	145.24	124.21	-0.79	124.94	105.50	19.43	6.429		
4,500.00	4,499.96	4,503.89	4,503.85	9.89	9.89	145.33	121.82	-2.11	124.76	104.98	19.78	6.308		
4,600.00	4,599.86	4,605.83	4,605.69	10.07	10.07	145.49	117.85	-4.29	124.45	104.33	20.12	6.185		
4,700.00	4,699.68	4,707.77	4,707.42	10.24	10.25	145.71	112.30	-7.35	124.02	103.56	20.47	6.060		
4,800.00	4,799.37	4,809.70	4,809.03	10.43	10.44	146.00	105.15	-11.29	123.48	102.67	20.81	5.933		
4,900.00	4,898.90	4,911.63	4,910.47	10.61	10.62	146.36	96.43	-16.09	122.82	101.66	21.16	5.805		
5,000.00	4,998.26	5,013.55	5,011.71	10.80	10.82	146.78	86.13	-21.76	122.04	100.54	21.51	5.675		
5,100.00	5,097.40	5,115.47	5,112.72	11.00	11.02	147.28	74.25	-28.31	121.16	99.30	21.86	5.543		

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 332H (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:	332H (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)						
5,179.27	5,175.82	5,196.25	5,192.59	11.17	11.19	147.73	63.72	-34.11	120.38	98.24	22.14	5.438		
5,200.00	5,196.31	5,217.37	5,213.46	11.21	11.23	147.84	60.81	-35.71	120.13	97.91	22.22	5.407		
5,300.00	5,295.13	5,319.25	5,313.88	11.43	11.46	148.16	45.80	-43.98	117.99	95.37	22.62	5.217		
5,400.00	5,393.96	5,420.28	5,413.18	11.65	11.69	148.14	29.50	-52.96	114.38	91.36	23.03	4.968		
5,500.00	5,492.78	5,520.21	5,511.34	11.88	11.93	148.04	13.11	-61.98	110.50	87.06	23.44	4.715		
5,600.00	5,591.61	5,620.13	5,609.50	12.12	12.18	147.93	-3.28	-71.01	106.62	82.76	23.86	4.469		
5,700.00	5,690.43	5,720.05	5,707.65	12.37	12.44	147.82	-19.67	-80.04	102.74	78.46	24.29	4.230		
5,800.00	5,789.26	5,819.98	5,805.81	12.61	12.71	147.70	-36.06	-89.06	98.86	74.14	24.72	3.999		
5,900.00	5,888.08	5,919.90	5,903.97	12.87	12.99	147.56	-52.45	-98.09	94.98	69.82	25.16	3.775		
6,000.00	5,986.91	6,019.83	6,002.13	13.13	13.27	147.42	-68.84	-107.12	91.11	65.50	25.61	3.558		
6,100.00	6,085.73	6,119.75	6,100.28	13.39	13.56	147.26	-85.24	-116.15	87.23	61.17	26.06	3.347		
6,200.00	6,184.56	6,219.68	6,198.44	13.66	13.85	147.09	-101.63	-125.17	83.35	56.83	26.52	3.143		
6,300.00	6,283.38	6,319.60	6,296.60	13.93	14.16	146.91	-118.02	-134.20	79.47	52.49	26.99	2.945		
6,400.00	6,382.21	6,419.53	6,394.75	14.21	14.46	146.70	-134.41	-143.23	75.60	48.14	27.46	2.753		
6,500.00	6,481.03	6,519.45	6,492.91	14.49	14.77	146.47	-150.80	-152.25	71.73	43.79	27.94	2.567		
6,600.00	6,579.86	6,619.37	6,591.07	14.77	15.09	146.21	-167.19	-161.28	67.85	39.43	28.42	2.387		
6,700.00	6,678.68	6,719.30	6,689.22	15.06	15.41	145.93	-183.58	-170.31	63.98	35.07	28.91	2.213		
6,800.00	6,777.51	6,819.22	6,787.38	15.35	15.74	145.60	-199.97	-179.34	60.11	30.70	29.41	2.044		
6,900.00	6,876.33	6,919.15	6,885.54	15.64	16.06	145.24	-216.36	-188.36	56.24	26.33	29.92	1.880		
7,000.00	6,975.16	7,019.07	6,983.69	15.94	16.40	144.82	-232.75	-197.39	52.38	21.95	30.43	1.721		
7,100.00	7,073.98	7,119.00	7,081.85	16.24	16.73	144.33	-249.14	-206.42	48.52	17.56	30.95	1.567		
7,200.00	7,172.81	7,218.40	7,179.59	16.54	17.05	144.09	-265.00	-215.15	45.11	13.64	31.47	1.434 Level 3		
7,300.00	7,271.63	7,317.72	7,277.54	16.84	17.35	144.94	-279.40	-223.08	43.16	11.24	31.92	1.352 Level 3		
7,375.60	7,346.34	7,392.82	7,351.78	17.07	17.56	146.37	-289.30	-228.54	42.71	10.50	32.21	1.326 Level 3, CC		
7,400.00	7,370.45	7,417.05	7,375.77	17.15	17.63	146.97	-292.32	-230.20	42.76	10.46	32.30	1.324 Level 3, ES, SF		
7,500.00	7,469.28	7,516.34	7,474.20	17.46	17.91	149.99	-303.73	-236.48	43.98	11.36	32.62	1.348 Level 3		
7,600.00	7,568.10	7,615.53	7,572.74	17.77	18.17	153.61	-313.64	-241.94	46.94	14.04	32.91	1.427 Level 3		
7,700.00	7,666.93	7,714.56	7,671.30	18.08	18.43	157.35	-322.04	-246.57	51.72	18.53	33.19	1.558		
7,800.00	7,765.75	7,813.36	7,769.79	18.39	18.67	160.85	-328.94	-250.37	58.36	24.86	33.50	1.742		
7,900.00	7,864.58	7,911.89	7,868.13	18.71	18.90	163.89	-334.33	-253.34	66.86	33.03	33.83	1.976		
8,000.00	7,963.40	8,010.09	7,966.22	19.02	19.11	166.41	-338.23	-255.49	77.20	43.00	34.19	2.258		
8,100.00	8,062.23	8,107.89	8,063.98	19.34	19.31	168.45	-340.65	-256.82	89.35	54.77	34.58	2.584		
8,200.00	8,161.05	8,205.25	8,161.33	19.66	19.50	170.06	-341.61	-257.35	103.26	68.29	34.97	2.953		
8,300.00	8,259.88	8,303.80	8,259.88	19.98	19.68	171.33	-341.63	-257.36	118.33	82.96	35.38	3.345		
8,400.00	8,358.70	8,402.62	8,358.70	20.31	19.87	172.32	-341.63	-257.36	133.47	97.67	35.80	3.729		
8,500.00	8,457.53	8,496.13	8,442.08	20.63	20.01	172.33	-337.92	-257.36	152.71	116.51	36.20	4.218		
8,528.99	8,486.18	8,508.58	8,464.32	20.73	20.03	171.99	-334.94	-257.36	160.47	124.15	36.32	4.419		
8,600.00	8,556.42	8,561.48	8,516.15	20.94	20.07	170.81	-324.48	-257.36	183.14	146.51	36.63	4.999		
8,700.00	8,655.54	8,630.43	8,581.87	21.21	20.07	168.71	-303.75	-257.36	222.99	185.93	37.07	6.016		
8,800.00	8,754.88	8,700.00	8,645.18	21.47	20.04	166.37	-274.99	-257.36	271.37	233.87	37.50	7.236		
8,900.00	8,854.41	8,750.00	8,688.28	21.71	19.99	164.77	-249.69	-257.36	326.68	288.80	37.88	8.625		
9,000.00	8,954.09	8,800.00	8,729.02	21.95	19.93	163.29	-220.73	-257.36	388.20	349.96	38.23	10.153		
9,100.00	9,053.89	8,839.07	8,759.01	22.17	19.87	162.28	-195.69	-257.36	454.66	416.12	38.54	11.796		
9,200.00	9,153.79	8,877.04	8,786.45	22.38	19.82	161.43	-169.46	-257.36	525.25	486.41	38.84	13.525		
9,300.00	9,253.75	8,900.00	8,802.18	22.57	19.78	161.11	-152.74	-257.36	599.36	560.28	39.07	15.340		
9,408.26	9,362.00	8,950.00	8,834.03	22.77	19.71	14.76	-114.22	-257.36	682.30	642.94	39.37	17.331		
9,500.00	9,453.74	8,967.53	8,844.39	22.94	19.68	14.30	-100.08	-257.36	755.06	715.47	39.59	19.071		
9,608.26	9,562.00	9,000.00	8,862.41	23.14	19.63	13.49	-73.07	-257.36	843.98	804.10	39.88	21.161		
9,650.00	9,603.70	9,000.00	8,862.41	23.20	19.63	12.18	-73.07	-257.36	878.06	838.21	39.86	22.031		
9,700.00	9,653.35	9,000.00	8,862.41	23.26	19.63	10.90	-73.07	-257.36	917.49	877.88	39.61	23.163		
9,750.00	9,702.30	9,027.16	8,876.29	23.29	19.59	9.57	-49.73	-257.36	954.26	915.09	39.17	24.360		
9,800.00	9,750.18	9,050.00	8,887.09	23.30	19.56	8.60	-29.61	-257.36	989.27	950.77	38.50	25.693		

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 332H (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:	332H (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)		+N/-S (usft)	+E/-W (usft)						
9,850.00	9,796.63	9,050.00	8,887.09	23.28	19.56	7.99	-29.61	-257.36	1,021.74	984.14	37.60	27.174		
9,900.00	9,841.30	9,068.36	8,895.19	23.24	19.53	7.37	-13.13	-257.36	1,051.88	1,015.35	36.53	28.796		
9,950.00	9,883.83	9,082.94	8,901.24	23.19	19.51	6.90	0.13	-257.36	1,079.54	1,044.25	35.29	30.591		
10,000.00	9,923.92	9,100.00	8,907.89	23.12	19.49	6.50	15.84	-257.37	1,104.62	1,070.70	33.92	32.570		
10,050.00	9,961.26	9,100.00	8,907.89	23.04	19.49	6.22	15.84	-257.37	1,127.24	1,094.82	32.42	34.767		
10,100.00	9,995.56	9,128.46	8,917.94	22.95	19.46	5.92	42.47	-257.37	1,146.71	1,115.81	30.90	37.112		
10,150.00	10,026.55	9,150.00	8,924.65	22.86	19.43	5.70	62.93	-257.37	1,163.66	1,134.31	29.35	39.641		
10,200.00	10,054.01	9,150.00	8,924.65	22.77	19.43	5.56	62.93	-257.37	1,177.82	1,149.99	27.83	42.326		
10,250.00	10,077.73	9,175.83	8,931.69	22.67	19.40	5.42	87.79	-257.37	1,188.91	1,162.47	26.44	44.962		
10,300.00	10,097.52	9,200.00	8,937.25	22.58	19.38	5.32	111.31	-257.37	1,197.31	1,172.08	25.24	47.445		
10,350.00	10,113.24	9,200.00	8,937.25	22.49	19.38	5.27	111.31	-257.37	1,202.71	1,178.47	24.24	49.621		
10,400.00	10,124.76	9,224.12	8,941.80	22.41	19.36	5.24	134.99	-257.37	1,205.09	1,181.48	23.61	51.049		
10,450.00	10,132.00	9,250.00	8,945.57	22.33	19.36	5.25	160.59	-257.37	1,204.74	1,181.38	23.35	51.588		
10,500.00	10,134.90	9,250.00	8,945.57	22.26	19.36	5.28	160.59	-257.37	1,201.25	1,177.82	23.44	51.250		
10,508.26	10,134.96	9,250.00	8,945.57	22.25	19.36	5.29	160.59	-257.37	1,200.46	1,176.97	23.49	51.103		
10,600.00	10,134.96	9,300.00	8,949.58	22.37	19.48	5.31	210.41	-257.37	1,193.03	1,169.21	23.82	50.077		
10,700.00	10,134.96	9,322.16	8,949.96	22.87	19.56	5.31	232.57	-257.37	1,190.11	1,165.96	24.14	49.293		
10,800.00	10,134.96	9,422.16	8,949.96	23.48	20.02	5.31	332.57	-257.37	1,190.11	1,165.37	24.73	48.115		
10,900.00	10,134.96	9,522.16	8,949.96	24.20	20.61	5.31	432.57	-257.37	1,190.11	1,164.71	25.40	46.858		
11,000.00	10,134.96	9,622.16	8,949.96	25.02	21.32	5.31	532.57	-257.38	1,190.11	1,163.97	26.13	45.542		
11,100.00	10,134.96	9,722.16	8,949.96	25.94	22.15	5.31	632.57	-257.38	1,190.11	1,163.18	26.93	44.192		
11,200.00	10,134.96	9,822.16	8,949.96	26.94	23.10	5.31	732.57	-257.38	1,190.11	1,162.32	27.79	42.828		
11,300.00	10,134.97	9,922.16	8,949.96	28.02	24.14	5.31	832.57	-257.38	1,190.11	1,161.41	28.70	41.470		
11,400.00	10,134.97	10,022.16	8,949.97	29.18	25.27	5.31	932.57	-257.39	1,190.11	1,160.45	29.66	40.129		
11,500.00	10,134.97	10,122.16	8,949.97	30.40	26.47	5.31	1,032.57	-257.39	1,190.11	1,159.45	30.66	38.817		
11,600.00	10,134.97	10,222.16	8,949.97	31.67	27.74	5.31	1,132.57	-257.39	1,190.10	1,158.40	31.70	37.542		
11,700.00	10,134.97	10,322.16	8,949.97	33.00	29.07	5.31	1,232.57	-257.39	1,190.10	1,157.33	32.78	36.308		
11,800.00	10,134.97	10,422.16	8,949.97	34.37	30.45	5.31	1,332.57	-257.40	1,190.10	1,156.22	33.89	35.119		
11,900.00	10,134.97	10,522.16	8,949.97	35.78	31.88	5.31	1,432.57	-257.40	1,190.10	1,155.08	35.03	33.978		
12,000.00	10,134.97	10,622.16	8,949.97	37.23	33.34	5.31	1,532.57	-257.40	1,190.10	1,153.91	36.19	32.885		
12,100.00	10,134.97	10,722.16	8,949.97	38.70	34.84	5.31	1,632.57	-257.40	1,190.10	1,152.72	37.38	31.839		
12,200.00	10,134.97	10,822.16	8,949.97	40.21	36.37	5.31	1,732.57	-257.40	1,190.10	1,151.51	38.59	30.841		
12,300.00	10,134.98	10,922.16	8,949.97	41.74	37.92	5.31	1,832.57	-257.41	1,190.10	1,150.28	39.82	29.888		
12,400.00	10,134.98	11,022.16	8,949.98	43.30	39.50	5.31	1,932.57	-257.41	1,190.10	1,149.04	41.07	28.980		
12,500.00	10,134.98	11,122.16	8,949.98	44.87	41.10	5.31	2,032.57	-257.41	1,190.10	1,147.77	42.33	28.115		
12,600.00	10,134.98	11,222.16	8,949.98	46.46	42.72	5.31	2,132.57	-257.41	1,190.10	1,146.49	43.61	27.291		
12,700.00	10,134.98	11,322.16	8,949.98	48.07	44.35	5.31	2,232.57	-257.42	1,190.10	1,145.20	44.90	26.505		
12,800.00	10,134.98	11,422.16	8,949.98	49.70	46.00	5.31	2,332.57	-257.42	1,190.10	1,143.90	46.20	25.757		
12,900.00	10,134.98	11,522.16	8,949.98	51.33	47.66	5.31	2,432.57	-257.42	1,190.10	1,142.58	47.52	25.044		
13,000.00	10,134.98	11,622.16	8,949.98	52.98	49.33	5.31	2,532.57	-257.42	1,190.10	1,141.25	48.85	24.364		
13,100.00	10,134.98	11,722.16	8,949.98	54.65	51.01	5.31	2,632.57	-257.43	1,190.10	1,139.92	50.18	23.715		
13,200.00	10,134.98	11,822.16	8,949.98	56.32	52.70	5.31	2,732.57	-257.43	1,190.10	1,138.57	51.53	23.096		
13,300.00	10,134.99	11,922.16	8,949.98	58.00	54.40	5.31	2,832.57	-257.43	1,190.10	1,137.22	52.88	22.505		
13,400.00	10,134.99	12,022.16	8,949.99	59.69	56.11	5.31	2,932.57	-257.43	1,190.10	1,135.86	54.24	21.940		
13,500.00	10,134.99	12,122.16	8,949.99	61.38	57.83	5.31	3,032.57	-257.43	1,190.10	1,134.49	55.61	21.400		
13,600.00	10,134.99	12,222.16	8,949.99	63.09	59.55	5.31	3,132.57	-257.44	1,190.10	1,133.11	56.99	20.884		
13,700.00	10,134.99	12,322.16	8,949.99	64.80	61.28	5.30	3,232.57	-257.44	1,190.10	1,131.73	58.37	20.390		
13,800.00	10,134.99	12,422.16	8,949.99	66.52	63.01	5.30	3,332.57	-257.44	1,190.10	1,130.35	59.75	19.917		
13,900.00	10,134.99	12,522.16	8,949.99	68.24	64.75	5.30	3,432.57	-257.44	1,190.10	1,128.95	61.14	19.464		
14,000.00	10,134.99	12,622.16	8,949.99	69.97	66.50	5.30	3,532.57	-257.45	1,190.10	1,127.56	62.54	19.029		
14,100.00	10,134.99	12,722.16	8,949.99	71.70	68.25	5.30	3,632.57	-257.45	1,190.10	1,126.15	63.94	18.612		
14,200.00	10,134.99	12,822.16	8,949.99	73.44	70.00	5.30	3,732.57	-257.45	1,190.10	1,124.75	65.35	18.212		

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 332H (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:	332H (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		
14,300.00	10,135.00	12,922.16	8,949.99	75.18	71.75	5.30	3,832.57	-257.45	1,190.10	1,123.34	66.76	17.827		
14,400.00	10,135.00	13,022.16	8,950.00	76.93	73.51	5.30	3,932.57	-257.46	1,190.10	1,121.93	68.17	17.458		
14,500.00	10,135.00	13,122.16	8,950.00	78.67	75.28	5.30	4,032.57	-257.46	1,190.10	1,120.51	69.59	17.102		
14,600.00	10,135.00	13,222.16	8,950.00	80.43	77.04	5.30	4,132.57	-257.46	1,190.10	1,119.09	71.01	16.760		
14,700.00	10,135.00	13,322.16	8,950.00	82.18	78.81	5.30	4,232.57	-257.46	1,190.09	1,117.66	72.43	16.431		
14,800.00	10,135.00	13,422.16	8,950.00	83.94	80.58	5.30	4,332.57	-257.46	1,190.09	1,116.24	73.86	16.113		
14,829.84	10,135.00	13,452.00	8,950.00	84.47	81.11	5.30	4,362.41	-257.47	1,190.09	1,115.81	74.28	16.021		



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (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:	332H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 320H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)						
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	4,400.52	4,400.52	9.72	9.72	146.20	74.64	0.59	75.37	55.93	19.44	3.877 ES		
4,500.00	4,499.96	4,500.94	4,500.89	9.89	9.91	149.10	73.56	3.00	76.60	56.81	19.79	3.870 SF		
4,600.00	4,599.86	4,601.13	4,600.99	10.07	10.10	153.70	71.77	7.01	79.08	58.93	20.15	3.925		
4,700.00	4,699.88	4,701.00	4,700.67	10.24	10.29	159.60	69.27	12.59	83.33	62.84	20.49	4.066		
4,800.00	4,799.37	4,800.44	4,799.80	10.43	10.49	166.24	66.08	19.72	89.95	69.11	20.84	4.316		
4,900.00	4,898.90	4,899.34	4,898.25	10.61	10.69	173.02	62.21	28.37	99.43	78.25	21.18	4.694		
5,000.00	4,998.26	4,997.61	4,995.89	10.80	10.89	179.43	57.68	38.51	112.08	90.56	21.52	5.207		
5,100.00	5,097.40	5,095.14	5,092.59	11.00	11.10	-174.83	52.51	50.07	128.02	106.15	21.87	5.855		

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 332H (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:	332H (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							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
5,179.27	5,175.82	5,172.28	5,168.94	11.17	11.27	-170.90	48.03	60.09	142.90	120.76	22.14	6.454		
5,200.00	5,196.31	5,192.47	5,188.93	11.21	11.32	-170.01	46.85	62.73	147.03	124.80	22.22	6.616		
5,300.00	5,295.13	5,289.88	5,285.34	11.43	11.54	-166.33	41.16	75.45	167.36	144.74	22.63	7.396		
5,400.00	5,393.96	5,387.29	5,381.74	11.65	11.77	-163.45	35.46	88.18	188.22	165.18	23.04	8.170		
5,500.00	5,492.78	5,484.70	5,478.14	11.88	12.00	-161.15	29.77	100.91	209.45	185.99	23.46	8.929		
5,600.00	5,591.61	5,582.10	5,574.55	12.12	12.24	-159.27	24.08	113.63	230.94	207.06	23.88	9.670		
5,700.00	5,690.43	5,679.51	5,670.95	12.37	12.48	-157.71	18.39	126.36	252.63	228.32	24.31	10.390		
5,800.00	5,789.26	5,776.92	5,767.36	12.61	12.73	-156.40	12.69	139.09	274.47	249.72	24.75	11.089		
5,900.00	5,888.08	5,874.33	5,863.76	12.87	12.98	-155.28	7.00	151.81	296.43	271.23	25.19	11.766		
6,000.00	5,986.91	5,971.73	5,960.17	13.13	13.24	-154.31	1.31	164.54	318.48	292.84	25.64	12.421		
6,100.00	6,085.73	6,069.14	6,056.57	13.39	13.49	-153.47	-4.38	177.27	340.60	314.51	26.09	13.053		
6,200.00	6,184.56	6,166.55	6,152.98	13.66	13.76	-152.73	-10.08	190.00	362.79	336.24	26.55	13.664		
6,300.00	6,283.38	6,263.95	6,249.38	13.93	14.02	-152.08	-15.77	202.72	385.03	358.01	27.01	14.253		
6,400.00	6,382.21	6,361.36	6,345.78	14.21	14.29	-151.50	-21.46	215.45	407.31	379.83	27.48	14.821		
6,500.00	6,481.03	6,458.77	6,442.19	14.49	14.56	-150.98	-27.15	228.18	429.62	401.67	27.95	15.370		
6,600.00	6,579.86	6,556.18	6,538.59	14.77	14.83	-150.51	-32.84	240.90	451.97	423.54	28.43	15.899		
6,700.00	6,678.68	6,653.58	6,635.00	15.06	15.11	-150.08	-38.54	253.63	474.34	445.44	28.91	16.409		
6,800.00	6,777.51	6,750.99	6,731.40	15.35	15.39	-149.69	-44.23	266.36	496.74	467.35	29.39	16.901		
6,900.00	6,876.33	6,848.40	6,827.81	15.64	15.67	-149.34	-49.92	279.08	519.15	489.28	29.88	17.376		
7,000.00	6,975.16	6,945.81	6,924.21	15.94	15.95	-149.01	-55.61	291.81	541.59	511.22	30.37	17.834		
7,100.00	7,073.98	7,043.21	7,020.62	16.24	16.24	-148.71	-61.31	304.54	564.03	533.17	30.86	18.276		
7,200.00	7,172.81	7,140.82	7,117.02	16.54	16.53	-148.44	-67.00	317.26	586.50	555.14	31.36	18.703		
7,300.00	7,271.63	7,238.03	7,213.43	16.84	16.82	-148.18	-72.69	329.99	608.97	577.11	31.86	19.115		
7,400.00	7,370.45	7,335.44	7,309.83	17.15	17.11	-147.95	-78.38	342.72	631.45	599.09	32.36	19.513		
7,500.00	7,469.28	7,436.99	7,410.37	17.46	17.39	-147.73	-84.21	355.76	653.79	620.93	32.86	19.895		
7,600.00	7,568.10	7,542.98	7,515.54	17.77	17.66	-147.63	-89.61	367.81	675.06	641.70	33.36	20.238		
7,700.00	7,666.93	7,649.54	7,621.50	18.08	17.92	-147.67	-94.23	378.15	695.11	661.26	33.85	20.538		
7,800.00	7,765.75	7,756.61	7,728.15	18.39	18.17	-147.81	-98.06	386.71	713.93	679.59	34.33	20.795		
7,900.00	7,864.58	7,864.10	7,835.38	18.71	18.41	-148.07	-101.09	393.48	731.51	696.70	34.81	21.013		
8,000.00	7,963.40	7,971.95	7,943.10	19.02	18.63	-148.44	-103.30	398.43	747.88	712.60	35.29	21.195		
8,100.00	8,062.23	8,080.09	8,051.18	19.34	18.85	-148.90	-104.69	401.52	763.05	727.29	35.75	21.342		
8,200.00	8,161.05	8,188.43	8,159.50	19.66	19.05	-149.47	-105.24	402.76	777.03	740.82	36.21	21.461		
8,300.00	8,259.88	8,288.80	8,259.88	19.98	19.24	-150.03	-105.25	402.79	790.29	753.64	36.65	21.565		
8,400.00	8,358.70	8,387.63	8,358.70	20.31	19.44	-150.58	-105.25	402.79	803.61	766.51	37.10	21.663		
8,500.00	8,457.53	8,450.00	8,421.03	20.63	19.56	-151.02	-103.56	402.79	818.57	781.11	37.46	21.850		
8,528.99	8,486.18	8,471.87	8,442.80	20.73	19.60	-151.26	-101.46	402.79	823.75	786.18	37.57	21.927		
8,600.00	8,586.42	8,512.55	8,483.01	20.94	19.66	-151.91	-95.36	402.79	837.86	800.03	37.83	22.149		
8,700.00	8,685.54	8,567.11	8,536.07	21.21	19.74	-153.02	-82.73	402.78	850.75	822.59	38.15	22.560		
8,800.00	8,784.88	8,618.12	8,584.38	21.47	19.81	-154.27	-66.40	402.78	867.35	848.91	38.44	23.082		
8,900.00	8,884.41	8,665.36	8,627.66	21.71	19.86	-155.61	-47.51	402.78	871.84	879.13	38.71	23.713		
9,000.00	8,984.09	8,700.00	8,658.33	21.95	19.90	-156.73	-31.42	402.78	882.38	913.43	38.95	24.451		
9,100.00	9,083.89	8,750.00	8,700.77	22.17	19.94	-158.37	-5.00	402.78	890.72	951.54	39.17	25.291		
9,200.00	9,183.79	8,785.24	8,729.21	22.38	19.97	-159.64	15.79	402.78	1,033.01	993.63	39.38	26.231		
9,300.00	9,283.75	8,818.64	8,754.94	22.57	20.00	-160.89	37.08	402.78	1,079.02	1,039.45	39.58	27.264		
9,408.26	9,382.00	8,850.00	8,777.93	22.77	20.02	52.52	58.40	402.78	1,132.78	1,093.00	39.78	28.477		
9,500.00	9,481.74	8,877.14	8,796.87	22.94	20.04	51.62	77.84	402.78	1,181.90	1,141.95	39.95	29.586		
9,608.26	9,581.00	8,900.00	8,812.08	23.14	20.07	50.85	94.90	402.77	1,244.54	1,204.38	40.16	30.987		
9,650.00	9,680.70	8,900.00	8,812.08	23.20	20.07	48.50	94.90	402.77	1,269.36	1,229.17	40.19	31.587		
9,700.00	9,780.35	8,927.24	8,829.31	23.26	20.09	45.23	116.00	402.77	1,297.31	1,257.24	40.07	32.376		
9,750.00	9,880.30	8,950.00	8,842.92	23.29	20.11	42.53	134.24	402.77	1,324.00	1,284.14	39.86	33.218		
9,800.00	9,980.18	8,950.00	8,842.92	23.30	20.11	40.64	134.24	402.77	1,348.76	1,309.29	39.47	34.169		
9,850.00	10,080.63	8,968.15	8,853.24	23.28	20.13	38.68	149.16	402.77	1,371.69	1,332.76	38.93	35.235		

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 332H (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:	332H (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)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,900.00	9,841.30	8,982.52	8,861.09	23.24	20.15	37.07	161.21	402.77	1,392.61	1,354.38	38.22	36.434		
9,950.00	9,883.83	9,000.00	8,870.21	23.19	20.17	35.66	176.12	402.77	1,411.39	1,374.03	37.37	37.770		
10,000.00	9,923.92	9,000.00	8,870.21	23.12	20.17	34.64	176.12	402.77	1,428.08	1,391.67	36.42	39.215		
10,050.00	9,961.26	9,027.22	8,883.50	23.04	20.21	33.59	199.86	402.77	1,442.14	1,406.76	35.38	40.765		
10,100.00	9,995.56	9,050.00	8,893.75	22.95	20.25	32.78	220.21	402.77	1,454.02	1,419.73	34.29	42.402		
10,150.00	10,026.55	9,050.00	8,893.75	22.86	20.25	32.27	220.21	402.77	1,463.40	1,430.19	33.21	44.069		
10,200.00	10,054.01	9,073.44	8,903.43	22.77	20.29	31.82	241.55	402.77	1,470.21	1,438.02	32.19	45.679		
10,250.00	10,077.73	9,100.00	8,913.35	22.67	20.35	31.54	266.19	402.76	1,474.68	1,443.41	31.28	47.150		
10,300.00	10,097.52	9,100.00	8,913.35	22.58	20.35	31.45	266.19	402.76	1,476.37	1,445.88	30.49	48.420		
10,350.00	10,113.24	9,120.28	8,920.15	22.49	20.41	31.50	285.30	402.76	1,475.59	1,445.63	29.96	49.258		
10,400.00	10,124.76	9,150.00	8,928.87	22.41	20.50	31.72	313.70	402.76	1,472.49	1,442.78	29.71	49.559		
10,450.00	10,132.00	9,150.00	8,928.87	22.33	20.50	32.04	313.70	402.76	1,466.42	1,436.77	29.65	49.459		
10,500.00	10,134.90	9,150.00	8,928.87	22.26	20.50	32.48	313.70	402.76	1,458.37	1,428.51	29.86	48.845		
10,508.26	10,134.96	9,169.44	8,933.78	22.25	20.58	32.67	332.52	402.76	1,456.44	1,426.41	30.02	48.508		
10,600.00	10,134.96	9,200.00	8,940.19	22.37	20.70	32.81	362.39	402.76	1,439.99	1,409.63	30.37	47.423		
10,700.00	10,134.96	9,229.75	8,944.90	22.87	20.85	32.91	391.76	402.76	1,426.49	1,395.69	30.80	46.321		
10,800.00	10,134.96	9,250.00	8,947.23	23.48	20.95	32.96	411.87	402.76	1,417.84	1,386.59	31.25	45.373		
10,900.00	10,134.96	9,300.00	8,949.93	24.20	21.25	33.02	461.79	402.75	1,413.66	1,381.74	31.92	44.291		
10,948.94	10,134.96	9,319.77	8,949.96	24.60	21.37	33.02	481.56	402.75	1,413.33	1,381.08	32.26	43.816		
11,000.00	10,134.96	9,370.83	8,949.96	25.02	21.73	33.02	532.61	402.75	1,413.33	1,380.57	32.76	43.136		
11,100.00	10,134.96	9,470.83	8,949.96	25.94	22.53	33.02	632.61	402.74	1,413.33	1,379.46	33.87	41.726		
11,200.00	10,134.96	9,570.83	8,949.96	26.94	23.44	33.02	732.61	402.74	1,413.32	1,378.22	35.10	40.266		
11,300.00	10,134.97	9,670.83	8,949.96	28.02	24.45	33.02	832.61	402.73	1,413.32	1,376.88	36.44	38.788		
11,400.00	10,134.97	9,770.83	8,949.96	29.18	25.56	33.02	932.61	402.73	1,413.32	1,375.44	37.87	37.317		
11,500.00	10,134.97	9,870.83	8,949.96	30.40	26.74	33.02	1,032.61	402.72	1,413.31	1,373.92	39.40	35.874		
11,600.00	10,134.97	9,970.83	8,949.97	31.67	28.00	33.02	1,132.61	402.71	1,413.31	1,372.31	41.00	34.474		
11,700.00	10,134.97	10,070.83	8,949.97	33.00	29.31	33.02	1,232.61	402.71	1,413.31	1,370.64	42.67	33.125		
11,800.00	10,134.97	10,170.83	8,949.97	34.37	30.67	33.02	1,332.61	402.70	1,413.30	1,368.91	44.40	31.834		
11,900.00	10,134.97	10,270.83	8,949.97	35.78	32.08	33.02	1,432.61	402.70	1,413.30	1,367.12	46.18	30.604		
12,000.00	10,134.97	10,370.83	8,949.97	37.23	33.53	33.02	1,532.61	402.69	1,413.29	1,365.28	48.01	29.436		
12,100.00	10,134.97	10,470.83	8,949.97	38.70	35.02	33.02	1,632.61	402.68	1,413.29	1,363.40	49.89	28.330		
12,200.00	10,134.97	10,570.83	8,949.97	40.21	36.54	33.02	1,732.61	402.68	1,413.29	1,361.49	51.80	27.284		
12,300.00	10,134.98	10,670.83	8,949.97	41.74	38.08	33.02	1,832.61	402.67	1,413.28	1,359.54	53.75	26.296		
12,400.00	10,134.98	10,770.83	8,949.97	43.30	39.65	33.02	1,932.61	402.67	1,413.28	1,357.56	55.72	25.363		
12,500.00	10,134.98	10,870.83	8,949.97	44.87	41.24	33.02	2,032.61	402.66	1,413.28	1,355.55	57.73	24.482		
12,600.00	10,134.98	10,970.83	8,949.98	46.46	42.84	33.02	2,132.61	402.66	1,413.27	1,353.52	59.76	23.651		
12,700.00	10,134.98	11,070.83	8,949.98	48.07	44.47	33.02	2,232.61	402.65	1,413.27	1,351.46	61.81	22.866		
12,800.00	10,134.98	11,170.83	8,949.98	49.70	46.11	33.02	2,332.61	402.64	1,413.27	1,349.39	63.88	22.125		
12,900.00	10,134.98	11,270.83	8,949.98	51.33	47.76	33.02	2,432.61	402.64	1,413.26	1,347.30	65.97	21.424		
13,000.00	10,134.98	11,370.83	8,949.98	52.98	49.42	33.02	2,532.61	402.63	1,413.26	1,345.19	68.07	20.762		
13,100.00	10,134.98	11,470.83	8,949.98	54.65	51.10	33.02	2,632.61	402.63	1,413.25	1,343.06	70.19	20.135		
13,200.00	10,134.98	11,570.83	8,949.98	56.32	52.79	33.02	2,732.61	402.62	1,413.25	1,340.93	72.32	19.541		
13,300.00	10,134.99	11,670.83	8,949.98	58.00	54.48	33.02	2,832.61	402.62	1,413.25	1,338.78	74.47	18.977		
13,400.00	10,134.99	11,770.83	8,949.98	59.69	56.19	33.02	2,932.61	402.61	1,413.24	1,336.62	76.63	18.443		
13,500.00	10,134.99	11,870.83	8,949.99	61.38	57.90	33.02	3,032.61	402.60	1,413.24	1,334.44	78.80	17.936		
13,600.00	10,134.99	11,970.83	8,949.99	63.09	59.61	33.02	3,132.61	402.60	1,413.24	1,332.26	80.97	17.453		
13,700.00	10,134.99	12,070.83	8,949.99	64.80	61.34	33.02	3,232.61	402.59	1,413.23	1,330.07	83.16	16.994		
13,800.00	10,134.99	12,170.83	8,949.99	66.52	63.07	33.02	3,332.61	402.59	1,413.23	1,327.87	85.35	16.557		
13,900.00	10,134.99	12,270.83	8,949.99	68.24	64.80	33.02	3,432.61	402.58	1,413.23	1,325.67	87.56	16.141		
14,000.00	10,134.99	12,370.83	8,949.99	69.97	66.54	33.02	3,532.61	402.57	1,413.22	1,323.46	89.77	15.743		
14,100.00	10,134.99	12,470.83	8,949.99	71.70	68.29	33.02	3,632.61	402.57	1,413.22	1,321.24	91.98	15.364		
14,200.00	10,134.99	12,570.83	8,949.99	73.44	70.04	33.02	3,732.61	402.56	1,413.21	1,319.01	94.20	15.002		

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 332H (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:	332H (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)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,300.00	10,135.00	12,670.83	8,949.99	75.18	71.79	33.02	3,832.61	402.56	1,413.21	1,316.78	96.43	14.655		
14,400.00	10,135.00	12,770.83	8,950.00	76.93	73.55	33.02	3,932.61	402.55	1,413.21	1,314.54	98.66	14.323		
14,500.00	10,135.00	12,870.83	8,950.00	78.67	75.31	33.02	4,032.61	402.55	1,413.20	1,312.30	100.90	14.006		
14,600.00	10,135.00	12,970.83	8,950.00	80.43	77.07	33.02	4,132.61	402.54	1,413.20	1,310.06	103.14	13.701		
14,700.00	10,135.00	13,070.83	8,950.00	82.18	78.84	33.02	4,232.61	402.53	1,413.20	1,307.81	105.39	13.409		
14,800.00	10,135.00	13,170.83	8,950.00	83.94	80.60	33.02	4,332.61	402.53	1,413.19	1,305.55	107.64	13.129		
14,829.84	10,135.00	13,200.67	8,950.00	84.47	81.13	33.02	4,362.45	402.53	1,413.19	1,304.88	108.31	13.047		

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 332H (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:	332H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 321H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Between Centres (usft)	Between Ellipses (usft)				Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	
0.00	0.00	0.00	0.00	0.00	0.00	108.13	-59.04	180.29	189.71					
100.00	100.00	100.00	100.00	0.08	0.08	108.13	-59.04	180.29	189.71	0.16	1,205.766			
200.00	200.00	200.00	200.00	0.30	0.30	108.13	-59.04	180.29	189.71	0.81	312.606			
300.00	300.00	300.00	300.00	0.53	0.53	108.13	-59.04	180.29	189.71	1.06	179.582			
400.00	400.00	400.00	400.00	0.75	0.75	108.13	-59.04	180.29	189.71	1.51	125.976			
500.00	500.00	500.00	500.00	0.98	0.98	108.13	-59.04	180.29	189.71	1.96	97.016			
600.00	600.00	600.00	600.00	1.20	1.20	108.13	-59.04	180.29	189.71	2.40	78.882			
700.00	700.00	700.00	700.00	1.43	1.43	108.13	-59.04	180.29	189.71	2.85	66.460			
800.00	800.00	800.00	800.00	1.65	1.65	108.13	-59.04	180.29	189.71	3.30	57.417			
900.00	900.00	900.00	900.00	1.88	1.88	108.13	-59.04	180.29	189.71	3.75	50.541			
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	108.13	-59.04	180.29	189.71	4.20	45.136			
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	108.13	-59.04	180.29	189.71	4.65	40.775			
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	108.13	-59.04	180.29	189.71	5.10	37.182			
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	108.13	-59.04	180.29	189.71	5.55	34.172			
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	108.13	-59.04	180.29	189.71	6.00	31.612			
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	108.13	-59.04	180.29	189.71	6.45	29.409			
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	108.13	-59.04	180.29	189.71	6.90	27.493			
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	108.13	-59.04	180.29	189.71	7.35	25.812			
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	108.13	-59.04	180.29	189.71	7.80	24.324			
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	108.13	-59.04	180.29	189.71	8.25	22.998			
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	108.13	-59.04	180.29	189.71	8.70	21.810			
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	108.13	-59.04	180.29	189.71	9.15	20.738			
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	108.13	-59.04	180.29	189.71	9.60	19.767			
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	108.13	-59.04	180.29	189.71	10.05	18.882			
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	108.13	-59.04	180.29	189.71	10.50	18.074			
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	108.13	-59.04	180.29	189.71	10.95	17.331			
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	108.13	-59.04	180.29	189.71	11.40	16.648			
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	108.13	-59.04	180.29	189.71	11.85	16.016			
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	108.13	-59.04	180.29	189.71	12.29	15.430			
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	108.13	-59.04	180.29	189.71	12.74	14.886			
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	108.13	-59.04	180.29	189.71	13.19	14.379			
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	108.13	-59.04	180.29	189.71	13.64	13.905			
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	108.13	-59.04	180.29	189.71	14.09	13.462			
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	108.13	-59.04	180.29	189.71	14.54	13.045			
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	108.13	-59.04	180.29	189.71	14.99	12.654			
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	108.13	-59.04	180.29	189.71	15.44	12.286			
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	108.13	-59.04	180.29	189.71	15.89	11.938			
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	108.13	-59.04	180.29	189.71	16.34	11.610			
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	108.13	-59.04	180.29	189.71	16.79	11.299			
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	108.13	-59.04	180.29	189.71	17.24	11.004			
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	108.13	-59.04	180.29	189.71	17.69	10.725			
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	108.13	-59.04	180.29	189.71	18.14	10.459			
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	108.13	-59.04	180.29	189.71	18.59	10.206			
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	108.13	-59.04	180.29	189.71	19.04	9.965 CC, ES			
4,400.00	4,400.00	4,398.78	4,398.77	9.72	9.72	-106.73	-59.29	181.07	190.81	17.37	9.818			
4,500.00	4,499.96	4,493.44	4,493.41	9.89	9.90	-107.42	-60.04	183.40	194.11	17.42	9.809 SF			
4,600.00	4,599.86	4,589.89	4,589.77	10.07	10.09	-108.50	-61.29	187.27	199.67	17.53	9.913			
4,700.00	4,699.68	4,686.02	4,685.73	10.24	10.27	-109.92	-63.02	192.66	207.58	18.08	10.126			
4,800.00	4,799.37	4,781.71	4,781.14	10.43	10.46	-111.58	-65.24	199.55	217.92	19.06	10.447			
4,900.00	4,898.90	4,876.87	4,875.89	10.61	10.66	-113.40	-67.93	207.91	230.79	21.22	10.876			
5,000.00	4,998.26	4,971.39	4,969.85	10.80	10.85	-115.28	-71.08	217.69	246.26	21.58	11.410			
5,100.00	5,097.40	5,065.17	5,062.90	11.00	11.06	-117.15	-74.67	228.85	264.39	21.95	12.047			

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 332H (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:	332H (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		
5,179.27	5,175.82	5,138.93	5,135.93	11.17	11.22	-118.60	-77.83	238.65	280.67	258.43	22.24	12.621		
5,200.00	5,196.31	5,158.13	5,154.93	11.21	11.26	-119.00	-78.69	241.35	285.19	262.87	22.32	12.779		
5,300.00	5,295.13	5,250.41	5,246.06	11.43	11.48	-120.74	-83.14	255.15	308.10	285.40	22.70	13.572		
5,400.00	5,393.96	5,342.06	5,336.32	11.65	11.70	-122.16	-88.00	270.24	332.75	309.66	23.09	14.410		
5,500.00	5,492.78	5,433.03	5,425.66	11.88	11.93	-123.32	-93.26	286.58	359.05	335.56	23.49	15.285		
5,600.00	5,591.61	5,523.30	5,514.03	12.12	12.18	-124.24	-98.90	304.13	386.91	363.02	23.90	16.192		
5,700.00	5,690.43	5,613.26	5,601.79	12.37	12.43	-124.98	-104.95	322.92	416.28	391.97	24.31	17.126		
5,800.00	5,789.26	5,708.53	5,694.60	12.61	12.72	-125.63	-111.55	343.42	446.31	421.58	24.74	18.041		
5,900.00	5,888.08	5,803.80	5,787.40	12.87	13.01	-126.20	-118.15	363.92	476.39	451.22	25.18	18.922		
6,000.00	5,986.91	5,899.07	5,880.20	13.13	13.31	-126.70	-124.75	384.42	506.51	480.89	25.62	19.769		
6,100.00	6,085.73	5,994.34	5,973.00	13.39	13.62	-127.15	-131.35	404.92	536.66	510.58	26.07	20.581		
6,200.00	6,184.56	6,089.60	6,065.81	13.66	13.94	-127.55	-137.95	425.42	566.83	540.29	26.53	21.362		
6,300.00	6,283.38	6,184.87	6,158.61	13.93	14.27	-127.91	-144.55	445.92	597.03	570.02	27.00	22.111		
6,400.00	6,382.21	6,280.14	6,251.41	14.21	14.60	-128.23	-151.15	466.42	627.24	599.77	27.47	22.830		
6,500.00	6,481.03	6,375.41	6,344.22	14.49	14.94	-128.52	-157.75	486.92	657.47	629.52	27.95	23.521		
6,600.00	6,579.86	6,470.68	6,437.02	14.77	15.29	-128.79	-164.34	507.42	687.72	659.28	28.44	24.184		
6,700.00	6,678.68	6,565.95	6,529.82	15.06	15.64	-129.04	-170.94	527.92	717.98	689.05	28.93	24.821		
6,800.00	6,777.51	6,661.22	6,622.63	15.35	16.00	-129.26	-177.54	548.42	748.25	718.83	29.42	25.432		
6,900.00	6,876.33	6,756.49	6,715.43	15.64	16.36	-129.47	-184.14	568.92	778.53	748.61	29.92	26.019		
7,000.00	6,975.16	6,851.76	6,808.23	15.94	16.73	-129.66	-190.74	589.42	808.81	778.39	30.43	26.584		
7,100.00	7,073.98	6,947.03	6,901.03	16.24	17.10	-129.84	-197.34	609.92	839.11	808.18	30.93	27.126		
7,200.00	7,172.81	7,042.29	6,993.84	16.54	17.48	-130.01	-203.94	630.42	869.41	837.97	31.45	27.647		
7,300.00	7,271.63	7,137.56	7,086.64	16.84	17.85	-130.16	-210.54	650.92	899.72	867.76	31.96	28.148		
7,400.00	7,370.45	7,232.83	7,179.44	17.15	18.24	-130.31	-217.14	671.42	930.04	897.55	32.48	28.630		
7,500.00	7,469.28	7,328.10	7,272.25	17.46	18.62	-130.44	-223.73	691.91	960.36	927.35	33.01	29.094		
7,600.00	7,568.10	7,423.37	7,365.05	17.77	19.01	-130.57	-230.33	712.41	990.68	957.14	33.54	29.540		
7,700.00	7,666.93	7,518.64	7,457.85	18.08	19.40	-130.69	-236.93	732.91	1,021.01	986.94	34.07	29.969		
7,800.00	7,765.75	7,613.91	7,550.66	18.39	19.80	-130.80	-243.53	753.41	1,051.34	1,016.74	34.60	30.383		
7,900.00	7,864.58	7,709.18	7,643.46	18.71	20.20	-130.91	-250.13	773.91	1,081.68	1,046.54	35.14	30.781		
8,000.00	7,963.40	7,804.45	7,736.26	19.02	20.60	-131.01	-256.73	794.41	1,112.02	1,076.33	35.68	31.165		
8,100.00	8,062.23	7,899.71	7,829.06	19.34	21.00	-131.11	-263.33	814.91	1,142.36	1,106.13	36.22	31.535		
8,200.00	8,161.05	7,994.98	7,921.87	19.66	21.40	-131.20	-269.93	835.41	1,172.70	1,135.93	36.77	31.892		
8,300.00	8,259.88	8,090.25	8,014.67	19.98	21.81	-131.28	-276.53	855.91	1,203.05	1,165.73	37.32	32.237		
8,400.00	8,358.70	8,185.52	8,107.47	20.31	22.22	-131.36	-283.13	876.41	1,233.40	1,195.53	37.87	32.569		
8,500.00	8,457.53	8,280.79	8,200.28	20.63	22.63	-131.44	-289.72	896.91	1,263.75	1,225.33	38.42	32.890		
8,528.99	8,486.18	8,308.41	8,227.18	20.73	22.75	-131.46	-291.64	902.85	1,272.55	1,233.96	38.58	32.980		
8,600.00	8,556.42	8,376.15	8,293.17	20.94	23.04	-131.67	-296.33	917.43	1,293.83	1,254.82	39.00	33.174		
8,700.00	8,655.54	8,462.85	8,377.66	21.21	23.41	-131.92	-301.72	936.09	1,322.96	1,283.42	39.54	33.462		
8,800.00	8,754.88	8,553.34	8,466.39	21.47	23.66	-132.44	-299.01	951.27	1,352.40	1,312.42	39.98	33.825		
8,900.00	8,854.41	8,600.00	8,510.63	21.71	23.88	-133.24	-288.51	965.46	1,382.63	1,342.25	40.38	34.242		
9,000.00	8,954.09	8,664.63	8,571.38	21.95	24.06	-134.28	-271.11	978.88	1,413.88	1,373.16	40.72	34.719		
9,100.00	9,053.89	8,723.43	8,624.67	22.17	24.21	-135.44	-249.29	990.65	1,446.46	1,405.43	41.03	35.257		
9,200.00	9,153.79	8,777.12	8,671.18	22.38	24.32	-136.68	-224.57	1,000.93	1,480.65	1,439.35	41.29	35.856		
9,300.00	9,253.75	8,825.75	8,711.20	22.57	24.42	-137.94	-198.42	1,009.77	1,516.72	1,475.18	41.53	36.517		
9,408.26	9,362.00	8,873.02	8,747.89	22.77	24.50	75.34	-169.76	1,017.87	1,558.11	1,516.34	41.77	37.303		
9,500.00	9,453.74	8,900.00	8,767.76	22.94	24.55	74.70	-152.04	1,022.26	1,595.77	1,553.83	41.95	38.044		
9,608.26	9,562.00	8,950.00	8,802.33	23.14	24.62	73.45	-116.76	1,029.90	1,643.89	1,601.74	42.15	39.001		
9,650.00	9,603.70	8,950.00	8,802.33	23.20	24.62	71.37	-116.76	1,029.90	1,663.19	1,620.91	42.28	39.334		
9,700.00	9,653.35	8,976.86	8,819.63	23.26	24.66	68.37	-96.57	1,033.72	1,685.79	1,643.41	42.38	39.776		
9,750.00	9,702.30	9,000.00	8,833.77	23.29	24.69	65.65	-78.53	1,036.84	1,707.85	1,665.45	42.41	40.272		
9,800.00	9,750.18	9,000.00	8,833.77	23.30	24.69	63.52	-78.53	1,036.84	1,729.14	1,686.79	42.35	40.831		
9,850.00	9,796.63	9,029.96	8,851.01	23.28	24.73	61.10	-54.32	1,040.65	1,749.26	1,707.12	42.14	41.511		

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 332H (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:	332H (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						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
9,900.00	9,841.30	9,050.00	8,861.84	23.24	24.76	59.05	-37.64	1,043.04	1,768.30	1,726.48	41.83	42.276		
9,950.00	9,883.83	9,066.94	8,870.55	23.19	24.79	57.25	-23.23	1,044.97	1,786.03	1,744.66	41.37	43.170		
10,000.00	9,923.92	9,100.00	8,886.32	23.12	24.84	55.52	5.61	1,048.45	1,802.44	1,761.61	40.83	44.142		
10,050.00	9,961.26	9,100.00	8,886.32	23.04	24.84	54.27	5.61	1,048.45	1,817.03	1,776.80	40.23	45.168		
10,100.00	9,995.56	9,124.05	8,896.76	22.95	24.87	53.03	27.15	1,050.76	1,830.04	1,790.45	39.59	46.226		
10,150.00	10,026.55	9,150.00	8,907.03	22.86	24.91	52.00	50.87	1,053.02	1,841.34	1,802.51	38.84	47.413		
10,200.00	10,054.01	9,150.00	8,907.03	22.77	24.91	51.24	50.87	1,053.02	1,850.86	1,812.70	38.16	48.505		
10,250.00	10,077.73	9,182.43	8,918.36	22.67	24.96	50.58	81.15	1,055.53	1,858.28	1,820.72	37.56	49.471		
10,300.00	10,097.52	9,200.00	8,923.80	22.58	24.99	50.13	97.81	1,056.73	1,863.87	1,826.81	37.06	50.292		
10,350.00	10,113.24	9,221.73	8,929.83	22.49	25.03	49.85	118.64	1,058.06	1,867.47	1,830.74	36.73	50.839		
10,400.00	10,124.76	9,250.00	8,936.52	22.41	25.09	49.77	146.06	1,059.54	1,869.13	1,832.52	36.61	51.049		
10,450.00	10,132.00	9,250.00	8,936.52	22.33	25.09	49.80	146.06	1,059.54	1,868.77	1,832.18	36.59	51.076		
10,500.00	10,134.90	9,280.78	8,942.29	22.26	25.15	50.09	176.27	1,060.81	1,866.29	1,829.36	36.93	50.540		
10,508.26	10,134.96	9,284.02	8,942.80	22.25	25.16	50.15	179.47	1,060.93	1,865.70	1,828.71	36.99	50.432		
10,600.00	10,134.96	9,320.38	8,947.36	22.37	25.25	50.28	215.52	1,061.93	1,860.25	1,822.84	37.41	49.730		
10,700.00	10,134.96	9,360.51	8,949.79	22.87	25.36	50.35	255.56	1,062.47	1,857.40	1,819.44	37.96	48.931		
10,748.66	10,134.96	9,386.17	8,950.00	23.16	25.44	50.35	281.22	1,062.52	1,857.17	1,818.85	38.31	48.473		
10,800.00	10,134.96	9,437.51	8,950.00	23.48	25.62	50.35	332.56	1,062.52	1,857.17	1,818.32	38.84	47.811		
10,900.00	10,134.96	9,537.51	8,950.00	24.20	26.08	50.35	432.56	1,062.52	1,857.17	1,817.14	40.03	46.399		
11,000.00	10,134.96	9,637.51	8,950.00	25.02	26.68	50.35	532.56	1,062.52	1,857.17	1,815.78	41.39	44.874		
11,100.00	10,134.96	9,737.51	8,950.00	25.94	27.41	50.35	632.56	1,062.52	1,857.17	1,814.26	42.91	43.281		
11,200.00	10,134.96	9,837.51	8,950.00	26.94	28.26	50.35	732.56	1,062.52	1,857.17	1,812.59	44.58	41.661		
11,300.00	10,134.97	9,937.51	8,950.00	28.02	29.21	50.35	832.56	1,062.52	1,857.17	1,810.79	46.38	40.046		
11,400.00	10,134.97	10,037.51	8,950.00	29.18	30.25	50.35	932.56	1,062.52	1,857.17	1,808.88	48.29	38.459		
11,500.00	10,134.97	10,137.51	8,950.00	30.40	31.38	50.35	1,032.56	1,062.52	1,857.17	1,806.86	50.30	36.918		
11,600.00	10,134.97	10,237.51	8,950.00	31.67	32.57	50.35	1,132.56	1,062.52	1,857.17	1,804.75	52.41	35.435		
11,700.00	10,134.97	10,337.51	8,950.00	33.00	33.83	50.35	1,232.56	1,062.52	1,857.17	1,802.57	54.60	34.016		
11,800.00	10,134.97	10,437.51	8,950.00	34.37	35.14	50.35	1,332.56	1,062.52	1,857.17	1,800.31	56.85	32.666		
11,900.00	10,134.97	10,537.51	8,950.00	35.78	36.49	50.35	1,432.56	1,062.52	1,857.17	1,797.99	59.17	31.385		
12,000.00	10,134.97	10,637.51	8,950.00	37.23	37.89	50.35	1,532.56	1,062.52	1,857.17	1,795.62	61.55	30.174		
12,100.00	10,134.97	10,737.51	8,950.00	38.70	39.32	50.35	1,632.56	1,062.52	1,857.17	1,793.19	63.97	29.030		
12,200.00	10,134.97	10,837.51	8,950.00	40.21	40.79	50.35	1,732.56	1,062.52	1,857.17	1,790.72	66.44	27.952		
12,300.00	10,134.98	10,937.51	8,950.00	41.74	42.28	50.35	1,832.56	1,062.52	1,857.17	1,788.22	68.95	26.935		
12,400.00	10,134.98	11,037.51	8,950.00	43.30	43.80	50.35	1,932.56	1,062.52	1,857.17	1,785.67	71.49	25.977		
12,500.00	10,134.98	11,137.51	8,950.00	44.87	45.35	50.35	2,032.56	1,062.52	1,857.17	1,783.10	74.07	25.074		
12,600.00	10,134.98	11,237.51	8,950.00	46.46	46.91	50.35	2,132.56	1,062.52	1,857.17	1,780.50	76.67	24.223		
12,700.00	10,134.98	11,337.51	8,950.00	48.07	48.49	50.35	2,232.56	1,062.52	1,857.17	1,777.87	79.30	23.420		
12,800.00	10,134.98	11,437.51	8,950.00	49.70	50.09	50.35	2,332.56	1,062.52	1,857.17	1,775.22	81.95	22.662		
12,900.00	10,134.98	11,537.51	8,950.00	51.33	51.70	50.35	2,432.56	1,062.52	1,857.17	1,772.54	84.62	21.946		
13,000.00	10,134.98	11,637.51	8,950.00	52.98	53.33	50.35	2,532.56	1,062.52	1,857.17	1,769.85	87.32	21.270		
13,100.00	10,134.98	11,737.51	8,950.00	54.65	54.97	50.35	2,632.56	1,062.52	1,857.17	1,767.14	90.02	20.630		
13,200.00	10,134.98	11,837.51	8,950.00	56.32	56.62	50.35	2,732.56	1,062.52	1,857.17	1,764.42	92.75	20.024		
13,300.00	10,134.99	11,937.51	8,950.00	58.00	58.29	50.35	2,832.56	1,062.52	1,857.17	1,761.68	95.49	19.449		
13,400.00	10,134.99	12,037.51	8,950.00	59.69	59.96	50.35	2,932.56	1,062.52	1,857.17	1,758.93	98.24	18.904		
13,500.00	10,134.99	12,137.51	8,950.00	61.38	61.64	50.35	3,032.56	1,062.52	1,857.17	1,756.16	101.00	18.387		
13,600.00	10,134.99	12,237.51	8,950.00	63.09	63.33	50.35	3,132.56	1,062.52	1,857.17	1,753.39	103.78	17.895		
13,700.00	10,134.99	12,337.51	8,950.00	64.80	65.02	50.35	3,232.56	1,062.52	1,857.17	1,750.60	106.57	17.427		
13,800.00	10,134.99	12,437.51	8,950.00	66.52	66.73	50.35	3,332.56	1,062.52	1,857.17	1,747.81	109.36	16.982		
13,900.00	10,134.99	12,537.51	8,950.00	68.24	68.43	50.35	3,432.56	1,062.52	1,857.17	1,745.00	112.16	16.557		
14,000.00	10,134.99	12,637.51	8,950.00	69.97	70.15	50.35	3,532.56	1,062.52	1,857.17	1,742.19	114.98	16.153		
14,100.00	10,134.99	12,737.51	8,950.00	71.70	71.87	50.35	3,632.56	1,062.52	1,857.17	1,739.37	117.80	15.766		
14,200.00	10,134.99	12,837.51	8,950.00	73.44	73.60	50.35	3,732.56	1,062.52	1,857.17	1,736.54	120.62	15.396		

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 332H (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:	332H (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							
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	
14,300.00	10,135.00	12,937.51	8,950.00	75.18	75.33	50.35	3,832.56	1,062.52	1,857.17	1,733.71	123.46	15.043		
14,400.00	10,135.00	13,037.51	8,950.00	76.93	77.06	50.35	3,932.56	1,062.52	1,857.17	1,730.87	126.30	14.705		
14,500.00	10,135.00	13,137.51	8,950.00	78.67	78.80	50.35	4,032.56	1,062.52	1,857.17	1,728.03	129.14	14.381		
14,600.00	10,135.00	13,237.51	8,950.00	80.43	80.54	50.35	4,132.56	1,062.52	1,857.17	1,725.18	131.99	14.070		
14,700.00	10,135.00	13,337.51	8,950.00	82.18	82.29	50.35	4,232.56	1,062.52	1,857.17	1,722.32	134.85	13.772		
14,800.00	10,135.00	13,437.51	8,950.00	83.94	84.04	50.35	4,332.56	1,062.52	1,857.17	1,719.46	137.71	13.486		
14,829.84	10,135.00	13,467.35	8,950.00	84.47	84.56	50.35	4,362.40	1,062.52	1,857.17	1,718.61	138.56	13.403		

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 332H (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:	332H (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)						
0.00	0.00	0.00	0.00	0.00	0.00	-0.16	150.00	-0.43	150.00					
100.00	100.00	100.00	100.00	0.08	0.08	-0.16	150.00	-0.43	150.00	149.84	0.16	953.375		
200.00	200.00	200.00	200.00	0.30	0.30	-0.16	150.00	-0.43	150.00	149.39	0.61	247.172		
300.00	300.00	300.00	300.00	0.53	0.53	-0.16	150.00	-0.43	150.00	148.94	1.06	141.992		
400.00	400.00	400.00	400.00	0.75	0.75	-0.16	150.00	-0.43	150.00	148.49	1.51	99.607		
500.00	500.00	500.00	500.00	0.98	0.98	-0.16	150.00	-0.43	150.00	148.05	1.96	76.708		
600.00	600.00	600.00	600.00	1.20	1.20	-0.16	150.00	-0.43	150.00	147.60	2.40	62.370		
700.00	700.00	700.00	700.00	1.43	1.43	-0.16	150.00	-0.43	150.00	147.15	2.85	52.548		
800.00	800.00	800.00	800.00	1.65	1.65	-0.16	150.00	-0.43	150.00	146.70	3.30	45.399		
900.00	900.00	900.00	900.00	1.88	1.88	-0.16	150.00	-0.43	150.00	146.25	3.75	39.962		
1,000.00	1,000.00	1,000.00	1,000.00	2.10	2.10	-0.16	150.00	-0.43	150.00	145.80	4.20	35.688		
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	-0.16	150.00	-0.43	150.00	145.35	4.65	32.240		
1,200.00	1,200.00	1,200.00	1,200.00	2.55	2.55	-0.16	150.00	-0.43	150.00	144.90	5.10	29.399		
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	-0.16	150.00	-0.43	150.00	144.45	5.55	27.019		
1,400.00	1,400.00	1,400.00	1,400.00	3.00	3.00	-0.16	150.00	-0.43	150.00	144.00	6.00	24.995		
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	-0.16	150.00	-0.43	150.00	143.55	6.45	23.253		
1,600.00	1,600.00	1,600.00	1,600.00	3.45	3.45	-0.16	150.00	-0.43	150.00	143.10	6.90	21.738		
1,700.00	1,700.00	1,700.00	1,700.00	3.67	3.67	-0.16	150.00	-0.43	150.00	142.65	7.35	20.409		
1,800.00	1,800.00	1,800.00	1,800.00	3.90	3.90	-0.16	150.00	-0.43	150.00	142.20	7.80	19.232		
1,900.00	1,900.00	1,900.00	1,900.00	4.12	4.12	-0.16	150.00	-0.43	150.00	141.75	8.25	18.184		
2,000.00	2,000.00	2,000.00	2,000.00	4.35	4.35	-0.16	150.00	-0.43	150.00	141.30	8.70	17.245		
2,100.00	2,100.00	2,100.00	2,100.00	4.57	4.57	-0.16	150.00	-0.43	150.00	140.85	9.15	16.397		
2,200.00	2,200.00	2,200.00	2,200.00	4.80	4.80	-0.16	150.00	-0.43	150.00	140.40	9.60	15.629		
2,300.00	2,300.00	2,300.00	2,300.00	5.02	5.02	-0.16	150.00	-0.43	150.00	139.95	10.05	14.930		
2,400.00	2,400.00	2,400.00	2,400.00	5.25	5.25	-0.16	150.00	-0.43	150.00	139.50	10.50	14.290		
2,500.00	2,500.00	2,500.00	2,500.00	5.47	5.47	-0.16	150.00	-0.43	150.00	139.05	10.95	13.704		
2,600.00	2,600.00	2,600.00	2,600.00	5.70	5.70	-0.16	150.00	-0.43	150.00	138.61	11.40	13.163		
2,700.00	2,700.00	2,700.00	2,700.00	5.92	5.92	-0.16	150.00	-0.43	150.00	138.16	11.85	12.663		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	-0.16	150.00	-0.43	150.00	137.71	12.29	12.200		
2,900.00	2,900.00	2,900.00	2,900.00	6.37	6.37	-0.16	150.00	-0.43	150.00	137.26	12.74	11.770		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	-0.16	150.00	-0.43	150.00	136.81	13.19	11.369		
3,100.00	3,100.00	3,100.00	3,100.00	6.82	6.82	-0.16	150.00	-0.43	150.00	136.36	13.64	10.994		
3,200.00	3,200.00	3,200.00	3,200.00	7.05	7.05	-0.16	150.00	-0.43	150.00	135.91	14.09	10.644		
3,300.00	3,300.00	3,300.00	3,300.00	7.27	7.27	-0.16	150.00	-0.43	150.00	135.46	14.54	10.315		
3,400.00	3,400.00	3,400.00	3,400.00	7.50	7.50	-0.16	150.00	-0.43	150.00	135.01	14.99	10.005		
3,500.00	3,500.00	3,500.00	3,500.00	7.72	7.72	-0.16	150.00	-0.43	150.00	134.56	15.44	9.714		
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.95	-0.16	150.00	-0.43	150.00	134.11	15.89	9.439		
3,700.00	3,700.00	3,700.00	3,700.00	8.17	8.17	-0.16	150.00	-0.43	150.00	133.66	16.34	9.180		
3,800.00	3,800.00	3,800.00	3,800.00	8.40	8.40	-0.16	150.00	-0.43	150.00	133.21	16.79	8.934		
3,900.00	3,900.00	3,900.00	3,900.00	8.62	8.62	-0.16	150.00	-0.43	150.00	132.76	17.24	8.701		
4,000.00	4,000.00	4,000.00	4,000.00	8.84	8.84	-0.16	150.00	-0.43	150.00	132.31	17.69	8.480		
4,100.00	4,100.00	4,100.00	4,100.00	9.07	9.07	-0.16	150.00	-0.43	150.00	131.86	18.14	8.270		
4,200.00	4,200.00	4,200.00	4,200.00	9.29	9.29	-0.16	150.00	-0.43	150.00	131.41	18.59	8.070		
4,300.00	4,300.00	4,300.00	4,300.00	9.52	9.52	-0.16	150.00	-0.43	150.00	130.96	19.04	7.879		
4,400.00	4,400.00	4,402.63	4,402.62	9.72	9.72	145.47	149.10	-0.24	149.84	130.41	19.43	7.710		
4,500.00	4,499.96	4,505.23	4,505.18	9.89	9.89	146.27	146.40	0.31	149.38	129.61	19.77	7.554		
4,600.00	4,599.86	4,607.76	4,607.62	10.07	10.07	147.62	141.91	1.24	148.68	128.56	20.12	7.391		
4,700.00	4,699.68	4,710.21	4,709.86	10.24	10.25	149.52	135.62	2.53	147.83	127.37	20.45	7.227		
4,800.00	4,799.37	4,812.53	4,811.85	10.43	10.43	151.98	127.56	4.18	146.97	126.18	20.79	7.068		
4,900.00	4,898.90	4,914.71	4,913.53	10.61	10.61	155.01	117.73	6.20	146.29	125.16	21.13	6.924		
5,000.00	4,998.26	5,016.70	5,014.83	10.80	10.80	158.61	106.15	8.59	146.00	124.54	21.46	6.803		
5,000.35	4,998.61	5,017.06	5,015.19	10.81	10.80	158.62	106.11	8.59	146.00	124.54	21.46	6.803 CC, ES		

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



LEAM Drilling Systems LLC

Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (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:	332H (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		Minimum		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Separation (usft)			
5,100.00	5,097.40	5,116.51	5,113.84	11.00	10.99	162.53	93.73	11.14	146.95	125.17	21.79	6.745 SF		
5,179.27	5,175.82	5,195.31	5,192.00	11.17	11.15	165.70	83.91	13.16	149.38	127.34	22.04	6.777		
5,200.00	5,196.31	5,215.91	5,212.43	11.21	11.19	166.53	81.34	13.68	150.23	128.11	22.12	6.791		
5,300.00	5,295.13	5,315.28	5,310.99	11.43	11.40	170.38	68.96	16.23	154.75	132.25	22.50	6.878		
5,400.00	5,393.96	5,414.65	5,409.55	11.65	11.61	174.00	56.58	18.78	159.94	137.05	22.89	6.988		
5,500.00	5,492.78	5,514.01	5,508.11	11.88	11.82	177.38	44.20	21.32	165.73	142.44	23.28	7.118		
5,600.00	5,591.61	5,613.38	5,606.67	12.12	12.05	-179.48	31.81	23.87	172.05	148.36	23.69	7.263		
5,700.00	5,690.43	5,712.75	5,705.23	12.37	12.27	-176.56	19.43	26.41	178.86	154.76	24.11	7.420		
5,800.00	5,789.26	5,812.11	5,803.78	12.61	12.50	-173.87	7.05	28.96	186.10	161.57	24.53	7.586		
5,900.00	5,888.08	5,911.48	5,902.34	12.87	12.73	-171.38	-5.33	31.50	193.73	168.76	24.97	7.759		
6,000.00	5,986.91	6,010.85	6,000.90	13.13	12.97	-169.08	-17.72	34.05	201.68	176.27	25.41	7.936		
6,100.00	6,085.73	6,110.21	6,099.46	13.39	13.21	-166.96	-30.10	36.59	209.94	184.08	25.87	8.116		
6,200.00	6,184.56	6,209.58	6,198.02	13.66	13.45	-165.00	-42.48	39.14	218.47	192.14	26.33	8.297		
6,300.00	6,283.38	6,308.95	6,296.58	13.93	13.70	-163.18	-54.86	41.68	227.23	200.43	26.80	8.478		
6,400.00	6,382.21	6,408.31	6,395.14	14.21	13.95	-161.51	-67.25	44.23	236.20	208.92	27.28	8.658		
6,500.00	6,481.03	6,507.68	6,493.70	14.49	14.21	-159.96	-79.63	46.77	245.36	217.59	27.77	8.836		
6,600.00	6,579.86	6,607.05	6,592.26	14.77	14.46	-158.51	-92.01	49.32	254.68	226.42	28.26	9.011		
6,700.00	6,678.68	6,706.41	6,690.82	15.06	14.72	-157.18	-104.39	51.86	264.16	235.39	28.76	9.183		
6,800.00	6,777.51	6,805.78	6,789.38	15.35	14.98	-155.93	-116.78	54.41	273.76	244.49	29.27	9.353		
6,900.00	6,876.33	6,905.15	6,887.94	15.64	15.25	-154.77	-129.16	56.96	283.49	253.70	29.78	9.518		
7,000.00	6,975.16	7,004.51	6,986.50	15.94	15.51	-153.69	-141.54	59.50	293.32	263.02	30.30	9.680		
7,100.00	7,073.98	7,103.88	7,085.06	16.24	15.78	-152.67	-153.92	62.05	303.26	272.43	30.83	9.837		
7,200.00	7,172.81	7,202.43	7,182.84	16.54	16.05	-151.78	-165.94	64.52	313.35	282.00	31.35	9.995		
7,300.00	7,271.63	7,300.00	7,279.82	16.84	16.30	-151.21	-176.38	66.96	323.91	292.06	31.85	10.169		
7,400.00	7,370.45	7,398.28	7,377.68	17.15	16.54	-150.95	-185.26	68.49	334.94	302.60	32.34	10.356		
7,500.00	7,469.28	7,496.12	7,475.24	17.46	16.77	-150.97	-192.46	69.97	346.41	313.59	32.82	10.555		
7,600.00	7,568.10	7,593.82	7,572.78	17.77	17.00	-151.26	-198.02	71.11	358.33	325.05	33.28	10.767		
7,700.00	7,666.93	7,691.34	7,670.22	18.08	17.22	-151.77	-201.95	71.92	370.71	336.98	33.72	10.993		
7,800.00	7,765.75	7,788.61	7,767.46	18.39	17.42	-152.49	-204.24	72.39	383.59	349.44	34.15	11.233		
7,900.00	7,864.58	7,885.74	7,864.58	18.71	17.62	-153.39	-204.93	72.53	397.02	362.47	34.55	11.490		
8,000.00	7,963.40	7,984.56	7,963.40	19.02	17.81	-154.35	-204.93	72.53	410.78	375.82	34.96	11.750		
8,100.00	8,062.23	8,081.95	8,060.79	19.34	18.01	-155.23	-204.92	72.53	424.65	389.28	35.37	12.007		
8,200.00	8,161.05	8,180.00	8,158.65	19.66	18.12	-156.31	-200.43	72.53	442.16	406.48	35.69	12.390		
8,300.00	8,259.88	8,277.79	8,258.25	19.98	18.19	-158.18	-188.00	72.53	466.44	430.51	35.94	12.979		
8,400.00	8,358.70	8,376.24	8,353.04	20.31	18.23	-160.39	-170.35	72.53	497.89	461.75	36.14	13.775		
8,500.00	8,457.53	8,475.79	8,453.33	20.63	18.24	-162.70	-149.27	72.53	536.69	500.36	36.33	14.773		
8,528.99	8,486.18	8,500.00	8,518.76	20.73	18.24	-163.48	-141.64	72.53	549.30	512.92	36.38	15.099		
8,600.00	8,585.42	8,603.54	8,584.41	20.94	18.23	-165.04	-126.47	72.53	582.31	545.77	36.54	15.937		
8,700.00	8,684.54	8,702.22	8,683.23	21.21	18.22	-167.23	-102.99	72.53	633.34	596.59	36.75	17.234		
8,800.00	8,783.88	8,801.35	8,784.61	21.47	18.21	-169.21	-79.63	72.53	689.25	652.29	36.96	18.647		
8,900.00	8,883.41	8,901.00	8,884.75	21.71	18.20	-171.00	-56.53	72.53	749.48	712.31	37.18	20.161		
9,000.00	8,982.09	9,000.00	8,984.15	21.95	18.20	-172.54	-35.09	72.53	813.49	776.10	37.39	21.759		
9,100.00	9,080.89	9,099.00	9,082.29	22.17	18.19	-173.50	-21.38	72.53	880.87	843.27	37.60	23.429		
9,200.00	9,179.79	9,198.00	9,182.63	22.38	18.19	-175.74	16.73	72.53	951.07	913.28	37.79	25.168		
9,300.00	9,278.75	9,297.00	9,283.63	22.57	18.19	-175.82	16.73	72.53	1,023.31	985.32	37.99	26.937		
9,408.26	9,377.00	9,396.18	9,383.64	22.77	18.20	37.43	42.70	72.53	1,103.88	1,065.70	38.19	28.908		
9,500.00	9,475.74	9,495.00	9,482.52	22.94	18.21	36.73	57.52	72.53	1,174.29	1,135.91	38.37	30.603		
9,608.26	9,574.00	9,593.31	9,581.72	23.14	18.22	35.98	73.92	72.53	1,260.03	1,221.44	38.60	32.646		
9,650.00	9,603.70	9,623.59	9,611.41	23.20	18.23	32.69	80.19	72.53	1,293.03	1,254.48	38.85	33.539		
9,700.00	9,653.35	9,673.00	9,660.75	23.26	18.25	29.08	100.67	72.53	1,331.19	1,292.83	38.36	34.702		
9,750.00	9,702.30	9,722.00	9,709.75	23.29	18.25	26.69	100.67	72.53	1,366.96	1,328.98	37.98	35.993		
9,800.00	9,751.18	9,771.00	9,758.75	23.30	18.25	24.68	100.67	72.53	1,400.88	1,363.48	37.41	37.451		

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 332H (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:	332H (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		
9,850.00	9,796.63	8,717.77	8,571.80	23.28	18.27	22.79	116.51	72.53	1,432.45	1,395.80	36.65	39.084		
9,900.00	9,841.30	8,729.36	8,576.78	23.24	18.28	21.30	126.97	72.53	1,461.68	1,425.96	35.72	40.920		
9,950.00	9,883.83	8,750.00	8,585.13	23.19	18.31	20.01	145.85	72.53	1,488.48	1,453.84	34.64	42.970		
10,000.00	9,923.92	8,750.00	8,585.13	23.12	18.31	19.09	145.85	72.53	1,512.49	1,479.07	33.42	45.252		
10,050.00	9,961.26	8,750.00	8,585.13	23.04	18.31	18.32	145.85	72.53	1,534.14	1,502.03	32.11	47.780		
10,100.00	9,995.56	8,779.15	8,595.74	22.95	18.37	17.56	172.99	72.53	1,552.39	1,521.64	30.75	50.481		
10,150.00	10,026.55	8,800.00	8,602.48	22.86	18.41	16.99	192.73	72.53	1,568.13	1,538.75	29.38	53.369		
10,200.00	10,054.01	8,800.00	8,602.48	22.77	18.41	16.61	192.73	72.53	1,580.84	1,552.80	28.04	56.387		
10,250.00	10,077.73	8,818.84	8,607.95	22.67	18.46	16.29	210.76	72.53	1,590.56	1,563.76	26.81	59.335		
10,300.00	10,097.52	8,850.00	8,615.68	22.58	18.55	16.06	240.94	72.53	1,597.67	1,571.90	25.76	62.012		
10,350.00	10,113.24	8,850.00	8,615.68	22.49	18.55	15.97	240.94	72.53	1,601.03	1,576.13	24.90	64.298		
10,400.00	10,124.76	8,850.00	8,615.68	22.41	18.55	15.95	240.94	72.53	1,601.76	1,577.45	24.31	65.881		
10,450.00	10,132.00	8,872.95	8,620.33	22.33	18.63	16.02	263.41	72.53	1,599.25	1,575.14	24.11	66.336		
10,500.00	10,134.90	8,900.00	8,624.64	22.26	18.73	16.21	290.11	72.53	1,594.01	1,569.74	24.27	65.679		
10,508.26	10,134.96	8,900.00	8,624.64	22.25	18.73	16.24	290.11	72.53	1,592.75	1,568.43	24.32	65.497		
10,600.00	10,134.96	8,900.00	8,624.64	22.37	18.73	16.24	290.11	72.53	1,580.99	1,556.48	24.51	64.512		
10,700.00	10,134.96	8,950.00	8,629.27	22.87	18.94	16.29	339.88	72.53	1,572.34	1,547.43	24.91	63.121		
10,800.00	10,134.96	8,978.15	8,629.96	23.48	19.07	16.30	368.02	72.53	1,568.41	1,543.11	25.30	61.999		
10,851.65	10,134.96	8,994.36	8,629.96	23.85	19.16	16.30	384.23	72.53	1,568.01	1,542.48	25.53	61.426		
10,900.00	10,134.96	9,042.70	8,629.96	24.20	19.44	16.30	432.57	72.53	1,568.01	1,542.15	25.86	60.632		
11,000.00	10,134.96	9,142.70	8,629.96	25.02	20.11	16.30	532.57	72.53	1,568.01	1,541.39	26.62	58.899		
11,100.00	10,134.96	9,242.70	8,629.96	25.94	20.92	16.30	632.57	72.53	1,568.01	1,540.53	27.47	57.071		
11,200.00	10,134.96	9,342.70	8,629.96	26.94	21.85	16.30	732.57	72.53	1,568.01	1,539.60	28.41	55.192		
11,300.00	10,134.97	9,442.70	8,629.96	28.02	22.88	16.30	832.57	72.53	1,568.01	1,538.59	29.42	53.296		
11,400.00	10,134.97	9,542.70	8,629.96	29.18	24.01	16.30	932.57	72.53	1,568.01	1,537.51	30.50	51.413		
11,500.00	10,134.97	9,642.70	8,629.97	30.40	25.23	16.30	1,032.57	72.53	1,568.01	1,536.37	31.64	49.564		
11,600.00	10,134.97	9,742.70	8,629.97	31.67	26.51	16.30	1,132.57	72.53	1,568.01	1,535.18	32.83	47.765		
11,700.00	10,134.97	9,842.70	8,629.97	33.00	27.85	16.30	1,232.57	72.53	1,568.01	1,533.94	34.07	46.028		
11,800.00	10,134.97	9,942.70	8,629.97	34.37	29.25	16.30	1,332.57	72.53	1,568.01	1,532.66	35.35	44.359		
11,900.00	10,134.97	10,042.70	8,629.97	35.78	30.69	16.30	1,432.57	72.53	1,568.01	1,531.34	36.67	42.762		
12,000.00	10,134.97	10,142.70	8,629.97	37.23	32.17	16.30	1,532.57	72.53	1,568.01	1,529.99	38.02	41.240		
12,100.00	10,134.97	10,242.70	8,629.97	38.70	33.69	16.30	1,632.57	72.53	1,568.01	1,528.60	39.41	39.791		
12,200.00	10,134.97	10,342.70	8,629.97	40.21	35.23	16.30	1,732.57	72.53	1,568.01	1,527.19	40.82	38.415		
12,300.00	10,134.98	10,442.70	8,629.97	41.74	36.80	16.30	1,832.57	72.53	1,568.01	1,525.75	42.25	37.109		
12,400.00	10,134.98	10,542.70	8,629.97	43.30	38.40	16.30	1,932.57	72.53	1,568.01	1,524.29	43.71	35.870		
12,500.00	10,134.98	10,642.70	8,629.98	44.87	40.01	16.30	2,032.57	72.53	1,568.01	1,522.81	45.19	34.697		
12,600.00	10,134.98	10,742.70	8,629.98	46.46	41.64	16.30	2,132.57	72.53	1,568.01	1,521.32	46.69	33.584		
12,700.00	10,134.98	10,842.70	8,629.98	48.07	43.29	16.30	2,232.57	72.53	1,568.00	1,519.80	48.20	32.530		
12,800.00	10,134.98	10,942.70	8,629.98	49.70	44.95	16.30	2,332.57	72.53	1,568.00	1,518.28	49.73	31.531		
12,900.00	10,134.98	11,042.70	8,629.98	51.33	46.62	16.30	2,432.57	72.53	1,568.00	1,516.73	51.27	30.583		
13,000.00	10,134.98	11,142.70	8,629.98	52.98	48.31	16.30	2,532.57	72.53	1,568.00	1,515.18	52.83	29.683		
13,100.00	10,134.98	11,242.70	8,629.98	54.65	50.00	16.30	2,632.57	72.53	1,568.00	1,513.61	54.39	28.829		
13,200.00	10,134.98	11,342.70	8,629.98	56.32	51.70	16.30	2,732.57	72.53	1,568.00	1,512.04	55.97	28.017		
13,300.00	10,134.99	11,442.70	8,629.98	58.00	53.42	16.30	2,832.57	72.53	1,568.00	1,510.45	57.55	27.245		
13,400.00	10,134.99	11,542.70	8,629.99	59.69	55.13	16.30	2,932.57	72.53	1,568.00	1,508.86	59.15	26.511		
13,500.00	10,134.99	11,642.70	8,629.99	61.38	56.86	16.30	3,032.57	72.53	1,568.00	1,507.25	60.75	25.812		
13,600.00	10,134.99	11,742.70	8,629.99	63.09	58.59	16.30	3,132.57	72.53	1,568.00	1,505.64	62.36	25.145		
13,700.00	10,134.99	11,842.70	8,629.99	64.80	60.33	16.30	3,232.57	72.53	1,568.00	1,504.03	63.97	24.510		
13,800.00	10,134.99	11,942.70	8,629.99	66.52	62.07	16.30	3,332.57	72.53	1,568.00	1,502.40	65.60	23.903		
13,900.00	10,134.99	12,042.70	8,629.99	68.24	63.82	16.30	3,432.57	72.53	1,568.00	1,500.78	67.23	23.324		
14,000.00	10,134.99	12,142.70	8,629.99	69.97	65.57	16.30	3,532.57	72.53	1,568.00	1,499.14	68.86	22.771		
14,100.00	10,134.99	12,242.70	8,629.99	71.70	67.33	16.30	3,632.57	72.53	1,568.00	1,497.50	70.50	22.241		

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 332H (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:	332H (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		
14,200.00	10,134.99	12,342.70	8,629.99	73.44	69.09	16.30	3,732.57	72.53	1,568.00	1,495.86	72.14	21.734		
14,300.00	10,135.00	12,442.70	8,629.99	75.18	70.85	16.30	3,832.57	72.53	1,568.00	1,494.21	73.79	21.248		
14,400.00	10,135.00	12,542.70	8,630.00	76.93	72.62	16.30	3,932.57	72.53	1,568.00	1,492.55	75.45	20.783		
14,500.00	10,135.00	12,642.70	8,630.00	78.67	74.39	16.30	4,032.57	72.53	1,568.00	1,490.90	77.10	20.336		
14,600.00	10,135.00	12,742.70	8,630.00	80.43	76.16	16.30	4,132.57	72.53	1,568.00	1,489.24	78.76	19.908		
14,700.00	10,135.00	12,842.70	8,630.00	82.18	77.93	16.30	4,232.57	72.53	1,568.00	1,487.57	80.43	19.496		
14,800.00	10,135.00	12,942.70	8,630.00	83.94	79.71	16.30	4,332.57	72.53	1,568.00	1,485.90	82.10	19.100		
14,829.84	10,135.00	12,972.54	8,630.00	84.47	80.24	16.30	4,362.41	72.53	1,568.00	1,485.41	82.59	18.985		



LEAM Drilling Systems LLC
Anticollision Report



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (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:	332H (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 (°)	Offset Wellbore Centre		Distance				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)	Minimum Separation (usft)	Separation Factor		
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 CC, ES		
4,400.00	4,400.00	4,400.54	4,400.53	9.72	9.73	145.97	99.72	0.55	100.45	81.01	19.44	5.167		
4,500.00	4,499.96	4,500.96	4,500.92	9.89	9.92	148.20	98.89	3.06	101.89	82.09	19.80	5.147 SF		
4,600.00	4,599.86	4,601.14	4,601.00	10.07	10.11	151.77	97.51	7.22	104.63	84.48	20.15	5.192		
4,700.00	4,699.68	4,700.97	4,700.64	10.24	10.30	156.41	95.58	13.03	109.11	86.60	20.51	5.321		
4,800.00	4,799.37	4,800.33	4,799.70	10.43	10.50	161.78	93.13	20.44	115.82	94.96	20.86	5.553		
4,900.00	4,898.90	4,899.12	4,898.03	10.61	10.70	167.46	90.15	29.42	125.24	104.03	21.20	5.907		
5,000.00	4,998.26	4,997.22	4,995.50	10.80	10.91	173.09	86.66	39.93	137.71	116.17	21.54	6.392		
5,100.00	5,097.40	5,094.52	5,091.98	11.00	11.12	178.38	82.88	51.92	153.45	131.57	21.89	7.011		

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 332H (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:	332H (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			
5,179.27	5,175.82	5,171.02	5,167.67	11.17	11.29	-177.79	79.20	62.43	168.30	146.14	22.16	7.596			
5,200.00	5,196.31	5,190.94	5,187.35	11.21	11.34	-176.84	78.24	65.33	172.49	150.25	22.24	7.756			
5,300.00	5,295.13	5,286.61	5,281.74	11.43	11.56	-172.62	73.32	80.14	193.66	171.02	22.64	8.553			
5,400.00	5,393.96	5,381.58	5,375.17	11.65	11.80	-168.86	67.96	96.32	216.41	193.36	23.06	9.387			
5,500.00	5,492.78	5,476.07	5,467.83	11.88	12.04	-165.49	62.14	113.86	240.72	217.24	23.48	10.254			
5,600.00	5,591.61	5,572.00	5,561.78	12.12	12.31	-162.59	56.04	132.24	266.04	242.12	23.91	11.126			
5,700.00	5,690.43	5,667.92	5,655.74	12.37	12.58	-160.18	49.95	150.61	291.89	267.54	24.35	11.987			
5,800.00	5,789.26	5,763.85	5,749.69	12.61	12.85	-158.17	43.86	168.98	318.15	293.35	24.80	12.829			
5,900.00	5,888.08	5,859.78	5,843.65	12.87	13.14	-156.46	37.76	187.35	344.73	319.47	25.25	13.651			
6,000.00	5,986.91	5,955.71	5,937.60	13.13	13.43	-154.99	31.67	205.72	371.55	345.84	25.71	14.451			
6,100.00	6,085.73	6,051.63	6,031.56	13.39	13.73	-153.72	25.58	224.09	398.57	372.39	26.18	15.226			
6,200.00	6,184.56	6,147.56	6,125.51	13.66	14.04	-152.61	19.48	242.46	425.74	399.10	26.65	15.977			
6,300.00	6,283.38	6,243.49	6,219.47	13.93	14.35	-151.64	13.39	260.83	453.05	425.93	27.12	16.703			
6,400.00	6,382.21	6,339.42	6,313.42	14.21	14.67	-150.77	7.30	279.20	480.47	452.86	27.61	17.405			
6,500.00	6,481.03	6,435.35	6,407.38	14.49	14.99	-150.00	1.20	297.58	507.98	479.89	28.09	18.082			
6,600.00	6,579.86	6,531.27	6,501.33	14.77	15.31	-149.30	-4.89	315.95	535.56	506.98	28.58	18.737			
6,700.00	6,678.68	6,627.20	6,595.29	15.06	15.64	-148.68	-10.98	334.32	563.21	534.13	29.08	19.368			
6,800.00	6,777.51	6,723.13	6,689.24	15.35	15.98	-148.11	-17.08	352.69	590.92	561.34	29.58	19.978			
6,900.00	6,876.33	6,819.06	6,783.20	15.64	16.32	-147.60	-23.17	371.06	618.68	588.59	30.08	20.566			
7,000.00	6,975.16	6,914.98	6,877.15	15.94	16.66	-147.12	-29.27	389.43	646.47	615.88	30.59	21.133			
7,100.00	7,073.98	7,010.91	6,971.11	16.24	17.01	-146.69	-35.36	407.80	674.31	643.21	31.10	21.680			
7,200.00	7,172.81	7,106.84	7,065.06	16.54	17.36	-146.29	-41.45	426.17	702.18	670.56	31.62	22.208			
7,300.00	7,271.63	7,202.77	7,159.02	16.84	17.71	-145.92	-47.55	444.54	730.08	697.94	32.14	22.718			
7,400.00	7,370.45	7,298.70	7,252.97	17.15	18.06	-145.58	-53.64	462.92	758.00	725.34	32.66	23.210			
7,500.00	7,469.28	7,394.62	7,346.93	17.46	18.42	-145.26	-59.73	481.29	785.95	752.76	33.18	23.685			
7,600.00	7,568.10	7,490.55	7,440.88	17.77	18.78	-144.97	-65.83	499.66	813.91	780.20	33.71	24.144			
7,700.00	7,666.93	7,586.48	7,534.83	18.08	19.15	-144.69	-71.92	518.03	841.90	807.66	34.24	24.587			
7,800.00	7,765.75	7,682.41	7,628.79	18.39	19.51	-144.43	-78.01	536.40	869.90	835.13	34.78	25.015			
7,900.00	7,864.58	7,778.33	7,722.74	18.71	19.88	-144.19	-84.11	554.77	897.92	862.61	35.31	25.428			
8,000.00	7,963.40	7,874.26	7,816.70	19.02	20.25	-143.97	-90.20	573.14	925.95	890.10	35.85	25.828			
8,100.00	8,062.23	7,970.19	7,910.65	19.34	20.62	-143.75	-96.29	591.51	954.00	917.61	36.39	26.215			
8,200.00	8,161.05	8,066.12	8,004.61	19.66	20.99	-143.55	-102.39	609.88	982.05	945.12	36.93	26.589			
8,300.00	8,259.88	8,136.72	8,073.82	19.98	21.25	-143.50	-108.31	628.32	1,010.97	973.58	37.39	27.037			
8,400.00	8,358.70	8,200.00	8,135.76	20.31	21.46	-143.82	-114.16	635.53	1,043.13	1,005.33	37.80	27.594			
8,500.00	8,457.53	8,250.00	8,184.15	20.63	21.60	-144.33	-120.00	645.00	1,078.64	1,040.48	38.16	28.269			
8,528.99	8,486.18	8,266.31	8,199.76	20.73	21.65	-144.54	-89.37	648.06	1,089.58	1,051.32	38.25	28.483			
8,600.00	8,556.42	8,300.00	8,231.66	20.94	21.74	-145.21	-80.52	654.30	1,117.29	1,078.77	38.52	29.004			
8,700.00	8,655.54	8,350.00	8,277.92	21.21	21.86	-146.33	-63.90	663.35	1,158.24	1,119.37	38.86	29.802			
8,800.00	8,754.88	8,400.00	8,322.58	21.47	21.97	-147.58	-43.23	672.10	1,201.52	1,162.34	39.18	30.668			
8,900.00	8,854.41	8,450.00	8,365.30	21.71	22.07	-148.97	-18.67	680.47	1,247.29	1,207.83	39.46	31.605			
9,000.00	8,954.09	8,476.53	8,387.08	21.95	22.11	-149.87	-4.13	684.73	1,295.25	1,255.53	39.72	32.606			
9,100.00	9,053.89	8,500.00	8,405.77	22.17	22.16	-150.74	9.59	688.39	1,345.80	1,305.82	39.98	33.666			
9,200.00	9,153.79	8,550.00	8,443.66	22.38	22.24	-152.30	41.33	695.82	1,398.45	1,358.25	40.20	34.786			
9,300.00	9,253.75	8,573.31	8,460.36	22.57	22.28	-153.21	57.25	699.09	1,453.35	1,412.94	40.42	35.960			
9,408.26	9,362.00	8,600.00	8,478.69	22.77	22.32	60.38	76.32	702.69	1,515.18	1,474.54	40.64	37.284			
9,500.00	9,453.74	8,625.45	8,495.33	22.94	22.36	59.69	95.29	705.95	1,569.88	1,529.07	40.80	38.476			
9,608.26	9,562.00	8,650.00	8,510.59	23.14	22.40	59.01	114.28	708.95	1,637.70	1,596.69	41.01	39.932			
9,650.00	9,603.70	8,650.00	8,510.59	23.20	22.40	56.12	114.28	708.95	1,664.19	1,623.04	41.15	40.443			
9,700.00	9,653.35	8,670.57	8,522.75	23.26	22.43	52.51	130.70	711.33	1,694.65	1,653.47	41.17	41.160			
9,750.00	9,702.30	8,682.69	8,529.64	23.29	22.45	49.50	140.58	712.69	1,723.75	1,682.67	41.08	41.964			
9,800.00	9,750.18	8,700.00	8,539.12	23.30	22.48	46.78	154.94	714.55	1,751.25	1,710.43	40.82	42.897			
9,850.00	9,796.63	8,700.00	8,539.12	23.28	22.48	44.63	154.94	714.55	1,776.99	1,736.60	40.39	43.997			

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 332H (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:	332H (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		
9,900.00	9,841.30	8,721.79	8,550.45	23.24	22.51	42.53	173.42	716.77	1,800.68	1,760.88	39.80	45.244		
9,950.00	9,883.83	8,750.00	8,564.07	23.19	22.56	40.70	197.97	719.45	1,822.53	1,783.59	38.94	46.802		
10,000.00	9,923.92	8,750.00	8,564.07	23.12	22.56	39.36	197.97	719.45	1,841.81	1,803.78	38.03	48.435		
10,050.00	9,961.26	8,750.00	8,564.07	23.04	22.56	38.20	197.97	719.45	1,859.12	1,822.12	37.00	50.245		
10,100.00	9,995.56	8,778.41	8,576.58	22.95	22.61	37.15	223.35	721.91	1,873.68	1,837.78	35.90	52.193		
10,150.00	10,026.55	8,800.00	8,585.25	22.86	22.65	36.34	243.06	723.61	1,885.98	1,851.20	34.78	54.230		
10,200.00	10,054.01	8,800.00	8,585.25	22.77	22.65	35.76	243.06	723.61	1,895.70	1,862.00	33.70	56.256		
10,250.00	10,077.73	8,822.75	8,593.58	22.67	22.70	35.32	264.16	725.25	1,902.76	1,870.02	32.73	58.128		
10,300.00	10,097.52	8,850.00	8,602.48	22.58	22.76	35.08	289.85	727.01	1,907.37	1,875.43	31.94	59.717		
10,350.00	10,113.24	8,850.00	8,602.48	22.49	22.76	34.98	289.85	727.01	1,909.08	1,877.77	31.31	60.974		
10,400.00	10,124.76	8,867.64	8,607.60	22.41	22.80	35.07	306.70	728.02	1,908.26	1,877.27	30.99	61.574		
10,450.00	10,132.00	8,900.00	8,615.65	22.33	22.89	35.39	338.00	729.61	1,905.05	1,874.01	31.05	61.361		
10,500.00	10,134.90	8,900.00	8,615.65	22.26	22.89	35.76	338.00	729.61	1,898.70	1,867.44	31.26	60.734		
10,508.26	10,134.96	8,900.00	8,615.65	22.25	22.89	35.83	338.00	729.61	1,897.44	1,866.11	31.33	60.572		
10,600.00	10,134.96	8,927.26	8,621.07	22.37	22.97	35.96	364.69	730.68	1,884.60	1,852.93	31.67	59.504		
10,700.00	10,134.96	8,950.00	8,624.64	22.87	23.04	36.04	387.14	731.39	1,874.17	1,842.08	32.08	58.413		
10,800.00	10,134.96	9,000.00	8,629.41	23.48	23.22	36.15	436.88	732.35	1,867.41	1,834.68	32.73	57.046		
10,900.00	10,134.96	9,019.61	8,630.11	24.20	23.30	36.17	456.48	732.50	1,864.17	1,830.88	33.29	56.003		
10,936.71	10,134.96	9,032.22	8,630.21	24.50	23.35	36.17	469.09	732.52	1,863.95	1,830.41	33.54	55.568		
11,000.00	10,134.96	9,091.75	8,630.05	25.02	23.63	36.16	528.62	732.52	1,864.08	1,829.88	34.20	54.505		
11,100.00	10,134.96	9,191.75	8,629.79	25.94	24.23	36.16	628.62	732.52	1,864.29	1,828.90	35.39	52.681		
11,200.00	10,134.96	9,291.75	8,629.53	26.94	24.97	36.16	728.62	732.52	1,864.50	1,827.80	36.70	50.801		
11,300.00	10,134.97	9,391.75	8,629.27	28.02	25.84	36.15	828.62	732.52	1,864.72	1,826.59	38.13	48.904		
11,400.00	10,134.97	9,491.75	8,629.01	29.18	26.81	36.15	928.61	732.52	1,864.93	1,825.27	39.66	47.025		
11,500.00	10,134.97	9,591.75	8,628.75	30.40	27.89	36.14	1,028.61	732.52	1,865.14	1,823.86	41.28	45.186		
11,600.00	10,134.97	9,691.75	8,628.48	31.67	29.04	36.14	1,128.61	732.52	1,865.35	1,822.38	42.97	43.405		
11,700.00	10,134.97	9,791.75	8,628.22	33.00	30.26	36.13	1,228.61	732.52	1,865.56	1,820.82	44.74	41.695		
11,800.00	10,134.97	9,891.75	8,627.96	34.37	31.54	36.13	1,328.61	732.52	1,865.77	1,819.20	46.57	40.060		
11,900.00	10,134.97	9,991.74	8,627.70	35.78	32.88	36.12	1,428.61	732.52	1,865.99	1,817.53	48.46	38.505		
12,000.00	10,134.97	10,091.74	8,627.44	37.23	34.26	36.12	1,528.61	732.52	1,866.20	1,815.80	50.40	37.031		
12,100.00	10,134.97	10,191.74	8,627.17	38.70	35.69	36.11	1,628.61	732.52	1,866.41	1,814.04	52.37	35.636		
12,200.00	10,134.97	10,291.74	8,626.91	40.21	37.14	36.11	1,728.61	732.52	1,866.62	1,812.23	54.39	34.319		
12,300.00	10,134.98	10,391.74	8,626.65	41.74	38.63	36.10	1,828.61	732.52	1,866.83	1,810.39	56.44	33.075		
12,400.00	10,134.98	10,491.74	8,626.39	43.30	40.15	36.10	1,928.61	732.52	1,867.05	1,808.52	58.53	31.902		
12,500.00	10,134.98	10,591.74	8,626.13	44.87	41.70	36.09	2,028.61	732.52	1,867.26	1,806.62	60.64	30.795		
12,600.00	10,134.98	10,691.74	8,625.87	46.46	43.26	36.09	2,128.61	732.52	1,867.47	1,804.70	62.77	29.751		
12,700.00	10,134.98	10,791.74	8,625.60	48.07	44.85	36.08	2,228.61	732.52	1,867.68	1,802.75	64.93	28.766		
12,800.00	10,134.98	10,891.74	8,625.34	49.70	46.45	36.08	2,328.61	732.52	1,867.89	1,800.79	67.10	27.836		
12,900.00	10,134.98	10,991.74	8,625.08	51.33	48.07	36.07	2,428.60	732.52	1,868.10	1,798.81	69.30	26.957		
13,000.00	10,134.98	11,091.74	8,624.82	52.98	49.70	36.07	2,528.60	732.52	1,868.32	1,796.81	71.51	26.126		
13,100.00	10,134.98	11,191.74	8,624.56	54.65	51.35	36.06	2,628.60	732.52	1,868.53	1,794.79	73.74	25.340		
13,200.00	10,134.98	11,291.74	8,624.29	56.32	53.01	36.06	2,728.60	732.52	1,868.74	1,792.76	75.98	24.595		
13,300.00	10,134.99	11,391.74	8,624.03	58.00	54.67	36.06	2,828.60	732.52	1,868.95	1,790.72	78.23	23.890		
13,400.00	10,134.99	11,491.74	8,623.77	59.69	56.35	36.05	2,928.60	732.52	1,869.16	1,788.67	80.50	23.221		
13,500.00	10,134.99	11,591.74	8,623.51	61.38	58.04	36.05	3,028.60	732.52	1,869.38	1,786.61	82.77	22.585		
13,600.00	10,134.99	11,691.74	8,623.25	63.09	59.74	36.04	3,128.60	732.52	1,869.59	1,784.53	85.05	21.981		
13,700.00	10,134.99	11,791.74	8,622.99	64.80	61.44	36.04	3,228.60	732.52	1,869.80	1,782.45	87.35	21.407		
13,800.00	10,134.99	11,891.74	8,622.72	66.52	63.15	36.03	3,328.60	732.52	1,870.01	1,780.36	89.65	20.859		
13,900.00	10,134.99	11,991.74	8,622.46	68.24	64.87	36.03	3,428.60	732.52	1,870.23	1,778.27	91.96	20.338		
14,000.00	10,134.99	12,091.74	8,622.20	69.97	66.59	36.02	3,528.60	732.52	1,870.44	1,776.17	94.27	19.841		
14,100.00	10,134.99	12,191.74	8,621.94	71.70	68.32	36.02	3,628.60	732.52	1,870.65	1,774.06	96.59	19.366		
14,200.00	10,134.99	12,291.74	8,621.68	73.44	70.05	36.01	3,728.60	732.52	1,870.86	1,771.94	98.92	18.913		

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 332H (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:	332H (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		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
14,300.00	10,135.00	12,391.74	8,621.42	75.18	71.79	36.01	3,828.59	732.52	1,871.07	1,769.82	101.25	18.479	
14,400.00	10,135.00	12,491.74	8,621.15	76.93	73.53	36.00	3,928.59	732.52	1,871.29	1,767.70	103.59	18.064	
14,500.00	10,135.00	12,591.74	8,620.89	78.67	75.27	36.00	4,028.59	732.52	1,871.50	1,765.57	105.93	17.667	
14,600.00	10,135.00	12,691.74	8,620.63	80.43	77.02	35.99	4,128.59	732.52	1,871.71	1,763.43	108.28	17.286	
14,700.00	10,135.00	12,791.74	8,620.37	82.18	78.78	35.99	4,228.59	732.52	1,871.92	1,761.29	110.63	16.921	
14,800.00	10,135.00	12,891.73	8,620.11	83.94	80.53	35.98	4,328.59	732.52	1,872.13	1,759.15	112.98	16.570	
14,829.84	10,135.00	12,921.57	8,620.03	84.47	81.06	35.98	4,358.43	732.52	1,872.20	1,758.51	113.69	16.468	

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 332H (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:	332H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 333H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside 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)		+N/-S (usft)	+E/-W (usft)						
0.00	0.00	0.00	0.00	0.00	0.00	-0.16	25.00	-0.07	25.00					
100.00	100.00	100.00	100.00	0.08	0.08	-0.16	25.00	-0.07	25.00	24.84	0.16	158.896		
200.00	200.00	200.00	200.00	0.30	0.30	-0.16	25.00	-0.07	25.00	24.39	0.61	41.195		
300.00	300.00	300.00	300.00	0.53	0.53	-0.16	25.00	-0.07	25.00	23.94	1.06	23.665		
400.00	400.00	400.00	400.00	0.75	0.75	-0.16	25.00	-0.07	25.00	23.49	1.51	16.601		
500.00	500.00	500.00	500.00	0.98	0.98	-0.16	25.00	-0.07	25.00	23.04	1.96	12.785		
600.00	600.00	600.00	600.00	1.20	1.20	-0.16	25.00	-0.07	25.00	22.60	2.40	10.395		
700.00	700.00	700.00	700.00	1.43	1.43	-0.16	25.00	-0.07	25.00	22.15	2.85	8.758		
800.00	800.00	800.00	800.00	1.65	1.65	-0.16	25.00	-0.07	25.00	21.70	3.30	7.566		
900.00	900.00	900.00	900.00	1.88	1.88	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	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	-0.16	25.00	-0.07	25.00	5.96	19.04	1.313 Level 3, CC		
4,400.00	4,400.00	4,400.31	4,400.30	9.72	9.72	147.71	24.36	0.53	25.10	5.66	19.43	1.291 Level 3, ES, SF		
4,500.00	4,499.96	4,500.55	4,500.51	9.89	9.90	155.02	22.43	2.32	25.67	5.89	19.78	1.298 Level 3		
4,600.00	4,599.86	4,600.64	4,600.50	10.07	10.08	166.17	19.22	5.30	27.48	7.37	20.12	1.366 Level 3		
4,700.00	4,699.68	4,700.52	4,700.19	10.24	10.26	178.90	14.75	9.45	31.48	11.02	20.45	1.539		
4,800.00	4,799.37	4,800.11	4,799.48	10.43	10.44	-169.38	9.02	14.78	38.28	17.49	20.79	1.841		
4,900.00	4,898.90	4,899.35	4,898.26	10.61	10.63	-160.01	2.06	21.25	48.02	26.89	21.13	2.272		
5,000.00	4,998.26	4,998.16	4,996.44	10.80	10.83	-153.01	-6.12	28.85	60.56	39.07	21.48	2.819		
5,100.00	5,097.40	5,096.49	5,093.92	11.00	11.03	-147.88	-15.49	37.55	75.70	53.86	21.84	3.466		

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 332H (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:	332H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 333H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance							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		
5,179.27	5,175.82	5,174.04	5,170.65	11.17	11.19	-144.79	-23.74	45.22	89.44	67.30	22.14	4.041		
5,200.00	5,196.31	5,194.26	5,190.63	11.21	11.24	-144.10	-26.02	47.34	93.25	71.03	22.22	4.197		
5,300.00	5,295.13	5,291.56	5,286.62	11.43	11.45	-140.98	-37.69	58.19	112.21	89.57	22.64	4.957		
5,400.00	5,393.96	5,388.67	5,382.14	11.65	11.68	-138.13	-50.50	70.09	132.18	109.11	23.07	5.730		
5,500.00	5,492.78	5,486.40	5,478.19	11.88	11.92	-135.87	-63.73	82.39	152.62	129.11	23.51	6.493		
5,600.00	5,591.61	5,584.13	5,574.24	12.12	12.17	-134.14	-76.96	94.68	173.24	149.28	23.96	7.231		
5,700.00	5,690.43	5,681.86	5,670.28	12.37	12.43	-132.78	-90.19	106.97	193.98	169.57	24.41	7.945		
5,800.00	5,789.26	5,779.60	5,766.33	12.61	12.70	-131.68	-103.42	119.27	214.80	189.92	24.88	8.633		
5,900.00	5,888.08	5,877.33	5,862.38	12.87	12.97	-130.77	-116.64	131.56	235.69	210.33	25.36	9.295		
6,000.00	5,986.91	5,975.06	5,958.43	13.13	13.25	-129.87	-129.87	143.85	256.62	230.78	25.84	9.931		
6,100.00	6,085.73	6,072.79	6,054.48	13.39	13.53	-129.37	-143.10	156.15	277.59	251.26	26.33	10.543		
6,200.00	6,184.56	6,170.53	6,150.53	13.66	13.82	-128.82	-156.33	168.44	298.59	271.76	26.83	11.129		
6,300.00	6,283.38	6,268.26	6,246.58	13.93	14.12	-128.34	-169.56	180.74	319.61	292.28	27.33	11.693		
6,400.00	6,382.21	6,365.99	6,342.63	14.21	14.42	-127.92	-182.79	193.03	340.65	312.80	27.85	12.233		
6,500.00	6,481.03	6,463.73	6,438.68	14.49	14.72	-127.55	-196.02	205.32	361.71	333.34	28.37	12.752		
6,600.00	6,579.86	6,561.46	6,534.73	14.77	15.04	-127.22	-209.25	217.62	382.78	353.89	28.89	13.249		
6,700.00	6,678.68	6,659.19	6,630.78	15.06	15.35	-126.92	-222.48	229.91	403.86	374.43	29.42	13.727		
6,800.00	6,777.51	6,756.92	6,726.83	15.35	15.67	-126.65	-235.70	242.21	424.94	394.99	29.96	14.185		
6,900.00	6,876.33	6,854.66	6,822.88	15.64	15.99	-126.41	-248.93	254.50	446.04	415.54	30.50	14.626		
7,000.00	6,975.16	6,952.39	6,918.93	15.94	16.32	-126.19	-262.16	266.79	467.14	436.10	31.04	15.048		
7,100.00	7,073.98	7,050.12	7,014.98	16.24	16.65	-125.99	-275.39	279.09	488.25	456.66	31.59	15.454		
7,200.00	7,172.81	7,147.86	7,111.03	16.54	16.98	-125.81	-288.62	291.38	509.37	477.22	32.15	15.844		
7,300.00	7,271.63	7,245.59	7,207.08	16.84	17.31	-125.64	-301.85	303.67	530.49	497.78	32.71	16.219		
7,400.00	7,370.45	7,343.32	7,303.13	17.15	17.65	-125.48	-315.08	315.97	551.61	518.34	33.27	16.579		
7,500.00	7,469.28	7,441.05	7,399.18	17.46	17.99	-125.34	-328.31	328.26	572.74	538.90	33.84	16.925		
7,600.00	7,568.10	7,538.79	7,495.23	17.77	18.34	-125.20	-341.54	340.56	593.87	559.46	34.41	17.258		
7,700.00	7,666.93	7,636.52	7,591.28	18.08	18.68	-125.08	-354.76	352.85	615.00	580.02	34.98	17.579		
7,800.00	7,765.75	7,734.25	7,687.33	18.39	19.03	-124.96	-367.99	365.14	636.14	600.58	35.56	17.888		
7,900.00	7,864.58	7,831.99	7,783.38	18.71	19.38	-124.85	-381.22	377.44	657.28	621.13	36.14	18.185		
8,000.00	7,963.40	7,929.72	7,879.43	19.02	19.73	-124.75	-394.45	389.73	678.42	641.69	36.73	18.472		
8,100.00	8,062.23	8,027.45	7,975.48	19.34	20.09	-124.65	-407.68	402.03	699.56	662.25	37.31	18.748		
8,200.00	8,161.05	8,125.18	8,071.53	19.66	20.44	-124.56	-420.91	414.32	720.71	682.80	37.90	19.014		
8,300.00	8,259.88	8,222.92	8,167.58	19.98	20.80	-124.47	-434.14	426.61	741.85	703.36	38.50	19.271		
8,400.00	8,358.70	8,320.65	8,263.63	20.31	21.16	-124.39	-447.37	438.91	763.00	723.91	39.09	19.518		
8,500.00	8,457.53	8,423.19	8,364.45	20.63	21.51	-124.33	-460.60	451.65	784.00	744.32	39.69	19.754		
8,528.99	8,486.18	8,454.48	8,395.26	20.73	21.61	-124.32	-465.04	455.34	789.91	750.05	39.86	19.818		
8,600.00	8,556.42	8,531.35	8,471.10	20.94	21.84	-124.44	-474.27	463.91	803.69	763.40	40.28	19.951		
8,700.00	8,655.54	8,640.23	8,578.78	21.21	22.15	-124.58	-486.06	474.87	821.18	780.33	40.85	20.103		
8,800.00	8,754.88	8,749.76	8,687.39	21.47	22.45	-124.70	-496.41	484.49	836.43	795.04	41.40	20.206		
8,900.00	8,854.41	8,859.85	8,796.82	21.71	22.74	-124.80	-505.28	492.72	849.42	807.50	41.92	20.262		
9,000.00	8,954.09	8,970.42	8,906.92	21.95	23.00	-124.88	-512.63	499.56	860.12	817.70	42.42	20.275		
9,100.00	9,053.89	9,081.37	9,017.59	22.17	23.26	-124.94	-518.44	504.96	868.53	825.63	42.90	20.245		
9,200.00	9,153.79	9,192.62	9,128.69	22.38	23.49	-124.98	-522.69	508.91	874.64	831.29	43.36	20.173		
9,300.00	9,253.75	9,304.07	9,240.08	22.57	23.71	-125.00	-525.37	511.39	878.44	834.65	43.79	20.062		
9,408.26	9,362.00	9,424.85	9,360.84	22.77	23.93	-89.63	-526.47	512.42	879.94	835.72	44.22	19.899		
9,500.00	9,453.74	9,517.75	9,453.74	22.94	24.09	-89.63	-526.48	512.43	879.95	835.39	44.56	19.747		
9,608.26	9,562.00	9,626.01	9,562.00	23.14	24.28	-89.63	-526.48	512.43	879.95	834.98	44.97	19.568		
9,650.00	9,603.70	9,667.45	9,603.43	23.20	24.34	-89.67	-525.62	512.43	879.94	834.84	45.11	19.508		
9,700.00	9,653.35	9,717.05	9,652.77	23.26	24.40	-89.73	-520.76	512.43	879.94	834.71	45.22	19.457		
9,750.00	9,702.30	9,766.72	9,701.58	23.29	24.44	-89.79	-511.63	512.43	879.93	834.65	45.29	19.431		
9,800.00	9,750.18	9,816.48	9,749.50	23.30	24.45	-89.86	-498.29	512.43	879.93	834.64	45.30	19.426		
9,850.00	9,796.63	9,866.33	9,796.16	23.28	24.43	-89.92	-480.81	512.43	879.93	834.67	45.26	19.442		

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 332H (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:	332H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 333H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	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)						
9,896.96	9,838.64	9,913.22	9,838.52	23.25	24.40	89.98	-460.72	512.43	879.93	834.74	45.19	19.473		
9,900.00	9,841.30	9,916.25	9,841.20	23.24	24.40	89.99	-459.30	512.43	879.93	834.75	45.18	19.475		
9,950.00	9,883.83	9,966.27	9,884.27	23.19	24.35	90.05	-433.90	512.43	879.93	834.86	45.07	19.523		
10,000.00	9,923.92	10,016.37	9,925.04	23.12	24.28	90.12	-404.79	512.43	879.93	834.99	44.94	19.581		
10,050.00	9,961.26	10,066.57	9,963.16	23.04	24.20	90.18	-372.18	512.43	879.93	835.15	44.79	19.647		
10,100.00	9,995.56	10,116.84	9,998.35	22.95	24.10	90.24	-336.29	512.43	879.94	835.30	44.64	19.714		
10,150.00	10,026.55	10,167.21	10,030.30	22.86	24.00	90.31	-297.38	512.43	879.94	835.45	44.49	19.778		
10,200.00	10,054.01	10,217.65	10,058.76	22.77	23.90	90.36	-255.75	512.43	879.95	835.59	44.36	19.835		
10,250.00	10,077.73	10,268.18	10,083.49	22.67	23.79	90.42	-211.71	512.43	879.96	835.69	44.26	19.880		
10,300.00	10,097.52	10,318.77	10,104.27	22.58	23.68	90.47	-165.59	512.44	879.96	835.76	44.20	19.908		
10,350.00	10,113.24	10,369.44	10,120.92	22.49	23.57	90.52	-117.75	512.44	879.97	835.78	44.19	19.915		
10,400.00	10,124.76	10,420.18	10,133.29	22.41	23.47	90.57	-68.57	512.44	879.98	835.76	44.22	19.899		
10,450.00	10,132.00	10,470.98	10,141.27	22.33	23.37	90.61	-18.42	512.44	879.98	835.67	44.31	19.858		
10,500.00	10,134.90	10,521.83	10,144.78	22.26	23.29	90.64	32.30	512.44	879.99	835.53	44.46	19.792		
10,508.26	10,134.96	10,530.23	10,144.93	22.25	23.28	90.65	40.69	512.44	879.99	835.50	44.49	19.779		
10,600.00	10,134.96	10,622.07	10,144.96	22.37	23.19	90.65	132.54	512.44	879.99	835.03	44.97	19.570		
10,700.00	10,134.96	10,722.07	10,144.96	22.87	23.37	90.65	232.54	512.44	879.99	834.25	45.75	19.235		
10,800.00	10,134.96	10,822.07	10,144.96	23.48	23.92	90.65	332.54	512.45	880.00	833.19	46.80	18.802		
10,900.00	10,134.96	10,922.07	10,144.96	24.20	24.61	90.65	432.54	512.45	880.00	831.88	48.11	18.290		
11,000.00	10,134.96	11,022.07	10,144.96	25.02	25.41	90.65	532.54	512.45	880.00	830.34	49.66	17.722		
11,100.00	10,134.96	11,122.07	10,144.96	25.94	26.31	90.65	632.54	512.45	880.00	828.59	51.41	17.116		
11,200.00	10,134.96	11,222.07	10,144.96	26.94	27.29	90.65	732.54	512.45	880.00	826.64	53.36	16.490		
11,300.00	10,134.97	11,322.07	10,144.97	28.02	28.35	90.65	832.54	512.46	880.00	824.51	55.49	15.859		
11,400.00	10,134.97	11,422.07	10,144.97	29.18	29.48	90.65	932.54	512.46	880.00	822.24	57.76	15.234		
11,500.00	10,134.97	11,522.07	10,144.97	30.40	30.68	90.65	1,032.54	512.46	880.00	819.83	60.18	14.624		
11,600.00	10,134.97	11,622.07	10,144.97	31.67	31.93	90.65	1,132.54	512.46	880.01	817.30	62.71	14.033		
11,700.00	10,134.97	11,722.07	10,144.97	33.00	33.23	90.65	1,232.54	512.46	880.01	814.66	65.35	13.467		
11,800.00	10,134.97	11,822.07	10,144.97	34.37	34.58	90.65	1,332.54	512.47	880.01	811.93	68.08	12.926		
11,900.00	10,134.97	11,922.07	10,144.97	35.78	35.97	90.65	1,432.54	512.47	880.01	809.11	70.90	12.413		
12,000.00	10,134.97	12,022.07	10,144.97	37.23	37.40	90.65	1,532.54	512.47	880.01	806.23	73.79	11.927		
12,100.00	10,134.97	12,122.07	10,144.97	38.70	38.85	90.65	1,632.54	512.47	880.01	803.27	76.74	11.467		
12,200.00	10,134.97	12,222.07	10,144.97	40.21	40.34	90.65	1,732.54	512.47	880.01	800.26	79.75	11.034		
12,300.00	10,134.98	12,322.07	10,144.98	41.74	41.86	90.65	1,832.54	512.47	880.01	797.20	82.82	10.626		
12,400.00	10,134.98	12,422.07	10,144.98	43.30	43.39	90.65	1,932.54	512.48	880.02	794.09	85.93	10.241		
12,500.00	10,134.98	12,522.07	10,144.98	44.87	44.95	90.65	2,032.54	512.48	880.02	790.94	89.08	9.879		
12,600.00	10,134.98	12,622.07	10,144.98	46.46	46.53	90.65	2,132.54	512.48	880.02	787.75	92.27	9.538		
12,700.00	10,134.98	12,722.07	10,144.98	48.07	48.13	90.65	2,232.54	512.48	880.02	784.53	95.49	9.216		
12,800.00	10,134.98	12,822.07	10,144.98	49.70	49.74	90.65	2,332.54	512.48	880.02	781.28	98.74	8.912		
12,900.00	10,134.98	12,922.07	10,144.98	51.33	51.36	90.65	2,432.54	512.49	880.02	778.00	102.02	8.626		
13,000.00	10,134.98	13,022.07	10,144.98	52.98	53.00	90.65	2,532.54	512.49	880.02	774.70	105.33	8.355		
13,100.00	10,134.98	13,122.07	10,144.98	54.65	54.65	90.65	2,632.54	512.49	880.02	771.37	108.65	8.099		
13,200.00	10,134.98	13,222.07	10,144.98	56.32	56.31	90.65	2,732.54	512.49	880.03	768.02	112.00	7.857		
13,300.00	10,134.99	13,322.07	10,144.99	58.00	57.98	90.65	2,832.54	512.49	880.03	764.66	115.37	7.628		
13,400.00	10,134.99	13,422.07	10,144.99	59.69	59.66	90.65	2,932.54	512.50	880.03	761.28	118.75	7.411		
13,500.00	10,134.99	13,522.07	10,144.99	61.38	61.35	90.65	3,032.54	512.50	880.03	757.88	122.15	7.205		
13,600.00	10,134.99	13,622.07	10,144.99	63.09	63.05	90.65	3,132.54	512.50	880.03	754.47	125.56	7.009		
13,700.00	10,134.99	13,722.07	10,144.99	64.80	64.75	90.65	3,232.54	512.50	880.03	751.05	128.99	6.823		
13,800.00	10,134.99	13,822.07	10,144.99	66.52	66.46	90.65	3,332.54	512.50	880.03	747.61	132.42	6.646		
13,900.00	10,134.99	13,922.07	10,144.99	68.24	68.17	90.65	3,432.54	512.51	880.03	744.16	135.87	6.477		
14,000.00	10,134.99	14,022.07	10,144.99	69.97	69.89	90.65	3,532.54	512.51	880.03	740.70	139.33	6.316		
14,100.00	10,134.99	14,122.07	10,144.99	71.70	71.62	90.65	3,632.54	512.51	880.04	737.23	142.80	6.163		
14,200.00	10,134.99	14,222.07	10,144.99	73.44	73.35	90.65	3,732.54	512.51	880.04	733.76	146.28	6.016		

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



LEAM Drilling Systems LLC
Anticollision Report



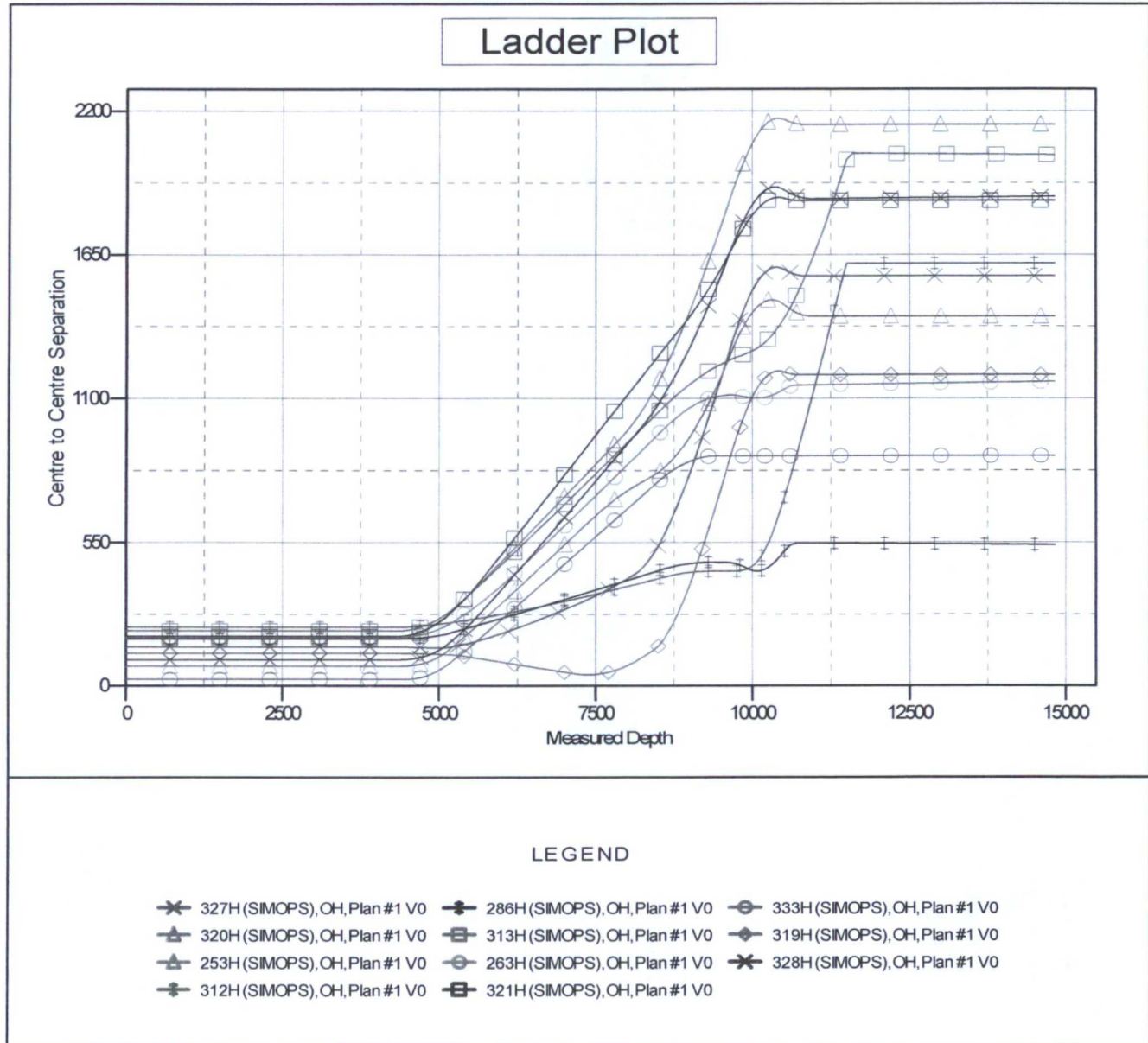
Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (SIMOPS)
Project:	Lea County, NM (NAD-83)	TVD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Reference Site:	Cotton Draw Unit	MD Reference:	3431.4' GE + 30' KB @ 3461.40usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	332H (SIMOPS)	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Cotton Draw Unit - 333H (SIMOPS) - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,300.00	10,135.00	14,322.07	10,144.99	75.18	75.09	90.65	3,832.54	512.51	880.04	730.27	149.77	5.876		
14,400.00	10,135.00	14,422.07	10,145.00	76.93	76.83	90.65	3,932.54	512.52	880.04	726.78	153.26	5.742		
14,500.00	10,135.00	14,522.07	10,145.00	78.67	78.57	90.65	4,032.54	512.52	880.04	723.28	156.77	5.614		
14,600.00	10,135.00	14,622.07	10,145.00	80.43	80.32	90.65	4,132.54	512.52	880.04	719.77	160.27	5.491		
14,700.00	10,135.00	14,722.07	10,145.00	82.18	82.07	90.65	4,232.54	512.52	880.04	716.25	163.79	5.373		
14,800.00	10,135.00	14,822.07	10,145.00	83.94	83.82	90.65	4,332.54	512.52	880.04	712.73	167.31	5.260		
14,829.84	10,135.00	14,851.91	10,145.00	84.47	84.34	90.65	4,362.38	512.52	880.05	711.68	168.36	5.227		

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (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:	332H (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: 332H (SIMOPS)
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.33°



Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 332H (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:	332H (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

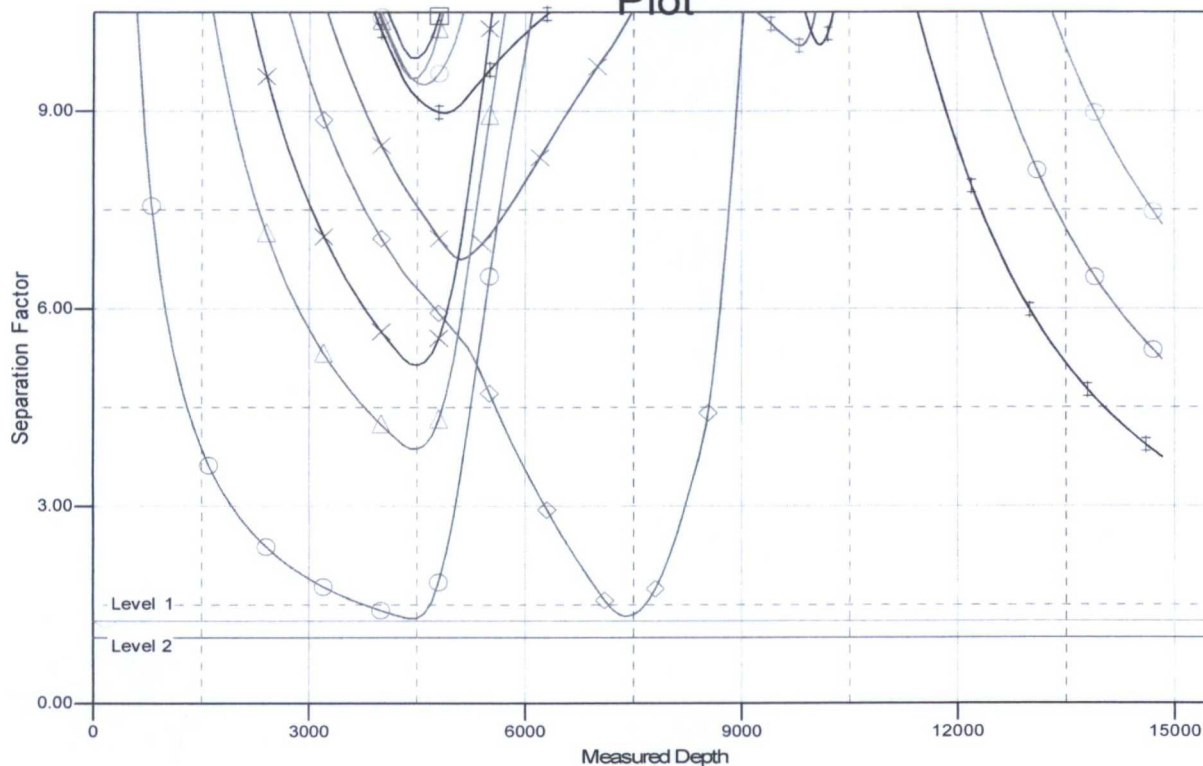
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 332H (SIMOPS)

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

Grid Convergence at Surface is: 0.33°

Separation Factor Plot



LEGEND

✕ 327H (SIMOPS), OH, Plan #1 V0	✕ 286H (SIMOPS), OH, Plan #1 V0	⊖ 333H (SIMOPS), OH, Plan #1 V0
△ 320H (SIMOPS), OH, Plan #1 V0	⊖ 313H (SIMOPS), OH, Plan #1 V0	⊖ 319H (SIMOPS), OH, Plan #1 V0
△ 253H (SIMOPS), OH, Plan #1 V0	⊖ 263H (SIMOPS), OH, Plan #1 V0	✕ 328H (SIMOPS), OH, Plan #1 V0
✕ 312H (SIMOPS), OH, Plan #1 V0	⊖ 321H (SIMOPS), OH, Plan #1 V0	