

DEVON ENERGY

Lea County, NM (NAD-83)

Seawolf 1-12 Fed

93H

OH

Plan #1

HOBBS OCD

APR 26 2017

RECEIVED

Anticollision Report

27 October, 2016

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 93H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3317 @ 3340.50usft
Reference Site:	Seawolf 1-12 Fed	MD Reference:	3317 @ 3340.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	93H	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:	MD Interval 100.00usft	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	10/27/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	22,748.68	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						
Seawolf 1-12 Fed						
83H - OH - Plan #1	4,000.00	3,999.70	20.03	2.33	1.131	Level 2, CC, ES, SF
84H - OH - Plan #1	3,466.57	3,466.87	30.02	14.71	1.961	CC
84H - OH - Plan #1	3,500.00	3,500.30	30.02	14.56	1.942	ES
84H - OH - Plan #1	22,748.68	22,532.20	491.83	135.38	1.380	Level 3, SF
92H - OH - Plan #1	22,748.68	22,767.85	897.99	526.95	2.420	CC, ES, SF

Offset Design														Seawolf 1-12 Fed - 83H - OH - Plan #1		Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM MWD-ADJ																Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)							
0.00	0.00	0.00	0.00	0.00	0.00	-90.23	-0.08	-20.03	20.03								
100.00	100.00	99.70	99.70	0.09	0.09	-90.23	-0.08	-20.03	20.03	19.86	0.17	116.666					
200.00	200.00	199.70	199.70	0.31	0.31	-90.23	-0.08	-20.03	20.03	19.41	0.62	32.265					
300.00	300.00	299.70	299.70	0.54	0.53	-90.23	-0.08	-20.03	20.03	18.96	1.07	18.714					
400.00	400.00	399.70	399.70	0.76	0.76	-90.23	-0.08	-20.03	20.03	18.51	1.52	13.179					
500.00	500.00	499.70	499.70	0.99	0.98	-90.23	-0.08	-20.03	20.03	18.06	1.97	10.171					
600.00	600.00	599.70	599.70	1.21	1.21	-90.23	-0.08	-20.03	20.03	17.61	2.42	8.281					
700.00	700.00	699.70	699.70	1.43	1.43	-90.23	-0.08	-20.03	20.03	17.16	2.87	6.983					
800.00	800.00	799.70	799.70	1.66	1.66	-90.23	-0.08	-20.03	20.03	16.71	3.32	6.037					
900.00	900.00	899.70	899.70	1.88	1.88	-90.23	-0.08	-20.03	20.03	16.26	3.77	5.317					
1,000.00	1,000.00	999.70	999.70	2.11	2.11	-90.23	-0.08	-20.03	20.03	15.81	4.22	4.750					
1,100.00	1,100.00	1,099.70	1,099.70	2.33	2.33	-90.23	-0.08	-20.03	20.03	15.36	4.67	4.292					
1,200.00	1,200.00	1,199.70	1,199.70	2.56	2.56	-90.23	-0.08	-20.03	20.03	14.91	5.12	3.915					
1,300.00	1,300.00	1,299.70	1,299.70	2.78	2.78	-90.23	-0.08	-20.03	20.03	14.46	5.57	3.599					
1,400.00	1,400.00	1,399.70	1,399.70	3.01	3.01	-90.23	-0.08	-20.03	20.03	14.01	6.02	3.330					
1,500.00	1,500.00	1,499.70	1,499.70	3.23	3.23	-90.23	-0.08	-20.03	20.03	13.57	6.46	3.098					
1,600.00	1,600.00	1,599.70	1,599.70	3.46	3.46	-90.23	-0.08	-20.03	20.03	13.12	6.91	2.897					
1,700.00	1,700.00	1,699.70	1,699.70	3.68	3.68	-90.23	-0.08	-20.03	20.03	12.67	7.36	2.720					
1,800.00	1,800.00	1,799.70	1,799.70	3.91	3.91	-90.23	-0.08	-20.03	20.03	12.22	7.81	2.564					
1,900.00	1,900.00	1,899.70	1,899.70	4.13	4.13	-90.23	-0.08	-20.03	20.03	11.77	8.26	2.424					
2,000.00	2,000.00	1,999.70	1,999.70	4.36	4.36	-90.23	-0.08	-20.03	20.03	11.32	8.71	2.299					
2,100.00	2,100.00	2,099.70	2,099.70	4.58	4.58	-90.23	-0.08	-20.03	20.03	10.87	9.16	2.186					

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

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 93H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
 TVD Reference: 3317 @ 3340.50usft
 MD Reference: 3317 @ 3340.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 83H - 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
2,200.00	2,200.00	2,199.70	2,199.70	4.81	4.81	-90.23	-0.08	-20.03	20.03	10.42	9.61	2.084	
2,300.00	2,300.00	2,299.70	2,299.70	5.03	5.03	-90.23	-0.08	-20.03	20.03	9.97	10.06	1.991	
2,400.00	2,400.00	2,399.70	2,399.70	5.26	5.25	-90.23	-0.08	-20.03	20.03	9.52	10.51	1.906	
2,500.00	2,500.00	2,499.70	2,499.70	5.48	5.48	-90.23	-0.08	-20.03	20.03	9.07	10.96	1.828	
2,600.00	2,600.00	2,599.70	2,599.70	5.71	5.70	-90.23	-0.08	-20.03	20.03	8.62	11.41	1.756	
2,700.00	2,700.00	2,699.70	2,699.70	5.93	5.93	-90.23	-0.08	-20.03	20.03	8.17	11.86	1.689	
2,800.00	2,800.00	2,799.70	2,799.70	6.15	6.15	-90.23	-0.08	-20.03	20.03	7.72	12.31	1.627	
2,900.00	2,900.00	2,899.70	2,899.70	6.38	6.38	-90.23	-0.08	-20.03	20.03	7.27	12.76	1.570	
3,000.00	3,000.00	2,999.70	2,999.70	6.60	6.60	-90.23	-0.08	-20.03	20.03	6.82	13.21	1.517	
3,100.00	3,100.00	3,099.70	3,099.70	6.83	6.83	-90.23	-0.08	-20.03	20.03	6.37	13.66	1.467 Level 3	
3,200.00	3,200.00	3,199.70	3,199.70	7.05	7.05	-90.23	-0.08	-20.03	20.03	5.92	14.11	1.420 Level 3	
3,300.00	3,300.00	3,299.70	3,299.70	7.28	7.28	-90.23	-0.08	-20.03	20.03	5.47	14.56	1.376 Level 3	
3,400.00	3,400.00	3,399.70	3,399.70	7.50	7.50	-90.23	-0.08	-20.03	20.03	5.02	15.01	1.335 Level 3	
3,500.00	3,500.00	3,499.70	3,499.70	7.73	7.73	-90.23	-0.08	-20.03	20.03	4.57	15.46	1.296 Level 3	
3,600.00	3,600.00	3,599.70	3,599.70	7.95	7.95	-90.23	-0.08	-20.03	20.03	4.13	15.90	1.259 Level 3	
3,700.00	3,700.00	3,699.70	3,699.70	8.18	8.18	-90.23	-0.08	-20.03	20.03	3.68	16.35	1.225 Level 2	
3,800.00	3,800.00	3,799.70	3,799.70	8.40	8.40	-90.23	-0.08	-20.03	20.03	3.23	16.80	1.192 Level 2	
3,900.00	3,900.00	3,899.70	3,899.70	8.63	8.63	-90.23	-0.08	-20.03	20.03	2.78	17.25	1.161 Level 2	
4,000.00	4,000.00	3,999.70	3,999.70	8.85	8.85	-90.23	-0.08	-20.03	20.03	2.33	17.70	1.131 Level 2, CC, ES, SF	
4,100.00	4,100.00	4,099.70	4,099.70	9.07	9.08	-151.42	-0.08	-20.03	20.79	2.65	18.14	1.146 Level 2	
4,200.00	4,199.96	4,199.66	4,199.66	9.28	9.30	-154.51	-0.08	-20.03	23.12	4.55	18.57	1.245 Level 2	
4,300.00	4,299.86	4,299.56	4,299.56	9.49	9.53	-158.47	-0.08	-20.03	27.13	8.13	18.99	1.428 Level 3	
4,400.00	4,399.68	4,399.38	4,399.38	9.71	9.75	-162.35	-0.08	-20.03	32.88	13.47	19.41	1.694	
4,500.00	4,499.37	4,499.07	4,499.07	9.93	9.97	-165.71	-0.08	-20.03	40.43	20.61	19.82	2.040	
4,600.00	4,598.99	4,598.69	4,598.69	10.15	10.20	-168.23	-0.08	-20.03	48.93	28.67	20.26	2.415	
4,700.00	4,698.60	4,698.30	4,698.30	10.37	10.42	-170.00	-0.08	-20.03	57.49	36.79	20.69	2.778	
4,800.00	4,798.22	4,797.92	4,797.92	10.60	10.65	-171.31	-0.08	-20.03	66.09	44.96	21.13	3.128	
4,900.00	4,897.84	4,897.54	4,897.54	10.82	10.87	-172.32	-0.08	-20.03	74.72	53.15	21.57	3.464	
5,000.00	4,897.46	4,897.16	4,897.16	11.05	11.09	-173.12	-0.08	-20.03	83.36	61.35	22.01	3.788	
5,100.00	5,097.08	5,096.78	5,096.78	11.29	11.32	-173.77	-0.08	-20.03	92.02	69.57	22.45	4.099	
5,200.00	5,196.70	5,196.40	5,196.40	11.52	11.54	-174.31	-0.08	-20.03	100.69	77.80	22.89	4.399	
5,300.00	5,296.32	5,296.02	5,296.02	11.75	11.76	-174.76	-0.08	-20.03	109.37	86.04	23.33	4.687	
5,400.00	5,395.94	5,395.64	5,395.64	11.99	11.99	-175.15	-0.08	-20.03	118.05	94.28	23.77	4.965	
5,500.00	5,495.56	5,495.26	5,495.26	12.23	12.21	-175.48	-0.08	-20.03	126.74	102.52	24.22	5.233	
5,600.00	5,595.18	5,592.89	5,592.89	12.47	12.42	-175.63	-0.08	-20.78	136.12	111.48	24.64	5.524	
5,700.00	5,694.80	5,690.13	5,690.10	12.71	12.61	-175.47	-0.08	-23.18	147.03	121.97	25.05	5.868	
5,800.00	5,794.42	5,787.01	5,786.89	12.95	12.81	-175.09	-0.08	-27.22	159.46	133.99	25.47	6.262	
5,900.00	5,894.04	5,883.47	5,883.19	13.19	13.00	-174.53	-0.08	-32.86	173.41	147.53	25.88	6.701	
6,000.00	5,993.66	5,979.47	5,978.92	13.44	13.20	-173.85	-0.08	-40.08	188.90	162.61	26.29	7.185	
6,100.00	6,093.28	6,077.44	6,076.51	13.68	13.40	-173.13	-0.08	-48.58	205.46	178.76	26.71	7.693	
6,200.00	6,192.90	6,176.02	6,174.72	13.93	13.61	-172.52	-0.08	-57.17	222.09	194.96	27.13	8.187	
6,300.00	6,292.52	6,274.60	6,272.92	14.18	13.82	-171.99	-0.08	-65.77	238.73	211.18	27.55	8.666	
6,400.00	6,392.14	6,373.19	6,371.13	14.43	14.03	-171.53	-0.08	-74.36	255.39	227.42	27.97	9.131	
6,500.00	6,491.76	6,471.77	6,469.34	14.68	14.24	-171.12	-0.08	-82.95	272.07	243.68	28.39	9.582	
6,600.00	6,591.41	6,570.42	6,567.62	14.90	14.46	-170.76	-0.08	-91.55	288.33	259.52	28.81	10.006	
6,700.00	6,691.14	6,669.21	6,666.03	15.10	14.67	-170.41	-0.08	-100.16	303.76	274.54	29.22	10.397	
6,800.00	6,790.92	6,768.12	6,764.56	15.30	14.89	-170.07	-0.08	-108.78	318.34	288.73	29.62	10.749	
6,900.00	6,890.76	6,867.15	6,863.22	15.49	15.12	-169.74	-0.08	-117.41	332.09	302.07	30.02	11.063	
7,000.00	6,990.65	6,966.29	6,961.98	15.69	15.34	-169.40	-0.08	-126.05	345.00	314.58	30.42	11.342	
7,100.00	7,090.57	7,065.54	7,060.85	15.88	15.56	-169.06	-0.08	-134.70	357.07	326.25	30.82	11.586	
7,200.00	7,190.52	7,164.88	7,159.81	16.07	15.79	-168.72	-0.08	-143.36	368.30	337.08	31.22	11.797	
7,300.00	7,290.50	7,264.31	7,258.87	16.26	16.02	-168.37	-0.08	-152.02	378.69	347.07	31.62	11.977	

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

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 93H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
TVD Reference: 3317 @ 3340.50usft
MD Reference: 3317 @ 3340.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 83H - 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	
7,400.00	7,390.49	7,363.82	7,358.00	16.45	16.25	-168.02	-0.08	-160.70	388.25	356.23	32.02	12.127	
7,500.00	7,490.49	7,463.41	7,457.20	16.63	16.48	-107.65	-0.08	-169.38	396.97	364.56	32.41	12.248	
7,600.00	7,590.49	7,563.03	7,556.45	16.82	16.72	-107.28	-0.08	-178.06	405.29	372.47	32.82	12.347	
7,700.00	7,690.49	7,662.65	7,655.69	17.04	16.95	-106.92	-0.08	-186.74	413.62	380.37	33.26	12.437	
7,800.00	7,790.49	7,762.27	7,754.93	17.26	17.19	-106.57	-0.08	-195.42	421.97	388.28	33.69	12.525	
7,900.00	7,890.49	7,861.89	7,854.17	17.47	17.42	-106.24	-0.08	-204.11	430.34	396.21	34.13	12.610	
8,000.00	7,990.49	7,961.51	7,953.41	17.69	17.66	-105.92	-0.08	-212.79	438.71	404.15	34.56	12.694	
8,100.00	8,090.49	8,063.51	8,055.04	17.90	17.89	-105.62	-0.08	-221.50	446.94	411.94	34.99	12.772	
8,200.00	8,190.49	8,167.14	8,158.36	18.12	18.11	-105.34	-0.08	-229.50	454.37	418.95	35.42	12.827	
8,300.00	8,290.49	8,270.91	8,261.89	18.34	18.33	-105.11	-0.08	-236.56	460.95	425.10	35.85	12.858	
8,400.00	8,390.49	8,374.80	8,365.59	18.56	18.54	-104.91	-0.08	-242.70	466.65	430.38	36.27	12.865	
8,500.00	8,490.49	8,478.79	8,469.45	18.77	18.75	-104.75	-0.08	-247.90	471.48	434.78	36.70	12.847	
8,600.00	8,590.49	8,582.86	8,573.44	18.99	18.96	-104.62	-0.08	-252.16	475.44	438.32	37.13	12.806	
8,700.00	8,690.49	8,687.01	8,677.53	19.21	19.17	-104.52	-0.08	-255.48	478.53	440.97	37.55	12.742	
8,800.00	8,790.49	8,791.21	8,781.70	19.43	19.37	-104.45	-0.08	-257.85	480.73	442.75	37.98	12.657	
8,900.00	8,890.49	8,895.44	8,885.93	19.64	19.58	-104.41	-0.08	-259.27	482.06	443.65	38.41	12.551	
9,000.00	8,990.49	8,999.69	8,990.17	19.86	19.77	-104.39	-0.08	-259.75	482.50	443.67	38.83	12.426	
9,100.00	9,090.49	9,099.70	9,090.19	20.08	19.97	-104.39	-0.08	-259.75	482.50	443.25	39.25	12.292	
9,200.00	9,190.49	9,199.70	9,190.19	20.30	20.19	-104.39	-0.08	-259.75	482.50	442.80	39.70	12.155	
9,300.00	9,290.49	9,299.70	9,290.19	20.52	20.41	-104.39	-0.08	-259.75	482.50	442.36	40.14	12.021	
9,400.00	9,390.49	9,399.70	9,390.19	20.74	20.62	-104.39	-0.08	-259.75	482.50	441.92	40.58	11.890	
9,500.00	9,490.49	9,499.70	9,490.19	20.95	20.84	-104.39	-0.08	-259.75	482.50	441.47	41.02	11.761	
9,600.00	9,590.49	9,599.70	9,590.19	21.17	21.06	-104.39	-0.08	-259.75	482.50	441.03	41.47	11.636	
9,700.00	9,690.49	9,699.70	9,690.19	21.39	21.28	-104.39	-0.08	-259.75	482.50	440.59	41.91	11.512	
9,800.00	9,790.49	9,799.70	9,790.19	21.61	21.50	-104.39	-0.08	-259.75	482.50	440.14	42.35	11.392	
9,900.00	9,890.49	9,899.70	9,890.19	21.83	21.71	-104.39	-0.08	-259.75	482.50	439.70	42.80	11.274	
10,000.00	9,990.49	9,999.70	9,990.19	22.05	21.93	-104.39	-0.08	-259.75	482.50	439.26	43.24	11.158	
10,100.00	10,090.49	10,099.70	10,090.19	22.27	22.15	-104.39	-0.08	-259.75	482.50	438.81	43.69	11.045	
10,200.00	10,190.49	10,199.70	10,190.19	22.49	22.37	-104.39	-0.08	-259.75	482.50	438.37	44.13	10.934	
10,300.00	10,290.49	10,299.70	10,290.19	22.71	22.59	-104.39	-0.08	-259.75	482.50	437.92	44.57	10.825	
10,400.00	10,390.49	10,399.70	10,390.19	22.93	22.81	-104.39	-0.08	-259.75	482.50	437.48	45.02	10.718	
10,500.00	10,490.49	10,499.70	10,490.19	23.15	23.03	-104.39	-0.08	-259.75	482.50	437.04	45.46	10.613	
10,600.00	10,590.49	10,599.70	10,590.19	23.37	23.25	-104.39	-0.08	-259.75	482.50	436.59	45.91	10.510	
10,700.00	10,690.49	10,699.70	10,690.19	23.59	23.47	-104.39	-0.08	-259.75	482.50	436.15	46.35	10.410	
10,800.00	10,790.49	10,799.70	10,790.19	23.81	23.69	-104.39	-0.08	-259.75	482.50	435.70	46.80	10.311	
10,900.00	10,890.49	10,899.70	10,890.19	24.03	23.90	-104.39	-0.08	-259.75	482.50	435.26	47.24	10.214	
11,000.00	10,990.49	10,999.70	10,990.19	24.25	24.12	-104.39	-0.08	-259.75	482.50	434.81	47.69	10.118	
11,100.00	11,090.49	11,099.70	11,090.19	24.47	24.34	-104.39	-0.08	-259.75	482.50	434.37	48.13	10.025	
11,200.00	11,190.49	11,199.70	11,190.19	24.69	24.56	-104.39	-0.08	-259.75	482.50	433.92	48.58	9.933	
11,300.00	11,290.49	11,299.70	11,290.19	24.91	24.78	-104.39	-0.08	-259.75	482.50	433.48	49.02	9.843	
11,400.00	11,390.49	11,399.70	11,390.19	25.13	25.00	-104.39	-0.08	-259.75	482.50	433.03	49.47	9.754	
11,500.00	11,490.49	11,499.70	11,490.19	25.35	25.22	-104.39	-0.08	-259.75	482.50	432.59	49.91	9.667	
11,600.00	11,590.49	11,599.70	11,590.19	25.57	25.44	-104.39	-0.08	-259.75	482.50	432.14	50.36	9.582	
11,700.00	11,690.49	11,699.70	11,690.19	25.79	25.66	-104.39	-0.08	-259.75	482.50	431.70	50.80	9.498	
11,800.00	11,790.49	11,799.70	11,790.19	26.01	25.89	-104.39	-0.08	-259.75	482.50	431.25	51.25	9.415	
11,900.00	11,890.49	11,899.70	11,890.19	26.24	26.11	-104.39	-0.08	-259.75	482.50	430.81	51.69	9.334	
12,000.00	11,990.49	11,999.70	11,990.19	26.46	26.33	-104.39	-0.08	-259.75	482.50	430.36	52.14	9.254	
12,100.00	12,090.49	12,099.70	12,090.19	26.68	26.55	-104.39	-0.08	-259.75	482.50	429.91	52.58	9.176	
12,137.89	12,128.37	12,137.59	12,128.07	26.76	26.63	-104.39	-0.08	-259.75	482.50	429.75	52.75	9.146	
12,200.00	12,190.49	12,190.34	12,180.79	26.90	26.74	-104.56	-1.53	-259.75	482.95	429.95	53.00	9.113	
12,300.00	12,290.48	12,268.26	12,257.64	27.12	26.88	73.94	-13.90	-259.72	487.10	433.76	53.34	9.131	
12,400.00	12,389.35	12,343.60	12,329.08	27.28	27.01	71.80	-37.58	-259.66	492.44	438.90	53.55	9.196	

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

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 93H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
 TVD Reference: 3317 @ 3340.50usft
 MD Reference: 3317 @ 3340.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 83H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
12,500.00	12,483.20	12,417.72	12,394.87	27.42	27.14	70.28	-71.55	-259.57	496.55	442.95	53.60	9.264	
12,600.00	12,567.93	12,491.09	12,454.05	27.54	27.27	69.42	-114.80	-259.46	498.97	445.43	53.54	9.319	
12,700.00	12,639.83	12,564.14	12,505.70	27.66	27.42	69.22	-166.34	-259.33	499.44	445.93	53.50	9.335	
12,800.00	12,695.78	12,637.25	12,548.93	27.79	27.59	69.69	-225.21	-259.18	497.90	444.26	53.63	9.283	
12,900.00	12,733.31	12,710.84	12,582.87	28.01	27.80	70.82	-290.43	-259.02	494.49	440.43	54.06	9.148	
13,000.00	12,750.79	12,785.35	12,606.61	28.33	28.08	72.60	-360.98	-258.84	489.56	434.74	54.82	8.930	
13,100.00	12,752.25	12,861.75	12,619.27	28.75	28.42	74.11	-436.25	-258.65	484.93	429.18	55.75	8.699	
13,200.00	12,752.62	12,950.22	12,621.03	29.27	28.89	74.27	-524.66	-258.43	484.17	427.44	56.73	8.534	
13,300.00	12,752.99	13,050.22	12,620.98	29.90	29.51	74.21	-624.65	-258.18	484.04	426.11	57.93	8.356	
13,400.00	12,753.36	13,150.21	12,620.93	30.63	30.23	74.15	-724.65	-257.93	483.91	424.61	59.31	8.159	
13,500.00	12,753.73	13,250.21	12,620.87	31.44	31.04	74.10	-824.65	-257.68	483.79	422.93	60.86	7.949	
13,600.00	12,754.10	13,350.21	12,620.82	32.34	31.93	74.04	-924.65	-257.43	483.66	421.09	62.57	7.730	
13,700.00	12,754.47	13,450.21	12,620.77	33.31	32.90	73.98	-1,024.65	-257.17	483.53	419.10	64.43	7.505	
13,800.00	12,754.84	13,550.21	12,620.71	34.35	33.94	73.93	-1,124.65	-256.92	483.41	416.99	66.42	7.278	
13,900.00	12,755.21	13,650.21	12,620.66	35.46	35.04	73.87	-1,224.65	-256.67	483.28	414.75	68.54	7.052	
14,000.00	12,755.58	13,750.21	12,620.61	36.62	36.20	73.81	-1,324.64	-256.42	483.16	412.40	70.76	6.828	
14,100.00	12,755.95	13,850.21	12,620.56	37.83	37.42	73.76	-1,424.64	-256.17	483.03	409.95	73.08	6.609	
14,200.00	12,756.32	13,950.21	12,620.50	39.09	38.68	73.70	-1,524.64	-255.92	482.91	407.41	75.50	6.396	
14,300.00	12,756.70	14,050.20	12,620.45	40.40	39.98	73.64	-1,624.64	-255.67	482.79	404.79	78.00	6.190	
14,400.00	12,757.07	14,150.20	12,620.40	41.74	41.33	73.59	-1,724.64	-255.41	482.66	402.10	80.57	5.991	
14,500.00	12,757.44	14,250.20	12,620.35	43.12	42.71	73.53	-1,824.64	-255.16	482.54	399.34	83.21	5.799	
14,600.00	12,757.81	14,350.20	12,620.29	44.53	44.12	73.47	-1,924.63	-254.91	482.42	396.52	85.90	5.616	
14,700.00	12,758.18	14,450.20	12,620.24	45.97	45.56	73.42	-2,024.63	-254.66	482.30	393.64	88.66	5.440	
14,800.00	12,758.55	14,550.20	12,620.19	47.43	47.03	73.36	-2,124.63	-254.41	482.18	390.72	91.46	5.272	
14,900.00	12,758.92	14,650.20	12,620.13	48.92	48.52	73.30	-2,224.63	-254.16	482.06	387.75	94.31	5.111	
15,000.00	12,759.29	14,750.20	12,620.08	50.43	50.03	73.25	-2,324.63	-253.91	481.94	384.74	97.20	4.958	
15,100.00	12,759.66	14,850.19	12,620.03	51.96	51.57	73.19	-2,424.63	-253.65	481.82	381.69	100.13	4.812	
15,200.00	12,760.03	14,950.19	12,619.98	53.51	53.12	73.13	-2,524.63	-253.40	481.70	378.61	103.09	4.673	
15,300.00	12,760.40	15,050.19	12,619.92	55.08	54.69	73.08	-2,624.62	-253.15	481.58	375.50	106.08	4.540	
15,400.00	12,760.77	15,150.19	12,619.87	56.66	56.27	73.02	-2,724.62	-252.90	481.46	372.36	109.10	4.413	
15,500.00	12,761.14	15,250.19	12,619.82	58.26	57.87	72.96	-2,824.62	-252.65	481.35	369.20	112.14	4.292	
15,600.00	12,761.51	15,350.19	12,619.77	59.87	59.48	72.91	-2,924.62	-252.40	481.23	366.02	115.21	4.177	
15,700.00	12,761.88	15,450.19	12,619.71	61.49	61.10	72.85	-3,024.62	-252.15	481.11	362.81	118.30	4.067	
15,800.00	12,762.25	15,550.19	12,619.66	63.12	62.74	72.79	-3,124.62	-251.89	481.00	359.58	121.41	3.962	
15,900.00	12,762.62	15,650.18	12,619.61	64.76	64.38	72.74	-3,224.61	-251.64	480.88	356.34	124.54	3.861	
16,000.00	12,762.99	15,750.18	12,619.56	66.41	66.03	72.68	-3,324.61	-251.39	480.76	353.08	127.68	3.765	
16,100.00	12,763.36	15,850.18	12,619.50	68.07	67.70	72.62	-3,424.61	-251.14	480.65	349.81	130.84	3.673	
16,200.00	12,763.74	15,950.18	12,619.45	69.74	69.37	72.56	-3,524.61	-250.89	480.54	346.52	134.02	3.586	
16,300.00	12,764.11	16,050.18	12,619.40	71.41	71.04	72.51	-3,624.61	-250.64	480.42	343.22	137.20	3.502	
16,400.00	12,764.48	16,150.18	12,619.34	73.10	72.73	72.45	-3,724.61	-250.39	480.31	339.91	140.40	3.421	
16,500.00	12,764.85	16,250.18	12,619.29	74.78	74.42	72.39	-3,824.61	-250.13	480.20	336.58	143.61	3.344	
16,600.00	12,765.22	16,350.18	12,619.24	76.48	76.12	72.34	-3,924.60	-249.88	480.08	333.25	146.83	3.270	
16,700.00	12,765.59	16,450.17	12,619.19	78.18	77.82	72.28	-4,024.60	-249.63	479.97	329.91	150.06	3.199	
16,800.00	12,765.96	16,550.17	12,619.13	79.89	79.53	72.22	-4,124.60	-249.38	479.86	326.57	153.29	3.130	
16,900.00	12,766.33	16,650.17	12,619.08	81.60	81.24	72.16	-4,224.60	-249.13	479.75	323.21	156.54	3.065	
17,000.00	12,766.70	16,750.17	12,619.03	83.31	82.96	72.11	-4,324.60	-248.88	479.64	319.85	159.79	3.002	
17,100.00	12,767.07	16,850.17	12,618.98	85.03	84.68	72.05	-4,424.60	-248.63	479.53	316.48	163.05	2.941	
17,200.00	12,767.44	16,950.17	12,618.92	86.76	86.41	71.99	-4,524.59	-248.37	479.42	313.11	166.31	2.883	
17,300.00	12,767.81	17,050.17	12,618.87	88.49	88.14	71.93	-4,624.59	-248.12	479.31	309.73	169.58	2.826	
17,400.00	12,768.18	17,150.17	12,618.82	90.22	89.88	71.88	-4,724.59	-247.87	479.20	306.35	172.86	2.772	
17,500.00	12,768.55	17,250.17	12,618.77	91.95	91.61	71.82	-4,824.59	-247.62	479.09	302.96	176.14	2.720	
17,600.00	12,768.92	17,350.16	12,618.71	93.69	93.35	71.76	-4,924.59	-247.37	478.99	299.57	179.42	2.670	

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
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 93H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
 TVD Reference: 3317 @ 3340.50usft
 MD Reference: 3317 @ 3340.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 83H - 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)			
17,700.00	12,769.29	17,450.16	12,618.66	95.44	95.10	71.70	-5,024.59	-247.12	478.88	296.17	182.71	2.621	
17,800.00	12,769.66	17,550.16	12,618.61	97.18	96.84	71.65	-5,124.59	-246.87	478.77	292.77	186.00	2.574	
17,900.00	12,770.03	17,650.16	12,618.55	98.93	98.59	71.59	-5,224.58	-246.61	478.67	289.37	189.29	2.529	
18,000.00	12,770.40	17,750.16	12,618.50	100.68	100.35	71.53	-5,324.58	-246.36	478.56	285.97	192.59	2.485	
18,100.00	12,770.78	17,850.16	12,618.45	102.43	102.10	71.47	-5,424.58	-246.11	478.46	282.56	195.89	2.442	
18,200.00	12,771.15	17,950.16	12,618.40	104.19	103.86	71.42	-5,524.58	-245.86	478.35	279.15	199.20	2.401	
18,300.00	12,771.52	18,050.16	12,618.34	105.94	105.62	71.36	-5,624.58	-245.61	478.25	275.74	202.50	2.362	
18,400.00	12,771.89	18,150.15	12,618.29	107.70	107.38	71.30	-5,724.58	-245.36	478.14	272.33	205.81	2.323	
18,500.00	12,772.26	18,250.15	12,618.24	109.47	109.14	71.24	-5,824.57	-245.11	478.04	268.92	209.12	2.286	
18,600.00	12,772.63	18,350.15	12,618.19	111.23	110.91	71.18	-5,924.57	-244.85	477.94	265.51	212.43	2.250	
18,700.00	12,773.00	18,450.15	12,618.13	113.00	112.67	71.13	-6,024.57	-244.60	477.83	262.09	215.74	2.215	
18,800.00	12,773.37	18,550.15	12,618.08	114.76	114.44	71.07	-6,124.57	-244.35	477.73	258.67	219.06	2.181	
18,900.00	12,773.74	18,650.15	12,618.03	116.53	116.21	71.01	-6,224.57	-244.10	477.63	255.26	222.37	2.148	
19,000.00	12,774.11	18,750.15	12,617.98	118.30	117.99	70.95	-6,324.57	-243.85	477.53	251.84	225.69	2.116	
19,100.00	12,774.48	18,850.15	12,617.92	120.08	119.76	70.90	-6,424.57	-243.60	477.43	248.42	229.01	2.085	
19,200.00	12,774.85	18,950.14	12,617.87	121.85	121.54	70.84	-6,524.56	-243.35	477.33	245.01	232.32	2.055	
19,300.00	12,775.22	19,050.14	12,617.82	123.62	123.31	70.78	-6,624.56	-243.09	477.23	241.59	235.64	2.025	
19,400.00	12,775.59	19,150.14	12,617.76	125.40	125.09	70.72	-6,724.56	-242.84	477.13	238.17	238.96	1.997	
19,500.00	12,775.96	19,250.14	12,617.71	127.18	126.87	70.66	-6,824.56	-242.59	477.03	234.75	242.28	1.969	
19,600.00	12,776.33	19,350.14	12,617.66	128.96	128.65	70.61	-6,924.56	-242.34	476.94	231.34	245.60	1.942	
19,700.00	12,776.70	19,450.14	12,617.61	130.74	130.43	70.55	-7,024.56	-242.09	476.84	227.92	248.92	1.916	
19,800.00	12,777.07	19,550.14	12,617.55	132.52	132.21	70.49	-7,124.55	-241.84	476.74	224.51	252.24	1.890	
19,900.00	12,777.45	19,650.14	12,617.50	134.30	134.00	70.43	-7,224.55	-241.59	476.65	221.09	255.56	1.865	
20,000.00	12,777.82	19,750.13	12,617.45	136.08	135.78	70.37	-7,324.55	-241.33	476.55	217.68	258.87	1.841	
20,100.00	12,778.19	19,850.13	12,617.40	137.87	137.57	70.32	-7,424.55	-241.08	476.46	214.26	262.19	1.817	
20,200.00	12,778.56	19,950.13	12,617.34	139.65	139.36	70.26	-7,524.55	-240.83	476.36	210.85	265.51	1.794	
20,300.00	12,778.93	20,050.13	12,617.29	141.44	141.14	70.20	-7,624.55	-240.58	476.27	207.44	268.83	1.772	
20,400.00	12,779.30	20,150.13	12,617.24	143.23	142.93	70.14	-7,724.55	-240.33	476.17	204.03	272.14	1.750	
20,500.00	12,779.67	20,250.13	12,617.19	145.02	144.72	70.08	-7,824.54	-240.08	476.08	200.62	275.46	1.728	
20,600.00	12,780.04	20,350.13	12,617.13	146.81	146.51	70.02	-7,924.54	-239.83	475.99	197.21	278.78	1.707	
20,700.00	12,780.41	20,450.13	12,617.08	148.60	148.30	69.97	-8,024.54	-239.57	475.89	193.80	282.09	1.687	
20,800.00	12,780.78	20,550.13	12,617.03	150.39	150.10	69.91	-8,124.54	-239.32	475.80	190.40	285.41	1.667	
20,900.00	12,781.15	20,650.12	12,616.97	152.18	151.89	69.85	-8,224.54	-239.07	475.71	186.99	288.72	1.648	
21,000.00	12,781.52	20,750.12	12,616.92	153.97	153.68	69.79	-8,324.54	-238.82	475.62	183.59	292.03	1.629	
21,100.00	12,781.89	20,850.12	12,616.87	155.76	155.48	69.73	-8,424.53	-238.57	475.53	180.19	295.34	1.610	
21,200.00	12,782.26	20,950.12	12,616.82	157.56	157.27	69.67	-8,524.53	-238.32	475.44	176.79	298.65	1.592	
21,300.00	12,782.63	21,050.12	12,616.76	159.35	159.07	69.62	-8,624.53	-238.07	475.35	173.39	301.96	1.574	
21,400.00	12,783.00	21,150.12	12,616.71	161.15	160.86	69.56	-8,724.53	-237.82	475.26	169.99	305.27	1.557	
21,500.00	12,783.37	21,250.12	12,616.66	162.94	162.66	69.50	-8,824.53	-237.56	475.17	166.60	308.57	1.540	
21,600.00	12,783.74	21,350.12	12,616.61	164.74	164.46	69.44	-8,924.53	-237.31	475.08	163.21	311.88	1.523	
21,700.00	12,784.11	21,450.11	12,616.55	166.53	166.25	69.38	-9,024.53	-237.06	475.00	159.81	315.18	1.507	
21,800.00	12,784.49	21,550.11	12,616.50	168.33	168.05	69.32	-9,124.52	-236.81	474.91	156.43	318.48	1.491 Level 3	
21,900.00	12,784.86	21,650.11	12,616.45	170.13	169.85	69.26	-9,224.52	-236.56	474.82	153.04	321.78	1.476 Level 3	
22,000.00	12,785.23	21,750.11	12,616.40	171.93	171.65	69.21	-9,324.52	-236.31	474.74	149.65	325.08	1.460 Level 3	
22,100.00	12,785.60	21,850.11	12,616.34	173.72	173.45	69.15	-9,424.52	-236.06	474.65	146.27	328.38	1.445 Level 3	
22,200.00	12,785.97	21,950.11	12,616.29	175.52	175.25	69.09	-9,524.52	-235.80	474.57	142.89	331.68	1.431 Level 3	
22,300.00	12,786.34	22,050.11	12,616.24	177.32	177.05	69.03	-9,624.52	-235.55	474.48	139.51	334.97	1.416 Level 3	
22,400.00	12,786.71	22,150.11	12,616.18	179.12	178.85	68.97	-9,724.51	-235.30	474.40	136.13	338.27	1.402 Level 3	
22,500.00	12,787.08	22,250.10	12,616.13	180.92	180.65	68.91	-9,824.51	-235.05	474.31	132.76	341.56	1.389 Level 3	
22,600.00	12,787.45	22,350.10	12,616.08	182.73	182.46	68.85	-9,924.51	-234.80	474.23	129.38	344.85	1.375 Level 3	
22,700.00	12,787.82	22,450.10	12,616.03	184.53	184.26	68.80	-10,024.51	-234.55	474.15	126.01	348.13	1.362 Level 3	
22,748.68	12,788.00	22,498.78	12,616.00	185.40	185.14	68.77	-10,073.19	-234.42	474.11	124.37	349.73	1.356 Level 3	

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
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 93H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
TVD Reference: 3317 @ 3340.50usft
MD Reference: 3317 @ 3340.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 93H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
 TVD Reference: 3317 @ 3340.50usft
 MD Reference: 3317 @ 3340.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 84H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance				Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	0.30	0.30	0.00	0.00	89.48	0.27	30.02	30.02				
100.00	100.00	100.30	100.30	0.09	0.09	89.48	0.27	30.02	30.02	29.85	0.17	173.914	
200.00	200.00	200.30	200.30	0.31	0.31	89.48	0.27	30.02	30.02	29.40	0.62	48.254	
300.00	300.00	300.30	300.30	0.54	0.54	89.48	0.27	30.02	30.02	28.95	1.07	28.013	
400.00	400.00	400.30	400.30	0.76	0.76	89.48	0.27	30.02	30.02	28.50	1.52	19.735	
500.00	500.00	500.30	500.30	0.99	0.99	89.48	0.27	30.02	30.02	28.05	1.97	15.233	
600.00	600.00	600.30	600.30	1.21	1.21	89.48	0.27	30.02	30.02	27.60	2.42	12.404	
700.00	700.00	700.30	700.30	1.43	1.44	89.48	0.27	30.02	30.02	27.15	2.87	10.461	
800.00	800.00	800.30	800.30	1.66	1.66	89.48	0.27	30.02	30.02	26.70	3.32	9.044	
900.00	900.00	900.30	900.30	1.88	1.88	89.48	0.27	30.02	30.02	26.25	3.77	7.966	
1,000.00	1,000.00	1,000.30	1,000.30	2.11	2.11	89.48	0.27	30.02	30.02	25.80	4.22	7.117	
1,100.00	1,100.00	1,100.30	1,100.30	2.33	2.33	89.48	0.27	30.02	30.02	25.35	4.67	6.431	
1,200.00	1,200.00	1,200.30	1,200.30	2.56	2.56	89.48	0.27	30.02	30.02	24.90	5.12	5.866	
1,300.00	1,300.00	1,300.30	1,300.30	2.78	2.78	89.48	0.27	30.02	30.02	24.45	5.57	5.393	
1,400.00	1,400.00	1,400.30	1,400.30	3.01	3.01	89.48	0.27	30.02	30.02	24.00	6.02	4.990	
1,500.00	1,500.00	1,500.30	1,500.30	3.23	3.23	89.48	0.27	30.02	30.02	23.56	6.47	4.643	
1,600.00	1,600.00	1,600.30	1,600.30	3.46	3.46	89.48	0.27	30.02	30.02	23.11	6.92	4.341	
1,700.00	1,700.00	1,700.30	1,700.30	3.68	3.68	89.48	0.27	30.02	30.02	22.66	7.37	4.076	
1,800.00	1,800.00	1,800.30	1,800.30	3.91	3.91	89.48	0.27	30.02	30.02	22.21	7.81	3.842	
1,900.00	1,900.00	1,900.30	1,900.30	4.13	4.13	89.48	0.27	30.02	30.02	21.76	8.26	3.633	
2,000.00	2,000.00	2,000.30	2,000.30	4.36	4.36	89.48	0.27	30.02	30.02	21.31	8.71	3.445	
2,100.00	2,100.00	2,100.30	2,100.30	4.58	4.58	89.48	0.27	30.02	30.02	20.86	9.16	3.276	
2,200.00	2,200.00	2,200.30	2,200.30	4.81	4.81	89.48	0.27	30.02	30.02	20.41	9.61	3.123	
2,300.00	2,300.00	2,300.30	2,300.30	5.03	5.03	89.48	0.27	30.02	30.02	19.96	10.06	2.984	
2,400.00	2,400.00	2,400.30	2,400.30	5.26	5.26	89.48	0.27	30.02	30.02	19.51	10.51	2.856	
2,500.00	2,500.00	2,500.30	2,500.30	5.48	5.48	89.48	0.27	30.02	30.02	19.06	10.96	2.739	
2,600.00	2,600.00	2,600.30	2,600.30	5.71	5.71	89.48	0.27	30.02	30.02	18.61	11.41	2.631	
2,700.00	2,700.00	2,700.30	2,700.30	5.93	5.93	89.48	0.27	30.02	30.02	18.16	11.86	2.531	
2,800.00	2,800.00	2,800.30	2,800.30	6.15	6.16	89.48	0.27	30.02	30.02	17.71	12.31	2.439	
2,900.00	2,900.00	2,900.30	2,900.30	6.38	6.38	89.48	0.27	30.02	30.02	17.26	12.76	2.353	
3,000.00	3,000.00	3,000.30	3,000.30	6.60	6.60	89.48	0.27	30.02	30.02	16.81	13.21	2.273	
3,100.00	3,100.00	3,100.30	3,100.30	6.83	6.83	89.48	0.27	30.02	30.02	16.36	13.66	2.198	
3,200.00	3,200.00	3,200.30	3,200.30	7.05	7.05	89.48	0.27	30.02	30.02	15.91	14.11	2.128	
3,300.00	3,300.00	3,300.30	3,300.30	7.28	7.28	89.48	0.27	30.02	30.02	15.46	14.56	2.062	
3,400.00	3,400.00	3,400.30	3,400.30	7.50	7.50	89.48	0.27	30.02	30.02	15.01	15.01	2.000	
3,466.57	3,466.57	3,466.87	3,466.87	7.65	7.65	89.48	0.27	30.02	30.02	14.71	15.31	1.961 CC	
3,500.00	3,500.00	3,500.30	3,500.30	7.73	7.73	89.48	0.27	30.02	30.02	14.56	15.46	1.942 ES	
3,600.00	3,600.00	3,600.00	3,600.00	7.95	7.94	89.50	0.27	30.89	30.90	15.00	15.89	1.944	
3,700.00	3,700.00	3,699.18	3,699.14	8.18	8.14	89.54	0.27	33.48	33.50	17.19	16.31	2.054	
3,800.00	3,800.00	3,798.46	3,798.33	8.40	8.33	89.59	0.27	37.79	37.84	21.11	16.74	2.261	
3,900.00	3,900.00	3,897.57	3,897.26	8.63	8.54	89.65	0.27	43.81	43.91	26.75	17.16	2.559	
4,000.00	4,000.00	3,996.45	3,995.83	8.85	8.74	89.70	0.27	51.51	51.71	34.12	17.59	2.939	
4,100.00	4,100.00	4,096.09	4,095.09	9.07	8.95	30.12	0.27	60.20	59.67	41.67	18.00	3.316	
4,200.00	4,199.96	4,195.88	4,194.50	9.28	9.17	31.21	0.27	68.89	66.14	47.74	18.40	3.594	
4,300.00	4,299.86	4,295.73	4,293.97	9.49	9.39	32.85	0.27	77.60	71.16	52.35	18.81	3.783	
4,400.00	4,399.68	4,395.62	4,393.48	9.71	9.61	35.03	0.27	86.30	74.80	55.58	19.22	3.893	
4,500.00	4,499.37	4,495.53	4,493.01	9.93	9.83	37.79	0.27	95.01	77.16	57.53	19.62	3.932	
4,600.00	4,598.99	4,595.42	4,592.52	10.15	10.06	40.80	0.27	103.72	79.02	58.97	20.05	3.941	
4,700.00	4,698.60	4,695.32	4,692.04	10.37	10.29	43.67	0.27	112.42	81.09	60.60	20.48	3.959	
4,800.00	4,798.22	4,795.22	4,791.56	10.60	10.52	46.39	0.27	121.13	83.35	62.43	20.92	3.984	
4,900.00	4,897.84	4,895.12	4,891.08	10.82	10.75	48.96	0.27	129.84	85.79	64.43	21.36	4.016	
5,000.00	4,997.46	4,995.02	4,990.60	11.05	10.99	51.38	0.27	138.54	88.40	66.59	21.81	4.053	

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

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 93H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
TVD Reference: 3317 @ 3340.50usft
MD Reference: 3317 @ 3340.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 84H - 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	
5,100.00	5,097.08	5,094.91	5,090.11	11.29	11.23	53.66	0.27	147.25	91.15	68.89	22.26	4.095	
5,200.00	5,196.70	5,194.81	5,189.63	11.52	11.46	55.80	0.27	155.96	94.04	71.32	22.71	4.140	
5,300.00	5,296.32	5,294.71	5,289.15	11.75	11.70	57.82	0.27	164.66	97.05	73.88	23.17	4.188	
5,400.00	5,395.94	5,394.61	5,388.67	11.99	11.94	59.71	0.27	173.37	100.17	76.54	23.64	4.238	
5,500.00	5,495.56	5,494.51	5,488.19	12.23	12.19	61.48	0.27	182.08	103.40	79.30	24.10	4.290	
5,600.00	5,595.18	5,594.41	5,587.70	12.47	12.43	63.15	0.27	190.78	106.72	82.15	24.57	4.343	
5,700.00	5,694.80	5,694.30	5,687.22	12.71	12.68	64.71	0.27	199.49	110.13	85.08	25.05	4.397	
5,800.00	5,794.42	5,794.20	5,786.74	12.95	12.92	66.18	0.27	208.20	113.61	88.08	25.53	4.451	
5,900.00	5,894.04	5,894.10	5,886.26	13.19	13.17	67.56	0.27	216.90	117.16	91.15	26.01	4.505	
6,000.00	5,993.66	5,994.00	5,985.78	13.44	13.42	68.86	0.27	225.61	120.78	94.29	26.49	4.559	
6,100.00	6,093.28	6,093.90	6,085.29	13.68	13.67	70.08	0.27	234.32	124.45	97.47	26.98	4.613	
6,200.00	6,192.90	6,193.80	6,184.81	13.93	13.92	71.23	0.27	243.02	128.18	100.71	27.47	4.667	
6,300.00	6,292.52	6,293.69	6,284.33	14.18	14.17	72.32	0.27	251.73	131.96	104.00	27.96	4.720	
6,400.00	6,392.14	6,393.59	6,383.85	14.43	14.42	73.35	0.27	260.44	135.78	107.32	28.45	4.772	
6,500.00	6,491.76	6,493.49	6,483.37	14.68	14.67	74.32	0.27	269.14	139.64	110.69	28.95	4.824	
6,600.00	6,591.41	6,593.39	6,582.89	14.90	14.93	75.08	0.27	277.85	143.65	114.23	29.42	4.883	
6,700.00	6,691.14	6,693.30	6,682.41	15.10	15.18	75.48	0.27	286.56	147.90	118.04	29.86	4.952	
6,800.00	6,790.92	6,793.20	6,781.93	15.30	15.44	75.55	0.27	295.27	152.38	122.07	30.30	5.029	
6,900.00	6,890.76	6,893.08	6,881.44	15.49	15.69	75.30	0.27	303.97	157.07	126.34	30.73	5.111	
7,000.00	6,990.65	6,992.95	6,980.93	15.69	15.95	74.77	0.27	312.68	161.99	130.84	31.16	5.199	
7,100.00	7,090.57	7,092.79	7,080.38	15.88	16.20	73.99	0.27	321.38	167.17	135.60	31.57	5.295	
7,200.00	7,190.52	7,192.59	7,179.81	16.07	16.46	72.97	0.27	330.08	172.63	140.65	31.98	5.398	
7,300.00	7,290.50	7,292.35	7,279.19	16.26	16.72	71.76	0.27	338.77	178.42	146.03	32.38	5.510	
7,400.00	7,390.49	7,392.06	7,378.52	16.45	16.98	70.37	0.27	347.46	184.57	151.79	32.78	5.631	
7,500.00	7,490.49	7,491.71	7,477.79	16.63	17.23	128.84	0.27	356.15	191.14	157.98	33.16	5.765	
7,600.00	7,590.49	7,591.33	7,577.03	16.82	17.49	127.26	0.27	364.83	198.02	164.46	33.55	5.901	
7,700.00	7,690.49	7,690.95	7,676.27	17.04	17.75	125.79	0.27	373.51	205.03	171.06	33.97	6.035	
7,800.00	7,790.49	7,790.57	7,775.51	17.26	18.01	124.41	0.27	382.19	212.17	177.78	34.39	6.169	
7,900.00	7,890.49	7,890.19	7,874.75	17.47	18.27	123.13	0.27	390.87	219.42	184.61	34.81	6.303	
8,000.00	7,990.49	7,989.81	7,973.99	17.69	18.53	121.92	0.27	399.56	226.78	191.55	35.23	6.437	
8,100.00	8,090.49	8,089.43	8,073.23	17.90	18.79	120.80	0.27	408.24	234.23	198.58	35.66	6.569	
8,200.00	8,190.49	8,189.05	8,172.47	18.12	19.05	119.74	0.27	416.92	241.77	205.69	36.08	6.701	
8,300.00	8,290.49	8,288.67	8,271.71	18.34	19.31	118.75	0.27	425.60	249.38	212.87	36.51	6.831	
8,400.00	8,390.49	8,388.29	8,370.95	18.56	19.57	117.81	0.27	434.29	257.06	220.13	36.93	6.960	
8,500.00	8,490.49	8,487.91	8,470.19	18.77	19.84	116.94	0.27	442.97	264.81	227.45	37.36	7.088	
8,600.00	8,590.49	8,587.53	8,569.44	18.99	20.10	116.11	0.27	451.65	272.61	234.82	37.79	7.214	
8,700.00	8,690.49	8,687.15	8,668.68	19.21	20.36	115.32	0.27	460.33	280.47	242.25	38.22	7.338	
8,800.00	8,790.49	8,786.77	8,767.92	19.43	20.62	114.58	0.27	469.02	288.38	249.72	38.65	7.460	
8,900.00	8,890.49	8,886.38	8,867.16	19.64	20.89	113.88	0.27	477.70	296.33	257.24	39.09	7.581	
9,000.00	8,990.49	8,986.00	8,966.40	19.86	21.15	113.22	0.27	486.38	304.33	264.80	39.52	7.700	
9,100.00	9,090.49	9,085.62	9,065.64	20.08	21.41	112.59	0.27	495.06	312.36	272.40	39.96	7.818	
9,200.00	9,190.49	9,185.24	9,164.88	20.30	21.68	111.99	0.27	503.75	320.43	280.04	40.39	7.933	
9,300.00	9,290.49	9,284.86	9,264.12	20.52	21.94	111.42	0.27	512.43	328.53	287.70	40.83	8.047	
9,400.00	9,390.49	9,384.48	9,363.36	20.74	22.20	110.88	0.27	521.11	336.66	295.40	41.27	8.158	
9,500.00	9,490.49	9,484.10	9,462.60	20.95	22.47	110.36	0.27	529.79	344.82	303.12	41.70	8.268	
9,600.00	9,590.49	9,583.72	9,561.84	21.17	22.73	109.87	0.27	538.48	353.01	310.87	42.14	8.377	
9,700.00	9,690.49	9,683.34	9,661.08	21.39	23.00	109.40	0.27	547.16	361.22	318.64	42.58	8.483	
9,800.00	9,790.49	9,782.96	9,760.32	21.61	23.26	108.95	0.27	555.84	369.46	326.44	43.02	8.588	
9,900.00	9,890.49	9,882.58	9,859.56	21.83	23.53	108.52	0.27	564.52	377.71	334.25	43.46	8.691	
10,000.00	9,990.49	9,982.20	9,958.80	22.05	23.79	108.11	0.27	573.21	385.99	342.09	43.90	8.792	
10,100.00	10,090.49	10,081.82	10,058.04	22.27	24.06	107.72	0.27	581.89	394.29	349.94	44.34	8.891	
10,200.00	10,190.49	10,181.44	10,157.28	22.49	24.32	107.34	0.27	590.57	402.60	357.81	44.79	8.989	

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

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 93H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
TVD Reference: 3317 @ 3340.50usft
MD Reference: 3317 @ 3340.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 84H - 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)						
10,300.00	10,290.49	10,281.06	10,256.52	22.71	24.59	106.98	0.27	599.25	410.93	365.70	45.23	9.085		
10,400.00	10,390.49	10,380.68	10,355.76	22.93	24.85	106.63	0.27	607.93	419.28	373.60	45.67	9.180		
10,500.00	10,490.49	10,480.30	10,455.00	23.15	25.12	106.30	0.27	616.62	427.64	381.52	46.12	9.273		
10,600.00	10,590.49	10,582.95	10,557.29	23.37	25.37	105.98	0.27	625.27	435.73	389.18	46.55	9.360		
10,700.00	10,690.49	10,686.48	10,660.53	23.59	25.59	105.70	0.27	633.08	442.99	396.03	46.97	9.432		
10,800.00	10,790.49	10,790.15	10,763.97	23.81	25.80	105.46	0.27	639.96	449.39	402.01	47.38	9.484		
10,900.00	10,890.49	10,893.94	10,867.58	24.03	26.01	105.26	0.27	645.92	454.93	407.13	47.80	9.518		
11,000.00	10,990.49	10,997.82	10,971.35	24.25	26.21	105.10	0.27	650.94	459.59	411.38	48.21	9.533		
11,100.00	11,090.49	11,101.79	11,075.23	24.47	26.41	104.96	0.27	655.02	463.39	414.76	48.63	9.530		
11,200.00	11,190.49	11,205.82	11,179.22	24.69	26.60	104.86	0.27	658.16	466.31	417.27	49.04	9.509		
11,300.00	11,290.49	11,309.90	11,283.28	24.91	26.79	104.80	0.27	660.36	468.35	418.89	49.45	9.470		
11,400.00	11,390.49	11,414.02	11,387.38	25.13	26.97	104.76	0.27	661.62	469.51	419.65	49.87	9.415		
11,500.00	11,490.49	11,517.42	11,490.79	25.35	27.15	104.75	0.27	661.94	469.81	419.53	50.28	9.343		
11,600.00	11,590.49	11,617.42	11,590.79	25.57	27.34	104.75	0.27	661.94	469.81	419.10	50.71	9.265		
11,700.00	11,690.49	11,717.42	11,690.79	25.79	27.54	104.75	0.27	661.94	469.81	418.67	51.14	9.187		
11,800.00	11,790.49	11,817.42	11,790.79	26.01	27.73	104.75	0.27	661.94	469.81	418.24	51.57	9.110		
11,900.00	11,890.49	11,917.42	11,890.79	26.24	27.93	104.75	0.27	661.94	469.81	417.81	52.00	9.035		
12,000.00	11,990.49	12,017.42	11,990.79	26.46	28.13	104.75	0.27	661.94	469.81	417.38	52.43	8.961		
12,100.00	12,090.49	12,117.42	12,090.79	26.68	28.33	104.75	0.27	661.94	469.81	416.95	52.86	8.887		
12,154.23	12,144.72	12,171.65	12,145.02	26.80	28.43	104.75	0.27	661.94	469.81	416.71	53.10	8.848		
12,200.00	12,190.49	12,211.93	12,185.29	26.90	28.51	104.81	-0.22	661.94	469.97	416.69	53.28	8.821		
12,300.00	12,290.48	12,290.39	12,263.01	27.12	28.65	-73.96	-10.20	661.95	473.34	419.68	53.66	8.821		
12,400.00	12,389.35	12,366.66	12,336.03	27.28	28.79	-72.11	-31.97	661.98	477.84	423.92	53.91	8.863		
12,500.00	12,483.20	12,441.89	12,403.76	27.42	28.93	-70.88	-64.55	662.03	481.11	427.14	53.97	8.915		
12,600.00	12,567.93	12,516.53	12,465.08	27.54	29.07	-70.29	-106.98	662.08	482.79	428.89	53.89	8.958		
12,700.00	12,639.83	12,591.01	12,518.93	27.66	29.23	-70.34	-158.31	662.15	482.70	428.85	53.86	8.963		
12,800.00	12,695.78	12,665.73	12,564.29	27.79	29.42	-71.04	-217.60	662.23	480.87	426.84	54.04	8.899		
12,900.00	12,733.31	12,741.12	12,600.12	28.01	29.64	-72.37	-283.84	662.31	477.50	422.93	54.57	8.750		
13,000.00	12,750.79	12,817.64	12,625.38	28.33	29.91	-74.32	-355.98	662.41	472.97	417.48	55.49	8.524		
13,100.00	12,752.25	12,896.35	12,639.01	28.75	30.25	-75.98	-433.41	662.51	468.97	412.48	56.49	8.302		
13,150.28	12,752.44	12,936.99	12,641.01	29.01	30.44	-76.20	-473.98	662.56	468.48	411.50	56.98	8.221		
13,200.00	12,752.62	12,985.90	12,641.00	29.27	30.70	-76.18	-522.90	662.63	468.59	411.07	57.52	8.147		
13,300.00	12,752.99	13,085.90	12,640.95	29.90	31.30	-76.14	-622.90	662.76	468.82	410.05	58.77	7.977		
13,400.00	12,753.36	13,185.90	12,640.90	30.63	31.99	-76.09	-722.90	662.89	469.05	408.85	60.20	7.791		
13,500.00	12,753.73	13,285.90	12,640.84	31.44	32.77	-76.04	-822.89	663.02	469.28	407.47	61.81	7.593		
13,600.00	12,754.10	13,385.90	12,640.79	32.34	33.63	-76.00	-922.89	663.15	469.51	405.94	63.57	7.386		
13,700.00	12,754.47	13,485.90	12,640.74	33.31	34.57	-75.95	-1,022.89	663.28	469.74	404.27	65.47	7.174		
13,800.00	12,754.84	13,585.90	12,640.69	34.35	35.57	-75.90	-1,122.89	663.41	469.97	402.46	67.51	6.961		
13,900.00	12,755.21	13,685.89	12,640.63	35.46	36.64	-75.86	-1,222.89	663.54	470.20	400.53	69.67	6.749		
14,000.00	12,755.58	13,785.89	12,640.58	36.62	37.77	-75.81	-1,322.89	663.68	470.44	398.50	71.94	6.539		
14,100.00	12,755.95	13,885.89	12,640.53	37.83	38.94	-75.77	-1,422.89	663.81	470.67	396.36	74.31	6.334		
14,200.00	12,756.32	13,985.89	12,640.48	39.09	40.17	-75.72	-1,522.89	663.94	470.90	394.13	76.77	6.134		
14,300.00	12,756.70	14,085.89	12,640.42	40.40	41.44	-75.68	-1,622.89	664.07	471.13	391.83	79.30	5.941		
14,400.00	12,757.07	14,185.89	12,640.37	41.74	42.75	-75.63	-1,722.89	664.20	471.37	389.45	81.92	5.754		
14,500.00	12,757.44	14,285.89	12,640.32	43.12	44.10	-75.58	-1,822.88	664.33	471.60	387.00	84.60	5.575		
14,600.00	12,757.81	14,385.89	12,640.27	44.53	45.48	-75.54	-1,922.88	664.46	471.83	384.50	87.34	5.402		
14,700.00	12,758.18	14,485.89	12,640.22	45.97	46.89	-75.49	-2,022.88	664.59	472.07	381.93	90.13	5.238		
14,800.00	12,758.55	14,585.89	12,640.16	47.43	48.32	-75.45	-2,122.88	664.73	472.30	379.32	92.98	5.080		
14,900.00	12,758.92	14,685.89	12,640.11	48.92	49.79	-75.40	-2,222.88	664.86	472.53	376.67	95.87	4.929		
15,000.00	12,759.29	14,785.88	12,640.06	50.43	51.27	-75.36	-2,322.88	664.99	472.77	373.97	98.80	4.785		
15,100.00	12,759.66	14,885.88	12,640.01	51.96	52.78	-75.31	-2,422.88	665.12	473.00	371.24	101.76	4.648		
15,200.00	12,760.03	14,985.88	12,639.95	53.51	54.31	-75.26	-2,522.88	665.25	473.24	368.47	104.77	4.517		

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

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 93H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
TVD Reference: 3317 @ 3340.50usft
MD Reference: 3317 @ 3340.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 84H - 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)			
15,300.00	12,760.40	15,085.88	12,639.90	55.08	55.85	-75.22	-2,622.88	665.38	473.48	365.68	4.392
15,400.00	12,760.77	15,185.88	12,639.85	56.66	57.41	-75.17	-2,722.87	665.51	473.71	362.85	4.273
15,500.00	12,761.14	15,285.88	12,639.80	58.26	58.99	-75.13	-2,822.87	665.64	473.95	360.00	4.159
15,600.00	12,761.51	15,385.88	12,639.74	59.87	60.58	-75.08	-2,922.87	665.77	474.18	357.13	4.051
15,700.00	12,761.88	15,485.88	12,639.69	61.49	62.18	-75.04	-3,022.87	665.91	474.42	354.23	3.947
15,800.00	12,762.25	15,585.88	12,639.64	63.12	63.79	-74.99	-3,122.87	666.04	474.66	351.31	3.848
15,900.00	12,762.62	15,685.88	12,639.59	64.76	65.42	-74.95	-3,222.87	666.17	474.90	348.38	3.754
16,000.00	12,762.99	15,785.87	12,639.53	66.41	67.05	-74.90	-3,322.87	666.30	475.13	345.43	3.663
16,100.00	12,763.36	15,885.87	12,639.48	68.07	68.70	-74.86	-3,422.87	666.43	475.37	342.46	3.577
16,200.00	12,763.74	15,985.87	12,639.43	69.74	70.35	-74.81	-3,522.87	666.56	475.61	339.48	3.494
16,300.00	12,764.11	16,085.87	12,639.38	71.41	72.01	-74.77	-3,622.86	666.69	475.85	336.49	3.415
16,400.00	12,764.48	16,185.87	12,639.32	73.10	73.68	-74.72	-3,722.86	666.82	476.09	333.48	3.339
16,500.00	12,764.85	16,285.87	12,639.27	74.78	75.36	-74.68	-3,822.86	666.96	476.33	330.47	3.266
16,600.00	12,765.22	16,385.87	12,639.22	76.48	77.04	-74.63	-3,922.86	667.09	476.56	327.44	3.196
16,700.00	12,765.59	16,485.87	12,639.17	78.18	78.73	-74.59	-4,022.86	667.22	476.80	324.40	3.129
16,800.00	12,765.96	16,585.87	12,639.12	79.89	80.42	-74.54	-4,122.86	667.35	477.04	321.36	3.064
16,900.00	12,766.33	16,685.87	12,639.06	81.60	82.13	-74.50	-4,222.86	667.48	477.28	318.30	3.002
17,000.00	12,766.70	16,785.86	12,639.01	83.31	83.83	-74.45	-4,322.86	667.61	477.53	315.24	2.943
17,100.00	12,767.07	16,885.86	12,638.96	85.03	85.54	-74.41	-4,422.86	667.74	477.77	312.17	2.885
17,200.00	12,767.44	16,985.86	12,638.91	86.76	87.26	-74.36	-4,522.86	667.87	478.01	309.10	2.830
17,300.00	12,767.81	17,085.86	12,638.85	88.49	88.98	-74.32	-4,622.85	668.01	478.25	306.02	2.777
17,400.00	12,768.18	17,185.86	12,638.80	90.22	90.70	-74.28	-4,722.85	668.14	478.49	302.93	2.726
17,500.00	12,768.55	17,285.86	12,638.75	91.95	92.43	-74.23	-4,822.85	668.27	478.73	299.84	2.676
17,600.00	12,768.92	17,385.86	12,638.70	93.69	94.16	-74.19	-4,922.85	668.40	478.97	296.74	2.628
17,700.00	12,769.29	17,485.86	12,638.64	95.44	95.89	-74.14	-5,022.85	668.53	479.22	293.64	2.582
17,800.00	12,769.66	17,585.86	12,638.59	97.18	97.63	-74.10	-5,122.85	668.66	479.46	290.54	2.538
17,900.00	12,770.03	17,685.86	12,638.54	98.93	99.37	-74.05	-5,222.85	668.79	479.70	287.43	2.495
18,000.00	12,770.40	17,785.85	12,638.49	100.68	101.11	-74.01	-5,322.85	668.92	479.95	284.32	2.453
18,100.00	12,770.78	17,885.85	12,638.43	102.43	102.86	-73.97	-5,422.85	669.05	480.19	281.20	2.413
18,200.00	12,771.15	17,985.85	12,638.38	104.19	104.61	-73.92	-5,522.84	669.19	480.43	278.09	2.374
18,300.00	12,771.52	18,085.85	12,638.33	105.94	106.36	-73.88	-5,622.84	669.32	480.68	274.96	2.337
18,400.00	12,771.89	18,185.85	12,638.28	107.70	108.11	-73.83	-5,722.84	669.45	480.92	271.84	2.300
18,500.00	12,772.26	18,285.85	12,638.22	109.47	109.87	-73.79	-5,822.84	669.58	481.17	268.72	2.265
18,600.00	12,772.63	18,385.85	12,638.17	111.23	111.62	-73.75	-5,922.84	669.71	481.41	265.59	2.231
18,700.00	12,773.00	18,485.85	12,638.12	113.00	113.38	-73.70	-6,022.84	669.84	481.66	262.46	2.197
18,800.00	12,773.37	18,585.85	12,638.07	114.76	115.15	-73.66	-6,122.84	669.97	481.90	259.33	2.165
18,900.00	12,773.74	18,685.85	12,638.02	116.53	116.91	-73.61	-6,222.84	670.10	482.15	256.19	2.134
19,000.00	12,774.11	18,785.84	12,637.96	118.30	118.68	-73.57	-6,322.84	670.24	482.40	253.06	2.103
19,100.00	12,774.48	18,885.84	12,637.91	120.08	120.44	-73.53	-6,422.83	670.37	482.64	249.92	2.074
19,200.00	12,774.85	18,985.84	12,637.86	121.85	122.21	-73.48	-6,522.83	670.50	482.89	246.78	2.045
19,300.00	12,775.22	19,085.84	12,637.81	123.62	123.98	-73.44	-6,622.83	670.63	483.14	243.64	2.017
19,400.00	12,775.59	19,185.84	12,637.75	125.40	125.75	-73.40	-6,722.83	670.76	483.39	240.50	1.990
19,500.00	12,775.96	19,285.84	12,637.70	127.18	127.53	-73.35	-6,822.83	670.89	483.63	237.36	1.964
19,600.00	12,776.33	19,385.84	12,637.65	128.96	129.30	-73.31	-6,922.83	671.02	483.88	234.22	1.938
19,700.00	12,776.70	19,485.84	12,637.60	130.74	131.08	-73.26	-7,022.83	671.15	484.13	231.08	1.913
19,800.00	12,777.07	19,585.84	12,637.54	132.52	132.86	-73.22	-7,122.83	671.28	484.38	227.94	1.889
19,900.00	12,777.45	19,685.84	12,637.49	134.30	134.63	-73.18	-7,222.83	671.42	484.63	224.80	1.865
20,000.00	12,777.82	19,785.84	12,637.44	136.08	136.41	-73.13	-7,322.82	671.55	484.88	221.65	1.842
20,100.00	12,778.19	19,885.83	12,637.39	137.87	138.19	-73.09	-7,422.82	671.68	485.12	218.51	1.820
20,200.00	12,778.56	19,985.83	12,637.33	139.65	139.98	-73.05	-7,522.82	671.81	485.37	215.36	1.798
20,300.00	12,778.93	20,085.83	12,637.28	141.44	141.76	-73.01	-7,622.82	671.94	485.62	212.22	1.776
20,400.00	12,779.30	20,185.83	12,637.23	143.23	143.54	-72.96	-7,722.82	672.07	485.87	209.08	1.755

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
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 93H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
 TVD Reference: 3317 @ 3340.50usft
 MD Reference: 3317 @ 3340.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 84H - 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	
20,500.00	12,779.67	20,285.83	12,637.18	145.02	145.33	-72.92	-7,822.82	672.20	486.12	205.93	280.19	1.735	
20,600.00	12,780.04	20,385.83	12,637.12	146.81	147.11	-72.88	-7,922.82	672.33	486.38	202.79	283.59	1.715	
20,700.00	12,780.41	20,485.83	12,637.07	148.60	148.90	-72.83	-8,022.82	672.47	486.63	199.64	286.98	1.696	
20,800.00	12,780.78	20,585.83	12,637.02	150.39	150.69	-72.79	-8,122.82	672.60	486.88	196.50	290.38	1.677	
20,900.00	12,781.15	20,685.83	12,636.97	152.18	152.48	-72.75	-8,222.82	672.73	487.13	193.36	293.77	1.658	
21,000.00	12,781.52	20,785.83	12,636.92	153.97	154.27	-72.70	-8,322.81	672.86	487.38	190.21	297.17	1.640	
21,100.00	12,781.89	20,885.82	12,636.86	155.76	156.06	-72.66	-8,422.81	672.99	487.63	187.07	300.56	1.622	
21,200.00	12,782.26	20,985.82	12,636.81	157.56	157.85	-72.62	-8,522.81	673.12	487.89	183.93	303.96	1.605	
21,300.00	12,782.63	21,085.82	12,636.76	159.35	159.64	-72.58	-8,622.81	673.25	488.14	180.78	307.35	1.588	
21,400.00	12,783.00	21,185.82	12,636.71	161.15	161.43	-72.53	-8,722.81	673.38	488.39	177.64	310.75	1.572	
21,500.00	12,783.37	21,285.82	12,636.65	162.94	163.22	-72.49	-8,822.81	673.51	488.64	174.50	314.14	1.555	
21,600.00	12,783.74	21,385.82	12,636.60	164.74	165.02	-72.45	-8,922.81	673.65	488.90	171.36	317.54	1.540	
21,700.00	12,784.11	21,485.82	12,636.55	166.53	166.81	-72.41	-9,022.81	673.78	489.15	168.22	320.93	1.524	
21,800.00	12,784.49	21,585.82	12,636.50	168.33	168.61	-72.36	-9,122.81	673.91	489.41	165.08	324.32	1.509	
21,900.00	12,784.86	21,685.82	12,636.44	170.13	170.40	-72.32	-9,222.80	674.04	489.66	161.94	327.72	1.494 Level 3	
22,000.00	12,785.23	21,785.82	12,636.39	171.93	172.20	-72.28	-9,322.80	674.17	489.91	158.80	331.11	1.480 Level 3	
22,100.00	12,785.60	21,885.81	12,636.34	173.72	173.99	-72.24	-9,422.80	674.30	490.17	155.67	334.50	1.465 Level 3	
22,200.00	12,785.97	21,985.81	12,636.29	175.52	175.79	-72.19	-9,522.80	674.43	490.42	152.53	337.89	1.451 Level 3	
22,300.00	12,786.34	22,085.81	12,636.23	177.32	177.59	-72.15	-9,622.80	674.56	490.68	149.39	341.29	1.438 Level 3	
22,400.00	12,786.71	22,185.81	12,636.18	179.12	179.39	-72.11	-9,722.80	674.70	490.94	146.26	344.68	1.424 Level 3	
22,500.00	12,787.08	22,285.81	12,636.13	180.92	181.18	-72.07	-9,822.80	674.83	491.19	143.12	348.07	1.411 Level 3	
22,600.00	12,787.45	22,385.81	12,636.08	182.73	182.98	-72.02	-9,922.80	674.96	491.45	139.99	351.46	1.398 Level 3	
22,700.00	12,787.82	22,485.81	12,636.02	184.53	184.78	-71.98	-10,022.80	675.09	491.70	136.86	354.85	1.386 Level 3	
22,748.68	12,788.00	22,532.20	12,636.00	185.40	185.62	-71.96	-10,069.19	675.15	491.83	135.38	356.46	1.380 Level 3, SF	

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 93H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
TVD Reference: 3317 @ 3340.50usft
MD Reference: 3317 @ 3340.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 92H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		+N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)			
0.00	0.00	1.90	1.90	0.00	0.00	-90.75	-23.63	-1,811.58	1,811.73				
100.00	100.00	101.90	101.90	0.09	0.09	-90.75	-23.63	-1,811.58	1,811.73	1,811.56	0.18	N/A	
200.00	200.00	201.90	201.90	0.31	0.32	-90.75	-23.63	-1,811.58	1,811.73	1,811.11	0.63	2,895.306	
300.00	300.00	301.90	301.90	0.54	0.54	-90.75	-23.63	-1,811.58	1,811.73	1,810.66	1.08	1,684.894	
400.00	400.00	401.90	401.90	0.76	0.76	-90.75	-23.63	-1,811.58	1,811.73	1,810.21	1.52	1,188.168	
500.00	500.00	501.90	501.90	0.99	0.99	-90.75	-23.63	-1,811.58	1,811.73	1,809.76	1.97	917.638	
600.00	600.00	601.90	601.90	1.21	1.21	-90.75	-23.63	-1,811.58	1,811.73	1,809.31	2.42	747.453	
700.00	700.00	701.90	701.90	1.43	1.44	-90.75	-23.63	-1,811.58	1,811.73	1,808.86	2.87	630.517	
800.00	800.00	801.90	801.90	1.66	1.66	-90.75	-23.63	-1,811.58	1,811.73	1,808.41	3.32	545.220	
900.00	900.00	901.90	901.90	1.88	1.89	-90.75	-23.63	-1,811.58	1,811.73	1,807.96	3.77	480.251	
1,000.00	1,000.00	1,001.90	1,001.90	2.11	2.11	-90.75	-23.63	-1,811.58	1,811.73	1,807.51	4.22	429.117	
1,100.00	1,100.00	1,101.90	1,101.90	2.33	2.34	-90.75	-23.63	-1,811.58	1,811.73	1,807.06	4.67	387.824	
1,200.00	1,200.00	1,201.90	1,201.90	2.56	2.56	-90.75	-23.63	-1,811.58	1,811.73	1,806.61	5.12	353.780	
1,300.00	1,300.00	1,301.90	1,301.90	2.78	2.79	-90.75	-23.63	-1,811.58	1,811.73	1,806.16	5.57	325.231	
1,400.00	1,400.00	1,401.90	1,401.90	3.01	3.01	-90.75	-23.63	-1,811.58	1,811.73	1,805.71	6.02	300.946	
1,500.00	1,500.00	1,501.90	1,501.90	3.23	3.24	-90.75	-23.63	-1,811.58	1,811.73	1,805.26	6.47	280.035	
1,600.00	1,600.00	1,601.90	1,601.90	3.46	3.46	-90.75	-23.63	-1,811.58	1,811.73	1,804.81	6.92	261.842	
1,700.00	1,700.00	1,701.90	1,701.90	3.68	3.69	-90.75	-23.63	-1,811.58	1,811.73	1,804.37	7.37	245.868	
1,800.00	1,800.00	1,801.90	1,801.90	3.91	3.91	-90.75	-23.63	-1,811.58	1,811.73	1,803.92	7.82	231.731	
1,900.00	1,900.00	1,901.90	1,901.90	4.13	4.14	-90.75	-23.63	-1,811.58	1,811.73	1,803.47	8.27	219.132	
2,000.00	2,000.00	2,001.90	2,001.90	4.36	4.36	-90.75	-23.63	-1,811.58	1,811.73	1,803.02	8.72	207.831	
2,100.00	2,100.00	2,101.90	2,101.90	4.58	4.59	-90.75	-23.63	-1,811.58	1,811.73	1,802.57	9.17	197.640	
2,200.00	2,200.00	2,201.90	2,201.90	4.81	4.81	-90.75	-23.63	-1,811.58	1,811.73	1,802.12	9.62	188.401	
2,300.00	2,300.00	2,301.90	2,301.90	5.03	5.04	-90.75	-23.63	-1,811.58	1,811.73	1,801.67	10.07	179.987	
2,400.00	2,400.00	2,401.90	2,401.90	5.26	5.26	-90.75	-23.63	-1,811.58	1,811.73	1,801.22	10.52	172.293	
2,500.00	2,500.00	2,501.90	2,501.90	5.48	5.48	-90.75	-23.63	-1,811.58	1,811.73	1,800.77	10.96	165.229	
2,600.00	2,600.00	2,601.90	2,601.90	5.71	5.71	-90.75	-23.63	-1,811.58	1,811.73	1,800.32	11.41	158.722	
2,700.00	2,700.00	2,701.90	2,701.90	5.93	5.93	-90.75	-23.63	-1,811.58	1,811.73	1,799.87	11.86	152.708	
2,800.00	2,800.00	2,801.90	2,801.90	6.15	6.16	-90.75	-23.63	-1,811.58	1,811.73	1,799.42	12.31	147.133	
2,900.00	2,900.00	2,901.90	2,901.90	6.38	6.38	-90.75	-23.63	-1,811.58	1,811.73	1,798.97	12.76	141.951	
3,000.00	3,000.00	3,001.90	3,001.90	6.60	6.61	-90.75	-23.63	-1,811.58	1,811.73	1,798.52	13.21	137.121	
3,100.00	3,100.00	3,101.90	3,101.90	6.83	6.83	-90.75	-23.63	-1,811.58	1,811.73	1,798.07	13.66	132.609	
3,200.00	3,200.00	3,201.90	3,201.90	7.05	7.06	-90.75	-23.63	-1,811.58	1,811.73	1,797.62	14.11	128.385	
3,300.00	3,300.00	3,301.90	3,301.90	7.28	7.28	-90.75	-23.63	-1,811.58	1,811.73	1,797.17	14.56	124.422	
3,400.00	3,400.00	3,401.90	3,401.90	7.50	7.51	-90.75	-23.63	-1,811.58	1,811.73	1,796.72	15.01	120.696	
3,500.00	3,500.00	3,502.77	3,502.77	7.73	7.73	-90.75	-23.63	-1,811.58	1,811.73	1,796.27	15.46	117.174	
3,600.00	3,600.00	3,648.44	3,648.42	7.95	8.04	-90.74	-23.36	-1,809.68	1,810.42	1,794.43	15.99	113.215	
3,700.00	3,700.00	3,793.92	3,793.79	8.18	8.33	-90.72	-22.58	-1,804.12	1,806.60	1,790.08	16.51	109.415	
3,800.00	3,800.00	3,939.02	3,938.59	8.40	8.64	-90.68	-21.29	-1,794.93	1,800.26	1,783.22	17.04	105.666	
3,900.00	3,900.00	4,083.56	4,082.55	8.63	8.95	-90.63	-19.50	-1,782.18	1,791.42	1,773.85	17.57	101.967	
4,000.00	4,000.00	4,227.36	4,225.40	8.85	9.27	-90.56	-17.21	-1,765.92	1,780.09	1,761.99	18.11	98.302	
4,100.00	4,100.00	4,348.87	4,345.80	9.07	9.55	-150.57	-14.92	-1,749.63	1,767.36	1,748.82	18.54	95.322	
4,200.00	4,199.96	4,448.20	4,444.16	9.28	9.79	-150.61	-13.00	-1,735.94	1,755.82	1,736.87	18.95	92.633	
4,300.00	4,299.86	4,547.70	4,542.69	9.49	10.04	-150.67	-11.07	-1,722.23	1,745.80	1,726.43	19.37	90.143	
4,400.00	4,399.68	4,647.33	4,641.35	9.71	10.29	-150.75	-9.14	-1,708.49	1,737.28	1,717.51	19.78	87.840	
4,500.00	4,499.37	4,747.06	4,740.11	9.93	10.55	-150.85	-7.21	-1,694.75	1,730.29	1,710.10	20.19	85.711	
4,600.00	4,598.99	4,846.83	4,838.92	10.15	10.81	-150.93	-5.28	-1,681.00	1,724.06	1,703.45	20.62	83.624	
4,700.00	4,698.60	4,946.61	4,937.72	10.37	11.07	-151.02	-3.35	-1,667.25	1,717.84	1,696.79	21.05	81.612	
4,800.00	4,798.22	5,046.38	5,036.52	10.60	11.34	-151.10	-1.41	-1,653.50	1,711.62	1,690.13	21.48	79.672	
4,900.00	4,897.84	5,146.16	5,135.33	10.82	11.62	-151.19	0.52	-1,639.75	1,705.40	1,683.48	21.92	77.802	
5,000.00	4,997.46	5,245.93	5,234.13	11.05	11.89	-151.27	2.45	-1,626.00	1,699.19	1,676.83	22.36	75.999	
5,100.00	5,097.08	5,345.71	5,332.93	11.29	12.17	-151.36	4.38	-1,612.24	1,692.97	1,670.18	22.80	74.258	

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

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 93H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
 TVD Reference: 3317 @ 3340.50usft
 MD Reference: 3317 @ 3340.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 92H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
5,200.00	5,196.70	5,445.48	5,431.74	11.52	12.45	-151.45	6.32	-1,598.49	1,686.77	1,663.53	23.24	72.578	
5,300.00	5,296.32	5,545.26	5,530.54	11.75	12.73	-151.53	8.25	-1,584.74	1,680.57	1,656.88	23.68	70.956	
5,400.00	5,395.94	5,645.03	5,629.34	11.99	13.02	-151.62	10.18	-1,570.99	1,674.37	1,650.24	24.13	69.389	
5,500.00	5,495.56	5,744.81	5,728.15	12.23	13.31	-151.71	12.11	-1,557.24	1,668.17	1,643.60	24.58	67.875	
5,600.00	5,595.18	5,844.58	5,826.95	12.47	13.60	-151.80	14.05	-1,543.49	1,661.98	1,636.96	25.03	66.412	
5,700.00	5,694.80	5,944.35	5,925.75	12.71	13.89	-151.89	15.98	-1,529.74	1,655.80	1,630.32	25.47	64.997	
5,800.00	5,794.42	6,044.13	6,024.56	12.95	14.19	-151.98	17.91	-1,515.99	1,649.61	1,623.69	25.93	63.628	
5,900.00	5,894.04	6,143.90	6,123.36	13.19	14.49	-152.07	19.85	-1,502.24	1,643.44	1,617.06	26.38	62.304	
6,000.00	5,993.66	6,243.68	6,222.17	13.44	14.79	-152.16	21.78	-1,488.49	1,637.26	1,610.43	26.83	61.021	
6,100.00	6,093.28	6,343.45	6,320.97	13.68	15.09	-152.25	23.71	-1,474.74	1,631.09	1,603.81	27.29	59.779	
6,200.00	6,192.90	6,443.23	6,419.77	13.93	15.39	-152.35	25.64	-1,460.99	1,624.93	1,597.19	27.74	58.576	
6,300.00	6,292.52	6,543.00	6,518.58	14.18	15.69	-152.44	27.58	-1,447.24	1,618.77	1,590.57	28.20	57.410	
6,400.00	6,392.14	6,642.78	6,617.38	14.43	16.00	-152.54	29.51	-1,433.48	1,612.61	1,583.95	28.65	56.280	
6,500.00	6,491.76	6,742.55	6,716.18	14.68	16.30	-152.63	31.44	-1,419.73	1,606.46	1,577.34	29.11	55.183	
6,600.00	6,591.41	6,842.31	6,814.97	14.90	16.61	-152.71	33.37	-1,405.99	1,599.92	1,570.36	29.56	54.129	
6,700.00	6,691.14	6,942.02	6,913.71	15.10	16.92	-152.76	35.30	-1,392.24	1,592.62	1,562.63	29.98	53.117	
6,800.00	6,790.92	7,041.68	7,012.40	15.30	17.22	-152.81	37.23	-1,378.51	1,584.54	1,554.13	30.41	52.109	
6,900.00	6,890.76	7,141.27	7,111.03	15.49	17.53	-152.84	39.16	-1,364.78	1,575.69	1,544.86	30.83	51.108	
7,000.00	6,990.65	7,240.81	7,209.59	15.69	17.84	-152.85	41.09	-1,351.06	1,566.07	1,534.82	31.25	50.111	
7,100.00	7,090.57	7,340.26	7,308.08	15.88	18.16	-152.84	43.02	-1,337.36	1,555.68	1,524.01	31.67	49.119	
7,200.00	7,190.52	7,439.64	7,406.49	16.07	18.47	-152.82	44.94	-1,323.66	1,544.51	1,512.42	32.09	48.131	
7,300.00	7,290.50	7,538.92	7,504.80	16.26	18.78	-152.78	46.87	-1,309.98	1,532.58	1,500.07	32.51	47.148	
7,400.00	7,390.49	7,638.11	7,603.03	16.45	19.09	-152.73	48.79	-1,296.31	1,519.87	1,486.95	32.92	46.170	
7,500.00	7,490.49	7,737.19	7,701.14	16.63	19.41	-92.66	50.71	-1,282.65	1,506.40	1,473.07	33.33	45.198	
7,600.00	7,590.49	7,836.22	7,799.21	16.82	19.72	-92.61	52.62	-1,269.01	1,492.54	1,458.78	33.76	44.207	
7,700.00	7,690.49	7,935.24	7,897.27	17.04	20.03	-92.56	54.54	-1,255.36	1,478.68	1,444.47	34.22	43.217	
7,800.00	7,790.49	8,034.27	7,995.33	17.26	20.35	-92.50	56.46	-1,241.71	1,464.83	1,430.16	34.67	42.252	
7,900.00	7,890.49	8,133.30	8,093.40	17.47	20.66	-92.45	58.38	-1,228.06	1,450.97	1,415.85	35.12	41.312	
8,000.00	7,990.49	8,232.32	8,191.46	17.69	20.98	-92.40	60.30	-1,214.42	1,437.12	1,401.54	35.58	40.395	
8,100.00	8,090.49	8,331.35	8,289.52	17.90	21.30	-92.34	62.21	-1,200.77	1,423.27	1,387.24	36.03	39.501	
8,200.00	8,190.49	8,430.38	8,387.58	18.12	21.61	-92.29	64.13	-1,187.12	1,409.42	1,372.93	36.49	38.629	
8,300.00	8,290.49	8,529.40	8,485.65	18.34	21.93	-92.23	66.05	-1,173.47	1,395.57	1,358.63	36.94	37.778	
8,400.00	8,390.49	8,628.43	8,583.71	18.56	22.25	-92.17	67.97	-1,159.82	1,381.72	1,344.32	37.40	36.947	
8,500.00	8,490.49	8,727.46	8,681.77	18.77	22.57	-92.11	69.89	-1,146.18	1,367.88	1,330.02	37.85	36.136	
8,600.00	8,590.49	8,826.49	8,779.84	18.99	22.89	-92.05	71.80	-1,132.53	1,354.03	1,315.72	38.31	35.344	
8,700.00	8,690.49	8,925.51	8,877.90	19.21	23.21	-91.99	73.72	-1,118.88	1,340.19	1,301.42	38.77	34.570	
8,800.00	8,790.49	9,024.54	8,975.96	19.43	23.53	-91.93	75.64	-1,105.23	1,326.35	1,287.12	39.22	33.814	
8,900.00	8,890.49	9,123.57	9,074.03	19.64	23.85	-91.86	77.56	-1,091.59	1,312.51	1,272.82	39.68	33.075	
9,000.00	8,990.49	9,222.59	9,172.09	19.86	24.17	-91.80	79.48	-1,077.94	1,298.67	1,258.53	40.14	32.353	
9,100.00	9,090.49	9,321.62	9,270.15	20.08	24.49	-91.73	81.39	-1,064.29	1,284.83	1,244.23	40.60	31.647	
9,200.00	9,190.49	9,420.65	9,368.22	20.30	24.81	-91.66	83.31	-1,050.64	1,271.00	1,229.94	41.06	30.956	
9,300.00	9,290.49	9,519.67	9,466.28	20.52	25.13	-91.59	85.23	-1,036.99	1,257.16	1,215.65	41.52	30.281	
9,400.00	9,390.49	9,618.70	9,564.34	20.74	25.45	-91.52	87.15	-1,023.35	1,243.33	1,201.36	41.98	29.620	
9,500.00	9,490.49	9,717.73	9,662.40	20.95	25.77	-91.45	89.07	-1,009.70	1,229.50	1,187.07	42.44	28.973	
9,600.00	9,590.49	9,816.75	9,760.47	21.17	26.10	-91.37	90.99	-996.05	1,215.68	1,172.78	42.90	28.340	
9,700.00	9,690.49	9,915.78	9,858.53	21.39	26.42	-91.30	92.90	-982.40	1,201.85	1,158.49	43.36	27.720	
9,800.00	9,790.49	10,014.81	9,956.59	21.61	26.74	-91.22	94.82	-968.76	1,188.03	1,144.21	43.82	27.113	
9,900.00	9,890.49	10,113.83	10,054.66	21.83	27.07	-91.14	96.74	-955.11	1,174.21	1,129.93	44.28	26.519	
10,000.00	9,990.49	10,212.86	10,152.72	22.05	27.39	-91.06	98.66	-941.46	1,160.39	1,115.65	44.74	25.936	
10,100.00	10,090.49	10,310.81	10,249.72	22.27	27.71	-90.97	100.55	-927.97	1,146.58	1,101.38	45.20	25.369	
10,200.00	10,190.49	10,400.00	10,338.10	22.49	27.97	-90.90	102.22	-916.10	1,133.25	1,087.63	45.62	24.843	
10,300.00	10,290.49	10,491.38	10,428.74	22.71	28.20	-90.83	103.83	-904.64	1,120.69	1,074.66	46.02	24.350	

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

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 93H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
TVD Reference: 3317 @ 3340.50usft
MD Reference: 3317 @ 3340.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 92H - 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	
10,400.00	10,390.49	10,581.93	10,518.65	22.93	28.42	-90.76	105.33	-894.00	1,108.91	1,062.48	46.43	23.885	
10,500.00	10,490.49	10,672.65	10,608.81	23.15	28.64	-90.69	106.73	-884.04	1,097.92	1,051.08	46.83	23.444	
10,600.00	10,590.49	10,763.52	10,699.20	23.37	28.85	-90.63	108.03	-874.78	1,087.70	1,040.47	47.23	23.028	
10,700.00	10,690.49	10,854.54	10,789.81	23.59	29.06	-90.57	109.23	-866.21	1,078.28	1,030.64	47.64	22.635	
10,800.00	10,790.49	10,945.69	10,880.61	23.81	29.26	-90.51	110.34	-858.34	1,069.63	1,021.60	48.04	22.266	
10,900.00	10,890.49	11,036.96	10,971.59	24.03	29.46	-90.46	111.34	-851.18	1,061.78	1,013.34	48.44	21.919	
11,000.00	10,990.49	11,128.34	11,062.74	24.25	29.65	-90.41	112.25	-844.74	1,054.72	1,005.88	48.84	21.595	
11,100.00	11,090.49	11,219.82	11,154.03	24.47	29.84	-90.37	113.06	-839.00	1,048.44	999.20	49.24	21.293	
11,200.00	11,190.49	11,311.38	11,245.46	24.69	30.02	-90.34	113.76	-833.98	1,042.96	993.32	49.64	21.012	
11,300.00	11,290.49	11,400.00	11,333.98	24.91	30.19	-90.30	114.35	-829.82	1,038.27	988.24	50.03	20.754	
11,400.00	11,390.49	11,494.73	11,428.63	25.13	30.36	-90.28	114.87	-826.11	1,034.36	983.93	50.43	20.511	
11,500.00	11,490.49	11,586.48	11,520.34	25.35	30.53	-90.26	115.27	-823.26	1,031.26	980.43	50.82	20.291	
11,600.00	11,590.49	11,678.28	11,612.11	25.57	30.69	-90.24	115.57	-821.14	1,028.94	977.72	51.22	20.090	
11,700.00	11,690.49	11,770.11	11,703.93	25.79	30.84	-90.23	115.76	-819.75	1,027.42	975.81	51.61	19.908	
11,800.00	11,790.49	11,861.95	11,795.76	26.01	30.99	-90.22	115.86	-819.08	1,026.70	974.70	52.00	19.744	
11,856.91	11,847.40	11,915.48	11,849.30	26.14	31.07	-90.22	115.87	-819.02	1,026.63	974.40	52.23	19.657	
11,900.00	11,890.49	11,958.57	11,892.39	26.24	31.14	-90.22	115.87	-819.02	1,026.63	974.22	52.41	19.589	
12,000.00	11,990.49	12,058.57	11,992.39	26.46	31.32	-90.22	115.87	-819.02	1,026.63	973.80	52.83	19.432	
12,100.00	12,090.49	12,158.57	12,092.39	26.68	31.50	-90.22	115.87	-819.02	1,026.63	973.37	53.26	19.276	
12,200.00	12,190.49	12,258.57	12,192.39	26.90	31.68	-90.22	115.87	-819.02	1,026.63	972.94	53.69	19.122	
12,300.00	12,290.48	12,359.41	12,293.08	27.12	31.84	89.59	112.26	-818.97	1,026.60	972.51	54.10	18.978	
12,400.00	12,389.35	12,459.26	12,390.18	27.28	31.98	89.11	89.79	-818.69	1,026.42	972.03	54.39	18.872	
12,500.00	12,483.20	12,557.30	12,478.95	27.42	32.09	88.68	48.58	-818.17	1,026.05	971.42	54.63	18.782	
12,600.00	12,567.93	12,653.71	12,556.24	27.54	32.19	88.31	-8.76	-817.44	1,025.51	970.65	54.87	18.692	
12,700.00	12,639.83	12,748.69	12,619.62	27.66	32.30	88.00	-79.29	-816.55	1,024.81	969.67	55.14	18.586	
12,800.00	12,695.78	12,842.50	12,667.32	27.79	32.43	87.79	-159.88	-815.54	1,023.94	968.45	55.50	18.451	
12,900.00	12,733.31	12,935.38	12,698.15	28.01	32.62	87.66	-247.34	-814.43	1,022.94	966.96	55.98	18.274	
13,000.00	12,750.79	13,027.63	12,711.45	28.33	32.87	87.63	-338.47	-813.28	1,021.82	965.22	56.60	18.055	
13,100.00	12,752.25	13,125.87	12,712.50	28.75	33.22	87.66	-436.69	-812.04	1,020.57	963.14	57.43	17.770	
13,200.00	12,752.62	13,225.86	12,713.14	29.27	33.68	87.67	-536.67	-810.78	1,019.30	960.81	58.49	17.428	
13,300.00	12,752.99	13,325.85	12,713.78	29.90	34.23	87.68	-636.66	-809.52	1,018.03	958.28	59.74	17.040	
13,400.00	12,753.36	13,425.84	12,714.42	30.63	34.87	87.69	-736.64	-808.25	1,016.75	955.56	61.19	16.615	
13,500.00	12,753.73	13,525.84	12,715.05	31.44	35.59	87.71	-836.62	-806.99	1,015.48	952.66	62.82	16.164	
13,600.00	12,754.10	13,625.83	12,715.69	32.34	36.40	87.72	-936.60	-805.73	1,014.21	949.59	64.62	15.696	
13,700.00	12,754.47	13,725.82	12,716.33	33.31	37.27	87.73	-1,036.58	-804.47	1,012.94	946.37	66.56	15.218	
13,800.00	12,754.84	13,825.81	12,716.97	34.35	38.22	87.74	-1,136.56	-803.21	1,011.66	943.02	68.65	14.737	
13,900.00	12,755.21	13,925.80	12,717.60	35.46	39.23	87.76	-1,236.55	-801.94	1,010.39	939.53	70.86	14.260	
14,000.00	12,755.58	14,025.79	12,718.24	36.62	40.29	87.77	-1,336.53	-800.68	1,009.12	935.93	73.18	13.789	
14,100.00	12,755.95	14,125.79	12,718.88	37.83	41.42	87.78	-1,436.51	-799.42	1,007.84	932.23	75.61	13.329	
14,200.00	12,756.32	14,225.78	12,719.52	39.09	42.59	87.79	-1,536.49	-798.16	1,006.57	928.43	78.14	12.882	
14,300.00	12,756.70	14,325.77	12,720.16	40.40	43.80	87.81	-1,636.47	-796.89	1,005.30	924.55	80.75	12.450	
14,400.00	12,757.07	14,425.76	12,720.79	41.74	45.06	87.82	-1,736.45	-795.63	1,004.03	920.59	83.44	12.033	
14,500.00	12,757.44	14,525.75	12,721.43	43.12	46.35	87.83	-1,836.44	-794.37	1,002.75	916.56	86.20	11.633	
14,600.00	12,757.81	14,625.74	12,722.07	44.53	47.68	87.84	-1,936.42	-793.11	1,001.48	912.46	89.02	11.250	
14,700.00	12,758.18	14,725.74	12,722.71	45.97	49.05	87.86	-2,036.40	-791.85	1,000.21	908.31	91.90	10.884	
14,800.00	12,758.55	14,825.73	12,723.34	47.43	50.44	87.87	-2,136.38	-790.58	998.94	904.10	94.83	10.533	
14,900.00	12,758.92	14,925.72	12,723.98	48.92	51.86	87.88	-2,236.36	-789.32	997.66	899.85	97.82	10.199	
15,000.00	12,759.29	15,025.71	12,724.62	50.43	53.30	87.89	-2,336.34	-788.06	996.39	895.55	100.84	9.881	
15,100.00	12,759.66	15,125.70	12,725.26	51.96	54.77	87.91	-2,436.33	-786.80	995.12	891.21	103.91	9.577	
15,200.00	12,760.03	15,225.69	12,725.89	53.51	56.26	87.92	-2,536.31	-785.53	993.85	886.84	107.01	9.287	
15,300.00	12,760.40	15,325.69	12,726.53	55.08	57.76	87.93	-2,636.29	-784.27	992.57	882.43	110.15	9.011	
15,400.00	12,760.77	15,425.68	12,727.17	56.66	59.29	87.94	-2,736.27	-783.01	991.30	877.99	113.31	8.748	

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

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 93H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
TVD Reference: 3317 @ 3340.50usft
MD Reference: 3317 @ 3340.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 92H - 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)					
15,500.00	12,761.14	15,525.67	12,727.81	58.26	60.83	87.96	-2,836.25	-781.75	990.03	873.52	116.51	8.498	
15,600.00	12,761.51	15,625.66	12,728.45	59.87	62.39	87.97	-2,936.23	-780.49	988.76	869.03	119.73	8.258	
15,700.00	12,761.88	15,725.65	12,729.08	61.49	63.96	87.98	-3,036.22	-779.22	987.49	864.51	122.97	8.030	
15,800.00	12,762.25	15,825.64	12,729.72	63.12	65.54	88.00	-3,136.20	-777.96	986.21	859.98	126.24	7.812	
15,900.00	12,762.62	15,925.64	12,730.36	64.76	67.14	88.01	-3,236.18	-776.70	984.94	855.42	129.53	7.604	
16,000.00	12,762.99	16,025.63	12,731.00	66.41	68.75	88.02	-3,336.16	-775.44	983.67	850.84	132.83	7.405	
16,100.00	12,763.36	16,125.62	12,731.63	68.07	70.37	88.04	-3,436.14	-774.17	982.40	846.24	136.16	7.215	
16,200.00	12,763.74	16,225.61	12,732.27	69.74	72.00	88.05	-3,536.12	-772.91	981.13	841.63	139.49	7.033	
16,300.00	12,764.11	16,325.60	12,732.91	71.41	73.63	88.06	-3,636.11	-771.65	979.86	837.01	142.85	6.859	
16,400.00	12,764.48	16,425.59	12,733.55	73.10	75.28	88.07	-3,736.09	-770.39	978.58	832.37	146.22	6.693	
16,500.00	12,764.85	16,525.59	12,734.19	74.78	76.94	88.09	-3,836.07	-769.13	977.31	827.71	149.60	6.533	
16,600.00	12,765.22	16,625.58	12,734.82	76.48	78.60	88.10	-3,936.05	-767.86	976.04	823.05	152.99	6.380	
16,700.00	12,765.59	16,725.57	12,735.46	78.18	80.27	88.11	-4,036.03	-766.60	974.77	818.37	156.40	6.233	
16,800.00	12,765.96	16,825.56	12,736.10	79.89	81.94	88.13	-4,136.01	-765.34	973.50	813.68	159.82	6.091	
16,900.00	12,766.33	16,925.55	12,736.74	81.60	83.63	88.14	-4,236.00	-764.08	972.23	808.98	163.24	5.956	
17,000.00	12,766.70	17,025.54	12,737.37	83.31	85.31	88.15	-4,335.98	-762.82	970.96	804.28	166.68	5.825	
17,100.00	12,767.07	17,125.54	12,738.01	85.03	87.01	88.17	-4,435.96	-761.55	969.68	799.56	170.12	5.700	
17,200.00	12,767.44	17,225.53	12,738.65	86.76	88.71	88.18	-4,535.94	-760.29	968.41	794.84	173.58	5.579	
17,300.00	12,767.81	17,325.52	12,739.29	88.49	90.41	88.19	-4,635.92	-759.03	967.14	790.10	177.04	5.463	
17,400.00	12,768.18	17,425.51	12,739.93	90.22	92.12	88.21	-4,735.90	-757.77	965.87	785.36	180.51	5.351	
17,500.00	12,768.55	17,525.50	12,740.56	91.95	93.83	88.22	-4,835.89	-756.50	964.60	780.62	183.98	5.243	
17,600.00	12,768.92	17,625.49	12,741.20	93.69	95.55	88.24	-4,935.87	-755.24	963.33	775.86	187.46	5.139	
17,700.00	12,769.29	17,725.49	12,741.84	95.44	97.27	88.25	-5,035.85	-753.98	962.06	771.10	190.95	5.038	
17,800.00	12,769.66	17,825.48	12,742.48	97.18	99.00	88.26	-5,135.83	-752.72	960.79	766.34	194.45	4.941	
17,900.00	12,770.03	17,925.47	12,743.11	98.93	100.73	88.28	-5,235.81	-751.46	959.52	761.57	197.95	4.847	
18,000.00	12,770.40	18,025.46	12,743.75	100.68	102.46	88.29	-5,335.79	-750.19	958.25	756.79	201.45	4.757	
18,100.00	12,770.78	18,125.45	12,744.39	102.43	104.19	88.30	-5,435.78	-748.93	956.97	752.01	204.96	4.669	
18,200.00	12,771.15	18,225.44	12,745.03	104.19	105.93	88.32	-5,535.76	-747.67	955.70	747.23	208.48	4.584	
18,300.00	12,771.52	18,325.44	12,745.67	105.94	107.67	88.33	-5,635.74	-746.41	954.43	742.44	212.00	4.502	
18,400.00	12,771.89	18,425.43	12,746.30	107.70	109.42	88.34	-5,735.72	-745.14	953.16	737.64	215.52	4.423	
18,500.00	12,772.26	18,525.42	12,746.94	109.47	111.16	88.36	-5,835.70	-743.88	951.89	732.84	219.05	4.346	
18,600.00	12,772.63	18,625.41	12,747.58	111.23	112.91	88.37	-5,935.68	-742.62	950.62	728.04	222.58	4.271	
18,700.00	12,773.00	18,725.40	12,748.22	113.00	114.66	88.39	-6,035.67	-741.36	949.35	723.23	226.12	4.198	
18,800.00	12,773.37	18,825.39	12,748.85	114.76	116.42	88.40	-6,135.65	-740.10	948.08	718.42	229.66	4.128	
18,900.00	12,773.74	18,925.38	12,749.49	116.53	118.17	88.41	-6,235.63	-738.83	946.81	713.61	233.20	4.060	
19,000.00	12,774.11	19,025.38	12,750.13	118.30	119.93	88.43	-6,335.61	-737.57	945.54	708.80	236.75	3.994	
19,100.00	12,774.48	19,125.37	12,750.77	120.08	121.69	88.44	-6,435.59	-736.31	944.27	703.98	240.29	3.930	
19,200.00	12,774.85	19,225.36	12,751.41	121.85	123.45	88.46	-6,535.57	-735.05	943.00	699.15	243.85	3.867	
19,300.00	12,775.22	19,325.35	12,752.04	123.62	125.22	88.47	-6,635.56	-733.78	941.73	694.33	247.40	3.806	
19,400.00	12,775.59	19,425.34	12,752.68	125.40	126.98	88.49	-6,735.54	-732.52	940.46	689.50	250.96	3.747	
19,500.00	12,775.96	19,525.34	12,753.32	127.18	128.75	88.50	-6,835.52	-731.26	939.19	684.67	254.52	3.690	
19,600.00	12,776.33	19,625.33	12,753.96	128.96	130.52	88.51	-6,935.50	-730.00	937.92	679.84	258.08	3.634	
19,700.00	12,776.70	19,725.32	12,754.59	130.74	132.29	88.53	-7,035.48	-728.74	936.65	675.00	261.65	3.580	
19,800.00	12,777.07	19,825.31	12,755.23	132.52	134.06	88.54	-7,135.46	-727.47	935.38	670.17	265.22	3.527	
19,900.00	12,777.45	19,925.30	12,755.87	134.30	135.83	88.56	-7,235.45	-726.21	934.11	665.33	268.79	3.475	
20,000.00	12,777.82	20,025.29	12,756.51	136.08	137.61	88.57	-7,335.43	-724.95	932.84	660.48	272.36	3.425	
20,100.00	12,778.19	20,125.29	12,757.15	137.87	139.38	88.59	-7,435.41	-723.69	931.57	655.64	275.93	3.376	
20,200.00	12,778.56	20,225.28	12,757.78	139.65	141.16	88.60	-7,535.39	-722.42	930.30	650.80	279.51	3.328	
20,300.00	12,778.93	20,325.27	12,758.42	141.44	142.94	88.62	-7,635.37	-721.16	929.03	645.95	283.09	3.282	
20,400.00	12,779.30	20,425.26	12,759.06	143.23	144.72	88.63	-7,735.35	-719.90	927.76	641.10	286.67	3.236	
20,500.00	12,779.67	20,525.25	12,759.70	145.02	146.50	88.64	-7,835.34	-718.64	926.49	636.25	290.25	3.192	
20,600.00	12,780.04	20,625.24	12,760.33	146.81	148.28	88.66	-7,935.32	-717.38	925.23	631.40	293.83	3.149	

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

LEAM Drilling Systems LLC

Anticollision Report

Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Reference Site: Seawolf 1-12 Fed
 Site Error: 0.00 usft
 Reference Well: 93H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
 TVD Reference: 3317 @ 3340.50usft
 MD Reference: 3317 @ 3340.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Single User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 92H - 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 Toothface (")	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)					
20,700.00	12,780.41	20,725.24	12,760.97	148.60	150.07	88.67	-8,035.30	-716.11	923.96	626.54	297.42	3.107	
20,800.00	12,780.78	20,825.23	12,761.61	150.39	151.85	88.69	-8,135.28	-714.85	922.69	621.69	301.00	3.065	
20,900.00	12,781.15	20,925.22	12,762.25	152.18	153.63	88.70	-8,235.26	-713.59	921.42	616.83	304.59	3.025	
21,000.00	12,781.52	21,025.21	12,762.89	153.97	155.42	88.72	-8,335.24	-712.33	920.15	611.97	308.18	2.986	
21,100.00	12,781.89	21,125.20	12,763.52	155.76	157.21	88.73	-8,435.23	-711.07	918.88	607.11	311.77	2.947	
21,200.00	12,782.26	21,225.19	12,764.16	157.56	159.00	88.75	-8,535.21	-709.80	917.61	602.25	315.36	2.910	
21,300.00	12,782.63	21,325.19	12,764.80	159.35	160.78	88.76	-8,635.19	-708.54	916.34	597.39	318.96	2.873	
21,400.00	12,783.00	21,425.18	12,765.44	161.15	162.57	88.78	-8,735.17	-707.28	915.07	592.52	322.55	2.837	
21,500.00	12,783.37	21,525.17	12,766.07	162.94	164.36	88.79	-8,835.15	-706.02	913.81	587.66	326.15	2.802	
21,600.00	12,783.74	21,625.16	12,766.71	164.74	166.15	88.81	-8,935.13	-704.75	912.54	582.79	329.74	2.767	
21,700.00	12,784.11	21,725.15	12,767.35	166.53	167.95	88.82	-9,035.12	-703.49	911.27	577.93	333.34	2.734	
21,800.00	12,784.49	21,825.14	12,767.99	168.33	169.74	88.84	-9,135.10	-702.23	910.00	573.06	336.94	2.701	
21,900.00	12,784.86	21,925.14	12,768.63	170.13	171.53	88.85	-9,235.08	-700.97	908.73	568.19	340.54	2.668	
22,000.00	12,785.23	22,025.13	12,769.26	171.93	173.33	88.87	-9,335.06	-699.71	907.46	563.32	344.14	2.637	
22,100.00	12,785.60	22,125.12	12,769.90	173.72	175.12	88.88	-9,435.04	-698.44	906.19	558.45	347.75	2.606	
22,200.00	12,785.97	22,225.11	12,770.54	175.52	176.92	88.90	-9,535.02	-697.18	904.93	553.57	351.35	2.576	
22,300.00	12,786.34	22,325.10	12,771.18	177.32	178.71	88.92	-9,635.01	-695.92	903.66	548.70	354.96	2.546	
22,400.00	12,786.71	22,425.09	12,771.81	179.12	180.51	88.93	-9,734.99	-694.66	902.39	543.83	358.56	2.517	
22,500.00	12,787.08	22,525.09	12,772.45	180.92	182.30	88.95	-9,834.97	-693.39	901.12	538.95	362.17	2.488	
22,600.00	12,787.45	22,625.08	12,773.09	182.73	184.10	88.96	-9,934.95	-692.13	899.85	534.08	365.78	2.460	
22,700.00	12,787.82	22,725.07	12,773.73	184.53	185.90	88.98	-10,034.93	-690.87	898.59	529.20	369.38	2.433	
22,748.68	12,788.00	22,767.85	12,774.00	185.40	186.67	88.98	-10,077.71	-690.33	897.99	526.95	371.03	2.420 CC, ES, SF	

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

LEAM Drilling Systems LLC

Anticollision Report

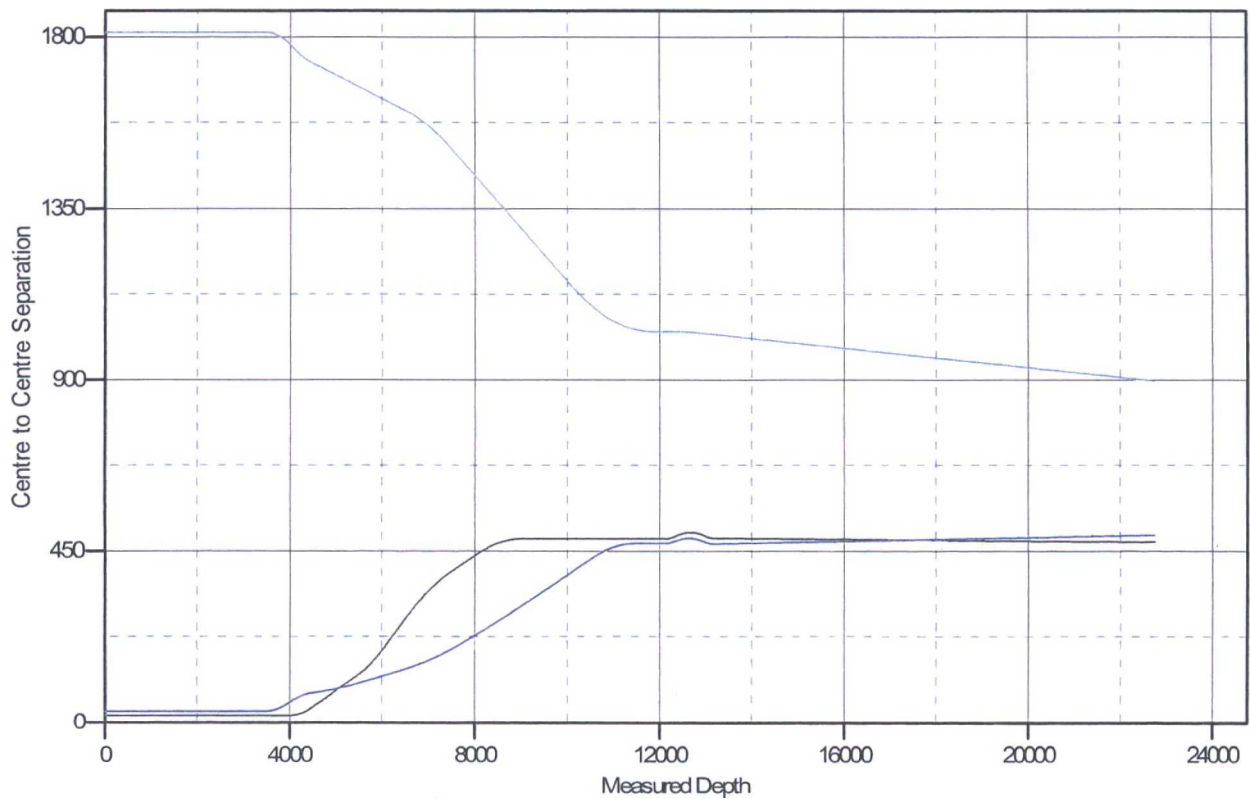
Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 93H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
TVD Reference: 3317 @ 3340.50usft
MD Reference: 3317 @ 3340.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to 3317 @ 3340.50usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 93H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.43°

Ladder Plot



LEGEND

83H, OH, Plan #1 V0 92H, OH, Plan #1 V0 84H, OH, Plan #1 V0

LEAM Drilling Systems LLC

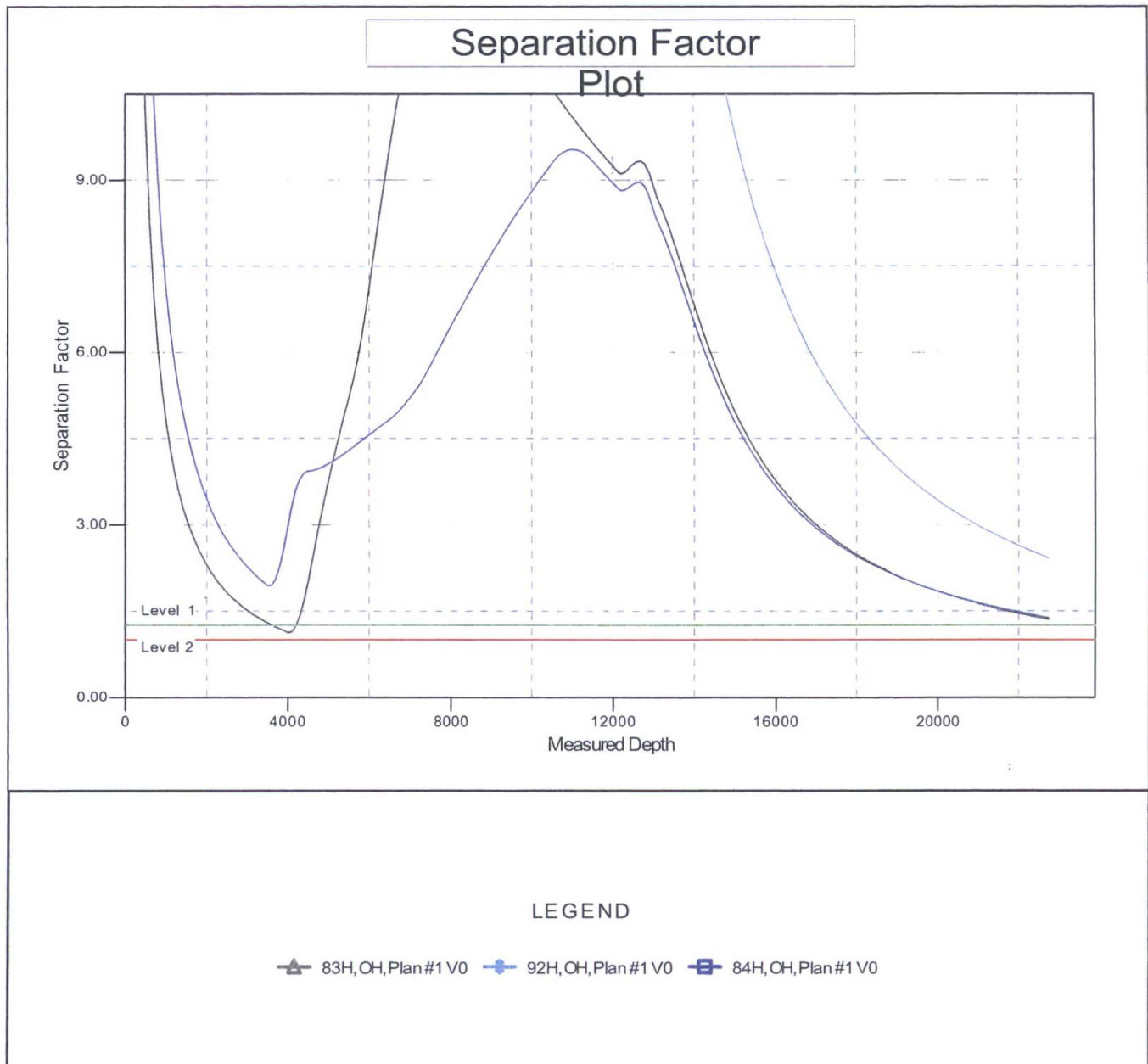
Anticollision Report

Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 93H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 93H
TVD Reference: 3317 @ 3340.50usft
MD Reference: 3317 @ 3340.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Single User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to 3317 @ 3340.50usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 93H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.43°





Project: Lea County, NM (NAD-83)
 Site: Seawolf 1-12 Fed
 Well: 93H
 Wellbore: OH
 Design: Plan #1



Azimuths to Grid North
 True North: -0.43°
 Magnetic North: 6.45°
 Magnetic Field
 Strength: 48024.4snT
 Dip Angle: 59.82°
 Date: 10/27/2016
 Model: HDGM

