

Devon Energy

Lea County, NM (NAD-83)

Seawolf 1-12 Fed

81H

OH

Plan #1

HOLDS OCD

APR 26 2017

RECEIVED

Anticollision Report

23 January, 2017

Devon Energy

Anticollision Risk Report

Company: WESTERN DIVISION
 Project: PBNM
 Reference Site: Dzurisin
 Site Error: 0.00
 Reference Well: Seawolf 1-12 Fed 82H
 Well Error: 0.00
 Reference Wellbore: Wellbore #1
 Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 82H
 TVD Reference: 1 @ 3342.40ft
 MD Reference: 1 @ 3342.40ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM r5000 US Production
 Offset TVD Reference: Offset Datum

Reference	Plan 1
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	Stations Interval 100.00ft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 10,000.00ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Combined Covariances
Casing Method:	Not applied

Risk Settings		
Vertical Depth for Analysis:	ft	(Below TVD Reference Datum)
Level of Acceptable Risk (1 in):		
Minimum Separation:	0 ft	

Survey Tool Program		Date	8/26/2016		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	22,447.27	Plan 1 (Wellbore #1)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance		Separation Factor	Warning
			Between Centres (ft)	Between Ellipses (ft)		
Offset Well - Wellbore - Design						
Dzurisin						
Seawolf 1-12 Fed 81H - Wellbore #1 - Plan 1	4,000.00	4,000.50	49.98	37.46	3.992 CC, ES	
Seawolf 1-12 Fed 81H - Wellbore #1 - Plan 1	22,447.27	22,424.19	904.00	547.37	2.535 SF	

Offset Design	Dzurisin - Seawolf 1-12 Fed 81H - Wellbore #1 - Plan 1										Offset Site Error:	0.00 ft
Survey Program:	0-MWD										Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Distance				Minimum Separation		Risk	Probability	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Separation Factor	of Collision	
0.00	0.00	0.50	0.50	0.00	0.00	-90.47	49.98					0
100.00	100.00	100.50	100.50	0.09	0.09	-90.47	49.98	49.86	0.12	408.409	0	0
200.00	200.00	200.50	200.50	0.31	0.31	-90.47	49.98	49.54	0.44	113.531	0	0
300.00	300.00	300.50	300.50	0.54	0.54	-90.47	49.98	49.22	0.76	65.929	0	0
400.00	400.00	400.50	400.50	0.76	0.76	-90.47	49.98	48.91	1.08	46.452	0	0
500.00	500.00	500.50	500.50	0.99	0.99	-90.47	49.98	48.59	1.39	35.859	0	0
600.00	600.00	600.50	600.50	1.21	1.21	-90.47	49.98	48.27	1.71	29.200	0	0
700.00	700.00	700.50	700.50	1.43	1.44	-90.47	49.98	47.95	2.03	24.627	0	0
800.00	800.00	800.50	800.50	1.66	1.66	-90.47	49.98	47.63	2.35	21.292	0	0
900.00	900.00	900.50	900.50	1.88	1.89	-90.47	49.98	47.32	2.67	18.753	0	0
1,000.00	1,000.00	1,000.50	1,000.50	2.11	2.11	-90.47	49.98	47.00	2.98	16.755	0	0
1,100.00	1,100.00	1,100.50	1,100.50	2.33	2.33	-90.47	49.98	46.68	3.30	15.141	0	0
1,200.00	1,200.00	1,200.50	1,200.50	2.56	2.56	-90.47	49.98	46.36	3.62	13.811	0	0
1,300.00	1,300.00	1,300.50	1,300.50	2.78	2.78	-90.47	49.98	46.04	3.94	12.696	0	0
1,400.00	1,400.00	1,400.50	1,400.50	3.01	3.01	-90.47	49.98	45.73	4.25	11.748	0	0
1,500.00	1,500.00	1,500.50	1,500.50	3.23	3.23	-90.47	49.98	45.41	4.57	10.931	0	0
1,600.00	1,600.00	1,600.50	1,600.50	3.46	3.46	-90.47	49.98	45.09	4.89	10.220	0	0
1,700.00	1,700.00	1,700.50	1,700.50	3.68	3.68	-90.47	49.98	44.77	5.21	9.597	0	0
1,800.00	1,800.00	1,800.50	1,800.50	3.91	3.91	-90.47	49.98	44.46	5.53	9.045	0	0
1,900.00	1,900.00	1,900.50	1,900.50	4.13	4.13	-90.47	49.98	44.14	5.84	8.553	0	0
2,000.00	2,000.00	2,000.50	2,000.50	4.36	4.36	-90.47	49.98	43.82	6.16	8.111	0	0

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

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Reference Wellbore: Wellbore #1
Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 82H
TVD Reference: 1 @ 3342.40ft
MD Reference: 1 @ 3342.40ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM r5000 US Production
Offset TVD Reference: Offset Datum

Offset Design Dzurisin - Seawolf 1-12 Fed 81H - Wellbore #1 - Plan 1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning	
2,100.00	2,100.00	2,100.50	2,100.50	4.58	4.58	-90.47	49.98	43.50	6.48	7.714	0			
2,200.00	2,200.00	2,200.50	2,200.50	4.81	4.81	-90.47	49.98	43.18	6.80	7.353	0			
2,300.00	2,300.00	2,300.50	2,300.50	5.03	5.03	-90.47	49.98	42.87	7.12	7.024	0			
2,400.00	2,400.00	2,400.50	2,400.50	5.26	5.26	-90.47	49.98	42.55	7.43	6.724	0			
2,500.00	2,500.00	2,500.50	2,500.50	5.48	5.48	-90.47	49.98	42.23	7.75	6.448	0			
2,600.00	2,600.00	2,600.50	2,600.50	5.71	5.71	-90.47	49.98	41.91	8.07	6.194	0			
2,700.00	2,700.00	2,700.50	2,700.50	5.93	5.93	-90.47	49.98	41.59	8.39	5.959	0			
2,800.00	2,800.00	2,800.50	2,800.50	6.15	6.16	-90.47	49.98	41.28	8.70	5.742	0			
2,900.00	2,900.00	2,900.50	2,900.50	6.38	6.38	-90.47	49.98	40.96	9.02	5.540	0			
3,000.00	3,000.00	3,000.50	3,000.50	6.60	6.61	-90.47	49.98	40.64	9.34	5.351	0			
3,100.00	3,100.00	3,100.50	3,100.50	6.83	6.83	-90.47	49.98	40.32	9.66	5.175	0			
3,200.00	3,200.00	3,200.50	3,200.50	7.05	7.05	-90.47	49.98	40.01	9.98	5.010	0			
3,300.00	3,300.00	3,300.50	3,300.50	7.28	7.28	-90.47	49.98	39.69	10.29	4.855	0			
3,400.00	3,400.00	3,400.50	3,400.50	7.50	7.50	-90.47	49.98	39.37	10.61	4.710	0			
3,500.00	3,500.00	3,500.50	3,500.50	7.73	7.73	-90.47	49.98	39.05	10.93	4.573	0			
3,600.00	3,600.00	3,600.50	3,600.50	7.95	7.95	-90.47	49.98	38.73	11.25	4.444	0			
3,700.00	3,700.00	3,700.50	3,700.50	8.18	8.18	-90.47	49.98	38.42	11.57	4.322	0			
3,800.00	3,800.00	3,800.50	3,800.50	8.40	8.40	-90.47	49.98	38.10	11.88	4.206	0			
3,900.00	3,900.00	3,900.50	3,900.50	8.63	8.63	-90.47	49.98	37.78	12.20	4.096	0			
4,000.00	4,000.00	4,000.50	4,000.50	8.85	8.85	-90.47	49.98	37.46	12.52	3.992	0	CC, ES		
4,100.00	4,100.00	4,100.50	4,100.50	9.06	9.08	179.54	50.85	38.03	12.83	3.965	0			
4,200.00	4,199.96	4,200.46	4,200.46	9.26	9.30	179.56	53.47	40.35	13.12	4.074	0			
4,300.00	4,299.86	4,300.36	4,300.36	9.46	9.53	179.59	57.83	44.41	13.42	4.308	0			
4,400.00	4,399.68	4,400.18	4,400.18	9.66	9.75	179.63	63.94	50.22	13.72	4.659	0			
4,500.00	4,499.37	4,499.87	4,499.87	9.87	9.98	179.67	71.78	57.76	14.02	5.119	0			
4,600.00	4,598.99	4,599.49	4,599.49	10.08	10.20	179.71	80.50	66.18	14.32	5.620	0			
4,700.00	4,698.60	4,699.10	4,699.10	10.30	10.42	179.74	89.21	74.59	14.63	6.100	0			
4,800.00	4,798.22	4,798.72	4,798.72	10.51	10.65	179.76	97.93	83.00	14.93	6.560	0			
4,900.00	4,897.84	4,898.34	4,898.34	10.73	10.87	179.78	106.65	91.42	15.23	7.002	0			
5,000.00	4,997.46	4,997.96	4,997.96	10.96	11.09	179.80	115.36	99.83	15.53	7.426	0			
5,100.00	5,097.08	5,097.58	5,097.58	11.18	11.32	179.81	124.08	108.24	15.84	7.834	0			
5,200.00	5,196.70	5,197.20	5,197.20	11.41	11.54	179.82	132.79	116.65	16.14	8.225	0			
5,300.00	5,296.32	5,296.82	5,296.82	11.64	11.77	179.83	141.51	125.06	16.45	8.602	0			
5,400.00	5,395.94	5,396.44	5,396.44	11.87	11.99	179.84	150.22	133.47	16.76	8.965	0			
5,500.00	5,495.56	5,496.06	5,496.06	12.10	12.21	179.85	158.94	141.87	17.06	9.314	0			
5,600.00	5,595.18	5,595.68	5,595.68	12.33	12.42	179.86	168.43	151.08	17.35	9.705	0			
5,700.00	5,694.80	5,695.30	5,695.30	12.57	12.61	179.87	179.60	161.97	17.63	10.187	0			
5,800.00	5,794.42	5,794.92	5,794.92	12.80	12.81	179.88	192.43	174.53	17.90	10.749	0			
5,900.00	5,894.04	5,894.54	5,894.54	13.04	13.01	179.89	206.93	188.76	18.17	11.388	0			
6,000.00	5,993.66	5,994.16	5,994.16	13.28	13.22	179.89	223.06	204.63	18.43	12.101	0			
6,100.00	6,093.28	6,093.78	6,093.78	13.52	13.44	179.90	240.38	221.66	18.72	12.843	0			
6,200.00	6,192.90	6,193.40	6,193.40	13.77	13.67	179.91	257.74	238.73	19.01	13.560	0			
6,300.00	6,292.52	6,293.02	6,293.02	14.01	13.90	179.91	275.11	255.81	19.30	14.255	0			
6,400.00	6,392.14	6,392.64	6,392.64	14.25	14.14	179.92	292.47	272.88	19.59	14.928	0			
6,500.00	6,491.76	6,492.26	6,492.26	14.50	14.38	179.92	309.84	289.95	19.89	15.580	0			
6,600.00	6,591.37	6,591.87	6,591.87	14.75	14.62	179.93	327.20	307.02	20.18	16.213	0			
6,700.00	6,690.99	6,691.49	6,691.49	14.99	14.87	179.93	344.57	324.09	20.48	16.827	0			
6,800.00	6,790.61	6,791.11	6,791.11	15.24	15.12	179.93	361.93	341.16	20.77	17.422	0			
6,900.00	6,890.23	6,890.73	6,890.73	15.49	15.38	179.94	379.30	358.22	21.07	18.000	0			
7,000.00	6,989.85	6,990.35	6,990.35	15.74	15.64	179.94	396.66	375.29	21.37	18.561	0			
7,100.00	7,089.47	7,089.97	7,089.97	15.99	15.90	179.94	414.02	392.35	21.67	19.106	0			
7,200.00	7,189.09	7,189.59	7,189.59	16.24	16.17	179.94	431.39	409.42	21.97	19.635	0			
7,300.00	7,288.71	7,289.21	7,289.21	16.50	16.44	179.95	448.75	426.48	22.27	20.149	0			
7,400.00	7,388.33	7,388.83	7,388.83	16.75	16.69	179.95	465.99	443.41	22.58	20.636	0			

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

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Site Error: 0.00
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Database: EDM r5000 US Production
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Offset Design Dzurisin - Seawolf 1-12 Fed 81H - Wellbore #1 - Plan 1													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	
7,500.00	7,487.95	7,459.18	7,453.08	17.00	16.91	179.95	482.43	459.53	22.89	21.071	0		
7,600.00	7,587.57	7,562.38	7,556.04	17.26	17.12	179.95	497.98	474.77	23.21	21.459	0		
7,700.00	7,687.19	7,665.86	7,659.33	17.51	17.33	179.95	512.64	489.12	23.52	21.798	0		
7,800.00	7,786.81	7,769.61	7,762.95	17.77	17.54	179.95	526.40	502.57	23.83	22.092	0		
7,900.00	7,886.43	7,873.62	7,866.87	18.02	17.75	179.96	539.26	515.13	24.14	22.341	0		
8,000.00	7,986.05	7,977.86	7,971.05	18.28	17.96	179.96	551.23	526.78	24.45	22.547	0		
8,100.00	8,085.67	8,082.32	8,075.49	18.54	18.16	179.96	562.29	537.53	24.76	22.712	0		
8,200.00	8,185.29	8,186.99	8,180.14	18.79	18.37	179.96	572.44	547.37	25.07	22.837	0		
8,300.00	8,284.91	8,291.84	8,284.99	19.05	18.56	179.96	581.68	556.31	25.37	22.929	0		
8,400.00	8,384.53	8,391.88	8,385.03	19.31	18.76	179.96	590.40	564.73	25.67	23.000	0		
8,500.00	8,484.14	8,491.49	8,484.64	19.57	18.97	179.96	599.12	573.13	25.98	23.058	0		
8,600.00	8,583.76	8,591.11	8,584.26	19.83	19.19	179.96	607.83	581.53	26.30	23.113	0		
8,700.00	8,683.38	8,690.73	8,683.88	20.09	19.40	179.96	616.55	589.93	26.61	23.167	0		
8,800.00	8,783.00	8,790.35	8,783.50	20.35	19.62	179.96	625.26	598.33	26.93	23.219	0		
8,900.00	8,882.62	8,889.97	8,883.12	20.61	19.83	179.96	633.98	606.73	27.24	23.270	0		
9,000.00	8,982.24	8,989.59	8,982.74	20.87	20.05	179.96	642.69	615.13	27.56	23.319	0		
9,100.00	9,081.86	9,089.21	9,082.36	21.13	20.26	179.96	651.41	623.53	27.88	23.367	0		
9,200.00	9,181.48	9,188.83	9,181.98	21.39	20.48	179.96	660.13	631.93	28.19	23.414	0		
9,300.00	9,281.10	9,288.45	9,281.60	21.65	20.70	179.96	668.84	640.33	28.51	23.460	0		
9,400.00	9,380.72	9,388.07	9,381.22	21.91	20.91	179.97	677.56	648.73	28.83	23.505	0		
9,500.00	9,480.34	9,487.69	9,480.84	22.18	21.13	179.97	686.27	657.13	29.14	23.548	0		
9,600.00	9,580.03	9,587.38	9,580.53	22.41	21.35	179.97	694.12	664.67	29.45	23.571	0		
9,700.00	9,679.84	9,687.19	9,680.34	22.61	21.57	179.97	702.22	670.48	29.74	23.546	0		
9,800.00	9,779.75	9,787.10	9,780.25	22.81	21.78	179.97	704.58	674.56	30.03	23.464	0		
9,900.00	9,879.71	9,887.06	9,880.21	22.99	22.00	179.97	707.20	676.88	30.32	23.326	0		
10,000.00	9,979.70	9,987.05	9,980.20	23.17	22.22	-90.03	708.08	677.47	30.61	23.133	0		
10,100.00	10,079.70	10,087.05	10,080.20	23.36	22.44	-90.03	708.08	677.17	30.91	22.909	0		
10,200.00	10,179.70	10,187.05	10,180.20	23.56	22.66	-90.03	708.08	676.86	31.22	22.683	0		
10,300.00	10,279.70	10,287.05	10,280.20	23.76	22.88	-90.03	708.08	676.55	31.52	22.462	0		
10,400.00	10,379.70	10,387.05	10,380.20	23.97	23.10	-90.03	708.08	676.24	31.83	22.244	0		
10,500.00	10,479.70	10,487.05	10,480.20	24.17	23.32	-90.03	708.08	675.93	32.14	22.031	0		
10,600.00	10,579.70	10,587.05	10,580.20	24.37	23.53	-90.03	708.08	675.63	32.45	21.821	0		
10,700.00	10,679.70	10,687.05	10,680.20	24.58	23.75	-90.03	708.08	675.32	32.76	21.615	0		
10,800.00	10,779.70	10,787.06	10,780.20	24.78	23.97	-90.03	708.08	675.01	33.07	21.413	0		
10,900.00	10,879.70	10,887.06	10,880.20	24.98	24.19	-90.03	708.08	674.70	33.38	21.215	0		
11,000.00	10,979.70	10,987.06	10,980.20	25.19	24.41	-90.03	708.08	674.39	33.69	21.020	0		
11,100.00	11,079.70	11,087.06	11,080.20	25.39	24.63	-90.03	708.08	674.08	34.00	20.829	0		
11,200.00	11,179.70	11,187.06	11,180.20	25.60	24.85	-90.03	708.08	673.77	34.30	20.641	0		
11,300.00	11,279.70	11,287.06	11,280.20	25.81	25.07	-90.03	708.08	673.46	34.61	20.456	0		
11,400.00	11,379.70	11,387.06	11,380.20	26.01	25.29	-90.03	708.08	673.15	34.92	20.275	0		
11,500.00	11,479.70	11,487.06	11,480.20	26.22	25.51	-90.03	708.08	672.84	35.23	20.096	0		
11,600.00	11,579.70	11,587.06	11,580.20	26.42	25.73	-90.03	708.08	672.53	35.54	19.921	0		
11,700.00	11,679.70	11,687.06	11,680.20	26.63	25.95	-90.03	708.08	672.22	35.86	19.748	0		
11,800.00	11,779.70	11,787.06	11,780.20	26.84	26.17	-90.03	708.08	671.91	36.17	19.579	0		
11,900.00	11,879.70	11,887.06	11,880.20	27.05	26.39	-90.03	708.08	671.60	36.48	19.412	0		
12,000.00	11,979.71	11,987.06	11,980.21	27.25	26.61	-90.03	708.08	671.29	36.79	19.248	0		
12,100.00	12,079.71	12,087.06	12,080.21	27.46	26.83	-90.03	708.08	670.98	37.10	19.087	0		
12,127.79	12,107.49	12,114.84	12,107.99	27.52	26.89	-90.03	708.08	670.89	37.18	19.042	0		
12,146.00	12,125.71	12,133.05	12,126.20	27.56	26.93	-90.04	708.08	670.84	37.24	19.014	0		
12,150.00	12,129.70	12,137.04	12,130.19	27.57	26.94	91.06	708.08	670.83	37.25	19.008	0		
12,175.00	12,154.69	12,161.99	12,155.10	27.61	26.99	91.03	708.09	670.78	37.32	18.976	0		
12,200.00	12,179.59	12,186.92	12,179.90	27.65	27.03	90.99	708.14	670.76	37.38	18.946	0		
12,225.00	12,204.35	12,211.83	12,204.51	27.70	27.07	90.95	708.20	670.77	37.44	18.917	0		
12,250.00	12,228.88	12,236.72	12,228.86	27.75	27.12	90.91	708.30	670.80	37.50	18.890	0		

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

Devon Energy

Anticollision Risk Report

Company: WESTERN DIVISION
 Project: PBNM
 Reference Site: Dzurisin
 Site Error: 0.00
 Reference Well: Seawolf 1-12 Fed 82H
 Well Error: 0.00
 Reference Wellbore: Wellbore #1
 Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 82H
 TVD Reference: 1 @ 3342.40ft
 MD Reference: 1 @ 3342.40ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM r5000 US Production
 Offset TVD Reference: Offset Datum

Offset Design Dzurisin - Seawolf 1-12 Fed 81H - Wellbore #1 - Plan 1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Distance						Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Riskd Separation Factor		Probability of Collision	
12,275.00	12,253.14	12,261.59	12,252.90	27.79	27.16	90.86	708.42	670.86	37.56	18.863	0			
12,300.00	12,277.05	12,286.44	12,276.55	27.84	27.21	90.82	708.56	670.95	37.62	18.837	0			
12,325.00	12,300.54	12,311.27	12,299.76	27.89	27.25	90.77	708.73	671.06	37.68	18.811	0			
12,350.00	12,323.55	12,336.08	12,322.46	27.93	27.30	90.72	708.92	671.19	37.74	18.786	0			
12,375.00	12,346.03	12,360.87	12,344.59	27.98	27.35	90.66	709.14	671.34	37.80	18.759	0			
12,400.00	12,367.89	12,385.65	12,366.10	28.03	27.40	90.61	709.38	671.51	37.87	18.731	0			
12,425.00	12,389.10	12,410.41	12,386.93	28.08	27.45	90.55	709.64	671.69	37.95	18.701	0			
12,450.00	12,409.58	12,435.15	12,407.03	28.13	27.50	90.49	709.92	671.89	38.03	18.669	0			
12,475.00	12,429.28	12,459.88	12,426.34	28.18	27.56	90.43	710.22	672.11	38.11	18.634	0			
12,500.00	12,448.15	12,484.59	12,444.81	28.23	27.63	90.37	710.54	672.33	38.21	18.596	0			
12,525.00	12,466.14	12,509.29	12,462.40	28.29	27.70	90.31	710.88	672.57	38.32	18.553	0			
12,550.00	12,483.19	12,533.98	12,479.06	28.35	27.78	90.25	711.24	672.81	38.43	18.506	0			
12,575.00	12,499.27	12,558.65	12,494.75	28.41	27.87	90.18	711.62	673.06	38.56	18.453	0			
12,600.00	12,514.32	12,583.31	12,509.42	28.47	27.98	90.12	712.01	673.30	38.71	18.395	0			
12,625.00	12,528.31	12,607.96	12,523.05	28.54	28.10	90.06	712.42	673.55	38.86	18.332	0			
12,650.00	12,541.19	12,632.60	12,535.60	28.61	28.24	89.99	712.84	673.80	39.03	18.262	0			
12,675.00	12,552.93	12,657.23	12,547.03	28.68	28.40	89.93	713.27	674.05	39.22	18.186	0			
12,700.00	12,563.50	12,681.86	12,557.32	28.76	28.58	89.86	713.71	674.29	39.42	18.103	0			
12,725.00	12,572.88	12,706.48	12,566.44	28.85	28.78	89.80	714.17	674.52	39.64	18.014	0			
12,750.00	12,581.02	12,731.09	12,574.37	28.94	28.99	89.74	714.63	674.75	39.88	17.919	0			
12,775.00	12,587.92	12,755.69	12,581.09	29.04	29.23	89.67	715.10	674.97	40.13	17.818	0			
12,800.00	12,593.55	12,780.30	12,586.58	29.15	29.48	89.61	715.57	675.17	40.40	17.711	0			
12,825.00	12,597.90	12,804.90	12,590.82	29.26	29.76	89.55	716.06	675.37	40.69	17.599	0			
12,850.00	12,600.96	12,829.50	12,593.81	29.37	30.05	89.49	716.54	675.55	40.99	17.482	0			
12,875.00	12,602.71	12,854.10	12,595.54	29.50	30.35	89.44	717.03	675.72	41.30	17.361	0			
12,907.30	12,603.14	12,886.02	12,595.98	29.66	30.77	89.39	717.66	675.93	41.73	17.197	0			
13,000.00	12,602.90	12,978.71	12,595.64	30.20	32.13	89.38	719.47	676.34	43.13	16.683	0			
13,100.00	12,602.63	13,078.69	12,595.27	30.87	33.80	89.37	721.42	676.58	44.84	16.089	0			
13,200.00	12,602.37	13,178.67	12,594.91	31.64	35.64	89.37	723.37	676.61	46.76	15.470	0			
13,300.00	12,602.11	13,278.65	12,594.54	32.49	37.64	89.36	725.33	676.46	48.86	14.844	0			
13,400.00	12,601.84	13,378.63	12,594.17	33.43	39.78	89.35	727.28	676.15	51.13	14.225	0			
13,500.00	12,601.58	13,478.61	12,593.81	34.43	42.02	89.35	729.23	675.70	53.53	13.623	0			
13,600.00	12,601.32	13,578.59	12,593.44	35.50	44.36	89.34	731.18	675.13	56.05	13.045	0			
13,700.00	12,601.05	13,678.57	12,593.08	36.63	46.78	89.33	733.14	674.45	58.68	12.493	0			
13,800.00	12,600.79	13,778.55	12,592.71	37.82	49.27	89.33	735.09	673.68	61.41	11.971	0			
13,900.00	12,600.53	13,878.53	12,592.34	39.06	51.82	89.32	737.04	672.83	64.21	11.479	0			
14,000.00	12,600.26	13,978.52	12,591.98	40.34	54.42	89.32	739.00	671.91	67.08	11.016	0			
14,100.00	12,600.00	14,078.50	12,591.61	41.66	57.06	89.31	740.95	670.93	70.02	10.582	0			
14,200.00	12,599.74	14,178.48	12,591.24	43.02	59.74	89.30	742.90	669.89	73.01	10.175	0			
14,300.00	12,599.47	14,278.46	12,590.88	44.42	62.46	89.30	744.86	668.81	76.05	9.795	0			
14,400.00	12,599.21	14,378.44	12,590.51	45.84	65.20	89.29	746.81	667.68	79.13	9.438	0			
14,500.00	12,598.95	14,478.42	12,590.14	47.30	67.97	89.29	748.76	666.51	82.25	9.104	0			
14,600.00	12,598.68	14,578.40	12,589.78	48.78	70.76	89.28	750.71	665.32	85.40	8.791	0			
14,700.00	12,598.42	14,678.38	12,589.41	50.28	73.57	89.27	752.67	664.09	88.58	8.497	0			
14,800.00	12,598.15	14,778.36	12,589.04	51.80	76.39	89.27	754.62	662.83	91.79	8.221	0			
14,900.00	12,597.89	14,878.34	12,588.68	53.35	79.24	89.26	756.57	661.55	95.02	7.962	0			
15,000.00	12,597.63	14,978.32	12,588.31	54.91	82.09	89.26	758.53	660.25	98.28	7.718	0			
15,100.00	12,597.36	15,078.31	12,587.95	56.48	84.96	89.25	760.48	658.93	101.55	7.489	0			
15,200.00	12,597.10	15,178.29	12,587.58	58.08	87.84	89.24	762.43	657.59	104.84	7.272	0			
15,300.00	12,596.84	15,278.27	12,587.21	59.68	90.74	89.24	764.39	656.24	108.15	7.068	0			
15,400.00	12,596.57	15,378.25	12,586.85	61.30	93.64	89.23	766.34	654.87	111.47	6.875	0			
15,500.00	12,596.31	15,478.23	12,586.48	62.93	96.55	89.23	768.29	653.48	114.81	6.692	0			
15,600.00	12,596.05	15,578.21	12,586.11	64.57	99.46	89.22	770.25	652.09	118.16	6.519	0			
15,700.00	12,595.78	15,678.19	12,585.75	66.22	102.39	89.22	772.20	650.68	121.52	6.355	0			

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

Devon Energy

Anticollision Risk Report

Company: WESTERN DIVISION
Project: PBNM
Reference Site: Dzurisin
Site Error: 0.00
Reference Well: Seawolf 1-12 Fed 82H
Well Error: 0.00
Reference Wellbore: Wellbore #1
Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 82H
TVD Reference: 1 @ 3342.40ft
MD Reference: 1 @ 3342.40ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM r5000 US Production
Offset TVD Reference: Offset Datum

Offset Design Dzurisin - Seawolf 1-12 Fed 81H - Wellbore #1 - Plan 1													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risk Factor	Probability of Collision	
15,800.00	12,595.52	15,778.17	12,585.38	67.88	105.32	89.21	774.15	649.26	124.89	6.199	0		
15,900.00	12,595.26	15,878.15	12,585.01	69.55	108.25	89.20	776.11	647.84	128.27	6.051	0		
16,000.00	12,594.99	15,978.13	12,584.65	71.23	111.20	89.20	778.06	646.40	131.66	5.910	0		
16,100.00	12,594.73	16,078.11	12,584.28	72.91	114.14	89.19	780.01	644.96	135.05	5.776	0		
16,200.00	12,594.46	16,178.10	12,583.91	74.60	117.10	89.19	781.97	643.51	138.46	5.648	0		
16,300.00	12,594.20	16,278.08	12,583.55	76.30	120.05	89.18	783.92	642.05	141.87	5.526	0		
16,400.00	12,593.94	16,378.06	12,583.18	78.00	123.01	89.18	785.87	640.58	145.29	5.409	0		
16,500.00	12,593.67	16,478.04	12,582.82	79.71	125.98	89.17	787.82	639.11	148.71	5.298	0		
16,600.00	12,593.41	16,578.02	12,582.45	81.43	128.94	89.17	789.78	637.64	152.14	5.191	0		
16,700.00	12,593.15	16,678.00	12,582.08	83.15	131.91	89.16	791.73	636.16	155.58	5.089	0		
16,800.00	12,592.88	16,777.98	12,581.72	84.87	134.89	89.15	793.68	634.67	159.02	4.991	0		
16,900.00	12,592.62	16,877.96	12,581.35	86.60	137.86	89.15	795.64	633.18	162.46	4.897	0		
17,000.00	12,592.36	16,977.94	12,580.98	88.33	140.84	89.14	797.59	631.68	165.91	4.807	0		
17,100.00	12,592.09	17,077.92	12,580.62	90.07	143.83	89.14	799.54	630.18	169.36	4.721	0		
17,200.00	12,591.83	17,177.90	12,580.25	91.81	146.81	89.13	801.50	628.68	172.82	4.638	0		
17,300.00	12,591.57	17,277.88	12,579.88	93.56	149.80	89.13	803.45	627.17	176.28	4.558	0		
17,400.00	12,591.30	17,377.87	12,579.52	95.30	152.78	89.12	805.40	625.66	179.74	4.481	0		
17,500.00	12,591.04	17,477.85	12,579.15	97.05	155.77	89.12	807.36	624.15	183.21	4.407	0		
17,600.00	12,590.78	17,577.83	12,578.78	98.81	158.77	89.11	809.31	622.63	186.68	4.335	0		
17,700.00	12,590.51	17,677.81	12,578.42	100.56	161.76	89.11	811.26	621.11	190.15	4.266	0		
17,800.00	12,590.25	17,777.79	12,578.05	102.32	164.76	89.10	813.22	619.59	193.63	4.200	0		
17,900.00	12,589.98	17,877.77	12,577.68	104.08	167.75	89.10	815.17	618.06	197.11	4.136	0		
18,000.00	12,589.72	17,977.75	12,577.32	105.85	170.75	89.09	817.12	616.54	200.59	4.074	0		
18,100.00	12,589.46	18,077.73	12,576.95	107.61	173.75	89.09	819.08	615.01	204.07	4.014	0		
18,200.00	12,589.19	18,177.71	12,576.59	109.38	176.75	89.08	821.03	613.48	207.55	3.956	0		
18,300.00	12,588.93	18,277.69	12,576.22	111.15	179.76	89.08	822.98	611.94	211.04	3.900	0		
18,400.00	12,588.67	18,377.67	12,575.85	112.92	182.76	89.07	824.94	610.41	214.53	3.845	0		
18,500.00	12,588.40	18,477.66	12,575.49	114.70	185.77	89.07	826.89	608.87	218.02	3.793	0		
18,600.00	12,588.14	18,577.64	12,575.12	116.47	188.77	89.06	828.84	607.33	221.51	3.742	0		
18,700.00	12,587.88	18,677.62	12,574.75	118.25	191.78	89.06	830.80	605.79	225.01	3.692	0		
18,800.00	12,587.61	18,777.60	12,574.39	120.03	194.79	89.05	832.75	604.25	228.50	3.644	0		
18,900.00	12,587.35	18,877.58	12,574.02	121.81	197.80	89.05	834.70	602.70	232.00	3.598	0		
19,000.00	12,587.09	18,977.56	12,573.65	123.59	200.81	89.04	836.66	601.16	235.50	3.553	0		
19,100.00	12,586.82	19,077.54	12,573.29	125.38	203.82	89.04	838.61	599.61	239.00	3.509	0		
19,200.00	12,586.56	19,177.52	12,572.92	127.16	206.83	89.03	840.56	598.06	242.50	3.466	0		
19,300.00	12,586.29	19,277.50	12,572.55	128.95	209.84	89.03	842.52	596.51	246.00	3.425	0		
19,400.00	12,586.03	19,377.48	12,572.19	130.73	212.85	89.02	844.47	594.96	249.51	3.385	0		
19,500.00	12,585.77	19,477.46	12,571.82	132.52	215.87	89.02	846.42	593.41	253.01	3.345	0		
19,600.00	12,585.50	19,577.45	12,571.46	134.31	218.88	89.01	848.38	591.86	256.52	3.307	0		
19,700.00	12,585.24	19,677.43	12,571.09	136.10	221.90	89.01	850.33	590.30	260.03	3.270	0		
19,800.00	12,584.98	19,777.41	12,570.72	137.90	224.91	89.00	852.28	588.75	263.54	3.234	0		
19,900.00	12,584.71	19,877.39	12,570.36	139.69	227.93	89.00	854.24	587.19	267.05	3.199	0		
20,000.00	12,584.45	19,977.37	12,569.99	141.48	230.95	89.00	856.19	585.63	270.56	3.165	0		
20,100.00	12,584.19	20,077.35	12,569.62	143.28	233.96	88.99	858.14	584.07	274.07	3.131	0		
20,200.00	12,583.92	20,177.33	12,569.26	145.07	236.98	88.99	860.10	582.52	277.58	3.099	0		
20,300.00	12,583.66	20,277.31	12,568.89	146.87	240.00	88.98	862.05	580.96	281.10	3.067	0		
20,400.00	12,583.40	20,377.29	12,568.52	148.67	243.02	88.98	864.01	579.40	284.61	3.036	0		
20,500.00	12,583.13	20,477.27	12,568.16	150.47	246.04	88.97	865.96	577.83	288.13	3.005	0		
20,600.00	12,582.87	20,577.25	12,567.79	152.27	249.06	88.97	867.91	576.27	291.64	2.976	0		
20,700.00	12,582.60	20,677.24	12,567.42	154.07	252.08	88.96	869.87	574.71	295.16	2.947	0		
20,800.00	12,582.34	20,777.22	12,567.06	155.87	255.10	88.96	871.82	573.14	298.67	2.919	0		
20,900.00	12,582.08	20,877.20	12,566.69	157.67	258.12	88.96	873.77	571.58	302.19	2.891	0		
21,000.00	12,581.81	20,977.18	12,566.33	159.47	261.15	88.95	875.73	570.01	305.71	2.865	0		
21,100.00	12,581.55	21,077.16	12,565.96	161.27	264.17	88.95	877.68	568.45	309.23	2.838	0		

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

Devon Energy

Anticollision Risk Report

Company: WESTERN DIVISION
Project: PBNM
Reference Site: Dzurisin
Site Error: 0.00
Reference Well: Seawolf 1-12 Fed 82H
Well Error: 0.00
Reference Wellbore: Wellbore #1
Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 82H
TVD Reference: 1 @ 3342.40ft
MD Reference: 1 @ 3342.40ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM r5000 US Production
Offset TVD Reference: Offset Datum

Offset Design Dzurisin - Seawolf 1-12 Fed 81H - Wellbore #1 - Plan 1													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	
21,200.00	12,581.29	21,177.14	12,565.59	163.08	267.19	88.94	879.63	566.88	312.75	2.813	0		
21,300.00	12,581.02	21,277.12	12,565.23	164.88	270.21	88.94	881.59	565.32	316.27	2.787	0		
21,400.00	12,580.76	21,377.10	12,564.86	166.69	273.24	88.93	883.54	563.75	319.79	2.763	0		
21,500.00	12,580.50	21,477.08	12,564.49	168.49	276.26	88.93	885.49	562.18	323.31	2.739	0		
21,600.00	12,580.23	21,577.06	12,564.13	170.30	279.29	88.92	887.45	560.61	326.84	2.715	0		
21,700.00	12,579.97	21,677.04	12,563.76	172.10	282.31	88.92	889.40	559.04	330.36	2.692	0		
21,800.00	12,579.71	21,777.03	12,563.39	173.91	285.33	88.92	891.35	557.47	333.88	2.670	0		
21,900.00	12,579.44	21,877.01	12,563.03	175.72	288.36	88.91	893.31	555.90	337.41	2.648	0		
22,000.00	12,579.18	21,976.99	12,562.66	177.53	291.39	88.91	895.26	554.33	340.93	2.626	0		
22,100.00	12,578.92	22,076.97	12,562.29	179.33	294.41	88.90	897.21	552.76	344.45	2.605	0		
22,200.00	12,578.65	22,176.95	12,561.93	181.14	297.44	88.90	899.17	551.19	347.98	2.584	0		
22,300.00	12,578.39	22,276.93	12,561.56	182.95	300.46	88.90	901.12	549.62	351.51	2.564	0		
22,400.00	12,578.12	22,376.91	12,561.19	184.76	303.49	88.89	903.08	548.04	355.03	2.544	0		
22,412.12	12,578.09	22,389.03	12,561.15	184.98	303.86	88.89	903.31	547.85	355.46	2.541	0		
22,447.27	12,578.00	22,424.19	12,561.02	185.58	304.86	88.89	904.00	547.37	356.63	2.535	0		SF

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

Devon Energy
Anticollision Risk Report

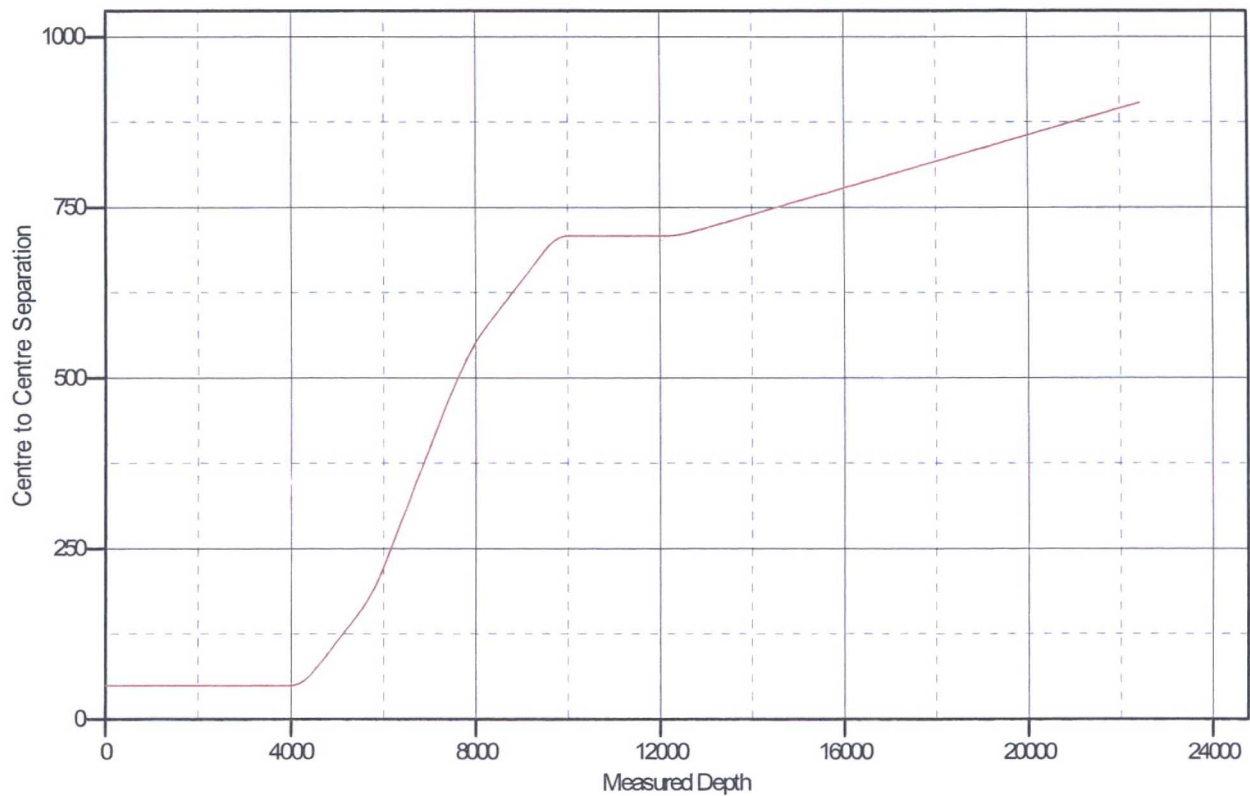
Company: WESTERN DIVISION
Project: PBNM
Reference Site: Dzurisin
Site Error: 0.00
Reference Well: Seawolf 1-12 Fed 82H
Well Error: 0.00
Reference Wellbore: Wellbore #1
Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 82H
TVD Reference: 1 @ 3342.40ft
MD Reference: 1 @ 3342.40ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000 US Production
Offset TVD Reference: Offset Datum

Reference Depths are relative to 1 @ 3342.40ft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334 °

Coordinates are relative to: Seawolf 1-12 Fed 82H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.43°

Ladder Plot



LEGEND

▲ Seawolf 1-12 Fed 81H, Wellbore #1, Plan 1 V0

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

Devon Energy
Anticollision Risk Report

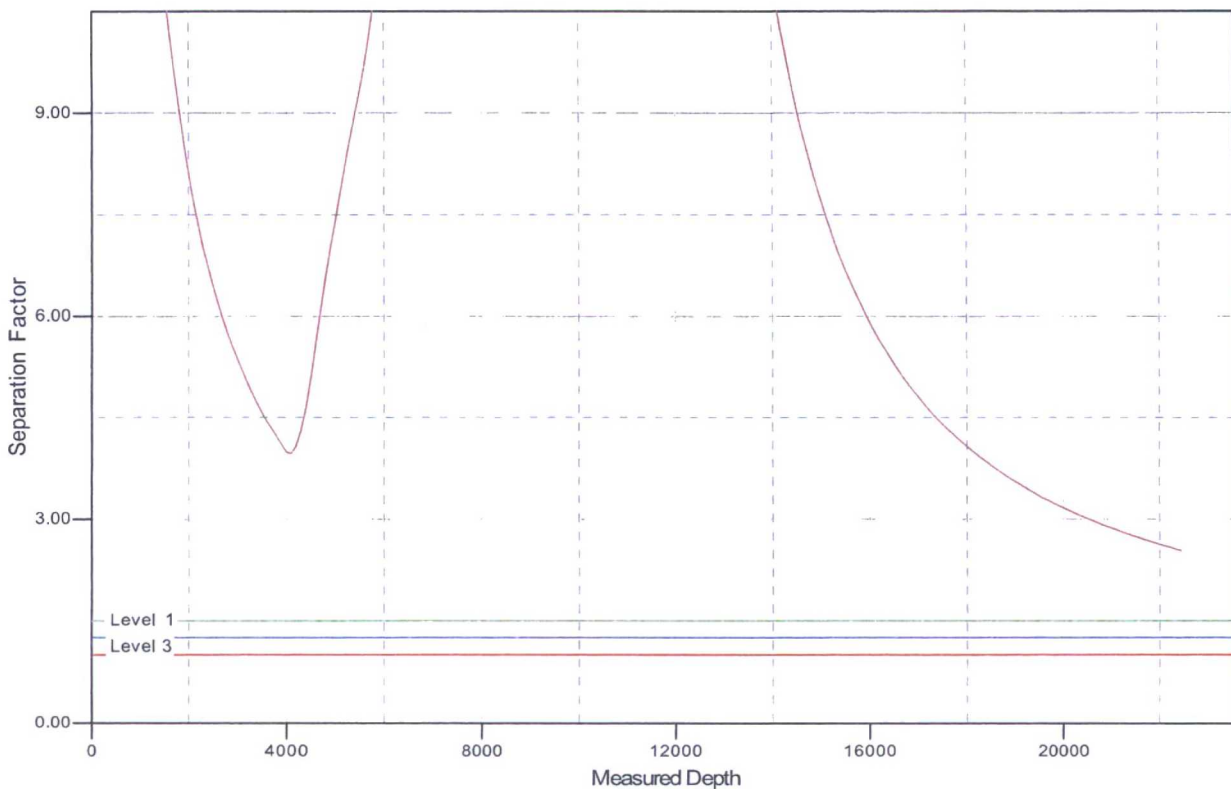
Company: WESTERN DIVISION
Project: PBNM
Reference Site: Dzurisin
Site Error: 0.00
Reference Well: Seawolf 1-12 Fed 82H
Well Error: 0.00
Reference Wellbore: Wellbore #1
Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 82H
TVD Reference: 1 @ 3342.40ft
MD Reference: 1 @ 3342.40ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM r5000 US Production
Offset TVD Reference: Offset Datum

Reference Depths are relative to 1 @ 3342.40ft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334 °

Coordinates are relative to: Seawolf 1-12 Fed 82H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.43°

Separation Factor Plot



LEGEND

▲ Seawolf 1-12 Fed 81H, Wellbore #1, Plan 1 V0

LEAM Drilling Systems LLC

Anticollision Report

Company:	Devon Energy	Local Co-ordinate Reference:	Well 81H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3318.5' GE + 21' KB @ 3339.50usft
Reference Site:	Seawolf 1-12 Fed	MD Reference:	3318.5' GE + 21' KB @ 3339.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	81H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	EDM 5000.1 Multi User Db
Reference Design:	Plan #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	1/23/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	22,574.52	Plan #1 (OH)	LEAM MWD+HDGM	MWD+HDGM

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Seawolf 1-12 Fed						
102H - OH - Plan #1	2,416.50	2,417.00	59.98	49.39	5.663 CC	
102H - OH - Plan #1	2,500.00	2,500.00	59.98	49.02	5.470 ES	
102H - OH - Plan #1	22,575.52	23,182.55	1,073.22	785.70	3.733 SF	
82H - OH - Plan #1	2,845.08	2,844.77	27.05	14.55	2.164 CC, ES	
82H - OH - Plan #1	2,900.00	2,899.35	27.46	14.73	2.156 SF	
91H - OH - Plan #1	3,038.01	3,039.95	22.79	9.53	1.718 CC, ES	
91H - OH - Plan #1	22,575.52	22,696.28	492.20	182.03	1.587 SF	
92H - OH - Plan #1	2,500.00	2,499.70	89.97	79.01	8.205 CC, ES	
92H - OH - Plan #1	22,575.52	22,787.99	1,368.50	1,040.24	4.169 SF	

Offset Design													Offset Site Error: 0.00 usft
Seawolf 1-12 Fed - 102H - OH - Plan #1													Offset Well Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													
Reference	Offset	Semi Major Axis						Distance					Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.50	0.50	0.00	0.00	89.53	0.49	59.98	59.98				
100.00	100.00	100.50	100.50	0.09	0.09	89.53	0.49	59.98	59.98	59.80	0.18	335.678	
200.00	200.00	200.50	200.50	0.31	0.31	89.53	0.49	59.98	59.98	59.35	0.63	95.479	
300.00	300.00	300.50	300.50	0.54	0.54	89.53	0.49	59.98	59.98	58.90	1.08	55.655	
400.00	400.00	400.50	400.50	0.76	0.76	89.53	0.49	59.98	59.98	58.45	1.53	39.274	
500.00	500.00	500.50	500.50	0.99	0.99	89.53	0.49	59.98	59.98	58.01	1.98	30.343	
600.00	600.00	600.50	600.50	1.21	1.21	89.53	0.49	59.98	59.98	57.56	2.43	24.721	
700.00	700.00	700.50	700.50	1.44	1.44	89.53	0.49	59.98	59.98	57.11	2.88	20.857	
800.00	800.00	800.50	800.50	1.66	1.66	89.53	0.49	59.98	59.98	56.66	3.33	18.037	
900.00	900.00	900.50	900.50	1.89	1.89	89.53	0.49	59.98	59.98	56.21	3.77	15.890	
1,000.00	1,000.00	1,000.50	1,000.50	2.11	2.11	89.53	0.49	59.98	59.98	55.76	4.22	14.199	
1,100.00	1,100.00	1,100.50	1,100.50	2.34	2.34	89.53	0.49	59.98	59.98	55.31	4.67	12.833	
1,200.00	1,200.00	1,200.50	1,200.50	2.56	2.56	89.53	0.49	59.98	59.98	54.86	5.12	11.707	
1,300.00	1,300.00	1,300.50	1,300.50	2.79	2.79	89.53	0.49	59.98	59.98	54.41	5.57	10.763	
1,400.00	1,400.00	1,400.50	1,400.50	3.01	3.01	89.53	0.49	59.98	59.98	53.96	6.02	9.959	
1,500.00	1,500.00	1,500.50	1,500.50	3.24	3.24	89.53	0.49	59.98	59.98	53.51	6.47	9.268	
1,600.00	1,600.00	1,600.50	1,600.50	3.46	3.46	89.53	0.49	59.98	59.98	53.06	6.92	8.666	
1,700.00	1,700.00	1,700.50	1,700.50	3.69	3.69	89.53	0.49	59.98	59.98	52.61	7.37	8.137	

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

LEAM Drilling Systems LLC

Anticollision Report

Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 102H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	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)			
1,800.00	1,800.00	1,800.50	1,800.50	3.91	3.91	89.53	0.49	59.98	59.98	52.16	7.82	7.670	
1,900.00	1,900.00	1,900.50	1,900.50	4.13	4.14	89.53	0.49	59.98	59.98	51.71	8.27	7.253	
2,000.00	2,000.00	2,000.50	2,000.50	4.36	4.36	89.53	0.49	59.98	59.98	51.26	8.72	6.879	
2,100.00	2,100.00	2,100.50	2,100.50	4.58	4.59	89.53	0.49	59.98	59.98	50.81	9.17	6.542	
2,200.00	2,200.00	2,200.50	2,200.50	4.81	4.81	89.53	0.49	59.98	59.98	50.36	9.62	6.236	
2,300.00	2,300.00	2,300.50	2,300.50	5.03	5.03	89.53	0.49	59.98	59.98	49.91	10.07	5.957	
2,400.00	2,400.00	2,400.50	2,400.50	5.26	5.26	89.53	0.49	59.98	59.98	49.46	10.52	5.703	
2,416.50	2,416.50	2,417.00	2,417.00	5.30	5.30	89.53	0.49	59.98	59.98	49.39	10.59	5.663 CC	
2,500.00	2,500.00	2,500.00	2,500.00	5.48	5.48	89.53	0.49	59.98	59.98	49.02	10.97	5.470 ES	
2,600.00	2,599.99	2,599.47	2,599.47	5.71	5.70	63.53	0.67	60.82	60.44	49.04	11.40	5.302	
2,700.00	2,699.96	2,698.42	2,698.38	5.93	5.90	65.17	1.20	63.34	61.84	50.03	11.82	5.233	
2,800.00	2,799.86	2,797.30	2,797.16	6.15	6.10	67.73	2.09	67.52	64.28	52.05	12.23	5.255	
2,900.00	2,899.68	2,896.08	2,895.76	6.38	6.31	70.99	3.34	73.37	67.89	55.24	12.65	5.368	
2,999.70	2,999.06	2,994.42	2,993.81	6.60	6.52	74.68	4.92	80.83	72.80	59.73	13.06	5.573	
3,100.00	3,098.99	3,093.23	3,092.17	6.83	6.74	78.00	6.87	89.99	79.37	65.89	13.48	5.886	
3,200.00	3,198.61	3,192.12	3,190.46	7.05	6.96	80.31	9.14	100.67	87.51	73.60	13.92	6.289	
3,300.00	3,298.23	3,291.71	3,289.41	7.29	7.19	82.16	11.48	111.70	96.02	81.65	14.36	6.685	
3,400.00	3,397.85	3,391.31	3,388.36	7.52	7.43	83.70	13.83	122.73	104.60	89.79	14.82	7.060	
3,500.00	3,497.47	3,490.90	3,487.32	7.75	7.66	85.01	16.17	133.75	113.26	97.98	15.27	7.415	
3,600.00	3,597.09	3,590.50	3,586.27	7.99	7.90	86.13	18.52	144.78	121.96	106.22	15.74	7.751	
3,700.00	3,696.71	3,690.09	3,685.23	8.23	8.15	87.10	20.86	155.81	130.70	114.50	16.20	8.068	
3,800.00	3,796.33	3,789.69	3,784.18	8.47	8.39	87.95	23.20	166.84	139.48	122.81	16.67	8.367	
3,900.00	3,895.95	3,889.28	3,883.13	8.71	8.64	88.70	25.55	177.87	148.28	131.14	17.14	8.650	
4,000.00	3,895.57	3,888.87	3,882.09	8.95	8.89	89.37	27.89	188.89	157.10	139.49	17.62	8.918	
4,100.00	4,095.18	4,088.47	4,081.04	9.19	9.15	89.96	30.24	199.92	165.95	147.85	18.09	9.171	
4,200.00	4,194.80	4,188.06	4,180.00	9.44	9.40	90.49	32.58	210.95	174.80	156.23	18.57	9.411	
4,300.00	4,294.42	4,287.66	4,278.95	9.68	9.66	90.98	34.92	221.98	183.68	164.62	19.06	9.639	
4,400.00	4,394.04	4,387.25	4,377.90	9.93	9.92	91.42	37.27	233.01	192.56	173.02	19.54	9.854	
4,500.00	4,493.66	4,486.85	4,476.86	10.18	10.18	91.81	39.61	244.03	201.46	181.43	20.03	10.059	
4,600.00	4,593.28	4,586.44	4,575.81	10.42	10.44	92.18	41.96	255.06	210.36	189.84	20.52	10.253	
4,688.48	4,681.42	4,674.56	4,663.36	10.64	10.68	92.48	44.03	264.82	218.24	197.29	20.95	10.417	
4,700.00	4,692.91	4,686.03	4,674.77	10.67	10.71	92.52	44.30	266.09	219.27	198.27	21.00	10.440	
4,800.00	4,792.57	4,785.64	4,773.73	10.86	10.97	92.74	46.64	277.12	228.16	206.72	21.44	10.642	
4,900.00	4,892.30	4,885.24	4,872.69	11.05	11.24	92.73	48.99	288.15	237.01	215.14	21.87	10.835	
5,000.00	4,992.09	4,984.85	4,971.66	11.25	11.50	92.53	51.33	299.18	245.83	223.52	22.31	11.021	
5,100.00	5,091.94	5,084.44	5,070.61	11.44	11.77	92.14	53.68	310.21	254.61	231.88	22.73	11.199	
5,200.00	5,191.83	5,184.02	5,169.55	11.63	12.04	91.59	56.02	321.23	263.38	240.22	23.16	11.373	
5,300.00	5,291.76	5,283.58	5,268.47	11.82	12.31	90.90	58.36	332.26	272.17	248.59	23.58	11.542	
5,400.00	5,391.71	5,383.10	5,367.35	12.00	12.58	90.08	60.71	343.28	280.99	256.99	24.00	11.709	
5,500.00	5,491.69	5,482.58	5,466.19	12.19	12.85	89.13	63.05	354.29	289.89	265.48	24.41	11.876	
5,600.00	5,591.68	5,582.01	5,564.99	12.37	13.12	88.08	65.39	365.30	298.89	274.08	24.82	12.044	
5,687.87	5,679.55	5,669.34	5,651.75	12.53	13.36	113.64	67.44	374.97	306.93	281.76	25.17	12.193	
5,700.00	5,691.68	5,681.39	5,663.73	12.55	13.39	113.49	67.73	376.31	308.05	282.82	25.22	12.213	
5,800.00	5,791.68	5,780.75	5,762.45	12.77	13.67	112.31	70.07	387.31	317.35	291.69	25.66	12.368	
5,900.00	5,891.68	5,880.11	5,861.17	12.98	13.94	111.19	72.40	398.31	326.78	300.69	26.10	12.523	
6,000.00	5,991.68	5,979.47	5,959.88	13.20	14.21	110.14	74.74	409.31	336.33	309.80	26.53	12.676	
6,100.00	6,091.68	6,078.82	6,058.60	13.41	14.49	109.14	77.08	420.31	345.99	319.02	26.97	12.828	
6,200.00	6,191.68	6,178.18	6,157.32	13.63	14.76	108.20	79.42	431.31	355.74	328.33	27.41	12.979	
6,300.00	6,291.68	6,277.54	6,256.04	13.84	15.04	107.31	81.76	442.32	365.58	337.74	27.85	13.128	
6,400.00	6,391.68	6,376.89	6,354.76	14.06	15.31	106.47	84.10	453.32	375.51	347.22	28.29	13.275	
6,500.00	6,491.68	6,476.25	6,453.48	14.28	15.59	105.66	86.44	464.32	385.51	356.79	28.73	13.420	
6,600.00	6,591.68	6,575.61	6,552.19	14.50	15.86	104.90	88.77	475.32	395.59	366.42	29.17	13.562	

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: 81H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
 TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
 MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Multi User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 102H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDCM												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)					
6,700.00	6,691.68	6,674.97	6,650.91	14.71	16.14	104.18	91.11	486.32	405.73	376.12	29.61	13.703	
6,800.00	6,791.68	6,774.32	6,749.63	14.93	16.42	103.49	93.45	497.32	415.93	385.88	30.05	13.841	
6,900.00	6,891.68	6,873.68	6,848.35	15.15	16.69	102.84	95.79	508.33	426.19	395.69	30.49	13.976	
7,000.00	6,991.68	6,973.04	6,947.07	15.37	16.97	102.22	98.13	519.33	436.50	405.56	30.94	14.109	
7,100.00	7,091.68	7,072.39	7,045.79	15.58	17.25	101.62	100.47	530.33	446.86	415.48	31.38	14.240	
7,200.00	7,191.68	7,171.75	7,144.51	15.80	17.53	101.05	102.80	541.33	457.26	425.44	31.82	14.368	
7,300.00	7,291.68	7,271.11	7,243.22	16.02	17.81	100.51	105.14	552.33	467.71	435.44	32.27	14.494	
7,400.00	7,391.68	7,370.47	7,341.94	16.24	18.09	99.99	107.48	563.34	478.20	445.48	32.71	14.618	
7,500.00	7,491.68	7,469.82	7,440.66	16.46	18.36	99.50	109.82	574.34	488.72	455.56	33.16	14.738	
7,600.00	7,591.68	7,569.18	7,539.38	16.68	18.64	99.02	112.16	585.34	499.28	465.67	33.61	14.857	
7,700.00	7,691.68	7,668.54	7,638.10	16.90	18.92	98.56	114.50	596.34	509.87	475.82	34.05	14.973	
7,800.00	7,791.68	7,767.89	7,736.82	17.12	19.20	98.13	116.84	607.34	520.49	485.99	34.50	15.087	
7,900.00	7,891.68	7,867.25	7,835.54	17.34	19.48	97.71	119.17	618.34	531.14	496.20	34.95	15.199	
8,000.00	7,991.68	7,966.61	7,934.25	17.56	19.76	97.30	121.51	629.35	541.82	506.43	35.39	15.308	
8,100.00	8,091.68	8,065.97	8,032.97	17.78	20.04	96.92	123.85	640.35	552.53	516.68	35.84	15.415	
8,200.00	8,191.68	8,165.32	8,131.69	18.00	20.32	96.54	126.19	651.35	563.25	526.96	36.29	15.520	
8,300.00	8,291.68	8,264.68	8,230.41	18.22	20.60	96.18	128.53	662.35	574.01	537.27	36.74	15.623	
8,400.00	8,391.68	8,364.04	8,329.13	18.44	20.89	95.84	130.87	673.35	584.78	547.59	37.19	15.724	
8,500.00	8,491.68	8,463.39	8,427.85	18.66	21.17	95.50	133.21	684.36	595.57	557.93	37.64	15.823	
8,600.00	8,591.68	8,562.75	8,526.56	18.88	21.45	95.18	135.54	695.36	606.38	568.29	38.09	15.920	
8,700.00	8,691.68	8,662.11	8,625.28	19.10	21.73	94.87	137.88	706.36	617.21	578.67	38.54	16.015	
8,800.00	8,791.68	8,761.47	8,724.00	19.32	22.01	94.57	140.22	717.36	628.06	589.07	38.99	16.108	
8,900.00	8,891.68	8,860.82	8,822.72	19.54	22.29	94.28	142.56	728.36	638.82	599.48	39.44	16.199	
9,000.00	8,991.68	8,960.18	8,921.44	19.76	22.57	94.00	144.90	739.36	649.80	609.91	39.89	16.289	
9,100.00	9,091.68	9,059.54	9,020.16	19.98	22.86	93.73	147.24	750.37	660.70	620.35	40.34	16.376	
9,200.00	9,191.68	9,158.90	9,118.88	20.20	23.14	93.47	149.57	761.37	671.61	630.81	40.80	16.462	
9,300.00	9,291.68	9,258.25	9,217.59	20.42	23.42	93.22	151.91	772.37	682.53	641.28	41.25	16.547	
9,400.00	9,391.68	9,357.61	9,316.31	20.64	23.70	92.97	154.25	783.37	693.46	651.76	41.70	16.629	
9,500.00	9,491.68	9,456.97	9,415.03	20.86	23.98	92.74	156.59	794.37	704.41	662.25	42.15	16.710	
9,600.00	9,591.68	9,556.32	9,513.75	21.08	24.27	92.50	158.93	805.37	715.37	672.76	42.61	16.790	
9,700.00	9,691.68	9,655.68	9,612.47	21.31	24.55	92.28	161.27	816.38	726.34	683.28	43.06	16.868	
9,800.00	9,791.68	9,755.04	9,711.19	21.53	24.83	92.06	163.61	827.38	737.32	693.80	43.51	16.945	
9,900.00	9,891.68	9,854.40	9,809.91	21.75	25.12	91.85	165.94	838.38	748.31	704.34	43.97	17.020	
10,000.00	9,991.68	9,953.75	9,908.62	21.97	25.40	91.65	168.28	849.38	759.31	714.88	44.42	17.093	
10,100.00	10,091.68	10,053.11	10,007.34	22.19	25.68	91.45	170.62	860.38	770.31	725.44	44.88	17.166	
10,200.00	10,191.68	10,152.47	10,106.06	22.41	25.96	91.26	172.96	871.39	781.33	736.00	45.33	17.237	
10,300.00	10,291.68	10,251.82	10,204.78	22.63	26.25	91.07	175.30	882.39	792.36	746.58	45.78	17.307	
10,400.00	10,391.68	10,351.18	10,303.50	22.86	26.53	90.89	177.64	893.39	803.39	757.16	46.24	17.375	
10,500.00	10,491.68	10,450.54	10,402.22	23.08	26.81	90.71	179.97	904.39	814.44	767.74	46.69	17.442	
10,600.00	10,591.68	10,550.64	10,501.68	23.30	27.10	90.54	182.33	915.47	825.48	778.33	47.15	17.508	
10,700.00	10,691.68	10,657.64	10,608.05	23.52	27.34	90.36	184.72	926.74	836.00	788.39	47.60	17.562	
10,800.00	10,791.68	10,764.84	10,714.74	23.74	27.57	90.21	186.92	937.05	845.61	797.56	48.04	17.601	
10,900.00	10,891.68	10,872.24	10,821.70	23.97	27.79	90.07	188.90	946.40	854.31	805.83	48.48	17.622	
11,000.00	10,991.68	10,979.80	10,928.92	24.19	28.01	89.95	190.69	954.78	862.11	813.19	48.92	17.625	
11,100.00	11,091.68	11,087.51	11,036.37	24.41	28.22	89.85	192.26	962.19	868.99	819.64	49.35	17.610	
11,200.00	11,191.68	11,195.36	11,144.02	24.63	28.43	89.76	193.63	968.62	874.95	825.18	49.77	17.579	
11,300.00	11,291.68	11,303.32	11,251.84	24.85	28.63	89.69	194.78	974.06	880.00	829.80	50.20	17.531	
11,400.00	11,391.68	11,411.38	11,359.80	25.08	28.83	89.63	195.73	978.51	884.12	833.50	50.62	17.467	
11,500.00	11,491.68	11,519.52	11,467.87	25.30	29.02	89.58	196.46	981.96	887.32	836.29	51.03	17.387	
11,600.00	11,591.68	11,627.71	11,576.04	25.52	29.21	89.55	196.99	984.42	889.60	838.15	51.45	17.291	
11,700.00	11,691.68	11,735.94	11,684.25	25.74	29.39	89.53	197.30	985.89	890.95	839.09	51.86	17.181	
11,800.00	11,791.68	11,843.87	11,792.18	25.97	29.56	89.52	197.40	986.35	891.38	839.11	52.27	17.054	

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: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 102H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													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 Factor		
11,900.00	11,891.68	11,943.87	11,892.18	26.19	29.74	89.52	197.40	986.35	891.38	838.69	52.69	16.918	
12,000.00	11,991.68	12,043.87	11,992.18	26.41	29.93	89.52	197.40	986.35	891.38	838.26	53.12	16.782	
12,027.87	12,019.55	12,071.73	12,020.05	26.47	29.98	89.52	197.40	986.35	891.38	838.14	53.23	16.744	
12,050.00	12,041.68	12,093.86	12,042.18	26.52	30.02	-90.51	197.40	986.35	891.38	838.06	53.32	16.717	
12,100.00	12,091.49	12,143.68	12,091.99	26.60	30.11	-90.77	197.40	986.35	891.43	837.93	53.50	16.663	
12,150.00	12,140.76	12,192.94	12,141.26	26.67	30.21	-91.28	197.40	986.35	891.58	837.92	53.66	16.616	
12,200.00	12,189.10	12,241.29	12,189.60	26.74	30.30	-92.03	197.40	986.35	891.96	838.16	53.81	16.577	
12,250.00	12,236.16	12,288.34	12,236.66	26.80	30.38	-92.97	197.40	986.35	892.75	838.80	53.94	16.550	
12,300.00	12,281.57	12,333.75	12,282.07	26.86	30.47	-94.05	197.40	986.35	894.16	840.09	54.07	16.537	
12,350.00	12,324.98	12,377.16	12,325.48	26.91	30.55	-95.19	197.40	986.35	896.47	842.27	54.20	16.541	
12,400.00	12,366.07	12,418.25	12,366.57	26.97	30.63	-96.33	197.40	986.35	899.95	845.63	54.32	16.567	
12,450.00	12,404.52	12,456.70	12,405.02	27.02	30.70	-97.39	197.40	986.35	904.91	850.46	54.45	16.619	
12,500.00	12,440.04	12,492.22	12,440.54	27.07	30.77	-98.29	197.40	986.35	911.63	857.04	54.59	16.700	
12,550.00	12,472.36	12,524.54	12,472.86	27.11	30.83	-98.96	197.40	986.35	920.38	865.64	54.74	16.813	
12,600.00	12,501.23	12,553.41	12,501.73	27.16	30.88	-99.32	197.40	986.35	931.39	876.48	54.91	16.962	
12,650.00	12,526.44	12,578.62	12,526.94	27.24	30.93	-99.31	197.40	986.35	944.81	889.72	55.09	17.149	
12,700.00	12,547.79	12,599.97	12,548.29	27.34	30.97	-98.85	197.40	986.35	960.75	905.45	55.29	17.375	
12,750.00	12,565.12	12,617.30	12,565.62	27.45	31.00	-97.91	197.40	986.35	979.21	923.70	55.51	17.641	
12,800.00	12,578.30	12,630.48	12,578.80	27.59	31.03	-96.43	197.40	986.35	1,000.13	944.40	55.73	17.945	
12,850.00	12,587.22	12,679.98	12,628.24	27.74	31.11	-96.91	195.53	986.35	1,023.27	967.31	55.96	18.285	
12,900.00	12,591.83	12,900.92	12,839.65	27.90	31.40	-106.91	136.22	986.35	1,047.44	991.85	55.59	18.842	
12,929.95	12,592.50	13,543.24	13,155.00	28.01	32.33	-122.23	-385.07	986.33	1,053.75	1,000.59	53.16	19.823	
13,000.00	12,592.25	13,613.29	13,155.00	28.29	32.56	-122.24	-455.12	986.33	1,053.89	1,000.32	53.57	19.674	
13,100.00	12,591.89	13,713.29	13,155.00	28.77	32.97	-122.26	-555.12	986.32	1,054.09	999.82	54.27	19.422	
13,200.00	12,591.52	13,813.29	13,155.00	29.32	33.45	-122.28	-655.12	986.32	1,054.29	999.17	55.12	19.129	
13,300.00	12,591.16	13,913.29	13,155.00	29.96	34.01	-122.29	-755.12	986.32	1,054.48	998.39	56.09	18.799	
13,400.00	12,590.80	14,013.29	13,155.00	30.67	34.64	-122.31	-855.12	986.31	1,054.68	997.48	57.20	18.439	
13,500.00	12,590.44	14,113.28	13,155.00	31.45	35.34	-122.32	-955.12	986.31	1,054.88	996.46	58.42	18.056	
13,600.00	12,590.07	14,213.28	13,155.00	32.29	36.10	-122.34	-1,055.12	986.31	1,055.08	995.32	59.76	17.656	
13,700.00	12,589.71	14,313.28	13,155.00	33.19	36.91	-122.36	-1,155.12	986.30	1,055.28	994.08	61.20	17.243	
13,800.00	12,589.35	14,413.28	13,155.00	34.15	37.78	-122.37	-1,255.11	986.30	1,055.47	992.74	62.74	16.823	
13,900.00	12,588.98	14,513.28	13,155.00	35.16	38.71	-122.39	-1,355.11	986.30	1,055.67	991.31	64.37	16.401	
14,000.00	12,588.62	14,613.28	13,155.00	36.21	39.67	-122.41	-1,455.11	986.29	1,055.87	989.79	66.08	15.979	
14,100.00	12,588.26	14,713.28	13,155.00	37.30	40.68	-122.42	-1,555.11	986.29	1,056.07	988.20	67.87	15.561	
14,200.00	12,587.89	14,813.28	13,155.00	38.44	41.73	-122.44	-1,655.11	986.28	1,056.27	986.54	69.73	15.149	
14,300.00	12,587.53	14,913.28	13,155.00	39.60	42.82	-122.46	-1,755.11	986.28	1,056.47	984.81	71.65	14.744	
14,400.00	12,587.17	15,013.28	13,155.00	40.80	43.94	-122.47	-1,855.11	986.28	1,056.66	983.03	73.64	14.349	
14,500.00	12,586.81	15,113.28	13,155.00	42.03	45.09	-122.49	-1,955.11	986.27	1,056.86	981.18	75.68	13.965	
14,600.00	12,586.44	15,213.28	13,155.00	43.29	46.27	-122.51	-2,055.11	986.27	1,057.06	979.29	77.77	13.592	
14,700.00	12,586.08	15,313.28	13,155.00	44.57	47.48	-122.52	-2,155.11	986.27	1,057.26	977.35	79.91	13.231	
14,800.00	12,585.72	15,413.28	13,155.00	45.87	48.71	-122.54	-2,255.11	986.26	1,057.46	975.37	82.09	12.881	
14,900.00	12,585.35	15,513.28	13,155.00	47.19	49.97	-122.56	-2,355.11	986.26	1,057.66	973.35	84.31	12.544	
15,000.00	12,584.99	15,613.27	13,155.00	48.54	51.25	-122.57	-2,455.11	986.26	1,057.86	971.29	86.57	12.219	
15,100.00	12,584.63	15,713.27	13,155.00	49.90	52.54	-122.59	-2,555.11	986.25	1,058.06	969.19	88.86	11.907	
15,200.00	12,584.27	15,813.27	13,155.00	51.27	53.86	-122.60	-2,655.11	986.25	1,058.26	967.07	91.19	11.605	
15,300.00	12,583.90	15,913.27	13,155.00	52.66	55.19	-122.62	-2,755.10	986.25	1,058.46	964.92	93.54	11.316	
15,400.00	12,583.54	16,013.27	13,155.00	54.07	56.54	-122.64	-2,855.10	986.24	1,058.66	962.74	95.92	11.037	
15,500.00	12,583.18	16,113.27	13,155.00	55.48	57.90	-122.65	-2,955.10	986.24	1,058.86	960.54	98.32	10.770	
15,600.00	12,582.81	16,213.27	13,155.00	56.91	59.28	-122.67	-3,055.10	986.24	1,059.06	958.31	100.75	10.512	
15,700.00	12,582.45	16,313.27	13,155.00	58.35	60.67	-122.69	-3,155.10	986.23	1,059.26	956.07	103.19	10.265	
15,800.00	12,582.09	16,413.27	13,155.00	59.80	62.07	-122.70	-3,255.10	986.23	1,059.46	953.80	105.66	10.027	
15,900.00	12,581.73	16,513.27	13,155.00	61.26	63.48	-122.72	-3,355.10	986.23	1,059.66	951.52	108.14	9.799	

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: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 102H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													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	
16,000.00	12,581.36	16,613.27	13,155.00	62.73	64.91	-122.74	-3,455.10	986.22	1,059.86	949.21	110.64	9.579	
16,100.00	12,581.00	16,713.27	13,155.00	64.20	66.34	-122.75	-3,555.10	986.22	1,060.06	946.90	113.16	9.368	
16,200.00	12,580.64	16,813.27	13,155.00	65.69	67.78	-122.77	-3,655.10	986.22	1,060.26	944.57	115.69	9.165	
16,300.00	12,580.27	16,913.27	13,155.00	67.18	69.23	-122.79	-3,755.10	986.21	1,060.46	942.22	118.24	8.969	
16,400.00	12,579.91	17,013.27	13,155.00	68.67	70.69	-122.80	-3,855.10	986.21	1,060.66	939.87	120.79	8.781	
16,500.00	12,579.55	17,113.26	13,155.00	70.17	72.16	-122.82	-3,955.10	986.21	1,060.86	937.50	123.36	8.599	
16,600.00	12,579.18	17,213.26	13,155.00	71.68	73.63	-122.83	-4,055.10	986.20	1,061.06	935.12	125.94	8.425	
16,700.00	12,578.82	17,313.26	13,155.00	73.20	75.11	-122.85	-4,155.10	986.20	1,061.26	932.73	128.53	8.257	
16,800.00	12,578.46	17,413.26	13,155.00	74.71	76.59	-122.87	-4,255.09	986.20	1,061.46	930.33	131.13	8.094	
16,900.00	12,578.10	17,513.26	13,155.00	76.24	78.09	-122.88	-4,355.09	986.19	1,061.66	927.92	133.74	7.938	
17,000.00	12,577.73	17,613.26	13,155.00	77.77	79.58	-122.90	-4,455.09	986.19	1,061.86	925.50	136.36	7.787	
17,100.00	12,577.37	17,713.26	13,155.00	79.30	81.09	-122.92	-4,555.09	986.19	1,062.06	923.08	138.99	7.641	
17,200.00	12,577.01	17,813.26	13,155.00	80.83	82.59	-122.93	-4,655.09	986.18	1,062.27	920.64	141.62	7.501	
17,300.00	12,576.64	17,913.26	13,155.00	82.38	84.11	-122.95	-4,755.09	986.18	1,062.47	918.20	144.26	7.365	
17,400.00	12,576.28	18,013.26	13,155.00	83.92	85.62	-122.96	-4,855.09	986.18	1,062.67	915.76	146.91	7.233	
17,500.00	12,575.92	18,113.26	13,155.00	85.47	87.14	-122.98	-4,955.09	986.17	1,062.87	913.31	149.56	7.106	
17,600.00	12,575.56	18,213.26	13,155.00	87.02	88.67	-123.00	-5,055.09	986.17	1,063.07	910.85	152.22	6.984	
17,700.00	12,575.19	18,313.26	13,155.00	88.57	90.20	-123.01	-5,155.09	986.17	1,063.27	908.39	154.89	6.865	
17,800.00	12,574.83	18,413.26	13,155.00	90.13	91.73	-123.03	-5,255.09	986.16	1,063.47	905.92	157.56	6.750	
17,900.00	12,574.47	18,513.26	13,155.00	91.68	93.27	-123.05	-5,355.09	986.16	1,063.68	903.44	160.23	6.638	
18,000.00	12,574.10	18,613.26	13,155.00	93.25	94.81	-123.06	-5,455.09	986.16	1,063.88	900.97	162.91	6.530	
18,100.00	12,573.74	18,713.25	13,155.00	94.81	96.35	-123.08	-5,555.09	986.15	1,064.08	898.49	165.60	6.426	
18,200.00	12,573.38	18,813.25	13,155.00	96.38	97.89	-123.09	-5,655.09	986.15	1,064.28	896.00	168.28	6.324	
18,300.00	12,573.01	18,913.25	13,155.00	97.94	99.44	-123.11	-5,755.08	986.15	1,064.48	893.51	170.97	6.226	
18,400.00	12,572.65	19,013.25	13,155.00	99.51	100.99	-123.13	-5,855.08	986.14	1,064.69	891.02	173.67	6.131	
18,500.00	12,572.29	19,113.25	13,155.00	101.09	102.55	-123.14	-5,955.08	986.14	1,064.89	888.52	176.37	6.038	
18,600.00	12,571.93	19,213.25	13,155.00	102.66	104.10	-123.16	-6,055.08	986.14	1,065.09	886.02	179.07	5.948	
18,700.00	12,571.56	19,313.25	13,155.00	104.24	105.66	-123.18	-6,155.08	986.13	1,065.29	883.52	181.78	5.860	
18,800.00	12,571.20	19,413.25	13,155.00	105.82	107.22	-123.19	-6,255.08	986.13	1,065.50	881.01	184.48	5.776	
18,900.00	12,570.84	19,513.25	13,155.00	107.39	108.78	-123.21	-6,355.08	986.12	1,065.70	878.50	187.19	5.693	
19,000.00	12,570.47	19,613.25	13,155.00	108.98	110.35	-123.22	-6,455.08	986.12	1,065.90	875.99	189.91	5.613	
19,100.00	12,570.11	19,713.25	13,155.00	110.56	111.92	-123.24	-6,555.08	986.12	1,066.11	873.48	192.62	5.535	
19,200.00	12,569.75	19,813.25	13,155.00	112.14	113.48	-123.26	-6,655.08	986.11	1,066.31	870.97	195.34	5.459	
19,300.00	12,569.39	19,913.25	13,155.00	113.73	115.05	-123.27	-6,755.08	986.11	1,066.51	868.45	198.06	5.385	
19,400.00	12,569.02	20,013.25	13,155.00	115.32	116.63	-123.29	-6,855.08	986.11	1,066.71	865.93	200.78	5.313	
19,500.00	12,568.66	20,113.25	13,155.00	116.90	118.20	-123.30	-6,955.08	986.10	1,066.92	863.41	203.51	5.243	
19,600.00	12,568.30	20,213.24	13,155.00	118.49	119.78	-123.32	-7,055.08	986.10	1,067.12	860.89	206.23	5.174	
19,700.00	12,567.93	20,313.24	13,155.00	120.09	121.35	-123.34	-7,155.08	986.10	1,067.32	858.36	208.96	5.108	
19,800.00	12,567.57	20,413.24	13,155.00	121.68	122.93	-123.35	-7,255.08	986.09	1,067.53	855.84	211.69	5.043	
19,900.00	12,567.21	20,513.24	13,155.00	123.27	124.51	-123.37	-7,355.07	986.09	1,067.73	853.31	214.42	4.980	
20,000.00	12,566.85	20,613.24	13,155.00	124.86	126.09	-123.39	-7,455.07	986.09	1,067.93	850.78	217.15	4.918	
20,100.00	12,566.48	20,713.24	13,155.00	126.46	127.68	-123.40	-7,555.07	986.08	1,068.14	848.25	219.89	4.858	
20,200.00	12,566.12	20,813.24	13,155.00	128.06	129.26	-123.42	-7,655.07	986.08	1,068.34	845.72	222.62	4.799	
20,300.00	12,565.76	20,913.24	13,155.00	129.65	130.85	-123.43	-7,755.07	986.08	1,068.55	843.19	225.36	4.742	
20,400.00	12,565.39	21,013.24	13,155.00	131.25	132.43	-123.45	-7,855.07	986.07	1,068.75	840.65	228.10	4.686	
20,500.00	12,565.03	21,113.24	13,155.00	132.85	134.02	-123.47	-7,955.07	986.07	1,068.95	838.12	230.83	4.631	
20,600.00	12,564.67	21,213.24	13,155.00	134.45	135.61	-123.48	-8,055.07	986.07	1,069.16	835.58	233.57	4.577	
20,700.00	12,564.30	21,313.24	13,155.00	136.05	137.20	-123.50	-8,155.07	986.06	1,069.36	833.05	236.31	4.525	
20,800.00	12,563.94	21,413.24	13,155.00	137.65	138.79	-123.51	-8,255.07	986.06	1,069.57	830.51	239.06	4.474	
20,900.00	12,563.58	21,513.24	13,155.00	139.25	140.38	-123.53	-8,355.07	986.06	1,069.77	827.97	241.80	4.424	
21,000.00	12,563.22	21,613.24	13,155.00	140.86	141.97	-123.55	-8,455.07	986.05	1,069.97	825.43	244.54	4.375	
21,100.00	12,562.85	21,713.23	13,155.00	142.46	143.57	-123.56	-8,555.07	986.05	1,070.18	822.90	247.28	4.328	

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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: 81H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
 TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
 MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Multi User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 102H - OH - Plan #1													Offset Site Error: 0.00 usft	
Survey Program: 0-LEAM MWD+HDGM													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 +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
21,200.00	12,562.49	21,813.23	13,155.00	144.06	145.16	-123.58	-8,655.07	986.05	1,070.38	820.36	250.03	4.281		
21,300.00	12,562.13	21,913.23	13,155.00	145.67	146.76	-123.59	-8,755.07	986.04	1,070.59	817.82	252.77	4.235		
21,400.00	12,561.76	22,013.23	13,155.00	147.27	148.35	-123.61	-8,855.06	986.04	1,070.79	815.27	255.52	4.191		
21,500.00	12,561.40	22,113.23	13,155.00	148.88	149.95	-123.63	-8,955.06	986.04	1,071.00	812.73	258.26	4.147		
21,600.00	12,561.04	22,213.23	13,155.00	150.49	151.55	-123.64	-9,055.06	986.03	1,071.20	810.19	261.01	4.104		
21,700.00	12,560.68	22,313.23	13,155.00	152.10	153.15	-123.66	-9,155.06	986.03	1,071.41	807.65	263.76	4.062		
21,800.00	12,560.31	22,413.23	13,155.00	153.70	154.75	-123.67	-9,255.06	986.03	1,071.61	805.11	266.50	4.021		
21,900.00	12,559.95	22,513.23	13,155.00	155.31	156.35	-123.69	-9,355.06	986.02	1,071.82	802.57	269.25	3.981		
22,000.00	12,559.59	22,613.23	13,155.00	156.92	157.95	-123.71	-9,455.06	986.02	1,072.02	800.02	272.00	3.941		
22,100.00	12,559.22	22,713.23	13,155.00	158.53	159.55	-123.72	-9,555.06	986.02	1,072.23	797.48	274.75	3.903		
22,200.00	12,558.86	22,813.23	13,155.00	160.14	161.15	-123.74	-9,655.06	986.01	1,072.43	794.94	277.50	3.865		
22,300.00	12,558.50	22,913.23	13,155.00	161.75	162.75	-123.75	-9,755.06	986.01	1,072.64	792.39	280.25	3.827		
22,400.00	12,558.13	23,013.23	13,155.00	163.36	164.36	-123.77	-9,855.06	986.01	1,072.85	789.85	283.00	3.791		
22,500.00	12,557.77	23,113.23	13,155.00	164.97	165.96	-123.79	-9,955.06	986.00	1,073.05	787.31	285.74	3.755		
22,574.84	12,557.50	23,182.55	13,155.00	165.91	167.07	-123.80	-10,024.38	986.00	1,073.22	785.70	287.52	3.733		
22,575.52	12,557.50	23,182.55	13,155.00	165.91	167.07	-123.80	-10,024.38	986.00	1,073.22	785.70	287.53	3.733 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: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 82H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	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	0.10	0.10	0.00	0.00	89.54	0.24	29.96	29.96				
100.00	100.00	100.10	100.10	0.09	0.09	89.54	0.24	29.96	29.96	29.78	0.18	168.519	
200.00	200.00	200.10	200.10	0.31	0.31	89.54	0.24	29.96	29.96	29.33	0.63	47.760	
300.00	300.00	300.10	300.10	0.54	0.54	89.54	0.24	29.96	29.96	28.88	1.08	27.823	
400.00	400.00	400.10	400.10	0.76	0.76	89.54	0.24	29.96	29.96	28.43	1.53	19.629	
500.00	500.00	500.10	500.10	0.99	0.99	89.54	0.24	29.96	29.96	27.99	1.98	15.163	
600.00	600.00	600.10	600.10	1.21	1.21	89.54	0.24	29.96	29.96	27.54	2.43	12.353	
700.00	700.00	700.10	700.10	1.44	1.44	89.54	0.24	29.96	29.96	27.09	2.87	10.421	
800.00	800.00	800.10	800.10	1.66	1.66	89.54	0.24	29.96	29.96	26.64	3.32	9.012	
900.00	900.00	900.10	900.10	1.89	1.89	89.54	0.24	29.96	29.96	26.19	3.77	7.939	
1,000.00	1,000.00	1,000.10	1,000.10	2.11	2.11	89.54	0.24	29.96	29.96	25.74	4.22	7.094	
1,100.00	1,100.00	1,100.10	1,100.10	2.34	2.34	89.54	0.24	29.96	29.96	25.29	4.67	6.411	
1,200.00	1,200.00	1,200.10	1,200.10	2.56	2.56	89.54	0.24	29.96	29.96	24.84	5.12	5.849	
1,300.00	1,300.00	1,300.10	1,300.10	2.79	2.79	89.54	0.24	29.96	29.96	24.39	5.57	5.377	
1,400.00	1,400.00	1,400.10	1,400.10	3.01	3.01	89.54	0.24	29.96	29.96	23.94	6.02	4.975	
1,500.00	1,500.00	1,500.10	1,500.10	3.24	3.24	89.54	0.24	29.96	29.96	23.49	6.47	4.630	
1,600.00	1,600.00	1,600.10	1,600.10	3.46	3.46	89.54	0.24	29.96	29.96	23.04	6.92	4.329	
1,700.00	1,700.00	1,700.10	1,700.10	3.69	3.69	89.54	0.24	29.96	29.96	22.59	7.37	4.065	
1,800.00	1,800.00	1,800.10	1,800.10	3.91	3.91	89.54	0.24	29.96	29.96	22.14	7.82	3.831	
1,900.00	1,900.00	1,900.10	1,900.10	4.13	4.13	89.54	0.24	29.96	29.96	21.69	8.27	3.623	
2,000.00	2,000.00	2,000.10	2,000.10	4.36	4.36	89.54	0.24	29.96	29.96	21.24	8.72	3.436	
2,100.00	2,100.00	2,100.10	2,100.10	4.58	4.58	89.54	0.24	29.96	29.96	20.79	9.17	3.268	
2,200.00	2,200.00	2,200.10	2,200.10	4.81	4.81	89.54	0.24	29.96	29.96	20.34	9.62	3.115	
2,300.00	2,300.00	2,300.10	2,300.10	5.03	5.03	89.54	0.24	29.96	29.96	19.89	10.07	2.976	
2,400.00	2,400.00	2,400.10	2,400.10	5.26	5.26	89.54	0.24	29.96	29.96	19.44	10.52	2.849	
2,500.00	2,500.00	2,500.10	2,500.10	5.48	5.48	89.54	0.24	29.96	29.96	18.99	10.97	2.732	
2,600.00	2,599.99	2,600.09	2,600.09	5.71	5.71	64.49	0.24	29.96	29.57	18.16	11.41	2.591	
2,700.00	2,699.96	2,700.06	2,700.06	5.93	5.93	69.24	0.24	29.96	28.54	16.69	11.86	2.407	
2,800.00	2,799.86	2,799.96	2,799.96	6.15	6.16	77.84	0.24	29.96	27.30	15.00	12.31	2.219	
2,845.08	2,844.87	2,844.77	2,844.77	6.25	6.25	82.97	0.24	30.13	27.05	14.55	12.50	2.164 CC, ES	
2,900.00	2,899.68	2,899.35	2,899.35	6.38	6.37	89.85	0.24	30.82	27.46	14.73	12.74	2.156 SF	
2,999.70	2,999.06	2,998.38	2,998.34	6.60	6.56	102.38	0.24	33.39	30.50	17.35	13.15	2.319	
3,100.00	3,098.99	3,097.97	3,097.83	6.83	6.76	111.55	0.24	37.71	36.23	22.65	13.58	2.668	
3,200.00	3,198.61	3,197.21	3,196.89	7.05	6.97	116.24	0.24	43.72	43.62	29.61	14.01	3.114	
3,300.00	3,298.23	3,296.34	3,295.72	7.29	7.17	117.98	0.24	51.44	52.20	37.76	14.44	3.616	
3,400.00	3,397.85	3,395.31	3,394.24	7.52	7.39	117.91	0.24	60.86	61.79	46.93	14.87	4.156	
3,500.00	3,497.47	3,494.06	3,492.37	7.75	7.61	116.75	0.24	71.95	72.39	57.09	15.30	4.731	
3,600.00	3,597.09	3,593.37	3,590.93	7.99	7.83	115.36	0.24	84.05	83.60	67.85	15.75	5.308	
3,700.00	3,696.71	3,692.72	3,689.54	8.23	8.06	114.30	0.24	96.15	94.85	78.64	16.20	5.854	
3,800.00	3,796.33	3,792.07	3,788.16	8.47	8.30	113.46	0.24	108.26	106.12	89.46	16.66	6.369	
3,900.00	3,895.95	3,891.43	3,886.77	8.71	8.54	112.78	0.24	120.37	117.40	100.28	17.12	6.857	
4,000.00	3,995.57	3,990.78	3,985.38	8.95	8.78	112.22	0.24	132.48	128.71	111.12	17.59	7.318	
4,100.00	4,095.18	4,090.13	4,083.99	9.19	9.02	111.75	0.24	144.59	140.02	121.96	18.06	7.754	
4,200.00	4,194.80	4,189.48	4,182.60	9.44	9.27	111.35	0.24	156.69	151.34	132.81	18.53	8.168	
4,300.00	4,294.42	4,288.83	4,281.21	9.68	9.52	111.01	0.24	168.80	162.67	143.66	19.00	8.560	
4,400.00	4,394.04	4,388.19	4,379.83	9.93	9.78	110.71	0.24	180.91	174.00	154.52	19.48	8.932	
4,500.00	4,493.66	4,487.54	4,478.44	10.18	10.03	110.45	0.24	193.02	185.33	165.37	19.96	9.285	
4,600.00	4,593.28	4,586.89	4,577.05	10.42	10.29	110.22	0.24	205.13	196.67	176.23	20.44	9.621	
4,688.48	4,681.42	4,674.79	4,664.30	10.64	10.52	110.03	0.24	215.84	206.71	185.84	20.87	9.905	
4,700.00	4,692.91	4,686.24	4,675.66	10.67	10.55	110.02	0.24	217.23	208.01	187.09	20.92	9.942	
4,800.00	4,792.57	4,785.61	4,774.29	10.86	10.81	109.75	0.24	229.34	219.18	197.82	21.35	10.265	
4,900.00	4,892.30	4,885.00	4,872.93	11.05	11.08	109.31	0.24	241.46	230.06	208.28	21.78	10.563	

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LEAM Drilling Systems LLC

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Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 82H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDM													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)					
5,000.00	4,992.09	4,984.40	4,971.59	11.25	11.34	108.71	0.24	253.57	240.68	218.47	22.21	10.838	
5,100.00	5,091.94	5,083.80	5,070.25	11.44	11.61	107.98	0.24	265.68	251.05	228.42	22.63	11.093	
5,200.00	5,191.83	5,183.20	5,168.91	11.63	11.88	107.13	0.24	277.80	261.22	238.16	23.06	11.330	
5,300.00	5,291.76	5,282.59	5,267.56	11.82	12.15	106.16	0.24	289.91	271.20	247.72	23.48	11.552	
5,400.00	5,391.71	5,381.96	5,366.19	12.00	12.42	105.10	0.24	302.02	281.03	257.14	23.89	11.762	
5,500.00	5,491.69	5,481.31	5,464.80	12.19	12.69	103.94	0.24	314.13	290.75	266.45	24.31	11.962	
5,600.00	5,591.68	5,580.62	5,563.37	12.37	12.97	102.70	0.24	326.23	300.40	275.68	24.71	12.155	
5,687.87	5,679.55	5,667.85	5,649.95	12.53	13.21	128.12	0.24	336.86	308.85	283.78	25.07	12.320	
5,700.00	5,691.68	5,679.89	5,661.90	12.55	13.24	127.95	0.24	338.33	310.02	284.90	25.12	12.341	
5,800.00	5,791.68	5,779.15	5,760.42	12.77	13.52	126.61	0.24	350.43	319.74	294.18	25.56	12.510	
5,900.00	5,891.68	5,878.40	5,858.93	12.98	13.79	125.35	0.24	362.52	329.63	303.63	26.00	12.680	
6,000.00	5,991.68	5,977.66	5,957.45	13.20	14.07	124.16	0.24	374.62	339.67	313.23	26.43	12.849	
6,100.00	6,091.68	6,076.91	6,055.96	13.41	14.35	123.04	0.24	386.71	349.84	322.97	26.87	13.018	
6,200.00	6,191.68	6,176.17	6,154.48	13.63	14.62	121.99	0.24	398.81	360.14	332.83	27.31	13.186	
6,300.00	6,291.68	6,275.42	6,252.99	13.84	14.90	120.99	0.24	410.91	370.55	342.80	27.75	13.353	
6,400.00	6,391.68	6,374.68	6,351.51	14.06	15.18	120.05	0.24	423.00	381.07	352.88	28.19	13.518	
6,500.00	6,491.68	6,473.93	6,450.02	14.28	15.46	119.16	0.24	435.10	391.69	363.06	28.63	13.681	
6,600.00	6,591.68	6,573.19	6,548.54	14.50	15.75	118.32	0.24	447.19	402.39	373.32	29.07	13.842	
6,700.00	6,691.68	6,672.44	6,647.05	14.71	16.03	117.52	0.24	459.29	413.18	383.67	29.51	14.000	
6,800.00	6,791.68	6,771.69	6,745.57	14.93	16.31	116.76	0.24	471.39	424.04	394.09	29.95	14.157	
6,900.00	6,891.68	6,870.95	6,844.08	15.15	16.59	116.03	0.24	483.48	434.97	404.58	30.40	14.311	
7,000.00	6,991.68	6,970.20	6,942.60	15.37	16.87	115.35	0.24	495.58	445.97	415.13	30.84	14.462	
7,100.00	7,091.68	7,069.46	7,041.11	15.58	17.16	114.69	0.24	507.67	457.03	425.75	31.28	14.611	
7,200.00	7,191.68	7,168.71	7,139.63	15.80	17.44	114.07	0.24	519.77	468.14	436.42	31.72	14.757	
7,300.00	7,291.68	7,267.97	7,238.14	16.02	17.73	113.48	0.24	531.87	479.31	447.14	32.17	14.900	
7,400.00	7,391.68	7,367.22	7,336.66	16.24	18.01	112.91	0.24	543.96	490.53	457.91	32.61	15.041	
7,500.00	7,491.68	7,466.48	7,435.17	16.46	18.30	112.37	0.24	556.06	501.79	468.73	33.06	15.179	
7,600.00	7,591.68	7,565.73	7,533.69	16.68	18.58	111.85	0.24	568.16	513.09	479.59	33.50	15.314	
7,700.00	7,691.68	7,664.99	7,632.20	16.90	18.87	111.36	0.24	580.25	524.43	490.48	33.95	15.447	
7,800.00	7,791.68	7,764.24	7,730.72	17.12	19.15	110.88	0.24	592.35	535.81	501.41	34.40	15.578	
7,900.00	7,891.68	7,863.50	7,829.23	17.34	19.44	110.43	0.24	604.44	547.22	512.38	34.84	15.705	
8,000.00	7,991.68	7,962.75	7,927.74	17.56	19.73	109.99	0.24	616.54	558.67	523.38	35.29	15.831	
8,100.00	8,091.68	8,062.00	8,026.26	17.78	20.02	109.58	0.24	628.64	570.15	534.41	35.74	15.954	
8,200.00	8,191.68	8,161.26	8,124.77	18.00	20.30	109.17	0.24	640.73	581.65	545.47	36.19	16.074	
8,300.00	8,291.68	8,260.51	8,223.29	18.22	20.59	108.79	0.24	652.83	593.19	556.55	36.63	16.192	
8,400.00	8,391.68	8,359.77	8,321.80	18.44	20.88	108.42	0.24	664.92	604.75	567.66	37.08	16.308	
8,500.00	8,491.68	8,459.02	8,420.32	18.66	21.17	108.06	0.24	677.02	616.33	578.80	37.53	16.421	
8,600.00	8,591.68	8,558.28	8,518.83	18.88	21.46	107.71	0.24	689.12	627.94	589.95	37.98	16.532	
8,700.00	8,691.68	8,657.53	8,617.35	19.10	21.74	107.38	0.24	701.21	639.56	601.13	38.43	16.641	
8,800.00	8,791.68	8,756.79	8,715.86	19.32	22.03	107.06	0.24	713.31	651.21	612.33	38.88	16.748	
8,900.00	8,891.68	8,856.04	8,814.38	19.54	22.32	106.75	0.24	725.40	662.88	623.55	39.33	16.852	
9,000.00	8,991.68	8,955.30	8,912.89	19.76	22.61	106.45	0.24	737.50	674.57	634.78	39.79	16.955	
9,100.00	9,091.68	9,054.55	9,011.41	19.98	22.90	106.17	0.24	749.60	686.27	646.03	40.24	17.056	
9,200.00	9,191.68	9,153.81	9,109.92	20.20	23.19	105.89	0.24	761.69	697.99	657.30	40.69	17.154	
9,300.00	9,291.68	9,253.06	9,208.44	20.42	23.48	105.62	0.24	773.79	709.73	668.58	41.14	17.251	
9,400.00	9,391.68	9,352.31	9,306.95	20.64	23.77	105.36	0.24	785.89	721.48	679.88	41.59	17.346	
9,500.00	9,491.68	9,451.57	9,405.47	20.86	24.06	105.11	0.24	797.98	733.24	691.19	42.05	17.439	
9,600.00	9,591.68	9,550.82	9,503.98	21.08	24.35	104.86	0.24	810.08	745.02	702.52	42.50	17.530	
9,700.00	9,691.68	9,650.08	9,602.50	21.31	24.64	104.63	0.24	822.17	756.81	713.86	42.95	17.620	
9,800.00	9,791.68	9,749.33	9,701.01	21.53	24.93	104.40	0.24	834.27	768.61	725.21	43.41	17.708	
9,900.00	9,891.68	9,848.59	9,799.53	21.75	25.22	104.17	0.24	846.37	780.43	736.57	43.86	17.794	
10,000.00	9,991.68	9,947.84	9,898.04	21.97	25.51	103.96	0.24	858.46	792.26	747.94	44.31	17.878	

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: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 82H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		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)					
10,100.00	10,091.68	10,047.10	9,996.56	22.19	25.80	103.75	0.24	870.56	804.09	759.33	44.77	17.961	
10,200.00	10,191.68	10,146.35	10,095.07	22.41	26.10	103.55	0.24	882.65	815.94	770.72	45.22	18.043	
10,300.00	10,291.68	10,245.61	10,193.59	22.63	26.39	103.35	0.24	894.75	827.80	782.12	45.68	18.123	
10,400.00	10,391.68	10,344.86	10,292.10	22.86	26.68	103.16	0.24	906.85	839.67	793.53	46.13	18.201	
10,500.00	10,491.68	10,448.73	10,395.22	23.08	26.94	102.96	0.24	919.33	851.38	804.79	46.59	18.274	
10,600.00	10,591.68	10,555.92	10,501.74	23.30	27.18	102.78	0.24	931.30	862.27	815.24	47.04	18.331	
10,700.00	10,691.68	10,663.33	10,608.58	23.52	27.41	102.62	0.24	942.30	872.27	824.78	47.49	18.369	
10,800.00	10,791.68	10,770.93	10,715.72	23.74	27.64	102.48	0.24	952.31	881.35	833.42	47.93	18.389	
10,900.00	10,891.68	10,878.72	10,823.12	23.97	27.87	102.35	0.24	961.33	889.53	841.16	48.37	18.390	
11,000.00	10,991.68	10,986.66	10,930.77	24.19	28.08	102.24	0.24	969.35	896.79	847.98	48.81	18.374	
11,100.00	11,091.68	11,094.75	11,038.63	24.41	28.30	102.15	0.24	976.37	903.13	853.89	49.24	18.341	
11,200.00	11,191.68	11,202.96	11,146.67	24.63	28.50	102.07	0.24	982.37	908.56	858.89	49.67	18.292	
11,300.00	11,291.68	11,311.28	11,254.87	24.85	28.70	102.01	0.24	987.36	913.06	862.96	50.10	18.226	
11,400.00	11,391.68	11,419.67	11,363.20	25.08	28.90	101.95	0.24	991.33	916.64	866.12	50.52	18.144	
11,500.00	11,491.68	11,528.14	11,471.62	25.30	29.09	101.92	0.24	994.27	919.30	868.36	50.94	18.047	
11,600.00	11,591.68	11,636.65	11,580.11	25.52	29.27	101.89	0.24	996.19	921.03	869.67	51.36	17.934	
11,700.00	11,691.68	11,745.19	11,688.65	25.74	29.45	101.88	0.24	997.08	921.83	870.06	51.77	17.806	
11,800.00	11,791.68	11,848.32	11,791.78	25.97	29.63	101.88	0.24	997.15	921.89	869.70	52.19	17.664	
11,900.00	11,891.68	11,948.32	11,891.78	26.19	29.81	101.88	0.24	997.15	921.89	869.28	52.62	17.521	
12,000.00	11,991.68	12,048.32	11,991.78	26.41	30.00	101.88	0.24	997.15	921.89	868.85	53.04	17.381	
12,027.87	12,019.55	12,076.19	12,019.65	26.47	30.05	101.88	0.24	997.15	921.89	868.73	53.16	17.342	
12,050.00	12,041.68	12,094.55	12,038.01	26.52	30.08	-78.15	0.13	997.15	921.84	868.59	53.24	17.314	
12,100.00	12,091.49	12,132.14	12,075.54	26.60	30.15	-78.24	-1.85	997.15	921.53	868.14	53.39	17.259	
12,150.00	12,140.76	12,169.79	12,112.92	26.67	30.21	-78.41	-6.29	997.15	921.02	867.49	53.53	17.207	
12,200.00	12,189.10	12,207.55	12,150.03	26.74	30.27	-78.65	-13.20	997.15	920.29	866.65	53.64	17.156	
12,250.00	12,236.16	12,250.00	12,191.11	26.80	30.35	-78.98	-23.87	997.15	919.40	865.64	53.76	17.103	
12,300.00	12,281.57	12,283.52	12,222.93	26.86	30.40	-79.33	-34.43	997.16	918.30	864.46	53.84	17.057	
12,350.00	12,324.98	12,321.82	12,258.44	26.91	30.47	-79.77	-48.74	997.16	917.06	863.14	53.93	17.006	
12,400.00	12,366.07	12,360.39	12,293.16	26.97	30.53	-80.27	-65.52	997.16	915.71	861.69	54.02	16.953	
12,450.00	12,404.52	12,400.00	12,327.56	27.02	30.60	-80.84	-85.14	997.16	914.26	860.14	54.11	16.895	
12,500.00	12,440.04	12,438.49	12,359.61	27.07	30.67	-81.45	-106.45	997.16	912.75	858.52	54.22	16.833	
12,550.00	12,472.36	12,478.14	12,391.05	27.11	30.74	-82.13	-130.58	997.16	911.21	856.85	54.36	16.764	
12,600.00	12,501.23	12,518.25	12,421.09	27.16	30.82	-82.85	-157.16	997.17	909.68	855.17	54.51	16.687	
12,650.00	12,526.44	12,558.89	12,449.55	27.24	30.90	-83.62	-186.15	997.17	908.20	853.50	54.70	16.604	
12,700.00	12,547.79	12,600.00	12,476.17	27.34	30.98	-84.43	-217.47	997.17	906.80	851.89	54.92	16.513	
12,750.00	12,565.12	12,642.02	12,501.00	27.45	31.07	-85.29	-251.37	997.17	905.53	850.36	55.17	16.414	
12,800.00	12,578.30	12,684.67	12,523.58	27.59	31.18	-86.17	-287.53	997.18	904.42	848.97	55.46	16.309	
12,850.00	12,587.22	12,728.15	12,543.77	27.74	31.29	-87.08	-326.03	997.18	903.51	847.73	55.77	16.199	
12,900.00	12,591.83	12,772.56	12,561.32	27.90	31.42	-88.02	-366.81	997.18	902.82	846.70	56.12	16.087	
12,929.95	12,592.50	12,800.00	12,570.56	28.01	31.51	-88.60	-392.64	997.19	902.53	846.20	56.34	16.020	
13,000.00	12,592.25	12,865.64	12,587.58	28.29	31.73	-89.70	-456.00	997.19	902.26	845.36	56.90	15.857	
13,021.08	12,592.17	12,886.24	12,591.42	28.39	31.81	-89.95	-476.24	997.19	902.25	845.16	57.09	15.805	
13,100.00	12,591.89	12,965.24	12,599.32	28.77	32.14	-90.47	-554.78	997.20	902.29	844.47	57.82	15.604	
13,200.00	12,591.52	13,065.49	12,599.38	29.32	32.62	-90.49	-655.03	997.21	902.31	843.38	58.93	15.312	
13,300.00	12,591.16	13,165.49	12,599.12	29.96	33.18	-90.50	-755.03	997.22	902.33	842.15	60.18	14.994	
13,400.00	12,590.80	13,265.49	12,598.85	30.67	33.81	-90.51	-855.03	997.22	902.34	840.77	61.58	14.653	
13,500.00	12,590.44	13,365.49	12,598.59	31.45	34.51	-90.51	-955.03	997.23	902.36	839.25	63.12	14.297	
13,600.00	12,590.07	13,465.49	12,598.32	32.29	35.27	-90.52	-1,055.03	997.24	902.38	837.60	64.78	13.929	
13,700.00	12,589.71	13,565.49	12,598.06	33.19	36.09	-90.52	-1,155.03	997.25	902.40	835.83	66.57	13.556	
13,800.00	12,589.35	13,665.49	12,597.80	34.15	36.96	-90.53	-1,255.03	997.26	902.41	833.95	68.46	13.181	
13,900.00	12,588.98	13,765.49	12,597.53	35.16	37.89	-90.54	-1,355.03	997.27	902.43	831.97	70.46	12.808	
14,000.00	12,588.62	13,865.49	12,597.27	36.21	38.86	-90.54	-1,455.03	997.28	902.45	829.90	72.55	12.439	

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: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 82H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: O-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,100.00	12,588.26	13,965.49	12,597.00	37.30	39.87	-90.55	-1,555.03	997.28	902.47	827.75	74.72	12.078	
14,200.00	12,587.89	14,065.49	12,596.74	38.44	40.93	-90.56	-1,655.03	997.29	902.48	825.51	76.97	11.725	
14,300.00	12,587.53	14,165.49	12,596.47	39.60	42.02	-90.56	-1,755.03	997.30	902.50	823.21	79.29	11.382	
14,400.00	12,587.17	14,265.49	12,596.21	40.80	43.15	-90.57	-1,855.03	997.31	902.52	820.84	81.68	11.050	
14,500.00	12,586.81	14,365.49	12,595.94	42.03	44.30	-90.57	-1,955.03	997.32	902.54	818.41	84.12	10.729	
14,600.00	12,586.44	14,465.49	12,595.68	43.29	45.49	-90.58	-2,055.03	997.33	902.55	815.93	86.62	10.419	
14,700.00	12,586.08	14,565.49	12,595.41	44.57	46.70	-90.59	-2,155.03	997.33	902.57	813.40	89.17	10.122	
14,800.00	12,585.72	14,665.49	12,595.15	45.87	47.94	-90.59	-2,255.03	997.34	902.59	810.82	91.77	9.836	
14,900.00	12,585.35	14,765.49	12,594.89	47.19	49.20	-90.60	-2,355.03	997.35	902.61	808.20	94.40	9.561	
15,000.00	12,584.99	14,865.49	12,594.62	48.54	50.49	-90.60	-2,455.02	997.36	902.63	805.55	97.08	9.298	
15,100.00	12,584.63	14,965.49	12,594.36	49.90	51.79	-90.61	-2,555.02	997.37	902.64	802.85	99.79	9.046	
15,200.00	12,584.27	15,065.49	12,594.09	51.27	53.11	-90.62	-2,655.02	997.38	902.66	800.13	102.53	8.804	
15,300.00	12,583.90	15,165.49	12,593.83	52.66	54.45	-90.62	-2,755.02	997.39	902.68	797.37	105.30	8.572	
15,400.00	12,583.54	15,265.49	12,593.56	54.07	55.80	-90.63	-2,855.02	997.39	902.70	794.59	108.10	8.350	
15,500.00	12,583.18	15,365.49	12,593.30	55.48	57.17	-90.64	-2,955.02	997.40	902.71	791.78	110.93	8.138	
15,600.00	12,582.81	15,465.49	12,593.03	56.91	58.55	-90.64	-3,055.02	997.41	902.73	788.95	113.78	7.934	
15,700.00	12,582.45	15,565.49	12,592.77	58.35	59.95	-90.65	-3,155.02	997.42	902.75	786.10	116.65	7.739	
15,800.00	12,582.09	15,665.49	12,592.51	59.80	61.35	-90.65	-3,255.02	997.43	902.77	783.22	119.54	7.552	
15,900.00	12,581.73	15,765.49	12,592.24	61.26	62.77	-90.66	-3,355.02	997.44	902.78	780.33	122.45	7.372	
16,000.00	12,581.36	15,865.49	12,591.98	62.73	64.20	-90.67	-3,455.02	997.44	902.80	777.42	125.38	7.200	
16,100.00	12,581.00	15,965.49	12,591.71	64.20	65.64	-90.67	-3,555.02	997.45	902.82	774.49	128.33	7.035	
16,200.00	12,580.64	16,065.49	12,591.45	65.69	67.08	-90.68	-3,655.02	997.46	902.84	771.55	131.29	6.877	
16,300.00	12,580.27	16,165.49	12,591.18	67.18	68.54	-90.69	-3,755.02	997.47	902.86	768.59	134.26	6.725	
16,400.00	12,579.91	16,265.49	12,590.92	68.67	70.00	-90.69	-3,855.02	997.48	902.87	765.62	137.25	6.578	
16,500.00	12,579.55	16,365.49	12,590.65	70.17	71.47	-90.70	-3,955.02	997.49	902.89	762.64	140.25	6.438	
16,600.00	12,579.18	16,465.49	12,590.39	71.68	72.95	-90.70	-4,055.02	997.50	902.91	759.65	143.26	6.302	
16,700.00	12,578.82	16,565.49	12,590.12	73.20	74.43	-90.71	-4,155.02	997.50	902.93	756.64	146.28	6.172	
16,800.00	12,578.46	16,665.49	12,589.86	74.71	75.92	-90.72	-4,255.02	997.51	902.94	753.63	149.32	6.047	
16,900.00	12,578.10	16,765.49	12,589.60	76.24	77.41	-90.72	-4,355.02	997.52	902.96	750.60	152.36	5.926	
17,000.00	12,577.73	16,865.49	12,589.33	77.77	78.92	-90.73	-4,455.02	997.53	902.98	747.57	155.41	5.810	
17,100.00	12,577.37	16,965.49	12,589.07	79.30	80.42	-90.74	-4,555.02	997.54	903.00	744.52	158.47	5.698	
17,200.00	12,577.01	17,065.49	12,588.80	80.83	81.93	-90.74	-4,655.02	997.55	903.02	741.47	161.54	5.590	
17,300.00	12,576.64	17,165.49	12,588.54	82.38	83.45	-90.75	-4,755.02	997.55	903.03	738.41	164.62	5.486	
17,400.00	12,576.28	17,265.49	12,588.27	83.92	84.97	-90.75	-4,855.02	997.56	903.05	735.35	167.70	5.385	
17,500.00	12,575.92	17,365.49	12,588.01	85.47	86.49	-90.76	-4,955.02	997.57	903.07	732.28	170.79	5.288	
17,600.00	12,575.56	17,465.49	12,587.74	87.02	88.02	-90.77	-5,055.01	997.58	903.09	729.20	173.89	5.193	
17,700.00	12,575.19	17,565.49	12,587.48	88.57	89.55	-90.77	-5,155.01	997.59	903.10	726.11	176.99	5.103	
17,800.00	12,574.83	17,665.49	12,587.22	90.13	91.09	-90.78	-5,255.01	997.60	903.12	723.02	180.10	5.015	
17,900.00	12,574.47	17,765.49	12,586.95	91.68	92.63	-90.79	-5,355.01	997.61	903.14	719.93	183.22	4.929	
18,000.00	12,574.10	17,865.49	12,586.69	93.25	94.17	-90.79	-5,455.01	997.61	903.16	716.82	186.33	4.847	
18,100.00	12,573.74	17,965.49	12,586.42	94.81	95.72	-90.80	-5,555.01	997.62	903.18	713.72	189.46	4.767	
18,200.00	12,573.38	18,065.49	12,586.16	96.38	97.26	-90.80	-5,655.01	997.63	903.19	710.61	192.59	4.690	
18,300.00	12,573.01	18,165.49	12,585.89	97.94	98.81	-90.81	-5,755.01	997.64	903.21	707.49	195.72	4.615	
18,400.00	12,572.65	18,265.49	12,585.63	99.51	100.37	-90.82	-5,855.01	997.65	903.23	704.37	198.86	4.542	
18,500.00	12,572.29	18,365.49	12,585.36	101.09	101.92	-90.82	-5,955.01	997.66	903.25	701.25	202.00	4.471	
18,600.00	12,571.93	18,465.49	12,585.10	102.66	103.48	-90.83	-6,055.01	997.66	903.27	698.12	205.15	4.403	
18,700.00	12,571.56	18,565.49	12,584.83	104.24	105.04	-90.84	-6,155.01	997.67	903.28	694.99	208.30	4.336	
18,800.00	12,571.20	18,665.49	12,584.57	105.82	106.61	-90.84	-6,255.01	997.68	903.30	691.85	211.45	4.272	
18,900.00	12,570.84	18,765.49	12,584.31	107.39	108.17	-90.85	-6,355.01	997.69	903.32	688.71	214.61	4.209	
19,000.00	12,570.47	18,865.49	12,584.04	108.98	109.74	-90.85	-6,455.01	997.70	903.34	685.57	217.77	4.148	
19,100.00	12,570.11	18,965.49	12,583.78	110.56	111.31	-90.86	-6,555.01	997.71	903.36	682.42	220.93	4.089	
19,200.00	12,569.75	19,065.49	12,583.51	112.14	112.88	-90.87	-6,655.01	997.72	903.37	679.28	224.10	4.031	

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: 81H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
 TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
 MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: EDM 5000.1 Multi User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 82H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: O-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	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)			
19,300.00	12,569.39	19,165.49	12,583.25	113.73	114.45	-90.87	-6,755.01	997.72	903.39	676.13	227.27	3.975	
19,400.00	12,569.02	19,265.49	12,582.98	115.32	116.03	-90.88	-6,855.01	997.73	903.41	672.97	230.44	3.920	
19,500.00	12,568.66	19,365.49	12,582.72	116.90	117.60	-90.89	-6,955.01	997.74	903.43	669.82	233.61	3.867	
19,600.00	12,568.30	19,465.49	12,582.45	118.49	119.18	-90.89	-7,055.01	997.75	903.45	666.66	236.79	3.815	
19,700.00	12,567.93	19,565.49	12,582.19	120.09	120.76	-90.90	-7,155.01	997.76	903.46	663.50	239.97	3.765	
19,800.00	12,567.57	19,665.49	12,581.93	121.68	122.34	-90.90	-7,255.01	997.77	903.48	660.33	243.15	3.716	
19,900.00	12,567.21	19,765.49	12,581.66	123.27	123.92	-90.91	-7,355.01	997.77	903.50	657.17	246.34	3.668	
20,000.00	12,566.85	19,865.49	12,581.40	124.86	125.50	-90.92	-7,455.01	997.78	903.52	654.00	249.52	3.621	
20,100.00	12,566.48	19,965.49	12,581.13	126.46	127.09	-90.92	-7,555.00	997.79	903.54	650.83	252.71	3.575	
20,200.00	12,566.12	20,065.49	12,580.87	128.06	128.67	-90.93	-7,655.00	997.80	903.56	647.66	255.90	3.531	
20,300.00	12,565.76	20,165.49	12,580.60	129.65	130.26	-90.94	-7,755.00	997.81	903.57	644.48	259.09	3.487	
20,400.00	12,565.39	20,265.49	12,580.34	131.25	131.85	-90.94	-7,855.00	997.82	903.59	641.31	262.29	3.445	
20,500.00	12,565.03	20,365.49	12,580.07	132.85	133.44	-90.95	-7,955.00	997.83	903.61	638.13	265.48	3.404	
20,600.00	12,564.67	20,465.49	12,579.81	134.45	135.03	-90.95	-8,055.00	997.83	903.63	634.95	268.68	3.363	
20,700.00	12,564.30	20,565.49	12,579.54	136.05	136.62	-90.96	-8,155.00	997.84	903.65	631.77	271.88	3.324	
20,800.00	12,563.94	20,665.49	12,579.28	137.65	138.21	-90.97	-8,255.00	997.85	903.66	628.59	275.08	3.285	
20,900.00	12,563.58	20,765.49	12,579.02	139.25	139.81	-90.97	-8,355.00	997.86	903.68	625.40	278.28	3.247	
21,000.00	12,563.22	20,865.49	12,578.75	140.86	141.40	-90.98	-8,455.00	997.87	903.70	622.22	281.48	3.210	
21,100.00	12,562.85	20,965.49	12,578.49	142.46	142.99	-90.98	-8,555.00	997.88	903.72	619.03	284.69	3.174	
21,200.00	12,562.49	21,065.49	12,578.22	144.06	144.59	-90.99	-8,655.00	997.88	903.74	615.84	287.89	3.139	
21,300.00	12,562.13	21,165.49	12,577.96	145.67	146.19	-91.00	-8,755.00	997.89	903.76	612.65	291.10	3.105	
21,400.00	12,561.76	21,265.49	12,577.69	147.27	147.79	-91.00	-8,855.00	997.90	903.77	609.46	294.31	3.071	
21,500.00	12,561.40	21,365.49	12,577.43	148.88	149.38	-91.01	-8,955.00	997.91	903.79	606.27	297.52	3.038	
21,600.00	12,561.04	21,465.49	12,577.16	150.49	150.98	-91.02	-9,055.00	997.92	903.81	603.08	300.73	3.005	
21,700.00	12,560.68	21,565.49	12,576.90	152.10	152.58	-91.02	-9,155.00	997.93	903.83	599.88	303.95	2.974	
21,800.00	12,560.31	21,665.49	12,576.64	153.70	154.18	-91.03	-9,255.00	997.93	903.85	596.69	307.16	2.943	
21,900.00	12,559.95	21,765.49	12,576.37	155.31	155.79	-91.03	-9,355.00	997.94	903.87	593.49	310.37	2.912	
22,000.00	12,559.59	21,865.49	12,576.11	156.92	157.39	-91.04	-9,455.00	997.95	903.88	590.29	313.59	2.882	
22,100.00	12,559.22	21,965.49	12,575.84	158.53	158.99	-91.05	-9,555.00	997.96	903.90	587.09	316.81	2.853	
22,200.00	12,558.86	22,065.49	12,575.58	160.14	160.59	-91.05	-9,655.00	997.97	903.92	583.90	320.03	2.825	
22,300.00	12,558.50	22,165.49	12,575.31	161.75	162.20	-91.06	-9,755.00	997.98	903.94	580.69	323.24	2.796	
22,400.00	12,558.13	22,265.49	12,575.05	163.36	163.80	-91.07	-9,855.00	997.99	903.96	577.49	326.46	2.769	
22,500.00	12,557.77	22,365.49	12,574.78	164.97	165.41	-91.07	-9,955.00	997.99	903.98	574.29	329.69	2.742	
22,505.02	12,557.75	22,370.51	12,574.77	165.04	165.49	-91.07	-9,960.02	997.99	903.98	574.15	329.83	2.741	
22,574.84	12,557.50	22,434.80	12,574.60	165.91	166.52	-91.08	-10,024.30	998.00	904.01	572.19	331.82	2.724	
22,575.52	12,557.50	22,434.80	12,574.60	165.91	166.52	-91.08	-10,024.30	998.00	904.01	572.18	331.83	2.724	

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: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 91H - OH - Plan #1														Offset Site Error: 0.00 usft
Survey Program: O-LEAM MWD+HDGM														Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)				Between Centres (usft)	Between Ellipses (usft)	
0.00	0.00	0.10	0.10	0.00	0.00	-90.34	-0.18	-30.02	30.02					
100.00	100.00	100.10	100.10	0.09	0.09	-90.34	-0.18	-30.02	30.02	29.84	0.18	168.854		
200.00	200.00	200.10	200.10	0.31	0.31	-90.34	-0.18	-30.02	30.02	29.39	0.63	47.855		
300.00	300.00	300.10	300.10	0.54	0.54	-90.34	-0.18	-30.02	30.02	28.94	1.08	27.878		
400.00	400.00	400.10	400.10	0.76	0.76	-90.34	-0.18	-30.02	30.02	28.49	1.53	19.668		
500.00	500.00	500.10	500.10	0.99	0.99	-90.34	-0.18	-30.02	30.02	28.04	1.98	15.193		
600.00	600.00	600.10	600.10	1.21	1.21	-90.34	-0.18	-30.02	30.02	27.60	2.43	12.377		
700.00	700.00	700.10	700.10	1.44	1.44	-90.34	-0.18	-30.02	30.02	27.15	2.87	10.442		
800.00	800.00	800.10	800.10	1.66	1.66	-90.34	-0.18	-30.02	30.02	26.70	3.32	9.030		
900.00	900.00	900.10	900.10	1.89	1.89	-90.34	-0.18	-30.02	30.02	26.25	3.77	7.954		
1,000.00	1,000.00	1,000.10	1,000.10	2.11	2.11	-90.34	-0.18	-30.02	30.02	25.80	4.22	7.108		
1,100.00	1,100.00	1,100.10	1,100.10	2.34	2.34	-90.34	-0.18	-30.02	30.02	25.35	4.67	6.424		
1,200.00	1,200.00	1,200.10	1,200.10	2.56	2.56	-90.34	-0.18	-30.02	30.02	24.90	5.12	5.860		
1,300.00	1,300.00	1,300.10	1,300.10	2.79	2.79	-90.34	-0.18	-30.02	30.02	24.45	5.57	5.388		
1,400.00	1,400.00	1,400.10	1,400.10	3.01	3.01	-90.34	-0.18	-30.02	30.02	24.00	6.02	4.985		
1,500.00	1,500.00	1,500.10	1,500.10	3.24	3.24	-90.34	-0.18	-30.02	30.02	23.55	6.47	4.639		
1,600.00	1,600.00	1,600.10	1,600.10	3.46	3.46	-90.34	-0.18	-30.02	30.02	23.10	6.92	4.338		
1,700.00	1,700.00	1,700.10	1,700.10	3.69	3.69	-90.34	-0.18	-30.02	30.02	22.65	7.37	4.073		
1,800.00	1,800.00	1,800.10	1,800.10	3.91	3.91	-90.34	-0.18	-30.02	30.02	22.20	7.82	3.839		
1,900.00	1,900.00	1,900.10	1,900.10	4.13	4.13	-90.34	-0.18	-30.02	30.02	21.75	8.27	3.630		
2,000.00	2,000.00	2,000.10	2,000.10	4.36	4.36	-90.34	-0.18	-30.02	30.02	21.30	8.72	3.443		
2,100.00	2,100.00	2,100.10	2,100.10	4.58	4.58	-90.34	-0.18	-30.02	30.02	20.85	9.17	3.274		
2,200.00	2,200.00	2,200.10	2,200.10	4.81	4.81	-90.34	-0.18	-30.02	30.02	20.40	9.62	3.121		
2,300.00	2,300.00	2,300.10	2,300.10	5.03	5.03	-90.34	-0.18	-30.02	30.02	19.95	10.07	2.982		
2,400.00	2,400.00	2,400.10	2,400.10	5.26	5.26	-90.34	-0.18	-30.02	30.02	19.50	10.52	2.854		
2,500.00	2,500.00	2,500.10	2,500.10	5.48	5.48	-90.34	-0.18	-30.02	30.02	19.05	10.97	2.737		
2,600.00	2,599.99	2,600.60	2,600.59	5.71	5.70	-117.91	0.09	-29.18	29.58	18.18	11.40	2.594		
2,700.00	2,699.96	2,701.07	2,701.03	5.93	5.91	-121.09	0.91	-26.67	28.33	16.50	11.83	2.395		
2,800.00	2,799.86	2,801.48	2,801.34	6.15	6.12	-127.02	2.27	-22.48	26.46	14.21	12.25	2.160		
2,900.00	2,899.68	2,901.81	2,901.48	6.38	6.33	-136.66	4.17	-16.63	24.39	11.73	12.67	1.926		
2,999.70	2,999.06	3,001.72	3,001.08	6.60	6.55	-150.96	6.60	-9.14	22.93	9.84	13.09	1.752		
3,038.01	3,037.23	3,039.95	3,039.16	6.69	6.63	-157.40	7.63	-5.97	22.79	9.53	13.26	1.718 CC, ES		
3,100.00	3,098.99	3,101.80	3,100.78	6.83	6.77	-167.75	9.30	-0.85	23.16	9.62	13.54	1.710		
3,200.00	3,198.61	3,201.57	3,200.17	7.05	6.99	-177.09	11.99	7.42	25.26	11.25	14.01	1.803		
3,300.00	3,298.23	3,301.35	3,299.57	7.29	7.22	-164.95	14.67	15.69	28.81	14.33	14.48	1.990		
3,400.00	3,397.85	3,401.12	3,398.96	7.52	7.45	-155.77	17.36	23.96	33.35	18.40	14.94	2.232		
3,500.00	3,497.47	3,500.89	3,498.35	7.75	7.68	-148.91	20.05	32.23	38.53	23.12	15.41	2.501		
3,600.00	3,597.09	3,600.67	3,597.75	7.99	7.91	-143.74	22.73	40.51	44.14	28.26	15.88	2.780		
3,700.00	3,696.71	3,700.44	3,697.14	8.23	8.14	-139.75	25.42	48.78	50.02	33.67	16.35	3.060		
3,800.00	3,796.33	3,800.21	3,796.54	8.47	8.38	-136.62	28.11	57.05	56.09	39.27	16.82	3.335		
3,900.00	3,895.95	3,899.99	3,895.93	8.71	8.62	-134.10	30.80	65.32	62.29	45.00	17.29	3.602		
4,000.00	3,995.57	3,999.76	3,995.32	8.95	8.86	-132.04	33.48	73.59	68.60	50.83	17.77	3.861		
4,100.00	4,095.18	4,099.54	4,094.72	9.19	9.10	-130.33	36.17	81.86	74.97	56.73	18.25	4.109		
4,200.00	4,194.80	4,199.31	4,194.11	9.44	9.34	-128.89	38.86	90.13	81.41	62.68	18.73	4.348		
4,300.00	4,294.42	4,299.08	4,293.50	9.68	9.58	-127.66	41.55	98.40	87.88	68.68	19.21	4.576		
4,400.00	4,394.04	4,398.86	4,392.90	9.93	9.82	-126.60	44.23	106.67	94.40	74.71	19.69	4.794		
4,500.00	4,493.66	4,498.63	4,492.29	10.18	10.07	-125.67	46.92	114.94	100.94	80.76	20.17	5.003		
4,600.00	4,593.28	4,598.40	4,591.69	10.42	10.31	-124.86	49.61	123.21	107.50	86.84	20.66	5.203		
4,688.48	4,681.42	4,686.68	4,679.63	10.64	10.53	-124.22	51.98	130.52	113.32	92.23	21.09	5.373		
4,700.00	4,692.91	4,698.18	4,691.08	10.67	10.56	-124.15	52.29	131.48	114.08	92.94	21.14	5.396		
4,800.00	4,792.57	4,797.96	4,790.49	10.86	10.81	-123.32	54.98	139.75	120.38	98.81	21.57	5.580		
4,900.00	4,892.30	4,897.76	4,889.91	11.05	11.06	-122.24	57.67	148.02	126.24	104.23	22.01	5.736		

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: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 91H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	Offset Wellbore Centre +E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,000.00	4,992.09	4,997.57	4,989.33	11.25	11.31	120.94	60.36	156.29	131.69	109.26	22.44	5.869	
5,100.00	5,091.94	5,097.37	5,088.76	11.44	11.55	119.42	63.05	164.57	136.78	113.91	22.87	5.981	
5,200.00	5,191.83	5,197.17	5,188.17	11.63	11.80	117.70	65.73	172.84	141.56	118.25	23.30	6.075	
5,300.00	5,291.76	5,296.95	5,287.58	11.82	12.06	115.79	68.42	181.11	146.07	122.34	23.73	6.156	
5,400.00	5,391.71	5,396.71	5,386.95	12.00	12.31	113.69	71.11	189.38	150.39	126.23	24.15	6.226	
5,500.00	5,491.69	5,496.43	5,486.30	12.19	12.56	111.42	73.79	197.64	154.58	130.00	24.57	6.291	
5,600.00	5,591.68	5,596.12	5,585.60	12.37	12.81	108.97	76.48	205.91	158.72	133.73	24.99	6.352	
5,687.87	5,679.55	5,683.67	5,672.82	12.53	13.03	133.25	78.84	213.17	162.38	137.04	25.34	6.407	
5,700.00	5,691.68	5,695.76	5,684.86	12.55	13.06	132.93	79.16	214.17	162.89	137.50	25.40	6.414	
5,800.00	5,791.68	5,795.38	5,784.10	12.77	13.31	130.32	81.84	222.42	167.31	141.48	25.83	6.476	
5,900.00	5,891.68	5,894.99	5,883.34	12.98	13.57	127.86	84.53	230.68	172.06	145.79	26.27	6.550	
6,000.00	5,991.68	5,994.61	5,982.58	13.20	13.82	125.53	87.21	238.94	177.11	150.41	26.70	6.632	
6,100.00	6,091.68	6,094.23	6,081.82	13.41	14.07	123.33	89.89	247.20	182.44	155.30	27.14	6.723	
6,200.00	6,191.68	6,193.85	6,181.07	13.63	14.33	121.27	92.58	255.45	188.02	160.45	27.57	6.820	
6,300.00	6,291.68	6,293.47	6,280.31	13.84	14.58	119.32	95.26	263.71	193.83	165.83	28.00	6.922	
6,400.00	6,391.68	6,393.09	6,379.55	14.06	14.84	117.48	97.94	271.97	199.86	171.42	28.43	7.029	
6,500.00	6,491.68	6,492.71	6,478.79	14.28	15.09	115.76	100.63	280.23	206.07	177.21	28.86	7.140	
6,600.00	6,591.68	6,592.33	6,578.03	14.50	15.35	114.14	103.31	288.48	212.46	183.17	29.29	7.253	
6,700.00	6,691.68	6,691.95	6,677.27	14.71	15.60	112.61	105.99	296.74	219.02	189.29	29.73	7.368	
6,800.00	6,791.68	6,791.57	6,776.51	14.93	15.86	111.17	108.67	305.00	225.71	195.56	30.16	7.484	
6,900.00	6,891.68	6,891.19	6,875.75	15.15	16.11	109.82	111.36	313.26	232.55	201.96	30.59	7.602	
7,000.00	6,991.68	6,990.81	6,974.99	15.37	16.37	108.54	114.04	321.51	239.50	208.48	31.02	7.720	
7,100.00	7,091.68	7,090.43	7,074.23	15.58	16.63	107.33	116.72	329.77	246.57	215.11	31.46	7.838	
7,200.00	7,191.68	7,190.05	7,173.47	15.80	16.88	106.20	119.41	338.03	253.74	221.84	31.89	7.956	
7,300.00	7,291.68	7,289.67	7,272.71	16.02	17.14	105.12	122.09	346.29	261.00	228.67	32.33	8.074	
7,400.00	7,391.68	7,389.29	7,371.95	16.24	17.40	104.11	124.77	354.54	268.35	235.58	32.76	8.190	
7,500.00	7,491.68	7,488.91	7,471.19	16.46	17.65	103.15	127.46	362.80	275.78	242.58	33.20	8.306	
7,600.00	7,591.68	7,588.53	7,570.43	16.68	17.91	102.23	130.14	371.06	283.28	249.64	33.64	8.421	
7,700.00	7,691.68	7,688.15	7,669.67	16.90	18.17	101.37	132.82	379.32	290.85	256.77	34.08	8.535	
7,800.00	7,791.68	7,787.76	7,768.91	17.12	18.43	100.55	135.50	387.57	298.48	263.97	34.51	8.648	
7,900.00	7,891.68	7,887.38	7,868.15	17.34	18.68	99.77	138.19	395.83	306.17	271.22	34.95	8.759	
8,000.00	7,991.68	7,987.00	7,967.39	17.56	18.94	99.03	140.87	404.09	313.92	278.52	35.39	8.869	
8,100.00	8,091.68	8,086.62	8,066.63	17.78	19.20	98.33	143.55	412.35	321.71	285.88	35.83	8.978	
8,200.00	8,191.68	8,186.24	8,165.87	18.00	19.46	97.66	146.24	420.60	329.55	293.28	36.28	9.085	
8,300.00	8,291.68	8,285.86	8,265.11	18.22	19.71	97.01	148.92	428.86	337.43	300.72	36.72	9.190	
8,400.00	8,391.68	8,385.48	8,364.35	18.44	19.97	96.40	151.60	437.12	345.36	308.20	37.16	9.294	
8,500.00	8,491.68	8,485.10	8,463.59	18.66	20.23	95.82	154.29	445.38	353.32	315.71	37.60	9.396	
8,600.00	8,591.68	8,584.72	8,562.83	18.88	20.49	95.26	156.97	453.63	361.31	323.27	38.05	9.497	
8,700.00	8,691.68	8,684.34	8,662.07	19.10	20.75	94.73	159.65	461.89	369.34	330.85	38.49	9.596	
8,800.00	8,791.68	8,783.96	8,761.32	19.32	21.01	94.22	162.33	470.15	377.40	338.46	38.93	9.693	
8,900.00	8,891.68	8,883.58	8,860.56	19.54	21.27	93.73	165.02	478.41	385.49	346.11	39.38	9.789	
9,000.00	8,991.68	8,983.20	8,959.80	19.76	21.53	93.26	167.70	486.66	393.60	353.78	39.82	9.883	
9,100.00	9,091.68	9,082.82	9,059.04	19.98	21.78	92.81	170.38	494.92	401.74	361.47	40.27	9.976	
9,200.00	9,191.68	9,182.44	9,158.28	20.20	22.04	92.38	173.07	503.18	409.90	369.19	40.72	10.067	
9,300.00	9,291.68	9,284.97	9,260.45	20.42	22.28	91.96	175.73	511.38	417.80	376.64	41.16	10.151	
9,400.00	9,391.68	9,388.26	9,363.44	20.64	22.49	91.60	178.13	518.77	424.89	383.30	41.58	10.218	
9,500.00	9,491.68	9,491.69	9,466.64	20.86	22.69	91.30	180.25	525.29	431.14	389.14	42.00	10.266	
9,600.00	9,591.68	9,595.23	9,570.01	21.08	22.89	91.04	182.08	530.93	436.55	394.13	42.41	10.293	
9,700.00	9,691.68	9,698.86	9,673.53	21.31	23.09	90.83	183.63	535.69	441.11	398.28	42.83	10.300	
9,800.00	9,791.68	9,802.58	9,777.17	21.53	23.28	90.66	184.89	539.55	444.82	401.58	43.24	10.288	
9,900.00	9,891.68	9,906.37	9,880.91	21.75	23.46	90.53	185.85	542.53	447.68	404.03	43.65	10.257	
10,000.00	9,991.68	10,010.20	9,984.72	21.97	23.65	90.44	186.53	544.61	449.68	405.63	44.05	10.208	

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: 81H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
 TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
 MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: EDM 5000.1 Multi User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 91H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
10,100.00	10,091.68	10,114.07	10,088.57	22.19	23.83	90.39	186.91	545.80	450.82	406.37	10.141		
10,200.00	10,191.68	10,217.28	10,191.78	22.41	24.00	90.38	187.01	546.11	451.12	406.25	10.055		
10,300.00	10,291.68	10,317.28	10,291.78	22.63	24.19	90.38	187.01	546.11	451.12	405.83	9.962		
10,400.00	10,391.68	10,417.28	10,391.78	22.86	24.39	90.38	187.01	546.11	451.12	405.40	9.868		
10,500.00	10,491.68	10,517.28	10,491.78	23.08	24.59	90.38	187.01	546.11	451.12	404.97	9.775		
10,600.00	10,591.68	10,617.28	10,591.78	23.30	24.79	90.38	187.01	546.11	451.12	404.54	9.685		
10,700.00	10,691.68	10,717.28	10,691.78	23.52	24.99	90.38	187.01	546.11	451.12	404.10	9.596		
10,800.00	10,791.68	10,817.28	10,791.78	23.74	25.19	90.38	187.01	546.11	451.12	403.67	9.508		
10,900.00	10,891.68	10,917.28	10,891.78	23.97	25.39	90.38	187.01	546.11	451.12	403.24	9.422		
11,000.00	10,991.68	11,017.28	10,991.78	24.19	25.60	90.38	187.01	546.11	451.12	402.80	9.338		
11,100.00	11,091.68	11,117.28	11,091.78	24.41	25.80	90.38	187.01	546.11	451.12	402.37	9.254		
11,200.00	11,191.68	11,217.28	11,191.78	24.63	26.00	90.38	187.01	546.11	451.12	401.94	9.173		
11,300.00	11,291.68	11,317.28	11,291.78	24.85	26.20	90.38	187.01	546.11	451.12	401.50	9.092		
11,400.00	11,391.68	11,417.28	11,391.78	25.08	26.41	90.38	187.01	546.11	451.12	401.07	9.014		
11,500.00	11,491.68	11,517.28	11,491.78	25.30	26.61	90.38	187.01	546.11	451.12	400.63	8.936		
11,600.00	11,591.68	11,617.28	11,591.78	25.52	26.82	90.38	187.01	546.11	451.12	400.20	8.860		
11,700.00	11,691.68	11,717.28	11,691.78	25.74	27.02	90.38	187.01	546.11	451.12	399.76	8.784		
11,800.00	11,791.68	11,817.28	11,791.78	25.97	27.22	90.38	187.01	546.11	451.12	399.33	8.711		
11,900.00	11,891.68	11,917.28	11,891.78	26.19	27.43	90.38	187.01	546.11	451.12	398.89	8.638		
12,000.00	11,991.68	12,017.28	11,991.78	26.41	27.63	90.38	187.01	546.11	451.12	398.45	8.566		
12,027.87	12,019.55	12,045.15	12,019.65	26.47	27.69	90.38	187.01	546.11	451.12	398.33	8.547		
12,050.00	12,041.68	12,067.27	12,041.78	26.52	27.74	-89.68	187.01	546.11	451.11	398.24	8.532		
12,086.02	12,077.61	12,103.20	12,077.71	26.57	27.81	-90.00	187.01	546.11	451.11	398.10	8.511		
12,100.00	12,091.49	12,117.09	12,091.59	26.60	27.84	-90.20	187.01	546.11	451.11	398.06	8.503		
12,150.00	12,140.76	12,166.57	12,141.07	26.67	27.94	-91.23	186.88	546.11	451.21	398.00	8.480		
12,200.00	12,189.10	12,216.94	12,191.32	26.74	28.03	-92.42	183.58	546.11	451.52	398.18	8.464		
12,250.00	12,236.16	12,268.20	12,241.95	26.80	28.11	-93.59	175.70	546.11	452.03	398.56	8.454		
12,300.00	12,281.57	12,320.38	12,292.56	26.86	28.18	-94.75	163.07	546.11	452.71	399.14	8.450		
12,350.00	12,324.98	12,373.50	12,342.69	26.91	28.25	-95.87	145.54	546.11	453.57	399.90	8.451		
12,400.00	12,366.07	12,427.60	12,391.84	26.97	28.31	-96.96	122.99	546.11	454.56	400.81	8.456		
12,450.00	12,404.52	12,482.68	12,439.47	27.02	28.37	-98.00	95.38	546.11	455.67	401.84	8.465		
12,500.00	12,440.04	12,538.73	12,485.00	27.07	28.43	-98.98	62.72	546.10	456.85	402.95	8.476		
12,550.00	12,472.36	12,595.74	12,527.80	27.11	28.49	-99.89	25.10	546.10	458.07	404.10	8.487		
12,600.00	12,501.23	12,653.67	12,567.25	27.16	28.54	-100.73	-17.28	546.10	459.27	405.23	8.498		
12,650.00	12,526.44	12,712.46	12,602.71	27.24	28.61	-101.47	-64.15	546.10	460.43	406.30	8.506		
12,700.00	12,547.79	12,772.04	12,633.55	27.34	28.68	-102.11	-115.10	546.10	461.49	407.25	8.509		
12,750.00	12,565.12	12,832.32	12,659.20	27.45	28.77	-102.64	-169.61	546.10	462.41	408.04	8.504		
12,800.00	12,578.30	12,893.17	12,679.15	27.59	28.88	-103.06	-227.07	546.10	463.17	408.62	8.491		
12,850.00	12,587.22	12,954.47	12,692.96	27.74	29.02	-103.36	-286.76	546.10	463.72	408.94	8.465		
12,900.00	12,591.83	13,016.06	12,700.35	27.90	29.20	-103.54	-347.88	546.10	464.05	408.99	8.428		
12,929.95	12,592.50	13,052.67	12,701.61	28.01	29.32	-103.58	-384.46	546.10	464.13	408.88	8.400		
13,000.00	12,592.25	13,122.72	12,701.98	28.29	29.59	-103.66	-454.51	546.10	464.29	408.50	8.323		
13,100.00	12,591.89	13,222.71	12,702.51	28.77	30.04	-103.76	-554.51	546.10	464.50	407.84	8.197		
13,200.00	12,591.52	13,322.71	12,703.04	29.32	30.58	-103.87	-654.50	546.10	464.73	407.01	8.053		
13,300.00	12,591.16	13,422.71	12,703.57	29.96	31.20	-103.98	-754.49	546.10	464.95	406.04	7.893		
13,400.00	12,590.80	13,522.70	12,704.10	30.67	31.89	-104.08	-854.49	546.10	465.17	404.92	7.720		
13,500.00	12,590.44	13,622.70	12,704.63	31.45	32.64	-104.19	-954.48	546.10	465.40	403.67	7.540		
13,600.00	12,590.07	13,722.69	12,705.16	32.29	33.46	-104.30	-1,054.48	546.10	465.62	402.30	7.353		
13,700.00	12,589.71	13,822.69	12,705.68	33.19	34.34	-104.40	-1,154.47	546.10	465.85	400.82	7.163		
13,800.00	12,589.35	13,922.69	12,706.21	34.15	35.28	-104.51	-1,254.47	546.10	466.08	399.23	6.972		
13,900.00	12,588.98	14,022.68	12,706.74	35.16	36.26	-104.61	-1,354.46	546.10	466.31	397.55	6.781		
14,000.00	12,588.62	14,122.68	12,707.27	36.21	37.29	-104.72	-1,454.46	546.10	466.55	395.78	6.592		

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: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 91H - OH - Plan #1												Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toothface (")	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)					
14,100.00	12,588.26	14,222.67	12,707.80	37.30	38.36	-104.83	-1,554.45	546.10	466.78	393.93	72.85	6.407	
14,200.00	12,587.89	14,322.67	12,708.33	38.44	39.46	-104.93	-1,654.45	546.10	467.02	392.01	75.01	6.226	
14,300.00	12,587.53	14,422.67	12,708.86	39.60	40.61	-105.04	-1,754.44	546.10	467.26	390.02	77.23	6.050	
14,400.00	12,587.17	14,522.66	12,709.39	40.80	41.79	-105.14	-1,854.44	546.10	467.50	387.98	79.52	5.879	
14,500.00	12,586.81	14,622.66	12,709.91	42.03	42.99	-105.25	-1,954.43	546.10	467.74	385.88	81.86	5.714	
14,600.00	12,586.44	14,722.65	12,710.44	43.29	44.23	-105.35	-2,054.42	546.10	467.98	383.73	84.25	5.555	
14,700.00	12,586.08	14,822.65	12,710.97	44.57	45.49	-105.46	-2,154.42	546.10	468.23	381.54	86.69	5.401	
14,800.00	12,585.72	14,922.65	12,711.50	45.87	46.77	-105.56	-2,254.41	546.10	468.47	379.30	89.17	5.254	
14,900.00	12,585.35	15,022.64	12,712.03	47.19	48.07	-105.67	-2,354.41	546.10	468.72	377.03	91.69	5.112	
15,000.00	12,584.99	15,122.64	12,712.56	48.54	49.39	-105.77	-2,454.40	546.10	468.97	374.73	94.24	4.976	
15,100.00	12,584.63	15,222.64	12,713.09	49.90	50.74	-105.88	-2,554.40	546.10	469.22	372.40	96.82	4.846	
15,200.00	12,584.27	15,322.63	12,713.62	51.27	52.09	-105.98	-2,654.39	546.10	469.47	370.03	99.44	4.721	
15,300.00	12,583.90	15,422.63	12,714.14	52.66	53.47	-106.08	-2,754.39	546.10	469.73	367.65	102.08	4.602	
15,400.00	12,583.54	15,522.62	12,714.67	54.07	54.86	-106.19	-2,854.38	546.10	469.98	365.24	104.74	4.487	
15,500.00	12,583.18	15,622.62	12,715.20	55.48	56.26	-106.29	-2,954.38	546.10	470.24	362.81	107.43	4.377	
15,600.00	12,582.81	15,722.62	12,715.73	56.91	57.67	-106.40	-3,054.37	546.10	470.50	360.36	110.14	4.272	
15,700.00	12,582.45	15,822.61	12,716.26	58.35	59.09	-106.50	-3,154.37	546.10	470.76	357.89	112.87	4.171	
15,800.00	12,582.09	15,922.61	12,716.79	59.80	60.53	-106.60	-3,254.36	546.10	471.02	355.41	115.61	4.074	
15,900.00	12,581.73	16,022.60	12,717.32	61.26	61.98	-106.71	-3,354.35	546.10	471.28	352.91	118.37	3.981	
16,000.00	12,581.36	16,122.60	12,717.85	62.73	63.43	-106.81	-3,454.35	546.10	471.55	350.40	121.14	3.892	
16,100.00	12,581.00	16,222.60	12,718.37	64.20	64.89	-106.91	-3,554.34	546.10	471.81	347.88	123.93	3.807	
16,200.00	12,580.64	16,322.59	12,718.90	65.69	66.36	-107.02	-3,654.34	546.10	472.08	345.35	126.73	3.725	
16,300.00	12,580.27	16,422.59	12,719.43	67.18	67.84	-107.12	-3,754.33	546.10	472.35	342.81	129.54	3.646	
16,400.00	12,579.91	16,522.58	12,719.96	68.67	69.33	-107.22	-3,854.33	546.10	472.62	340.26	132.36	3.571	
16,500.00	12,579.55	16,622.58	12,720.49	70.17	70.82	-107.33	-3,954.32	546.10	472.89	337.70	135.19	3.498	
16,600.00	12,579.18	16,722.58	12,721.02	71.68	72.32	-107.43	-4,054.32	546.09	473.17	335.13	138.03	3.428	
16,700.00	12,578.82	16,822.57	12,721.55	73.20	73.82	-107.53	-4,154.31	546.09	473.44	332.56	140.88	3.361	
16,800.00	12,578.46	16,922.57	12,722.08	74.71	75.33	-107.63	-4,254.31	546.09	473.72	329.99	143.73	3.296	
16,900.00	12,578.10	17,022.56	12,722.60	76.24	76.84	-107.74	-4,354.30	546.09	474.00	327.40	146.59	3.233	
17,000.00	12,577.73	17,122.56	12,723.13	77.77	78.36	-107.84	-4,454.30	546.09	474.28	324.82	149.46	3.173	
17,100.00	12,577.37	17,222.56	12,723.66	79.30	79.89	-107.94	-4,554.29	546.09	474.56	322.23	152.33	3.115	
17,200.00	12,577.01	17,322.55	12,724.19	80.83	81.42	-108.04	-4,654.28	546.09	474.84	319.64	155.21	3.059	
17,300.00	12,576.64	17,422.55	12,724.72	82.38	82.95	-108.15	-4,754.28	546.09	475.13	317.04	158.09	3.005	
17,400.00	12,576.28	17,522.54	12,725.25	83.92	84.48	-108.25	-4,854.27	546.09	475.41	314.44	160.97	2.953	
17,500.00	12,575.92	17,622.54	12,725.78	85.47	86.02	-108.35	-4,954.27	546.09	475.70	311.84	163.86	2.903	
17,600.00	12,575.56	17,722.54	12,726.31	87.02	87.57	-108.45	-5,054.26	546.09	475.99	309.24	166.75	2.854	
17,700.00	12,575.19	17,822.53	12,726.83	88.57	89.11	-108.55	-5,154.26	546.09	476.28	306.63	169.65	2.807	
17,800.00	12,574.83	17,922.53	12,727.36	90.13	90.66	-108.65	-5,254.25	546.09	476.57	304.03	172.54	2.762	
17,900.00	12,574.47	18,022.52	12,727.89	91.68	92.21	-108.75	-5,354.25	546.09	476.86	301.42	175.44	2.718	
18,000.00	12,574.10	18,122.52	12,728.42	93.25	93.77	-108.86	-5,454.24	546.09	477.16	298.82	178.34	2.676	
18,100.00	12,573.74	18,222.52	12,728.95	94.81	95.33	-108.96	-5,554.24	546.09	477.46	296.21	181.25	2.634	
18,200.00	12,573.38	18,322.51	12,729.48	96.38	96.89	-109.06	-5,654.23	546.09	477.75	293.60	184.15	2.594	
18,300.00	12,573.01	18,422.51	12,730.01	97.94	98.45	-109.16	-5,754.23	546.09	478.05	291.00	187.06	2.556	
18,400.00	12,572.65	18,522.50	12,730.54	99.51	100.01	-109.26	-5,854.22	546.09	478.35	288.39	189.96	2.518	
18,500.00	12,572.29	18,622.50	12,731.06	101.09	101.58	-109.36	-5,954.22	546.09	478.66	285.79	192.87	2.482	
18,600.00	12,571.93	18,722.50	12,731.59	102.66	103.15	-109.46	-6,054.21	546.09	478.96	283.18	195.78	2.446	
18,700.00	12,571.56	18,822.49	12,732.12	104.24	104.72	-109.56	-6,154.20	546.09	479.26	280.58	198.69	2.412	
18,800.00	12,571.20	18,922.49	12,732.65	105.82	106.29	-109.66	-6,254.20	546.09	479.57	277.98	201.59	2.379	
18,900.00	12,570.84	19,022.48	12,733.18	107.39	107.87	-109.76	-6,354.19	546.09	479.88	275.38	204.50	2.347	
19,000.00	12,570.47	19,122.48	12,733.71	108.98	109.44	-109.86	-6,454.19	546.09	480.19	272.78	207.41	2.315	
19,100.00	12,570.11	19,222.48	12,734.24	110.56	111.02	-109.96	-6,554.18	546.09	480.50	270.18	210.32	2.285	
19,200.00	12,569.75	19,322.47	12,734.77	112.14	112.60	-110.06	-6,654.18	546.09	480.81	267.59	213.23	2.255	

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: 81H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
 TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
 MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Multi User Db
 Offset TVD Reference: Offset Datum

Offset Design Seawolf 1-12 Fed - 91H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
19,300.00	12,569.39	19,422.47	12,735.29	113.73	114.18	-110.16	-6,754.17	546.09	481.13	264.99	216.13	2.226	
19,400.00	12,569.02	19,522.46	12,735.82	115.32	115.77	-110.26	-6,854.17	546.09	481.44	262.40	219.04	2.198	
19,500.00	12,568.66	19,622.46	12,736.35	116.90	117.35	-110.36	-6,954.16	546.09	481.76	259.81	221.94	2.171	
19,600.00	12,568.30	19,722.46	12,736.88	118.49	118.94	-110.46	-7,054.16	546.09	482.08	257.23	224.85	2.144	
19,700.00	12,567.93	19,822.45	12,737.41	120.09	120.52	-110.55	-7,154.15	546.09	482.40	254.64	227.75	2.118	
19,800.00	12,567.57	19,922.45	12,737.94	121.68	122.11	-110.65	-7,254.15	546.09	482.72	252.06	230.65	2.093	
19,900.00	12,567.21	20,022.44	12,738.47	123.27	123.70	-110.75	-7,354.14	546.09	483.04	249.49	233.56	2.068	
20,000.00	12,566.85	20,122.44	12,739.00	124.86	125.29	-110.85	-7,454.13	546.09	483.36	246.91	236.45	2.044	
20,100.00	12,566.48	20,222.44	12,739.52	126.46	126.88	-110.95	-7,554.13	546.09	483.69	244.34	239.35	2.021	
20,200.00	12,566.12	20,322.43	12,740.05	128.06	128.48	-111.05	-7,654.12	546.09	484.02	241.77	242.25	1.998	
20,300.00	12,565.76	20,422.43	12,740.58	129.65	130.07	-111.15	-7,754.12	546.09	484.35	239.20	245.14	1.976	
20,400.00	12,565.39	20,522.42	12,741.11	131.25	131.66	-111.24	-7,854.11	546.09	484.68	236.64	248.04	1.954	
20,500.00	12,565.03	20,622.42	12,741.64	132.85	133.26	-111.34	-7,954.11	546.09	485.01	234.08	250.93	1.933	
20,600.00	12,564.67	20,722.42	12,742.17	134.45	134.86	-111.44	-8,054.10	546.08	485.34	231.52	253.82	1.912	
20,700.00	12,564.30	20,822.41	12,742.70	136.05	136.45	-111.54	-8,154.10	546.08	485.67	228.97	256.71	1.892	
20,800.00	12,563.94	20,922.41	12,743.23	137.65	138.05	-111.63	-8,254.09	546.08	486.01	226.42	259.59	1.872	
20,900.00	12,563.58	21,022.40	12,743.75	139.25	139.65	-111.73	-8,354.09	546.08	486.34	223.87	262.48	1.853	
21,000.00	12,563.22	21,122.40	12,744.28	140.86	141.25	-111.83	-8,454.08	546.08	486.68	221.33	265.36	1.834	
21,100.00	12,562.85	21,222.40	12,744.81	142.46	142.85	-111.93	-8,554.08	546.08	487.02	218.79	268.24	1.816	
21,200.00	12,562.49	21,322.39	12,745.34	144.06	144.45	-112.02	-8,654.07	546.08	487.36	216.25	271.11	1.798	
21,300.00	12,562.13	21,422.39	12,745.87	145.67	146.06	-112.12	-8,754.06	546.08	487.71	213.72	273.99	1.780	
21,400.00	12,561.76	21,522.38	12,746.40	147.27	147.66	-112.22	-8,854.06	546.08	488.05	211.19	276.86	1.763	
21,500.00	12,561.40	21,622.38	12,746.93	148.88	149.26	-112.31	-8,954.05	546.08	488.39	208.66	279.73	1.746	
21,600.00	12,561.04	21,722.38	12,747.46	150.49	150.87	-112.41	-9,054.05	546.08	488.74	206.14	282.60	1.729	
21,700.00	12,560.68	21,822.37	12,747.98	152.10	152.47	-112.50	-9,154.04	546.08	489.09	203.62	285.47	1.713	
21,800.00	12,560.31	21,922.37	12,748.51	153.70	154.08	-112.60	-9,254.04	546.08	489.44	201.11	288.33	1.698	
21,900.00	12,559.95	22,022.36	12,749.04	155.31	155.68	-112.70	-9,354.03	546.08	489.79	198.60	291.19	1.682	
22,000.00	12,559.59	22,122.36	12,749.57	156.92	157.29	-112.79	-9,454.03	546.08	490.14	196.10	294.05	1.667	
22,100.00	12,559.22	22,222.36	12,750.10	158.53	158.90	-112.89	-9,554.02	546.08	490.49	193.59	296.90	1.652	
22,200.00	12,558.86	22,322.35	12,750.63	160.14	160.50	-112.98	-9,654.02	546.08	490.85	191.10	299.75	1.638	
22,300.00	12,558.50	22,422.35	12,751.16	161.75	162.11	-113.08	-9,754.01	546.08	491.21	188.60	302.60	1.623	
22,400.00	12,558.13	22,522.34	12,751.69	163.36	163.72	-113.17	-9,854.01	546.08	491.56	186.11	305.45	1.609	
22,500.00	12,557.77	22,622.34	12,752.21	164.97	165.33	-113.27	-9,954.00	546.08	491.92	183.63	308.29	1.596	
22,574.84	12,557.50	22,696.28	12,752.60	165.91	166.52	-113.34	-10,027.94	546.08	492.19	182.04	310.15	1.587	
22,575.52	12,557.50	22,696.28	12,752.60	165.91	166.52	-113.34	-10,027.94	546.08	492.20	182.03	310.17	1.587 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
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi 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+HDGM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Tooface (")	Distance		Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)					
0.00	0.00	0.00	0.00	0.00	0.00	89.56	0.69	89.97	89.97				
100.00	100.00	99.70	99.70	0.09	0.09	89.56	0.69	89.97	89.97	89.80	0.18	507.463	
200.00	200.00	199.70	199.70	0.31	0.31	89.56	0.69	89.97	89.97	89.35	0.63	143.629	
300.00	300.00	299.70	299.70	0.54	0.54	89.56	0.69	89.97	89.97	88.90	1.08	83.621	
400.00	400.00	399.70	399.70	0.76	0.76	89.56	0.69	89.97	89.97	88.45	1.53	58.980	
500.00	500.00	499.70	499.70	0.99	0.99	89.56	0.69	89.97	89.97	88.00	1.98	45.555	
600.00	600.00	599.70	599.70	1.21	1.21	89.56	0.69	89.97	89.97	87.55	2.42	37.109	
700.00	700.00	699.70	699.70	1.44	1.44	89.56	0.69	89.97	89.97	87.10	2.87	31.305	
800.00	800.00	799.70	799.70	1.66	1.66	89.56	0.69	89.97	89.97	86.65	3.32	27.071	
900.00	900.00	899.70	899.70	1.89	1.89	89.56	0.69	89.97	89.97	86.20	3.77	23.846	
1,000.00	1,000.00	999.70	999.70	2.11	2.11	89.56	0.69	89.97	89.97	85.75	4.22	21.307	
1,100.00	1,100.00	1,099.70	1,099.70	2.34	2.34	89.56	0.69	89.97	89.97	85.30	4.67	19.257	
1,200.00	1,200.00	1,199.70	1,199.70	2.56	2.56	89.56	0.69	89.97	89.97	84.85	5.12	17.567	
1,300.00	1,300.00	1,299.70	1,299.70	2.79	2.79	89.56	0.69	89.97	89.97	84.40	5.57	16.149	
1,400.00	1,400.00	1,399.70	1,399.70	3.01	3.01	89.56	0.69	89.97	89.97	83.95	6.02	14.944	
1,500.00	1,500.00	1,499.70	1,499.70	3.24	3.23	89.56	0.69	89.97	89.97	83.50	6.47	13.905	
1,600.00	1,600.00	1,599.70	1,599.70	3.46	3.46	89.56	0.69	89.97	89.97	83.05	6.92	13.002	
1,700.00	1,700.00	1,699.70	1,699.70	3.69	3.68	89.56	0.69	89.97	89.97	82.60	7.37	12.209	
1,800.00	1,800.00	1,799.70	1,799.70	3.91	3.91	89.56	0.69	89.97	89.97	82.15	7.82	11.507	
1,900.00	1,900.00	1,899.70	1,899.70	4.13	4.13	89.56	0.69	89.97	89.97	81.70	8.27	10.881	
2,000.00	2,000.00	1,999.70	1,999.70	4.36	4.36	89.56	0.69	89.97	89.97	81.25	8.72	10.320	
2,100.00	2,100.00	2,099.70	2,099.70	4.58	4.58	89.56	0.69	89.97	89.97	80.81	9.17	9.814	
2,200.00	2,200.00	2,199.70	2,199.70	4.81	4.81	89.56	0.69	89.97	89.97	80.36	9.62	9.356	
2,300.00	2,300.00	2,299.70	2,299.70	5.03	5.03	89.56	0.69	89.97	89.97	79.91	10.07	8.938	
2,400.00	2,400.00	2,399.70	2,399.70	5.26	5.26	89.56	0.69	89.97	89.97	79.46	10.52	8.556	
2,500.00	2,500.00	2,499.70	2,499.70	5.48	5.48	89.56	0.69	89.97	89.97	79.01	10.97	8.205 CC, ES	
2,600.00	2,599.99	2,598.17	2,598.16	5.71	5.69	63.41	0.81	90.80	90.43	79.03	11.40	7.935	
2,700.00	2,699.96	2,696.59	2,696.55	5.93	5.89	64.61	1.16	93.31	91.82	80.01	11.81	7.775	
2,800.00	2,799.86	2,794.94	2,794.81	6.15	6.09	66.54	1.75	97.49	94.24	82.02	12.22	7.710	
2,900.00	2,899.68	2,893.17	2,892.86	6.38	6.30	69.06	2.57	103.32	97.80	85.17	12.63	7.741	
2,999.70	2,999.06	2,990.96	2,990.36	6.60	6.51	72.03	3.62	110.79	102.63	89.59	13.04	7.868	
3,100.00	3,098.99	3,089.18	3,088.14	6.83	6.72	74.92	4.90	119.94	109.14	95.68	13.46	8.108	
3,200.00	3,198.61	3,186.93	3,185.29	7.05	6.94	77.15	6.41	130.70	117.46	103.58	13.88	8.465	
3,300.00	3,298.23	3,284.45	3,282.00	7.29	7.17	78.79	8.15	143.06	127.49	113.19	14.29	8.919	
3,400.00	3,397.85	3,381.67	3,378.19	7.52	7.40	79.90	10.11	157.01	139.14	124.42	14.71	9.457	
3,500.00	3,497.47	3,478.55	3,473.80	7.75	7.65	80.56	12.29	172.52	152.35	137.22	15.13	10.068	
3,600.00	3,597.09	3,577.00	3,570.76	7.99	7.91	80.95	14.67	189.41	166.62	151.04	15.58	10.694	
3,700.00	3,696.71	3,675.97	3,668.22	8.23	8.18	81.28	17.06	206.43	180.94	164.90	16.04	11.278	
3,800.00	3,796.33	3,774.93	3,765.68	8.47	8.45	81.55	19.45	223.44	195.27	178.75	16.51	11.826	
3,900.00	3,895.95	3,873.89	3,863.15	8.71	8.73	81.79	21.84	240.46	209.60	192.61	16.98	12.341	
4,000.00	3,995.57	3,972.86	3,960.61	8.95	9.02	82.00	24.23	257.48	223.93	206.47	17.46	12.825	
4,100.00	4,095.18	4,071.82	4,058.07	9.19	9.31	82.19	26.62	274.50	238.26	220.32	17.94	13.282	
4,200.00	4,194.80	4,170.79	4,155.53	9.44	9.61	82.35	29.02	291.52	252.60	234.18	18.42	13.712	
4,300.00	4,294.42	4,269.75	4,252.99	9.68	9.91	82.50	31.41	308.53	266.94	248.03	18.91	14.118	
4,400.00	4,394.04	4,368.72	4,350.45	9.93	10.21	82.63	33.80	325.55	281.28	261.88	19.40	14.502	
4,500.00	4,493.66	4,467.68	4,447.91	10.18	10.52	82.74	36.19	342.57	295.62	275.73	19.89	14.864	
4,600.00	4,593.28	4,566.65	4,545.37	10.42	10.83	82.85	38.58	359.59	309.96	289.58	20.38	15.208	
4,688.48	4,681.42	4,654.21	4,631.60	10.64	11.11	82.94	40.70	374.64	322.65	301.83	20.82	15.497	
4,700.00	4,692.91	4,665.61	4,642.83	10.67	11.14	82.96	40.97	376.60	324.30	303.43	20.87	15.536	
4,800.00	4,792.57	4,764.57	4,740.29	10.86	11.46	83.03	43.37	393.62	338.71	317.39	21.32	15.889	
4,900.00	4,892.30	4,863.50	4,837.72	11.05	11.78	82.96	45.76	410.63	353.22	331.47	21.76	16.234	
5,000.00	4,992.09	4,962.41	4,935.13	11.25	12.10	82.76	48.15	427.64	367.85	345.65	22.20	16.572	

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: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi 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+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,100.00	5,091.94	5,061.29	5,032.50	11.44	12.42	82.46	50.54	444.64	382.60	359.96	22.63	16.904		
5,200.00	5,191.83	5,160.13	5,129.83	11.63	12.75	82.05	52.92	461.64	397.48	374.41	23.07	17.233		
5,300.00	5,291.76	5,258.91	5,227.12	11.82	13.07	81.57	55.31	478.63	412.51	389.02	23.49	17.559		
5,400.00	5,391.71	5,357.64	5,324.35	12.00	13.40	81.00	57.70	495.60	427.71	403.80	23.92	17.883		
5,500.00	5,491.69	5,456.30	5,421.51	12.19	13.73	80.37	60.08	512.57	443.11	418.77	24.34	18.207		
5,600.00	5,591.68	5,554.89	5,518.61	12.37	14.06	79.68	62.47	529.52	458.72	433.97	24.75	18.533		
5,687.87	5,679.55	5,641.46	5,603.86	12.53	14.35	105.60	64.56	544.41	472.64	447.53	25.11	18.820		
5,700.00	5,691.68	5,653.41	5,615.62	12.55	14.39	105.49	64.85	546.46	474.58	449.41	25.17	18.858		
5,800.00	5,791.68	5,751.89	5,712.61	12.77	14.72	104.69	67.23	563.40	490.59	464.98	25.61	19.156		
5,900.00	5,891.68	5,850.37	5,809.59	12.98	15.05	103.93	69.61	580.33	506.69	480.63	26.06	19.446		
6,000.00	5,991.68	5,948.85	5,906.58	13.20	15.39	103.22	71.99	597.27	522.87	496.37	26.50	19.729		
6,100.00	6,091.68	6,047.33	6,003.56	13.41	15.72	102.56	74.37	614.20	539.12	512.17	26.95	20.005		
6,200.00	6,191.68	6,145.81	6,100.55	13.63	16.06	101.93	76.75	631.14	555.45	528.05	27.40	20.273		
6,300.00	6,291.68	6,244.29	6,197.53	13.84	16.39	101.34	79.13	648.07	571.83	543.98	27.85	20.534		
6,400.00	6,391.68	6,342.77	6,294.52	14.06	16.73	100.78	81.51	665.01	588.27	559.97	28.30	20.788		
6,500.00	6,491.68	6,441.25	6,391.50	14.28	17.07	100.25	83.89	681.94	604.76	576.01	28.75	21.036		
6,600.00	6,591.68	6,539.73	6,488.48	14.50	17.41	99.75	86.27	698.88	621.30	592.10	29.20	21.276		
6,700.00	6,691.68	6,638.21	6,585.47	14.71	17.75	99.27	88.65	715.81	637.88	608.23	29.65	21.510		
6,800.00	6,791.68	6,736.70	6,682.45	14.93	18.09	98.82	91.03	732.74	654.51	624.40	30.11	21.738		
6,900.00	6,891.68	6,835.18	6,779.44	15.15	18.43	98.39	93.41	749.68	671.17	640.61	30.56	21.960		
7,000.00	6,991.68	6,933.66	6,876.42	15.37	18.77	97.99	95.79	766.61	687.86	656.85	31.02	22.176		
7,100.00	7,091.68	7,032.14	6,973.41	15.58	19.11	97.60	98.17	783.55	704.59	673.12	31.47	22.387		
7,200.00	7,191.68	7,130.62	7,070.39	15.80	19.46	97.23	100.55	800.48	721.35	689.42	31.93	22.591		
7,300.00	7,291.68	7,229.10	7,167.38	16.02	19.80	96.87	102.93	817.42	738.14	705.75	32.39	22.791		
7,400.00	7,391.68	7,327.58	7,264.36	16.24	20.14	96.53	105.31	834.35	754.95	722.10	32.85	22.985		
7,500.00	7,491.68	7,426.06	7,361.35	16.46	20.49	96.21	107.69	851.29	771.79	738.48	33.30	23.174		
7,600.00	7,591.68	7,524.54	7,458.33	16.68	20.83	95.90	110.07	868.22	788.65	754.88	33.76	23.359		
7,700.00	7,691.68	7,623.02	7,555.32	16.90	21.18	95.61	112.45	885.16	805.53	771.31	34.22	23.538		
7,800.00	7,791.68	7,721.50	7,652.30	17.12	21.52	95.32	114.83	902.09	822.43	787.75	34.68	23.713		
7,900.00	7,891.68	7,819.98	7,749.28	17.34	21.87	95.05	117.21	919.02	839.35	804.21	35.14	23.884		
8,000.00	7,991.68	7,918.46	7,846.27	17.56	22.22	94.79	119.59	935.96	856.29	820.68	35.60	24.050		
8,100.00	8,091.68	8,016.95	7,943.25	17.78	22.56	94.53	121.97	952.89	873.24	837.18	36.07	24.213		
8,200.00	8,191.68	8,115.43	8,040.24	18.00	22.91	94.29	124.35	969.83	890.21	853.69	36.53	24.371		
8,300.00	8,291.68	8,213.91	8,137.22	18.22	23.26	94.06	126.73	986.76	907.20	870.21	36.99	24.526		
8,400.00	8,391.68	8,312.39	8,234.21	18.44	23.60	93.83	129.11	1,003.70	924.20	886.75	37.45	24.677		
8,500.00	8,491.68	8,410.87	8,331.19	18.66	23.95	93.62	131.49	1,020.63	941.21	903.30	37.92	24.824		
8,600.00	8,591.68	8,509.35	8,428.18	18.88	24.30	93.41	133.87	1,037.57	958.24	919.86	38.38	24.967		
8,700.00	8,691.68	8,607.83	8,525.16	19.10	24.65	93.21	136.25	1,054.50	975.28	936.43	38.84	25.108		
8,800.00	8,791.68	8,706.31	8,622.15	19.32	24.99	93.01	138.63	1,071.44	992.32	953.02	39.31	25.245		
8,900.00	8,891.68	8,804.79	8,719.13	19.54	25.34	92.82	141.01	1,088.37	1,009.38	969.61	39.77	25.379		
9,000.00	8,991.68	8,903.27	8,816.12	19.76	25.69	92.64	143.39	1,105.31	1,026.45	986.22	40.24	25.510		
9,100.00	9,091.68	9,001.75	8,913.10	19.98	26.04	92.47	145.77	1,122.24	1,043.53	1,002.83	40.70	25.637		
9,200.00	9,191.68	9,100.23	9,010.08	20.20	26.39	92.30	148.15	1,139.17	1,060.62	1,019.45	41.17	25.762		
9,300.00	9,291.68	9,198.71	9,107.07	20.42	26.74	92.13	150.53	1,156.11	1,077.72	1,036.08	41.64	25.885		
9,400.00	9,391.68	9,297.20	9,204.05	20.64	27.09	91.97	152.91	1,173.04	1,094.83	1,052.72	42.10	26.004		
9,500.00	9,491.68	9,395.68	9,301.04	20.86	27.44	91.82	155.29	1,189.98	1,111.94	1,069.37	42.57	26.121		
9,600.00	9,591.68	9,494.16	9,398.02	21.08	27.79	91.67	157.67	1,206.91	1,129.06	1,086.03	43.04	26.235		
9,700.00	9,691.68	9,592.64	9,495.01	21.31	28.14	91.52	160.05	1,223.85	1,146.19	1,102.69	43.50	26.347		
9,800.00	9,791.68	9,691.12	9,591.99	21.53	28.49	91.38	162.43	1,240.78	1,163.33	1,119.36	43.97	26.456		
9,900.00	9,891.68	9,789.60	9,688.98	21.75	28.84	91.24	164.81	1,257.72	1,180.47	1,136.03	44.44	26.563		
10,000.00	9,991.68	9,889.01	9,786.88	21.97	29.19	91.11	167.21	1,274.81	1,197.62	1,152.71	44.91	26.666		
10,100.00	10,091.68	9,999.03	9,895.33	22.19	29.49	90.97	169.78	1,293.13	1,214.23	1,168.83	45.40	26.747		

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: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi 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+HDGM												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (usft)	Separation Factor	Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)		Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)					
10,200.00	10,191.68	10,109.39	10,004.29	22.41	29.78	90.84	172.22	1,310.47	1,229.91	1,184.03	45.88	26.810	
10,300.00	10,291.68	10,220.09	10,113.75	22.63	30.07	90.72	174.52	1,326.81	1,244.65	1,198.30	46.35	26.853	
10,400.00	10,391.68	10,331.10	10,223.68	22.86	30.34	90.61	176.67	1,342.15	1,258.45	1,211.63	46.82	26.877	
10,500.00	10,491.68	10,442.40	10,334.04	23.08	30.61	90.51	178.69	1,356.48	1,271.30	1,224.01	47.29	26.883	
10,600.00	10,591.68	10,553.98	10,444.80	23.30	30.87	90.42	180.55	1,369.77	1,283.20	1,235.45	47.75	26.872	
10,700.00	10,691.68	10,665.81	10,555.95	23.52	31.13	90.34	182.28	1,382.02	1,294.15	1,245.93	48.21	26.843	
10,800.00	10,791.68	10,777.87	10,667.44	23.74	31.38	90.27	183.85	1,393.21	1,304.13	1,255.46	48.67	26.797	
10,900.00	10,891.68	10,890.15	10,779.24	23.97	31.62	90.21	185.27	1,403.35	1,313.15	1,264.04	49.12	26.736	
11,000.00	10,991.68	11,002.61	10,891.34	24.19	31.85	90.15	186.55	1,412.41	1,321.21	1,271.65	49.56	26.658	
11,100.00	11,091.68	11,115.25	11,003.68	24.41	32.07	90.10	187.67	1,420.40	1,328.30	1,278.30	50.00	26.565	
11,200.00	11,191.68	11,228.03	11,116.25	24.63	32.28	90.06	188.64	1,427.30	1,334.41	1,283.98	50.44	26.457	
11,300.00	11,291.68	11,340.94	11,229.01	24.85	32.49	90.02	189.46	1,433.10	1,339.56	1,288.69	50.87	26.334	
11,400.00	11,391.68	11,453.96	11,341.92	25.08	32.69	89.99	190.12	1,437.82	1,343.73	1,292.43	51.29	26.197	
11,500.00	11,491.68	11,567.05	11,454.96	25.30	32.88	89.97	190.62	1,441.43	1,346.92	1,295.20	51.71	26.045	
11,600.00	11,591.68	11,680.21	11,568.09	25.52	33.06	89.96	190.98	1,443.93	1,349.13	1,297.00	52.13	25.880	
11,700.00	11,691.68	11,793.41	11,681.28	25.74	33.23	89.95	191.17	1,445.33	1,350.37	1,297.83	52.54	25.701	
11,800.00	11,791.68	11,903.52	11,791.38	25.97	33.39	89.95	191.22	1,445.66	1,350.66	1,297.71	52.95	25.507	
11,900.00	11,891.68	12,003.52	11,891.38	26.19	33.56	89.95	191.22	1,445.66	1,350.66	1,297.29	53.37	25.306	
12,000.00	11,991.68	12,103.52	11,991.38	26.41	33.72	89.95	191.22	1,445.66	1,350.66	1,296.87	53.79	25.109	
12,027.87	12,019.55	12,131.38	12,019.25	26.47	33.77	89.95	191.22	1,445.66	1,350.66	1,296.75	53.91	25.054	
12,050.00	12,041.68	12,153.51	12,041.38	26.52	33.81	-90.07	191.22	1,445.66	1,350.66	1,296.66	54.00	25.014	
12,100.00	12,091.49	12,203.33	12,091.19	26.60	33.89	-90.25	191.22	1,445.66	1,350.67	1,296.50	54.17	24.935	
12,150.00	12,140.76	12,252.73	12,140.59	26.67	33.97	-90.59	191.19	1,445.66	1,350.73	1,296.41	54.32	24.864	
12,200.00	12,189.10	12,303.39	12,191.17	26.74	34.04	-91.01	188.48	1,445.66	1,350.88	1,296.42	54.46	24.804	
12,250.00	12,236.16	12,355.02	12,242.25	26.80	34.11	-91.43	181.14	1,445.66	1,351.10	1,296.51	54.59	24.752	
12,300.00	12,281.57	12,407.64	12,293.42	26.86	34.17	-91.84	168.96	1,445.66	1,351.38	1,296.68	54.70	24.705	
12,350.00	12,324.98	12,461.29	12,344.23	26.91	34.23	-92.24	151.75	1,445.66	1,351.73	1,296.92	54.81	24.663	
12,400.00	12,366.07	12,516.00	12,394.14	26.97	34.28	-92.62	129.40	1,445.66	1,352.13	1,297.22	54.91	24.623	
12,450.00	12,404.52	12,571.78	12,442.59	27.02	34.33	-92.99	101.82	1,445.66	1,352.57	1,297.55	55.02	24.583	
12,500.00	12,440.04	12,628.61	12,488.96	27.07	34.38	-93.34	69.01	1,445.66	1,353.03	1,297.90	55.13	24.541	
12,550.00	12,472.36	12,686.47	12,532.60	27.11	34.42	-93.66	31.05	1,445.66	1,353.50	1,298.25	55.26	24.495	
12,600.00	12,501.23	12,745.33	12,572.84	27.16	34.47	-93.96	-11.87	1,445.66	1,353.96	1,298.57	55.39	24.443	
12,650.00	12,526.44	12,805.11	12,608.98	27.24	34.52	-94.22	-59.46	1,445.67	1,354.40	1,298.85	55.55	24.380	
12,700.00	12,547.79	12,865.72	12,640.36	27.34	34.58	-94.44	-111.28	1,445.67	1,354.80	1,299.06	55.74	24.305	
12,750.00	12,565.12	12,927.06	12,666.37	27.45	34.65	-94.63	-166.79	1,445.67	1,355.14	1,299.18	55.96	24.217	
12,800.00	12,578.30	12,988.97	12,686.45	27.59	34.74	-94.77	-225.33	1,445.67	1,355.40	1,299.20	56.21	24.115	
12,850.00	12,587.22	13,051.32	12,700.18	27.74	34.86	-94.86	-286.12	1,445.67	1,355.59	1,299.10	56.49	23.996	
12,900.00	12,591.83	13,113.93	12,707.24	27.90	34.99	-94.90	-348.29	1,445.67	1,355.68	1,298.87	56.81	23.862	
12,929.95	12,592.50	13,149.90	12,708.24	28.01	35.09	-94.91	-384.25	1,445.68	1,355.70	1,298.67	57.02	23.774	
13,000.00	12,592.25	13,219.95	12,708.69	28.29	35.29	-94.94	-454.30	1,445.68	1,355.77	1,298.20	57.57	23.551	
13,100.00	12,591.89	13,319.95	12,709.34	28.77	35.66	-94.98	-554.29	1,445.68	1,355.86	1,297.38	58.48	23.185	
13,200.00	12,591.52	13,419.94	12,709.98	29.32	36.09	-95.02	-654.28	1,445.68	1,355.96	1,296.41	59.56	22.767	
13,300.00	12,591.16	13,519.94	12,710.62	29.96	36.59	-95.07	-754.28	1,445.69	1,356.06	1,295.27	60.79	22.308	
13,400.00	12,590.80	13,619.93	12,711.26	30.67	37.17	-95.11	-854.27	1,445.69	1,356.16	1,294.00	62.17	21.815	
13,500.00	12,590.44	13,719.93	12,711.91	31.45	37.81	-95.15	-954.26	1,445.69	1,356.26	1,292.58	63.68	21.298	
13,600.00	12,590.07	13,819.92	12,712.55	32.29	38.51	-95.19	-1,054.25	1,445.70	1,356.37	1,291.04	65.32	20.764	
13,700.00	12,589.71	13,919.92	12,713.19	33.19	39.26	-95.24	-1,154.25	1,445.70	1,356.47	1,289.39	67.08	20.221	
13,800.00	12,589.35	14,019.91	12,713.84	34.15	40.07	-95.28	-1,254.24	1,445.70	1,356.57	1,287.62	68.95	19.675	
13,900.00	12,588.98	14,119.91	12,714.48	35.16	40.94	-95.32	-1,354.23	1,445.71	1,356.68	1,285.76	70.91	19.131	
14,000.00	12,588.62	14,219.90	12,715.12	36.21	41.85	-95.36	-1,454.23	1,445.71	1,356.78	1,283.81	72.97	18.593	
14,100.00	12,588.26	14,319.90	12,715.76	37.30	42.80	-95.40	-1,554.22	1,445.71	1,356.89	1,281.77	75.12	18.064	
14,200.00	12,587.89	14,419.89	12,716.41	38.44	43.80	-95.45	-1,654.21	1,445.71	1,356.99	1,279.66	77.34	17.547	

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: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM 5000.1 Multi 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+HDM													Offset Well Error: 0.00 usft
Reference		Offset		Semi Major Axis		Highside Toothface (")	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)					
14,300.00	12,587.53	14,519.89	12,717.05	39.60	44.83	-95.49	-1,754.20	1,445.72	1,357.10	1,277.47	79.63	17.044	
14,400.00	12,587.17	14,619.88	12,717.69	40.80	45.90	-95.53	-1,854.20	1,445.72	1,357.21	1,275.23	81.98	16.555	
14,500.00	12,586.81	14,719.88	12,718.34	42.03	47.00	-95.57	-1,954.19	1,445.72	1,357.31	1,272.92	84.39	16.083	
14,600.00	12,586.44	14,819.87	12,718.98	43.29	48.14	-95.62	-2,054.18	1,445.73	1,357.42	1,270.56	86.86	15.627	
14,700.00	12,586.08	14,919.86	12,719.62	44.57	49.30	-95.66	-2,154.18	1,445.73	1,357.53	1,268.15	89.38	15.188	
14,800.00	12,585.72	15,019.86	12,720.26	45.87	50.49	-95.70	-2,254.17	1,445.73	1,357.64	1,265.70	91.94	14.766	
14,900.00	12,585.35	15,119.85	12,720.91	47.19	51.70	-95.74	-2,354.16	1,445.74	1,357.76	1,263.21	94.55	14.361	
15,000.00	12,584.99	15,219.85	12,721.55	48.54	52.93	-95.78	-2,454.15	1,445.74	1,357.87	1,260.68	97.19	13.971	
15,100.00	12,584.63	15,319.84	12,722.19	49.90	54.19	-95.83	-2,554.15	1,445.74	1,357.98	1,258.11	99.87	13.598	
15,200.00	12,584.27	15,419.84	12,722.84	51.27	55.47	-95.87	-2,654.14	1,445.74	1,358.09	1,255.51	102.58	13.239	
15,300.00	12,583.90	15,519.83	12,723.48	52.66	56.76	-95.91	-2,754.13	1,445.75	1,358.21	1,252.89	105.32	12.896	
15,400.00	12,583.54	15,619.83	12,724.12	54.07	58.07	-95.95	-2,854.13	1,445.75	1,358.32	1,250.23	108.09	12.567	
15,500.00	12,583.18	15,719.82	12,724.76	55.48	59.40	-96.00	-2,954.12	1,445.75	1,358.44	1,247.56	110.88	12.251	
15,600.00	12,582.81	15,819.82	12,725.41	56.91	60.74	-96.04	-3,054.11	1,445.76	1,358.56	1,244.86	113.70	11.949	
15,700.00	12,582.45	15,919.81	12,726.05	58.35	62.10	-96.08	-3,154.11	1,445.76	1,358.67	1,242.13	116.54	11.658	
15,800.00	12,582.09	16,019.81	12,726.69	59.80	63.47	-96.12	-3,254.10	1,445.76	1,358.79	1,239.39	119.40	11.380	
15,900.00	12,581.73	16,119.80	12,727.34	61.26	64.85	-96.16	-3,354.09	1,445.77	1,358.91	1,236.63	122.28	11.113	
16,000.00	12,581.36	16,219.80	12,727.98	62.73	66.25	-96.21	-3,454.08	1,445.77	1,359.03	1,233.86	125.17	10.857	
16,100.00	12,581.00	16,319.79	12,728.62	64.20	67.65	-96.25	-3,554.08	1,445.77	1,359.15	1,231.06	128.09	10.611	
16,200.00	12,580.64	16,419.79	12,729.26	65.69	69.07	-96.29	-3,654.07	1,445.78	1,359.27	1,228.26	131.01	10.375	
16,300.00	12,580.27	16,519.78	12,729.91	67.18	70.49	-96.33	-3,754.06	1,445.78	1,359.39	1,225.44	133.95	10.148	
16,400.00	12,579.91	16,619.78	12,730.55	68.67	71.92	-96.37	-3,854.06	1,445.78	1,359.52	1,222.61	136.91	9.930	
16,500.00	12,579.55	16,719.77	12,731.19	70.17	73.37	-96.42	-3,954.05	1,445.78	1,359.64	1,219.76	139.87	9.720	
16,600.00	12,579.18	16,819.77	12,731.84	71.68	74.82	-96.46	-4,054.04	1,445.79	1,359.76	1,216.91	142.85	9.519	
16,700.00	12,578.82	16,919.76	12,732.48	73.20	76.27	-96.50	-4,154.03	1,445.79	1,359.89	1,214.05	145.84	9.324	
16,800.00	12,578.46	17,019.76	12,733.12	74.71	77.74	-96.54	-4,254.03	1,445.79	1,360.01	1,211.17	148.84	9.137	
16,900.00	12,578.10	17,119.75	12,733.76	76.24	79.21	-96.58	-4,354.02	1,445.80	1,360.14	1,208.29	151.85	8.957	
17,000.00	12,577.73	17,219.75	12,734.41	77.77	80.68	-96.63	-4,454.01	1,445.80	1,360.27	1,205.40	154.86	8.784	
17,100.00	12,577.37	17,319.74	12,735.05	79.30	82.17	-96.67	-4,554.01	1,445.80	1,360.39	1,202.50	157.89	8.616	
17,200.00	12,577.01	17,419.74	12,735.69	80.83	83.65	-96.71	-4,654.00	1,445.81	1,360.52	1,199.60	160.92	8.454	
17,300.00	12,576.64	17,519.73	12,736.34	82.38	85.15	-96.75	-4,753.99	1,445.81	1,360.65	1,196.69	163.96	8.299	
17,400.00	12,576.28	17,619.73	12,736.98	83.92	86.65	-96.79	-4,853.98	1,445.81	1,360.78	1,193.77	167.01	8.148	
17,500.00	12,575.92	17,719.72	12,737.62	85.47	88.15	-96.84	-4,953.98	1,445.82	1,360.91	1,190.85	170.06	8.002	
17,600.00	12,575.56	17,819.72	12,738.26	87.02	89.66	-96.88	-5,053.97	1,445.82	1,361.04	1,187.92	173.12	7.862	
17,700.00	12,575.19	17,919.71	12,738.91	88.57	91.17	-96.92	-5,153.96	1,445.82	1,361.17	1,184.98	176.19	7.726	
17,800.00	12,574.83	18,019.71	12,739.55	90.13	92.69	-96.96	-5,253.96	1,445.82	1,361.31	1,182.05	179.26	7.594	
17,900.00	12,574.47	18,119.70	12,740.19	91.68	94.21	-97.00	-5,353.95	1,445.83	1,361.44	1,179.10	182.34	7.467	
18,000.00	12,574.10	18,219.70	12,740.84	93.25	95.73	-97.05	-5,453.94	1,445.83	1,361.57	1,176.16	185.42	7.343	
18,100.00	12,573.74	18,319.69	12,741.48	94.81	97.26	-97.09	-5,553.93	1,445.83	1,361.71	1,173.21	188.50	7.224	
18,200.00	12,573.38	18,419.69	12,742.12	96.38	98.79	-97.13	-5,653.93	1,445.84	1,361.84	1,170.25	191.59	7.108	
18,300.00	12,573.01	18,519.68	12,742.76	97.94	100.33	-97.17	-5,753.92	1,445.84	1,361.98	1,167.29	194.69	6.996	
18,400.00	12,572.65	18,619.68	12,743.41	99.51	101.86	-97.21	-5,853.91	1,445.84	1,362.12	1,164.33	197.78	6.887	
18,500.00	12,572.29	18,719.67	12,744.05	101.09	103.40	-97.26	-5,953.91	1,445.85	1,362.25	1,161.37	200.89	6.781	
18,600.00	12,571.93	18,819.67	12,744.69	102.66	104.95	-97.30	-6,053.90	1,445.85	1,362.39	1,158.40	203.99	6.679	
18,700.00	12,571.56	18,919.66	12,745.34	104.24	106.49	-97.34	-6,153.89	1,445.85	1,362.53	1,155.43	207.10	6.579	
18,800.00	12,571.20	19,019.66	12,745.98	105.82	108.04	-97.38	-6,253.88	1,445.85	1,362.67	1,152.46	210.21	6.482	
18,900.00	12,570.84	19,119.65	12,746.62	107.39	109.59	-97.42	-6,353.88	1,445.86	1,362.81	1,149.49	213.32	6.388	
19,000.00	12,570.47	19,219.65	12,747.26	108.98	111.15	-97.47	-6,453.87	1,445.86	1,362.95	1,146.51	216.44	6.297	
19,100.00	12,570.11	19,319.64	12,747.91	110.56	112.70	-97.51	-6,553.86	1,445.86	1,363.10	1,143.54	219.56	6.208	
19,200.00	12,569.75	19,419.64	12,748.55	112.14	114.26	-97.55	-6,653.86	1,445.87	1,363.24	1,140.56	222.68	6.122	
19,300.00	12,569.39	19,519.63	12,749.19	113.73	115.82	-97.59	-6,753.85	1,445.87	1,363.38	1,137.58	225.81	6.038	
19,400.00	12,569.02	19,619.63	12,749.84	115.32	117.38	-97.63	-6,853.84	1,445.87	1,363.53	1,134.59	228.93	5.956	

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: 81H
 Well Error: 0.00 usft
 Reference Wellbore: OH
 Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
 TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
 MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM 5000.1 Multi 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+HDGM													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
19,500.00	12,568.66	19,719.62	12,750.48	116.90	118.95	-97.67	-6,953.83	1,445.88	1,363.67	1,131.61	232.06	5.876		
19,600.00	12,568.30	19,819.62	12,751.12	118.49	120.51	-97.72	-7,053.83	1,445.88	1,363.82	1,128.63	235.19	5.799		
19,700.00	12,567.93	19,919.61	12,751.76	120.09	122.08	-97.76	-7,153.82	1,445.88	1,363.96	1,125.64	238.33	5.723		
19,800.00	12,567.57	20,019.61	12,752.41	121.68	123.65	-97.80	-7,253.81	1,445.89	1,364.11	1,122.65	241.46	5.649		
19,900.00	12,567.21	20,119.60	12,753.05	123.27	125.22	-97.84	-7,353.81	1,445.89	1,364.26	1,119.66	244.60	5.578		
20,000.00	12,566.85	20,219.60	12,753.69	124.86	126.79	-97.88	-7,453.80	1,445.89	1,364.41	1,116.68	247.73	5.508		
20,100.00	12,566.48	20,319.59	12,754.34	126.46	128.37	-97.93	-7,553.79	1,445.89	1,364.56	1,113.69	250.87	5.439		
20,200.00	12,566.12	20,419.59	12,754.98	128.06	129.94	-97.97	-7,653.78	1,445.90	1,364.71	1,110.70	254.01	5.373		
20,300.00	12,565.76	20,519.58	12,755.62	129.65	131.52	-98.01	-7,753.78	1,445.90	1,364.86	1,107.70	257.15	5.308		
20,400.00	12,565.39	20,619.58	12,756.26	131.25	133.10	-98.05	-7,853.77	1,445.90	1,365.01	1,104.71	260.30	5.244		
20,500.00	12,565.03	20,719.57	12,756.91	132.85	134.68	-98.09	-7,953.76	1,445.91	1,365.16	1,101.72	263.44	5.182		
20,600.00	12,564.67	20,819.57	12,757.55	134.45	136.26	-98.13	-8,053.76	1,445.91	1,365.32	1,098.73	266.59	5.121		
20,700.00	12,564.30	20,919.56	12,758.19	136.05	137.84	-98.18	-8,153.75	1,445.91	1,365.47	1,095.74	269.73	5.062		
20,800.00	12,563.94	21,019.56	12,758.84	137.65	139.43	-98.22	-8,253.74	1,445.92	1,365.62	1,092.74	272.88	5.004		
20,900.00	12,563.58	21,119.55	12,759.48	139.25	141.01	-98.26	-8,353.73	1,445.92	1,365.78	1,089.75	276.03	4.948		
21,000.00	12,563.22	21,219.55	12,760.12	140.86	142.60	-98.30	-8,453.73	1,445.92	1,365.94	1,086.75	279.18	4.893		
21,100.00	12,562.85	21,319.54	12,760.76	142.46	144.18	-98.34	-8,553.72	1,445.93	1,366.09	1,083.76	282.33	4.839		
21,200.00	12,562.49	21,419.54	12,761.41	144.06	145.77	-98.38	-8,653.71	1,445.93	1,366.25	1,080.77	285.48	4.786		
21,300.00	12,562.13	21,519.53	12,762.05	145.67	147.36	-98.43	-8,753.71	1,445.93	1,366.41	1,077.77	288.63	4.734		
21,400.00	12,561.76	21,619.53	12,762.69	147.27	148.95	-98.47	-8,853.70	1,445.93	1,366.57	1,074.78	291.79	4.683		
21,500.00	12,561.40	21,719.52	12,763.34	148.88	150.54	-98.51	-8,953.69	1,445.94	1,366.73	1,071.79	294.94	4.634		
21,600.00	12,561.04	21,819.52	12,763.98	150.49	152.13	-98.55	-9,053.68	1,445.94	1,366.89	1,068.79	298.09	4.585		
21,700.00	12,560.68	21,919.51	12,764.62	152.10	153.73	-98.59	-9,153.68	1,445.94	1,367.05	1,065.80	301.25	4.538		
21,800.00	12,560.31	22,019.51	12,765.26	153.70	155.32	-98.63	-9,253.67	1,445.95	1,367.21	1,062.81	304.40	4.491		
21,900.00	12,559.95	22,119.50	12,765.91	155.31	156.91	-98.68	-9,353.66	1,445.95	1,367.37	1,059.81	307.56	4.446		
22,000.00	12,559.59	22,219.50	12,766.55	156.92	158.51	-98.72	-9,453.66	1,445.95	1,367.53	1,056.82	310.71	4.401		
22,100.00	12,559.22	22,319.49	12,767.19	158.53	160.10	-98.76	-9,553.65	1,445.96	1,367.70	1,053.83	313.87	4.358		
22,200.00	12,558.86	22,419.49	12,767.84	160.14	161.70	-98.80	-9,653.64	1,445.96	1,367.86	1,050.84	317.02	4.315		
22,300.00	12,558.50	22,519.48	12,768.48	161.75	163.30	-98.84	-9,753.63	1,445.96	1,368.03	1,047.85	320.18	4.273		
22,400.00	12,558.13	22,619.48	12,769.12	163.36	164.90	-98.88	-9,853.63	1,445.96	1,368.19	1,044.86	323.34	4.231		
22,500.00	12,557.77	22,719.47	12,769.76	164.97	166.43	-98.92	-9,953.62	1,445.97	1,368.36	1,041.94	326.42	4.192		
22,574.84	12,557.50	22,787.99	12,770.20	165.91	167.31	-98.95	-10,022.14	1,445.97	1,368.50	1,040.25	328.25	4.169		
22,575.52	12,557.50	22,787.99	12,770.20	165.91	167.31	-98.95	-10,022.14	1,445.97	1,368.50	1,040.24	328.26	4.169 SF		

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

LEAM Drilling Systems LLC

Anticollision Report

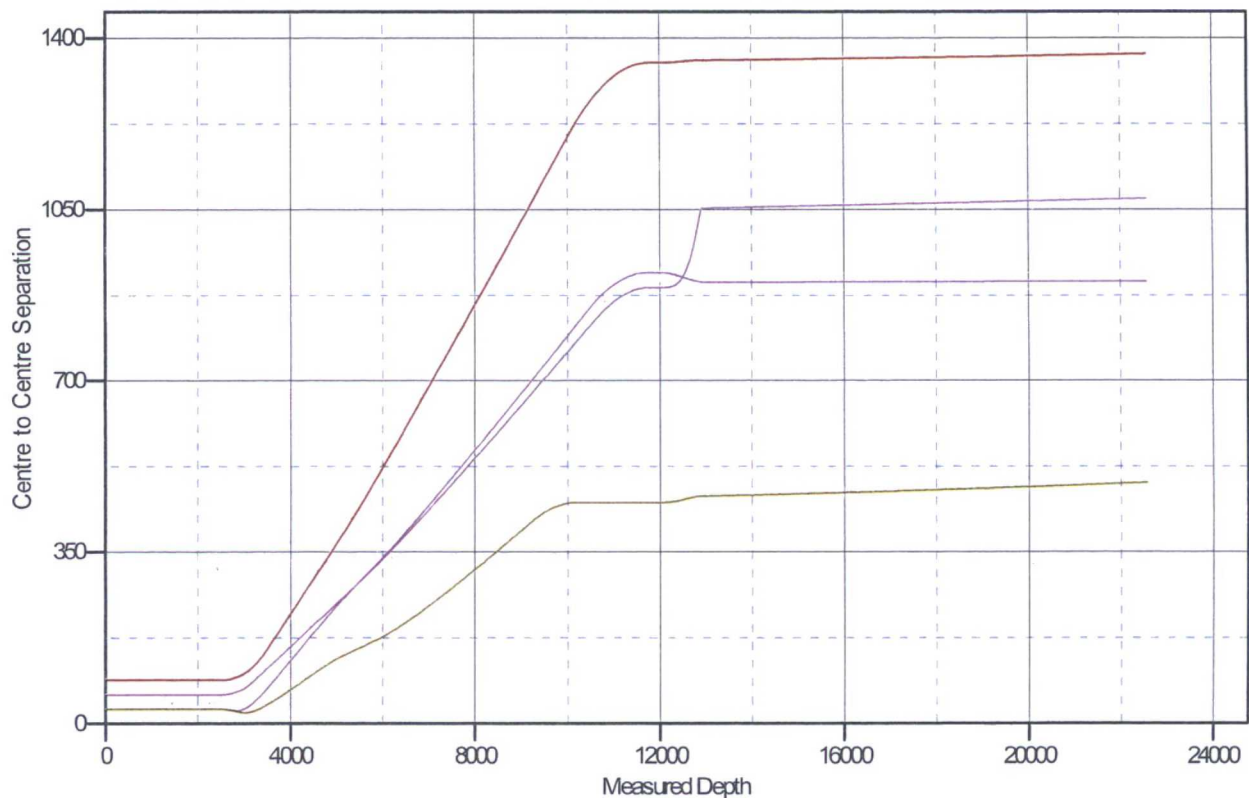
Company: Devon Energy
Project: Lea County, NM (NAD-83)
Reference Site: Seawolf 1-12 Fed
Site Error: 0.00 usft
Reference Well: 81H
Well Error: 0.00 usft
Reference Wellbore: OH
Reference Design: Plan #1

Local Co-ordinate Reference: Well 81H
TVD Reference: 3318.5' GE + 21' KB @ 3339.50usft
MD Reference: 3318.5' GE + 21' KB @ 3339.50usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM 5000.1 Multi User Db
Offset TVD Reference: Offset Datum

Reference Depths are relative to 3318.5' GE + 21' KB @ 3339.50usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 81H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.42°

Ladder Plot



LEGEND

102H, OH, Plan #1 V0 92H, OH, Plan #1 V0
82H, OH, Plan #1 V0 91H, OH, Plan #1 V0

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

LEAM Drilling Systems LLC

Anticollision Report

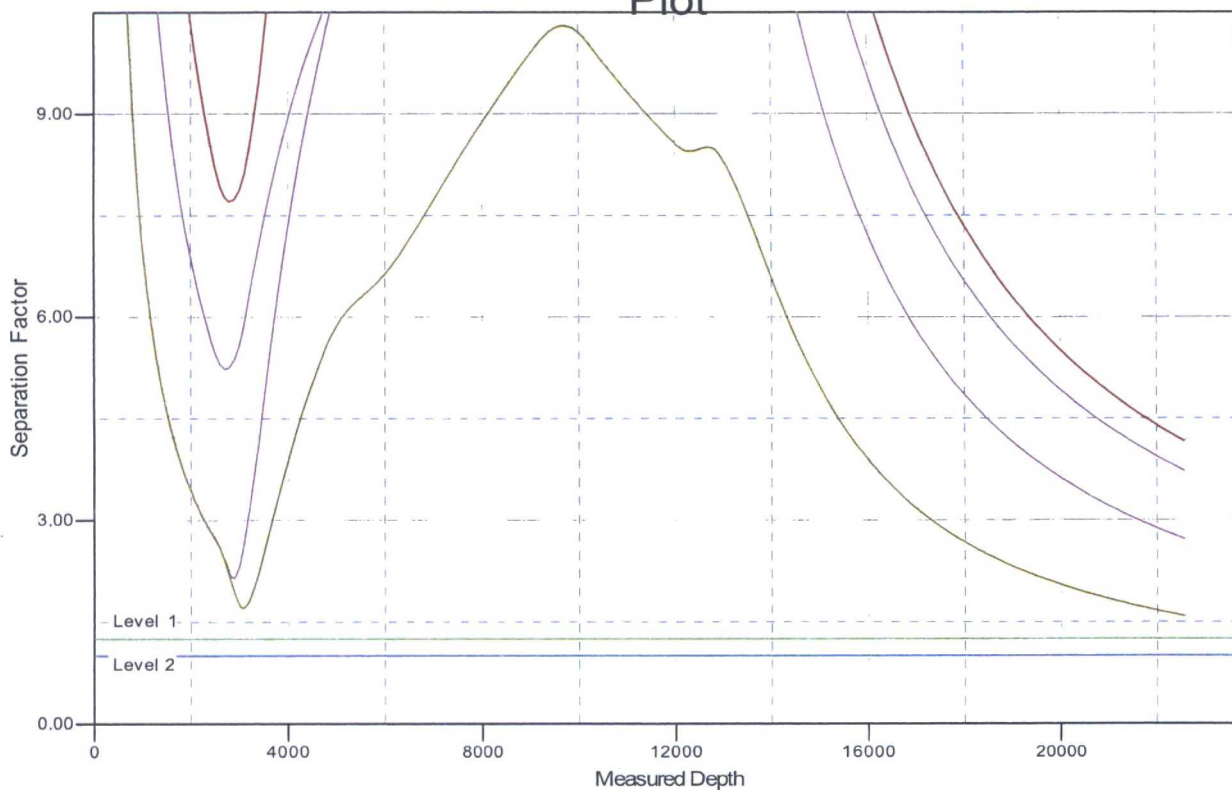
Company: Devon Energy
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Survey Calculation Method: Minimum Curvature
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Reference Depths are relative to 3318.5' GE + 21' KB @ 3339.50usft
Offset Depths are relative to Offset Datum
Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 81H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.42°

Separation Factor Plot



LEGEND

102H, OH, Plan #1 V0 92H, OH, Plan #1 V0
82H, OH, Plan #1 V0 91H, OH, Plan #1 V0