

HOBBS CO

APR 27 2016

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DEVON ENERGY

Lea County, NM (NAD-83)
Paloma Blanco 19 Fed
1H

OH
Plan #1

Anticollision Report

08 October, 2015

APR 28 2016

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
Reference Site:	Paloma Blanco 19 Fed	MD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

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

Survey Tool Program		Date	10/8/2015		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	15,708.95	Plan #1 (OH)	LEAM MWD-ADJ	MWD - Standard	

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						
Paloma Blanco 19 Fed						
2H - OH - Plan #1	5,100.00	5,099.00	49.99	27.35	2.208	CC, ES
2H - OH - Plan #1	5,200.00	5,198.25	50.73	27.66	2.199	SF
3H - OH - Plan #1	5,100.00	5,098.00	99.93	77.29	4.414	CC, ES
3H - OH - Plan #1	5,200.00	5,195.82	100.99	77.93	4.379	SF

Offset Design Paloma Blanco 19 Fed - 2H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: O-LEAM MWD-ADJ													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		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	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.61	0.34	49.99	50.00				
100.00	100.00	99.00	99.00	0.08	0.08	89.61	0.34	49.99	49.99	49.82	0.17	298.042	
200.00	200.00	199.00	199.00	0.31	0.31	89.61	0.34	49.99	49.99	49.38	0.62	81.173	
300.00	300.00	299.00	299.00	0.53	0.53	89.61	0.34	49.99	49.99	48.93	1.07	46.923	
400.00	400.00	399.00	399.00	0.76	0.76	89.61	0.34	49.99	49.99	48.48	1.51	32.999	
500.00	500.00	499.00	499.00	0.98	0.98	89.61	0.34	49.99	49.99	48.03	1.96	25.448	
600.00	600.00	599.00	599.00	1.21	1.21	89.61	0.34	49.99	49.99	47.58	2.41	20.709	
700.00	700.00	699.00	699.00	1.43	1.43	89.61	0.34	49.99	49.99	47.13	2.86	17.458	
800.00	800.00	799.00	799.00	1.66	1.66	89.61	0.34	49.99	49.99	46.68	3.31	15.089	
900.00	900.00	899.00	899.00	1.88	1.88	89.61	0.34	49.99	49.99	46.23	3.76	13.286	
1,000.00	1,000.00	999.00	999.00	2.11	2.10	89.61	0.34	49.99	49.99	45.78	4.21	11.888	
1,100.00	1,100.00	1,099.00	1,099.00	2.33	2.33	89.61	0.34	49.99	49.99	45.33	4.66	10.724	
1,200.00	1,200.00	1,199.00	1,199.00	2.56	2.55	89.61	0.34	49.99	49.99	44.88	5.11	9.781	
1,300.00	1,300.00	1,299.00	1,299.00	2.78	2.78	89.61	0.34	49.99	49.99	44.43	5.56	8.990	
1,400.00	1,400.00	1,399.00	1,399.00	3.01	3.00	89.61	0.34	49.99	49.99	43.98	6.01	8.318	
1,500.00	1,500.00	1,499.00	1,499.00	3.23	3.23	89.61	0.34	49.99	49.99	43.53	6.46	7.739	
1,600.00	1,600.00	1,599.00	1,599.00	3.46	3.45	89.61	0.34	49.99	49.99	43.08	6.91	7.235	
1,700.00	1,700.00	1,699.00	1,699.00	3.68	3.68	89.61	0.34	49.99	49.99	42.63	7.36	6.793	
1,800.00	1,800.00	1,799.00	1,799.00	3.91	3.90	89.61	0.34	49.99	49.99	42.18	7.81	6.402	
1,900.00	1,900.00	1,899.00	1,899.00	4.13	4.13	89.61	0.34	49.99	49.99	41.73	8.26	6.054	
2,000.00	2,000.00	1,999.00	1,999.00	4.35	4.35	89.61	0.34	49.99	49.99	41.28	8.71	5.741	
2,100.00	2,100.00	2,099.00	2,099.00	4.58	4.58	89.61	0.34	49.99	49.99	40.83	9.16	5.459	
2,200.00	2,200.00	2,199.00	2,199.00	4.80	4.80	89.61	0.34	49.99	49.99	40.38	9.61	5.204	

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

LEAM Drilling Systems LLC

Anticollision Report

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

Offset Design Paloma Blanco 19 Fed - 2H - OH - Plan #1														Offset Site Error:
Survey Program: 0-LEAM MWD-ADJ														Offset Well Error:
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,300.00	2,300.00	2,299.00	2,299.00	5.03	5.03	89.61	0.34	49.99	49.99	39.94	10.06	4.971		
2,400.00	2,400.00	2,399.00	2,399.00	5.25	5.25	89.61	0.34	49.99	49.99	39.49	10.51	4.759		
2,500.00	2,500.00	2,499.00	2,499.00	5.48	5.48	89.61	0.34	49.99	49.99	39.04	10.96	4.563		
2,600.00	2,600.00	2,599.00	2,599.00	5.70	5.70	89.61	0.34	49.99	49.99	38.59	11.40	4.383		
2,700.00	2,700.00	2,699.00	2,699.00	5.93	5.93	89.61	0.34	49.99	49.99	38.14	11.85	4.217		
2,800.00	2,800.00	2,799.00	2,799.00	6.15	6.15	89.61	0.34	49.99	49.99	37.69	12.30	4.063		
2,900.00	2,900.00	2,899.00	2,899.00	6.38	6.38	89.61	0.34	49.99	49.99	37.24	12.75	3.920		
3,000.00	3,000.00	2,999.00	2,999.00	6.60	6.60	89.61	0.34	49.99	49.99	36.79	13.20	3.786		
3,100.00	3,100.00	3,099.00	3,099.00	6.83	6.83	89.61	0.34	49.99	49.99	36.34	13.65	3.662		
3,200.00	3,200.00	3,199.00	3,199.00	7.05	7.05	89.61	0.34	49.99	49.99	35.89	14.10	3.545		
3,300.00	3,300.00	3,299.00	3,299.00	7.28	7.27	89.61	0.34	49.99	49.99	35.44	14.55	3.435		
3,400.00	3,400.00	3,399.00	3,399.00	7.50	7.50	89.61	0.34	49.99	49.99	34.99	15.00	3.333		
3,500.00	3,500.00	3,499.00	3,499.00	7.73	7.72	89.61	0.34	49.99	49.99	34.54	15.45	3.238		
3,600.00	3,600.00	3,599.00	3,599.00	7.95	7.95	89.61	0.34	49.99	49.99	34.09	15.90	3.144		
3,700.00	3,700.00	3,699.00	3,699.00	8.18	8.17	89.61	0.34	49.99	49.99	33.64	16.35	3.058		
3,800.00	3,800.00	3,799.00	3,799.00	8.40	8.40	89.61	0.34	49.99	49.99	33.19	16.80	2.976		
3,900.00	3,900.00	3,899.00	3,899.00	8.63	8.62	89.61	0.34	49.99	49.99	32.74	17.25	2.898		
4,000.00	4,000.00	3,999.00	3,999.00	8.85	8.85	89.61	0.34	49.99	49.99	32.29	17.70	2.825		
4,100.00	4,100.00	4,099.00	4,099.00	9.07	9.07	89.61	0.34	49.99	49.99	31.84	18.15	2.755		
4,200.00	4,200.00	4,199.00	4,199.00	9.30	9.30	89.61	0.34	49.99	49.99	31.39	18.60	2.688		
4,300.00	4,300.00	4,299.00	4,299.00	9.52	9.52	89.61	0.34	49.99	49.99	30.94	19.05	2.625		
4,400.00	4,400.00	4,399.00	4,399.00	9.75	9.75	89.61	0.34	49.99	49.99	30.49	19.50	2.564		
4,500.00	4,500.00	4,499.00	4,499.00	9.97	9.97	89.61	0.34	49.99	49.99	30.05	19.95	2.506		
4,600.00	4,600.00	4,599.00	4,599.00	10.20	10.20	89.61	0.34	49.99	49.99	29.60	20.40	2.451		
4,700.00	4,700.00	4,699.00	4,699.00	10.42	10.42	89.61	0.34	49.99	49.99	29.15	20.84	2.398		
4,800.00	4,800.00	4,799.00	4,799.00	10.65	10.65	89.61	0.34	49.99	49.99	28.70	21.29	2.348		
4,900.00	4,900.00	4,899.00	4,899.00	10.87	10.87	89.61	0.34	49.99	49.99	28.25	21.74	2.299		
5,000.00	5,000.00	4,999.00	4,999.00	11.10	11.10	89.61	0.34	49.99	49.99	27.80	22.19	2.253		
5,100.00	5,100.00	5,099.00	5,099.00	11.32	11.32	89.61	0.34	49.99	49.99	27.35	22.64	2.208	CC, ES	
5,200.00	5,200.00	5,198.25	5,198.24	11.55	11.52	90.79	-0.69	50.71	50.73	27.06	23.06	2.199	SF	
5,300.00	5,300.00	5,297.36	5,297.27	11.77	11.69	94.15	-3.84	52.91	53.08	26.62	23.46	2.263		
5,400.00	5,400.00	5,396.20	5,395.90	12.00	11.88	99.10	-9.06	56.57	57.38	33.52	23.88	2.405		
5,500.00	5,500.00	5,494.85	5,493.94	12.22	12.04	104.84	-16.35	61.67	64.00	39.75	24.25	2.639		
5,600.00	5,600.00	5,594.03	5,592.78	12.45	12.22	110.18	-24.85	67.63	72.32	47.66	24.85	2.933		
5,700.00	5,700.00	5,693.48	5,691.69	12.67	12.41	114.39	-33.37	73.59	81.13	56.08	25.08	3.238		
5,800.00	5,800.00	5,792.93	5,790.60	12.90	12.60	117.77	-41.88	79.55	90.30	64.84	25.46	3.546		
5,900.00	5,900.00	5,892.39	5,889.51	13.12	12.80	120.51	-50.40	85.52	99.72	73.85	25.87	3.855		
6,000.00	6,000.00	5,991.84	5,988.41	13.35	12.99	122.78	-58.91	91.48	109.32	83.05	26.28	4.161		
6,100.00	6,100.00	6,091.29	6,087.32	13.57	13.20	124.68	-67.43	97.44	119.07	92.39	26.69	4.462		
6,200.00	6,200.00	6,190.74	6,186.23	13.80	13.40	126.30	-75.95	103.41	128.93	101.83	27.10	4.758		
6,300.00	6,300.00	6,290.19	6,285.14	14.02	13.61	127.68	-84.46	109.37	138.88	111.37	27.51	5.048		
6,400.00	6,400.00	6,389.65	6,384.04	14.24	13.82	128.87	-92.98	115.33	148.89	120.97	27.93	5.332		
6,500.00	6,500.00	6,489.10	6,482.95	14.47	14.04	129.92	-101.49	121.29	158.97	130.63	28.34	5.609		
6,600.00	6,600.00	6,588.55	6,581.86	14.69	14.26	130.84	-110.01	127.26	169.08	140.33	28.76	5.880		
6,700.00	6,700.00	6,688.00	6,680.76	14.92	14.48	131.66	-118.52	133.22	179.24	150.07	29.18	6.143		
6,800.00	6,800.00	6,787.46	6,779.67	15.14	14.70	132.39	-127.04	139.18	189.43	159.83	29.60	6.401		
6,900.00	6,900.00	6,886.91	6,878.58	15.37	14.93	133.04	-135.55	145.14	199.65	169.63	30.02	6.651		
7,000.00	7,000.00	6,986.36	6,977.49	15.59	15.15	133.63	-144.07	151.11	209.89	179.45	30.44	6.895		
7,100.00	7,100.00	7,085.81	7,076.39	15.82	15.38	134.17	-152.59	157.07	220.15	189.28	30.86	7.133		
7,200.00	7,200.00	7,185.26	7,175.30	16.04	15.62	134.66	-161.10	163.03	230.42	199.14	31.29	7.365		
7,300.00	7,300.00	7,284.72	7,274.21	16.27	15.85	135.11	-169.62	168.99	240.71	209.00	31.71	7.591		
7,400.00	7,400.00	7,384.17	7,373.12	16.49	16.09	135.52	-178.13	174.96	251.02	218.88	32.14	7.811		

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Anticollision Report

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Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Paloma Blanco 19 Fed - 2H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM-MWD-ADJ													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,500.00	7,500.00	7,483.82	7,472.02	16.72	16.33	135.89	-186.65	180.92	291.34	228.77	32.56	8.026	
7,600.00	7,600.00	7,583.07	7,570.93	16.94	16.57	136.24	-195.16	186.88	271.66	238.67	32.99	8.235	
7,700.00	7,700.00	7,662.53	7,669.84	17.17	16.81	136.56	-203.58	192.85	282.00	248.58	33.42	8.438	
7,800.00	7,800.00	7,781.98	7,768.75	17.39	17.06	136.87	-212.19	198.81	292.35	258.50	33.85	8.637	
7,900.00	7,900.00	7,881.43	7,867.65	17.62	17.30	137.15	-220.71	204.77	302.70	268.42	34.28	8.830	
8,000.00	8,000.00	7,980.88	7,966.56	17.84	17.55	137.41	-229.23	210.73	313.06	278.35	34.71	9.019	
8,100.00	8,100.00	8,080.33	8,065.47	18.07	17.80	137.65	-237.74	216.70	323.42	288.28	35.14	9.203	
8,200.00	8,200.00	8,179.79	8,164.38	18.29	18.05	137.88	-246.26	222.66	333.79	298.22	35.58	9.383	
8,300.00	8,300.00	8,279.24	8,263.28	18.52	18.30	138.10	-254.77	228.62	344.17	308.16	36.01	9.558	
8,400.00	8,400.00	8,378.69	8,362.19	18.74	18.55	138.30	-263.29	234.58	354.55	318.11	36.44	9.729	
8,500.00	8,500.00	8,478.14	8,461.10	18.96	18.81	138.49	-271.80	240.55	364.93	328.06	36.88	9.896	
8,600.00	8,600.00	8,585.98	8,568.44	19.19	19.07	138.67	-280.25	246.46	374.45	337.12	37.33	10.030	
8,700.00	8,700.00	8,696.63	8,678.83	19.41	19.33	138.79	-288.38	250.75	381.18	343.39	37.79	10.086	
8,800.00	8,800.00	8,807.83	8,789.74	19.64	19.57	138.86	-289.90	253.22	385.03	346.78	38.25	10.065	
8,900.00	8,900.00	8,916.90	8,899.00	19.86	19.78	138.88	-290.82	253.86	386.03	347.33	38.70	9.974	
9,000.00	9,000.00	9,016.90	8,999.00	20.09	19.98	138.88	-290.82	253.86	386.03	346.90	39.13	9.864	
9,100.00	9,100.00	9,116.90	9,099.00	20.31	20.18	138.88	-290.82	253.86	386.03	346.46	39.57	9.755	
9,200.00	9,200.00	9,216.90	9,199.00	20.54	20.39	138.88	-290.82	253.86	386.03	346.02	40.01	9.648	
9,300.00	9,300.00	9,316.90	9,299.00	20.76	20.60	138.88	-290.82	253.86	386.03	345.58	40.45	9.543	
9,400.00	9,400.00	9,416.90	9,399.00	20.99	20.80	138.88	-290.82	253.86	386.03	345.14	40.89	9.440	
9,500.00	9,500.00	9,516.90	9,499.00	21.21	21.01	138.88	-290.82	253.86	386.03	344.70	41.33	9.340	
9,600.00	9,600.00	9,616.90	9,599.00	21.44	21.21	138.88	-290.82	253.86	386.03	344.26	41.77	9.241	
9,660.34	9,660.34	9,677.24	9,659.34	21.57	21.34	138.88	-290.82	253.86	386.03	343.99	42.04	9.183	
9,700.00	9,700.00	9,710.99	9,693.09	21.66	21.41	138.89	-290.90	253.88	386.15	343.95	42.20	9.151	
9,800.00	9,800.00	9,773.54	9,755.45	21.89	21.55	139.21	-295.31	254.81	392.47	349.92	42.55	9.223	
9,900.00	9,900.00	9,834.42	9,815.32	22.11	21.72	139.96	-305.95	257.08	408.29	365.38	42.91	9.515	
9,930.05	9,930.05	9,850.00	9,830.43	22.18	21.77	140.22	-309.67	257.87	414.87	371.86	43.01	9.646	
9,950.00	9,950.00	9,863.88	9,843.80	22.22	21.81	-34.79	-313.32	258.64	419.41	376.33	43.08	9.735	
10,000.00	9,999.83	9,900.00	9,878.12	22.30	21.94	-33.72	-324.30	260.98	430.04	386.91	43.12	9.972	
10,050.00	10,049.13	9,922.23	9,898.87	22.39	22.02	-33.02	-332.10	262.63	439.20	396.22	42.98	10.219	
10,100.00	10,097.52	9,950.00	9,924.34	22.47	22.13	-32.44	-342.93	264.94	447.12	404.44	42.68	10.475	
10,150.00	10,144.84	9,980.23	9,951.41	22.55	22.28	-32.03	-356.09	267.73	453.67	411.42	42.25	10.738	
10,200.00	10,190.12	10,000.00	9,968.71	22.63	22.34	-31.77	-365.44	269.72	458.96	417.31	41.65	11.020	
10,250.00	10,233.63	10,037.99	10,000.99	22.71	22.53	-31.73	-385.02	273.88	462.52	421.53	40.99	11.283	
10,300.00	10,274.82	10,068.82	10,024.56	22.81	22.68	-31.83	-401.25	277.33	464.82	424.58	40.23	11.553	
10,350.00	10,313.40	10,100.00	10,050.62	22.92	22.86	-32.13	-421.34	281.60	465.72	426.27	39.45	11.804	
10,400.00	10,349.05	10,124.43	10,089.01	23.04	23.00	-32.49	-437.05	284.94	465.15	426.51	38.65	12.036	
10,450.00	10,381.52	10,150.00	10,087.52	23.19	23.15	-33.00	-454.31	288.61	463.26	425.36	37.89	12.225	
10,500.00	10,410.55	10,182.07	10,109.59	23.36	23.37	-33.80	-477.06	293.45	459.98	422.68	37.30	12.332	
10,550.00	10,435.92	10,210.94	10,128.32	23.56	23.56	-34.72	-498.55	298.01	455.43	418.58	36.86	12.357	
10,600.00	10,457.44	10,239.86	10,145.94	23.79	23.77	-35.81	-520.98	302.78	449.65	413.01	36.84	12.271	
10,650.00	10,474.95	10,268.88	10,162.43	24.04	24.00	-37.11	-544.30	307.74	442.72	406.01	36.71	12.061	
10,700.00	10,488.31	10,300.00	10,178.77	24.33	24.25	-38.68	-570.23	313.25	434.73	397.61	37.12	11.711	
10,750.00	10,497.43	10,327.15	10,191.82	24.64	24.48	-40.33	-593.52	318.20	425.77	387.98	37.80	11.265	
10,800.00	10,502.22	10,350.00	10,201.93	24.96	24.67	-41.98	-613.56	322.46	416.09	377.41	38.68	10.758	
10,827.75	10,503.00	10,372.85	10,211.20	25.18	24.89	-43.48	-633.99	326.80	410.30	370.75	39.55	10.375	
10,900.00	10,503.29	10,416.72	10,226.64	25.72	25.30	-45.74	-674.14	335.34	398.29	357.22	41.07	9.697	
11,000.00	10,503.70	10,480.95	10,243.49	26.52	25.95	-48.58	-734.74	348.22	391.85	348.65	43.20	9.070	
11,006.01	10,503.72	10,484.92	10,244.30	26.58	25.99	-48.74	-738.53	349.02	391.83	348.50	43.33	9.042	
11,099.26	10,504.11	10,550.00	10,253.74	27.42	26.69	-50.86	-801.49	362.41	396.59	351.31	45.29	8.757	
11,200.00	10,504.52	10,628.38	10,256.12	28.42	27.53	-52.45	-876.16	378.17	410.38	363.04	47.34	8.668	
11,300.00	10,504.93	10,734.27	10,256.60	29.50	28.68	-54.06	-982.14	398.34	424.84	375.06	49.78	8.535	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
Reference Site:	Paloma Blanco 19 Fed	MD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Paloma Blanco 19 Fed - 2H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM.MWD-ADJ													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (F)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipse (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,400.00	10,505.34	10,843.18	10,257.07	30.65	29.93	-55.34	-1,089.88	415.65	437.24	384.97	52.27	8.365	
11,500.00	10,505.75	10,952.97	10,257.55	31.86	31.26	-56.33	-1,198.50	429.99	447.45	392.63	54.82	8.162	
11,600.00	10,506.16	11,063.44	10,258.03	33.13	32.65	-57.07	-1,308.39	441.25	455.35	397.94	57.41	7.932	
11,700.00	10,506.57	11,174.44	10,258.52	34.45	34.10	-57.56	-1,419.09	449.37	460.86	400.85	60.01	7.679	
11,800.00	10,506.98	11,283.68	10,258.99	35.82	35.57	-57.83	-1,528.21	454.25	463.99	401.39	62.60	7.412	
11,900.00	10,507.39	11,393.64	10,259.42	37.22	36.99	-58.02	-1,628.12	457.73	466.29	401.15	65.14	7.150	
12,000.00	10,507.80	11,483.60	10,259.88	38.66	38.44	-58.20	-1,728.02	461.21	468.80	400.85	67.75	6.917	
12,100.00	10,508.21	11,583.57	10,260.29	40.13	39.93	-58.37	-1,827.92	464.69	470.91	400.49	70.42	6.687	
12,200.00	10,508.62	11,683.53	10,260.73	41.64	41.44	-58.55	-1,927.82	468.17	473.23	400.08	73.16	6.469	
12,300.00	10,509.03	11,783.49	10,261.16	43.16	42.98	-58.72	-2,027.72	471.65	475.56	399.62	75.94	6.262	
12,400.00	10,509.44	11,883.45	10,261.59	44.71	44.54	-58.90	-2,127.62	475.13	477.88	399.11	78.77	6.067	
12,500.00	10,509.85	11,983.42	10,262.03	46.28	46.12	-59.07	-2,227.52	478.60	480.21	398.56	81.85	5.881	
12,600.00	10,510.26	12,083.38	10,262.46	47.87	47.72	-59.24	-2,327.42	482.08	482.55	397.98	84.57	5.706	
12,700.00	10,510.67	12,183.34	10,262.89	49.47	49.34	-59.40	-2,427.32	485.56	484.89	397.37	87.52	5.540	
12,800.00	10,511.08	12,283.31	10,263.33	51.09	50.97	-59.57	-2,527.23	489.04	487.23	396.73	90.51	5.383	
12,900.00	10,511.49	12,383.27	10,263.76	52.73	52.62	-59.74	-2,627.13	492.52	489.58	396.06	93.52	5.235	
13,000.00	10,511.90	12,483.23	10,264.20	54.37	54.27	-59.90	-2,727.03	496.00	491.93	395.36	96.57	5.094	
13,100.00	10,512.31	12,583.19	10,264.63	56.03	55.94	-60.06	-2,826.93	499.48	494.29	394.65	99.64	4.961	
13,200.00	10,512.72	12,683.16	10,265.06	57.70	57.62	-60.22	-2,926.83	502.96	496.65	393.91	102.74	4.834	
13,300.00	10,513.13	12,783.12	10,265.50	59.38	59.31	-60.38	-3,026.73	506.44	499.01	393.15	105.87	4.714	
13,400.00	10,513.54	12,883.08	10,265.93	61.06	61.01	-60.53	-3,126.63	509.91	501.38	392.37	109.01	4.599	
13,500.00	10,513.95	12,983.04	10,266.36	62.76	62.71	-60.69	-3,226.53	513.39	503.75	391.58	112.17	4.491	
13,600.00	10,514.36	13,083.01	10,266.80	64.48	64.42	-60.84	-3,326.43	516.87	506.13	390.77	115.36	4.388	
13,700.00	10,514.77	13,182.97	10,267.23	66.17	66.14	-61.00	-3,426.34	520.35	508.51	389.95	118.56	4.289	
13,800.00	10,515.18	13,282.93	10,267.67	67.88	67.87	-61.15	-3,526.24	523.83	510.89	389.11	121.78	4.195	
13,900.00	10,515.58	13,382.89	10,268.10	69.60	69.60	-61.30	-3,626.14	527.31	513.27	388.26	125.01	4.106	
14,000.00	10,515.99	13,482.86	10,268.53	71.33	71.34	-61.45	-3,726.04	530.79	515.66	387.40	128.26	4.020	
14,100.00	10,516.40	13,582.82	10,268.97	73.06	73.08	-61.59	-3,825.94	534.27	518.06	386.53	131.52	3.939	
14,200.00	10,516.81	13,682.78	10,269.40	74.80	74.82	-61.74	-3,925.84	537.74	520.45	385.65	134.80	3.861	
14,300.00	10,517.22	13,782.74	10,269.83	76.54	76.57	-61.88	-4,025.74	541.22	522.85	384.76	138.09	3.786	
14,400.00	10,517.63	13,882.71	10,270.27	78.28	78.33	-62.03	-4,125.64	544.70	525.25	383.86	141.39	3.715	
14,500.00	10,518.04	13,982.67	10,270.70	80.03	80.09	-62.17	-4,225.54	548.18	527.66	382.95	144.71	3.646	
14,600.00	10,518.45	14,082.63	10,271.13	81.78	81.85	-62.31	-4,325.45	551.66	530.07	382.03	148.03	3.581	
14,700.00	10,518.86	14,182.59	10,271.57	83.54	83.61	-62.45	-4,425.35	555.14	532.48	381.11	151.37	3.518	
14,800.00	10,519.27	14,282.56	10,272.00	85.30	85.38	-62.58	-4,525.25	558.62	534.90	380.18	154.72	3.457	
14,900.00	10,519.68	14,382.52	10,272.44	87.06	87.15	-62.72	-4,625.15	562.10	537.31	379.24	158.07	3.399	
15,000.00	10,520.09	14,482.48	10,272.87	88.82	88.93	-62.86	-4,725.05	565.58	539.73	378.29	161.44	3.343	
15,100.00	10,520.50	14,582.44	10,273.30	90.59	90.70	-62.99	-4,824.95	569.05	542.16	377.34	164.81	3.290	
15,200.00	10,520.91	14,682.41	10,273.74	92.36	92.48	-63.12	-4,924.85	572.53	544.59	376.39	168.20	3.238	
15,300.00	10,521.32	14,782.37	10,274.17	94.13	94.26	-63.25	-5,024.75	576.01	547.02	375.43	171.59	3.188	
15,400.00	10,521.73	14,882.33	10,274.60	95.90	96.05	-63.39	-5,124.65	579.49	549.45	374.46	174.99	3.140	
15,500.00	10,522.14	14,982.30	10,275.04	97.68	97.83	-63.51	-5,224.55	582.97	551.89	373.49	178.40	3.094	
15,600.00	10,522.55	15,082.26	10,275.47	99.46	99.62	-63.64	-5,324.46	586.45	554.32	372.51	181.81	3.049	
15,709.14	10,523.00	15,181.36	10,275.94	101.40	101.57	-63.78	-5,423.49	590.25	556.99	371.44	185.55	3.002	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
Reference Site:	Paloma Blanco 19 Fed	MD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM:5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Paloma Blanco 19 Fed - 3H - OH - Plan #1													Offset Site Error:
Survey Program: OLEAM/MWD-ADJ													Offset Well Error:
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre -N-S (usft)	-E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.00	0.00	0.00	0.00	0.00	0.00	89.59	0.72	99.93	99.95				
100.00	100.00	98.00	98.00	0.08	0.08	89.59	0.72	99.93	99.93	99.77	0.17	598.797	
200.00	200.00	198.00	198.00	0.31	0.30	89.59	0.72	99.93	99.93	99.32	0.61	162.860	
300.00	300.00	298.00	298.00	0.53	0.53	89.59	0.72	99.93	99.93	98.87	1.06	93.997	
400.00	400.00	398.00	398.00	0.76	0.75	89.59	0.72	99.93	99.93	98.42	1.51	66.063	
500.00	500.00	498.00	498.00	0.98	0.98	89.59	0.72	99.93	99.93	97.97	1.96	50.929	
600.00	600.00	598.00	598.00	1.21	1.20	89.59	0.72	99.93	99.93	97.52	2.41	41.436	
700.00	700.00	698.00	698.00	1.43	1.43	89.59	0.72	99.93	99.93	97.07	2.86	34.926	
800.00	800.00	798.00	798.00	1.66	1.65	89.59	0.72	99.93	99.93	96.62	3.31	30.184	
900.00	900.00	898.00	898.00	1.88	1.88	89.59	0.72	99.93	99.93	96.17	3.76	26.575	
1,000.00	1,000.00	998.00	998.00	2.11	2.10	89.59	0.72	99.93	99.93	95.72	4.21	23.738	
1,100.00	1,100.00	1,098.00	1,098.00	2.33	2.33	89.59	0.72	99.93	99.93	95.27	4.66	21.448	
1,200.00	1,200.00	1,198.00	1,198.00	2.56	2.55	89.59	0.72	99.93	99.93	94.82	5.11	19.560	
1,300.00	1,300.00	1,298.00	1,298.00	2.78	2.78	89.59	0.72	99.93	99.93	94.37	5.56	17.978	
1,400.00	1,400.00	1,398.00	1,398.00	3.01	3.00	89.59	0.72	99.93	99.93	93.92	6.01	16.633	
1,500.00	1,500.00	1,498.00	1,498.00	3.23	3.23	89.59	0.72	99.93	99.93	93.48	6.46	15.475	
1,600.00	1,600.00	1,598.00	1,598.00	3.46	3.45	89.59	0.72	99.93	99.93	93.03	6.91	14.468	
1,700.00	1,700.00	1,698.00	1,698.00	3.68	3.68	89.59	0.72	99.93	99.93	92.58	7.36	13.584	
1,800.00	1,800.00	1,798.00	1,798.00	3.91	3.90	89.59	0.72	99.93	99.93	92.13	7.81	12.802	
1,900.00	1,900.00	1,898.00	1,898.00	4.13	4.13	89.59	0.72	99.93	99.93	91.68	8.26	12.105	
2,000.00	2,000.00	1,998.00	1,998.00	4.35	4.35	89.59	0.72	99.93	99.93	91.23	8.71	11.480	
2,100.00	2,100.00	2,098.00	2,098.00	4.58	4.58	89.59	0.72	99.93	99.93	90.78	9.15	10.916	
2,200.00	2,200.00	2,198.00	2,198.00	4.80	4.80	89.59	0.72	99.93	99.93	90.33	9.60	10.405	
2,300.00	2,300.00	2,298.00	2,298.00	5.03	5.02	89.59	0.72	99.93	99.93	89.88	10.05	9.940	
2,400.00	2,400.00	2,398.00	2,398.00	5.25	5.25	89.59	0.72	99.93	99.93	89.43	10.50	9.514	
2,500.00	2,500.00	2,498.00	2,498.00	5.48	5.47	89.59	0.72	99.93	99.93	88.98	10.95	9.124	
2,600.00	2,600.00	2,598.00	2,598.00	5.70	5.70	89.59	0.72	99.93	99.93	88.53	11.40	8.764	
2,700.00	2,700.00	2,698.00	2,698.00	5.93	5.92	89.59	0.72	99.93	99.93	88.08	11.85	8.432	
2,800.00	2,800.00	2,798.00	2,798.00	6.15	6.15	89.59	0.72	99.93	99.93	87.63	12.30	8.124	
2,900.00	2,900.00	2,898.00	2,898.00	6.38	6.37	89.59	0.72	99.93	99.93	87.18	12.75	7.837	
3,000.00	3,000.00	2,998.00	2,998.00	6.60	6.60	89.59	0.72	99.93	99.93	86.73	13.20	7.570	
3,100.00	3,100.00	3,098.00	3,098.00	6.83	6.82	89.59	0.72	99.93	99.93	86.28	13.65	7.321	
3,200.00	3,200.00	3,198.00	3,198.00	7.05	7.05	89.59	0.72	99.93	99.93	85.83	14.10	7.088	
3,300.00	3,300.00	3,298.00	3,298.00	7.28	7.27	89.59	0.72	99.93	99.93	85.38	14.55	6.869	
3,400.00	3,400.00	3,398.00	3,398.00	7.50	7.50	89.59	0.72	99.93	99.93	84.93	15.00	6.663	
3,500.00	3,500.00	3,498.00	3,498.00	7.73	7.72	89.59	0.72	99.93	99.93	84.48	15.45	6.469	
3,600.00	3,600.00	3,598.00	3,598.00	7.95	7.95	89.59	0.72	99.93	99.93	84.03	15.90	6.288	
3,700.00	3,700.00	3,698.00	3,698.00	8.18	8.17	89.59	0.72	99.93	99.93	83.59	16.35	6.113	
3,800.00	3,800.00	3,798.00	3,798.00	8.40	8.40	89.59	0.72	99.93	99.93	83.14	16.80	5.950	
3,900.00	3,900.00	3,898.00	3,898.00	8.63	8.62	89.59	0.72	99.93	99.93	82.69	17.25	5.794	
4,000.00	4,000.00	3,998.00	3,998.00	8.85	8.85	89.59	0.72	99.93	99.93	82.24	17.70	5.647	
4,100.00	4,100.00	4,098.00	4,098.00	9.07	9.07	89.59	0.72	99.93	99.93	81.79	18.15	5.507	
4,200.00	4,200.00	4,198.00	4,198.00	9.30	9.30	89.59	0.72	99.93	99.93	81.34	18.59	5.374	
4,300.00	4,300.00	4,298.00	4,298.00	9.52	9.52	89.59	0.72	99.93	99.93	80.89	19.04	5.247	
4,400.00	4,400.00	4,398.00	4,398.00	9.75	9.74	89.59	0.72	99.93	99.93	80.44	19.49	5.126	
4,500.00	4,500.00	4,498.00	4,498.00	9.97	9.97	89.59	0.72	99.93	99.93	79.99	19.94	5.011	
4,600.00	4,600.00	4,598.00	4,598.00	10.20	10.19	89.59	0.72	99.93	99.93	79.54	20.39	4.900	
4,700.00	4,700.00	4,698.00	4,698.00	10.42	10.42	89.59	0.72	99.93	99.93	79.09	20.84	4.795	
4,800.00	4,800.00	4,798.00	4,798.00	10.65	10.64	89.59	0.72	99.93	99.93	78.64	21.29	4.693	
4,900.00	4,900.00	4,898.00	4,898.00	10.87	10.87	89.59	0.72	99.93	99.93	78.19	21.74	4.596	
5,000.00	5,000.00	4,998.00	4,998.00	11.10	11.09	89.59	0.72	99.93	99.93	77.74	22.19	4.503	
5,100.00	5,100.00	5,098.00	5,098.00	11.32	11.32	89.59	0.72	99.93	99.93	77.29	22.64	4.414 CC, ES	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
Reference Site:	Paloma Blanco 19 Fed	MD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset-TVD Reference:	Offset Datum

Offset Design Paloma Blanco 19 Fed - 3H - OH - Plan #1													Offset Site Error: 0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error: 0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Warning					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,200.00	5,195.82	5,195.81	11.55	11.52	89.93	0.12	100.97	100.99	77.93	23.06	4.379 SF	
5,300.00	5,300.00	5,293.47	5,293.38	11.77	11.70	90.95	-1.73	104.17	104.29	80.82	23.47	4.444	
5,400.00	5,400.00	5,390.86	5,390.58	12.00	11.88	92.52	-4.81	109.52	109.87	86.00	23.87	4.603	
5,500.00	5,500.00	5,487.88	5,487.21	12.22	12.06	94.46	-9.12	116.97	117.82	93.55	24.27	4.854	
5,600.00	5,600.00	5,584.40	5,583.10	12.45	12.25	96.59	-14.62	126.49	128.20	103.53	24.68	5.195	
5,700.00	5,700.00	5,680.30	5,678.07	12.67	12.45	98.76	-21.28	138.03	141.08	115.99	25.08	5.624	
5,800.00	5,800.00	5,775.81	5,772.29	12.90	12.65	100.86	-29.09	151.56	156.45	130.97	25.49	6.138	
5,900.00	5,900.00	5,874.29	5,869.28	13.12	12.87	102.75	-37.84	166.37	172.98	147.08	25.90	6.679	
6,000.00	6,000.00	5,972.77	5,968.28	13.35	13.10	104.30	-48.19	181.18	189.65	163.34	26.31	7.208	
6,100.00	6,100.00	6,071.25	6,063.25	13.57	13.33	105.81	-54.74	195.99	206.44	179.71	26.73	7.724	
6,200.00	6,200.00	6,169.73	6,160.23	13.80	13.57	106.71	-63.29	210.80	223.31	196.17	27.14	8.227	
6,300.00	6,300.00	6,268.21	6,257.21	14.02	13.82	107.66	-71.84	225.61	240.26	212.70	27.56	8.716	
6,400.00	6,400.00	6,366.89	6,354.20	14.24	14.08	108.49	-80.39	240.42	257.26	229.28	27.98	9.193	
6,500.00	6,500.00	6,465.18	6,451.18	14.47	14.34	109.21	-88.94	255.23	274.31	245.90	28.41	9.656	
6,600.00	6,600.00	6,563.66	6,548.17	14.69	14.60	109.85	-97.49	270.04	291.39	262.56	28.83	10.107	
6,700.00	6,700.00	6,662.14	6,645.15	14.92	14.87	110.42	-106.04	284.85	308.51	279.25	29.26	10.545	
6,800.00	6,800.00	6,760.62	6,742.14	15.14	15.15	110.93	-114.59	299.66	325.65	295.97	29.68	10.971	
6,900.00	6,900.00	6,859.10	6,839.12	15.37	15.43	111.39	-123.14	314.47	342.82	312.70	30.11	11.384	
7,000.00	7,000.00	6,957.58	6,936.11	15.59	15.71	111.80	-131.69	329.28	360.00	329.46	30.54	11.787	
7,100.00	7,100.00	7,056.06	7,033.09	15.82	16.00	112.18	-140.25	344.09	377.20	346.22	30.97	12.178	
7,200.00	7,200.00	7,154.54	7,130.08	16.04	16.30	112.52	-148.80	358.90	394.41	363.01	31.41	12.558	
7,300.00	7,300.00	7,253.02	7,227.06	16.27	16.59	112.83	-157.35	373.71	411.64	379.80	31.84	12.928	
7,400.00	7,400.00	7,351.50	7,324.05	16.49	16.90	113.12	-165.90	388.52	428.88	396.80	32.28	13.288	
7,500.00	7,500.00	7,449.98	7,421.03	16.72	17.20	113.39	-174.45	403.33	446.13	413.41	32.71	13.637	
7,600.00	7,600.00	7,548.46	7,518.02	16.94	17.51	113.64	-183.00	418.14	463.39	430.23	33.15	13.978	
7,700.00	7,700.00	7,646.94	7,615.00	17.17	17.82	113.87	-191.55	432.95	480.65	447.08	33.59	14.309	
7,800.00	7,800.00	7,745.43	7,711.98	17.39	18.13	114.08	-200.10	447.76	497.92	463.89	34.03	14.632	
7,900.00	7,900.00	7,843.91	7,808.97	17.62	18.45	114.28	-208.65	462.57	515.20	480.73	34.47	14.946	
8,000.00	8,000.00	7,942.39	7,905.95	17.84	18.77	114.46	-217.20	477.38	532.48	497.57	34.91	15.252	
8,100.00	8,100.00	8,040.87	8,002.94	18.07	19.09	114.64	-225.75	492.19	549.77	514.42	35.36	15.550	
8,200.00	8,200.00	8,139.35	8,099.92	18.29	19.42	114.80	-234.30	507.00	567.07	531.27	35.80	15.840	
8,300.00	8,300.00	8,237.83	8,196.91	18.52	19.74	114.96	-242.85	521.81	584.36	548.12	36.24	16.123	
8,400.00	8,400.00	8,336.31	8,293.89	18.74	20.07	115.10	-251.40	536.62	601.66	564.98	36.69	16.399	
8,500.00	8,500.00	8,434.79	8,390.88	18.96	20.40	115.24	-259.95	551.43	618.97	581.83	37.14	16.668	
8,600.00	8,600.00	8,533.27	8,487.86	19.19	20.73	115.37	-268.50	566.24	636.28	598.69	37.58	16.930	
8,700.00	8,700.00	8,631.75	8,584.85	19.41	21.07	115.49	-277.05	581.05	653.59	615.56	38.03	17.186	
8,800.00	8,800.00	8,730.23	8,681.83	19.64	21.40	115.61	-285.60	595.86	670.90	632.42	38.48	17.435	
8,900.00	8,900.00	8,828.71	8,778.82	19.86	21.74	115.72	-294.15	610.67	688.22	649.29	38.93	17.679	
9,000.00	9,000.00	8,927.19	8,875.80	20.09	22.08	115.83	-302.71	625.48	705.54	666.16	39.38	17.916	
9,100.00	9,100.00	9,025.68	8,972.78	20.31	22.42	115.93	-311.26	640.29	722.86	683.03	39.83	18.148	
9,200.00	9,200.00	9,124.16	9,069.77	20.54	22.77	116.02	-319.81	655.10	740.18	699.90	40.28	18.375	
9,300.00	9,300.00	9,222.64	9,166.75	20.76	23.11	116.11	-328.36	669.91	757.51	716.77	40.73	18.596	
9,400.00	9,400.00	9,321.12	9,263.74	20.99	23.46	116.20	-336.91	684.72	774.84	733.65	41.19	18.813	
9,500.00	9,500.00	9,419.60	9,360.72	21.21	23.80	116.28	-345.46	699.53	792.16	750.52	41.64	19.024	
9,600.00	9,600.00	9,518.08	9,457.71	21.44	24.15	116.36	-354.01	714.34	809.49	767.40	42.09	19.230	
9,700.00	9,700.00	9,616.56	9,550.72	21.66	24.53	116.45	-363.88	731.44	825.33	782.73	42.60	19.375	
9,800.00	9,800.00	9,715.04	9,646.46	21.89	24.86	116.52	-371.86	745.26	837.90	794.80	43.10	19.443	
9,900.00	9,900.00	9,813.52	9,743.59	22.11	25.17	116.57	-377.79	755.52	847.16	803.57	43.59	19.435	
9,930.05	9,930.05	9,912.00	9,842.00	22.18	25.25	116.58	-379.16	757.90	849.30	805.56	43.74	19.418	
9,950.00	9,950.00	9,961.23	9,897.56	22.22	25.31	-58.85	-379.96	759.29	850.37	806.52	43.85	19.392	
10,000.00	9,999.83	10,000.00	9,936.26	22.30	25.39	-58.90	-381.14	761.15	851.28	807.28	44.00	19.348	
10,050.00	10,049.13	10,028.83	9,964.97	22.39	25.46	-59.10	-383.17	762.75	851.15	807.08	44.07	19.314	

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
Reference Site:	Paloma Blanco 19 Fed	MD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset-TVD Reference:	Offset Datum

Offset Design Paloma Blanco 19 Fed - 3H - OH - Plan #1														Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ														Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre	+W-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,100.00	10,097.52	10,050.00	9,985.96	22.47	25.52	-59.38		-385.56	764.13	850.26	808.18	44.07	19.291		
10,150.00	10,144.84	10,080.11	10,015.62	22.55	25.61	-59.88		-390.25	766.38	848.55	804.48	44.07	19.254		
10,200.00	10,190.12	10,100.00	10,035.04	22.63	25.68	-60.38		-394.19	768.05	846.18	802.16	44.02	19.222		
10,250.00	10,233.63	10,131.34	10,065.32	22.71	25.79	-61.20		-401.72	770.98	843.07	799.05	44.02	19.151		
10,300.00	10,274.82	10,150.00	10,083.12	22.81	25.86	-61.89		-406.96	772.89	839.46	795.45	44.00	19.078		
10,350.00	10,313.40	10,182.52	10,113.89	22.92	26.00	-63.01		-417.45	778.51	835.21	791.11	44.11	18.936		
10,400.00	10,349.05	10,200.00	10,129.84	23.04	26.08	-63.87		-423.79	778.81	830.87	786.47	44.19	18.796		
10,450.00	10,381.52	10,233.67	10,160.36	23.19	26.24	-65.29		-437.33	782.93	825.66	781.17	44.49	18.556		
10,500.00	10,410.55	10,250.00	10,174.84	23.36	26.32	-66.26		-444.53	785.16	820.81	775.88	44.75	18.339		
10,550.00	10,435.92	10,264.81	10,204.98	23.56	26.51	-67.95		-461.20	790.19	815.31	770.02	45.29	18.001		
10,600.00	10,457.44	10,310.38	10,226.41	23.79	26.66	-69.39		-474.57	794.12	810.16	764.32	45.85	17.671		
10,650.00	10,474.95	10,335.96	10,247.21	24.04	26.81	-70.90		-488.88	798.24	805.23	758.74	46.49	17.319		
10,700.00	10,488.31	10,361.56	10,267.34	24.33	26.98	-72.44		-504.09	802.54	800.68	753.46	47.22	16.957		
10,750.00	10,497.43	10,387.18	10,286.77	24.64	27.15	-74.00		-520.18	807.01	796.66	748.67	48.00	16.598		
10,800.00	10,502.22	10,412.83	10,305.45	24.98	27.33	-75.56		-537.14	811.66	793.35	744.54	48.81	16.254		
10,827.75	10,503.00	10,427.09	10,315.48	25.18	27.43	-76.42		-546.91	814.31	791.89	742.62	49.27	16.072		
10,872.90	10,503.18	10,450.00	10,331.08	25.52	27.60	-77.58		-563.12	818.66	790.80	740.95	49.85	15.864		
10,900.00	10,503.29	10,466.58	10,341.94	25.72	27.73	-78.38		-575.22	821.88	791.13	740.90	50.23	15.750		
11,000.00	10,503.70	10,529.62	10,379.81	26.52	28.25	-81.19		-623.95	834.61	798.27	748.61	51.66	15.452		
11,099.26	10,504.11	10,602.57	10,416.43	27.42	28.92	-83.89		-685.04	850.14	813.23	760.02	53.20	15.285		
11,200.00	10,504.52	10,687.23	10,448.50	28.42	29.77	-86.25		-761.02	868.93	833.16	778.07	55.10	15.122		
11,300.00	10,504.93	10,780.28	10,470.05	28.50	30.79	-87.79		-848.93	890.05	854.59	797.43	57.16	14.951		
11,400.00	10,505.34	10,882.14	10,476.81	30.65	31.97	-88.28		-947.81	913.08	876.33	818.91	59.42	14.748		
11,500.00	10,505.75	11,009.79	10,477.50	31.86	33.37	-88.34		-1,072.76	938.15	898.01	834.01	62.00	14.452		
11,600.00	10,506.16	11,139.03	10,478.20	33.13	34.85	-88.39		-1,200.08	961.26	912.38	847.62	64.76	14.088		
11,700.00	10,506.57	11,269.57	10,478.91	34.45	36.41	-88.43		-1,329.37	979.22	925.39	857.71	67.89	13.672		
11,800.00	10,506.98	11,401.14	10,479.62	35.82	38.02	-88.46		-1,460.23	992.84	935.00	864.25	70.75	13.216		
11,900.00	10,507.39	11,533.43	10,480.34	37.22	39.69	-88.48		-1,592.20	1,001.98	941.16	867.22	73.94	12.729		
12,000.00	10,507.80	11,666.13	10,481.05	38.66	41.40	-88.50		-1,724.81	1,006.55	943.85	868.64	77.21	12.224		
12,100.00	10,508.21	11,771.10	10,481.61	40.13	42.82	-88.51		-1,829.76	1,007.85	944.33	864.13	80.20	11.775		
12,200.00	10,508.62	11,871.10	10,482.15	41.64	44.22	-88.52		-1,929.76	1,009.03	944.76	861.59	83.18	11.359		
12,300.00	10,509.03	11,971.10	10,482.69	43.16	45.65	-88.53		-2,029.75	1,010.21	945.20	858.99	86.21	10.964		
12,400.00	10,509.44	12,071.10	10,483.22	44.71	47.10	-88.53		-2,129.74	1,011.40	945.63	856.34	89.29	10.591		
12,500.00	10,509.85	12,171.10	10,483.76	46.28	48.58	-88.54		-2,229.73	1,012.58	946.06	853.66	92.41	10.238		
12,600.00	10,510.26	12,271.09	10,484.30	47.87	50.08	-88.55		-2,329.72	1,013.76	946.50	850.93	95.56	9.904		
12,700.00	10,510.67	12,371.08	10,484.83	49.47	51.61	-88.56		-2,429.71	1,014.95	946.93	848.17	98.76	9.588		
12,800.00	10,511.08	12,471.09	10,485.37	51.09	53.15	-88.57		-2,529.70	1,016.13	947.37	845.38	101.98	9.289		
12,900.00	10,511.49	12,571.09	10,485.91	52.73	54.71	-88.58		-2,629.69	1,017.31	947.80	842.56	105.24	9.006		
13,000.00	10,511.90	12,671.09	10,486.44	54.37	56.28	-88.58		-2,729.68	1,018.50	948.23	839.72	108.52	8.738		
13,100.00	10,512.31	12,771.09	10,486.98	56.03	57.87	-88.59		-2,829.67	1,019.68	948.67	836.85	111.82	8.484		
13,200.00	10,512.72	12,871.09	10,487.52	57.70	59.48	-88.60		-2,929.66	1,020.86	949.10	833.96	115.14	8.243		
13,300.00	10,513.13	12,971.09	10,488.05	59.38	61.09	-88.61		-3,029.65	1,022.05	949.54	831.05	118.49	8.014		
13,400.00	10,513.54	13,071.09	10,488.59	61.06	62.72	-88.62		-3,129.64	1,023.23	949.97	828.12	121.85	7.796		
13,500.00	10,513.95	13,171.08	10,489.13	62.76	64.36	-88.63		-3,229.63	1,024.41	950.41	825.17	125.23	7.589		
13,600.00	10,514.36	13,271.08	10,489.66	64.46	66.01	-88.63		-3,329.62	1,025.59	950.84	822.21	128.63	7.392		
13,700.00	10,514.77	13,371.08	10,490.20	66.17	67.67	-88.64		-3,429.61	1,026.78	951.27	819.24	132.03	7.205		
13,800.00	10,515.18	13,471.08	10,490.73	67.88	69.33	-88.65		-3,529.60	1,027.96	951.71	816.25	135.46	7.028		
13,900.00	10,515.58	13,571.08	10,491.27	69.60	71.01	-88.66		-3,629.59	1,029.14	952.14	813.25	138.89	6.855		
14,000.00	10,515.99	13,671.08	10,491.81	71.33	72.69	-88.67		-3,729.58	1,030.33	952.58	810.24	142.34	6.692		
14,100.00	10,516.40	13,771.08	10,492.34	73.08	74.38	-88.67		-3,829.58	1,031.51	953.01	807.22	145.79	6.537		
14,200.00	10,516.81	13,871.08	10,492.88	74.80	76.07	-88.68		-3,929.57	1,032.69	953.45	804.19	149.26	6.388		
14,300.00	10,517.22	13,971.08	10,493.42	76.54	77.78	-88.69		-4,029.56	1,033.88	953.88	801.15	152.73	6.245		

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

LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
Reference Site:	Paloma Blanco 19 Fed	MD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design: Paloma Blanco 19 Fed - 3H - OH - Plan #1													Offset Site Error:	0.00 usft
Survey Program: 0-LEAM MWD-ADJ													Offset Well Error:	0.00 usft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N-S (usft)	+E-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,400.00	10,517.63	14,071.08	10,493.95	78.28	79.48	-88.70	-4,129.55	1,035.06	954.31	798.10	156.22	6.109		
14,500.00	10,518.04	14,171.07	10,494.49	80.03	81.20	-88.71	-4,229.54	1,036.24	954.75	795.04	159.71	5.978		
14,600.00	10,518.45	14,271.07	10,495.03	81.78	82.91	-88.72	-4,329.53	1,037.43	955.18	791.97	163.21	5.853		
14,700.00	10,518.86	14,371.07	10,495.56	83.54	84.64	-88.72	-4,429.52	1,038.61	955.62	788.90	166.71	5.732		
14,800.00	10,519.27	14,471.07	10,496.10	85.30	86.38	-88.73	-4,529.51	1,039.79	956.05	785.83	170.23	5.616		
14,900.00	10,519.68	14,571.07	10,496.64	87.06	88.09	-88.74	-4,629.50	1,040.98	956.49	782.74	173.75	5.505		
15,000.00	10,520.09	14,671.07	10,497.17	88.82	89.83	-88.75	-4,729.49	1,042.16	956.92	779.65	177.27	5.398		
15,100.00	10,520.50	14,771.07	10,497.71	90.59	91.57	-88.76	-4,829.48	1,043.34	957.36	776.56	180.80	5.295		
15,200.00	10,520.91	14,871.07	10,498.25	92.36	93.31	-88.76	-4,929.47	1,044.52	957.79	773.46	184.33	5.196		
15,300.00	10,521.32	14,971.07	10,498.78	94.13	95.05	-88.77	-5,029.46	1,045.71	958.23	770.35	187.87	5.100		
15,400.00	10,521.73	15,071.07	10,499.32	95.90	96.80	-88.78	-5,129.45	1,046.89	958.66	767.24	191.42	5.008		
15,500.00	10,522.14	15,171.06	10,499.85	97.68	98.56	-88.79	-5,229.44	1,048.07	959.09	764.13	194.97	4.919		
15,600.00	10,522.55	15,271.06	10,500.39	99.46	100.31	-88.80	-5,329.43	1,049.26	959.53	761.01	198.52	4.833		
15,709.14	10,523.00	15,380.20	10,500.98	101.40	102.23	-88.81	-5,438.56	1,050.55	960.00	757.60	202.40	4.743		

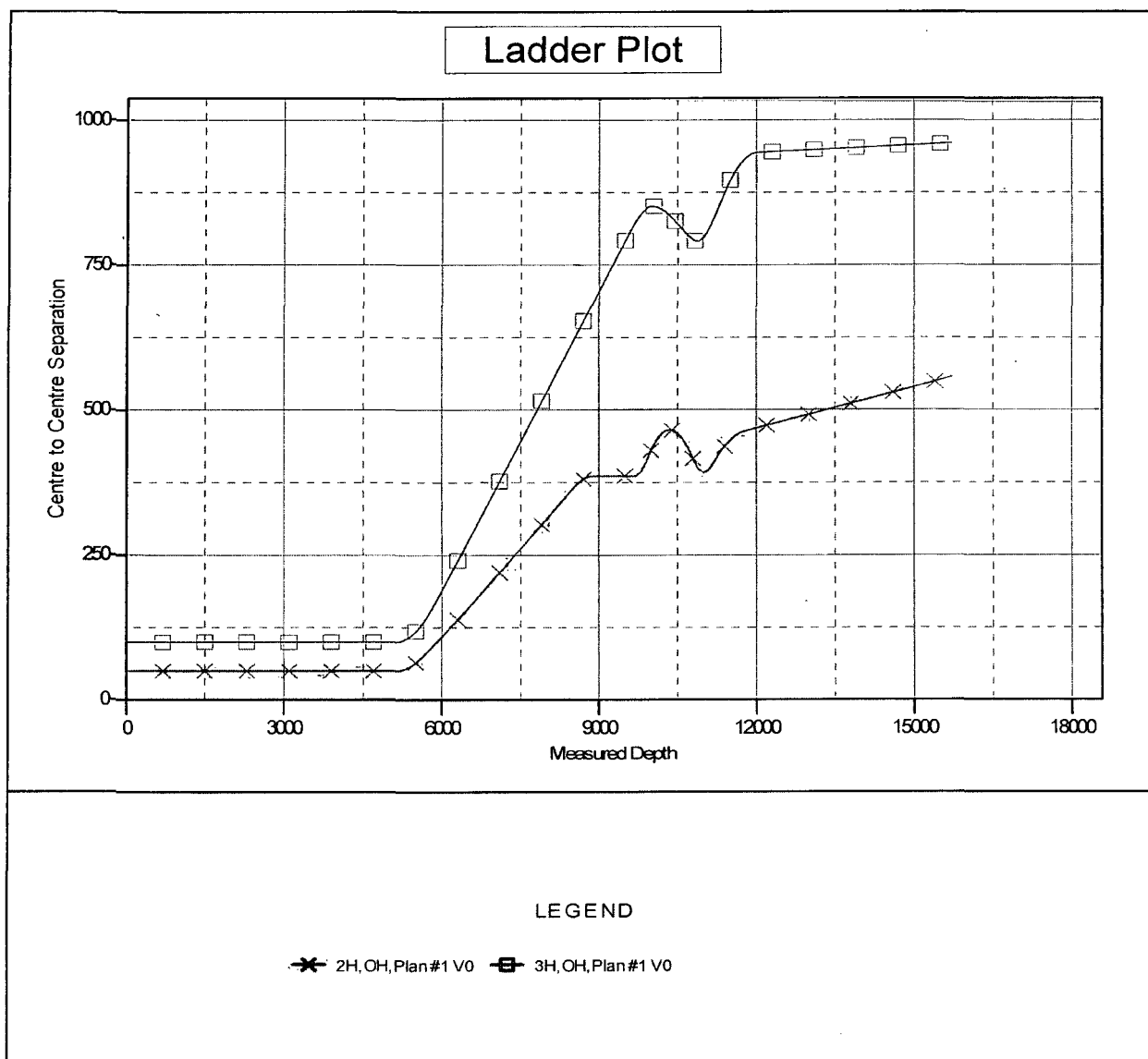
LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
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Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00'usft	Output errors are at:	2.00 sigma
Reference Wellbore:	OH	Database:	EDM 5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3541.3' GL + 25' RKB @ 3566.30usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 1H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.44°



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

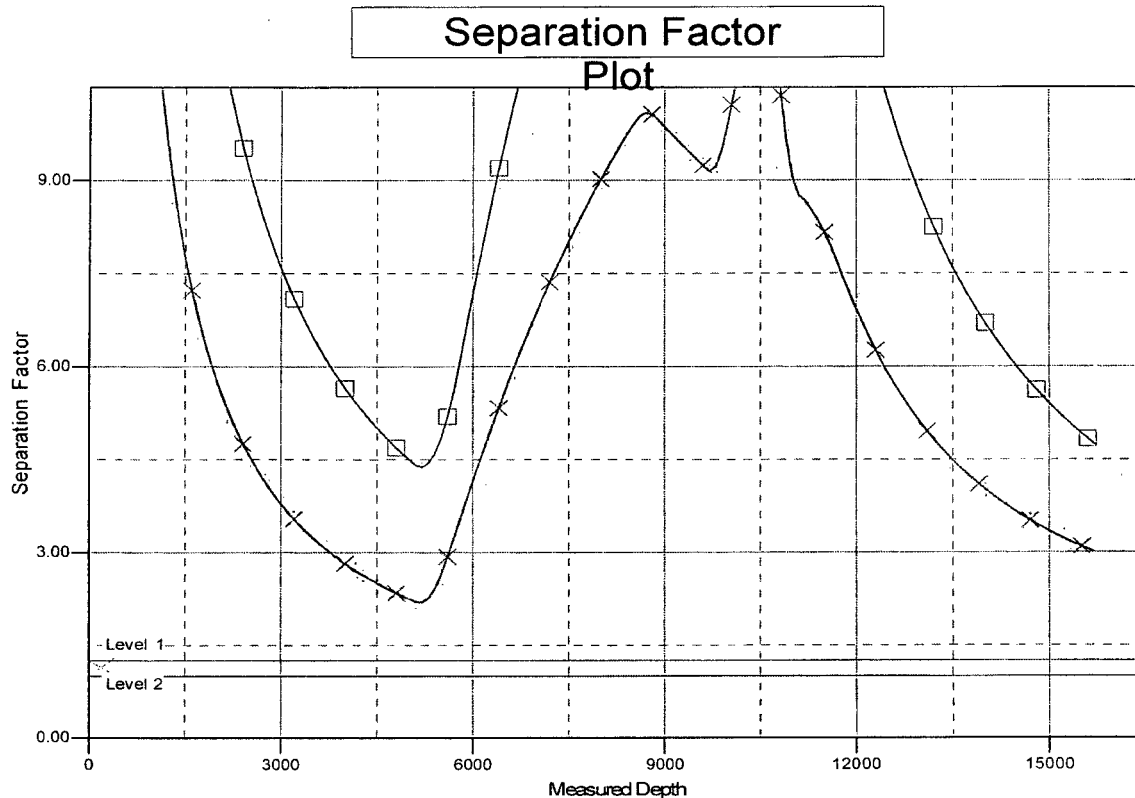
LEAM Drilling Systems LLC

Anticollision Report

Company:	DEVON ENERGY	Local Co-ordinate Reference:	Well 1H
Project:	Lea County, NM (NAD-83)	TVD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
Reference Site:	Paloma Blanco 19 Fed	MD Reference:	3541.3' GL + 25' RKB @ 3566.30usft
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Reference Well:	1H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at:	2.00 sigma
Reference Wellbore:	OH	Database:	EDM-5000.1 Single User Db
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 3541.3' GL + 25' RKB @ 3566.30usft
 Offset Depths are relative to Offset Datum
 Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: 1H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.44°



LEGEND

✕ 2H, OH, Plan #1 V0 ◻ 3H, OH, Plan #1 V0