

Devon Energy

Anticollision Risk Report

Company:	WESTERN DIVISION	Local Co-ordinate Reference:	Well Gaucho Unit 81H
Project:	PBNM	TVD Reference:	1 @ 3495.50ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3495.50ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Gaucha Unit 81H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
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 Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00ft	Error Surface:	Combined Covariances
Warning Levels Evaluated at:	2.00 Sigma	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 8/30/2016	
From (ft)	To (ft)	Survey (Wellbore)	Tool Name
0.00	16,342.73	Plan 1 (Wellbore #1)	MWD
		Description	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Dzurisin						
Gaucha Unit 82H - Wellbore #1 - Plan 1	3,000.00	3,000.00	50.26	40.92	5.381 CC	
Gaucha Unit 82H - Wellbore #1 - Plan 1	3,100.00	3,099.99	50.55	40.89	5.235 ES	
Gaucha Unit 82H - Wellbore #1 - Plan 1	10,937.80	10,933.60	142.24	108.06	4.161 SF	

Offset Design													Dzurisin - Gaucho Unit 82H - 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									
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	Warning			
0.00	0.00	0.00	0.00	0.00	0.00	-149.00	50.26						0			
100.00	100.00	100.00	100.00	0.09	0.09	-149.00	50.26	50.13	0.12	413.343			0			
200.00	200.00	200.00	200.00	0.31	0.31	-149.00	50.26	49.82	0.44	114.361			0			
300.00	300.00	300.00	300.00	0.54	0.54	-149.00	50.26	49.50	0.76	66.361			0			
400.00	400.00	400.00	400.00	0.76	0.76	-149.00	50.26	49.18	1.08	46.742			0			
500.00	500.00	500.00	500.00	0.99	0.99	-149.00	50.26	48.86	1.39	36.076			0			
600.00	600.00	600.00	600.00	1.21	1.21	-149.00	50.26	48.55	1.71	29.374			0			
700.00	700.00	700.00	700.00	1.43	1.43	-149.00	50.26	48.23	2.03	24.771			0			
800.00	800.00	800.00	800.00	1.66	1.66	-149.00	50.26	47.91	2.35	21.416			0			
900.00	900.00	900.00	900.00	1.88	1.88	-149.00	50.26	47.59	2.66	18.861			0			
1,000.00	1,000.00	1,000.00	1,000.00	2.11	2.11	-149.00	50.26	47.27	2.98	16.851			0			
1,100.00	1,100.00	1,100.00	1,100.00	2.33	2.33	-149.00	50.26	46.96	3.30	15.228			0			
1,200.00	1,200.00	1,200.00	1,200.00	2.56	2.56	-149.00	50.26	46.64	3.62	13.890			0			
1,300.00	1,300.00	1,300.00	1,300.00	2.78	2.78	-149.00	50.26	46.32	3.94	12.768			0			
1,400.00	1,400.00	1,400.00	1,400.00	3.01	3.01	-149.00	50.26	46.00	4.25	11.814			0			
1,500.00	1,500.00	1,500.00	1,500.00	3.23	3.23	-149.00	50.26	45.68	4.57	10.993			0			
1,600.00	1,600.00	1,600.00	1,600.00	3.46	3.46	-149.00	50.26	45.37	4.89	10.278			0			
1,700.00	1,700.00	1,700.00	1,700.00	3.68	3.68	-149.00	50.26	45.05	5.21	9.651			0			
1,800.00	1,800.00	1,800.00	1,800.00	3.91	3.91	-149.00	50.26	44.73	5.53	9.096			0			
1,900.00	1,900.00	1,900.00	1,900.00	4.13	4.13	-149.00	50.26	44.41	5.84	8.601			0			

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

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Project:	PBNM	TVD Reference:	1 @ 3495.50ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3495.50ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Gaucho Unit 81H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Dzurisin - Gaucho Unit 82H - Wellbore #1 - Plan 1												Offset Well Error:	0.00 ft
Survey Program: 0-MWD													
Reference				Offset		Semi Major Axis		Distance					
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
2,000.00	2,000.00	2,000.00	2,000.00	4.36	4.36	-149.00	50.26	44.09	6.16	8.157	0		
2,100.00	2,100.00	2,100.00	2,100.00	4.58	4.58	-149.00	50.26	43.78	6.48	7.757	0		
2,200.00	2,200.00	2,200.00	2,200.00	4.81	4.81	-149.00	50.26	43.46	6.80	7.394	0		
2,300.00	2,300.00	2,300.00	2,300.00	5.03	5.03	-149.00	50.26	43.14	7.11	7.064	0		
2,400.00	2,400.00	2,400.00	2,400.00	5.26	5.26	-149.00	50.26	42.82	7.43	6.762	0		
2,500.00	2,500.00	2,500.00	2,500.00	5.48	5.48	-149.00	50.26	42.51	7.75	6.484	0		
2,600.00	2,600.00	2,600.00	2,600.00	5.71	5.71	-149.00	50.26	42.19	8.07	6.229	0		
2,700.00	2,700.00	2,700.00	2,700.00	5.93	5.93	-149.00	50.26	41.87	8.39	5.993	0		
2,800.00	2,800.00	2,800.00	2,800.00	6.15	6.15	-149.00	50.26	41.55	8.70	5.774	0		
2,900.00	2,900.00	2,900.00	2,900.00	6.38	6.38	-149.00	50.26	41.23	9.02	5.570	0		
3,000.00	3,000.00	3,000.00	3,000.00	6.60	6.60	-149.00	50.26	40.92	9.34	5.381	0		CC
3,100.00	3,099.99	3,099.99	3,099.99	6.83	6.83	-109.94	50.55	40.89	9.66	5.235	0		ES
3,200.00	3,199.96	3,199.96	3,199.96	7.04	7.05	-112.67	51.50	41.53	9.97	5.166	0		
3,300.00	3,299.86	3,299.86	3,299.86	7.27	7.28	-116.98	53.33	43.05	10.28	5.186	0		
3,400.00	3,399.68	3,399.68	3,399.68	7.49	7.50	-122.48	56.37	45.77	10.60	5.318	0		
3,500.00	3,499.37	3,499.37	3,499.37	7.71	7.73	-128.67	60.95	50.03	10.92	5.583	0		
3,600.00	3,598.99	3,598.99	3,598.99	7.94	7.95	-134.51	66.75	55.52	11.23	5.942	0		
3,700.00	3,698.60	3,698.60	3,698.60	8.17	8.17	-139.37	73.14	61.59	11.55	6.332	0		
3,800.00	3,798.22	3,798.22	3,798.22	8.40	8.40	-143.44	79.96	68.10	11.87	6.737	0		
3,900.00	3,897.84	3,897.84	3,897.84	8.64	8.62	-146.85	87.13	74.94	12.19	7.150	0		
4,000.00	3,997.46	3,997.46	3,997.46	8.87	8.85	-149.74	94.55	82.05	12.50	7.562	0		
4,100.00	4,097.08	4,097.08	4,097.08	9.11	9.07	-152.20	102.18	89.36	12.82	7.970	0		
4,200.00	4,196.74	4,196.74	4,196.74	9.33	9.29	-154.23	109.58	96.46	13.12	8.352	0		
4,300.00	4,296.46	4,296.46	4,296.46	9.52	9.52	-155.83	116.30	102.90	13.40	8.678	0		
4,400.00	4,396.25	4,396.25	4,396.25	9.71	9.74	-157.10	122.30	108.62	13.68	8.937	0		
4,500.00	4,496.09	4,496.09	4,496.09	9.90	9.97	-158.10	127.54	113.57	13.97	9.130	0		
4,600.00	4,595.97	4,595.97	4,595.97	10.09	10.19	-158.88	132.01	117.75	14.26	9.259	0		
4,700.00	4,695.90	4,695.90	4,695.90	10.28	10.42	-159.49	135.68	121.13	14.54	9.329	0		
4,800.00	4,795.85	4,795.85	4,795.85	10.47	10.64	-159.94	138.54	123.71	14.83	9.340	0		
4,900.00	4,895.82	4,895.82	4,895.82	10.66	10.87	-160.24	140.60	125.47	15.12	9.296	0		
5,000.00	4,995.82	4,995.82	4,995.82	10.85	11.09	-160.42	141.83	126.41	15.41	9.201	0		
5,100.00	5,095.81	5,095.81	5,095.81	11.03	11.31	159.52	142.24	126.53	15.70	9.057	0		
5,200.00	5,195.81	5,195.81	5,195.81	11.23	11.54	159.52	142.24	126.23	16.01	8.886	0		
5,300.00	5,295.81	5,295.81	5,295.81	11.45	11.76	159.52	142.24	125.92	16.32	8.714	0		
5,400.00	5,395.81	5,395.81	5,395.81	11.67	11.99	159.52	142.24	125.60	16.64	8.549	0		
5,500.00	5,495.81	5,495.81	5,495.81	11.89	12.21	159.52	142.24	125.28	16.95	8.390	0		
5,600.00	5,595.81	5,595.81	5,595.81	12.11	12.44	159.52	142.24	124.97	17.27	8.236	0		
5,700.00	5,695.81	5,695.81	5,695.81	12.33	12.66	159.52	142.24	124.65	17.59	8.088	0		
5,800.00	5,795.81	5,795.81	5,795.81	12.55	12.89	159.52	142.24	124.34	17.90	7.945	0		
5,900.00	5,895.81	5,895.81	5,895.81	12.77	13.11	159.52	142.24	124.02	18.22	7.808	0		
6,000.00	5,995.81	5,995.81	5,995.81	12.99	13.34	159.52	142.24	123.70	18.53	7.674	0		
6,100.00	6,095.81	6,095.81	6,095.81	13.21	13.56	159.52	142.24	123.39	18.85	7.546	0		
6,200.00	6,195.81	6,195.81	6,195.81	13.43	13.79	159.52	142.24	123.07	19.17	7.421	0		
6,300.00	6,295.81	6,295.81	6,295.81	13.65	14.01	159.52	142.24	122.76	19.48	7.301	0		
6,400.00	6,395.81	6,395.81	6,395.81	13.87	14.24	159.52	142.24	122.44	19.80	7.184	0		
6,500.00	6,495.81	6,495.81	6,495.81	14.09	14.46	159.52	142.24	122.12	20.12	7.071	0		
6,600.00	6,595.81	6,595.81	6,595.81	14.31	14.69	159.52	142.24	121.81	20.43	6.962	0		
6,700.00	6,695.81	6,695.81	6,695.81	14.53	14.91	159.52	142.24	121.49	20.75	6.855	0		
6,800.00	6,795.81	6,795.81	6,795.81	14.75	15.14	159.52	142.24	121.17	21.07	6.752	0		
6,900.00	6,895.81	6,895.81	6,895.81	14.98	15.36	159.52	142.24	120.86	21.38	6.652	0		
7,000.00	6,995.81	6,995.81	6,995.81	15.20	15.59	159.52	142.24	120.54	21.70	6.555	0		
7,100.00	7,095.81	7,095.81	7,095.81	15.42	15.81	159.52	142.24	120.22	22.01	6.461	0		
7,200.00	7,195.81	7,195.81	7,195.81	15.64	16.03	159.52	142.24	119.91	22.33	6.369	0		
7,300.00	7,295.81	7,295.81	7,295.81	15.86	16.26	159.52	142.24	119.59	22.65	6.280	0		

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

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Company:	WESTERN DIVISION	Local Co-ordinate Reference:	Well Gaucho Unit 81H
Project:	PBNM	TVD Reference:	1 @ 3495.50ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3495.50ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Gaucho Unit 81H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.00 ft
Dzurisin - Gaucho Unit 82H - Wellbore #1 - Plan 1														Offset Well Error:	0.00 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis		Distance									
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		
7,400.00	7,395.81	7,395.81	7,395.81	16.08	16.48	159.52	142.24	119.27	22.96	6.194	0				
7,500.00	7,495.81	7,495.81	7,495.81	16.31	16.71	159.52	142.24	118.96	23.28	6.110	0				
7,600.00	7,595.81	7,595.81	7,595.81	16.53	16.93	159.52	142.24	118.64	23.60	6.027	0				
7,700.00	7,695.81	7,695.81	7,695.81	16.75	17.16	159.52	142.24	118.32	23.92	5.948	0				
7,800.00	7,795.81	7,795.81	7,795.81	16.97	17.38	159.52	142.24	118.01	24.23	5.870	0				
7,900.00	7,895.81	7,895.81	7,895.81	17.20	17.61	159.52	142.24	117.69	24.55	5.794	0				
8,000.00	7,995.81	7,995.81	7,995.81	17.42	17.83	159.52	142.24	117.37	24.87	5.720	0				
8,100.00	8,095.81	8,095.81	8,095.81	17.64	18.06	159.52	142.24	117.06	25.18	5.648	0				
8,200.00	8,195.81	8,195.81	8,195.81	17.86	18.28	159.52	142.24	116.74	25.50	5.578	0				
8,300.00	8,295.81	8,295.81	8,295.81	18.08	18.51	159.52	142.24	116.42	25.82	5.510	0				
8,400.00	8,395.81	8,395.81	8,395.81	18.31	18.73	159.52	142.24	116.11	26.13	5.443	0				
8,500.00	8,495.81	8,495.81	8,495.81	18.53	18.96	159.52	142.24	115.79	26.45	5.378	0				
8,600.00	8,595.81	8,595.81	8,595.81	18.75	19.18	159.52	142.24	115.47	26.77	5.314	0				
8,700.00	8,695.81	8,695.81	8,695.81	18.98	19.41	159.52	142.24	115.15	27.08	5.252	0				
8,800.00	8,795.81	8,795.81	8,795.81	19.20	19.63	159.52	142.24	114.84	27.40	5.191	0				
8,900.00	8,895.81	8,895.81	8,895.81	19.42	19.86	159.52	142.24	114.52	27.72	5.131	0				
9,000.00	8,995.81	8,995.81	8,995.81	19.64	20.08	159.52	142.24	114.20	28.04	5.073	0				
9,100.00	9,095.81	9,095.81	9,095.81	19.87	20.31	159.52	142.24	113.89	28.35	5.017	0				
9,200.00	9,195.81	9,195.81	9,195.81	20.09	20.53	159.52	142.24	113.57	28.67	4.961	0				
9,300.00	9,295.81	9,295.81	9,295.81	20.31	20.76	159.52	142.24	113.25	28.99	4.907	0				
9,400.00	9,395.81	9,395.81	9,395.81	20.54	20.98	159.52	142.24	112.93	29.30	4.854	0				
9,500.00	9,495.81	9,495.81	9,495.81	20.76	21.20	159.52	142.24	112.62	29.62	4.802	0				
9,600.00	9,595.81	9,595.81	9,595.81	20.98	21.43	159.52	142.24	112.30	29.94	4.751	0				
9,700.00	9,695.81	9,695.81	9,695.81	21.20	21.65	159.52	142.24	111.98	30.26	4.701	0				
9,800.00	9,795.81	9,795.81	9,795.81	21.43	21.88	159.52	142.24	111.67	30.57	4.652	0				
9,900.00	9,895.81	9,895.81	9,895.81	21.65	22.10	159.52	142.24	111.35	30.89	4.605	0				
10,000.00	9,995.81	9,995.81	9,995.81	21.87	22.33	159.52	142.24	111.03	31.21	4.558	0				
10,100.00	10,095.81	10,095.81	10,095.81	22.10	22.55	159.52	142.24	110.71	31.53	4.512	0				
10,200.00	10,195.81	10,195.81	10,195.81	22.32	22.78	159.52	142.24	110.40	31.84	4.467	0				
10,300.00	10,295.81	10,295.81	10,295.81	22.54	23.00	159.52	142.24	110.08	32.16	4.423	0				
10,400.00	10,395.81	10,395.81	10,395.81	22.77	23.23	159.52	142.24	109.76	32.48	4.380	0				
10,500.00	10,495.81	10,495.81	10,495.81	22.99	23.45	159.52	142.24	109.44	32.79	4.337	0				
10,600.00	10,595.81	10,595.81	10,595.81	23.21	23.68	159.52	142.24	109.13	33.11	4.296	0				
10,700.00	10,695.81	10,695.81	10,695.81	23.44	23.90	159.52	142.24	108.81	33.43	4.255	0				
10,800.00	10,795.81	10,795.81	10,795.81	23.66	24.13	159.52	142.24	108.49	33.75	4.215	0				
10,900.00	10,895.81	10,895.81	10,895.81	23.88	24.35	159.52	142.24	108.18	34.06	4.176	0				
10,925.20	10,921.01	10,921.01	10,921.01	23.94	24.41	159.52	142.24	108.10	34.14	4.166	0				
10,937.80	10,933.61	10,933.60	10,933.60	23.97	24.44	159.52	142.24	108.06	34.18	4.161	0		SF		
10,950.00	10,945.81	10,943.16	10,943.16	24.00	24.45	160.52	142.50	108.29	34.21	4.165	0				
10,975.00	10,970.78	10,962.60	10,962.58	24.05	24.49	160.68	144.66	110.41	34.25	4.224	0				
11,000.00	10,995.64	10,981.69	10,981.61	24.11	24.52	160.99	148.98	114.73	34.26	4.349	0				
11,025.00	11,020.33	11,000.00	10,999.79	24.17	24.55	161.38	155.44	121.20	34.24	4.539	0				
11,050.00	11,044.78	11,017.93	11,017.49	24.23	24.58	161.85	163.97	129.75	34.21	4.792	0				
11,075.00	11,068.93	11,034.72	11,033.97	24.29	24.61	162.30	174.48	140.32	34.16	5.107	0				
11,100.00	11,092.71	11,050.00	11,048.85	24.35	24.64	162.69	186.88	152.79	34.09	5.482	0				
11,125.00	11,116.05	11,065.02	11,063.36	24.42	24.66	163.06	201.05	167.02	34.03	5.908	0				
11,150.00	11,138.90	11,075.00	11,072.94	24.48	24.68	163.04	216.87	183.01	33.87	6.403	0				
11,175.00	11,161.18	11,090.48	11,087.67	24.55	24.70	163.37	234.11	200.24	33.87	6.912	0				
11,200.00	11,182.83	11,100.00	11,096.65	24.61	24.72	163.17	252.72	218.95	33.76	7.485	0				
11,225.00	11,203.81	11,110.97	11,106.92	24.68	24.74	163.00	272.50	238.78	33.72	8.081	0				
11,250.00	11,224.04	11,119.40	11,114.75	24.75	24.75	162.47	293.32	259.67	33.65	8.716	0				
11,275.00	11,243.47	11,125.00	11,119.92	24.83	24.76	161.43	315.06	281.50	33.56	9.389	0				
11,300.00	11,262.06	11,132.89	11,127.15	24.91	24.77	160.38	337.55	304.01	33.54	10.063	0				
11,325.00	11,279.75	11,138.05	11,131.86	24.99	24.78	158.56	360.69	327.19	33.50	10.766	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	Local Co-ordinate Reference:	Well Gaucho Unit 81H
Project:	PBNM	TVD Reference:	1 @ 3495.50ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3495.50ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Gaucho Unit 81H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Dzurisin - Gaucho Unit 82H - 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	Separation Factor	Risked Separation Factor	Probability of Collision	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)	(ft)					
11,350.00	11,296.49	11,142.24	11,135.66	25.08	24.79	155.89	384.37	350.90	33.47	11.484	0			
11,375.00	11,312.23	11,150.00	11,142.67	25.17	24.80	153.07	408.51	374.99	33.53	12.185	0			
11,400.00	11,326.94	11,150.00	11,142.67	25.27	24.80	146.31	432.90	399.44	33.47	12.935	0			
11,425.00	11,340.56	11,150.00	11,142.67	25.37	24.80	134.96	457.56	424.12	33.44	13.685	0			
11,450.00	11,353.08	11,150.00	11,142.67	25.48	24.80	114.97	482.37	448.95	33.42	14.432	0			
11,475.00	11,364.44	11,150.00	11,142.67	25.59	24.80	84.47	507.26	473.82	33.43	15.173	0			
11,500.00	11,374.62	11,150.00	11,142.67	25.71	24.80	55.48	532.14	498.68	33.46	15.906	0			
11,525.00	11,383.59	11,150.00	11,142.67	25.84	24.80	37.46	556.96	523.47	33.49	16.629	0			
11,550.00	11,391.33	11,150.00	11,142.67	25.97	24.80	27.18	581.66	548.12	33.54	17.341	0			
11,575.00	11,397.82	11,150.00	11,142.67	26.11	24.80	20.94	606.20	572.60	33.80	18.041	0			
11,600.00	11,403.03	11,150.00	11,142.67	26.25	24.80	16.86	630.52	596.85	33.67	18.728	0			
11,625.00	11,406.96	11,140.26	11,133.87	26.40	24.79	13.40	654.42	620.78	33.63	19.459	0			
11,650.00	11,409.58	11,136.93	11,130.84	26.56	24.78	11.36	678.06	644.39	33.68	20.133	0			
11,675.00	11,410.91	11,133.24	11,127.47	26.72	24.77	9.82	701.34	667.61	33.73	20.793	0			
11,682.72	11,411.05	11,125.00	11,119.92	26.77	24.76	9.23	708.53	674.85	33.67	21.042	0			
11,700.00	11,411.24	11,125.00	11,119.92	26.88	24.76	9.23	724.35	690.61	33.74	21.469	0			
11,724.45	11,411.50	11,125.00	11,119.92	27.03	24.76	9.23	746.85	713.02	33.83	22.077	0			
11,800.00	11,412.31	11,114.95	11,110.62	27.57	24.74	8.97	816.91	782.93	33.98	24.041	0			
11,900.00	11,413.38	11,100.00	11,096.65	28.38	24.72	8.60	910.55	876.42	34.13	26.682	0			
12,000.00	11,414.45	11,100.00	11,096.65	29.28	24.72	8.60	1,005.11	970.78	34.33	29.275	0			
12,100.00	11,415.52	11,075.00	11,072.94	30.27	24.68	8.03	1,100.24	1,065.88	34.36	32.020	0			
12,200.00	11,416.60	11,075.00	11,072.94	31.33	24.68	8.03	1,195.89	1,161.38	34.51	34.656	0			
12,300.00	11,417.67	11,075.00	11,072.94	32.46	24.68	8.03	1,292.19	1,257.57	34.63	37.317	0			
12,400.00	11,418.74	11,059.38	11,057.93	33.65	24.65	7.71	1,388.68	1,354.01	34.67	40.057	0			
12,500.00	11,419.81	11,050.00	11,048.85	34.90	24.64	7.53	1,485.64	1,450.91	34.73	42.782	0			
12,600.00	11,420.88	11,050.00	11,048.85	36.20	24.64	7.53	1,582.86	1,548.06	34.81	45.475	0			
12,700.00	11,421.96	11,050.00	11,048.85	37.55	24.64	7.53	1,680.42	1,645.54	34.88	48.179	0			
12,800.00	11,423.03	11,038.19	11,037.35	38.93	24.62	7.31	1,778.05	1,743.14	34.91	50.931	0			
12,900.00	11,424.10	11,025.00	11,024.44	40.35	24.59	7.08	1,876.06	1,841.13	34.94	53.697	0			
13,000.00	11,425.17	11,025.00	11,024.44	41.80	24.59	7.08	1,974.06	1,939.07	34.99	56.410	0			
13,100.00	11,426.24	11,025.00	11,024.44	43.28	24.59	7.08	2,072.26	2,037.21	35.05	59.128	0			
13,200.00	11,427.32	11,025.00	11,024.44	44.79	24.59	7.08	2,170.61	2,135.52	35.10	61.849	0			
13,300.00	11,428.39	11,025.00	11,024.44	46.32	24.59	7.08	2,269.11	2,233.97	35.14	64.572	0			
13,400.00	11,429.46	11,025.00	11,024.44	47.87	24.59	7.08	2,367.74	2,332.55	35.18	67.296	0			
13,500.00	11,430.53	11,025.00	11,024.44	49.44	24.59	7.08	2,466.47	2,431.25	35.23	70.020	0			
13,600.00	11,431.60	11,012.19	11,011.84	51.03	24.57	6.86	2,565.11	2,529.86	35.25	72.779	0			
13,700.00	11,432.67	11,000.00	10,999.79	52.63	24.55	6.67	2,664.07	2,628.80	35.27	75.541	0			
13,800.00	11,433.75	11,000.00	10,999.79	54.25	24.55	6.67	2,762.93	2,727.63	35.31	78.257	0			
13,900.00	11,434.82	11,000.00	10,999.79	55.88	24.55	6.67	2,861.88	2,826.53	35.34	80.972	0			
14,000.00	11,435.89	11,000.00	10,999.79	57.53	24.55	6.67	2,960.89	2,925.51	35.38	83.684	0			
14,100.00	11,436.96	11,000.00	10,999.79	59.18	24.55	6.67	3,059.97	3,024.56	35.42	86.394	0			
14,200.00	11,438.03	11,000.00	10,999.79	60.85	24.55	6.67	3,159.11	3,123.66	35.46	89.100	0			
14,300.00	11,439.11	11,000.00	10,999.79	62.52	24.55	6.67	3,258.30	3,222.81	35.49	91.803	0			
14,400.00	11,440.18	11,000.00	10,999.79	64.21	24.55	6.67	3,357.54	3,322.01	35.53	94.503	0			
14,500.00	11,441.25	11,000.00	10,999.79	65.90	24.55	6.67	3,456.82	3,421.26	35.56	97.198	0			
14,600.00	11,442.32	11,000.00	10,999.79	67.60	24.55	6.67	3,556.15	3,520.54	35.60	99.889	0			
14,700.00	11,443.39	11,000.00	10,999.79	69.30	24.55	6.67	3,655.50	3,619.87	35.64	102.575	0			
14,800.00	11,444.47	11,000.00	10,999.79	71.01	24.55	6.67	3,754.90	3,719.22	35.67	105.257	0			
14,900.00	11,445.54	11,000.00	10,999.79	72.73	24.55	6.67	3,854.32	3,818.61	35.71	107.933	0			
15,000.00	11,446.61	11,000.00	10,999.79	74.46	24.55	6.67	3,953.78	3,918.03	35.75	110.603	0			
15,100.00	11,447.68	10,987.95	10,987.83	76.18	24.53	6.49	4,053.09	4,017.31	35.77	113.295	0			
15,200.00	11,448.75	10,986.88	10,986.77	77.92	24.53	6.47	4,152.56	4,116.75	35.81	115.956	0			
15,300.00	11,449.83	10,975.00	10,974.95	79.66	24.51	6.30	4,252.20	4,216.36	35.84	118.643	0			
15,400.00	11,450.90	10,975.00	10,974.95	81.40	24.51	6.30	4,351.69	4,315.81	35.88	121.287	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	Local Co-ordinate Reference:	Well Gaucho Unit 81H
Project:	PBNM	TVD Reference:	1 @ 3495.50ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3495.50ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Gaucho Unit 81H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Dzurisin - Gaucho Unit 82H - 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					Risky Separation Factor	Probability of Collision	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				
15,500.00	11,451.97	10,975.00	10,974.95	83.14	24.51	6.30	4,451.21	4,415.29	35.92	123.926	0			
15,600.00	11,453.04	10,975.00	10,974.95	84.89	24.51	6.30	4,550.75	4,514.79	35.96	126.557	0			
15,700.00	11,454.11	10,975.00	10,974.95	86.65	24.51	6.30	4,650.30	4,614.31	36.00	129.182	0			
15,800.00	11,455.18	10,975.00	10,974.95	88.40	24.51	6.30	4,749.88	4,713.84	36.04	131.800	0			
15,900.00	11,456.26	10,975.00	10,974.95	90.16	24.51	6.30	4,849.47	4,813.39	36.08	134.411	0			
16,000.00	11,457.33	10,975.00	10,974.95	91.92	24.51	6.30	4,949.08	4,912.96	36.12	137.014	0			
16,100.00	11,458.40	10,975.00	10,974.95	93.69	24.51	6.30	5,048.71	5,012.55	36.16	139.610	0			
16,200.00	11,459.47	10,975.00	10,974.95	95.46	24.51	6.30	5,148.35	5,112.14	36.21	142.198	0			
16,282.27	11,460.35	10,975.00	10,974.95	96.91	24.51	6.30	5,230.33	5,194.09	36.24	144.322	0			
16,300.00	11,460.54	10,975.00	10,974.95	97.22	24.51	6.28	5,248.00	5,211.75	36.25	144.779	0			
16,342.73	11,461.00	10,975.00	10,974.95	97.95	24.51	6.24	5,290.59	5,254.32	36.27	145.879	0			

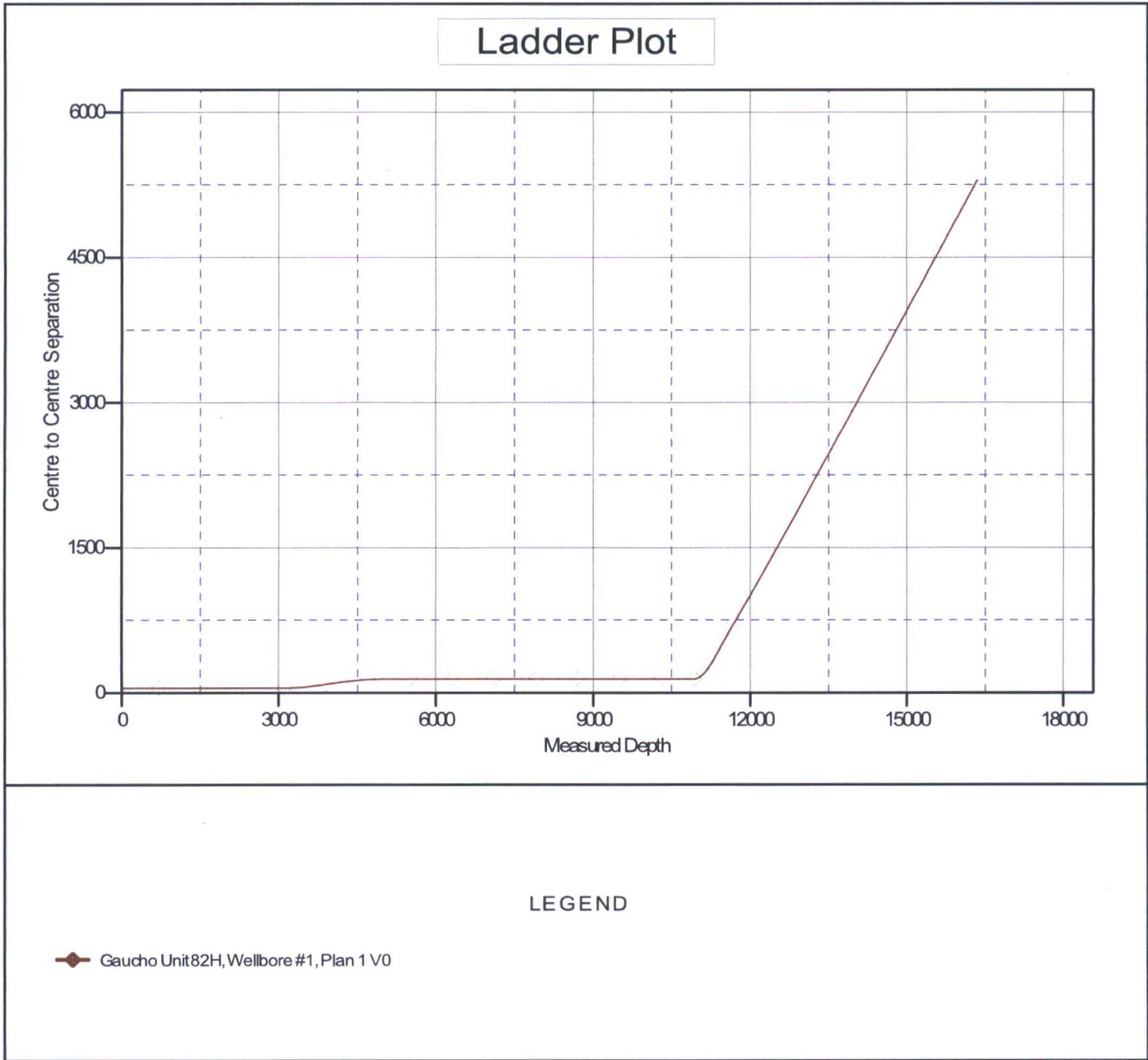
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Devon Energy
Anticollision Risk Report

Company:	WESTERN DIVISION	Local Co-ordinate Reference:	Well Gaucho Unit 81H
Project:	PBNM	TVD Reference:	1 @ 3495.50ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3495.50ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Gaicho Unit 81H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 1 @ 3495.50ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334 °

Coordinates are relative to: Gaucho Unit 81H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.45°



Devon Energy

Anticollision Risk Report

Company:	WESTERN DIVISION	Local Co-ordinate Reference:	Well Gaucho Unit 81H
Project:	PBNM	TVD Reference:	1 @ 3495.50ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3495.50ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	GaUCHO Unit 81H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 1 @ 3495.50ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -104.333334 °

Coordinates are relative to: Gaucho Unit 81H
 Coordinate System is US State Plane 1983, New Mexico Eastern Zone
 Grid Convergence at Surface is: 0.45°

