



Extraction Oil & Gas

Weld Co., Co

Sec.31-T05N-R67W

Wind 09

Original Hole

Rev 1

Anticollision Risk Report

14 August, 2014



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Reference	Rev 1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations Interval 1.00usft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 25,000.00usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

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

Survey Tool Program		Date	8/14/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	11,894.53	Rev 1 (Original Hole)	Pathfinder	Pathfinder MWD	

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance		Separation Factor	Warning
Offset Well - Wellbore - Design			Between Centres (usft)	Between Ellipses (usft)		
Sec.31-T05N-R67W						
Wind 01 - Original Hole - Rev 1	500.00	496.00	224.06	222.38	133.170 CC, ES	
Wind 01 - Original Hole - Rev 1	11,894.53	11,534.87	1,842.09	1,763.41	23.412 SF	
Wind 02 - Original Hole - Rev 1	600.00	597.00	196.01	193.97	96.397 CC, ES	
Wind 02 - Original Hole - Rev 1	11,894.53	11,506.02	1,518.22	1,440.08	19.429 SF	
Wind 03 - Original Hole - Rev 1	700.00	697.00	167.95	165.57	70.499 CC, ES	
Wind 03 - Original Hole - Rev 1	11,894.53	11,818.22	1,319.75	1,239.97	16.543 SF	
Wind 04 - Original Hole - Rev 1	800.00	798.00	139.90	137.17	51.187 CC, ES	
Wind 04 - Original Hole - Rev 1	11,894.53	11,494.68	1,197.72	1,120.48	15.507 SF	
Wind 05 - Original Hole - Rev 1	800.00	798.00	112.21	109.48	41.055 CC, ES	
Wind 05 - Original Hole - Rev 1	11,894.53	11,498.97	883.86	808.53	11.733 SF	
Wind 06 - Original Hole - Rev 1	800.00	799.00	84.16	81.42	30.772 CC, ES	
Wind 06 - Original Hole - Rev 1	11,894.53	11,825.73	659.69	579.91	8.269 SF	
Wind 07 - Original Hole - Rev 1	800.00	799.00	56.10	53.37	20.514 CC, ES	
Wind 07 - Original Hole - Rev 1	11,894.53	11,518.36	588.61	518.55	8.401 SF	
Wind 08 - Original Hole - Rev 1	800.00	800.00	28.05	25.32	10.250 CC, ES	
Wind 08 - Original Hole - Rev 1	5,700.00	5,705.36	104.71	84.34	5.141 SF	
Wind 10 - Original Hole - Rev 1	666.33	667.33	25.87	23.59	11.386 CC	
Wind 10 - Original Hole - Rev 1	700.00	700.99	25.87	23.48	10.826 ES	
Wind 10 - Original Hole - Rev 1	11,894.53	11,604.07	360.94	305.70	6.535 SF	
Wind 11 - Original Hole - Rev 1	566.33	567.33	53.92	52.00	28.044 CC	
Wind 11 - Original Hole - Rev 1	600.00	600.98	53.92	51.88	26.429 ES	
Wind 11 - Original Hole - Rev 1	11,894.53	11,671.55	590.05	517.43	8.125 SF	
Wind 12 - Original Hole - Rev 1	465.99	467.99	81.97	80.40	52.072 CC	
Wind 12 - Original Hole - Rev 1	500.00	501.94	81.97	80.28	48.423 ES	
Wind 12 - Original Hole - Rev 1	11,894.53	12,010.27	660.12	580.08	8.247 SF	

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



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Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risk Separation Factor	Probability of Collision	Warning	
0.00	0.00	0.00	0.00	0.00	0.00	0.35	224.09				0			
100.00	100.00	96.00	96.00	0.15	0.14	0.35	224.06	223.77	0.29	779.734	0			
200.00	200.00	196.00	196.00	0.32	0.31	0.35	224.06	223.42	0.64	352.680	0			
300.00	300.00	296.00	296.00	0.50	0.49	0.35	224.06	223.07	0.98	227.616	0			
400.00	400.00	396.00	396.00	0.67	0.66	0.35	224.06	222.72	1.33	168.031	0			
500.00	500.00	496.00	496.00	0.84	0.84	0.35	224.06	222.38	1.68	133.170	0		CC, ES	
600.00	600.00	589.13	589.12	1.02	1.00	0.28	225.52	223.50	2.02	111.666	0			
700.00	700.00	681.80	681.68	1.19	1.16	0.07	230.16	227.80	2.36	97.687	0			
800.00	800.00	774.08	773.66	1.37	1.33	-0.27	237.97	235.27	2.69	88.389	0			
900.00	899.98	866.35	865.36	1.54	1.49	171.47	250.62	247.59	3.03	82.787	0			
1,000.00	999.84	964.82	963.06	1.72	1.67	171.11	267.97	264.60	3.37	79.520	0			
1,100.00	1,099.45	1,062.64	1,060.12	1.90	1.85	170.88	288.70	284.99	3.71	77.867	0			
1,200.00	1,198.70	1,159.69	1,156.42	2.07	2.03	170.77	312.79	308.75	4.04	77.418	0			
1,300.00	1,297.47	1,255.85	1,251.84	2.26	2.20	170.75	340.21	335.84	4.37	77.896	0			
1,328.83	1,325.83	1,283.39	1,279.17	2.31	2.25	170.75	348.73	344.27	4.46	78.177	0			
1,400.00	1,395.79	1,351.27	1,346.52	2.44	2.38	170.85	370.10	365.40	4.70	78.666	0			
1,500.00	1,494.09	1,446.66	1,441.17	2.63	2.55	170.96	400.13	395.08	5.05	79.268	0			
1,600.00	1,592.39	1,542.04	1,535.81	2.82	2.73	171.05	430.16	424.77	5.39	79.789	0			
1,700.00	1,690.70	1,637.42	1,630.46	3.01	2.90	171.13	460.19	454.45	5.73	80.243	0			
1,800.00	1,789.00	1,732.81	1,725.10	3.20	3.08	171.21	490.22	484.14	6.08	80.643	0			
1,900.00	1,887.30	1,828.19	1,819.75	3.40	3.26	171.27	520.25	513.82	6.42	80.998	0			
2,000.00	1,985.60	1,923.57	1,914.39	3.59	3.43	171.33	550.28	543.51	6.77	81.315	0			
2,100.00	2,083.90	2,018.95	2,009.04	3.78	3.61	171.38	580.31	573.20	7.11	81.599	0			
2,200.00	2,182.20	2,114.34	2,103.68	3.98	3.79	171.43	610.34	602.88	7.46	81.856	0			
2,300.00	2,280.50	2,209.72	2,198.32	4.17	3.96	171.47	640.37	632.57	7.80	82.088	0			
2,400.00	2,378.80	2,305.10	2,292.97	4.37	4.14	171.51	670.40	662.26	8.15	82.301	0			
2,500.00	2,477.10	2,400.49	2,387.61	4.56	4.32	171.54	700.44	691.95	8.49	82.495	0			
2,600.00	2,575.41	2,495.87	2,482.26	4.76	4.49	171.57	730.47	721.64	8.84	82.674	0			
2,700.00	2,673.71	2,591.25	2,576.90	4.96	4.67	171.60	760.50	751.32	9.18	82.838	0			
2,800.00	2,772.01	2,686.63	2,671.55	5.15	4.85	171.63	790.54	781.01	9.53	82.990	0			
2,900.00	2,870.31	2,782.02	2,766.19	5.35	5.03	171.66	820.57	810.70	9.87	83.132	0			
3,000.00	2,968.61	2,877.40	2,860.83	5.55	5.20	171.68	850.60	840.39	10.22	83.263	0			
3,100.00	3,066.91	2,972.78	2,955.48	5.74	5.38	171.70	880.64	870.08	10.56	83.385	0			
3,200.00	3,165.21	3,068.16	3,050.12	5.94	5.56	171.72	910.67	899.77	10.91	83.500	0			
3,300.00	3,263.51	3,163.55	3,144.77	6.14	5.74	171.74	940.71	929.45	11.25	83.607	0			
3,400.00	3,361.81	3,258.93	3,239.41	6.34	5.91	171.76	970.74	959.14	11.60	83.708	0			
3,500.00	3,460.11	3,354.31	3,334.06	6.53	6.09	171.78	1,000.77	988.83	11.94	83.802	0			
3,600.00	3,558.42	3,449.70	3,428.70	6.73	6.27	171.79	1,030.81	1,018.52	12.29	83.891	0			
3,700.00	3,656.72	3,545.08	3,523.35	6.93	6.44	171.81	1,060.84	1,048.21	12.63	83.975	0			
3,800.00	3,755.02	3,640.46	3,617.99	7.13	6.62	171.82	1,090.88	1,077.90	12.98	84.055	0			
3,900.00	3,853.32	3,735.84	3,712.63	7.32	6.80	171.83	1,120.91	1,107.59	13.32	84.130	0			
4,000.00	3,951.62	3,831.23	3,807.28	7.52	6.98	171.85	1,150.95	1,137.28	13.67	84.202	0			
4,100.00	4,049.92	3,926.61	3,901.92	7.72	7.15	171.86	1,180.98	1,166.97	14.01	84.269	0			
4,200.00	4,148.22	4,021.99	3,996.57	7.92	7.33	171.87	1,211.01	1,196.65	14.36	84.334	0			
4,300.00	4,246.52	4,117.38	4,091.21	8.12	7.51	171.88	1,241.05	1,226.34	14.71	84.395	0			
4,400.00	4,344.82	4,212.76	4,185.86	8.31	7.69	171.89	1,271.08	1,256.03	15.05	84.454	0			
4,500.00	4,443.12	4,308.14	4,280.50	8.51	7.86	171.90	1,301.12	1,285.72	15.40	84.509	0			
4,600.00	4,541.43	4,403.52	4,375.14	8.71	8.04	171.91	1,331.15	1,315.41	15.74	84.563	0			
4,700.00	4,639.73	4,498.91	4,469.79	8.91	8.22	171.92	1,361.19	1,345.10	16.09	84.614	0			
4,800.00	4,738.03	4,594.29	4,564.43	9.11	8.40	171.93	1,391.22	1,374.79	16.43	84.662	0			
4,900.00	4,836.33	4,689.67	4,659.08	9.31	8.57	171.94	1,421.26	1,404.48	16.78	84.709	0			
5,000.00	4,934.63	4,785.06	4,753.72	9.50	8.75	171.95	1,451.29	1,434.17	17.12	84.754	0			
5,100.00	5,032.93	4,880.44	4,848.37	9.70	8.93	171.95	1,481.33	1,463.86	17.47	84.797	0			
5,200.00	5,131.23	4,975.82	4,943.01	9.90	9.11	171.96	1,511.36	1,493.55	17.81	84.838	0			

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



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Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 01 - Original Hole - Rev 1		Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
5,300.00	5,229.53	5,071.20	5,037.66	10.10	9.28	171.97	1,541.40	1,523.24	18.16	84.877	0					
5,400.00	5,327.83	5,166.59	5,132.30	10.30	9.46	171.97	1,571.43	1,552.93	18.51	84.916	0					
5,500.00	5,426.14	5,261.97	5,226.94	10.50	9.64	171.98	1,601.47	1,582.61	18.85	84.952	0					
5,600.00	5,524.44	5,357.35	5,321.59	10.70	9.82	171.99	1,631.50	1,612.30	19.20	84.988	0					
5,700.00	5,622.74	5,452.73	5,416.23	10.89	9.99	171.99	1,661.54	1,641.99	19.54	85.022	0					
5,800.00	5,721.04	5,548.12	5,510.88	11.09	10.17	172.00	1,691.57	1,671.68	19.89	85.055	0					
5,900.00	5,819.34	5,643.50	5,605.52	11.29	10.35	172.00	1,721.61	1,701.37	20.23	85.086	0					
5,993.46	5,911.21	5,732.64	5,693.97	11.48	10.51	172.01	1,749.68	1,729.12	20.56	85.115	0					
6,000.00	5,917.64	5,738.89	5,700.17	11.49	10.53	172.02	1,751.63	1,731.05	20.58	85.096	0					
6,100.00	6,016.28	5,888.50	5,848.78	11.68	10.80	172.09	1,779.28	1,758.19	21.09	84.376	0					
6,200.00	6,115.43	6,142.57	6,102.46	11.86	11.23	172.21	1,796.93	1,775.18	21.75	82.609	0					
6,300.00	6,214.98	6,251.09	6,210.98	12.04	11.42	172.28	1,806.35	1,784.20	22.15	81.554	0					
6,400.00	6,314.79	6,350.89	6,310.36	12.21	11.59	172.08	1,812.30	1,789.78	22.52	80.469	0					
6,500.00	6,414.75	6,445.61	6,402.11	12.37	11.75	171.37	1,814.99	1,792.09	22.90	79.258	0					
6,522.29	6,437.04	6,465.51	6,420.84	12.41	11.79	-1.01	1,815.20	1,790.89	24.32	74.652	0					
6,600.00	6,514.75	6,530.77	6,480.38	12.53	11.91	-1.85	1,816.08	1,791.53	24.55	73.963	0					
6,622.29	6,537.04	6,550.00	6,497.30	12.57	11.95	-2.14	1,816.50	1,791.87	24.62	73.770	0					
6,650.00	6,564.74	6,569.44	6,514.09	12.61	11.98	87.50	1,817.11	1,793.60	23.51	77.296	0					
6,700.00	6,614.52	6,606.99	6,545.54	12.69	12.06	86.82	1,818.42	1,794.70	23.72	76.662	0					
6,750.00	6,663.70	6,643.72	6,574.94	12.78	12.13	86.15	1,819.95	1,796.01	23.94	76.034	0					
6,800.00	6,711.92	6,679.76	6,602.36	12.86	12.21	85.50	1,821.66	1,797.50	24.15	75.418	0					
6,850.00	6,758.81	6,715.19	6,627.82	12.95	12.29	84.87	1,823.50	1,799.13	24.37	74.830	0					
6,900.00	6,804.01	6,750.00	6,651.32	13.04	12.37	84.26	1,825.44	1,800.87	24.58	74.278	0					
6,950.00	6,847.17	6,784.52	6,673.03	13.13	12.45	83.68	1,827.43	1,802.64	24.78	73.737	0					
7,000.00	6,887.98	6,818.55	6,692.82	13.23	12.53	83.14	1,829.42	1,804.44	24.98	73.234	0					
7,050.00	6,926.12	6,850.00	6,709.62	13.33	12.61	82.64	1,831.38	1,806.23	25.15	72.806	0					
7,100.00	6,961.30	6,885.62	6,726.85	13.43	12.71	82.15	1,833.27	1,807.91	25.35	72.311	0					
7,150.00	6,993.24	6,918.75	6,741.11	13.55	12.80	81.73	1,835.04	1,809.51	25.53	71.879	0					
7,200.00	7,021.72	6,950.00	6,752.96	13.66	12.89	81.35	1,836.68	1,810.99	25.69	71.496	0					
7,250.00	7,046.51	6,984.38	6,764.14	13.79	12.99	81.01	1,838.14	1,812.27	25.87	71.041	0					
7,300.00	7,067.42	7,016.95	6,772.93	13.92	13.09	80.73	1,839.41	1,813.36	26.05	70.617	0					
7,350.00	7,084.29	7,050.00	6,780.01	14.06	13.20	80.49	1,840.46	1,814.23	26.23	70.170	0					
7,400.00	7,097.00	7,081.75	6,785.04	14.20	13.31	80.32	1,841.27	1,814.86	26.41	69.716	0					
7,450.00	7,105.44	7,114.03	6,788.38	14.36	13.42	80.20	1,841.83	1,815.23	26.61	69.225	0					
7,500.00	7,109.56	7,150.00	6,789.95	14.53	13.55	80.13	1,842.14	1,815.30	26.84	68.623	0					
7,522.29	7,110.00	7,162.56	6,790.00	14.60	13.60	80.12	1,842.18	1,815.25	26.93	68.411	0					
7,600.00	7,110.00	7,240.27	6,790.00	14.88	13.89	80.12	1,842.18	1,814.65	27.53	66.917	0					
7,700.00	7,110.00	7,340.27	6,790.00	15.25	14.30	80.12	1,842.18	1,813.84	28.34	64.999	0					
7,800.00	7,110.00	7,440.27	6,790.00	15.65	14.72	80.12	1,842.18	1,812.98	29.20	63.093	0					
7,900.00	7,110.00	7,540.27	6,790.00	16.08	15.17	80.12	1,842.18	1,812.08	30.09	61.214	0					
8,000.00	7,110.00	7,640.27	6,790.00	16.52	15.64	80.12	1,842.18	1,811.15	31.03	59.375	0					
8,100.00	7,110.00	7,740.27	6,790.00	16.98	16.12	80.12	1,842.18	1,810.18	31.99	57.582	0					
8,200.00	7,110.00	7,840.27	6,790.00	17.46	16.62	80.12	1,842.18	1,809.19	32.99	55.843	0					
8,300.00	7,110.00	7,940.27	6,790.00	17.95	17.14	80.12	1,842.18	1,808.16	34.01	54.162	0					
8,400.00	7,110.00	8,040.27	6,790.00	18.46	17.66	80.12	1,842.17	1,807.11	35.06	52.541	0					
8,500.00	7,110.00	8,140.27	6,790.00	18.98	18.20	80.12	1,842.17	1,806.04	36.13	50.982	0					
8,600.00	7,110.00	8,240.27	6,790.00	19.52	18.75	80.12	1,842.17	1,804.95	37.23	49.485	0					
8,700.00	7,110.00	8,340.27	6,790.00	20.06	19.31	80.12	1,842.17	1,803.83	38.34	48.049	0					
8,800.00	7,110.00	8,440.27	6,790.00	20.61	19.88	80.12	1,842.17	1,802.70	39.47	46.673	0					
8,900.00	7,110.00	8,540.27	6,790.00	21.17	20.46	80.12	1,842.17	1,801.56	40.62	45.356	0					
9,000.00	7,110.00	8,640.27	6,790.00	21.74	21.05	80.12	1,842.17	1,800.39	41.78	44.095	0					
9,100.00	7,110.00	8,740.27	6,790.00	22.32	21.64	80.12	1,842.17	1,799.22	42.95	42.889	0					
9,200.00	7,110.00	8,840.27	6,790.00	22.91	22.24	80.12	1,842.17	1,798.03	44.14	41.735	0					
9,300.00	7,110.00	8,940.27	6,790.00	23.50	22.84	80.12	1,842.17	1,796.83	45.34	40.632	0					

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
9,400.00	7,110.00	9,040.27	6,790.00	24.10	23.46	80.12	1,842.17	1,795.62	46.55	39.576	0			
9,500.00	7,110.00	9,140.27	6,790.00	24.70	24.07	80.12	1,842.17	1,794.40	47.77	38.566	0			
9,600.00	7,110.00	9,240.27	6,790.00	25.31	24.69	80.12	1,842.17	1,793.17	49.00	37.599	0			
9,700.00	7,110.00	9,340.27	6,790.00	25.92	25.32	80.12	1,842.17	1,791.93	50.23	36.673	0			
9,800.00	7,110.00	9,440.27	6,790.00	26.54	25.95	80.12	1,842.16	1,790.69	51.48	35.786	0			
9,900.00	7,110.00	9,540.27	6,790.00	27.16	26.58	80.12	1,842.16	1,789.43	52.73	34.936	0			
10,000.00	7,110.00	9,640.27	6,790.00	27.79	27.21	80.12	1,842.16	1,788.17	53.99	34.121	0			
10,100.00	7,110.00	9,740.27	6,790.00	28.42	27.85	80.12	1,842.16	1,786.91	55.25	33.340	0			
10,200.00	7,110.00	9,840.27	6,790.00	29.05	28.50	80.12	1,842.16	1,785.64	56.52	32.590	0			
10,300.00	7,110.00	9,940.27	6,790.00	29.69	29.14	80.12	1,842.16	1,784.36	57.80	31.871	0			
10,400.00	7,110.00	10,040.27	6,790.00	30.33	29.79	80.12	1,842.16	1,783.08	59.08	31.179	0			
10,500.00	7,110.00	10,140.27	6,790.00	30.97	30.44	80.12	1,842.16	1,781.79	60.37	30.515	0			
10,600.00	7,110.00	10,240.27	6,790.00	31.61	31.09	80.12	1,842.16	1,780.50	61.66	29.876	0			
10,700.00	7,110.00	10,340.27	6,790.00	32.26	31.75	80.12	1,842.16	1,779.20	62.96	29.261	0			
10,800.00	7,110.00	10,440.27	6,790.00	32.91	32.40	80.12	1,842.16	1,777.90	64.26	28.669	0			
10,900.00	7,110.00	10,540.27	6,790.00	33.56	33.06	80.12	1,842.16	1,776.60	65.56	28.100	0			
11,000.00	7,110.00	10,640.27	6,790.00	34.22	33.72	80.12	1,842.16	1,775.29	66.86	27.550	0			
11,100.00	7,110.00	10,740.27	6,790.00	34.87	34.39	80.12	1,842.16	1,773.98	68.17	27.021	0			
11,200.00	7,110.00	10,840.27	6,790.00	35.53	35.05	80.12	1,842.15	1,772.67	69.49	26.510	0			
11,300.00	7,110.00	10,940.27	6,790.00	36.19	35.72	80.12	1,842.15	1,771.35	70.80	26.018	0			
11,400.00	7,110.00	11,040.27	6,790.00	36.85	36.38	80.12	1,842.15	1,770.03	72.12	25.542	0			
11,500.00	7,110.00	11,140.27	6,790.00	37.51	37.05	80.12	1,842.15	1,768.71	73.44	25.082	0			
11,600.00	7,110.00	11,240.27	6,790.00	38.18	37.72	80.12	1,842.15	1,767.38	74.77	24.638	0			
11,700.00	7,110.00	11,340.27	6,790.00	38.84	38.39	80.12	1,842.15	1,766.06	76.09	24.209	0			
11,800.00	7,110.00	11,440.27	6,790.00	39.51	39.06	80.12	1,842.15	1,764.73	77.42	23.793	0			
11,894.53	7,110.00	11,534.87	6,790.00	40.14	39.70	80.12	1,842.09	1,763.41	78.68	23.412	0		SF	

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 02 - Original Hole - Rev 1		Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
0.00	0.00	0.00	0.00	0.00	0.00	0.37	196.03					0				
100.00	100.00	97.00	97.00	0.15	0.14	0.37	196.01	195.72	0.29	678.650	0					
200.00	200.00	197.00	197.00	0.32	0.32	0.37	196.01	195.37	0.64	307.679	0					
300.00	300.00	297.00	297.00	0.50	0.49	0.37	196.01	195.02	0.99	198.766	0					
400.00	400.00	397.00	397.00	0.67	0.66	0.37	196.01	194.67	1.34	146.801	0					
500.00	500.00	497.00	497.00	0.84	0.84	0.37	196.01	194.32	1.68	116.376	0					
600.00	600.00	597.00	597.00	1.02	1.01	0.37	196.01	193.97	2.03	96.397	0		CC, ES			
700.00	700.00	691.13	691.12	1.19	1.18	0.23	197.45	195.08	2.37	83.236	0					
800.00	800.00	784.89	784.76	1.37	1.34	-0.22	201.97	199.26	2.71	74.513	0					
900.00	899.98	883.70	883.34	1.54	1.52	171.36	210.14	207.09	3.06	68.743	0					
1,000.00	999.84	983.01	982.41	1.72	1.69	170.93	221.79	218.39	3.40	65.216	0					
1,100.00	1,099.45	1,081.86	1,081.03	1.90	1.87	170.68	236.86	233.12	3.74	63.317	0					
1,200.00	1,198.70	1,180.13	1,179.07	2.07	2.04	170.56	255.33	251.25	4.08	62.635	0					
1,300.00	1,297.47	1,277.71	1,276.42	2.26	2.21	170.56	277.17	272.76	4.41	62.888	0					
1,328.83	1,325.83	1,305.70	1,304.34	2.31	2.26	170.58	284.09	279.59	4.50	63.106	0					
1,400.00	1,395.79	1,374.70	1,373.18	2.44	2.39	170.69	301.51	296.76	4.75	63.507	0					
1,500.00	1,494.09	1,471.66	1,469.90	2.63	2.56	170.82	326.00	320.90	5.09	64.001	0					
1,600.00	1,592.39	1,568.61	1,566.63	2.82	2.73	170.93	350.48	345.04	5.44	64.429	0					
1,700.00	1,690.70	1,665.56	1,663.35	3.01	2.90	171.03	374.97	369.18	5.79	64.803	0					
1,800.00	1,789.00	1,762.52	1,760.07	3.20	3.07	171.11	399.45	393.32	6.13	65.132	0					
1,900.00	1,887.30	1,859.47	1,856.80	3.40	3.25	171.19	423.94	417.46	6.48	65.425	0					
2,000.00	1,985.60	1,956.42	1,953.52	3.59	3.42	171.25	448.43	441.60	6.83	65.686	0					
2,100.00	2,083.90	2,053.38	2,050.25	3.78	3.59	171.31	472.92	465.75	7.17	65.921	0					
2,200.00	2,182.20	2,150.33	2,146.97	3.98	3.76	171.37	497.41	489.89	7.52	66.134	0					
2,300.00	2,280.50	2,247.29	2,243.70	4.17	3.94	171.42	521.90	514.03	7.87	66.327	0					
2,400.00	2,378.80	2,344.24	2,340.42	4.37	4.11	171.46	546.39	538.18	8.22	66.503	0					
2,500.00	2,477.10	2,441.19	2,437.14	4.56	4.28	171.50	570.88	562.32	8.56	66.664	0					
2,600.00	2,575.41	2,538.15	2,533.87	4.76	4.45	171.54	595.37	586.46	8.91	66.812	0					
2,700.00	2,673.71	2,635.10	2,630.59	4.96	4.63	171.57	619.86	610.61	9.26	66.948	0					
2,800.00	2,772.01	2,732.06	2,727.32	5.15	4.80	171.60	644.36	634.75	9.61	67.074	0					
2,900.00	2,870.31	2,829.01	2,824.04	5.35	4.97	171.63	668.85	658.89	9.95	67.192	0					
3,000.00	2,968.61	2,925.96	2,920.77	5.55	5.14	171.66	693.34	683.04	10.30	67.301	0					
3,100.00	3,066.91	3,022.92	3,017.49	5.74	5.32	171.69	717.83	707.18	10.65	67.402	0					
3,200.00	3,165.21	3,119.87	3,114.21	5.94	5.49	171.71	742.32	731.33	11.00	67.497	0					
3,300.00	3,263.51	3,216.83	3,210.94	6.14	5.66	171.73	766.82	755.47	11.35	67.586	0					
3,400.00	3,361.81	3,313.78	3,307.66	6.34	5.84	171.75	791.31	779.61	11.69	67.670	0					
3,500.00	3,460.11	3,410.73	3,404.39	6.53	6.01	171.77	815.80	803.76	12.04	67.749	0					
3,600.00	3,558.42	3,507.69	3,501.11	6.73	6.18	171.79	840.29	827.90	12.39	67.823	0					
3,700.00	3,656.72	3,604.64	3,597.83	6.93	6.35	171.81	864.78	852.05	12.74	67.893	0					
3,800.00	3,755.02	3,701.59	3,694.56	7.13	6.53	171.83	889.28	876.19	13.09	67.959	0					
3,900.00	3,853.32	3,798.55	3,791.28	7.32	6.70	171.84	913.77	900.34	13.43	68.022	0					
4,000.00	3,951.62	3,895.50	3,888.01	7.52	6.87	171.86	938.26	924.48	13.78	68.081	0					
4,100.00	4,049.92	3,992.46	3,984.73	7.72	7.04	171.87	962.76	948.63	14.13	68.138	0					
4,200.00	4,148.22	4,089.41	4,081.46	7.92	7.22	171.88	987.25	972.77	14.48	68.191	0					
4,300.00	4,246.52	4,186.36	4,178.18	8.12	7.39	171.90	1,011.74	996.92	14.83	68.242	0					
4,400.00	4,344.82	4,283.32	4,274.90	8.31	7.56	171.91	1,036.23	1,021.06	15.17	68.291	0					
4,500.00	4,443.12	4,380.27	4,371.63	8.51	7.73	171.92	1,060.73	1,045.20	15.52	68.338	0					
4,600.00	4,541.43	4,477.23	4,468.35	8.71	7.91	171.93	1,085.22	1,069.35	15.87	68.382	0					
4,700.00	4,639.73	4,574.18	4,565.08	8.91	8.08	171.94	1,109.71	1,093.49	16.22	68.424	0					
4,800.00	4,738.03	4,671.13	4,661.80	9.11	8.25	171.95	1,134.21	1,117.64	16.57	68.465	0					
4,900.00	4,836.33	4,768.09	4,758.53	9.31	8.43	171.96	1,158.70	1,141.78	16.91	68.504	0					
5,000.00	4,934.63	4,865.04	4,855.25	9.50	8.60	171.97	1,183.19	1,165.93	17.26	68.541	0					
5,100.00	5,032.93	4,961.99	4,951.97	9.70	8.77	171.98	1,207.68	1,190.07	17.61	68.577	0					
5,200.00	5,131.23	5,058.95	5,048.70	9.90	8.94	171.99	1,232.18	1,214.22	17.96	68.612	0					

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 02 - Original Hole - Rev 1		Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder														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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
5,300.00	5,229.53	5,155.90	5,145.42	10.10	9.12	172.00	1,256.67	1,238.36	18.31	68.645	0					
5,400.00	5,327.83	5,252.86	5,242.15	10.30	9.29	172.01	1,281.16	1,262.51	18.66	68.677	0					
5,500.00	5,426.14	5,349.81	5,338.87	10.50	9.46	172.01	1,305.66	1,286.65	19.00	68.707	0					
5,600.00	5,524.44	5,446.76	5,435.60	10.70	9.63	172.02	1,330.15	1,310.80	19.35	68.737	0					
5,700.00	5,622.74	5,543.72	5,532.32	10.89	9.81	172.03	1,354.64	1,334.94	19.70	68.765	0					
5,800.00	5,721.04	5,640.67	5,629.04	11.09	9.98	172.03	1,379.14	1,359.09	20.05	68.793	0					
5,900.00	5,819.34	5,737.63	5,725.77	11.29	10.15	172.04	1,403.63	1,383.23	20.40	68.819	0					
5,993.46	5,911.21	5,828.24	5,816.16	11.48	10.31	172.05	1,426.52	1,405.80	20.72	68.843	0					
6,000.00	5,917.64	5,834.58	5,822.49	11.49	10.33	172.05	1,428.12	1,407.37	20.75	68.831	0					
6,100.00	6,016.28	5,931.99	5,919.67	11.68	10.50	172.11	1,450.71	1,429.56	21.15	68.591	0					
6,200.00	6,115.43	6,120.65	6,108.17	11.86	10.83	172.19	1,466.90	1,445.21	21.69	67.626	0					
6,300.00	6,214.98	6,224.45	6,211.98	12.04	11.01	172.27	1,476.31	1,454.24	22.07	66.898	0					
6,400.00	6,314.79	6,324.07	6,311.17	12.21	11.18	172.02	1,482.27	1,459.84	22.43	66.083	0					
6,500.00	6,414.75	6,418.56	6,402.67	12.37	11.35	171.15	1,485.03	1,462.23	22.80	65.138	0					
6,522.29	6,437.04	6,438.42	6,421.34	12.41	11.39	-1.28	1,485.28	1,461.39	23.88	62.189	0					
6,600.00	6,514.75	6,503.52	6,480.72	12.53	11.52	-2.31	1,486.38	1,462.26	24.12	61.616	0					
6,622.29	6,537.04	6,520.93	6,496.06	12.57	11.55	-2.63	1,486.90	1,462.71	24.19	61.466	0					
6,650.00	6,564.74	6,542.09	6,514.34	12.61	11.59	86.90	1,487.66	1,464.25	23.41	63.558	0					
6,700.00	6,614.52	6,579.55	6,545.70	12.69	11.67	86.07	1,489.27	1,465.65	23.62	63.052	0					
6,750.00	6,663.70	6,616.21	6,575.04	12.78	11.75	85.25	1,491.16	1,467.33	23.83	62.564	0					
6,800.00	6,711.92	6,650.00	6,600.78	12.86	11.82	84.49	1,493.27	1,469.24	24.04	62.128	0					
6,850.00	6,758.81	6,687.53	6,627.81	12.95	11.91	83.69	1,495.54	1,471.29	24.26	61.655	0					
6,900.00	6,804.01	6,722.36	6,651.32	13.04	11.99	82.95	1,497.92	1,473.46	24.46	61.238	0					
6,950.00	6,847.17	6,750.00	6,668.84	13.13	12.05	82.33	1,500.38	1,475.76	24.62	60.948	0					
7,000.00	6,887.98	6,790.72	6,692.71	13.23	12.16	81.58	1,502.80	1,477.96	24.84	60.500	0					
7,050.00	6,926.12	6,824.35	6,710.63	13.33	12.25	80.96	1,505.19	1,480.18	25.02	60.169	0					
7,100.00	6,961.30	6,850.00	6,723.16	13.43	12.32	80.46	1,507.53	1,482.39	25.13	59.982	0					
7,150.00	6,993.24	6,890.76	6,740.97	13.55	12.44	79.87	1,509.66	1,484.32	25.34	59.577	0					
7,200.00	7,021.72	6,923.62	6,753.40	13.66	12.54	79.41	1,511.65	1,486.16	25.49	59.294	0					
7,250.00	7,046.51	6,950.00	6,762.11	13.79	12.62	79.05	1,513.45	1,487.85	25.60	59.121	0					
7,300.00	7,067.42	6,988.83	6,772.81	13.92	12.75	78.67	1,514.97	1,489.18	25.80	58.727	0					
7,350.00	7,084.29	7,021.24	6,779.80	14.06	12.86	78.39	1,516.24	1,490.29	25.95	58.418	0					
7,400.00	7,097.00	7,050.00	6,784.49	14.20	12.96	78.19	1,517.23	1,491.14	26.09	58.147	0					
7,450.00	7,105.44	7,085.79	6,788.33	14.36	13.09	78.04	1,517.90	1,491.60	26.30	57.715	0					
7,500.00	7,109.56	7,118.00	6,789.88	14.53	13.21	77.96	1,518.25	1,491.76	26.49	57.306	0					
7,522.29	7,110.00	7,133.92	6,790.00	14.60	13.27	77.95	1,518.31	1,491.71	26.60	57.081	0					
7,600.00	7,110.00	7,211.63	6,790.00	14.88	13.58	77.95	1,518.31	1,491.11	27.20	55.824	0					
7,700.00	7,110.00	7,311.63	6,790.00	15.25	13.99	77.95	1,518.30	1,490.29	28.01	54.206	0					
7,800.00	7,110.00	7,411.63	6,790.00	15.65	14.43	77.95	1,518.30	1,489.44	28.86	52.601	0					
7,900.00	7,110.00	7,511.63	6,790.00	16.08	14.89	77.95	1,518.30	1,488.54	29.76	51.019	0					
8,000.00	7,110.00	7,611.63	6,790.00	16.52	15.36	77.95	1,518.30	1,487.61	30.69	49.471	0					
8,100.00	7,110.00	7,711.63	6,790.00	16.98	15.85	77.95	1,518.30	1,486.65	31.65	47.965	0					
8,200.00	7,110.00	7,811.63	6,790.00	17.46	16.36	77.95	1,518.30	1,485.65	32.65	46.504	0					
8,300.00	7,110.00	7,911.63	6,790.00	17.95	16.89	77.95	1,518.30	1,484.63	33.67	45.094	0					
8,400.00	7,110.00	8,011.63	6,790.00	18.46	17.42	77.95	1,518.30	1,483.58	34.72	43.734	0					
8,500.00	7,110.00	8,111.63	6,790.00	18.98	17.97	77.95	1,518.30	1,482.51	35.79	42.427	0					
8,600.00	7,110.00	8,211.63	6,790.00	19.52	18.52	77.95	1,518.30	1,481.42	36.88	41.173	0					
8,700.00	7,110.00	8,311.63	6,790.00	20.06	19.09	77.95	1,518.30	1,480.31	37.99	39.971	0					
8,800.00	7,110.00	8,411.63	6,790.00	20.61	19.67	77.95	1,518.30	1,479.18	39.11	38.820	0					
8,900.00	7,110.00	8,511.63	6,790.00	21.17	20.25	77.95	1,518.30	1,478.04	40.25	37.718	0					
9,000.00	7,110.00	8,611.63	6,790.00	21.74	20.84	77.95	1,518.29	1,476.88	41.41	36.664	0					
9,100.00	7,110.00	8,711.63	6,790.00	22.32	21.44	77.95	1,518.29	1,475.71	42.58	35.656	0					
9,200.00	7,110.00	8,811.63	6,790.00	22.91	22.05	77.95	1,518.29	1,474.53	43.76	34.692	0					
9,300.00	7,110.00	8,911.63	6,790.00	23.50	22.66	77.95	1,518.29	1,473.33	44.96	33.770	0					

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
9,400.00	7,110.00	9,011.63	6,790.00	24.10	23.27	77.95	1,518.29	1,472.13	46.16	32.889	0			
9,500.00	7,110.00	9,111.63	6,790.00	24.70	23.89	77.95	1,518.29	1,470.91	47.38	32.046	0			
9,600.00	7,110.00	9,211.63	6,790.00	25.31	24.52	77.95	1,518.29	1,469.69	48.60	31.239	0			
9,700.00	7,110.00	9,311.63	6,790.00	25.92	25.14	77.95	1,518.29	1,468.46	49.83	30.467	0			
9,800.00	7,110.00	9,411.63	6,790.00	26.54	25.78	77.95	1,518.29	1,467.22	51.07	29.728	0			
9,900.00	7,110.00	9,511.63	6,790.00	27.16	26.41	77.95	1,518.29	1,465.97	52.32	29.019	0			
10,000.00	7,110.00	9,611.63	6,790.00	27.79	27.05	77.95	1,518.29	1,464.71	53.57	28.340	0			
10,100.00	7,110.00	9,711.63	6,790.00	28.42	27.70	77.95	1,518.29	1,463.45	54.83	27.689	0			
10,200.00	7,110.00	9,811.63	6,790.00	29.05	28.34	77.95	1,518.29	1,462.19	56.10	27.065	0			
10,300.00	7,110.00	9,911.63	6,790.00	29.69	28.99	77.95	1,518.29	1,460.92	57.37	26.465	0			
10,400.00	7,110.00	10,011.63	6,790.00	30.33	29.64	77.95	1,518.28	1,459.64	58.64	25.890	0			
10,500.00	7,110.00	10,111.63	6,790.00	30.97	30.29	77.95	1,518.28	1,458.36	59.93	25.336	0			
10,600.00	7,110.00	10,211.63	6,790.00	31.61	30.95	77.95	1,518.28	1,457.07	61.21	24.804	0			
10,700.00	7,110.00	10,311.63	6,790.00	32.26	31.61	77.95	1,518.28	1,455.78	62.50	24.293	0			
10,800.00	7,110.00	10,411.63	6,790.00	32.91	32.27	77.95	1,518.28	1,454.49	63.79	23.800	0			
10,900.00	7,110.00	10,511.63	6,790.00	33.56	32.93	77.95	1,518.28	1,453.19	65.09	23.326	0			
11,000.00	7,110.00	10,611.63	6,790.00	34.22	33.59	77.95	1,518.28	1,451.89	66.39	22.869	0			
11,100.00	7,110.00	10,711.63	6,790.00	34.87	34.26	77.95	1,518.28	1,450.59	67.69	22.429	0			
11,200.00	7,110.00	10,811.63	6,790.00	35.53	34.92	77.95	1,518.28	1,449.28	69.00	22.004	0			
11,300.00	7,110.00	10,911.63	6,790.00	36.19	35.59	77.95	1,518.28	1,447.97	70.31	21.595	0			
11,400.00	7,110.00	11,011.63	6,790.00	36.85	36.26	77.95	1,518.28	1,446.66	71.62	21.199	0			
11,500.00	7,110.00	11,111.63	6,790.00	37.51	36.93	77.95	1,518.28	1,445.34	72.94	20.817	0			
11,600.00	7,110.00	11,211.63	6,790.00	38.18	37.60	77.95	1,518.28	1,444.02	74.25	20.447	0			
11,700.00	7,110.00	11,311.63	6,790.00	38.84	38.27	77.95	1,518.28	1,442.70	75.57	20.090	0			
11,800.00	7,110.00	11,411.63	6,790.00	39.51	38.95	77.95	1,518.27	1,441.38	76.89	19.745	0			
11,892.40	7,110.00	11,503.90	6,790.00	40.13	39.57	77.95	1,518.27	1,440.17	78.11	19.439	0			
11,894.53	7,110.00	11,506.02	6,790.00	40.14	39.58	77.95	1,518.22	1,440.08	78.14	19.429	0		SF	



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16")
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16")
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 03 - Original Hole - Rev 1		Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
0.00	0.00	0.00	0.00	0.00	0.00	0.40	167.98					0	CC, ES			
100.00	100.00	97.00	97.00	0.15	0.14	0.40	167.95	167.67	0.29	581.523	0					
200.00	200.00	197.00	197.00	0.32	0.32	0.40	167.95	167.32	0.64	263.645	0					
300.00	300.00	297.00	297.00	0.50	0.49	0.40	167.95	166.97	0.99	170.320	0					
400.00	400.00	397.00	397.00	0.67	0.66	0.40	167.95	166.62	1.34	125.792	0					
500.00	500.00	497.00	497.00	0.84	0.84	0.40	167.95	166.27	1.68	99.721	0					
600.00	600.00	597.00	597.00	1.02	1.01	0.40	167.95	165.92	2.03	82.601	0					
700.00	700.00	697.00	697.00	1.19	1.19	0.40	167.95	165.57	2.38	70.499	0					
800.00	800.00	792.37	792.36	1.37	1.36	0.13	169.28	166.56	2.72	62.158	0					
900.00	899.98	890.61	890.51	1.54	1.53	171.66	174.55	171.48	3.07	56.883	0					
1,000.00	999.84	990.20	990.00	1.72	1.70	171.18	183.43	180.02	3.41	53.742	0					
1,100.00	1,099.45	1,089.43	1,089.14	1.90	1.88	170.88	195.75	192.00	3.75	52.142	0					
1,200.00	1,198.70	1,188.17	1,187.79	2.07	2.05	170.76	211.49	207.40	4.09	51.693	0					
1,300.00	1,297.47	1,286.32	1,285.85	2.26	2.22	170.79	230.62	226.19	4.42	52.131	0					
1,328.83	1,325.83	1,314.49	1,313.99	2.31	2.27	170.81	236.76	232.24	4.52	52.395	0					
1,400.00	1,395.79	1,383.95	1,383.38	2.44	2.39	170.93	252.27	247.50	4.77	52.934	0					
1,500.00	1,494.09	1,481.54	1,480.89	2.63	2.56	171.08	274.06	268.94	5.11	53.601	0					
1,600.00	1,592.39	1,579.14	1,578.39	2.82	2.74	171.20	295.85	290.39	5.46	54.181	0					
1,700.00	1,690.70	1,676.73	1,675.89	3.01	2.91	171.31	317.64	311.83	5.81	54.689	0					
1,800.00	1,789.00	1,774.33	1,773.40	3.20	3.08	171.40	339.44	333.28	6.16	55.137	0					
1,900.00	1,887.30	1,871.92	1,870.90	3.40	3.25	171.48	361.23	354.73	6.50	55.537	0					
2,000.00	1,985.60	1,969.52	1,968.40	3.59	3.42	171.56	383.03	376.17	6.85	55.895	0					
2,100.00	2,083.90	2,067.11	2,065.91	3.78	3.59	171.62	404.82	397.62	7.20	56.217	0					
2,200.00	2,182.20	2,164.71	2,163.41	3.98	3.76	171.68	426.62	419.07	7.55	56.508	0					
2,300.00	2,280.50	2,262.30	2,260.91	4.17	3.94	171.73	448.42	440.52	7.90	56.773	0					
2,400.00	2,378.80	2,359.90	2,358.42	4.37	4.11	171.78	470.21	461.97	8.25	57.015	0					
2,500.00	2,477.10	2,457.49	2,455.92	4.56	4.28	171.82	492.01	483.42	8.60	57.237	0					
2,600.00	2,575.41	2,555.09	2,553.42	4.76	4.45	171.86	513.81	504.86	8.94	57.442	0					
2,700.00	2,673.71	2,652.68	2,650.93	4.96	4.62	171.90	535.61	526.31	9.29	57.631	0					
2,800.00	2,772.01	2,750.27	2,748.43	5.15	4.79	171.93	557.40	547.76	9.64	57.805	0					
2,900.00	2,870.31	2,847.87	2,845.93	5.35	4.97	171.96	579.20	569.21	9.99	57.968	0					
3,000.00	2,968.61	2,945.46	2,943.44	5.55	5.14	171.99	601.00	590.66	10.34	58.119	0					
3,100.00	3,066.91	3,043.06	3,040.94	5.74	5.31	172.02	622.80	612.11	10.69	58.260	0					
3,200.00	3,165.21	3,140.65	3,138.44	5.94	5.48	172.04	644.60	633.56	11.04	58.392	0					
3,300.00	3,263.51	3,238.25	3,235.95	6.14	5.65	172.07	666.40	655.01	11.39	58.516	0					
3,400.00	3,361.81	3,335.84	3,333.45	6.34	5.82	172.09	688.20	676.46	11.74	58.633	0					
3,500.00	3,460.11	3,433.44	3,430.95	6.53	6.00	172.11	710.00	697.91	12.09	58.742	0					
3,600.00	3,558.42	3,531.03	3,528.46	6.73	6.17	172.13	731.79	719.36	12.44	58.846	0					
3,700.00	3,656.72	3,628.63	3,625.96	6.93	6.34	172.15	753.59	740.81	12.79	58.943	0					
3,800.00	3,755.02	3,726.22	3,723.46	7.13	6.51	172.17	775.39	762.26	13.13	59.036	0					
3,900.00	3,853.32	3,823.82	3,820.97	7.32	6.68	172.18	797.19	783.71	13.48	59.123	0					
4,000.00	3,951.62	3,921.41	3,918.47	7.52	6.85	172.20	818.99	805.16	13.83	59.206	0					
4,100.00	4,049.92	4,019.01	4,015.97	7.72	7.03	172.21	840.79	826.61	14.18	59.285	0					
4,200.00	4,148.22	4,116.60	4,113.48	7.92	7.20	172.23	862.59	848.06	14.53	59.360	0					
4,300.00	4,246.52	4,214.20	4,210.98	8.12	7.37	172.24	884.39	869.51	14.88	59.431	0					
4,400.00	4,344.82	4,311.79	4,308.48	8.31	7.54	172.25	906.19	890.96	15.23	59.499	0					
4,500.00	4,443.12	4,409.39	4,405.99	8.51	7.71	172.26	927.99	912.41	15.58	59.565	0					
4,600.00	4,541.43	4,506.98	4,503.49	8.71	7.89	172.27	949.79	933.86	15.93	59.627	0					
4,700.00	4,639.73	4,604.58	4,600.99	8.91	8.06	172.29	971.59	955.31	16.28	59.686	0					
4,800.00	4,738.03	4,702.17	4,698.50	9.11	8.23	172.30	993.39	976.76	16.63	59.743	0					
4,900.00	4,836.33	4,799.77	4,796.00	9.31	8.40	172.31	1,015.19	998.21	16.98	59.798	0					
5,000.00	4,934.63	4,897.36	4,893.50	9.50	8.57	172.32	1,036.99	1,019.66	17.33	59.850	0					
5,100.00	5,032.93	4,994.96	4,991.01	9.70	8.74	172.32	1,058.79	1,041.11	17.68	59.900	0					
5,200.00	5,131.23	5,092.55	5,088.51	9.90	8.92	172.33	1,080.59	1,062.56	18.03	59.948	0					

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 03 - Original Hole - Rev 1		Offset Site Error:		0.00 usft	
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision						
5,300.00	5,229.53	5,190.14	5,186.01	10.10	9.09	172.34	1,102.39	1,084.01	18.37	59.995	0							
5,400.00	5,327.83	5,287.74	5,283.52	10.30	9.26	172.35	1,124.19	1,105.46	18.72	60.040	0							
5,500.00	5,426.14	5,385.33	5,381.02	10.50	9.43	172.36	1,145.99	1,126.91	19.07	60.083	0							
5,600.00	5,524.44	5,482.93	5,478.52	10.70	9.60	172.36	1,167.79	1,148.36	19.42	60.124	0							
5,700.00	5,622.74	5,580.52	5,576.03	10.89	9.77	172.37	1,189.59	1,169.81	19.77	60.164	0							
5,800.00	5,721.04	5,678.12	5,673.53	11.09	9.95	172.38	1,211.39	1,191.27	20.12	60.203	0							
5,900.00	5,819.34	5,775.71	5,771.03	11.29	10.12	172.39	1,233.19	1,212.72	20.47	60.240	0							
5,993.46	5,911.21	5,866.92	5,862.15	11.48	10.28	172.39	1,253.56	1,232.76	20.80	60.274	0							
6,000.00	5,917.64	5,873.31	5,868.54	11.49	10.29	172.40	1,254.98	1,234.16	20.82	60.265	0							
6,100.00	6,016.28	5,971.31	5,966.44	11.68	10.46	172.44	1,274.87	1,253.64	21.22	60.073	0							
6,200.00	6,115.43	6,069.93	6,064.98	11.86	10.64	172.46	1,291.35	1,269.75	21.60	59.777	0							
6,300.00	6,214.98	6,169.07	6,164.02	12.04	10.81	172.45	1,304.41	1,282.44	21.97	59.382	0							
6,400.00	6,314.79	6,268.58	6,263.44	12.21	10.99	172.41	1,314.04	1,291.72	22.31	58.894	0							
6,500.00	6,414.75	6,400.69	6,395.47	12.37	11.22	172.34	1,319.60	1,296.91	22.70	58.145	0							
6,522.29	6,437.04	6,437.34	6,432.11	12.41	11.28	0.16	1,319.84	1,296.07	23.77	55.517	0							
6,600.00	6,514.75	6,516.98	6,511.75	12.53	11.42	0.16	1,319.84	1,295.81	24.04	54.910	0							
6,622.29	6,537.04	6,539.27	6,534.04	12.57	11.46	0.16	1,319.84	1,295.73	24.11	54.741	0							
6,650.00	6,564.74	6,567.15	6,561.91	12.61	11.51	90.17	1,319.84	1,296.61	23.24	56.800	0							
6,700.00	6,614.52	6,617.50	6,612.05	12.69	11.59	90.18	1,319.84	1,296.43	23.41	56.368	0							
6,750.00	6,663.70	6,667.87	6,661.64	12.78	11.69	90.19	1,319.84	1,296.25	23.60	55.936	0							
6,800.00	6,711.92	6,718.26	6,710.28	12.86	11.78	90.19	1,319.84	1,296.06	23.78	55.501	0							
6,850.00	6,758.81	6,768.66	6,757.59	12.95	11.87	90.20	1,319.84	1,295.87	23.97	55.062	0							
6,900.00	6,804.01	6,819.07	6,803.20	13.04	11.97	90.20	1,319.84	1,295.68	24.17	54.617	0							
6,950.00	6,847.17	6,869.49	6,846.76	13.13	12.07	90.21	1,319.84	1,295.48	24.37	54.163	0							
7,000.00	6,887.98	6,919.91	6,887.93	13.23	12.18	90.21	1,319.84	1,295.27	24.58	53.698	0							
7,050.00	6,926.12	6,970.33	6,926.38	13.33	12.29	90.21	1,319.84	1,295.04	24.80	53.218	0							
7,100.00	6,961.30	7,020.75	6,961.82	13.43	12.41	90.21	1,319.84	1,294.81	25.03	52.720	0							
7,150.00	6,993.24	7,071.17	6,993.96	13.55	12.53	90.20	1,319.84	1,294.56	25.28	52.203	0							
7,200.00	7,021.72	7,121.57	7,022.57	13.66	12.66	90.20	1,319.84	1,294.30	25.55	51.664	0							
7,250.00	7,046.51	7,171.97	7,047.41	13.79	12.80	90.19	1,319.84	1,294.02	25.83	51.104	0							
7,300.00	7,067.42	7,222.34	7,068.31	13.92	12.95	90.18	1,319.84	1,293.72	26.12	50.521	0							
7,350.00	7,084.29	7,272.70	7,085.09	14.06	13.11	90.17	1,319.84	1,293.40	26.44	49.918	0							
7,400.00	7,097.00	7,323.04	7,097.64	14.20	13.28	90.16	1,319.84	1,293.07	26.77	49.296	0							
7,450.00	7,105.44	7,373.35	7,105.86	14.36	13.45	90.15	1,319.84	1,292.71	27.12	48.661	0							
7,500.00	7,109.56	7,423.64	7,109.70	14.53	13.63	90.14	1,319.84	1,292.35	27.49	48.016	0							
7,522.29	7,110.00	7,446.03	7,110.00	14.60	13.72	90.13	1,319.84	1,292.18	27.65	47.727	0							
7,600.00	7,110.00	7,523.74	7,110.00	14.88	14.02	90.13	1,319.84	1,291.58	28.25	46.713	0							
7,700.00	7,110.00	7,623.74	7,110.00	15.25	14.43	90.13	1,319.83	1,290.77	29.07	45.408	0							
7,800.00	7,110.00	7,723.74	7,110.00	15.65	14.86	90.13	1,319.83	1,289.91	29.92	44.108	0							
7,900.00	7,110.00	7,823.74	7,110.00	16.08	15.31	90.13	1,319.83	1,289.01	30.82	42.825	0							
8,000.00	7,110.00	7,923.74	7,110.00	16.52	15.78	90.13	1,319.83	1,288.08	31.75	41.565	0							
8,100.00	7,110.00	8,023.74	7,110.00	16.98	16.26	90.13	1,319.83	1,287.11	32.72	40.336	0							
8,200.00	7,110.00	8,123.74	7,110.00	17.46	16.77	90.13	1,319.83	1,286.11	33.72	39.141	0							
8,300.00	7,110.00	8,223.74	7,110.00	17.95	17.28	90.13	1,319.83	1,285.08	34.75	37.984	0							
8,400.00	7,110.00	8,323.74	7,110.00	18.46	17.81	90.13	1,319.83	1,284.03	35.80	36.867	0							
8,500.00	7,110.00	8,423.74	7,110.00	18.98	18.35	90.13	1,319.83	1,282.95	36.88	35.790	0							
8,600.00	7,110.00	8,523.74	7,110.00	19.52	18.90	90.13	1,319.83	1,281.85	37.97	34.755	0							
8,700.00	7,110.00	8,623.74	7,110.00	20.06	19.46	90.13	1,319.83	1,280.73	39.09	33.761	0							
8,800.00	7,110.00	8,723.74	7,110.00	20.61	20.03	90.13	1,319.83	1,279.60	40.23	32.808	0							
8,900.00	7,110.00	8,823.74	7,110.00	21.17	20.61	90.13	1,319.83	1,278.44	41.38	31.894	0							
9,000.00	7,110.00	8,923.74	7,110.00	21.74	21.20	90.13	1,319.83	1,277.28	42.55	31.018	0							
9,100.00	7,110.00	9,023.74	7,110.00	22.32	21.79	90.13	1,319.82	1,276.09	43.73	30.180	0							
9,200.00	7,110.00	9,123.74	7,110.00	22.91	22.39	90.13	1,319.82	1,274.90	44.93	29.377	0							
9,300.00	7,110.00	9,223.74	7,110.00	23.50	22.99	90.13	1,319.82	1,273.69	46.13	28.608	0							

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 03 - Original Hole - Rev 1		Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
9,400.00	7,110.00	9,323.74	7,110.00	24.10	23.60	90.13	1,319.82	1,272.47	47.35	27.872	0					
9,500.00	7,110.00	9,423.74	7,110.00	24.70	24.22	90.13	1,319.82	1,271.24	48.58	27.167	0					
9,600.00	7,110.00	9,523.74	7,110.00	25.31	24.84	90.13	1,319.82	1,270.00	49.82	26.492	0					
9,700.00	7,110.00	9,623.74	7,110.00	25.92	25.46	90.13	1,319.82	1,268.75	51.07	25.845	0					
9,800.00	7,110.00	9,723.74	7,110.00	26.54	26.09	90.13	1,319.82	1,267.50	52.32	25.226	0					
9,900.00	7,110.00	9,823.74	7,110.00	27.16	26.72	90.13	1,319.82	1,266.24	53.58	24.631	0					
10,000.00	7,110.00	9,923.74	7,110.00	27.79	27.36	90.13	1,319.82	1,264.97	54.85	24.061	0					
10,100.00	7,110.00	10,023.74	7,110.00	28.42	28.00	90.13	1,319.82	1,263.69	56.13	23.514	0					
10,200.00	7,110.00	10,123.74	7,110.00	29.05	28.64	90.13	1,319.82	1,262.41	57.41	22.989	0					
10,300.00	7,110.00	10,223.74	7,110.00	29.69	29.29	90.13	1,319.82	1,261.12	58.70	22.485	0					
10,400.00	7,110.00	10,323.74	7,110.00	30.33	29.93	90.13	1,319.81	1,259.82	59.99	22.000	0					
10,500.00	7,110.00	10,423.74	7,110.00	30.97	30.58	90.13	1,319.81	1,258.52	61.29	21.534	0					
10,600.00	7,110.00	10,523.74	7,110.00	31.61	31.24	90.13	1,319.81	1,257.22	62.59	21.086	0					
10,700.00	7,110.00	10,623.74	7,110.00	32.26	31.89	90.13	1,319.81	1,255.91	63.90	20.654	0					
10,800.00	7,110.00	10,723.74	7,110.00	32.91	32.55	90.13	1,319.81	1,254.60	65.21	20.239	0					
10,900.00	7,110.00	10,823.74	7,110.00	33.56	33.21	90.13	1,319.81	1,253.28	66.53	19.839	0					
11,000.00	7,110.00	10,923.74	7,110.00	34.22	33.87	90.13	1,319.81	1,251.96	67.85	19.453	0					
11,100.00	7,110.00	11,023.74	7,110.00	34.87	34.53	90.13	1,319.81	1,250.64	69.17	19.081	0					
11,200.00	7,110.00	11,123.74	7,110.00	35.53	35.19	90.13	1,319.81	1,249.31	70.49	18.722	0					
11,300.00	7,110.00	11,223.74	7,110.00	36.19	35.86	90.13	1,319.81	1,247.98	71.82	18.376	0					
11,400.00	7,110.00	11,323.74	7,110.00	36.85	36.52	90.13	1,319.81	1,246.65	73.16	18.041	0					
11,500.00	7,110.00	11,423.74	7,110.00	37.51	37.19	90.13	1,319.81	1,245.32	74.49	17.718	0					
11,600.00	7,110.00	11,523.74	7,110.00	38.18	37.86	90.13	1,319.81	1,243.98	75.83	17.405	0					
11,700.00	7,110.00	11,623.74	7,110.00	38.84	38.53	90.13	1,319.81	1,242.64	77.17	17.103	0					
11,800.00	7,110.00	11,723.74	7,110.00	39.51	39.20	90.13	1,319.80	1,241.30	78.51	16.811	0					
11,893.80	7,110.00	11,817.49	7,110.00	40.13	39.83	90.13	1,319.80	1,240.04	79.77	16.546	0					
11,894.53	7,110.00	11,818.22	7,110.00	40.14	39.84	90.13	1,319.75	1,239.97	79.78	16.543	0	SF				



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 04 - Original Hole - Rev 1		Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
0.00	0.00	0.00	0.00	0.00	0.00	0.44	139.92					0				
100.00	100.00	98.00	98.00	0.15	0.14	0.44	139.90	139.61	0.29	481.950	0					
200.00	200.00	198.00	198.00	0.32	0.32	0.44	139.90	139.26	0.64	219.011	0					
300.00	300.00	298.00	298.00	0.50	0.49	0.44	139.90	138.91	0.99	141.622	0					
400.00	400.00	398.00	398.00	0.67	0.67	0.44	139.90	138.57	1.34	104.645	0					
500.00	500.00	498.00	498.00	0.84	0.84	0.44	139.90	138.22	1.69	82.979	0					
600.00	600.00	598.00	598.00	1.02	1.02	0.44	139.90	137.87	2.04	68.746	0					
700.00	700.00	698.00	698.00	1.19	1.19	0.44	139.90	137.52	2.38	58.681	0					
800.00	800.00	798.00	798.00	1.37	1.36	0.44	139.90	137.17	2.73	51.187	0					
900.00	899.98	896.08	896.07	1.54	1.54	172.14	142.39	139.32	3.08	46.262	0		CC, ES			
1,000.00	999.84	995.85	995.80	1.72	1.71	171.46	148.93	145.51	3.42	43.506	0					
1,100.00	1,099.45	1,095.34	1,095.25	1.90	1.88	171.02	158.92	155.15	3.77	42.207	0					
1,200.00	1,198.70	1,194.43	1,194.30	2.07	2.06	170.81	172.33	168.23	4.10	41.998	0					
1,300.00	1,297.47	1,293.00	1,292.83	2.26	2.23	170.79	189.16	184.72	4.44	42.627	0					
1,328.83	1,325.83	1,321.30	1,321.12	2.31	2.28	170.81	194.63	190.10	4.53	42.939	0					
1,400.00	1,395.79	1,391.11	1,390.90	2.44	2.40	170.91	208.51	203.73	4.78	43.615	0					
1,500.00	1,494.09	1,489.19	1,488.94	2.63	2.57	171.04	228.01	222.88	5.13	44.453	0					
1,600.00	1,592.39	1,587.27	1,586.98	2.82	2.74	171.14	247.50	242.02	5.48	45.182	0					
1,700.00	1,690.70	1,685.35	1,685.03	3.01	2.92	171.23	267.00	261.17	5.83	45.821	0					
1,800.00	1,789.00	1,783.43	1,783.07	3.20	3.09	171.30	286.50	280.32	6.18	46.387	0					
1,900.00	1,887.30	1,881.51	1,881.11	3.40	3.26	171.37	306.00	299.47	6.53	46.891	0					
2,000.00	1,985.60	1,979.59	1,979.15	3.59	3.43	171.43	325.50	318.62	6.88	47.343	0					
2,100.00	2,083.90	2,077.67	2,077.19	3.78	3.60	171.48	345.00	337.77	7.22	47.750	0					
2,200.00	2,182.20	2,175.75	2,175.24	3.98	3.77	171.53	364.49	356.92	7.57	48.120	0					
2,300.00	2,280.50	2,273.83	2,273.28	4.17	3.95	171.57	383.99	376.07	7.92	48.456	0					
2,400.00	2,378.80	2,371.91	2,371.32	4.37	4.12	171.61	403.49	395.22	8.27	48.763	0					
2,500.00	2,477.10	2,469.99	2,469.36	4.56	4.29	171.64	422.99	414.37	8.62	49.045	0					
2,600.00	2,575.41	2,568.07	2,567.40	4.76	4.46	171.67	442.49	433.52	8.97	49.304	0					
2,700.00	2,673.71	2,666.15	2,665.45	4.96	4.63	171.70	462.00	452.67	9.32	49.544	0					
2,800.00	2,772.01	2,764.23	2,763.49	5.15	4.81	171.73	481.50	471.82	9.68	49.766	0					
2,900.00	2,870.31	2,862.31	2,861.53	5.35	4.98	171.75	501.00	490.97	10.03	49.973	0					
3,000.00	2,968.61	2,960.39	2,959.57	5.55	5.15	171.78	520.50	510.12	10.38	50.165	0					
3,100.00	3,066.91	3,058.47	3,057.62	5.74	5.32	171.80	540.00	529.27	10.73	50.345	0					
3,200.00	3,165.21	3,156.55	3,155.66	5.94	5.49	171.82	559.50	548.42	11.08	50.513	0					
3,300.00	3,263.51	3,254.63	3,253.70	6.14	5.66	171.83	579.00	567.57	11.43	50.670	0					
3,400.00	3,361.81	3,352.71	3,351.74	6.34	5.84	171.85	598.50	586.72	11.78	50.818	0					
3,500.00	3,460.11	3,450.79	3,449.78	6.53	6.01	171.87	618.00	605.87	12.13	50.958	0					
3,600.00	3,558.42	3,548.87	3,547.83	6.73	6.18	171.88	637.50	625.02	12.48	51.089	0					
3,700.00	3,656.72	3,646.95	3,645.87	6.93	6.35	171.90	657.00	644.17	12.83	51.214	0					
3,800.00	3,755.02	3,745.03	3,743.91	7.13	6.52	171.91	676.50	663.32	13.18	51.331	0					
3,900.00	3,853.32	3,843.11	3,841.95	7.32	6.69	171.92	696.00	682.47	13.53	51.443	0					
4,000.00	3,951.62	3,941.19	3,939.99	7.52	6.87	171.93	715.51	701.63	13.88	51.548	0					
4,100.00	4,049.92	4,039.27	4,038.04	7.72	7.04	171.94	735.01	720.78	14.23	51.649	0					
4,200.00	4,148.22	4,137.35	4,136.08	7.92	7.21	171.95	754.51	739.93	14.58	51.745	0					
4,300.00	4,246.52	4,235.43	4,234.12	8.12	7.38	171.96	774.01	759.08	14.93	51.836	0					
4,400.00	4,344.82	4,333.51	4,332.16	8.31	7.55	171.97	793.51	778.23	15.28	51.923	0					
4,500.00	4,443.12	4,431.59	4,430.20	8.51	7.72	171.98	813.01	797.38	15.63	52.005	0					
4,600.00	4,541.43	4,529.67	4,528.25	8.71	7.90	171.99	832.51	816.53	15.98	52.085	0					
4,700.00	4,639.73	4,627.75	4,626.29	8.91	8.07	172.00	852.01	835.68	16.33	52.161	0					
4,800.00	4,738.03	4,725.83	4,724.33	9.11	8.24	172.01	871.51	854.83	16.69	52.233	0					
4,900.00	4,836.33	4,823.91	4,822.37	9.31	8.41	172.02	891.02	873.98	17.04	52.303	0					
5,000.00	4,934.63	4,921.99	4,920.42	9.50	8.58	172.02	910.52	893.13	17.39	52.370	0					
5,100.00	5,032.93	5,020.07	5,018.46	9.70	8.76	172.03	930.02	912.28	17.74	52.434	0					
5,200.00	5,131.23	5,118.15	5,116.50	9.90	8.93	172.04	949.52	931.43	18.09	52.495	0					

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 04 - Original Hole - Rev 1		Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
5,300.00	5,229.53	5,216.23	5,214.54	10.10	9.10	172.04	969.02	950.58	18.44	52.555	0					
5,400.00	5,327.83	5,314.31	5,312.58	10.30	9.27	172.05	988.52	969.73	18.79	52.612	0					
5,500.00	5,426.14	5,412.39	5,410.63	10.50	9.44	172.05	1,008.02	988.88	19.14	52.667	0					
5,600.00	5,524.44	5,510.47	5,508.67	10.70	9.61	172.06	1,027.52	1,008.03	19.49	52.720	0					
5,700.00	5,622.74	5,608.55	5,606.71	10.89	9.79	172.07	1,047.03	1,027.18	19.84	52.771	0					
5,800.00	5,721.04	5,706.63	5,704.75	11.09	9.96	172.07	1,066.53	1,046.34	20.19	52.820	0					
5,900.00	5,819.34	5,804.71	5,802.79	11.29	10.13	172.08	1,086.03	1,065.49	20.54	52.867	0					
5,993.46	5,911.21	5,896.37	5,894.42	11.48	10.29	172.08	1,104.25	1,083.38	20.87	52.910	0					
6,000.00	5,917.64	5,902.79	5,900.84	11.49	10.30	172.08	1,105.52	1,084.63	20.90	52.904	0					
6,100.00	6,016.28	6,001.23	5,999.24	11.68	10.47	172.12	1,123.10	1,101.81	21.29	52.751	0					
6,200.00	6,115.43	6,114.59	6,112.58	11.86	10.67	172.17	1,136.88	1,115.19	21.69	52.411	0					
6,300.00	6,214.98	6,214.99	6,212.98	12.04	10.85	172.26	1,146.29	1,124.24	22.05	51.982	0					
6,400.00	6,314.79	6,314.42	6,311.97	12.21	11.02	171.92	1,152.25	1,129.85	22.40	51.431	0					
6,500.00	6,414.75	6,408.69	6,403.23	12.37	11.20	170.79	1,155.11	1,132.35	22.76	50.746	0					
6,522.29	6,437.04	6,428.50	6,421.85	12.41	11.24	-1.71	1,155.41	1,131.72	23.70	48.759	0					
6,600.00	6,514.75	6,493.43	6,481.05	12.53	11.36	-3.03	1,156.87	1,132.94	23.93	48.335	0					
6,622.29	6,537.04	6,510.81	6,496.35	12.57	11.40	-3.43	1,157.55	1,133.55	24.00	48.228	0					
6,650.00	6,564.74	6,531.91	6,514.58	12.61	11.44	85.96	1,158.54	1,135.17	23.38	49.560	0					
6,700.00	6,614.52	6,569.29	6,545.87	12.69	11.52	84.89	1,160.65	1,137.06	23.59	49.205	0					
6,750.00	6,663.70	6,605.87	6,575.13	12.78	11.60	83.84	1,163.10	1,139.30	23.80	48.873	0					
6,800.00	6,711.92	6,641.76	6,602.43	12.86	11.68	82.82	1,165.83	1,141.82	24.01	48.562	0					
6,850.00	6,758.81	6,677.05	6,627.79	12.95	11.76	81.84	1,168.76	1,144.55	24.21	48.277	0					
6,900.00	6,804.01	6,711.82	6,651.26	13.04	11.84	80.90	1,171.83	1,147.43	24.40	48.027	0					
6,950.00	6,847.17	6,750.00	6,675.19	13.13	11.94	79.94	1,174.97	1,150.37	24.60	47.771	0					
7,000.00	6,887.98	6,780.05	6,692.60	13.23	12.02	79.16	1,178.09	1,153.35	24.74	47.613	0					
7,050.00	6,926.12	6,813.63	6,710.50	13.33	12.11	78.37	1,181.16	1,156.27	24.89	47.449	0					
7,100.00	6,961.30	6,850.00	6,727.98	13.43	12.22	77.62	1,184.11	1,159.06	25.05	47.277	0					
7,150.00	6,993.24	6,879.95	6,740.83	13.55	12.31	77.00	1,186.87	1,161.71	25.16	47.179	0					
7,200.00	7,021.72	6,912.76	6,753.26	13.66	12.41	76.42	1,189.40	1,164.13	25.27	47.060	0					
7,250.00	7,046.51	6,950.00	6,765.24	13.79	12.53	75.88	1,191.68	1,166.26	25.42	46.883	0					
7,300.00	7,067.42	6,977.88	6,772.69	13.92	12.62	75.49	1,193.62	1,168.11	25.51	46.798	0					
7,350.00	7,084.29	7,010.25	6,779.70	14.06	12.73	75.15	1,195.22	1,169.60	25.63	46.638	0					
7,400.00	7,097.00	7,050.00	6,785.84	14.20	12.88	74.86	1,196.50	1,170.68	25.82	46.346	0					
7,450.00	7,105.44	7,074.73	6,788.28	14.36	12.97	74.71	1,197.30	1,171.39	25.91	46.206	0					
7,500.00	7,109.56	7,106.90	6,789.87	14.53	13.09	74.62	1,197.74	1,171.66	26.08	45.921	0					
7,522.29	7,110.00	7,122.44	6,790.00	14.60	13.15	74.60	1,197.80	1,171.63	26.18	45.759	0					
7,600.00	7,110.00	7,200.15	6,790.00	14.88	13.46	74.60	1,197.80	1,171.03	26.77	44.743	0					
7,700.00	7,110.00	7,300.15	6,790.00	15.25	13.88	74.60	1,197.80	1,170.23	27.58	43.434	0					
7,800.00	7,110.00	7,400.15	6,790.00	15.65	14.32	74.60	1,197.80	1,169.37	28.43	42.135	0					
7,900.00	7,110.00	7,500.15	6,790.00	16.08	14.78	74.60	1,197.80	1,168.49	29.32	40.858	0					
8,000.00	7,110.00	7,600.15	6,790.00	16.52	15.26	74.60	1,197.80	1,167.56	30.24	39.608	0					
8,100.00	7,110.00	7,700.15	6,790.00	16.98	15.75	74.60	1,197.80	1,166.60	31.20	38.393	0					
8,200.00	7,110.00	7,800.15	6,790.00	17.46	16.26	74.60	1,197.80	1,165.61	32.18	37.216	0					
8,300.00	7,110.00	7,900.15	6,790.00	17.95	16.79	74.60	1,197.80	1,164.60	33.20	36.080	0					
8,400.00	7,110.00	8,000.15	6,790.00	18.46	17.33	74.60	1,197.80	1,163.56	34.24	34.986	0					
8,500.00	7,110.00	8,100.15	6,790.00	18.98	17.88	74.60	1,197.80	1,162.50	35.30	33.934	0					
8,600.00	7,110.00	8,200.15	6,790.00	19.52	18.44	74.60	1,197.80	1,161.42	36.38	32.926	0					
8,700.00	7,110.00	8,300.15	6,790.00	20.06	19.00	74.60	1,197.80	1,160.32	37.48	31.960	0					
8,800.00	7,110.00	8,400.15	6,790.00	20.61	19.58	74.60	1,197.80	1,159.20	38.60	31.035	0					
8,900.00	7,110.00	8,500.15	6,790.00	21.17	20.17	74.60	1,197.79	1,158.07	39.73	30.150	0					
9,000.00	7,110.00	8,600.15	6,790.00	21.74	20.76	74.60	1,197.79	1,156.92	40.87	29.304	0					
9,100.00	7,110.00	8,700.15	6,790.00	22.32	21.36	74.60	1,197.79	1,155.76	42.03	28.496	0					
9,200.00	7,110.00	8,800.15	6,790.00	22.91	21.97	74.60	1,197.79	1,154.59	43.21	27.723	0					
9,300.00	7,110.00	8,900.15	6,790.00	23.50	22.58	74.60	1,197.79	1,153.40	44.39	26.984	0					

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 04 - Original Hole - Rev 1		Offset Site Error:		0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis			Distance						Warning				
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Risked Separation Factor	Probability of Collision					
(usft)	(usft)	(usft)	(usft)	(usft)	(usft)	(°)	(usft)	(usft)	(usft)								
9,400.00	7,110.00	9,000.15	6,790.00	24.10	23.20	74.60	1,197.79	1,152.21	45.58	26.277	0						
9,500.00	7,110.00	9,100.15	6,790.00	24.70	23.82	74.60	1,197.79	1,151.00	46.79	25.601	0						
9,600.00	7,110.00	9,200.15	6,790.00	25.31	24.45	74.60	1,197.79	1,149.79	48.00	24.955	0						
9,700.00	7,110.00	9,300.15	6,790.00	25.92	25.08	74.60	1,197.79	1,148.57	49.22	24.337	0						
9,800.00	7,110.00	9,400.15	6,790.00	26.54	25.71	74.60	1,197.79	1,147.34	50.45	23.744	0						
9,900.00	7,110.00	9,500.15	6,790.00	27.16	26.35	74.60	1,197.79	1,146.11	51.68	23.177	0						
10,000.00	7,110.00	9,600.15	6,790.00	27.79	26.99	74.60	1,197.79	1,144.87	52.92	22.634	0						
10,100.00	7,110.00	9,700.15	6,790.00	28.42	27.63	74.60	1,197.79	1,143.62	54.17	22.113	0						
10,200.00	7,110.00	9,800.15	6,790.00	29.05	28.28	74.60	1,197.79	1,142.37	55.42	21.613	0						
10,300.00	7,110.00	9,900.15	6,790.00	29.69	28.93	74.60	1,197.78	1,141.11	56.68	21.133	0						
10,400.00	7,110.00	10,000.15	6,790.00	30.33	29.58	74.60	1,197.78	1,139.84	57.94	20.673	0						
10,500.00	7,110.00	10,100.15	6,790.00	30.97	30.24	74.60	1,197.78	1,138.57	59.21	20.230	0						
10,600.00	7,110.00	10,200.15	6,790.00	31.61	30.89	74.60	1,197.78	1,137.30	60.48	19.805	0						
10,700.00	7,110.00	10,300.15	6,790.00	32.26	31.55	74.60	1,197.78	1,136.03	61.76	19.395	0						
10,800.00	7,110.00	10,400.15	6,790.00	32.91	32.21	74.60	1,197.78	1,134.75	63.04	19.002	0						
10,900.00	7,110.00	10,500.15	6,790.00	33.56	32.87	74.60	1,197.78	1,133.46	64.32	18.623	0						
11,000.00	7,110.00	10,600.15	6,790.00	34.22	33.54	74.60	1,197.78	1,132.17	65.61	18.257	0						
11,100.00	7,110.00	10,700.15	6,790.00	34.87	34.20	74.60	1,197.78	1,130.88	66.90	17.905	0						
11,200.00	7,110.00	10,800.15	6,790.00	35.53	34.87	74.60	1,197.78	1,129.59	68.19	17.566	0						
11,300.00	7,110.00	10,900.15	6,790.00	36.19	35.54	74.60	1,197.78	1,128.29	69.48	17.238	0						
11,400.00	7,110.00	11,000.15	6,790.00	36.85	36.21	74.60	1,197.78	1,126.99	70.78	16.922	0						
11,500.00	7,110.00	11,100.15	6,790.00	37.51	36.88	74.60	1,197.78	1,125.69	72.08	16.617	0						
11,600.00	7,110.00	11,200.15	6,790.00	38.18	37.55	74.60	1,197.78	1,124.39	73.39	16.321	0						
11,700.00	7,110.00	11,300.15	6,790.00	38.84	38.23	74.60	1,197.77	1,123.08	74.69	16.036	0						
11,800.00	7,110.00	11,400.15	6,790.00	39.51	38.90	74.60	1,197.77	1,121.77	76.00	15.760	0						
11,894.53	7,110.00	11,494.68	6,790.00	40.14	39.54	74.60	1,197.72	1,120.48	77.24	15.507	0	SF					

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risk Separation Factor	Probability of Collision		
0.00	0.00	0.00	0.00	0.00	0.00	0.35	112.23				0			
100.00	100.00	98.00	98.00	0.15	0.14	0.35	112.21	111.92	0.29	386.557	0			
200.00	200.00	198.00	198.00	0.32	0.32	0.35	112.21	111.57	0.64	175.662	0			
300.00	300.00	298.00	298.00	0.50	0.49	0.35	112.21	111.22	0.99	113.590	0			
400.00	400.00	398.00	398.00	0.67	0.67	0.35	112.21	110.87	1.34	83.932	0			
500.00	500.00	498.00	498.00	0.84	0.84	0.35	112.21	110.53	1.69	66.555	0			
600.00	600.00	598.00	598.00	1.02	1.02	0.35	112.21	110.18	2.04	55.139	0			
700.00	700.00	698.00	698.00	1.19	1.19	0.35	112.21	109.83	2.38	47.066	0			
800.00	800.00	798.00	798.00	1.37	1.36	0.35	112.21	109.48	2.73	41.055	0			
900.00	899.98	897.98	897.98	1.54	1.54	172.63	113.94	110.86	3.08	36.982	0			
1,000.00	999.84	997.84	997.84	1.72	1.71	172.94	119.13	115.71	3.43	34.772	0			
1,100.00	1,099.45	1,097.45	1,097.45	1.90	1.89	173.40	127.79	124.02	3.77	33.913	0			
1,200.00	1,198.70	1,196.70	1,196.70	2.07	2.06	173.95	139.90	135.79	4.11	34.070	0			
1,300.00	1,297.47	1,300.30	1,300.28	2.26	2.24	174.26	153.97	149.52	4.45	34.607	0			
1,328.83	1,325.83	1,330.29	1,330.25	2.31	2.29	174.25	158.07	153.53	4.55	34.759	0			
1,400.00	1,395.79	1,402.26	1,402.11	2.44	2.42	174.11	167.71	162.91	4.80	34.939	0			
1,500.00	1,494.09	1,501.36	1,501.06	2.63	2.59	173.91	181.07	175.92	5.15	35.148	0			
1,600.00	1,592.39	1,600.47	1,600.01	2.82	2.77	173.74	194.43	188.93	5.50	35.329	0			
1,700.00	1,690.70	1,699.57	1,698.96	3.01	2.94	173.59	207.79	201.94	5.86	35.487	0			
1,800.00	1,789.00	1,798.67	1,797.91	3.20	3.12	173.45	221.16	214.95	6.21	35.625	0			
1,900.00	1,887.30	1,897.77	1,896.85	3.40	3.29	173.33	234.53	227.96	6.56	35.748	0			
2,000.00	1,985.60	1,996.87	1,995.80	3.59	3.46	173.23	247.89	240.98	6.91	35.857	0			
2,100.00	2,083.90	2,095.97	2,094.75	3.78	3.64	173.14	261.26	253.99	7.27	35.955	0			
2,200.00	2,182.20	2,195.08	2,193.70	3.98	3.81	173.05	274.63	267.01	7.62	36.043	0			
2,300.00	2,280.50	2,294.18	2,292.65	4.17	3.99	172.97	288.00	280.03	7.97	36.123	0			
2,400.00	2,378.80	2,393.28	2,391.60	4.37	4.16	172.90	301.37	293.04	8.33	36.196	0			
2,500.00	2,477.10	2,492.38	2,490.54	4.56	4.34	172.84	314.74	306.06	8.68	36.262	0			
2,600.00	2,575.41	2,591.48	2,589.49	4.76	4.51	172.78	328.11	319.07	9.03	36.324	0			
2,700.00	2,673.71	2,690.58	2,688.44	4.96	4.69	172.73	341.48	332.09	9.39	36.380	0			
2,800.00	2,772.01	2,789.69	2,787.39	5.15	4.86	172.68	354.85	345.11	9.74	36.432	0			
2,900.00	2,870.31	2,888.79	2,886.34	5.35	5.04	172.63	368.22	358.13	10.09	36.480	0			
3,000.00	2,968.61	2,987.89	2,985.28	5.55	5.21	172.59	381.59	371.14	10.45	36.525	0			
3,100.00	3,066.91	3,086.99	3,084.23	5.74	5.39	172.54	394.96	384.16	10.80	36.566	0			
3,200.00	3,165.21	3,186.09	3,183.18	5.94	5.56	172.51	408.33	397.18	11.16	36.605	0			
3,300.00	3,263.51	3,285.19	3,282.13	6.14	5.74	172.47	421.71	410.20	11.51	36.642	0			
3,400.00	3,361.81	3,384.30	3,381.08	6.34	5.91	172.44	435.08	423.21	11.86	36.676	0			
3,500.00	3,460.11	3,483.40	3,480.02	6.53	6.09	172.41	448.45	436.23	12.22	36.708	0			
3,600.00	3,558.42	3,582.50	3,578.97	6.73	6.26	172.38	461.82	449.25	12.57	36.738	0			
3,700.00	3,656.72	3,681.60	3,677.92	6.93	6.44	172.35	475.19	462.27	12.92	36.767	0			
3,800.00	3,755.02	3,780.70	3,776.87	7.13	6.61	172.32	488.57	475.29	13.28	36.794	0			
3,900.00	3,853.32	3,879.80	3,875.82	7.32	6.79	172.30	501.94	488.31	13.63	36.819	0			
4,000.00	3,951.62	3,978.90	3,974.76	7.52	6.96	172.28	515.31	501.33	13.99	36.843	0			
4,100.00	4,049.92	4,078.01	4,073.71	7.72	7.14	172.25	528.68	514.34	14.34	36.866	0			
4,200.00	4,148.22	4,177.11	4,172.66	7.92	7.31	172.23	542.06	527.36	14.69	36.888	0			
4,300.00	4,246.52	4,276.21	4,271.61	8.12	7.49	172.21	555.43	540.38	15.05	36.909	0			
4,400.00	4,344.82	4,375.31	4,370.56	8.31	7.66	172.19	568.80	553.40	15.40	36.928	0			
4,500.00	4,443.12	4,474.41	4,469.51	8.51	7.84	172.17	582.18	566.42	15.76	36.947	0			
4,600.00	4,541.43	4,573.51	4,568.45	8.71	8.01	172.16	595.55	579.44	16.11	36.965	0			
4,700.00	4,639.73	4,672.62	4,667.40	8.91	8.19	172.14	608.92	592.46	16.47	36.982	0			
4,800.00	4,738.03	4,771.72	4,766.35	9.11	8.36	172.12	622.30	605.48	16.82	36.999	0			
4,900.00	4,836.33	4,870.82	4,865.30	9.31	8.54	172.11	635.67	618.49	17.17	37.014	0			
5,000.00	4,934.63	4,969.92	4,964.25	9.50	8.71	172.09	649.04	631.51	17.53	37.029	0			
5,100.00	5,032.93	5,069.02	5,063.19	9.70	8.89	172.08	662.41	644.53	17.88	37.044	0			
5,200.00	5,131.23	5,168.12	5,162.14	9.90	9.06	172.06	675.79	657.55	18.24	37.058	0			

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 05 - Original Hole - Rev 1		Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
5,300.00	5,229.53	5,267.23	5,261.09	10.10	9.24	172.05	689.16	670.57	18.59	37.071	0					
5,400.00	5,327.83	5,366.33	5,360.04	10.30	9.42	172.04	702.53	683.59	18.94	37.084	0					
5,500.00	5,426.14	5,465.43	5,458.99	10.50	9.59	172.03	715.91	696.61	19.30	37.096	0					
5,600.00	5,524.44	5,564.53	5,557.93	10.70	9.77	172.02	729.28	709.63	19.65	37.108	0					
5,700.00	5,622.74	5,663.63	5,656.88	10.89	9.94	172.00	742.65	722.65	20.01	37.120	0					
5,800.00	5,721.04	5,762.73	5,755.83	11.09	10.12	171.99	756.03	735.67	20.36	37.131	0					
5,900.00	5,819.34	5,861.84	5,854.78	11.29	10.29	171.98	769.40	748.69	20.72	37.141	0					
5,993.46	5,911.21	5,954.45	5,947.25	11.48	10.46	171.97	781.90	760.85	21.05	37.151	0					
6,000.00	5,917.64	5,960.94	5,953.73	11.49	10.47	171.98	782.77	761.70	21.07	37.146	0					
6,100.00	6,016.28	6,041.64	6,034.36	11.68	10.61	172.02	795.32	773.90	21.42	37.122	0					
6,200.00	6,115.43	6,121.44	6,114.15	11.86	10.75	172.12	806.86	785.10	21.76	37.087	0					
6,300.00	6,214.98	6,220.28	6,212.98	12.04	10.92	172.23	816.26	794.16	22.10	36.934	0					
6,400.00	6,314.79	6,319.54	6,311.81	12.21	11.09	171.75	822.24	799.79	22.44	36.639	0					
6,500.00	6,414.75	6,413.66	6,402.94	12.37	11.27	170.18	825.27	802.47	22.79	36.207	0					
6,522.29	6,437.04	6,433.44	6,421.53	12.41	11.30	-2.45	825.67	801.94	23.72	34.804	0					
6,600.00	6,514.75	6,500.00	6,482.19	12.53	11.43	-4.34	827.74	803.78	23.96	34.551	0					
6,622.29	6,537.04	6,515.66	6,495.97	12.57	11.46	-4.86	828.69	804.67	24.02	34.501	0					
6,650.00	6,564.74	6,536.75	6,514.20	12.61	11.51	84.30	830.09	806.68	23.42	35.450	0					
6,700.00	6,614.52	6,574.10	6,545.48	12.69	11.58	82.81	833.05	809.42	23.63	35.257	0					
6,750.00	6,663.70	6,610.65	6,574.74	12.78	11.66	81.36	836.48	812.64	23.83	35.096	0					
6,800.00	6,711.92	6,650.00	6,604.61	12.86	11.75	79.85	840.29	816.24	24.05	34.946	0					
6,850.00	6,758.81	6,681.79	6,627.41	12.95	11.82	78.60	844.35	820.13	24.22	34.866	0					
6,900.00	6,804.01	6,716.54	6,650.90	13.04	11.91	77.31	848.60	824.21	24.38	34.803	0					
6,950.00	6,847.17	6,750.00	6,672.00	13.13	11.99	76.11	852.92	828.40	24.52	34.785	0					
7,000.00	6,887.98	6,784.75	6,692.27	13.23	12.08	74.95	857.22	832.58	24.65	34.780	0					
7,050.00	6,926.12	6,818.32	6,710.20	13.33	12.17	73.89	861.43	836.69	24.74	34.813	0					
7,100.00	6,961.30	6,850.00	6,725.56	13.43	12.26	72.96	865.46	840.65	24.81	34.885	0					
7,150.00	6,993.24	6,884.61	6,740.58	13.55	12.36	72.06	869.22	844.34	24.88	34.940	0					
7,200.00	7,021.72	6,917.42	6,753.04	13.66	12.46	71.29	872.67	847.75	24.92	35.015	0					
7,250.00	7,046.51	6,950.00	6,763.68	13.79	12.57	70.63	875.74	850.78	24.96	35.087	0					
7,300.00	7,067.42	6,982.53	6,772.54	13.92	12.68	70.07	878.37	853.37	25.00	35.132	0					
7,350.00	7,084.29	7,014.90	6,779.58	14.06	12.79	69.62	880.54	855.48	25.05	35.148	0					
7,400.00	7,097.00	7,050.00	6,785.18	14.20	12.91	69.26	882.20	857.06	25.14	35.092	0					
7,450.00	7,105.44	7,079.37	6,788.23	14.36	13.02	69.05	883.32	858.11	25.21	35.033	0					
7,500.00	7,109.56	7,111.54	6,789.86	14.53	13.14	68.93	883.89	858.56	25.34	34.884	0					
7,522.29	7,110.00	7,126.73	6,790.00	14.60	13.20	68.92	883.97	858.56	25.41	34.786	0					
7,600.00	7,110.00	7,204.44	6,790.00	14.88	13.51	68.92	883.97	857.97	26.00	34.001	0					
7,700.00	7,110.00	7,304.44	6,790.00	15.25	13.92	68.92	883.97	857.18	26.79	32.993	0					
7,800.00	7,110.00	7,404.44	6,790.00	15.65	14.36	68.92	883.97	856.34	27.63	31.994	0					
7,900.00	7,110.00	7,504.44	6,790.00	16.08	14.82	68.92	883.97	855.46	28.50	31.013	0					
8,000.00	7,110.00	7,604.44	6,790.00	16.52	15.30	68.92	883.96	854.55	29.41	30.055	0					
8,100.00	7,110.00	7,704.44	6,790.00	16.98	15.79	68.92	883.96	853.61	30.35	29.125	0					
8,200.00	7,110.00	7,804.44	6,790.00	17.46	16.30	68.92	883.96	852.64	31.32	28.225	0					
8,300.00	7,110.00	7,904.44	6,790.00	17.95	16.83	68.92	883.96	851.65	32.31	27.356	0					
8,400.00	7,110.00	8,004.44	6,790.00	18.46	17.36	68.92	883.96	850.63	33.33	26.521	0					
8,500.00	7,110.00	8,104.44	6,790.00	18.98	17.91	68.92	883.96	849.59	34.37	25.719	0					
8,600.00	7,110.00	8,204.44	6,790.00	19.52	18.47	68.92	883.96	848.53	35.43	24.950	0					
8,700.00	7,110.00	8,304.44	6,790.00	20.06	19.04	68.92	883.95	847.45	36.51	24.215	0					
8,800.00	7,110.00	8,404.44	6,790.00	20.61	19.62	68.92	883.95	846.36	37.60	23.510	0					
8,900.00	7,110.00	8,504.44	6,790.00	21.17	20.20	68.92	883.95	845.25	38.71	22.837	0					
9,000.00	7,110.00	8,604.44	6,790.00	21.74	20.79	68.92	883.95	844.12	39.83	22.194	0					
9,100.00	7,110.00	8,704.44	6,790.00	22.32	21.39	68.92	883.95	842.99	40.96	21.579	0					
9,200.00	7,110.00	8,804.44	6,790.00	22.91	22.00	68.92	883.95	841.84	42.11	20.992	0					
9,300.00	7,110.00	8,904.44	6,790.00	23.50	22.61	68.92	883.95	840.68	43.27	20.431	0					

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 05 - Original Hole - Rev 1		Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
9,400.00	7,110.00	9,004.44	6,790.00	24.10	23.22	68.92	883.95	839.51	44.43	19.894	0					
9,500.00	7,110.00	9,104.44	6,790.00	24.70	23.85	68.92	883.94	838.34	45.61	19.382	0					
9,600.00	7,110.00	9,204.44	6,790.00	25.31	24.47	68.92	883.94	837.15	46.79	18.891	0					
9,700.00	7,110.00	9,304.44	6,790.00	25.92	25.10	68.92	883.94	835.96	47.98	18.422	0					
9,800.00	7,110.00	9,404.44	6,790.00	26.54	25.73	68.91	883.94	834.76	49.18	17.973	0					
9,900.00	7,110.00	9,504.44	6,790.00	27.16	26.37	68.91	883.94	833.55	50.39	17.543	0					
10,000.00	7,110.00	9,604.44	6,790.00	27.79	27.01	68.91	883.94	832.34	51.60	17.131	0					
10,100.00	7,110.00	9,704.44	6,790.00	28.42	27.66	68.91	883.94	831.12	52.82	16.736	0					
10,200.00	7,110.00	9,804.44	6,790.00	29.05	28.30	68.91	883.93	829.89	54.04	16.357	0					
10,300.00	7,110.00	9,904.44	6,790.00	29.69	28.95	68.91	883.93	828.66	55.27	15.993	0					
10,400.00	7,110.00	10,004.44	6,790.00	30.33	29.60	68.91	883.93	827.43	56.50	15.644	0					
10,500.00	7,110.00	10,104.44	6,790.00	30.97	30.26	68.91	883.93	826.19	57.74	15.309	0					
10,600.00	7,110.00	10,204.44	6,790.00	31.61	30.91	68.91	883.93	824.95	58.98	14.987	0					
10,700.00	7,110.00	10,304.44	6,790.00	32.26	31.57	68.91	883.93	823.70	60.23	14.677	0					
10,800.00	7,110.00	10,404.44	6,790.00	32.91	32.23	68.91	883.93	822.45	61.47	14.379	0					
10,900.00	7,110.00	10,504.44	6,790.00	33.56	32.89	68.91	883.93	821.20	62.73	14.092	0					
11,000.00	7,110.00	10,604.44	6,790.00	34.22	33.56	68.91	883.92	819.94	63.98	13.815	0					
11,100.00	7,110.00	10,704.44	6,790.00	34.87	34.22	68.91	883.92	818.68	65.24	13.548	0					
11,200.00	7,110.00	10,804.44	6,790.00	35.53	34.89	68.91	883.92	817.42	66.50	13.291	0					
11,300.00	7,110.00	10,904.44	6,790.00	36.19	35.56	68.91	883.92	816.15	67.77	13.043	0					
11,400.00	7,110.00	11,004.44	6,790.00	36.85	36.22	68.91	883.92	814.88	69.03	12.804	0					
11,500.00	7,110.00	11,104.44	6,790.00	37.51	36.90	68.91	883.92	813.61	70.30	12.573	0					
11,600.00	7,110.00	11,204.44	6,790.00	38.18	37.57	68.91	883.92	812.34	71.57	12.350	0					
11,700.00	7,110.00	11,304.44	6,790.00	38.84	38.24	68.91	883.91	811.07	72.85	12.134	0					
11,800.00	7,110.00	11,404.44	6,790.00	39.51	38.91	68.91	883.91	809.79	74.12	11.925	0					
11,894.53	7,110.00	11,498.97	6,790.00	40.14	39.55	68.91	883.86	808.53	75.33	11.733	0	SF				

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16")
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16")
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 06 - Original Hole - Rev 1		Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
0.00	0.00	0.00	0.00	0.00	0.00	0.40	84.17					0				
100.00	100.00	99.00	99.00	0.15	0.15	0.40	84.16	83.87	0.29	288.464	0					
200.00	200.00	199.00	199.00	0.32	0.32	0.40	84.16	83.52	0.64	131.389	0					
300.00	300.00	299.00	299.00	0.50	0.49	0.40	84.16	83.17	0.99	85.043	0					
400.00	400.00	399.00	399.00	0.67	0.67	0.40	84.16	82.82	1.34	62.868	0					
500.00	500.00	499.00	499.00	0.84	0.84	0.40	84.16	82.47	1.69	49.865	0					
600.00	600.00	599.00	599.00	1.02	1.02	0.40	84.16	82.12	2.04	41.319	0					
700.00	700.00	699.00	699.00	1.19	1.19	0.40	84.16	81.77	2.39	35.274	0					
800.00	800.00	799.00	799.00	1.37	1.37	0.40	84.16	81.42	2.73	30.772	0					
900.00	899.98	898.98	898.98	1.54	1.54	172.72	85.89	82.81	3.08	27.861	0		CC, ES			
1,000.00	999.84	998.84	998.84	1.72	1.72	173.12	91.08	87.66	3.43	26.571	0					
1,100.00	1,099.45	1,098.45	1,098.45	1.90	1.89	173.70	99.74	95.97	3.77	26.458	0					
1,200.00	1,198.70	1,201.45	1,201.43	2.07	2.07	174.12	110.21	106.09	4.11	26.784	0					
1,300.00	1,297.47	1,304.88	1,304.70	2.26	2.25	174.10	120.71	116.25	4.46	27.076	0					
1,328.83	1,325.83	1,334.09	1,333.83	2.31	2.30	174.04	123.79	119.23	4.56	27.171	0					
1,400.00	1,395.79	1,404.82	1,404.36	2.44	2.43	173.93	131.66	126.85	4.81	27.392	0					
1,500.00	1,494.09	1,504.21	1,503.45	2.63	2.60	173.80	142.72	137.56	5.16	27.664	0					
1,600.00	1,592.39	1,603.59	1,602.55	2.82	2.78	173.68	153.79	148.27	5.51	27.899	0					
1,700.00	1,690.70	1,702.98	1,701.65	3.01	2.95	173.58	164.85	158.99	5.87	28.105	0					
1,800.00	1,789.00	1,802.36	1,800.75	3.20	3.13	173.49	175.92	169.70	6.22	28.287	0					
1,900.00	1,887.30	1,901.75	1,899.84	3.40	3.30	173.42	186.98	180.41	6.57	28.447	0					
2,000.00	1,985.60	2,001.13	1,998.94	3.59	3.48	173.35	198.05	191.12	6.93	28.591	0					
2,100.00	2,083.90	2,100.52	2,098.04	3.78	3.66	173.29	209.11	201.83	7.28	28.720	0					
2,200.00	2,182.20	2,199.90	2,197.13	3.98	3.83	173.23	220.18	212.55	7.64	28.837	0					
2,300.00	2,280.50	2,299.29	2,296.23	4.17	4.01	173.18	231.25	223.26	7.99	28.943	0					
2,400.00	2,378.80	2,398.68	2,395.33	4.37	4.19	173.13	242.31	233.97	8.34	29.040	0					
2,500.00	2,477.10	2,498.06	2,494.43	4.56	4.36	173.09	253.38	244.68	8.70	29.128	0					
2,600.00	2,575.41	2,597.45	2,593.52	4.76	4.54	173.05	264.45	255.39	9.05	29.210	0					
2,700.00	2,673.71	2,696.83	2,692.62	4.96	4.72	173.02	275.52	266.11	9.41	29.285	0					
2,800.00	2,772.01	2,796.22	2,791.72	5.15	4.90	172.99	286.58	276.82	9.76	29.354	0					
2,900.00	2,870.31	2,895.60	2,890.81	5.35	5.07	172.96	297.65	287.53	10.12	29.418	0					
3,000.00	2,968.61	2,994.99	2,989.91	5.55	5.25	172.93	308.72	298.24	10.47	29.478	0					
3,100.00	3,066.91	3,094.37	3,089.01	5.74	5.43	172.90	319.78	308.96	10.83	29.534	0					
3,200.00	3,165.21	3,193.76	3,188.11	5.94	5.61	172.88	330.85	319.67	11.18	29.586	0					
3,300.00	3,263.51	3,293.15	3,287.20	6.14	5.78	172.86	341.92	330.38	11.54	29.635	0					
3,400.00	3,361.81	3,392.53	3,386.30	6.34	5.96	172.84	352.99	341.09	11.89	29.681	0					
3,500.00	3,460.11	3,491.92	3,485.40	6.53	6.14	172.82	364.05	351.81	12.25	29.724	0					
3,600.00	3,558.42	3,591.30	3,584.49	6.73	6.31	172.80	375.12	362.52	12.60	29.765	0					
3,700.00	3,656.72	3,690.69	3,683.59	6.93	6.49	172.78	386.19	373.23	12.96	29.803	0					
3,800.00	3,755.02	3,790.07	3,782.69	7.13	6.67	172.76	397.26	383.94	13.31	29.839	0					
3,900.00	3,853.32	3,889.46	3,881.79	7.32	6.85	172.75	408.33	394.66	13.67	29.874	0					
4,000.00	3,951.62	3,988.84	3,980.88	7.52	7.02	172.73	419.39	405.37	14.02	29.906	0					
4,100.00	4,049.92	4,088.23	4,079.98	7.72	7.20	172.72	430.46	416.08	14.38	29.937	0					
4,200.00	4,148.22	4,187.62	4,179.08	7.92	7.38	172.71	441.53	426.79	14.73	29.966	0					
4,300.00	4,246.52	4,287.00	4,278.17	8.12	7.56	172.69	452.60	437.51	15.09	29.994	0					
4,400.00	4,344.82	4,386.39	4,377.27	8.31	7.74	172.68	463.66	448.22	15.44	30.021	0					
4,500.00	4,443.12	4,485.77	4,476.37	8.51	7.91	172.67	474.73	458.93	15.80	30.046	0					
4,600.00	4,541.43	4,585.16	4,575.47	8.71	8.09	172.66	485.80	469.65	16.16	30.071	0					
4,700.00	4,639.73	4,684.54	4,674.56	8.91	8.27	172.65	496.87	480.36	16.51	30.094	0					
4,800.00	4,738.03	4,783.93	4,773.66	9.11	8.45	172.64	507.94	491.07	16.87	30.116	0					
4,900.00	4,836.33	4,883.32	4,872.76	9.31	8.62	172.63	519.00	501.78	17.22	30.137	0					
5,000.00	4,934.63	4,982.70	4,971.85	9.50	8.80	172.62	530.07	512.50	17.58	30.158	0					
5,100.00	5,032.93	5,082.09	5,070.95	9.70	8.98	172.61	541.14	523.21	17.93	30.177	0					
5,200.00	5,131.23	5,181.47	5,170.05	9.90	9.16	172.60	552.21	533.92	18.29	30.196	0					

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder												Offset Well Error: 0.00 usft	
Reference				Offset		Semi Major Axis		Distance					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning
5,300.00	5,229.53	5,280.86	5,269.15	10.10	9.33	172.59	563.28	544.63	18.64	30.214	0		
5,400.00	5,327.83	5,380.24	5,368.24	10.30	9.51	172.58	574.34	555.35	19.00	30.232	0		
5,500.00	5,426.14	5,479.63	5,467.34	10.50	9.69	172.58	585.41	566.06	19.35	30.248	0		
5,600.00	5,524.44	5,579.01	5,566.44	10.70	9.87	172.57	596.48	576.77	19.71	30.264	0		
5,700.00	5,622.74	5,678.40	5,665.53	10.89	10.05	172.56	607.55	587.48	20.06	30.280	0		
5,800.00	5,721.04	5,777.79	5,764.63	11.09	10.22	172.56	618.62	598.20	20.42	30.295	0		
5,900.00	5,819.34	5,877.17	5,863.73	11.29	10.40	172.55	629.68	608.91	20.78	30.309	0		
5,993.46	5,911.21	5,970.05	5,956.34	11.48	10.57	172.54	640.03	618.92	21.11	30.322	0		
6,000.00	5,917.64	5,976.56	5,962.83	11.49	10.58	172.54	640.75	619.61	21.13	30.319	0		
6,100.00	6,016.28	6,076.13	6,062.11	11.68	10.76	172.54	649.87	628.35	21.52	30.204	0		
6,200.00	6,115.43	6,175.97	6,161.66	11.86	10.94	172.49	655.54	633.66	21.88	29.961	0		
6,300.00	6,214.98	6,268.34	6,253.78	12.04	11.10	172.40	657.99	635.78	22.21	29.624	0		
6,400.00	6,314.79	6,350.48	6,335.81	12.21	11.24	172.35	659.26	636.75	22.50	29.295	0		
6,500.00	6,414.75	6,432.60	6,417.92	12.37	11.39	172.32	659.77	637.00	22.78	28.968	0		
6,522.29	6,437.04	6,451.73	6,437.04	12.41	11.42	0.15	659.79	635.94	23.85	27.662	0		
6,548.53	6,463.28	6,476.97	6,462.28	12.45	11.46	0.15	659.79	635.85	23.94	27.563	0		
6,600.00	6,514.75	6,528.44	6,513.75	12.53	11.55	0.15	659.79	635.68	24.11	27.368	0		
6,622.29	6,537.04	6,550.73	6,536.04	12.57	11.59	0.15	659.79	635.60	24.18	27.284	0		
6,650.00	6,564.74	6,578.52	6,563.83	12.61	11.64	90.15	659.79	636.51	23.28	28.345	0		
6,700.00	6,614.52	6,628.68	6,613.76	12.69	11.72	90.16	659.79	636.33	23.46	28.130	0		
6,750.00	6,663.70	6,678.85	6,663.12	12.78	11.81	90.17	659.79	636.15	23.64	27.914	0		
6,800.00	6,711.92	6,729.02	6,711.51	12.86	11.91	90.17	659.79	635.97	23.82	27.698	0		
6,850.00	6,758.81	6,779.19	6,758.57	12.95	12.00	90.17	659.79	635.78	24.01	27.479	0		
6,900.00	6,804.01	6,829.37	6,803.94	13.04	12.10	90.17	659.79	635.58	24.21	27.258	0		
6,950.00	6,847.17	6,879.54	6,847.26	13.13	12.20	90.17	659.79	635.38	24.41	27.032	0		
7,000.00	6,887.98	6,929.72	6,888.20	13.23	12.30	90.17	659.79	635.17	24.62	26.801	0		
7,050.00	6,926.12	6,979.89	6,926.45	13.33	12.41	90.17	659.79	634.95	24.84	26.563	0		
7,100.00	6,961.30	7,030.06	6,961.71	13.43	12.52	90.17	659.79	634.71	25.07	26.316	0		
7,150.00	6,993.24	7,080.22	6,993.72	13.55	12.64	90.16	659.78	634.47	25.32	26.060	0		
7,200.00	7,021.72	7,130.38	7,022.22	13.66	12.77	90.15	659.78	634.20	25.58	25.793	0		
7,250.00	7,046.51	7,180.53	7,047.01	13.79	12.91	90.15	659.78	633.93	25.86	25.516	0		
7,300.00	7,067.42	7,230.67	7,067.88	13.92	13.06	90.14	659.78	633.63	26.15	25.227	0		
7,350.00	7,084.29	7,280.81	7,084.69	14.06	13.21	90.13	659.78	633.32	26.47	24.928	0		
7,400.00	7,097.00	7,330.93	7,097.31	14.20	13.37	90.12	659.78	632.98	26.80	24.620	0		
7,450.00	7,105.44	7,381.04	7,105.64	14.36	13.55	90.10	659.78	632.64	27.15	24.305	0		
7,500.00	7,109.56	7,431.14	7,109.63	14.53	13.73	90.09	659.78	632.27	27.51	23.985	0		
7,522.29	7,110.00	7,453.47	7,110.00	14.60	13.81	90.09	659.78	632.11	27.67	23.841	0		
7,600.00	7,110.00	7,531.18	7,110.00	14.88	14.11	90.09	659.78	631.51	28.27	23.335	0		
7,700.00	7,110.00	7,631.18	7,110.00	15.25	14.51	90.09	659.78	630.69	29.08	22.685	0		
7,800.00	7,110.00	7,731.18	7,110.00	15.65	14.94	90.09	659.78	629.84	29.94	22.036	0		
7,900.00	7,110.00	7,831.18	7,110.00	16.08	15.39	90.09	659.78	628.94	30.84	21.396	0		
8,000.00	7,110.00	7,931.18	7,110.00	16.52	15.86	90.09	659.78	628.01	31.77	20.768	0		
8,100.00	7,110.00	8,031.18	7,110.00	16.98	16.34	90.09	659.78	627.04	32.74	20.154	0		
8,200.00	7,110.00	8,131.18	7,110.00	17.46	16.84	90.09	659.78	626.04	33.73	19.558	0		
8,300.00	7,110.00	8,231.18	7,110.00	17.95	17.35	90.09	659.77	625.01	34.76	18.980	0		
8,400.00	7,110.00	8,331.18	7,110.00	18.46	17.88	90.09	659.77	623.96	35.81	18.423	0		
8,500.00	7,110.00	8,431.18	7,110.00	18.98	18.42	90.09	659.77	622.88	36.89	17.885	0		
8,600.00	7,110.00	8,531.18	7,110.00	19.52	18.97	90.09	659.77	621.79	37.99	17.369	0		
8,700.00	7,110.00	8,631.18	7,110.00	20.06	19.52	90.09	659.77	620.67	39.10	16.872	0		
8,800.00	7,110.00	8,731.18	7,110.00	20.61	20.09	90.09	659.77	619.53	40.24	16.396	0		
8,900.00	7,110.00	8,831.18	7,110.00	21.17	20.67	90.09	659.77	618.38	41.39	15.940	0		
9,000.00	7,110.00	8,931.18	7,110.00	21.74	21.25	90.09	659.77	617.21	42.56	15.502	0		
9,100.00	7,110.00	9,031.18	7,110.00	22.32	21.84	90.09	659.77	616.03	43.74	15.084	0		
9,200.00	7,110.00	9,131.18	7,110.00	22.91	22.44	90.09	659.77	614.83	44.94	14.683	0		

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
9,300.00	7,110.00	9,231.18	7,110.00	23.50	23.05	90.09	659.77	613.63	46.14	14.299	0			
9,400.00	7,110.00	9,331.18	7,110.00	24.10	23.65	90.09	659.77	612.41	47.36	13.931	0			
9,500.00	7,110.00	9,431.18	7,110.00	24.70	24.27	90.09	659.77	611.18	48.59	13.579	0			
9,600.00	7,110.00	9,531.18	7,110.00	25.31	24.89	90.09	659.77	609.94	49.83	13.242	0			
9,700.00	7,110.00	9,631.18	7,110.00	25.92	25.51	90.09	659.76	608.69	51.07	12.918	0			
9,800.00	7,110.00	9,731.18	7,110.00	26.54	26.14	90.09	659.76	607.44	52.33	12.609	0			
9,900.00	7,110.00	9,831.18	7,110.00	27.16	26.77	90.09	659.76	606.17	53.59	12.312	0			
10,000.00	7,110.00	9,931.18	7,110.00	27.79	27.40	90.09	659.76	604.91	54.86	12.027	0			
10,100.00	7,110.00	10,031.18	7,110.00	28.42	28.04	90.09	659.76	603.63	56.13	11.754	0			
10,200.00	7,110.00	10,131.18	7,110.00	29.05	28.68	90.09	659.76	602.35	57.41	11.491	0			
10,300.00	7,110.00	10,231.18	7,110.00	29.69	29.33	90.09	659.76	601.06	58.70	11.239	0			
10,400.00	7,110.00	10,331.18	7,110.00	30.33	29.97	90.09	659.76	599.76	60.00	10.997	0			
10,500.00	7,110.00	10,431.18	7,110.00	30.97	30.62	90.09	659.76	598.47	61.29	10.764	0			
10,600.00	7,110.00	10,531.18	7,110.00	31.61	31.27	90.09	659.76	597.16	62.60	10.540	0			
10,700.00	7,110.00	10,631.18	7,110.00	32.26	31.93	90.09	659.76	595.85	63.90	10.324	0			
10,800.00	7,110.00	10,731.18	7,110.00	32.91	32.58	90.09	659.76	594.54	65.21	10.117	0			
10,900.00	7,110.00	10,831.18	7,110.00	33.56	33.24	90.09	659.76	593.23	66.53	9.917	0			
11,000.00	7,110.00	10,931.18	7,110.00	34.22	33.90	90.09	659.75	591.91	67.85	9.724	0			
11,100.00	7,110.00	11,031.18	7,110.00	34.87	34.56	90.09	659.75	590.58	69.17	9.538	0			
11,200.00	7,110.00	11,131.18	7,110.00	35.53	35.23	90.09	659.75	589.26	70.50	9.359	0			
11,300.00	7,110.00	11,231.18	7,110.00	36.19	35.89	90.09	659.75	587.93	71.82	9.186	0			
11,400.00	7,110.00	11,331.18	7,110.00	36.85	36.56	90.09	659.75	586.60	73.16	9.018	0			
11,500.00	7,110.00	11,431.18	7,110.00	37.51	37.22	90.09	659.75	585.26	74.49	8.857	0			
11,600.00	7,110.00	11,531.18	7,110.00	38.18	37.89	90.09	659.75	583.92	75.83	8.701	0			
11,700.00	7,110.00	11,631.18	7,110.00	38.84	38.56	90.09	659.75	582.58	77.17	8.550	0			
11,800.00	7,110.00	11,731.18	7,110.00	39.51	39.23	90.09	659.75	581.24	78.51	8.403	0			
11,894.53	7,110.00	11,825.73	7,110.00	40.14	39.87	90.09	659.69	579.91	79.78	8.269	0		SF	



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
0.00	0.00	0.00	0.00	0.00	0.00	0.21	56.11						CC, ES	
100.00	100.00	99.00	99.00	0.15	0.15	0.21	56.10	55.81	0.29	192.302	0			
200.00	200.00	199.00	199.00	0.32	0.32	0.21	56.10	55.46	0.64	87.589	0			
300.00	300.00	299.00	299.00	0.50	0.49	0.21	56.10	55.11	0.99	56.693	0			
400.00	400.00	399.00	399.00	0.67	0.67	0.21	56.10	54.77	1.34	41.910	0			
500.00	500.00	499.00	499.00	0.84	0.84	0.21	56.10	54.42	1.69	33.242	0			
600.00	600.00	599.00	599.00	1.02	1.02	0.21	56.10	54.07	2.04	27.545	0			
700.00	700.00	699.00	699.00	1.19	1.19	0.21	56.10	53.72	2.39	23.515	0			
800.00	800.00	799.00	799.00	1.37	1.37	0.21	56.10	53.37	2.73	20.514	0			
900.00	899.98	898.98	898.98	1.54	1.54	172.61	57.83	54.75	3.08	18.760	0			
1,000.00	999.84	998.84	998.84	1.72	1.72	173.21	63.03	59.60	3.43	18.387	0			
1,100.00	1,099.45	1,100.88	1,100.86	1.90	1.89	173.72	70.00	66.22	3.77	18.547	0			
1,200.00	1,198.70	1,203.19	1,203.02	2.07	2.07	173.83	76.96	72.84	4.12	18.686	0			
1,300.00	1,297.47	1,305.76	1,305.18	2.26	2.25	173.64	83.90	79.44	4.46	18.804	0			
1,328.83	1,325.83	1,334.64	1,333.89	2.31	2.31	173.56	86.01	81.45	4.56	18.864	0			
1,400.00	1,395.79	1,405.59	1,404.43	2.44	2.43	173.41	91.55	86.74	4.81	19.028	0			
1,500.00	1,494.09	1,505.29	1,503.54	2.63	2.61	173.22	99.34	94.17	5.17	19.230	0			
1,600.00	1,592.39	1,604.98	1,602.65	2.82	2.79	173.07	107.13	101.61	5.52	19.405	0			
1,700.00	1,690.70	1,704.68	1,701.76	3.01	2.97	172.93	114.92	109.04	5.88	19.558	0			
1,800.00	1,789.00	1,804.37	1,800.88	3.20	3.15	172.81	122.71	116.48	6.23	19.692	0			
1,900.00	1,887.30	1,904.07	1,899.99	3.40	3.33	172.70	130.50	123.91	6.59	19.811	0			
2,000.00	1,985.60	2,003.76	1,999.10	3.59	3.51	172.61	138.29	131.35	6.94	19.918	0			
2,100.00	2,083.90	2,103.46	2,098.22	3.78	3.69	172.53	146.08	138.79	7.30	20.013	0			
2,200.00	2,182.20	2,203.16	2,197.33	3.98	3.87	172.45	153.88	146.22	7.66	20.100	0			
2,300.00	2,280.50	2,302.85	2,296.44	4.17	4.05	172.39	161.67	153.66	8.01	20.178	0			
2,400.00	2,378.80	2,402.55	2,395.55	4.37	4.23	172.32	169.46	161.09	8.37	20.250	0			
2,500.00	2,477.10	2,502.24	2,494.67	4.56	4.41	172.27	177.26	168.53	8.73	20.315	0			
2,600.00	2,575.41	2,601.94	2,593.78	4.76	4.59	172.22	185.05	175.97	9.08	20.375	0			
2,700.00	2,673.71	2,701.63	2,692.89	4.96	4.77	172.17	192.84	183.40	9.44	20.430	0			
2,800.00	2,772.01	2,801.33	2,792.00	5.15	4.96	172.13	200.64	190.84	9.80	20.482	0			
2,900.00	2,870.31	2,901.03	2,891.12	5.35	5.14	172.09	208.43	198.28	10.15	20.529	0			
3,000.00	2,968.61	3,000.72	2,990.23	5.55	5.32	172.05	216.22	205.71	10.51	20.573	0			
3,100.00	3,066.91	3,100.42	3,089.34	5.74	5.50	172.02	224.02	213.15	10.87	20.614	0			
3,200.00	3,165.21	3,200.11	3,188.46	5.94	5.68	171.98	231.81	220.59	11.22	20.653	0			
3,300.00	3,263.51	3,299.81	3,287.57	6.14	5.86	171.95	239.60	228.02	11.58	20.689	0			
3,400.00	3,361.81	3,399.50	3,386.68	6.34	6.05	171.92	247.40	235.46	11.94	20.723	0			
3,500.00	3,460.11	3,499.20	3,485.79	6.53	6.23	171.90	255.19	242.90	12.30	20.754	0			
3,600.00	3,558.42	3,598.90	3,584.91	6.73	6.41	171.87	262.99	250.33	12.65	20.784	0			
3,700.00	3,656.72	3,698.59	3,684.02	6.93	6.59	171.85	270.78	257.77	13.01	20.812	0			
3,800.00	3,755.02	3,798.29	3,783.13	7.13	6.78	171.83	278.57	265.21	13.37	20.839	0			
3,900.00	3,853.32	3,897.98	3,882.25	7.32	6.96	171.81	286.37	272.64	13.73	20.864	0			
4,000.00	3,951.62	3,997.68	3,981.36	7.52	7.14	171.79	294.16	280.08	14.08	20.888	0			
4,100.00	4,049.92	4,097.37	4,080.47	7.72	7.32	171.77	301.96	287.52	14.44	20.911	0			
4,200.00	4,148.22	4,197.07	4,179.58	7.92	7.50	171.75	309.75	294.95	14.80	20.933	0			
4,300.00	4,246.52	4,296.77	4,278.70	8.12	7.69	171.73	317.55	302.39	15.16	20.953	0			
4,400.00	4,344.82	4,396.46	4,377.81	8.31	7.87	171.72	325.34	309.83	15.51	20.973	0			
4,500.00	4,443.12	4,496.16	4,476.92	8.51	8.05	171.70	333.13	317.26	15.87	20.991	0			
4,600.00	4,541.43	4,595.85	4,576.04	8.71	8.23	171.69	340.93	324.70	16.23	21.009	0			
4,700.00	4,639.73	4,695.55	4,675.15	8.91	8.42	171.67	348.72	332.14	16.59	21.026	0			
4,800.00	4,738.03	4,795.24	4,774.26	9.11	8.60	171.66	356.52	339.57	16.94	21.043	0			
4,900.00	4,836.33	4,894.94	4,873.37	9.31	8.78	171.64	364.31	347.01	17.30	21.058	0			
5,000.00	4,934.63	4,994.64	4,972.49	9.50	8.96	171.63	372.11	354.45	17.66	21.073	0			
5,100.00	5,032.93	5,094.33	5,071.60	9.70	9.15	171.62	379.90	361.88	18.02	21.087	0			
5,200.00	5,131.23	5,194.03	5,170.71	9.90	9.33	171.61	387.69	369.32	18.37	21.101	0			

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 07 - Original Hole - Rev 1		Offset Site Error:		0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis			Distance										
Measured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside	Between	Between	Minimum	Separation	Risked	Probability	Warning				
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	Toolface (°)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor	Separation Factor	of Collision					
5,300.00	5,229.53	5,293.72	5,269.82	10.10	9.51	171.60	395.49	376.76	18.73	21.115	0						
5,400.00	5,327.83	5,393.42	5,368.94	10.30	9.69	171.59	403.28	384.20	19.09	21.127	0						
5,500.00	5,426.14	5,493.11	5,468.05	10.50	9.88	171.58	411.08	391.63	19.45	21.140	0						
5,600.00	5,524.44	5,592.81	5,567.16	10.70	10.06	171.57	418.87	399.07	19.80	21.151	0						
5,700.00	5,622.74	5,692.51	5,666.28	10.89	10.24	171.56	426.67	406.51	20.16	21.163	0						
5,800.00	5,721.04	5,792.20	5,765.39	11.09	10.42	171.55	434.46	413.94	20.52	21.174	0						
5,900.00	5,819.34	5,884.47	5,857.16	11.29	10.59	171.56	442.74	421.87	20.86	21.221	0						
5,993.46	5,911.21	5,965.18	5,937.63	11.48	10.73	171.63	452.85	431.68	21.17	21.389	0						
6,000.00	5,917.64	5,970.82	5,943.26	11.49	10.74	171.64	453.65	432.45	21.20	21.402	0						
6,100.00	6,016.28	6,056.76	6,029.11	11.68	10.89	171.81	465.51	443.97	21.55	21.606	0						
6,200.00	6,115.43	6,144.71	6,117.04	11.86	11.04	171.99	476.84	454.96	21.88	21.795	0						
6,300.00	6,214.98	6,241.64	6,213.98	12.04	11.21	172.17	486.23	464.02	22.21	21.895	0						
6,400.00	6,314.79	6,340.72	6,312.60	12.21	11.38	171.35	492.24	469.70	22.54	21.840	0						
6,500.00	6,414.75	6,434.61	6,403.49	12.37	11.55	168.72	495.69	472.80	22.89	21.654	0						
6,522.29	6,437.04	6,454.34	6,422.03	12.41	11.58	-4.23	496.32	472.36	23.95	20.720	0						
6,600.00	6,514.75	6,519.04	6,481.02	12.53	11.71	-7.26	499.85	475.68	24.17	20.684	0						
6,622.29	6,537.04	6,536.36	6,496.26	12.57	11.74	-8.20	501.46	477.23	24.22	20.701	0						
6,650.00	6,564.74	6,557.40	6,514.44	12.61	11.78	80.42	503.81	480.26	23.55	21.395	0						
6,700.00	6,614.52	6,594.66	6,545.63	12.69	11.86	77.99	508.73	484.97	23.76	21.411	0						
6,750.00	6,663.70	6,631.13	6,574.83	12.78	11.93	75.65	514.39	490.43	23.96	21.469	0						
6,800.00	6,711.92	6,666.93	6,602.07	12.86	12.01	73.40	520.61	496.48	24.13	21.573	0						
6,850.00	6,758.81	6,700.00	6,625.91	12.95	12.08	71.37	527.22	502.96	24.26	21.734	0						
6,900.00	6,804.01	6,736.82	6,650.84	13.04	12.17	69.29	534.03	509.67	24.37	21.917	0						
6,950.00	6,847.17	6,771.06	6,672.42	13.13	12.25	67.43	540.92	516.50	24.42	22.154	0						
7,000.00	6,887.98	6,800.00	6,689.40	13.23	12.32	65.87	547.75	523.36	24.39	22.456	0						
7,050.00	6,926.12	6,838.43	6,710.07	13.33	12.42	64.17	554.31	529.94	24.37	22.746	0						
7,100.00	6,961.30	6,871.65	6,726.16	13.43	12.51	62.77	560.56	536.28	24.28	23.087	0						
7,150.00	6,993.24	6,900.00	6,738.53	13.55	12.59	61.62	566.41	542.27	24.13	23.470	0						
7,200.00	7,021.72	6,937.39	6,752.90	13.66	12.71	60.44	571.66	547.65	24.01	23.808	0						
7,250.00	7,046.51	6,969.98	6,763.56	13.79	12.81	59.51	576.34	552.48	23.86	24.158	0						
7,300.00	7,067.42	7,000.00	6,771.82	13.92	12.90	58.77	580.34	556.65	23.69	24.494	0						
7,350.00	7,084.29	7,034.74	6,779.48	14.06	13.02	58.12	583.59	560.01	23.58	24.750	0						
7,400.00	7,097.00	7,066.97	6,784.73	14.20	13.13	57.66	586.08	562.59	23.49	24.952	0						
7,450.00	7,105.44	7,100.00	6,788.25	14.36	13.25	57.36	587.75	564.30	23.45	25.063	0						
7,500.00	7,109.56	7,131.27	6,789.84	14.53	13.36	57.21	588.59	565.12	23.46	25.085	0						
7,522.29	7,110.00	7,146.07	6,790.00	14.60	13.42	57.19	588.69	565.19	23.50	25.053	0						
7,600.00	7,110.00	7,223.79	6,790.00	14.88	13.72	57.19	588.69	564.62	24.06	24.463	0						
7,700.00	7,110.00	7,323.79	6,790.00	15.25	14.13	57.19	588.69	563.86	24.83	23.711	0						
7,800.00	7,110.00	7,423.79	6,790.00	15.65	14.56	57.19	588.69	563.06	25.63	22.972	0						
7,900.00	7,110.00	7,523.79	6,790.00	16.08	15.01	57.19	588.69	562.23	26.46	22.249	0						
8,000.00	7,110.00	7,623.79	6,790.00	16.52	15.48	57.19	588.69	561.36	27.32	21.547	0						
8,100.00	7,110.00	7,723.79	6,790.00	16.98	15.97	57.19	588.69	560.47	28.21	20.867	0						
8,200.00	7,110.00	7,823.79	6,790.00	17.46	16.48	57.19	588.68	559.56	29.13	20.212	0						
8,300.00	7,110.00	7,923.79	6,790.00	17.95	16.99	57.19	588.68	558.62	30.06	19.582	0						
8,400.00	7,110.00	8,023.79	6,790.00	18.46	17.53	57.19	588.68	557.66	31.02	18.977	0						
8,500.00	7,110.00	8,123.79	6,790.00	18.98	18.07	57.19	588.68	556.69	32.00	18.398	0						
8,600.00	7,110.00	8,223.79	6,790.00	19.52	18.62	57.19	588.68	555.69	32.99	17.844	0						
8,700.00	7,110.00	8,323.79	6,790.00	20.06	19.19	57.19	588.68	554.68	34.00	17.314	0						
8,800.00	7,110.00	8,423.79	6,790.00	20.61	19.76	57.19	588.68	553.66	35.02	16.809	0						
8,900.00	7,110.00	8,523.79	6,790.00	21.17	20.34	57.19	588.68	552.62	36.06	16.326	0						
9,000.00	7,110.00	8,623.79	6,790.00	21.74	20.93	57.19	588.68	551.57	37.11	15.864	0						
9,100.00	7,110.00	8,723.79	6,790.00	22.32	21.52	57.19	588.68	550.51	38.17	15.424	0						
9,200.00	7,110.00	8,823.79	6,790.00	22.91	22.13	57.19	588.68	549.44	39.23	15.004	0						
9,300.00	7,110.00	8,923.79	6,790.00	23.50	22.73	57.19	588.68	548.37	40.31	14.603	0						

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 07 - Original Hole - Rev 1		Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
9,400.00	7,110.00	9,023.79	6,790.00	24.10	23.35	57.19	588.68	547.28	41.40	14.219	0					
9,500.00	7,110.00	9,123.79	6,790.00	24.70	23.97	57.19	588.68	546.18	42.49	13.853	0					
9,600.00	7,110.00	9,223.79	6,790.00	25.31	24.59	57.19	588.68	545.08	43.60	13.503	0					
9,700.00	7,110.00	9,323.79	6,790.00	25.92	25.21	57.19	588.68	543.97	44.70	13.168	0					
9,800.00	7,110.00	9,423.79	6,790.00	26.54	25.85	57.19	588.67	542.86	45.82	12.848	0					
9,900.00	7,110.00	9,523.79	6,790.00	27.16	26.48	57.19	588.67	541.73	46.94	12.541	0					
10,000.00	7,110.00	9,623.79	6,790.00	27.79	27.12	57.19	588.67	540.61	48.07	12.247	0					
10,100.00	7,110.00	9,723.79	6,790.00	28.42	27.76	57.19	588.67	539.48	49.20	11.966	0					
10,200.00	7,110.00	9,823.79	6,790.00	29.05	28.40	57.19	588.67	538.34	50.33	11.696	0					
10,300.00	7,110.00	9,923.79	6,790.00	29.69	29.05	57.19	588.67	537.20	51.47	11.437	0					
10,400.00	7,110.00	10,023.79	6,790.00	30.33	29.70	57.19	588.67	536.05	52.62	11.188	0					
10,500.00	7,110.00	10,123.79	6,790.00	30.97	30.35	57.19	588.67	534.91	53.76	10.949	0					
10,600.00	7,110.00	10,223.79	6,790.00	31.61	31.01	57.19	588.67	533.75	54.92	10.719	0					
10,700.00	7,110.00	10,323.79	6,790.00	32.26	31.66	57.19	588.67	532.60	56.07	10.499	0					
10,800.00	7,110.00	10,423.79	6,790.00	32.91	32.32	57.19	588.67	531.44	57.23	10.286	0					
10,900.00	7,110.00	10,523.79	6,790.00	33.56	32.98	57.19	588.67	530.28	58.39	10.082	0					
11,000.00	7,110.00	10,623.79	6,790.00	34.22	33.64	57.19	588.67	529.11	59.55	9.885	0					
11,100.00	7,110.00	10,723.79	6,790.00	34.87	34.31	57.19	588.67	527.95	60.72	9.695	0					
11,200.00	7,110.00	10,823.79	6,790.00	35.53	34.97	57.19	588.67	526.78	61.89	9.511	0					
11,300.00	7,110.00	10,923.79	6,790.00	36.19	35.64	57.19	588.67	525.60	63.06	9.335	0					
11,400.00	7,110.00	11,023.79	6,790.00	36.85	36.31	57.19	588.66	524.43	64.23	9.164	0					
11,500.00	7,110.00	11,123.79	6,790.00	37.51	36.97	57.19	588.66	523.25	65.41	9.000	0					
11,600.00	7,110.00	11,223.79	6,790.00	38.18	37.65	57.19	588.66	522.08	66.59	8.840	0					
11,700.00	7,110.00	11,323.79	6,790.00	38.84	38.32	57.19	588.66	520.90	67.77	8.686	0					
11,800.00	7,110.00	11,423.79	6,790.00	39.51	38.99	57.19	588.66	519.71	68.95	8.538	0					
11,894.53	7,110.00	11,518.36	6,790.00	40.14	39.63	57.18	588.61	518.55	70.07	8.401	0		SF			

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
0.00	0.00	0.00	0.00	0.00	0.00	0.21	28.05						0	
100.00	100.00	100.00	100.00	0.15	0.15	0.21	28.05	27.76	0.29	95.670	0		0	
200.00	200.00	200.00	200.00	0.32	0.32	0.21	28.05	27.41	0.64	43.676	0		0	
300.00	300.00	300.00	300.00	0.50	0.50	0.21	28.05	27.06	0.99	28.297	0		0	
400.00	400.00	400.00	400.00	0.67	0.67	0.21	28.05	26.71	1.34	20.928	0		0	
500.00	500.00	500.00	500.00	0.84	0.84	0.21	28.05	26.36	1.69	16.604	0		0	
600.00	600.00	600.00	600.00	1.02	1.02	0.21	28.05	26.01	2.04	13.761	0		0	
700.00	700.00	700.00	700.00	1.19	1.19	0.21	28.05	25.66	2.39	11.749	0		0	
800.00	800.00	800.00	800.00	1.37	1.37	0.21	28.05	25.32	2.74	10.250	0		0	CC, ES
900.00	899.98	899.98	899.98	1.54	1.54	172.82	29.78	26.70	3.08	9.655	0		0	
1,000.00	999.84	1,001.02	1,001.00	1.72	1.72	173.50	33.24	29.80	3.43	9.685	0		0	
1,100.00	1,099.45	1,102.18	1,102.02	1.90	1.90	173.92	36.66	32.89	3.78	9.707	0		0	
1,200.00	1,198.70	1,203.47	1,202.90	2.07	2.08	174.15	40.06	35.94	4.12	9.721	0		0	
1,300.00	1,297.47	1,304.88	1,303.54	2.26	2.26	174.23	43.42	38.96	4.46	9.727	0		0	
1,328.83	1,325.83	1,334.14	1,332.48	2.31	2.31	174.23	44.38	39.82	4.56	9.727	0		0	
1,400.00	1,395.79	1,406.18	1,403.56	2.44	2.44	174.09	45.90	41.08	4.82	9.527	0		0	
1,500.00	1,494.09	1,506.17	1,502.09	2.63	2.63	173.80	47.25	42.08	5.18	9.130	0		0	
1,600.00	1,592.39	1,606.16	1,600.61	2.82	2.81	173.51	48.61	43.07	5.53	8.785	0		0	
1,700.00	1,690.70	1,706.15	1,699.14	3.01	3.00	173.25	49.97	44.07	5.89	8.481	0		0	
1,800.00	1,789.00	1,806.15	1,797.66	3.20	3.19	173.00	51.32	45.07	6.25	8.211	0		0	
1,900.00	1,887.30	1,906.14	1,896.19	3.40	3.38	172.76	52.68	46.07	6.61	7.970	0		0	
2,000.00	1,985.60	2,006.13	1,994.71	3.59	3.57	172.53	54.04	47.07	6.97	7.754	0		0	
2,100.00	2,083.90	2,106.12	2,093.24	3.78	3.76	172.31	55.41	48.08	7.33	7.559	0		0	
2,200.00	2,182.20	2,206.11	2,191.76	3.98	3.95	172.11	56.77	49.08	7.69	7.382	0		0	
2,300.00	2,280.50	2,306.10	2,290.29	4.17	4.14	171.91	58.13	50.08	8.05	7.221	0		0	
2,400.00	2,378.80	2,406.09	2,388.81	4.37	4.33	171.72	59.49	51.08	8.41	7.073	0		0	
2,500.00	2,477.10	2,506.08	2,487.34	4.56	4.52	171.55	60.86	52.09	8.77	6.938	0		0	
2,600.00	2,575.41	2,606.07	2,585.86	4.76	4.72	171.38	62.22	53.09	9.13	6.813	0		0	
2,700.00	2,673.71	2,706.06	2,684.39	4.96	4.91	171.21	63.59	54.09	9.49	6.698	0		0	
2,800.00	2,772.01	2,806.05	2,782.91	5.15	5.10	171.06	64.95	55.10	9.86	6.591	0		0	
2,900.00	2,870.31	2,906.04	2,881.44	5.35	5.30	170.91	66.32	56.10	10.22	6.491	0		0	
3,000.00	2,968.61	3,006.03	2,979.96	5.55	5.49	170.76	67.69	57.11	10.58	6.398	0		0	
3,100.00	3,066.91	3,106.02	3,078.49	5.74	5.68	170.62	69.05	58.11	10.94	6.312	0		0	
3,200.00	3,165.21	3,206.01	3,177.01	5.94	5.88	170.49	70.42	59.12	11.30	6.231	0		0	
3,300.00	3,263.51	3,306.00	3,275.54	6.14	6.07	170.36	71.79	60.12	11.66	6.155	0		0	
3,400.00	3,361.81	3,405.99	3,374.06	6.34	6.27	170.24	73.16	61.13	12.03	6.083	0		0	
3,500.00	3,460.11	3,505.98	3,472.59	6.53	6.46	170.12	74.52	62.14	12.39	6.016	0		0	
3,600.00	3,558.42	3,605.97	3,571.11	6.73	6.65	170.01	75.89	63.14	12.75	5.952	0		0	
3,700.00	3,656.72	3,705.97	3,669.64	6.93	6.85	169.90	77.26	64.15	13.11	5.892	0		0	
3,800.00	3,755.02	3,805.96	3,768.16	7.13	7.04	169.79	78.63	65.16	13.47	5.836	0		0	
3,900.00	3,853.32	3,905.95	3,866.69	7.32	7.24	169.69	80.00	66.16	13.84	5.782	0		0	
4,000.00	3,951.62	4,005.94	3,965.21	7.52	7.43	169.59	81.37	67.17	14.20	5.731	0		0	
4,100.00	4,049.92	4,105.93	4,063.74	7.72	7.63	169.49	82.74	68.18	14.56	5.682	0		0	
4,200.00	4,148.22	4,205.92	4,162.26	7.92	7.82	169.40	84.11	69.19	14.92	5.636	0		0	
4,300.00	4,246.52	4,305.91	4,260.79	8.12	8.02	169.31	85.48	70.19	15.29	5.592	0		0	
4,400.00	4,344.82	4,405.90	4,359.31	8.31	8.21	169.22	86.85	71.20	15.65	5.550	0		0	
4,500.00	4,443.12	4,505.89	4,457.84	8.51	8.41	169.14	88.22	72.21	16.01	5.510	0		0	
4,600.00	4,541.43	4,605.88	4,556.36	8.71	8.60	169.05	89.59	73.22	16.37	5.471	0		0	
4,700.00	4,639.73	4,705.87	4,654.89	8.91	8.80	168.98	90.97	74.23	16.74	5.435	0		0	
4,800.00	4,738.03	4,805.86	4,753.41	9.11	8.99	168.90	92.34	75.24	17.10	5.400	0		0	
4,900.00	4,836.33	4,905.85	4,851.94	9.31	9.19	168.82	93.71	76.25	17.46	5.366	0		0	
5,000.00	4,934.63	5,005.84	4,950.46	9.50	9.38	168.75	95.08	77.25	17.83	5.334	0		0	
5,100.00	5,032.93	5,105.83	5,048.99	9.70	9.58	168.68	96.45	78.26	18.19	5.303	0		0	
5,200.00	5,131.23	5,205.82	5,147.51	9.90	9.77	168.61	97.82	79.27	18.55	5.273	0		0	

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 08 - Original Hole - Rev 1		Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
5,300.00	5,229.53	5,305.81	5,246.04	10.10	9.97	168.55	99.20	80.28	18.91	5.244	0	SF				
5,400.00	5,327.83	5,405.80	5,344.56	10.30	10.16	168.48	100.57	81.29	19.28	5.217	0					
5,500.00	5,426.14	5,505.79	5,443.09	10.50	10.36	168.42	101.94	82.30	19.64	5.190	0					
5,600.00	5,524.44	5,605.78	5,541.61	10.70	10.56	168.36	103.31	83.31	20.00	5.165	0					
5,700.00	5,622.74	5,705.36	5,639.74	10.89	10.75	168.30	104.71	84.34	20.37	5.141	0					
5,800.00	5,721.04	5,801.82	5,735.10	11.09	10.93	168.48	108.11	87.40	20.72	5.218	0					
5,900.00	5,819.34	5,897.94	5,830.56	11.29	11.10	169.01	114.80	93.74	21.06	5.450	0					
5,993.46	5,911.21	5,987.29	5,919.58	11.48	11.26	169.72	124.01	102.63	21.38	5.800	0					
6,000.00	5,917.64	5,993.53	5,925.80	11.49	11.27	169.78	124.75	103.35	21.41	5.828	0					
6,100.00	6,016.28	6,088.62	6,020.77	11.68	11.43	170.59	136.05	114.30	21.75	6.255	0					
6,200.00	6,115.43	6,184.90	6,117.04	11.86	11.59	171.31	147.19	125.11	22.08	6.667	0					
6,300.00	6,214.98	6,282.84	6,214.98	12.04	11.75	171.85	156.57	134.18	22.39	6.992	0					
6,400.00	6,314.79	6,381.72	6,313.40	12.21	11.91	169.28	162.73	140.01	22.73	7.160	0					
6,500.00	6,414.75	6,475.39	6,404.04	12.37	12.07	161.51	168.26	145.10	23.16	7.265	0					
6,522.29	6,437.04	6,495.08	6,422.53	12.41	12.11	-12.88	169.99	145.68	24.31	6.992	0					
6,600.00	6,514.75	6,559.62	6,481.35	12.53	12.23	-21.26	180.29	155.90	24.39	7.393	0					
6,622.29	6,537.04	6,576.89	6,496.55	12.57	12.26	-23.69	184.79	160.39	24.40	7.573	0					
6,650.00	6,564.74	6,600.00	6,516.49	12.61	12.30	62.57	191.19	167.09	24.10	7.933	0					
6,700.00	6,614.52	6,635.06	6,545.80	12.69	12.37	57.18	203.97	179.64	24.33	8.385	0					
6,750.00	6,663.70	6,671.45	6,574.93	12.78	12.44	52.24	217.85	193.38	24.47	8.903	0					
6,800.00	6,711.92	6,707.17	6,602.11	12.86	12.52	47.99	232.29	207.79	24.50	9.481	0					
6,850.00	6,758.81	6,742.31	6,627.39	12.95	12.59	44.34	246.85	222.44	24.41	10.114	0					
6,900.00	6,804.01	6,776.94	6,650.79	13.04	12.67	41.23	261.20	237.01	24.19	10.798	0					
6,950.00	6,847.17	6,811.12	6,672.34	13.13	12.75	38.58	275.08	251.23	23.85	11.533	0					
7,000.00	6,887.98	6,850.00	6,694.87	13.23	12.84	36.14	288.36	264.94	23.42	12.311	0					
7,050.00	6,926.12	6,878.38	6,709.94	13.33	12.91	34.43	300.68	277.81	22.87	13.145	0					
7,100.00	6,961.30	6,911.55	6,726.02	13.43	13.00	32.82	312.10	289.84	22.27	14.017	0					
7,150.00	6,993.24	6,950.00	6,742.52	13.55	13.10	31.35	322.53	300.90	21.63	14.914	0					
7,200.00	7,021.72	6,977.20	6,752.76	13.66	13.18	30.36	331.67	310.74	20.93	15.850	0					
7,250.00	7,046.51	7,009.74	6,763.43	13.79	13.27	29.44	339.67	319.42	20.24	16.779	0					
7,300.00	7,067.42	7,050.00	6,774.19	13.92	13.40	28.61	346.53	326.91	19.62	17.658	0					
7,350.00	7,084.29	7,074.42	6,779.38	14.06	13.47	28.13	351.82	332.81	19.01	18.510	0					
7,400.00	7,097.00	7,100.00	6,783.72	14.20	13.56	27.74	355.99	337.51	18.48	19.264	0					
7,450.00	7,105.44	7,138.74	6,788.14	14.36	13.69	27.44	358.61	340.47	18.14	19.772	0					
7,500.00	7,109.56	7,170.84	6,789.83	14.53	13.80	27.31	359.94	342.03	17.91	20.100	0					
7,522.29	7,110.00	7,185.27	6,790.00	14.60	13.85	27.29	360.08	342.23	17.86	20.164	0					
7,600.00	7,110.00	7,262.98	6,790.00	14.88	14.14	27.29	360.08	341.71	18.38	19.595	0					
7,700.00	7,110.00	7,362.98	6,790.00	15.25	14.53	27.29	360.08	341.03	19.05	18.897	0					
7,800.00	7,110.00	7,462.98	6,790.00	15.65	14.95	27.29	360.08	340.33	19.75	18.234	0					
7,900.00	7,110.00	7,562.98	6,790.00	16.08	15.39	27.29	360.08	339.63	20.45	17.606	0					
8,000.00	7,110.00	7,662.98	6,790.00	16.52	15.84	27.29	360.08	338.91	21.17	17.011	0					
8,100.00	7,110.00	7,762.98	6,790.00	16.98	16.32	27.29	360.08	338.19	21.89	16.447	0					
8,200.00	7,110.00	7,862.98	6,790.00	17.46	16.81	27.29	360.08	337.45	22.63	15.913	0					
8,300.00	7,110.00	7,962.98	6,790.00	17.95	17.32	27.29	360.08	336.71	23.37	15.407	0					
8,400.00	7,110.00	8,062.98	6,790.00	18.46	17.84	27.29	360.08	335.96	24.12	14.928	0					
8,500.00	7,110.00	8,162.98	6,790.00	18.98	18.38	27.29	360.08	335.20	24.88	14.474	0					
8,600.00	7,110.00	8,262.98	6,790.00	19.52	18.92	27.29	360.08	334.44	25.64	14.043	0					
8,700.00	7,110.00	8,362.98	6,790.00	20.06	19.48	27.29	360.08	333.67	26.41	13.635	0					
8,800.00	7,110.00	8,462.98	6,790.00	20.61	20.04	27.29	360.08	332.90	27.18	13.247	0					
8,900.00	7,110.00	8,562.98	6,790.00	21.17	20.61	27.29	360.08	332.12	27.96	12.878	0					
9,000.00	7,110.00	8,662.98	6,790.00	21.74	21.19	27.29	360.08	331.33	28.74	12.527	0					
9,100.00	7,110.00	8,762.98	6,790.00	22.32	21.78	27.29	360.08	330.55	29.53	12.194	0					
9,200.00	7,110.00	8,862.98	6,790.00	22.91	22.38	27.29	360.08	329.76	30.32	11.876	0					
9,300.00	7,110.00	8,962.98	6,790.00	23.50	22.98	27.29	360.08	328.96	31.11	11.573	0					

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
9,400.00	7,110.00	9,062.98	6,790.00	24.10	23.59	27.29	360.08	328.17	31.91	11.284	0			
9,500.00	7,110.00	9,162.98	6,790.00	24.70	24.20	27.29	360.08	327.37	32.71	11.008	0			
9,600.00	7,110.00	9,262.98	6,790.00	25.31	24.82	27.29	360.08	326.56	33.51	10.745	0			
9,700.00	7,110.00	9,362.98	6,790.00	25.92	25.44	27.29	360.08	325.76	34.32	10.493	0			
9,800.00	7,110.00	9,462.98	6,790.00	26.54	26.06	27.29	360.07	324.95	35.12	10.252	0			
9,900.00	7,110.00	9,562.98	6,790.00	27.16	26.69	27.29	360.07	324.14	35.93	10.021	0			
10,000.00	7,110.00	9,662.98	6,790.00	27.79	27.33	27.29	360.07	323.33	36.74	9.800	0			
10,100.00	7,110.00	9,762.98	6,790.00	28.42	27.96	27.29	360.07	322.52	37.56	9.588	0			
10,200.00	7,110.00	9,862.98	6,790.00	29.05	28.60	27.29	360.07	321.70	38.37	9.384	0			
10,300.00	7,110.00	9,962.98	6,790.00	29.69	29.24	27.29	360.07	320.89	39.19	9.188	0			
10,400.00	7,110.00	10,062.98	6,790.00	30.33	29.89	27.29	360.07	320.07	40.01	9.001	0			
10,500.00	7,110.00	10,162.98	6,790.00	30.97	30.54	27.29	360.07	319.25	40.82	8.820	0			
10,600.00	7,110.00	10,262.98	6,790.00	31.61	31.19	27.29	360.07	318.43	41.65	8.646	0			
10,700.00	7,110.00	10,362.98	6,790.00	32.26	31.84	27.29	360.07	317.60	42.47	8.479	0			
10,800.00	7,110.00	10,462.98	6,790.00	32.91	32.50	27.29	360.07	316.78	43.29	8.317	0			
10,900.00	7,110.00	10,562.98	6,790.00	33.56	33.15	27.29	360.07	315.96	44.12	8.162	0			
11,000.00	7,110.00	10,662.98	6,790.00	34.22	33.81	27.29	360.07	315.13	44.94	8.012	0			
11,100.00	7,110.00	10,762.98	6,790.00	34.87	34.47	27.29	360.07	314.30	45.77	7.867	0			
11,200.00	7,110.00	10,862.98	6,790.00	35.53	35.13	27.29	360.07	313.47	46.60	7.728	0			
11,300.00	7,110.00	10,962.98	6,790.00	36.19	35.80	27.29	360.07	312.65	47.42	7.593	0			
11,400.00	7,110.00	11,062.98	6,790.00	36.85	36.46	27.29	360.07	311.82	48.25	7.462	0			
11,500.00	7,110.00	11,162.98	6,790.00	37.51	37.13	27.29	360.07	310.99	49.08	7.336	0			
11,600.00	7,110.00	11,262.98	6,790.00	38.18	37.80	27.29	360.07	310.15	49.91	7.214	0			
11,700.00	7,110.00	11,362.98	6,790.00	38.84	38.47	27.29	360.07	309.32	50.75	7.095	0			
11,800.00	7,110.00	11,462.98	6,790.00	39.51	39.14	27.29	360.07	308.49	51.58	6.981	0			
11,894.53	7,110.00	11,557.53	6,790.00	40.14	39.77	27.28	360.04	307.68	52.36	6.876	0			



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
0.00	0.00	1.00	1.00	0.00	0.00	-179.74	25.87						0	
100.00	100.00	101.00	101.00	0.15	0.15	-179.74	25.87	25.57	0.29	87.694	0		0	
200.00	200.00	201.00	201.00	0.32	0.32	-179.74	25.87	25.22	0.64	40.163	0		0	
300.00	300.00	301.00	301.00	0.50	0.50	-179.74	25.87	24.87	0.99	26.046	0		0	
400.00	400.00	401.00	401.00	0.67	0.67	-179.74	25.87	24.52	1.34	19.272	0		0	
500.00	500.00	501.00	501.00	0.84	0.85	-179.74	25.87	24.18	1.69	15.294	0		0	
600.00	600.00	601.00	601.00	1.02	1.02	-179.74	25.87	23.83	2.04	12.678	0		0	
666.33	666.33	667.33	667.33	1.14	1.14	-179.74	25.87	23.59	2.27	11.386	0		0	
700.00	700.00	700.99	700.99	1.19	1.20	-179.74	25.87	23.48	2.39	10.826	0		0	CC
800.00	800.00	800.00	799.98	1.37	1.37	-179.32	27.62	24.88	2.74	10.092	0		0	ES
900.00	899.98	898.99	898.83	1.54	1.54	-6.52	31.08	28.00	3.08	10.080	0		0	
1,000.00	999.84	997.81	997.27	1.72	1.72	-6.11	34.51	31.08	3.43	10.066	0		0	
1,100.00	1,099.45	1,096.51	1,095.24	1.90	1.89	-5.86	37.90	34.13	3.77	10.050	0		0	
1,200.00	1,198.70	1,195.09	1,192.63	2.07	2.08	-5.75	41.25	37.14	4.11	10.028	0		0	
1,300.00	1,297.47	1,293.57	1,289.33	2.26	2.26	-5.72	44.56	40.10	4.46	10.000	0		0	
1,328.83	1,325.83	1,321.94	1,317.07	2.31	2.32	-5.73	45.50	40.95	4.55	9.991	0		0	
1,400.00	1,395.79	1,392.69	1,386.06	2.44	2.45	-5.72	48.29	43.48	4.81	10.042	0		0	
1,500.00	1,494.09	1,492.61	1,483.46	2.63	2.65	-5.69	52.34	47.17	5.17	10.125	0		0	
1,600.00	1,592.39	1,592.53	1,580.86	2.82	2.85	-5.66	56.39	50.86	5.53	10.196	0		0	
1,700.00	1,690.70	1,692.45	1,678.26	3.01	3.04	-5.64	60.44	54.55	5.89	10.258	0		0	
1,800.00	1,789.00	1,792.37	1,775.66	3.20	3.24	-5.62	64.49	58.24	6.25	10.312	0		0	
1,900.00	1,887.30	1,892.28	1,873.06	3.40	3.45	-5.60	68.54	61.93	6.62	10.359	0		0	
2,000.00	1,985.60	1,992.20	1,970.46	3.59	3.65	-5.59	72.59	65.61	6.98	10.402	0		0	
2,100.00	2,083.90	2,092.12	2,067.86	3.78	3.85	-5.58	76.64	69.30	7.34	10.439	0		0	
2,200.00	2,182.20	2,192.04	2,165.26	3.98	4.06	-5.56	80.69	72.99	7.70	10.473	0		0	
2,300.00	2,280.50	2,291.96	2,262.66	4.17	4.26	-5.55	84.74	76.67	8.07	10.503	0		0	
2,400.00	2,378.80	2,391.87	2,360.06	4.37	4.47	-5.54	88.79	80.36	8.43	10.531	0		0	
2,500.00	2,477.10	2,491.79	2,457.46	4.56	4.67	-5.53	92.84	84.05	8.80	10.556	0		0	
2,600.00	2,575.41	2,591.71	2,554.86	4.76	4.88	-5.52	96.89	87.73	9.16	10.579	0		0	
2,700.00	2,673.71	2,691.63	2,652.26	4.96	5.08	-5.52	100.94	91.42	9.52	10.600	0		0	
2,800.00	2,772.01	2,791.55	2,749.66	5.15	5.29	-5.51	104.99	95.11	9.89	10.620	0		0	
2,900.00	2,870.31	2,891.46	2,847.06	5.35	5.50	-5.50	109.04	98.79	10.25	10.638	0		0	
3,000.00	2,968.61	2,991.38	2,944.46	5.55	5.70	-5.50	113.09	102.48	10.61	10.654	0		0	
3,100.00	3,066.91	3,091.30	3,041.86	5.74	5.91	-5.49	117.14	106.16	10.98	10.670	0		0	
3,200.00	3,165.21	3,191.22	3,139.26	5.94	6.12	-5.49	121.19	109.85	11.34	10.684	0		0	
3,300.00	3,263.51	3,291.14	3,236.66	6.14	6.33	-5.48	125.24	113.54	11.71	10.698	0		0	
3,400.00	3,361.81	3,391.05	3,334.06	6.34	6.53	-5.48	129.29	117.22	12.07	10.711	0		0	
3,500.00	3,460.11	3,490.97	3,431.46	6.53	6.74	-5.47	133.34	120.91	12.44	10.722	0		0	
3,600.00	3,558.42	3,590.89	3,528.86	6.73	6.95	-5.47	137.39	124.59	12.80	10.734	0		0	
3,700.00	3,656.72	3,690.81	3,626.26	6.93	7.16	-5.46	141.44	128.28	13.16	10.744	0		0	
3,800.00	3,755.02	3,790.73	3,723.66	7.13	7.36	-5.46	145.49	131.96	13.53	10.754	0		0	
3,900.00	3,853.32	3,890.64	3,821.06	7.32	7.57	-5.46	149.54	135.65	13.89	10.763	0		0	
4,000.00	3,951.62	3,990.56	3,918.46	7.52	7.78	-5.45	153.59	139.34	14.26	10.772	0		0	
4,100.00	4,049.92	4,090.48	4,015.86	7.72	7.99	-5.45	157.64	143.02	14.62	10.781	0		0	
4,200.00	4,148.22	4,190.40	4,113.26	7.92	8.20	-5.45	161.69	146.71	14.99	10.789	0		0	
4,300.00	4,246.52	4,290.32	4,210.66	8.12	8.41	-5.44	165.74	150.39	15.35	10.796	0		0	
4,400.00	4,344.82	4,390.23	4,308.06	8.31	8.62	-5.44	169.79	154.08	15.72	10.803	0		0	
4,500.00	4,443.12	4,490.15	4,405.46	8.51	8.82	-5.44	173.84	157.76	16.08	10.810	0		0	
4,600.00	4,541.43	4,590.07	4,502.86	8.71	9.03	-5.44	177.89	161.45	16.45	10.817	0		0	
4,700.00	4,639.73	4,689.99	4,600.26	8.91	9.24	-5.43	181.94	165.13	16.81	10.823	0		0	
4,800.00	4,738.03	4,789.91	4,697.66	9.11	9.45	-5.43	186.00	168.82	17.18	10.829	0		0	
4,900.00	4,836.33	4,889.82	4,795.06	9.31	9.66	-5.43	190.05	172.50	17.54	10.835	0		0	
5,000.00	4,934.63	4,989.74	4,892.47	9.50	9.87	-5.43	194.10	176.19	17.91	10.840	0		0	
5,100.00	5,032.93	5,089.66	4,989.87	9.70	10.08	-5.43	198.15	179.88	18.27	10.845	0		0	

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 10 - Original Hole - Rev 1		Offset Site Error:		0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision					
5,200.00	5,131.23	5,189.58	5,087.27	9.90	10.29	-5.42	202.20	183.56	18.63	10.850	0						
5,300.00	5,229.53	5,289.49	5,184.67	10.10	10.50	-5.42	206.25	187.25	19.00	10.855	0						
5,400.00	5,327.83	5,389.41	5,282.07	10.30	10.70	-5.42	210.30	190.93	19.36	10.860	0						
5,500.00	5,426.14	5,489.33	5,379.47	10.50	10.91	-5.42	214.35	194.62	19.73	10.864	0						
5,600.00	5,524.44	5,589.25	5,476.87	10.70	11.12	-5.42	218.40	198.30	20.09	10.869	0						
5,700.00	5,622.74	5,697.40	5,582.72	10.89	11.34	-5.46	220.61	200.14	20.47	10.776	0						
5,800.00	5,721.04	5,805.68	5,689.45	11.09	11.55	-5.58	219.05	198.20	20.85	10.508	0						
5,900.00	5,819.34	5,913.67	5,796.51	11.29	11.74	-5.79	213.74	192.52	21.22	10.073	0						
5,993.46	5,911.21	6,014.07	5,896.45	11.48	11.91	-6.09	205.39	183.83	21.57	9.524	0						
6,000.00	5,917.64	6,021.08	5,903.44	11.49	11.93	-6.12	204.70	183.11	21.59	9.481	0						
6,100.00	6,016.28	6,127.88	6,010.07	11.68	12.10	-6.49	193.90	171.95	21.95	8.833	0						
6,200.00	6,115.43	6,234.22	6,116.39	11.86	12.27	-6.90	182.89	160.59	22.29	8.204	0						
6,300.00	6,214.98	6,333.81	6,215.98	12.04	12.42	-7.25	173.47	150.87	22.60	7.675	0						
6,400.00	6,314.79	6,432.50	6,314.19	12.21	12.58	-4.65	167.77	144.90	22.87	7.335	0						
6,445.02	6,359.78	6,475.53	6,356.28	12.28	12.65	-1.65	166.98	144.00	22.98	7.266	0						
6,500.00	6,414.75	6,525.95	6,404.59	12.37	12.73	3.22	168.49	145.37	23.12	7.287	0						
6,522.29	6,437.04	6,545.58	6,423.03	12.41	12.77	-166.71	170.12	144.93	25.19	6.753	0						
6,600.00	6,514.75	6,609.96	6,481.68	12.53	12.88	-158.36	180.66	155.28	25.38	7.117	0						
6,622.29	6,537.04	6,627.20	6,496.84	12.57	12.91	-155.95	185.24	159.81	25.43	7.284	0						
6,650.00	6,564.74	6,650.00	6,516.52	12.61	12.95	-62.25	191.72	167.91	23.81	8.051	0						
6,700.00	6,614.52	6,685.22	6,545.96	12.69	13.02	-56.85	204.64	180.50	24.14	8.477	0						
6,750.00	6,663.70	6,721.54	6,575.02	12.78	13.09	-51.94	218.63	194.22	24.41	8.956	0						
6,800.00	6,711.92	6,757.19	6,602.14	12.86	13.16	-47.71	233.15	208.57	24.58	9.485	0						
6,850.00	6,758.81	6,792.26	6,627.37	12.95	13.23	-44.09	247.78	223.15	24.63	10.061	0						
6,900.00	6,804.01	6,826.82	6,650.73	13.04	13.30	-41.00	262.18	237.63	24.55	10.681	0						
6,950.00	6,847.17	6,860.95	6,672.25	13.13	13.38	-38.37	276.10	251.75	24.35	11.340	0						
7,000.00	6,887.98	6,900.00	6,694.89	13.23	13.46	-35.94	289.40	265.35	24.05	12.035	0						
7,050.00	6,926.12	6,928.10	6,709.81	13.33	13.53	-34.25	301.73	278.07	23.66	12.754	0						
7,100.00	6,961.30	6,961.22	6,725.88	13.43	13.61	-32.66	313.15	289.94	23.21	13.493	0						
7,150.00	6,993.24	7,000.00	6,742.53	13.55	13.71	-31.19	323.58	300.86	22.73	14.237	0						
7,200.00	7,021.72	7,026.78	6,752.62	13.66	13.78	-30.21	332.70	310.46	22.24	14.961	0						
7,250.00	7,046.51	7,059.27	6,763.30	13.79	13.87	-29.30	340.68	318.90	21.77	15.646	0						
7,300.00	7,067.42	7,100.00	6,774.20	13.92	13.99	-28.48	347.54	326.16	21.38	16.257	0						
7,350.00	7,084.29	7,123.87	6,779.28	14.06	14.06	-28.01	352.77	331.72	21.05	16.760	0						
7,400.00	7,097.00	7,150.00	6,783.72	14.20	14.14	-27.63	356.89	336.06	20.83	17.132	0						
7,450.00	7,105.44	7,188.12	6,788.09	14.36	14.26	-27.33	359.48	338.70	20.78	17.300	0						
7,500.00	7,109.56	7,220.17	6,789.81	14.53	14.37	-27.21	360.76	339.89	20.87	17.286	0						
7,522.29	7,110.00	7,234.87	6,790.00	14.60	14.42	-27.19	360.89	339.92	20.97	17.213	0						
7,542.78	7,110.00	7,254.72	6,790.00	14.67	14.48	-27.19	360.89	339.67	21.22	17.010	0						
7,600.00	7,110.00	7,311.94	6,790.00	14.88	14.69	-27.19	360.89	339.40	21.49	16.796	0						
7,700.00	7,110.00	7,411.94	6,790.00	15.25	15.06	-27.19	360.89	338.72	22.17	16.279	0						
7,800.00	7,110.00	7,511.94	6,790.00	15.65	15.45	-27.19	360.89	338.03	22.86	15.785	0						
7,900.00	7,110.00	7,611.94	6,790.00	16.08	15.87	-27.19	360.89	337.32	23.57	15.313	0						
8,000.00	7,110.00	7,711.94	6,790.00	16.52	16.32	-27.19	360.89	336.61	24.28	14.863	0						
8,100.00	7,110.00	7,811.94	6,790.00	16.98	16.78	-27.19	360.89	335.89	25.00	14.434	0						
8,200.00	7,110.00	7,911.94	6,790.00	17.46	17.25	-27.19	360.89	335.16	25.73	14.024	0						
8,300.00	7,110.00	8,011.94	6,790.00	17.95	17.75	-27.19	360.89	334.42	26.47	13.633	0						
8,400.00	7,110.00	8,111.94	6,790.00	18.46	18.25	-27.19	360.89	333.68	27.22	13.260	0						
8,500.00	7,110.00	8,211.94	6,790.00	18.98	18.78	-27.19	360.89	332.92	27.97	12.904	0						
8,600.00	7,110.00	8,311.94	6,790.00	19.52	19.31	-27.19	360.89	332.17	28.72	12.564	0						
8,700.00	7,110.00	8,411.94	6,790.00	20.06	19.85	-27.19	360.89	331.41	29.49	12.240	0						
8,800.00	7,110.00	8,511.94	6,790.00	20.61	20.41	-27.19	360.89	330.64	30.25	11.930	0						
8,900.00	7,110.00	8,611.94	6,790.00	21.17	20.97	-27.19	360.89	329.87	31.02	11.633	0						
9,000.00	7,110.00	8,711.94	6,790.00	21.74	21.54	-27.19	360.89	329.10	31.80	11.350	0						

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder												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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	
9,100.00	7,110.00	8,811.94	6,790.00	22.32	22.12	-27.19	360.89	328.32	32.58	11.078	0		
9,200.00	7,110.00	8,911.94	6,790.00	22.91	22.70	-27.19	360.89	327.53	33.36	10.818	0		
9,300.00	7,110.00	9,011.94	6,790.00	23.50	23.30	-27.20	360.89	326.75	34.15	10.569	0		
9,400.00	7,110.00	9,111.94	6,790.00	24.10	23.90	-27.20	360.90	325.96	34.93	10.331	0		
9,500.00	7,110.00	9,211.94	6,790.00	24.70	24.50	-27.20	360.90	325.17	35.73	10.102	0		
9,600.00	7,110.00	9,311.94	6,790.00	25.31	25.11	-27.20	360.90	324.37	36.52	9.882	0		
9,700.00	7,110.00	9,411.94	6,790.00	25.92	25.73	-27.20	360.90	323.58	37.32	9.671	0		
9,800.00	7,110.00	9,511.94	6,790.00	26.54	26.34	-27.20	360.90	322.78	38.12	9.468	0		
9,900.00	7,110.00	9,611.94	6,790.00	27.16	26.97	-27.20	360.90	321.98	38.92	9.273	0		
10,000.00	7,110.00	9,711.94	6,790.00	27.79	27.59	-27.20	360.90	321.17	39.72	9.085	0		
10,100.00	7,110.00	9,811.94	6,790.00	28.42	28.23	-27.20	360.90	320.37	40.53	8.904	0		
10,200.00	7,110.00	9,911.94	6,790.00	29.05	28.86	-27.20	360.90	319.56	41.34	8.730	0		
10,300.00	7,110.00	10,011.94	6,790.00	29.69	29.50	-27.20	360.90	318.75	42.15	8.563	0		
10,400.00	7,110.00	10,111.94	6,790.00	30.33	30.14	-27.20	360.90	317.94	42.96	8.401	0		
10,500.00	7,110.00	10,211.94	6,790.00	30.97	30.78	-27.20	360.90	317.13	43.77	8.245	0		
10,600.00	7,110.00	10,311.94	6,790.00	31.61	31.43	-27.20	360.90	316.31	44.59	8.094	0		
10,700.00	7,110.00	10,411.94	6,790.00	32.26	32.07	-27.20	360.90	315.50	45.40	7.949	0		
10,800.00	7,110.00	10,511.94	6,790.00	32.91	32.72	-27.20	360.90	314.68	46.22	7.808	0		
10,900.00	7,110.00	10,611.94	6,790.00	33.56	33.38	-27.20	360.90	313.86	47.04	7.673	0		
11,000.00	7,110.00	10,711.94	6,790.00	34.22	34.03	-27.20	360.90	313.04	47.86	7.541	0		
11,100.00	7,110.00	10,811.94	6,790.00	34.87	34.69	-27.20	360.90	312.22	48.68	7.414	0		
11,200.00	7,110.00	10,911.94	6,790.00	35.53	35.35	-27.20	360.90	311.40	49.50	7.291	0		
11,300.00	7,110.00	11,011.94	6,790.00	36.19	36.01	-27.20	360.90	310.58	50.32	7.172	0		
11,400.00	7,110.00	11,111.94	6,790.00	36.85	36.67	-27.20	360.90	309.75	51.15	7.056	0		
11,500.00	7,110.00	11,211.94	6,790.00	37.51	37.33	-27.20	360.90	308.93	51.97	6.944	0		
11,600.00	7,110.00	11,311.94	6,790.00	38.18	38.00	-27.20	360.90	308.11	52.80	6.836	0		
11,700.00	7,110.00	11,411.94	6,790.00	38.84	38.66	-27.20	360.90	307.28	53.62	6.730	0		
11,800.00	7,110.00	11,511.94	6,790.00	39.51	39.33	-27.20	360.90	306.45	54.45	6.628	0		
11,864.12	7,110.00	11,576.06	6,790.00	39.94	39.76	-27.20	360.90	305.86	55.04	6.557	0		
11,894.53	7,110.00	11,604.07	6,790.00	40.14	39.95	-27.21	360.94	305.70	55.23	6.535	0		SF



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
0.00	0.00	1.00	1.00	0.00	0.00	-179.47	53.92							
100.00	100.00	101.00	101.00	0.15	0.15	-179.47	53.92	53.63	0.29	182.810	0			
200.00	200.00	201.00	201.00	0.32	0.32	-179.47	53.92	53.28	0.64	83.726	0			
300.00	300.00	301.00	301.00	0.50	0.50	-179.47	53.92	52.93	0.99	54.297	0			
400.00	400.00	401.00	401.00	0.67	0.67	-179.47	53.92	52.58	1.34	40.175	0			
500.00	500.00	501.00	501.00	0.84	0.85	-179.47	53.92	52.23	1.69	31.883	0			
566.33	566.33	567.33	567.33	0.96	0.96	-179.47	53.92	52.00	1.92	28.044	0		CC	
600.00	600.00	600.98	600.98	1.02	1.02	-179.47	53.92	51.88	2.04	26.429	0		ES	
700.00	700.00	700.00	699.98	1.19	1.19	-179.32	55.67	53.28	2.39	23.316	0			
800.00	800.00	796.99	796.83	1.37	1.36	-178.93	60.81	58.08	2.73	22.261	0			
900.00	899.98	894.57	894.05	1.54	1.54	-6.38	67.63	64.56	3.08	21.984	0			
1,000.00	999.84	991.94	990.72	1.72	1.71	-6.18	74.38	70.96	3.42	21.749	0			
1,100.00	1,099.45	1,089.08	1,086.71	1.90	1.89	-6.12	81.04	77.28	3.76	21.542	0			
1,200.00	1,198.70	1,186.02	1,181.94	2.07	2.07	-6.16	87.61	83.51	4.10	21.350	0			
1,300.00	1,297.47	1,282.75	1,276.30	2.26	2.26	-6.29	94.09	89.64	4.45	21.167	0			
1,328.83	1,325.83	1,310.60	1,303.34	2.31	2.32	-6.33	95.94	91.39	4.54	21.116	0			
1,400.00	1,395.79	1,379.21	1,369.64	2.44	2.46	-6.43	101.34	96.54	4.80	21.126	0			
1,500.00	1,494.09	1,476.96	1,463.45	2.63	2.66	-6.47	111.37	106.21	5.16	21.596	0			
1,600.00	1,592.39	1,576.41	1,558.78	2.82	2.87	-6.48	121.82	116.30	5.52	22.065	0			
1,700.00	1,690.70	1,675.86	1,654.11	3.01	3.09	-6.49	132.27	126.39	5.89	22.473	0			
1,800.00	1,789.00	1,775.32	1,749.45	3.20	3.30	-6.50	142.73	136.47	6.25	22.832	0			
1,900.00	1,887.30	1,874.77	1,844.78	3.40	3.52	-6.51	153.18	146.56	6.62	23.149	0			
2,000.00	1,985.60	1,974.22	1,940.11	3.59	3.74	-6.52	163.63	156.65	6.98	23.431	0			
2,100.00	2,083.90	2,073.67	2,035.44	3.78	3.96	-6.52	174.08	166.73	7.35	23.685	0			
2,200.00	2,182.20	2,173.12	2,130.77	3.98	4.18	-6.53	184.53	176.82	7.72	23.913	0			
2,300.00	2,280.50	2,272.58	2,226.11	4.17	4.40	-6.53	194.99	186.90	8.08	24.120	0			
2,400.00	2,378.80	2,372.03	2,321.44	4.37	4.62	-6.54	205.44	196.99	8.45	24.309	0			
2,500.00	2,477.10	2,471.48	2,416.77	4.56	4.84	-6.54	215.89	207.07	8.82	24.481	0			
2,600.00	2,575.41	2,570.93	2,512.10	4.76	5.06	-6.55	226.34	217.16	9.19	24.639	0			
2,700.00	2,673.71	2,670.39	2,607.43	4.96	5.29	-6.55	236.79	227.24	9.55	24.785	0			
2,800.00	2,772.01	2,769.84	2,702.77	5.15	5.51	-6.55	247.25	237.32	9.92	24.919	0			
2,900.00	2,870.31	2,869.29	2,798.10	5.35	5.74	-6.56	257.70	247.41	10.29	25.043	0			
3,000.00	2,968.61	2,968.74	2,893.43	5.55	5.96	-6.56	268.15	257.49	10.66	25.159	0			
3,100.00	3,066.91	3,068.20	2,988.76	5.74	6.18	-6.56	278.60	267.58	11.03	25.267	0			
3,200.00	3,165.21	3,167.65	3,084.09	5.94	6.41	-6.56	289.05	277.66	11.39	25.367	0			
3,300.00	3,263.51	3,267.10	3,179.42	6.14	6.63	-6.57	299.51	287.74	11.76	25.461	0			
3,400.00	3,361.81	3,366.55	3,274.76	6.34	6.86	-6.57	309.96	297.83	12.13	25.549	0			
3,500.00	3,460.11	3,466.00	3,370.09	6.53	7.09	-6.57	320.41	307.91	12.50	25.632	0			
3,600.00	3,558.42	3,565.46	3,465.42	6.73	7.31	-6.57	330.86	317.99	12.87	25.710	0			
3,700.00	3,656.72	3,664.91	3,560.75	6.93	7.54	-6.57	341.31	328.08	13.24	25.784	0			
3,800.00	3,755.02	3,764.36	3,656.08	7.13	7.76	-6.58	351.77	338.16	13.61	25.853	0			
3,900.00	3,853.32	3,863.81	3,751.42	7.32	7.99	-6.58	362.22	348.24	13.97	25.919	0			
4,000.00	3,951.62	3,963.27	3,846.75	7.52	8.22	-6.58	372.67	358.33	14.34	25.982	0			
4,100.00	4,049.92	4,062.72	3,942.08	7.72	8.44	-6.58	383.12	368.41	14.71	26.041	0			
4,200.00	4,148.22	4,162.17	4,037.41	7.92	8.67	-6.58	393.58	378.49	15.08	26.097	0			
4,300.00	4,246.52	4,261.62	4,132.74	8.12	8.90	-6.58	404.03	388.58	15.45	26.150	0			
4,400.00	4,344.82	4,361.07	4,228.08	8.31	9.12	-6.58	414.48	398.66	15.82	26.201	0			
4,500.00	4,443.12	4,460.53	4,323.41	8.51	9.35	-6.58	424.93	408.74	16.19	26.250	0			
4,600.00	4,541.43	4,559.98	4,418.74	8.71	9.58	-6.59	435.38	418.83	16.56	26.296	0			
4,700.00	4,639.73	4,659.43	4,514.07	8.91	9.80	-6.59	445.84	428.91	16.93	26.340	0			
4,800.00	4,738.03	4,758.88	4,609.40	9.11	10.03	-6.59	456.29	438.99	17.30	26.383	0			
4,900.00	4,836.33	4,858.34	4,704.74	9.31	10.26	-6.59	466.74	449.08	17.66	26.423	0			
5,000.00	4,934.63	4,957.79	4,800.07	9.50	10.48	-6.59	477.19	459.16	18.03	26.462	0			
5,100.00	5,032.93	5,057.24	4,895.40	9.70	10.71	-6.59	487.64	469.24	18.40	26.499	0			

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 11 - Original Hole - Rev 1		Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
5,200.00	5,131.23	5,156.69	4,990.73	9.90	10.94	-6.59	498.10	479.32	18.77	26.535	0					
5,300.00	5,229.53	5,256.15	5,086.06	10.10	11.17	-6.59	508.55	489.41	19.14	26.569	0					
5,400.00	5,327.83	5,355.60	5,181.39	10.30	11.39	-6.59	519.00	499.49	19.51	26.602	0					
5,500.00	5,426.14	5,455.05	5,276.73	10.50	11.62	-6.59	529.45	509.57	19.88	26.634	0					
5,600.00	5,524.44	5,571.63	5,388.88	10.70	11.88	-6.60	538.73	518.45	20.28	26.567	0					
5,700.00	5,622.74	5,694.70	5,508.54	10.89	12.13	-6.66	543.88	523.19	20.69	26.293	0					
5,800.00	5,721.04	5,818.07	5,629.62	11.09	12.38	-6.75	544.74	523.65	21.09	25.831	0					
5,900.00	5,819.34	5,941.31	5,751.47	11.29	12.60	-6.89	541.31	519.82	21.49	25.191	0					
5,993.46	5,911.21	6,055.94	5,865.44	11.48	12.80	-7.05	534.25	512.39	21.86	24.442	0					
6,000.00	5,917.64	6,063.94	5,873.41	11.49	12.81	-7.07	533.62	511.74	21.88	24.385	0					
6,100.00	6,016.28	6,185.86	5,995.06	11.68	13.00	-7.24	523.65	501.39	22.25	23.531	0					
6,200.00	6,115.43	6,307.13	6,116.30	11.86	13.18	-7.42	512.91	490.31	22.60	22.695	0					
6,300.00	6,214.98	6,406.81	6,215.98	12.04	13.32	-7.53	503.50	480.61	22.89	21.996	0					
6,400.00	6,314.79	6,505.32	6,314.02	12.21	13.47	-6.65	497.65	474.49	23.15	21.493	0					
6,475.78	6,390.54	6,576.78	6,383.51	12.33	13.58	-4.78	496.10	472.77	23.33	21.265	0					
6,500.00	6,414.75	6,600.00	6,405.59	12.37	13.62	-3.95	496.28	472.90	23.38	21.224	0					
6,522.29	6,437.04	6,618.24	6,422.71	12.41	13.65	-175.40	496.79	470.68	26.11	19.030	0					
6,600.00	6,514.75	6,682.55	6,481.31	12.53	13.76	-172.38	500.55	474.20	26.35	18.994	0					
6,622.29	6,537.04	6,700.00	6,496.68	12.57	13.78	-171.44	502.24	475.82	26.42	19.008	0					
6,650.00	6,564.74	6,720.68	6,514.54	12.61	13.82	-80.07	504.68	480.84	23.84	21.167	0					
6,700.00	6,614.52	6,757.74	6,545.57	12.69	13.89	-77.64	509.76	485.71	24.06	21.190	0					
6,750.00	6,663.70	6,794.04	6,574.63	12.78	13.95	-75.30	515.57	491.29	24.28	21.236	0					
6,800.00	6,711.92	6,829.66	6,601.75	12.86	14.02	-73.06	521.91	497.41	24.50	21.304	0					
6,850.00	6,758.81	6,864.71	6,626.99	12.95	14.09	-70.94	528.62	503.92	24.70	21.400	0					
6,900.00	6,804.01	6,900.00	6,650.85	13.04	14.16	-68.93	535.53	510.64	24.88	21.523	0					
6,950.00	6,847.17	6,933.37	6,671.90	13.13	14.23	-67.11	542.48	517.45	25.03	21.673	0					
7,000.00	6,887.98	6,967.09	6,691.61	13.23	14.30	-65.42	549.33	524.18	25.15	21.845	0					
7,050.00	6,926.12	7,000.00	6,709.25	13.33	14.37	-63.89	555.95	530.72	25.23	22.033	0					
7,100.00	6,961.30	7,033.61	6,725.60	13.43	14.45	-62.49	562.22	536.92	25.30	22.225	0					
7,150.00	6,993.24	7,066.48	6,739.90	13.55	14.53	-61.26	568.04	542.69	25.35	22.411	0					
7,200.00	7,021.72	7,100.00	6,752.70	13.66	14.61	-60.17	573.31	547.91	25.40	22.575	0					
7,250.00	7,046.51	7,131.64	6,763.11	13.79	14.69	-59.27	577.95	552.49	25.46	22.703	0					
7,300.00	7,067.42	7,163.99	6,772.03	13.92	14.78	-58.52	581.90	556.35	25.55	22.778	0					
7,350.00	7,084.29	7,200.00	6,779.87	14.06	14.88	-57.88	585.13	559.44	25.68	22.781	0					
7,400.00	7,097.00	7,228.38	6,784.49	14.20	14.96	-57.47	587.52	561.66	25.86	22.717	0					
7,450.00	7,105.44	7,260.47	6,788.04	14.36	15.06	-57.18	589.12	563.01	26.11	22.563	0					
7,500.00	7,109.56	7,300.00	6,789.94	14.53	15.18	-57.03	589.95	563.50	26.45	22.303	0					
7,508.15	7,109.82	7,300.00	6,789.94	14.55	15.18	-57.04	589.92	563.40	26.52	22.244	0					
7,522.29	7,110.00	7,307.87	6,790.00	14.60	15.20	-57.03	589.94	563.34	26.59	22.184	0					
7,543.11	7,110.00	7,327.04	6,790.00	14.67	15.26	-57.03	589.94	562.98	26.95	21.887	0					
7,600.00	7,110.00	7,383.93	6,790.00	14.88	15.45	-57.03	589.94	562.77	27.17	21.716	0					
7,700.00	7,110.00	7,483.93	6,790.00	15.25	15.80	-57.03	589.94	562.00	27.93	21.120	0					
7,800.00	7,110.00	7,583.93	6,790.00	15.65	16.17	-57.04	589.94	561.20	28.73	20.532	0					
7,900.00	7,110.00	7,683.93	6,790.00	16.08	16.57	-57.04	589.94	560.38	29.56	19.956	0					
8,000.00	7,110.00	7,783.93	6,790.00	16.52	16.99	-57.04	589.94	559.52	30.42	19.395	0					
8,100.00	7,110.00	7,883.93	6,790.00	16.98	17.42	-57.04	589.94	558.64	31.30	18.849	0					
8,200.00	7,110.00	7,983.93	6,790.00	17.46	17.88	-57.04	589.94	557.74	32.20	18.320	0					
8,300.00	7,110.00	8,083.93	6,790.00	17.95	18.35	-57.04	589.94	556.81	33.13	17.809	0					
8,400.00	7,110.00	8,183.93	6,790.00	18.46	18.84	-57.04	589.94	555.87	34.07	17.315	0					
8,500.00	7,110.00	8,283.93	6,790.00	18.98	19.34	-57.04	589.94	554.91	35.03	16.840	0					
8,600.00	7,110.00	8,383.93	6,790.00	19.52	19.86	-57.04	589.94	553.93	36.01	16.383	0					
8,700.00	7,110.00	8,483.93	6,790.00	20.06	20.39	-57.04	589.94	552.94	37.00	15.943	0					
8,800.00	7,110.00	8,583.93	6,790.00	20.61	20.92	-57.04	589.94	551.93	38.01	15.521	0					
8,900.00	7,110.00	8,683.93	6,790.00	21.17	21.47	-57.04	589.94	550.91	39.03	15.115	0					

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 11 - Original Hole - Rev 1		Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
9,000.00	7,110.00	8,783.93	6,790.00	21.74	22.03	-57.04	589.94	549.88	40.06	14.726	0					
9,100.00	7,110.00	8,883.93	6,790.00	22.32	22.60	-57.04	589.94	548.84	41.10	14.353	0					
9,200.00	7,110.00	8,983.93	6,790.00	22.91	23.17	-57.04	589.95	547.79	42.16	13.995	0					
9,300.00	7,110.00	9,083.93	6,790.00	23.50	23.75	-57.04	589.95	546.73	43.22	13.651	0					
9,400.00	7,110.00	9,183.93	6,790.00	24.10	24.34	-57.04	589.95	545.66	44.29	13.321	0					
9,500.00	7,110.00	9,283.93	6,790.00	24.70	24.93	-57.04	589.95	544.58	45.37	13.004	0					
9,600.00	7,110.00	9,383.93	6,790.00	25.31	25.53	-57.04	589.95	543.50	46.45	12.700	0					
9,700.00	7,110.00	9,483.93	6,790.00	25.92	26.14	-57.04	589.95	542.40	47.54	12.408	0					
9,800.00	7,110.00	9,583.93	6,790.00	26.54	26.75	-57.04	589.95	541.31	48.64	12.128	0					
9,900.00	7,110.00	9,683.93	6,790.00	27.16	27.36	-57.04	589.95	540.20	49.75	11.858	0					
10,000.00	7,110.00	9,783.93	6,790.00	27.79	27.98	-57.04	589.95	539.09	50.86	11.599	0					
10,100.00	7,110.00	9,883.93	6,790.00	28.42	28.60	-57.04	589.95	537.97	51.98	11.350	0					
10,200.00	7,110.00	9,983.93	6,790.00	29.05	29.23	-57.04	589.95	536.85	53.10	11.111	0					
10,300.00	7,110.00	10,083.93	6,790.00	29.69	29.86	-57.04	589.95	535.73	54.22	10.880	0					
10,400.00	7,110.00	10,183.93	6,790.00	30.33	30.49	-57.04	589.95	534.60	55.36	10.658	0					
10,500.00	7,110.00	10,283.93	6,790.00	30.97	31.13	-57.04	589.95	533.46	56.49	10.444	0					
10,600.00	7,110.00	10,383.93	6,790.00	31.61	31.77	-57.04	589.95	532.33	57.63	10.237	0					
10,700.00	7,110.00	10,483.93	6,790.00	32.26	32.41	-57.04	589.95	531.18	58.77	10.038	0					
10,800.00	7,110.00	10,583.93	6,790.00	32.91	33.05	-57.04	589.96	530.04	59.92	9.846	0					
10,900.00	7,110.00	10,683.93	6,790.00	33.56	33.70	-57.04	589.96	528.89	61.06	9.661	0					
11,000.00	7,110.00	10,783.93	6,790.00	34.22	34.35	-57.04	589.96	527.74	62.22	9.482	0					
11,100.00	7,110.00	10,883.93	6,790.00	34.87	35.00	-57.04	589.96	526.59	63.37	9.309	0					
11,200.00	7,110.00	10,983.93	6,790.00	35.53	35.65	-57.04	589.96	525.43	64.53	9.142	0					
11,300.00	7,110.00	11,083.93	6,790.00	36.19	36.31	-57.04	589.96	524.27	65.69	8.981	0					
11,400.00	7,110.00	11,183.93	6,790.00	36.85	36.96	-57.04	589.96	523.11	66.85	8.825	0					
11,500.00	7,110.00	11,283.93	6,790.00	37.51	37.62	-57.04	589.96	521.94	68.02	8.674	0					
11,600.00	7,110.00	11,383.93	6,790.00	38.18	38.28	-57.04	589.96	520.78	69.18	8.527	0					
11,700.00	7,110.00	11,483.93	6,790.00	38.84	38.94	-57.04	589.96	519.61	70.35	8.386	0					
11,800.00	7,110.00	11,583.93	6,790.00	39.51	39.61	-57.04	589.96	518.44	71.53	8.248	0					
11,862.36	7,110.00	11,646.32	6,790.00	39.92	40.02	-57.04	589.96	517.58	72.37	8.151	0					
11,894.53	7,110.00	11,671.55	6,790.00	40.14	40.19	-57.04	590.05	517.43	72.62	8.125	0	SF				



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
0.00	0.00	2.00	2.00	0.00	0.00	-179.58	81.97				0			
100.00	100.00	102.00	102.00	0.15	0.15	-179.58	81.97	81.68	0.30	276.278	0			
200.00	200.00	202.00	202.00	0.32	0.32	-179.58	81.97	81.33	0.65	126.939	0			
300.00	300.00	302.00	302.00	0.50	0.50	-179.58	81.97	80.98	0.99	82.399	0			
400.00	400.00	402.00	402.00	0.67	0.67	-179.58	81.97	80.63	1.34	60.997	0			
465.99	465.99	467.99	467.99	0.79	0.79	-179.58	81.97	80.40	1.57	52.072	0		CC	
500.00	500.00	501.94	501.94	0.84	0.85	-179.58	81.97	80.28	1.69	48.423	0		ES	
600.00	600.00	600.00	599.98	1.02	1.02	-179.49	83.74	81.70	2.04	41.076	0			
700.00	700.00	696.09	695.94	1.19	1.19	-179.24	88.87	86.49	2.38	37.322	0			
800.00	800.00	792.60	792.09	1.37	1.36	-178.89	97.37	94.64	2.72	35.733	0			
900.00	899.98	888.66	887.47	1.54	1.53	-6.39	107.49	104.42	3.07	35.036	0			
1,000.00	999.84	984.41	982.10	1.72	1.71	-6.21	117.48	114.07	3.41	34.451	0			
1,100.00	1,099.45	1,079.85	1,075.90	1.90	1.89	-6.13	127.33	123.58	3.75	33.943	0			
1,200.00	1,198.70	1,174.99	1,168.76	2.07	2.08	-6.13	137.03	132.94	4.09	33.487	0			
1,300.00	1,297.47	1,269.85	1,260.62	2.26	2.27	-6.21	146.58	142.15	4.43	33.065	0			
1,328.83	1,325.83	1,297.14	1,286.90	2.31	2.33	-6.24	149.30	144.77	4.53	32.949	0			
1,400.00	1,395.79	1,365.95	1,352.88	2.44	2.47	-6.32	156.67	151.88	4.79	32.733	0			
1,500.00	1,494.09	1,465.38	1,448.11	2.63	2.69	-6.41	167.38	162.23	5.15	32.498	0			
1,600.00	1,592.39	1,564.80	1,543.34	2.82	2.90	-6.49	178.09	172.58	5.52	32.290	0			
1,700.00	1,690.70	1,664.23	1,638.58	3.01	3.12	-6.57	188.81	182.93	5.88	32.104	0			
1,800.00	1,789.00	1,763.65	1,733.81	3.20	3.34	-6.63	199.52	193.28	6.25	31.938	0			
1,900.00	1,887.30	1,863.07	1,829.05	3.40	3.56	-6.69	210.24	203.62	6.61	31.788	0			
2,000.00	1,985.60	1,962.50	1,924.28	3.59	3.78	-6.75	220.95	213.97	6.98	31.653	0			
2,100.00	2,083.90	2,061.92	2,019.52	3.78	4.00	-6.79	231.67	224.32	7.35	31.529	0			
2,200.00	2,182.20	2,161.35	2,114.75	3.98	4.22	-6.84	242.38	234.67	7.72	31.417	0			
2,300.00	2,280.50	2,260.77	2,209.98	4.17	4.44	-6.88	253.10	245.02	8.08	31.314	0			
2,400.00	2,378.80	2,360.19	2,305.22	4.37	4.67	-6.92	263.82	255.37	8.45	31.219	0			
2,500.00	2,477.10	2,459.62	2,400.45	4.56	4.89	-6.95	274.53	265.71	8.82	31.131	0			
2,600.00	2,575.41	2,559.04	2,495.69	4.76	5.12	-6.98	285.25	276.06	9.19	31.050	0			
2,700.00	2,673.71	2,658.47	2,590.92	4.96	5.34	-7.01	295.96	286.41	9.55	30.975	0			
2,800.00	2,772.01	2,757.89	2,686.16	5.15	5.57	-7.04	306.68	296.76	9.92	30.905	0			
2,900.00	2,870.31	2,857.31	2,781.39	5.35	5.79	-7.06	317.40	307.10	10.29	30.839	0			
3,000.00	2,968.61	2,956.74	2,876.63	5.55	6.02	-7.09	328.11	317.45	10.66	30.778	0			
3,100.00	3,066.91	3,056.16	2,971.86	5.74	6.25	-7.11	338.83	327.80	11.03	30.721	0			
3,200.00	3,165.21	3,155.59	3,067.09	5.94	6.47	-7.13	349.54	338.15	11.40	30.668	0			
3,300.00	3,263.51	3,255.01	3,162.33	6.14	6.70	-7.15	360.26	348.49	11.77	30.617	0			
3,400.00	3,361.81	3,354.43	3,257.56	6.34	6.93	-7.17	370.98	358.84	12.14	30.569	0			
3,500.00	3,460.11	3,453.86	3,352.80	6.53	7.15	-7.19	381.69	369.19	12.50	30.524	0			
3,600.00	3,558.42	3,553.28	3,448.03	6.73	7.38	-7.20	392.41	379.54	12.87	30.482	0			
3,700.00	3,656.72	3,652.71	3,543.27	6.93	7.61	-7.22	403.13	389.88	13.24	30.442	0			
3,800.00	3,755.02	3,752.13	3,638.50	7.13	7.83	-7.23	413.84	400.23	13.61	30.404	0			
3,900.00	3,853.32	3,851.56	3,733.73	7.32	8.06	-7.25	424.56	410.58	13.98	30.367	0			
4,000.00	3,951.62	3,950.98	3,828.97	7.52	8.29	-7.26	435.28	420.93	14.35	30.333	0			
4,100.00	4,049.92	4,050.40	3,924.20	7.72	8.52	-7.28	445.99	431.27	14.72	30.300	0			
4,200.00	4,148.22	4,149.83	4,019.44	7.92	8.74	-7.29	456.71	441.62	15.09	30.269	0			
4,300.00	4,246.52	4,249.25	4,114.67	8.12	8.97	-7.30	467.42	451.97	15.46	30.239	0			
4,400.00	4,344.82	4,348.68	4,209.91	8.31	9.20	-7.31	478.14	462.31	15.83	30.211	0			
4,500.00	4,443.12	4,448.10	4,305.14	8.51	9.43	-7.32	488.86	472.66	16.20	30.183	0			
4,600.00	4,541.43	4,547.52	4,400.37	8.71	9.66	-7.33	499.57	483.01	16.57	30.157	0			
4,700.00	4,639.73	4,646.95	4,495.61	8.91	9.88	-7.34	510.29	493.36	16.93	30.132	0			
4,800.00	4,738.03	4,746.37	4,590.84	9.11	10.11	-7.35	521.01	503.70	17.30	30.108	0			
4,900.00	4,836.33	4,845.80	4,686.08	9.31	10.34	-7.36	531.72	514.05	17.67	30.086	0			
5,000.00	4,934.63	4,945.22	4,781.31	9.50	10.57	-7.37	542.44	524.40	18.04	30.063	0			
5,100.00	5,032.93	5,044.64	4,876.55	9.70	10.80	-7.38	553.16	534.75	18.41	30.042	0			

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Sec.31-T05N-R67W - Wind 12 - Original Hole - Rev 1		Offset Site Error:		0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision					
5,200.00	5,131.23	5,144.07	4,971.78	9.90	11.02	-7.38	563.87	545.09	18.78	30.022	0						
5,300.00	5,229.53	5,243.49	5,067.01	10.10	11.25	-7.39	574.59	555.44	19.15	30.002	0						
5,400.00	5,327.83	5,342.92	5,162.25	10.30	11.48	-7.40	585.31	565.79	19.52	29.983	0						
5,500.00	5,426.14	5,442.34	5,257.48	10.50	11.71	-7.41	596.02	576.13	19.89	29.965	0						
5,600.00	5,524.44	5,541.76	5,352.72	10.70	11.94	-7.41	606.74	586.48	20.26	29.948	0						
5,700.00	5,622.74	5,641.19	5,447.95	10.89	12.17	-7.42	617.46	596.83	20.63	29.931	0						
5,800.00	5,721.04	5,740.61	5,543.19	11.09	12.39	-7.43	628.18	607.18	21.00	29.914	0						
5,900.00	5,819.34	5,847.27	5,645.40	11.29	12.64	-7.43	638.75	617.37	21.38	29.874	0						
5,993.46	5,911.21	5,967.29	5,761.41	11.48	12.89	-7.47	645.77	623.99	21.77	29.658	0						
6,000.00	5,917.64	5,975.72	5,769.60	11.49	12.91	-7.47	646.12	624.32	21.80	29.638	0						
6,100.00	6,016.28	6,104.71	5,895.68	11.68	13.17	-7.54	650.97	628.78	22.19	29.332	0						
6,200.00	6,115.43	6,234.01	6,023.15	11.86	13.41	-7.59	654.79	632.23	22.56	29.024	0						
6,300.00	6,214.98	6,363.54	6,151.71	12.04	13.64	-7.62	657.56	634.66	22.90	28.712	0						
6,400.00	6,314.79	6,493.23	6,281.00	12.21	13.85	-7.64	659.29	636.07	23.22	28.393	0						
6,500.00	6,414.75	6,623.01	6,410.71	12.37	14.04	-7.65	659.96	636.45	23.51	28.067	0						
6,522.29	6,437.04	6,651.35	6,439.04	12.41	14.08	-179.82	659.97	633.46	26.51	24.894	0						
6,600.00	6,514.75	6,729.06	6,516.75	12.53	14.19	-179.82	659.97	633.22	26.75	24.674	0						
6,614.13	6,528.88	6,743.19	6,530.88	12.55	14.21	-179.82	659.97	633.18	26.79	24.634	0						
6,622.29	6,537.04	6,751.34	6,539.03	12.57	14.22	-179.82	659.97	633.15	26.82	24.611	0						
6,650.00	6,564.74	6,778.95	6,566.63	12.61	14.26	-89.82	659.97	635.96	24.01	27.487	0						
6,700.00	6,614.52	6,828.76	6,616.20	12.69	14.34	-89.80	659.97	635.78	24.18	27.288	0						
6,750.00	6,663.70	6,878.56	6,665.16	12.78	14.41	-89.79	659.97	635.61	24.36	27.089	0						
6,800.00	6,711.92	6,928.34	6,713.14	12.86	14.49	-89.78	659.97	635.43	24.54	26.889	0						
6,850.00	6,758.81	6,978.12	6,759.78	12.95	14.57	-89.77	659.97	635.24	24.73	26.687	0						
6,900.00	6,804.01	7,027.88	6,804.73	13.04	14.65	-89.76	659.97	635.05	24.92	26.482	0						
6,950.00	6,847.17	7,077.64	6,847.67	13.13	14.73	-89.76	659.97	634.85	25.12	26.273	0						
7,000.00	6,887.98	7,127.40	6,888.25	13.23	14.82	-89.76	659.97	634.64	25.33	26.058	0						
7,050.00	6,926.12	7,177.15	6,926.19	13.33	14.91	-89.75	659.97	634.43	25.54	25.838	0						
7,100.00	6,961.30	7,226.91	6,961.19	13.43	15.01	-89.75	659.97	634.20	25.77	25.609	0						
7,150.00	6,993.24	7,276.66	6,993.00	13.55	15.11	-89.76	659.97	633.96	26.01	25.372	0						
7,200.00	7,021.72	7,326.42	7,021.38	13.66	15.21	-89.76	659.97	633.70	26.27	25.124	0						
7,250.00	7,046.51	7,376.18	7,046.10	13.79	15.32	-89.77	659.97	633.43	26.54	24.865	0						
7,300.00	7,067.42	7,425.95	7,067.00	13.92	15.44	-89.77	659.97	633.14	26.83	24.596	0						
7,350.00	7,084.29	7,475.73	7,083.89	14.06	15.56	-89.78	659.97	632.83	27.14	24.317	0						
7,400.00	7,097.00	7,525.51	7,096.67	14.20	15.69	-89.79	659.97	632.51	27.47	24.029	0						
7,450.00	7,105.44	7,575.31	7,105.22	14.36	15.83	-89.81	659.97	632.16	27.81	23.734	0						
7,500.00	7,109.56	7,625.12	7,109.49	14.53	15.97	-89.82	659.97	631.81	28.16	23.433	0						
7,522.29	7,110.00	7,647.33	7,109.99	14.60	16.04	-89.83	659.97	631.65	28.33	23.299	0						
7,523.21	7,110.00	7,648.25	7,110.00	14.60	16.04	-89.83	659.97	631.30	28.67	23.021	0						
7,600.00	7,110.00	7,725.04	7,110.00	14.88	16.28	-89.83	659.97	631.06	28.91	22.825	0						
7,700.00	7,110.00	7,825.04	7,110.00	15.25	16.62	-89.83	659.97	630.26	29.71	22.212	0						
7,800.00	7,110.00	7,925.04	7,110.00	15.65	16.98	-89.83	659.97	629.42	30.55	21.600	0						
7,900.00	7,110.00	8,025.04	7,110.00	16.08	17.36	-89.83	659.97	628.54	31.44	20.995	0						
8,000.00	7,110.00	8,125.04	7,110.00	16.52	17.76	-89.83	659.98	627.62	32.35	20.398	0						
8,100.00	7,110.00	8,225.04	7,110.00	16.98	18.18	-89.83	659.98	626.67	33.31	19.814	0						
8,200.00	7,110.00	8,325.04	7,110.00	17.46	18.62	-89.83	659.98	625.68	34.29	19.246	0						
8,300.00	7,110.00	8,425.04	7,110.00	17.95	19.08	-89.83	659.98	624.67	35.31	18.693	0						
8,400.00	7,110.00	8,525.04	7,110.00	18.46	19.55	-89.83	659.98	623.63	36.34	18.159	0						
8,500.00	7,110.00	8,625.04	7,110.00	18.98	20.04	-89.83	659.98	622.57	37.41	17.643	0						
8,600.00	7,110.00	8,725.04	7,110.00	19.52	20.54	-89.83	659.98	621.49	38.49	17.145	0						
8,700.00	7,110.00	8,825.04	7,110.00	20.06	21.05	-89.83	659.98	620.38	39.60	16.666	0						
8,800.00	7,110.00	8,925.04	7,110.00	20.61	21.58	-89.83	659.98	619.26	40.72	16.206	0						
8,900.00	7,110.00	9,025.04	7,110.00	21.17	22.11	-89.83	659.98	618.12	41.87	15.764	0						
9,000.00	7,110.00	9,125.04	7,110.00	21.74	22.66	-89.83	659.98	616.96	43.02	15.340	0						

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													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 (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
9,100.00	7,110.00	9,225.04	7,110.00	22.32	23.21	-89.83	659.98	615.79	44.19	14.934	0			
9,200.00	7,110.00	9,325.04	7,110.00	22.91	23.78	-89.83	659.98	614.60	45.38	14.544	0			
9,300.00	7,110.00	9,425.04	7,110.00	23.50	24.35	-89.83	659.98	613.41	46.58	14.170	0			
9,400.00	7,110.00	9,525.04	7,110.00	24.10	24.92	-89.83	659.99	612.20	47.79	13.811	0			
9,500.00	7,110.00	9,625.04	7,110.00	24.70	25.51	-89.83	659.99	610.98	49.01	13.468	0			
9,600.00	7,110.00	9,725.04	7,110.00	25.31	26.10	-89.83	659.99	609.75	50.23	13.138	0			
9,700.00	7,110.00	9,825.04	7,110.00	25.92	26.69	-89.83	659.99	608.51	51.47	12.822	0			
9,800.00	7,110.00	9,925.04	7,110.00	26.54	27.29	-89.83	659.99	607.27	52.72	12.519	0			
9,900.00	7,110.00	10,025.04	7,110.00	27.16	27.90	-89.83	659.99	606.01	53.97	12.228	0			
10,000.00	7,110.00	10,125.04	7,110.00	27.79	28.51	-89.83	659.99	604.75	55.24	11.948	0			
10,100.00	7,110.00	10,225.04	7,110.00	28.42	29.12	-89.83	659.99	603.49	56.51	11.680	0			
10,200.00	7,110.00	10,325.04	7,110.00	29.05	29.74	-89.83	659.99	602.21	57.78	11.422	0			
10,300.00	7,110.00	10,425.04	7,110.00	29.69	30.36	-89.83	659.99	600.93	59.06	11.175	0			
10,400.00	7,110.00	10,525.04	7,110.00	30.33	30.99	-89.83	659.99	599.64	60.35	10.936	0			
10,500.00	7,110.00	10,625.04	7,110.00	30.97	31.62	-89.83	659.99	598.35	61.64	10.707	0			
10,600.00	7,110.00	10,725.04	7,110.00	31.61	32.25	-89.83	659.99	597.06	62.94	10.486	0			
10,700.00	7,110.00	10,825.04	7,110.00	32.26	32.89	-89.83	660.00	595.76	64.24	10.274	0			
10,800.00	7,110.00	10,925.04	7,110.00	32.91	33.52	-89.83	660.00	594.45	65.55	10.069	0			
10,900.00	7,110.00	11,025.04	7,110.00	33.56	34.16	-89.83	660.00	593.14	66.86	9.872	0			
11,000.00	7,110.00	11,125.04	7,110.00	34.22	34.81	-89.83	660.00	591.83	68.17	9.682	0			
11,100.00	7,110.00	11,225.04	7,110.00	34.87	35.45	-89.83	660.00	590.51	69.49	9.498	0			
11,200.00	7,110.00	11,325.04	7,110.00	35.53	36.10	-89.83	660.00	589.19	70.81	9.321	0			
11,300.00	7,110.00	11,425.04	7,110.00	36.19	36.75	-89.83	660.00	587.87	72.13	9.150	0			
11,400.00	7,110.00	11,525.04	7,110.00	36.85	37.40	-89.83	660.00	586.54	73.46	8.984	0			
11,500.00	7,110.00	11,625.04	7,110.00	37.51	38.06	-89.83	660.00	585.21	74.79	8.825	0			
11,600.00	7,110.00	11,725.04	7,110.00	38.18	38.71	-89.83	660.00	583.88	76.12	8.670	0			
11,700.00	7,110.00	11,825.04	7,110.00	38.84	39.37	-89.83	660.00	582.54	77.46	8.520	0			
11,800.00	7,110.00	11,925.04	7,110.00	39.51	40.03	-89.83	660.00	581.20	78.80	8.376	0			
11,850.55	7,110.00	11,975.59	7,110.00	39.85	40.36	-89.83	660.00	580.34	79.67	8.284	0			
11,894.53	7,110.00	12,010.27	7,110.00	40.14	40.59	-89.83	660.12	580.08	80.04	8.247	0		SF	

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 4944.00usft (Xtreme 7 - 16')

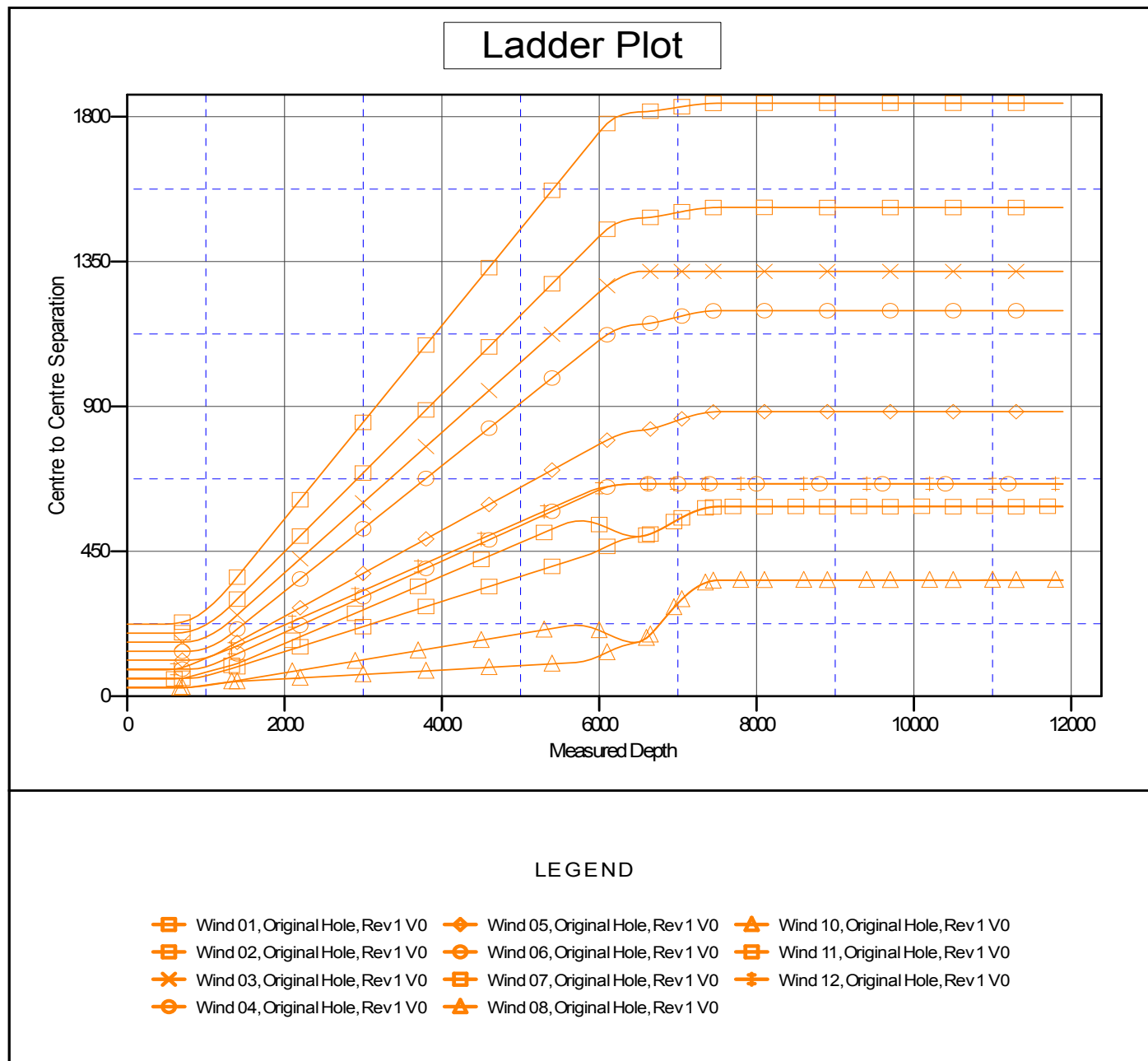
Offset Depths are relative to Offset Datum

Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Wind 09

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.36°



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Wind 09
Project:	Weld Co., Co	TVD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Reference Site:	Sec.31-T05N-R67W	MD Reference:	KB @ 4944.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Wind 09	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
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Reference Depths are relative to KB @ 4944.00usft (Xtreme 7 - 16')

Offset Depths are relative to Offset Datum

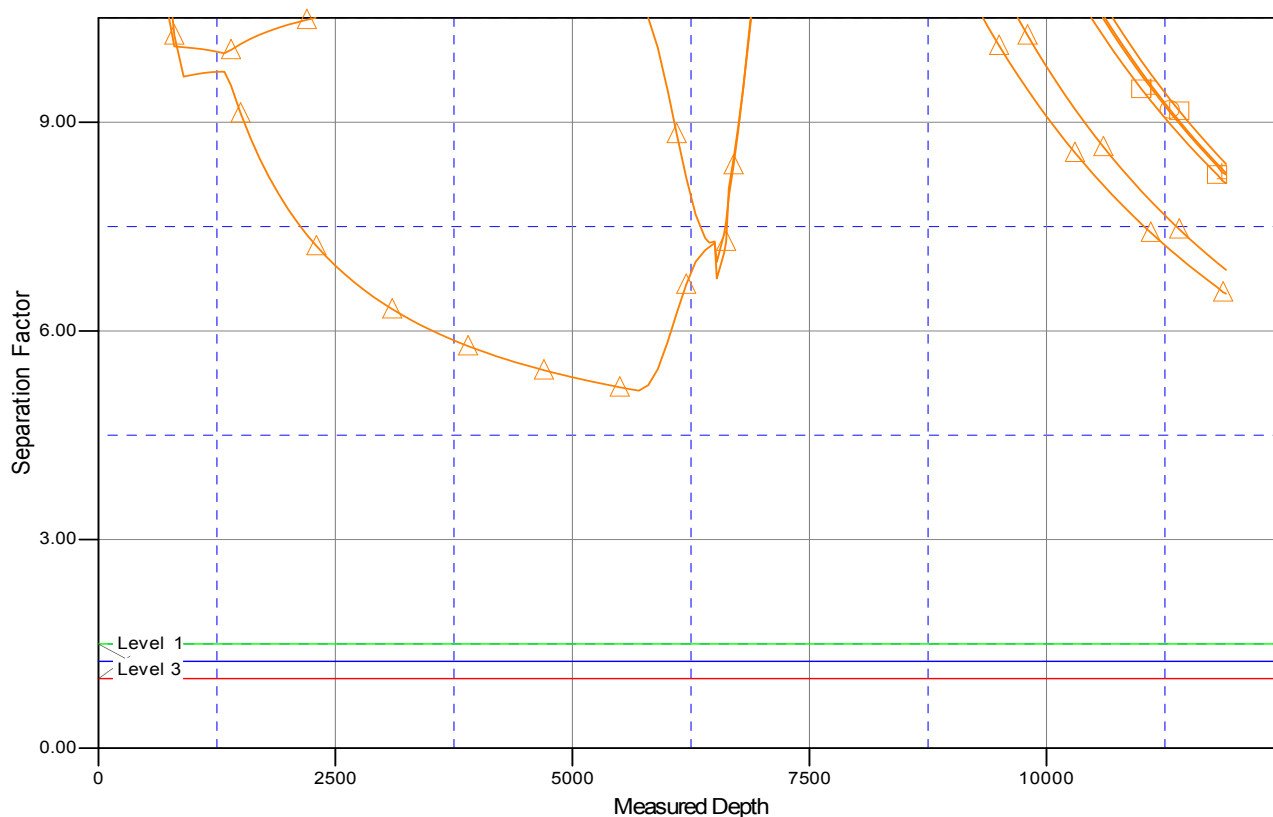
Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Wind 09

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.36°

Separation Factor Plot



LEGEND

- | | | |
|----------------------------------|----------------------------------|----------------------------------|
| Wind 01, Original Hole, Rev 1 V0 | Wind 05, Original Hole, Rev 1 V0 | Wind 10, Original Hole, Rev 1 V0 |
| Wind 02, Original Hole, Rev 1 V0 | Wind 06, Original Hole, Rev 1 V0 | Wind 11, Original Hole, Rev 1 V0 |
| Wind 03, Original Hole, Rev 1 V0 | Wind 07, Original Hole, Rev 1 V0 | Wind 12, Original Hole, Rev 1 V0 |
| Wind 04, Original Hole, Rev 1 V0 | Wind 08, Original Hole, Rev 1 V0 | |