



# **Extraction Oil & Gas**

**Weld Co., Co**

**Sec.31-T05N-R67W**

**Wind 11**

**Original Hole**

**Rev 1**

## **Anticollision Risk Report**

**14 August, 2014**



# Schlumberger

## Anticollision Risk Report

**PATHFINDER**  
A Schlumberger Company

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	11,671.55	Rev 1 (Original Hole)	Pathfinder	Pathfinder MWD	

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance		Separation Factor	Warning
			Between Centres (usft)	Between Ellipses (usft)		
Sec.31-T05N-R67W						
Wind 01 - Original Hole - Rev 1	500.00	495.00	277.98	276.30	165.390	CC, ES
Wind 01 - Original Hole - Rev 1	11,671.55	11,527.97	2,309.83	2,230.51	29.118	SF
Wind 02 - Original Hole - Rev 1	600.00	596.00	249.93	247.90	123.022	CC, ES
Wind 02 - Original Hole - Rev 1	11,671.55	11,499.26	1,979.80	1,900.52	24.973	SF
Wind 03 - Original Hole - Rev 1	600.00	596.00	221.88	219.84	109.214	CC, ES
Wind 03 - Original Hole - Rev 1	11,671.55	11,811.28	1,843.48	1,764.54	23.352	SF
Wind 04 - Original Hole - Rev 1	600.00	597.00	193.82	191.79	95.324	CC, ES
Wind 04 - Original Hole - Rev 1	11,671.55	11,487.78	1,649.78	1,570.52	20.816	SF
Wind 05 - Original Hole - Rev 1	600.00	597.00	166.13	164.10	81.706	CC, ES
Wind 05 - Original Hole - Rev 1	11,671.55	11,492.07	1,319.72	1,240.46	16.651	SF
Wind 06 - Original Hole - Rev 1	600.00	598.00	138.08	136.05	67.851	CC, ES
Wind 06 - Original Hole - Rev 1	11,671.55	11,818.83	1,198.79	1,120.68	15.348	SF
Wind 07 - Original Hole - Rev 1	600.00	598.00	110.03	107.99	54.065	CC, ES
Wind 07 - Original Hole - Rev 1	11,671.55	11,511.45	989.72	910.44	12.484	SF
Wind 08 - Original Hole - Rev 1	600.00	599.00	81.97	79.94	40.246	CC, ES
Wind 08 - Original Hole - Rev 1	11,671.55	11,550.64	660.06	580.73	8.321	SF
Wind 09 - Original Hole - Rev 1	600.00	599.00	53.92	51.89	26.474	CC, ES
Wind 09 - Original Hole - Rev 1	11,671.55	11,887.33	590.00	517.45	8.132	SF
Wind 10 - Original Hole - Rev 1	600.00	600.00	28.06	26.02	13.763	CC, ES
Wind 10 - Original Hole - Rev 1	11,671.55	11,599.57	330.03	250.64	4.157	SF
Wind 12 - Original Hole - Rev 1	466.33	467.33	28.05	26.48	17.826	CC
Wind 12 - Original Hole - Rev 1	500.00	500.99	28.05	26.36	16.587	ES
Wind 12 - Original Hole - Rev 1	5,500.00	5,488.69	67.24	46.80	3.290	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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				
0.00	0.00	0.00	0.00	0.00	0.00	0.39	278.02									
100.00	100.00	95.00	95.00	0.15	0.14	0.39	277.98	277.69	0.29	972.346	0					
200.00	200.00	195.00	195.00	0.32	0.31	0.39	277.98	277.35	0.63	438.761	0					
300.00	300.00	295.00	295.00	0.50	0.49	0.39	277.98	277.00	0.98	282.896	0					
400.00	400.00	395.00	395.00	0.67	0.66	0.39	277.98	276.65	1.33	208.742	0					
500.00	500.00	495.00	495.00	0.84	0.84	0.39	277.98	276.30	1.68	165.390	0		CC, ES			
600.00	600.00	586.72	586.71	1.02	1.00	0.33	279.39	277.37	2.02	138.626	0					
700.00	699.98	677.72	677.61	1.19	1.16	174.78	285.65	283.30	2.35	121.655	0					
800.00	799.84	767.87	767.48	1.37	1.32	174.58	298.46	295.78	2.68	111.484	0					
900.00	899.45	856.70	855.78	1.55	1.47	174.33	317.73	314.73	3.00	105.858	0					
1,000.00	998.70	953.64	951.97	1.73	1.65	174.10	341.88	338.54	3.34	102.455	0					
1,100.00	1,097.47	1,049.78	1,047.36	1.91	1.82	173.93	369.38	365.71	3.67	100.715	0					
1,200.00	1,195.62	1,144.90	1,141.75	2.10	2.00	173.83	400.21	396.21	3.99	100.222	0					
1,300.00	1,293.06	1,238.90	1,235.02	2.30	2.17	173.77	434.31	430.00	4.31	100.690	0					
1,400.00	1,389.64	1,331.66	1,327.06	2.50	2.34	173.76	471.66	467.03	4.63	101.917	0					
1,427.52	1,416.06	1,356.95	1,352.16	2.56	2.39	173.76	482.50	477.79	4.71	102.370	0					
1,500.00	1,485.54	1,423.43	1,418.12	2.71	2.51	173.82	511.37	506.41	4.96	103.108	0					
1,600.00	1,581.39	1,515.15	1,509.13	2.92	2.68	173.90	551.21	545.91	5.30	104.003	0					
1,700.00	1,677.25	1,606.87	1,600.14	3.14	2.85	173.97	591.04	585.40	5.64	104.779	0					
1,800.00	1,773.11	1,698.59	1,691.15	3.36	3.02	174.03	630.88	624.89	5.98	105.460	0					
1,900.00	1,868.96	1,790.32	1,782.17	3.57	3.19	174.09	670.71	664.39	6.32	106.062	0					
2,000.00	1,964.82	1,882.04	1,873.18	3.79	3.36	174.14	710.55	703.88	6.67	106.598	0					
2,100.00	2,060.68	1,973.76	1,964.19	4.01	3.53	174.18	750.38	743.37	7.01	107.078	0					
2,200.00	2,156.54	2,065.48	2,055.20	4.24	3.70	174.22	790.22	782.87	7.35	107.510	0					
2,300.00	2,252.39	2,157.20	2,146.21	4.46	3.87	174.25	830.06	822.36	7.69	107.902	0					
2,400.00	2,348.25	2,248.92	2,237.22	4.68	4.04	174.28	869.89	861.86	8.04	108.258	0					
2,500.00	2,444.11	2,340.64	2,328.24	4.91	4.21	174.31	909.73	901.35	8.38	108.583	0					
2,600.00	2,539.96	2,432.37	2,419.25	5.13	4.38	174.34	949.57	940.85	8.72	108.882	0					
2,700.00	2,635.82	2,524.09	2,510.26	5.35	4.55	174.36	989.40	980.34	9.06	109.157	0					
2,800.00	2,731.68	2,615.81	2,601.27	5.58	4.72	174.39	1,029.24	1,019.83	9.41	109.410	0					
2,900.00	2,827.53	2,707.53	2,692.28	5.80	4.89	174.41	1,069.08	1,059.33	9.75	109.645	0					
3,000.00	2,923.39	2,799.25	2,783.29	6.03	5.06	174.43	1,108.92	1,098.82	10.09	109.863	0					
3,100.00	3,019.25	2,890.97	2,874.30	6.26	5.23	174.44	1,148.75	1,138.32	10.44	110.066	0					
3,200.00	3,115.11	2,982.70	2,965.32	6.48	5.40	174.46	1,188.59	1,177.81	10.78	110.256	0					
3,300.00	3,210.96	3,074.42	3,056.33	6.71	5.57	174.48	1,228.43	1,217.31	11.12	110.433	0					
3,400.00	3,306.82	3,166.14	3,147.34	6.94	5.74	174.49	1,268.27	1,256.80	11.47	110.600	0					
3,500.00	3,402.68	3,257.86	3,238.35	7.16	5.91	174.50	1,308.11	1,296.30	11.81	110.756	0					
3,600.00	3,498.53	3,349.58	3,329.36	7.39	6.08	174.52	1,347.94	1,335.79	12.15	110.903	0					
3,700.00	3,594.39	3,441.30	3,420.37	7.62	6.25	174.53	1,387.78	1,375.28	12.50	111.042	0					
3,800.00	3,690.25	3,533.02	3,511.38	7.84	6.42	174.54	1,427.62	1,414.78	12.84	111.173	0					
3,900.00	3,786.10	3,624.75	3,602.40	8.07	6.59	174.55	1,467.46	1,454.27	13.19	111.297	0					
4,000.00	3,881.96	3,716.47	3,693.41	8.30	6.76	174.56	1,507.30	1,493.77	13.53	111.414	0					
4,100.00	3,977.82	3,808.19	3,784.42	8.53	6.93	174.57	1,547.14	1,533.26	13.87	111.525	0					
4,200.00	4,073.67	3,899.91	3,875.43	8.76	7.10	174.58	1,586.97	1,572.76	14.22	111.631	0					
4,300.00	4,169.53	3,991.63	3,966.44	8.98	7.27	174.59	1,626.81	1,612.25	14.56	111.732	0					
4,400.00	4,265.39	4,083.35	4,057.45	9.21	7.45	174.60	1,666.65	1,651.75	14.90	111.827	0					
4,500.00	4,361.25	4,175.08	4,148.46	9.44	7.62	174.61	1,706.49	1,691.24	15.25	111.919	0					
4,600.00	4,457.10	4,266.80	4,239.48	9.67	7.79	174.61	1,746.33	1,730.74	15.59	112.006	0					
4,700.00	4,552.96	4,358.52	4,330.49	9.90	7.96	174.62	1,786.17	1,770.23	15.94	112.089	0					
4,800.00	4,648.82	4,450.24	4,421.50	10.12	8.13	174.63	1,826.01	1,809.73	16.28	112.169	0					
4,900.00	4,744.67	4,541.96	4,512.51	10.35	8.30	174.64	1,865.84	1,849.22	16.62	112.245	0					
5,000.00	4,840.53	4,633.68	4,603.52	10.58	8.47	174.64	1,905.68	1,888.72	16.97	112.318	0					
5,100.00	4,936.39	4,725.40	4,694.53	10.81	8.64	174.65	1,945.52	1,928.21	17.31	112.388	0					
5,200.00	5,032.24	4,817.13	4,785.54	11.04	8.81	174.65	1,985.36	1,967.71	17.65	112.456	0					

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**  
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<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	5,128.10	4,908.85	4,876.56	11.27	8.98	174.66	2,025.20	2,007.20	18.00	112.520	0					
5,400.00	5,223.96	5,000.57	4,967.57	11.50	9.15	174.67	2,065.04	2,046.70	18.34	112.582	0					
5,480.35	5,300.98	5,074.27	5,040.70	11.68	9.29	174.67	2,097.05	2,078.43	18.62	112.631	0					
5,500.00	5,319.83	5,092.32	5,058.61	11.72	9.32	174.69	2,104.82	2,086.11	18.70	112.534	0					
5,600.00	5,416.35	5,184.97	5,150.54	11.94	9.50	174.76	2,142.42	2,123.29	19.13	112.007	0					
5,700.00	5,513.72	5,278.88	5,243.72	12.15	9.67	174.82	2,176.78	2,157.24	19.54	111.413	0					
5,800.00	5,611.83	5,373.92	5,338.03	12.34	9.85	174.86	2,207.86	2,187.93	19.93	110.759	0					
5,900.00	5,710.55	5,469.98	5,433.34	12.53	10.03	174.88	2,235.62	2,215.30	20.32	110.047	0					
6,000.00	5,809.76	5,566.94	5,529.55	12.70	10.21	174.89	2,260.02	2,239.34	20.68	109.282	0					
6,100.00	5,909.35	5,664.69	5,626.55	12.87	10.39	174.89	2,281.03	2,260.00	21.03	108.465	0					
6,200.00	6,009.19	5,763.10	5,724.20	13.02	10.57	174.87	2,298.64	2,277.27	21.36	107.599	0					
6,307.87	6,117.04	6,133.24	6,093.12	13.18	11.22	0.18	2,309.82	2,285.24	24.59	93.944	0					
6,407.87	6,217.04	6,252.16	6,212.04	13.33	11.42	0.18	2,309.84	2,284.91	24.93	92.649	0					
6,450.00	6,259.13	6,294.76	6,254.62	13.39	11.49	90.18	2,309.84	2,287.16	22.68	101.845	0					
6,500.00	6,308.77	6,345.43	6,304.96	13.46	11.58	90.19	2,309.85	2,286.99	22.86	101.055	0					
6,550.00	6,357.72	6,396.13	6,354.65	13.54	11.66	90.20	2,309.85	2,286.81	23.04	100.262	0					
6,600.00	6,405.59	6,446.85	6,403.29	13.62	11.75	90.21	2,309.85	2,286.62	23.22	99.463	0					
6,650.00	6,452.03	6,497.60	6,450.49	13.70	11.85	90.21	2,309.85	2,286.44	23.41	98.656	0					
6,700.00	6,496.68	6,548.35	6,495.86	13.78	11.94	90.21	2,309.85	2,286.24	23.61	97.836	0					
6,750.00	6,539.20	6,599.12	6,539.06	13.87	12.04	90.21	2,309.85	2,286.04	23.81	96.999	0					
6,800.00	6,579.27	6,649.88	6,579.73	13.96	12.15	90.21	2,309.85	2,285.82	24.03	96.138	0					
6,850.00	6,616.58	6,700.65	6,617.55	14.06	12.26	90.21	2,309.85	2,285.60	24.25	95.240	0					
6,900.00	6,650.85	6,751.40	6,652.23	14.16	12.37	90.21	2,309.85	2,285.36	24.49	94.307	0					
6,950.00	6,681.82	6,802.13	6,683.48	14.26	12.49	90.20	2,309.85	2,285.10	24.75	93.336	0					
7,000.00	6,709.25	6,852.84	6,711.06	14.37	12.62	90.20	2,309.85	2,284.83	25.02	92.322	0					
7,050.00	6,732.94	6,903.52	6,734.77	14.49	12.76	90.19	2,309.85	2,284.54	25.31	91.267	0					
7,100.00	6,752.70	6,954.17	6,754.42	14.61	12.90	90.18	2,309.84	2,284.23	25.62	90.171	0					
7,150.00	6,768.39	7,004.78	6,769.86	14.74	13.06	90.17	2,309.84	2,283.90	25.94	89.039	0					
7,200.00	6,779.87	7,055.35	6,780.98	14.88	13.22	90.15	2,309.84	2,283.56	26.29	87.877	0					
7,250.00	6,787.08	7,105.87	6,787.70	15.02	13.39	90.14	2,309.84	2,283.20	26.64	86.692	0					
7,300.00	6,789.94	7,156.34	6,790.00	15.18	13.57	90.13	2,309.84	2,282.82	27.02	85.495	0					
7,307.87	6,790.00	7,164.22	6,790.00	15.20	13.60	90.12	2,309.84	2,282.76	27.08	85.306	0					
7,400.00	6,790.00	7,256.35	6,790.00	15.50	13.96	90.12	2,309.84	2,282.04	27.80	83.092	0					
7,500.00	6,790.00	7,356.35	6,790.00	15.86	14.36	90.12	2,309.84	2,281.21	28.62	80.695	0					
7,600.00	6,790.00	7,456.35	6,790.00	16.23	14.79	90.12	2,309.84	2,280.34	29.49	78.314	0					
7,700.00	6,790.00	7,556.35	6,790.00	16.63	15.24	90.12	2,309.84	2,279.43	30.40	75.969	0					
7,800.00	6,790.00	7,656.35	6,790.00	17.05	15.71	90.12	2,309.84	2,278.49	31.35	73.674	0					
7,900.00	6,790.00	7,756.35	6,790.00	17.49	16.20	90.12	2,309.84	2,277.51	32.33	71.439	0					
8,000.00	6,790.00	7,856.35	6,790.00	17.95	16.70	90.12	2,309.84	2,276.49	33.34	69.273	0					
8,100.00	6,790.00	7,956.35	6,790.00	18.43	17.22	90.12	2,309.84	2,275.46	34.38	67.179	0					
8,200.00	6,790.00	8,056.35	6,790.00	18.92	17.75	90.12	2,309.84	2,274.39	35.45	65.162	0					
8,300.00	6,790.00	8,156.35	6,790.00	19.42	18.29	90.12	2,309.84	2,273.30	36.54	63.222	0					
8,400.00	6,790.00	8,256.35	6,790.00	19.94	18.84	90.12	2,309.84	2,272.19	37.64	61.359	0					
8,500.00	6,790.00	8,356.35	6,790.00	20.47	19.40	90.12	2,309.84	2,271.07	38.77	59.573	0					
8,600.00	6,790.00	8,456.35	6,790.00	21.01	19.98	90.12	2,309.84	2,269.92	39.92	57.863	0					
8,700.00	6,790.00	8,556.35	6,790.00	21.56	20.56	90.12	2,309.84	2,268.76	41.08	56.226	0					
8,800.00	6,790.00	8,656.35	6,790.00	22.12	21.14	90.12	2,309.84	2,267.58	42.26	54.660	0					
8,900.00	6,790.00	8,756.35	6,790.00	22.69	21.74	90.12	2,309.84	2,266.39	43.45	53.162	0					
9,000.00	6,790.00	8,856.35	6,790.00	23.26	22.34	90.12	2,309.84	2,265.19	44.65	51.729	0					
9,100.00	6,790.00	8,956.35	6,790.00	23.84	22.94	90.12	2,309.84	2,263.97	45.87	50.358	0					
9,200.00	6,790.00	9,056.35	6,790.00	24.43	23.55	90.12	2,309.84	2,262.74	47.09	49.048	0					
9,300.00	6,790.00	9,156.35	6,790.00	25.03	24.17	90.12	2,309.84	2,261.51	48.33	47.794	0					
9,400.00	6,790.00	9,256.35	6,790.00	25.63	24.79	90.12	2,309.84	2,260.26	49.57	46.594	0					
9,500.00	6,790.00	9,356.35	6,790.00	26.23	25.42	90.12	2,309.84	2,259.01	50.83	45.445	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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		
9,600.00	6,790.00	9,456.35	6,790.00	26.84	26.05	90.12	2,309.84	2,257.75	52.09	44.344	0			
9,700.00	6,790.00	9,556.35	6,790.00	27.46	26.68	90.12	2,309.84	2,256.48	53.36	43.290	0			
9,800.00	6,790.00	9,656.35	6,790.00	28.08	27.32	90.12	2,309.84	2,255.21	54.63	42.280	0			
9,900.00	6,790.00	9,756.35	6,790.00	28.70	27.96	90.12	2,309.84	2,253.92	55.91	41.311	0			
10,000.00	6,790.00	9,856.35	6,790.00	29.33	28.60	90.12	2,309.84	2,252.64	57.20	40.381	0			
10,100.00	6,790.00	9,956.35	6,790.00	29.96	29.25	90.12	2,309.84	2,251.34	58.49	39.488	0			
10,200.00	6,790.00	10,056.35	6,790.00	30.59	29.89	90.12	2,309.84	2,250.05	59.79	38.631	0			
10,300.00	6,790.00	10,156.35	6,790.00	31.23	30.54	90.12	2,309.84	2,248.74	61.10	37.807	0			
10,400.00	6,790.00	10,256.35	6,790.00	31.87	31.20	90.12	2,309.84	2,247.44	62.40	37.015	0			
10,500.00	6,790.00	10,356.35	6,790.00	32.51	31.85	90.12	2,309.84	2,246.12	63.71	36.253	0			
10,600.00	6,790.00	10,456.35	6,790.00	33.15	32.51	90.12	2,309.84	2,244.81	65.03	35.519	0			
10,700.00	6,790.00	10,556.35	6,790.00	33.80	33.17	90.12	2,309.84	2,243.49	66.35	34.813	0			
10,800.00	6,790.00	10,656.35	6,790.00	34.45	33.83	90.12	2,309.84	2,242.17	67.67	34.132	0			
10,900.00	6,790.00	10,756.35	6,790.00	35.10	34.49	90.12	2,309.84	2,240.84	69.00	33.476	0			
11,000.00	6,790.00	10,856.35	6,790.00	35.76	35.16	90.12	2,309.84	2,239.51	70.33	32.843	0			
11,100.00	6,790.00	10,956.35	6,790.00	36.41	35.82	90.12	2,309.84	2,238.18	71.66	32.233	0			
11,200.00	6,790.00	11,056.35	6,790.00	37.07	36.49	90.12	2,309.84	2,236.84	73.00	31.643	0			
11,300.00	6,790.00	11,156.35	6,790.00	37.73	37.16	90.12	2,309.84	2,235.50	74.33	31.074	0			
11,400.00	6,790.00	11,256.35	6,790.00	38.39	37.83	90.12	2,309.84	2,234.16	75.67	30.523	0			
11,500.00	6,790.00	11,356.35	6,790.00	39.05	38.50	90.12	2,309.84	2,232.82	77.02	29.991	0			
11,600.00	6,790.00	11,456.35	6,790.00	39.71	39.17	90.12	2,309.84	2,231.48	78.36	29.476	0			
11,671.55	6,790.00	11,527.97	6,790.00	40.19	39.65	90.12	2,309.83	2,230.51	79.33	29.118	0	SF		



# Schlumberger

## Anticollision Risk Report

**PATHFINDER**  
A Schlumberger Company

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	0.41	249.96						CC, ES	
100.00	100.00	96.00	96.00	0.15	0.14	0.41	249.93	249.64	0.29	869.763	0			
200.00	200.00	196.00	196.00	0.32	0.31	0.41	249.93	249.29	0.64	393.401	0			
300.00	300.00	296.00	296.00	0.50	0.49	0.41	249.93	248.94	0.98	253.897	0			
400.00	400.00	396.00	396.00	0.67	0.66	0.41	249.93	248.59	1.33	187.432	0			
500.00	500.00	496.00	496.00	0.84	0.84	0.41	249.93	248.25	1.68	148.546	0			
600.00	600.00	596.00	596.00	1.02	1.01	0.41	249.93	247.90	2.03	123.022	0			
700.00	699.98	688.66	688.65	1.19	1.17	174.92	253.06	250.69	2.37	106.910	0			
800.00	799.84	780.45	780.33	1.37	1.33	174.67	262.66	259.96	2.70	97.314	0			
900.00	899.45	877.84	877.50	1.55	1.51	174.32	277.70	274.66	3.04	91.397	0			
1,000.00	998.70	976.10	975.52	1.73	1.68	174.06	296.22	292.84	3.38	87.732	0			
1,100.00	1,097.47	1,073.66	1,072.85	1.91	1.85	173.89	318.15	314.43	3.71	85.745	0			
1,200.00	1,195.62	1,170.40	1,169.37	2.10	2.02	173.79	343.44	339.40	4.04	85.014	0			
1,300.00	1,293.06	1,266.21	1,264.94	2.30	2.19	173.74	372.08	367.72	4.36	85.251	0			
1,400.00	1,389.64	1,360.96	1,359.47	2.50	2.36	173.74	404.03	399.34	4.68	86.254	0			
1,427.52	1,416.06	1,386.84	1,385.29	2.56	2.41	173.75	413.39	408.62	4.77	86.646	0			
1,500.00	1,485.54	1,454.87	1,453.16	2.71	2.53	173.83	438.39	433.37	5.02	87.319	0			
1,600.00	1,581.39	1,548.74	1,546.80	2.92	2.69	173.91	472.87	467.51	5.37	88.137	0			
1,700.00	1,677.25	1,642.60	1,640.44	3.14	2.86	173.99	507.36	501.65	5.71	88.849	0			
1,800.00	1,773.11	1,736.46	1,734.08	3.36	3.03	174.06	541.85	535.79	6.06	89.474	0			
1,900.00	1,868.96	1,830.33	1,827.72	3.57	3.20	174.12	576.34	569.93	6.40	90.027	0			
2,000.00	1,964.82	1,924.19	1,921.36	3.79	3.36	174.17	610.82	604.08	6.75	90.519	0			
2,100.00	2,060.68	2,018.05	2,015.00	4.01	3.53	174.22	645.31	638.22	7.09	90.960	0			
2,200.00	2,156.54	2,111.91	2,108.64	4.24	3.70	174.26	679.80	672.36	7.44	91.358	0			
2,300.00	2,252.39	2,205.78	2,202.29	4.46	3.86	174.30	714.29	706.50	7.79	91.719	0			
2,400.00	2,348.25	2,299.64	2,295.93	4.68	4.03	174.33	748.78	740.65	8.13	92.047	0			
2,500.00	2,444.11	2,393.50	2,389.57	4.91	4.20	174.37	783.27	774.79	8.48	92.347	0			
2,600.00	2,539.96	2,487.37	2,483.21	5.13	4.36	174.39	817.76	808.93	8.83	92.623	0			
2,700.00	2,635.82	2,581.23	2,576.85	5.35	4.53	174.42	852.25	843.08	9.18	92.876	0			
2,800.00	2,731.68	2,675.09	2,670.49	5.58	4.70	174.45	886.74	877.22	9.52	93.111	0			
2,900.00	2,827.53	2,768.96	2,764.13	5.80	4.87	174.47	921.23	911.36	9.87	93.328	0			
3,000.00	2,923.39	2,862.82	2,857.77	6.03	5.03	174.49	955.72	945.51	10.22	93.530	0			
3,100.00	3,019.25	2,956.68	2,951.41	6.26	5.20	174.51	990.22	979.65	10.57	93.718	0			
3,200.00	3,115.11	3,050.55	3,045.05	6.48	5.37	174.53	1,024.71	1,013.79	10.91	93.893	0			
3,300.00	3,210.96	3,144.41	3,138.69	6.71	5.53	174.54	1,059.20	1,047.94	11.26	94.057	0			
3,400.00	3,306.82	3,238.27	3,232.33	6.94	5.70	174.56	1,093.69	1,082.08	11.61	94.212	0			
3,500.00	3,402.68	3,332.13	3,325.97	7.16	5.87	174.58	1,128.18	1,116.22	11.96	94.356	0			
3,600.00	3,498.53	3,426.00	3,419.61	7.39	6.04	174.59	1,162.67	1,150.37	12.30	94.493	0			
3,700.00	3,594.39	3,519.86	3,513.26	7.62	6.20	174.60	1,197.16	1,184.51	12.65	94.621	0			
3,800.00	3,690.25	3,613.72	3,606.90	7.84	6.37	174.62	1,231.65	1,218.65	13.00	94.743	0			
3,900.00	3,786.10	3,707.59	3,700.54	8.07	6.54	174.63	1,266.15	1,252.80	13.35	94.858	0			
4,000.00	3,881.96	3,801.45	3,794.18	8.30	6.70	174.64	1,300.64	1,286.94	13.70	94.967	0			
4,100.00	3,977.82	3,895.31	3,887.82	8.53	6.87	174.65	1,335.13	1,321.08	14.04	95.070	0			
4,200.00	4,073.67	3,989.18	3,981.46	8.76	7.04	174.66	1,369.62	1,355.23	14.39	95.168	0			
4,300.00	4,169.53	4,083.04	4,075.10	8.98	7.21	174.67	1,404.11	1,389.37	14.74	95.262	0			
4,400.00	4,265.39	4,176.90	4,168.74	9.21	7.37	174.68	1,438.60	1,423.52	15.09	95.351	0			
4,500.00	4,361.25	4,270.77	4,262.38	9.44	7.54	174.69	1,473.09	1,457.66	15.44	95.436	0			
4,600.00	4,457.10	4,364.63	4,356.02	9.67	7.71	174.70	1,507.59	1,491.80	15.78	95.517	0			
4,700.00	4,552.96	4,458.49	4,449.66	9.90	7.87	174.70	1,542.08	1,525.95	16.13	95.594	0			
4,800.00	4,648.82	4,552.35	4,543.30	10.12	8.04	174.71	1,576.57	1,560.09	16.48	95.668	0			
4,900.00	4,744.67	4,646.22	4,636.94	10.35	8.21	174.72	1,611.06	1,594.23	16.83	95.739	0			
5,000.00	4,840.53	4,740.08	4,730.59	10.58	8.38	174.73	1,645.55	1,628.38	17.18	95.807	0			
5,100.00	4,936.39	4,833.94	4,824.23	10.81	8.54	174.73	1,680.05	1,662.52	17.52	95.873	0			
5,200.00	5,032.24	4,927.81	4,917.87	11.04	8.71	174.74	1,714.54	1,696.67	17.87	95.935	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	5,128.10	5,021.67	5,011.51	11.27	8.88	174.74	1,749.03	1,730.81	18.22	95.996	0					
5,400.00	5,223.96	5,115.53	5,105.15	11.50	9.04	174.75	1,783.52	1,764.95	18.57	96.053	0					
5,480.35	5,300.98	5,190.95	5,180.39	11.68	9.18	174.76	1,811.24	1,792.39	18.85	96.098	0					
5,500.00	5,319.83	5,209.42	5,198.81	11.72	9.21	174.77	1,817.95	1,799.02	18.93	96.026	0					
5,600.00	5,416.35	5,304.09	5,293.25	11.94	9.38	174.83	1,850.16	1,830.81	19.35	95.614	0					
5,700.00	5,513.72	5,399.81	5,388.75	12.15	9.55	174.87	1,879.06	1,859.30	19.75	95.122	0					
5,800.00	5,611.83	5,496.49	5,485.20	12.34	9.72	174.90	1,904.61	1,884.47	20.14	94.555	0					
5,900.00	5,710.55	5,593.98	5,582.47	12.53	9.90	174.91	1,926.79	1,906.27	20.52	93.918	0					
6,000.00	5,809.76	5,692.19	5,680.44	12.70	10.07	174.90	1,945.56	1,924.69	20.87	93.214	0					
6,100.00	5,909.35	5,790.99	5,779.00	12.87	10.25	174.88	1,960.91	1,939.70	21.21	92.447	0					
6,200.00	6,009.19	5,890.25	5,878.03	13.02	10.42	174.85	1,972.82	1,951.29	21.53	91.620	0					
6,307.87	6,117.04	6,118.16	6,105.68	13.18	10.82	0.18	1,979.80	1,955.64	24.16	81.946	0					
6,407.87	6,217.04	6,225.52	6,213.04	13.33	11.01	0.18	1,979.81	1,955.32	24.49	80.840	0					
6,450.00	6,259.13	6,268.06	6,255.56	13.39	11.08	90.18	1,979.81	1,957.24	22.57	87.716	0					
6,500.00	6,308.77	6,318.63	6,305.80	13.46	11.17	90.19	1,979.81	1,957.06	22.75	87.030	0					
6,550.00	6,357.72	6,369.23	6,355.37	13.54	11.26	90.20	1,979.81	1,956.88	22.93	86.342	0					
6,600.00	6,405.59	6,419.84	6,403.88	13.62	11.36	90.20	1,979.81	1,956.70	23.12	85.649	0					
6,650.00	6,452.03	6,470.47	6,450.95	13.70	11.45	90.21	1,979.81	1,956.51	23.31	84.949	0					
6,700.00	6,496.68	6,521.10	6,496.20	13.78	11.55	90.21	1,979.81	1,956.31	23.50	84.236	0					
6,750.00	6,539.20	6,571.74	6,539.28	13.87	11.65	90.21	1,979.81	1,956.11	23.71	83.506	0					
6,800.00	6,579.27	6,622.38	6,579.84	13.96	11.76	90.21	1,979.81	1,955.89	23.92	82.755	0					
6,850.00	6,616.58	6,673.02	6,617.56	14.06	11.87	90.21	1,979.81	1,955.66	24.15	81.978	0					
6,900.00	6,650.85	6,723.64	6,652.15	14.16	11.99	90.20	1,979.81	1,955.42	24.39	81.171	0					
6,950.00	6,681.82	6,774.25	6,683.34	14.26	12.12	90.20	1,979.81	1,955.17	24.65	80.331	0					
7,000.00	6,709.25	6,824.84	6,710.88	14.37	12.25	90.19	1,979.81	1,954.90	24.92	79.456	0					
7,050.00	6,732.94	6,875.40	6,734.56	14.49	12.39	90.18	1,979.81	1,954.61	25.21	78.545	0					
7,100.00	6,752.70	6,925.93	6,754.21	14.61	12.55	90.17	1,979.81	1,954.30	25.51	77.599	0					
7,150.00	6,768.39	6,976.43	6,769.67	14.74	12.71	90.16	1,979.81	1,953.97	25.84	76.622	0					
7,200.00	6,779.87	7,026.89	6,780.83	14.88	12.88	90.15	1,979.81	1,953.63	26.18	75.619	0					
7,250.00	6,787.08	7,077.31	6,787.62	15.02	13.06	90.13	1,979.81	1,953.27	26.54	74.596	0					
7,300.00	6,789.94	7,127.69	6,790.00	15.18	13.25	90.12	1,979.81	1,952.89	26.91	73.563	0					
7,307.87	6,790.00	7,135.57	6,790.00	15.20	13.28	90.12	1,979.81	1,952.83	26.97	73.399	0					
7,400.00	6,790.00	7,227.70	6,790.00	15.50	13.64	90.12	1,979.81	1,952.11	27.70	71.484	0					
7,500.00	6,790.00	7,327.70	6,790.00	15.86	14.06	90.12	1,979.81	1,951.28	28.52	69.408	0					
7,600.00	6,790.00	7,427.70	6,790.00	16.23	14.50	90.12	1,979.81	1,950.41	29.40	67.349	0					
7,700.00	6,790.00	7,527.70	6,790.00	16.63	14.96	90.12	1,979.81	1,949.50	30.31	65.321	0					
7,800.00	6,790.00	7,627.70	6,790.00	17.05	15.44	90.12	1,979.81	1,948.55	31.26	63.337	0					
7,900.00	6,790.00	7,727.70	6,790.00	17.49	15.94	90.12	1,979.81	1,947.56	32.24	61.406	0					
8,000.00	6,790.00	7,827.70	6,790.00	17.95	16.45	90.12	1,979.81	1,946.55	33.25	59.535	0					
8,100.00	6,790.00	7,927.70	6,790.00	18.43	16.97	90.12	1,979.81	1,945.51	34.30	57.727	0					
8,200.00	6,790.00	8,027.70	6,790.00	18.92	17.51	90.12	1,979.81	1,944.44	35.36	55.986	0					
8,300.00	6,790.00	8,127.70	6,790.00	19.42	18.06	90.12	1,979.81	1,943.35	36.45	54.313	0					
8,400.00	6,790.00	8,227.70	6,790.00	19.94	18.62	90.12	1,979.81	1,942.24	37.56	52.706	0					
8,500.00	6,790.00	8,327.70	6,790.00	20.47	19.18	90.12	1,979.81	1,941.11	38.69	51.167	0					
8,600.00	6,790.00	8,427.70	6,790.00	21.01	19.76	90.12	1,979.81	1,939.96	39.84	49.693	0					
8,700.00	6,790.00	8,527.70	6,790.00	21.56	20.35	90.12	1,979.81	1,938.80	41.00	48.282	0					
8,800.00	6,790.00	8,627.70	6,790.00	22.12	20.94	90.12	1,979.81	1,937.62	42.18	46.933	0					
8,900.00	6,790.00	8,727.70	6,790.00	22.69	21.54	90.12	1,979.81	1,936.43	43.38	45.643	0					
9,000.00	6,790.00	8,827.70	6,790.00	23.26	22.14	90.12	1,979.81	1,935.22	44.58	44.409	0					
9,100.00	6,790.00	8,927.70	6,790.00	23.84	22.75	90.12	1,979.81	1,934.01	45.80	43.230	0					
9,200.00	6,790.00	9,027.70	6,790.00	24.43	23.37	90.12	1,979.81	1,932.78	47.02	42.102	0					
9,300.00	6,790.00	9,127.70	6,790.00	25.03	23.99	90.12	1,979.81	1,931.54	48.26	41.023	0					
9,400.00	6,790.00	9,227.70	6,790.00	25.63	24.62	90.12	1,979.81	1,930.30	49.51	39.990	0					
9,500.00	6,790.00	9,327.70	6,790.00	26.23	25.25	90.12	1,979.81	1,929.04	50.76	39.002	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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		
9,600.00	6,790.00	9,427.70	6,790.00	26.84	25.88	90.12	1,979.81	1,927.78	52.02	38.056	0			
9,700.00	6,790.00	9,527.70	6,790.00	27.46	26.52	90.12	1,979.81	1,926.51	53.29	37.149	0			
9,800.00	6,790.00	9,627.70	6,790.00	28.08	27.16	90.12	1,979.81	1,925.24	54.57	36.280	0			
9,900.00	6,790.00	9,727.70	6,790.00	28.70	27.80	90.12	1,979.81	1,923.95	55.85	35.447	0			
10,000.00	6,790.00	9,827.70	6,790.00	29.33	28.45	90.12	1,979.81	1,922.66	57.14	34.648	0			
10,100.00	6,790.00	9,927.70	6,790.00	29.96	29.09	90.12	1,979.81	1,921.37	58.43	33.881	0			
10,200.00	6,790.00	10,027.70	6,790.00	30.59	29.75	90.12	1,979.81	1,920.07	59.73	33.144	0			
10,300.00	6,790.00	10,127.70	6,790.00	31.23	30.40	90.12	1,979.81	1,918.77	61.04	32.436	0			
10,400.00	6,790.00	10,227.70	6,790.00	31.87	31.06	90.12	1,979.81	1,917.46	62.35	31.755	0			
10,500.00	6,790.00	10,327.70	6,790.00	32.51	31.71	90.12	1,979.81	1,916.15	63.66	31.101	0			
10,600.00	6,790.00	10,427.70	6,790.00	33.15	32.37	90.12	1,979.81	1,914.83	64.97	30.470	0			
10,700.00	6,790.00	10,527.70	6,790.00	33.80	33.03	90.12	1,979.81	1,913.51	66.29	29.864	0			
10,800.00	6,790.00	10,627.70	6,790.00	34.45	33.70	90.12	1,979.81	1,912.19	67.62	29.279	0			
10,900.00	6,790.00	10,727.70	6,790.00	35.10	34.36	90.12	1,979.81	1,910.86	68.95	28.715	0			
11,000.00	6,790.00	10,827.70	6,790.00	35.76	35.03	90.12	1,979.81	1,909.53	70.28	28.172	0			
11,100.00	6,790.00	10,927.70	6,790.00	36.41	35.70	90.12	1,979.81	1,908.20	71.61	27.647	0			
11,200.00	6,790.00	11,027.70	6,790.00	37.07	36.37	90.12	1,979.81	1,906.86	72.94	27.141	0			
11,300.00	6,790.00	11,127.70	6,790.00	37.73	37.04	90.12	1,979.81	1,905.52	74.28	26.652	0			
11,400.00	6,790.00	11,227.70	6,790.00	38.39	37.71	90.12	1,979.81	1,904.18	75.62	26.179	0			
11,500.00	6,790.00	11,327.70	6,790.00	39.05	38.38	90.12	1,979.81	1,902.84	76.97	25.723	0			
11,600.00	6,790.00	11,427.70	6,790.00	39.71	39.05	90.12	1,979.81	1,901.49	78.31	25.281	0			
11,671.55	6,790.00	11,499.26	6,790.00	40.19	39.54	90.12	1,979.80	1,900.52	79.28	24.973	0		SF	





# Schlumberger

## Anticollision Risk Report



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	0.43	221.91						0	
100.00	100.00	96.00	96.00	0.15	0.14	0.43	221.88	221.59	0.29	772.141	0		0	
200.00	200.00	196.00	196.00	0.32	0.31	0.43	221.88	221.24	0.64	349.246	0		0	
300.00	300.00	296.00	296.00	0.50	0.49	0.43	221.88	220.89	0.98	225.400	0		0	
400.00	400.00	396.00	396.00	0.67	0.66	0.43	221.88	220.54	1.33	166.395	0		0	
500.00	500.00	496.00	496.00	0.84	0.84	0.43	221.88	220.19	1.68	131.873	0		0	
600.00	600.00	596.00	596.00	1.02	1.01	0.43	221.88	219.84	2.03	109.214	0		0	CC, ES
700.00	699.98	695.98	695.98	1.19	1.19	175.07	223.61	221.23	2.38	93.967	0		0	
800.00	799.84	789.74	789.72	1.37	1.35	174.97	230.10	227.39	2.72	84.747	0		0	
900.00	899.45	886.62	886.52	1.55	1.52	174.63	242.25	239.20	3.05	79.330	0		0	
1,000.00	998.70	985.35	985.16	1.73	1.69	174.34	258.04	254.65	3.39	76.051	0		0	
1,100.00	1,097.47	1,083.48	1,083.20	1.91	1.86	174.16	277.25	273.52	3.73	74.361	0		0	
1,200.00	1,195.62	1,180.89	1,180.52	2.10	2.04	174.05	299.86	295.80	4.06	73.861	0		0	
1,300.00	1,293.06	1,277.45	1,276.99	2.30	2.21	174.02	325.83	321.44	4.39	74.279	0		0	
1,400.00	1,389.64	1,373.05	1,372.50	2.50	2.37	174.03	355.14	350.43	4.71	75.423	0		0	
1,427.52	1,416.06	1,399.18	1,398.60	2.56	2.42	174.04	363.79	358.99	4.80	75.847	0		0	
1,500.00	1,485.54	1,467.88	1,467.24	2.71	2.54	174.12	386.89	381.84	5.05	76.653	0		0	
1,600.00	1,581.39	1,562.66	1,561.93	2.92	2.71	174.21	418.77	413.37	5.39	77.635	0		0	
1,700.00	1,677.25	1,657.44	1,656.62	3.14	2.87	174.28	450.64	444.90	5.74	78.492	0		0	
1,800.00	1,773.11	1,752.22	1,751.31	3.36	3.04	174.35	482.52	476.43	6.09	79.245	0		0	
1,900.00	1,868.96	1,847.00	1,846.01	3.57	3.21	174.41	514.40	507.96	6.44	79.913	0		0	
2,000.00	1,964.82	1,941.79	1,940.70	3.79	3.37	174.47	546.27	539.49	6.79	80.510	0		0	
2,100.00	2,060.68	2,036.57	2,035.39	4.01	3.54	174.51	578.15	571.02	7.13	81.046	0		0	
2,200.00	2,156.54	2,131.35	2,130.09	4.24	3.71	174.55	610.03	602.55	7.48	81.530	0		0	
2,300.00	2,252.39	2,226.13	2,224.78	4.46	3.87	174.59	641.91	634.08	7.83	81.970	0		0	
2,400.00	2,348.25	2,320.91	2,319.47	4.68	4.04	174.63	673.79	665.61	8.18	82.370	0		0	
2,500.00	2,444.11	2,415.70	2,414.16	4.91	4.21	174.66	705.67	697.14	8.53	82.737	0		0	
2,600.00	2,539.96	2,510.48	2,508.86	5.13	4.37	174.69	737.55	728.67	8.88	83.073	0		0	
2,700.00	2,635.82	2,605.26	2,603.55	5.35	4.54	174.71	769.43	760.20	9.23	83.384	0		0	
2,800.00	2,731.68	2,700.04	2,698.24	5.58	4.71	174.74	801.31	791.73	9.58	83.671	0		0	
2,900.00	2,827.53	2,794.82	2,792.94	5.80	4.87	174.76	833.19	823.26	9.93	83.937	0		0	
3,000.00	2,923.39	2,889.60	2,887.63	6.03	5.04	174.78	865.07	854.79	10.28	84.185	0		0	
3,100.00	3,019.25	2,984.39	2,982.32	6.26	5.21	174.80	896.95	886.32	10.63	84.416	0		0	
3,200.00	3,115.11	3,079.17	3,077.01	6.48	5.37	174.82	928.83	917.85	10.97	84.632	0		0	
3,300.00	3,210.96	3,173.95	3,171.71	6.71	5.54	174.83	960.71	949.38	11.32	84.834	0		0	
3,400.00	3,306.82	3,268.73	3,266.40	6.94	5.71	174.85	992.59	980.91	11.67	85.023	0		0	
3,500.00	3,402.68	3,363.51	3,361.09	7.16	5.87	174.86	1,024.47	1,012.44	12.02	85.202	0		0	
3,600.00	3,498.53	3,458.29	3,455.79	7.39	6.04	174.88	1,056.35	1,043.97	12.37	85.370	0		0	
3,700.00	3,594.39	3,553.08	3,550.48	7.62	6.21	174.89	1,088.23	1,075.51	12.72	85.528	0		0	
3,800.00	3,690.25	3,647.86	3,645.17	7.84	6.37	174.90	1,120.11	1,107.04	13.07	85.678	0		0	
3,900.00	3,786.10	3,742.64	3,739.86	8.07	6.54	174.91	1,151.99	1,138.57	13.42	85.820	0		0	
4,000.00	3,881.96	3,837.42	3,834.56	8.30	6.71	174.92	1,183.87	1,170.10	13.77	85.954	0		0	
4,100.00	3,977.82	3,932.20	3,929.25	8.53	6.87	174.93	1,215.75	1,201.63	14.12	86.082	0		0	
4,200.00	4,073.67	4,026.99	4,023.94	8.76	7.04	174.94	1,247.63	1,233.16	14.47	86.204	0		0	
4,300.00	4,169.53	4,121.77	4,118.64	8.98	7.21	174.95	1,279.51	1,264.69	14.82	86.319	0		0	
4,400.00	4,265.39	4,216.55	4,213.33	9.21	7.37	174.96	1,311.39	1,296.22	15.17	86.429	0		0	
4,500.00	4,361.25	4,311.33	4,308.02	9.44	7.54	174.97	1,343.27	1,327.75	15.52	86.534	0		0	
4,600.00	4,457.10	4,406.11	4,402.72	9.67	7.71	174.98	1,375.15	1,359.28	15.87	86.635	0		0	
4,700.00	4,552.96	4,500.89	4,497.41	9.90	7.87	174.99	1,407.04	1,390.81	16.22	86.730	0		0	
4,800.00	4,648.82	4,595.68	4,592.10	10.12	8.04	174.99	1,438.92	1,422.34	16.57	86.822	0		0	
4,900.00	4,744.67	4,690.46	4,686.79	10.35	8.21	175.00	1,470.80	1,453.87	16.92	86.910	0		0	
5,000.00	4,840.53	4,785.24	4,781.49	10.58	8.37	175.01	1,502.68	1,485.50	17.27	86.994	0		0	
5,100.00	4,936.39	4,880.02	4,876.18	10.81	8.54	175.01	1,534.56	1,516.94	17.62	87.075	0		0	
5,200.00	5,032.24	4,974.80	4,970.87	11.04	8.71	175.02	1,566.44	1,548.47	17.97	87.153	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	5,128.10	5,069.58	5,065.57	11.27	8.88	175.03	1,598.32	1,580.00	18.32	87.228	0					
5,400.00	5,223.96	5,164.37	5,160.26	11.50	9.04	175.03	1,630.20	1,611.53	18.67	87.299	0					
5,480.35	5,300.98	5,240.52	5,236.34	11.68	9.18	175.04	1,655.82	1,636.86	18.96	87.355	0					
5,500.00	5,319.83	5,259.17	5,254.97	11.72	9.21	175.05	1,662.02	1,642.98	19.04	87.297	0					
5,600.00	5,416.35	5,354.69	5,350.40	11.94	9.38	175.10	1,691.59	1,672.14	19.45	86.951	0					
5,700.00	5,513.72	5,451.18	5,446.81	12.15	9.55	175.13	1,717.83	1,697.97	19.86	86.517	0					
5,800.00	5,611.83	5,548.53	5,544.06	12.34	9.72	175.15	1,740.69	1,720.45	20.24	86.000	0					
5,900.00	5,710.55	5,646.60	5,642.04	12.53	9.89	175.15	1,760.16	1,739.55	20.61	85.406	0					
6,000.00	5,809.76	5,745.29	5,740.64	12.70	10.06	175.14	1,776.20	1,755.24	20.96	84.738	0					
6,100.00	5,909.35	5,844.48	5,839.74	12.87	10.24	175.11	1,788.81	1,767.51	21.30	84.000	0					
6,200.00	6,009.19	5,944.04	5,939.20	13.02	10.41	175.07	1,797.95	1,776.34	21.61	83.195	0					
6,307.87	6,117.04	6,051.71	6,046.77	13.18	10.60	0.41	1,803.93	1,780.01	23.93	75.393	0					
6,407.87	6,217.04	6,151.62	6,146.59	13.33	10.78	0.34	1,807.61	1,783.36	24.25	74.545	0					
6,450.00	6,259.13	6,193.71	6,188.63	13.39	10.85	90.20	1,809.17	1,786.74	22.42	80.686	0					
6,500.00	6,308.77	6,243.43	6,238.31	13.46	10.94	90.16	1,811.03	1,788.44	22.60	80.146	0					
6,550.00	6,357.72	6,292.56	6,287.40	13.54	11.03	90.25	1,812.94	1,790.17	22.77	79.613	0					
6,600.00	6,405.59	6,366.38	6,361.16	13.62	11.16	90.71	1,814.78	1,791.79	22.99	78.927	0					
6,650.00	6,452.03	6,453.25	6,448.03	13.70	11.31	91.61	1,815.65	1,792.41	23.24	78.117	0					
6,700.00	6,496.68	6,497.90	6,492.68	13.78	11.38	92.16	1,816.48	1,793.06	23.42	77.556	0					
6,750.00	6,539.20	6,540.43	6,535.20	13.87	11.46	92.73	1,817.80	1,794.20	23.60	77.023	0					
6,800.00	6,579.27	6,592.09	6,586.80	13.96	11.55	93.46	1,819.64	1,795.84	23.80	76.448	0					
6,850.00	6,616.58	6,647.86	6,642.03	14.06	11.65	94.22	1,821.89	1,797.88	24.02	75.857	0					
6,900.00	6,650.85	6,708.05	6,700.52	14.16	11.76	94.99	1,824.51	1,800.26	24.25	75.244	0					
6,950.00	6,681.82	6,773.53	6,762.08	14.26	11.88	95.78	1,827.42	1,802.93	24.50	74.600	0					
7,000.00	6,709.25	6,845.28	6,826.12	14.37	12.02	96.59	1,830.53	1,805.77	24.77	73.909	0					
7,050.00	6,732.94	6,924.30	6,891.38	14.49	12.19	97.41	1,833.70	1,808.63	25.07	73.147	0					
7,100.00	6,752.70	7,011.48	6,955.53	14.61	12.38	98.22	1,836.75	1,811.34	25.41	72.289	0					
7,150.00	6,768.39	7,107.29	7,014.83	14.74	12.62	98.96	1,839.47	1,813.67	25.80	71.298	0					
7,200.00	6,779.87	7,211.37	7,064.10	14.88	12.92	99.57	1,841.64	1,815.38	26.26	70.138	0					
7,250.00	6,787.08	7,322.14	7,097.45	15.02	13.27	99.99	1,843.03	1,816.24	26.79	68.794	0					
7,300.00	6,789.94	7,436.62	7,109.97	15.18	13.68	100.12	1,843.49	1,816.09	27.40	67.274	0					
7,307.87	6,790.00	7,447.69	7,110.00	15.20	13.72	100.12	1,843.49	1,815.99	27.49	67.060	0					
7,400.00	6,790.00	7,539.81	7,110.00	15.50	14.08	100.12	1,843.49	1,815.28	28.20	65.363	0					
7,500.00	6,790.00	7,639.81	7,110.00	15.86	14.50	100.12	1,843.49	1,814.47	29.02	63.525	0					
7,600.00	6,790.00	7,739.81	7,110.00	16.23	14.93	100.12	1,843.49	1,813.61	29.88	61.699	0					
7,700.00	6,790.00	7,839.81	7,110.00	16.63	15.38	100.12	1,843.49	1,812.71	30.78	59.900	0					
7,800.00	6,790.00	7,939.81	7,110.00	17.05	15.86	100.12	1,843.49	1,811.78	31.71	58.138	0					
7,900.00	6,790.00	8,039.81	7,110.00	17.49	16.34	100.12	1,843.49	1,810.81	32.67	56.420	0					
8,000.00	6,790.00	8,139.81	7,110.00	17.95	16.85	100.12	1,843.49	1,809.82	33.67	54.752	0					
8,100.00	6,790.00	8,239.81	7,110.00	18.43	17.37	100.12	1,843.49	1,808.79	34.69	53.139	0					
8,200.00	6,790.00	8,339.81	7,110.00	18.92	17.90	100.12	1,843.49	1,807.75	35.74	51.582	0					
8,300.00	6,790.00	8,439.81	7,110.00	19.42	18.44	100.12	1,843.49	1,806.68	36.81	50.083	0					
8,400.00	6,790.00	8,539.81	7,110.00	19.94	18.99	100.12	1,843.49	1,805.59	37.90	48.641	0					
8,500.00	6,790.00	8,639.81	7,110.00	20.47	19.55	100.12	1,843.49	1,804.48	39.01	47.258	0					
8,600.00	6,790.00	8,739.81	7,110.00	21.01	20.12	100.12	1,843.49	1,803.35	40.14	45.931	0					
8,700.00	6,790.00	8,839.81	7,110.00	21.56	20.70	100.12	1,843.49	1,802.21	41.28	44.659	0					
8,800.00	6,790.00	8,939.81	7,110.00	22.12	21.29	100.12	1,843.49	1,801.05	42.44	43.440	0					
8,900.00	6,790.00	9,039.81	7,110.00	22.69	21.88	100.12	1,843.49	1,799.88	43.61	42.273	0					
9,000.00	6,790.00	9,139.81	7,110.00	23.26	22.48	100.12	1,843.49	1,798.69	44.79	41.156	0					
9,100.00	6,790.00	9,239.81	7,110.00	23.84	23.09	100.12	1,843.49	1,797.50	45.99	40.086	0					
9,200.00	6,790.00	9,339.81	7,110.00	24.43	23.70	100.12	1,843.49	1,796.29	47.19	39.062	0					
9,300.00	6,790.00	9,439.81	7,110.00	25.03	24.32	100.12	1,843.49	1,795.08	48.41	38.081	0					
9,400.00	6,790.00	9,539.81	7,110.00	25.63	24.94	100.12	1,843.49	1,793.85	49.64	37.141	0					
9,500.00	6,790.00	9,639.81	7,110.00	26.23	25.56	100.12	1,843.49	1,792.62	50.87	36.240	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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		
9,600.00	6,790.00	9,739.81	7,110.00	26.84	26.19	100.12	1,843.49	1,791.38	52.11	35.377	0			
9,700.00	6,790.00	9,839.81	7,110.00	27.46	26.83	100.12	1,843.49	1,790.13	53.36	34.549	0			
9,800.00	6,790.00	9,939.81	7,110.00	28.08	27.46	100.12	1,843.49	1,788.87	54.61	33.755	0			
9,900.00	6,790.00	10,039.81	7,110.00	28.70	28.10	100.12	1,843.49	1,787.61	55.88	32.993	0			
10,000.00	6,790.00	10,139.81	7,110.00	29.33	28.75	100.12	1,843.49	1,786.34	57.14	32.261	0			
10,100.00	6,790.00	10,239.81	7,110.00	29.96	29.39	100.12	1,843.49	1,785.07	58.42	31.557	0			
10,200.00	6,790.00	10,339.81	7,110.00	30.59	30.04	100.12	1,843.49	1,783.79	59.70	30.881	0			
10,300.00	6,790.00	10,439.81	7,110.00	31.23	30.69	100.12	1,843.49	1,782.51	60.98	30.232	0			
10,400.00	6,790.00	10,539.81	7,110.00	31.87	31.34	100.12	1,843.49	1,781.22	62.27	29.606	0			
10,500.00	6,790.00	10,639.81	7,110.00	32.51	32.00	100.12	1,843.49	1,779.93	63.56	29.004	0			
10,600.00	6,790.00	10,739.81	7,110.00	33.15	32.65	100.12	1,843.49	1,778.63	64.86	28.425	0			
10,700.00	6,790.00	10,839.81	7,110.00	33.80	33.31	100.12	1,843.49	1,777.33	66.16	27.866	0			
10,800.00	6,790.00	10,939.81	7,110.00	34.45	33.97	100.12	1,843.49	1,776.03	67.46	27.328	0			
10,900.00	6,790.00	11,039.81	7,110.00	35.10	34.64	100.12	1,843.49	1,774.72	68.77	26.808	0			
11,000.00	6,790.00	11,139.81	7,110.00	35.76	35.30	100.12	1,843.49	1,773.41	70.08	26.307	0			
11,100.00	6,790.00	11,239.81	7,110.00	36.41	35.96	100.12	1,843.49	1,772.10	71.39	25.823	0			
11,200.00	6,790.00	11,339.81	7,110.00	37.07	36.63	100.12	1,843.49	1,770.78	72.71	25.356	0			
11,300.00	6,790.00	11,439.81	7,110.00	37.73	37.30	100.12	1,843.49	1,769.46	74.02	24.904	0			
11,400.00	6,790.00	11,539.81	7,110.00	38.39	37.97	100.12	1,843.49	1,768.14	75.35	24.467	0			
11,500.00	6,790.00	11,639.81	7,110.00	39.05	38.64	100.12	1,843.49	1,766.82	76.67	24.045	0			
11,600.00	6,790.00	11,739.81	7,110.00	39.71	39.31	100.12	1,843.49	1,765.49	77.99	23.636	0			
11,663.16	6,790.00	11,802.89	7,110.00	40.13	39.74	100.12	1,843.49	1,764.67	78.81	23.391	0			
11,671.55	6,790.00	11,811.28	7,110.00	40.19	39.79	100.12	1,843.48	1,764.54	78.94	23.352	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	0.47	193.85					0	CC, ES			
100.00	100.00	97.00	97.00	0.15	0.14	0.47	193.82	193.54	0.29	671.095	0					
200.00	200.00	197.00	197.00	0.32	0.32	0.47	193.82	193.19	0.64	304.255	0					
300.00	300.00	297.00	297.00	0.50	0.49	0.47	193.82	192.84	0.99	196.554	0					
400.00	400.00	397.00	397.00	0.67	0.66	0.47	193.82	192.49	1.34	145.167	0					
500.00	500.00	497.00	497.00	0.84	0.84	0.47	193.82	192.14	1.68	115.081	0					
600.00	600.00	597.00	597.00	1.02	1.01	0.47	193.82	191.79	2.03	95.324	0					
700.00	699.98	696.98	696.98	1.19	1.19	175.10	195.56	193.18	2.38	82.119	0					
800.00	799.84	796.84	796.84	1.37	1.36	175.22	200.78	198.05	2.73	73.615	0					
900.00	899.45	893.69	893.67	1.55	1.53	175.04	210.19	207.12	3.07	68.551	0					
1,000.00	998.70	992.77	992.71	1.73	1.70	174.66	223.65	220.24	3.41	65.654	0					
1,100.00	1,097.47	1,091.32	1,091.23	1.91	1.88	174.39	240.54	236.80	3.74	64.261	0					
1,200.00	1,195.62	1,189.23	1,189.10	2.10	2.05	174.23	260.85	256.78	4.08	63.996	0					
1,300.00	1,293.06	1,286.37	1,286.21	2.30	2.22	174.15	284.55	280.15	4.40	64.600	0					
1,400.00	1,389.64	1,382.64	1,382.43	2.50	2.39	174.13	311.61	306.88	4.73	65.893	0					
1,427.52	1,416.06	1,408.96	1,408.74	2.56	2.43	174.13	319.65	314.83	4.82	66.352	0					
1,500.00	1,485.54	1,478.18	1,477.94	2.71	2.55	174.19	341.13	336.06	5.07	67.287	0					
1,600.00	1,581.39	1,573.69	1,573.41	2.92	2.72	174.26	370.77	365.35	5.42	68.429	0					
1,700.00	1,677.25	1,669.19	1,668.87	3.14	2.89	174.32	400.41	394.65	5.77	69.426	0					
1,800.00	1,773.11	1,764.70	1,764.34	3.36	3.06	174.37	430.06	423.94	6.12	70.306	0					
1,900.00	1,868.96	1,860.20	1,859.81	3.57	3.22	174.42	459.70	453.23	6.47	71.087	0					
2,000.00	1,964.82	1,955.70	1,955.28	3.79	3.39	174.46	489.34	482.53	6.82	71.785	0					
2,100.00	2,060.68	2,051.21	2,050.75	4.01	3.56	174.49	518.99	511.82	7.17	72.412	0					
2,200.00	2,156.54	2,146.71	2,146.21	4.24	3.72	174.52	548.63	541.11	7.52	72.979	0					
2,300.00	2,252.39	2,242.22	2,241.68	4.46	3.89	174.55	578.28	570.41	7.87	73.494	0					
2,400.00	2,348.25	2,337.72	2,337.15	4.68	4.06	174.58	607.92	599.70	8.22	73.963	0					
2,500.00	2,444.11	2,433.23	2,432.62	4.91	4.23	174.60	637.56	628.99	8.57	74.393	0					
2,600.00	2,539.96	2,528.73	2,528.09	5.13	4.39	174.62	667.21	658.29	8.92	74.789	0					
2,700.00	2,635.82	2,624.24	2,623.55	5.35	4.56	174.64	696.85	687.58	9.27	75.154	0					
2,800.00	2,731.68	2,719.74	2,719.02	5.58	4.73	174.65	726.50	716.87	9.62	75.491	0					
2,900.00	2,827.53	2,815.25	2,814.49	5.80	4.89	174.67	756.14	746.17	9.97	75.804	0					
3,000.00	2,923.39	2,910.75	2,909.96	6.03	5.06	174.69	785.79	775.46	10.33	76.096	0					
3,100.00	3,019.25	3,006.26	3,005.43	6.26	5.23	174.70	815.43	804.75	10.68	76.367	0					
3,200.00	3,115.11	3,101.76	3,100.89	6.48	5.40	174.71	845.07	834.05	11.03	76.621	0					
3,300.00	3,210.96	3,197.27	3,196.36	6.71	5.56	174.72	874.72	863.34	11.38	76.859	0					
3,400.00	3,306.82	3,292.77	3,291.83	6.94	5.73	174.74	904.36	892.63	11.73	77.083	0					
3,500.00	3,402.68	3,388.28	3,387.30	7.16	5.90	174.75	934.01	921.92	12.08	77.293	0					
3,600.00	3,498.53	3,483.78	3,482.76	7.39	6.07	174.76	963.65	951.22	12.44	77.491	0					
3,700.00	3,594.39	3,579.29	3,578.23	7.62	6.23	174.76	993.30	980.51	12.79	77.678	0					
3,800.00	3,690.25	3,674.79	3,673.70	7.84	6.40	174.77	1,022.94	1,009.80	13.14	77.855	0					
3,900.00	3,786.10	3,770.30	3,769.17	8.07	6.57	174.78	1,052.59	1,039.10	13.49	78.022	0					
4,000.00	3,881.96	3,865.80	3,864.64	8.30	6.73	174.79	1,082.23	1,068.39	13.84	78.181	0					
4,100.00	3,977.82	3,961.31	3,960.10	8.53	6.90	174.80	1,111.88	1,097.68	14.19	78.332	0					
4,200.00	4,073.67	4,056.81	4,055.57	8.76	7.07	174.80	1,141.52	1,126.98	14.55	78.475	0					
4,300.00	4,169.53	4,152.32	4,151.04	8.98	7.24	174.81	1,171.17	1,156.27	14.90	78.612	0					
4,400.00	4,265.39	4,247.82	4,246.51	9.21	7.40	174.82	1,200.81	1,185.56	15.25	78.742	0					
4,500.00	4,361.25	4,343.33	4,341.98	9.44	7.57	174.82	1,230.46	1,214.85	15.60	78.866	0					
4,600.00	4,457.10	4,438.83	4,437.44	9.67	7.74	174.83	1,260.10	1,244.15	15.95	78.984	0					
4,700.00	4,552.96	4,534.33	4,532.91	9.90	7.90	174.83	1,289.75	1,273.44	16.31	79.098	0					
4,800.00	4,648.82	4,629.84	4,628.38	10.12	8.07	174.84	1,319.39	1,302.73	16.66	79.206	0					
4,900.00	4,744.67	4,725.34	4,723.85	10.35	8.24	174.84	1,349.04	1,332.03	17.01	79.310	0					
5,000.00	4,840.53	4,820.85	4,819.32	10.58	8.41	174.85	1,378.68	1,361.32	17.36	79.410	0					
5,100.00	4,936.39	4,916.35	4,914.78	10.81	8.57	174.85	1,408.33	1,390.61	17.71	79.506	0					
5,200.00	5,032.24	5,011.86	5,010.25	11.04	8.74	174.86	1,437.97	1,419.91	18.07	79.597	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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		
5,300.00	5,128.10	5,107.36	5,105.72	11.27	8.91	174.86	1,467.62	1,449.20	18.42	79.686	0			
5,400.00	5,223.96	5,202.87	5,201.19	11.50	9.08	174.87	1,497.26	1,478.49	18.77	79.771	0			
5,480.35	5,300.98	5,279.61	5,277.90	11.68	9.21	174.87	1,521.08	1,502.03	19.05	79.837	0			
5,500.00	5,319.83	5,298.39	5,296.67	11.72	9.24	174.88	1,526.84	1,507.71	19.14	79.790	0			
5,600.00	5,416.35	5,394.58	5,392.83	11.94	9.41	174.93	1,554.16	1,534.61	19.55	79.499	0			
5,700.00	5,513.72	5,491.66	5,489.87	12.15	9.58	174.95	1,578.13	1,558.18	19.95	79.112	0			
5,800.00	5,611.83	5,589.52	5,587.69	12.34	9.75	174.96	1,598.70	1,578.37	20.33	78.636	0			
5,900.00	5,710.55	5,688.02	5,686.15	12.53	9.93	174.96	1,615.86	1,595.16	20.70	78.076	0			
6,000.00	5,809.76	5,787.06	5,785.15	12.70	10.10	174.93	1,629.58	1,608.54	21.04	77.436	0			
6,100.00	5,909.35	5,886.51	5,884.57	12.87	10.27	174.89	1,639.86	1,618.48	21.37	76.721	0			
6,200.00	6,009.19	5,986.26	5,984.27	13.02	10.45	174.84	1,646.67	1,624.98	21.69	75.932	0			
6,307.87	6,117.04	6,114.91	6,112.89	13.18	10.67	0.18	1,649.78	1,625.80	23.98	68.796	0			
6,407.87	6,217.04	6,216.06	6,214.04	13.33	10.85	0.18	1,649.79	1,625.48	24.30	67.883	0			
6,450.00	6,259.13	6,258.54	6,256.49	13.39	10.92	90.18	1,649.79	1,627.26	22.53	73.228	0			
6,500.00	6,308.77	6,309.01	6,306.63	13.46	11.01	90.19	1,649.79	1,627.08	22.71	72.654	0			
6,550.00	6,357.72	6,359.50	6,356.08	13.54	11.11	90.20	1,649.79	1,626.90	22.89	72.078	0			
6,600.00	6,405.59	6,410.00	6,404.47	13.62	11.20	90.20	1,649.79	1,626.71	23.07	71.499	0			
6,650.00	6,452.03	6,460.51	6,451.41	13.70	11.30	90.20	1,649.79	1,626.52	23.27	70.912	0			
6,700.00	6,496.68	6,511.03	6,496.54	13.78	11.40	90.20	1,649.79	1,626.33	23.46	70.315	0			
6,750.00	6,539.20	6,561.54	6,539.49	13.87	11.50	90.20	1,649.79	1,626.12	23.67	69.705	0			
6,800.00	6,579.27	6,612.06	6,579.94	13.96	11.61	90.20	1,649.79	1,625.90	23.88	69.077	0			
6,850.00	6,616.58	6,662.56	6,617.57	14.06	11.73	90.20	1,649.79	1,625.68	24.11	68.428	0			
6,900.00	6,650.85	6,713.06	6,652.07	14.16	11.85	90.19	1,649.79	1,625.44	24.35	67.754	0			
6,950.00	6,681.82	6,763.54	6,683.20	14.26	11.98	90.19	1,649.79	1,625.18	24.60	67.052	0			
7,000.00	6,709.25	6,814.01	6,710.69	14.37	12.11	90.18	1,649.79	1,624.91	24.88	66.322	0			
7,050.00	6,732.94	6,864.45	6,734.35	14.49	12.26	90.17	1,649.78	1,624.62	25.16	65.561	0			
7,100.00	6,752.70	6,914.86	6,754.00	14.61	12.41	90.16	1,649.78	1,624.31	25.47	64.772	0			
7,150.00	6,768.39	6,965.25	6,769.48	14.74	12.58	90.15	1,649.78	1,623.99	25.80	63.956	0			
7,200.00	6,779.87	7,015.61	6,780.68	14.88	12.75	90.13	1,649.78	1,623.64	26.14	63.118	0			
7,250.00	6,787.08	7,065.93	6,787.54	15.02	12.94	90.12	1,649.78	1,623.28	26.50	62.264	0			
7,300.00	6,789.94	7,116.21	6,789.99	15.18	13.13	90.11	1,649.78	1,622.91	26.87	61.401	0			
7,307.87	6,790.00	7,124.10	6,790.00	15.20	13.16	90.10	1,649.78	1,622.85	26.93	61.263	0			
7,400.00	6,790.00	7,216.23	6,790.00	15.50	13.52	90.10	1,649.78	1,622.13	27.65	59.663	0			
7,500.00	6,790.00	7,316.23	6,790.00	15.86	13.95	90.10	1,649.78	1,621.30	28.48	57.926	0			
7,600.00	6,790.00	7,416.23	6,790.00	16.23	14.39	90.10	1,649.78	1,620.43	29.35	56.203	0			
7,700.00	6,790.00	7,516.23	6,790.00	16.63	14.85	90.10	1,649.78	1,619.51	30.27	54.506	0			
7,800.00	6,790.00	7,616.23	6,790.00	17.05	15.34	90.10	1,649.78	1,618.56	31.22	52.847	0			
7,900.00	6,790.00	7,716.23	6,790.00	17.49	15.83	90.10	1,649.78	1,617.58	32.20	51.233	0			
8,000.00	6,790.00	7,816.23	6,790.00	17.95	16.35	90.10	1,649.78	1,616.56	33.22	49.668	0			
8,100.00	6,790.00	7,916.23	6,790.00	18.43	16.87	90.10	1,649.78	1,615.52	34.26	48.158	0			
8,200.00	6,790.00	8,016.23	6,790.00	18.92	17.41	90.10	1,649.78	1,614.46	35.33	46.703	0			
8,300.00	6,790.00	8,116.23	6,790.00	19.42	17.97	90.10	1,649.78	1,613.36	36.42	45.304	0			
8,400.00	6,790.00	8,216.23	6,790.00	19.94	18.53	90.10	1,649.78	1,612.25	37.53	43.962	0			
8,500.00	6,790.00	8,316.23	6,790.00	20.47	19.10	90.10	1,649.78	1,611.12	38.66	42.676	0			
8,600.00	6,790.00	8,416.23	6,790.00	21.01	19.68	90.10	1,649.78	1,609.97	39.81	41.445	0			
8,700.00	6,790.00	8,516.23	6,790.00	21.56	20.26	90.10	1,649.78	1,608.81	40.97	40.267	0			
8,800.00	6,790.00	8,616.23	6,790.00	22.12	20.86	90.10	1,649.78	1,607.63	42.15	39.140	0			
8,900.00	6,790.00	8,716.23	6,790.00	22.69	21.46	90.10	1,649.78	1,606.44	43.34	38.063	0			
9,000.00	6,790.00	8,816.23	6,790.00	23.26	22.07	90.10	1,649.78	1,605.23	44.55	37.033	0			
9,100.00	6,790.00	8,916.23	6,790.00	23.84	22.68	90.10	1,649.78	1,604.01	45.77	36.048	0			
9,200.00	6,790.00	9,016.23	6,790.00	24.43	23.30	90.10	1,649.78	1,602.79	46.99	35.107	0			
9,300.00	6,790.00	9,116.23	6,790.00	25.03	23.92	90.10	1,649.78	1,601.55	48.23	34.206	0			
9,400.00	6,790.00	9,216.23	6,790.00	25.63	24.55	90.10	1,649.78	1,600.30	49.48	33.344	0			
9,500.00	6,790.00	9,316.23	6,790.00	26.23	25.18	90.10	1,649.78	1,599.05	50.73	32.519	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	
9,600.00	6,790.00	9,416.23	6,790.00	26.84	25.81	90.10	1,649.78	1,597.79	51.99	31.730	0		
9,700.00	6,790.00	9,516.23	6,790.00	27.46	26.45	90.10	1,649.78	1,596.52	53.26	30.973	0		
9,800.00	6,790.00	9,616.23	6,790.00	28.08	27.09	90.10	1,649.78	1,595.24	54.54	30.248	0		
9,900.00	6,790.00	9,716.23	6,790.00	28.70	27.74	90.10	1,649.78	1,593.96	55.82	29.553	0		
10,000.00	6,790.00	9,816.23	6,790.00	29.33	28.39	90.10	1,649.78	1,592.67	57.11	28.886	0		
10,100.00	6,790.00	9,916.23	6,790.00	29.96	29.04	90.10	1,649.78	1,591.37	58.41	28.246	0		
10,200.00	6,790.00	10,016.23	6,790.00	30.59	29.69	90.10	1,649.78	1,590.07	59.71	27.631	0		
10,300.00	6,790.00	10,116.23	6,790.00	31.23	30.34	90.10	1,649.78	1,588.77	61.01	27.041	0		
10,400.00	6,790.00	10,216.23	6,790.00	31.87	31.00	90.10	1,649.78	1,587.46	62.32	26.473	0		
10,500.00	6,790.00	10,316.23	6,790.00	32.51	31.66	90.10	1,649.78	1,586.15	63.63	25.927	0		
10,600.00	6,790.00	10,416.23	6,790.00	33.15	32.32	90.10	1,649.78	1,584.83	64.95	25.401	0		
10,700.00	6,790.00	10,516.23	6,790.00	33.80	32.98	90.10	1,649.78	1,583.51	66.27	24.895	0		
10,800.00	6,790.00	10,616.23	6,790.00	34.45	33.65	90.10	1,649.78	1,582.19	67.59	24.407	0		
10,900.00	6,790.00	10,716.23	6,790.00	35.10	34.31	90.10	1,649.78	1,580.86	68.92	23.937	0		
11,000.00	6,790.00	10,816.23	6,790.00	35.76	34.98	90.10	1,649.78	1,579.53	70.25	23.484	0		
11,100.00	6,790.00	10,916.23	6,790.00	36.41	35.65	90.10	1,649.78	1,578.20	71.58	23.047	0		
11,200.00	6,790.00	11,016.23	6,790.00	37.07	36.32	90.10	1,649.78	1,576.86	72.92	22.624	0		
11,300.00	6,790.00	11,116.23	6,790.00	37.73	36.99	90.10	1,649.78	1,575.52	74.26	22.216	0		
11,400.00	6,790.00	11,216.23	6,790.00	38.39	37.66	90.10	1,649.78	1,574.18	75.60	21.822	0		
11,500.00	6,790.00	11,316.23	6,790.00	39.05	38.33	90.10	1,649.78	1,572.84	76.94	21.441	0		
11,600.00	6,790.00	11,416.23	6,790.00	39.71	39.01	90.10	1,649.78	1,571.49	78.29	21.073	0		
11,671.55	6,790.00	11,487.78	6,790.00	40.19	39.49	90.10	1,649.78	1,570.52	79.25	20.816	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	0.41	166.16				0		
100.00	100.00	97.00	97.00	0.15	0.14	0.41	166.13	165.84	0.29	575.217	0		
200.00	200.00	197.00	197.00	0.32	0.32	0.41	166.13	165.50	0.64	260.786	0		
300.00	300.00	297.00	297.00	0.50	0.49	0.41	166.13	165.15	0.99	168.473	0		
400.00	400.00	397.00	397.00	0.67	0.66	0.41	166.13	164.80	1.34	124.427	0		
500.00	500.00	497.00	497.00	0.84	0.84	0.41	166.13	164.45	1.68	98.639	0		
600.00	600.00	597.00	597.00	1.02	1.01	0.41	166.13	164.10	2.03	81.706	0		CC, ES
700.00	699.98	696.98	696.98	1.19	1.19	175.06	167.87	165.49	2.38	70.491	0		
800.00	799.84	796.84	796.84	1.37	1.36	175.20	173.09	170.36	2.73	63.461	0		
900.00	899.45	896.45	896.45	1.55	1.54	175.41	181.77	178.70	3.07	59.194	0		
1,000.00	998.70	995.70	995.70	1.73	1.71	175.68	193.92	190.51	3.41	56.849	0		
1,100.00	1,097.47	1,094.47	1,094.47	1.91	1.88	175.98	209.52	205.78	3.75	55.900	0		
1,200.00	1,195.62	1,192.62	1,192.62	2.10	2.05	176.29	228.56	224.48	4.08	56.000	0		
1,300.00	1,293.06	1,297.66	1,297.66	2.30	2.24	176.45	249.65	245.22	4.42	56.431	0		
1,400.00	1,389.64	1,400.22	1,400.08	2.50	2.42	176.28	271.21	266.45	4.76	56.971	0		
1,427.52	1,416.06	1,426.99	1,426.80	2.56	2.46	176.23	277.59	272.74	4.85	57.234	0		
1,500.00	1,485.54	1,497.41	1,497.12	2.71	2.59	176.14	294.73	289.62	5.11	57.723	0		
1,600.00	1,581.39	1,594.57	1,594.13	2.92	2.76	176.02	318.37	312.91	5.46	58.318	0		
1,700.00	1,677.25	1,691.74	1,691.14	3.14	2.93	175.93	342.02	336.21	5.81	58.835	0		
1,800.00	1,773.11	1,788.90	1,788.15	3.36	3.10	175.84	365.67	359.51	6.17	59.289	0		
1,900.00	1,868.96	1,886.06	1,885.16	3.57	3.27	175.77	389.32	382.80	6.52	59.691	0		
2,000.00	1,964.82	1,983.22	1,982.17	3.79	3.44	175.70	412.98	406.10	6.88	60.049	0		
2,100.00	2,060.68	2,080.38	2,079.18	4.01	3.61	175.64	436.63	429.40	7.23	60.370	0		
2,200.00	2,156.54	2,177.55	2,176.20	4.24	3.78	175.59	460.28	452.69	7.59	60.659	0		
2,300.00	2,252.39	2,274.71	2,273.21	4.46	3.95	175.54	483.93	475.99	7.94	60.921	0		
2,400.00	2,348.25	2,371.87	2,370.22	4.68	4.13	175.50	507.59	499.29	8.30	61.159	0		
2,500.00	2,444.11	2,469.03	2,467.23	4.91	4.30	175.46	531.24	522.58	8.66	61.376	0		
2,600.00	2,539.96	2,566.19	2,564.24	5.13	4.47	175.42	554.89	545.88	9.01	61.576	0		
2,700.00	2,635.82	2,663.35	2,661.25	5.35	4.64	175.39	578.55	569.18	9.37	61.760	0		
2,800.00	2,731.68	2,760.52	2,758.26	5.58	4.81	175.36	602.20	592.48	9.72	61.930	0		
2,900.00	2,827.53	2,857.68	2,855.27	5.80	4.98	175.33	625.85	615.77	10.08	62.087	0		
3,000.00	2,923.39	2,954.84	2,952.29	6.03	5.15	175.31	649.51	639.07	10.44	62.233	0		
3,100.00	3,019.25	3,052.00	3,049.30	6.26	5.33	175.28	673.16	662.37	10.79	62.369	0		
3,200.00	3,115.11	3,149.16	3,146.31	6.48	5.50	175.26	696.82	685.67	11.15	62.496	0		
3,300.00	3,210.96	3,246.32	3,243.32	6.71	5.67	175.24	720.47	708.96	11.51	62.614	0		
3,400.00	3,306.82	3,343.49	3,340.33	6.94	5.84	175.22	744.12	732.26	11.86	62.726	0		
3,500.00	3,402.68	3,440.65	3,437.34	7.16	6.01	175.20	767.78	755.56	12.22	62.830	0		
3,600.00	3,498.53	3,537.81	3,534.35	7.39	6.18	175.18	791.43	778.86	12.58	62.929	0		
3,700.00	3,594.39	3,634.97	3,631.36	7.62	6.35	175.17	815.09	802.15	12.93	63.021	0		
3,800.00	3,690.25	3,732.13	3,728.38	7.84	6.53	175.15	838.74	825.45	13.29	63.109	0		
3,900.00	3,786.10	3,829.30	3,825.39	8.07	6.70	175.13	862.40	848.75	13.65	63.192	0		
4,000.00	3,881.96	3,926.46	3,922.40	8.30	6.87	175.12	886.05	872.05	14.00	63.270	0		
4,100.00	3,977.82	4,023.62	4,019.41	8.53	7.04	175.11	909.71	895.35	14.36	63.345	0		
4,200.00	4,073.67	4,120.78	4,116.42	8.76	7.21	175.10	933.36	918.64	14.72	63.416	0		
4,300.00	4,169.53	4,217.94	4,213.43	8.98	7.39	175.08	957.02	941.94	15.08	63.483	0		
4,400.00	4,265.39	4,315.10	4,310.44	9.21	7.56	175.07	980.67	965.24	15.43	63.547	0		
4,500.00	4,361.25	4,412.27	4,407.45	9.44	7.73	175.06	1,004.33	988.54	15.79	63.608	0		
4,600.00	4,457.10	4,509.43	4,504.47	9.67	7.90	175.05	1,027.98	1,011.84	16.15	63.667	0		
4,700.00	4,552.96	4,606.59	4,601.48	9.90	8.07	175.04	1,051.64	1,035.13	16.50	63.723	0		
4,800.00	4,648.82	4,703.75	4,698.49	10.12	8.24	175.03	1,075.29	1,058.43	16.86	63.776	0		
4,900.00	4,744.67	4,800.91	4,795.50	10.35	8.42	175.02	1,098.95	1,081.73	17.22	63.827	0		
5,000.00	4,840.53	4,898.07	4,892.51	10.58	8.59	175.01	1,122.60	1,105.03	17.57	63.876	0		
5,100.00	4,936.39	4,995.24	4,989.52	10.81	8.76	175.01	1,146.26	1,128.33	17.93	63.923	0		
5,200.00	5,032.24	5,092.40	5,086.53	11.04	8.93	175.00	1,169.91	1,151.62	18.29	63.968	0		

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





# Schlumberger

## Anticollision Risk Report



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	5,128.10	5,189.56	5,183.54	11.27	9.10	174.99	1,193.57	1,174.92	18.65	64.011	0					
5,400.00	5,223.96	5,286.72	5,280.56	11.50	9.27	174.98	1,217.22	1,198.22	19.00	64.053	0					
5,480.35	5,300.98	5,364.79	5,358.50	11.68	9.41	174.98	1,236.23	1,216.94	19.29	64.085	0					
5,500.00	5,319.83	5,383.90	5,377.58	11.72	9.45	174.98	1,240.81	1,221.44	19.37	64.048	0					
5,600.00	5,416.35	5,481.60	5,475.13	11.94	9.62	175.01	1,262.11	1,242.32	19.78	63.798	0					
5,700.00	5,513.72	5,579.98	5,573.36	12.15	9.79	175.01	1,279.99	1,259.82	20.18	63.441	0					
5,800.00	5,611.83	5,678.92	5,672.15	12.34	9.97	174.99	1,294.45	1,273.89	20.55	62.983	0					
5,900.00	5,710.55	5,778.30	5,771.37	12.53	10.14	174.95	1,305.45	1,284.54	20.91	62.429	0					
6,000.00	5,809.76	5,878.00	5,870.92	12.70	10.32	174.90	1,313.00	1,291.75	21.25	61.786	0					
6,100.00	5,909.35	5,974.15	5,966.92	12.87	10.49	174.83	1,317.10	1,295.53	21.57	61.075	0					
6,200.00	6,009.19	6,045.37	6,038.08	13.02	10.61	174.79	1,319.08	1,297.26	21.81	60.467	0					
6,307.87	6,117.04	6,124.34	6,117.04	13.18	10.75	0.18	1,319.76	1,295.74	24.03	54.931	0					
6,342.24	6,151.40	6,155.70	6,148.40	13.23	10.81	0.18	1,319.76	1,295.63	24.13	54.693	0					
6,407.87	6,217.04	6,221.34	6,214.04	13.33	10.92	0.18	1,319.76	1,295.42	24.34	54.222	0					
6,450.00	6,259.13	6,263.75	6,256.42	13.39	10.99	90.18	1,319.76	1,297.21	22.55	58.525	0					
6,500.00	6,308.77	6,314.14	6,306.47	13.46	11.08	90.19	1,319.76	1,297.03	22.73	58.067	0					
6,550.00	6,357.72	6,364.54	6,355.84	13.54	11.18	90.20	1,319.76	1,296.85	22.91	57.607	0					
6,600.00	6,405.59	6,414.95	6,404.16	13.62	11.27	90.21	1,319.76	1,296.66	23.10	57.145	0					
6,650.00	6,452.03	6,465.38	6,451.04	13.70	11.37	90.21	1,319.76	1,296.47	23.29	56.677	0					
6,700.00	6,496.68	6,515.82	6,496.11	13.78	11.46	90.22	1,319.76	1,296.28	23.48	56.201	0					
6,750.00	6,539.20	6,566.26	6,539.03	13.87	11.57	90.22	1,319.76	1,296.07	23.69	55.714	0					
6,800.00	6,579.27	6,616.70	6,579.45	13.96	11.68	90.22	1,319.76	1,295.86	23.90	55.214	0					
6,850.00	6,616.58	6,667.15	6,617.06	14.06	11.79	90.22	1,319.76	1,295.63	24.13	54.697	0					
6,900.00	6,650.85	6,717.58	6,651.58	14.16	11.91	90.21	1,319.76	1,295.39	24.37	54.160	0					
6,950.00	6,681.82	6,768.01	6,682.72	14.26	12.04	90.21	1,319.76	1,295.14	24.62	53.601	0					
7,000.00	6,709.25	6,818.43	6,710.25	14.37	12.17	90.20	1,319.76	1,294.87	24.89	53.019	0					
7,050.00	6,732.94	6,868.83	6,733.96	14.49	12.32	90.19	1,319.76	1,294.58	25.18	52.413	0					
7,100.00	6,752.70	6,919.21	6,753.67	14.61	12.47	90.18	1,319.76	1,294.27	25.49	51.783	0					
7,150.00	6,768.39	6,969.57	6,769.22	14.74	12.63	90.17	1,319.75	1,293.94	25.81	51.133	0					
7,200.00	6,779.87	7,019.91	6,780.51	14.88	12.81	90.16	1,319.75	1,293.60	26.15	50.464	0					
7,250.00	6,787.08	7,070.22	6,787.44	15.02	12.99	90.15	1,319.75	1,293.24	26.51	49.782	0					
7,300.00	6,789.94	7,120.50	6,789.99	15.18	13.18	90.13	1,319.75	1,292.87	26.88	49.093	0					
7,307.87	6,790.00	7,128.39	6,790.00	15.20	13.21	90.13	1,319.75	1,292.81	26.94	48.984	0					
7,400.00	6,790.00	7,220.52	6,790.00	15.50	13.57	90.13	1,319.75	1,292.09	27.67	47.705	0					
7,500.00	6,790.00	7,320.52	6,790.00	15.86	13.99	90.13	1,319.75	1,291.26	28.49	46.317	0					
7,600.00	6,790.00	7,420.52	6,790.00	16.23	14.43	90.13	1,319.75	1,290.38	29.37	44.941	0					
7,700.00	6,790.00	7,520.52	6,790.00	16.63	14.90	90.13	1,319.75	1,289.47	30.28	43.586	0					
7,800.00	6,790.00	7,620.52	6,790.00	17.05	15.38	90.13	1,319.75	1,288.52	31.23	42.260	0					
7,900.00	6,790.00	7,720.52	6,790.00	17.49	15.87	90.13	1,319.75	1,287.53	32.21	40.971	0					
8,000.00	6,790.00	7,820.52	6,790.00	17.95	16.39	90.13	1,319.75	1,286.52	33.23	39.720	0					
8,100.00	6,790.00	7,920.52	6,790.00	18.43	16.91	90.13	1,319.75	1,285.48	34.27	38.513	0					
8,200.00	6,790.00	8,020.52	6,790.00	18.92	17.45	90.13	1,319.74	1,284.41	35.33	37.350	0					
8,300.00	6,790.00	8,120.52	6,790.00	19.42	18.00	90.13	1,319.74	1,283.32	36.42	36.233	0					
8,400.00	6,790.00	8,220.52	6,790.00	19.94	18.56	90.13	1,319.74	1,282.21	37.54	35.160	0					
8,500.00	6,790.00	8,320.52	6,790.00	20.47	19.13	90.13	1,319.74	1,281.08	38.67	34.132	0					
8,600.00	6,790.00	8,420.52	6,790.00	21.01	19.71	90.13	1,319.74	1,279.93	39.81	33.148	0					
8,700.00	6,790.00	8,520.52	6,790.00	21.56	20.30	90.13	1,319.74	1,278.76	40.98	32.206	0					
8,800.00	6,790.00	8,620.52	6,790.00	22.12	20.89	90.13	1,319.74	1,277.58	42.16	31.305	0					
8,900.00	6,790.00	8,720.52	6,790.00	22.69	21.49	90.13	1,319.74	1,276.39	43.35	30.444	0					
9,000.00	6,790.00	8,820.52	6,790.00	23.26	22.10	90.13	1,319.74	1,275.18	44.55	29.620	0					
9,100.00	6,790.00	8,920.52	6,790.00	23.84	22.71	90.13	1,319.74	1,273.97	45.77	28.833	0					
9,200.00	6,790.00	9,020.52	6,790.00	24.43	23.32	90.13	1,319.74	1,272.74	47.00	28.080	0					
9,300.00	6,790.00	9,120.52	6,790.00	25.03	23.95	90.13	1,319.74	1,271.50	48.24	27.360	0					
9,400.00	6,790.00	9,220.52	6,790.00	25.63	24.57	90.13	1,319.74	1,270.25	49.48	26.671	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	
9,500.00	6,790.00	9,320.52	6,790.00	26.23	25.20	90.13	1,319.74	1,269.00	50.74	26.011	0		
9,600.00	6,790.00	9,420.52	6,790.00	26.84	25.84	90.13	1,319.74	1,267.74	52.00	25.380	0		
9,700.00	6,790.00	9,520.52	6,790.00	27.46	26.47	90.13	1,319.73	1,266.47	53.27	24.775	0		
9,800.00	6,790.00	9,620.52	6,790.00	28.08	27.12	90.13	1,319.73	1,265.19	54.55	24.195	0		
9,900.00	6,790.00	9,720.52	6,790.00	28.70	27.76	90.13	1,319.73	1,263.90	55.83	23.639	0		
10,000.00	6,790.00	9,820.52	6,790.00	29.33	28.41	90.13	1,319.73	1,262.62	57.12	23.106	0		
10,100.00	6,790.00	9,920.52	6,790.00	29.96	29.06	90.13	1,319.73	1,261.32	58.41	22.594	0		
10,200.00	6,790.00	10,020.52	6,790.00	30.59	29.71	90.13	1,319.73	1,260.02	59.71	22.102	0		
10,300.00	6,790.00	10,120.52	6,790.00	31.23	30.36	90.13	1,319.73	1,258.72	61.01	21.630	0		
10,400.00	6,790.00	10,220.52	6,790.00	31.87	31.02	90.13	1,319.73	1,257.41	62.32	21.176	0		
10,500.00	6,790.00	10,320.52	6,790.00	32.51	31.68	90.13	1,319.73	1,256.09	63.64	20.739	0		
10,600.00	6,790.00	10,420.52	6,790.00	33.15	32.34	90.13	1,319.73	1,254.78	64.95	20.319	0		
10,700.00	6,790.00	10,520.52	6,790.00	33.80	33.00	90.13	1,319.73	1,253.46	66.27	19.914	0		
10,800.00	6,790.00	10,620.52	6,790.00	34.45	33.66	90.13	1,319.73	1,252.13	67.60	19.524	0		
10,900.00	6,790.00	10,720.52	6,790.00	35.10	34.33	90.13	1,319.73	1,250.80	68.92	19.148	0		
11,000.00	6,790.00	10,820.52	6,790.00	35.76	34.99	90.13	1,319.73	1,249.47	70.25	18.785	0		
11,100.00	6,790.00	10,920.52	6,790.00	36.41	35.66	90.13	1,319.72	1,248.14	71.59	18.435	0		
11,200.00	6,790.00	11,020.52	6,790.00	37.07	36.33	90.13	1,319.72	1,246.80	72.92	18.098	0		
11,300.00	6,790.00	11,120.52	6,790.00	37.73	37.00	90.13	1,319.72	1,245.46	74.26	17.771	0		
11,400.00	6,790.00	11,220.52	6,790.00	38.39	37.68	90.13	1,319.72	1,244.12	75.60	17.456	0		
11,500.00	6,790.00	11,320.52	6,790.00	39.05	38.35	90.13	1,319.72	1,242.78	76.95	17.151	0		
11,600.00	6,790.00	11,420.52	6,790.00	39.71	39.02	90.13	1,319.72	1,241.43	78.29	16.856	0		
11,671.55	6,790.00	11,492.07	6,790.00	40.19	39.51	90.13	1,319.72	1,240.46	79.26	16.651	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16")
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16")
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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		
0.00	0.00	0.00	0.00	0.00	0.00	0.45	138.10				0	CC, ES	
100.00	100.00	98.00	98.00	0.15	0.14	0.45	138.08	137.79	0.29	475.676	0		
200.00	200.00	198.00	198.00	0.32	0.32	0.45	138.08	137.44	0.64	216.160	0		
300.00	300.00	298.00	298.00	0.50	0.49	0.45	138.08	137.09	0.99	139.778	0		
400.00	400.00	398.00	398.00	0.67	0.67	0.45	138.08	136.74	1.34	103.283	0		
500.00	500.00	498.00	498.00	0.84	0.84	0.45	138.08	136.39	1.69	81.899	0		
600.00	600.00	598.00	598.00	1.02	1.02	0.45	138.08	136.05	2.04	67.851	0		
700.00	699.98	697.98	697.98	1.19	1.19	175.11	139.82	137.44	2.38	58.669	0		
800.00	799.84	797.84	797.84	1.37	1.36	175.27	145.03	142.31	2.73	53.143	0		
900.00	899.45	897.45	897.45	1.55	1.54	175.53	153.72	150.65	3.07	50.031	0		
1,000.00	998.70	996.70	996.70	1.73	1.71	175.84	165.87	162.46	3.41	48.602	0		
1,100.00	1,097.47	1,095.47	1,095.47	1.91	1.88	176.18	181.48	177.73	3.75	48.396	0		
1,200.00	1,195.62	1,200.29	1,200.27	2.10	2.07	176.39	198.96	194.86	4.09	48.587	0		
1,300.00	1,293.06	1,306.07	1,305.90	2.30	2.25	176.32	216.41	211.97	4.44	48.743	0		
1,400.00	1,389.64	1,405.18	1,404.71	2.50	2.43	176.14	235.18	230.41	4.77	49.287	0		
1,427.52	1,416.06	1,432.09	1,431.55	2.56	2.47	176.11	240.94	236.08	4.86	49.557	0		
1,500.00	1,485.54	1,502.89	1,502.14	2.71	2.60	176.05	256.44	251.32	5.12	50.096	0		
1,600.00	1,581.39	1,600.57	1,599.54	2.92	2.77	175.98	277.83	272.36	5.47	50.752	0		
1,700.00	1,677.25	1,698.26	1,696.94	3.14	2.94	175.91	299.23	293.40	5.83	51.324	0		
1,800.00	1,773.11	1,795.94	1,794.34	3.36	3.12	175.86	320.62	314.43	6.19	51.827	0		
1,900.00	1,868.96	1,893.63	1,891.75	3.57	3.29	175.82	342.01	335.47	6.54	52.272	0		
2,000.00	1,964.82	1,991.31	1,989.15	3.79	3.46	175.77	363.41	356.51	6.90	52.669	0		
2,100.00	2,060.68	2,089.00	2,086.55	4.01	3.64	175.74	384.80	377.54	7.26	53.026	0		
2,200.00	2,156.54	2,186.68	2,183.95	4.24	3.81	175.71	406.19	398.58	7.61	53.347	0		
2,300.00	2,252.39	2,284.37	2,281.35	4.46	3.98	175.68	427.58	419.61	7.97	53.638	0		
2,400.00	2,348.25	2,382.05	2,378.75	4.68	4.16	175.65	448.98	440.65	8.33	53.903	0		
2,500.00	2,444.11	2,479.73	2,476.15	4.91	4.33	175.63	470.37	461.68	8.69	54.146	0		
2,600.00	2,539.96	2,577.42	2,573.55	5.13	4.51	175.60	491.77	482.72	9.05	54.368	0		
2,700.00	2,635.82	2,675.10	2,670.95	5.35	4.68	175.58	513.16	503.76	9.40	54.573	0		
2,800.00	2,731.68	2,772.79	2,768.36	5.58	4.85	175.56	534.55	524.79	9.76	54.763	0		
2,900.00	2,827.53	2,870.47	2,865.76	5.80	5.03	175.55	555.95	545.83	10.12	54.938	0		
3,000.00	2,923.39	2,968.16	2,963.16	6.03	5.20	175.53	577.34	566.86	10.48	55.101	0		
3,100.00	3,019.25	3,065.84	3,060.56	6.26	5.38	175.52	598.73	587.90	10.84	55.253	0		
3,200.00	3,115.11	3,163.53	3,157.96	6.48	5.55	175.50	620.13	608.93	11.19	55.395	0		
3,300.00	3,210.96	3,261.21	3,255.36	6.71	5.73	175.49	641.52	629.97	11.55	55.528	0		
3,400.00	3,306.82	3,358.90	3,352.76	6.94	5.90	175.48	662.92	651.00	11.91	55.652	0		
3,500.00	3,402.68	3,456.58	3,450.16	7.16	6.07	175.47	684.31	672.04	12.27	55.770	0		
3,600.00	3,498.53	3,554.27	3,547.56	7.39	6.25	175.46	705.70	693.08	12.63	55.880	0		
3,700.00	3,594.39	3,651.95	3,644.97	7.62	6.42	175.45	727.10	714.11	12.99	55.984	0		
3,800.00	3,690.25	3,749.63	3,742.37	7.84	6.60	175.44	748.49	735.15	13.35	56.082	0		
3,900.00	3,786.10	3,847.32	3,839.77	8.07	6.77	175.43	769.89	756.18	13.71	56.175	0		
4,000.00	3,881.96	3,945.00	3,937.17	8.30	6.95	175.42	791.28	777.22	14.06	56.263	0		
4,100.00	3,977.82	4,042.69	4,034.57	8.53	7.12	175.41	812.67	798.25	14.42	56.347	0		
4,200.00	4,073.67	4,140.37	4,131.97	8.76	7.30	175.41	834.07	819.29	14.78	56.426	0		
4,300.00	4,169.53	4,238.06	4,229.37	8.98	7.47	175.40	855.46	840.32	15.14	56.502	0		
4,400.00	4,265.39	4,335.74	4,326.77	9.21	7.64	175.39	876.86	861.36	15.50	56.574	0		
4,500.00	4,361.25	4,433.43	4,424.17	9.44	7.82	175.38	898.25	882.39	15.86	56.643	0		
4,600.00	4,457.10	4,531.11	4,521.58	9.67	7.99	175.38	919.65	903.43	16.22	56.708	0		
4,700.00	4,552.96	4,628.80	4,618.98	9.90	8.17	175.37	941.04	924.46	16.58	56.771	0		
4,800.00	4,648.82	4,726.48	4,716.38	10.12	8.34	175.37	962.43	945.50	16.94	56.831	0		
4,900.00	4,744.67	4,824.16	4,813.78	10.35	8.52	175.36	983.83	966.53	17.29	56.888	0		
5,000.00	4,840.53	4,921.85	4,911.18	10.58	8.69	175.36	1,005.22	987.57	17.65	56.943	0		
5,100.00	4,936.39	5,019.53	5,008.58	10.81	8.87	175.35	1,026.62	1,008.60	18.01	56.996	0		
5,200.00	5,032.24	5,117.22	5,105.98	11.04	9.04	175.35	1,048.01	1,029.64	18.37	57.047	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	Riskd Separation Factor	Probability of Collision					
5,300.00	5,128.10	5,214.90	5,203.38	11.27	9.22	175.34	1,069.40	1,050.67	18.73	57.095	0						
5,400.00	5,223.96	5,312.59	5,300.78	11.50	9.39	175.34	1,090.80	1,071.71	19.09	57.142	0						
5,480.35	5,300.98	5,391.08	5,379.05	11.68	9.53	175.33	1,107.99	1,088.61	19.38	57.178	0						
5,500.00	5,319.83	5,410.29	5,398.20	11.72	9.57	175.34	1,112.13	1,092.67	19.46	57.149	0						
5,600.00	5,416.35	5,508.46	5,496.08	11.94	9.74	175.36	1,131.15	1,111.28	19.87	56.933	0						
5,700.00	5,513.72	5,607.23	5,594.57	12.15	9.92	175.36	1,146.74	1,126.48	20.26	56.604	0						
5,800.00	5,611.83	5,706.48	5,693.53	12.34	10.10	175.33	1,158.89	1,138.26	20.63	56.169	0						
5,900.00	5,710.55	5,806.09	5,792.85	12.53	10.27	175.29	1,167.58	1,146.59	20.99	55.632	0						
6,000.00	5,809.76	5,905.94	5,892.41	12.70	10.45	175.23	1,172.80	1,151.48	21.32	55.000	0						
6,100.00	5,909.35	6,005.90	5,992.08	12.87	10.63	175.15	1,174.55	1,152.91	21.64	54.275	0						
6,200.00	6,009.19	6,105.86	6,091.75	13.02	10.81	175.05	1,172.82	1,150.88	21.94	53.462	0						
6,307.87	6,117.04	6,213.54	6,199.13	13.18	11.00	0.33	1,167.07	1,142.80	24.27	48.093	0						
6,407.87	6,217.04	6,300.00	6,285.38	13.33	11.16	0.23	1,160.67	1,136.11	24.56	47.250	0						
6,450.00	6,259.13	6,321.56	6,306.91	13.39	11.19	90.47	1,158.61	1,135.95	22.67	51.119	0						
6,500.00	6,308.77	6,357.49	6,342.82	13.46	11.26	90.84	1,156.82	1,134.00	22.82	50.703	0						
6,550.00	6,357.72	6,400.00	6,385.31	13.54	11.33	91.37	1,155.75	1,132.77	22.98	50.290	0						
6,593.11	6,399.07	6,422.86	6,408.17	13.61	11.37	91.73	1,155.40	1,132.30	23.10	50.008	0						
6,600.00	6,405.59	6,427.57	6,412.88	13.62	11.38	91.81	1,155.41	1,132.28	23.13	49.961	0						
6,650.00	6,452.03	6,464.71	6,450.03	13.70	11.44	92.43	1,155.99	1,132.70	23.29	49.629	0						
6,700.00	6,496.68	6,509.36	6,494.68	13.78	11.52	93.30	1,157.25	1,133.77	23.48	49.289	0						
6,750.00	6,539.20	6,551.92	6,537.23	13.87	11.59	94.20	1,159.28	1,135.61	23.67	48.983	0						
6,800.00	6,579.27	6,603.90	6,589.14	13.96	11.68	95.36	1,162.10	1,138.22	23.88	48.666	0						
6,850.00	6,616.58	6,659.52	6,644.20	14.06	11.78	96.53	1,165.55	1,141.44	24.10	48.360	0						
6,900.00	6,650.85	6,719.49	6,702.42	14.16	11.89	97.72	1,169.55	1,145.22	24.34	48.060	0						
6,950.00	6,681.82	6,784.65	6,763.60	14.26	12.01	98.95	1,174.01	1,149.43	24.58	47.759	0						
7,000.00	6,709.25	6,855.94	6,827.16	14.37	12.15	100.19	1,178.77	1,153.92	24.85	47.444	0						
7,050.00	6,732.94	6,934.35	6,891.85	14.49	12.31	101.44	1,183.61	1,158.48	25.13	47.095	0						
7,100.00	6,752.70	7,020.72	6,955.39	14.61	12.50	102.66	1,188.28	1,162.82	25.45	46.685	0						
7,150.00	6,768.39	7,115.54	7,014.17	14.74	12.73	103.78	1,192.46	1,166.63	25.82	46.179	0						
7,200.00	6,779.87	7,218.49	7,063.18	14.88	13.02	104.72	1,195.80	1,169.54	26.26	45.537	0						
7,250.00	6,787.08	7,328.08	7,096.71	15.02	13.37	105.35	1,198.00	1,171.21	26.78	44.730	0						
7,300.00	6,789.94	7,441.51	7,109.91	15.18	13.77	105.58	1,198.80	1,171.40	27.39	43.764	0						
7,307.87	6,790.00	7,455.12	7,110.00	15.20	13.82	105.58	1,198.79	1,171.30	27.49	43.604	0						
7,400.00	6,790.00	7,547.25	7,110.00	15.50	14.17	105.58	1,198.79	1,170.59	28.20	42.506	0						
7,500.00	6,790.00	7,647.25	7,110.00	15.86	14.58	105.58	1,198.79	1,169.78	29.01	41.319	0						
7,600.00	6,790.00	7,747.25	7,110.00	16.23	15.01	105.58	1,198.79	1,168.93	29.86	40.141	0						
7,700.00	6,790.00	7,847.25	7,110.00	16.63	15.46	105.58	1,198.79	1,168.04	30.75	38.982	0						
7,800.00	6,790.00	7,947.25	7,110.00	17.05	15.93	105.58	1,198.79	1,167.12	31.67	37.847	0						
7,900.00	6,790.00	8,047.25	7,110.00	17.49	16.42	105.58	1,198.79	1,166.16	32.63	36.742	0						
8,000.00	6,790.00	8,147.25	7,110.00	17.95	16.92	105.58	1,198.79	1,165.18	33.61	35.668	0						
8,100.00	6,790.00	8,247.25	7,110.00	18.43	17.44	105.58	1,198.79	1,164.17	34.62	34.630	0						
8,200.00	6,790.00	8,347.25	7,110.00	18.92	17.96	105.58	1,198.79	1,163.14	35.65	33.628	0						
8,300.00	6,790.00	8,447.25	7,110.00	19.42	18.50	105.58	1,198.79	1,162.09	36.70	32.662	0						
8,400.00	6,790.00	8,547.25	7,110.00	19.94	19.06	105.58	1,198.79	1,161.02	37.78	31.734	0						
8,500.00	6,790.00	8,647.25	7,110.00	20.47	19.62	105.58	1,198.79	1,159.92	38.87	30.843	0						
8,600.00	6,790.00	8,747.25	7,110.00	21.01	20.18	105.58	1,198.79	1,158.81	39.98	29.987	0						
8,700.00	6,790.00	8,847.25	7,110.00	21.56	20.76	105.58	1,198.79	1,157.69	41.10	29.167	0						
8,800.00	6,790.00	8,947.25	7,110.00	22.12	21.35	105.58	1,198.79	1,156.55	42.24	28.381	0						
8,900.00	6,790.00	9,047.25	7,110.00	22.69	21.94	105.58	1,198.79	1,155.40	43.39	27.627	0						
9,000.00	6,790.00	9,147.25	7,110.00	23.26	22.54	105.58	1,198.79	1,154.24	44.56	26.906	0						
9,100.00	6,790.00	9,247.25	7,110.00	23.84	23.14	105.58	1,198.79	1,153.06	45.73	26.215	0						
9,200.00	6,790.00	9,347.25	7,110.00	24.43	23.75	105.58	1,198.79	1,151.88	46.92	25.552	0						
9,300.00	6,790.00	9,447.25	7,110.00	25.03	24.37	105.58	1,198.79	1,150.68	48.11	24.918	0						
9,400.00	6,790.00	9,547.25	7,110.00	25.63	24.99	105.58	1,198.79	1,149.48	49.31	24.309	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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		
9,500.00	6,790.00	9,647.25	7,110.00	26.23	25.61	105.58	1,198.79	1,148.27	50.53	23.726	0			
9,600.00	6,790.00	9,747.25	7,110.00	26.84	26.24	105.58	1,198.79	1,147.05	51.75	23.167	0			
9,700.00	6,790.00	9,847.25	7,110.00	27.46	26.87	105.58	1,198.79	1,145.82	52.97	22.630	0			
9,800.00	6,790.00	9,947.25	7,110.00	28.08	27.51	105.58	1,198.79	1,144.59	54.21	22.115	0			
9,900.00	6,790.00	10,047.25	7,110.00	28.70	28.14	105.58	1,198.79	1,143.35	55.45	21.621	0			
10,000.00	6,790.00	10,147.25	7,110.00	29.33	28.79	105.58	1,198.79	1,142.10	56.69	21.146	0			
10,100.00	6,790.00	10,247.25	7,110.00	29.96	29.43	105.58	1,198.79	1,140.85	57.94	20.689	0			
10,200.00	6,790.00	10,347.25	7,110.00	30.59	30.08	105.58	1,198.79	1,139.59	59.20	20.250	0			
10,300.00	6,790.00	10,447.25	7,110.00	31.23	30.73	105.58	1,198.79	1,138.33	60.46	19.828	0			
10,400.00	6,790.00	10,547.25	7,110.00	31.87	31.38	105.58	1,198.79	1,137.07	61.72	19.422	0			
10,500.00	6,790.00	10,647.25	7,110.00	32.51	32.03	105.58	1,198.79	1,135.80	62.99	19.030	0			
10,600.00	6,790.00	10,747.25	7,110.00	33.15	32.69	105.58	1,198.79	1,134.52	64.27	18.653	0			
10,700.00	6,790.00	10,847.25	7,110.00	33.80	33.35	105.58	1,198.79	1,133.25	65.54	18.290	0			
10,800.00	6,790.00	10,947.25	7,110.00	34.45	34.01	105.58	1,198.79	1,131.97	66.83	17.939	0			
10,900.00	6,790.00	11,047.25	7,110.00	35.10	34.67	105.58	1,198.79	1,130.68	68.11	17.601	0			
11,000.00	6,790.00	11,147.25	7,110.00	35.76	35.33	105.58	1,198.79	1,129.40	69.40	17.275	0			
11,100.00	6,790.00	11,247.25	7,110.00	36.41	36.00	105.58	1,198.79	1,128.11	70.69	16.959	0			
11,200.00	6,790.00	11,347.25	7,110.00	37.07	36.66	105.58	1,198.79	1,126.81	71.98	16.655	0			
11,300.00	6,790.00	11,447.25	7,110.00	37.73	37.33	105.58	1,198.79	1,125.52	73.27	16.360	0			
11,400.00	6,790.00	11,547.25	7,110.00	38.39	38.00	105.58	1,198.79	1,124.22	74.57	16.075	0			
11,500.00	6,790.00	11,647.25	7,110.00	39.05	38.67	105.58	1,198.79	1,122.92	75.87	15.800	0			
11,600.00	6,790.00	11,747.25	7,110.00	39.71	39.34	105.58	1,198.79	1,121.62	77.18	15.533	0			
11,671.55	6,790.00	11,818.83	7,110.00	40.19	39.82	105.58	1,198.79	1,120.68	78.11	15.348	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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				
0.00	0.00	0.00	0.00	0.00	0.00	0.37	110.04					0				
100.00	100.00	98.00	98.00	0.15	0.14	0.37	110.03	109.74	0.29	379.027	0					
200.00	200.00	198.00	198.00	0.32	0.32	0.37	110.03	109.39	0.64	172.240	0					
300.00	300.00	298.00	298.00	0.50	0.49	0.37	110.03	109.04	0.99	111.378	0					
400.00	400.00	398.00	398.00	0.67	0.67	0.37	110.03	108.69	1.34	82.298	0					
500.00	500.00	498.00	498.00	0.84	0.84	0.37	110.03	108.34	1.69	65.259	0					
600.00	600.00	598.00	598.00	1.02	1.02	0.37	110.03	107.99	2.04	54.065	0		CC, ES			
700.00	699.98	697.98	697.98	1.19	1.19	175.04	111.76	109.38	2.38	46.897	0					
800.00	799.84	797.84	797.84	1.37	1.36	175.25	116.98	114.25	2.73	42.863	0					
900.00	899.45	897.45	897.45	1.55	1.54	175.57	125.67	122.59	3.07	40.900	0					
1,000.00	998.70	996.70	996.70	1.73	1.71	175.94	137.82	134.41	3.41	40.382	0					
1,100.00	1,097.47	1,100.69	1,100.67	1.91	1.89	176.21	151.79	148.03	3.76	40.379	0					
1,200.00	1,195.62	1,205.38	1,205.21	2.10	2.08	176.23	165.69	161.59	4.10	40.364	0					
1,300.00	1,293.06	1,310.57	1,309.96	2.30	2.26	176.05	179.50	175.05	4.45	40.332	0					
1,400.00	1,389.64	1,409.35	1,408.17	2.50	2.44	175.85	195.00	190.22	4.78	40.765	0					
1,427.52	1,416.06	1,436.44	1,435.10	2.56	2.49	175.81	199.87	195.00	4.87	41.003	0					
1,500.00	1,485.54	1,507.71	1,505.95	2.71	2.61	175.75	213.04	207.91	5.13	41.498	0					
1,600.00	1,581.39	1,606.05	1,603.71	2.92	2.79	175.67	231.21	225.71	5.49	42.100	0					
1,700.00	1,677.25	1,704.38	1,701.47	3.14	2.97	175.60	249.37	243.52	5.85	42.625	0					
1,800.00	1,773.11	1,802.72	1,799.23	3.36	3.14	175.54	267.54	261.33	6.21	43.086	0					
1,900.00	1,868.96	1,901.05	1,896.99	3.57	3.32	175.49	285.71	279.14	6.57	43.495	0					
2,000.00	1,964.82	1,999.39	1,994.75	3.79	3.50	175.45	303.87	296.95	6.93	43.858	0					
2,100.00	2,060.68	2,097.73	2,092.52	4.01	3.68	175.41	322.04	314.75	7.29	44.185	0					
2,200.00	2,156.54	2,196.06	2,190.28	4.24	3.85	175.37	340.21	332.56	7.65	44.479	0					
2,300.00	2,252.39	2,294.40	2,288.04	4.46	4.03	175.34	358.38	350.37	8.01	44.746	0					
2,400.00	2,348.25	2,392.73	2,385.80	4.68	4.21	175.31	376.55	368.18	8.37	44.989	0					
2,500.00	2,444.11	2,491.07	2,483.56	4.91	4.39	175.28	394.71	385.98	8.73	45.211	0					
2,600.00	2,539.96	2,589.40	2,581.32	5.13	4.57	175.26	412.88	403.79	9.09	45.414	0					
2,700.00	2,635.82	2,687.74	2,679.08	5.35	4.75	175.24	431.05	421.60	9.45	45.602	0					
2,800.00	2,731.68	2,786.08	2,776.84	5.58	4.93	175.22	449.22	439.40	9.81	45.775	0					
2,900.00	2,827.53	2,884.41	2,874.60	5.80	5.11	175.20	467.39	457.21	10.17	45.936	0					
3,000.00	2,923.39	2,982.75	2,972.36	6.03	5.29	175.18	485.55	475.02	10.54	46.085	0					
3,100.00	3,019.25	3,081.08	3,070.12	6.26	5.47	175.17	503.72	492.82	10.90	46.224	0					
3,200.00	3,115.11	3,179.42	3,167.88	6.48	5.64	175.15	521.89	510.63	11.26	46.354	0					
3,300.00	3,210.96	3,277.75	3,265.64	6.71	5.82	175.14	540.06	528.44	11.62	46.475	0					
3,400.00	3,306.82	3,376.09	3,363.40	6.94	6.00	175.12	558.23	546.25	11.98	46.589	0					
3,500.00	3,402.68	3,474.42	3,461.16	7.16	6.18	175.11	576.40	564.05	12.34	46.696	0					
3,600.00	3,498.53	3,572.76	3,558.93	7.39	6.36	175.10	594.56	581.86	12.71	46.797	0					
3,700.00	3,594.39	3,671.10	3,656.69	7.62	6.54	175.09	612.73	599.67	13.07	46.892	0					
3,800.00	3,690.25	3,769.43	3,754.45	7.84	6.72	175.08	630.90	617.47	13.43	46.982	0					
3,900.00	3,786.10	3,867.77	3,852.21	8.07	6.90	175.07	649.07	635.28	13.79	47.067	0					
4,000.00	3,881.96	3,966.10	3,949.97	8.30	7.08	175.06	667.24	653.09	14.15	47.147	0					
4,100.00	3,977.82	4,064.44	4,047.73	8.53	7.26	175.05	685.41	670.89	14.51	47.223	0					
4,200.00	4,073.67	4,162.77	4,145.49	8.76	7.44	175.05	703.58	688.70	14.88	47.296	0					
4,300.00	4,169.53	4,261.11	4,243.25	8.98	7.62	175.04	721.74	706.51	15.24	47.365	0					
4,400.00	4,265.39	4,359.45	4,341.01	9.21	7.80	175.03	739.91	724.31	15.60	47.431	0					
4,500.00	4,361.25	4,457.78	4,438.77	9.44	7.98	175.02	758.08	742.12	15.96	47.493	0					
4,600.00	4,457.10	4,556.12	4,536.53	9.67	8.16	175.02	776.25	759.93	16.32	47.553	0					
4,700.00	4,552.96	4,654.45	4,634.29	9.90	8.34	175.01	794.42	777.73	16.69	47.610	0					
4,800.00	4,648.82	4,752.79	4,732.05	10.12	8.52	175.00	812.59	795.54	17.05	47.665	0					
4,900.00	4,744.67	4,851.12	4,829.81	10.35	8.70	175.00	830.76	813.35	17.41	47.718	0					
5,000.00	4,840.53	4,949.46	4,927.57	10.58	8.88	174.99	848.92	831.15	17.77	47.768	0					
5,100.00	4,936.39	5,047.79	5,025.33	10.81	9.06	174.99	867.09	848.96	18.13	47.816	0					
5,200.00	5,032.24	5,146.13	5,123.10	11.04	9.24	174.98	885.26	866.77	18.50	47.862	0					

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



# Schlumberger

## Anticollision Risk Report



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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						Risked Separation Factor	Probability of Collision	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					
5,300.00	5,128.10	5,244.47	5,220.86	11.27	9.42	174.98	903.43	884.57	18.86	47.907	0				
5,400.00	5,223.96	5,342.80	5,318.62	11.50	9.60	174.97	921.60	902.38	19.22	47.949	0				
5,480.35	5,300.98	5,421.81	5,397.17	11.68	9.75	174.97	936.20	916.69	19.51	47.982	0				
5,500.00	5,319.83	5,441.15	5,416.39	11.72	9.78	174.97	939.70	920.11	19.59	47.961	0				
5,600.00	5,416.35	5,539.89	5,514.55	11.94	9.96	174.99	955.48	935.48	20.00	47.778	0				
5,700.00	5,513.72	5,639.12	5,613.20	12.15	10.14	174.97	967.82	947.43	20.39	47.473	0				
5,800.00	5,611.83	5,738.72	5,712.22	12.34	10.33	174.94	976.70	955.95	20.76	47.055	0				
5,900.00	5,710.55	5,834.76	5,807.69	12.53	10.50	174.88	982.13	961.03	21.10	46.544	0				
6,000.00	5,809.76	5,912.57	5,885.15	12.70	10.64	174.83	985.43	964.04	21.39	46.064	0				
6,100.00	5,909.35	6,000.00	5,972.40	12.87	10.80	174.80	987.91	966.23	21.68	45.569	0				
6,200.00	6,009.19	6,062.41	6,034.75	13.02	10.90	174.78	989.24	967.33	21.90	45.167	0				
6,307.87	6,117.04	6,144.71	6,117.04	13.18	11.04	0.18	989.73	965.44	24.29	40.753	0				
6,341.88	6,151.05	6,176.72	6,149.05	13.23	11.10	0.18	989.73	965.34	24.39	40.579	0				
6,407.87	6,217.04	6,242.71	6,215.04	13.33	11.21	0.18	989.73	965.13	24.60	40.236	0				
6,450.00	6,259.13	6,285.05	6,257.35	13.39	11.28	90.18	989.73	967.10	22.63	43.733	0				
6,500.00	6,308.77	6,335.34	6,307.29	13.46	11.37	90.19	989.73	966.92	22.81	43.393	0				
6,550.00	6,357.72	6,385.63	6,356.55	13.54	11.46	90.20	989.73	966.74	22.99	43.051	0				
6,600.00	6,405.59	6,435.94	6,404.74	13.62	11.55	90.20	989.73	966.55	23.17	42.707	0				
6,650.00	6,452.03	6,486.25	6,451.49	13.70	11.64	90.21	989.73	966.36	23.37	42.359	0				
6,700.00	6,496.68	6,536.56	6,496.44	13.78	11.74	90.21	989.73	966.17	23.56	42.006	0				
6,750.00	6,539.20	6,586.88	6,539.24	13.87	11.84	90.21	989.73	965.96	23.77	41.645	0				
6,800.00	6,579.27	6,637.20	6,579.55	13.96	11.95	90.21	989.73	965.75	23.98	41.274	0				
6,850.00	6,616.58	6,687.51	6,617.07	14.06	12.06	90.21	989.73	965.52	24.20	40.890	0				
6,900.00	6,650.85	6,737.82	6,651.50	14.16	12.17	90.20	989.73	965.29	24.44	40.492	0				
6,950.00	6,681.82	6,788.13	6,682.57	14.26	12.29	90.20	989.73	965.03	24.70	40.077	0				
7,000.00	6,709.25	6,838.42	6,710.06	14.37	12.42	90.19	989.73	964.76	24.96	39.645	0				
7,050.00	6,732.94	6,888.70	6,733.75	14.49	12.56	90.18	989.73	964.48	25.25	39.196	0				
7,100.00	6,752.70	6,938.96	6,753.45	14.61	12.71	90.17	989.73	964.17	25.56	38.729	0				
7,150.00	6,768.39	6,989.21	6,769.03	14.74	12.87	90.16	989.73	963.85	25.88	38.246	0				
7,200.00	6,779.87	7,039.44	6,780.36	14.88	13.03	90.15	989.73	963.51	26.22	37.749	0				
7,250.00	6,787.08	7,089.65	6,787.36	15.02	13.21	90.13	989.73	963.15	26.57	37.243	0				
7,300.00	6,789.94	7,139.84	6,789.98	15.18	13.39	90.12	989.73	962.78	26.95	36.730	0				
7,307.87	6,790.00	7,147.73	6,790.00	15.20	13.42	90.12	989.73	962.72	27.01	36.649	0				
7,400.00	6,790.00	7,239.86	6,790.00	15.50	13.78	90.12	989.73	962.00	27.73	35.695	0				
7,500.00	6,790.00	7,339.86	6,790.00	15.86	14.20	90.12	989.73	961.17	28.55	34.661	0				
7,600.00	6,790.00	7,439.86	6,790.00	16.23	14.63	90.12	989.73	960.30	29.43	33.635	0				
7,700.00	6,790.00	7,539.86	6,790.00	16.63	15.09	90.12	989.73	959.39	30.34	32.625	0				
7,800.00	6,790.00	7,639.86	6,790.00	17.05	15.56	90.12	989.73	958.44	31.28	31.637	0				
7,900.00	6,790.00	7,739.86	6,790.00	17.49	16.05	90.12	989.73	957.46	32.27	30.674	0				
8,000.00	6,790.00	7,839.86	6,790.00	17.95	16.56	90.12	989.73	956.45	33.28	29.741	0				
8,100.00	6,790.00	7,939.86	6,790.00	18.43	17.08	90.12	989.73	955.41	34.32	28.840	0				
8,200.00	6,790.00	8,039.86	6,790.00	18.92	17.61	90.12	989.73	954.34	35.38	27.972	0				
8,300.00	6,790.00	8,139.86	6,790.00	19.42	18.16	90.12	989.73	953.25	36.47	27.137	0				
8,400.00	6,790.00	8,239.86	6,790.00	19.94	18.71	90.12	989.73	952.14	37.58	26.335	0				
8,500.00	6,790.00	8,339.86	6,790.00	20.47	19.28	90.12	989.73	951.01	38.71	25.567	0				
8,600.00	6,790.00	8,439.86	6,790.00	21.01	19.85	90.12	989.73	949.87	39.86	24.832	0				
8,700.00	6,790.00	8,539.86	6,790.00	21.56	20.43	90.12	989.73	948.70	41.02	24.128	0				
8,800.00	6,790.00	8,639.86	6,790.00	22.12	21.02	90.12	989.73	947.53	42.20	23.454	0				
8,900.00	6,790.00	8,739.86	6,790.00	22.69	21.62	90.12	989.73	946.34	43.39	22.810	0				
9,000.00	6,790.00	8,839.86	6,790.00	23.26	22.22	90.12	989.73	945.13	44.59	22.194	0				
9,100.00	6,790.00	8,939.86	6,790.00	23.84	22.83	90.12	989.73	943.92	45.81	21.605	0				
9,200.00	6,790.00	9,039.86	6,790.00	24.43	23.45	90.12	989.73	942.69	47.04	21.042	0				
9,300.00	6,790.00	9,139.86	6,790.00	25.03	24.07	90.12	989.73	941.45	48.27	20.503	0				
9,400.00	6,790.00	9,239.86	6,790.00	25.63	24.69	90.12	989.73	940.21	49.52	19.987	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	
9,500.00	6,790.00	9,339.86	6,790.00	26.23	25.32	90.12	989.73	938.95	50.77	19.494	0		
9,600.00	6,790.00	9,439.86	6,790.00	26.84	25.95	90.12	989.73	937.69	52.03	19.021	0		
9,700.00	6,790.00	9,539.86	6,790.00	27.46	26.58	90.12	989.73	936.42	53.30	18.568	0		
9,800.00	6,790.00	9,639.86	6,790.00	28.08	27.22	90.12	989.73	935.15	54.58	18.134	0		
9,900.00	6,790.00	9,739.86	6,790.00	28.70	27.86	90.12	989.73	933.87	55.86	17.718	0		
10,000.00	6,790.00	9,839.86	6,790.00	29.33	28.51	90.12	989.73	932.58	57.15	17.319	0		
10,100.00	6,790.00	9,939.86	6,790.00	29.96	29.15	90.12	989.73	931.28	58.44	16.935	0		
10,200.00	6,790.00	10,039.86	6,790.00	30.59	29.80	90.12	989.73	929.99	59.74	16.567	0		
10,300.00	6,790.00	10,139.86	6,790.00	31.23	30.46	90.12	989.73	928.68	61.04	16.214	0		
10,400.00	6,790.00	10,239.86	6,790.00	31.87	31.11	90.12	989.73	927.37	62.35	15.873	0		
10,500.00	6,790.00	10,339.86	6,790.00	32.51	31.77	90.12	989.73	926.06	63.66	15.546	0		
10,600.00	6,790.00	10,439.86	6,790.00	33.15	32.43	90.12	989.73	924.75	64.98	15.231	0		
10,700.00	6,790.00	10,539.86	6,790.00	33.80	33.09	90.12	989.73	923.43	66.30	14.928	0		
10,800.00	6,790.00	10,639.86	6,790.00	34.45	33.75	90.12	989.73	922.10	67.62	14.636	0		
10,900.00	6,790.00	10,739.86	6,790.00	35.10	34.41	90.12	989.73	920.78	68.95	14.354	0		
11,000.00	6,790.00	10,839.86	6,790.00	35.76	35.08	90.12	989.73	919.45	70.28	14.083	0		
11,100.00	6,790.00	10,939.86	6,790.00	36.41	35.74	90.12	989.73	918.11	71.61	13.821	0		
11,200.00	6,790.00	11,039.86	6,790.00	37.07	36.41	90.12	989.73	916.78	72.95	13.568	0		
11,300.00	6,790.00	11,139.86	6,790.00	37.73	37.08	90.12	989.73	915.44	74.29	13.323	0		
11,400.00	6,790.00	11,239.86	6,790.00	38.39	37.75	90.12	989.73	914.10	75.63	13.087	0		
11,500.00	6,790.00	11,339.86	6,790.00	39.05	38.42	90.12	989.73	912.76	76.97	12.859	0		
11,600.00	6,790.00	11,439.86	6,790.00	39.71	39.10	90.12	989.73	911.41	78.31	12.638	0		
11,671.55	6,790.00	11,511.45	6,790.00	40.19	39.58	90.12	989.72	910.44	79.28	12.484	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	0.42	81.98							
100.00	100.00	99.00	99.00	0.15	0.15	0.42	81.97	81.68	0.29	280.972	0			
200.00	200.00	199.00	199.00	0.32	0.32	0.42	81.97	81.33	0.64	127.976	0			
300.00	300.00	299.00	299.00	0.50	0.49	0.42	81.97	80.98	0.99	82.835	0			
400.00	400.00	399.00	399.00	0.67	0.67	0.42	81.97	80.63	1.34	61.235	0			
500.00	500.00	499.00	499.00	0.84	0.84	0.42	81.97	80.29	1.69	48.570	0			
600.00	600.00	599.00	599.00	1.02	1.02	0.42	81.97	79.94	2.04	40.246	0		CC, ES	
700.00	699.98	698.98	698.98	1.19	1.19	175.12	83.71	81.33	2.38	35.100	0			
800.00	799.84	798.84	798.84	1.37	1.37	175.40	88.93	86.20	2.73	32.564	0			
900.00	899.45	898.45	898.45	1.55	1.54	175.79	97.62	94.54	3.07	31.753	0			
1,000.00	998.70	1,001.52	1,001.50	1.73	1.72	176.14	108.06	104.64	3.42	31.583	0			
1,100.00	1,097.47	1,105.04	1,104.86	1.91	1.90	176.30	118.41	114.64	3.77	31.427	0			
1,200.00	1,195.62	1,208.96	1,208.36	2.10	2.09	176.33	128.66	124.54	4.11	31.275	0			
1,300.00	1,293.06	1,313.27	1,311.84	2.30	2.27	176.24	138.78	134.32	4.46	31.119	0			
1,400.00	1,389.64	1,416.60	1,413.82	2.50	2.46	176.08	148.89	144.09	4.80	30.995	0			
1,427.52	1,416.06	1,443.94	1,440.76	2.56	2.51	176.04	152.01	147.11	4.90	31.046	0			
1,500.00	1,485.54	1,515.91	1,511.68	2.71	2.64	175.96	160.56	155.40	5.16	31.123	0			
1,600.00	1,581.39	1,615.21	1,609.53	2.92	2.83	175.87	172.36	166.84	5.52	31.213	0			
1,700.00	1,677.25	1,714.51	1,707.37	3.14	3.02	175.79	184.16	178.28	5.89	31.288	0			
1,800.00	1,773.11	1,813.81	1,805.22	3.36	3.20	175.72	195.96	189.71	6.25	31.352	0			
1,900.00	1,868.96	1,913.12	1,903.06	3.57	3.39	175.66	207.77	201.15	6.62	31.407	0			
2,000.00	1,964.82	2,012.42	2,000.91	3.79	3.58	175.60	219.57	212.59	6.98	31.455	0			
2,100.00	2,060.68	2,111.72	2,098.75	4.01	3.77	175.55	231.37	224.02	7.35	31.496	0			
2,200.00	2,156.54	2,211.02	2,196.60	4.24	3.96	175.51	243.17	235.46	7.71	31.532	0			
2,300.00	2,252.39	2,310.32	2,294.45	4.46	4.15	175.47	254.97	246.90	8.08	31.564	0			
2,400.00	2,348.25	2,409.62	2,392.29	4.68	4.34	175.43	266.78	258.33	8.44	31.592	0			
2,500.00	2,444.11	2,508.92	2,490.14	4.91	4.53	175.40	278.58	269.77	8.81	31.618	0			
2,600.00	2,539.96	2,608.22	2,587.98	5.13	4.72	175.37	290.38	281.20	9.18	31.641	0			
2,700.00	2,635.82	2,707.52	2,685.83	5.35	4.91	175.34	302.18	292.64	9.54	31.661	0			
2,800.00	2,731.68	2,806.82	2,783.67	5.58	5.11	175.31	313.99	304.08	9.91	31.680	0			
2,900.00	2,827.53	2,906.12	2,881.52	5.80	5.30	175.28	325.79	315.51	10.28	31.697	0			
3,000.00	2,923.39	3,005.43	2,979.36	6.03	5.49	175.26	337.59	326.95	10.65	31.712	0			
3,100.00	3,019.25	3,104.73	3,077.21	6.26	5.68	175.24	349.40	338.38	11.01	31.726	0			
3,200.00	3,115.11	3,204.03	3,175.06	6.48	5.87	175.22	361.20	349.82	11.38	31.739	0			
3,300.00	3,210.96	3,303.33	3,272.90	6.71	6.07	175.20	373.00	361.25	11.75	31.751	0			
3,400.00	3,306.82	3,402.63	3,370.75	6.94	6.26	175.18	384.80	372.69	12.12	31.762	0			
3,500.00	3,402.68	3,501.93	3,468.59	7.16	6.45	175.17	396.61	384.12	12.48	31.773	0			
3,600.00	3,498.53	3,601.23	3,566.44	7.39	6.65	175.15	408.41	395.56	12.85	31.782	0			
3,700.00	3,594.39	3,700.53	3,664.28	7.62	6.84	175.14	420.21	407.00	13.22	31.791	0			
3,800.00	3,690.25	3,799.83	3,762.13	7.84	7.03	175.12	432.02	418.43	13.59	31.799	0			
3,900.00	3,786.10	3,899.13	3,859.97	8.07	7.23	175.11	443.82	429.87	13.95	31.807	0			
4,000.00	3,881.96	3,998.43	3,957.82	8.30	7.42	175.10	455.62	441.30	14.32	31.814	0			
4,100.00	3,977.82	4,097.74	4,055.67	8.53	7.61	175.08	467.43	452.74	14.69	31.821	0			
4,200.00	4,073.67	4,197.04	4,153.51	8.76	7.81	175.07	479.23	464.17	15.06	31.827	0			
4,300.00	4,169.53	4,296.34	4,251.36	8.98	8.00	175.06	491.03	475.61	15.43	31.833	0			
4,400.00	4,265.39	4,395.64	4,349.20	9.21	8.19	175.05	502.84	487.04	15.79	31.839	0			
4,500.00	4,361.25	4,494.94	4,447.05	9.44	8.39	175.04	514.64	498.48	16.16	31.845	0			
4,600.00	4,457.10	4,594.24	4,544.89	9.67	8.58	175.03	526.44	509.91	16.53	31.850	0			
4,700.00	4,552.96	4,693.54	4,642.74	9.90	8.77	175.02	538.25	521.35	16.90	31.854	0			
4,800.00	4,648.82	4,792.84	4,740.58	10.12	8.97	175.02	550.05	532.78	17.27	31.859	0			
4,900.00	4,744.67	4,892.14	4,838.43	10.35	9.16	175.01	561.85	544.22	17.63	31.863	0			
5,000.00	4,840.53	4,991.44	4,936.28	10.58	9.36	175.00	573.66	555.65	18.00	31.867	0			
5,100.00	4,936.39	5,090.75	5,034.12	10.81	9.55	174.99	585.46	567.09	18.37	31.871	0			
5,200.00	5,032.24	5,190.05	5,131.97	11.04	9.74	174.98	597.26	578.52	18.74	31.875	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	5,128.10	5,289.35	5,229.81	11.27	9.94	174.98	609.07	589.96	19.11	31.879	0							
5,400.00	5,223.96	5,388.65	5,327.66	11.50	10.13	174.97	620.87	601.40	19.47	31.882	0							
5,480.35	5,300.98	5,468.44	5,406.28	11.68	10.29	174.97	630.35	610.58	19.77	31.885	0							
5,500.00	5,319.83	5,487.96	5,425.51	11.72	10.33	174.97	632.61	612.76	19.85	31.868	0							
5,600.00	5,416.35	5,587.51	5,523.60	11.94	10.52	174.96	642.00	621.75	20.25	31.702	0							
5,700.00	5,513.72	5,687.33	5,621.96	12.15	10.71	174.92	647.93	627.30	20.63	31.402	0							
5,800.00	5,611.83	5,770.14	5,703.73	12.34	10.87	174.87	651.62	630.65	20.96	31.084	0							
5,900.00	5,710.55	5,851.72	5,784.61	12.53	11.02	174.84	654.63	633.37	21.27	30.778	0							
6,000.00	5,809.76	5,933.25	5,865.71	12.70	11.17	174.81	656.99	635.44	21.55	30.481	0							
6,100.00	5,909.35	6,014.74	5,946.98	12.87	11.31	174.79	658.68	636.86	21.82	30.191	0							
6,200.00	6,009.19	6,100.00	6,032.15	13.02	11.45	174.78	659.72	637.65	22.07	29.899	0							
6,307.87	6,117.04	6,184.90	6,117.04	13.18	11.59	0.18	660.07	635.27	24.80	26.617	0							
6,341.54	6,150.71	6,217.57	6,149.71	13.23	11.64	0.18	660.06	635.16	24.90	26.508	0							
6,407.87	6,217.04	6,283.90	6,216.04	13.33	11.75	0.18	660.06	634.96	25.11	26.292	0							
6,450.00	6,259.13	6,326.18	6,258.28	13.39	11.82	90.18	660.06	637.28	22.78	28.972	0							
6,500.00	6,308.77	6,376.37	6,308.12	13.46	11.90	90.19	660.06	637.10	22.96	28.748	0							
6,550.00	6,357.72	6,426.56	6,357.26	13.54	11.99	90.19	660.07	636.92	23.14	28.524	0							
6,600.00	6,405.59	6,476.75	6,405.32	13.62	12.08	90.19	660.07	636.74	23.33	28.298	0							
6,650.00	6,452.03	6,526.95	6,451.95	13.70	12.17	90.20	660.07	636.55	23.51	28.070	0							
6,700.00	6,496.68	6,577.15	6,496.78	13.78	12.26	90.20	660.07	636.35	23.71	27.838	0							
6,750.00	6,539.20	6,627.34	6,539.45	13.87	12.36	90.19	660.07	636.15	23.91	27.602	0							
6,800.00	6,579.27	6,677.54	6,579.66	13.96	12.46	90.19	660.07	635.94	24.13	27.358	0							
6,850.00	6,616.58	6,727.73	6,617.08	14.06	12.56	90.19	660.06	635.71	24.35	27.107	0							
6,900.00	6,650.85	6,777.91	6,651.43	14.16	12.67	90.18	660.06	635.48	24.59	26.846	0							
6,950.00	6,681.82	6,828.09	6,682.44	14.26	12.79	90.17	660.06	635.23	24.84	26.575	0							
7,000.00	6,709.25	6,878.26	6,709.88	14.37	12.91	90.16	660.06	634.96	25.10	26.292	0							
7,050.00	6,732.94	6,928.42	6,733.54	14.49	13.04	90.15	660.06	634.67	25.39	25.998	0							
7,100.00	6,752.70	6,978.57	6,753.25	14.61	13.18	90.14	660.06	634.37	25.69	25.692	0							
7,150.00	6,768.39	7,028.71	6,768.84	14.74	13.33	90.13	660.06	634.05	26.01	25.376	0							
7,200.00	6,779.87	7,078.84	6,780.21	14.88	13.49	90.12	660.06	633.71	26.35	25.051	0							
7,250.00	6,787.08	7,128.95	6,787.27	15.02	13.65	90.10	660.06	633.36	26.70	24.718	0							
7,300.00	6,789.94	7,179.04	6,789.97	15.18	13.83	90.09	660.06	632.99	27.07	24.383	0							
7,307.87	6,790.00	7,186.93	6,790.00	15.20	13.86	90.09	660.06	632.93	27.13	24.329	0							
7,400.00	6,790.00	7,279.05	6,790.00	15.50	14.20	90.09	660.06	632.21	27.85	23.702	0							
7,500.00	6,790.00	7,379.05	6,790.00	15.86	14.60	90.09	660.06	631.39	28.67	23.021	0							
7,600.00	6,790.00	7,479.05	6,790.00	16.23	15.02	90.09	660.06	630.52	29.54	22.345	0							
7,700.00	6,790.00	7,579.05	6,790.00	16.63	15.46	90.09	660.06	629.61	30.45	21.678	0							
7,800.00	6,790.00	7,679.05	6,790.00	17.05	15.92	90.09	660.06	628.67	31.39	21.026	0							
7,900.00	6,790.00	7,779.05	6,790.00	17.49	16.40	90.09	660.06	627.69	32.37	20.390	0							
8,000.00	6,790.00	7,879.05	6,790.00	17.95	16.89	90.09	660.06	626.68	33.38	19.774	0							
8,100.00	6,790.00	7,979.05	6,790.00	18.43	17.40	90.09	660.06	625.64	34.42	19.178	0							
8,200.00	6,790.00	8,079.05	6,790.00	18.92	17.93	90.09	660.06	624.58	35.48	18.603	0							
8,300.00	6,790.00	8,179.05	6,790.00	19.42	18.46	90.09	660.06	623.50	36.57	18.051	0							
8,400.00	6,790.00	8,279.05	6,790.00	19.94	19.01	90.09	660.06	622.39	37.67	17.520	0							
8,500.00	6,790.00	8,379.05	6,790.00	20.47	19.57	90.09	660.06	621.26	38.80	17.012	0							
8,600.00	6,790.00	8,479.05	6,790.00	21.01	20.13	90.09	660.06	620.12	39.95	16.524	0							
8,700.00	6,790.00	8,579.05	6,790.00	21.56	20.71	90.09	660.06	618.96	41.11	16.058	0							
8,800.00	6,790.00	8,679.05	6,790.00	22.12	21.29	90.09	660.06	617.78	42.28	15.611	0							
8,900.00	6,790.00	8,779.05	6,790.00	22.69	21.88	90.09	660.06	616.59	43.47	15.184	0							
9,000.00	6,790.00	8,879.05	6,790.00	23.26	22.47	90.09	660.06	615.39	44.67	14.775	0							
9,100.00	6,790.00	8,979.05	6,790.00	23.84	23.08	90.09	660.06	614.18	45.89	14.384	0							
9,200.00	6,790.00	9,079.05	6,790.00	24.43	23.68	90.09	660.06	612.95	47.11	14.011	0							
9,300.00	6,790.00	9,179.05	6,790.00	25.03	24.30	90.09	660.06	611.72	48.35	13.653	0							
9,400.00	6,790.00	9,279.05	6,790.00	25.63	24.91	90.09	660.06	610.47	49.59	13.310	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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											
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				
9,500.00	6,790.00	9,379.05	6,790.00	26.23	25.54	90.09	660.06	609.22	50.84	12.983	0						
9,600.00	6,790.00	9,479.05	6,790.00	26.84	26.16	90.09	660.06	607.96	52.10	12.669	0						
9,700.00	6,790.00	9,579.05	6,790.00	27.46	26.79	90.09	660.06	606.69	53.37	12.368	0						
9,800.00	6,790.00	9,679.05	6,790.00	28.08	27.43	90.09	660.06	605.42	54.64	12.079	0						
9,900.00	6,790.00	9,779.05	6,790.00	28.70	28.06	90.09	660.06	604.14	55.92	11.803	0						
10,000.00	6,790.00	9,879.05	6,790.00	29.33	28.70	90.09	660.06	602.85	57.21	11.537	0						
10,100.00	6,790.00	9,979.05	6,790.00	29.96	29.35	90.09	660.06	601.56	58.50	11.282	0						
10,200.00	6,790.00	10,079.05	6,790.00	30.59	29.99	90.09	660.06	600.26	59.80	11.038	0						
10,300.00	6,790.00	10,179.05	6,790.00	31.23	30.64	90.09	660.06	598.96	61.10	10.802	0						
10,400.00	6,790.00	10,279.05	6,790.00	31.87	31.29	90.09	660.06	597.65	62.41	10.576	0						
10,500.00	6,790.00	10,379.05	6,790.00	32.51	31.95	90.09	660.06	596.34	63.72	10.359	0						
10,600.00	6,790.00	10,479.05	6,790.00	33.15	32.60	90.09	660.06	595.03	65.04	10.149	0						
10,700.00	6,790.00	10,579.05	6,790.00	33.80	33.26	90.09	660.06	593.71	66.35	9.947	0						
10,800.00	6,790.00	10,679.05	6,790.00	34.45	33.92	90.09	660.06	592.38	67.68	9.753	0						
10,900.00	6,790.00	10,779.05	6,790.00	35.10	34.58	90.09	660.06	591.06	69.00	9.566	0						
11,000.00	6,790.00	10,879.05	6,790.00	35.76	35.24	90.09	660.06	589.73	70.33	9.385	0						
11,100.00	6,790.00	10,979.05	6,790.00	36.41	35.90	90.09	660.06	588.40	71.66	9.211	0						
11,200.00	6,790.00	11,079.05	6,790.00	37.07	36.57	90.09	660.06	587.06	73.00	9.042	0						
11,300.00	6,790.00	11,179.05	6,790.00	37.73	37.24	90.09	660.06	585.73	74.34	8.879	0						
11,400.00	6,790.00	11,279.05	6,790.00	38.39	37.91	90.09	660.06	584.39	75.68	8.722	0						
11,500.00	6,790.00	11,379.05	6,790.00	39.05	38.57	90.09	660.06	583.04	77.02	8.570	0						
11,600.00	6,790.00	11,479.05	6,790.00	39.71	39.25	90.09	660.06	581.70	78.36	8.423	0						
11,671.55	6,790.00	11,550.64	6,790.00	40.19	39.73	90.09	660.06	580.73	79.33	8.321	0	SF					



# Schlumberger

## Anticollision Risk Report

**PATHFINDER**  
A Schlumberger Company

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	0.53	53.93							
100.00	100.00	99.00	99.00	0.15	0.15	0.53	53.92	53.63	0.29	184.822	0			
200.00	200.00	199.00	199.00	0.32	0.32	0.53	53.92	53.28	0.64	84.182	0			
300.00	300.00	299.00	299.00	0.50	0.49	0.53	53.92	52.93	0.99	54.488	0			
400.00	400.00	399.00	399.00	0.67	0.67	0.53	53.92	52.58	1.34	40.280	0			
500.00	500.00	499.00	499.00	0.84	0.84	0.53	53.92	52.23	1.69	31.949	0			
600.00	600.00	599.00	599.00	1.02	1.02	0.53	53.92	51.89	2.04	26.474	0		CC, ES	
700.00	699.98	698.98	698.98	1.19	1.19	175.28	55.66	53.28	2.38	23.339	0			
800.00	799.84	798.84	798.84	1.37	1.37	175.67	60.88	58.15	2.73	22.292	0			
900.00	899.45	900.85	900.83	1.55	1.54	176.06	67.85	64.77	3.08	22.039	0			
1,000.00	998.70	1,003.14	1,002.97	1.73	1.72	176.24	74.76	71.34	3.43	21.827	0			
1,100.00	1,097.47	1,105.69	1,105.11	1.91	1.91	176.29	81.60	77.83	3.77	21.638	0			
1,200.00	1,195.62	1,208.49	1,207.11	2.10	2.09	176.22	88.36	84.24	4.12	21.463	0			
1,300.00	1,293.06	1,311.55	1,308.83	2.30	2.28	176.06	95.03	90.57	4.46	21.293	0			
1,400.00	1,389.64	1,411.81	1,407.40	2.50	2.47	175.92	102.85	98.04	4.80	21.409	0			
1,427.52	1,416.06	1,439.19	1,434.32	2.56	2.52	175.90	105.59	100.70	4.90	21.563	0			
1,500.00	1,485.54	1,511.27	1,505.18	2.71	2.65	175.89	113.17	108.01	5.16	21.929	0			
1,600.00	1,581.39	1,610.73	1,602.94	2.92	2.84	175.88	123.62	118.09	5.53	22.374	0			
1,700.00	1,677.25	1,710.18	1,700.70	3.14	3.03	175.87	134.07	128.18	5.89	22.762	0			
1,800.00	1,773.11	1,809.63	1,798.46	3.36	3.22	175.86	144.52	138.27	6.26	23.102	0			
1,900.00	1,868.96	1,909.08	1,896.23	3.57	3.41	175.85	154.98	148.35	6.62	23.404	0			
2,000.00	1,964.82	2,008.54	1,993.99	3.79	3.61	175.84	165.43	158.44	6.99	23.672	0			
2,100.00	2,060.68	2,107.99	2,091.75	4.01	3.80	175.84	175.88	168.52	7.36	23.913	0			
2,200.00	2,156.54	2,207.44	2,189.52	4.24	3.99	175.83	186.33	178.61	7.72	24.129	0			
2,300.00	2,252.39	2,306.89	2,287.28	4.46	4.19	175.83	196.78	188.69	8.09	24.326	0			
2,400.00	2,348.25	2,406.35	2,385.04	4.68	4.38	175.82	207.24	198.78	8.46	24.505	0			
2,500.00	2,444.11	2,505.80	2,482.80	4.91	4.58	175.82	217.69	208.86	8.82	24.668	0			
2,600.00	2,539.96	2,605.25	2,580.57	5.13	4.77	175.81	228.14	218.95	9.19	24.818	0			
2,700.00	2,635.82	2,704.70	2,678.33	5.35	4.97	175.81	238.59	229.03	9.56	24.956	0			
2,800.00	2,731.68	2,804.15	2,776.09	5.58	5.16	175.81	249.04	239.12	9.93	25.084	0			
2,900.00	2,827.53	2,903.61	2,873.85	5.80	5.36	175.80	259.50	249.20	10.30	25.202	0			
3,000.00	2,923.39	3,003.06	2,971.62	6.03	5.55	175.80	269.95	259.28	10.67	25.311	0			
3,100.00	3,019.25	3,102.51	3,069.38	6.26	5.75	175.80	280.40	269.37	11.03	25.414	0			
3,200.00	3,115.11	3,201.96	3,167.14	6.48	5.94	175.80	290.85	279.45	11.40	25.509	0			
3,300.00	3,210.96	3,301.42	3,264.90	6.71	6.14	175.80	301.30	289.53	11.77	25.598	0			
3,400.00	3,306.82	3,400.87	3,362.67	6.94	6.34	175.79	311.76	299.62	12.14	25.682	0			
3,500.00	3,402.68	3,500.32	3,460.43	7.16	6.53	175.79	322.21	309.70	12.51	25.761	0			
3,600.00	3,498.53	3,599.77	3,558.19	7.39	6.73	175.79	332.66	319.78	12.88	25.835	0			
3,700.00	3,594.39	3,699.22	3,655.95	7.62	6.93	175.79	343.11	329.87	13.25	25.904	0			
3,800.00	3,690.25	3,798.68	3,753.72	7.84	7.12	175.79	353.57	339.95	13.61	25.970	0			
3,900.00	3,786.10	3,898.13	3,851.48	8.07	7.32	175.78	364.02	350.03	13.98	26.033	0			
4,000.00	3,881.96	3,997.58	3,949.24	8.30	7.52	175.78	374.47	360.12	14.35	26.092	0			
4,100.00	3,977.82	4,097.03	4,047.00	8.53	7.71	175.78	384.92	370.20	14.72	26.148	0			
4,200.00	4,073.67	4,196.49	4,144.77	8.76	7.91	175.78	395.37	380.28	15.09	26.201	0			
4,300.00	4,169.53	4,295.94	4,242.53	8.98	8.11	175.78	405.83	390.37	15.46	26.252	0			
4,400.00	4,265.39	4,395.39	4,340.29	9.21	8.31	175.78	416.28	400.45	15.83	26.300	0			
4,500.00	4,361.25	4,494.84	4,438.06	9.44	8.50	175.78	426.73	410.53	16.20	26.346	0			
4,600.00	4,457.10	4,594.30	4,535.82	9.67	8.70	175.78	437.18	420.62	16.57	26.390	0			
4,700.00	4,552.96	4,693.75	4,633.58	9.90	8.90	175.78	447.63	430.70	16.94	26.432	0			
4,800.00	4,648.82	4,793.20	4,731.34	10.12	9.09	175.77	458.09	440.78	17.30	26.472	0			
4,900.00	4,744.67	4,892.65	4,829.11	10.35	9.29	175.77	468.54	450.86	17.67	26.511	0			
5,000.00	4,840.53	4,992.10	4,926.87	10.58	9.49	175.77	478.99	460.95	18.04	26.548	0			
5,100.00	4,936.39	5,091.56	5,024.63	10.81	9.69	175.77	489.44	471.03	18.41	26.583	0			
5,200.00	5,032.24	5,191.01	5,122.39	11.04	9.88	175.77	499.89	481.11	18.78	26.617	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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		
5,300.00	5,128.10	5,290.46	5,220.16	11.27	10.08	175.77	510.35	491.20	19.15	26.649	0			
5,400.00	5,223.96	5,389.91	5,317.92	11.50	10.28	175.77	520.80	501.28	19.52	26.681	0			
5,480.35	5,300.98	5,469.82	5,396.47	11.68	10.44	175.77	529.20	509.38	19.82	26.705	0			
5,500.00	5,319.83	5,489.37	5,415.69	11.72	10.48	175.77	531.18	511.29	19.90	26.697	0			
5,600.00	5,416.35	5,589.04	5,513.67	11.94	10.67	175.76	539.22	518.93	20.30	26.569	0			
5,700.00	5,513.72	5,688.93	5,611.86	12.15	10.87	175.72	543.78	523.11	20.68	26.301	0			
5,800.00	5,611.83	5,788.92	5,710.15	12.34	11.07	175.65	544.87	523.84	21.04	25.903	0			
5,900.00	5,710.55	5,888.88	5,808.41	12.53	11.27	175.55	542.48	521.10	21.37	25.379	0			
6,000.00	5,809.76	5,988.70	5,906.53	12.70	11.47	175.41	536.61	514.91	21.69	24.736	0			
6,100.00	5,909.35	6,073.58	5,990.17	12.87	11.63	175.27	528.59	506.63	21.96	24.067	0			
6,200.00	6,009.19	6,157.90	6,073.63	13.02	11.79	175.13	520.01	497.80	22.21	23.414	0			
6,307.87	6,117.04	6,249.05	6,164.22	13.18	11.95	0.39	510.14	484.99	25.16	20.278	0			
6,407.87	6,217.04	6,333.87	6,248.76	13.33	12.10	0.29	502.16	476.71	25.45	19.733	0			
6,450.00	6,259.13	6,369.69	6,284.51	13.39	12.16	90.65	499.69	476.79	22.90	21.820	0			
6,500.00	6,308.77	6,412.01	6,326.79	13.46	12.23	91.41	497.51	474.44	23.06	21.572	0			
6,550.00	6,357.72	6,453.77	6,368.53	13.54	12.30	92.50	496.28	473.05	23.23	21.361	0			
6,573.62	6,380.48	6,473.20	6,387.95	13.58	12.33	93.11	496.10	472.78	23.32	21.276	0			
6,600.00	6,405.59	6,500.00	6,414.75	13.62	12.37	94.05	496.28	472.85	23.43	21.185	0			
6,650.00	6,452.03	6,536.27	6,451.03	13.70	12.43	95.48	497.68	474.07	23.61	21.078	0			
6,700.00	6,496.68	6,580.92	6,495.68	13.78	12.50	97.49	500.53	476.71	23.83	21.008	0			
6,750.00	6,539.20	6,623.69	6,538.44	13.87	12.57	99.58	505.11	481.07	24.04	21.011	0			
6,800.00	6,579.27	6,675.54	6,590.22	13.96	12.65	102.19	511.43	487.16	24.27	21.075	0			
6,850.00	6,616.58	6,730.98	6,645.08	14.06	12.74	104.79	519.10	494.62	24.48	21.206	0			
6,900.00	6,650.85	6,790.72	6,703.06	14.16	12.85	107.40	527.92	503.25	24.67	21.403	0			
6,950.00	6,681.82	6,855.57	6,763.93	14.26	12.96	110.00	537.61	512.79	24.82	21.658	0			
7,000.00	6,709.25	6,926.47	6,827.13	14.37	13.09	112.57	547.82	522.87	24.95	21.956	0			
7,050.00	6,732.94	7,004.37	6,891.43	14.49	13.24	115.09	558.09	533.03	25.06	22.270	0			
7,100.00	6,752.70	7,090.14	6,954.61	14.61	13.41	117.47	567.89	542.72	25.17	22.561	0			
7,150.00	6,768.39	7,184.25	7,013.14	14.74	13.63	119.61	576.58	551.26	25.32	22.771	0			
7,200.00	6,779.87	7,286.43	7,062.14	14.88	13.88	121.34	583.54	557.98	25.56	22.830	0			
7,250.00	6,787.08	7,395.30	7,095.98	15.02	14.19	122.50	588.13	562.19	25.94	22.672	0			
7,300.00	6,789.94	7,508.15	7,109.82	15.18	14.55	122.96	589.92	563.42	26.50	22.260	0			
7,307.87	6,790.00	7,523.94	7,110.00	15.20	14.61	122.97	589.94	563.33	26.60	22.174	0			
7,400.00	6,790.00	7,616.07	7,110.00	15.50	14.94	122.97	589.94	562.65	27.29	21.620	0			
7,500.00	6,790.00	7,716.07	7,110.00	15.86	15.32	122.97	589.94	561.88	28.06	21.024	0			
7,600.00	6,790.00	7,816.07	7,110.00	16.23	15.72	122.96	589.94	561.07	28.86	20.439	0			
7,700.00	6,790.00	7,916.07	7,110.00	16.63	16.15	122.96	589.94	560.24	29.70	19.865	0			
7,800.00	6,790.00	8,016.07	7,110.00	17.05	16.59	122.96	589.94	559.38	30.56	19.306	0			
7,900.00	6,790.00	8,116.07	7,110.00	17.49	17.06	122.96	589.94	558.50	31.44	18.763	0			
8,000.00	6,790.00	8,216.07	7,110.00	17.95	17.54	122.96	589.94	557.59	32.35	18.237	0			
8,100.00	6,790.00	8,316.07	7,110.00	18.43	18.04	122.96	589.94	556.66	33.28	17.728	0			
8,200.00	6,790.00	8,416.07	7,110.00	18.92	18.55	122.96	589.94	555.72	34.22	17.238	0			
8,300.00	6,790.00	8,516.07	7,110.00	19.42	19.07	122.96	589.94	554.75	35.19	16.765	0			
8,400.00	6,790.00	8,616.07	7,110.00	19.94	19.60	122.96	589.94	553.77	36.17	16.311	0			
8,500.00	6,790.00	8,716.07	7,110.00	20.47	20.15	122.96	589.94	552.78	37.16	15.874	0			
8,600.00	6,790.00	8,816.07	7,110.00	21.01	20.70	122.96	589.94	551.77	38.17	15.454	0			
8,700.00	6,790.00	8,916.07	7,110.00	21.56	21.27	122.96	589.94	550.75	39.19	15.052	0			
8,800.00	6,790.00	9,016.07	7,110.00	22.12	21.84	122.96	589.94	549.72	40.23	14.665	0			
8,900.00	6,790.00	9,116.07	7,110.00	22.69	22.42	122.96	589.94	548.67	41.27	14.294	0			
9,000.00	6,790.00	9,216.07	7,110.00	23.26	23.00	122.96	589.95	547.62	42.33	13.938	0			
9,100.00	6,790.00	9,316.07	7,110.00	23.84	23.60	122.96	589.95	546.56	43.39	13.597	0			
9,200.00	6,790.00	9,416.07	7,110.00	24.43	24.19	122.96	589.95	545.49	44.46	13.269	0			
9,300.00	6,790.00	9,516.07	7,110.00	25.03	24.80	122.96	589.95	544.41	45.54	12.955	0			
9,400.00	6,790.00	9,616.07	7,110.00	25.63	25.41	122.96	589.95	543.32	46.63	12.653	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Sec.31-T05N-R67W - Wind 09 - Original Hole - Rev 1												<b>Offset Site Error:</b>	0.00 usft
Survey Program: 0-Pathfinder												<b>Offset Well Error:</b>	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	
9,500.00	6,790.00	9,716.07	7,110.00	26.23	26.02	122.96	589.95	542.23	47.72	12.362	0		
9,600.00	6,790.00	9,816.07	7,110.00	26.84	26.64	122.96	589.95	541.13	48.82	12.084	0		
9,700.00	6,790.00	9,916.07	7,110.00	27.46	27.26	122.96	589.95	540.02	49.93	11.816	0		
9,800.00	6,790.00	10,016.07	7,110.00	28.08	27.89	122.96	589.95	538.91	51.04	11.559	0		
9,900.00	6,790.00	10,116.07	7,110.00	28.70	28.52	122.96	589.95	537.79	52.16	11.311	0		
10,000.00	6,790.00	10,216.07	7,110.00	29.33	29.15	122.96	589.95	536.67	53.28	11.073	0		
10,100.00	6,790.00	10,316.07	7,110.00	29.96	29.79	122.96	589.95	535.55	54.41	10.844	0		
10,200.00	6,790.00	10,416.07	7,110.00	30.59	30.43	122.96	589.95	534.42	55.54	10.623	0		
10,300.00	6,790.00	10,516.07	7,110.00	31.23	31.07	122.96	589.95	533.28	56.67	10.410	0		
10,400.00	6,790.00	10,616.07	7,110.00	31.87	31.72	122.96	589.95	532.14	57.81	10.205	0		
10,500.00	6,790.00	10,716.07	7,110.00	32.51	32.37	122.96	589.95	531.00	58.95	10.007	0		
10,600.00	6,790.00	10,816.07	7,110.00	33.15	33.02	122.96	589.96	529.86	60.10	9.816	0		
10,700.00	6,790.00	10,916.07	7,110.00	33.80	33.67	122.96	589.96	528.71	61.25	9.632	0		
10,800.00	6,790.00	11,016.07	7,110.00	34.45	34.32	122.96	589.96	527.55	62.40	9.454	0		
10,900.00	6,790.00	11,116.07	7,110.00	35.10	34.98	122.96	589.96	526.40	63.56	9.282	0		
11,000.00	6,790.00	11,216.07	7,110.00	35.76	35.64	122.96	589.96	525.24	64.72	9.116	0		
11,100.00	6,790.00	11,316.07	7,110.00	36.41	36.30	122.96	589.96	524.08	65.88	8.956	0		
11,200.00	6,790.00	11,416.07	7,110.00	37.07	36.96	122.96	589.96	522.92	67.04	8.800	0		
11,300.00	6,790.00	11,516.07	7,110.00	37.73	37.62	122.96	589.96	521.76	68.20	8.650	0		
11,400.00	6,790.00	11,616.07	7,110.00	38.39	38.28	122.96	589.96	520.59	69.37	8.504	0		
11,500.00	6,790.00	11,716.07	7,110.00	39.05	38.95	122.96	589.96	519.42	70.54	8.363	0		
11,544.33	6,790.00	11,760.40	7,110.00	39.34	39.24	122.96	589.96	518.91	71.06	8.303	0		
11,600.00	6,790.00	11,815.77	7,110.00	39.71	39.61	122.96	589.97	518.26	71.71	8.227	0		
11,671.55	6,790.00	11,887.33	7,110.00	40.19	40.09	122.96	590.00	517.45	72.55	8.132	0		SF



# Schlumberger

## Anticollision Risk Report

**PATHFINDER**  
A Schlumberger Company

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	0.78	28.06							
100.00	100.00	100.00	100.00	0.15	0.15	0.78	28.06	27.76	0.29	95.684	0			
200.00	200.00	200.00	200.00	0.32	0.32	0.78	28.06	27.41	0.64	43.682	0			
300.00	300.00	300.00	300.00	0.50	0.50	0.78	28.06	27.06	0.99	28.301	0			
400.00	400.00	400.00	400.00	0.67	0.67	0.78	28.06	26.72	1.34	20.931	0			
500.00	500.00	500.00	500.00	0.84	0.84	0.78	28.06	26.37	1.69	16.606	0			
600.00	600.00	600.00	600.00	1.02	1.02	0.78	28.06	26.02	2.04	13.763	0		CC, ES	
700.00	699.98	699.98	699.98	1.19	1.19	175.64	29.80	27.41	2.39	12.484	0			
800.00	799.84	801.03	801.01	1.37	1.37	176.02	33.26	30.53	2.73	12.163	0			
900.00	899.45	902.20	902.03	1.55	1.55	176.18	36.70	33.62	3.08	11.909	0			
1,000.00	998.70	1,003.49	1,002.92	1.73	1.73	176.18	40.10	36.67	3.43	11.699	0			
1,100.00	1,097.47	1,104.91	1,103.56	1.91	1.91	176.05	43.46	39.69	3.77	11.518	0			
1,200.00	1,195.62	1,206.44	1,203.81	2.10	2.10	175.83	46.78	42.66	4.12	11.357	0			
1,300.00	1,293.06	1,308.10	1,303.54	2.30	2.29	175.53	50.05	45.59	4.47	11.208	0			
1,400.00	1,389.64	1,408.66	1,401.62	2.50	2.48	175.25	54.00	49.19	4.81	11.225	0			
1,427.52	1,416.06	1,436.13	1,428.40	2.56	2.54	175.23	55.63	50.73	4.91	11.342	0			
1,500.00	1,485.54	1,508.46	1,498.91	2.71	2.68	175.20	60.29	55.11	5.17	11.658	0			
1,600.00	1,581.39	1,608.25	1,596.19	2.92	2.88	175.17	66.70	61.16	5.54	12.042	0			
1,700.00	1,677.25	1,708.05	1,693.46	3.14	3.08	175.15	73.12	67.21	5.91	12.376	0			
1,800.00	1,773.11	1,807.84	1,790.74	3.36	3.28	175.13	79.54	73.26	6.28	12.670	0			
1,900.00	1,868.96	1,907.64	1,888.02	3.57	3.48	175.12	85.95	79.31	6.65	12.930	0			
2,000.00	1,964.82	2,007.43	1,985.30	3.79	3.68	175.10	92.37	85.35	7.02	13.162	0			
2,100.00	2,060.68	2,107.22	2,082.58	4.01	3.88	175.09	98.79	91.40	7.39	13.371	0			
2,200.00	2,156.54	2,207.02	2,179.86	4.24	4.09	175.08	105.21	97.45	7.76	13.558	0			
2,300.00	2,252.39	2,306.81	2,277.14	4.46	4.29	175.07	111.62	103.49	8.13	13.728	0			
2,400.00	2,348.25	2,406.61	2,374.42	4.68	4.50	175.06	118.04	109.54	8.50	13.883	0			
2,500.00	2,444.11	2,506.40	2,471.70	4.91	4.70	175.06	124.46	115.58	8.87	14.025	0			
2,600.00	2,539.96	2,606.19	2,568.98	5.13	4.91	175.05	130.88	121.63	9.25	14.155	0			
2,700.00	2,635.82	2,705.99	2,666.26	5.35	5.11	175.04	137.29	127.67	9.62	14.275	0			
2,800.00	2,731.68	2,805.78	2,763.54	5.58	5.32	175.04	143.71	133.72	9.99	14.385	0			
2,900.00	2,827.53	2,905.58	2,860.82	5.80	5.53	175.03	150.13	139.76	10.36	14.488	0			
3,000.00	2,923.39	3,005.37	2,958.10	6.03	5.73	175.03	156.54	145.81	10.73	14.583	0			
3,100.00	3,019.25	3,105.16	3,055.37	6.26	5.94	175.02	162.96	151.85	11.11	14.672	0			
3,200.00	3,115.11	3,204.96	3,152.65	6.48	6.15	175.02	169.38	157.90	11.48	14.754	0			
3,300.00	3,210.96	3,304.75	3,249.93	6.71	6.35	175.02	175.80	163.94	11.85	14.832	0			
3,400.00	3,306.82	3,404.54	3,347.21	6.94	6.56	175.01	182.21	169.99	12.23	14.905	0			
3,500.00	3,402.68	3,504.34	3,444.49	7.16	6.77	175.01	188.63	176.03	12.60	14.973	0			
3,600.00	3,498.53	3,604.13	3,541.77	7.39	6.98	175.01	195.05	182.08	12.97	15.037	0			
3,700.00	3,594.39	3,703.93	3,639.05	7.62	7.18	175.00	201.46	188.12	13.34	15.098	0			
3,800.00	3,690.25	3,803.72	3,736.33	7.84	7.39	175.00	207.88	194.16	13.72	15.155	0			
3,900.00	3,786.10	3,903.51	3,833.61	8.07	7.60	175.00	214.30	200.21	14.09	15.209	0			
4,000.00	3,881.96	4,003.31	3,930.89	8.30	7.81	175.00	220.72	206.25	14.46	15.261	0			
4,100.00	3,977.82	4,103.10	4,028.17	8.53	8.02	174.99	227.13	212.30	14.84	15.309	0			
4,200.00	4,073.67	4,202.90	4,125.45	8.76	8.22	174.99	233.55	218.34	15.21	15.356	0			
4,300.00	4,169.53	4,302.69	4,222.73	8.98	8.43	174.99	239.97	224.39	15.58	15.400	0			
4,400.00	4,265.39	4,402.48	4,320.01	9.21	8.64	174.99	246.39	230.43	15.96	15.442	0			
4,500.00	4,361.25	4,502.28	4,417.28	9.44	8.85	174.99	252.80	236.47	16.33	15.482	0			
4,600.00	4,457.10	4,602.07	4,514.56	9.67	9.06	174.98	259.22	242.52	16.70	15.520	0			
4,700.00	4,552.96	4,701.86	4,611.84	9.90	9.27	174.98	265.64	248.56	17.08	15.556	0			
4,800.00	4,648.82	4,801.66	4,709.12	10.12	9.47	174.98	272.05	254.61	17.45	15.591	0			
4,900.00	4,744.67	4,901.45	4,806.40	10.35	9.68	174.98	278.47	260.65	17.82	15.625	0			
5,000.00	4,840.53	5,001.25	4,903.68	10.58	9.89	174.98	284.89	266.69	18.20	15.657	0			
5,100.00	4,936.39	5,101.04	5,000.96	10.81	10.10	174.98	291.31	272.74	18.57	15.688	0			
5,200.00	5,032.24	5,200.83	5,098.24	11.04	10.31	174.98	297.72	278.78	18.94	15.717	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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				
5,300.00	5,128.10	5,300.63	5,195.52	11.27	10.52	174.98	304.14	284.82	19.32	15.746	0					
5,400.00	5,223.96	5,400.42	5,292.80	11.50	10.73	174.97	310.56	290.87	19.69	15.773	0					
5,480.35	5,300.98	5,480.61	5,370.96	11.68	10.89	174.97	315.71	295.72	19.99	15.794	0					
5,500.00	5,319.83	5,500.22	5,390.08	11.72	10.94	174.97	316.91	296.84	20.07	15.791	0					
5,600.00	5,416.35	5,599.16	5,486.53	11.94	11.14	174.94	320.92	300.46	20.46	15.683	0					
5,700.00	5,513.72	5,689.08	5,574.55	12.15	11.32	174.90	323.31	302.49	20.82	15.532	0					
5,800.00	5,611.83	5,778.95	5,663.04	12.34	11.50	174.86	325.33	304.19	21.15	15.384	0					
5,900.00	5,710.55	5,868.78	5,751.94	12.53	11.66	174.83	327.00	305.55	21.46	15.241	0					
6,000.00	5,809.76	5,958.57	5,841.16	12.70	11.82	174.80	328.31	306.56	21.74	15.100	0					
6,100.00	5,909.35	6,048.33	5,930.63	12.87	11.97	174.79	329.25	307.24	22.01	14.962	0					
6,200.00	6,009.19	6,138.08	6,020.26	13.02	12.12	174.78	329.82	307.57	22.25	14.825	0					
6,307.87	6,117.04	6,234.87	6,117.04	13.18	12.27	0.18	330.04	304.58	25.45	12.968	0					
6,407.87	6,217.04	6,334.87	6,217.04	13.33	12.42	0.18	330.04	304.28	25.75	12.816	0					
6,450.00	6,259.13	6,377.08	6,259.21	13.39	12.49	90.18	330.04	307.06	22.97	14.368	0					
6,500.00	6,308.77	6,427.16	6,308.93	13.46	12.57	90.17	330.04	306.89	23.15	14.258	0					
6,550.00	6,357.72	6,477.25	6,357.96	13.54	12.65	90.17	330.03	306.71	23.33	14.149	0					
6,600.00	6,405.59	6,527.34	6,405.90	13.62	12.73	90.17	330.03	306.52	23.51	14.038	0					
6,650.00	6,452.03	6,577.42	6,452.41	13.70	12.82	90.16	330.03	306.34	23.70	13.926	0					
6,700.00	6,496.68	6,627.50	6,497.11	13.78	12.91	90.15	330.03	306.14	23.89	13.813	0					
6,750.00	6,539.20	6,677.57	6,539.67	13.87	13.00	90.15	330.03	305.94	24.10	13.697	0					
6,800.00	6,579.27	6,727.64	6,579.76	13.96	13.10	90.14	330.03	305.73	24.31	13.578	0					
6,850.00	6,616.58	6,777.71	6,617.08	14.06	13.20	90.13	330.03	305.51	24.53	13.455	0					
6,900.00	6,650.85	6,827.77	6,651.35	14.16	13.30	90.11	330.03	305.27	24.76	13.328	0					
6,950.00	6,681.82	6,877.82	6,682.30	14.26	13.41	90.10	330.03	305.02	25.01	13.195	0					
7,000.00	6,709.25	6,927.87	6,709.70	14.37	13.53	90.09	330.03	304.76	25.28	13.057	0					
7,050.00	6,732.94	6,977.91	6,733.34	14.49	13.65	90.08	330.03	304.48	25.56	12.913	0					
7,100.00	6,752.70	7,027.95	6,753.04	14.61	13.79	90.06	330.03	304.18	25.86	12.764	0					
7,150.00	6,768.39	7,077.98	6,768.65	14.74	13.93	90.05	330.03	303.86	26.17	12.609	0					
7,200.00	6,779.87	7,128.00	6,780.06	14.88	14.07	90.03	330.03	303.52	26.51	12.450	0					
7,250.00	6,787.08	7,178.01	6,787.18	15.02	14.23	90.02	330.03	303.17	26.86	12.287	0					
7,300.00	6,789.94	7,228.01	6,789.96	15.18	14.39	90.00	330.03	302.81	27.23	12.122	0					
7,307.87	6,790.00	7,235.89	6,790.00	15.20	14.42	90.00	330.03	302.75	27.28	12.096	0					
7,400.00	6,790.00	7,328.01	6,790.00	15.50	14.74	90.00	330.03	302.03	28.00	11.787	0					
7,500.00	6,790.00	7,428.01	6,790.00	15.86	15.12	90.00	330.03	301.21	28.82	11.452	0					
7,600.00	6,790.00	7,528.01	6,790.00	16.23	15.52	90.00	330.03	300.35	29.68	11.119	0					
7,700.00	6,790.00	7,628.01	6,790.00	16.63	15.94	90.00	330.03	299.45	30.59	10.790	0					
7,800.00	6,790.00	7,728.01	6,790.00	17.05	16.39	90.00	330.03	298.51	31.53	10.468	0					
7,900.00	6,790.00	7,828.01	6,790.00	17.49	16.85	90.00	330.03	297.53	32.50	10.154	0					
8,000.00	6,790.00	7,928.01	6,790.00	17.95	17.33	90.00	330.03	296.52	33.51	9.849	0					
8,100.00	6,790.00	8,028.01	6,790.00	18.43	17.83	90.00	330.03	295.49	34.54	9.554	0					
8,200.00	6,790.00	8,128.01	6,790.00	18.92	18.34	90.00	330.03	294.43	35.60	9.270	0					
8,300.00	6,790.00	8,228.01	6,790.00	19.42	18.86	90.00	330.03	293.35	36.68	8.996	0					
8,400.00	6,790.00	8,328.01	6,790.00	19.94	19.39	90.00	330.03	292.24	37.79	8.734	0					
8,500.00	6,790.00	8,428.01	6,790.00	20.47	19.94	90.00	330.03	291.12	38.91	8.481	0					
8,600.00	6,790.00	8,528.01	6,790.00	21.01	20.50	90.00	330.03	289.98	40.05	8.240	0					
8,700.00	6,790.00	8,628.01	6,790.00	21.56	21.06	90.00	330.03	288.82	41.21	8.008	0					
8,800.00	6,790.00	8,728.01	6,790.00	22.12	21.63	90.00	330.03	287.65	42.39	7.787	0					
8,900.00	6,790.00	8,828.01	6,790.00	22.69	22.21	90.00	330.03	286.46	43.57	7.574	0					
9,000.00	6,790.00	8,928.01	6,790.00	23.26	22.80	90.00	330.03	285.26	44.77	7.371	0					
9,100.00	6,790.00	9,028.01	6,790.00	23.84	23.39	90.00	330.03	284.05	45.98	7.177	0					
9,200.00	6,790.00	9,128.01	6,790.00	24.43	23.99	90.00	330.03	282.83	47.21	6.991	0					
9,300.00	6,790.00	9,228.01	6,790.00	25.03	24.60	90.00	330.03	281.60	48.44	6.814	0					
9,400.00	6,790.00	9,328.01	6,790.00	25.63	25.21	90.00	330.03	280.35	49.68	6.643	0					
9,500.00	6,790.00	9,428.01	6,790.00	26.23	25.82	90.00	330.03	279.10	50.93	6.480	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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			
9,600.00	6,790.00	9,528.01	6,790.00	26.84	26.44	90.00	330.03	277.85	52.19	6.324	0						
9,700.00	6,790.00	9,628.01	6,790.00	27.46	27.07	90.00	330.03	276.58	53.45	6.174	0						
9,800.00	6,790.00	9,728.01	6,790.00	28.08	27.70	90.00	330.03	275.31	54.73	6.031	0						
9,900.00	6,790.00	9,828.01	6,790.00	28.70	28.33	90.00	330.03	274.03	56.01	5.893	0						
10,000.00	6,790.00	9,928.01	6,790.00	29.33	28.96	90.00	330.03	272.74	57.29	5.761	0						
10,100.00	6,790.00	10,028.01	6,790.00	29.96	29.60	90.00	330.03	271.45	58.58	5.634	0						
10,200.00	6,790.00	10,128.01	6,790.00	30.59	30.24	90.00	330.03	270.16	59.88	5.512	0						
10,300.00	6,790.00	10,228.01	6,790.00	31.23	30.88	90.00	330.03	268.86	61.18	5.395	0						
10,400.00	6,790.00	10,328.01	6,790.00	31.87	31.53	90.00	330.03	267.55	62.48	5.282	0						
10,500.00	6,790.00	10,428.01	6,790.00	32.51	32.18	90.00	330.03	266.24	63.79	5.173	0						
10,600.00	6,790.00	10,528.01	6,790.00	33.15	32.83	90.00	330.03	264.93	65.11	5.069	0						
10,700.00	6,790.00	10,628.01	6,790.00	33.80	33.48	90.00	330.03	263.61	66.42	4.969	0						
10,800.00	6,790.00	10,728.01	6,790.00	34.45	34.14	90.00	330.03	262.29	67.75	4.872	0						
10,900.00	6,790.00	10,828.01	6,790.00	35.10	34.79	90.00	330.03	260.96	69.07	4.778	0						
11,000.00	6,790.00	10,928.01	6,790.00	35.76	35.45	90.00	330.03	259.64	70.40	4.688	0						
11,100.00	6,790.00	11,028.01	6,790.00	36.41	36.11	90.00	330.03	258.30	71.73	4.601	0						
11,200.00	6,790.00	11,128.01	6,790.00	37.07	36.78	90.00	330.03	256.97	73.06	4.517	0						
11,300.00	6,790.00	11,228.01	6,790.00	37.73	37.44	90.00	330.03	255.63	74.40	4.436	0						
11,400.00	6,790.00	11,328.01	6,790.00	38.39	38.10	90.00	330.03	254.30	75.74	4.358	0						
11,500.00	6,790.00	11,428.01	6,790.00	39.05	38.77	90.00	330.03	252.95	77.08	4.282	0						
11,600.00	6,790.00	11,528.02	6,790.00	39.71	39.44	90.00	330.03	251.61	78.42	4.208	0						
11,671.55	6,790.00	11,599.57	6,790.00	40.19	39.92	90.00	330.03	250.64	79.39	4.157	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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				
0.00	0.00	1.00	1.00	0.00	0.00	-179.79	28.05				0					
100.00	100.00	101.00	101.00	0.15	0.15	-179.79	28.05	27.76	0.29	95.104	0					
200.00	200.00	201.00	201.00	0.32	0.32	-179.79	28.05	27.41	0.64	43.557	0					
300.00	300.00	301.00	301.00	0.50	0.50	-179.79	28.05	27.06	0.99	28.247	0					
400.00	400.00	401.00	401.00	0.67	0.67	-179.79	28.05	26.71	1.34	20.901	0					
466.33	466.33	467.33	467.33	0.79	0.79	-179.79	28.05	26.48	1.57	17.826	0		CC			
500.00	500.00	500.99	500.99	0.84	0.85	-179.79	28.05	26.36	1.69	16.587	0		ES			
600.00	600.00	600.00	599.98	1.02	1.02	-179.51	29.81	27.77	2.04	14.622	0					
700.00	699.98	698.84	698.68	1.19	1.19	-4.48	33.27	30.89	2.39	13.949	0					
800.00	799.84	797.58	797.04	1.37	1.37	-4.17	36.69	33.96	2.73	13.437	0					
900.00	899.45	896.20	894.94	1.55	1.55	-3.96	40.07	37.00	3.08	13.030	0					
1,000.00	998.70	994.71	992.26	1.73	1.73	-3.82	43.41	39.99	3.42	12.691	0					
1,100.00	1,097.47	1,093.11	1,088.88	1.91	1.92	-3.74	46.69	42.92	3.77	12.400	0					
1,200.00	1,195.62	1,191.41	1,184.71	2.10	2.11	-3.71	49.91	45.80	4.11	12.142	0					
1,300.00	1,293.06	1,289.59	1,279.63	2.30	2.31	-3.71	53.08	48.62	4.46	11.908	0					
1,400.00	1,389.64	1,388.71	1,374.68	2.50	2.52	-3.78	55.68	50.87	4.81	11.584	0					
1,427.52	1,416.06	1,416.23	1,401.04	2.56	2.58	-3.83	55.88	50.98	4.90	11.397	0					
1,500.00	1,485.54	1,488.71	1,470.46	2.71	2.74	-3.99	56.07	50.90	5.17	10.838	0					
1,600.00	1,581.39	1,588.71	1,566.25	2.92	2.95	-4.21	56.34	50.79	5.55	10.154	0					
1,700.00	1,677.25	1,688.71	1,662.03	3.14	3.17	-4.44	56.60	50.68	5.92	9.556	0					
1,800.00	1,773.11	1,788.71	1,757.82	3.36	3.39	-4.66	56.87	50.57	6.30	9.028	0					
1,900.00	1,868.96	1,888.71	1,853.60	3.57	3.61	-4.87	57.13	50.46	6.68	8.558	0					
2,000.00	1,964.82	1,988.71	1,949.39	3.79	3.84	-5.09	57.40	50.35	7.05	8.139	0					
2,100.00	2,060.68	2,088.71	2,045.17	4.01	4.06	-5.30	57.67	50.24	7.43	7.761	0					
2,200.00	2,156.54	2,188.71	2,140.96	4.24	4.28	-5.51	57.93	50.13	7.81	7.420	0					
2,300.00	2,252.39	2,288.71	2,236.75	4.46	4.51	-5.72	58.20	50.02	8.19	7.110	0					
2,400.00	2,348.25	2,388.71	2,332.53	4.68	4.73	-5.93	58.47	49.91	8.57	6.827	0					
2,500.00	2,444.11	2,488.71	2,428.32	4.91	4.96	-6.14	58.74	49.80	8.94	6.568	0					
2,600.00	2,539.96	2,588.71	2,524.10	5.13	5.18	-6.34	59.02	49.69	9.32	6.330	0					
2,700.00	2,635.82	2,688.71	2,619.89	5.35	5.41	-6.54	59.29	49.59	9.70	6.110	0					
2,800.00	2,731.68	2,788.70	2,715.67	5.58	5.64	-6.74	59.56	49.48	10.08	5.907	0					
2,900.00	2,827.53	2,888.70	2,811.46	5.80	5.87	-6.94	59.84	49.37	10.46	5.718	0					
3,000.00	2,923.39	2,988.70	2,907.24	6.03	6.09	-7.13	60.11	49.27	10.84	5.543	0					
3,100.00	3,019.25	3,088.70	3,003.03	6.26	6.32	-7.33	60.38	49.16	11.23	5.379	0					
3,200.00	3,115.11	3,188.70	3,098.81	6.48	6.55	-7.52	60.66	49.05	11.61	5.226	0					
3,300.00	3,210.96	3,288.70	3,194.60	6.71	6.78	-7.71	60.94	48.95	11.99	5.083	0					
3,400.00	3,306.82	3,388.70	3,290.38	6.94	7.00	-7.90	61.21	48.85	12.37	4.949	0					
3,500.00	3,402.68	3,488.70	3,386.17	7.16	7.23	-8.09	61.49	48.74	12.75	4.822	0					
3,600.00	3,498.53	3,588.70	3,481.96	7.39	7.46	-8.28	61.77	48.64	13.13	4.703	0					
3,700.00	3,594.39	3,688.70	3,577.74	7.62	7.69	-8.46	62.05	48.53	13.52	4.591	0					
3,800.00	3,690.25	3,788.70	3,673.53	7.84	7.92	-8.64	62.33	48.43	13.90	4.485	0					
3,900.00	3,786.10	3,888.70	3,769.31	8.07	8.15	-8.82	62.61	48.33	14.28	4.384	0					
4,000.00	3,881.96	3,988.70	3,865.10	8.30	8.38	-9.00	62.89	48.23	14.66	4.289	0					
4,100.00	3,977.82	4,088.70	3,960.88	8.53	8.60	-9.18	63.17	48.13	15.05	4.198	0					
4,200.00	4,073.67	4,188.70	4,056.67	8.76	8.83	-9.36	63.46	48.02	15.43	4.112	0					
4,300.00	4,169.53	4,288.70	4,152.45	8.98	9.06	-9.53	63.74	47.92	15.81	4.030	0					
4,400.00	4,265.39	4,388.70	4,248.24	9.21	9.29	-9.70	64.02	47.82	16.20	3.952	0					
4,500.00	4,361.25	4,488.69	4,344.02	9.44	9.52	-9.88	64.31	47.72	16.58	3.878	0					
4,600.00	4,457.10	4,588.69	4,439.81	9.67	9.75	-10.05	64.59	47.62	16.97	3.807	0					
4,700.00	4,552.96	4,688.69	4,535.59	9.90	9.98	-10.21	64.88	47.52	17.35	3.739	0					
4,800.00	4,648.82	4,788.69	4,631.38	10.12	10.21	-10.38	65.16	47.42	17.74	3.674	0					
4,900.00	4,744.67	4,888.69	4,727.17	10.35	10.44	-10.55	65.45	47.33	18.12	3.612	0					
5,000.00	4,840.53	4,988.69	4,822.95	10.58	10.67	-10.71	65.73	47.23	18.51	3.552	0					
5,100.00	4,936.39	5,088.69	4,918.74	10.81	10.90	-10.87	66.02	47.13	18.89	3.495	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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	5,032.24	5,188.69	5,014.52	11.04	11.13	-11.03	66.31	47.03	19.28	3.440	0	SF				
5,300.00	5,128.10	5,288.69	5,110.31	11.27	11.36	-11.19	66.60	46.93	19.66	3.387	0					
5,400.00	5,223.96	5,388.69	5,206.09	11.50	11.59	-11.35	66.89	46.84	20.05	3.336	0					
5,480.35	5,300.98	5,469.04	5,283.06	11.68	11.77	-11.48	67.12	46.76	20.36	3.297	0					
5,500.00	5,319.83	5,488.69	5,301.88	11.72	11.82	-11.50	67.24	46.80	20.44	3.290	0					
5,600.00	5,416.35	5,588.65	5,397.62	11.94	12.04	-11.26	69.91	49.09	20.82	3.358	0					
5,700.00	5,513.72	5,688.45	5,493.22	12.15	12.27	-10.55	76.01	54.84	21.17	3.590	0					
5,800.00	5,611.83	5,787.98	5,588.56	12.34	12.50	-9.56	85.55	64.06	21.49	3.980	0					
5,900.00	5,710.55	5,889.65	5,686.21	12.53	12.73	-8.52	97.60	75.81	21.80	4.478	0					
6,000.00	5,809.76	5,992.59	5,786.02	12.70	12.95	-7.68	109.71	87.63	22.08	4.969	0					
6,100.00	5,909.35	6,096.01	5,887.14	12.87	13.15	-7.00	121.73	99.38	22.35	5.448	0					
6,200.00	6,009.19	6,199.89	5,989.43	13.02	13.35	-6.44	133.63	111.04	22.59	5.916	0					
6,307.87	6,117.04	6,312.48	6,100.95	13.18	13.55	179.47	146.31	119.61	26.70	5.480	0					
6,407.87	6,217.04	6,417.52	6,205.46	13.33	13.73	179.84	156.18	129.16	27.02	5.780	0					
6,450.00	6,259.13	6,461.94	6,249.77	13.39	13.80	-90.34	159.25	135.93	23.32	6.829	0					
6,500.00	6,308.77	6,514.46	6,302.20	13.46	13.88	-92.12	162.19	138.68	23.51	6.899	0					
6,550.00	6,357.72	6,566.32	6,354.03	13.54	13.95	-95.44	164.79	141.08	23.70	6.952	0					
6,600.00	6,405.59	6,617.08	6,404.77	13.62	14.03	-100.05	167.84	143.94	23.90	7.024	0					
6,650.00	6,452.03	6,665.33	6,453.03	13.70	14.10	-105.46	172.43	148.38	24.06	7.168	0					
6,700.00	6,496.68	6,709.98	6,497.68	13.78	14.16	-110.98	180.24	156.10	24.14	7.467	0					
6,750.00	6,539.20	6,753.16	6,540.85	13.87	14.22	-116.44	192.32	168.22	24.10	7.981	0					
6,800.00	6,579.27	6,804.92	6,592.52	13.96	14.30	-122.56	207.96	184.06	23.90	8.702	0					
6,850.00	6,616.58	6,860.21	6,647.21	14.06	14.38	-128.03	225.78	202.27	23.52	9.601	0					
6,900.00	6,650.85	6,919.72	6,704.92	14.16	14.48	-132.89	245.01	222.05	22.96	10.671	0					
6,950.00	6,681.82	6,984.26	6,765.43	14.26	14.58	-137.19	264.90	242.64	22.26	11.900	0					
7,000.00	6,709.25	7,054.71	6,828.15	14.37	14.69	-140.97	284.73	263.28	21.46	13.271	0					
7,050.00	6,732.94	7,132.02	6,891.89	14.49	14.83	-144.26	303.76	283.17	20.59	14.751	0					
7,100.00	6,752.70	7,217.00	6,954.47	14.61	14.99	-147.06	321.20	301.47	19.73	16.277	0					
7,150.00	6,768.39	7,310.15	7,012.49	14.74	15.18	-149.35	336.24	317.30	18.94	17.750	0					
7,200.00	6,779.87	7,411.24	7,061.23	14.88	15.40	-151.07	348.04	329.75	18.30	19.023	0					
7,250.00	6,787.08	7,518.96	7,095.23	15.02	15.67	-152.18	355.85	337.99	17.86	19.927	0					
7,300.00	6,789.94	7,630.77	7,109.70	15.18	15.99	-152.64	359.08	341.41	17.68	20.315	0					
7,307.87	6,790.00	7,648.53	7,110.00	15.20	16.04	-152.65	359.15	341.48	17.67	20.323	0					
7,400.00	6,790.00	7,741.11	7,110.00	15.50	16.33	-152.65	359.15	340.85	18.30	19.627	0					
7,500.00	6,790.00	7,841.11	7,110.00	15.86	16.67	-152.65	359.15	340.16	18.99	18.912	0					
7,600.00	6,790.00	7,941.11	7,110.00	16.23	17.03	-152.65	359.15	339.46	19.70	18.235	0					
7,700.00	6,790.00	8,041.11	7,110.00	16.63	17.42	-152.65	359.15	338.74	20.41	17.595	0					
7,800.00	6,790.00	8,141.11	7,110.00	17.05	17.82	-152.65	359.15	338.01	21.14	16.990	0					
7,900.00	6,790.00	8,241.11	7,110.00	17.49	18.25	-152.65	359.15	337.28	21.87	16.419	0					
8,000.00	6,790.00	8,341.11	7,110.00	17.95	18.69	-152.65	359.15	336.53	22.62	15.879	0					
8,100.00	6,790.00	8,441.11	7,110.00	18.43	19.15	-152.65	359.15	335.78	23.37	15.368	0					
8,200.00	6,790.00	8,541.11	7,110.00	18.92	19.63	-152.65	359.15	335.02	24.13	14.885	0					
8,300.00	6,790.00	8,641.11	7,110.00	19.42	20.12	-152.65	359.15	334.26	24.89	14.427	0					
8,400.00	6,790.00	8,741.11	7,110.00	19.94	20.62	-152.65	359.15	333.49	25.66	13.994	0					
8,500.00	6,790.00	8,841.11	7,110.00	20.47	21.14	-152.65	359.15	332.71	26.44	13.584	0					
8,600.00	6,790.00	8,941.11	7,110.00	21.01	21.66	-152.65	359.15	331.93	27.22	13.194	0					
8,700.00	6,790.00	9,041.11	7,110.00	21.56	22.20	-152.65	359.15	331.15	28.01	12.825	0					
8,800.00	6,790.00	9,141.11	7,110.00	22.12	22.75	-152.65	359.15	330.36	28.79	12.473	0					
8,900.00	6,790.00	9,241.11	7,110.00	22.69	23.30	-152.65	359.15	329.57	29.59	12.139	0					
9,000.00	6,790.00	9,341.11	7,110.00	23.26	23.87	-152.65	359.15	328.77	30.38	11.821	0					
9,100.00	6,790.00	9,441.11	7,110.00	23.84	24.44	-152.65	359.15	327.97	31.18	11.518	0					
9,200.00	6,790.00	9,541.11	7,110.00	24.43	25.02	-152.65	359.15	327.17	31.98	11.230	0					
9,300.00	6,790.00	9,641.11	7,110.00	25.03	25.60	-152.65	359.15	326.36	32.79	10.954	0					
9,400.00	6,790.00	9,741.11	7,110.00	25.63	26.19	-152.65	359.15	325.56	33.59	10.691	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

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	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		
9,500.00	6,790.00	9,841.11	7,110.00	26.23	26.79	-152.65	359.15	324.75	34.40	10.440	0			
9,600.00	6,790.00	9,941.11	7,110.00	26.84	27.39	-152.65	359.15	323.94	35.21	10.199	0			
9,700.00	6,790.00	10,041.11	7,110.00	27.46	28.00	-152.65	359.15	323.12	36.03	9.969	0			
9,800.00	6,790.00	10,141.11	7,110.00	28.08	28.61	-152.65	359.15	322.31	36.84	9.748	0			
9,900.00	6,790.00	10,241.11	7,110.00	28.70	29.22	-152.65	359.15	321.49	37.66	9.537	0			
10,000.00	6,790.00	10,341.11	7,110.00	29.33	29.84	-152.65	359.15	320.67	38.48	9.334	0			
10,100.00	6,790.00	10,441.11	7,110.00	29.96	30.46	-152.65	359.15	319.85	39.30	9.139	0			
10,200.00	6,790.00	10,541.11	7,110.00	30.59	31.09	-152.65	359.15	319.03	40.12	8.952	0			
10,300.00	6,790.00	10,641.11	7,110.00	31.23	31.72	-152.65	359.15	318.21	40.94	8.772	0			
10,400.00	6,790.00	10,741.11	7,110.00	31.87	32.35	-152.65	359.15	317.38	41.77	8.599	0			
10,500.00	6,790.00	10,841.11	7,110.00	32.51	32.99	-152.65	359.15	316.56	42.59	8.432	0			
10,600.00	6,790.00	10,941.11	7,110.00	33.15	33.63	-152.65	359.15	315.73	43.42	8.272	0			
10,700.00	6,790.00	11,041.11	7,110.00	33.80	34.27	-152.65	359.15	314.90	44.25	8.117	0			
10,800.00	6,790.00	11,141.11	7,110.00	34.45	34.91	-152.65	359.15	314.08	45.08	7.968	0			
10,900.00	6,790.00	11,241.11	7,110.00	35.10	35.56	-152.65	359.15	313.25	45.91	7.824	0			
11,000.00	6,790.00	11,341.11	7,110.00	35.76	36.21	-152.65	359.15	312.42	46.74	7.685	0			
11,100.00	6,790.00	11,441.11	7,110.00	36.41	36.86	-152.65	359.15	311.58	47.57	7.550	0			
11,200.00	6,790.00	11,541.11	7,110.00	37.07	37.51	-152.65	359.15	310.75	48.40	7.421	0			
11,300.00	6,790.00	11,641.11	7,110.00	37.73	38.16	-152.65	359.15	309.92	49.23	7.295	0			
11,400.00	6,790.00	11,741.11	7,110.00	38.39	38.82	-152.65	359.15	309.09	50.07	7.174	0			
11,500.00	6,790.00	11,841.11	7,110.00	39.05	39.47	-152.65	359.15	308.25	50.90	7.056	0			
11,600.00	6,790.00	11,941.11	7,110.00	39.71	40.13	-152.65	359.15	307.42	51.73	6.942	0			
11,650.80	6,790.00	11,991.92	7,110.00	40.05	40.47	-152.65	359.15	306.95	52.20	6.880	0			
11,671.55	6,790.00	12,010.27	7,110.00	40.19	40.59	-152.65	359.16	306.83	52.33	6.864	0			

<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB @ 4945.00usft (Xtreme 7 - 16')

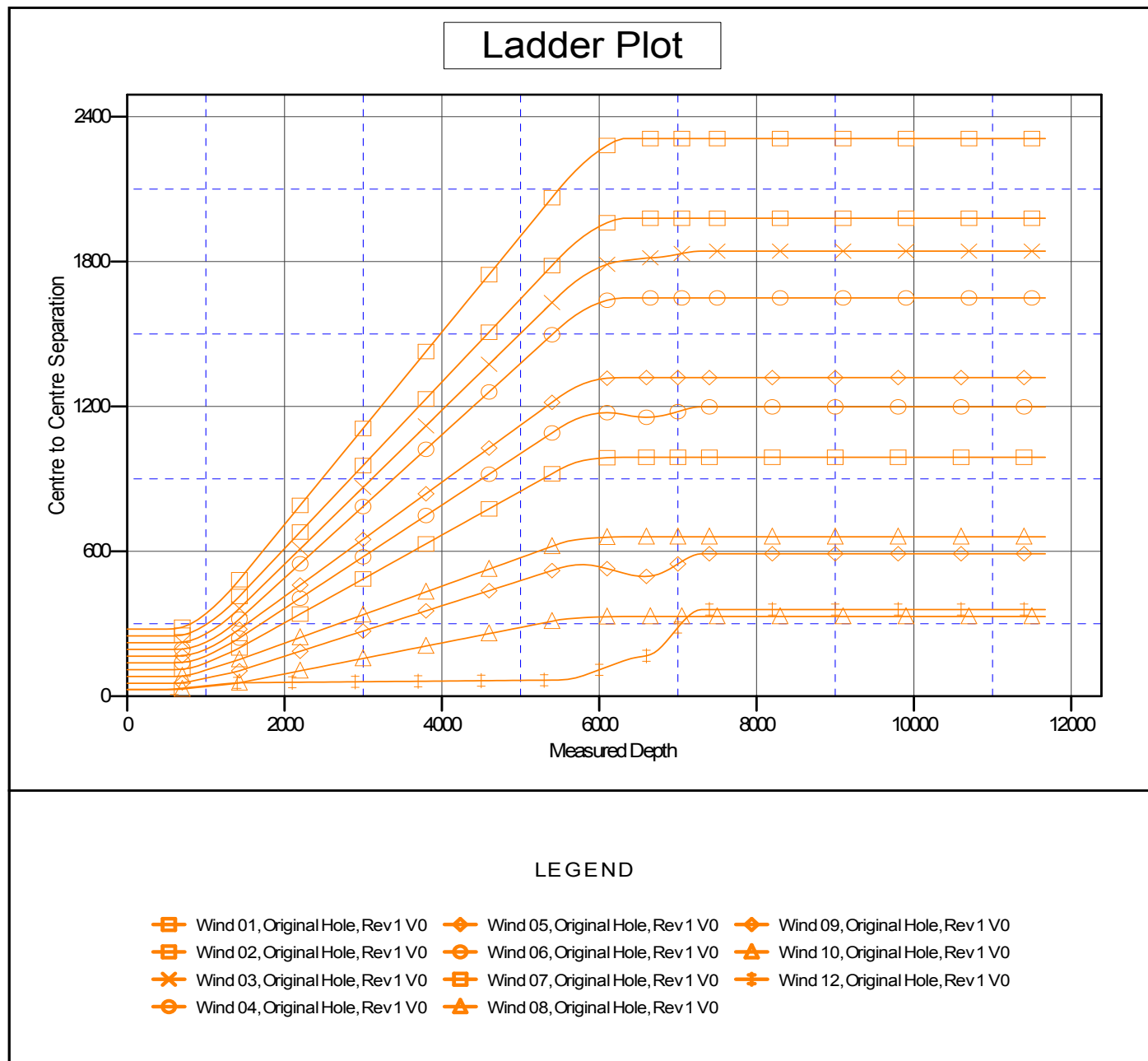
Offset Depths are relative to Offset Datum

Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Wind 11

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.36°



<b>Company:</b>	Extraction Oil & Gas	<b>Local Co-ordinate Reference:</b>	Well Wind 11
<b>Project:</b>	Weld Co., Co	<b>TVD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Reference Site:</b>	Sec.31-T05N-R67W	<b>MD Reference:</b>	KB @ 4945.00usft (Xtreme 7 - 16')
<b>Site Error:</b>	0.00	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wind 11	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.00	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Hole	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	Rev 1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB @ 4945.00usft (Xtreme 7 - 16')

Offset Depths are relative to Offset Datum

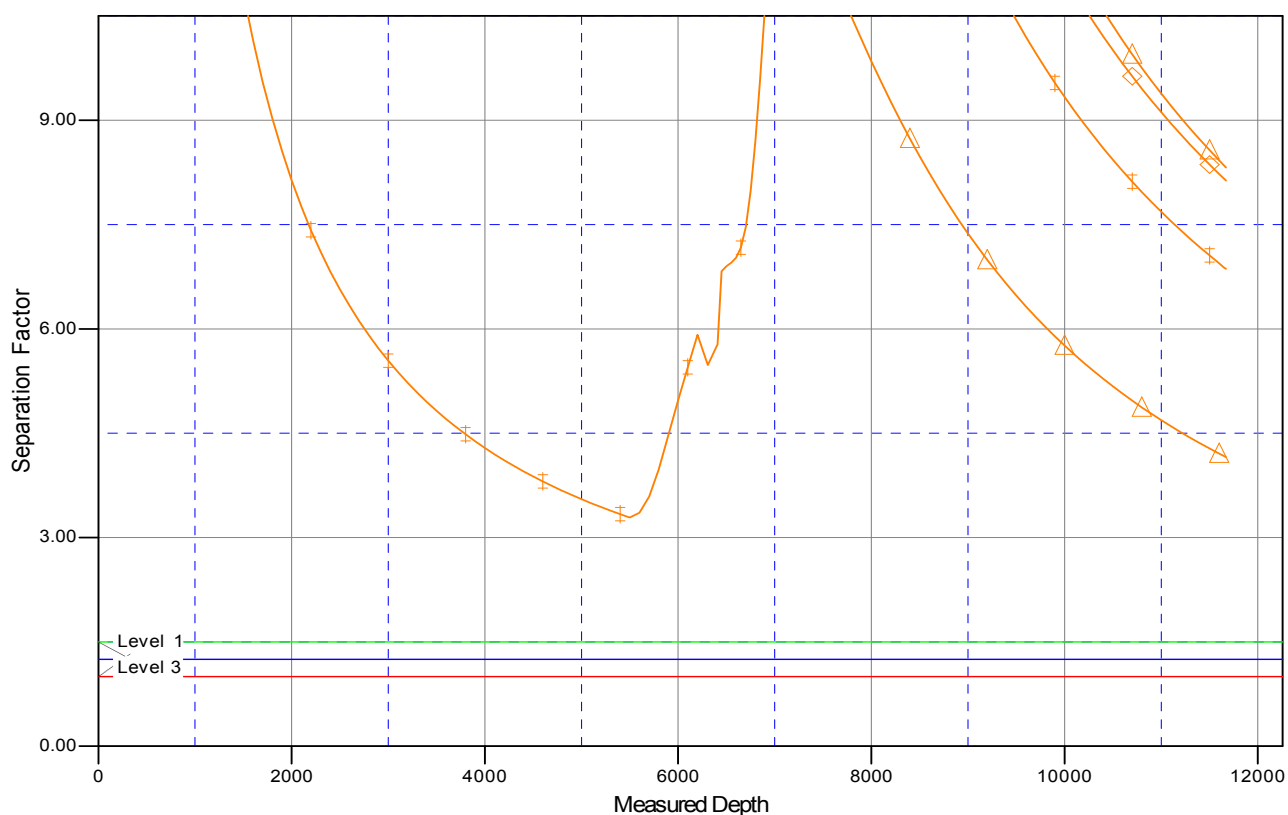
Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Wind 11

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 09, Original Hole, Rev 1 V0 |
| Wind 02, Original Hole, Rev 1 V0 | Wind 06, Original Hole, Rev 1 V0 | Wind 10, 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 |                                  |