



Extraction Oil & Gas

**Weld Co., Co
Sec.28-T07N-R67W
Nelson Farm #2**

**Original Hole
Rev 0**

Anticollision Risk Report

28 May, 2014



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Reference	Rev 0		
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	5/28/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	14,888.41	Rev 0 (Original Hole)	Pathfinder	Pathfinder MWD

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Sec.28-T07N-R67W						
George Nelson #1 - Original Hole - Original Hole	700.00	686.00	1,549.04	1,545.47	434.710 CC, ES	
George Nelson #1 - Original Hole - Original Hole	4,500.00	4,338.00	1,977.38	1,954.42	86.109 SF	
Nelson Farm #1 - Original Hole - Rev 0	566.33	567.33	28.06	26.14	14.594 CC	
Nelson Farm #1 - Original Hole - Rev 0	600.00	600.99	28.06	26.02	13.754 ES	
Nelson Farm #1 - Original Hole - Rev 0	14,888.41	15,083.00	242.53	153.01	2.709 SF	
Nelson Farm #10 - Original Hole - Rev 0	700.00	690.00	224.06	221.69	94.536 CC, ES	
Nelson Farm #10 - Original Hole - Rev 0	14,888.41	15,136.93	1,800.26	1,684.55	15.559 SF	
Nelson Farm #11 - Original Hole - Rev 0	600.00	589.00	252.12	250.10	124.851 CC, ES	
Nelson Farm #11 - Original Hole - Rev 0	14,888.41	14,983.20	1,949.85	1,833.74	16.793 SF	
Nelson Farm #12 - Original Hole - Rev 0	500.00	488.00	280.17	278.51	167.916 CC, ES	
Nelson Farm #12 - Original Hole - Rev 0	14,888.41	15,054.19	2,279.92	2,163.72	19.622 SF	
Nelson Farm #3 - Original Hole - Rev 0	700.00	699.00	28.06	25.68	11.761 CC, ES	
Nelson Farm #3 - Original Hole - Rev 0	14,888.41	14,866.48	329.71	213.75	2.843 SF	
Nelson Farm #4 - Original Hole - Rev 0	700.00	698.00	56.11	53.72	23.533 CC, ES	
Nelson Farm #4 - Original Hole - Rev 0	14,888.41	15,044.40	523.76	412.55	4.710 SF	
Nelson Farm #5 - Original Hole - Rev 0	700.00	696.00	84.16	81.78	35.353 CC, ES	
Nelson Farm #5 - Original Hole - Rev 0	14,888.41	14,861.72	649.95	534.00	5.605 SF	
Nelson Farm #6 - Original Hole - Rev 0	700.00	695.00	112.22	109.84	47.172 CC, ES	
Nelson Farm #6 - Original Hole - Rev 0	14,888.41	14,872.46	979.66	863.69	8.448 SF	
Nelson Farm #7 - Original Hole - Rev 0	700.00	694.00	139.91	137.53	58.854 CC, ES	
Nelson Farm #7 - Original Hole - Rev 0	14,888.41	15,063.07	1,155.51	1,040.44	10.043 SF	
Nelson Farm #8 - Original Hole - Rev 0	700.00	693.00	167.96	165.58	70.708 CC, ES	
Nelson Farm #8 - Original Hole - Rev 0	14,888.41	14,894.36	1,299.90	1,183.90	11.207 SF	
Nelson Farm #9 - Original Hole - Rev 0	700.00	692.00	196.01	193.64	82.578 CC, ES	
Nelson Farm #9 - Original Hole - Rev 0	14,888.41	14,935.76	1,629.97	1,513.92	14.046 SF	

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



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Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Sec.28-T07N-R67W - George Nelson #1 - Original Hole - Original Hole		Offset Site Error: 0.00 usft	
Survey Program: 4338-INC_ONLY<10															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	88.40	1,549.10						0			
100.00	100.00	86.00	86.00	0.15	0.30	88.40	1,549.04	1,548.59	0.44	3,491.433	0					
200.00	200.00	186.00	186.00	0.32	0.64	88.40	1,549.04	1,548.07	0.96	1,607.519	0					
300.00	300.00	286.00	286.00	0.50	0.99	88.40	1,549.04	1,547.55	1.48	1,044.127	0					
400.00	400.00	386.00	386.00	0.67	1.33	88.40	1,549.04	1,547.03	2.00	773.157	0					
500.00	500.00	486.00	486.00	0.84	1.68	88.40	1,549.04	1,546.51	2.52	613.851	0					
600.00	600.00	586.00	586.00	1.02	2.02	88.40	1,549.04	1,545.99	3.04	508.978	0					
700.00	700.00	686.00	686.00	1.19	2.37	88.40	1,549.04	1,545.47	3.56	434.710	0					
800.00	799.98	785.98	785.98	1.37	2.71	133.99	1,550.25	1,546.17	4.08	379.747	0	CC, ES				
900.00	899.84	885.84	885.84	1.54	3.06	134.08	1,553.89	1,549.29	4.60	337.885	0					
1,000.00	999.45	985.45	985.45	1.72	3.40	134.22	1,559.97	1,554.86	5.11	305.125	0					
1,100.00	1,098.70	1,084.70	1,084.70	1.90	3.75	134.42	1,568.52	1,562.90	5.62	278.947	0					
1,145.64	1,143.85	1,129.85	1,129.85	1.98	3.90	134.52	1,573.25	1,567.39	5.85	268.718	0					
1,200.00	1,197.55	1,183.55	1,183.55	2.08	4.09	134.74	1,579.20	1,573.06	6.14	257.331	0					
1,300.00	1,296.34	1,282.34	1,282.34	2.27	4.43	135.13	1,590.21	1,583.55	6.66	238.892	0					
1,400.00	1,395.13	1,381.13	1,381.13	2.45	4.77	135.52	1,601.29	1,594.12	7.18	223.115	0					
1,500.00	1,493.93	1,479.93	1,479.93	2.64	5.11	135.91	1,612.45	1,604.75	7.70	209.468	0					
1,600.00	1,592.72	1,578.72	1,578.72	2.83	5.45	136.28	1,623.68	1,615.46	8.22	197.552	0					
1,700.00	1,691.51	1,677.51	1,677.51	3.01	5.79	136.66	1,634.98	1,626.24	8.74	187.061	0					
1,800.00	1,790.30	1,776.30	1,776.30	3.20	6.14	137.02	1,646.34	1,637.08	9.26	177.755	0					
1,900.00	1,889.10	1,875.10	1,875.10	3.39	6.48	137.39	1,657.77	1,647.99	9.78	169.447	0					
2,000.00	1,987.89	1,973.89	1,973.89	3.58	6.82	137.75	1,669.27	1,658.97	10.31	161.985	0					
2,100.00	2,086.68	2,072.68	2,072.68	3.77	7.16	138.10	1,680.83	1,670.01	10.83	155.248	0					
2,200.00	2,185.47	2,171.47	2,171.47	3.96	7.50	138.45	1,692.46	1,681.11	11.35	149.137	0					
2,300.00	2,284.27	2,270.27	2,270.27	4.15	7.84	138.79	1,704.15	1,692.28	11.87	143.568	0					
2,400.00	2,383.06	2,369.06	2,369.06	4.34	8.18	139.13	1,715.89	1,703.50	12.39	138.473	0					
2,500.00	2,481.85	2,467.85	2,467.85	4.53	8.52	139.46	1,727.70	1,714.79	12.91	133.795	0					
2,600.00	2,580.64	2,566.64	2,566.64	4.72	8.87	139.79	1,739.56	1,726.13	13.43	129.485	0					
2,700.00	2,679.44	2,665.44	2,665.44	4.91	9.21	140.12	1,751.48	1,737.53	13.96	125.502	0					
2,800.00	2,778.23	2,764.23	2,764.23	5.11	9.55	140.44	1,763.46	1,748.98	14.48	121.810	0					
2,900.00	2,877.02	2,863.02	2,863.02	5.30	9.89	140.76	1,775.49	1,760.49	15.00	118.380	0					
3,000.00	2,975.81	2,961.81	2,961.81	5.49	10.23	141.07	1,787.57	1,772.05	15.52	115.184	0					
3,100.00	3,074.61	3,060.61	3,060.61	5.68	10.57	141.38	1,799.71	1,783.67	16.04	112.199	0					
3,200.00	3,173.40	3,159.40	3,159.40	5.87	10.91	141.68	1,811.90	1,795.34	16.56	109.406	0					
3,300.00	3,272.19	3,258.19	3,258.19	6.06	11.25	141.98	1,824.13	1,807.05	17.08	106.787	0					
3,400.00	3,370.98	3,356.98	3,356.98	6.25	11.60	142.28	1,836.42	1,818.82	17.60	104.327	0					
3,500.00	3,469.78	3,455.78	3,455.78	6.45	11.94	142.57	1,848.76	1,830.63	18.12	102.011	0					
3,600.00	3,568.57	3,554.57	3,554.57	6.64	12.28	142.86	1,861.14	1,842.49	18.64	99.827	0					
3,700.00	3,667.36	3,653.36	3,653.36	6.83	12.62	143.15	1,873.57	1,854.40	19.16	97.765	0					
3,800.00	3,766.15	3,752.15	3,752.15	7.02	12.96	143.43	1,886.04	1,866.35	19.68	95.815	0					
3,900.00	3,864.95	3,850.95	3,850.95	7.21	13.30	143.70	1,898.56	1,878.35	20.20	93.968	0					
4,000.00	3,963.74	3,949.74	3,949.74	7.40	13.64	143.98	1,911.12	1,890.39	20.72	92.216	0					
4,100.00	4,062.53	4,048.53	4,048.53	7.60	13.98	144.25	1,923.72	1,902.48	21.24	90.552	0					
4,200.00	4,161.32	4,147.32	4,147.32	7.79	14.33	144.52	1,936.37	1,914.61	21.76	88.970	0					
4,300.00	4,260.12	4,246.12	4,246.12	7.98	14.67	144.78	1,949.06	1,926.77	22.28	87.464	0					
4,400.00	4,358.91	4,338.00	4,338.00	8.17	14.98	145.02	1,961.80	1,939.02	22.78	86.119	0					
4,500.00	4,457.70	4,338.00	4,338.00	8.36	14.98	145.02	1,977.38	1,954.42	22.96	86.109	0	SF				
4,600.00	4,556.49	4,338.00	4,338.00	8.56	14.98	145.02	1,997.85	1,974.70	23.15	86.311	0					
4,700.00	4,655.29	4,338.00	4,338.00	8.75	14.98	145.02	2,023.07	1,999.73	23.33	86.713	0					
4,800.00	4,754.08	4,338.00	4,338.00	8.94	14.98	145.02	2,052.85	2,029.33	23.51	87.303	0					
4,900.00	4,852.87	4,338.00	4,338.00	9.13	14.98	145.02	2,087.00	2,063.30	23.70	88.068	0					
5,000.00	4,951.66	4,338.00	4,338.00	9.33	14.98	145.02	2,125.31	2,101.43	23.88	88.996	0					
5,100.00	5,050.46	4,338.00	4,338.00	9.52	14.98	145.02	2,167.56	2,143.50	24.06	90.073	0					
5,200.00	5,149.25	4,338.00	4,338.00	9.71	14.98	145.02	2,213.53	2,189.28	24.25	91.287	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



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Sec.28-T07N-R67W - George Nelson #1 - Original Hole - Original Hole		Offset Site Error:		0.00 usft
Survey Program: 4338-INC_ONLY<10													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis		Distance											
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning				
5,300.00	5,248.04	4,338.00	4,338.00	9.90	14.98	145.02	2,262.98	2,238.55	24.43	92.626	0						
5,400.00	5,346.83	4,338.00	4,338.00	10.09	14.98	145.02	2,315.70	2,291.08	24.61	94.077	0						
5,500.00	5,445.63	4,338.00	4,338.00	10.29	14.98	145.02	2,371.46	2,346.67	24.80	95.629	0						
5,600.00	5,544.42	4,338.00	4,338.00	10.48	14.98	145.02	2,430.07	2,405.08	24.98	97.273	0						
5,700.00	5,643.21	4,338.00	4,338.00	10.67	14.98	145.02	2,491.31	2,466.14	25.17	98.997	0						
5,800.00	5,742.00	4,338.00	4,338.00	10.86	14.98	145.02	2,554.99	2,529.64	25.35	100.792	0						
5,900.00	5,840.80	4,338.00	4,338.00	11.06	14.98	145.02	2,620.95	2,595.42	25.53	102.651	0						
5,973.62	5,913.53	4,338.00	4,338.00	11.20	14.98	145.02	2,670.86	2,645.19	25.67	104.055	0						
6,000.00	5,939.61	4,338.00	4,338.00	11.25	14.98	145.30	2,688.93	2,663.21	25.73	104.520	0						
6,100.00	6,038.77	4,338.00	4,338.00	11.43	14.98	146.36	2,757.37	2,731.44	25.94	106.313	0						
6,200.00	6,138.33	4,338.00	4,338.00	11.61	14.98	147.38	2,825.62	2,799.49	26.13	108.150	0						
6,300.00	6,238.15	4,338.00	4,338.00	11.78	14.98	148.37	2,893.62	2,867.32	26.30	110.037	0						
6,400.00	6,338.11	4,338.00	4,338.00	11.94	14.98	149.32	2,961.29	2,934.85	26.45	111.977	0						
6,419.27	6,357.38	4,338.00	4,338.00	11.97	14.98	103.93	2,974.29	2,947.50	26.79	111.017	0						
6,500.00	6,438.11	4,338.00	4,338.00	12.11	14.98	103.93	3,029.31	3,002.38	26.92	112.510	0						
6,519.27	6,457.38	4,338.00	4,338.00	12.14	14.98	103.93	3,042.61	3,015.65	26.96	112.871	0						
6,550.00	6,488.10	4,338.00	4,338.00	12.18	14.98	13.33	3,063.43	3,036.80	26.64	115.013	0						
6,600.00	6,537.90	4,338.00	4,338.00	12.26	14.98	12.50	3,095.35	3,068.72	26.63	116.237	0						
6,650.00	6,587.20	4,338.00	4,338.00	12.33	14.98	11.81	3,124.75	3,098.18	26.57	117.590	0						
6,700.00	6,635.69	4,338.00	4,338.00	12.39	14.98	11.24	3,151.52	3,125.14	26.39	119.429	0						
6,750.00	6,683.09	4,338.00	4,338.00	12.45	14.98	10.77	3,175.57	3,149.49	26.08	121.774	0						
6,800.00	6,729.10	4,338.00	4,338.00	12.51	14.98	10.38	3,196.79	3,171.15	25.65	124.650	0						
6,850.00	6,773.43	4,338.00	4,338.00	12.56	14.98	10.07	3,215.14	3,190.04	25.10	128.090	0						
6,900.00	6,815.82	4,338.00	4,338.00	12.62	14.98	9.81	3,230.53	3,206.08	24.45	132.131	0						
6,950.00	6,855.99	4,338.00	4,338.00	12.67	14.98	9.62	3,242.92	3,219.22	23.70	136.813	0						
7,000.00	6,893.71	4,338.00	4,338.00	12.72	14.98	9.48	3,252.27	3,229.39	22.87	142.178	0						
7,050.00	6,928.74	4,338.00	4,338.00	12.78	14.98	9.38	3,258.54	3,236.56	21.98	148.260	0						
7,100.00	6,960.86	4,338.00	4,338.00	12.83	14.98	9.34	3,261.72	3,240.68	21.03	155.079	0						
7,150.00	6,989.87	4,338.00	4,338.00	12.89	14.98	9.34	3,261.78	3,241.73	20.06	162.620	0						
7,200.00	7,015.61	4,338.00	4,338.00	12.95	14.98	9.38	3,258.75	3,239.67	19.08	170.807	0						
7,250.00	7,037.90	4,338.00	4,338.00	13.02	14.98	9.47	3,252.61	3,234.49	18.12	179.455	0						
7,300.00	7,056.61	4,338.00	4,338.00	13.09	14.98	9.61	3,243.40	3,226.17	17.23	188.199	0						
7,350.00	7,071.63	4,338.00	4,338.00	13.17	14.98	9.80	3,231.15	3,214.70	16.45	196.385	0						
7,400.00	7,082.86	4,338.00	4,338.00	13.25	14.98	10.05	3,215.89	3,200.04	15.85	202.952	0						
7,450.00	7,090.24	4,338.00	4,338.00	13.35	14.98	10.37	3,197.68	3,182.19	15.49	206.417	0						
7,500.00	7,093.71	4,338.00	4,338.00	13.46	14.98	10.75	3,176.58	3,161.10	15.47	205.291	0						
7,519.27	7,094.00	4,338.00	4,338.00	13.51	14.98	10.92	3,167.69	3,152.12	15.57	203.464	0						
7,600.00	7,094.00	4,338.00	4,338.00	13.72	14.98	10.92	3,130.39	3,114.50	15.89	196.975	0						
7,700.00	7,094.00	4,338.00	4,338.00	14.01	14.98	10.92	3,086.49	3,070.20	16.29	189.422	0						
7,800.00	7,094.00	4,338.00	4,338.00	14.33	14.98	10.92	3,045.24	3,028.55	16.70	182.378	0						
7,900.00	7,094.00	4,338.00	4,338.00	14.68	14.98	10.92	3,006.76	2,989.66	17.10	175.817	0						
8,000.00	7,094.00	4,338.00	4,338.00	15.06	14.98	10.92	2,971.14	2,953.64	17.51	169.713	0						
8,100.00	7,094.00	4,338.00	4,338.00	15.45	14.98	10.92	2,938.50	2,920.59	17.91	164.043	0						
8,200.00	7,094.00	4,338.00	4,338.00	15.87	14.98	10.92	2,908.93	2,890.61	18.32	158.785	0						
8,300.00	7,094.00	4,338.00	4,338.00	16.31	14.98	10.92	2,882.52	2,863.80	18.73	153.918	0						
8,400.00	7,094.00	4,338.00	4,338.00	16.76	14.98	10.92	2,859.38	2,840.24	19.14	149.424	0						
8,500.00	7,094.00	4,338.00	4,338.00	17.24	14.98	10.92	2,839.56	2,820.02	19.54	145.284	0						
8,600.00	7,094.00	4,338.00	4,338.00	17.72	14.98	10.92	2,823.16	2,803.20	19.95	141.480	0						
8,700.00	7,094.00	4,338.00	4,338.00	18.22	14.98	10.92	2,810.21	2,789.85	20.36	137.996	0						
8,800.00	7,094.00	4,338.00	4,338.00	18.74	14.98	10.92	2,800.78	2,780.01	20.77	134.816	0						
8,900.00	7,094.00	4,338.00	4,338.00	19.26	14.98	10.92	2,794.90	2,773.72	21.19	131.923	0						
9,000.00	7,094.00	4,338.00	4,338.00	19.80	14.98	10.92	2,792.59	2,770.99	21.60	129.303	0						
9,014.56	7,094.00	4,338.00	4,338.00	19.88	14.98	10.92	2,792.55	2,770.82	21.73	128.524	0						
9,100.00	7,094.00	4,338.00	4,338.00	20.34	14.98	10.92	2,793.86	2,771.85	22.01	126.942	0						

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error: 0.00 usft	
Survey Program: 4338-INC_ONLY<10												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	
9,200.00	7,094.00	4,338.00	4,338.00	20.90	14.98	10.92	2,798.70	2,776.28	22.42	124.825	0		
9,300.00	7,094.00	4,338.00	4,338.00	21.46	14.98	10.92	2,807.10	2,784.27	22.83	122.938	0		
9,400.00	7,094.00	4,338.00	4,338.00	22.04	14.98	10.92	2,819.03	2,795.78	23.25	121.268	0		
9,500.00	7,094.00	4,338.00	4,338.00	22.62	14.98	10.92	2,834.43	2,810.77	23.66	119.802	0		
9,600.00	7,094.00	4,338.00	4,338.00	23.20	14.98	10.92	2,853.26	2,829.19	24.07	118.528	0		
9,700.00	7,094.00	4,338.00	4,338.00	23.80	14.98	10.92	2,875.44	2,850.96	24.49	117.432	0		
9,800.00	7,094.00	4,338.00	4,338.00	24.40	14.98	10.92	2,900.91	2,876.01	24.90	116.503	0		
9,900.00	7,094.00	4,338.00	4,338.00	25.00	14.98	10.92	2,929.56	2,904.25	25.31	115.730	0		
10,000.00	7,094.00	4,338.00	4,338.00	25.61	14.98	10.92	2,961.32	2,935.60	25.73	115.101	0		
10,100.00	7,094.00	4,338.00	4,338.00	26.22	14.98	10.92	2,996.08	2,969.94	26.14	114.606	0		
10,200.00	7,094.00	4,338.00	4,338.00	26.84	14.98	10.92	3,033.75	3,007.19	26.56	114.236	0		
10,300.00	7,094.00	4,338.00	4,338.00	27.46	14.98	10.92	3,074.20	3,047.23	26.97	113.979	0		
10,400.00	7,094.00	4,338.00	4,338.00	28.09	14.98	10.92	3,117.34	3,089.95	27.39	113.827	0		
10,500.00	7,094.00	4,338.00	4,338.00	28.72	14.98	10.92	3,163.05	3,135.25	27.80	113.772	0		
10,600.00	7,094.00	4,338.00	4,338.00	29.35	14.98	10.92	3,211.22	3,183.01	28.22	113.805	0		
10,700.00	7,094.00	4,338.00	4,338.00	29.99	14.98	10.92	3,261.76	3,233.12	28.63	113.919	0		
10,800.00	7,094.00	4,338.00	4,338.00	30.63	14.98	10.92	3,314.53	3,285.49	29.05	114.107	0		
10,900.00	7,094.00	4,338.00	4,338.00	31.27	14.98	10.92	3,369.45	3,339.99	29.46	114.361	0		
11,000.00	7,094.00	4,338.00	4,338.00	31.91	14.98	10.92	3,426.41	3,396.53	29.88	114.676	0		
11,100.00	7,094.00	4,338.00	4,338.00	32.56	14.98	10.92	3,485.31	3,455.02	30.29	115.046	0		
11,200.00	7,094.00	4,338.00	4,338.00	33.21	14.98	10.92	3,546.05	3,515.34	30.71	115.466	0		
11,300.00	7,094.00	4,338.00	4,338.00	33.86	14.98	10.92	3,608.54	3,577.41	31.13	115.930	0		
11,400.00	7,094.00	4,338.00	4,338.00	34.52	14.98	10.92	3,672.69	3,641.15	31.54	116.435	0		
11,500.00	7,094.00	4,338.00	4,338.00	35.17	14.98	10.92	3,738.41	3,706.46	31.96	116.975	0		
11,600.00	7,094.00	4,338.00	4,338.00	35.83	14.98	10.92	3,805.63	3,773.26	32.38	117.547	0		
11,700.00	7,094.00	4,338.00	4,338.00	36.49	14.98	10.92	3,874.26	3,841.47	32.79	118.147	0		
11,800.00	7,094.00	4,338.00	4,338.00	37.15	14.98	10.92	3,944.24	3,911.03	33.21	118.772	0		
11,900.00	7,094.00	4,338.00	4,338.00	37.81	14.98	10.92	4,015.48	3,981.86	33.62	119.420	0		
12,000.00	7,094.00	4,338.00	4,338.00	38.47	14.98	10.92	4,087.93	4,053.89	34.04	120.087	0		
12,100.00	7,094.00	4,338.00	4,338.00	39.14	14.98	10.92	4,161.52	4,127.06	34.46	120.770	0		
12,200.00	7,094.00	4,338.00	4,338.00	39.80	14.98	10.92	4,236.20	4,201.32	34.88	121.468	0		
12,300.00	7,094.00	4,338.00	4,338.00	40.47	14.98	10.92	4,311.90	4,276.60	35.29	122.178	0		
12,400.00	7,094.00	4,338.00	4,338.00	41.14	14.98	10.92	4,388.57	4,352.86	35.71	122.899	0		
12,500.00	7,094.00	4,338.00	4,338.00	41.81	14.98	10.92	4,466.16	4,430.04	36.13	123.628	0		
12,600.00	7,094.00	4,338.00	4,338.00	42.48	14.98	10.92	4,544.64	4,508.09	36.54	124.365	0		
12,700.00	7,094.00	4,338.00	4,338.00	43.15	14.98	10.92	4,623.94	4,586.98	36.96	125.107	0		
12,800.00	7,094.00	4,338.00	4,338.00	43.83	14.98	10.92	4,704.03	4,666.65	37.38	125.854	0		
12,900.00	7,094.00	4,338.00	4,338.00	44.50	14.98	10.92	4,784.87	4,747.07	37.79	126.604	0		
13,000.00	7,094.00	4,338.00	4,338.00	45.18	14.98	10.92	4,866.42	4,828.21	38.21	127.355	0		
13,100.00	7,094.00	4,338.00	4,338.00	45.85	14.98	10.92	4,948.65	4,910.02	38.63	128.108	0		
13,200.00	7,094.00	4,338.00	4,338.00	46.53	14.98	10.92	5,031.52	4,992.48	39.05	128.862	0		
13,300.00	7,094.00	4,338.00	4,338.00	47.21	14.98	10.92	5,115.01	5,075.55	39.46	129.614	0		
13,400.00	7,094.00	4,338.00	4,338.00	47.88	14.98	10.92	5,199.08	5,159.20	39.88	130.366	0		
13,500.00	7,094.00	4,338.00	4,338.00	48.56	14.98	10.92	5,283.70	5,243.40	40.30	131.115	0		
13,600.00	7,094.00	4,338.00	4,338.00	49.24	14.98	10.92	5,368.85	5,328.14	40.72	131.862	0		
13,700.00	7,094.00	4,338.00	4,338.00	49.92	14.98	10.92	5,454.51	5,413.38	41.13	132.606	0		
13,800.00	7,094.00	4,338.00	4,338.00	50.60	14.98	10.92	5,540.65	5,499.10	41.55	133.347	0		
13,900.00	7,094.00	4,338.00	4,338.00	51.28	14.98	10.92	5,627.24	5,585.27	41.97	134.083	0		
14,000.00	7,094.00	4,338.00	4,338.00	51.97	14.98	10.92	5,714.27	5,671.89	42.39	134.816	0		
14,100.00	7,094.00	4,338.00	4,338.00	52.65	14.98	10.92	5,801.73	5,758.92	42.80	135.543	0		
14,200.00	7,094.00	4,338.00	4,338.00	53.33	14.98	10.92	5,889.58	5,846.35	43.22	136.266	0		
14,300.00	7,094.00	4,338.00	4,338.00	54.02	14.98	10.92	5,977.81	5,934.17	43.64	136.983	0		
14,400.00	7,094.00	4,338.00	4,338.00	54.70	14.98	10.92	6,066.41	6,022.35	44.06	137.695	0		
14,500.00	7,094.00	4,338.00	4,338.00	55.39	14.98	10.92	6,155.35	6,110.88	44.47	138.402	0		

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design		Sec.28-T07N-R67W - George Nelson #1 - Original Hole - Original Hole										Offset Site Error:	0.00 usft
Survey Program: 4338-INC_ONLY<10												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
14,600.00	7,094.00	4,338.00	4,338.00	56.07	14.98	10.92	6,244.63	6,199.74	44.89	139.103	0		
14,700.00	7,094.00	4,338.00	4,338.00	56.76	14.98	10.92	6,334.24	6,288.93	45.31	139.797	0		
14,800.00	7,094.00	4,338.00	4,338.00	57.44	14.98	10.92	6,424.14	6,378.42	45.73	140.486	0		
14,888.41	7,094.00	4,338.00	4,338.00	58.05	14.98	10.92	6,503.88	6,457.78	46.10	141.090	0		



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Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Sec.28-T07N-R67W - Nelson Farm #1 - Original Hole - Rev 0		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	0.18	28.06					0				
100.00	100.00	101.00	101.00	0.15	0.15	0.18	28.06	27.77	0.29	95.136	0					
200.00	200.00	201.00	201.00	0.32	0.32	0.18	28.06	27.42	0.64	43.572	0					
300.00	300.00	301.00	301.00	0.50	0.50	0.18	28.06	27.07	0.99	28.257	0					
400.00	400.00	401.00	401.00	0.67	0.67	0.18	28.06	26.72	1.34	20.908	0					
500.00	500.00	501.00	501.00	0.84	0.85	0.18	28.06	26.37	1.69	16.592	0					
566.33	566.33	567.33	567.33	0.96	0.96	0.18	28.06	26.14	1.92	14.594	0		CC			
600.00	600.00	600.99	600.99	1.02	1.02	0.18	28.06	26.02	2.04	13.754	0		ES			
700.00	700.00	700.00	699.98	1.19	1.19	-1.99	29.44	27.05	2.39	12.328	0					
800.00	799.98	799.28	799.12	1.37	1.37	40.03	32.38	29.64	2.74	11.832	0					
900.00	899.84	898.23	897.69	1.54	1.54	37.60	35.59	32.50	3.08	11.540	0					
1,000.00	999.45	997.06	995.79	1.72	1.72	36.03	39.01	35.58	3.43	11.368	0					
1,100.00	1,098.70	1,096.04	1,093.58	1.90	1.90	35.20	42.55	38.77	3.78	11.253	0					
1,145.64	1,143.85	1,141.67	1,138.58	1.98	1.99	35.42	43.65	39.70	3.94	11.072	0					
1,200.00	1,197.55	1,196.02	1,192.18	2.08	2.09	36.01	44.60	40.46	4.14	10.779	0					
1,300.00	1,296.34	1,296.00	1,290.79	2.27	2.28	37.04	46.37	41.87	4.50	10.307	0					
1,400.00	1,395.13	1,395.98	1,389.40	2.45	2.47	37.98	48.15	43.29	4.86	9.904	0					
1,500.00	1,493.93	1,495.96	1,488.01	2.64	2.65	38.86	49.94	44.72	5.23	9.557	0					
1,600.00	1,592.72	1,595.94	1,586.62	2.83	2.84	39.68	51.75	46.16	5.59	9.254	0					
1,700.00	1,691.51	1,695.92	1,685.23	3.01	3.04	40.45	53.56	47.61	5.96	8.989	0					
1,800.00	1,790.30	1,795.90	1,783.84	3.20	3.23	41.16	55.39	49.06	6.33	8.755	0					
1,900.00	1,889.10	1,895.88	1,882.45	3.39	3.42	41.83	57.22	50.52	6.70	8.546	0					
2,000.00	1,987.89	1,995.87	1,981.06	3.58	3.61	42.45	59.06	51.99	7.06	8.359	0					
2,100.00	2,086.68	2,095.85	2,079.67	3.77	3.80	43.04	60.90	53.47	7.43	8.192	0					
2,200.00	2,185.47	2,195.83	2,178.28	3.96	4.00	43.59	62.76	54.95	7.81	8.040	0					
2,300.00	2,284.27	2,295.81	2,276.89	4.15	4.19	44.12	64.61	56.44	8.18	7.902	0					
2,400.00	2,383.06	2,395.79	2,375.50	4.34	4.38	44.61	66.47	57.93	8.55	7.776	0					
2,500.00	2,481.85	2,495.77	2,474.11	4.53	4.57	45.07	68.34	59.42	8.92	7.660	0					
2,600.00	2,580.64	2,595.75	2,572.72	4.72	4.77	45.52	70.21	60.92	9.29	7.555	0					
2,700.00	2,679.44	2,695.73	2,671.33	4.91	4.96	45.93	72.09	62.42	9.67	7.457	0					
2,800.00	2,778.23	2,795.71	2,769.94	5.11	5.15	46.33	73.97	63.93	10.04	7.367	0					
2,900.00	2,877.02	2,895.70	2,868.55	5.30	5.35	46.71	75.85	65.43	10.41	7.283	0					
3,000.00	2,975.81	2,995.68	2,967.16	5.49	5.54	47.07	77.73	66.94	10.79	7.205	0					
3,100.00	3,074.61	3,095.66	3,065.77	5.68	5.74	47.41	79.62	68.46	11.16	7.133	0					
3,200.00	3,173.40	3,195.64	3,164.38	5.87	5.93	47.73	81.51	69.97	11.54	7.065	0					
3,300.00	3,272.19	3,295.62	3,262.99	6.06	6.12	48.05	83.41	71.49	11.91	7.001	0					
3,400.00	3,370.98	3,395.60	3,361.60	6.25	6.32	48.34	85.30	73.01	12.29	6.942	0					
3,500.00	3,469.78	3,495.58	3,460.21	6.45	6.51	48.63	87.20	74.54	12.66	6.886	0					
3,600.00	3,568.57	3,595.56	3,558.82	6.64	6.70	48.90	89.10	76.06	13.04	6.833	0					
3,700.00	3,667.36	3,695.54	3,657.43	6.83	6.90	49.16	91.00	77.59	13.41	6.784	0					
3,800.00	3,766.15	3,795.53	3,756.04	7.02	7.09	49.41	92.90	79.11	13.79	6.737	0					
3,900.00	3,864.95	3,895.51	3,854.65	7.21	7.29	49.65	94.81	80.64	14.17	6.692	0					
4,000.00	3,963.74	3,995.49	3,953.26	7.40	7.48	49.88	96.72	82.17	14.54	6.650	0					
4,100.00	4,062.53	4,095.47	4,051.87	7.60	7.68	50.10	98.62	83.70	14.92	6.610	0					
4,200.00	4,161.32	4,195.45	4,150.48	7.79	7.87	50.32	100.53	85.24	15.30	6.572	0					
4,300.00	4,260.12	4,295.43	4,249.09	7.98	8.06	50.52	102.45	86.77	15.67	6.536	0					
4,400.00	4,358.91	4,395.41	4,347.70	8.17	8.26	50.72	104.36	88.31	16.05	6.502	0					
4,500.00	4,457.70	4,495.39	4,446.31	8.36	8.45	50.91	106.27	89.84	16.43	6.469	0					
4,600.00	4,556.49	4,595.37	4,544.92	8.56	8.65	51.09	108.19	91.38	16.80	6.438	0					
4,700.00	4,655.29	4,695.35	4,643.53	8.75	8.84	51.27	110.10	92.92	17.18	6.408	0					
4,800.00	4,754.08	4,795.34	4,742.14	8.94	9.04	51.44	112.02	94.46	17.56	6.380	0					
4,900.00	4,852.87	4,895.32	4,840.75	9.13	9.23	51.61	113.94	96.00	17.94	6.353	0					
5,000.00	4,951.66	4,995.30	4,939.36	9.33	9.43	51.77	115.86	97.54	18.31	6.327	0					
5,100.00	5,050.46	5,095.28	5,037.97	9.52	9.62	51.93	117.78	99.09	18.69	6.301	0					

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
5,200.00	5,149.25	5,195.26	5,136.58	9.71	9.81	52.08	119.70	100.63	19.07	6.277	0			
5,300.00	5,248.04	5,295.24	5,235.19	9.90	10.01	52.22	121.62	102.17	19.45	6.254	0			
5,400.00	5,346.83	5,395.22	5,333.80	10.09	10.20	52.36	123.54	103.72	19.82	6.232	0			
5,500.00	5,445.63	5,495.20	5,432.41	10.29	10.40	52.50	125.46	105.26	20.20	6.211	0			
5,600.00	5,544.42	5,595.18	5,531.02	10.48	10.59	52.63	127.39	106.81	20.58	6.190	0			
5,700.00	5,643.21	5,695.17	5,629.63	10.67	10.79	52.76	129.31	108.35	20.96	6.170	0			
5,800.00	5,742.00	5,795.15	5,728.24	10.86	10.98	52.88	131.23	109.90	21.33	6.151	0			
5,900.00	5,840.80	5,895.13	5,826.85	11.06	11.18	53.00	133.16	111.45	21.71	6.133	0			
5,973.62	5,913.53	5,968.74	5,899.45	11.20	11.32	53.09	134.58	112.59	21.99	6.120	0			
6,000.00	5,939.61	5,995.11	5,925.46	11.25	11.37	53.09	135.16	113.07	22.09	6.119	0			
6,100.00	6,038.77	6,095.02	6,024.00	11.43	11.57	52.38	138.70	116.26	22.44	6.181	0			
6,200.00	6,138.33	6,196.81	6,124.49	11.61	11.76	50.77	144.05	121.29	22.76	6.330	0			
6,300.00	6,238.15	6,300.39	6,227.22	11.78	11.95	49.09	149.43	126.37	23.06	6.481	0			
6,400.00	6,338.11	6,404.24	6,330.63	11.94	12.13	47.47	154.57	131.24	23.34	6.624	0			
6,419.27	6,357.38	6,424.28	6,350.62	11.97	12.17	1.59	155.54	132.09	23.44	6.634	0			
6,500.00	6,438.11	6,508.41	6,434.64	12.11	12.31	0.56	158.70	134.95	23.75	6.682	0			
6,519.27	6,457.38	6,528.52	6,454.74	12.14	12.34	0.41	159.19	135.37	23.82	6.683	0			
6,550.00	6,488.10	6,560.59	6,486.80	12.18	12.39	-90.00	159.76	135.97	23.80	6.714	0			
6,600.00	6,537.90	6,612.62	6,538.83	12.26	12.48	-91.70	160.20	136.29	23.91	6.700	0			
6,650.00	6,587.20	6,661.99	6,588.20	12.33	12.56	-94.57	160.66	136.69	23.97	6.702	0			
6,700.00	6,635.69	6,710.49	6,636.69	12.39	12.63	-98.58	162.10	138.12	23.98	6.760	0			
6,750.00	6,683.09	6,760.82	6,686.98	12.45	12.71	-103.28	164.92	140.99	23.92	6.894	0			
6,800.00	6,729.10	6,812.55	6,738.36	12.51	12.78	-107.82	168.88	145.06	23.82	7.091	0			
6,850.00	6,773.43	6,865.60	6,790.38	12.56	12.86	-112.09	173.84	150.19	23.66	7.349	0			
6,900.00	6,815.82	6,920.06	6,842.69	12.62	12.92	-116.07	179.64	156.20	23.43	7.665	0			
6,950.00	6,855.99	6,975.98	6,894.87	12.67	12.99	-119.73	186.06	162.91	23.15	8.036	0			
7,000.00	6,893.71	7,033.45	6,946.43	12.72	13.05	-123.04	192.92	170.10	22.82	8.453	0			
7,050.00	6,928.74	7,092.48	6,996.81	12.78	13.12	-126.01	199.99	177.53	22.45	8.907	0			
7,100.00	6,960.86	7,153.12	7,045.36	12.83	13.18	-128.64	207.06	185.00	22.06	9.387	0			
7,150.00	6,989.87	7,215.34	7,091.36	12.89	13.25	-130.94	213.92	192.26	21.67	9.874	0			
7,200.00	7,015.61	7,279.11	7,134.03	12.95	13.32	-132.93	220.40	199.10	21.29	10.350	0			
7,250.00	7,037.90	7,344.35	7,172.57	13.02	13.39	-134.60	226.30	205.33	20.97	10.793	0			
7,300.00	7,056.61	7,410.94	7,206.14	13.09	13.47	-135.98	231.46	210.75	20.71	11.176	0			
7,350.00	7,071.63	7,478.71	7,233.95	13.17	13.57	-137.06	235.75	215.20	20.55	11.474	0			
7,400.00	7,082.86	7,547.44	7,255.29	13.25	13.67	-137.86	239.04	218.56	20.49	11.667	0			
7,450.00	7,090.24	7,616.89	7,269.58	13.35	13.80	-138.39	241.25	220.70	20.55	11.737	0			
7,500.00	7,093.71	7,686.77	7,276.41	13.46	13.94	-138.63	242.32	221.57	20.75	11.680	0			
7,519.27	7,094.00	7,713.74	7,277.00	13.51	14.00	-138.66	242.42	221.56	20.85	11.624	0			
7,600.00	7,094.00	7,794.60	7,277.00	13.72	14.20	-138.66	242.42	221.11	21.31	11.378	0			
7,700.00	7,094.00	7,894.60	7,277.00	14.01	14.48	-138.66	242.42	220.52	21.90	11.071	0			
7,800.00	7,094.00	7,994.60	7,277.00	14.33	14.79	-138.66	242.42	219.90	22.52	10.765	0			
7,900.00	7,094.00	8,094.60	7,277.00	14.68	15.13	-138.66	242.42	219.24	23.17	10.461	0			
8,000.00	7,094.00	8,194.60	7,277.00	15.06	15.50	-138.66	242.42	218.56	23.85	10.163	0			
8,100.00	7,094.00	8,294.60	7,277.00	15.45	15.89	-138.66	242.42	217.86	24.56	9.870	0			
8,200.00	7,094.00	8,394.60	7,277.00	15.87	16.30	-138.66	242.42	217.13	25.29	9.585	0			
8,300.00	7,094.00	8,494.60	7,277.00	16.31	16.73	-138.66	242.42	216.38	26.04	9.309	0			
8,400.00	7,094.00	8,594.60	7,277.00	16.76	17.18	-138.66	242.42	215.61	26.81	9.041	0			
8,500.00	7,094.00	8,694.60	7,277.00	17.24	17.64	-138.66	242.42	214.82	27.60	8.783	0			
8,600.00	7,094.00	8,794.60	7,277.00	17.72	18.12	-138.66	242.42	214.01	28.41	8.534	0			
8,700.00	7,094.00	8,894.60	7,277.00	18.22	18.62	-138.66	242.42	213.20	29.23	8.295	0			
8,800.00	7,094.00	8,994.60	7,277.00	18.74	19.12	-138.66	242.42	212.36	30.06	8.065	0			
8,900.00	7,094.00	9,094.60	7,277.00	19.26	19.64	-138.66	242.42	211.52	30.91	7.844	0			
9,000.00	7,094.00	9,194.60	7,277.00	19.80	20.17	-138.66	242.42	210.66	31.76	7.632	0			
9,100.00	7,094.00	9,294.60	7,277.00	20.34	20.71	-138.66	242.42	209.79	32.63	7.429	0			

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
9,200.00	7,094.00	9,394.60	7,277.00	20.90	21.26	-138.66	242.42	208.91	33.51	7.234	0			
9,300.00	7,094.00	9,494.60	7,277.00	21.46	21.82	-138.66	242.42	208.03	34.40	7.047	0			
9,400.00	7,094.00	9,594.60	7,277.00	22.04	22.38	-138.66	242.43	207.13	35.30	6.868	0			
9,500.00	7,094.00	9,694.60	7,277.00	22.62	22.96	-138.65	242.43	206.23	36.20	6.697	0			
9,600.00	7,094.00	9,794.60	7,277.00	23.20	23.54	-138.65	242.43	205.32	37.11	6.532	0			
9,700.00	7,094.00	9,894.60	7,277.00	23.80	24.13	-138.65	242.43	204.40	38.03	6.375	0			
9,800.00	7,094.00	9,994.60	7,277.00	24.40	24.72	-138.65	242.43	203.47	38.95	6.223	0			
9,900.00	7,094.00	10,094.60	7,277.00	25.00	25.32	-138.65	242.43	202.54	39.89	6.078	0			
10,000.00	7,094.00	10,194.60	7,277.00	25.61	25.92	-138.65	242.43	201.61	40.82	5.939	0			
10,100.00	7,094.00	10,294.60	7,277.00	26.22	26.53	-138.65	242.43	200.67	41.76	5.805	0			
10,200.00	7,094.00	10,394.60	7,277.00	26.84	27.15	-138.65	242.43	199.73	42.71	5.677	0			
10,300.00	7,094.00	10,494.60	7,277.00	27.46	27.76	-138.65	242.43	198.78	43.66	5.553	0			
10,400.00	7,094.00	10,594.60	7,277.00	28.09	28.39	-138.65	242.44	197.82	44.61	5.434	0			
10,500.00	7,094.00	10,694.60	7,277.00	28.72	29.01	-138.65	242.44	196.87	45.57	5.320	0			
10,600.00	7,094.00	10,794.60	7,277.00	29.35	29.64	-138.65	242.44	195.91	46.53	5.210	0			
10,700.00	7,094.00	10,894.60	7,277.00	29.99	30.27	-138.65	242.44	194.94	47.50	5.104	0			
10,800.00	7,094.00	10,994.60	7,277.00	30.63	30.91	-138.65	242.44	193.97	48.47	5.002	0			
10,900.00	7,094.00	11,094.60	7,277.00	31.27	31.55	-138.65	242.44	193.00	49.44	4.904	0			
11,000.00	7,094.00	11,194.60	7,277.00	31.91	32.19	-138.65	242.44	192.03	50.41	4.809	0			
11,100.00	7,094.00	11,294.60	7,277.00	32.56	32.83	-138.65	242.45	191.06	51.39	4.718	0			
11,200.00	7,094.00	11,394.60	7,277.00	33.21	33.48	-138.65	242.45	190.08	52.37	4.630	0			
11,300.00	7,094.00	11,494.60	7,277.00	33.86	34.13	-138.65	242.45	189.10	53.35	4.544	0			
11,400.00	7,094.00	11,594.60	7,277.00	34.52	34.78	-138.65	242.45	188.11	54.33	4.462	0			
11,500.00	7,094.00	11,694.60	7,277.00	35.17	35.43	-138.65	242.45	187.13	55.32	4.383	0			
11,600.00	7,094.00	11,794.60	7,277.00	35.83	36.08	-138.65	242.45	186.14	56.31	4.306	0			
11,700.00	7,094.00	11,894.60	7,277.00	36.49	36.74	-138.65	242.45	185.15	57.30	4.231	0			
11,800.00	7,094.00	11,994.60	7,277.00	37.15	37.40	-138.65	242.46	184.16	58.29	4.159	0			
11,900.00	7,094.00	12,094.60	7,277.00	37.81	38.06	-138.65	242.46	183.17	59.29	4.090	0			
12,000.00	7,094.00	12,194.60	7,277.00	38.47	38.72	-138.65	242.46	182.18	60.28	4.022	0			
12,100.00	7,094.00	12,294.59	7,277.00	39.14	39.38	-138.65	242.46	181.18	61.28	3.957	0			
12,200.00	7,094.00	12,394.59	7,277.00	39.80	40.04	-138.64	242.46	180.19	62.28	3.893	0			
12,300.00	7,094.00	12,494.59	7,277.00	40.47	40.71	-138.64	242.47	179.19	63.28	3.832	0			
12,400.00	7,094.00	12,594.59	7,277.00	41.14	41.38	-138.64	242.47	178.19	64.28	3.772	0			
12,500.00	7,094.00	12,694.59	7,277.00	41.81	42.04	-138.64	242.47	177.19	65.28	3.714	0			
12,600.00	7,094.00	12,794.59	7,277.00	42.48	42.71	-138.64	242.47	176.18	66.29	3.658	0			
12,700.00	7,094.00	12,894.59	7,277.00	43.15	43.38	-138.64	242.47	175.18	67.29	3.603	0			
12,800.00	7,094.00	12,994.59	7,277.00	43.83	44.05	-138.64	242.48	174.18	68.30	3.550	0			
12,900.00	7,094.00	13,094.59	7,277.00	44.50	44.73	-138.64	242.48	173.17	69.31	3.499	0			
13,000.00	7,094.00	13,194.59	7,277.00	45.18	45.40	-138.64	242.48	172.16	70.32	3.448	0			
13,100.00	7,094.00	13,294.59	7,277.00	45.85	46.07	-138.64	242.48	171.16	71.33	3.400	0			
13,200.00	7,094.00	13,394.59	7,277.00	46.53	46.75	-138.64	242.49	170.15	72.34	3.352	0			
13,300.00	7,094.00	13,494.59	7,277.00	47.21	47.42	-138.64	242.49	169.14	73.35	3.306	0			
13,400.00	7,094.00	13,594.59	7,277.00	47.88	48.10	-138.64	242.49	168.13	74.36	3.261	0			
13,500.00	7,094.00	13,694.59	7,277.00	48.56	48.78	-138.64	242.49	167.12	75.38	3.217	0			
13,600.00	7,094.00	13,794.59	7,277.00	49.24	49.45	-138.64	242.50	166.11	76.39	3.174	0			
13,700.00	7,094.00	13,894.59	7,277.00	49.92	50.13	-138.64	242.50	165.09	77.41	3.133	0			
13,800.00	7,094.00	13,994.59	7,277.00	50.60	50.81	-138.63	242.50	164.08	78.42	3.092	0			
13,900.00	7,094.00	14,094.59	7,277.00	51.28	51.49	-138.63	242.50	163.07	79.44	3.053	0			
14,000.00	7,094.00	14,194.59	7,277.00	51.97	52.17	-138.63	242.51	162.05	80.46	3.014	0			
14,100.00	7,094.00	14,294.59	7,277.00	52.65	52.85	-138.63	242.51	161.04	81.47	2.977	0			
14,200.00	7,094.00	14,394.59	7,277.00	53.33	53.54	-138.63	242.51	160.02	82.49	2.940	0			
14,300.00	7,094.00	14,494.59	7,277.00	54.02	54.22	-138.63	242.51	159.00	83.51	2.904	0			
14,400.00	7,094.00	14,594.59	7,277.00	54.70	54.90	-138.63	242.52	157.99	84.53	2.869	0			
14,500.00	7,094.00	14,694.59	7,277.00	55.39	55.58	-138.63	242.52	156.97	85.55	2.835	0			

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design Sec.28-T07N-R67W - Nelson Farm #1 - Original Hole - Rev 0													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance						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	Risked Separation Factor			
14,600.00	7,094.00	14,794.59	7,277.00	56.07	56.27	-138.63	242.52	155.95	86.57	2.801	0			
14,700.00	7,094.00	14,894.59	7,277.00	56.76	56.95	-138.63	242.53	154.93	87.59	2.769	0			
14,800.00	7,094.00	14,994.59	7,277.00	57.44	57.64	-138.63	242.53	153.91	88.62	2.737	0			
14,868.07	7,094.00	15,062.66	7,277.00	57.91	58.10	-138.63	242.53	153.22	89.31	2.716	0			
14,888.41	7,094.00	15,083.00	7,277.00	58.05	58.24	-138.63	242.53	153.01	89.52	2.709	0		SF	



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor		
0.00	0.00	0.00	0.00	0.00	0.00	-179.74	224.29					0	
100.00	100.00	90.00	90.00	0.15	0.13	-179.74	224.06	223.79	0.28	804.383	0		
200.00	200.00	190.00	190.00	0.32	0.30	-179.74	224.06	223.44	0.62	358.602	0		
300.00	300.00	290.00	290.00	0.50	0.48	-179.74	224.06	223.09	0.97	230.071	0		
400.00	400.00	390.00	390.00	0.67	0.65	-179.74	224.06	222.74	1.32	169.366	0		
500.00	500.00	490.00	490.00	0.84	0.83	-179.74	224.06	222.39	1.67	134.008	0		
600.00	600.00	590.00	590.00	1.02	1.00	-179.74	224.06	222.04	2.02	110.863	0		
700.00	700.00	690.00	690.00	1.19	1.18	-179.74	224.06	221.69	2.37	94.536	0		
800.00	799.98	784.26	784.24	1.37	1.34	-134.29	226.42	223.71	2.71	83.584	0		CC, ES
900.00	899.84	877.51	877.40	1.54	1.50	-134.51	234.01	230.97	3.05	76.832	0		
1,000.00	999.45	970.02	969.62	1.72	1.67	-134.81	246.82	243.44	3.38	72.983	0		
1,100.00	1,098.70	1,061.41	1,060.45	1.90	1.83	-135.14	264.79	261.07	3.72	71.231	0		
1,145.64	1,143.85	1,100.00	1,098.70	1.98	1.90	-135.28	274.70	270.83	3.87	71.069	0		
1,200.00	1,197.55	1,151.43	1,149.56	2.08	2.00	-135.60	287.48	283.42	4.05	70.904	0		
1,300.00	1,296.34	1,240.28	1,237.08	2.27	2.16	-135.86	312.99	308.60	4.39	71.238	0		
1,400.00	1,395.13	1,328.23	1,323.21	2.45	2.33	-135.83	341.00	336.27	4.73	72.056	0		
1,500.00	1,493.93	1,423.88	1,416.60	2.64	2.51	-135.68	370.15	365.06	5.09	72.775	0		
1,600.00	1,592.72	1,519.54	1,509.99	2.83	2.70	-135.55	399.29	393.85	5.44	73.386	0		
1,700.00	1,691.51	1,615.19	1,603.38	3.01	2.89	-135.44	428.44	422.64	5.80	73.908	0		
1,800.00	1,790.30	1,710.85	1,696.77	3.20	3.08	-135.34	457.59	451.43	6.15	74.359	0		
1,900.00	1,889.10	1,806.50	1,790.16	3.39	3.27	-135.26	486.74	480.23	6.51	74.753	0		
2,000.00	1,987.89	1,902.16	1,883.55	3.58	3.46	-135.18	515.89	509.02	6.87	75.100	0		
2,100.00	2,086.68	1,997.81	1,976.95	3.77	3.65	-135.12	545.04	537.81	7.23	75.407	0		
2,200.00	2,185.47	2,093.47	2,070.34	3.96	3.85	-135.06	574.19	566.60	7.59	75.680	0		
2,300.00	2,284.27	2,189.12	2,163.73	4.15	4.04	-135.00	603.34	595.40	7.95	75.925	0		
2,400.00	2,383.06	2,284.78	2,257.12	4.34	4.24	-134.95	632.49	624.19	8.31	76.146	0		
2,500.00	2,481.85	2,380.43	2,350.51	4.53	4.43	-134.91	661.65	652.98	8.67	76.346	0		
2,600.00	2,580.64	2,476.09	2,443.90	4.72	4.63	-134.86	690.80	681.77	9.03	76.528	0		
2,700.00	2,679.44	2,571.74	2,537.30	4.91	4.82	-134.83	719.95	710.57	9.39	76.695	0		
2,800.00	2,778.23	2,667.40	2,630.69	5.11	5.02	-134.79	749.11	739.36	9.75	76.847	0		
2,900.00	2,877.02	2,763.05	2,724.08	5.30	5.21	-134.76	778.26	768.15	10.11	76.988	0		
3,000.00	2,975.81	2,858.71	2,817.47	5.49	5.41	-134.73	807.42	796.95	10.47	77.117	0		
3,100.00	3,074.61	2,954.36	2,910.86	5.68	5.61	-134.70	836.57	825.74	10.83	77.237	0		
3,200.00	3,173.40	3,050.02	3,004.25	5.87	5.80	-134.67	865.73	854.53	11.19	77.348	0		
3,300.00	3,272.19	3,145.67	3,097.64	6.06	6.00	-134.65	894.88	883.33	11.55	77.452	0		
3,400.00	3,370.98	3,241.33	3,191.04	6.25	6.20	-134.63	924.04	912.12	11.92	77.548	0		
3,500.00	3,469.78	3,336.98	3,284.43	6.45	6.39	-134.61	953.19	940.91	12.28	77.639	0		
3,600.00	3,568.57	3,432.64	3,377.82	6.64	6.59	-134.59	982.35	969.71	12.64	77.723	0		
3,700.00	3,667.36	3,528.29	3,471.21	6.83	6.79	-134.57	1,011.50	998.50	13.00	77.803	0		
3,800.00	3,766.15	3,623.95	3,564.60	7.02	6.99	-134.55	1,040.66	1,027.29	13.36	77.877	0		
3,900.00	3,864.95	3,719.60	3,657.99	7.21	7.18	-134.53	1,069.81	1,056.09	13.72	77.948	0		
4,000.00	3,963.74	3,815.26	3,751.38	7.40	7.38	-134.52	1,098.97	1,084.88	14.09	78.014	0		
4,100.00	4,062.53	3,910.91	3,844.78	7.60	7.58	-134.50	1,128.12	1,113.67	14.45	78.077	0		
4,200.00	4,161.32	4,006.57	3,938.17	7.79	7.78	-134.49	1,157.28	1,142.47	14.81	78.136	0		
4,300.00	4,260.12	4,102.22	4,031.56	7.98	7.98	-134.47	1,186.43	1,171.26	15.17	78.193	0		
4,400.00	4,358.91	4,197.88	4,124.95	8.17	8.17	-134.46	1,215.59	1,200.06	15.54	78.246	0		
4,500.00	4,457.70	4,293.53	4,218.34	8.36	8.37	-134.45	1,244.75	1,228.85	15.90	78.297	0		
4,600.00	4,556.49	4,389.19	4,311.73	8.56	8.57	-134.43	1,273.90	1,257.64	16.26	78.345	0		
4,700.00	4,655.29	4,484.84	4,405.12	8.75	8.77	-134.42	1,303.06	1,286.44	16.62	78.391	0		
4,800.00	4,754.08	4,580.50	4,498.52	8.94	8.97	-134.41	1,332.21	1,315.23	16.98	78.435	0		
4,900.00	4,852.87	4,676.15	4,591.91	9.13	9.16	-134.40	1,361.37	1,344.02	17.35	78.477	0		
5,000.00	4,951.66	4,771.81	4,685.30	9.33	9.36	-134.39	1,390.53	1,372.82	17.71	78.517	0		
5,100.00	5,050.46	4,867.46	4,778.69	9.52	9.56	-134.38	1,419.68	1,401.61	18.07	78.556	0		
5,200.00	5,149.25	4,963.12	4,872.08	9.71	9.76	-134.37	1,448.84	1,430.40	18.43	78.592	0		

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning
5,300.00	5,248.04	5,058.77	4,965.47	9.90	9.96	-134.36	1,478.00	1,459.20	18.80	78.628	0		
5,400.00	5,346.83	5,154.43	5,058.86	10.09	10.16	-134.36	1,507.15	1,487.99	19.16	78.662	0		
5,500.00	5,445.63	5,250.08	5,152.26	10.29	10.35	-134.35	1,536.31	1,516.79	19.52	78.694	0		
5,600.00	5,544.42	5,345.74	5,245.65	10.48	10.55	-134.34	1,565.46	1,545.58	19.89	78.725	0		
5,700.00	5,643.21	5,441.39	5,339.04	10.67	10.75	-134.33	1,594.62	1,574.37	20.25	78.755	0		
5,800.00	5,742.00	5,537.05	5,432.43	10.86	10.95	-134.32	1,623.78	1,603.17	20.61	78.784	0		
5,900.00	5,840.80	5,632.70	5,525.82	11.06	11.15	-134.32	1,652.93	1,631.96	20.97	78.812	0		
5,973.62	5,913.53	5,703.13	5,594.58	11.20	11.29	-134.31	1,674.40	1,653.16	21.24	78.832	0		
6,000.00	5,939.61	5,728.38	5,619.24	11.25	11.35	-134.42	1,682.01	1,660.66	21.35	78.793	0		
6,100.00	6,038.77	5,824.54	5,713.12	11.43	11.55	-134.75	1,709.37	1,687.63	21.74	78.613	0		
6,200.00	6,138.33	5,921.25	5,807.54	11.61	11.75	-134.96	1,734.37	1,712.24	22.13	78.371	0		
6,300.00	6,238.15	6,018.40	5,902.40	11.78	11.95	-135.06	1,757.00	1,734.49	22.51	78.071	0		
6,400.00	6,338.11	6,205.55	6,086.09	11.94	12.32	-134.81	1,775.26	1,752.24	23.03	77.091	0		
6,419.27	6,357.38	6,246.35	6,126.42	11.97	12.39	-179.69	1,777.82	1,754.10	23.72	74.948	0		
6,500.00	6,438.11	6,419.00	6,297.90	12.11	12.70	-179.98	1,785.79	1,761.63	24.16	73.903	0		
6,519.27	6,457.38	6,460.51	6,339.29	12.14	12.77	-179.93	1,787.08	1,762.81	24.27	73.643	0		
6,550.00	6,488.10	6,526.83	6,405.49	12.18	12.88	90.05	1,788.63	1,764.79	23.84	75.033	0		
6,600.00	6,537.90	6,634.65	6,513.27	12.26	13.05	90.29	1,789.86	1,765.77	24.10	74.276	0		
6,650.00	6,587.20	6,698.58	6,577.20	12.33	13.15	90.60	1,789.99	1,765.70	24.28	73.712	0		
6,700.00	6,635.69	6,747.08	6,625.69	12.39	13.22	90.96	1,790.16	1,765.71	24.45	73.226	0		
6,750.00	6,683.09	6,797.06	6,675.66	12.45	13.30	91.41	1,790.48	1,765.86	24.62	72.739	0		
6,800.00	6,729.10	6,849.15	6,727.49	12.51	13.37	91.87	1,790.93	1,766.15	24.78	72.260	0		
6,850.00	6,773.43	6,902.68	6,780.15	12.56	13.44	92.33	1,791.50	1,766.55	24.95	71.793	0		
6,900.00	6,815.82	6,957.75	6,833.28	12.62	13.51	92.78	1,792.18	1,767.05	25.12	71.341	0		
6,950.00	6,855.99	7,014.43	6,886.46	12.67	13.57	93.22	1,792.94	1,767.66	25.29	70.907	0		
7,000.00	6,893.71	7,072.80	6,939.19	12.72	13.64	93.64	1,793.78	1,768.33	25.45	70.493	0		
7,050.00	6,928.74	7,132.91	6,990.85	12.78	13.70	94.06	1,794.67	1,769.07	25.60	70.102	0		
7,100.00	6,960.86	7,194.77	7,040.76	12.83	13.76	94.44	1,795.58	1,769.83	25.75	69.733	0		
7,150.00	6,989.87	7,258.40	7,088.15	12.89	13.82	94.81	1,796.49	1,770.60	25.89	69.392	0		
7,200.00	7,015.61	7,323.73	7,132.15	12.95	13.89	95.14	1,797.36	1,771.34	26.02	69.071	0		
7,250.00	7,037.90	7,390.67	7,171.87	13.02	13.97	95.43	1,798.17	1,772.02	26.15	68.760	0		
7,300.00	7,056.61	7,459.07	7,206.38	13.09	14.05	95.68	1,798.88	1,772.60	26.28	68.451	0		
7,350.00	7,071.63	7,528.73	7,234.82	13.17	14.14	95.89	1,799.47	1,773.05	26.41	68.129	0		
7,400.00	7,082.86	7,599.38	7,256.40	13.25	14.25	96.04	1,799.90	1,773.35	26.56	67.778	0		
7,450.00	7,090.24	7,670.73	7,270.50	13.35	14.37	96.13	1,800.18	1,773.46	26.72	67.381	0		
7,500.00	7,093.71	7,742.44	7,276.71	13.46	14.51	96.16	1,800.27	1,773.37	26.90	66.928	0		
7,519.27	7,094.00	7,767.57	7,277.00	13.51	14.56	96.15	1,800.26	1,773.25	27.00	66.668	0		
7,600.00	7,094.00	7,848.30	7,277.00	13.72	14.74	96.15	1,800.26	1,772.82	27.43	65.622	0		
7,700.00	7,094.00	7,948.30	7,277.00	14.01	15.00	96.15	1,800.26	1,772.24	28.02	64.256	0		
7,800.00	7,094.00	8,048.30	7,277.00	14.33	15.30	96.15	1,800.26	1,771.60	28.66	62.822	0		
7,900.00	7,094.00	8,148.30	7,277.00	14.68	15.62	96.15	1,800.26	1,770.91	29.35	61.339	0		
8,000.00	7,094.00	8,248.30	7,277.00	15.06	15.97	96.15	1,800.26	1,770.17	30.09	59.827	0		
8,100.00	7,094.00	8,348.30	7,277.00	15.45	16.35	96.15	1,800.26	1,769.38	30.88	58.301	0		
8,200.00	7,094.00	8,448.30	7,277.00	15.87	16.75	96.15	1,800.26	1,768.55	31.71	56.775	0		
8,300.00	7,094.00	8,548.30	7,277.00	16.31	17.17	96.15	1,800.26	1,767.68	32.58	55.260	0		
8,400.00	7,094.00	8,648.30	7,277.00	16.76	17.60	96.15	1,800.26	1,766.77	33.48	53.766	0		
8,500.00	7,094.00	8,748.30	7,277.00	17.24	18.06	96.15	1,800.26	1,765.84	34.42	52.301	0		
8,600.00	7,094.00	8,848.30	7,277.00	17.72	18.53	96.15	1,800.26	1,764.87	35.39	50.869	0		
8,700.00	7,094.00	8,948.30	7,277.00	18.22	19.01	96.15	1,800.26	1,763.87	36.39	49.475	0		
8,800.00	7,094.00	9,048.30	7,277.00	18.74	19.51	96.15	1,800.26	1,762.85	37.41	48.122	0		
8,900.00	7,094.00	9,148.30	7,277.00	19.26	20.02	96.15	1,800.26	1,761.80	38.46	46.812	0		
9,000.00	7,094.00	9,248.30	7,277.00	19.80	20.54	96.15	1,800.26	1,760.73	39.53	45.547	0		
9,100.00	7,094.00	9,348.30	7,277.00	20.34	21.07	96.15	1,800.26	1,759.64	40.61	44.325	0		
9,200.00	7,094.00	9,448.30	7,277.00	20.90	21.61	96.15	1,800.26	1,758.54	41.72	43.149	0		

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	
9,300.00	7,094.00	9,548.30	7,277.00	21.46	22.17	96.15	1,800.26	1,757.41	42.85	42.016	0		
9,400.00	7,094.00	9,648.30	7,277.00	22.04	22.72	96.15	1,800.26	1,756.27	43.99	40.927	0		
9,500.00	7,094.00	9,748.30	7,277.00	22.62	23.29	96.15	1,800.26	1,755.12	45.14	39.880	0		
9,600.00	7,094.00	9,848.30	7,277.00	23.20	23.87	96.15	1,800.26	1,753.95	46.31	38.873	0		
9,700.00	7,094.00	9,948.30	7,277.00	23.80	24.45	96.15	1,800.26	1,752.77	47.49	37.906	0		
9,800.00	7,094.00	10,048.30	7,277.00	24.40	25.03	96.15	1,800.26	1,751.57	48.69	36.978	0		
9,900.00	7,094.00	10,148.30	7,277.00	25.00	25.63	96.15	1,800.26	1,750.37	49.89	36.085	0		
10,000.00	7,094.00	10,248.30	7,277.00	25.61	26.22	96.15	1,800.26	1,749.16	51.10	35.228	0		
10,100.00	7,094.00	10,348.30	7,277.00	26.22	26.83	96.15	1,800.26	1,747.93	52.33	34.405	0		
10,200.00	7,094.00	10,448.30	7,277.00	26.84	27.44	96.15	1,800.26	1,746.70	53.56	33.614	0		
10,300.00	7,094.00	10,548.30	7,277.00	27.46	28.05	96.15	1,800.26	1,745.46	54.80	32.853	0		
10,400.00	7,094.00	10,648.30	7,277.00	28.09	28.67	96.15	1,800.26	1,744.21	56.04	32.122	0		
10,500.00	7,094.00	10,748.30	7,277.00	28.72	29.29	96.15	1,800.26	1,742.96	57.30	31.419	0		
10,600.00	7,094.00	10,848.30	7,277.00	29.35	29.91	96.15	1,800.26	1,741.70	58.56	30.742	0		
10,700.00	7,094.00	10,948.30	7,277.00	29.99	30.54	96.15	1,800.26	1,740.43	59.83	30.091	0		
10,800.00	7,094.00	11,048.30	7,277.00	30.63	31.17	96.15	1,800.26	1,739.16	61.10	29.464	0		
10,900.00	7,094.00	11,148.30	7,277.00	31.27	31.80	96.15	1,800.26	1,737.88	62.38	28.860	0		
11,000.00	7,094.00	11,248.30	7,277.00	31.91	32.44	96.15	1,800.26	1,736.59	63.66	28.278	0		
11,100.00	7,094.00	11,348.30	7,277.00	32.56	33.08	96.15	1,800.26	1,735.31	64.95	27.717	0		
11,200.00	7,094.00	11,448.30	7,277.00	33.21	33.72	96.15	1,800.26	1,734.01	66.25	27.176	0		
11,300.00	7,094.00	11,548.30	7,277.00	33.86	34.37	96.15	1,800.26	1,732.72	67.54	26.654	0		
11,400.00	7,094.00	11,648.30	7,277.00	34.52	35.01	96.15	1,800.26	1,731.41	68.84	26.150	0		
11,500.00	7,094.00	11,748.30	7,277.00	35.17	35.66	96.15	1,800.26	1,730.11	70.15	25.663	0		
11,600.00	7,094.00	11,848.30	7,277.00	35.83	36.31	96.15	1,800.26	1,728.80	71.46	25.193	0		
11,700.00	7,094.00	11,948.30	7,277.00	36.49	36.97	96.15	1,800.26	1,727.49	72.77	24.739	0		
11,800.00	7,094.00	12,048.30	7,277.00	37.15	37.62	96.15	1,800.26	1,726.17	74.09	24.300	0		
11,900.00	7,094.00	12,148.30	7,277.00	37.81	38.28	96.15	1,800.26	1,724.85	75.40	23.875	0		
12,000.00	7,094.00	12,248.30	7,277.00	38.47	38.94	96.15	1,800.26	1,723.53	76.73	23.463	0		
12,100.00	7,094.00	12,348.30	7,277.00	39.14	39.60	96.15	1,800.26	1,722.21	78.05	23.065	0		
12,200.00	7,094.00	12,448.30	7,277.00	39.80	40.26	96.15	1,800.26	1,720.88	79.38	22.680	0		
12,300.00	7,094.00	12,548.30	7,277.00	40.47	40.92	96.15	1,800.26	1,719.55	80.71	22.306	0		
12,400.00	7,094.00	12,648.30	7,277.00	41.14	41.58	96.15	1,800.26	1,718.22	82.04	21.944	0		
12,500.00	7,094.00	12,748.30	7,277.00	41.81	42.25	96.15	1,800.26	1,716.89	83.37	21.593	0		
12,600.00	7,094.00	12,848.30	7,277.00	42.48	42.91	96.15	1,800.26	1,715.55	84.71	21.252	0		
12,700.00	7,094.00	12,948.30	7,277.00	43.15	43.58	96.15	1,800.26	1,714.21	86.05	20.922	0		
12,800.00	7,094.00	13,048.30	7,277.00	43.83	44.25	96.15	1,800.26	1,712.87	87.39	20.601	0		
12,900.00	7,094.00	13,148.30	7,277.00	44.50	44.92	96.15	1,800.26	1,711.53	88.73	20.289	0		
13,000.00	7,094.00	13,248.30	7,277.00	45.18	45.59	96.15	1,800.26	1,710.18	90.07	19.987	0		
13,100.00	7,094.00	13,348.30	7,277.00	45.85	46.26	96.15	1,800.26	1,708.84	91.42	19.692	0		
13,200.00	7,094.00	13,448.30	7,277.00	46.53	46.94	96.15	1,800.26	1,707.49	92.77	19.406	0		
13,300.00	7,094.00	13,548.30	7,277.00	47.21	47.61	96.15	1,800.26	1,706.14	94.11	19.128	0		
13,400.00	7,094.00	13,648.30	7,277.00	47.88	48.28	96.15	1,800.26	1,704.79	95.47	18.858	0		
13,500.00	7,094.00	13,748.30	7,277.00	48.56	48.96	96.15	1,800.26	1,703.44	96.82	18.594	0		
13,600.00	7,094.00	13,848.30	7,277.00	49.24	49.63	96.15	1,800.26	1,702.09	98.17	18.338	0		
13,700.00	7,094.00	13,948.30	7,277.00	49.92	50.31	96.15	1,800.26	1,700.73	99.52	18.089	0		
13,800.00	7,094.00	14,048.30	7,277.00	50.60	50.99	96.15	1,800.26	1,699.38	100.88	17.846	0		
13,900.00	7,094.00	14,148.30	7,277.00	51.28	51.67	96.15	1,800.26	1,698.02	102.24	17.609	0		
14,000.00	7,094.00	14,248.30	7,277.00	51.97	52.35	96.15	1,800.26	1,696.66	103.59	17.378	0		
14,100.00	7,094.00	14,348.30	7,277.00	52.65	53.02	96.15	1,800.26	1,695.30	104.95	17.153	0		
14,200.00	7,094.00	14,448.30	7,277.00	53.33	53.71	96.15	1,800.26	1,693.94	106.31	16.933	0		
14,300.00	7,094.00	14,548.30	7,277.00	54.02	54.39	96.15	1,800.26	1,692.58	107.68	16.719	0		
14,400.00	7,094.00	14,648.30	7,277.00	54.70	55.07	96.15	1,800.26	1,691.22	109.04	16.510	0		
14,500.00	7,094.00	14,748.30	7,277.00	55.39	55.75	96.15	1,800.26	1,689.86	110.40	16.307	0		
14,600.00	7,094.00	14,848.30	7,277.00	56.07	56.43	96.15	1,800.26	1,688.49	111.76	16.108	0		

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design Sec.28-T07N-R67W - Nelson Farm #10 - Original Hole - Rev 0													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		
14,700.00	7,094.00	14,948.30	7,277.00	56.76	57.11	96.15	1,800.26	1,687.13	113.13	15.913	0		SF	
14,800.00	7,094.00	15,048.30	7,277.00	57.44	57.80	96.15	1,800.26	1,685.76	114.50	15.723	0			
14,888.41	7,094.00	15,136.93	7,277.00	58.05	58.40	96.15	1,800.26	1,684.55	115.71	15.559	0			



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder												Offset Well Error: 0.00 usft	
Reference				Offset		Semi Major Axis		Distance					
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-179.75	252.36				0		
100.00	100.00	89.00	89.00	0.15	0.13	-179.75	252.12	251.84	0.28	909.881	0		
200.00	200.00	189.00	189.00	0.32	0.30	-179.75	252.12	251.49	0.62	404.630	0		
300.00	300.00	289.00	289.00	0.50	0.48	-179.75	252.12	251.15	0.97	259.341	0		
400.00	400.00	389.00	389.00	0.67	0.65	-179.75	252.12	250.80	1.32	190.823	0		
500.00	500.00	489.00	489.00	0.84	0.83	-179.75	252.12	250.45	1.67	150.943	0		
600.00	600.00	589.00	589.00	1.02	1.00	-179.75	252.12	250.10	2.02	124.851	0		CC, ES
700.00	700.00	682.53	682.51	1.19	1.16	-179.63	253.26	250.90	2.36	107.439	0		
800.00	799.98	775.03	774.92	1.37	1.33	-133.83	258.47	255.77	2.69	95.980	0		
900.00	899.84	866.95	866.56	1.54	1.49	-133.73	268.94	265.92	3.03	88.840	0		
1,000.00	999.45	957.89	956.96	1.72	1.65	-133.75	284.63	281.27	3.36	84.691	0		
1,100.00	1,098.70	1,047.49	1,045.68	1.90	1.81	-133.86	305.46	301.76	3.69	82.695	0		
1,145.64	1,143.85	1,087.85	1,085.50	1.98	1.89	-133.92	316.64	312.80	3.85	82.350	0		
1,200.00	1,197.55	1,135.52	1,132.41	2.08	1.98	-134.17	330.98	326.95	4.03	82.160	0		
1,300.00	1,296.34	1,222.22	1,217.34	2.27	2.15	-134.40	359.34	354.97	4.36	82.323	0		
1,400.00	1,395.13	1,307.69	1,300.51	2.45	2.31	-134.41	390.22	385.52	4.70	83.014	0		
1,500.00	1,493.93	1,402.40	1,392.36	2.64	2.50	-134.32	422.31	417.25	5.05	83.562	0		
1,600.00	1,592.72	1,497.11	1,484.21	2.83	2.70	-134.25	454.39	448.99	5.41	84.019	0		
1,700.00	1,691.51	1,591.82	1,576.05	3.01	2.89	-134.19	486.48	480.72	5.76	84.405	0		
1,800.00	1,790.30	1,686.53	1,667.90	3.20	3.08	-134.13	518.57	512.45	6.12	84.734	0		
1,900.00	1,889.10	1,781.24	1,759.75	3.39	3.28	-134.08	550.66	544.18	6.48	85.019	0		
2,000.00	1,987.89	1,875.95	1,851.59	3.58	3.48	-134.04	582.75	575.91	6.83	85.266	0		
2,100.00	2,086.68	1,970.66	1,943.44	3.77	3.68	-134.00	614.83	607.64	7.19	85.483	0		
2,200.00	2,185.47	2,065.37	2,035.29	3.96	3.88	-133.96	646.92	639.37	7.55	85.674	0		
2,300.00	2,284.27	2,160.08	2,127.14	4.15	4.08	-133.93	679.01	671.10	7.91	85.844	0		
2,400.00	2,383.06	2,254.80	2,218.98	4.34	4.28	-133.90	711.10	702.83	8.27	85.996	0		
2,500.00	2,481.85	2,349.51	2,310.83	4.53	4.48	-133.88	743.19	734.56	8.63	86.132	0		
2,600.00	2,580.64	2,444.22	2,402.68	4.72	4.68	-133.85	775.28	766.29	8.99	86.256	0		
2,700.00	2,679.44	2,538.93	2,494.52	4.91	4.88	-133.83	807.37	798.02	9.35	86.367	0		
2,800.00	2,778.23	2,633.64	2,586.37	5.11	5.08	-133.81	839.46	829.75	9.71	86.469	0		
2,900.00	2,877.02	2,728.35	2,678.22	5.30	5.28	-133.79	871.55	861.48	10.07	86.562	0		
3,000.00	2,975.81	2,823.06	2,770.06	5.49	5.48	-133.77	903.64	893.21	10.43	86.648	0		
3,100.00	3,074.61	2,917.77	2,861.91	5.68	5.69	-133.75	935.73	924.94	10.79	86.726	0		
3,200.00	3,173.40	3,012.48	2,953.76	5.87	5.89	-133.74	967.82	956.67	11.15	86.798	0		
3,300.00	3,272.19	3,107.19	3,045.61	6.06	6.09	-133.72	999.91	988.40	11.51	86.865	0		
3,400.00	3,370.98	3,201.91	3,137.45	6.25	6.30	-133.71	1,032.00	1,020.13	11.87	86.928	0		
3,500.00	3,469.78	3,296.62	3,229.30	6.45	6.50	-133.70	1,064.09	1,051.86	12.23	86.986	0		
3,600.00	3,568.57	3,391.33	3,321.15	6.64	6.70	-133.69	1,096.18	1,083.59	12.59	87.040	0		
3,700.00	3,667.36	3,486.04	3,412.99	6.83	6.91	-133.67	1,128.27	1,115.32	12.96	87.090	0		
3,800.00	3,766.15	3,580.75	3,504.84	7.02	7.11	-133.66	1,160.36	1,147.05	13.32	87.137	0		
3,900.00	3,864.95	3,675.46	3,596.69	7.21	7.31	-133.65	1,192.45	1,178.78	13.68	87.181	0		
4,000.00	3,963.74	3,770.17	3,688.54	7.40	7.52	-133.64	1,224.54	1,210.51	14.04	87.223	0		
4,100.00	4,062.53	3,864.88	3,780.38	7.60	7.72	-133.63	1,256.64	1,242.23	14.40	87.262	0		
4,200.00	4,161.32	3,959.59	3,872.23	7.79	7.92	-133.63	1,288.73	1,273.96	14.76	87.299	0		
4,300.00	4,260.12	4,054.30	3,964.08	7.98	8.13	-133.62	1,320.82	1,305.69	15.12	87.334	0		
4,400.00	4,358.91	4,149.01	4,055.92	8.17	8.33	-133.61	1,352.91	1,337.42	15.49	87.367	0		
4,500.00	4,457.70	4,243.73	4,147.77	8.36	8.53	-133.60	1,385.00	1,369.15	15.85	87.399	0		
4,600.00	4,556.49	4,338.44	4,239.62	8.56	8.74	-133.60	1,417.09	1,400.88	16.21	87.428	0		
4,700.00	4,655.29	4,433.15	4,331.47	8.75	8.94	-133.59	1,449.18	1,432.61	16.57	87.456	0		
4,800.00	4,754.08	4,527.86	4,423.31	8.94	9.15	-133.58	1,481.27	1,464.34	16.93	87.483	0		
4,900.00	4,852.87	4,622.57	4,515.16	9.13	9.35	-133.58	1,513.36	1,496.07	17.29	87.509	0		
5,000.00	4,951.66	4,717.28	4,607.01	9.33	9.56	-133.57	1,545.45	1,527.80	17.66	87.533	0		
5,100.00	5,050.46	4,811.99	4,698.85	9.52	9.76	-133.56	1,577.54	1,559.52	18.02	87.556	0		
5,200.00	5,149.25	4,906.70	4,790.70	9.71	9.96	-133.56	1,609.63	1,591.25	18.38	87.579	0		

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	
5,300.00	5,248.04	5,001.41	4,882.55	9.90	10.17	-133.55	1,641.72	1,622.98	18.74	87.600	0		
5,400.00	5,346.83	5,096.12	4,974.40	10.09	10.37	-133.55	1,673.81	1,654.71	19.10	87.620	0		
5,500.00	5,445.63	5,190.83	5,066.24	10.29	10.58	-133.54	1,705.91	1,686.44	19.46	87.640	0		
5,600.00	5,544.42	5,285.55	5,158.09	10.48	10.78	-133.54	1,738.00	1,718.17	19.83	87.658	0		
5,700.00	5,643.21	5,380.26	5,249.94	10.67	10.99	-133.53	1,770.09	1,749.90	20.19	87.676	0		
5,800.00	5,742.00	5,474.97	5,341.78	10.86	11.19	-133.53	1,802.18	1,781.63	20.55	87.693	0		
5,900.00	5,840.80	5,569.68	5,433.63	11.06	11.40	-133.52	1,834.27	1,813.36	20.91	87.710	0		
5,973.62	5,913.53	5,639.41	5,501.25	11.20	11.55	-133.52	1,857.90	1,836.72	21.18	87.722	0		
6,000.00	5,939.61	5,664.42	5,525.50	11.25	11.60	-133.65	1,866.28	1,844.99	21.29	87.670	0		
6,100.00	6,038.77	5,759.67	5,617.88	11.43	11.81	-134.04	1,896.62	1,874.93	21.69	87.448	0		
6,200.00	6,138.33	5,935.42	5,789.03	11.61	12.17	-134.22	1,923.52	1,901.30	22.22	86.563	0		
6,300.00	6,238.15	6,180.23	6,030.76	11.78	12.63	-134.25	1,941.48	1,918.63	22.86	84.946	0		
6,400.00	6,338.11	6,431.13	6,280.95	11.94	13.04	-134.26	1,949.42	1,925.95	23.47	83.051	0		
6,419.27	6,357.38	6,479.78	6,329.60	11.97	13.11	-179.81	1,949.78	1,925.34	24.44	79.769	0		
6,500.00	6,438.11	6,577.30	6,427.11	12.11	13.26	-179.81	1,949.83	1,925.10	24.73	78.850	0		
6,519.27	6,457.38	6,596.56	6,446.38	12.14	13.29	-179.81	1,949.83	1,925.04	24.79	78.652	0		
6,550.00	6,488.10	6,627.50	6,477.31	12.18	13.33	90.20	1,949.83	1,925.78	24.05	81.083	0		
6,600.00	6,537.90	6,678.07	6,527.74	12.26	13.40	90.23	1,949.83	1,925.63	24.20	80.576	0		
6,650.00	6,587.20	6,728.70	6,577.79	12.33	13.47	90.25	1,949.83	1,925.49	24.34	80.105	0		
6,700.00	6,635.69	6,779.40	6,627.14	12.39	13.53	90.27	1,949.84	1,925.36	24.48	79.666	0		
6,750.00	6,683.09	6,830.15	6,675.46	12.45	13.58	90.29	1,949.84	1,925.24	24.60	79.258	0		
6,800.00	6,729.10	6,880.96	6,722.45	12.51	13.64	90.31	1,949.84	1,925.12	24.72	78.876	0		
6,850.00	6,773.43	6,931.81	6,767.79	12.56	13.69	90.32	1,949.85	1,925.01	24.83	78.514	0		
6,900.00	6,815.82	6,982.71	6,811.19	12.62	13.74	90.34	1,949.85	1,924.90	24.94	78.166	0		
6,950.00	6,855.99	7,033.64	6,852.35	12.67	13.79	90.35	1,949.85	1,924.80	25.05	77.826	0		
7,000.00	6,893.71	7,084.60	6,891.01	12.72	13.84	90.36	1,949.85	1,924.69	25.16	77.487	0		
7,050.00	6,928.74	7,135.59	6,926.91	12.78	13.89	90.37	1,949.86	1,924.58	25.28	77.142	0		
7,100.00	6,960.86	7,186.59	6,959.81	12.83	13.94	90.37	1,949.86	1,924.46	25.39	76.782	0		
7,150.00	6,989.87	7,237.61	6,989.50	12.89	14.00	90.37	1,949.86	1,924.34	25.52	76.399	0		
7,200.00	7,015.61	7,288.63	7,015.77	12.95	14.06	90.37	1,949.86	1,924.19	25.66	75.979	0		
7,250.00	7,037.90	7,339.64	7,038.45	13.02	14.12	90.37	1,949.86	1,924.04	25.82	75.523	0		
7,300.00	7,056.61	7,390.65	7,057.40	13.09	14.19	90.37	1,949.86	1,923.87	25.99	75.028	0		
7,350.00	7,071.63	7,441.65	7,072.50	13.17	14.26	90.36	1,949.85	1,923.68	26.18	74.492	0		
7,400.00	7,082.86	7,492.62	7,083.65	13.25	14.35	90.35	1,949.85	1,923.47	26.38	73.913	0		
7,450.00	7,090.24	7,543.56	7,090.79	13.35	14.44	90.34	1,949.85	1,923.25	26.60	73.294	0		
7,500.00	7,093.71	7,594.47	7,093.87	13.46	14.54	90.33	1,949.85	1,923.00	26.84	72.639	0		
7,519.27	7,094.00	7,613.96	7,094.00	13.51	14.58	90.32	1,949.85	1,922.91	26.94	72.377	0		
7,600.00	7,094.00	7,694.70	7,094.00	13.72	14.76	90.32	1,949.85	1,922.48	27.37	71.246	0		
7,700.00	7,094.00	7,794.70	7,094.00	14.01	15.01	90.32	1,949.85	1,921.89	27.95	69.755	0		
7,800.00	7,094.00	7,894.70	7,094.00	14.33	15.29	90.32	1,949.85	1,921.25	28.60	68.188	0		
7,900.00	7,094.00	7,994.70	7,094.00	14.68	15.61	90.32	1,949.85	1,920.56	29.29	66.568	0		
8,000.00	7,094.00	8,094.70	7,094.00	15.06	15.95	90.32	1,949.85	1,919.81	30.04	64.916	0		
8,100.00	7,094.00	8,194.70	7,094.00	15.45	16.33	90.32	1,949.85	1,919.02	30.83	63.248	0		
8,200.00	7,094.00	8,294.70	7,094.00	15.87	16.72	90.32	1,949.85	1,918.18	31.66	61.581	0		
8,300.00	7,094.00	8,394.70	7,094.00	16.31	17.13	90.32	1,949.85	1,917.31	32.54	59.926	0		
8,400.00	7,094.00	8,494.70	7,094.00	16.76	17.57	90.32	1,949.85	1,916.40	33.45	58.295	0		
8,500.00	7,094.00	8,594.70	7,094.00	17.24	18.02	90.32	1,949.85	1,915.45	34.39	56.695	0		
8,600.00	7,094.00	8,694.70	7,094.00	17.72	18.49	90.32	1,949.85	1,914.48	35.37	55.132	0		
8,700.00	7,094.00	8,794.70	7,094.00	18.22	18.97	90.32	1,949.85	1,913.48	36.37	53.612	0		
8,800.00	7,094.00	8,894.70	7,094.00	18.74	19.47	90.32	1,949.85	1,912.45	37.40	52.136	0		
8,900.00	7,094.00	8,994.70	7,094.00	19.26	19.97	90.32	1,949.85	1,911.39	38.45	50.708	0		
9,000.00	7,094.00	9,094.70	7,094.00	19.80	20.49	90.32	1,949.85	1,910.32	39.53	49.329	0		
9,100.00	7,094.00	9,194.70	7,094.00	20.34	21.03	90.32	1,949.85	1,909.22	40.62	47.999	0		
9,200.00	7,094.00	9,294.70	7,094.00	20.90	21.57	90.32	1,949.85	1,908.11	41.74	46.718	0		

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	
9,300.00	7,094.00	9,394.70	7,094.00	21.46	22.12	90.32	1,949.85	1,906.98	42.87	45.485	0		
9,400.00	7,094.00	9,494.70	7,094.00	22.04	22.67	90.32	1,949.85	1,905.83	44.02	44.299	0		
9,500.00	7,094.00	9,594.70	7,094.00	22.62	23.24	90.32	1,949.85	1,904.67	45.18	43.160	0		
9,600.00	7,094.00	9,694.70	7,094.00	23.20	23.81	90.32	1,949.85	1,903.49	46.35	42.065	0		
9,700.00	7,094.00	9,794.70	7,094.00	23.80	24.39	90.32	1,949.85	1,902.31	47.54	41.014	0		
9,800.00	7,094.00	9,894.70	7,094.00	24.40	24.98	90.32	1,949.85	1,901.11	48.74	40.004	0		
9,900.00	7,094.00	9,994.70	7,094.00	25.00	25.57	90.32	1,949.85	1,899.90	49.95	39.035	0		
10,000.00	7,094.00	10,094.70	7,094.00	25.61	26.17	90.32	1,949.85	1,898.67	51.17	38.104	0		
10,100.00	7,094.00	10,194.70	7,094.00	26.22	26.77	90.32	1,949.85	1,897.44	52.40	37.209	0		
10,200.00	7,094.00	10,294.70	7,094.00	26.84	27.38	90.32	1,949.85	1,896.21	53.64	36.350	0		
10,300.00	7,094.00	10,394.70	7,094.00	27.46	27.99	90.32	1,949.85	1,894.96	54.89	35.524	0		
10,400.00	7,094.00	10,494.70	7,094.00	28.09	28.61	90.32	1,949.85	1,893.70	56.14	34.730	0		
10,500.00	7,094.00	10,594.70	7,094.00	28.72	29.23	90.32	1,949.85	1,892.44	57.40	33.967	0		
10,600.00	7,094.00	10,694.70	7,094.00	29.35	29.85	90.32	1,949.85	1,891.17	58.67	33.233	0		
10,700.00	7,094.00	10,794.70	7,094.00	29.99	30.48	90.32	1,949.85	1,889.90	59.95	32.527	0		
10,800.00	7,094.00	10,894.70	7,094.00	30.63	31.11	90.32	1,949.85	1,888.62	61.23	31.847	0		
10,900.00	7,094.00	10,994.70	7,094.00	31.27	31.75	90.32	1,949.85	1,887.33	62.51	31.192	0		
11,000.00	7,094.00	11,094.70	7,094.00	31.91	32.38	90.32	1,949.85	1,886.04	63.80	30.561	0		
11,100.00	7,094.00	11,194.70	7,094.00	32.56	33.02	90.32	1,949.85	1,884.75	65.10	29.952	0		
11,200.00	7,094.00	11,294.70	7,094.00	33.21	33.66	90.32	1,949.85	1,883.45	66.40	29.366	0		
11,300.00	7,094.00	11,394.70	7,094.00	33.86	34.31	90.32	1,949.85	1,882.14	67.70	28.800	0		
11,400.00	7,094.00	11,494.70	7,094.00	34.52	34.96	90.32	1,949.85	1,880.84	69.01	28.254	0		
11,500.00	7,094.00	11,594.70	7,094.00	35.17	35.60	90.32	1,949.85	1,879.52	70.32	27.727	0		
11,600.00	7,094.00	11,694.70	7,094.00	35.83	36.25	90.32	1,949.85	1,878.21	71.64	27.218	0		
11,700.00	7,094.00	11,794.70	7,094.00	36.49	36.91	90.32	1,949.85	1,876.89	72.96	26.725	0		
11,800.00	7,094.00	11,894.70	7,094.00	37.15	37.56	90.32	1,949.85	1,875.57	74.28	26.250	0		
11,900.00	7,094.00	11,994.70	7,094.00	37.81	38.22	90.32	1,949.85	1,874.24	75.61	25.789	0		
12,000.00	7,094.00	12,094.70	7,094.00	38.47	38.88	90.32	1,949.85	1,872.91	76.93	25.344	0		
12,100.00	7,094.00	12,194.70	7,094.00	39.14	39.54	90.32	1,949.85	1,871.58	78.27	24.913	0		
12,200.00	7,094.00	12,294.70	7,094.00	39.80	40.20	90.32	1,949.85	1,870.25	79.60	24.496	0		
12,300.00	7,094.00	12,394.70	7,094.00	40.47	40.86	90.32	1,949.85	1,868.91	80.94	24.091	0		
12,400.00	7,094.00	12,494.70	7,094.00	41.14	41.52	90.32	1,949.85	1,867.57	82.27	23.699	0		
12,500.00	7,094.00	12,594.70	7,094.00	41.81	42.19	90.32	1,949.85	1,866.23	83.62	23.319	0		
12,600.00	7,094.00	12,694.70	7,094.00	42.48	42.85	90.32	1,949.85	1,864.89	84.96	22.951	0		
12,700.00	7,094.00	12,794.70	7,094.00	43.15	43.52	90.32	1,949.85	1,863.54	86.30	22.593	0		
12,800.00	7,094.00	12,894.70	7,094.00	43.83	44.19	90.32	1,949.85	1,862.20	87.65	22.246	0		
12,900.00	7,094.00	12,994.70	7,094.00	44.50	44.86	90.32	1,949.85	1,860.85	89.00	21.909	0		
13,000.00	7,094.00	13,094.70	7,094.00	45.18	45.53	90.32	1,949.85	1,859.50	90.35	21.581	0		
13,100.00	7,094.00	13,194.70	7,094.00	45.85	46.20	90.32	1,949.85	1,858.14	91.70	21.263	0		
13,200.00	7,094.00	13,294.70	7,094.00	46.53	46.87	90.32	1,949.85	1,856.79	93.06	20.953	0		
13,300.00	7,094.00	13,394.70	7,094.00	47.21	47.55	90.32	1,949.85	1,855.43	94.41	20.653	0		
13,400.00	7,094.00	13,494.70	7,094.00	47.88	48.22	90.32	1,949.85	1,854.08	95.77	20.360	0		
13,500.00	7,094.00	13,594.70	7,094.00	48.56	48.90	90.32	1,949.85	1,852.72	97.13	20.075	0		
13,600.00	7,094.00	13,694.70	7,094.00	49.24	49.57	90.32	1,949.85	1,851.36	98.49	19.798	0		
13,700.00	7,094.00	13,794.70	7,094.00	49.92	50.25	90.32	1,949.85	1,850.00	99.85	19.528	0		
13,800.00	7,094.00	13,894.70	7,094.00	50.60	50.93	90.32	1,949.85	1,848.64	101.21	19.265	0		
13,900.00	7,094.00	13,994.70	7,094.00	51.28	51.60	90.32	1,949.85	1,847.27	102.57	19.009	0		
14,000.00	7,094.00	14,094.70	7,094.00	51.97	52.28	90.32	1,949.85	1,845.91	103.94	18.760	0		
14,100.00	7,094.00	14,194.70	7,094.00	52.65	52.96	90.32	1,949.85	1,844.54	105.30	18.516	0		
14,200.00	7,094.00	14,294.70	7,094.00	53.33	53.64	90.32	1,949.85	1,843.18	106.67	18.279	0		
14,300.00	7,094.00	14,394.70	7,094.00	54.02	54.32	90.32	1,949.85	1,841.81	108.04	18.048	0		
14,400.00	7,094.00	14,494.70	7,094.00	54.70	55.00	90.32	1,949.85	1,840.44	109.41	17.822	0		
14,500.00	7,094.00	14,594.70	7,094.00	55.39	55.69	90.32	1,949.85	1,839.07	110.78	17.601	0		
14,600.00	7,094.00	14,694.70	7,094.00	56.07	56.37	90.32	1,949.85	1,837.70	112.15	17.386	0		

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design Sec.28-T07N-R67W - Nelson Farm #11 - Original Hole - Rev 0													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		
14,700.00	7,094.00	14,794.70	7,094.00	56.76	57.05	90.32	1,949.85	1,836.33	113.52	17.176	0			
14,800.00	7,094.00	14,894.70	7,094.00	57.44	57.73	90.32	1,949.85	1,834.95	114.89	16.971	0			
14,888.41	7,094.00	14,983.20	7,094.00	58.05	58.34	90.32	1,949.85	1,833.74	116.11	16.793	0		SF	



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-179.70	280.43				0		
100.00	100.00	88.00	88.00	0.15	0.13	-179.70	280.17	279.90	0.28	1,016.514	0		
200.00	200.00	188.00	188.00	0.32	0.30	-179.70	280.17	279.55	0.62	450.921	0		
300.00	300.00	288.00	288.00	0.50	0.47	-179.70	280.17	279.20	0.97	288.719	0		
400.00	400.00	388.00	388.00	0.67	0.65	-179.70	280.17	278.85	1.32	212.339	0		
500.00	500.00	488.00	488.00	0.84	0.82	-179.70	280.17	278.51	1.67	167.916	0		CC, ES
600.00	600.00	580.67	580.66	1.02	0.99	-179.61	281.32	279.32	2.00	140.316	0		
700.00	700.00	672.18	672.07	1.19	1.15	-179.31	285.42	283.08	2.34	121.987	0		
800.00	799.98	763.26	762.89	1.37	1.31	-133.35	293.68	291.01	2.67	109.872	0		
900.00	899.84	853.52	852.62	1.54	1.47	-133.13	307.26	304.25	3.00	102.261	0		
1,000.00	999.45	942.57	940.81	1.72	1.63	-133.07	326.06	322.73	3.34	97.767	0		
1,100.00	1,098.70	1,030.04	1,027.02	1.90	1.80	-133.11	350.01	346.35	3.66	95.501	0		
1,145.64	1,143.85	1,069.35	1,065.61	1.98	1.87	-133.16	362.62	358.80	3.81	95.053	0		
1,200.00	1,197.55	1,115.72	1,110.99	2.08	1.96	-133.42	378.65	374.65	4.00	94.745	0		
1,300.00	1,296.34	1,200.00	1,193.06	2.27	2.13	-133.74	410.16	405.83	4.33	94.727	0		
1,400.00	1,395.13	1,282.58	1,272.89	2.45	2.30	-133.89	444.21	439.55	4.66	95.286	0		
1,500.00	1,493.93	1,364.26	1,351.21	2.64	2.47	-133.89	480.72	475.72	4.99	96.273	0		
1,600.00	1,592.72	1,456.92	1,439.73	2.83	2.67	-133.84	518.31	512.97	5.35	96.967	0		
1,700.00	1,691.51	1,549.58	1,528.25	3.01	2.87	-133.80	555.91	550.22	5.70	97.560	0		
1,800.00	1,790.30	1,642.25	1,616.77	3.20	3.08	-133.76	593.51	587.46	6.05	98.069	0		
1,900.00	1,889.10	1,734.91	1,705.29	3.39	3.28	-133.73	631.11	624.71	6.41	98.510	0		
2,000.00	1,987.89	1,827.57	1,793.81	3.58	3.49	-133.70	668.71	661.95	6.76	98.896	0		
2,100.00	2,086.68	1,920.23	1,882.34	3.77	3.70	-133.67	706.31	699.20	7.12	99.236	0		
2,200.00	2,185.47	2,012.89	1,970.86	3.96	3.91	-133.65	743.91	736.44	7.47	99.537	0		
2,300.00	2,284.27	2,105.55	2,059.38	4.15	4.12	-133.63	781.51	773.68	7.83	99.806	0		
2,400.00	2,383.06	2,198.21	2,147.90	4.34	4.33	-133.61	819.11	810.93	8.19	100.048	0		
2,500.00	2,481.85	2,290.88	2,236.42	4.53	4.54	-133.59	856.71	848.17	8.54	100.266	0		
2,600.00	2,580.64	2,383.54	2,324.94	4.72	4.75	-133.58	894.31	885.41	8.90	100.463	0		
2,700.00	2,679.44	2,476.20	2,413.46	4.91	4.96	-133.56	931.91	922.65	9.26	100.642	0		
2,800.00	2,778.23	2,568.86	2,501.98	5.11	5.17	-133.55	969.52	959.90	9.62	100.806	0		
2,900.00	2,877.02	2,661.52	2,590.50	5.30	5.38	-133.53	1,007.12	997.14	9.98	100.957	0		
3,000.00	2,975.81	2,754.18	2,679.02	5.49	5.60	-133.52	1,044.72	1,034.38	10.33	101.095	0		
3,100.00	3,074.61	2,846.84	2,767.54	5.68	5.81	-133.51	1,082.32	1,071.62	10.69	101.223	0		
3,200.00	3,173.40	2,939.51	2,856.06	5.87	6.02	-133.50	1,119.92	1,108.87	11.05	101.341	0		
3,300.00	3,272.19	3,032.17	2,944.58	6.06	6.24	-133.49	1,157.52	1,146.11	11.41	101.451	0		
3,400.00	3,370.98	3,124.83	3,033.11	6.25	6.45	-133.48	1,195.12	1,183.35	11.77	101.553	0		
3,500.00	3,469.78	3,217.49	3,121.63	6.45	6.67	-133.48	1,232.72	1,220.59	12.13	101.649	0		
3,600.00	3,568.57	3,310.15	3,210.15	6.64	6.88	-133.47	1,270.32	1,257.83	12.49	101.738	0		
3,700.00	3,667.36	3,402.81	3,298.67	6.83	7.09	-133.46	1,307.92	1,295.08	12.85	101.821	0		
3,800.00	3,766.15	3,495.48	3,387.19	7.02	7.31	-133.45	1,345.52	1,332.32	13.20	101.899	0		
3,900.00	3,864.95	3,588.14	3,475.71	7.21	7.52	-133.45	1,383.12	1,369.56	13.56	101.973	0		
4,000.00	3,963.74	3,680.80	3,564.23	7.40	7.74	-133.44	1,420.72	1,406.80	13.92	102.042	0		
4,100.00	4,062.53	3,773.46	3,652.75	7.60	7.95	-133.43	1,458.32	1,444.04	14.28	102.108	0		
4,200.00	4,161.32	3,866.12	3,741.27	7.79	8.17	-133.43	1,495.92	1,481.28	14.64	102.170	0		
4,300.00	4,260.12	3,958.78	3,829.79	7.98	8.38	-133.42	1,533.53	1,518.52	15.00	102.228	0		
4,400.00	4,358.91	4,051.44	3,918.31	8.17	8.60	-133.42	1,571.13	1,555.77	15.36	102.284	0		
4,500.00	4,457.70	4,144.11	4,006.83	8.36	8.81	-133.41	1,608.73	1,593.01	15.72	102.336	0		
4,600.00	4,556.49	4,236.77	4,095.35	8.56	9.03	-133.41	1,646.33	1,630.25	16.08	102.386	0		
4,700.00	4,655.29	4,329.43	4,183.88	8.75	9.24	-133.40	1,683.93	1,667.49	16.44	102.434	0		
4,800.00	4,754.08	4,422.09	4,272.40	8.94	9.46	-133.40	1,721.53	1,704.73	16.80	102.479	0		
4,900.00	4,852.87	4,514.75	4,360.92	9.13	9.67	-133.40	1,759.13	1,741.97	17.16	102.523	0		
5,000.00	4,951.66	4,607.41	4,449.44	9.33	9.89	-133.39	1,796.73	1,779.21	17.52	102.564	0		
5,100.00	5,050.46	4,700.08	4,537.96	9.52	10.11	-133.39	1,834.33	1,816.45	17.88	102.603	0		
5,200.00	5,149.25	4,792.74	4,626.48	9.71	10.32	-133.38	1,871.93	1,853.70	18.24	102.641	0		

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risk Separation Factor	Probability of Collision		
5,300.00	5,248.04	4,885.40	4,715.00	9.90	10.54	-133.38	1,909.53	1,890.94	18.60	102.677	0			
5,400.00	5,346.83	4,978.06	4,803.52	10.09	10.75	-133.38	1,947.14	1,928.18	18.96	102.712	0			
5,500.00	5,445.63	5,070.72	4,892.04	10.29	10.97	-133.37	1,984.74	1,965.42	19.32	102.745	0			
5,600.00	5,544.42	5,163.38	4,980.56	10.48	11.18	-133.37	2,022.34	2,002.66	19.68	102.777	0			
5,700.00	5,643.21	5,256.04	5,069.08	10.67	11.40	-133.37	2,059.94	2,039.90	20.04	102.808	0			
5,800.00	5,742.00	5,348.71	5,157.60	10.86	11.61	-133.37	2,097.54	2,077.14	20.40	102.837	0			
5,900.00	5,840.80	5,441.37	5,246.12	11.06	11.83	-133.36	2,135.14	2,114.38	20.76	102.865	0			
5,973.62	5,913.53	5,509.59	5,311.30	11.20	11.99	-133.36	2,162.82	2,141.80	21.02	102.886	0			
6,000.00	5,939.61	5,534.06	5,334.67	11.25	12.05	-133.51	2,172.66	2,151.53	21.13	102.816	0			
6,100.00	6,038.77	5,627.37	5,423.81	11.43	12.26	-134.01	2,208.55	2,187.01	21.54	102.532	0			
6,200.00	6,138.33	5,729.98	5,521.84	11.61	12.50	-134.39	2,242.17	2,220.22	21.95	102.127	0			
6,300.00	6,238.15	6,085.16	5,867.13	11.78	13.24	-134.32	2,267.69	2,244.88	22.81	99.430	0			
6,400.00	6,338.11	6,459.21	6,238.78	11.94	13.87	-134.27	2,279.25	2,255.60	23.65	96.388	0			
6,419.27	6,357.38	6,532.29	6,311.83	11.97	13.97	-179.82	2,279.80	2,254.48	25.32	90.024	0			
6,500.00	6,438.11	6,646.57	6,426.11	12.11	14.14	-179.82	2,279.89	2,254.27	25.63	88.968	0			
6,519.27	6,457.38	6,665.84	6,445.38	12.14	14.16	-179.82	2,279.89	2,254.21	25.69	88.758	0			
6,550.00	6,488.10	6,696.79	6,476.33	12.18	14.21	90.19	2,279.89	2,255.60	24.29	93.862	0			
6,600.00	6,537.90	6,747.43	6,526.84	12.26	14.27	90.22	2,279.90	2,255.46	24.44	93.279	0			
6,650.00	6,587.20	6,798.14	6,576.97	12.33	14.34	90.24	2,279.90	2,255.32	24.58	92.738	0			
6,700.00	6,635.69	6,848.92	6,626.42	12.39	14.39	90.26	2,279.90	2,255.19	24.72	92.236	0			
6,750.00	6,683.09	6,899.77	6,674.84	12.45	14.45	90.28	2,279.91	2,255.06	24.84	91.768	0			
6,800.00	6,729.10	6,950.67	6,721.93	12.51	14.50	90.29	2,279.91	2,254.95	24.96	91.330	0			
6,850.00	6,773.43	7,001.62	6,767.38	12.56	14.55	90.31	2,279.91	2,254.84	25.08	90.916	0			
6,900.00	6,815.82	7,052.62	6,810.88	12.62	14.60	90.32	2,279.92	2,254.73	25.19	90.519	0			
6,950.00	6,855.99	7,103.65	6,852.15	12.67	14.65	90.33	2,279.92	2,254.62	25.30	90.131	0			
7,000.00	6,893.71	7,154.72	6,890.90	12.72	14.69	90.34	2,279.92	2,254.52	25.40	89.744	0			
7,050.00	6,928.74	7,205.81	6,926.88	12.78	14.74	90.35	2,279.92	2,254.41	25.52	89.350	0			
7,100.00	6,960.86	7,256.92	6,959.85	12.83	14.79	90.35	2,279.92	2,254.29	25.63	88.940	0			
7,150.00	6,989.87	7,308.05	6,989.59	12.89	14.84	90.35	2,279.92	2,254.16	25.76	88.505	0			
7,200.00	7,015.61	7,359.17	7,015.90	12.95	14.90	90.35	2,279.92	2,254.03	25.90	88.035	0			
7,250.00	7,037.90	7,410.29	7,038.60	13.02	14.96	90.35	2,279.92	2,253.87	26.05	87.513	0			
7,300.00	7,056.61	7,461.40	7,057.56	13.09	15.03	90.35	2,279.92	2,253.70	26.22	86.945	0			
7,350.00	7,071.63	7,512.49	7,072.65	13.17	15.10	90.34	2,279.92	2,253.51	26.41	86.330	0			
7,400.00	7,082.86	7,563.56	7,083.77	13.25	15.18	90.33	2,279.92	2,253.30	26.61	85.668	0			
7,450.00	7,090.24	7,614.59	7,090.86	13.35	15.26	90.32	2,279.92	2,253.08	26.84	84.959	0			
7,500.00	7,093.71	7,665.59	7,093.88	13.46	15.36	90.31	2,279.91	2,252.84	27.07	84.210	0			
7,519.27	7,094.00	7,685.09	7,094.00	13.51	15.39	90.30	2,279.91	2,252.74	27.17	83.912	0			
7,600.00	7,094.00	7,765.82	7,094.00	13.72	15.56	90.30	2,279.91	2,252.31	27.60	82.608	0			
7,700.00	7,094.00	7,865.82	7,094.00	14.01	15.80	90.30	2,279.91	2,251.73	28.18	80.902	0			
7,800.00	7,094.00	7,965.82	7,094.00	14.33	16.06	90.30	2,279.91	2,251.09	28.82	79.109	0			
7,900.00	7,094.00	8,065.82	7,094.00	14.68	16.36	90.30	2,279.91	2,250.40	29.51	77.253	0			
8,000.00	7,094.00	8,165.82	7,094.00	15.06	16.68	90.30	2,279.91	2,249.66	30.25	75.359	0			
8,100.00	7,094.00	8,265.82	7,094.00	15.45	17.03	90.30	2,279.91	2,248.87	31.04	73.446	0			
8,200.00	7,094.00	8,365.82	7,094.00	15.87	17.40	90.30	2,279.91	2,248.04	31.87	71.532	0			
8,300.00	7,094.00	8,465.82	7,094.00	16.31	17.79	90.30	2,279.91	2,247.17	32.74	69.632	0			
8,400.00	7,094.00	8,565.82	7,094.00	16.76	18.21	90.30	2,279.91	2,246.26	33.65	67.756	0			
8,500.00	7,094.00	8,665.82	7,094.00	17.24	18.64	90.30	2,279.91	2,245.32	34.59	65.915	0			
8,600.00	7,094.00	8,765.82	7,094.00	17.72	19.09	90.30	2,279.91	2,244.35	35.56	64.115	0			
8,700.00	7,094.00	8,865.82	7,094.00	18.22	19.56	90.30	2,279.91	2,243.35	36.56	62.363	0			
8,800.00	7,094.00	8,965.82	7,094.00	18.74	20.04	90.30	2,279.91	2,242.33	37.58	60.662	0			
8,900.00	7,094.00	9,065.82	7,094.00	19.26	20.53	90.30	2,279.91	2,241.28	38.63	59.014	0			
9,000.00	7,094.00	9,165.82	7,094.00	19.80	21.04	90.30	2,279.91	2,240.21	39.70	57.421	0			
9,100.00	7,094.00	9,265.82	7,094.00	20.34	21.56	90.30	2,279.91	2,239.12	40.80	55.885	0			
9,200.00	7,094.00	9,365.82	7,094.00	20.90	22.08	90.30	2,279.91	2,238.00	41.91	54.404	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



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	
9,300.00	7,094.00	9,465.82	7,094.00	21.46	22.62	90.30	2,279.91	2,236.88	43.04	52.978	0		
9,400.00	7,094.00	9,565.82	7,094.00	22.04	23.17	90.30	2,279.91	2,235.73	44.18	51.606	0		
9,500.00	7,094.00	9,665.82	7,094.00	22.62	23.72	90.30	2,279.91	2,234.57	45.34	50.287	0		
9,600.00	7,094.00	9,765.82	7,094.00	23.20	24.29	90.30	2,279.91	2,233.40	46.51	49.019	0		
9,700.00	7,094.00	9,865.82	7,094.00	23.80	24.86	90.30	2,279.91	2,232.22	47.70	47.801	0		
9,800.00	7,094.00	9,965.82	7,094.00	24.40	25.43	90.30	2,279.91	2,231.02	48.89	46.631	0		
9,900.00	7,094.00	10,065.82	7,094.00	25.00	26.02	90.30	2,279.91	2,229.81	50.10	45.506	0		
10,000.00	7,094.00	10,165.82	7,094.00	25.61	26.61	90.30	2,279.91	2,228.59	51.32	44.426	0		
10,100.00	7,094.00	10,265.82	7,094.00	26.22	27.20	90.30	2,279.91	2,227.37	52.55	43.388	0		
10,200.00	7,094.00	10,365.82	7,094.00	26.84	27.80	90.30	2,279.91	2,226.13	53.78	42.391	0		
10,300.00	7,094.00	10,465.82	7,094.00	27.46	28.40	90.30	2,279.91	2,224.88	55.03	41.432	0		
10,400.00	7,094.00	10,565.82	7,094.00	28.09	29.01	90.30	2,279.91	2,223.63	56.28	40.510	0		
10,500.00	7,094.00	10,665.82	7,094.00	28.72	29.62	90.30	2,279.91	2,222.37	57.54	39.624	0		
10,600.00	7,094.00	10,765.82	7,094.00	29.35	30.24	90.30	2,279.91	2,221.11	58.80	38.771	0		
10,700.00	7,094.00	10,865.82	7,094.00	29.99	30.86	90.30	2,279.91	2,219.83	60.08	37.950	0		
10,800.00	7,094.00	10,965.82	7,094.00	30.63	31.49	90.30	2,279.91	2,218.56	61.36	37.159	0		
10,900.00	7,094.00	11,065.82	7,094.00	31.27	32.11	90.30	2,279.91	2,217.27	62.64	36.398	0		
11,000.00	7,094.00	11,165.82	7,094.00	31.91	32.74	90.30	2,279.91	2,215.98	63.93	35.664	0		
11,100.00	7,094.00	11,265.82	7,094.00	32.56	33.38	90.30	2,279.91	2,214.69	65.22	34.956	0		
11,200.00	7,094.00	11,365.82	7,094.00	33.21	34.01	90.30	2,279.91	2,213.39	66.52	34.274	0		
11,300.00	7,094.00	11,465.82	7,094.00	33.86	34.65	90.30	2,279.91	2,212.09	67.82	33.616	0		
11,400.00	7,094.00	11,565.82	7,094.00	34.52	35.29	90.30	2,279.91	2,210.78	69.13	32.980	0		
11,500.00	7,094.00	11,665.82	7,094.00	35.17	35.94	90.30	2,279.91	2,209.47	70.44	32.366	0		
11,600.00	7,094.00	11,765.82	7,094.00	35.83	36.58	90.30	2,279.91	2,208.16	71.75	31.774	0		
11,700.00	7,094.00	11,865.82	7,094.00	36.49	37.23	90.30	2,279.91	2,206.84	73.07	31.201	0		
11,800.00	7,094.00	11,965.82	7,094.00	37.15	37.88	90.30	2,279.91	2,205.52	74.39	30.647	0		
11,900.00	7,094.00	12,065.82	7,094.00	37.81	38.53	90.30	2,279.91	2,204.19	75.72	30.111	0		
12,000.00	7,094.00	12,165.82	7,094.00	38.47	39.18	90.30	2,279.91	2,202.87	77.05	29.592	0		
12,100.00	7,094.00	12,265.82	7,094.00	39.14	39.84	90.30	2,279.91	2,201.54	78.38	29.090	0		
12,200.00	7,094.00	12,365.82	7,094.00	39.80	40.50	90.30	2,279.91	2,200.20	79.71	28.603	0		
12,300.00	7,094.00	12,465.82	7,094.00	40.47	41.15	90.30	2,279.91	2,198.87	81.04	28.132	0		
12,400.00	7,094.00	12,565.82	7,094.00	41.14	41.81	90.30	2,279.91	2,197.53	82.38	27.675	0		
12,500.00	7,094.00	12,665.82	7,094.00	41.81	42.47	90.30	2,279.91	2,196.19	83.72	27.233	0		
12,600.00	7,094.00	12,765.82	7,094.00	42.48	43.14	90.30	2,279.91	2,194.85	85.06	26.803	0		
12,700.00	7,094.00	12,865.82	7,094.00	43.15	43.80	90.30	2,279.91	2,193.51	86.41	26.386	0		
12,800.00	7,094.00	12,965.82	7,094.00	43.83	44.47	90.30	2,279.91	2,192.16	87.75	25.981	0		
12,900.00	7,094.00	13,065.82	7,094.00	44.50	45.13	90.30	2,279.91	2,190.81	89.10	25.588	0		
13,000.00	7,094.00	13,165.82	7,094.00	45.18	45.80	90.30	2,279.91	2,189.46	90.45	25.206	0		
13,100.00	7,094.00	13,265.82	7,094.00	45.85	46.47	90.30	2,279.91	2,188.11	91.80	24.835	0		
13,200.00	7,094.00	13,365.82	7,094.00	46.53	47.14	90.30	2,279.91	2,186.76	93.15	24.475	0		
13,300.00	7,094.00	13,465.82	7,094.00	47.21	47.81	90.30	2,279.91	2,185.40	94.51	24.124	0		
13,400.00	7,094.00	13,565.82	7,094.00	47.88	48.48	90.30	2,279.91	2,184.05	95.86	23.783	0		
13,500.00	7,094.00	13,665.82	7,094.00	48.56	49.15	90.30	2,279.91	2,182.69	97.22	23.451	0		
13,600.00	7,094.00	13,765.82	7,094.00	49.24	49.82	90.30	2,279.91	2,181.33	98.58	23.127	0		
13,700.00	7,094.00	13,865.82	7,094.00	49.92	50.50	90.30	2,279.91	2,179.97	99.94	22.812	0		
13,800.00	7,094.00	13,965.82	7,094.00	50.60	51.17	90.30	2,279.91	2,178.61	101.30	22.506	0		
13,900.00	7,094.00	14,065.82	7,094.00	51.28	51.85	90.30	2,279.91	2,177.25	102.67	22.207	0		
14,000.00	7,094.00	14,165.82	7,094.00	51.97	52.52	90.30	2,279.91	2,175.88	104.03	21.916	0		
14,100.00	7,094.00	14,265.82	7,094.00	52.65	53.20	90.30	2,279.91	2,174.52	105.40	21.632	0		
14,200.00	7,094.00	14,365.82	7,094.00	53.33	53.88	90.30	2,279.91	2,173.15	106.76	21.355	0		
14,300.00	7,094.00	14,465.82	7,094.00	54.02	54.56	90.30	2,279.91	2,171.78	108.13	21.085	0		
14,400.00	7,094.00	14,565.82	7,094.00	54.70	55.23	90.30	2,279.91	2,170.42	109.50	20.822	0		
14,500.00	7,094.00	14,665.82	7,094.00	55.39	55.91	90.30	2,279.91	2,169.05	110.87	20.565	0		
14,600.00	7,094.00	14,765.82	7,094.00	56.07	56.59	90.30	2,279.91	2,167.68	112.24	20.313	0		

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design Sec.28-T07N-R67W - Nelson Farm #12 - Original Hole - Rev 0													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		
14,700.00	7,094.00	14,865.82	7,094.00	56.76	57.27	90.30	2,279.91	2,166.30	113.61	20.068	0			
14,800.00	7,094.00	14,965.82	7,094.00	57.44	57.96	90.30	2,279.91	2,164.93	114.98	19.829	0			
14,888.41	7,094.00	15,054.19	7,094.00	58.05	58.56	90.30	2,279.92	2,163.72	116.19	19.622	0		SF	



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	
0.00	0.00	0.00	0.00	0.00	0.00	-179.82	28.08				0		
100.00	100.00	99.00	99.00	0.15	0.15	-179.82	28.06	27.77	0.29	96.183	0		
200.00	200.00	199.00	199.00	0.32	0.32	-179.82	28.06	27.42	0.64	43.809	0		
300.00	300.00	299.00	299.00	0.50	0.49	-179.82	28.06	27.07	0.99	28.356	0		
400.00	400.00	399.00	399.00	0.67	0.67	-179.82	28.06	26.72	1.34	20.962	0		
500.00	500.00	499.00	499.00	0.84	0.84	-179.82	28.06	26.37	1.69	16.627	0		
600.00	600.00	599.00	599.00	1.02	1.02	-179.82	28.06	26.02	2.04	13.777	0		
700.00	700.00	699.00	699.00	1.19	1.19	-179.82	28.06	25.68	2.39	11.761	0		CC, ES
800.00	799.98	798.98	798.98	1.37	1.37	-136.68	29.31	26.57	2.73	10.716	0		
900.00	899.84	899.43	899.41	1.54	1.54	-140.31	32.40	29.32	3.08	10.507	0		
1,000.00	999.45	999.98	999.82	1.72	1.72	-141.97	36.46	33.03	3.43	10.624	0		
1,100.00	1,098.70	1,100.59	1,100.04	1.90	1.90	-142.12	41.40	37.62	3.78	10.949	0		
1,145.64	1,143.85	1,146.53	1,145.69	1.98	1.98	-141.81	43.94	40.00	3.94	11.149	0		
1,200.00	1,197.55	1,200.85	1,199.60	2.08	2.08	-141.29	47.02	42.88	4.14	11.369	0		
1,300.00	1,296.34	1,300.69	1,298.68	2.27	2.25	-140.47	52.68	48.18	4.49	11.720	0		
1,400.00	1,395.13	1,400.53	1,397.76	2.45	2.44	-139.82	58.35	53.49	4.86	12.016	0		
1,500.00	1,493.93	1,500.36	1,496.84	2.64	2.62	-139.28	64.02	58.81	5.22	12.271	0		
1,600.00	1,592.72	1,600.20	1,595.92	2.83	2.80	-138.83	69.71	64.12	5.58	12.490	0		
1,700.00	1,691.51	1,700.04	1,695.00	3.01	2.98	-138.44	75.39	69.44	5.94	12.682	0		
1,800.00	1,790.30	1,799.87	1,794.08	3.20	3.16	-138.11	81.08	74.77	6.31	12.850	0		
1,900.00	1,889.10	1,899.71	1,893.16	3.39	3.35	-137.83	86.77	80.09	6.67	12.999	0		
2,000.00	1,987.89	1,999.55	1,992.25	3.58	3.53	-137.57	92.46	85.42	7.04	13.132	0		
2,100.00	2,086.68	2,099.39	2,091.33	3.77	3.71	-137.35	98.15	90.74	7.41	13.251	0		
2,200.00	2,185.47	2,199.22	2,190.41	3.96	3.90	-137.15	103.85	96.07	7.77	13.359	0		
2,300.00	2,284.27	2,299.06	2,289.49	4.15	4.08	-136.98	109.54	101.40	8.14	13.456	0		
2,400.00	2,383.06	2,398.90	2,388.57	4.34	4.27	-136.82	115.24	106.73	8.51	13.545	0		
2,500.00	2,481.85	2,498.73	2,487.65	4.53	4.45	-136.67	120.93	112.06	8.88	13.626	0		
2,600.00	2,580.64	2,598.57	2,586.73	4.72	4.63	-136.54	126.63	117.39	9.24	13.700	0		
2,700.00	2,679.44	2,698.41	2,685.81	4.91	4.82	-136.42	132.33	122.72	9.61	13.769	0		
2,800.00	2,778.23	2,798.25	2,784.90	5.11	5.00	-136.31	138.03	128.05	9.98	13.832	0		
2,900.00	2,877.02	2,898.08	2,883.98	5.30	5.19	-136.21	143.73	133.38	10.35	13.890	0		
3,000.00	2,975.81	2,997.92	2,983.06	5.49	5.37	-136.12	149.43	138.71	10.72	13.944	0		
3,100.00	3,074.61	3,097.76	3,082.14	5.68	5.56	-136.03	155.13	144.05	11.08	13.995	0		
3,200.00	3,173.40	3,197.59	3,181.22	5.87	5.74	-135.95	160.83	149.38	11.45	14.042	0		
3,300.00	3,272.19	3,297.43	3,280.30	6.06	5.93	-135.87	166.53	154.71	11.82	14.086	0		
3,400.00	3,370.98	3,397.27	3,379.38	6.25	6.11	-135.80	172.23	160.04	12.19	14.128	0		
3,500.00	3,469.78	3,497.11	3,478.46	6.45	6.30	-135.74	177.94	165.37	12.56	14.167	0		
3,600.00	3,568.57	3,596.94	3,577.55	6.64	6.48	-135.67	183.64	170.71	12.93	14.203	0		
3,700.00	3,667.36	3,696.78	3,676.63	6.83	6.67	-135.62	189.34	176.04	13.30	14.238	0		
3,800.00	3,766.15	3,796.62	3,775.71	7.02	6.85	-135.56	195.04	181.37	13.67	14.270	0		
3,900.00	3,864.95	3,896.45	3,874.79	7.21	7.04	-135.51	200.74	186.71	14.04	14.301	0		
4,000.00	3,963.74	3,996.29	3,973.87	7.40	7.22	-135.46	206.45	192.04	14.41	14.330	0		
4,100.00	4,062.53	4,096.13	4,072.95	7.60	7.41	-135.42	212.15	197.37	14.78	14.358	0		
4,200.00	4,161.32	4,195.97	4,172.03	7.79	7.59	-135.37	217.85	202.71	15.15	14.384	0		
4,300.00	4,260.12	4,295.80	4,271.11	7.98	7.78	-135.33	223.55	208.04	15.51	14.409	0		
4,400.00	4,358.91	4,395.64	4,370.19	8.17	7.96	-135.29	229.26	213.37	15.88	14.433	0		
4,500.00	4,457.70	4,495.48	4,469.28	8.36	8.15	-135.25	234.96	218.71	16.25	14.456	0		
4,600.00	4,556.49	4,595.31	4,568.36	8.56	8.34	-135.22	240.66	224.04	16.62	14.477	0		
4,700.00	4,655.29	4,695.15	4,667.44	8.75	8.52	-135.18	246.37	229.37	16.99	14.498	0		
4,800.00	4,754.08	4,794.99	4,766.52	8.94	8.71	-135.15	252.07	234.71	17.36	14.518	0		
4,900.00	4,852.87	4,894.83	4,865.60	9.13	8.89	-135.12	257.77	240.04	17.73	14.537	0		
5,000.00	4,951.66	4,994.66	4,964.68	9.33	9.08	-135.09	263.48	245.37	18.10	14.555	0		
5,100.00	5,050.46	5,094.50	5,063.76	9.52	9.26	-135.06	269.18	250.71	18.47	14.572	0		
5,200.00	5,149.25	5,194.34	5,162.84	9.71	9.45	-135.04	274.88	256.04	18.84	14.589	0		

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Sec.28-T07N-R67W - Nelson Farm #3 - Original Hole - Rev 0		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	5,248.04	5,294.17	5,261.93	9.90	9.63	-135.01	280.59	261.38	19.21	14.605	0					
5,400.00	5,346.83	5,394.01	5,361.01	10.09	9.82	-134.98	286.29	266.71	19.58	14.620	0					
5,500.00	5,445.63	5,493.85	5,460.09	10.29	10.00	-134.96	291.99	272.04	19.95	14.635	0					
5,600.00	5,544.42	5,593.68	5,559.17	10.48	10.19	-134.94	297.70	277.38	20.32	14.649	0					
5,700.00	5,643.21	5,693.52	5,658.25	10.67	10.38	-134.92	303.40	282.71	20.69	14.663	0					
5,800.00	5,742.00	5,793.36	5,757.33	10.86	10.56	-134.89	309.11	288.04	21.06	14.676	0					
5,900.00	5,840.80	5,893.20	5,856.41	11.06	10.75	-134.87	314.81	293.38	21.43	14.689	0					
5,973.62	5,913.53	5,966.70	5,929.36	11.20	10.88	-134.86	319.01	297.31	21.70	14.698	0					
6,000.00	5,939.61	5,993.04	5,955.50	11.25	10.93	-134.86	320.43	298.62	21.80	14.696	0					
6,100.00	6,038.77	6,090.67	6,052.44	11.43	11.11	-134.63	324.43	302.26	22.18	14.630	0					
6,200.00	6,138.33	6,186.04	6,147.41	11.61	11.28	-134.43	327.23	304.70	22.52	14.528	0					
6,300.00	6,238.15	6,281.44	6,242.65	11.78	11.45	-134.30	328.98	306.13	22.85	14.396	0					
6,400.00	6,338.11	6,376.85	6,338.04	11.94	11.61	-134.24	329.69	306.53	23.16	14.233	0					
6,419.27	6,357.38	6,396.19	6,357.38	11.97	11.64	-179.80	329.71	306.77	22.94	14.375	0					
6,446.52	6,384.63	6,422.44	6,383.63	12.02	11.68	-179.80	329.71	306.68	23.03	14.318	0					
6,500.00	6,438.11	6,475.92	6,437.11	12.11	11.77	-179.80	329.71	306.50	23.21	14.206	0					
6,519.27	6,457.38	6,495.19	6,456.38	12.14	11.80	-179.80	329.71	306.44	23.27	14.166	0					
6,550.00	6,488.10	6,525.98	6,487.16	12.18	11.85	90.20	329.71	306.05	23.66	13.937	0					
6,600.00	6,537.90	6,576.07	6,537.05	12.26	11.93	90.22	329.71	305.90	23.81	13.848	0					
6,650.00	6,587.20	6,626.17	6,586.46	12.33	12.00	90.23	329.71	305.76	23.95	13.766	0					
6,700.00	6,635.69	6,676.28	6,635.08	12.39	12.07	90.24	329.71	305.63	24.08	13.690	0					
6,750.00	6,683.09	6,726.39	6,682.59	12.45	12.13	90.25	329.71	305.50	24.21	13.620	0					
6,800.00	6,729.10	6,776.50	6,728.72	12.51	12.19	90.25	329.71	305.38	24.33	13.554	0					
6,850.00	6,773.43	6,826.62	6,773.17	12.56	12.24	90.26	329.71	305.27	24.44	13.491	0					
6,900.00	6,815.82	6,876.73	6,815.66	12.62	12.30	90.26	329.71	305.16	24.55	13.431	0					
6,950.00	6,855.99	6,926.85	6,855.94	12.67	12.35	90.26	329.71	305.05	24.66	13.371	0					
7,000.00	6,893.71	6,976.97	6,893.74	12.72	12.40	90.26	329.71	304.94	24.77	13.312	0					
7,050.00	6,928.74	7,027.09	6,928.85	12.78	12.46	90.26	329.71	304.83	24.88	13.251	0					
7,100.00	6,960.86	7,077.21	6,961.03	12.83	12.52	90.26	329.71	304.71	25.00	13.187	0					
7,150.00	6,989.87	7,127.32	6,990.09	12.89	12.58	90.25	329.71	304.58	25.13	13.119	0					
7,200.00	7,015.61	7,177.44	7,015.85	12.95	12.64	90.25	329.71	304.44	25.27	13.045	0					
7,250.00	7,037.90	7,227.55	7,038.15	13.02	12.71	90.24	329.71	304.28	25.43	12.966	0					
7,300.00	7,056.61	7,277.65	7,056.86	13.09	12.78	90.23	329.71	304.11	25.60	12.880	0					
7,350.00	7,071.63	7,327.75	7,071.85	13.17	12.86	90.22	329.71	303.92	25.79	12.786	0					
7,400.00	7,082.86	7,377.85	7,083.03	13.25	12.96	90.21	329.71	303.72	25.99	12.686	0					
7,450.00	7,090.24	7,427.94	7,090.34	13.35	13.08	90.19	329.71	303.50	26.21	12.578	0					
7,500.00	7,093.71	7,478.03	7,093.74	13.46	13.21	90.18	329.71	303.26	26.45	12.464	0					
7,519.27	7,094.00	7,497.32	7,094.00	13.51	13.26	90.17	329.71	303.16	26.55	12.419	0					
7,600.00	7,094.00	7,578.05	7,094.00	13.72	13.48	90.17	329.71	302.73	26.98	12.219	0					
7,700.00	7,094.00	7,678.05	7,094.00	14.01	13.78	90.17	329.71	302.14	27.57	11.958	0					
7,800.00	7,094.00	7,778.05	7,094.00	14.33	14.11	90.17	329.71	301.49	28.22	11.683	0					
7,900.00	7,094.00	7,878.05	7,094.00	14.68	14.46	90.17	329.71	300.79	28.92	11.400	0					
8,000.00	7,094.00	7,978.05	7,094.00	15.06	14.84	90.17	329.71	300.03	29.67	11.111	0					
8,100.00	7,094.00	8,078.05	7,094.00	15.45	15.24	90.17	329.71	299.24	30.47	10.820	0					
8,200.00	7,094.00	8,178.05	7,094.00	15.87	15.66	90.17	329.71	298.40	31.31	10.529	0					
8,300.00	7,094.00	8,278.05	7,094.00	16.31	16.10	90.17	329.71	297.51	32.19	10.241	0					
8,400.00	7,094.00	8,378.05	7,094.00	16.76	16.56	90.17	329.71	296.60	33.11	9.958	0					
8,500.00	7,094.00	8,478.05	7,094.00	17.24	17.03	90.17	329.71	295.65	34.06	9.680	0					
8,600.00	7,094.00	8,578.05	7,094.00	17.72	17.53	90.17	329.71	294.67	35.04	9.409	0					
8,700.00	7,094.00	8,678.05	7,094.00	18.22	18.03	90.17	329.71	293.66	36.05	9.145	0					
8,800.00	7,094.00	8,778.05	7,094.00	18.74	18.55	90.17	329.71	292.62	37.09	8.890	0					
8,900.00	7,094.00	8,878.05	7,094.00	19.26	19.08	90.17	329.71	291.56	38.15	8.643	0					
9,000.00	7,094.00	8,978.05	7,094.00	19.80	19.62	90.17	329.71	290.48	39.23	8.405	0					
9,100.00	7,094.00	9,078.05	7,094.00	20.34	20.17	90.17	329.71	289.38	40.33	8.175	0					

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	
9,200.00	7,094.00	9,178.05	7,094.00	20.90	20.73	90.17	329.71	288.26	41.45	7.954	0		
9,300.00	7,094.00	9,278.05	7,094.00	21.46	21.30	90.17	329.71	287.12	42.59	7.742	0		
9,400.00	7,094.00	9,378.05	7,094.00	22.04	21.87	90.17	329.71	285.97	43.74	7.538	0		
9,500.00	7,094.00	9,478.05	7,094.00	22.62	22.46	90.17	329.71	284.80	44.91	7.342	0		
9,600.00	7,094.00	9,578.05	7,094.00	23.20	23.05	90.17	329.71	283.62	46.09	7.154	0		
9,700.00	7,094.00	9,678.05	7,094.00	23.80	23.64	90.17	329.71	282.43	47.28	6.974	0		
9,800.00	7,094.00	9,778.05	7,094.00	24.40	24.24	90.17	329.71	281.22	48.48	6.800	0		
9,900.00	7,094.00	9,878.05	7,094.00	25.00	24.85	90.17	329.71	280.01	49.70	6.634	0		
10,000.00	7,094.00	9,978.05	7,094.00	25.61	25.46	90.17	329.71	278.78	50.92	6.474	0		
10,100.00	7,094.00	10,078.05	7,094.00	26.22	26.08	90.17	329.71	277.55	52.16	6.321	0		
10,200.00	7,094.00	10,178.05	7,094.00	26.84	26.70	90.17	329.71	276.31	53.40	6.174	0		
10,300.00	7,094.00	10,278.05	7,094.00	27.46	27.33	90.17	329.71	275.06	54.65	6.033	0		
10,400.00	7,094.00	10,378.05	7,094.00	28.09	27.96	90.17	329.71	273.80	55.91	5.897	0		
10,500.00	7,094.00	10,478.05	7,094.00	28.72	28.59	90.17	329.71	272.53	57.18	5.767	0		
10,600.00	7,094.00	10,578.05	7,094.00	29.35	29.23	90.17	329.71	271.26	58.45	5.641	0		
10,700.00	7,094.00	10,678.05	7,094.00	29.99	29.86	90.17	329.71	269.98	59.72	5.521	0		
10,800.00	7,094.00	10,778.05	7,094.00	30.63	30.51	90.17	329.71	268.70	61.01	5.404	0		
10,900.00	7,094.00	10,878.05	7,094.00	31.27	31.15	90.17	329.71	267.41	62.30	5.293	0		
11,000.00	7,094.00	10,978.05	7,094.00	31.91	31.80	90.17	329.71	266.12	63.59	5.185	0		
11,100.00	7,094.00	11,078.05	7,094.00	32.56	32.45	90.17	329.71	264.82	64.89	5.081	0		
11,200.00	7,094.00	11,178.05	7,094.00	33.21	33.10	90.17	329.71	263.52	66.19	4.981	0		
11,300.00	7,094.00	11,278.05	7,094.00	33.86	33.75	90.17	329.71	262.21	67.50	4.885	0		
11,400.00	7,094.00	11,378.05	7,094.00	34.52	34.41	90.17	329.71	260.90	68.81	4.792	0		
11,500.00	7,094.00	11,478.05	7,094.00	35.17	35.06	90.17	329.71	259.58	70.12	4.702	0		
11,600.00	7,094.00	11,578.05	7,094.00	35.83	35.72	90.17	329.71	258.27	71.44	4.615	0		
11,700.00	7,094.00	11,678.05	7,094.00	36.49	36.38	90.17	329.71	256.94	72.76	4.531	0		
11,800.00	7,094.00	11,778.05	7,094.00	37.15	37.04	90.17	329.71	255.62	74.09	4.450	0		
11,900.00	7,094.00	11,878.05	7,094.00	37.81	37.71	90.17	329.71	254.29	75.42	4.372	0		
12,000.00	7,094.00	11,978.05	7,094.00	38.47	38.37	90.17	329.71	252.96	76.75	4.296	0		
12,100.00	7,094.00	12,078.05	7,094.00	39.14	39.04	90.17	329.71	251.63	78.08	4.223	0		
12,200.00	7,094.00	12,178.05	7,094.00	39.80	39.71	90.17	329.71	250.29	79.42	4.152	0		
12,300.00	7,094.00	12,278.05	7,094.00	40.47	40.38	90.17	329.71	248.95	80.75	4.083	0		
12,400.00	7,094.00	12,378.05	7,094.00	41.14	41.05	90.17	329.71	247.61	82.09	4.016	0		
12,500.00	7,094.00	12,478.05	7,094.00	41.81	41.72	90.17	329.71	246.27	83.44	3.952	0		
12,600.00	7,094.00	12,578.05	7,094.00	42.48	42.39	90.17	329.71	244.93	84.78	3.889	0		
12,700.00	7,094.00	12,678.05	7,094.00	43.15	43.06	90.17	329.71	243.58	86.13	3.828	0		
12,800.00	7,094.00	12,778.05	7,094.00	43.83	43.74	90.17	329.71	242.23	87.48	3.769	0		
12,900.00	7,094.00	12,878.05	7,094.00	44.50	44.41	90.17	329.71	240.88	88.83	3.712	0		
13,000.00	7,094.00	12,978.05	7,094.00	45.18	45.09	90.17	329.71	239.53	90.18	3.656	0		
13,100.00	7,094.00	13,078.05	7,094.00	45.85	45.77	90.17	329.71	238.17	91.53	3.602	0		
13,200.00	7,094.00	13,178.05	7,094.00	46.53	46.44	90.17	329.71	236.82	92.89	3.549	0		
13,300.00	7,094.00	13,278.05	7,094.00	47.21	47.12	90.17	329.71	235.46	94.25	3.498	0		
13,400.00	7,094.00	13,378.05	7,094.00	47.88	47.80	90.17	329.71	234.10	95.61	3.449	0		
13,500.00	7,094.00	13,478.05	7,094.00	48.56	48.48	90.17	329.71	232.74	96.96	3.400	0		
13,600.00	7,094.00	13,578.05	7,094.00	49.24	49.16	90.17	329.71	231.38	98.33	3.353	0		
13,700.00	7,094.00	13,678.05	7,094.00	49.92	49.84	90.17	329.71	230.02	99.69	3.307	0		
13,800.00	7,094.00	13,778.05	7,094.00	50.60	50.53	90.17	329.71	228.66	101.05	3.263	0		
13,900.00	7,094.00	13,878.05	7,094.00	51.28	51.21	90.17	329.71	227.29	102.42	3.219	0		
14,000.00	7,094.00	13,978.05	7,094.00	51.97	51.89	90.17	329.71	225.93	103.78	3.177	0		
14,100.00	7,094.00	14,078.05	7,094.00	52.65	52.57	90.17	329.71	224.56	105.15	3.136	0		
14,200.00	7,094.00	14,178.05	7,094.00	53.33	53.26	90.17	329.71	223.19	106.52	3.095	0		
14,300.00	7,094.00	14,278.05	7,094.00	54.02	53.94	90.17	329.71	221.82	107.89	3.056	0		
14,400.00	7,094.00	14,378.05	7,094.00	54.70	54.63	90.17	329.71	220.45	109.26	3.018	0		
14,500.00	7,094.00	14,478.05	7,094.00	55.39	55.31	90.17	329.71	219.08	110.63	2.980	0		

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design Sec.28-T07N-R67W - Nelson Farm #3 - Original Hole - Rev 0													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		
14,600.00	7,094.00	14,578.05	7,094.00	56.07	56.00	90.17	329.71	217.71	112.00	2.944	0			
14,700.00	7,094.00	14,678.05	7,094.00	56.76	56.69	90.17	329.71	216.34	113.37	2.908	0			
14,800.00	7,094.00	14,778.05	7,094.00	57.44	57.37	90.17	329.71	214.96	114.75	2.873	0			
14,888.41	7,094.00	14,866.48	7,094.00	58.05	57.98	90.17	329.71	213.75	115.96	2.843	0		SF	



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
0.00	0.00	0.00	0.00	0.00	0.00	-179.82	56.14						0	
100.00	100.00	98.00	98.00	0.15	0.14	-179.82	56.11	55.82	0.29	193.282	0		0	
200.00	200.00	198.00	198.00	0.32	0.32	-179.82	56.11	55.47	0.64	87.832	0		0	
300.00	300.00	298.00	298.00	0.50	0.49	-179.82	56.11	55.12	0.99	56.796	0		0	
400.00	400.00	398.00	398.00	0.67	0.67	-179.82	56.11	54.77	1.34	41.967	0		0	
500.00	500.00	498.00	498.00	0.84	0.84	-179.82	56.11	54.42	1.69	33.278	0		0	
600.00	600.00	598.00	598.00	1.02	1.02	-179.82	56.11	54.07	2.04	27.570	0		0	
700.00	700.00	698.00	698.00	1.19	1.19	-179.82	56.11	53.72	2.38	23.533	0		0	
800.00	799.98	797.98	797.98	1.37	1.36	-135.49	57.34	54.61	2.73	20.980	0		0	CC, ES
900.00	899.84	897.84	897.84	1.54	1.54	-138.87	61.18	58.10	3.08	19.856	0		0	
1,000.00	999.45	998.31	998.29	1.72	1.71	-142.34	67.37	63.94	3.43	19.643	0		0	
1,100.00	1,098.70	1,098.93	1,098.77	1.90	1.89	-144.27	75.20	71.42	3.78	19.905	0		0	
1,145.64	1,143.85	1,144.88	1,144.58	1.98	1.97	-144.72	79.28	75.34	3.94	20.139	0		0	
1,200.00	1,197.55	1,199.65	1,199.11	2.08	2.07	-144.82	84.10	79.97	4.13	20.362	0		0	
1,300.00	1,296.34	1,299.58	1,298.41	2.27	2.25	-144.03	92.31	87.82	4.49	20.571	0		0	
1,400.00	1,395.13	1,399.24	1,397.44	2.45	2.42	-143.32	100.51	95.66	4.85	20.740	0		0	
1,500.00	1,493.93	1,498.89	1,496.46	2.64	2.60	-142.72	108.71	103.50	5.21	20.883	0		0	
1,600.00	1,592.72	1,598.55	1,595.49	2.83	2.78	-142.21	116.93	111.36	5.57	21.005	0		0	
1,700.00	1,691.51	1,698.21	1,694.52	3.01	2.96	-141.76	125.15	119.22	5.93	21.110	0		0	
1,800.00	1,790.30	1,797.86	1,793.54	3.20	3.14	-141.37	133.38	127.09	6.29	21.202	0		0	
1,900.00	1,889.10	1,897.52	1,892.57	3.39	3.33	-141.02	141.62	134.96	6.65	21.283	0		0	
2,000.00	1,987.89	1,997.18	1,991.59	3.58	3.51	-140.71	149.86	142.84	7.02	21.354	0		0	
2,100.00	2,086.68	2,096.84	2,090.62	3.77	3.69	-140.44	158.10	150.72	7.38	21.418	0		0	
2,200.00	2,185.47	2,196.49	2,189.65	3.96	3.87	-140.19	166.35	158.60	7.75	21.475	0		0	
2,300.00	2,284.27	2,296.15	2,288.67	4.15	4.05	-139.96	174.60	166.49	8.11	21.526	0		0	
2,400.00	2,383.06	2,395.81	2,387.70	4.34	4.23	-139.76	182.85	174.38	8.48	21.572	0		0	
2,500.00	2,481.85	2,495.46	2,486.72	4.53	4.42	-139.57	191.11	182.27	8.84	21.614	0		0	
2,600.00	2,580.64	2,595.12	2,585.75	4.72	4.60	-139.40	199.37	190.16	9.21	21.652	0		0	
2,700.00	2,679.44	2,694.78	2,684.78	4.91	4.78	-139.24	207.63	198.05	9.57	21.687	0		0	
2,800.00	2,778.23	2,794.43	2,783.80	5.11	4.96	-139.09	215.89	205.95	9.94	21.719	0		0	
2,900.00	2,877.02	2,894.09	2,882.83	5.30	5.14	-138.96	224.15	213.84	10.31	21.748	0		0	
3,000.00	2,975.81	2,993.75	2,981.86	5.49	5.33	-138.83	232.41	221.74	10.67	21.776	0		0	
3,100.00	3,074.61	3,093.40	3,080.88	5.68	5.51	-138.72	240.67	229.63	11.04	21.801	0		0	
3,200.00	3,173.40	3,193.06	3,179.91	5.87	5.69	-138.61	248.94	237.53	11.41	21.824	0		0	
3,300.00	3,272.19	3,292.72	3,278.93	6.06	5.88	-138.50	257.20	245.43	11.77	21.846	0		0	
3,400.00	3,370.98	3,392.37	3,377.96	6.25	6.06	-138.41	265.47	253.33	12.14	21.867	0		0	
3,500.00	3,469.78	3,492.03	3,476.99	6.45	6.24	-138.32	273.74	261.23	12.51	21.886	0		0	
3,600.00	3,568.57	3,591.69	3,576.01	6.64	6.42	-138.23	282.00	269.13	12.87	21.904	0		0	
3,700.00	3,667.36	3,691.34	3,675.04	6.83	6.61	-138.15	290.27	277.03	13.24	21.921	0		0	
3,800.00	3,766.15	3,791.00	3,774.06	7.02	6.79	-138.08	298.54	284.93	13.61	21.936	0		0	
3,900.00	3,864.95	3,890.66	3,873.09	7.21	6.97	-138.01	306.81	292.83	13.98	21.951	0		0	
4,000.00	3,963.74	3,990.31	3,972.12	7.40	7.16	-137.94	315.08	300.73	14.34	21.965	0		0	
4,100.00	4,062.53	4,089.97	4,071.14	7.60	7.34	-137.88	323.35	308.64	14.71	21.979	0		0	
4,200.00	4,161.32	4,189.63	4,170.17	7.79	7.52	-137.81	331.62	316.54	15.08	21.991	0		0	
4,300.00	4,260.12	4,289.29	4,269.19	7.98	7.71	-137.76	339.89	324.44	15.45	22.003	0		0	
4,400.00	4,358.91	4,388.94	4,368.22	8.17	7.89	-137.70	348.16	332.35	15.81	22.015	0		0	
4,500.00	4,457.70	4,488.60	4,467.25	8.36	8.07	-137.65	356.43	340.25	16.18	22.026	0		0	
4,600.00	4,556.49	4,588.26	4,566.27	8.56	8.25	-137.60	364.70	348.15	16.55	22.036	0		0	
4,700.00	4,655.29	4,687.91	4,665.30	8.75	8.44	-137.55	372.98	356.06	16.92	22.046	0		0	
4,800.00	4,754.08	4,787.57	4,764.32	8.94	8.62	-137.50	381.25	363.96	17.29	22.055	0		0	
4,900.00	4,852.87	4,887.23	4,863.35	9.13	8.80	-137.46	389.52	371.87	17.65	22.064	0		0	
5,000.00	4,951.66	4,986.88	4,962.38	9.33	8.99	-137.42	397.79	379.77	18.02	22.072	0		0	
5,100.00	5,050.46	5,086.54	5,061.40	9.52	9.17	-137.38	406.07	387.68	18.39	22.081	0		0	
5,200.00	5,149.25	5,186.20	5,160.43	9.71	9.35	-137.34	414.34	395.58	18.76	22.089	0		0	

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Sec.28-T07N-R67W - Nelson Farm #4 - Original Hole - Rev 0	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	5,248.04	5,285.85	5,259.45	9.90	9.54	-137.30	422.61	403.49	19.13	22.096	0				
5,400.00	5,346.83	5,385.51	5,358.48	10.09	9.72	-137.26	430.89	411.39	19.49	22.103	0				
5,500.00	5,445.63	5,485.17	5,457.51	10.29	9.90	-137.23	439.16	419.30	19.86	22.110	0				
5,600.00	5,544.42	5,584.82	5,556.53	10.48	10.09	-137.20	447.43	427.20	20.23	22.117	0				
5,700.00	5,643.21	5,684.48	5,655.56	10.67	10.27	-137.16	455.71	435.11	20.60	22.123	0				
5,800.00	5,742.00	5,784.14	5,754.58	10.86	10.45	-137.13	463.98	443.01	20.97	22.129	0				
5,900.00	5,840.80	5,883.79	5,853.61	11.06	10.64	-137.10	472.25	450.92	21.33	22.135	0				
5,973.62	5,913.53	5,957.17	5,926.52	11.20	10.77	-137.08	478.35	456.74	21.61	22.139	0				
6,000.00	5,939.61	5,983.46	5,952.64	11.25	10.82	-137.09	480.44	458.73	21.71	22.133	0				
6,100.00	6,038.77	6,083.23	6,051.79	11.43	11.00	-136.94	486.77	464.69	22.08	22.043	0				
6,200.00	6,138.33	6,183.06	6,150.98	11.61	11.19	-136.48	490.58	468.13	22.45	21.853	0				
6,300.00	6,238.15	6,281.49	6,248.81	11.78	11.37	-135.74	491.97	469.16	22.80	21.573	0				
6,400.00	6,338.11	6,377.23	6,344.19	11.94	11.54	-135.00	491.59	468.45	23.14	21.246	0				
6,419.27	6,357.38	6,395.70	6,362.63	11.97	11.57	179.57	491.33	468.45	22.88	21.476	0				
6,500.00	6,438.11	6,473.23	6,440.06	12.11	11.70	-180.00	490.42	467.27	23.14	21.191	0				
6,519.27	6,457.38	6,491.76	6,458.58	12.14	11.74	-179.93	490.28	467.07	23.21	21.127	0				
6,550.00	6,488.10	6,521.31	6,488.12	12.18	11.79	90.24	490.11	466.47	23.64	20.729	0				
6,588.16	6,526.14	6,557.92	6,524.73	12.24	11.85	90.64	490.04	466.26	23.77	20.612	0				
6,600.00	6,537.90	6,569.25	6,536.06	12.26	11.87	90.79	490.04	466.23	23.81	20.578	0				
6,650.00	6,587.20	6,618.38	6,585.20	12.33	11.95	91.73	490.23	466.23	23.99	20.431	0				
6,700.00	6,635.69	6,666.88	6,633.69	12.39	12.03	93.05	490.75	466.57	24.18	20.292	0				
6,750.00	6,683.09	6,717.17	6,683.95	12.45	12.11	94.65	491.77	467.39	24.38	20.172	0				
6,800.00	6,729.10	6,769.03	6,735.48	12.51	12.19	96.26	493.20	468.63	24.57	20.075	0				
6,850.00	6,773.43	6,822.25	6,787.71	12.56	12.26	97.84	495.02	470.27	24.74	20.005	0				
6,900.00	6,815.82	6,876.91	6,840.28	12.62	12.33	99.39	497.19	472.28	24.91	19.961	0				
6,950.00	6,855.99	6,933.09	6,892.77	12.67	12.40	100.89	499.66	474.61	25.05	19.945	0				
7,000.00	6,893.71	6,990.84	6,944.68	12.72	12.47	102.34	502.37	477.19	25.18	19.955	0				
7,050.00	6,928.74	7,050.20	6,995.42	12.78	12.54	103.71	505.24	479.96	25.28	19.988	0				
7,100.00	6,960.86	7,111.21	7,044.36	12.83	12.60	105.01	508.18	482.83	25.35	20.043	0				
7,150.00	6,989.87	7,173.85	7,090.74	12.89	12.67	106.20	511.12	485.70	25.42	20.110	0				
7,200.00	7,015.61	7,238.08	7,133.77	12.95	12.75	107.28	513.94	488.47	25.47	20.182	0				
7,250.00	7,037.90	7,303.81	7,172.61	13.02	12.83	108.24	516.56	491.05	25.51	20.247	0				
7,300.00	7,056.61	7,370.92	7,206.40	13.09	12.92	109.06	518.89	493.32	25.57	20.296	0				
7,350.00	7,071.63	7,439.22	7,234.35	13.17	13.03	109.72	520.83	495.19	25.64	20.314	0				
7,400.00	7,082.86	7,508.49	7,255.72	13.25	13.15	110.22	522.32	496.58	25.74	20.292	0				
7,450.00	7,090.24	7,578.46	7,269.91	13.35	13.30	110.54	523.31	497.42	25.88	20.219	0				
7,500.00	7,093.71	7,648.83	7,276.52	13.46	13.47	110.68	523.74	497.67	26.07	20.091	0				
7,519.27	7,094.00	7,675.29	7,277.00	13.51	13.53	110.68	523.76	497.59	26.16	20.019	0				
7,600.00	7,094.00	7,756.02	7,277.00	13.72	13.75	110.68	523.76	497.15	26.60	19.687	0				
7,700.00	7,094.00	7,856.02	7,277.00	14.01	14.05	110.68	523.76	496.56	27.20	19.259	0				
7,800.00	7,094.00	7,956.02	7,277.00	14.33	14.37	110.68	523.76	495.92	27.84	18.814	0				
7,900.00	7,094.00	8,056.02	7,277.00	14.68	14.72	110.68	523.76	495.23	28.53	18.358	0				
8,000.00	7,094.00	8,156.02	7,277.00	15.06	15.09	110.68	523.76	494.49	29.27	17.896	0				
8,100.00	7,094.00	8,256.02	7,277.00	15.45	15.49	110.68	523.76	493.71	30.04	17.433	0				
8,200.00	7,094.00	8,356.02	7,277.00	15.87	15.91	110.68	523.76	492.90	30.86	16.972	0				
8,300.00	7,094.00	8,456.02	7,277.00	16.31	16.34	110.68	523.76	492.05	31.71	16.517	0				
8,400.00	7,094.00	8,556.02	7,277.00	16.76	16.80	110.68	523.76	491.16	32.59	16.069	0				
8,500.00	7,094.00	8,656.02	7,277.00	17.24	17.27	110.68	523.76	490.25	33.51	15.631	0				
8,600.00	7,094.00	8,756.02	7,277.00	17.72	17.76	110.68	523.76	489.31	34.45	15.205	0				
8,700.00	7,094.00	8,856.02	7,277.00	18.22	18.26	110.68	523.76	488.34	35.41	14.790	0				
8,800.00	7,094.00	8,956.02	7,277.00	18.74	18.77	110.68	523.76	487.35	36.40	14.388	0				
8,900.00	7,094.00	9,056.02	7,277.00	19.26	19.30	110.68	523.76	486.34	37.41	13.999	0				
9,000.00	7,094.00	9,156.02	7,277.00	19.80	19.84	110.68	523.76	485.31	38.44	13.624	0				
9,100.00	7,094.00	9,256.02	7,277.00	20.34	20.38	110.68	523.76	484.26	39.49	13.262	0				

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
9,200.00	7,094.00	9,356.02	7,277.00	20.90	20.94	110.68	523.76	483.20	40.56	12.913	0			
9,300.00	7,094.00	9,456.02	7,277.00	21.46	21.51	110.68	523.76	482.12	41.64	12.578	0			
9,400.00	7,094.00	9,556.02	7,277.00	22.04	22.08	110.68	523.76	481.02	42.74	12.256	0			
9,500.00	7,094.00	9,656.02	7,277.00	22.62	22.66	110.68	523.76	479.91	43.84	11.946	0			
9,600.00	7,094.00	9,756.02	7,277.00	23.20	23.25	110.68	523.76	478.79	44.97	11.648	0			
9,700.00	7,094.00	9,856.02	7,277.00	23.80	23.84	110.68	523.76	477.66	46.10	11.362	0			
9,800.00	7,094.00	9,956.02	7,277.00	24.40	24.44	110.68	523.76	476.51	47.24	11.087	0			
9,900.00	7,094.00	10,056.02	7,277.00	25.00	25.04	110.68	523.76	475.36	48.40	10.823	0			
10,000.00	7,094.00	10,156.02	7,277.00	25.61	25.65	110.68	523.76	474.20	49.56	10.569	0			
10,100.00	7,094.00	10,256.02	7,277.00	26.22	26.27	110.68	523.76	473.03	50.73	10.325	0			
10,200.00	7,094.00	10,356.02	7,277.00	26.84	26.89	110.68	523.76	471.85	51.91	10.090	0			
10,300.00	7,094.00	10,456.02	7,277.00	27.46	27.51	110.68	523.76	470.66	53.09	9.865	0			
10,400.00	7,094.00	10,556.02	7,277.00	28.09	28.14	110.68	523.76	469.47	54.29	9.648	0			
10,500.00	7,094.00	10,656.02	7,277.00	28.72	28.77	110.68	523.76	468.27	55.48	9.440	0			
10,600.00	7,094.00	10,756.02	7,277.00	29.35	29.40	110.68	523.76	467.07	56.69	9.239	0			
10,700.00	7,094.00	10,856.02	7,277.00	29.99	30.04	110.68	523.76	465.86	57.90	9.046	0			
10,800.00	7,094.00	10,956.02	7,277.00	30.63	30.68	110.68	523.76	464.64	59.12	8.859	0			
10,900.00	7,094.00	11,056.02	7,277.00	31.27	31.32	110.68	523.76	463.42	60.34	8.680	0			
11,000.00	7,094.00	11,156.02	7,277.00	31.91	31.97	110.68	523.76	462.19	61.57	8.507	0			
11,100.00	7,094.00	11,256.02	7,277.00	32.56	32.61	110.68	523.76	460.96	62.80	8.341	0			
11,200.00	7,094.00	11,356.02	7,277.00	33.21	33.26	110.68	523.76	459.73	64.03	8.180	0			
11,300.00	7,094.00	11,456.02	7,277.00	33.86	33.91	110.68	523.76	458.49	65.27	8.024	0			
11,400.00	7,094.00	11,556.02	7,277.00	34.52	34.57	110.68	523.76	457.24	66.51	7.875	0			
11,500.00	7,094.00	11,656.02	7,277.00	35.17	35.22	110.68	523.76	456.00	67.76	7.730	0			
11,600.00	7,094.00	11,756.02	7,277.00	35.83	35.88	110.68	523.76	454.75	69.01	7.590	0			
11,700.00	7,094.00	11,856.02	7,277.00	36.49	36.54	110.68	523.76	453.50	70.26	7.454	0			
11,800.00	7,094.00	11,956.02	7,277.00	37.15	37.20	110.68	523.76	452.24	71.52	7.324	0			
11,900.00	7,094.00	12,056.02	7,277.00	37.81	37.86	110.68	523.76	450.98	72.77	7.197	0			
12,000.00	7,094.00	12,156.02	7,277.00	38.47	38.53	110.68	523.76	449.72	74.04	7.074	0			
12,100.00	7,094.00	12,256.02	7,277.00	39.14	39.19	110.68	523.76	448.46	75.30	6.956	0			
12,200.00	7,094.00	12,356.02	7,277.00	39.80	39.86	110.68	523.76	447.19	76.57	6.841	0			
12,300.00	7,094.00	12,456.02	7,277.00	40.47	40.53	110.68	523.76	445.92	77.83	6.729	0			
12,400.00	7,094.00	12,556.02	7,277.00	41.14	41.20	110.68	523.76	444.65	79.10	6.621	0			
12,500.00	7,094.00	12,656.02	7,277.00	41.81	41.87	110.68	523.76	443.38	80.38	6.516	0			
12,600.00	7,094.00	12,756.02	7,277.00	42.48	42.54	110.68	523.76	442.11	81.65	6.415	0			
12,700.00	7,094.00	12,856.02	7,277.00	43.15	43.21	110.68	523.76	440.83	82.93	6.316	0			
12,800.00	7,094.00	12,956.02	7,277.00	43.83	43.88	110.68	523.76	439.55	84.21	6.220	0			
12,900.00	7,094.00	13,056.02	7,277.00	44.50	44.56	110.68	523.76	438.27	85.49	6.127	0			
13,000.00	7,094.00	13,156.02	7,277.00	45.18	45.23	110.68	523.76	436.99	86.77	6.036	0			
13,100.00	7,094.00	13,256.02	7,277.00	45.85	45.91	110.68	523.76	435.71	88.05	5.948	0			
13,200.00	7,094.00	13,356.02	7,277.00	46.53	46.59	110.68	523.76	434.42	89.34	5.863	0			
13,300.00	7,094.00	13,456.02	7,277.00	47.21	47.26	110.68	523.76	433.13	90.62	5.780	0			
13,400.00	7,094.00	13,556.02	7,277.00	47.88	47.94	110.68	523.76	431.85	91.91	5.699	0			
13,500.00	7,094.00	13,656.02	7,277.00	48.56	48.62	110.68	523.76	430.56	93.20	5.620	0			
13,600.00	7,094.00	13,756.02	7,277.00	49.24	49.30	110.68	523.76	429.27	94.49	5.543	0			
13,700.00	7,094.00	13,856.02	7,277.00	49.92	49.98	110.68	523.76	427.98	95.78	5.468	0			
13,800.00	7,094.00	13,956.02	7,277.00	50.60	50.66	110.68	523.76	426.68	97.07	5.395	0			
13,900.00	7,094.00	14,056.02	7,277.00	51.28	51.34	110.68	523.76	425.39	98.37	5.324	0			
14,000.00	7,094.00	14,156.02	7,277.00	51.97	52.03	110.68	523.76	424.09	99.66	5.255	0			
14,100.00	7,094.00	14,256.02	7,277.00	52.65	52.71	110.68	523.76	422.80	100.96	5.188	0			
14,200.00	7,094.00	14,356.02	7,277.00	53.33	53.39	110.68	523.76	421.50	102.26	5.122	0			
14,300.00	7,094.00	14,456.02	7,277.00	54.02	54.08	110.68	523.76	420.20	103.55	5.058	0			
14,400.00	7,094.00	14,556.02	7,277.00	54.70	54.76	110.68	523.76	418.90	104.85	4.995	0			
14,500.00	7,094.00	14,656.02	7,277.00	55.39	55.45	110.68	523.76	417.61	106.15	4.934	0			

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Sec.28-T07N-R67W - Nelson Farm #4 - Original Hole - Rev 0		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	Riskd Separation Factor	Probability of Collision	Warning					
14,600.00	7,094.00	14,756.02	7,277.00	56.07	56.13	110.68	523.76	416.30	107.45	4.874	0							
14,700.00	7,094.00	14,856.02	7,277.00	56.76	56.82	110.68	523.76	415.00	108.75	4.816	0							
14,800.00	7,094.00	14,956.02	7,277.00	57.44	57.50	110.68	523.76	413.70	110.06	4.759	0							
14,888.41	7,094.00	15,044.40	7,277.00	58.05	58.11	110.68	523.76	412.55	111.21	4.710	0	SF						



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Sec.28-T07N-R67W - Nelson Farm #5 - Original Hole - Rev 0		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	-179.63	84.26					0	CC, ES			
100.00	100.00	96.00	96.00	0.15	0.14	-179.63	84.16	83.88	0.29	292.892	0					
200.00	200.00	196.00	196.00	0.32	0.31	-179.63	84.16	83.53	0.64	132.477	0					
300.00	300.00	296.00	296.00	0.50	0.49	-179.63	84.16	83.18	0.98	85.500	0					
400.00	400.00	396.00	396.00	0.67	0.66	-179.63	84.16	82.83	1.33	63.118	0					
500.00	500.00	496.00	496.00	0.84	0.84	-179.63	84.16	82.48	1.68	50.023	0					
600.00	600.00	596.00	596.00	1.02	1.01	-179.63	84.16	82.13	2.03	41.428	0					
700.00	700.00	696.00	696.00	1.19	1.19	-179.63	84.16	81.78	2.38	35.353	0					
800.00	799.98	795.98	795.98	1.37	1.36	-134.89	85.39	82.66	2.73	31.283	0					
900.00	899.84	895.84	895.84	1.54	1.54	-137.22	89.16	86.08	3.08	28.967	0					
1,000.00	999.45	995.45	995.45	1.72	1.71	-140.67	95.74	92.32	3.43	27.950	0					
1,100.00	1,098.70	1,095.35	1,095.33	1.90	1.88	-143.93	105.18	101.41	3.77	27.877	0					
1,145.64	1,143.85	1,140.98	1,140.92	1.98	1.96	-144.97	110.30	106.37	3.93	28.062	0					
1,200.00	1,197.55	1,195.39	1,195.24	2.08	2.06	-145.82	116.61	112.49	4.12	28.279	0					
1,300.00	1,296.34	1,295.70	1,295.17	2.27	2.24	-145.97	127.66	123.18	4.48	28.502	0					
1,400.00	1,395.13	1,395.47	1,394.30	2.45	2.41	-144.97	138.14	133.30	4.84	28.565	0					
1,500.00	1,493.93	1,494.89	1,493.06	2.64	2.59	-144.02	148.61	143.41	5.19	28.611	0					
1,600.00	1,592.72	1,594.32	1,591.81	2.83	2.77	-143.20	159.11	153.56	5.55	28.651	0					
1,700.00	1,691.51	1,693.74	1,690.57	3.01	2.95	-142.48	169.64	163.73	5.91	28.685	0					
1,800.00	1,790.30	1,793.16	1,789.32	3.20	3.13	-141.85	180.20	173.93	6.28	28.715	0					
1,900.00	1,889.10	1,892.58	1,888.08	3.39	3.31	-141.28	190.78	184.14	6.64	28.741	0					
2,000.00	1,987.89	1,992.01	1,986.84	3.58	3.49	-140.78	201.37	194.37	7.00	28.763	0					
2,100.00	2,086.68	2,091.43	2,085.59	3.77	3.67	-140.32	211.97	204.61	7.36	28.783	0					
2,200.00	2,185.47	2,190.85	2,184.35	3.96	3.85	-139.91	222.59	214.86	7.73	28.800	0					
2,300.00	2,284.27	2,290.27	2,283.10	4.15	4.03	-139.54	233.22	225.13	8.09	28.816	0					
2,400.00	2,383.06	2,389.70	2,381.86	4.34	4.21	-139.19	243.86	235.40	8.46	28.829	0					
2,500.00	2,481.85	2,489.12	2,480.61	4.53	4.40	-138.88	254.50	245.68	8.82	28.842	0					
2,600.00	2,580.64	2,588.54	2,579.37	4.72	4.58	-138.59	265.16	255.97	9.19	28.852	0					
2,700.00	2,679.44	2,687.96	2,678.12	4.91	4.76	-138.33	275.81	266.26	9.56	28.861	0					
2,800.00	2,778.23	2,787.39	2,776.88	5.11	4.94	-138.08	286.48	276.55	9.92	28.870	0					
2,900.00	2,877.02	2,886.81	2,875.64	5.30	5.12	-137.85	297.15	286.86	10.29	28.877	0					
3,000.00	2,975.81	2,986.23	2,974.39	5.49	5.31	-137.64	307.82	297.16	10.66	28.884	0					
3,100.00	3,074.61	3,085.65	3,073.15	5.68	5.49	-137.44	318.50	307.47	11.02	28.890	0					
3,200.00	3,173.40	3,185.08	3,171.90	5.87	5.67	-137.26	329.18	317.78	11.39	28.896	0					
3,300.00	3,272.19	3,284.50	3,270.66	6.06	5.85	-137.08	339.86	328.10	11.76	28.901	0					
3,400.00	3,370.98	3,383.92	3,369.41	6.25	6.04	-136.92	350.55	338.42	12.13	28.906	0					
3,500.00	3,469.78	3,483.34	3,468.17	6.45	6.22	-136.77	361.24	348.74	12.49	28.910	0					
3,600.00	3,568.57	3,582.77	3,566.92	6.64	6.40	-136.62	371.93	359.06	12.86	28.915	0					
3,700.00	3,667.36	3,682.19	3,665.68	6.83	6.59	-136.49	382.62	369.39	13.23	28.919	0					
3,800.00	3,766.15	3,781.61	3,764.44	7.02	6.77	-136.36	393.32	379.72	13.60	28.922	0					
3,900.00	3,864.95	3,881.03	3,863.19	7.21	6.95	-136.24	404.01	390.05	13.97	28.926	0					
4,000.00	3,963.74	3,980.46	3,961.95	7.40	7.13	-136.12	414.71	400.38	14.34	28.929	0					
4,100.00	4,062.53	4,079.88	4,060.70	7.60	7.32	-136.01	425.41	410.71	14.70	28.932	0					
4,200.00	4,161.32	4,179.30	4,159.46	7.79	7.50	-135.91	436.12	421.04	15.07	28.935	0					
4,300.00	4,260.12	4,278.72	4,258.21	7.98	7.68	-135.81	446.82	431.38	15.44	28.937	0					
4,400.00	4,358.91	4,378.15	4,356.97	8.17	7.87	-135.71	457.52	441.71	15.81	28.940	0					
4,500.00	4,457.70	4,477.57	4,455.72	8.36	8.05	-135.62	468.23	452.05	16.18	28.942	0					
4,600.00	4,556.49	4,576.99	4,554.48	8.56	8.23	-135.53	478.94	462.39	16.55	28.945	0					
4,700.00	4,655.29	4,676.42	4,653.24	8.75	8.42	-135.45	489.65	472.73	16.92	28.947	0					
4,800.00	4,754.08	4,775.84	4,751.99	8.94	8.60	-135.37	500.36	483.07	17.28	28.949	0					
4,900.00	4,852.87	4,875.26	4,850.75	9.13	8.78	-135.30	511.07	493.41	17.65	28.951	0					
5,000.00	4,951.66	4,974.68	4,949.50	9.33	8.97	-135.22	521.78	503.75	18.02	28.953	0					
5,100.00	5,050.46	5,074.11	5,048.26	9.52	9.15	-135.15	532.49	514.10	18.39	28.954	0					
5,200.00	5,149.25	5,173.53	5,147.01	9.71	9.33	-135.09	543.20	524.44	18.76	28.956	0					

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Sec.28-T07N-R67W - Nelson Farm #5 - Original Hole - Rev 0		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	5,248.04	5,272.95	5,245.77	9.90	9.52	-135.02	553.91	534.79	19.13	28.958	0					
5,400.00	5,346.83	5,372.37	5,344.53	10.09	9.70	-134.96	564.63	545.13	19.50	28.959	0					
5,500.00	5,445.63	5,471.80	5,443.28	10.29	9.88	-134.90	575.34	555.48	19.87	28.960	0					
5,600.00	5,544.42	5,571.22	5,542.04	10.48	10.07	-134.84	586.06	565.82	20.24	28.962	0					
5,700.00	5,643.21	5,670.64	5,640.79	10.67	10.25	-134.79	596.77	576.17	20.60	28.963	0					
5,800.00	5,742.00	5,770.06	5,739.55	10.86	10.43	-134.73	607.49	586.52	20.97	28.964	0					
5,900.00	5,840.80	5,869.49	5,838.30	11.06	10.62	-134.68	618.21	596.86	21.34	28.966	0					
5,973.62	5,913.53	5,942.69	5,911.01	11.20	10.75	-134.64	626.10	604.48	21.61	28.966	0					
6,000.00	5,939.61	5,968.92	5,937.07	11.25	10.80	-134.66	628.84	607.12	21.72	28.956	0					
6,100.00	6,038.77	6,068.45	6,035.94	11.43	10.98	-134.57	637.70	615.60	22.10	28.859	0					
6,200.00	6,138.33	6,167.89	6,134.92	11.61	11.16	-134.41	644.15	621.69	22.46	28.680	0					
6,300.00	6,238.15	6,267.56	6,234.40	11.78	11.34	-134.31	648.22	625.42	22.80	28.425	0					
6,400.00	6,338.11	6,367.35	6,334.15	11.94	11.50	-134.26	649.89	626.76	23.13	28.095	0					
6,419.27	6,357.38	6,386.58	6,353.39	11.97	11.54	-179.82	649.93	627.10	22.83	28.467	0					
6,447.58	6,385.69	6,414.89	6,381.69	12.02	11.58	-179.82	649.93	627.01	22.93	28.347	0					
6,500.00	6,438.11	6,467.31	6,434.11	12.11	11.67	-179.82	649.93	626.83	23.11	28.128	0					
6,519.27	6,457.38	6,486.57	6,453.38	12.14	11.71	-179.82	649.93	626.76	23.17	28.048	0					
6,550.00	6,488.10	6,517.40	6,484.19	12.18	11.75	90.20	649.93	626.31	23.63	27.506	0					
6,600.00	6,537.90	6,567.58	6,534.20	12.26	11.83	90.22	649.94	626.16	23.78	27.330	0					
6,650.00	6,587.20	6,617.79	6,583.75	12.33	11.90	90.25	649.94	626.01	23.92	27.168	0					
6,700.00	6,635.69	6,668.02	6,632.54	12.39	11.97	90.27	649.94	625.88	24.06	27.017	0					
6,750.00	6,683.09	6,718.27	6,680.26	12.45	12.03	90.29	649.94	625.76	24.18	26.877	0					
6,800.00	6,729.10	6,768.54	6,726.60	12.51	12.09	90.31	649.94	625.64	24.30	26.746	0					
6,850.00	6,773.43	6,818.83	6,771.28	12.56	12.15	90.33	649.94	625.53	24.41	26.622	0					
6,900.00	6,815.82	6,869.14	6,814.02	12.62	12.20	90.35	649.94	625.42	24.52	26.502	0					
6,950.00	6,855.99	6,919.45	6,854.55	12.67	12.26	90.36	649.94	625.31	24.63	26.385	0					
7,000.00	6,893.71	6,969.78	6,892.60	12.72	12.31	90.37	649.94	625.20	24.74	26.267	0					
7,050.00	6,928.74	7,020.12	6,927.94	12.78	12.37	90.38	649.95	625.09	24.86	26.146	0					
7,100.00	6,960.86	7,070.46	6,960.34	12.83	12.43	90.39	649.95	624.97	24.98	26.020	0					
7,150.00	6,989.87	7,120.82	6,989.60	12.89	12.50	90.39	649.95	624.84	25.11	25.885	0					
7,200.00	7,015.61	7,171.17	7,015.54	12.95	12.57	90.40	649.95	624.70	25.25	25.740	0					
7,250.00	7,037.90	7,221.52	7,037.99	13.02	12.65	90.40	649.95	624.54	25.41	25.583	0					
7,300.00	7,056.61	7,271.88	7,056.80	13.09	12.73	90.39	649.95	624.37	25.58	25.413	0					
7,350.00	7,071.63	7,322.23	7,071.87	13.17	12.83	90.39	649.95	624.18	25.76	25.228	0					
7,400.00	7,082.86	7,372.57	7,083.10	13.25	12.93	90.38	649.95	623.98	25.97	25.028	0					
7,450.00	7,090.24	7,422.91	7,090.41	13.35	13.04	90.37	649.94	623.75	26.19	24.815	0					
7,500.00	7,093.71	7,473.24	7,093.76	13.46	13.16	90.36	649.94	623.51	26.43	24.590	0					
7,519.27	7,094.00	7,492.61	7,094.00	13.51	13.21	90.35	649.94	623.42	26.53	24.501	0					
7,600.00	7,094.00	7,573.34	7,094.00	13.72	13.43	90.35	649.94	622.98	26.96	24.106	0					
7,700.00	7,094.00	7,673.34	7,094.00	14.01	13.72	90.35	649.94	622.39	27.55	23.590	0					
7,800.00	7,094.00	7,773.34	7,094.00	14.33	14.05	90.35	649.94	621.74	28.20	23.048	0					
7,900.00	7,094.00	7,873.34	7,094.00	14.68	14.40	90.35	649.94	621.04	28.90	22.488	0					
8,000.00	7,094.00	7,973.34	7,094.00	15.06	14.78	90.35	649.94	620.29	29.65	21.917	0					
8,100.00	7,094.00	8,073.34	7,094.00	15.45	15.18	90.35	649.94	619.49	30.45	21.343	0					
8,200.00	7,094.00	8,173.34	7,094.00	15.87	15.60	90.35	649.94	618.65	31.29	20.769	0					
8,300.00	7,094.00	8,273.34	7,094.00	16.31	16.04	90.35	649.94	617.77	32.18	20.200	0					
8,400.00	7,094.00	8,373.34	7,094.00	16.76	16.50	90.35	649.94	616.85	33.09	19.640	0					
8,500.00	7,094.00	8,473.34	7,094.00	17.24	16.98	90.35	649.94	615.90	34.04	19.091	0					
8,600.00	7,094.00	8,573.34	7,094.00	17.72	17.47	90.35	649.94	614.92	35.03	18.556	0					
8,700.00	7,094.00	8,673.34	7,094.00	18.22	17.97	90.35	649.94	613.91	36.04	18.036	0					
8,800.00	7,094.00	8,773.34	7,094.00	18.74	18.49	90.35	649.94	612.87	37.07	17.532	0					
8,900.00	7,094.00	8,873.34	7,094.00	19.26	19.02	90.35	649.94	611.81	38.13	17.045	0					
9,000.00	7,094.00	8,973.34	7,094.00	19.80	19.57	90.35	649.94	610.73	39.21	16.575	0					
9,100.00	7,094.00	9,073.34	7,094.00	20.34	20.12	90.35	649.94	609.63	40.31	16.122	0					

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor		
9,200.00	7,094.00	9,173.34	7,094.00	20.90	20.68	90.35	649.94	608.51	41.43	15.686	0		
9,300.00	7,094.00	9,273.34	7,094.00	21.46	21.25	90.35	649.94	607.37	42.57	15.267	0		
9,400.00	7,094.00	9,373.34	7,094.00	22.04	21.82	90.35	649.94	606.22	43.72	14.865	0		
9,500.00	7,094.00	9,473.34	7,094.00	22.62	22.41	90.35	649.94	605.05	44.89	14.478	0		
9,600.00	7,094.00	9,573.34	7,094.00	23.20	23.00	90.35	649.94	603.87	46.07	14.107	0		
9,700.00	7,094.00	9,673.34	7,094.00	23.80	23.60	90.35	649.94	602.68	47.26	13.751	0		
9,800.00	7,094.00	9,773.34	7,094.00	24.40	24.20	90.35	649.94	601.47	48.47	13.409	0		
9,900.00	7,094.00	9,873.34	7,094.00	25.00	24.81	90.35	649.94	600.26	49.68	13.081	0		
10,000.00	7,094.00	9,973.34	7,094.00	25.61	25.42	90.35	649.94	599.03	50.91	12.767	0		
10,100.00	7,094.00	10,073.34	7,094.00	26.22	26.04	90.35	649.94	597.80	52.14	12.464	0		
10,200.00	7,094.00	10,173.34	7,094.00	26.84	26.66	90.35	649.94	596.56	53.39	12.174	0		
10,300.00	7,094.00	10,273.34	7,094.00	27.46	27.29	90.35	649.94	595.31	54.64	11.895	0		
10,400.00	7,094.00	10,373.34	7,094.00	28.09	27.92	90.35	649.94	594.05	55.90	11.628	0		
10,500.00	7,094.00	10,473.34	7,094.00	28.72	28.55	90.35	649.94	592.78	57.16	11.370	0		
10,600.00	7,094.00	10,573.34	7,094.00	29.35	29.19	90.35	649.94	591.51	58.43	11.123	0		
10,700.00	7,094.00	10,673.34	7,094.00	29.99	29.83	90.35	649.94	590.23	59.71	10.885	0		
10,800.00	7,094.00	10,773.34	7,094.00	30.63	30.47	90.35	649.94	588.95	60.99	10.656	0		
10,900.00	7,094.00	10,873.34	7,094.00	31.27	31.11	90.35	649.94	587.66	62.28	10.435	0		
11,000.00	7,094.00	10,973.34	7,094.00	31.91	31.76	90.35	649.94	586.37	63.58	10.223	0		
11,100.00	7,094.00	11,073.34	7,094.00	32.56	32.41	90.35	649.94	585.07	64.88	10.018	0		
11,200.00	7,094.00	11,173.34	7,094.00	33.21	33.06	90.35	649.94	583.76	66.18	9.821	0		
11,300.00	7,094.00	11,273.34	7,094.00	33.86	33.72	90.35	649.94	582.46	67.49	9.631	0		
11,400.00	7,094.00	11,373.34	7,094.00	34.52	34.37	90.35	649.94	581.15	68.80	9.447	0		
11,500.00	7,094.00	11,473.34	7,094.00	35.17	35.03	90.35	649.94	579.83	70.11	9.270	0		
11,600.00	7,094.00	11,573.34	7,094.00	35.83	35.69	90.35	649.94	578.51	71.43	9.099	0		
11,700.00	7,094.00	11,673.34	7,094.00	36.49	36.35	90.35	649.94	577.19	72.75	8.934	0		
11,800.00	7,094.00	11,773.34	7,094.00	37.15	37.01	90.35	649.94	575.87	74.08	8.774	0		
11,900.00	7,094.00	11,873.34	7,094.00	37.81	37.68	90.35	649.94	574.54	75.40	8.619	0		
12,000.00	7,094.00	11,973.34	7,094.00	38.47	38.34	90.35	649.94	573.21	76.74	8.470	0		
12,100.00	7,094.00	12,073.34	7,094.00	39.14	39.01	90.35	649.94	571.88	78.07	8.325	0		
12,200.00	7,094.00	12,173.34	7,094.00	39.80	39.68	90.35	649.94	570.54	79.40	8.185	0		
12,300.00	7,094.00	12,273.34	7,094.00	40.47	40.35	90.35	649.94	569.20	80.74	8.050	0		
12,400.00	7,094.00	12,373.34	7,094.00	41.14	41.02	90.35	649.94	567.86	82.08	7.918	0		
12,500.00	7,094.00	12,473.34	7,094.00	41.81	41.69	90.35	649.94	566.52	83.43	7.791	0		
12,600.00	7,094.00	12,573.34	7,094.00	42.48	42.36	90.35	649.94	565.17	84.77	7.667	0		
12,700.00	7,094.00	12,673.34	7,094.00	43.15	43.04	90.35	649.94	563.83	86.12	7.547	0		
12,800.00	7,094.00	12,773.34	7,094.00	43.83	43.71	90.35	649.94	562.48	87.47	7.431	0		
12,900.00	7,094.00	12,873.34	7,094.00	44.50	44.39	90.35	649.94	561.13	88.82	7.318	0		
13,000.00	7,094.00	12,973.34	7,094.00	45.18	45.06	90.35	649.94	559.77	90.17	7.208	0		
13,100.00	7,094.00	13,073.34	7,094.00	45.85	45.74	90.35	649.94	558.42	91.52	7.101	0		
13,200.00	7,094.00	13,173.34	7,094.00	46.53	46.42	90.35	649.94	557.06	92.88	6.998	0		
13,300.00	7,094.00	13,273.34	7,094.00	47.21	47.10	90.35	649.94	555.71	94.24	6.897	0		
13,400.00	7,094.00	13,373.34	7,094.00	47.88	47.78	90.35	649.94	554.35	95.59	6.799	0		
13,500.00	7,094.00	13,473.34	7,094.00	48.56	48.46	90.35	649.94	552.99	96.95	6.704	0		
13,600.00	7,094.00	13,573.34	7,094.00	49.24	49.14	90.35	649.94	551.63	98.32	6.611	0		
13,700.00	7,094.00	13,673.34	7,094.00	49.92	49.82	90.35	649.94	550.27	99.68	6.520	0		
13,800.00	7,094.00	13,773.34	7,094.00	50.60	50.50	90.35	649.94	548.90	101.04	6.432	0		
13,900.00	7,094.00	13,873.34	7,094.00	51.28	51.18	90.35	649.94	547.54	102.41	6.347	0		
14,000.00	7,094.00	13,973.34	7,094.00	51.97	51.87	90.35	649.94	546.17	103.77	6.263	0		
14,100.00	7,094.00	14,073.34	7,094.00	52.65	52.55	90.35	649.94	544.80	105.14	6.182	0		
14,200.00	7,094.00	14,173.34	7,094.00	53.33	53.23	90.35	649.94	543.44	106.51	6.102	0		
14,300.00	7,094.00	14,273.34	7,094.00	54.02	53.92	90.35	649.94	542.07	107.88	6.025	0		
14,400.00	7,094.00	14,373.34	7,094.00	54.70	54.60	90.35	649.94	540.70	109.25	5.949	0		
14,500.00	7,094.00	14,473.34	7,094.00	55.39	55.29	90.35	649.94	539.33	110.62	5.876	0		

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



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design Sec.28-T07N-R67W - Nelson Farm #5 - Original Hole - Rev 0													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		
14,600.00	7,094.00	14,573.34	7,094.00	56.07	55.98	90.35	649.94	537.95	111.99	5.804	0			
14,700.00	7,094.00	14,673.34	7,094.00	56.76	56.66	90.35	649.94	536.58	113.36	5.733	0			
14,800.00	7,094.00	14,773.34	7,094.00	57.44	57.35	90.35	649.94	535.21	114.74	5.665	0			
14,888.41	7,094.00	14,861.72	7,094.00	58.05	57.96	90.35	649.95	534.00	115.95	5.605	0		SF	



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Sec.28-T07N-R67W - Nelson Farm #6 - Original Hole - Rev 0		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	-179.67	112.33									
100.00	100.00	95.00	95.00	0.15	0.14	-179.67	112.22	111.93	0.29	392.522	0					
200.00	200.00	195.00	195.00	0.32	0.31	-179.67	112.22	111.58	0.63	177.121	0					
300.00	300.00	295.00	295.00	0.50	0.49	-179.67	112.22	111.23	0.98	114.201	0					
400.00	400.00	395.00	395.00	0.67	0.66	-179.67	112.22	110.88	1.33	84.266	0					
500.00	500.00	495.00	495.00	0.84	0.84	-179.67	112.22	110.54	1.68	66.765	0					
600.00	600.00	595.00	595.00	1.02	1.01	-179.67	112.22	110.19	2.03	55.284	0					
700.00	700.00	695.00	695.00	1.19	1.19	-179.67	112.22	109.84	2.38	47.172	0					
800.00	799.98	794.98	794.98	1.37	1.36	-134.73	113.44	110.71	2.73	41.587	0		CC, ES			
900.00	899.84	894.84	894.84	1.54	1.53	-136.49	117.18	114.10	3.08	38.093	0					
1,000.00	999.45	994.45	994.45	1.72	1.71	-139.18	123.65	120.23	3.42	36.111	0					
1,100.00	1,098.70	1,093.70	1,093.70	1.90	1.88	-142.49	133.14	129.36	3.77	35.302	0					
1,145.64	1,143.85	1,138.31	1,138.31	1.98	1.96	-143.99	138.61	134.69	3.93	35.291	0					
1,200.00	1,197.55	1,191.33	1,191.32	2.08	2.05	-145.45	145.86	141.74	4.12	35.418	0					
1,300.00	1,296.34	1,288.94	1,288.80	2.27	2.22	-146.89	160.01	155.54	4.47	35.806	0					
1,400.00	1,395.13	1,386.45	1,385.97	2.45	2.39	-147.03	175.01	170.19	4.82	36.312	0					
1,500.00	1,493.93	1,483.63	1,482.48	2.64	2.57	-146.16	190.84	185.67	5.17	36.906	0					
1,600.00	1,592.72	1,582.21	1,580.18	2.83	2.74	-144.97	207.15	201.63	5.53	37.480	0					
1,700.00	1,691.51	1,680.78	1,677.87	3.01	2.92	-143.96	223.54	217.66	5.88	37.988	0					
1,800.00	1,790.30	1,779.36	1,775.57	3.20	3.10	-143.08	239.99	233.75	6.24	38.439	0					
1,900.00	1,889.10	1,877.93	1,873.26	3.39	3.28	-142.31	256.48	249.88	6.60	38.842	0					
2,000.00	1,987.89	1,976.51	1,970.96	3.58	3.46	-141.64	273.02	266.05	6.96	39.205	0					
2,100.00	2,086.68	2,075.09	2,068.65	3.77	3.64	-141.04	289.59	282.26	7.33	39.532	0					
2,200.00	2,185.47	2,173.66	2,166.34	3.96	3.82	-140.51	306.18	298.49	7.69	39.829	0					
2,300.00	2,284.27	2,272.24	2,264.04	4.15	4.00	-140.03	322.80	314.75	8.05	40.099	0					
2,400.00	2,383.06	2,370.81	2,361.73	4.34	4.19	-139.60	339.43	331.02	8.41	40.346	0					
2,500.00	2,481.85	2,469.39	2,459.43	4.53	4.37	-139.21	356.09	347.31	8.78	40.572	0					
2,600.00	2,580.64	2,567.96	2,557.12	4.72	4.55	-138.86	372.76	363.61	9.14	40.780	0					
2,700.00	2,679.44	2,666.54	2,654.82	4.91	4.73	-138.53	389.44	379.93	9.50	40.973	0					
2,800.00	2,778.23	2,765.12	2,752.51	5.11	4.92	-138.24	406.13	396.26	9.87	41.150	0					
2,900.00	2,877.02	2,863.69	2,850.20	5.30	5.10	-137.96	422.83	412.60	10.23	41.313	0					
3,000.00	2,975.81	2,962.27	2,947.90	5.49	5.28	-137.71	439.54	428.94	10.60	41.465	0					
3,100.00	3,074.61	3,060.84	3,045.59	5.68	5.47	-137.47	456.26	445.29	10.97	41.607	0					
3,200.00	3,173.40	3,159.42	3,143.29	5.87	5.65	-137.25	472.98	461.65	11.33	41.740	0					
3,300.00	3,272.19	3,258.00	3,240.98	6.06	5.83	-137.05	489.72	478.02	11.70	41.865	0					
3,400.00	3,370.98	3,356.57	3,338.68	6.25	6.02	-136.86	506.45	494.39	12.06	41.981	0					
3,500.00	3,469.78	3,455.15	3,436.37	6.45	6.20	-136.68	523.20	510.77	12.43	42.092	0					
3,600.00	3,568.57	3,553.72	3,534.06	6.64	6.38	-136.52	539.94	527.15	12.80	42.195	0					
3,700.00	3,667.36	3,652.30	3,631.76	6.83	6.57	-136.36	556.69	543.53	13.16	42.293	0					
3,800.00	3,766.15	3,750.88	3,729.45	7.02	6.75	-136.21	573.45	559.92	13.53	42.386	0					
3,900.00	3,864.95	3,849.45	3,827.15	7.21	6.94	-136.07	590.21	576.31	13.90	42.474	0					
4,000.00	3,963.74	3,948.03	3,924.84	7.40	7.12	-135.94	606.97	592.71	14.26	42.557	0					
4,100.00	4,062.53	4,046.60	4,022.53	7.60	7.30	-135.81	623.73	609.10	14.63	42.636	0					
4,200.00	4,161.32	4,145.18	4,120.23	7.79	7.49	-135.70	640.50	625.51	15.00	42.711	0					
4,300.00	4,260.12	4,243.75	4,217.92	7.98	7.67	-135.58	657.27	641.91	15.36	42.782	0					
4,400.00	4,358.91	4,342.33	4,315.62	8.17	7.86	-135.48	674.04	658.31	15.73	42.851	0					
4,500.00	4,457.70	4,440.91	4,413.31	8.36	8.04	-135.38	690.82	674.72	16.10	42.916	0					
4,600.00	4,556.49	4,539.48	4,511.01	8.56	8.23	-135.28	707.59	691.13	16.46	42.978	0					
4,700.00	4,655.29	4,638.06	4,608.70	8.75	8.41	-135.19	724.37	707.54	16.83	43.037	0					
4,800.00	4,754.08	4,736.63	4,706.39	8.94	8.60	-135.10	741.15	723.95	17.20	43.094	0					
4,900.00	4,852.87	4,835.21	4,804.09	9.13	8.78	-135.02	757.93	740.37	17.57	43.149	0					
5,000.00	4,951.66	4,933.79	4,901.78	9.33	8.97	-134.94	774.72	756.78	17.93	43.201	0					
5,100.00	5,050.46	5,032.36	4,999.48	9.52	9.15	-134.86	791.50	773.20	18.30	43.251	0					
5,200.00	5,149.25	5,130.94	5,097.17	9.71	9.34	-134.79	808.29	789.62	18.67	43.299	0					

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
5,300.00	5,248.04	5,229.51	5,194.87	9.90	9.52	-134.71	825.07	806.04	19.03	43.346	0			
5,400.00	5,346.83	5,328.09	5,292.56	10.09	9.70	-134.65	841.86	822.46	19.40	43.390	0			
5,500.00	5,445.63	5,426.67	5,390.25	10.29	9.89	-134.58	858.65	838.88	19.77	43.433	0			
5,600.00	5,544.42	5,525.24	5,487.95	10.48	10.07	-134.52	875.44	855.31	20.14	43.474	0			
5,700.00	5,643.21	5,623.82	5,585.64	10.67	10.26	-134.46	892.23	871.73	20.50	43.514	0			
5,800.00	5,742.00	5,722.39	5,683.34	10.86	10.44	-134.40	909.03	888.15	20.87	43.552	0			
5,900.00	5,840.80	5,820.97	5,781.03	11.06	10.63	-134.34	925.82	904.58	21.24	43.590	0			
5,973.62	5,913.53	5,893.55	5,852.96	11.20	10.77	-134.30	938.18	916.67	21.51	43.616	0			
6,000.00	5,939.61	5,919.56	5,878.74	11.25	10.81	-134.35	942.53	920.92	21.61	43.607	0			
6,100.00	6,038.77	6,018.67	5,976.97	11.43	11.00	-134.40	957.49	935.48	22.00	43.519	0			
6,200.00	6,138.33	6,135.56	6,093.11	11.61	11.21	-134.33	969.10	946.70	22.40	43.256	0			
6,300.00	6,238.15	6,253.30	6,210.53	11.78	11.42	-134.28	976.46	953.68	22.79	42.848	0			
6,400.00	6,338.11	6,371.50	6,328.67	11.94	11.62	-134.26	979.54	956.38	23.16	42.303	0			
6,419.27	6,357.38	6,394.30	6,351.46	11.97	11.66	-179.82	979.64	956.68	22.95	42.681	0			
6,500.00	6,438.11	6,475.95	6,433.11	12.11	11.79	-179.81	979.64	956.41	23.23	42.175	0			
6,519.27	6,457.38	6,495.21	6,452.38	12.14	11.82	-179.81	979.64	956.35	23.29	42.056	0			
6,550.00	6,488.10	6,526.08	6,483.24	12.18	11.87	90.20	979.64	955.98	23.66	41.404	0			
6,600.00	6,537.90	6,576.36	6,533.34	12.26	11.95	90.22	979.64	955.83	23.81	41.140	0			
6,650.00	6,587.20	6,626.67	6,583.01	12.33	12.02	90.24	979.64	955.69	23.95	40.895	0			
6,700.00	6,635.69	6,677.01	6,631.91	12.39	12.09	90.26	979.64	955.56	24.09	40.670	0			
6,750.00	6,683.09	6,727.37	6,679.74	12.45	12.15	90.28	979.65	955.43	24.21	40.460	0			
6,800.00	6,729.10	6,777.75	6,726.21	12.51	12.21	90.29	979.65	955.32	24.33	40.263	0			
6,850.00	6,773.43	6,828.16	6,771.01	12.56	12.26	90.31	979.65	955.20	24.44	40.076	0			
6,900.00	6,815.82	6,878.58	6,813.86	12.62	12.32	90.32	979.65	955.09	24.55	39.897	0			
6,950.00	6,855.99	6,929.01	6,854.49	12.67	12.37	90.33	979.65	954.99	24.66	39.720	0			
7,000.00	6,893.71	6,979.46	6,892.63	12.72	12.43	90.34	979.65	954.88	24.77	39.543	0			
7,050.00	6,928.74	7,029.92	6,928.05	12.78	12.48	90.34	979.65	954.76	24.89	39.362	0			
7,100.00	6,960.86	7,080.39	6,960.51	12.83	12.54	90.34	979.65	954.64	25.01	39.171	0			
7,150.00	6,989.87	7,130.85	6,989.82	12.89	12.60	90.35	979.65	954.51	25.14	38.969	0			
7,200.00	7,015.61	7,181.32	7,015.79	12.95	12.67	90.35	979.65	954.37	25.28	38.751	0			
7,250.00	7,037.90	7,231.79	7,038.24	13.02	12.73	90.34	979.65	954.22	25.44	38.515	0			
7,300.00	7,056.61	7,282.25	7,057.05	13.09	12.81	90.34	979.65	954.05	25.61	38.258	0			
7,350.00	7,071.63	7,332.70	7,072.09	13.17	12.88	90.33	979.65	953.86	25.79	37.980	0			
7,400.00	7,082.86	7,383.15	7,083.27	13.25	12.98	90.32	979.65	953.65	26.00	37.681	0			
7,450.00	7,090.24	7,433.57	7,090.52	13.35	13.10	90.31	979.65	953.43	26.22	37.360	0			
7,500.00	7,093.71	7,483.99	7,093.79	13.46	13.23	90.30	979.65	953.19	26.46	37.021	0			
7,519.27	7,094.00	7,503.38	7,094.00	13.51	13.28	90.29	979.65	953.09	26.56	36.886	0			
7,600.00	7,094.00	7,584.11	7,094.00	13.72	13.50	90.29	979.65	952.66	26.99	36.294	0			
7,700.00	7,094.00	7,684.11	7,094.00	14.01	13.80	90.29	979.65	952.07	27.58	35.519	0			
7,800.00	7,094.00	7,784.11	7,094.00	14.33	14.13	90.29	979.65	951.42	28.23	34.704	0			
7,900.00	7,094.00	7,884.11	7,094.00	14.68	14.48	90.29	979.65	950.72	28.93	33.863	0			
8,000.00	7,094.00	7,984.11	7,094.00	15.06	14.86	90.29	979.65	949.97	29.68	33.005	0			
8,100.00	7,094.00	8,084.11	7,094.00	15.45	15.26	90.29	979.65	949.17	30.48	32.141	0			
8,200.00	7,094.00	8,184.11	7,094.00	15.87	15.68	90.29	979.65	948.33	31.32	31.278	0			
8,300.00	7,094.00	8,284.11	7,094.00	16.31	16.12	90.29	979.65	947.45	32.20	30.423	0			
8,400.00	7,094.00	8,384.11	7,094.00	16.76	16.58	90.29	979.65	946.53	33.12	29.581	0			
8,500.00	7,094.00	8,484.11	7,094.00	17.24	17.05	90.29	979.65	945.58	34.07	28.755	0			
8,600.00	7,094.00	8,584.11	7,094.00	17.72	17.54	90.29	979.65	944.60	35.05	27.950	0			
8,700.00	7,094.00	8,684.11	7,094.00	18.22	18.05	90.29	979.65	943.59	36.06	27.168	0			
8,800.00	7,094.00	8,784.11	7,094.00	18.74	18.56	90.29	979.65	942.55	37.09	26.410	0			
8,900.00	7,094.00	8,884.11	7,094.00	19.26	19.09	90.29	979.65	941.49	38.15	25.677	0			
9,000.00	7,094.00	8,984.11	7,094.00	19.80	19.63	90.29	979.65	940.41	39.23	24.969	0			
9,100.00	7,094.00	9,084.11	7,094.00	20.34	20.18	90.29	979.65	939.31	40.34	24.288	0			
9,200.00	7,094.00	9,184.11	7,094.00	20.90	20.74	90.29	979.65	938.19	41.45	23.632	0			

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
9,300.00	7,094.00	9,284.11	7,094.00	21.46	21.31	90.29	979.65	937.06	42.59	23.001	0			
9,400.00	7,094.00	9,384.11	7,094.00	22.04	21.89	90.29	979.65	935.90	43.74	22.395	0			
9,500.00	7,094.00	9,484.11	7,094.00	22.62	22.47	90.29	979.65	934.74	44.91	21.813	0			
9,600.00	7,094.00	9,584.11	7,094.00	23.20	23.06	90.29	979.65	933.56	46.09	21.255	0			
9,700.00	7,094.00	9,684.11	7,094.00	23.80	23.65	90.29	979.65	932.36	47.28	20.718	0			
9,800.00	7,094.00	9,784.11	7,094.00	24.40	24.26	90.29	979.65	931.16	48.49	20.204	0			
9,900.00	7,094.00	9,884.11	7,094.00	25.00	24.86	90.29	979.65	929.94	49.70	19.710	0			
10,000.00	7,094.00	9,984.11	7,094.00	25.61	25.48	90.29	979.65	928.72	50.93	19.236	0			
10,100.00	7,094.00	10,084.11	7,094.00	26.22	26.09	90.29	979.65	927.49	52.16	18.781	0			
10,200.00	7,094.00	10,184.11	7,094.00	26.84	26.71	90.29	979.65	926.24	53.40	18.344	0			
10,300.00	7,094.00	10,284.11	7,094.00	27.46	27.34	90.29	979.65	924.99	54.65	17.924	0			
10,400.00	7,094.00	10,384.11	7,094.00	28.09	27.97	90.29	979.65	923.73	55.91	17.521	0			
10,500.00	7,094.00	10,484.11	7,094.00	28.72	28.60	90.29	979.65	922.47	57.18	17.133	0			
10,600.00	7,094.00	10,584.11	7,094.00	29.35	29.23	90.29	979.65	921.20	58.45	16.761	0			
10,700.00	7,094.00	10,684.11	7,094.00	29.99	29.87	90.29	979.65	919.92	59.73	16.402	0			
10,800.00	7,094.00	10,784.11	7,094.00	30.63	30.51	90.29	979.65	918.64	61.01	16.057	0			
10,900.00	7,094.00	10,884.11	7,094.00	31.27	31.16	90.29	979.65	917.35	62.30	15.725	0			
11,000.00	7,094.00	10,984.11	7,094.00	31.91	31.81	90.29	979.65	916.05	63.59	15.405	0			
11,100.00	7,094.00	11,084.11	7,094.00	32.56	32.45	90.29	979.65	914.76	64.89	15.097	0			
11,200.00	7,094.00	11,184.11	7,094.00	33.21	33.11	90.29	979.65	913.45	66.19	14.800	0			
11,300.00	7,094.00	11,284.11	7,094.00	33.86	33.76	90.29	979.65	912.15	67.50	14.513	0			
11,400.00	7,094.00	11,384.11	7,094.00	34.52	34.41	90.29	979.65	910.84	68.81	14.237	0			
11,500.00	7,094.00	11,484.11	7,094.00	35.17	35.07	90.29	979.65	909.52	70.13	13.970	0			
11,600.00	7,094.00	11,584.11	7,094.00	35.83	35.73	90.29	979.65	908.20	71.44	13.712	0			
11,700.00	7,094.00	11,684.11	7,094.00	36.49	36.39	90.29	979.65	906.88	72.77	13.463	0			
11,800.00	7,094.00	11,784.11	7,094.00	37.15	37.05	90.29	979.65	905.56	74.09	13.222	0			
11,900.00	7,094.00	11,884.11	7,094.00	37.81	37.72	90.29	979.65	904.23	75.42	12.990	0			
12,000.00	7,094.00	11,984.11	7,094.00	38.47	38.38	90.29	979.65	902.90	76.75	12.764	0			
12,100.00	7,094.00	12,084.11	7,094.00	39.14	39.05	90.29	979.65	901.57	78.08	12.546	0			
12,200.00	7,094.00	12,184.11	7,094.00	39.80	39.72	90.29	979.65	900.23	79.42	12.335	0			
12,300.00	7,094.00	12,284.11	7,094.00	40.47	40.38	90.29	979.65	898.89	80.76	12.131	0			
12,400.00	7,094.00	12,384.11	7,094.00	41.14	41.05	90.29	979.65	897.55	82.10	11.933	0			
12,500.00	7,094.00	12,484.11	7,094.00	41.81	41.73	90.29	979.65	896.21	83.44	11.741	0			
12,600.00	7,094.00	12,584.11	7,094.00	42.48	42.40	90.29	979.65	894.86	84.78	11.555	0			
12,700.00	7,094.00	12,684.11	7,094.00	43.15	43.07	90.29	979.65	893.52	86.13	11.374	0			
12,800.00	7,094.00	12,784.11	7,094.00	43.83	43.74	90.29	979.65	892.17	87.48	11.199	0			
12,900.00	7,094.00	12,884.11	7,094.00	44.50	44.42	90.29	979.65	890.82	88.83	11.028	0			
13,000.00	7,094.00	12,984.11	7,094.00	45.18	45.10	90.29	979.65	889.47	90.18	10.863	0			
13,100.00	7,094.00	13,084.11	7,094.00	45.85	45.77	90.29	979.65	888.11	91.54	10.702	0			
13,200.00	7,094.00	13,184.11	7,094.00	46.53	46.45	90.29	979.65	886.76	92.89	10.546	0			
13,300.00	7,094.00	13,284.11	7,094.00	47.21	47.13	90.29	979.65	885.40	94.25	10.394	0			
13,400.00	7,094.00	13,384.11	7,094.00	47.88	47.81	90.29	979.65	884.04	95.61	10.247	0			
13,500.00	7,094.00	13,484.11	7,094.00	48.56	48.49	90.29	979.65	882.68	96.97	10.103	0			
13,600.00	7,094.00	13,584.11	7,094.00	49.24	49.17	90.29	979.65	881.32	98.33	9.963	0			
13,700.00	7,094.00	13,684.11	7,094.00	49.92	49.85	90.29	979.65	879.96	99.69	9.827	0			
13,800.00	7,094.00	13,784.11	7,094.00	50.60	50.53	90.29	979.65	878.59	101.05	9.694	0			
13,900.00	7,094.00	13,884.11	7,094.00	51.28	51.21	90.29	979.65	877.23	102.42	9.565	0			
14,000.00	7,094.00	13,984.11	7,094.00	51.97	51.90	90.29	979.65	875.86	103.78	9.439	0			
14,100.00	7,094.00	14,084.11	7,094.00	52.65	52.58	90.29	979.65	874.50	105.15	9.317	0			
14,200.00	7,094.00	14,184.11	7,094.00	53.33	53.26	90.29	979.65	873.13	106.52	9.197	0			
14,300.00	7,094.00	14,284.11	7,094.00	54.02	53.95	90.29	979.65	871.76	107.89	9.080	0			
14,400.00	7,094.00	14,384.11	7,094.00	54.70	54.63	90.29	979.65	870.39	109.26	8.966	0			
14,500.00	7,094.00	14,484.11	7,094.00	55.39	55.32	90.29	979.65	869.02	110.63	8.855	0			
14,600.00	7,094.00	14,584.11	7,094.00	56.07	56.00	90.29	979.65	867.65	112.00	8.747	0			

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design Sec.28-T07N-R67W - Nelson Farm #6 - Original Hole - Rev 0													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		
14,700.00	7,094.00	14,684.11	7,094.00	56.76	56.69	90.29	979.65	866.27	113.37	8.641	0			
14,800.00	7,094.00	14,784.11	7,094.00	57.44	57.38	90.29	979.65	864.90	114.75	8.537	0			
14,888.41	7,094.00	14,872.46	7,094.00	58.05	57.98	90.29	979.66	863.69	115.96	8.448	0		SF	



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
0.00	0.00	0.00	0.00	0.00	0.00	-179.70	140.03						CC, ES	
100.00	100.00	94.00	94.00	0.15	0.14	-179.70	139.91	139.62	0.28	491.897	0			
200.00	200.00	194.00	194.00	0.32	0.31	-179.70	139.91	139.27	0.63	221.435	0			
300.00	300.00	294.00	294.00	0.50	0.49	-179.70	139.91	138.92	0.98	142.633	0			
400.00	400.00	394.00	394.00	0.67	0.66	-179.70	139.91	138.58	1.33	105.196	0			
500.00	500.00	494.00	494.00	0.84	0.83	-179.70	139.91	138.23	1.68	83.326	0			
600.00	600.00	594.00	594.00	1.02	1.01	-179.70	139.91	137.88	2.03	68.984	0			
700.00	700.00	694.00	694.00	1.19	1.18	-179.70	139.91	137.53	2.38	58.854	0			
800.00	799.98	793.98	793.98	1.37	1.36	-134.63	141.13	138.40	2.73	51.771	0			
900.00	899.84	893.84	893.84	1.54	1.53	-136.05	144.85	141.78	3.07	47.114	0			
1,000.00	999.45	993.45	993.45	1.72	1.71	-138.25	151.25	147.83	3.42	44.190	0			
1,100.00	1,098.70	1,090.20	1,090.19	1.90	1.87	-140.50	161.29	157.52	3.77	42.827	0			
1,145.64	1,143.85	1,134.12	1,134.08	1.98	1.95	-141.33	167.39	163.47	3.92	42.680	0			
1,200.00	1,197.55	1,186.34	1,186.20	2.08	2.04	-142.16	175.47	171.36	4.11	42.679	0			
1,300.00	1,296.34	1,282.17	1,281.71	2.27	2.21	-142.83	191.58	187.12	4.46	42.958	0			
1,400.00	1,395.13	1,377.54	1,376.44	2.45	2.38	-142.60	209.21	204.40	4.81	43.513	0			
1,500.00	1,493.93	1,474.88	1,472.85	2.64	2.56	-141.87	227.95	222.79	5.16	44.164	0			
1,600.00	1,592.72	1,573.06	1,570.06	2.83	2.74	-141.22	246.78	241.26	5.52	44.723	0			
1,700.00	1,691.51	1,671.23	1,667.27	3.01	2.91	-140.67	265.63	259.76	5.88	45.208	0			
1,800.00	1,790.30	1,769.41	1,764.48	3.20	3.09	-140.19	284.51	278.27	6.23	45.634	0			
1,900.00	1,889.10	1,867.59	1,861.69	3.39	3.27	-139.76	303.40	296.81	6.59	46.010	0			
2,000.00	1,987.89	1,965.76	1,958.90	3.58	3.46	-139.39	322.30	315.35	6.95	46.344	0			
2,100.00	2,086.68	2,063.94	2,056.11	3.77	3.64	-139.06	341.22	333.91	7.32	46.643	0			
2,200.00	2,185.47	2,162.12	2,153.32	3.96	3.82	-138.77	360.15	352.47	7.68	46.912	0			
2,300.00	2,284.27	2,260.29	2,250.53	4.15	4.00	-138.50	379.08	371.04	8.04	47.156	0			
2,400.00	2,383.06	2,358.47	2,347.74	4.34	4.18	-138.26	398.02	389.62	8.40	47.377	0			
2,500.00	2,481.85	2,456.65	2,444.95	4.53	4.37	-138.04	416.97	408.21	8.76	47.578	0			
2,600.00	2,580.64	2,554.82	2,542.16	4.72	4.55	-137.84	435.92	426.80	9.13	47.763	0			
2,700.00	2,679.44	2,653.00	2,639.37	4.91	4.73	-137.65	454.88	445.39	9.49	47.933	0			
2,800.00	2,778.23	2,751.18	2,736.59	5.11	4.92	-137.49	473.85	463.99	9.85	48.089	0			
2,900.00	2,877.02	2,849.35	2,833.80	5.30	5.10	-137.33	492.81	482.59	10.22	48.234	0			
3,000.00	2,975.81	2,947.53	2,931.01	5.49	5.28	-137.19	511.78	501.20	10.58	48.368	0			
3,100.00	3,074.61	3,045.71	3,028.22	5.68	5.47	-137.05	530.75	519.81	10.95	48.493	0			
3,200.00	3,173.40	3,143.88	3,125.43	5.87	5.65	-136.93	549.73	538.42	11.31	48.609	0			
3,300.00	3,272.19	3,242.06	3,222.64	6.06	5.84	-136.81	568.70	557.03	11.67	48.718	0			
3,400.00	3,370.98	3,340.24	3,319.85	6.25	6.02	-136.70	587.68	575.65	12.04	48.819	0			
3,500.00	3,469.78	3,438.41	3,417.06	6.45	6.21	-136.60	606.66	594.26	12.40	48.915	0			
3,600.00	3,568.57	3,536.59	3,514.27	6.64	6.39	-136.50	625.65	612.88	12.77	49.005	0			
3,700.00	3,667.36	3,634.76	3,611.48	6.83	6.58	-136.41	644.63	631.50	13.13	49.089	0			
3,800.00	3,766.15	3,732.94	3,708.69	7.02	6.76	-136.33	663.62	650.12	13.50	49.169	0			
3,900.00	3,864.95	3,831.12	3,805.90	7.21	6.94	-136.25	682.60	668.74	13.86	49.245	0			
4,000.00	3,963.74	3,929.29	3,903.11	7.40	7.13	-136.17	701.59	687.37	14.23	49.316	0			
4,100.00	4,062.53	4,027.47	4,000.32	7.60	7.31	-136.10	720.58	705.99	14.59	49.384	0			
4,200.00	4,161.32	4,125.65	4,097.54	7.79	7.50	-136.03	739.57	724.62	14.96	49.448	0			
4,300.00	4,260.12	4,223.82	4,194.75	7.98	7.68	-135.97	758.56	743.24	15.32	49.509	0			
4,400.00	4,358.91	4,322.00	4,291.96	8.17	7.87	-135.91	777.56	761.87	15.69	49.567	0			
4,500.00	4,457.70	4,420.18	4,389.17	8.36	8.05	-135.85	796.55	780.50	16.05	49.622	0			
4,600.00	4,556.49	4,518.35	4,486.38	8.56	8.24	-135.79	815.54	799.13	16.42	49.675	0			
4,700.00	4,655.29	4,616.53	4,583.59	8.75	8.42	-135.74	834.54	817.76	16.78	49.726	0			
4,800.00	4,754.08	4,714.71	4,680.80	8.94	8.61	-135.69	853.53	836.39	17.15	49.774	0			
4,900.00	4,852.87	4,812.88	4,778.01	9.13	8.80	-135.64	872.53	855.02	17.51	49.820	0			
5,000.00	4,951.66	4,911.06	4,875.22	9.33	8.98	-135.59	891.53	873.65	17.88	49.864	0			
5,100.00	5,050.46	5,009.24	4,972.43	9.52	9.17	-135.55	910.52	892.28	18.24	49.906	0			
5,200.00	5,149.25	5,107.41	5,069.64	9.71	9.35	-135.50	929.52	910.91	18.61	49.947	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



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design		Sec.28-T07N-R67W - Nelson Farm #7 - Original Hole - Rev 0											Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder													Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Distance						Warning		
Measured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside	Between	Between	Minimum	Separation	Risked		Probability	
Depth (usft)	Depth (usft)	Depth (usft)	Depth (usft)	(usft)	(usft)	Toolface (°)	Centres (usft)	Ellipses (usft)	Separation (usft)	Factor	Separation Factor		of Collision	
5,300.00	5,248.04	5,205.59	5,166.85	9.90	9.54	-135.46	948.52	929.54	18.98	49.986	0			
5,400.00	5,346.83	5,303.77	5,264.06	10.09	9.72	-135.42	967.52	948.18	19.34	50.023	0			
5,500.00	5,445.63	5,401.94	5,361.27	10.29	9.91	-135.38	986.52	966.81	19.71	50.059	0			
5,600.00	5,544.42	5,500.12	5,458.48	10.48	10.09	-135.35	1,005.52	985.44	20.07	50.094	0			
5,700.00	5,643.21	5,598.30	5,555.70	10.67	10.28	-135.31	1,024.52	1,004.08	20.44	50.127	0			
5,800.00	5,742.00	5,696.47	5,652.91	10.86	10.46	-135.28	1,043.52	1,022.71	20.80	50.160	0			
5,900.00	5,840.80	5,794.65	5,750.12	11.06	10.65	-135.24	1,062.52	1,041.35	21.17	50.191	0			
5,973.62	5,913.53	5,866.93	5,821.69	11.20	10.79	-135.22	1,076.51	1,055.07	21.44	50.213	0			
6,000.00	5,939.61	5,892.84	5,847.34	11.25	10.83	-135.28	1,081.43	1,059.89	21.54	50.199	0			
6,100.00	6,038.77	5,991.33	5,944.86	11.43	11.02	-135.39	1,098.57	1,076.64	21.93	50.100	0			
6,200.00	6,138.33	6,090.12	6,042.68	11.61	11.21	-135.35	1,113.27	1,090.97	22.31	49.911	0			
6,300.00	6,238.15	6,189.43	6,141.02	11.78	11.39	-135.15	1,125.54	1,102.87	22.67	49.645	0			
6,400.00	6,338.11	6,318.46	6,269.15	11.94	11.63	-134.76	1,134.08	1,111.01	23.07	49.150	0			
6,419.27	6,357.38	6,343.46	6,294.05	11.97	11.67	179.76	1,135.15	1,112.17	22.98	49.398	0			
6,500.00	6,438.11	6,448.58	6,398.92	12.11	11.86	-179.95	1,138.37	1,115.07	23.30	48.864	0			
6,519.27	6,457.38	6,473.74	6,424.05	12.14	11.90	-179.91	1,138.88	1,115.51	23.37	48.728	0			
6,550.00	6,488.10	6,513.86	6,464.15	12.18	11.97	90.14	1,139.49	1,115.83	23.66	48.157	0			
6,600.00	6,537.90	6,578.98	6,529.26	12.26	12.07	90.42	1,139.97	1,116.12	23.85	47.803	0			
6,650.00	6,587.20	6,630.92	6,581.20	12.33	12.16	90.84	1,140.07	1,116.05	24.02	47.468	0			
6,700.00	6,635.69	6,679.41	6,629.69	12.39	12.24	91.41	1,140.32	1,116.13	24.19	47.145	0			
6,750.00	6,683.09	6,729.56	6,679.82	12.45	12.32	92.11	1,140.79	1,116.43	24.36	46.827	0			
6,800.00	6,729.10	6,781.54	6,731.51	12.51	12.40	92.82	1,141.45	1,116.92	24.54	46.520	0			
6,850.00	6,773.43	6,834.92	6,783.95	12.56	12.47	93.52	1,142.29	1,117.58	24.71	46.227	0			
6,900.00	6,815.82	6,889.78	6,836.81	12.62	12.54	94.21	1,143.29	1,118.41	24.88	45.950	0			
6,950.00	6,855.99	6,946.21	6,889.64	12.67	12.61	94.89	1,144.43	1,119.38	25.05	45.690	0			
7,000.00	6,893.71	7,004.27	6,941.95	12.72	12.68	95.54	1,145.68	1,120.47	25.21	45.453	0			
7,050.00	6,928.74	7,064.01	6,993.16	12.78	12.74	96.17	1,147.00	1,121.65	25.36	45.237	0			
7,100.00	6,960.86	7,125.44	7,042.58	12.83	12.81	96.77	1,148.37	1,122.87	25.50	45.041	0			
7,150.00	6,989.87	7,188.57	7,089.46	12.89	12.88	97.32	1,149.73	1,124.10	25.63	44.861	0			
7,200.00	7,015.61	7,253.35	7,132.97	12.95	12.95	97.83	1,151.04	1,125.28	25.75	44.692	0			
7,250.00	7,037.90	7,319.68	7,172.24	13.02	13.03	98.28	1,152.25	1,126.38	25.88	44.532	0			
7,300.00	7,056.61	7,387.43	7,206.39	13.09	13.11	98.66	1,153.33	1,127.33	26.00	44.364	0			
7,350.00	7,071.63	7,456.40	7,234.58	13.17	13.21	98.98	1,154.23	1,128.10	26.13	44.180	0			
7,400.00	7,082.86	7,526.36	7,256.06	13.25	13.32	99.21	1,154.90	1,128.64	26.27	43.968	0			
7,450.00	7,090.24	7,597.01	7,270.21	13.35	13.45	99.36	1,155.34	1,128.91	26.43	43.718	0			
7,500.00	7,093.71	7,668.04	7,276.62	13.46	13.61	99.41	1,155.51	1,128.89	26.61	43.417	0			
7,519.27	7,094.00	7,693.86	7,277.00	13.51	13.68	99.41	1,155.50	1,128.78	26.72	43.244	0			
7,600.00	7,094.00	7,774.59	7,277.00	13.72	13.90	99.41	1,155.50	1,128.35	27.15	42.553	0			
7,700.00	7,094.00	7,874.59	7,277.00	14.01	14.19	99.41	1,155.50	1,127.76	27.74	41.653	0			
7,800.00	7,094.00	7,974.59	7,277.00	14.33	14.52	99.41	1,155.50	1,127.12	28.38	40.708	0			
7,900.00	7,094.00	8,074.59	7,277.00	14.68	14.87	99.41	1,155.50	1,126.42	29.08	39.734	0			
8,000.00	7,094.00	8,174.59	7,277.00	15.06	15.24	99.41	1,155.50	1,125.68	29.83	38.742	0			
8,100.00	7,094.00	8,274.59	7,277.00	15.45	15.64	99.41	1,155.50	1,124.89	30.62	37.743	0			
8,200.00	7,094.00	8,374.59	7,277.00	15.87	16.05	99.41	1,155.50	1,124.06	31.45	36.745	0			
8,300.00	7,094.00	8,474.59	7,277.00	16.31	16.49	99.41	1,155.50	1,123.19	32.32	35.755	0			
8,400.00	7,094.00	8,574.59	7,277.00	16.76	16.94	99.41	1,155.50	1,122.28	33.22	34.781	0			
8,500.00	7,094.00	8,674.59	7,277.00	17.24	17.41	99.41	1,155.50	1,121.34	34.16	33.825	0			
8,600.00	7,094.00	8,774.59	7,277.00	17.72	17.89	99.41	1,155.50	1,120.38	35.13	32.893	0			
8,700.00	7,094.00	8,874.59	7,277.00	18.22	18.39	99.41	1,155.50	1,119.38	36.13	31.986	0			
8,800.00	7,094.00	8,974.59	7,277.00	18.74	18.90	99.41	1,155.50	1,118.36	37.15	31.106	0			
8,900.00	7,094.00	9,074.59	7,277.00	19.26	19.43	99.41	1,155.50	1,117.31	38.19	30.255	0			
9,000.00	7,094.00	9,174.59	7,277.00	19.80	19.96	99.41	1,155.50	1,116.25	39.26	29.433	0			
9,100.00	7,094.00	9,274.59	7,277.00	20.34	20.51	99.41	1,155.50	1,115.16	40.35	28.640	0			
9,200.00	7,094.00	9,374.59	7,277.00	20.90	21.06	99.41	1,155.50	1,114.05	41.45	27.877	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



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Sec.28-T07N-R67W - Nelson Farm #7 - Original Hole - Rev 0		Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder													Offset Well Error: 0.00 usft			
Reference		Offset		Semi Major Axis		Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision				
9,300.00	7,094.00	9,474.59	7,277.00	21.46	21.62	99.41	1,155.50	1,112.93	42.57	27.142	0					
9,400.00	7,094.00	9,574.59	7,277.00	22.04	22.19	99.41	1,155.50	1,111.80	43.71	26.436	0					
9,500.00	7,094.00	9,674.59	7,277.00	22.62	22.77	99.41	1,155.50	1,110.64	44.86	25.757	0					
9,600.00	7,094.00	9,774.59	7,277.00	23.20	23.36	99.41	1,155.50	1,109.48	46.03	25.106	0					
9,700.00	7,094.00	9,874.59	7,277.00	23.80	23.95	99.41	1,155.50	1,108.30	47.20	24.480	0					
9,800.00	7,094.00	9,974.59	7,277.00	24.40	24.55	99.41	1,155.50	1,107.11	48.39	23.878	0					
9,900.00	7,094.00	10,074.59	7,277.00	25.00	25.15	99.41	1,155.50	1,105.91	49.59	23.301	0					
10,000.00	7,094.00	10,174.59	7,277.00	25.61	25.76	99.41	1,155.50	1,104.71	50.80	22.746	0					
10,100.00	7,094.00	10,274.59	7,277.00	26.22	26.37	99.41	1,155.50	1,103.49	52.02	22.214	0					
10,200.00	7,094.00	10,374.59	7,277.00	26.84	26.99	99.41	1,155.50	1,102.26	53.24	21.702	0					
10,300.00	7,094.00	10,474.59	7,277.00	27.46	27.61	99.41	1,155.50	1,101.03	54.48	21.210	0					
10,400.00	7,094.00	10,574.59	7,277.00	28.09	28.23	99.41	1,155.50	1,099.78	55.72	20.737	0					
10,500.00	7,094.00	10,674.59	7,277.00	28.72	28.86	99.41	1,155.50	1,098.53	56.97	20.283	0					
10,600.00	7,094.00	10,774.59	7,277.00	29.35	29.49	99.41	1,155.50	1,097.28	58.23	19.845	0					
10,700.00	7,094.00	10,874.59	7,277.00	29.99	30.13	99.41	1,155.50	1,096.02	59.49	19.425	0					
10,800.00	7,094.00	10,974.59	7,277.00	30.63	30.77	99.41	1,155.50	1,094.75	60.75	19.019	0					
10,900.00	7,094.00	11,074.59	7,277.00	31.27	31.41	99.41	1,155.50	1,093.48	62.03	18.629	0					
11,000.00	7,094.00	11,174.59	7,277.00	31.91	32.05	99.41	1,155.50	1,092.20	63.30	18.253	0					
11,100.00	7,094.00	11,274.59	7,277.00	32.56	32.70	99.41	1,155.50	1,090.92	64.59	17.891	0					
11,200.00	7,094.00	11,374.59	7,277.00	33.21	33.34	99.41	1,155.50	1,089.63	65.87	17.541	0					
11,300.00	7,094.00	11,474.59	7,277.00	33.86	34.00	99.41	1,155.50	1,088.34	67.16	17.204	0					
11,400.00	7,094.00	11,574.59	7,277.00	34.52	34.65	99.41	1,155.50	1,087.05	68.46	16.879	0					
11,500.00	7,094.00	11,674.59	7,277.00	35.17	35.30	99.41	1,155.50	1,085.75	69.76	16.564	0					
11,600.00	7,094.00	11,774.59	7,277.00	35.83	35.96	99.41	1,155.50	1,084.44	71.06	16.261	0					
11,700.00	7,094.00	11,874.59	7,277.00	36.49	36.62	99.41	1,155.50	1,083.14	72.37	15.968	0					
11,800.00	7,094.00	11,974.59	7,277.00	37.15	37.28	99.41	1,155.50	1,081.83	73.67	15.684	0					
11,900.00	7,094.00	12,074.59	7,277.00	37.81	37.94	99.41	1,155.50	1,080.52	74.99	15.410	0					
12,000.00	7,094.00	12,174.59	7,277.00	38.47	38.60	99.41	1,155.50	1,079.20	76.30	15.144	0					
12,100.00	7,094.00	12,274.59	7,277.00	39.14	39.27	99.41	1,155.50	1,077.89	77.62	14.887	0					
12,200.00	7,094.00	12,374.59	7,277.00	39.80	39.93	99.41	1,155.50	1,076.57	78.94	14.638	0					
12,300.00	7,094.00	12,474.59	7,277.00	40.47	40.60	99.41	1,155.50	1,075.24	80.26	14.397	0					
12,400.00	7,094.00	12,574.59	7,277.00	41.14	41.27	99.41	1,155.50	1,073.92	81.58	14.163	0					
12,500.00	7,094.00	12,674.59	7,277.00	41.81	41.94	99.41	1,155.50	1,072.59	82.91	13.937	0					
12,600.00	7,094.00	12,774.59	7,277.00	42.48	42.61	99.41	1,155.50	1,071.26	84.24	13.717	0					
12,700.00	7,094.00	12,874.59	7,277.00	43.15	43.28	99.41	1,155.50	1,069.93	85.57	13.503	0					
12,800.00	7,094.00	12,974.59	7,277.00	43.83	43.95	99.41	1,155.50	1,068.60	86.90	13.296	0					
12,900.00	7,094.00	13,074.59	7,277.00	44.50	44.62	99.41	1,155.50	1,067.27	88.24	13.095	0					
13,000.00	7,094.00	13,174.59	7,277.00	45.18	45.30	99.41	1,155.50	1,065.93	89.58	12.900	0					
13,100.00	7,094.00	13,274.59	7,277.00	45.85	45.97	99.41	1,155.50	1,064.59	90.91	12.710	0					
13,200.00	7,094.00	13,374.59	7,277.00	46.53	46.65	99.41	1,155.50	1,063.25	92.25	12.525	0					
13,300.00	7,094.00	13,474.59	7,277.00	47.21	47.33	99.41	1,155.50	1,061.91	93.59	12.346	0					
13,400.00	7,094.00	13,574.59	7,277.00	47.88	48.00	99.41	1,155.50	1,060.57	94.94	12.171	0					
13,500.00	7,094.00	13,674.59	7,277.00	48.56	48.68	99.41	1,155.50	1,059.22	96.28	12.001	0					
13,600.00	7,094.00	13,774.59	7,277.00	49.24	49.36	99.41	1,155.50	1,057.88	97.63	11.836	0					
13,700.00	7,094.00	13,874.59	7,277.00	49.92	50.04	99.41	1,155.50	1,056.53	98.97	11.675	0					
13,800.00	7,094.00	13,974.59	7,277.00	50.60	50.72	99.41	1,155.50	1,055.18	100.32	11.518	0					
13,900.00	7,094.00	14,074.59	7,277.00	51.28	51.40	99.41	1,155.50	1,053.83	101.67	11.365	0					
14,000.00	7,094.00	14,174.59	7,277.00	51.97	52.08	99.41	1,155.50	1,052.48	103.02	11.216	0					
14,100.00	7,094.00	14,274.59	7,277.00	52.65	52.77	99.41	1,155.50	1,051.13	104.37	11.071	0					
14,200.00	7,094.00	14,374.59	7,277.00	53.33	53.45	99.41	1,155.50	1,049.78	105.72	10.929	0					
14,300.00	7,094.00	14,474.59	7,277.00	54.02	54.13	99.41	1,155.50	1,048.43	107.08	10.791	0					
14,400.00	7,094.00	14,574.59	7,277.00	54.70	54.82	99.41	1,155.50	1,047.07	108.43	10.657	0					
14,500.00	7,094.00	14,674.59	7,277.00	55.39	55.50	99.41	1,155.50	1,045.72	109.79	10.525	0					
14,600.00	7,094.00	14,774.59	7,277.00	56.07	56.18	99.41	1,155.50	1,044.36	111.14	10.397	0					

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design Sec.28-T07N-R67W - Nelson Farm #7 - Original Hole - Rev 0													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		
14,700.00	7,094.00	14,874.59	7,277.00	56.76	56.87	99.41	1,155.50	1,043.00	112.50	10.271	0			
14,800.00	7,094.00	14,974.59	7,277.00	57.44	57.56	99.41	1,155.50	1,041.65	113.86	10.149	0			
14,888.41	7,094.00	15,063.07	7,277.00	58.05	58.16	99.41	1,155.51	1,040.44	115.06	10.043	0		SF	



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	
0.00	0.00	0.00	0.00	0.00	0.00	-179.72	168.10				0		
100.00	100.00	93.00	93.00	0.15	0.14	-179.72	167.96	167.68	0.28	593.590	0		
200.00	200.00	193.00	193.00	0.32	0.31	-179.72	167.96	167.33	0.63	266.573	0		
300.00	300.00	293.00	293.00	0.50	0.48	-179.72	167.96	166.98	0.98	171.538	0		
400.00	400.00	393.00	393.00	0.67	0.66	-179.72	167.96	166.63	1.33	126.456	0		
500.00	500.00	493.00	493.00	0.84	0.83	-179.72	167.96	166.28	1.68	100.138	0		
600.00	600.00	593.00	593.00	1.02	1.01	-179.72	167.96	165.93	2.03	82.888	0		
700.00	700.00	693.00	693.00	1.19	1.18	-179.72	167.96	165.58	2.38	70.708	0		CC, ES
800.00	799.98	792.98	792.98	1.37	1.36	-134.56	169.18	166.45	2.72	62.101	0		
900.00	899.84	892.84	892.84	1.54	1.53	-135.75	172.89	169.82	3.07	56.265	0		
1,000.00	999.45	988.83	988.81	1.72	1.70	-137.19	180.18	176.76	3.41	52.763	0		
1,100.00	1,098.70	1,084.01	1,083.89	1.90	1.86	-138.36	192.28	188.53	3.76	51.196	0		
1,145.64	1,143.85	1,127.20	1,126.97	1.98	1.94	-138.80	199.39	195.48	3.91	50.984	0		
1,200.00	1,197.55	1,178.45	1,178.01	2.08	2.03	-139.28	208.75	204.65	4.10	50.927	0		
1,300.00	1,296.34	1,272.26	1,271.22	2.27	2.20	-139.57	227.53	223.08	4.44	51.191	0		
1,400.00	1,395.13	1,365.54	1,363.49	2.45	2.37	-139.25	248.27	243.48	4.79	51.825	0		
1,500.00	1,493.93	1,463.14	1,459.83	2.64	2.55	-138.72	269.93	264.79	5.15	52.456	0		
1,600.00	1,592.72	1,560.73	1,556.16	2.83	2.73	-138.27	291.61	286.11	5.50	52.997	0		
1,700.00	1,691.51	1,658.33	1,652.50	3.01	2.91	-137.88	313.30	307.44	5.86	53.463	0		
1,800.00	1,790.30	1,755.93	1,748.84	3.20	3.09	-137.54	335.00	328.78	6.22	53.869	0		
1,900.00	1,889.10	1,853.53	1,845.17	3.39	3.27	-137.24	356.71	350.14	6.58	54.226	0		
2,000.00	1,987.89	1,951.13	1,941.51	3.58	3.46	-136.98	378.44	371.50	6.94	54.541	0		
2,100.00	2,086.68	2,048.73	2,037.85	3.77	3.64	-136.75	400.16	392.86	7.30	54.822	0		
2,200.00	2,185.47	2,146.33	2,134.18	3.96	3.82	-136.53	421.90	414.24	7.66	55.073	0		
2,300.00	2,284.27	2,243.92	2,230.52	4.15	4.01	-136.34	443.64	435.61	8.02	55.300	0		
2,400.00	2,383.06	2,341.52	2,326.86	4.34	4.20	-136.17	465.38	456.99	8.38	55.505	0		
2,500.00	2,481.85	2,439.12	2,423.19	4.53	4.38	-136.02	487.12	478.38	8.75	55.692	0		
2,600.00	2,580.64	2,536.72	2,519.53	4.72	4.57	-135.87	508.87	499.76	9.11	55.862	0		
2,700.00	2,679.44	2,634.32	2,615.87	4.91	4.75	-135.74	530.63	521.15	9.47	56.018	0		
2,800.00	2,778.23	2,731.92	2,712.21	5.11	4.94	-135.62	552.38	542.54	9.84	56.162	0		
2,900.00	2,877.02	2,829.52	2,808.54	5.30	5.13	-135.51	574.14	563.94	10.20	56.294	0		
3,000.00	2,975.81	2,927.11	2,904.88	5.49	5.31	-135.40	595.90	585.33	10.56	56.417	0		
3,100.00	3,074.61	3,024.71	3,001.22	5.68	5.50	-135.31	617.66	606.73	10.93	56.530	0		
3,200.00	3,173.40	3,122.31	3,097.55	5.87	5.69	-135.22	639.42	628.13	11.29	56.636	0		
3,300.00	3,272.19	3,219.91	3,193.89	6.06	5.87	-135.13	661.18	649.53	11.65	56.735	0		
3,400.00	3,370.98	3,317.51	3,290.23	6.25	6.06	-135.05	682.95	670.93	12.02	56.827	0		
3,500.00	3,469.78	3,415.11	3,386.56	6.45	6.25	-134.98	704.71	692.33	12.38	56.914	0		
3,600.00	3,568.57	3,512.71	3,482.90	6.64	6.44	-134.91	726.48	713.73	12.75	56.995	0		
3,700.00	3,667.36	3,610.30	3,579.24	6.83	6.63	-134.84	748.25	735.14	13.11	57.071	0		
3,800.00	3,766.15	3,707.90	3,675.57	7.02	6.81	-134.78	770.02	756.54	13.48	57.143	0		
3,900.00	3,864.95	3,805.50	3,771.91	7.21	7.00	-134.72	791.79	777.95	13.84	57.211	0		
4,000.00	3,963.74	3,903.10	3,868.25	7.40	7.19	-134.67	813.56	799.35	14.20	57.275	0		
4,100.00	4,062.53	4,000.70	3,964.58	7.60	7.38	-134.62	835.33	820.76	14.57	57.336	0		
4,200.00	4,161.32	4,098.30	4,060.92	7.79	7.56	-134.57	857.10	842.17	14.93	57.394	0		
4,300.00	4,260.12	4,195.90	4,157.26	7.98	7.75	-134.52	878.87	863.57	15.30	57.449	0		
4,400.00	4,358.91	4,293.49	4,253.59	8.17	7.94	-134.47	900.64	884.98	15.66	57.501	0		
4,500.00	4,457.70	4,391.09	4,349.93	8.36	8.13	-134.43	922.42	906.39	16.03	57.550	0		
4,600.00	4,556.49	4,488.69	4,446.27	8.56	8.32	-134.39	944.19	927.80	16.39	57.597	0		
4,700.00	4,655.29	4,586.29	4,542.60	8.75	8.51	-134.35	965.97	949.21	16.76	57.642	0		
4,800.00	4,754.08	4,683.89	4,638.94	8.94	8.69	-134.31	987.74	970.62	17.12	57.685	0		
4,900.00	4,852.87	4,781.49	4,735.28	9.13	8.88	-134.28	1,009.51	992.03	17.49	57.726	0		
5,000.00	4,951.66	4,879.09	4,831.61	9.33	9.07	-134.24	1,031.29	1,013.44	17.85	57.766	0		
5,100.00	5,050.46	4,976.68	4,927.95	9.52	9.26	-134.21	1,053.07	1,034.85	18.22	57.803	0		
5,200.00	5,149.25	5,074.28	5,024.29	9.71	9.45	-134.18	1,074.84	1,056.26	18.58	57.839	0		

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error: 0.00 usft	
Survey Program: 0-Pathfinder												Offset Well Error: 0.00 usft	
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor		
5,300.00	5,248.04	5,171.88	5,120.62	9.90	9.64	-134.15	1,096.62	1,077.67	18.95	57.874	0		
5,400.00	5,346.83	5,269.48	5,216.96	10.09	9.82	-134.12	1,118.39	1,099.08	19.31	57.907	0		
5,500.00	5,445.63	5,367.08	5,313.30	10.29	10.01	-134.09	1,140.17	1,120.49	19.68	57.939	0		
5,600.00	5,544.42	5,464.68	5,409.63	10.48	10.20	-134.07	1,161.95	1,141.90	20.04	57.970	0		
5,700.00	5,643.21	5,562.28	5,505.97	10.67	10.39	-134.04	1,183.73	1,163.32	20.41	57.999	0		
5,800.00	5,742.00	5,659.87	5,602.31	10.86	10.58	-134.02	1,205.50	1,184.73	20.77	58.028	0		
5,900.00	5,840.80	5,757.47	5,698.64	11.06	10.77	-133.99	1,227.28	1,206.14	21.14	58.055	0		
5,973.62	5,913.53	5,829.33	5,769.57	11.20	10.91	-133.97	1,243.32	1,221.91	21.41	58.075	0		
6,000.00	5,939.61	5,855.09	5,795.00	11.25	10.96	-134.05	1,248.98	1,227.46	21.51	58.056	0		
6,100.00	6,038.77	5,953.04	5,891.68	11.43	11.15	-134.23	1,268.94	1,247.04	21.91	57.926	0		
6,200.00	6,138.33	6,052.57	6,029.86	11.61	11.41	-134.25	1,285.06	1,262.70	22.36	57.476	0		
6,300.00	6,238.15	6,236.98	6,173.68	11.78	11.66	-134.25	1,295.35	1,272.55	22.80	56.820	0		
6,400.00	6,338.11	6,382.51	6,319.08	11.94	11.90	-134.25	1,299.72	1,276.50	23.22	55.979	0		
6,419.27	6,357.38	6,410.60	6,347.17	11.97	11.95	-179.81	1,299.87	1,276.62	23.25	55.900	0		
6,500.00	6,438.11	6,494.54	6,431.11	12.11	12.09	-179.81	1,299.88	1,276.35	23.53	55.244	0		
6,519.27	6,457.38	6,513.81	6,450.38	12.14	12.12	-179.81	1,299.88	1,276.29	23.59	55.093	0		
6,550.00	6,488.10	6,544.71	6,481.28	12.18	12.17	90.21	1,299.88	1,276.15	23.74	54.761	0		
6,600.00	6,537.90	6,595.10	6,531.50	12.26	12.24	90.23	1,299.89	1,276.00	23.89	54.412	0		
6,650.00	6,587.20	6,645.53	6,581.30	12.33	12.31	90.25	1,299.89	1,275.86	24.03	54.091	0		
6,700.00	6,635.69	6,695.99	6,630.36	12.39	12.38	90.27	1,299.89	1,275.73	24.16	53.793	0		
6,750.00	6,683.09	6,746.49	6,678.36	12.45	12.44	90.29	1,299.89	1,275.60	24.29	53.516	0		
6,800.00	6,729.10	6,797.03	6,725.01	12.51	12.50	90.30	1,299.89	1,275.49	24.41	53.257	0		
6,850.00	6,773.43	6,847.59	6,769.99	12.56	12.55	90.32	1,299.90	1,275.38	24.52	53.011	0		
6,900.00	6,815.82	6,898.17	6,813.03	12.62	12.61	90.33	1,299.90	1,275.27	24.63	52.775	0		
6,950.00	6,855.99	6,948.78	6,853.84	12.67	12.66	90.34	1,299.90	1,275.16	24.74	52.542	0		
7,000.00	6,893.71	6,999.41	6,892.15	12.72	12.71	90.35	1,299.90	1,275.05	24.85	52.309	0		
7,050.00	6,928.74	7,050.05	6,927.73	12.78	12.76	90.36	1,299.90	1,274.94	24.96	52.070	0		
7,100.00	6,960.86	7,100.70	6,960.34	12.83	12.82	90.36	1,299.90	1,274.82	25.09	51.820	0		
7,150.00	6,989.87	7,151.35	6,989.77	12.89	12.88	90.36	1,299.90	1,274.69	25.21	51.553	0		
7,200.00	7,015.61	7,202.01	7,015.83	12.95	12.94	90.36	1,299.90	1,274.55	25.36	51.266	0		
7,250.00	7,037.90	7,252.66	7,038.36	13.02	13.01	90.36	1,299.90	1,274.39	25.51	50.954	0		
7,300.00	7,056.61	7,303.31	7,057.20	13.09	13.08	90.36	1,299.90	1,274.22	25.68	50.615	0		
7,350.00	7,071.63	7,353.94	7,072.26	13.17	13.16	90.35	1,299.90	1,274.03	25.87	50.248	0		
7,400.00	7,082.86	7,404.56	7,083.42	13.25	13.25	90.34	1,299.90	1,273.82	26.07	49.852	0		
7,450.00	7,090.24	7,455.16	7,090.62	13.35	13.35	90.33	1,299.90	1,273.60	26.30	49.429	0		
7,500.00	7,093.71	7,505.74	7,093.82	13.46	13.46	90.31	1,299.90	1,273.36	26.54	48.982	0		
7,519.27	7,094.00	7,525.17	7,094.00	13.51	13.51	90.31	1,299.90	1,273.26	26.64	48.803	0		
7,600.00	7,094.00	7,605.90	7,094.00	13.72	13.72	90.31	1,299.90	1,272.83	27.07	48.026	0		
7,700.00	7,094.00	7,705.90	7,094.00	14.01	14.01	90.31	1,299.90	1,272.24	27.66	47.003	0		
7,800.00	7,094.00	7,805.90	7,094.00	14.33	14.34	90.31	1,299.90	1,271.59	28.30	45.930	0		
7,900.00	7,094.00	7,905.90	7,094.00	14.68	14.69	90.31	1,299.90	1,270.89	29.00	44.820	0		
8,000.00	7,094.00	8,005.90	7,094.00	15.06	15.06	90.31	1,299.90	1,270.14	29.75	43.690	0		
8,100.00	7,094.00	8,105.90	7,094.00	15.45	15.46	90.31	1,299.90	1,269.35	30.55	42.550	0		
8,200.00	7,094.00	8,205.90	7,094.00	15.87	15.88	90.31	1,299.90	1,268.51	31.39	41.412	0		
8,300.00	7,094.00	8,305.90	7,094.00	16.31	16.31	90.31	1,299.90	1,267.63	32.27	40.283	0		
8,400.00	7,094.00	8,405.90	7,094.00	16.76	16.77	90.31	1,299.90	1,266.71	33.18	39.172	0		
8,500.00	7,094.00	8,505.90	7,094.00	17.24	17.24	90.31	1,299.90	1,265.76	34.13	38.082	0		
8,600.00	7,094.00	8,605.90	7,094.00	17.72	17.73	90.31	1,299.90	1,264.78	35.11	37.020	0		
8,700.00	7,094.00	8,705.90	7,094.00	18.22	18.23	90.31	1,299.90	1,263.77	36.12	35.987	0		
8,800.00	7,094.00	8,805.90	7,094.00	18.74	18.74	90.31	1,299.90	1,262.74	37.16	34.985	0		
8,900.00	7,094.00	8,905.90	7,094.00	19.26	19.27	90.31	1,299.90	1,261.68	38.21	34.016	0		
9,000.00	7,094.00	9,005.90	7,094.00	19.80	19.80	90.31	1,299.90	1,260.60	39.29	33.082	0		
9,100.00	7,094.00	9,105.90	7,094.00	20.34	20.35	90.31	1,299.90	1,259.50	40.39	32.181	0		
9,200.00	7,094.00	9,205.90	7,094.00	20.90	20.91	90.31	1,299.90	1,258.38	41.51	31.314	0		

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision		
9,300.00	7,094.00	9,305.90	7,094.00	21.46	21.47	90.31	1,299.90	1,257.25	42.65	30.480	0			
9,400.00	7,094.00	9,405.90	7,094.00	22.04	22.04	90.31	1,299.90	1,256.10	43.80	29.679	0			
9,500.00	7,094.00	9,505.90	7,094.00	22.62	22.62	90.31	1,299.90	1,254.93	44.97	28.909	0			
9,600.00	7,094.00	9,605.90	7,094.00	23.20	23.21	90.31	1,299.90	1,253.75	46.14	28.170	0			
9,700.00	7,094.00	9,705.90	7,094.00	23.80	23.80	90.31	1,299.90	1,252.56	47.34	27.461	0			
9,800.00	7,094.00	9,805.90	7,094.00	24.40	24.40	90.31	1,299.90	1,251.36	48.54	26.780	0			
9,900.00	7,094.00	9,905.90	7,094.00	25.00	25.00	90.31	1,299.90	1,250.14	49.75	26.126	0			
10,000.00	7,094.00	10,005.90	7,094.00	25.61	25.61	90.31	1,299.90	1,248.92	50.98	25.499	0			
10,100.00	7,094.00	10,105.90	7,094.00	26.22	26.23	90.31	1,299.90	1,247.68	52.21	24.897	0			
10,200.00	7,094.00	10,205.90	7,094.00	26.84	26.85	90.31	1,299.90	1,246.44	53.45	24.318	0			
10,300.00	7,094.00	10,305.90	7,094.00	27.46	27.47	90.31	1,299.90	1,245.19	54.70	23.763	0			
10,400.00	7,094.00	10,405.90	7,094.00	28.09	28.10	90.31	1,299.90	1,243.94	55.96	23.229	0			
10,500.00	7,094.00	10,505.90	7,094.00	28.72	28.73	90.31	1,299.90	1,242.67	57.22	22.716	0			
10,600.00	7,094.00	10,605.90	7,094.00	29.35	29.36	90.31	1,299.90	1,241.40	58.50	22.222	0			
10,700.00	7,094.00	10,705.90	7,094.00	29.99	29.99	90.31	1,299.90	1,240.12	59.77	21.748	0			
10,800.00	7,094.00	10,805.90	7,094.00	30.63	30.63	90.31	1,299.90	1,238.84	61.05	21.291	0			
10,900.00	7,094.00	10,905.90	7,094.00	31.27	31.28	90.31	1,299.90	1,237.55	62.34	20.851	0			
11,000.00	7,094.00	11,005.90	7,094.00	31.91	31.92	90.31	1,299.90	1,236.26	63.64	20.427	0			
11,100.00	7,094.00	11,105.90	7,094.00	32.56	32.57	90.31	1,299.90	1,234.96	64.93	20.019	0			
11,200.00	7,094.00	11,205.90	7,094.00	33.21	33.22	90.31	1,299.90	1,233.66	66.24	19.625	0			
11,300.00	7,094.00	11,305.90	7,094.00	33.86	33.87	90.31	1,299.90	1,232.35	67.54	19.246	0			
11,400.00	7,094.00	11,405.90	7,094.00	34.52	34.52	90.31	1,299.90	1,231.04	68.85	18.879	0			
11,500.00	7,094.00	11,505.90	7,094.00	35.17	35.18	90.31	1,299.90	1,229.73	70.17	18.526	0			
11,600.00	7,094.00	11,605.90	7,094.00	35.83	35.83	90.31	1,299.90	1,228.41	71.48	18.184	0			
11,700.00	7,094.00	11,705.90	7,094.00	36.49	36.49	90.31	1,299.90	1,227.09	72.81	17.854	0			
11,800.00	7,094.00	11,805.90	7,094.00	37.15	37.15	90.31	1,299.90	1,225.77	74.13	17.535	0			
11,900.00	7,094.00	11,905.90	7,094.00	37.81	37.82	90.31	1,299.90	1,224.44	75.46	17.227	0			
12,000.00	7,094.00	12,005.90	7,094.00	38.47	38.48	90.31	1,299.90	1,223.11	76.79	16.929	0			
12,100.00	7,094.00	12,105.90	7,094.00	39.14	39.15	90.31	1,299.90	1,221.78	78.12	16.640	0			
12,200.00	7,094.00	12,205.90	7,094.00	39.80	39.81	90.31	1,299.90	1,220.44	79.46	16.360	0			
12,300.00	7,094.00	12,305.90	7,094.00	40.47	40.48	90.31	1,299.90	1,219.10	80.79	16.089	0			
12,400.00	7,094.00	12,405.90	7,094.00	41.14	41.15	90.31	1,299.90	1,217.76	82.13	15.827	0			
12,500.00	7,094.00	12,505.90	7,094.00	41.81	41.82	90.31	1,299.90	1,216.42	83.48	15.572	0			
12,600.00	7,094.00	12,605.90	7,094.00	42.48	42.49	90.31	1,299.90	1,215.08	84.82	15.325	0			
12,700.00	7,094.00	12,705.90	7,094.00	43.15	43.16	90.31	1,299.90	1,213.73	86.17	15.086	0			
12,800.00	7,094.00	12,805.90	7,094.00	43.83	43.83	90.31	1,299.90	1,212.38	87.51	14.853	0			
12,900.00	7,094.00	12,905.90	7,094.00	44.50	44.51	90.31	1,299.90	1,211.03	88.86	14.628	0			
13,000.00	7,094.00	13,005.90	7,094.00	45.18	45.18	90.31	1,299.90	1,209.68	90.22	14.409	0			
13,100.00	7,094.00	13,105.90	7,094.00	45.85	45.86	90.31	1,299.90	1,208.33	91.57	14.196	0			
13,200.00	7,094.00	13,205.90	7,094.00	46.53	46.54	90.31	1,299.90	1,206.97	92.93	13.989	0			
13,300.00	7,094.00	13,305.90	7,094.00	47.21	47.21	90.31	1,299.90	1,205.61	94.28	13.787	0			
13,400.00	7,094.00	13,405.90	7,094.00	47.88	47.89	90.31	1,299.90	1,204.26	95.64	13.592	0			
13,500.00	7,094.00	13,505.90	7,094.00	48.56	48.57	90.31	1,299.90	1,202.90	97.00	13.401	0			
13,600.00	7,094.00	13,605.90	7,094.00	49.24	49.25	90.31	1,299.90	1,201.53	98.36	13.216	0			
13,700.00	7,094.00	13,705.90	7,094.00	49.92	49.93	90.31	1,299.90	1,200.17	99.72	13.035	0			
13,800.00	7,094.00	13,805.90	7,094.00	50.60	50.61	90.31	1,299.90	1,198.81	101.09	12.859	0			
13,900.00	7,094.00	13,905.90	7,094.00	51.28	51.29	90.31	1,299.90	1,197.44	102.45	12.688	0			
14,000.00	7,094.00	14,005.90	7,094.00	51.97	51.97	90.31	1,299.90	1,196.08	103.82	12.521	0			
14,100.00	7,094.00	14,105.90	7,094.00	52.65	52.66	90.31	1,299.90	1,194.71	105.18	12.358	0			
14,200.00	7,094.00	14,205.90	7,094.00	53.33	53.34	90.31	1,299.90	1,193.34	106.55	12.200	0			
14,300.00	7,094.00	14,305.90	7,094.00	54.02	54.02	90.31	1,299.90	1,191.98	107.92	12.045	0			
14,400.00	7,094.00	14,405.90	7,094.00	54.70	54.71	90.31	1,299.90	1,190.61	109.29	11.894	0			
14,500.00	7,094.00	14,505.90	7,094.00	55.39	55.39	90.31	1,299.90	1,189.24	110.66	11.747	0			
14,600.00	7,094.00	14,605.90	7,094.00	56.07	56.08	90.31	1,299.90	1,187.86	112.03	11.603	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
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design Sec.28-T07N-R67W - Nelson Farm #8 - Original Hole - Rev 0													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		
14,700.00	7,094.00	14,705.90	7,094.00	56.76	56.76	90.31	1,299.90	1,186.49	113.40	11.463	0			
14,800.00	7,094.00	14,805.94	7,094.00	57.44	57.45	90.31	1,299.89	1,185.12	114.78	11.325	0			
14,816.62	7,094.00	14,822.57	7,094.00	57.56	57.56	90.31	1,299.89	1,184.61	115.29	11.275	0			
14,888.41	7,094.00	14,894.36	7,094.00	58.05	58.06	90.31	1,299.90	1,183.90	115.99	11.207	0		SF	



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Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 usft
Survey Program: 0-Pathfinder												Offset Well Error:	0.00 usft
Reference		Offset		Semi Major Axis		Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	
0.00	0.00	0.00	0.00	0.00	0.00	-179.73	196.17				0		
100.00	100.00	92.00	92.00	0.15	0.13	-179.73	196.01	195.73	0.28	696.343	0		
200.00	200.00	192.00	192.00	0.32	0.31	-179.73	196.01	195.38	0.63	311.962	0		
300.00	300.00	292.00	292.00	0.50	0.48	-179.73	196.01	195.03	0.98	200.547	0		
400.00	400.00	392.00	392.00	0.67	0.66	-179.73	196.01	194.69	1.33	147.771	0		
500.00	500.00	492.00	492.00	0.84	0.83	-179.73	196.01	194.34	1.68	116.986	0		
600.00	600.00	592.00	592.00	1.02	1.01	-179.73	196.01	193.99	2.02	96.816	0		
700.00	700.00	692.00	692.00	1.19	1.18	-179.73	196.01	193.64	2.37	82.578	0		
800.00	799.98	791.98	791.98	1.37	1.35	-134.52	197.23	194.51	2.72	72.445	0		CC, ES
900.00	899.84	886.85	886.83	1.54	1.52	-135.24	202.07	199.01	3.06	65.987	0		
1,000.00	999.45	980.77	980.65	1.72	1.68	-135.98	212.10	208.70	3.40	62.369	0		
1,100.00	1,098.70	1,073.82	1,073.40	1.90	1.85	-136.68	227.29	223.55	3.74	60.797	0		
1,145.64	1,143.85	1,115.90	1,115.26	1.98	1.92	-136.97	235.92	232.03	3.89	60.615	0		
1,200.00	1,197.55	1,165.73	1,164.73	2.08	2.01	-137.37	247.20	243.12	4.08	60.616	0		
1,300.00	1,296.34	1,256.66	1,254.73	2.27	2.18	-137.71	269.86	265.44	4.42	61.055	0		
1,400.00	1,395.13	1,346.52	1,343.21	2.45	2.34	-137.64	294.93	290.16	4.76	61.947	0		
1,500.00	1,493.93	1,438.83	1,433.62	2.64	2.52	-137.28	322.10	317.00	5.11	63.063	0		
1,600.00	1,592.72	1,534.94	1,527.68	2.83	2.70	-136.93	349.62	344.16	5.46	64.007	0		
1,700.00	1,691.51	1,631.06	1,621.74	3.01	2.89	-136.63	377.16	371.34	5.82	64.824	0		
1,800.00	1,790.30	1,727.18	1,715.80	3.20	3.08	-136.36	404.70	398.52	6.18	65.537	0		
1,900.00	1,889.10	1,823.30	1,809.86	3.39	3.26	-136.13	432.24	425.71	6.53	66.165	0		
2,000.00	1,987.89	1,919.41	1,903.93	3.58	3.45	-135.93	459.80	452.91	6.89	66.721	0		
2,100.00	2,086.68	2,015.53	1,997.99	3.77	3.64	-135.76	487.35	480.10	7.25	67.218	0		
2,200.00	2,185.47	2,111.65	2,092.05	3.96	3.83	-135.60	514.91	507.30	7.61	67.664	0		
2,300.00	2,284.27	2,207.77	2,186.11	4.15	4.03	-135.45	542.48	534.51	7.97	68.067	0		
2,400.00	2,383.06	2,303.88	2,280.17	4.34	4.22	-135.32	570.05	561.72	8.33	68.432	0		
2,500.00	2,481.85	2,400.00	2,374.23	4.53	4.41	-135.21	597.62	588.93	8.69	68.764	0		
2,600.00	2,580.64	2,496.12	2,468.29	4.72	4.60	-135.10	625.19	616.14	9.05	69.068	0		
2,700.00	2,679.44	2,592.24	2,562.35	4.91	4.80	-135.00	652.76	643.35	9.41	69.347	0		
2,800.00	2,778.23	2,688.35	2,656.42	5.11	4.99	-134.91	680.34	670.56	9.77	69.604	0		
2,900.00	2,877.02	2,784.47	2,750.48	5.30	5.18	-134.83	707.91	697.78	10.14	69.841	0		
3,000.00	2,975.81	2,880.59	2,844.54	5.49	5.38	-134.75	735.49	724.99	10.50	70.061	0		
3,100.00	3,074.61	2,976.71	2,938.60	5.68	5.57	-134.68	763.07	752.21	10.86	70.266	0		
3,200.00	3,173.40	3,072.82	3,032.66	5.87	5.77	-134.61	790.65	779.43	11.22	70.456	0		
3,300.00	3,272.19	3,168.94	3,126.72	6.06	5.96	-134.55	818.23	806.65	11.58	70.634	0		
3,400.00	3,370.98	3,265.06	3,220.78	6.25	6.16	-134.49	845.81	833.87	11.95	70.800	0		
3,500.00	3,469.78	3,361.18	3,314.84	6.45	6.35	-134.44	873.40	861.09	12.31	70.956	0		
3,600.00	3,568.57	3,457.30	3,408.90	6.64	6.55	-134.39	900.98	888.31	12.67	71.103	0		
3,700.00	3,667.36	3,553.41	3,502.97	6.83	6.74	-134.34	928.56	915.53	13.03	71.241	0		
3,800.00	3,766.15	3,649.53	3,597.03	7.02	6.94	-134.30	956.15	942.75	13.40	71.371	0		
3,900.00	3,864.95	3,745.65	3,691.09	7.21	7.13	-134.25	983.73	969.97	13.76	71.494	0		
4,000.00	3,963.74	3,841.77	3,785.15	7.40	7.33	-134.21	1,011.32	997.20	14.12	71.610	0		
4,100.00	4,062.53	3,937.88	3,879.21	7.60	7.53	-134.17	1,038.91	1,024.42	14.49	71.721	0		
4,200.00	4,161.32	4,034.00	3,973.27	7.79	7.72	-134.14	1,066.49	1,051.64	14.85	71.825	0		
4,300.00	4,260.12	4,130.12	4,067.33	7.98	7.92	-134.10	1,094.08	1,078.87	15.21	71.924	0		
4,400.00	4,358.91	4,226.24	4,161.39	8.17	8.11	-134.07	1,121.67	1,106.09	15.57	72.019	0		
4,500.00	4,457.70	4,322.35	4,255.46	8.36	8.31	-134.04	1,149.25	1,133.32	15.94	72.109	0		
4,600.00	4,556.49	4,418.47	4,349.52	8.56	8.51	-134.01	1,176.84	1,160.54	16.30	72.195	0		
4,700.00	4,655.29	4,514.59	4,443.58	8.75	8.70	-133.98	1,204.43	1,187.76	16.66	72.277	0		
4,800.00	4,754.08	4,610.71	4,537.64	8.94	8.90	-133.96	1,232.02	1,214.99	17.03	72.355	0		
4,900.00	4,852.87	4,706.82	4,631.70	9.13	9.09	-133.93	1,259.61	1,242.21	17.39	72.430	0		
5,000.00	4,951.66	4,802.94	4,725.76	9.33	9.29	-133.91	1,287.19	1,269.44	17.75	72.501	0		
5,100.00	5,050.46	4,899.06	4,819.82	9.52	9.49	-133.88	1,314.78	1,296.67	18.12	72.570	0		
5,200.00	5,149.25	4,995.18	4,913.88	9.71	9.68	-133.86	1,342.37	1,323.89	18.48	72.636	0		

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Sec.28-T07N-R67W - Nelson Farm #9 - Original Hole - Rev 0	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	5,248.04	5,091.29	5,007.94	9.90	9.88	-133.84	1,369.96	1,351.12	18.84	72.699	0				
5,400.00	5,346.83	5,187.41	5,102.01	10.09	10.08	-133.82	1,397.55	1,378.34	19.21	72.760	0				
5,500.00	5,445.63	5,283.53	5,196.07	10.29	10.27	-133.80	1,425.14	1,405.57	19.57	72.818	0				
5,600.00	5,544.42	5,379.65	5,290.13	10.48	10.47	-133.78	1,452.73	1,432.80	19.93	72.874	0				
5,700.00	5,643.21	5,475.76	5,384.19	10.67	10.67	-133.76	1,480.32	1,460.02	20.30	72.928	0				
5,800.00	5,742.00	5,571.88	5,478.25	10.86	10.86	-133.74	1,507.91	1,487.25	20.66	72.980	0				
5,900.00	5,840.80	5,668.00	5,572.31	11.06	11.06	-133.72	1,535.50	1,514.47	21.03	73.031	0				
5,973.62	5,913.53	5,738.77	5,641.56	11.20	11.20	-133.71	1,555.81	1,534.52	21.29	73.067	0				
6,000.00	5,939.61	5,764.14	5,666.39	11.25	11.26	-133.81	1,563.01	1,541.61	21.40	73.040	0				
6,100.00	6,038.77	5,860.72	5,760.91	11.43	11.45	-134.11	1,588.82	1,567.03	21.79	72.903	0				
6,200.00	6,138.33	6,035.90	5,933.26	11.61	11.79	-134.20	1,610.11	1,587.79	22.32	72.139	0				
6,300.00	6,238.15	6,221.67	6,117.75	11.78	12.13	-134.25	1,623.80	1,600.96	22.84	71.087	0				
6,400.00	6,338.11	6,410.04	6,305.84	11.94	12.44	-134.26	1,629.70	1,606.35	23.34	69.810	0				
6,419.27	6,357.38	6,446.46	6,342.26	11.97	12.49	-179.82	1,629.93	1,606.12	23.81	68.449	0				
6,500.00	6,438.11	6,534.32	6,430.11	12.11	12.63	-179.82	1,629.95	1,605.86	24.09	67.663	0				
6,519.27	6,457.38	6,553.58	6,449.38	12.14	12.66	-179.82	1,629.95	1,605.80	24.15	67.486	0				
6,550.00	6,488.10	6,584.51	6,480.30	12.18	12.71	90.19	1,629.95	1,606.06	23.88	68.244	0				
6,600.00	6,537.90	6,634.97	6,530.60	12.26	12.78	90.22	1,629.95	1,605.92	24.04	67.814	0				
6,650.00	6,587.20	6,685.48	6,580.49	12.33	12.85	90.24	1,629.95	1,605.78	24.18	67.416	0				
6,700.00	6,635.69	6,736.03	6,629.65	12.39	12.91	90.25	1,629.96	1,605.65	24.31	67.049	0				
6,750.00	6,683.09	6,786.62	6,677.75	12.45	12.97	90.27	1,629.96	1,605.52	24.43	66.706	0				
6,800.00	6,729.10	6,837.24	6,724.50	12.51	13.03	90.28	1,629.96	1,605.41	24.55	66.386	0				
6,850.00	6,773.43	6,887.90	6,769.59	12.56	13.08	90.30	1,629.96	1,605.30	24.67	66.082	0				
6,900.00	6,815.82	6,938.59	6,812.73	12.62	13.13	90.31	1,629.96	1,605.19	24.78	65.789	0				
6,950.00	6,855.99	6,989.30	6,853.64	12.67	13.18	90.32	1,629.96	1,605.08	24.88	65.501	0				
7,000.00	6,893.71	7,040.03	6,892.04	12.72	13.24	90.33	1,629.97	1,604.97	24.99	65.212	0				
7,050.00	6,928.74	7,090.78	6,927.70	12.78	13.29	90.33	1,629.97	1,604.86	25.11	64.916	0				
7,100.00	6,960.86	7,141.53	6,960.38	12.83	13.34	90.33	1,629.97	1,604.74	25.23	64.605	0				
7,150.00	6,989.87	7,192.29	6,989.86	12.89	13.40	90.34	1,629.97	1,604.61	25.36	64.275	0				
7,200.00	7,015.61	7,243.05	7,015.96	12.95	13.46	90.33	1,629.97	1,604.47	25.50	63.919	0				
7,250.00	7,037.90	7,293.81	7,038.51	13.02	13.52	90.33	1,629.97	1,604.31	25.66	63.533	0				
7,300.00	7,056.61	7,344.55	7,057.36	13.09	13.59	90.33	1,629.97	1,604.14	25.83	63.114	0				
7,350.00	7,071.63	7,395.29	7,072.40	13.17	13.67	90.32	1,629.96	1,603.95	26.01	62.660	0				
7,400.00	7,082.86	7,446.00	7,083.54	13.25	13.76	90.31	1,629.96	1,603.75	26.22	62.170	0				
7,450.00	7,090.24	7,496.69	7,090.69	13.35	13.85	90.30	1,629.96	1,603.52	26.44	61.647	0				
7,500.00	7,093.71	7,547.35	7,093.84	13.46	13.96	90.29	1,629.96	1,603.28	26.68	61.092	0				
7,519.27	7,094.00	7,566.80	7,094.00	13.51	14.00	90.28	1,629.96	1,603.18	26.78	60.871	0				
7,600.00	7,094.00	7,647.53	7,094.00	13.72	14.19	90.28	1,629.96	1,602.75	27.21	59.903	0				
7,700.00	7,094.00	7,747.53	7,094.00	14.01	14.46	90.28	1,629.96	1,602.16	27.80	58.639	0				
7,800.00	7,094.00	7,847.53	7,094.00	14.33	14.76	90.28	1,629.96	1,601.52	28.44	57.311	0				
7,900.00	7,094.00	7,947.53	7,094.00	14.68	15.10	90.28	1,629.96	1,600.82	29.14	55.938	0				
8,000.00	7,094.00	8,047.53	7,094.00	15.06	15.46	90.28	1,629.96	1,600.07	29.89	54.538	0				
8,100.00	7,094.00	8,147.53	7,094.00	15.45	15.85	90.28	1,629.96	1,599.28	30.68	53.126	0				
8,200.00	7,094.00	8,247.53	7,094.00	15.87	16.26	90.28	1,629.96	1,598.44	31.52	51.715	0				
8,300.00	7,094.00	8,347.53	7,094.00	16.31	16.69	90.28	1,629.96	1,597.56	32.39	50.316	0				
8,400.00	7,094.00	8,447.53	7,094.00	16.76	17.13	90.28	1,629.96	1,596.65	33.31	48.936	0				
8,500.00	7,094.00	8,547.53	7,094.00	17.24	17.59	90.28	1,629.96	1,595.70	34.25	47.584	0				
8,600.00	7,094.00	8,647.53	7,094.00	17.72	18.07	90.28	1,629.96	1,594.73	35.23	46.264	0				
8,700.00	7,094.00	8,747.53	7,094.00	18.22	18.57	90.28	1,629.96	1,593.72	36.24	44.980	0				
8,800.00	7,094.00	8,847.53	7,094.00	18.74	19.07	90.28	1,629.96	1,592.69	37.27	43.735	0				
8,900.00	7,094.00	8,947.53	7,094.00	19.26	19.59	90.28	1,629.96	1,591.63	38.32	42.531	0				
9,000.00	7,094.00	9,047.53	7,094.00	19.80	20.12	90.28	1,629.96	1,590.56	39.40	41.368	0				
9,100.00	7,094.00	9,147.53	7,094.00	20.34	20.66	90.28	1,629.96	1,589.46	40.50	40.246	0				
9,200.00	7,094.00	9,247.53	7,094.00	20.90	21.21	90.28	1,629.96	1,588.34	41.62	39.167	0				

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



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design													Sec.28-T07N-R67W - Nelson Farm #9 - Original Hole - Rev 0		Offset Site Error:		0.00 usft
Survey Program: 0-Pathfinder													Offset Well Error:		0.00 usft		
Reference		Offset		Semi Major Axis		Distance							Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision					
9,300.00	7,094.00	9,347.53	7,094.00	21.46	21.76	90.28	1,629.96	1,587.21	42.75	38.128	0						
9,400.00	7,094.00	9,447.53	7,094.00	22.04	22.33	90.28	1,629.96	1,586.06	43.90	37.130	0						
9,500.00	7,094.00	9,547.53	7,094.00	22.62	22.90	90.28	1,629.96	1,584.90	45.06	36.171	0						
9,600.00	7,094.00	9,647.53	7,094.00	23.20	23.48	90.28	1,629.96	1,583.72	46.24	35.250	0						
9,700.00	7,094.00	9,747.53	7,094.00	23.80	24.07	90.28	1,629.96	1,582.53	47.43	34.365	0						
9,800.00	7,094.00	9,847.53	7,094.00	24.40	24.66	90.28	1,629.96	1,581.33	48.63	33.516	0						
9,900.00	7,094.00	9,947.53	7,094.00	25.00	25.26	90.28	1,629.96	1,580.11	49.84	32.701	0						
10,000.00	7,094.00	10,047.53	7,094.00	25.61	25.87	90.28	1,629.96	1,578.89	51.07	31.918	0						
10,100.00	7,094.00	10,147.53	7,094.00	26.22	26.48	90.28	1,629.96	1,577.66	52.30	31.167	0						
10,200.00	7,094.00	10,247.53	7,094.00	26.84	27.09	90.28	1,629.96	1,576.42	53.54	30.444	0						
10,300.00	7,094.00	10,347.53	7,094.00	27.46	27.71	90.28	1,629.96	1,575.17	54.79	29.751	0						
10,400.00	7,094.00	10,447.53	7,094.00	28.09	28.33	90.28	1,629.96	1,573.92	56.04	29.084	0						
10,500.00	7,094.00	10,547.53	7,094.00	28.72	28.96	90.28	1,629.96	1,572.65	57.31	28.443	0						
10,600.00	7,094.00	10,647.53	7,094.00	29.35	29.58	90.28	1,629.96	1,571.38	58.58	27.827	0						
10,700.00	7,094.00	10,747.53	7,094.00	29.99	30.22	90.28	1,629.96	1,570.11	59.85	27.234	0						
10,800.00	7,094.00	10,847.53	7,094.00	30.63	30.85	90.28	1,629.96	1,568.83	61.13	26.663	0						
10,900.00	7,094.00	10,947.53	7,094.00	31.27	31.49	90.28	1,629.96	1,567.54	62.42	26.113	0						
11,000.00	7,094.00	11,047.53	7,094.00	31.91	32.13	90.28	1,629.96	1,566.25	63.71	25.583	0						
11,100.00	7,094.00	11,147.53	7,094.00	32.56	32.77	90.28	1,629.96	1,564.95	65.01	25.073	0						
11,200.00	7,094.00	11,247.53	7,094.00	33.21	33.42	90.28	1,629.96	1,563.65	66.31	24.581	0						
11,300.00	7,094.00	11,347.53	7,094.00	33.86	34.07	90.28	1,629.96	1,562.34	67.61	24.107	0						
11,400.00	7,094.00	11,447.53	7,094.00	34.52	34.72	90.28	1,629.96	1,561.03	68.92	23.649	0						
11,500.00	7,094.00	11,547.53	7,094.00	35.17	35.37	90.28	1,629.96	1,559.72	70.24	23.206	0						
11,600.00	7,094.00	11,647.53	7,094.00	35.83	36.03	90.28	1,629.96	1,558.40	71.55	22.779	0						
11,700.00	7,094.00	11,747.53	7,094.00	36.49	36.68	90.28	1,629.96	1,557.08	72.87	22.367	0						
11,800.00	7,094.00	11,847.53	7,094.00	37.15	37.34	90.28	1,629.96	1,555.76	74.20	21.968	0						
11,900.00	7,094.00	11,947.53	7,094.00	37.81	38.00	90.28	1,629.96	1,554.43	75.52	21.582	0						
12,000.00	7,094.00	12,047.53	7,094.00	38.47	38.66	90.28	1,629.96	1,553.11	76.85	21.209	0						
12,100.00	7,094.00	12,147.53	7,094.00	39.14	39.32	90.28	1,629.96	1,551.77	78.19	20.847	0						
12,200.00	7,094.00	12,247.53	7,094.00	39.80	39.99	90.28	1,629.96	1,550.44	79.52	20.497	0						
12,300.00	7,094.00	12,347.53	7,094.00	40.47	40.65	90.28	1,629.96	1,549.10	80.86	20.158	0						
12,400.00	7,094.00	12,447.53	7,094.00	41.14	41.32	90.28	1,629.96	1,547.76	82.20	19.830	0						
12,500.00	7,094.00	12,547.53	7,094.00	41.81	41.99	90.28	1,629.96	1,546.42	83.54	19.512	0						
12,600.00	7,094.00	12,647.53	7,094.00	42.48	42.65	90.28	1,629.96	1,545.08	84.88	19.203	0						
12,700.00	7,094.00	12,747.53	7,094.00	43.15	43.32	90.28	1,629.96	1,543.73	86.23	18.903	0						
12,800.00	7,094.00	12,847.53	7,094.00	43.83	43.99	90.28	1,629.96	1,542.38	87.58	18.612	0						
12,900.00	7,094.00	12,947.53	7,094.00	44.50	44.67	90.28	1,629.96	1,541.03	88.92	18.330	0						
13,000.00	7,094.00	13,047.53	7,094.00	45.18	45.34	90.28	1,629.96	1,539.68	90.28	18.055	0						
13,100.00	7,094.00	13,147.53	7,094.00	45.85	46.01	90.28	1,629.96	1,538.33	91.63	17.789	0						
13,200.00	7,094.00	13,247.53	7,094.00	46.53	46.69	90.28	1,629.96	1,536.98	92.98	17.530	0						
13,300.00	7,094.00	13,347.53	7,094.00	47.21	47.36	90.28	1,629.96	1,535.62	94.34	17.278	0						
13,400.00	7,094.00	13,447.53	7,094.00	47.88	48.04	90.28	1,629.96	1,534.26	95.70	17.032	0						
13,500.00	7,094.00	13,547.53	7,094.00	48.56	48.72	90.28	1,629.96	1,532.90	97.06	16.794	0						
13,600.00	7,094.00	13,647.53	7,094.00	49.24	49.40	90.28	1,629.96	1,531.54	98.42	16.562	0						
13,700.00	7,094.00	13,747.53	7,094.00	49.92	50.07	90.28	1,629.96	1,530.18	99.78	16.336	0						
13,800.00	7,094.00	13,847.53	7,094.00	50.60	50.75	90.28	1,629.96	1,528.82	101.14	16.116	0						
13,900.00	7,094.00	13,947.53	7,094.00	51.28	51.43	90.28	1,629.96	1,527.45	102.51	15.901	0						
14,000.00	7,094.00	14,047.53	7,094.00	51.97	52.11	90.28	1,629.96	1,526.09	103.87	15.692	0						
14,100.00	7,094.00	14,147.53	7,094.00	52.65	52.79	90.28	1,629.96	1,524.72	105.24	15.488	0						
14,200.00	7,094.00	14,247.53	7,094.00	53.33	53.48	90.28	1,629.96	1,523.35	106.60	15.290	0						
14,300.00	7,094.00	14,347.53	7,094.00	54.02	54.16	90.28	1,629.96	1,521.99	107.97	15.096	0						
14,400.00	7,094.00	14,447.53	7,094.00	54.70	54.84	90.28	1,629.96	1,520.62	109.34	14.907	0						
14,500.00	7,094.00	14,547.53	7,094.00	55.39	55.52	90.28	1,629.96	1,519.25	110.71	14.722	0						
14,600.00	7,094.00	14,647.53	7,094.00	56.07	56.21	90.28	1,629.96	1,517.88	112.08	14.542	0						

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Offset Design Sec.28-T07N-R67W - Nelson Farm #9 - Original Hole - Rev 0													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		
14,700.00	7,094.00	14,747.53	7,094.00	56.76	56.89	90.28	1,629.96	1,516.50	113.46	14.366	0			
14,800.00	7,094.00	14,847.53	7,094.00	57.44	57.58	90.28	1,629.96	1,515.13	114.83	14.195	0			
14,888.41	7,094.00	14,935.76	7,094.00	58.05	58.18	90.28	1,629.97	1,513.92	116.04	14.046	0		SF	

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 4990.00usft (Xtreme 7 - 16')

Offset Depths are relative to Offset Datum

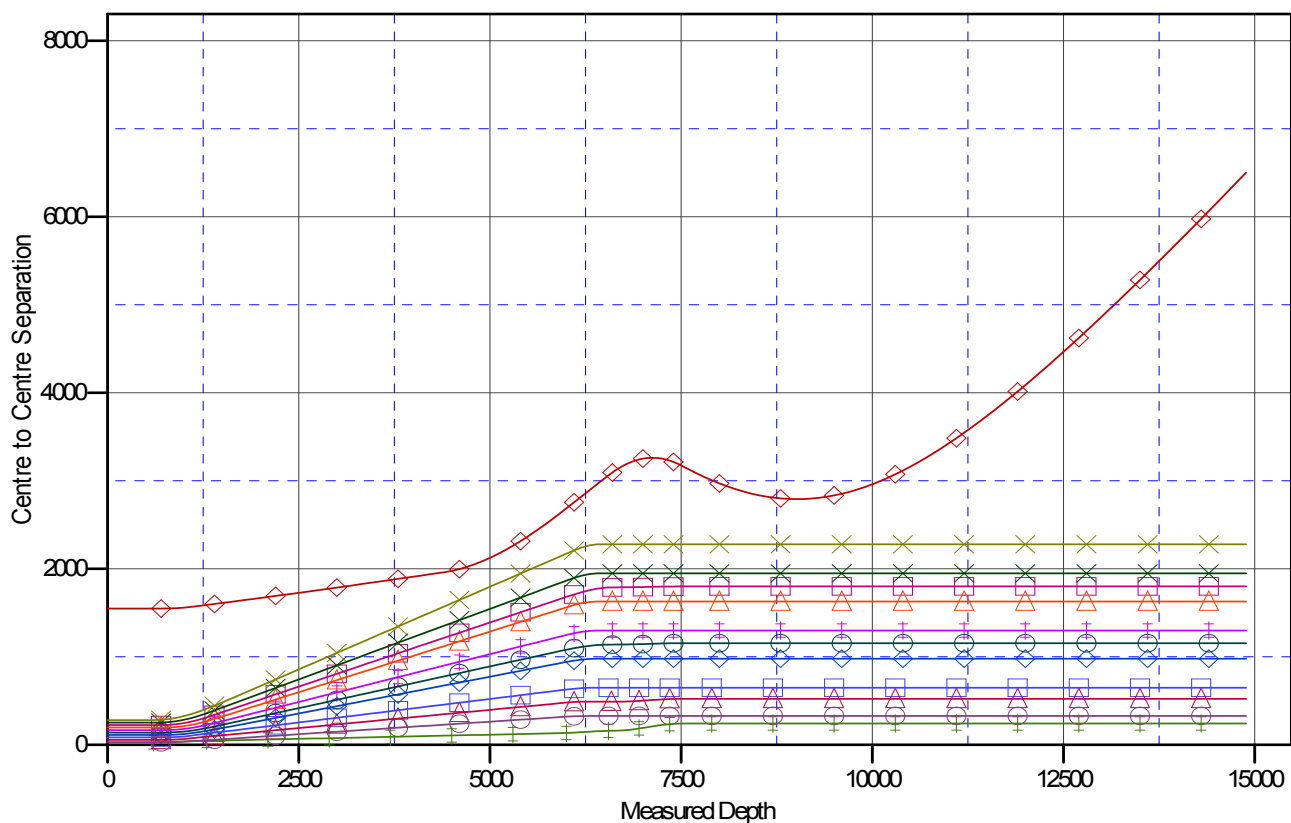
Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Nelson Farm #2

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.38°

Ladder Plot



LEGEND

- | | | |
|--|---|---|
| — Nelson Farm #1, Original Hole, Rev0 V0 | — George Nelson #1, Original Hole, Original Hole V0 | — Nelson Farm #12, Original Hole, Rev0 V0 |
| — Nelson Farm #5, Original Hole, Rev0 V0 | — Nelson Farm #8, Original Hole, Rev0 V0 | — Nelson Farm #6, Original Hole, Rev0 V0 |
| — Nelson Farm #7, Original Hole, Rev0 V0 | — Nelson Farm #10, Original Hole, Rev0 V0 | — Nelson Farm #11, Original Hole, Rev0 V0 |
| — Nelson Farm #4, Original Hole, Rev0 V0 | — Nelson Farm #3, Original Hole, Rev0 V0 | — Nelson Farm #9, Original Hole, Rev0 V0 |

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #2
Project:	Weld Co., Co	TVD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4990.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #2	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	EDM 5000.1 Single User Db
Reference Design:	Rev 0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB @ 4990.00usft (Xtreme 7 - 16')

Offset Depths are relative to Offset Datum

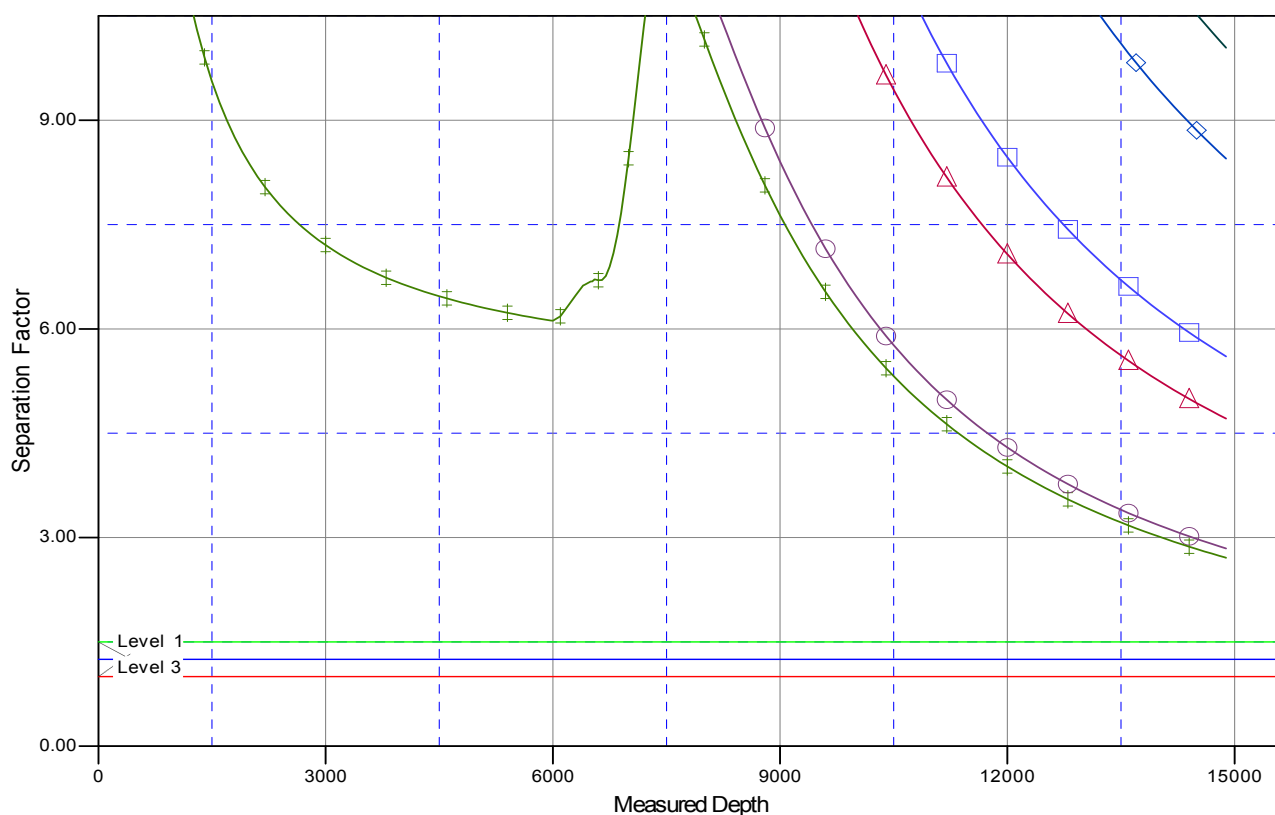
Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Nelson Farm #2

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.38°

Separation Factor Plot



LEGEND

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|--|--|--|
| <ul style="list-style-type: none"> Nelson Farm #1, Original Hole, Rev0 V0 Nelson Farm #5, Original Hole, Rev0 V0 Nelson Farm #7, Original Hole, Rev0 V0 Nelson Farm #4, Original Hole, Rev0 V0 | <ul style="list-style-type: none"> George Nelson #1, Original Hole, Original Hole V0 Nelson Farm #8, Original Hole, Rev0 V0 Nelson Farm #10, Original Hole, Rev0 V0 Nelson Farm #3, Original Hole, Rev0 V0 | <ul style="list-style-type: none"> Nelson Farm #12, Original Hole, Rev0 V0 Nelson Farm #6, Original Hole, Rev0 V0 Nelson Farm #11, Original Hole, Rev0 V0 Nelson Farm #9, Original Hole, Rev0 V0 |
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