



Extraction Oil & Gas

**Weld Co., Co
Sec.28-T07N-R67W
Nelson Farm #3**

**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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	14,867.11	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	800.00	787.00	1,550.16	1,546.08	379.311 CC, ES	
George Nelson #1 - Original Hole - Original Hole	4,500.00	4,338.00	1,948.33	1,925.50	85.326 SF	
Nelson Farm #1 - Original Hole - Rev 0	565.99	567.99	56.12	54.20	29.178 CC	
Nelson Farm #1 - Original Hole - Rev 0	600.00	601.97	56.12	54.08	27.483 ES	
Nelson Farm #1 - Original Hole - Rev 0	14,867.11	15,083.00	522.37	411.61	4.716 SF	
Nelson Farm #10 - Original Hole - Rev 0	700.00	691.00	196.01	193.64	82.637 CC, ES	
Nelson Farm #10 - Original Hole - Rev 0	14,867.11	15,137.53	1,472.75	1,357.34	12.761 SF	
Nelson Farm #11 - Original Hole - Rev 0	600.00	590.00	224.06	222.04	110.861 CC, ES	
Nelson Farm #11 - Original Hole - Rev 0	14,867.11	14,983.83	1,620.14	1,504.05	13.956 SF	
Nelson Farm #12 - Original Hole - Rev 0	500.00	489.00	252.12	250.45	150.943 CC, ES	
Nelson Farm #12 - Original Hole - Rev 0	14,867.11	15,054.83	1,950.21	1,834.04	16.787 SF	
Nelson Farm #2 - Original Hole - Rev 0	666.33	667.33	28.06	25.79	12.350 CC	
Nelson Farm #2 - Original Hole - Rev 0	700.00	700.99	28.06	25.67	11.743 ES	
Nelson Farm #2 - Original Hole - Rev 0	14,867.11	14,888.41	329.71	213.74	2.843 SF	
Nelson Farm #4 - Original Hole - Rev 0	800.00	799.00	28.05	25.31	10.256 CC, ES	
Nelson Farm #4 - Original Hole - Rev 0	14,867.11	15,045.06	244.03	153.67	2.700 SF	
Nelson Farm #5 - Original Hole - Rev 0	800.00	797.00	56.11	53.37	20.541 CC, ES	
Nelson Farm #5 - Original Hole - Rev 0	14,867.11	14,862.38	320.25	204.32	2.762 SF	
Nelson Farm #6 - Original Hole - Rev 0	800.00	796.00	84.16	81.43	30.831 CC, ES	
Nelson Farm #6 - Original Hole - Rev 0	14,867.11	14,873.12	649.95	534.01	5.606 SF	
Nelson Farm #7 - Original Hole - Rev 0	800.00	795.00	111.85	109.12	41.001 CC, ES	
Nelson Farm #7 - Original Hole - Rev 0	14,867.11	15,063.69	831.76	717.79	7.298 SF	
Nelson Farm #8 - Original Hole - Rev 0	800.00	794.00	139.90	137.17	51.317 CC, ES	
Nelson Farm #8 - Original Hole - Rev 0	14,867.11	14,894.99	970.19	854.22	8.366 SF	
Nelson Farm #9 - Original Hole - Rev 0	800.00	793.00	167.95	165.23	61.647 CC, ES	
Nelson Farm #9 - Original Hole - Rev 0	14,867.11	14,936.43	1,300.26	1,184.24	11.207 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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	87.37	1,550.22					0				
100.00	100.00	87.00	87.00	0.15	0.30	87.37	1,550.16	1,549.72	0.45	3,466.980	0					
200.00	200.00	187.00	187.00	0.32	0.65	87.37	1,550.16	1,549.20	0.97	1,602.942	0					
300.00	300.00	287.00	287.00	0.50	0.99	87.37	1,550.16	1,548.68	1.49	1,042.459	0					
400.00	400.00	387.00	387.00	0.67	1.34	87.37	1,550.16	1,548.16	2.01	772.387	0					
500.00	500.00	487.00	487.00	0.84	1.68	87.37	1,550.16	1,547.64	2.53	613.457	0					
600.00	600.00	587.00	587.00	1.02	2.03	87.37	1,550.16	1,547.12	3.05	508.771	0					
700.00	700.00	687.00	687.00	1.19	2.37	87.37	1,550.16	1,546.60	3.57	434.605	0					
800.00	800.00	787.00	787.00	1.37	2.72	87.37	1,550.16	1,546.08	4.09	379.311	0		CC, ES			
900.00	899.98	886.98	886.98	1.54	3.06	152.55	1,551.71	1,547.11	4.60	336.974	0					
1,000.00	999.84	986.84	986.84	1.72	3.41	152.59	1,556.36	1,551.24	5.12	304.075	0					
1,100.00	1,099.45	1,086.45	1,086.45	1.90	3.75	152.67	1,564.11	1,558.48	5.63	278.002	0					
1,152.76	1,151.87	1,138.87	1,138.87	1.99	3.93	152.72	1,569.44	1,563.55	5.89	266.388	0					
1,200.00	1,198.75	1,185.75	1,185.75	2.07	4.10	152.82	1,574.61	1,568.47	6.14	256.615	0					
1,300.00	1,297.99	1,284.99	1,284.99	2.25	4.44	153.02	1,585.56	1,578.91	6.65	238.289	0					
1,400.00	1,397.24	1,384.24	1,384.24	2.43	4.78	153.22	1,596.53	1,589.36	7.17	222.604	0					
1,500.00	1,496.48	1,483.48	1,483.48	2.62	5.12	153.42	1,607.53	1,599.84	7.69	209.029	0					
1,600.00	1,595.72	1,582.72	1,582.72	2.80	5.47	153.61	1,618.54	1,610.33	8.21	197.167	0					
1,700.00	1,694.97	1,681.97	1,681.97	2.98	5.81	153.80	1,629.56	1,620.84	8.73	186.714	0					
1,800.00	1,794.21	1,781.21	1,781.21	3.16	6.15	153.99	1,640.61	1,631.36	9.25	177.434	0					
1,900.00	1,893.45	1,880.45	1,880.45	3.35	6.50	154.18	1,651.67	1,641.91	9.77	169.140	0					
2,000.00	1,992.69	1,979.69	1,979.69	3.53	6.84	154.36	1,662.75	1,652.47	10.28	161.684	0					
2,100.00	2,091.94	2,078.94	2,078.94	3.71	7.18	154.54	1,673.85	1,663.05	10.80	154.945	0					
2,200.00	2,191.18	2,178.18	2,178.18	3.90	7.52	154.72	1,684.96	1,673.64	11.32	148.825	0					
2,300.00	2,290.42	2,277.42	2,277.42	4.08	7.87	154.90	1,696.09	1,684.25	11.84	143.243	0					
2,400.00	2,389.67	2,376.67	2,376.67	4.27	8.21	155.07	1,707.24	1,694.88	12.36	138.130	0					
2,500.00	2,488.91	2,475.91	2,475.91	4.45	8.55	155.25	1,718.40	1,705.52	12.88	133.431	0					
2,600.00	2,588.15	2,575.15	2,575.15	4.64	8.90	155.42	1,729.58	1,716.18	13.40	129.097	0					
2,700.00	2,687.39	2,674.39	2,674.39	4.82	9.24	155.58	1,740.77	1,726.85	13.92	125.087	0					
2,800.00	2,786.64	2,773.64	2,773.64	5.01	9.58	155.75	1,751.97	1,737.54	14.44	121.366	0					
2,900.00	2,885.88	2,872.88	2,872.88	5.19	9.92	155.91	1,763.19	1,748.24	14.95	117.905	0					
3,000.00	2,985.12	2,972.12	2,972.12	5.38	10.27	156.08	1,774.43	1,758.95	15.47	114.677	0					
3,100.00	3,084.37	3,071.37	3,071.37	5.56	10.61	156.23	1,785.67	1,769.68	15.99	111.660	0					
3,200.00	3,183.61	3,170.61	3,170.61	5.75	10.95	156.39	1,796.94	1,780.43	16.51	108.833	0					
3,300.00	3,282.85	3,269.85	3,269.85	5.93	11.29	156.55	1,808.21	1,791.18	17.03	106.179	0					
3,400.00	3,382.09	3,369.09	3,369.09	6.12	11.64	156.70	1,819.50	1,801.95	17.55	103.683	0					
3,500.00	3,481.34	3,468.34	3,468.34	6.30	11.98	156.85	1,830.80	1,812.73	18.07	101.331	0					
3,600.00	3,580.58	3,567.58	3,567.58	6.49	12.32	157.00	1,842.11	1,823.53	18.59	99.111	0					
3,700.00	3,679.82	3,666.82	3,666.82	6.67	12.67	157.15	1,853.44	1,834.33	19.11	97.013	0					
3,800.00	3,779.07	3,766.07	3,766.07	6.86	13.01	157.30	1,864.78	1,845.15	19.62	95.026	0					
3,900.00	3,878.31	3,865.31	3,865.31	7.05	13.35	157.44	1,876.13	1,855.98	20.14	93.142	0					
4,000.00	3,977.55	3,964.55	3,964.55	7.23	13.69	157.59	1,887.49	1,866.83	20.66	91.353	0					
4,100.00	4,076.79	4,063.79	4,063.79	7.42	14.04	157.73	1,898.86	1,877.68	21.18	89.653	0					
4,200.00	4,176.04	4,163.04	4,163.04	7.60	14.38	157.87	1,910.24	1,888.54	21.70	88.035	0					
4,300.00	4,275.28	4,262.28	4,262.28	7.79	14.72	158.00	1,921.64	1,899.42	22.22	86.492	0					
4,400.00	4,374.52	4,338.00	4,338.00	7.97	14.98	158.11	1,933.19	1,910.53	22.66	85.330	0					
4,500.00	4,473.77	4,338.00	4,338.00	8.16	14.98	158.11	1,948.33	1,925.50	22.83	85.326	0		SF			
4,600.00	4,573.01	4,338.00	4,338.00	8.34	14.98	158.11	1,968.45	1,945.43	23.01	85.538	0					
4,700.00	4,672.25	4,338.00	4,338.00	8.53	14.98	158.11	1,993.38	1,970.19	23.19	85.954	0					
4,800.00	4,771.49	4,338.00	4,338.00	8.72	14.98	158.11	2,022.96	1,999.59	23.37	86.563	0					
4,900.00	4,870.74	4,338.00	4,338.00	8.90	14.98	158.11	2,056.97	2,033.43	23.55	87.351	0					
5,000.00	4,969.98	4,338.00	4,338.00	9.09	14.98	158.11	2,095.22	2,071.49	23.73	88.305	0					
5,100.00	5,069.22	4,338.00	4,338.00	9.27	14.98	158.11	2,137.46	2,113.55	23.91	89.412	0					
5,200.00	5,168.47	4,338.00	4,338.00	9.46	14.98	158.11	2,183.46	2,159.38	24.08	90.660	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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				
5,300.00	5,267.71	4,338.00	4,338.00	9.64	14.98	158.11	2,233.00	2,208.74	24.26	92.034	0					
5,400.00	5,366.95	4,338.00	4,338.00	9.83	14.98	158.11	2,285.84	2,261.40	24.44	93.523	0					
5,500.00	5,466.19	4,338.00	4,338.00	10.02	14.98	158.11	2,341.76	2,317.14	24.62	95.116	0					
5,600.00	5,565.44	4,338.00	4,338.00	10.20	14.98	158.11	2,400.55	2,375.75	24.80	96.802	0					
5,700.00	5,664.68	4,338.00	4,338.00	10.39	14.98	158.11	2,462.00	2,437.02	24.98	98.570	0					
5,800.00	5,763.92	4,338.00	4,338.00	10.57	14.98	158.11	2,525.91	2,500.75	25.16	100.411	0					
5,900.00	5,863.17	4,338.00	4,338.00	10.76	14.98	158.11	2,592.10	2,566.77	25.33	102.315	0					
6,000.00	5,962.41	4,338.00	4,338.00	10.95	14.98	158.11	2,660.41	2,634.90	25.51	104.276	0					
6,043.43	6,005.51	4,338.00	4,338.00	11.03	14.98	158.11	2,690.70	2,665.11	25.59	105.144	0					
6,100.00	6,061.72	4,338.00	4,338.00	11.13	14.98	158.52	2,730.31	2,704.59	25.72	106.166	0					
6,200.00	6,161.34	4,338.00	4,338.00	11.31	14.98	159.22	2,799.97	2,774.05	25.92	108.013	0					
6,300.00	6,261.21	4,338.00	4,338.00	11.48	14.98	159.89	2,869.14	2,843.03	26.10	109.914	0					
6,396.19	6,357.38	4,338.00	4,338.00	11.64	14.98	95.34	2,935.16	2,908.58	26.58	110.437	0					
6,400.00	6,361.19	4,338.00	4,338.00	11.65	14.98	95.34	2,937.76	2,911.18	26.58	110.508	0					
6,496.19	6,457.38	4,338.00	4,338.00	11.81	14.98	95.34	3,004.40	2,977.65	26.75	112.333	0					
6,500.00	6,461.19	4,338.00	4,338.00	11.81	14.98	5.31	3,007.06	2,980.63	26.43	113.780	0					
6,550.00	6,511.12	4,338.00	4,338.00	11.89	14.98	4.94	3,040.73	3,014.24	26.49	114.790	0					
6,600.00	6,560.73	4,338.00	4,338.00	11.96	14.98	4.64	3,071.89	3,045.39	26.50	115.907	0					
6,650.00	6,609.70	4,338.00	4,338.00	12.03	14.98	4.39	3,100.44	3,074.06	26.38	117.516	0					
6,700.00	6,657.72	4,338.00	4,338.00	12.10	14.98	4.19	3,126.28	3,100.15	26.13	119.630	0					
6,750.00	6,704.52	4,338.00	4,338.00	12.16	14.98	4.02	3,149.31	3,123.55	25.76	122.274	0					
6,800.00	6,749.79	4,338.00	4,338.00	12.21	14.98	3.89	3,169.45	3,144.19	25.26	125.477	0					
6,850.00	6,793.25	4,338.00	4,338.00	12.27	14.98	3.78	3,186.63	3,161.98	24.65	129.282	0					
6,900.00	6,834.65	4,338.00	4,338.00	12.32	14.98	3.69	3,200.81	3,176.87	23.93	133.734	0					
6,950.00	6,873.72	4,338.00	4,338.00	12.38	14.98	3.62	3,211.92	3,188.79	23.13	138.887	0					
7,000.00	6,910.22	4,338.00	4,338.00	12.43	14.98	3.58	3,219.94	3,197.70	22.24	144.799	0					
7,050.00	6,943.93	4,338.00	4,338.00	12.49	14.98	3.55	3,224.83	3,203.55	21.28	151.525	0					
7,100.00	6,974.65	4,338.00	4,338.00	12.55	14.98	3.54	3,226.59	3,206.31	20.28	159.109	0					
7,150.00	7,002.17	4,338.00	4,338.00	12.61	14.98	3.55	3,225.21	3,205.96	19.25	167.569	0					
7,200.00	7,026.33	4,338.00	4,338.00	12.67	14.98	3.57	3,220.68	3,202.47	18.21	176.865	0					
7,250.00	7,046.99	4,338.00	4,338.00	12.74	14.98	3.62	3,213.03	3,195.84	17.20	186.851	0					
7,300.00	7,064.01	4,338.00	4,338.00	12.82	14.98	3.68	3,202.28	3,186.04	16.24	197.181	0					
7,350.00	7,077.29	4,338.00	4,338.00	12.90	14.98	3.76	3,188.47	3,173.08	15.39	207.148	0					
7,400.00	7,086.75	4,338.00	4,338.00	13.01	14.98	3.87	3,171.64	3,156.91	14.72	215.417	0					
7,450.00	7,092.32	4,338.00	4,338.00	13.13	14.98	4.00	3,151.84	3,137.50	14.34	219.812	0					
7,496.19	7,094.00	4,338.00	4,338.00	13.25	14.98	4.15	3,130.98	3,116.64	14.34	218.338	0					
7,500.00	7,094.00	4,338.00	4,338.00	13.26	14.98	4.15	3,129.16	3,114.81	14.35	218.007	0					
7,600.00	7,094.00	4,338.00	4,338.00	13.54	14.98	4.15	3,082.71	3,068.01	14.71	209.626	0					
7,700.00	7,094.00	4,338.00	4,338.00	13.85	14.98	4.15	3,038.85	3,023.79	15.06	201.812	0					
7,800.00	7,094.00	4,338.00	4,338.00	14.18	14.98	4.15	2,997.68	2,982.27	15.41	194.531	0					
7,900.00	7,094.00	4,338.00	4,338.00	14.54	14.98	4.15	2,959.32	2,943.56	15.76	187.756	0					
8,000.00	7,094.00	4,338.00	4,338.00	14.92	14.98	4.15	2,923.87	2,907.76	16.11	181.459	0					
8,100.00	7,094.00	4,338.00	4,338.00	15.33	14.98	4.15	2,891.45	2,874.99	16.46	175.616	0					
8,200.00	7,094.00	4,338.00	4,338.00	15.75	14.98	4.15	2,862.16	2,845.35	16.82	170.205	0					
8,300.00	7,094.00	4,338.00	4,338.00	16.20	14.98	4.15	2,836.10	2,818.93	17.17	165.204	0					
8,400.00	7,094.00	4,338.00	4,338.00	16.66	14.98	4.15	2,813.35	2,795.83	17.52	160.594	0					
8,500.00	7,094.00	4,338.00	4,338.00	17.14	14.98	4.15	2,794.00	2,776.13	17.87	156.356	0					
8,600.00	7,094.00	4,338.00	4,338.00	17.63	14.98	4.15	2,778.11	2,759.89	18.22	152.472	0					
8,700.00	7,094.00	4,338.00	4,338.00	18.14	14.98	4.15	2,765.75	2,747.18	18.57	148.925	0					
8,800.00	7,094.00	4,338.00	4,338.00	18.66	14.98	4.15	2,756.96	2,738.04	18.92	145.699	0					
8,900.00	7,094.00	4,338.00	4,338.00	19.19	14.98	4.15	2,751.79	2,732.51	19.27	142.779	0					
8,992.62	7,094.00	4,338.00	4,338.00	19.70	14.98	4.15	2,750.23	2,730.63	19.60	140.316	0					
9,000.00	7,094.00	4,338.00	4,338.00	19.74	14.98	4.15	2,750.24	2,730.61	19.62	140.148	0					
9,100.00	7,094.00	4,338.00	4,338.00	20.29	14.98	4.15	2,752.32	2,732.35	19.97	137.792	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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				
9,200.00	7,094.00	4,338.00	4,338.00	20.85	14.98	4.15	2,758.03	2,737.71	20.33	135.696	0					
9,300.00	7,094.00	4,338.00	4,338.00	21.42	14.98	4.15	2,767.35	2,746.68	20.68	133.846	0					
9,400.00	7,094.00	4,338.00	4,338.00	22.00	14.98	4.15	2,780.24	2,759.21	21.03	132.227	0					
9,500.00	7,094.00	4,338.00	4,338.00	22.58	14.98	4.15	2,796.64	2,775.26	21.38	130.827	0					
9,600.00	7,094.00	4,338.00	4,338.00	23.18	14.98	4.15	2,816.50	2,794.77	21.73	129.631	0					
9,700.00	7,094.00	4,338.00	4,338.00	23.77	14.98	4.15	2,839.74	2,817.66	22.08	128.626	0					
9,800.00	7,094.00	4,338.00	4,338.00	24.38	14.98	4.15	2,866.29	2,843.86	22.43	127.800	0					
9,900.00	7,094.00	4,338.00	4,338.00	24.99	14.98	4.15	2,896.05	2,873.27	22.78	127.141	0					
10,000.00	7,094.00	4,338.00	4,338.00	25.60	14.98	4.15	2,928.92	2,905.79	23.13	126.637	0					
10,100.00	7,094.00	4,338.00	4,338.00	26.22	14.98	4.15	2,964.80	2,941.32	23.48	126.276	0					
10,200.00	7,094.00	4,338.00	4,338.00	26.84	14.98	4.15	3,003.58	2,979.76	23.83	126.047	0					
10,300.00	7,094.00	4,338.00	4,338.00	27.47	14.98	4.15	3,045.16	3,020.98	24.18	125.941	0					
10,400.00	7,094.00	4,338.00	4,338.00	28.10	14.98	4.15	3,089.41	3,064.88	24.53	125.947	0					
10,500.00	7,094.00	4,338.00	4,338.00	28.73	14.98	4.15	3,136.23	3,111.35	24.88	126.056	0					
10,600.00	7,094.00	4,338.00	4,338.00	29.36	14.98	4.15	3,185.50	3,160.27	25.23	126.260	0					
10,700.00	7,094.00	4,338.00	4,338.00	30.00	14.98	4.15	3,237.11	3,211.53	25.58	126.549	0					
10,800.00	7,094.00	4,338.00	4,338.00	30.65	14.98	4.15	3,290.95	3,265.02	25.93	126.917	0					
10,900.00	7,094.00	4,338.00	4,338.00	31.29	14.98	4.15	3,346.92	3,320.64	26.28	127.356	0					
11,000.00	7,094.00	4,338.00	4,338.00	31.94	14.98	4.15	3,404.90	3,378.27	26.63	127.859	0					
11,100.00	7,094.00	4,338.00	4,338.00	32.59	14.98	4.15	3,464.80	3,437.82	26.98	128.420	0					
11,200.00	7,094.00	4,338.00	4,338.00	33.24	14.98	4.15	3,526.51	3,499.18	27.33	129.033	0					
11,300.00	7,094.00	4,338.00	4,338.00	33.89	14.98	4.15	3,589.95	3,562.27	27.68	129.694	0					
11,400.00	7,094.00	4,338.00	4,338.00	34.55	14.98	4.15	3,655.03	3,627.00	28.03	130.396	0					
11,500.00	7,094.00	4,338.00	4,338.00	35.21	14.98	4.15	3,721.65	3,693.27	28.38	131.135	0					
11,600.00	7,094.00	4,338.00	4,338.00	35.87	14.98	4.15	3,789.75	3,761.02	28.73	131.908	0					
11,700.00	7,094.00	4,338.00	4,338.00	36.53	14.98	4.15	3,859.23	3,830.15	29.08	132.710	0					
11,800.00	7,094.00	4,338.00	4,338.00	37.19	14.98	4.15	3,930.03	3,900.60	29.43	133.537	0					
11,900.00	7,094.00	4,338.00	4,338.00	37.85	14.98	4.15	4,002.08	3,972.30	29.78	134.387	0					
12,000.00	7,094.00	4,338.00	4,338.00	38.52	14.98	4.15	4,075.30	4,045.17	30.13	135.257	0					
12,100.00	7,094.00	4,338.00	4,338.00	39.19	14.98	4.15	4,149.65	4,119.17	30.48	136.143	0					
12,200.00	7,094.00	4,338.00	4,338.00	39.85	14.98	4.15	4,225.05	4,194.22	30.83	137.044	0					
12,300.00	7,094.00	4,338.00	4,338.00	40.52	14.98	4.15	4,301.46	4,270.28	31.18	137.956	0					
12,400.00	7,094.00	4,338.00	4,338.00	41.19	14.98	4.15	4,378.81	4,347.28	31.53	138.879	0					
12,500.00	7,094.00	4,338.00	4,338.00	41.87	14.98	4.15	4,457.07	4,425.19	31.88	139.810	0					
12,600.00	7,094.00	4,338.00	4,338.00	42.54	14.98	4.15	4,536.18	4,503.95	32.23	140.746	0					
12,700.00	7,094.00	4,338.00	4,338.00	43.21	14.98	4.15	4,616.11	4,583.53	32.58	141.688	0					
12,800.00	7,094.00	4,338.00	4,338.00	43.89	14.98	4.15	4,696.80	4,663.87	32.93	142.633	0					
12,900.00	7,094.00	4,338.00	4,338.00	44.56	14.98	4.15	4,778.22	4,744.94	33.28	143.581	0					
13,000.00	7,094.00	4,338.00	4,338.00	45.24	14.98	4.15	4,860.34	4,826.71	33.63	144.529	0					
13,100.00	7,094.00	4,338.00	4,338.00	45.92	14.98	4.15	4,943.11	4,909.13	33.98	145.477	0					
13,200.00	7,094.00	4,338.00	4,338.00	46.59	14.98	4.15	5,026.51	4,992.18	34.33	146.424	0					
13,300.00	7,094.00	4,338.00	4,338.00	47.27	14.98	4.15	5,110.51	5,075.83	34.68	147.369	0					
13,400.00	7,094.00	4,338.00	4,338.00	47.95	14.98	4.15	5,195.07	5,160.04	35.03	148.311	0					
13,500.00	7,094.00	4,338.00	4,338.00	48.63	14.98	4.15	5,280.17	5,244.80	35.38	149.250	0					
13,600.00	7,094.00	4,338.00	4,338.00	49.31	14.98	4.15	5,365.79	5,330.06	35.73	150.185	0					
13,700.00	7,094.00	4,338.00	4,338.00	49.99	14.98	4.15	5,451.90	5,415.82	36.08	151.116	0					
13,800.00	7,094.00	4,338.00	4,338.00	50.68	14.98	4.15	5,538.47	5,502.04	36.43	152.042	0					
13,900.00	7,094.00	4,338.00	4,338.00	51.36	14.98	4.15	5,625.49	5,588.71	36.78	152.962	0					
14,000.00	7,094.00	4,338.00	4,338.00	52.04	14.98	4.15	5,712.94	5,675.81	37.13	153.876	0					
14,100.00	7,094.00	4,338.00	4,338.00	52.72	14.98	4.15	5,800.78	5,763.31	37.48	154.784	0					
14,200.00	7,094.00	4,338.00	4,338.00	53.41	14.98	4.15	5,889.02	5,851.20	37.83	155.685	0					
14,300.00	7,094.00	4,338.00	4,338.00	54.09	14.98	4.15	5,977.63	5,939.45	38.18	156.580	0					
14,400.00	7,094.00	4,338.00	4,338.00	54.78	14.98	4.15	6,066.59	6,028.07	38.53	157.467	0					
14,500.00	7,094.00	4,338.00	4,338.00	55.46	14.98	4.15	6,155.89	6,117.02	38.88	158.348	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	56.15	14.98	4.15	6,245.52	6,206.29	39.23	159.221	0		
14,700.00	7,094.00	4,338.00	4,338.00	56.84	14.98	4.15	6,335.45	6,295.88	39.58	160.086	0		
14,800.00	7,094.00	4,338.00	4,338.00	57.52	14.98	4.15	6,425.69	6,385.76	39.92	160.944	0		
14,867.11	7,094.00	4,338.00	4,338.00	57.98	14.98	4.15	6,486.40	6,446.24	40.16	161.515	0		



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	Riskd Separation Factor	Probability of Collision		
0.00	0.00	2.00	2.00	0.00	0.00	0.18	56.12				0			
100.00	100.00	102.00	102.00	0.15	0.15	0.18	56.12	55.82	0.30	189.139	0			
200.00	200.00	202.00	202.00	0.32	0.32	0.18	56.12	55.47	0.65	86.902	0			
300.00	300.00	302.00	302.00	0.50	0.50	0.18	56.12	55.12	0.99	56.410	0			
400.00	400.00	402.00	402.00	0.67	0.67	0.18	56.12	54.77	1.34	41.758	0			
500.00	500.00	502.00	502.00	0.84	0.85	0.18	56.12	54.43	1.69	33.148	0			
565.99	565.99	567.99	567.99	0.96	0.96	0.18	56.12	54.20	1.92	29.178	0			
600.00	600.00	601.97	601.97	1.02	1.02	0.18	56.12	54.08	2.04	27.483	0			
700.00	700.00	700.00	699.98	1.19	1.19	-0.93	57.51	55.12	2.39	24.080	0			
800.00	800.00	798.69	798.53	1.37	1.37	-3.92	61.66	58.93	2.74	22.529	0			
900.00	899.98	896.60	896.07	1.54	1.54	58.23	67.93	64.85	3.08	22.031	0			
1,000.00	999.84	994.23	992.99	1.72	1.72	56.57	75.34	71.91	3.43	21.955	0			
1,100.00	1,099.45	1,091.97	1,089.57	1.90	1.90	55.98	83.73	79.95	3.78	22.142	0			
1,152.76	1,151.87	1,144.56	1,141.43	1.99	1.99	56.26	87.90	83.93	3.97	22.151	0			
1,200.00	1,198.75	1,191.67	1,187.89	2.07	2.08	56.77	91.40	87.26	4.14	22.092	0			
1,300.00	1,297.99	1,291.38	1,286.24	2.25	2.27	57.74	98.82	94.33	4.50	21.981	0			
1,400.00	1,397.24	1,391.09	1,384.58	2.43	2.46	58.57	106.27	101.42	4.86	21.884	0			
1,500.00	1,496.48	1,490.80	1,482.92	2.62	2.64	59.29	113.74	108.53	5.22	21.799	0			
1,600.00	1,595.72	1,590.51	1,581.27	2.80	2.83	59.93	121.23	115.65	5.58	21.721	0			
1,700.00	1,694.97	1,690.22	1,679.61	2.98	3.02	60.49	128.73	122.78	5.95	21.652	0			
1,800.00	1,794.21	1,789.93	1,777.95	3.16	3.22	60.98	136.24	129.93	6.31	21.589	0			
1,900.00	1,893.45	1,889.64	1,876.30	3.35	3.41	61.43	143.76	137.08	6.68	21.534	0			
2,000.00	1,992.69	1,989.35	1,974.64	3.53	3.60	61.83	151.28	144.24	7.04	21.483	0			
2,100.00	2,091.94	2,089.07	2,072.99	3.71	3.79	62.20	158.82	151.41	7.41	21.437	0			
2,200.00	2,191.18	2,188.78	2,171.33	3.90	3.98	62.53	166.36	158.58	7.78	21.394	0			
2,300.00	2,290.42	2,288.49	2,269.67	4.08	4.17	62.83	173.90	165.76	8.14	21.356	0			
2,400.00	2,389.67	2,388.20	2,368.02	4.27	4.37	63.11	181.45	172.94	8.51	21.320	0			
2,500.00	2,488.91	2,487.91	2,466.36	4.45	4.56	63.36	189.00	180.12	8.88	21.287	0			
2,600.00	2,588.15	2,587.62	2,564.70	4.64	4.75	63.60	196.56	187.31	9.25	21.256	0			
2,700.00	2,687.39	2,687.33	2,663.05	4.82	4.94	63.81	204.12	194.50	9.62	21.228	0			
2,800.00	2,786.64	2,787.04	2,761.39	5.01	5.14	64.02	211.68	201.70	9.98	21.202	0			
2,900.00	2,885.88	2,886.75	2,859.73	5.19	5.33	64.20	219.24	208.89	10.35	21.177	0			
3,000.00	2,985.12	2,986.46	2,958.08	5.38	5.52	64.38	226.81	216.09	10.72	21.154	0			
3,100.00	3,084.37	3,086.18	3,056.42	5.56	5.72	64.54	234.38	223.29	11.09	21.132	0			
3,200.00	3,183.61	3,185.89	3,154.76	5.75	5.91	64.70	241.95	230.49	11.46	21.112	0			
3,300.00	3,282.85	3,285.60	3,253.11	5.93	6.10	64.84	249.52	237.69	11.83	21.092	0			
3,400.00	3,382.09	3,385.31	3,351.45	6.12	6.30	64.98	257.09	244.89	12.20	21.074	0			
3,500.00	3,481.34	3,485.02	3,449.80	6.30	6.49	65.11	264.67	252.10	12.57	21.057	0			
3,600.00	3,580.58	3,584.73	3,548.14	6.49	6.68	65.23	272.24	259.31	12.94	21.041	0			
3,700.00	3,679.82	3,684.44	3,646.48	6.67	6.88	65.34	279.82	266.51	13.31	21.025	0			
3,800.00	3,779.07	3,784.15	3,744.83	6.86	7.07	65.45	287.40	273.72	13.68	21.011	0			
3,900.00	3,878.31	3,883.86	3,843.17	7.05	7.26	65.56	294.98	280.93	14.05	20.997	0			
4,000.00	3,977.55	3,983.57	3,941.51	7.23	7.46	65.65	302.56	288.14	14.42	20.984	0			
4,100.00	4,076.79	4,083.29	4,039.86	7.42	7.65	65.75	310.14	295.35	14.79	20.971	0			
4,200.00	4,176.04	4,183.00	4,138.20	7.60	7.85	65.83	317.72	302.56	15.16	20.959	0			
4,300.00	4,275.28	4,282.71	4,236.54	7.79	8.04	65.92	325.30	309.77	15.53	20.948	0			
4,400.00	4,374.52	4,382.42	4,334.89	7.97	8.23	66.00	332.89	316.99	15.90	20.937	0			
4,500.00	4,473.77	4,482.13	4,433.23	8.16	8.43	66.08	340.47	324.20	16.27	20.926	0			
4,600.00	4,573.01	4,581.84	4,531.57	8.34	8.62	66.15	348.06	331.41	16.64	20.916	0			
4,700.00	4,672.25	4,681.55	4,629.92	8.53	8.82	66.22	355.64	338.63	17.01	20.907	0			
4,800.00	4,771.49	4,781.26	4,728.26	8.72	9.01	66.29	363.23	345.84	17.38	20.898	0			
4,900.00	4,870.74	4,880.97	4,826.61	8.90	9.20	66.35	370.81	353.06	17.75	20.889	0			
5,000.00	4,969.98	4,980.68	4,924.95	9.09	9.40	66.42	378.40	360.28	18.12	20.880	0			
5,100.00	5,069.22	5,080.40	5,023.29	9.27	9.59	66.48	385.98	367.49	18.49	20.872	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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				
5,200.00	5,168.47	5,180.11	5,121.64	9.46	9.78	66.53	393.57	374.71	18.86	20.864	0					
5,300.00	5,267.71	5,279.82	5,219.98	9.64	9.98	66.59	401.16	381.92	19.23	20.857	0					
5,400.00	5,366.95	5,379.53	5,318.32	9.83	10.17	66.64	408.75	389.14	19.60	20.849	0					
5,500.00	5,466.19	5,479.24	5,416.67	10.02	10.37	66.69	416.33	396.36	19.98	20.842	0					
5,600.00	5,565.44	5,578.95	5,515.01	10.20	10.56	66.74	423.92	403.58	20.35	20.835	0					
5,700.00	5,664.68	5,678.66	5,613.35	10.39	10.75	66.79	431.51	410.80	20.72	20.829	0					
5,800.00	5,763.92	5,778.37	5,711.70	10.57	10.95	66.84	439.10	418.01	21.09	20.823	0					
5,900.00	5,863.17	5,878.08	5,810.04	10.76	11.14	66.88	446.69	425.23	21.46	20.816	0					
6,000.00	5,962.41	5,977.79	5,908.38	10.95	11.34	66.92	454.28	432.45	21.83	20.810	0					
6,043.43	6,005.51	6,021.10	5,951.10	11.03	11.42	66.94	457.58	435.59	21.99	20.808	0					
6,100.00	6,061.72	6,077.49	6,006.71	11.13	11.53	66.99	462.09	439.89	22.20	20.819	0					
6,200.00	6,161.34	6,182.36	6,110.20	11.31	11.73	66.77	470.92	448.37	22.55	20.880	0					
6,300.00	6,261.21	6,296.21	6,223.07	11.48	11.94	66.38	478.75	455.84	22.91	20.895	0					
6,396.19	6,357.38	6,406.17	6,332.56	11.64	12.14	0.74	484.80	461.71	23.10	20.991	0					
6,400.00	6,361.19	6,410.53	6,336.91	11.65	12.14	0.72	485.01	461.90	23.11	20.987	0					
6,496.19	6,457.38	6,520.96	6,447.18	11.81	12.33	0.28	488.82	465.35	23.47	20.827	0					
6,500.00	6,461.19	6,525.34	6,451.56	11.81	12.34	-89.72	488.92	465.31	23.61	20.707	0					
6,550.00	6,511.12	6,582.78	6,508.99	11.89	12.43	-90.04	489.72	465.94	23.78	20.594	0					
6,600.00	6,560.73	6,636.53	6,562.73	11.96	12.51	-90.81	489.88	465.96	23.93	20.475	0					
6,650.00	6,609.70	6,685.49	6,611.70	12.03	12.59	-91.94	490.13	466.08	24.05	20.381	0					
6,700.00	6,657.72	6,734.50	6,660.70	12.10	12.67	-93.43	490.79	466.64	24.15	20.320	0					
6,750.00	6,704.52	6,785.47	6,711.52	12.16	12.75	-95.01	491.88	467.64	24.24	20.290	0					
6,800.00	6,749.79	6,837.70	6,763.13	12.21	12.82	-96.58	493.36	469.04	24.32	20.288	0					
6,850.00	6,793.25	6,891.29	6,815.22	12.27	12.89	-98.12	495.20	470.82	24.38	20.313	0					
6,900.00	6,834.65	6,946.30	6,867.39	12.32	12.96	-99.63	497.36	472.94	24.43	20.363	0					
6,950.00	6,873.72	7,002.79	6,919.21	12.38	13.02	-101.09	499.80	475.34	24.46	20.434	0					
7,000.00	6,910.22	7,060.82	6,970.15	12.43	13.08	-102.48	502.44	477.95	24.48	20.523	0					
7,050.00	6,943.93	7,120.43	7,019.62	12.49	13.15	-103.81	505.21	480.71	24.50	20.623	0					
7,100.00	6,974.65	7,181.62	7,066.94	12.55	13.21	-105.05	508.03	483.52	24.51	20.727	0					
7,150.00	7,002.17	7,244.37	7,111.37	12.61	13.28	-106.19	510.82	486.29	24.53	20.825	0					
7,200.00	7,026.33	7,308.63	7,152.14	12.67	13.35	-107.21	513.48	488.92	24.56	20.907	0					
7,250.00	7,046.99	7,374.30	7,188.41	12.74	13.43	-108.11	515.92	491.30	24.61	20.962	0					
7,300.00	7,064.01	7,441.25	7,219.39	12.82	13.52	-108.87	518.05	493.36	24.69	20.979	0					
7,350.00	7,077.29	7,509.28	7,244.31	12.90	13.61	-109.47	519.81	494.99	24.82	20.947	0					
7,400.00	7,086.75	7,578.18	7,262.53	13.01	13.73	-109.92	521.11	496.13	24.98	20.860	0					
7,450.00	7,092.32	7,647.68	7,273.53	13.13	13.86	-110.19	521.92	496.73	25.20	20.712	0					
7,496.19	7,094.00	7,712.16	7,277.00	13.25	14.00	-110.28	522.21	496.76	25.45	20.522	0					
7,500.00	7,094.00	7,716.54	7,277.00	13.26	14.01	-110.28	522.21	496.74	25.47	20.505	0					
7,600.00	7,094.00	7,816.54	7,277.00	13.54	14.26	-110.28	522.21	496.20	26.01	20.080	0					
7,700.00	7,094.00	7,916.54	7,277.00	13.85	14.54	-110.28	522.21	495.61	26.60	19.632	0					
7,800.00	7,094.00	8,016.54	7,277.00	14.18	14.86	-110.28	522.21	494.96	27.25	19.166	0					
7,900.00	7,094.00	8,116.54	7,277.00	14.54	15.21	-110.28	522.21	494.27	27.94	18.689	0					
8,000.00	7,094.00	8,216.54	7,277.00	14.92	15.58	-110.28	522.21	493.52	28.68	18.206	0					
8,100.00	7,094.00	8,316.54	7,277.00	15.33	15.98	-110.28	522.21	492.74	29.47	17.722	0					
8,200.00	7,094.00	8,416.54	7,277.00	15.75	16.39	-110.28	522.21	491.92	30.29	17.241	0					
8,300.00	7,094.00	8,516.54	7,277.00	16.20	16.83	-110.28	522.21	491.06	31.15	16.767	0					
8,400.00	7,094.00	8,616.54	7,277.00	16.66	17.28	-110.28	522.21	490.17	32.04	16.300	0					
8,500.00	7,094.00	8,716.54	7,277.00	17.14	17.75	-110.28	522.21	489.25	32.96	15.845	0					
8,600.00	7,094.00	8,816.54	7,277.00	17.63	18.23	-110.28	522.21	488.30	33.91	15.401	0					
8,700.00	7,094.00	8,916.54	7,277.00	18.14	18.73	-110.28	522.21	487.33	34.88	14.971	0					
8,800.00	7,094.00	9,016.54	7,277.00	18.66	19.24	-110.28	522.21	486.33	35.88	14.555	0					
8,900.00	7,094.00	9,116.54	7,277.00	19.19	19.76	-110.28	522.21	485.31	36.90	14.153	0					
9,000.00	7,094.00	9,216.54	7,277.00	19.74	20.29	-110.28	522.21	484.28	37.94	13.765	0					
9,100.00	7,094.00	9,316.54	7,277.00	20.29	20.83	-110.28	522.21	483.22	38.99	13.392	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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				
9,200.00	7,094.00	9,416.54	7,277.00	20.85	21.38	-110.28	522.22	482.15	40.07	13.033	0					
9,300.00	7,094.00	9,516.54	7,277.00	21.42	21.94	-110.28	522.22	481.06	41.16	12.688	0					
9,400.00	7,094.00	9,616.54	7,277.00	22.00	22.51	-110.28	522.22	479.96	42.26	12.357	0					
9,500.00	7,094.00	9,716.54	7,277.00	22.58	23.09	-110.28	522.22	478.84	43.38	12.039	0					
9,600.00	7,094.00	9,816.54	7,277.00	23.18	23.67	-110.28	522.22	477.71	44.51	11.733	0					
9,700.00	7,094.00	9,916.54	7,277.00	23.77	24.26	-110.28	522.22	476.57	45.65	11.440	0					
9,800.00	7,094.00	10,016.54	7,277.00	24.38	24.85	-110.28	522.22	475.42	46.80	11.159	0					
9,900.00	7,094.00	10,116.54	7,277.00	24.99	25.45	-110.28	522.22	474.26	47.96	10.889	0					
10,000.00	7,094.00	10,216.54	7,277.00	25.60	26.06	-110.28	522.23	473.10	49.13	10.630	0					
10,100.00	7,094.00	10,316.54	7,277.00	26.22	26.67	-110.28	522.23	471.92	50.31	10.381	0					
10,200.00	7,094.00	10,416.54	7,277.00	26.84	27.28	-110.28	522.23	470.74	51.49	10.142	0					
10,300.00	7,094.00	10,516.54	7,277.00	27.47	27.90	-110.28	522.23	469.54	52.69	9.912	0					
10,400.00	7,094.00	10,616.54	7,277.00	28.10	28.52	-110.28	522.23	468.35	53.89	9.691	0					
10,500.00	7,094.00	10,716.54	7,277.00	28.73	29.15	-110.28	522.23	467.14	55.09	9.479	0					
10,600.00	7,094.00	10,816.54	7,277.00	29.36	29.78	-110.28	522.24	465.93	56.30	9.275	0					
10,700.00	7,094.00	10,916.53	7,277.00	30.00	30.41	-110.28	522.24	464.72	57.52	9.079	0					
10,800.00	7,094.00	11,016.53	7,277.00	30.65	31.05	-110.28	522.24	463.49	58.75	8.890	0					
10,900.00	7,094.00	11,116.53	7,277.00	31.29	31.69	-110.28	522.24	462.27	59.97	8.708	0					
11,000.00	7,094.00	11,216.53	7,277.00	31.94	32.33	-110.28	522.24	461.04	61.21	8.533	0					
11,100.00	7,094.00	11,316.53	7,277.00	32.59	32.97	-110.28	522.25	459.80	62.44	8.364	0					
11,200.00	7,094.00	11,416.53	7,277.00	33.24	33.62	-110.28	522.25	458.56	63.68	8.201	0					
11,300.00	7,094.00	11,516.53	7,277.00	33.89	34.27	-110.28	522.25	457.32	64.93	8.043	0					
11,400.00	7,094.00	11,616.53	7,277.00	34.55	34.92	-110.28	522.25	456.08	66.18	7.892	0					
11,500.00	7,094.00	11,716.53	7,277.00	35.21	35.57	-110.28	522.26	454.83	67.43	7.745	0					
11,600.00	7,094.00	11,816.53	7,277.00	35.87	36.23	-110.28	522.26	453.57	68.68	7.604	0					
11,700.00	7,094.00	11,916.53	7,277.00	36.53	36.88	-110.28	522.26	452.32	69.94	7.467	0					
11,800.00	7,094.00	12,016.53	7,277.00	37.19	37.54	-110.28	522.26	451.06	71.20	7.335	0					
11,900.00	7,094.00	12,116.53	7,277.00	37.85	38.20	-110.28	522.27	449.80	72.47	7.207	0					
12,000.00	7,094.00	12,216.53	7,277.00	38.52	38.86	-110.28	522.27	448.53	73.73	7.083	0					
12,100.00	7,094.00	12,316.53	7,277.00	39.19	39.53	-110.28	522.27	447.27	75.00	6.963	0					
12,200.00	7,094.00	12,416.53	7,277.00	39.85	40.19	-110.28	522.27	446.00	76.27	6.847	0					
12,300.00	7,094.00	12,516.53	7,277.00	40.52	40.86	-110.28	522.28	444.73	77.55	6.735	0					
12,400.00	7,094.00	12,616.53	7,277.00	41.19	41.52	-110.28	522.28	443.46	78.82	6.626	0					
12,500.00	7,094.00	12,716.53	7,277.00	41.87	42.19	-110.28	522.28	442.18	80.10	6.520	0					
12,600.00	7,094.00	12,816.53	7,277.00	42.54	42.86	-110.28	522.28	440.91	81.38	6.418	0					
12,700.00	7,094.00	12,916.53	7,277.00	43.21	43.53	-110.28	522.29	439.63	82.66	6.318	0					
12,800.00	7,094.00	13,016.53	7,277.00	43.89	44.20	-110.28	522.29	438.35	83.94	6.222	0					
12,900.00	7,094.00	13,116.53	7,277.00	44.56	44.87	-110.28	522.29	437.06	85.23	6.128	0					
13,000.00	7,094.00	13,216.53	7,277.00	45.24	45.55	-110.28	522.30	435.78	86.52	6.037	0					
13,100.00	7,094.00	13,316.53	7,277.00	45.92	46.22	-110.28	522.30	434.50	87.80	5.948	0					
13,200.00	7,094.00	13,416.53	7,277.00	46.59	46.90	-110.28	522.30	433.21	89.09	5.862	0					
13,300.00	7,094.00	13,516.53	7,277.00	47.27	47.57	-110.28	522.31	431.92	90.38	5.779	0					
13,400.00	7,094.00	13,616.53	7,277.00	47.95	48.25	-110.28	522.31	430.63	91.68	5.697	0					
13,500.00	7,094.00	13,716.53	7,277.00	48.63	48.93	-110.28	522.31	429.34	92.97	5.618	0					
13,600.00	7,094.00	13,816.53	7,277.00	49.31	49.60	-110.28	522.32	428.05	94.27	5.541	0					
13,700.00	7,094.00	13,916.53	7,277.00	49.99	50.28	-110.28	522.32	426.76	95.56	5.466	0					
13,800.00	7,094.00	14,016.53	7,277.00	50.68	50.96	-110.28	522.33	425.47	96.86	5.393	0					
13,900.00	7,094.00	14,116.53	7,277.00	51.36	51.64	-110.27	522.33	424.17	98.16	5.321	0					
14,000.00	7,094.00	14,216.53	7,277.00	52.04	52.32	-110.27	522.33	422.88	99.46	5.252	0					
14,100.00	7,094.00	14,316.52	7,277.00	52.72	53.00	-110.27	522.34	421.58	100.76	5.184	0					
14,200.00	7,094.00	14,416.52	7,277.00	53.41	53.69	-110.27	522.34	420.28	102.06	5.118	0					
14,300.00	7,094.00	14,516.52	7,277.00	54.09	54.37	-110.27	522.34	418.98	103.36	5.054	0					
14,400.00	7,094.00	14,616.52	7,277.00	54.78	55.05	-110.27	522.35	417.69	104.66	4.991	0					
14,500.00	7,094.00	14,716.52	7,277.00	55.46	55.73	-110.27	522.35	416.39	105.97	4.929	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	Riskd Separation Factor	Probability of Collision		
14,600.00	7,094.00	14,816.52	7,277.00	56.15	56.42	-110.27	522.36	415.09	107.27	4.869	0			
14,700.00	7,094.00	14,916.52	7,277.00	56.84	57.10	-110.27	522.36	413.78	108.58	4.811	0			
14,800.00	7,094.00	15,016.52	7,277.00	57.52	57.79	-110.27	522.37	412.48	109.88	4.754	0			
14,844.74	7,094.00	15,061.26	7,277.00	57.83	58.09	-110.27	522.37	411.90	110.47	4.729	0			
14,867.11	7,094.00	15,083.00	7,277.00	57.98	58.24	-110.27	522.37	411.61	110.76	4.716	0		SF	



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	-179.73	196.21					0	
100.00	100.00	91.00	91.00	0.15	0.13	-179.73	196.01	195.73	0.28	699.974	0		
200.00	200.00	191.00	191.00	0.32	0.31	-179.73	196.01	195.38	0.63	312.824	0		
300.00	300.00	291.00	291.00	0.50	0.48	-179.73	196.01	195.03	0.98	200.901	0		
400.00	400.00	391.00	391.00	0.67	0.65	-179.73	196.01	194.68	1.32	147.963	0		
500.00	500.00	491.00	491.00	0.84	0.83	-179.73	196.01	194.33	1.67	117.105	0		
600.00	600.00	591.00	591.00	1.02	1.00	-179.73	196.01	193.98	2.02	96.897	0		
700.00	700.00	691.00	691.00	1.19	1.18	-179.73	196.01	193.64	2.37	82.637	0		
800.00	800.00	785.90	785.89	1.37	1.34	-179.54	197.19	194.47	2.71	72.702	0		CC, ES
900.00	899.98	880.11	879.99	1.54	1.51	-114.09	201.92	198.87	3.05	66.177	0		
1,000.00	999.84	973.85	973.43	1.72	1.67	-114.14	210.91	207.52	3.39	62.206	0		
1,100.00	1,099.45	1,066.86	1,065.86	1.90	1.84	-114.47	224.14	220.41	3.73	60.067	0		
1,152.76	1,151.87	1,115.54	1,114.09	1.99	1.93	-114.72	232.81	228.90	3.91	59.516	0		
1,200.00	1,198.75	1,158.91	1,156.95	2.07	2.01	-115.07	241.41	237.34	4.07	59.257	0		
1,300.00	1,297.99	1,250.04	1,246.66	2.25	2.18	-115.47	261.59	257.18	4.42	59.222	0		
1,400.00	1,397.24	1,341.45	1,336.11	2.43	2.35	-115.51	284.36	279.60	4.76	59.713	0		
1,500.00	1,496.48	1,438.61	1,430.97	2.62	2.54	-115.43	308.01	302.89	5.12	60.173	0		
1,600.00	1,595.72	1,535.77	1,525.84	2.80	2.73	-115.37	331.66	326.18	5.48	60.560	0		
1,700.00	1,694.97	1,632.93	1,620.70	2.98	2.92	-115.32	355.31	349.47	5.84	60.889	0		
1,800.00	1,794.21	1,730.10	1,715.56	3.16	3.12	-115.27	378.96	372.76	6.20	61.170	0		
1,900.00	1,893.45	1,827.26	1,810.43	3.35	3.31	-115.22	402.61	396.05	6.56	61.414	0		
2,000.00	1,992.69	1,924.42	1,905.29	3.53	3.51	-115.19	426.26	419.34	6.92	61.627	0		
2,100.00	2,091.94	2,021.58	2,000.16	3.71	3.70	-115.15	449.91	442.63	7.28	61.815	0		
2,200.00	2,191.18	2,118.75	2,095.02	3.90	3.90	-115.12	473.56	465.92	7.64	61.981	0		
2,300.00	2,290.42	2,215.91	2,189.88	4.08	4.10	-115.10	497.21	489.21	8.00	62.129	0		
2,400.00	2,389.67	2,313.07	2,284.75	4.27	4.29	-115.07	520.87	512.50	8.37	62.262	0		
2,500.00	2,488.91	2,410.23	2,379.61	4.45	4.49	-115.05	544.52	535.79	8.73	62.382	0		
2,600.00	2,588.15	2,507.40	2,474.47	4.64	4.69	-115.03	568.17	559.08	9.09	62.491	0		
2,700.00	2,687.39	2,604.56	2,569.34	4.82	4.89	-115.01	591.82	582.36	9.46	62.589	0		
2,800.00	2,786.64	2,701.72	2,664.20	5.01	5.09	-114.99	615.47	605.65	9.82	62.679	0		
2,900.00	2,885.88	2,798.89	2,759.06	5.19	5.29	-114.97	639.12	628.94	10.18	62.762	0		
3,000.00	2,985.12	2,896.05	2,853.93	5.38	5.49	-114.96	662.78	652.23	10.55	62.838	0		
3,100.00	3,084.37	2,993.21	2,948.79	5.56	5.69	-114.94	686.43	675.52	10.91	62.908	0		
3,200.00	3,183.61	3,090.37	3,043.65	5.75	5.89	-114.93	710.08	698.80	11.28	62.972	0		
3,300.00	3,282.85	3,187.54	3,138.52	5.93	6.09	-114.92	733.73	722.09	11.64	63.032	0		
3,400.00	3,382.09	3,284.70	3,233.38	6.12	6.29	-114.91	757.38	745.38	12.01	63.088	0		
3,500.00	3,481.34	3,381.86	3,328.24	6.30	6.49	-114.90	781.04	768.67	12.37	63.140	0		
3,600.00	3,580.58	3,479.02	3,423.11	6.49	6.69	-114.89	804.69	791.95	12.73	63.189	0		
3,700.00	3,679.82	3,576.19	3,517.97	6.67	6.89	-114.88	828.34	815.24	13.10	63.234	0		
3,800.00	3,779.07	3,673.35	3,612.83	6.86	7.09	-114.87	851.99	838.53	13.46	63.277	0		
3,900.00	3,878.31	3,770.51	3,707.70	7.05	7.29	-114.86	875.64	861.81	13.83	63.317	0		
4,000.00	3,977.55	3,867.67	3,802.56	7.23	7.49	-114.85	899.30	885.10	14.19	63.355	0		
4,100.00	4,076.79	3,964.84	3,897.42	7.42	7.69	-114.84	922.95	908.39	14.56	63.391	0		
4,200.00	4,176.04	4,062.00	3,992.29	7.60	7.89	-114.83	946.60	931.67	14.92	63.424	0		
4,300.00	4,275.28	4,159.16	4,087.15	7.79	8.09	-114.83	970.25	954.96	15.29	63.456	0		
4,400.00	4,374.52	4,256.32	4,182.01	7.97	8.29	-114.82	993.90	978.25	15.66	63.486	0		
4,500.00	4,473.77	4,353.49	4,276.88	8.16	8.50	-114.81	1,017.56	1,001.54	16.02	63.515	0		
4,600.00	4,573.01	4,450.65	4,371.74	8.34	8.70	-114.81	1,041.21	1,024.82	16.39	63.542	0		
4,700.00	4,672.25	4,547.81	4,466.60	8.53	8.90	-114.80	1,064.86	1,048.11	16.75	63.568	0		
4,800.00	4,771.49	4,644.97	4,561.47	8.72	9.10	-114.80	1,088.51	1,071.40	17.12	63.593	0		
4,900.00	4,870.74	4,742.14	4,656.33	8.90	9.30	-114.79	1,112.16	1,094.68	17.48	63.616	0		
5,000.00	4,969.98	4,839.30	4,751.19	9.09	9.50	-114.79	1,135.82	1,117.97	17.85	63.639	0		
5,100.00	5,069.22	4,936.46	4,846.06	9.27	9.70	-114.78	1,159.47	1,141.26	18.21	63.660	0		
5,200.00	5,168.47	5,033.62	4,940.92	9.46	9.91	-114.78	1,183.12	1,164.54	18.58	63.681	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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				
5,300.00	5,267.71	5,130.79	5,035.78	9.64	10.11	-114.77	1,206.77	1,187.83	18.94	63.700	0					
5,400.00	5,366.95	5,227.95	5,130.65	9.83	10.31	-114.77	1,230.43	1,211.12	19.31	63.719	0					
5,500.00	5,466.19	5,325.11	5,225.51	10.02	10.51	-114.76	1,254.08	1,234.40	19.68	63.737	0					
5,600.00	5,565.44	5,422.27	5,320.37	10.20	10.71	-114.76	1,277.73	1,257.69	20.04	63.754	0					
5,700.00	5,664.68	5,519.44	5,415.24	10.39	10.91	-114.76	1,301.38	1,280.98	20.41	63.771	0					
5,800.00	5,763.92	5,616.60	5,510.10	10.57	11.12	-114.75	1,325.04	1,304.26	20.77	63.787	0					
5,900.00	5,863.17	5,713.76	5,604.97	10.76	11.32	-114.75	1,348.69	1,327.55	21.14	63.802	0					
6,000.00	5,962.41	5,810.92	5,699.83	10.95	11.52	-114.74	1,372.34	1,350.84	21.50	63.817	0					
6,043.43	6,005.51	5,853.13	5,741.03	11.03	11.61	-114.74	1,382.61	1,360.95	21.66	63.823	0					
6,100.00	6,061.72	5,908.14	5,794.74	11.13	11.72	-114.97	1,395.76	1,373.88	21.88	63.789	0					
6,200.00	6,161.34	6,005.59	5,889.89	11.31	11.92	-115.23	1,417.89	1,395.63	22.26	63.703	0					
6,300.00	6,261.21	6,153.06	6,034.34	11.48	12.22	-115.23	1,437.44	1,414.73	22.71	63.286	0					
6,396.19	6,357.38	6,320.88	6,200.29	11.64	12.53	179.78	1,450.34	1,426.83	23.51	61.690	0					
6,400.00	6,361.19	6,327.58	6,206.95	11.65	12.54	179.79	1,450.72	1,427.19	23.53	61.658	0					
6,496.19	6,457.38	6,497.83	6,376.53	11.81	12.83	-179.91	1,457.92	1,433.93	23.99	60.771	0					
6,500.00	6,461.19	6,504.60	6,383.29	11.81	12.84	90.08	1,458.10	1,434.43	23.67	61.592	0					
6,550.00	6,511.12	6,593.49	6,472.11	11.89	12.99	90.16	1,459.80	1,435.90	23.90	61.074	0					
6,600.00	6,560.73	6,673.12	6,551.73	11.96	13.11	90.51	1,460.24	1,436.13	24.11	60.564	0					
6,650.00	6,609.70	6,722.08	6,600.70	12.03	13.19	90.88	1,460.36	1,436.09	24.27	60.172	0					
6,700.00	6,657.72	6,770.63	6,649.24	12.10	13.26	91.38	1,460.65	1,436.22	24.43	59.790	0					
6,750.00	6,704.52	6,821.90	6,700.42	12.16	13.33	91.95	1,461.10	1,436.51	24.59	59.414	0					
6,800.00	6,749.79	6,874.55	6,752.57	12.21	13.41	92.51	1,461.71	1,436.96	24.75	59.048	0					
6,850.00	6,793.25	6,928.67	6,805.38	12.27	13.47	93.06	1,462.45	1,437.54	24.92	58.695	0					
6,900.00	6,834.65	6,984.35	6,858.46	12.32	13.54	93.60	1,463.32	1,438.24	25.08	58.355	0					
6,950.00	6,873.72	7,041.67	6,911.35	12.38	13.60	94.13	1,464.28	1,439.05	25.23	58.032	0					
7,000.00	6,910.22	7,100.68	6,963.51	12.43	13.67	94.64	1,465.33	1,439.94	25.38	57.728	0					
7,050.00	6,943.93	7,161.42	7,014.30	12.49	13.73	95.13	1,466.42	1,440.89	25.53	57.449	0					
7,100.00	6,974.65	7,223.92	7,063.00	12.55	13.79	95.59	1,467.52	1,441.86	25.66	57.188	0					
7,150.00	7,002.17	7,288.14	7,108.79	12.61	13.86	96.02	1,468.61	1,442.82	25.79	56.943	0					
7,200.00	7,026.33	7,354.01	7,150.82	12.67	13.93	96.41	1,469.64	1,443.72	25.92	56.709	0					
7,250.00	7,046.99	7,421.43	7,188.17	12.74	14.00	96.74	1,470.57	1,444.54	26.04	56.481	0					
7,300.00	7,064.01	7,490.21	7,219.96	12.82	14.09	97.02	1,471.38	1,445.22	26.16	56.244	0					
7,350.00	7,077.29	7,560.15	7,245.34	12.90	14.19	97.24	1,472.02	1,445.73	26.29	55.985	0					
7,400.00	7,086.75	7,630.96	7,263.61	13.01	14.30	97.40	1,472.47	1,446.03	26.44	55.694	0					
7,450.00	7,092.32	7,702.32	7,274.23	13.13	14.43	97.48	1,472.71	1,446.11	26.61	55.353	0					
7,496.19	7,094.00	7,766.44	7,277.00	13.25	14.56	97.49	1,472.75	1,445.95	26.80	54.952	0					
7,500.00	7,094.00	7,770.25	7,277.00	13.26	14.56	97.49	1,472.75	1,445.93	26.82	54.912	0					
7,600.00	7,094.00	7,870.25	7,277.00	13.54	14.80	97.49	1,472.75	1,445.39	27.36	53.829	0					
7,700.00	7,094.00	7,970.25	7,277.00	13.85	15.06	97.49	1,472.75	1,444.79	27.96	52.681	0					
7,800.00	7,094.00	8,070.25	7,277.00	14.18	15.37	97.49	1,472.75	1,444.14	28.61	51.480	0					
7,900.00	7,094.00	8,170.25	7,277.00	14.54	15.70	97.49	1,472.75	1,443.44	29.31	50.243	0					
8,000.00	7,094.00	8,270.25	7,277.00	14.92	16.05	97.49	1,472.75	1,442.68	30.07	48.984	0					
8,100.00	7,094.00	8,370.25	7,277.00	15.33	16.43	97.49	1,472.75	1,441.88	30.86	47.718	0					
8,200.00	7,094.00	8,470.25	7,277.00	15.75	16.84	97.49	1,472.75	1,441.05	31.70	46.455	0					
8,300.00	7,094.00	8,570.25	7,277.00	16.20	17.26	97.49	1,472.75	1,440.17	32.58	45.203	0					
8,400.00	7,094.00	8,670.25	7,277.00	16.66	17.70	97.49	1,472.75	1,439.25	33.49	43.971	0					
8,500.00	7,094.00	8,770.25	7,277.00	17.14	18.16	97.49	1,472.75	1,438.31	34.44	42.764	0					
8,600.00	7,094.00	8,870.25	7,277.00	17.63	18.63	97.49	1,472.75	1,437.33	35.41	41.586	0					
8,700.00	7,094.00	8,970.25	7,277.00	18.14	19.12	97.49	1,472.75	1,436.33	36.42	40.440	0					
8,800.00	7,094.00	9,070.25	7,277.00	18.66	19.62	97.49	1,472.75	1,435.30	37.45	39.330	0					
8,900.00	7,094.00	9,170.25	7,277.00	19.19	20.13	97.49	1,472.75	1,434.25	38.50	38.256	0					
9,000.00	7,094.00	9,270.25	7,277.00	19.74	20.66	97.49	1,472.75	1,433.18	39.57	37.218	0					
9,100.00	7,094.00	9,370.25	7,277.00	20.29	21.19	97.49	1,472.75	1,432.08	40.66	36.218	0					
9,200.00	7,094.00	9,470.25	7,277.00	20.85	21.73	97.49	1,472.75	1,430.97	41.77	35.255	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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				
9,300.00	7,094.00	9,570.25	7,277.00	21.42	22.29	97.49	1,472.75	1,429.85	42.90	34.328	0					
9,400.00	7,094.00	9,670.25	7,277.00	22.00	22.85	97.49	1,472.75	1,428.70	44.05	33.437	0					
9,500.00	7,094.00	9,770.25	7,277.00	22.58	23.42	97.49	1,472.75	1,427.55	45.20	32.581	0					
9,600.00	7,094.00	9,870.25	7,277.00	23.18	23.99	97.49	1,472.75	1,426.38	46.37	31.759	0					
9,700.00	7,094.00	9,970.25	7,277.00	23.77	24.57	97.49	1,472.75	1,425.19	47.56	30.969	0					
9,800.00	7,094.00	10,070.25	7,277.00	24.38	25.16	97.49	1,472.75	1,424.00	48.75	30.210	0					
9,900.00	7,094.00	10,170.25	7,277.00	24.99	25.76	97.49	1,472.75	1,422.79	49.96	29.481	0					
10,000.00	7,094.00	10,270.25	7,277.00	25.60	26.36	97.49	1,472.75	1,421.58	51.17	28.782	0					
10,100.00	7,094.00	10,370.25	7,277.00	26.22	26.96	97.49	1,472.75	1,420.35	52.39	28.109	0					
10,200.00	7,094.00	10,470.25	7,277.00	26.84	27.57	97.49	1,472.75	1,419.12	53.63	27.463	0					
10,300.00	7,094.00	10,570.25	7,277.00	27.47	28.18	97.49	1,472.75	1,417.88	54.87	26.843	0					
10,400.00	7,094.00	10,670.25	7,277.00	28.10	28.80	97.49	1,472.75	1,416.63	56.11	26.246	0					
10,500.00	7,094.00	10,770.25	7,277.00	28.73	29.42	97.49	1,472.75	1,415.38	57.37	25.672	0					
10,600.00	7,094.00	10,870.25	7,277.00	29.36	30.05	97.49	1,472.75	1,414.12	58.63	25.120	0					
10,700.00	7,094.00	10,970.25	7,277.00	30.00	30.68	97.49	1,472.75	1,412.85	59.90	24.588	0					
10,800.00	7,094.00	11,070.25	7,277.00	30.65	31.31	97.49	1,472.75	1,411.58	61.17	24.077	0					
10,900.00	7,094.00	11,170.25	7,277.00	31.29	31.94	97.49	1,472.75	1,410.30	62.45	23.584	0					
11,000.00	7,094.00	11,270.25	7,277.00	31.94	32.58	97.49	1,472.75	1,409.02	63.73	23.109	0					
11,100.00	7,094.00	11,370.25	7,277.00	32.59	33.22	97.49	1,472.75	1,407.73	65.02	22.652	0					
11,200.00	7,094.00	11,470.25	7,277.00	33.24	33.86	97.49	1,472.75	1,406.44	66.31	22.210	0					
11,300.00	7,094.00	11,570.25	7,277.00	33.89	34.51	97.49	1,472.75	1,405.14	67.61	21.784	0					
11,400.00	7,094.00	11,670.25	7,277.00	34.55	35.16	97.49	1,472.75	1,403.84	68.91	21.373	0					
11,500.00	7,094.00	11,770.25	7,277.00	35.21	35.81	97.49	1,472.75	1,402.54	70.21	20.976	0					
11,600.00	7,094.00	11,870.25	7,277.00	35.87	36.46	97.49	1,472.75	1,401.23	71.52	20.593	0					
11,700.00	7,094.00	11,970.25	7,277.00	36.53	37.11	97.49	1,472.75	1,399.92	72.83	20.222	0					
11,800.00	7,094.00	12,070.25	7,277.00	37.19	37.77	97.49	1,472.75	1,398.60	74.14	19.864	0					
11,900.00	7,094.00	12,170.25	7,277.00	37.85	38.42	97.49	1,472.75	1,397.29	75.46	19.517	0					
12,000.00	7,094.00	12,270.25	7,277.00	38.52	39.08	97.49	1,472.75	1,395.97	76.78	19.181	0					
12,100.00	7,094.00	12,370.25	7,277.00	39.19	39.74	97.49	1,472.75	1,394.65	78.10	18.856	0					
12,200.00	7,094.00	12,470.25	7,277.00	39.85	40.40	97.49	1,472.75	1,393.32	79.43	18.542	0					
12,300.00	7,094.00	12,570.25	7,277.00	40.52	41.06	97.49	1,472.75	1,391.99	80.76	18.237	0					
12,400.00	7,094.00	12,670.25	7,277.00	41.19	41.73	97.49	1,472.75	1,390.66	82.09	17.942	0					
12,500.00	7,094.00	12,770.25	7,277.00	41.87	42.39	97.49	1,472.75	1,389.33	83.42	17.655	0					
12,600.00	7,094.00	12,870.25	7,277.00	42.54	43.06	97.49	1,472.75	1,388.00	84.75	17.377	0					
12,700.00	7,094.00	12,970.25	7,277.00	43.21	43.73	97.49	1,472.75	1,386.66	86.09	17.107	0					
12,800.00	7,094.00	13,070.25	7,277.00	43.89	44.40	97.49	1,472.75	1,385.32	87.43	16.845	0					
12,900.00	7,094.00	13,170.25	7,277.00	44.56	45.07	97.49	1,472.75	1,383.98	88.77	16.591	0					
13,000.00	7,094.00	13,270.25	7,277.00	45.24	45.74	97.49	1,472.75	1,382.64	90.11	16.344	0					
13,100.00	7,094.00	13,370.25	7,277.00	45.92	46.41	97.49	1,472.75	1,381.30	91.45	16.104	0					
13,200.00	7,094.00	13,470.25	7,277.00	46.59	47.08	97.49	1,472.75	1,379.95	92.80	15.871	0					
13,300.00	7,094.00	13,570.25	7,277.00	47.27	47.76	97.49	1,472.75	1,378.60	94.14	15.644	0					
13,400.00	7,094.00	13,670.25	7,277.00	47.95	48.43	97.49	1,472.75	1,377.26	95.49	15.423	0					
13,500.00	7,094.00	13,770.25	7,277.00	48.63	49.11	97.49	1,472.75	1,375.91	96.84	15.208	0					
13,600.00	7,094.00	13,870.25	7,277.00	49.31	49.78	97.49	1,472.75	1,374.56	98.19	14.999	0					
13,700.00	7,094.00	13,970.25	7,277.00	49.99	50.46	97.49	1,472.75	1,373.20	99.54	14.795	0					
13,800.00	7,094.00	14,070.25	7,277.00	50.68	51.14	97.49	1,472.75	1,371.85	100.90	14.596	0					
13,900.00	7,094.00	14,170.25	7,277.00	51.36	51.82	97.49	1,472.75	1,370.50	102.25	14.403	0					
14,000.00	7,094.00	14,270.25	7,277.00	52.04	52.49	97.49	1,472.75	1,369.14	103.61	14.215	0					
14,100.00	7,094.00	14,370.25	7,277.00	52.72	53.17	97.49	1,472.75	1,367.78	104.96	14.031	0					
14,200.00	7,094.00	14,470.25	7,277.00	53.41	53.85	97.49	1,472.75	1,366.43	106.32	13.852	0					
14,300.00	7,094.00	14,570.25	7,277.00	54.09	54.54	97.49	1,472.75	1,365.07	107.68	13.677	0					
14,400.00	7,094.00	14,670.25	7,277.00	54.78	55.22	97.49	1,472.75	1,363.71	109.04	13.506	0					
14,500.00	7,094.00	14,770.25	7,277.00	55.46	55.90	97.49	1,472.75	1,362.35	110.40	13.340	0					
14,600.00	7,094.00	14,870.25	7,277.00	56.15	56.58	97.49	1,472.75	1,360.98	111.76	13.177	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	Riskd Separation Factor	Probability of Collision		
14,700.00	7,094.00	14,970.25	7,277.00	56.84	57.26	97.49	1,472.75	1,359.62	113.13	13.019	0			
14,800.00	7,094.00	15,070.25	7,277.00	57.52	57.95	97.49	1,472.75	1,358.26	114.49	12.864	0			
14,867.11	7,094.00	15,137.53	7,277.00	57.98	58.41	97.49	1,472.75	1,357.34	115.41	12.761	0		SF	



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	-179.74	224.28				0		
100.00	100.00	90.00	90.00	0.15	0.13	-179.74	224.06	223.78	0.28	804.368	0		
200.00	200.00	190.00	190.00	0.32	0.30	-179.74	224.06	223.44	0.62	358.596	0		
300.00	300.00	290.00	290.00	0.50	0.48	-179.74	224.06	223.09	0.97	230.067	0		
400.00	400.00	390.00	390.00	0.67	0.65	-179.74	224.06	222.74	1.32	169.363	0		
500.00	500.00	490.00	490.00	0.84	0.83	-179.74	224.06	222.39	1.67	134.005	0		
600.00	600.00	590.00	590.00	1.02	1.00	-179.74	224.06	222.04	2.02	110.861	0		
700.00	700.00	684.13	684.12	1.19	1.17	-179.60	225.24	222.88	2.36	95.434	0		CC, ES
800.00	800.00	777.43	777.32	1.37	1.33	-179.11	229.30	226.61	2.70	84.978	0		
900.00	899.98	870.35	869.95	1.54	1.49	-113.37	236.99	233.96	3.03	78.090	0		
1,000.00	999.84	962.61	961.64	1.72	1.66	-113.14	248.95	245.58	3.37	73.837	0		
1,100.00	1,099.45	1,053.94	1,052.04	1.90	1.83	-113.19	265.12	261.42	3.71	71.463	0		
1,152.76	1,151.87	1,100.00	1,097.47	1.99	1.91	-113.30	275.34	271.45	3.89	70.854	0		
1,200.00	1,198.75	1,144.11	1,140.85	2.07	2.00	-113.58	285.30	281.25	4.05	70.443	0		
1,300.00	1,297.99	1,233.20	1,228.05	2.25	2.17	-113.92	308.41	304.02	4.39	70.239	0		
1,400.00	1,397.24	1,322.62	1,314.99	2.43	2.34	-113.98	334.14	329.41	4.73	70.589	0		
1,500.00	1,496.48	1,419.00	1,408.46	2.62	2.54	-113.97	360.78	355.69	5.09	70.878	0		
1,600.00	1,595.72	1,515.39	1,501.94	2.80	2.73	-113.95	387.41	381.96	5.45	71.113	0		
1,700.00	1,694.97	1,611.78	1,595.41	2.98	2.93	-113.94	414.05	408.24	5.81	71.306	0		
1,800.00	1,794.21	1,708.17	1,688.88	3.16	3.13	-113.93	440.68	434.52	6.17	71.467	0		
1,900.00	1,893.45	1,804.55	1,782.35	3.35	3.33	-113.92	467.32	460.79	6.53	71.602	0		
2,000.00	1,992.69	1,900.94	1,875.83	3.53	3.53	-113.91	493.96	487.07	6.89	71.717	0		
2,100.00	2,091.94	1,997.33	1,969.30	3.71	3.73	-113.91	520.59	513.34	7.25	71.815	0		
2,200.00	2,191.18	2,093.72	2,062.77	3.90	3.94	-113.90	547.23	539.62	7.61	71.900	0		
2,300.00	2,290.42	2,190.10	2,156.25	4.08	4.14	-113.89	573.86	565.89	7.97	71.974	0		
2,400.00	2,389.67	2,286.49	2,249.72	4.27	4.34	-113.89	600.50	592.16	8.34	72.038	0		
2,500.00	2,488.91	2,382.88	2,343.19	4.45	4.55	-113.88	627.13	618.44	8.70	72.095	0		
2,600.00	2,588.15	2,479.27	2,436.67	4.64	4.75	-113.88	653.77	644.71	9.06	72.145	0		
2,700.00	2,687.39	2,575.65	2,530.14	4.82	4.96	-113.88	680.41	670.98	9.43	72.190	0		
2,800.00	2,786.64	2,672.04	2,623.61	5.01	5.16	-113.87	707.04	697.25	9.79	72.230	0		
2,900.00	2,885.88	2,768.43	2,717.08	5.19	5.37	-113.87	733.68	723.52	10.15	72.266	0		
3,000.00	2,985.12	2,864.82	2,810.56	5.38	5.57	-113.86	760.31	749.80	10.52	72.298	0		
3,100.00	3,084.37	2,961.20	2,904.03	5.56	5.78	-113.86	786.95	776.07	10.88	72.327	0		
3,200.00	3,183.61	3,057.59	2,997.50	5.75	5.99	-113.86	813.58	802.34	11.24	72.354	0		
3,300.00	3,282.85	3,153.98	3,090.98	5.93	6.19	-113.86	840.22	828.61	11.61	72.378	0		
3,400.00	3,382.09	3,250.37	3,184.45	6.12	6.40	-113.85	866.86	854.88	11.97	72.400	0		
3,500.00	3,481.34	3,346.75	3,277.92	6.30	6.61	-113.85	893.49	881.15	12.34	72.420	0		
3,600.00	3,580.58	3,443.14	3,371.39	6.49	6.81	-113.85	920.13	907.42	12.70	72.438	0		
3,700.00	3,679.82	3,539.53	3,464.87	6.67	7.02	-113.85	946.76	933.70	13.07	72.455	0		
3,800.00	3,779.07	3,635.92	3,558.34	6.86	7.23	-113.84	973.40	959.97	13.43	72.471	0		
3,900.00	3,878.31	3,732.30	3,651.81	7.05	7.43	-113.84	1,000.03	986.24	13.80	72.485	0		
4,000.00	3,977.55	3,828.69	3,745.29	7.23	7.64	-113.84	1,026.67	1,012.51	14.16	72.499	0		
4,100.00	4,076.79	3,925.08	3,838.76	7.42	7.85	-113.84	1,053.31	1,038.78	14.53	72.511	0		
4,200.00	4,176.04	4,021.47	3,932.23	7.60	8.06	-113.84	1,079.94	1,065.05	14.89	72.523	0		
4,300.00	4,275.28	4,117.85	4,025.71	7.79	8.26	-113.83	1,106.58	1,091.32	15.26	72.534	0		
4,400.00	4,374.52	4,214.24	4,119.18	7.97	8.47	-113.83	1,133.21	1,117.59	15.62	72.544	0		
4,500.00	4,473.77	4,310.63	4,212.65	8.16	8.68	-113.83	1,159.85	1,143.86	15.99	72.553	0		
4,600.00	4,573.01	4,407.01	4,306.12	8.34	8.89	-113.83	1,186.48	1,170.13	16.35	72.562	0		
4,700.00	4,672.25	4,503.40	4,399.60	8.53	9.09	-113.83	1,213.12	1,196.40	16.72	72.570	0		
4,800.00	4,771.49	4,599.79	4,493.07	8.72	9.30	-113.83	1,239.76	1,222.67	17.08	72.578	0		
4,900.00	4,870.74	4,696.18	4,586.54	8.90	9.51	-113.83	1,266.39	1,248.94	17.45	72.585	0		
5,000.00	4,969.98	4,792.56	4,680.02	9.09	9.72	-113.83	1,293.03	1,275.22	17.81	72.592	0		
5,100.00	5,069.22	4,888.95	4,773.49	9.27	9.93	-113.82	1,319.66	1,301.49	18.18	72.598	0		
5,200.00	5,168.47	4,985.34	4,866.96	9.46	10.13	-113.82	1,346.30	1,327.76	18.54	72.605	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	Risked Separation Factor	Probability of Collision				
5,300.00	5,267.71	5,081.73	4,960.43	9.64	10.34	-113.82	1,372.93	1,354.03	18.91	72.610	0					
5,400.00	5,366.95	5,178.11	5,053.91	9.83	10.55	-113.82	1,399.57	1,380.30	19.27	72.616	0					
5,500.00	5,466.19	5,274.50	5,147.38	10.02	10.76	-113.82	1,426.21	1,406.57	19.64	72.621	0					
5,600.00	5,565.44	5,370.89	5,240.85	10.20	10.97	-113.82	1,452.84	1,432.84	20.00	72.626	0					
5,700.00	5,664.68	5,467.28	5,334.33	10.39	11.17	-113.82	1,479.48	1,459.11	20.37	72.631	0					
5,800.00	5,763.92	5,563.66	5,427.80	10.57	11.38	-113.82	1,506.11	1,485.38	20.74	72.635	0					
5,900.00	5,863.17	5,660.05	5,521.27	10.76	11.59	-113.82	1,532.75	1,511.65	21.10	72.639	0					
6,000.00	5,962.41	5,756.44	5,614.74	10.95	11.80	-113.82	1,559.38	1,537.92	21.47	72.643	0					
6,043.43	6,005.51	5,798.30	5,655.34	11.03	11.89	-113.82	1,570.95	1,549.33	21.63	72.645	0					
6,100.00	6,061.72	5,902.67	5,756.97	11.13	12.10	-114.07	1,584.99	1,563.06	21.93	72.266	0					
6,200.00	6,161.34	6,096.61	5,947.84	11.31	12.48	-114.41	1,604.18	1,581.70	22.48	71.361	0					
6,300.00	6,261.21	6,294.76	6,144.77	11.48	12.82	-114.60	1,615.95	1,592.93	23.02	70.211	0					
6,396.19	6,357.38	6,487.49	6,337.30	11.64	13.12	-179.81	1,620.09	1,595.98	24.11	67.192	0					
6,400.00	6,361.19	6,495.13	6,344.95	11.65	13.13	-179.81	1,620.11	1,595.98	24.13	67.142	0					
6,496.19	6,457.38	6,597.56	6,447.38	11.81	13.29	-179.81	1,620.12	1,595.67	24.45	66.254	0					
6,500.00	6,461.19	6,601.37	6,451.19	11.81	13.29	90.19	1,620.12	1,596.24	23.88	67.852	0					
6,550.00	6,511.12	6,651.76	6,501.54	11.89	13.37	90.21	1,620.12	1,596.09	24.04	67.407	0					
6,600.00	6,560.73	6,702.26	6,551.73	11.96	13.43	90.24	1,620.13	1,595.94	24.18	66.996	0					
6,650.00	6,609.70	6,752.82	6,601.38	12.03	13.50	90.26	1,620.13	1,595.81	24.32	66.615	0					
6,700.00	6,657.72	6,803.44	6,650.18	12.10	13.56	90.29	1,620.13	1,595.68	24.45	66.261	0					
6,750.00	6,704.52	6,854.10	6,697.80	12.16	13.61	90.31	1,620.14	1,595.56	24.57	65.931	0					
6,800.00	6,749.79	6,904.81	6,743.95	12.21	13.66	90.33	1,620.14	1,595.45	24.69	65.620	0					
6,850.00	6,793.25	6,955.57	6,788.31	12.27	13.72	90.34	1,620.14	1,595.34	24.80	65.325	0					
6,900.00	6,834.65	7,006.36	6,830.60	12.32	13.76	90.36	1,620.14	1,595.23	24.91	65.038	0					
6,950.00	6,873.72	7,057.18	6,870.54	12.38	13.81	90.37	1,620.15	1,595.13	25.02	64.756	0					
7,000.00	6,910.22	7,108.04	6,907.87	12.43	13.86	90.38	1,620.15	1,595.02	25.13	64.471	0					
7,050.00	6,943.93	7,158.91	6,942.34	12.49	13.91	90.39	1,620.15	1,594.90	25.25	64.177	0					
7,100.00	6,974.65	7,209.80	6,973.73	12.55	13.97	90.40	1,620.15	1,594.78	25.37	63.867	0					
7,150.00	7,002.17	7,260.70	7,001.82	12.61	14.02	90.40	1,620.15	1,594.65	25.50	63.537	0					
7,200.00	7,026.33	7,311.60	7,026.43	12.67	14.08	90.40	1,620.15	1,594.51	25.64	63.181	0					
7,250.00	7,046.99	7,362.50	7,047.41	12.74	14.15	90.40	1,620.15	1,594.35	25.80	62.787	0					
7,300.00	7,064.01	7,413.40	7,064.62	12.82	14.22	90.39	1,620.15	1,594.17	25.98	62.357	0					
7,350.00	7,077.29	7,464.28	7,077.94	12.90	14.30	90.39	1,620.15	1,593.97	26.18	61.892	0					
7,400.00	7,086.75	7,515.14	7,087.30	13.01	14.38	90.38	1,620.15	1,593.76	26.39	61.392	0					
7,450.00	7,092.32	7,565.98	7,092.64	13.13	14.48	90.37	1,620.15	1,593.52	26.62	60.859	0					
7,496.19	7,094.00	7,612.83	7,094.00	13.25	14.57	90.35	1,620.14	1,593.29	26.85	60.343	0					
7,500.00	7,094.00	7,616.64	7,094.00	13.26	14.58	90.35	1,620.14	1,593.27	26.87	60.298	0					
7,600.00	7,094.00	7,716.64	7,094.00	13.54	14.81	90.35	1,620.14	1,592.73	27.41	59.111	0					
7,700.00	7,094.00	7,816.64	7,094.00	13.85	15.07	90.35	1,620.14	1,592.14	28.01	57.846	0					
7,800.00	7,094.00	7,916.64	7,094.00	14.18	15.36	90.35	1,620.14	1,591.48	28.66	56.523	0					
7,900.00	7,094.00	8,016.64	7,094.00	14.54	15.68	90.35	1,620.14	1,590.77	29.37	55.159	0					
8,000.00	7,094.00	8,116.64	7,094.00	14.92	16.03	90.35	1,620.14	1,590.01	30.13	53.772	0					
8,100.00	7,094.00	8,216.64	7,094.00	15.33	16.41	90.35	1,620.14	1,589.21	30.93	52.376	0					
8,200.00	7,094.00	8,316.64	7,094.00	15.75	16.81	90.35	1,620.14	1,588.37	31.78	50.983	0					
8,300.00	7,094.00	8,416.64	7,094.00	16.20	17.23	90.35	1,620.14	1,587.48	32.66	49.603	0					
8,400.00	7,094.00	8,516.64	7,094.00	16.66	17.67	90.35	1,620.14	1,586.56	33.58	48.245	0					
8,500.00	7,094.00	8,616.64	7,094.00	17.14	18.12	90.35	1,620.14	1,585.61	34.53	46.914	0					
8,600.00	7,094.00	8,716.64	7,094.00	17.63	18.59	90.35	1,620.14	1,584.63	35.52	45.616	0					
8,700.00	7,094.00	8,816.64	7,094.00	18.14	19.08	90.35	1,620.14	1,583.62	36.53	44.354	0					
8,800.00	7,094.00	8,916.64	7,094.00	18.66	19.58	90.35	1,620.14	1,582.58	37.56	43.131	0					
8,900.00	7,094.00	9,016.64	7,094.00	19.19	20.09	90.35	1,620.14	1,581.52	38.62	41.948	0					
9,000.00	7,094.00	9,116.64	7,094.00	19.74	20.61	90.35	1,620.14	1,580.44	39.70	40.805	0					
9,100.00	7,094.00	9,216.64	7,094.00	20.29	21.14	90.35	1,620.14	1,579.34	40.81	39.704	0					
9,200.00	7,094.00	9,316.64	7,094.00	20.85	21.69	90.35	1,620.14	1,578.22	41.92	38.644	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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													
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning						
9,300.00	7,094.00	9,416.64	7,094.00	21.42	22.24	90.35	1,620.14	1,577.08	43.06	37.625	0								
9,400.00	7,094.00	9,516.64	7,094.00	22.00	22.80	90.35	1,620.14	1,575.93	44.21	36.644	0								
9,500.00	7,094.00	9,616.64	7,094.00	22.58	23.37	90.35	1,620.14	1,574.76	45.38	35.703	0								
9,600.00	7,094.00	9,716.64	7,094.00	23.18	23.94	90.35	1,620.14	1,573.59	46.56	34.798	0								
9,700.00	7,094.00	9,816.64	7,094.00	23.77	24.52	90.35	1,620.14	1,572.39	47.75	33.930	0								
9,800.00	7,094.00	9,916.64	7,094.00	24.38	25.11	90.35	1,620.14	1,571.19	48.95	33.096	0								
9,900.00	7,094.00	10,016.64	7,094.00	24.99	25.70	90.35	1,620.14	1,569.98	50.17	32.295	0								
10,000.00	7,094.00	10,116.64	7,094.00	25.60	26.30	90.35	1,620.14	1,568.75	51.39	31.526	0								
10,100.00	7,094.00	10,216.64	7,094.00	26.22	26.91	90.35	1,620.14	1,567.52	52.62	30.787	0								
10,200.00	7,094.00	10,316.64	7,094.00	26.84	27.52	90.35	1,620.14	1,566.28	53.87	30.078	0								
10,300.00	7,094.00	10,416.64	7,094.00	27.47	28.13	90.35	1,620.14	1,565.03	55.11	29.396	0								
10,400.00	7,094.00	10,516.64	7,094.00	28.10	28.75	90.35	1,620.14	1,563.77	56.37	28.740	0								
10,500.00	7,094.00	10,616.64	7,094.00	28.73	29.37	90.35	1,620.14	1,562.51	57.64	28.110	0								
10,600.00	7,094.00	10,716.64	7,094.00	29.36	29.99	90.35	1,620.14	1,561.24	58.91	27.504	0								
10,700.00	7,094.00	10,816.64	7,094.00	30.00	30.62	90.35	1,620.14	1,559.96	60.18	26.921	0								
10,800.00	7,094.00	10,916.64	7,094.00	30.65	31.25	90.35	1,620.14	1,558.68	61.46	26.359	0								
10,900.00	7,094.00	11,016.64	7,094.00	31.29	31.89	90.35	1,620.14	1,557.39	62.75	25.818	0								
11,000.00	7,094.00	11,116.64	7,094.00	31.94	32.52	90.35	1,620.14	1,556.10	64.04	25.297	0								
11,100.00	7,094.00	11,216.64	7,094.00	32.59	33.16	90.35	1,620.14	1,554.80	65.34	24.795	0								
11,200.00	7,094.00	11,316.64	7,094.00	33.24	33.81	90.35	1,620.14	1,553.50	66.64	24.311	0								
11,300.00	7,094.00	11,416.64	7,094.00	33.89	34.45	90.35	1,620.14	1,552.19	67.95	23.844	0								
11,400.00	7,094.00	11,516.64	7,094.00	34.55	35.10	90.35	1,620.14	1,550.88	69.26	23.393	0								
11,500.00	7,094.00	11,616.64	7,094.00	35.21	35.75	90.35	1,620.14	1,549.57	70.57	22.957	0								
11,600.00	7,094.00	11,716.64	7,094.00	35.87	36.40	90.35	1,620.14	1,548.25	71.89	22.537	0								
11,700.00	7,094.00	11,816.64	7,094.00	36.53	37.05	90.35	1,620.14	1,546.93	73.21	22.130	0								
11,800.00	7,094.00	11,916.64	7,094.00	37.19	37.71	90.35	1,620.14	1,545.61	74.53	21.737	0								
11,900.00	7,094.00	12,016.64	7,094.00	37.85	38.36	90.35	1,620.14	1,544.28	75.86	21.357	0								
12,000.00	7,094.00	12,116.64	7,094.00	38.52	39.02	90.35	1,620.14	1,542.95	77.19	20.989	0								
12,100.00	7,094.00	12,216.64	7,094.00	39.19	39.68	90.35	1,620.14	1,541.62	78.52	20.633	0								
12,200.00	7,094.00	12,316.64	7,094.00	39.85	40.34	90.35	1,620.14	1,540.29	79.86	20.288	0								
12,300.00	7,094.00	12,416.64	7,094.00	40.52	41.00	90.35	1,620.14	1,538.95	81.19	19.954	0								
12,400.00	7,094.00	12,516.64	7,094.00	41.19	41.67	90.35	1,620.14	1,537.61	82.53	19.630	0								
12,500.00	7,094.00	12,616.64	7,094.00	41.87	42.33	90.35	1,620.14	1,536.27	83.88	19.316	0								
12,600.00	7,094.00	12,716.64	7,094.00	42.54	43.00	90.35	1,620.14	1,534.92	85.22	19.012	0								
12,700.00	7,094.00	12,816.64	7,094.00	43.21	43.67	90.35	1,620.14	1,533.58	86.56	18.716	0								
12,800.00	7,094.00	12,916.64	7,094.00	43.89	44.34	90.35	1,620.14	1,532.23	87.91	18.429	0								
12,900.00	7,094.00	13,016.64	7,094.00	44.56	45.01	90.35	1,620.14	1,530.88	89.26	18.150	0								
13,000.00	7,094.00	13,116.64	7,094.00	45.24	45.68	90.35	1,620.14	1,529.53	90.61	17.880	0								
13,100.00	7,094.00	13,216.64	7,094.00	45.92	46.35	90.35	1,620.14	1,528.18	91.97	17.617	0								
13,200.00	7,094.00	13,316.64	7,094.00	46.59	47.02	90.35	1,620.14	1,526.82	93.32	17.361	0								
13,300.00	7,094.00	13,416.64	7,094.00	47.27	47.70	90.35	1,620.14	1,525.47	94.68	17.112	0								
13,400.00	7,094.00	13,516.64	7,094.00	47.95	48.37	90.35	1,620.14	1,524.11	96.04	16.870	0								
13,500.00	7,094.00	13,616.64	7,094.00	48.63	49.05	90.35	1,620.14	1,522.75	97.39	16.635	0								
13,600.00	7,094.00	13,716.64	7,094.00	49.31	49.72	90.35	1,620.14	1,521.39	98.75	16.406	0								
13,700.00	7,094.00	13,816.64	7,094.00	49.99	50.40	90.35	1,620.14	1,520.03	100.12	16.183	0								
13,800.00	7,094.00	13,916.64	7,094.00	50.68	51.08	90.35	1,620.14	1,518.66	101.48	15.965	0								
13,900.00	7,094.00	14,016.64	7,094.00	51.36	51.75	90.35	1,620.14	1,517.30	102.84	15.754	0								
14,000.00	7,094.00	14,116.64	7,094.00	52.04	52.43	90.35	1,620.14	1,515.93	104.21	15.547	0								
14,100.00	7,094.00	14,216.64	7,094.00	52.72	53.11	90.35	1,620.14	1,514.57	105.57	15.346	0								
14,200.00	7,094.00	14,316.64	7,094.00	53.41	53.79	90.35	1,620.14	1,513.20	106.94	15.150	0								
14,300.00	7,094.00	14,416.64	7,094.00	54.09	54.47	90.35	1,620.14	1,511.83	108.31	14.958	0								
14,400.00	7,094.00	14,516.64	7,094.00	54.78	55.15	90.35	1,620.14	1,510.46	109.68	14.772	0								
14,500.00	7,094.00	14,616.64	7,094.00	55.46	55.84	90.35	1,620.14	1,509.09	111.05	14.589	0								
14,600.00	7,094.00	14,716.64	7,094.00	56.15	56.52	90.35	1,620.14	1,507.72	112.42	14.411	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	Risked Separation Factor	Probability of Collision			
14,700.00	7,094.00	14,816.64	7,094.00	56.84	57.20	90.35	1,620.14	1,506.35	113.79	14.238	0				
14,800.00	7,094.00	14,916.72	7,094.00	57.52	57.89	90.35	1,620.14	1,504.98	115.17	14.068	0				
14,867.11	7,094.00	14,983.83	7,094.00	57.98	58.34	90.35	1,620.14	1,504.05	116.09	13.956	0	SF			



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	-179.69	252.36					CC, ES	
100.00	100.00	89.00	89.00	0.15	0.13	-179.69	252.12	251.84	0.28	909.878	0		
200.00	200.00	189.00	189.00	0.32	0.30	-179.69	252.12	251.49	0.62	404.628	0		
300.00	300.00	289.00	289.00	0.50	0.48	-179.69	252.12	251.14	0.97	259.340	0		
400.00	400.00	389.00	389.00	0.67	0.65	-179.69	252.12	250.80	1.32	190.822	0		
500.00	500.00	489.00	489.00	0.84	0.83	-179.69	252.12	250.45	1.67	150.943	0		
600.00	600.00	582.27	582.26	1.02	0.99	-179.59	253.30	251.29	2.01	126.159	0		
700.00	700.00	674.54	674.43	1.19	1.15	-179.24	257.46	255.12	2.34	109.823	0		
800.00	800.00	766.44	766.06	1.37	1.31	-178.68	264.62	261.94	2.68	98.679	0		
900.00	899.98	857.78	856.85	1.54	1.48	-112.87	275.48	272.46	3.01	91.393	0		
1,000.00	999.84	948.25	946.42	1.72	1.64	-112.57	290.63	287.28	3.35	86.795	0		
1,100.00	1,099.45	1,037.58	1,034.43	1.90	1.81	-112.55	310.00	306.32	3.68	84.154	0		
1,152.76	1,151.87	1,084.15	1,080.11	1.99	1.90	-112.64	321.90	318.04	3.86	83.366	0		
1,200.00	1,198.75	1,125.54	1,120.58	2.07	1.98	-112.92	333.38	329.36	4.02	82.909	0		
1,300.00	1,297.99	1,212.23	1,204.92	2.25	2.15	-113.33	359.73	355.37	4.36	82.527	0		
1,400.00	1,397.24	1,300.00	1,289.64	2.43	2.33	-113.55	388.77	384.07	4.70	82.712	0		
1,500.00	1,496.48	1,384.45	1,370.50	2.62	2.51	-113.59	420.31	415.27	5.04	83.443	0		
1,600.00	1,595.72	1,479.10	1,460.92	2.80	2.72	-113.60	452.56	447.17	5.39	83.911	0		
1,700.00	1,694.97	1,573.76	1,551.35	2.98	2.93	-113.60	484.82	479.07	5.75	84.305	0		
1,800.00	1,794.21	1,668.41	1,641.77	3.16	3.13	-113.61	517.07	510.96	6.11	84.641	0		
1,900.00	1,893.45	1,763.07	1,732.20	3.35	3.34	-113.62	549.33	542.86	6.47	84.930	0		
2,000.00	1,992.69	1,857.73	1,822.63	3.53	3.56	-113.62	581.58	574.75	6.83	85.181	0		
2,100.00	2,091.94	1,952.38	1,913.05	3.71	3.77	-113.62	613.83	606.65	7.19	85.400	0		
2,200.00	2,191.18	2,047.04	2,003.48	3.90	3.98	-113.63	646.09	638.54	7.55	85.593	0		
2,300.00	2,290.42	2,141.69	2,093.90	4.08	4.20	-113.63	678.34	670.43	7.91	85.764	0		
2,400.00	2,389.67	2,236.35	2,184.33	4.27	4.41	-113.63	710.59	702.32	8.27	85.916	0		
2,500.00	2,488.91	2,331.00	2,274.75	4.45	4.63	-113.64	742.85	734.22	8.63	86.053	0		
2,600.00	2,588.15	2,425.66	2,365.18	4.64	4.84	-113.64	775.10	766.11	8.99	86.176	0		
2,700.00	2,687.39	2,520.32	2,455.61	4.82	5.06	-113.64	807.36	798.00	9.36	86.287	0		
2,800.00	2,786.64	2,614.97	2,546.03	5.01	5.28	-113.64	839.61	829.89	9.72	86.388	0		
2,900.00	2,885.88	2,709.63	2,636.46	5.19	5.50	-113.65	871.86	861.78	10.08	86.481	0		
3,000.00	2,985.12	2,804.28	2,726.88	5.38	5.71	-113.65	904.12	893.67	10.44	86.565	0		
3,100.00	3,084.37	2,898.94	2,817.31	5.56	5.93	-113.65	936.37	925.56	10.81	86.643	0		
3,200.00	3,183.61	2,993.59	2,907.73	5.75	6.15	-113.65	968.62	957.45	11.17	86.714	0		
3,300.00	3,282.85	3,088.25	2,998.16	5.93	6.37	-113.65	1,000.88	989.34	11.53	86.780	0		
3,400.00	3,382.09	3,182.91	3,088.59	6.12	6.59	-113.65	1,033.13	1,021.23	11.90	86.842	0		
3,500.00	3,481.34	3,277.56	3,179.01	6.30	6.80	-113.66	1,065.38	1,053.12	12.26	86.899	0		
3,600.00	3,580.58	3,372.22	3,269.44	6.49	7.02	-113.66	1,097.64	1,085.02	12.62	86.952	0		
3,700.00	3,679.82	3,466.87	3,359.86	6.67	7.24	-113.66	1,129.89	1,116.91	12.99	87.001	0		
3,800.00	3,779.07	3,561.53	3,450.29	6.86	7.46	-113.66	1,162.15	1,148.80	13.35	87.047	0		
3,900.00	3,878.31	3,656.18	3,540.72	7.05	7.68	-113.66	1,194.40	1,180.69	13.71	87.091	0		
4,000.00	3,977.55	3,750.84	3,631.14	7.23	7.90	-113.66	1,226.65	1,212.58	14.08	87.131	0		
4,100.00	4,076.79	3,845.50	3,721.57	7.42	8.12	-113.66	1,258.91	1,244.47	14.44	87.170	0		
4,200.00	4,176.04	3,940.15	3,811.99	7.60	8.34	-113.66	1,291.16	1,276.35	14.81	87.206	0		
4,300.00	4,275.28	4,034.81	3,902.42	7.79	8.56	-113.66	1,323.41	1,308.24	15.17	87.240	0		
4,400.00	4,374.52	4,129.46	3,992.84	7.97	8.78	-113.67	1,355.67	1,340.13	15.53	87.272	0		
4,500.00	4,473.77	4,224.12	4,083.27	8.16	9.00	-113.67	1,387.92	1,372.02	15.90	87.302	0		
4,600.00	4,573.01	4,318.77	4,173.70	8.34	9.22	-113.67	1,420.18	1,403.91	16.26	87.331	0		
4,700.00	4,672.25	4,413.43	4,264.12	8.53	9.44	-113.67	1,452.43	1,435.80	16.63	87.358	0		
4,800.00	4,771.49	4,508.09	4,354.55	8.72	9.66	-113.67	1,484.68	1,467.69	16.99	87.384	0		
4,900.00	4,870.74	4,602.74	4,444.97	8.90	9.88	-113.67	1,516.94	1,499.58	17.35	87.409	0		
5,000.00	4,969.98	4,697.40	4,535.40	9.09	10.10	-113.67	1,549.19	1,531.47	17.72	87.433	0		
5,100.00	5,069.22	4,792.05	4,625.82	9.27	10.32	-113.67	1,581.44	1,563.36	18.08	87.455	0		
5,200.00	5,168.47	4,886.71	4,716.25	9.46	10.54	-113.67	1,613.70	1,595.25	18.45	87.477	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	Riskd Separation Factor	Probability of Collision				
5,300.00	5,267.71	4,981.36	4,806.68	9.64	10.76	-113.67	1,645.95	1,627.14	18.81	87.497	0					
5,400.00	5,366.95	5,076.02	4,897.10	9.83	10.98	-113.67	1,678.21	1,659.03	19.18	87.517	0					
5,500.00	5,466.19	5,170.67	4,987.53	10.02	11.20	-113.67	1,710.46	1,690.92	19.54	87.535	0					
5,600.00	5,565.44	5,265.33	5,077.95	10.20	11.42	-113.67	1,742.71	1,722.81	19.90	87.553	0					
5,700.00	5,664.68	5,359.99	5,168.38	10.39	11.64	-113.67	1,774.97	1,754.70	20.27	87.571	0					
5,800.00	5,763.92	5,454.64	5,258.80	10.57	11.86	-113.67	1,807.22	1,786.59	20.63	87.587	0					
5,900.00	5,863.17	5,549.30	5,349.23	10.76	12.08	-113.67	1,839.47	1,818.48	21.00	87.603	0					
6,000.00	5,962.41	5,643.95	5,439.66	10.95	12.30	-113.67	1,871.73	1,850.37	21.36	87.618	0					
6,043.43	6,005.51	5,685.07	5,478.93	11.03	12.40	-113.68	1,885.74	1,864.22	21.52	87.625	0					
6,100.00	6,061.72	5,771.39	5,561.54	11.13	12.59	-113.99	1,903.59	1,881.79	21.80	87.310	0					
6,200.00	6,161.34	6,025.29	5,808.26	11.31	13.12	-114.38	1,928.85	1,906.38	22.47	85.842	0					
6,300.00	6,261.21	6,289.14	6,069.17	11.48	13.60	-114.60	1,944.51	1,921.38	23.13	84.070	0					
6,396.19	6,357.38	6,548.10	6,327.65	11.64	14.00	-179.82	1,950.13	1,925.13	25.00	77.993	0					
6,400.00	6,361.19	6,558.40	6,337.94	11.65	14.01	-179.82	1,950.16	1,925.14	25.03	77.927	0					
6,496.19	6,457.38	6,666.84	6,446.38	11.81	14.17	-179.82	1,950.19	1,924.84	25.35	76.934	0					
6,500.00	6,461.19	6,670.65	6,450.19	11.81	14.17	90.18	1,950.19	1,926.07	24.12	80.853	0					
6,550.00	6,511.12	6,721.09	6,500.60	11.89	14.24	90.20	1,950.19	1,925.91	24.28	80.331	0					
6,600.00	6,560.73	6,771.66	6,550.87	11.96	14.30	90.23	1,950.19	1,925.77	24.42	79.849	0					
6,650.00	6,609.70	6,822.30	6,600.61	12.03	14.36	90.25	1,950.20	1,925.63	24.56	79.401	0					
6,700.00	6,657.72	6,873.00	6,649.50	12.10	14.42	90.27	1,950.20	1,925.51	24.69	78.984	0					
6,750.00	6,704.52	6,923.76	6,697.23	12.16	14.47	90.29	1,950.20	1,925.39	24.81	78.596	0					
6,800.00	6,749.79	6,974.57	6,743.48	12.21	14.53	90.31	1,950.21	1,925.28	24.93	78.229	0					
6,850.00	6,793.25	7,025.42	6,787.95	12.27	14.57	90.32	1,950.21	1,925.17	25.04	77.880	0					
6,900.00	6,834.65	7,076.32	6,830.34	12.32	14.62	90.34	1,950.21	1,925.06	25.15	77.543	0					
6,950.00	6,873.72	7,127.24	6,870.38	12.38	14.67	90.35	1,950.21	1,924.95	25.26	77.209	0					
7,000.00	6,910.22	7,178.20	6,907.80	12.43	14.72	90.36	1,950.22	1,924.85	25.37	76.873	0					
7,050.00	6,943.93	7,229.18	6,942.34	12.49	14.76	90.36	1,950.22	1,924.73	25.48	76.527	0					
7,100.00	6,974.65	7,280.18	6,973.79	12.55	14.82	90.37	1,950.22	1,924.61	25.61	76.163	0					
7,150.00	7,002.17	7,331.18	7,001.93	12.61	14.87	90.37	1,950.22	1,924.48	25.74	75.774	0					
7,200.00	7,026.33	7,382.19	7,026.58	12.67	14.93	90.37	1,950.22	1,924.34	25.88	75.355	0					
7,250.00	7,046.99	7,433.19	7,047.57	12.74	14.99	90.37	1,950.22	1,924.18	26.04	74.897	0					
7,300.00	7,064.01	7,484.19	7,064.77	12.82	15.06	90.36	1,950.22	1,924.00	26.22	74.390	0					
7,350.00	7,077.29	7,535.17	7,078.08	12.90	15.13	90.36	1,950.21	1,923.80	26.41	73.842	0					
7,400.00	7,086.75	7,586.12	7,087.40	13.01	15.21	90.35	1,950.21	1,923.59	26.62	73.253	0					
7,450.00	7,092.32	7,637.05	7,092.69	13.13	15.30	90.33	1,950.21	1,923.36	26.85	72.625	0					
7,496.19	7,094.00	7,683.96	7,094.00	13.25	15.39	90.32	1,950.21	1,923.13	27.08	72.018	0					
7,500.00	7,094.00	7,687.76	7,094.00	13.26	15.40	90.32	1,950.21	1,923.11	27.10	71.967	0					
7,600.00	7,094.00	7,787.76	7,094.00	13.54	15.61	90.32	1,950.21	1,922.57	27.64	70.567	0					
7,700.00	7,094.00	7,887.76	7,094.00	13.85	15.85	90.32	1,950.21	1,921.98	28.23	69.077	0					
7,800.00	7,094.00	7,987.76	7,094.00	14.18	16.12	90.32	1,950.21	1,921.32	28.89	67.516	0					
7,900.00	7,094.00	8,087.76	7,094.00	14.54	16.42	90.32	1,950.21	1,920.62	29.59	65.908	0					
8,000.00	7,094.00	8,187.76	7,094.00	14.92	16.75	90.32	1,950.21	1,919.86	30.34	64.270	0					
8,100.00	7,094.00	8,287.76	7,094.00	15.33	17.10	90.32	1,950.21	1,919.07	31.14	62.620	0					
8,200.00	7,094.00	8,387.76	7,094.00	15.75	17.48	90.32	1,950.21	1,918.22	31.98	60.973	0					
8,300.00	7,094.00	8,487.76	7,094.00	16.20	17.88	90.32	1,950.21	1,917.34	32.86	59.341	0					
8,400.00	7,094.00	8,587.76	7,094.00	16.66	18.30	90.32	1,950.21	1,916.43	33.78	57.732	0					
8,500.00	7,094.00	8,687.76	7,094.00	17.14	18.74	90.32	1,950.21	1,915.48	34.73	56.155	0					
8,600.00	7,094.00	8,787.76	7,094.00	17.63	19.19	90.32	1,950.21	1,914.50	35.71	54.616	0					
8,700.00	7,094.00	8,887.76	7,094.00	18.14	19.66	90.32	1,950.21	1,913.49	36.71	53.118	0					
8,800.00	7,094.00	8,987.76	7,094.00	18.66	20.14	90.32	1,950.21	1,912.46	37.75	51.666	0					
8,900.00	7,094.00	9,087.76	7,094.00	19.19	20.64	90.32	1,950.21	1,911.41	38.80	50.260	0					
9,000.00	7,094.00	9,187.76	7,094.00	19.74	21.15	90.32	1,950.21	1,910.33	39.88	48.902	0					
9,100.00	7,094.00	9,287.76	7,094.00	20.29	21.67	90.32	1,950.21	1,909.23	40.98	47.592	0					
9,200.00	7,094.00	9,387.76	7,094.00	20.85	22.20	90.32	1,950.21	1,908.11	42.09	46.330	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	Riskd Separation Factor	Probability of Collision		
9,300.00	7,094.00	9,487.76	7,094.00	21.42	22.74	90.32	1,950.21	1,906.98	43.23	45.116	0			
9,400.00	7,094.00	9,587.76	7,094.00	22.00	23.29	90.32	1,950.21	1,905.83	44.38	43.948	0			
9,500.00	7,094.00	9,687.76	7,094.00	22.58	23.85	90.32	1,950.21	1,904.67	45.54	42.826	0			
9,600.00	7,094.00	9,787.76	7,094.00	23.18	24.41	90.32	1,950.21	1,903.49	46.72	41.747	0			
9,700.00	7,094.00	9,887.76	7,094.00	23.77	24.98	90.32	1,950.21	1,902.30	47.90	40.711	0			
9,800.00	7,094.00	9,987.76	7,094.00	24.38	25.56	90.32	1,950.21	1,901.10	49.10	39.715	0			
9,900.00	7,094.00	10,087.76	7,094.00	24.99	26.14	90.32	1,950.21	1,899.89	50.32	38.759	0			
10,000.00	7,094.00	10,187.76	7,094.00	25.60	26.73	90.32	1,950.21	1,898.67	51.54	37.841	0			
10,100.00	7,094.00	10,287.76	7,094.00	26.22	27.33	90.32	1,950.21	1,897.44	52.77	36.959	0			
10,200.00	7,094.00	10,387.76	7,094.00	26.84	27.93	90.32	1,950.21	1,896.20	54.01	36.111	0			
10,300.00	7,094.00	10,487.76	7,094.00	27.47	28.54	90.32	1,950.21	1,894.95	55.25	35.296	0			
10,400.00	7,094.00	10,587.76	7,094.00	28.10	29.15	90.32	1,950.21	1,893.70	56.51	34.512	0			
10,500.00	7,094.00	10,687.76	7,094.00	28.73	29.76	90.32	1,950.21	1,892.44	57.77	33.758	0			
10,600.00	7,094.00	10,787.76	7,094.00	29.36	30.38	90.32	1,950.21	1,891.17	59.04	33.033	0			
10,700.00	7,094.00	10,887.76	7,094.00	30.00	31.00	90.32	1,950.21	1,889.90	60.31	32.335	0			
10,800.00	7,094.00	10,987.76	7,094.00	30.65	31.62	90.32	1,950.21	1,888.62	61.59	31.663	0			
10,900.00	7,094.00	11,087.76	7,094.00	31.29	32.25	90.32	1,950.21	1,887.33	62.88	31.016	0			
11,000.00	7,094.00	11,187.76	7,094.00	31.94	32.88	90.32	1,950.21	1,886.04	64.17	30.392	0			
11,100.00	7,094.00	11,287.76	7,094.00	32.59	33.52	90.32	1,950.21	1,884.74	65.46	29.790	0			
11,200.00	7,094.00	11,387.76	7,094.00	33.24	34.15	90.32	1,950.21	1,883.44	66.76	29.210	0			
11,300.00	7,094.00	11,487.76	7,094.00	33.89	34.79	90.32	1,950.21	1,882.14	68.07	28.651	0			
11,400.00	7,094.00	11,587.76	7,094.00	34.55	35.43	90.32	1,950.21	1,880.83	69.38	28.110	0			
11,500.00	7,094.00	11,687.76	7,094.00	35.21	36.08	90.32	1,950.21	1,879.52	70.69	27.588	0			
11,600.00	7,094.00	11,787.76	7,094.00	35.87	36.72	90.32	1,950.21	1,878.20	72.00	27.084	0			
11,700.00	7,094.00	11,887.76	7,094.00	36.53	37.37	90.32	1,950.21	1,876.88	73.32	26.597	0			
11,800.00	7,094.00	11,987.76	7,094.00	37.19	38.02	90.32	1,950.21	1,875.56	74.65	26.126	0			
11,900.00	7,094.00	12,087.76	7,094.00	37.85	38.67	90.32	1,950.21	1,874.24	75.97	25.670	0			
12,000.00	7,094.00	12,187.76	7,094.00	38.52	39.33	90.32	1,950.21	1,872.91	77.30	25.229	0			
12,100.00	7,094.00	12,287.76	7,094.00	39.19	39.98	90.32	1,950.21	1,871.58	78.63	24.802	0			
12,200.00	7,094.00	12,387.76	7,094.00	39.85	40.64	90.32	1,950.21	1,870.24	79.96	24.388	0			
12,300.00	7,094.00	12,487.76	7,094.00	40.52	41.30	90.32	1,950.21	1,868.91	81.30	23.988	0			
12,400.00	7,094.00	12,587.76	7,094.00	41.19	41.96	90.32	1,950.21	1,867.57	82.64	23.599	0			
12,500.00	7,094.00	12,687.76	7,094.00	41.87	42.62	90.32	1,950.21	1,866.23	83.98	23.222	0			
12,600.00	7,094.00	12,787.76	7,094.00	42.54	43.28	90.32	1,950.21	1,864.89	85.32	22.857	0			
12,700.00	7,094.00	12,887.76	7,094.00	43.21	43.95	90.32	1,950.21	1,863.54	86.67	22.502	0			
12,800.00	7,094.00	12,987.76	7,094.00	43.89	44.61	90.32	1,950.21	1,862.19	88.01	22.158	0			
12,900.00	7,094.00	13,087.76	7,094.00	44.56	45.28	90.32	1,950.21	1,860.85	89.36	21.824	0			
13,000.00	7,094.00	13,187.76	7,094.00	45.24	45.95	90.32	1,950.21	1,859.50	90.71	21.499	0			
13,100.00	7,094.00	13,287.76	7,094.00	45.92	46.61	90.32	1,950.21	1,858.14	92.07	21.183	0			
13,200.00	7,094.00	13,387.76	7,094.00	46.59	47.28	90.32	1,950.21	1,856.79	93.42	20.876	0			
13,300.00	7,094.00	13,487.76	7,094.00	47.27	47.95	90.32	1,950.21	1,855.43	94.77	20.577	0			
13,400.00	7,094.00	13,587.76	7,094.00	47.95	48.63	90.32	1,950.21	1,854.08	96.13	20.287	0			
13,500.00	7,094.00	13,687.76	7,094.00	48.63	49.30	90.32	1,950.21	1,852.72	97.49	20.004	0			
13,600.00	7,094.00	13,787.76	7,094.00	49.31	49.97	90.32	1,950.21	1,851.36	98.85	19.729	0			
13,700.00	7,094.00	13,887.76	7,094.00	49.99	50.64	90.32	1,950.21	1,850.00	100.21	19.461	0			
13,800.00	7,094.00	13,987.76	7,094.00	50.68	51.32	90.32	1,950.21	1,848.64	101.57	19.200	0			
13,900.00	7,094.00	14,087.76	7,094.00	51.36	51.99	90.32	1,950.21	1,847.27	102.94	18.946	0			
14,000.00	7,094.00	14,187.76	7,094.00	52.04	52.67	90.32	1,950.21	1,845.91	104.30	18.698	0			
14,100.00	7,094.00	14,287.76	7,094.00	52.72	53.35	90.32	1,950.21	1,844.54	105.67	18.456	0			
14,200.00	7,094.00	14,387.76	7,094.00	53.41	54.03	90.32	1,950.21	1,843.18	107.03	18.221	0			
14,300.00	7,094.00	14,487.76	7,094.00	54.09	54.70	90.32	1,950.21	1,841.81	108.40	17.991	0			
14,400.00	7,094.00	14,587.76	7,094.00	54.78	55.38	90.32	1,950.21	1,840.44	109.77	17.767	0			
14,500.00	7,094.00	14,687.76	7,094.00	55.46	56.06	90.32	1,950.21	1,839.07	111.14	17.548	0			
14,600.00	7,094.00	14,787.76	7,094.00	56.15	56.74	90.32	1,950.21	1,837.70	112.51	17.334	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	14,887.76	7,094.00	56.84	57.42	90.32	1,950.21	1,836.33	113.88	17.125	0			
14,800.00	7,094.00	14,987.76	7,094.00	57.52	58.10	90.32	1,950.21	1,834.96	115.25	16.921	0			
14,867.11	7,094.00	15,054.83	7,094.00	57.98	58.56	90.32	1,950.21	1,834.04	116.17	16.787	0	SF		



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Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	1.00	1.00	0.00	0.00	0.18	28.06						CC ES	
100.00	100.00	101.00	101.00	0.15	0.15	0.18	28.06	27.76	0.29	95.122	0			
200.00	200.00	201.00	201.00	0.32	0.32	0.18	28.06	27.41	0.64	43.565	0			
300.00	300.00	301.00	301.00	0.50	0.50	0.18	28.06	27.06	0.99	28.252	0			
400.00	400.00	401.00	401.00	0.67	0.67	0.18	28.06	26.72	1.34	20.905	0			
500.00	500.00	501.00	501.00	0.84	0.85	0.18	28.06	26.37	1.69	16.590	0			
600.00	600.00	601.00	601.00	1.02	1.02	0.18	28.06	26.02	2.04	13.752	0			
666.33	666.33	667.33	667.33	1.14	1.14	0.18	28.06	25.79	2.27	12.350	0			
700.00	700.00	700.99	700.99	1.19	1.20	0.18	28.06	25.67	2.39	11.743	0			
800.00	800.00	800.00	799.98	1.37	1.37	-2.26	29.32	26.58	2.74	10.712	0			
900.00	899.98	899.41	899.25	1.54	1.54	59.27	32.39	29.31	3.09	10.498	0			
1,000.00	999.84	998.39	997.85	1.72	1.72	57.57	36.42	32.99	3.43	10.604	0			
1,100.00	1,099.45	1,097.22	1,095.95	1.90	1.90	57.34	41.31	37.52	3.78	10.914	0			
1,152.76	1,151.87	1,149.33	1,147.49	1.99	1.99	57.65	44.22	40.25	3.97	11.137	0			
1,200.00	1,198.75	1,196.49	1,194.08	2.07	2.08	58.11	46.89	42.75	4.14	11.328	0			
1,300.00	1,297.99	1,296.33	1,292.71	2.25	2.26	58.93	52.55	48.05	4.50	11.682	0			
1,400.00	1,397.24	1,396.17	1,391.35	2.43	2.45	59.59	58.22	53.36	4.86	11.982	0			
1,500.00	1,496.48	1,496.00	1,489.98	2.62	2.63	60.13	63.90	58.68	5.22	12.239	0			
1,600.00	1,595.72	1,595.84	1,588.61	2.80	2.82	60.59	69.58	63.99	5.58	12.461	0			
1,700.00	1,694.97	1,695.68	1,687.24	2.98	3.01	60.97	75.26	69.31	5.95	12.654	0			
1,800.00	1,794.21	1,795.51	1,785.87	3.16	3.19	61.30	80.95	74.64	6.31	12.824	0			
1,900.00	1,893.45	1,895.35	1,884.50	3.35	3.38	61.59	86.64	79.96	6.68	12.975	0			
2,000.00	1,992.69	1,995.19	1,983.14	3.53	3.57	61.84	92.33	85.29	7.04	13.109	0			
2,100.00	2,091.94	2,095.03	2,081.77	3.71	3.76	62.06	98.02	90.61	7.41	13.230	0			
2,200.00	2,191.18	2,194.86	2,180.40	3.90	3.95	62.26	103.72	95.94	7.78	13.338	0			
2,300.00	2,290.42	2,294.70	2,279.03	4.08	4.14	62.44	109.41	101.27	8.14	13.437	0			
2,400.00	2,389.67	2,394.54	2,377.66	4.27	4.33	62.60	115.11	106.60	8.51	13.526	0			
2,500.00	2,488.91	2,494.37	2,476.29	4.45	4.52	62.74	120.81	111.93	8.88	13.608	0			
2,600.00	2,588.15	2,594.21	2,574.92	4.64	4.71	62.88	126.50	117.26	9.25	13.683	0			
2,700.00	2,687.39	2,694.05	2,673.56	4.82	4.90	63.00	132.20	122.59	9.61	13.752	0			
2,800.00	2,786.64	2,793.89	2,772.19	5.01	5.09	63.11	137.90	127.92	9.98	13.816	0			
2,900.00	2,885.88	2,893.72	2,870.82	5.19	5.28	63.21	143.60	133.25	10.35	13.875	0			
3,000.00	2,985.12	2,993.56	2,969.45	5.38	5.48	63.30	149.30	138.58	10.72	13.930	0			
3,100.00	3,084.37	3,093.40	3,068.08	5.56	5.67	63.39	155.00	143.92	11.09	13.981	0			
3,200.00	3,183.61	3,193.23	3,166.71	5.75	5.86	63.47	160.70	149.25	11.46	14.029	0			
3,300.00	3,282.85	3,293.07	3,265.35	5.93	6.05	63.55	166.40	154.58	11.82	14.073	0			
3,400.00	3,382.09	3,392.91	3,363.98	6.12	6.24	63.62	172.11	159.91	12.19	14.115	0			
3,500.00	3,481.34	3,492.75	3,462.61	6.30	6.43	63.68	177.81	165.24	12.56	14.154	0			
3,600.00	3,580.58	3,592.58	3,561.24	6.49	6.62	63.74	183.51	170.58	12.93	14.191	0			
3,700.00	3,679.82	3,692.42	3,659.87	6.67	6.81	63.80	189.21	175.91	13.30	14.226	0			
3,800.00	3,779.07	3,792.26	3,758.50	6.86	7.01	63.86	194.91	181.24	13.67	14.259	0			
3,900.00	3,878.31	3,892.09	3,857.14	7.05	7.20	63.91	200.61	186.58	14.04	14.290	0			
4,000.00	3,977.55	3,991.93	3,955.77	7.23	7.39	63.96	206.32	191.91	14.41	14.320	0			
4,100.00	4,076.79	4,091.77	4,054.40	7.42	7.58	64.00	212.02	197.24	14.78	14.347	0			
4,200.00	4,176.04	4,191.61	4,153.03	7.60	7.77	64.05	217.72	202.58	15.15	14.374	0			
4,300.00	4,275.28	4,291.44	4,251.66	7.79	7.96	64.09	223.43	207.91	15.52	14.399	0			
4,400.00	4,374.52	4,391.28	4,350.29	7.97	8.16	64.13	229.13	213.24	15.89	14.423	0			
4,500.00	4,473.77	4,491.12	4,448.93	8.16	8.35	64.17	234.83	218.58	16.26	14.446	0			
4,600.00	4,573.01	4,590.95	4,547.56	8.34	8.54	64.20	240.53	223.91	16.63	14.468	0			
4,700.00	4,672.25	4,690.79	4,646.19	8.53	8.73	64.24	246.24	229.24	16.99	14.489	0			
4,800.00	4,771.49	4,790.63	4,744.82	8.72	8.92	64.27	251.94	234.58	17.36	14.509	0			
4,900.00	4,870.74	4,890.47	4,843.45	8.90	9.11	64.30	257.64	239.91	17.73	14.528	0			
5,000.00	4,969.98	4,990.30	4,942.08	9.09	9.31	64.33	263.35	245.24	18.10	14.546	0			
5,100.00	5,069.22	5,090.14	5,040.72	9.27	9.50	64.36	269.05	250.58	18.47	14.564	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	5,168.47	5,189.98	5,139.35	9.46	9.69	64.38	274.75	255.91	18.84	14.581	0			
5,300.00	5,267.71	5,289.81	5,237.98	9.64	9.88	64.41	280.46	261.25	19.21	14.597	0			
5,400.00	5,366.95	5,389.65	5,336.61	9.83	10.07	64.44	286.16	266.58	19.58	14.613	0			
5,500.00	5,466.19	5,489.49	5,435.24	10.02	10.27	64.46	291.87	271.91	19.95	14.628	0			
5,600.00	5,565.44	5,589.33	5,533.87	10.20	10.46	64.48	297.57	277.25	20.32	14.642	0			
5,700.00	5,664.68	5,689.16	5,632.50	10.39	10.65	64.51	303.27	282.58	20.69	14.656	0			
5,800.00	5,763.92	5,789.00	5,731.14	10.57	10.84	64.53	308.98	287.91	21.06	14.669	0			
5,900.00	5,863.17	5,888.84	5,829.77	10.76	11.03	64.55	314.68	293.25	21.43	14.682	0			
6,000.00	5,962.41	5,989.96	5,929.68	10.95	11.23	64.57	320.36	298.55	21.81	14.692	0			
6,043.43	6,005.51	6,037.07	5,976.32	11.03	11.32	64.67	322.41	300.44	21.97	14.674	0			
6,100.00	6,061.72	6,098.46	6,037.25	11.13	11.43	64.87	324.57	302.38	22.19	14.630	0			
6,200.00	6,161.34	6,207.08	6,145.39	11.31	11.62	65.15	327.46	304.91	22.55	14.521	0			
6,300.00	6,261.21	6,315.77	6,253.90	11.48	11.80	65.31	329.18	306.28	22.90	14.374	0			
6,396.19	6,357.38	6,420.27	6,358.38	11.64	11.98	0.20	329.71	306.77	22.94	14.374	0			
6,400.00	6,361.19	6,424.08	6,362.19	11.65	11.98	0.20	329.71	306.75	22.95	14.366	0			
6,463.79	6,424.98	6,487.87	6,425.98	11.75	12.09	0.20	329.71	306.54	23.17	14.231	0			
6,496.19	6,457.38	6,520.27	6,458.38	11.81	12.14	0.20	329.71	306.43	23.28	14.164	0			
6,500.00	6,461.19	6,524.07	6,462.18	11.81	12.14	-89.80	329.71	306.13	23.57	13.986	0			
6,550.00	6,511.12	6,573.98	6,512.02	11.89	12.22	-89.79	329.71	305.97	23.73	13.893	0			
6,600.00	6,560.73	6,623.88	6,561.52	11.96	12.29	-89.78	329.71	305.83	23.88	13.808	0			
6,650.00	6,609.70	6,673.77	6,610.38	12.03	12.36	-89.77	329.71	305.69	24.02	13.729	0			
6,700.00	6,657.72	6,723.67	6,658.29	12.10	12.42	-89.76	329.71	305.56	24.14	13.656	0			
6,750.00	6,704.52	6,773.56	6,704.96	12.16	12.48	-89.75	329.71	305.44	24.26	13.588	0			
6,800.00	6,749.79	6,823.44	6,750.11	12.21	12.53	-89.75	329.71	305.33	24.38	13.524	0			
6,850.00	6,793.25	6,873.33	6,793.47	12.27	12.59	-89.74	329.71	305.22	24.49	13.462	0			
6,900.00	6,834.65	6,923.21	6,834.76	12.32	12.64	-89.74	329.71	305.11	24.60	13.403	0			
6,950.00	6,873.72	6,973.09	6,873.73	12.38	12.69	-89.74	329.71	305.00	24.71	13.344	0			
7,000.00	6,910.22	7,022.98	6,910.15	12.43	12.75	-89.74	329.71	304.89	24.82	13.284	0			
7,050.00	6,943.93	7,072.86	6,943.79	12.49	12.80	-89.74	329.71	304.77	24.94	13.222	0			
7,100.00	6,974.65	7,122.74	6,974.45	12.55	12.86	-89.74	329.71	304.65	25.06	13.156	0			
7,150.00	7,002.17	7,172.63	7,001.94	12.61	12.92	-89.75	329.71	304.51	25.20	13.086	0			
7,200.00	7,026.33	7,222.52	7,026.08	12.67	12.98	-89.76	329.71	304.36	25.34	13.010	0			
7,250.00	7,046.99	7,272.41	7,046.73	12.74	13.05	-89.76	329.71	304.20	25.50	12.928	0			
7,300.00	7,064.01	7,322.30	7,063.77	12.82	13.12	-89.77	329.71	304.03	25.68	12.839	0			
7,350.00	7,077.29	7,372.20	7,077.09	12.90	13.21	-89.79	329.71	303.83	25.88	12.742	0			
7,400.00	7,086.75	7,422.11	7,086.60	13.01	13.30	-89.80	329.71	303.62	26.09	12.639	0			
7,450.00	7,092.32	7,472.02	7,092.25	13.13	13.40	-89.81	329.70	303.39	26.32	12.528	0			
7,496.19	7,094.00	7,518.14	7,094.00	13.25	13.51	-89.83	329.70	303.16	26.54	12.422	0			
7,498.00	7,094.00	7,519.94	7,094.00	13.26	13.51	-89.83	329.70	303.15	26.55	12.417	0			
7,500.00	7,094.00	7,521.95	7,094.00	13.26	13.52	-89.83	329.70	303.14	26.56	12.412	0			
7,600.00	7,094.00	7,621.95	7,094.00	13.54	13.78	-89.83	329.70	302.60	27.11	12.163	0			
7,700.00	7,094.00	7,721.95	7,094.00	13.85	14.08	-89.83	329.70	301.99	27.71	11.899	0			
7,800.00	7,094.00	7,821.95	7,094.00	14.18	14.41	-89.83	329.70	301.34	28.37	11.622	0			
7,900.00	7,094.00	7,921.95	7,094.00	14.54	14.76	-89.83	329.70	300.62	29.08	11.337	0			
8,000.00	7,094.00	8,021.95	7,094.00	14.92	15.14	-89.83	329.70	299.86	29.85	11.047	0			
8,100.00	7,094.00	8,121.95	7,094.00	15.33	15.55	-89.83	329.70	299.05	30.65	10.756	0			
8,200.00	7,094.00	8,221.95	7,094.00	15.75	15.97	-89.83	329.70	298.20	31.50	10.466	0			
8,300.00	7,094.00	8,321.95	7,094.00	16.20	16.41	-89.83	329.70	297.31	32.39	10.178	0			
8,400.00	7,094.00	8,421.95	7,094.00	16.66	16.87	-89.83	329.70	296.39	33.32	9.896	0			
8,500.00	7,094.00	8,521.95	7,094.00	17.14	17.34	-89.83	329.70	295.43	34.27	9.619	0			
8,600.00	7,094.00	8,621.95	7,094.00	17.63	17.83	-89.83	329.70	294.44	35.26	9.350	0			
8,700.00	7,094.00	8,721.95	7,094.00	18.14	18.34	-89.83	329.70	293.43	36.28	9.088	0			
8,800.00	7,094.00	8,821.95	7,094.00	18.66	18.85	-89.83	329.70	292.39	37.32	8.835	0			
8,900.00	7,094.00	8,921.95	7,094.00	19.19	19.38	-89.83	329.70	291.32	38.38	8.590	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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		
9,000.00	7,094.00	9,021.95	7,094.00	19.74	19.92	-89.83	329.70	290.24	39.47	8.354	0		
9,100.00	7,094.00	9,121.95	7,094.00	20.29	20.47	-89.83	329.70	289.13	40.57	8.126	0		
9,200.00	7,094.00	9,221.95	7,094.00	20.85	21.02	-89.83	329.70	288.01	41.70	7.907	0		
9,300.00	7,094.00	9,321.95	7,094.00	21.42	21.59	-89.83	329.70	286.87	42.84	7.696	0		
9,400.00	7,094.00	9,421.95	7,094.00	22.00	22.16	-89.83	329.70	285.71	43.99	7.494	0		
9,500.00	7,094.00	9,521.95	7,094.00	22.58	22.75	-89.83	329.70	284.54	45.16	7.300	0		
9,600.00	7,094.00	9,621.95	7,094.00	23.18	23.33	-89.83	329.70	283.36	46.35	7.114	0		
9,700.00	7,094.00	9,721.95	7,094.00	23.77	23.93	-89.83	329.70	282.16	47.54	6.935	0		
9,800.00	7,094.00	9,821.95	7,094.00	24.38	24.53	-89.83	329.70	280.95	48.75	6.763	0		
9,900.00	7,094.00	9,921.95	7,094.00	24.99	25.13	-89.83	329.70	279.74	49.97	6.598	0		
10,000.00	7,094.00	10,021.95	7,094.00	25.60	25.74	-89.83	329.70	278.51	51.19	6.440	0		
10,100.00	7,094.00	10,121.95	7,094.00	26.22	26.36	-89.83	329.70	277.27	52.43	6.288	0		
10,200.00	7,094.00	10,221.95	7,094.00	26.84	26.98	-89.83	329.70	276.03	53.67	6.143	0		
10,300.00	7,094.00	10,321.95	7,094.00	27.47	27.60	-89.83	329.70	274.78	54.93	6.003	0		
10,400.00	7,094.00	10,421.95	7,094.00	28.10	28.23	-89.83	329.70	273.52	56.19	5.868	0		
10,500.00	7,094.00	10,521.95	7,094.00	28.73	28.86	-89.83	329.70	272.25	57.45	5.739	0		
10,600.00	7,094.00	10,621.95	7,094.00	29.36	29.49	-89.83	329.70	270.98	58.73	5.614	0		
10,700.00	7,094.00	10,721.95	7,094.00	30.00	30.13	-89.83	329.70	269.70	60.01	5.495	0		
10,800.00	7,094.00	10,821.95	7,094.00	30.65	30.77	-89.83	329.70	268.41	61.29	5.379	0		
10,900.00	7,094.00	10,921.95	7,094.00	31.29	31.41	-89.83	329.70	267.12	62.58	5.269	0		
11,000.00	7,094.00	11,021.95	7,094.00	31.94	32.06	-89.83	329.70	265.83	63.87	5.162	0		
11,100.00	7,094.00	11,121.95	7,094.00	32.59	32.70	-89.83	329.70	264.53	65.17	5.059	0		
11,200.00	7,094.00	11,221.95	7,094.00	33.24	33.35	-89.83	329.70	263.23	66.48	4.960	0		
11,300.00	7,094.00	11,321.95	7,094.00	33.89	34.01	-89.83	329.70	261.92	67.79	4.864	0		
11,400.00	7,094.00	11,421.95	7,094.00	34.55	34.66	-89.83	329.70	260.61	69.10	4.772	0		
11,500.00	7,094.00	11,521.95	7,094.00	35.21	35.32	-89.83	329.70	259.29	70.41	4.682	0		
11,600.00	7,094.00	11,621.95	7,094.00	35.87	35.97	-89.83	329.70	257.97	71.73	4.596	0		
11,700.00	7,094.00	11,721.95	7,094.00	36.53	36.63	-89.83	329.70	256.65	73.05	4.513	0		
11,800.00	7,094.00	11,821.95	7,094.00	37.19	37.29	-89.83	329.70	255.32	74.38	4.433	0		
11,900.00	7,094.00	11,921.95	7,094.00	37.85	37.96	-89.83	329.70	254.00	75.71	4.355	0		
12,000.00	7,094.00	12,021.95	7,094.00	38.52	38.62	-89.83	329.70	252.67	77.04	4.280	0		
12,100.00	7,094.00	12,121.95	7,094.00	39.19	39.28	-89.83	329.70	251.33	78.37	4.207	0		
12,200.00	7,094.00	12,221.95	7,094.00	39.85	39.95	-89.83	329.70	250.00	79.71	4.136	0		
12,300.00	7,094.00	12,321.95	7,094.00	40.52	40.62	-89.83	329.70	248.66	81.05	4.068	0		
12,400.00	7,094.00	12,421.95	7,094.00	41.19	41.29	-89.83	329.70	247.32	82.39	4.002	0		
12,500.00	7,094.00	12,521.95	7,094.00	41.87	41.96	-89.83	329.70	245.97	83.73	3.938	0		
12,600.00	7,094.00	12,621.95	7,094.00	42.54	42.63	-89.83	329.70	244.63	85.08	3.875	0		
12,700.00	7,094.00	12,721.95	7,094.00	43.21	43.30	-89.83	329.70	243.28	86.42	3.815	0		
12,766.67	7,094.00	12,788.61	7,094.00	43.66	43.75	-89.83	329.70	242.38	87.32	3.776	0		
12,800.00	7,094.00	12,821.95	7,094.00	43.89	43.98	-89.83	329.70	241.93	87.77	3.756	0		
12,900.00	7,094.00	12,921.95	7,094.00	44.56	44.65	-89.83	329.70	240.58	89.12	3.699	0		
13,000.00	7,094.00	13,021.95	7,094.00	45.24	45.32	-89.83	329.70	239.23	90.48	3.644	0		
13,100.00	7,094.00	13,121.95	7,094.00	45.92	46.00	-89.83	329.70	237.87	91.83	3.590	0		
13,200.00	7,094.00	13,221.95	7,094.00	46.59	46.68	-89.83	329.70	236.52	93.19	3.538	0		
13,300.00	7,094.00	13,321.95	7,094.00	47.27	47.35	-89.83	329.70	235.16	94.54	3.487	0		
13,400.00	7,094.00	13,421.95	7,094.00	47.95	48.03	-89.83	329.70	233.80	95.90	3.438	0		
13,500.00	7,094.00	13,521.95	7,094.00	48.63	48.71	-89.83	329.70	232.44	97.26	3.390	0		
13,600.00	7,094.00	13,621.95	7,094.00	49.31	49.39	-89.83	329.70	231.08	98.63	3.343	0		
13,700.00	7,094.00	13,721.95	7,094.00	49.99	50.07	-89.83	329.70	229.72	99.99	3.297	0		
13,800.00	7,094.00	13,821.95	7,094.00	50.68	50.75	-89.83	329.70	228.35	101.35	3.253	0		
13,900.00	7,094.00	13,921.95	7,094.00	51.36	51.43	-89.83	329.70	226.99	102.72	3.210	0		
14,000.00	7,094.00	14,021.95	7,094.00	52.04	52.12	-89.83	329.70	225.62	104.08	3.168	0		
14,100.00	7,094.00	14,121.95	7,094.00	52.72	52.80	-89.83	329.70	224.25	105.45	3.127	0		
14,200.00	7,094.00	14,221.95	7,094.00	53.41	53.48	-89.83	329.70	222.89	106.82	3.087	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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 #2 - 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		
14,300.00	7,094.00	14,321.95	7,094.00	54.09	54.17	-89.83	329.70	221.52	108.19	3.048	0			
14,400.00	7,094.00	14,421.95	7,094.00	54.78	54.85	-89.83	329.70	220.15	109.56	3.009	0			
14,500.00	7,094.00	14,521.95	7,094.00	55.46	55.54	-89.83	329.70	218.78	110.93	2.972	0			
14,600.00	7,094.00	14,621.95	7,094.00	56.15	56.22	-89.83	329.70	217.40	112.30	2.936	0			
14,700.00	7,094.00	14,721.95	7,094.00	56.84	56.91	-89.83	329.70	216.03	113.67	2.900	0			
14,740.61	7,094.00	14,762.55	7,094.00	57.11	57.18	-89.83	329.70	215.47	114.23	2.886	0			
14,800.00	7,094.00	14,821.93	7,094.00	57.52	57.59	-89.83	329.71	214.66	115.05	2.866	0			
14,844.68	7,094.00	14,866.61	7,094.00	57.83	57.90	-89.83	329.71	214.05	115.66	2.851	0			
14,867.11	7,094.00	14,888.41	7,094.00	57.98	58.05	-89.83	329.71	213.74	115.97	2.843	0		SF	

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



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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				
0.00	0.00	0.00	0.00	0.00	0.00	-179.82	28.07					0	CC, ES			
100.00	100.00	99.00	99.00	0.15	0.15	-179.82	28.05	27.76	0.29	96.141	0					
200.00	200.00	199.00	199.00	0.32	0.32	-179.82	28.05	27.41	0.64	43.790	0					
300.00	300.00	299.00	299.00	0.50	0.49	-179.82	28.05	27.06	0.99	28.344	0					
400.00	400.00	399.00	399.00	0.67	0.67	-179.82	28.05	26.71	1.34	20.953	0					
500.00	500.00	499.00	499.00	0.84	0.84	-179.82	28.05	26.36	1.69	16.619	0					
600.00	600.00	599.00	599.00	1.02	1.02	-179.82	28.05	26.01	2.04	13.771	0					
700.00	700.00	699.00	699.00	1.19	1.19	-179.82	28.05	25.66	2.39	11.756	0					
800.00	800.00	799.00	799.00	1.37	1.37	-179.82	28.05	25.31	2.73	10.256	0					
900.00	899.98	898.98	898.98	1.54	1.54	-117.79	28.82	25.74	3.08	9.345	0					
1,000.00	999.84	999.26	999.24	1.72	1.72	-123.31	30.93	27.49	3.43	9.005	0					
1,100.00	1,099.45	1,099.65	1,099.48	1.90	1.89	-127.43	33.87	30.09	3.78	8.949	0					
1,152.76	1,151.87	1,152.65	1,152.32	1.99	1.99	-129.05	35.72	31.75	3.97	8.998	0					
1,200.00	1,198.75	1,200.15	1,199.60	2.07	2.07	-129.79	37.28	33.14	4.14	9.011	0					
1,300.00	1,297.99	1,300.26	1,299.08	2.25	2.25	-129.25	39.87	35.38	4.49	8.872	0					
1,400.00	1,397.24	1,400.22	1,398.42	2.43	2.43	-128.67	42.42	37.57	4.85	8.744	0					
1,500.00	1,496.48	1,500.19	1,497.75	2.62	2.61	-128.15	44.98	39.77	5.21	8.633	0					
1,600.00	1,595.72	1,600.15	1,597.08	2.80	2.79	-127.70	47.54	41.97	5.57	8.535	0					
1,700.00	1,694.97	1,700.12	1,696.42	2.98	2.97	-127.28	50.10	44.17	5.93	8.448	0					
1,800.00	1,794.21	1,800.09	1,795.75	3.16	3.15	-126.91	52.67	46.38	6.29	8.370	0					
1,900.00	1,893.45	1,900.05	1,895.09	3.35	3.33	-126.58	55.23	48.58	6.65	8.301	0					
2,000.00	1,992.69	2,000.02	1,994.42	3.53	3.51	-126.27	57.80	50.79	7.02	8.238	0					
2,100.00	2,091.94	2,099.99	2,093.75	3.71	3.69	-125.99	60.37	52.99	7.38	8.181	0					
2,200.00	2,191.18	2,199.95	2,193.09	3.90	3.88	-125.73	62.95	55.20	7.74	8.129	0					
2,300.00	2,290.42	2,299.92	2,292.42	4.08	4.06	-125.49	65.52	57.41	8.11	8.082	0					
2,400.00	2,389.67	2,399.89	2,391.75	4.27	4.24	-125.28	68.09	59.62	8.47	8.038	0					
2,500.00	2,488.91	2,499.85	2,491.09	4.45	4.42	-125.07	70.67	61.83	8.84	7.998	0					
2,600.00	2,588.15	2,599.82	2,590.42	4.64	4.61	-124.88	73.24	64.04	9.20	7.961	0					
2,700.00	2,687.39	2,699.79	2,689.76	4.82	4.79	-124.71	75.82	66.25	9.57	7.927	0					
2,800.00	2,786.64	2,799.75	2,789.09	5.01	4.97	-124.54	78.40	68.47	9.93	7.895	0					
2,900.00	2,885.88	2,899.72	2,888.42	5.19	5.15	-124.39	80.97	70.68	10.30	7.865	0					
3,000.00	2,985.12	2,999.69	2,987.76	5.38	5.34	-124.24	83.55	72.89	10.66	7.838	0					
3,100.00	3,084.37	3,099.65	3,087.09	5.56	5.52	-124.11	86.13	75.10	11.03	7.812	0					
3,200.00	3,183.61	3,199.62	3,186.42	5.75	5.70	-123.98	88.71	77.32	11.39	7.787	0					
3,300.00	3,282.85	3,299.59	3,285.76	5.93	5.89	-123.86	91.29	79.53	11.76	7.764	0					
3,400.00	3,382.09	3,399.55	3,385.09	6.12	6.07	-123.74	93.87	81.75	12.12	7.743	0					
3,500.00	3,481.34	3,499.52	3,484.43	6.30	6.25	-123.64	96.45	83.96	12.49	7.723	0					
3,600.00	3,580.58	3,599.49	3,583.76	6.49	6.44	-123.53	99.03	86.18	12.86	7.704	0					
3,700.00	3,679.82	3,699.45	3,683.09	6.67	6.62	-123.44	101.61	88.39	13.22	7.686	0					
3,800.00	3,779.07	3,799.42	3,782.43	6.86	6.81	-123.34	104.19	90.61	13.59	7.668	0					
3,900.00	3,878.31	3,899.39	3,881.76	7.05	6.99	-123.25	106.77	92.82	13.95	7.652	0					
4,000.00	3,977.55	3,999.35	3,981.10	7.23	7.17	-123.17	109.36	95.04	14.32	7.637	0					
4,100.00	4,076.79	4,099.32	4,080.43	7.42	7.36	-123.09	111.94	97.25	14.69	7.622	0					
4,200.00	4,176.04	4,199.28	4,179.76	7.60	7.54	-123.01	114.52	99.47	15.05	7.608	0					
4,300.00	4,275.28	4,299.25	4,279.10	7.79	7.72	-122.94	117.10	101.68	15.42	7.595	0					
4,400.00	4,374.52	4,399.22	4,378.43	7.97	7.91	-122.87	119.68	103.90	15.79	7.582	0					
4,500.00	4,473.77	4,499.18	4,477.76	8.16	8.09	-122.80	122.27	106.12	16.15	7.570	0					
4,600.00	4,573.01	4,599.15	4,577.10	8.34	8.27	-122.74	124.85	108.33	16.52	7.558	0					
4,700.00	4,672.25	4,699.12	4,676.43	8.53	8.46	-122.68	127.43	110.55	16.89	7.547	0					
4,800.00	4,771.49	4,799.08	4,775.77	8.72	8.64	-122.62	130.02	112.76	17.25	7.536	0					
4,900.00	4,870.74	4,899.05	4,875.10	8.90	8.83	-122.56	132.60	114.98	17.62	7.526	0					
5,000.00	4,969.98	4,999.02	4,974.43	9.09	9.01	-122.51	135.18	117.20	17.99	7.516	0					
5,100.00	5,069.22	5,098.98	5,073.77	9.27	9.19	-122.46	137.77	119.41	18.35	7.507	0					
5,200.00	5,168.47	5,198.95	5,173.10	9.46	9.38	-122.41	140.35	121.63	18.72	7.498	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	5,267.71	5,298.92	5,272.44	9.64	9.56	-122.36	142.93	123.85	19.09	7.489	0					
5,400.00	5,366.95	5,398.88	5,371.77	9.83	9.75	-122.31	145.52	126.06	19.45	7.480	0					
5,500.00	5,466.19	5,498.85	5,471.10	10.02	9.93	-122.26	148.10	128.28	19.82	7.472	0					
5,600.00	5,565.44	5,598.82	5,570.44	10.20	10.11	-122.22	150.69	130.50	20.19	7.465	0					
5,700.00	5,664.68	5,698.78	5,669.77	10.39	10.30	-122.18	153.27	132.72	20.55	7.457	0					
5,800.00	5,763.92	5,798.75	5,769.10	10.57	10.48	-122.14	155.85	134.93	20.92	7.450	0					
5,900.00	5,863.17	5,898.72	5,868.44	10.76	10.66	-122.10	158.44	137.15	21.29	7.443	0					
6,000.00	5,962.41	5,998.68	5,967.77	10.95	10.85	-122.06	161.02	139.37	21.65	7.436	0					
6,043.43	6,005.51	6,042.10	6,010.92	11.03	10.93	-122.04	162.15	140.33	21.81	7.433	0					
6,100.00	6,061.72	6,098.65	6,067.11	11.13	11.03	-121.88	163.31	141.29	22.02	7.415	0					
6,200.00	6,161.34	6,198.59	6,166.42	11.31	11.22	-120.75	163.96	141.57	22.39	7.322	0					
6,300.00	6,261.21	6,297.61	6,264.84	11.48	11.40	-118.69	163.10	140.34	22.76	7.166	0					
6,396.19	6,357.38	6,392.11	6,359.05	11.64	11.56	178.23	161.71	139.18	22.54	7.175	0					
6,400.00	6,361.19	6,395.86	6,362.78	11.65	11.57	178.31	161.65	139.10	22.55	7.169	0					
6,496.19	6,457.38	6,490.64	6,457.47	11.81	11.73	179.79	160.57	137.71	22.87	7.022	0					
6,500.00	6,461.19	6,494.40	6,461.22	11.81	11.74	89.84	160.55	137.08	23.47	6.842	0					
6,550.00	6,511.12	6,543.67	6,510.48	11.89	11.82	90.98	160.35	136.71	23.64	6.783	0					
6,554.93	6,516.03	6,548.52	6,515.33	11.90	11.83	91.15	160.35	136.69	23.66	6.776	0					
6,600.00	6,560.73	6,592.92	6,559.73	11.96	11.91	93.18	160.55	136.73	23.82	6.739	0					
6,650.00	6,609.70	6,641.88	6,608.70	12.03	11.99	96.59	161.42	137.42	24.01	6.724	0					
6,700.00	6,657.72	6,690.80	6,657.61	12.10	12.07	101.06	163.60	139.42	24.18	6.766	0					
6,750.00	6,704.52	6,741.89	6,708.57	12.16	12.15	105.73	167.08	142.78	24.30	6.876	0					
6,800.00	6,749.79	6,794.27	6,760.36	12.21	12.23	110.17	171.65	147.30	24.35	7.049	0					
6,850.00	6,793.25	6,848.04	6,812.68	12.27	12.30	114.33	177.17	152.84	24.32	7.284	0					
6,900.00	6,834.65	6,903.27	6,865.13	12.32	12.37	118.17	183.43	159.22	24.21	7.577	0					
6,950.00	6,873.72	6,960.03	6,917.27	12.38	12.43	121.68	190.23	166.21	24.01	7.921	0					
7,000.00	6,910.22	7,018.37	6,968.57	12.43	12.50	124.83	197.35	173.59	23.75	8.309	0					
7,050.00	6,943.93	7,078.32	7,018.41	12.49	12.57	127.64	204.57	181.14	23.44	8.729	0					
7,100.00	6,974.65	7,139.90	7,066.11	12.55	12.64	130.12	211.69	188.60	23.09	9.168	0					
7,150.00	7,002.17	7,203.09	7,110.92	12.61	12.71	132.26	218.50	195.77	22.74	9.611	0					
7,200.00	7,026.33	7,267.82	7,152.02	12.67	12.79	134.09	224.81	202.41	22.40	10.036	0					
7,250.00	7,046.99	7,333.99	7,188.56	12.74	12.87	135.62	230.45	208.34	22.11	10.423	0					
7,300.00	7,064.01	7,401.46	7,219.73	12.82	12.97	136.85	235.27	213.38	21.89	10.748	0					
7,350.00	7,077.29	7,470.03	7,244.74	12.90	13.08	137.79	239.12	217.36	21.76	10.988	0					
7,400.00	7,086.75	7,539.46	7,262.93	13.01	13.22	138.45	241.91	220.17	21.75	11.125	0					
7,450.00	7,092.32	7,609.47	7,273.78	13.13	13.37	138.83	243.56	221.71	21.85	11.147	0					
7,496.19	7,094.00	7,674.16	7,277.00	13.25	13.53	138.94	244.03	221.97	22.06	11.063	0					
7,500.00	7,094.00	7,677.97	7,277.00	13.26	13.54	138.94	244.03	221.95	22.08	11.052	0					
7,600.00	7,094.00	7,777.97	7,277.00	13.54	13.82	138.94	244.03	221.37	22.66	10.771	0					
7,700.00	7,094.00	7,877.97	7,277.00	13.85	14.12	138.94	244.03	220.76	23.27	10.489	0					
7,800.00	7,094.00	7,977.97	7,277.00	14.18	14.45	138.94	244.03	220.13	23.90	10.209	0					
7,900.00	7,094.00	8,077.97	7,277.00	14.54	14.80	138.94	244.03	219.46	24.57	9.932	0					
8,000.00	7,094.00	8,177.97	7,277.00	14.92	15.18	138.94	244.03	218.77	25.26	9.661	0					
8,100.00	7,094.00	8,277.97	7,277.00	15.33	15.58	138.94	244.03	218.06	25.97	9.395	0					
8,200.00	7,094.00	8,377.97	7,277.00	15.75	16.00	138.94	244.03	217.32	26.71	9.137	0					
8,300.00	7,094.00	8,477.97	7,277.00	16.20	16.44	138.94	244.03	216.57	27.46	8.886	0					
8,335.10	7,094.00	8,513.07	7,277.00	16.36	16.60	138.94	244.03	216.11	27.92	8.741	0					
8,400.00	7,094.00	8,577.97	7,277.00	16.66	16.90	138.94	244.03	215.79	28.24	8.642	0					
8,500.00	7,094.00	8,677.97	7,277.00	17.14	17.38	138.94	244.03	215.00	29.03	8.407	0					
8,600.00	7,094.00	8,777.97	7,277.00	17.63	17.87	138.94	244.03	214.20	29.83	8.181	0					
8,700.00	7,094.00	8,877.97	7,277.00	18.14	18.37	138.94	244.03	213.38	30.65	7.962	0					
8,800.00	7,094.00	8,977.97	7,277.00	18.66	18.89	138.94	244.03	212.55	31.48	7.752	0					
8,900.00	7,094.00	9,077.97	7,277.00	19.19	19.42	138.94	244.03	211.70	32.33	7.549	0					
9,000.00	7,094.00	9,177.97	7,277.00	19.74	19.96	138.94	244.03	210.85	33.18	7.355	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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				
9,100.00	7,094.00	9,277.97	7,277.00	20.29	20.51	138.94	244.03	209.98	34.05	7.168	0					
9,200.00	7,094.00	9,377.97	7,277.00	20.85	21.06	138.94	244.03	209.11	34.92	6.988	0					
9,300.00	7,094.00	9,477.97	7,277.00	21.42	21.63	138.94	244.03	208.23	35.80	6.816	0					
9,400.00	7,094.00	9,577.97	7,277.00	22.00	22.21	138.94	244.03	207.33	36.69	6.650	0					
9,500.00	7,094.00	9,677.97	7,277.00	22.58	22.79	138.94	244.03	206.43	37.59	6.491	0					
9,600.00	7,094.00	9,777.97	7,277.00	23.18	23.38	138.94	244.03	205.53	38.50	6.338	0					
9,700.00	7,094.00	9,877.97	7,277.00	23.77	23.97	138.94	244.03	204.62	39.41	6.192	0					
9,800.00	7,094.00	9,977.97	7,277.00	24.38	24.57	138.94	244.03	203.70	40.33	6.051	0					
9,829.91	7,094.00	10,007.88	7,277.00	24.56	24.75	138.94	244.03	203.22	40.81	5.980	0					
9,900.00	7,094.00	10,077.97	7,277.00	24.99	25.18	138.94	244.03	202.77	41.26	5.915	0					
10,000.00	7,094.00	10,177.97	7,277.00	25.60	25.79	138.94	244.03	201.84	42.19	5.785	0					
10,100.00	7,094.00	10,277.97	7,277.00	26.22	26.40	138.94	244.03	200.91	43.12	5.659	0					
10,200.00	7,094.00	10,377.97	7,277.00	26.84	27.02	138.94	244.03	199.97	44.06	5.538	0					
10,300.00	7,094.00	10,477.97	7,277.00	27.47	27.65	138.94	244.03	199.02	45.00	5.422	0					
10,400.00	7,094.00	10,577.97	7,277.00	28.10	28.28	138.94	244.03	198.08	45.95	5.310	0					
10,500.00	7,094.00	10,677.97	7,277.00	28.73	28.91	138.94	244.03	197.12	46.90	5.203	0					
10,600.00	7,094.00	10,777.97	7,277.00	29.36	29.54	138.94	244.03	196.17	47.86	5.099	0					
10,700.00	7,094.00	10,877.97	7,277.00	30.00	30.18	138.94	244.03	195.21	48.82	4.999	0					
10,800.00	7,094.00	10,977.97	7,277.00	30.65	30.82	138.94	244.03	194.25	49.78	4.902	0					
10,900.00	7,094.00	11,077.97	7,277.00	31.29	31.46	138.94	244.03	193.28	50.75	4.809	0					
11,000.00	7,094.00	11,177.97	7,277.00	31.94	32.11	138.94	244.03	192.31	51.71	4.719	0					
11,100.00	7,094.00	11,277.97	7,277.00	32.59	32.75	138.94	244.03	191.34	52.68	4.632	0					
11,200.00	7,094.00	11,377.97	7,277.00	33.24	33.41	138.94	244.03	190.37	53.66	4.548	0					
11,300.00	7,094.00	11,477.97	7,277.00	33.89	34.06	138.94	244.03	189.39	54.63	4.467	0					
11,334.98	7,094.00	11,512.95	7,277.00	34.12	34.29	138.94	244.03	188.87	55.16	4.424	0					
11,400.00	7,094.00	11,577.97	7,277.00	34.55	34.71	138.94	244.03	188.42	55.61	4.388	0					
11,500.00	7,094.00	11,677.97	7,277.00	35.21	35.37	138.94	244.03	187.44	56.59	4.312	0					
11,600.00	7,094.00	11,777.97	7,277.00	35.87	36.03	138.94	244.03	186.45	57.57	4.238	0					
11,700.00	7,094.00	11,877.97	7,277.00	36.53	36.69	138.94	244.03	185.47	58.56	4.167	0					
11,800.00	7,094.00	11,977.97	7,277.00	37.19	37.35	138.94	244.03	184.48	59.54	4.098	0					
11,900.00	7,094.00	12,077.97	7,277.00	37.85	38.01	138.94	244.03	183.50	60.53	4.031	0					
12,000.00	7,094.00	12,177.97	7,277.00	38.52	38.67	138.94	244.03	182.51	61.52	3.967	0					
12,100.00	7,094.00	12,277.97	7,277.00	39.19	39.34	138.94	244.03	181.52	62.51	3.904	0					
12,200.00	7,094.00	12,377.97	7,277.00	39.85	40.01	138.94	244.03	180.52	63.51	3.843	0					
12,300.00	7,094.00	12,477.97	7,277.00	40.52	40.67	138.94	244.03	179.53	64.50	3.783	0					
12,400.00	7,094.00	12,577.97	7,277.00	41.19	41.34	138.94	244.03	178.53	65.50	3.726	0					
12,500.00	7,094.00	12,677.97	7,277.00	41.87	42.01	138.94	244.03	177.54	66.49	3.670	0					
12,600.00	7,094.00	12,777.97	7,277.00	42.54	42.69	138.94	244.03	176.54	67.49	3.616	0					
12,700.00	7,094.00	12,877.97	7,277.00	43.21	43.36	138.94	244.03	175.54	68.49	3.563	0					
12,800.00	7,094.00	12,977.97	7,277.00	43.89	44.03	138.94	244.03	174.54	69.49	3.512	0					
12,842.00	7,094.00	13,019.97	7,277.00	44.17	44.32	138.94	244.03	173.95	70.08	3.482	0					
12,900.00	7,094.00	13,077.97	7,277.00	44.56	44.71	138.94	244.03	173.54	70.49	3.462	0					
13,000.00	7,094.00	13,177.97	7,277.00	45.24	45.38	138.94	244.03	172.53	71.49	3.413	0					
13,100.00	7,094.00	13,277.97	7,277.00	45.92	46.06	138.94	244.03	171.53	72.50	3.366	0					
13,200.00	7,094.00	13,377.97	7,277.00	46.59	46.73	138.94	244.03	170.53	73.50	3.320	0					
13,300.00	7,094.00	13,477.97	7,277.00	47.27	47.41	138.94	244.03	169.52	74.51	3.275	0					
13,400.00	7,094.00	13,577.97	7,277.00	47.95	48.09	138.94	244.03	168.51	75.51	3.232	0					
13,500.00	7,094.00	13,677.97	7,277.00	48.63	48.77	138.94	244.03	167.51	76.52	3.189	0					
13,600.00	7,094.00	13,777.97	7,277.00	49.31	49.45	138.94	244.03	166.50	77.53	3.148	0					
13,700.00	7,094.00	13,877.97	7,277.00	49.99	50.13	138.94	244.03	165.49	78.54	3.107	0					
13,800.00	7,094.00	13,977.97	7,277.00	50.68	50.81	138.94	244.03	164.48	79.55	3.068	0					
13,900.00	7,094.00	14,077.97	7,277.00	51.36	51.49	138.94	244.03	163.47	80.56	3.029	0					
14,000.00	7,094.00	14,177.97	7,277.00	52.04	52.18	138.94	244.03	162.46	81.57	2.992	0					
14,100.00	7,094.00	14,277.97	7,277.00	52.72	52.86	138.94	244.03	161.45	82.58	2.955	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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		
14,200.00	7,094.00	14,377.97	7,277.00	53.41	53.54	138.94	244.03	160.43	83.59	2.919	0			
14,300.00	7,094.00	14,477.97	7,277.00	54.09	54.23	138.94	244.03	159.42	84.61	2.884	0			
14,334.98	7,094.00	14,512.95	7,277.00	54.33	54.47	138.94	244.03	158.88	85.15	2.866	0			
14,400.00	7,094.00	14,577.97	7,277.00	54.78	54.91	138.94	244.03	158.41	85.62	2.850	0			
14,500.00	7,094.00	14,677.97	7,277.00	55.46	55.60	138.94	244.03	157.39	86.64	2.817	0			
14,600.00	7,094.00	14,777.97	7,277.00	56.15	56.28	138.94	244.03	156.38	87.65	2.784	0			
14,700.00	7,094.00	14,877.97	7,277.00	56.84	56.97	138.94	244.03	155.36	88.67	2.752	0			
14,800.00	7,094.00	14,977.97	7,277.00	57.52	57.65	138.94	244.03	154.35	89.68	2.721	0			
14,867.11	7,094.00	15,045.06	7,277.00	57.98	58.11	138.94	244.03	153.67	90.37	2.700	0		SF	



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	-179.53	56.19					0				
100.00	100.00	97.00	97.00	0.15	0.14	-179.53	56.11	55.82	0.29	194.261	0					
200.00	200.00	197.00	197.00	0.32	0.32	-179.53	56.11	55.47	0.64	88.072	0					
300.00	300.00	297.00	297.00	0.50	0.49	-179.53	56.11	55.12	0.99	56.896	0					
400.00	400.00	397.00	397.00	0.67	0.66	-179.53	56.11	54.77	1.34	42.021	0					
500.00	500.00	497.00	497.00	0.84	0.84	-179.53	56.11	54.42	1.68	33.312	0					
600.00	600.00	597.00	597.00	1.02	1.01	-179.53	56.11	54.07	2.03	27.593	0					
700.00	700.00	697.00	697.00	1.19	1.19	-179.53	56.11	53.72	2.38	23.550	0					
800.00	800.00	797.00	797.00	1.37	1.36	-179.53	56.11	53.37	2.73	20.541	0					
900.00	899.98	896.98	896.98	1.54	1.54	-115.95	56.85	53.77	3.08	18.453	0		CC, ES			
1,000.00	999.84	996.84	996.84	1.72	1.71	-120.46	59.33	55.90	3.43	17.293	0					
1,100.00	1,099.45	1,096.90	1,096.89	1.90	1.89	-125.68	63.84	60.06	3.78	16.883	0					
1,152.76	1,151.87	1,149.77	1,149.71	1.99	1.98	-127.92	66.95	62.98	3.97	16.879	0					
1,200.00	1,198.75	1,197.18	1,197.02	2.07	2.06	-129.41	69.87	65.74	4.13	16.901	0					
1,300.00	1,297.99	1,297.72	1,297.18	2.25	2.24	-130.30	75.42	70.94	4.49	16.801	0					
1,400.00	1,397.24	1,397.84	1,396.66	2.43	2.42	-129.20	80.23	75.39	4.85	16.557	0					
1,500.00	1,496.48	1,497.72	1,495.86	2.62	2.60	-128.08	85.02	79.82	5.20	16.338	0					
1,600.00	1,595.72	1,597.59	1,595.06	2.80	2.78	-127.09	89.84	84.27	5.56	16.149	0					
1,700.00	1,694.97	1,697.46	1,694.27	2.98	2.96	-126.19	94.68	88.75	5.92	15.983	0					
1,800.00	1,794.21	1,797.33	1,793.47	3.16	3.14	-125.39	99.54	93.25	6.28	15.838	0					
1,900.00	1,893.45	1,897.21	1,892.67	3.35	3.32	-124.65	104.42	97.77	6.65	15.709	0					
2,000.00	1,992.69	1,997.08	1,991.87	3.53	3.50	-123.99	109.31	102.30	7.01	15.594	0					
2,100.00	2,091.94	2,096.95	2,091.08	3.71	3.68	-123.38	114.22	106.84	7.37	15.490	0					
2,200.00	2,191.18	2,196.82	2,190.28	3.90	3.86	-122.82	119.14	111.40	7.74	15.397	0					
2,300.00	2,290.42	2,296.70	2,289.48	4.08	4.04	-122.31	124.07	115.96	8.10	15.313	0					
2,400.00	2,389.67	2,396.57	2,388.68	4.27	4.23	-121.83	129.01	120.54	8.47	15.236	0					
2,500.00	2,488.91	2,496.44	2,487.89	4.45	4.41	-121.39	133.95	125.12	8.83	15.166	0					
2,600.00	2,588.15	2,596.31	2,587.09	4.64	4.59	-120.98	138.91	129.71	9.20	15.102	0					
2,700.00	2,687.39	2,696.19	2,686.29	4.82	4.78	-120.60	143.87	134.30	9.56	15.043	0					
2,800.00	2,786.64	2,796.06	2,785.49	5.01	4.96	-120.25	148.83	138.90	9.93	14.988	0					
2,900.00	2,885.88	2,895.93	2,884.70	5.19	5.14	-119.92	153.81	143.51	10.30	14.937	0					
3,000.00	2,985.12	2,995.80	2,983.90	5.38	5.32	-119.60	158.78	148.12	10.66	14.890	0					
3,100.00	3,084.37	3,095.68	3,083.10	5.56	5.51	-119.31	163.76	152.73	11.03	14.846	0					
3,200.00	3,183.61	3,195.55	3,182.30	5.75	5.69	-119.04	168.75	157.35	11.40	14.805	0					
3,300.00	3,282.85	3,295.42	3,281.51	5.93	5.87	-118.78	173.74	161.97	11.77	14.767	0					
3,400.00	3,382.09	3,395.29	3,380.71	6.12	6.06	-118.53	178.73	166.60	12.13	14.731	0					
3,500.00	3,481.34	3,495.17	3,479.91	6.30	6.24	-118.30	183.73	171.23	12.50	14.697	0					
3,600.00	3,580.58	3,595.04	3,579.11	6.49	6.43	-118.08	188.72	175.86	12.87	14.666	0					
3,700.00	3,679.82	3,694.91	3,678.32	6.67	6.61	-117.87	193.73	180.49	13.24	14.636	0					
3,800.00	3,779.07	3,794.78	3,777.52	6.86	6.79	-117.68	198.73	185.12	13.60	14.608	0					
3,900.00	3,878.31	3,894.66	3,876.72	7.05	6.98	-117.49	203.73	189.76	13.97	14.581	0					
4,000.00	3,977.55	3,994.53	3,975.92	7.23	7.16	-117.31	208.74	194.40	14.34	14.556	0					
4,100.00	4,076.79	4,094.40	4,075.13	7.42	7.34	-117.14	213.75	199.04	14.71	14.532	0					
4,200.00	4,176.04	4,194.27	4,174.33	7.60	7.53	-116.98	218.76	203.69	15.08	14.510	0					
4,300.00	4,275.28	4,294.15	4,273.53	7.79	7.71	-116.82	223.78	208.33	15.45	14.488	0					
4,400.00	4,374.52	4,394.02	4,372.73	7.97	7.90	-116.67	228.79	212.98	15.81	14.468	0					
4,500.00	4,473.77	4,493.89	4,471.94	8.16	8.08	-116.53	233.81	217.62	16.18	14.449	0					
4,600.00	4,573.01	4,593.76	4,571.14	8.34	8.26	-116.39	238.82	222.27	16.55	14.430	0					
4,700.00	4,672.25	4,693.64	4,670.34	8.53	8.45	-116.26	243.84	226.92	16.92	14.412	0					
4,800.00	4,771.49	4,793.51	4,769.54	8.72	8.63	-116.14	248.86	231.58	17.29	14.396	0					
4,900.00	4,870.74	4,893.38	4,868.75	8.90	8.82	-116.02	253.88	236.23	17.66	14.379	0					
5,000.00	4,969.98	4,993.25	4,967.95	9.09	9.00	-115.90	258.91	240.88	18.02	14.364	0					
5,100.00	5,069.22	5,093.13	5,067.15	9.27	9.18	-115.79	263.93	245.54	18.39	14.349	0					
5,200.00	5,168.47	5,193.00	5,166.35	9.46	9.37	-115.68	268.95	250.19	18.76	14.335	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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				
5,300.00	5,267.71	5,292.87	5,265.56	9.64	9.55	-115.58	273.98	254.85	19.13	14.321	0					
5,400.00	5,366.95	5,392.74	5,364.76	9.83	9.74	-115.48	279.00	259.50	19.50	14.308	0					
5,500.00	5,466.19	5,492.62	5,463.96	10.02	9.92	-115.39	284.03	264.16	19.87	14.296	0					
5,600.00	5,565.44	5,592.49	5,563.16	10.20	10.11	-115.29	289.06	268.82	20.24	14.284	0					
5,700.00	5,664.68	5,692.36	5,662.37	10.39	10.29	-115.20	294.09	273.48	20.61	14.272	0					
5,800.00	5,763.92	5,792.23	5,761.57	10.57	10.47	-115.12	299.12	278.14	20.97	14.261	0					
5,900.00	5,863.17	5,892.10	5,860.77	10.76	10.66	-115.03	304.15	282.80	21.34	14.250	0					
6,000.00	5,962.41	5,991.98	5,959.97	10.95	10.84	-114.95	309.18	287.46	21.71	14.239	0					
6,043.43	6,005.51	6,035.36	6,003.06	11.03	10.92	-114.92	311.36	289.49	21.87	14.235	0					
6,100.00	6,061.72	6,091.81	6,059.15	11.13	11.03	-114.87	313.97	291.89	22.08	14.218	0					
6,200.00	6,161.34	6,191.61	6,158.58	11.31	11.20	-114.77	317.48	295.04	22.44	14.148	0					
6,300.00	6,261.21	6,291.48	6,258.30	11.48	11.38	-114.70	319.57	296.78	22.79	14.025	0					
6,396.19	6,357.38	6,387.58	6,354.38	11.64	11.54	-179.84	320.23	297.74	22.49	14.239	0					
6,400.00	6,361.19	6,391.38	6,358.19	11.65	11.54	-179.84	320.23	297.73	22.50	14.231	0					
6,496.19	6,457.38	6,487.57	6,454.38	11.81	11.71	-179.84	320.23	297.39	22.83	14.024	0					
6,500.00	6,461.19	6,491.38	6,458.19	11.81	11.71	90.16	320.23	296.77	23.46	13.653	0					
6,550.00	6,511.12	6,541.46	6,508.22	11.89	11.79	90.21	320.23	296.62	23.61	13.562	0					
6,600.00	6,560.73	6,591.56	6,557.95	11.96	11.87	90.25	320.23	296.47	23.76	13.477	0					
6,650.00	6,609.70	6,641.68	6,607.07	12.03	11.93	90.29	320.23	296.33	23.90	13.400	0					
6,700.00	6,657.72	6,691.81	6,655.28	12.10	12.00	90.32	320.23	296.21	24.03	13.328	0					
6,750.00	6,704.52	6,741.96	6,702.29	12.16	12.06	90.36	320.23	296.09	24.15	13.261	0					
6,800.00	6,749.79	6,792.13	6,747.78	12.21	12.12	90.39	320.24	295.97	24.26	13.197	0					
6,850.00	6,793.25	6,842.31	6,791.49	12.27	12.17	90.42	320.24	295.86	24.38	13.137	0					
6,900.00	6,834.65	6,892.50	6,833.13	12.32	12.23	90.45	320.24	295.75	24.49	13.079	0					
6,950.00	6,873.72	6,942.70	6,872.45	12.38	12.28	90.47	320.24	295.64	24.59	13.021	0					
7,000.00	6,910.22	6,992.91	6,909.19	12.43	12.34	90.50	320.24	295.53	24.71	12.962	0					
7,050.00	6,943.93	7,043.14	6,943.13	12.49	12.40	90.51	320.24	295.42	24.82	12.901	0					
7,100.00	6,974.65	7,093.37	6,974.05	12.55	12.46	90.53	320.24	295.29	24.95	12.836	0					
7,150.00	7,002.17	7,143.60	7,001.76	12.61	12.53	90.54	320.24	295.16	25.08	12.768	0					
7,200.00	7,026.33	7,193.85	7,026.09	12.67	12.60	90.55	320.24	295.01	25.23	12.693	0					
7,250.00	7,046.99	7,244.09	7,046.88	12.74	12.68	90.56	320.24	294.85	25.39	12.612	0					
7,300.00	7,064.01	7,294.34	7,063.99	12.82	12.77	90.56	320.24	294.67	25.57	12.524	0					
7,350.00	7,077.29	7,344.58	7,077.33	12.90	12.87	90.56	320.24	294.48	25.77	12.429	0					
7,400.00	7,086.75	7,394.83	7,086.81	13.01	12.98	90.56	320.24	294.26	25.98	12.327	0					
7,450.00	7,092.32	7,445.07	7,092.37	13.13	13.09	90.55	320.24	294.03	26.21	12.218	0					
7,496.19	7,094.00	7,491.48	7,094.00	13.25	13.21	90.54	320.24	293.80	26.44	12.113	0					
7,500.00	7,094.00	7,495.29	7,094.00	13.26	13.22	90.54	320.24	293.78	26.46	12.104	0					
7,600.00	7,094.00	7,595.29	7,094.00	13.54	13.49	90.54	320.24	293.24	27.00	11.860	0					
7,700.00	7,094.00	7,695.29	7,094.00	13.85	13.79	90.54	320.24	292.64	27.61	11.600	0					
7,800.00	7,094.00	7,795.29	7,094.00	14.18	14.12	90.54	320.24	291.97	28.27	11.329	0					
7,900.00	7,094.00	7,895.29	7,094.00	14.54	14.48	90.54	320.24	291.26	28.98	11.049	0					
8,000.00	7,094.00	7,995.29	7,094.00	14.92	14.86	90.54	320.24	290.49	29.75	10.765	0					
8,100.00	7,094.00	8,095.29	7,094.00	15.33	15.27	90.54	320.24	289.68	30.56	10.480	0					
8,200.00	7,094.00	8,195.29	7,094.00	15.75	15.69	90.54	320.24	288.83	31.41	10.196	0					
8,300.00	7,094.00	8,295.29	7,094.00	16.20	16.14	90.54	320.24	287.94	32.30	9.914	0					
8,400.00	7,094.00	8,395.29	7,094.00	16.66	16.60	90.54	320.24	287.01	33.23	9.638	0					
8,500.00	7,094.00	8,495.29	7,094.00	17.14	17.08	90.54	320.24	286.06	34.19	9.367	0					
8,600.00	7,094.00	8,595.29	7,094.00	17.63	17.58	90.54	320.24	285.07	35.18	9.104	0					
8,700.00	7,094.00	8,695.29	7,094.00	18.14	18.09	90.54	320.24	284.05	36.19	8.848	0					
8,800.00	7,094.00	8,795.29	7,094.00	18.66	18.61	90.54	320.24	283.01	37.24	8.600	0					
8,900.00	7,094.00	8,895.29	7,094.00	19.19	19.14	90.54	320.24	281.94	38.30	8.361	0					
9,000.00	7,094.00	8,995.29	7,094.00	19.74	19.68	90.54	320.24	280.85	39.39	8.130	0					
9,100.00	7,094.00	9,095.29	7,094.00	20.29	20.24	90.54	320.24	279.74	40.50	7.908	0					
9,200.00	7,094.00	9,195.29	7,094.00	20.85	20.80	90.54	320.24	278.62	41.62	7.694	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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						
9,300.00	7,094.00	9,295.29	7,094.00	21.42	21.37	90.54	320.24	277.48	42.76	7.488	0							
9,400.00	7,094.00	9,395.29	7,094.00	22.00	21.95	90.54	320.24	276.32	43.92	7.291	0							
9,500.00	7,094.00	9,495.29	7,094.00	22.58	22.54	90.54	320.24	275.15	45.09	7.102	0							
9,600.00	7,094.00	9,595.29	7,094.00	23.18	23.13	90.54	320.24	273.96	46.28	6.920	0							
9,700.00	7,094.00	9,695.29	7,094.00	23.77	23.73	90.54	320.24	272.77	47.48	6.745	0							
9,800.00	7,094.00	9,795.29	7,094.00	24.38	24.33	90.54	320.24	271.56	48.68	6.578	0							
9,900.00	7,094.00	9,895.29	7,094.00	24.99	24.94	90.54	320.24	270.34	49.90	6.417	0							
10,000.00	7,094.00	9,995.29	7,094.00	25.60	25.56	90.54	320.24	269.11	51.13	6.263	0							
10,100.00	7,094.00	10,095.29	7,094.00	26.22	26.17	90.54	320.24	267.87	52.37	6.115	0							
10,200.00	7,094.00	10,195.29	7,094.00	26.84	26.80	90.54	320.24	266.63	53.61	5.973	0							
10,300.00	7,094.00	10,295.29	7,094.00	27.47	27.42	90.54	320.24	265.38	54.87	5.837	0							
10,400.00	7,094.00	10,395.29	7,094.00	28.10	28.06	90.54	320.24	264.12	56.13	5.706	0							
10,500.00	7,094.00	10,495.29	7,094.00	28.73	28.69	90.54	320.24	262.85	57.39	5.580	0							
10,600.00	7,094.00	10,595.29	7,094.00	29.36	29.33	90.54	320.24	261.57	58.67	5.459	0							
10,700.00	7,094.00	10,695.29	7,094.00	30.00	29.97	90.54	320.24	260.29	59.95	5.342	0							
10,800.00	7,094.00	10,795.29	7,094.00	30.65	30.61	90.54	320.24	259.01	61.23	5.230	0							
10,900.00	7,094.00	10,895.29	7,094.00	31.29	31.25	90.54	320.24	257.72	62.52	5.122	0							
11,000.00	7,094.00	10,995.29	7,094.00	31.94	31.90	90.54	320.24	256.42	63.82	5.018	0							
11,100.00	7,094.00	11,095.29	7,094.00	32.59	32.55	90.54	320.24	255.12	65.12	4.918	0							
11,200.00	7,094.00	11,195.29	7,094.00	33.24	33.20	90.54	320.24	253.82	66.42	4.821	0							
11,300.00	7,094.00	11,295.29	7,094.00	33.89	33.86	90.54	320.24	252.51	67.73	4.728	0							
11,400.00	7,094.00	11,395.29	7,094.00	34.55	34.52	90.54	320.24	251.20	69.05	4.638	0							
11,500.00	7,094.00	11,495.29	7,094.00	35.21	35.17	90.54	320.24	249.88	70.36	4.551	0							
11,600.00	7,094.00	11,595.29	7,094.00	35.87	35.83	90.54	320.24	248.56	71.68	4.468	0							
11,700.00	7,094.00	11,695.29	7,094.00	36.53	36.50	90.54	320.24	247.24	73.00	4.387	0							
11,800.00	7,094.00	11,795.29	7,094.00	37.19	37.16	90.54	320.24	245.91	74.33	4.308	0							
11,900.00	7,094.00	11,895.29	7,094.00	37.85	37.82	90.54	320.24	244.58	75.66	4.233	0							
12,000.00	7,094.00	11,995.29	7,094.00	38.52	38.49	90.54	320.24	243.25	76.99	4.159	0							
12,100.00	7,094.00	12,095.29	7,094.00	39.19	39.16	90.54	320.24	241.92	78.33	4.089	0							
12,200.00	7,094.00	12,195.29	7,094.00	39.85	39.82	90.54	320.24	240.58	79.66	4.020	0							
12,300.00	7,094.00	12,295.29	7,094.00	40.52	40.49	90.54	320.24	239.24	81.00	3.954	0							
12,400.00	7,094.00	12,395.29	7,094.00	41.19	41.16	90.54	320.24	237.90	82.34	3.889	0							
12,500.00	7,094.00	12,495.29	7,094.00	41.87	41.84	90.54	320.24	236.56	83.69	3.827	0							
12,600.00	7,094.00	12,595.29	7,094.00	42.54	42.51	90.54	320.24	235.21	85.03	3.766	0							
12,700.00	7,094.00	12,695.29	7,094.00	43.21	43.18	90.54	320.24	233.86	86.38	3.707	0							
12,800.00	7,094.00	12,795.29	7,094.00	43.89	43.86	90.54	320.24	232.51	87.73	3.650	0							
12,900.00	7,094.00	12,895.29	7,094.00	44.56	44.53	90.54	320.24	231.16	89.08	3.595	0							
13,000.00	7,094.00	12,995.29	7,094.00	45.24	45.21	90.54	320.24	229.81	90.43	3.541	0							
13,100.00	7,094.00	13,095.29	7,094.00	45.92	45.89	90.54	320.24	228.45	91.79	3.489	0							
13,200.00	7,094.00	13,195.29	7,094.00	46.59	46.57	90.54	320.24	227.10	93.14	3.438	0							
13,300.00	7,094.00	13,295.29	7,094.00	47.27	47.25	90.54	320.24	225.74	94.50	3.389	0							
13,400.00	7,094.00	13,395.29	7,094.00	47.95	47.92	90.54	320.24	224.38	95.86	3.341	0							
13,500.00	7,094.00	13,495.29	7,094.00	48.63	48.61	90.54	320.24	223.02	97.22	3.294	0							
13,600.00	7,094.00	13,595.29	7,094.00	49.31	49.29	90.54	320.24	221.66	98.58	3.248	0							
13,700.00	7,094.00	13,695.29	7,094.00	49.99	49.97	90.54	320.24	220.30	99.95	3.204	0							
13,800.00	7,094.00	13,795.29	7,094.00	50.68	50.65	90.54	320.24	218.93	101.31	3.161	0							
13,900.00	7,094.00	13,895.29	7,094.00	51.36	51.33	90.54	320.24	217.57	102.68	3.119	0							
14,000.00	7,094.00	13,995.29	7,094.00	52.04	52.02	90.54	320.24	216.20	104.04	3.078	0							
14,100.00	7,094.00	14,095.29	7,094.00	52.72	52.70	90.54	320.24	214.83	105.41	3.038	0							
14,200.00	7,094.00	14,195.29	7,094.00	53.41	53.38	90.54	320.24	213.46	106.78	2.999	0							
14,300.00	7,094.00	14,295.29	7,094.00	54.09	54.07	90.54	320.24	212.09	108.15	2.961	0							
14,400.00	7,094.00	14,395.29	7,094.00	54.78	54.75	90.54	320.24	210.72	109.52	2.924	0							
14,500.00	7,094.00	14,495.29	7,094.00	55.46	55.44	90.54	320.24	209.35	110.89	2.888	0							
14,600.00	7,094.00	14,595.29	7,094.00	56.15	56.13	90.54	320.24	207.98	112.26	2.853	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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		
14,700.00	7,094.00	14,695.29	7,094.00	56.84	56.81	90.54	320.24	206.61	113.64	2.818	0			
14,800.00	7,094.00	14,795.29	7,094.00	57.52	57.50	90.54	320.24	205.23	115.01	2.784	0			
14,867.11	7,094.00	14,862.38	7,094.00	57.98	57.96	90.54	320.25	204.32	115.93	2.762	0		SF	



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	-179.63	84.25					0	CC, ES			
100.00	100.00	96.00	96.00	0.15	0.14	-179.63	84.16	83.87	0.29	292.878	0					
200.00	200.00	196.00	196.00	0.32	0.31	-179.63	84.16	83.52	0.64	132.471	0					
300.00	300.00	296.00	296.00	0.50	0.49	-179.63	84.16	83.17	0.98	85.496	0					
400.00	400.00	396.00	396.00	0.67	0.66	-179.63	84.16	82.83	1.33	63.115	0					
500.00	500.00	496.00	496.00	0.84	0.84	-179.63	84.16	82.48	1.68	50.020	0					
600.00	600.00	596.00	596.00	1.02	1.01	-179.63	84.16	82.13	2.03	41.426	0					
700.00	700.00	696.00	696.00	1.19	1.19	-179.63	84.16	81.78	2.38	35.352	0					
800.00	800.00	796.00	796.00	1.37	1.36	-179.63	84.16	81.43	2.73	30.831	0					
900.00	899.98	895.98	895.98	1.54	1.54	-115.52	84.90	81.82	3.08	27.572	0					
1,000.00	999.84	995.84	995.84	1.72	1.71	-118.58	87.28	83.85	3.43	25.452	0					
1,100.00	1,099.45	1,095.45	1,095.45	1.90	1.88	-123.27	91.78	88.00	3.78	24.277	0					
1,152.76	1,151.87	1,147.45	1,147.45	1.99	1.97	-125.97	95.31	91.35	3.96	24.043	0					
1,200.00	1,198.75	1,194.02	1,194.00	2.07	2.06	-128.01	99.11	94.98	4.13	23.994	0					
1,300.00	1,297.99	1,292.78	1,292.64	2.25	2.23	-130.55	107.97	103.49	4.48	24.084	0					
1,400.00	1,397.24	1,391.61	1,391.11	2.43	2.40	-131.06	117.57	112.74	4.84	24.313	0					
1,500.00	1,496.48	1,490.33	1,489.13	2.62	2.58	-129.97	127.81	122.62	5.19	24.629	0					
1,600.00	1,595.72	1,589.70	1,587.61	2.80	2.76	-128.45	138.41	132.87	5.55	24.954	0					
1,700.00	1,694.97	1,689.08	1,686.10	2.98	2.94	-127.13	149.10	143.19	5.91	25.248	0					
1,800.00	1,794.21	1,788.45	1,784.58	3.16	3.12	-126.00	159.85	153.58	6.27	25.514	0					
1,900.00	1,893.45	1,887.83	1,883.07	3.35	3.30	-125.01	170.65	164.03	6.63	25.755	0					
2,000.00	1,992.69	1,987.20	1,981.55	3.53	3.48	-124.13	181.50	174.51	6.99	25.974	0					
2,100.00	2,091.94	2,086.57	2,080.04	3.71	3.66	-123.36	192.39	185.04	7.35	26.175	0					
2,200.00	2,191.18	2,185.95	2,178.52	3.90	3.84	-122.67	203.31	195.59	7.71	26.358	0					
2,300.00	2,290.42	2,285.32	2,277.01	4.08	4.03	-122.05	214.25	206.17	8.08	26.526	0					
2,400.00	2,389.67	2,384.70	2,375.49	4.27	4.21	-121.48	225.22	216.78	8.44	26.682	0					
2,500.00	2,488.91	2,484.07	2,473.98	4.45	4.39	-120.98	236.20	227.40	8.81	26.825	0					
2,600.00	2,588.15	2,583.44	2,572.46	4.64	4.58	-120.51	247.20	238.03	9.17	26.958	0					
2,700.00	2,687.39	2,682.82	2,670.95	4.82	4.76	-120.09	258.22	248.69	9.54	27.081	0					
2,800.00	2,786.64	2,782.19	2,769.43	5.01	4.95	-119.70	269.25	259.35	9.90	27.194	0					
2,900.00	2,885.88	2,881.57	2,867.92	5.19	5.13	-119.34	280.29	270.03	10.27	27.300	0					
3,000.00	2,985.12	2,980.94	2,966.40	5.38	5.32	-119.01	291.34	280.71	10.63	27.398	0					
3,100.00	3,084.37	3,080.31	3,064.89	5.56	5.50	-118.70	302.41	291.41	11.00	27.491	0					
3,200.00	3,183.61	3,179.69	3,163.37	5.75	5.69	-118.41	313.47	302.11	11.37	27.578	0					
3,300.00	3,282.85	3,279.06	3,261.86	5.93	5.87	-118.15	324.55	312.82	11.73	27.660	0					
3,400.00	3,382.09	3,378.43	3,360.34	6.12	6.06	-117.90	335.63	323.53	12.10	27.737	0					
3,500.00	3,481.34	3,477.81	3,458.83	6.30	6.24	-117.67	346.72	334.25	12.47	27.810	0					
3,600.00	3,580.58	3,577.18	3,557.31	6.49	6.43	-117.45	357.81	344.98	12.83	27.879	0					
3,700.00	3,679.82	3,676.56	3,655.80	6.67	6.61	-117.24	368.91	355.71	13.20	27.944	0					
3,800.00	3,779.07	3,775.93	3,754.28	6.86	6.80	-117.05	380.01	366.44	13.57	28.006	0					
3,900.00	3,878.31	3,875.30	3,852.77	7.05	6.98	-116.87	391.12	377.18	13.94	28.065	0					
4,000.00	3,977.55	3,974.68	3,951.25	7.23	7.17	-116.70	402.23	387.92	14.30	28.120	0					
4,100.00	4,076.79	4,074.05	4,049.74	7.42	7.36	-116.53	413.34	398.67	14.67	28.174	0					
4,200.00	4,176.04	4,173.43	4,148.22	7.60	7.54	-116.38	424.46	409.42	15.04	28.224	0					
4,300.00	4,275.28	4,272.80	4,246.71	7.79	7.73	-116.23	435.58	420.17	15.41	28.273	0					
4,400.00	4,374.52	4,372.17	4,345.19	7.97	7.91	-116.09	446.70	430.93	15.77	28.319	0					
4,500.00	4,473.77	4,471.55	4,443.68	8.16	8.10	-115.96	457.82	441.68	16.14	28.363	0					
4,600.00	4,573.01	4,570.92	4,542.16	8.34	8.29	-115.84	468.95	452.44	16.51	28.405	0					
4,700.00	4,672.25	4,670.29	4,640.65	8.53	8.47	-115.72	480.08	463.20	16.88	28.445	0					
4,800.00	4,771.49	4,769.67	4,739.13	8.72	8.66	-115.60	491.21	473.97	17.25	28.484	0					
4,900.00	4,870.74	4,869.04	4,837.62	8.90	8.84	-115.49	502.34	484.73	17.61	28.521	0					
5,000.00	4,969.98	4,968.42	4,936.10	9.09	9.03	-115.39	513.48	495.50	17.98	28.557	0					
5,100.00	5,069.22	5,067.79	5,034.59	9.27	9.22	-115.29	524.62	506.27	18.35	28.591	0					
5,200.00	5,168.47	5,167.16	5,133.07	9.46	9.40	-115.19	535.75	517.04	18.72	28.624	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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				
5,300.00	5,267.71	5,266.54	5,231.56	9.64	9.59	-115.10	546.89	527.81	19.08	28.656	0					
5,400.00	5,366.95	5,365.91	5,330.04	9.83	9.78	-115.01	558.03	538.58	19.45	28.687	0					
5,500.00	5,466.19	5,465.29	5,428.53	10.02	9.96	-114.92	569.18	549.35	19.82	28.716	0					
5,600.00	5,565.44	5,564.66	5,527.01	10.20	10.15	-114.84	580.32	560.13	20.19	28.745	0					
5,700.00	5,664.68	5,664.03	5,625.50	10.39	10.33	-114.76	591.46	570.91	20.56	28.772	0					
5,800.00	5,763.92	5,763.41	5,723.98	10.57	10.52	-114.69	602.61	581.68	20.92	28.799	0					
5,900.00	5,863.17	5,862.78	5,822.47	10.76	10.71	-114.61	613.75	592.46	21.29	28.824	0					
6,000.00	5,962.41	5,962.15	5,920.95	10.95	10.89	-114.54	624.90	603.24	21.66	28.849	0					
6,043.43	6,005.51	6,005.32	5,963.73	11.03	10.97	-114.51	629.74	607.92	21.82	28.859	0					
6,100.00	6,061.72	6,066.52	6,024.44	11.13	11.09	-114.56	635.64	613.60	22.04	28.839	0					
6,200.00	6,161.34	6,177.36	6,134.75	11.31	11.29	-114.62	643.61	621.19	22.42	28.702	0					
6,300.00	6,261.21	6,288.58	6,245.78	11.48	11.48	-114.65	648.38	625.58	22.79	28.445	0					
6,396.19	6,357.38	6,395.76	6,352.92	11.64	11.66	-179.82	649.93	627.32	22.61	28.743	0					
6,400.00	6,361.19	6,400.00	6,357.17	11.65	11.66	-179.82	649.93	627.31	22.63	28.726	0					
6,496.19	6,457.38	6,496.21	6,453.38	11.81	11.83	-179.82	649.93	626.98	22.96	28.312	0					
6,500.00	6,461.19	6,500.02	6,457.19	11.81	11.83	90.18	649.93	626.45	23.49	27.671	0					
6,550.00	6,511.12	6,550.19	6,507.31	11.89	11.91	90.21	649.94	626.29	23.65	27.487	0					
6,600.00	6,560.73	6,600.39	6,557.14	11.96	11.98	90.23	649.94	626.14	23.79	27.317	0					
6,650.00	6,609.70	6,650.61	6,606.38	12.03	12.05	90.26	649.94	626.01	23.93	27.160	0					
6,700.00	6,657.72	6,700.85	6,654.71	12.10	12.12	90.28	649.94	625.88	24.06	27.015	0					
6,750.00	6,704.52	6,751.11	6,701.83	12.16	12.18	90.30	649.94	625.76	24.18	26.879	0					
6,800.00	6,749.79	6,801.39	6,747.45	12.21	12.23	90.32	649.94	625.65	24.30	26.751	0					
6,850.00	6,793.25	6,851.68	6,791.27	12.27	12.29	90.34	649.94	625.54	24.41	26.629	0					
6,900.00	6,834.65	6,901.99	6,833.02	12.32	12.34	90.35	649.94	625.43	24.52	26.511	0					
6,950.00	6,873.72	6,952.32	6,872.43	12.38	12.40	90.37	649.94	625.32	24.63	26.393	0					
7,000.00	6,910.22	7,002.65	6,909.26	12.43	12.45	90.38	649.95	625.21	24.74	26.274	0					
7,050.00	6,943.93	7,052.99	6,943.27	12.49	12.51	90.39	649.95	625.09	24.85	26.151	0					
7,100.00	6,974.65	7,103.34	6,974.25	12.55	12.57	90.39	649.95	624.97	24.98	26.021	0					
7,150.00	7,002.17	7,153.69	7,002.00	12.61	12.63	90.39	649.95	624.83	25.11	25.881	0					
7,200.00	7,026.33	7,204.05	7,026.34	12.67	12.70	90.40	649.95	624.69	25.26	25.730	0					
7,250.00	7,046.99	7,254.40	7,047.13	12.74	12.77	90.39	649.95	624.52	25.42	25.566	0					
7,300.00	7,064.01	7,304.76	7,064.23	12.82	12.84	90.39	649.95	624.35	25.60	25.389	0					
7,350.00	7,077.29	7,355.10	7,077.53	12.90	12.92	90.38	649.95	624.15	25.80	25.196	0					
7,400.00	7,086.75	7,405.44	7,086.96	13.01	13.03	90.38	649.95	623.94	26.01	24.989	0					
7,450.00	7,092.32	7,455.78	7,092.45	13.13	13.15	90.36	649.94	623.70	26.24	24.769	0					
7,496.19	7,094.00	7,502.25	7,094.00	13.25	13.27	90.35	649.94	623.47	26.47	24.555	0					
7,500.00	7,094.00	7,506.06	7,094.00	13.26	13.28	90.35	649.94	623.45	26.49	24.537	0					
7,600.00	7,094.00	7,606.06	7,094.00	13.54	13.56	90.35	649.94	622.91	27.03	24.044	0					
7,700.00	7,094.00	7,706.06	7,094.00	13.85	13.87	90.35	649.94	622.31	27.64	23.518	0					
7,800.00	7,094.00	7,806.06	7,094.00	14.18	14.20	90.35	649.94	621.65	28.30	22.969	0					
7,900.00	7,094.00	7,906.06	7,094.00	14.54	14.56	90.35	649.94	620.93	29.01	22.403	0					
8,000.00	7,094.00	8,006.06	7,094.00	14.92	14.94	90.35	649.94	620.17	29.77	21.829	0					
8,100.00	7,094.00	8,106.06	7,094.00	15.33	15.35	90.35	649.94	619.36	30.58	21.251	0					
8,200.00	7,094.00	8,206.06	7,094.00	15.75	15.77	90.35	649.94	618.51	31.44	20.675	0					
8,300.00	7,094.00	8,306.06	7,094.00	16.20	16.22	90.35	649.94	617.62	32.33	20.106	0					
8,400.00	7,094.00	8,406.06	7,094.00	16.66	16.68	90.35	649.94	616.69	33.25	19.546	0					
8,500.00	7,094.00	8,506.06	7,094.00	17.14	17.16	90.35	649.94	615.73	34.21	18.998	0					
8,600.00	7,094.00	8,606.06	7,094.00	17.63	17.65	90.35	649.94	614.74	35.20	18.464	0					
8,700.00	7,094.00	8,706.06	7,094.00	18.14	18.16	90.35	649.94	613.73	36.22	17.946	0					
8,800.00	7,094.00	8,806.06	7,094.00	18.66	18.68	90.35	649.94	612.68	37.26	17.444	0					
8,900.00	7,094.00	8,906.06	7,094.00	19.19	19.21	90.35	649.94	611.62	38.33	16.959	0					
9,000.00	7,094.00	9,006.06	7,094.00	19.74	19.75	90.35	649.94	610.53	39.41	16.491	0					
9,100.00	7,094.00	9,106.06	7,094.00	20.29	20.30	90.35	649.94	609.42	40.52	16.040	0					
9,200.00	7,094.00	9,206.06	7,094.00	20.85	20.87	90.35	649.94	608.30	41.64	15.607	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	9,306.06	7,094.00	21.42	21.44	90.35	649.94	607.16	42.79	15.191	0			
9,400.00	7,094.00	9,406.06	7,094.00	22.00	22.01	90.35	649.94	606.00	43.94	14.791	0			
9,500.00	7,094.00	9,506.06	7,094.00	22.58	22.60	90.35	649.94	604.83	45.11	14.407	0			
9,600.00	7,094.00	9,606.06	7,094.00	23.18	23.19	90.35	649.94	603.65	46.30	14.038	0			
9,700.00	7,094.00	9,706.06	7,094.00	23.77	23.79	90.35	649.94	602.45	47.49	13.685	0			
9,800.00	7,094.00	9,806.06	7,094.00	24.38	24.39	90.35	649.94	601.24	48.70	13.345	0			
9,900.00	7,094.00	9,906.06	7,094.00	24.99	25.00	90.35	649.94	600.02	49.92	13.020	0			
10,000.00	7,094.00	10,006.06	7,094.00	25.60	25.61	90.35	649.94	598.80	51.15	12.707	0			
10,100.00	7,094.00	10,106.06	7,094.00	26.22	26.23	90.35	649.94	597.56	52.38	12.407	0			
10,200.00	7,094.00	10,206.06	7,094.00	26.84	26.85	90.35	649.94	596.31	53.63	12.119	0			
10,300.00	7,094.00	10,306.06	7,094.00	27.47	27.48	90.35	649.94	595.06	54.88	11.842	0			
10,400.00	7,094.00	10,406.06	7,094.00	28.10	28.11	90.35	649.94	593.80	56.14	11.576	0			
10,500.00	7,094.00	10,506.06	7,094.00	28.73	28.74	90.35	649.94	592.53	57.41	11.321	0			
10,600.00	7,094.00	10,606.06	7,094.00	29.36	29.37	90.35	649.94	591.26	58.68	11.075	0			
10,700.00	7,094.00	10,706.06	7,094.00	30.00	30.01	90.35	649.94	589.98	59.96	10.839	0			
10,800.00	7,094.00	10,806.06	7,094.00	30.65	30.66	90.35	649.94	588.69	61.25	10.611	0			
10,900.00	7,094.00	10,906.06	7,094.00	31.29	31.30	90.35	649.94	587.40	62.54	10.393	0			
11,000.00	7,094.00	11,006.06	7,094.00	31.94	31.95	90.35	649.94	586.11	63.83	10.182	0			
11,100.00	7,094.00	11,106.06	7,094.00	32.59	32.60	90.35	649.94	584.81	65.13	9.978	0			
11,200.00	7,094.00	11,206.06	7,094.00	33.24	33.25	90.35	649.94	583.50	66.44	9.783	0			
11,300.00	7,094.00	11,306.06	7,094.00	33.89	33.90	90.35	649.94	582.20	67.75	9.594	0			
11,400.00	7,094.00	11,406.06	7,094.00	34.55	34.56	90.35	649.94	580.88	69.06	9.411	0			
11,500.00	7,094.00	11,506.06	7,094.00	35.21	35.22	90.35	649.94	579.57	70.38	9.235	0			
11,600.00	7,094.00	11,606.06	7,094.00	35.87	35.87	90.35	649.94	578.25	71.70	9.065	0			
11,700.00	7,094.00	11,706.06	7,094.00	36.53	36.54	90.35	649.94	576.93	73.02	8.901	0			
11,800.00	7,094.00	11,806.06	7,094.00	37.19	37.20	90.35	649.94	575.60	74.34	8.742	0			
11,900.00	7,094.00	11,906.06	7,094.00	37.85	37.86	90.35	649.94	574.27	75.67	8.589	0			
12,000.00	7,094.00	12,006.06	7,094.00	38.52	38.53	90.35	649.94	572.94	77.00	8.440	0			
12,100.00	7,094.00	12,106.06	7,094.00	39.19	39.19	90.35	649.94	571.61	78.34	8.297	0			
12,200.00	7,094.00	12,206.06	7,094.00	39.85	39.86	90.35	649.94	570.27	79.68	8.157	0			
12,300.00	7,094.00	12,306.06	7,094.00	40.52	40.53	90.35	649.94	568.93	81.01	8.023	0			
12,400.00	7,094.00	12,406.06	7,094.00	41.19	41.20	90.35	649.94	567.59	82.36	7.892	0			
12,500.00	7,094.00	12,506.06	7,094.00	41.87	41.87	90.35	649.94	566.24	83.70	7.765	0			
12,600.00	7,094.00	12,606.06	7,094.00	42.54	42.55	90.35	649.94	564.90	85.04	7.642	0			
12,700.00	7,094.00	12,706.06	7,094.00	43.21	43.22	90.35	649.94	563.55	86.39	7.523	0			
12,800.00	7,094.00	12,806.06	7,094.00	43.89	43.89	90.35	649.94	562.20	87.74	7.407	0			
12,900.00	7,094.00	12,906.06	7,094.00	44.56	44.57	90.35	649.94	560.85	89.09	7.295	0			
13,000.00	7,094.00	13,006.06	7,094.00	45.24	45.24	90.35	649.94	559.50	90.45	7.186	0			
13,100.00	7,094.00	13,106.06	7,094.00	45.92	45.92	90.35	649.94	558.14	91.80	7.080	0			
13,200.00	7,094.00	13,206.06	7,094.00	46.59	46.60	90.35	649.94	556.79	93.16	6.977	0			
13,300.00	7,094.00	13,306.06	7,094.00	47.27	47.28	90.35	649.94	555.43	94.51	6.877	0			
13,400.00	7,094.00	13,406.06	7,094.00	47.95	47.96	90.35	649.94	554.07	95.87	6.779	0			
13,500.00	7,094.00	13,506.06	7,094.00	48.63	48.64	90.35	649.94	552.71	97.23	6.684	0			
13,600.00	7,094.00	13,606.06	7,094.00	49.31	49.32	90.35	649.94	551.35	98.59	6.592	0			
13,700.00	7,094.00	13,706.06	7,094.00	49.99	50.00	90.35	649.94	549.99	99.96	6.502	0			
13,800.00	7,094.00	13,806.06	7,094.00	50.68	50.68	90.35	649.94	548.62	101.32	6.415	0			
13,900.00	7,094.00	13,906.06	7,094.00	51.36	51.36	90.35	649.94	547.26	102.69	6.329	0			
14,000.00	7,094.00	14,006.06	7,094.00	52.04	52.05	90.35	649.94	545.89	104.05	6.246	0			
14,100.00	7,094.00	14,106.06	7,094.00	52.72	52.73	90.35	649.94	544.52	105.42	6.165	0			
14,200.00	7,094.00	14,206.06	7,094.00	53.41	53.41	90.35	649.94	543.15	106.79	6.086	0			
14,300.00	7,094.00	14,306.06	7,094.00	54.09	54.10	90.35	649.94	541.78	108.16	6.009	0			
14,400.00	7,094.00	14,406.06	7,094.00	54.78	54.78	90.35	649.94	540.41	109.53	5.934	0			
14,500.00	7,094.00	14,506.06	7,094.00	55.46	55.47	90.35	649.94	539.04	110.90	5.861	0			
14,600.00	7,094.00	14,606.06	7,094.00	56.15	56.15	90.35	649.94	537.67	112.27	5.789	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	14,706.06	7,094.00	56.84	56.84	90.35	649.94	536.30	113.65	5.719	0			
14,762.09	7,094.00	14,768.15	7,094.00	57.26	57.27	90.35	649.94	535.31	114.64	5.670	0			
14,800.00	7,094.00	14,806.02	7,094.00	57.52	57.53	90.35	649.94	534.92	115.02	5.651	0			
14,867.11	7,094.00	14,873.12	7,094.00	57.98	57.99	90.35	649.95	534.01	115.94	5.606	0		SF	



Schlumberger

Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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				
0.00	0.00	0.00	0.00	0.00	0.00	-179.67	111.96					0	CC, ES			
100.00	100.00	95.00	95.00	0.15	0.14	-179.67	111.85	111.56	0.29	391.233	0					
200.00	200.00	195.00	195.00	0.32	0.31	-179.67	111.85	111.21	0.63	176.540	0					
300.00	300.00	295.00	295.00	0.50	0.49	-179.67	111.85	110.87	0.98	113.826	0					
400.00	400.00	395.00	395.00	0.67	0.66	-179.67	111.85	110.52	1.33	83.990	0					
500.00	500.00	495.00	495.00	0.84	0.84	-179.67	111.85	110.17	1.68	66.546	0					
600.00	600.00	595.00	595.00	1.02	1.01	-179.67	111.85	109.82	2.03	55.102	0					
700.00	700.00	695.00	695.00	1.19	1.19	-179.67	111.85	109.47	2.38	47.017	0					
800.00	800.00	795.00	795.00	1.37	1.36	-179.67	111.85	109.12	2.73	41.001	0					
900.00	899.98	894.98	894.98	1.54	1.53	-115.30	112.58	109.51	3.08	36.585	0					
1,000.00	999.84	994.84	994.84	1.72	1.71	-117.62	114.92	111.49	3.43	33.528	0					
1,100.00	1,099.45	1,092.52	1,092.50	1.90	1.88	-120.54	119.98	116.20	3.78	31.776	0					
1,152.76	1,151.87	1,143.93	1,143.87	1.99	1.97	-121.96	124.17	120.21	3.96	31.362	0					
1,200.00	1,198.75	1,189.95	1,189.81	2.07	2.05	-123.05	128.61	124.48	4.13	31.177	0					
1,300.00	1,297.99	1,287.29	1,286.80	2.25	2.22	-124.24	139.23	134.75	4.48	31.106	0					
1,400.00	1,397.24	1,384.36	1,383.21	2.43	2.39	-124.11	151.37	146.55	4.83	31.361	0					
1,500.00	1,496.48	1,483.04	1,480.93	2.62	2.57	-123.31	164.53	159.35	5.18	31.748	0					
1,600.00	1,595.72	1,582.14	1,579.05	2.80	2.75	-122.60	177.75	172.21	5.54	32.082	0					
1,700.00	1,694.97	1,681.24	1,677.18	2.98	2.93	-122.00	190.98	185.08	5.90	32.372	0					
1,800.00	1,794.21	1,780.34	1,775.30	3.16	3.11	-121.47	204.24	197.98	6.26	32.627	0					
1,900.00	1,893.45	1,879.45	1,873.43	3.35	3.30	-121.00	217.51	210.89	6.62	32.852	0					
2,000.00	1,992.69	1,978.55	1,971.56	3.53	3.48	-120.59	230.79	223.81	6.98	33.052	0					
2,100.00	2,091.94	2,077.65	2,069.68	3.71	3.66	-120.22	244.08	236.74	7.34	33.232	0					
2,200.00	2,191.18	2,176.75	2,167.81	3.90	3.85	-119.90	257.39	249.68	7.71	33.393	0					
2,300.00	2,290.42	2,275.85	2,265.94	4.08	4.03	-119.60	270.70	262.62	8.07	33.539	0					
2,400.00	2,389.67	2,374.95	2,364.06	4.27	4.21	-119.33	284.01	275.58	8.43	33.672	0					
2,500.00	2,488.91	2,474.05	2,462.19	4.45	4.40	-119.09	297.33	288.53	8.80	33.793	0					
2,600.00	2,588.15	2,573.15	2,560.31	4.64	4.58	-118.86	310.66	301.50	9.16	33.904	0					
2,700.00	2,687.39	2,672.25	2,658.44	4.82	4.77	-118.66	323.99	314.46	9.53	34.006	0					
2,800.00	2,786.64	2,771.36	2,756.57	5.01	4.95	-118.47	337.32	327.43	9.89	34.100	0					
2,900.00	2,885.88	2,870.46	2,854.69	5.19	5.14	-118.30	350.66	340.40	10.26	34.187	0					
3,000.00	2,985.12	2,969.56	2,952.82	5.38	5.33	-118.13	364.00	353.38	10.62	34.268	0					
3,100.00	3,084.37	3,068.66	3,050.94	5.56	5.51	-117.98	377.35	366.36	10.99	34.343	0					
3,200.00	3,183.61	3,167.76	3,149.07	5.75	5.70	-117.84	390.69	379.34	11.35	34.413	0					
3,300.00	3,282.85	3,266.86	3,247.20	5.93	5.88	-117.71	404.04	392.32	11.72	34.478	0					
3,400.00	3,382.09	3,365.96	3,345.32	6.12	6.07	-117.59	417.39	405.30	12.08	34.540	0					
3,500.00	3,481.34	3,465.06	3,443.45	6.30	6.26	-117.48	430.74	418.29	12.45	34.597	0					
3,600.00	3,580.58	3,564.16	3,541.58	6.49	6.44	-117.37	444.09	431.28	12.82	34.651	0					
3,700.00	3,679.82	3,663.27	3,639.70	6.67	6.63	-117.27	457.45	444.26	13.18	34.702	0					
3,800.00	3,779.07	3,762.37	3,737.83	6.86	6.82	-117.17	470.80	457.25	13.55	34.751	0					
3,900.00	3,878.31	3,861.47	3,835.95	7.05	7.00	-117.08	484.16	470.25	13.91	34.796	0					
4,000.00	3,977.55	3,960.57	3,934.08	7.23	7.19	-116.99	497.52	483.24	14.28	34.839	0					
4,100.00	4,076.79	4,059.67	4,032.21	7.42	7.37	-116.91	510.88	496.23	14.65	34.880	0					
4,200.00	4,176.04	4,158.77	4,130.33	7.60	7.56	-116.84	524.24	509.22	15.01	34.919	0					
4,300.00	4,275.28	4,257.87	4,228.46	7.79	7.75	-116.76	537.60	522.22	15.38	34.956	0					
4,400.00	4,374.52	4,356.97	4,326.59	7.97	7.94	-116.69	550.96	535.21	15.75	34.991	0					
4,500.00	4,473.77	4,456.07	4,424.71	8.16	8.12	-116.63	564.32	548.21	16.11	35.025	0					
4,600.00	4,573.01	4,555.18	4,522.84	8.34	8.31	-116.56	577.69	561.21	16.48	35.056	0					
4,700.00	4,672.25	4,654.28	4,620.96	8.53	8.50	-116.50	591.05	574.20	16.85	35.087	0					
4,800.00	4,771.49	4,753.38	4,719.09	8.72	8.68	-116.44	604.41	587.20	17.21	35.116	0					
4,900.00	4,870.74	4,852.48	4,817.22	8.90	8.87	-116.39	617.78	600.20	17.58	35.144	0					
5,000.00	4,969.98	4,951.58	4,915.34	9.09	9.06	-116.34	631.14	613.20	17.95	35.171	0					
5,100.00	5,069.22	5,050.68	5,013.47	9.27	9.24	-116.29	644.51	626.20	18.31	35.196	0					
5,200.00	5,168.47	5,149.78	5,111.59	9.46	9.43	-116.24	657.88	639.20	18.68	35.221	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	5,267.71	5,248.88	5,209.72	9.64	9.62	-116.19	671.24	652.20	19.05	35.244	0		
5,400.00	5,366.95	5,347.98	5,307.85	9.83	9.81	-116.15	684.61	665.20	19.41	35.267	0		
5,500.00	5,466.19	5,447.09	5,405.97	10.02	9.99	-116.10	697.98	678.20	19.78	35.289	0		
5,600.00	5,565.44	5,546.19	5,504.10	10.20	10.18	-116.06	711.35	691.20	20.15	35.310	0		
5,700.00	5,664.68	5,645.29	5,602.23	10.39	10.37	-116.02	724.72	704.20	20.51	35.330	0		
5,800.00	5,763.92	5,744.39	5,700.35	10.57	10.55	-115.98	738.09	717.21	20.88	35.350	0		
5,900.00	5,863.17	5,843.49	5,798.48	10.76	10.74	-115.94	751.46	730.21	21.25	35.369	0		
6,000.00	5,962.41	5,942.59	5,896.60	10.95	10.93	-115.91	764.83	743.21	21.61	35.387	0		
6,043.43	6,005.51	5,985.64	5,939.22	11.03	11.01	-115.89	770.63	748.86	21.77	35.394	0		
6,100.00	6,061.72	6,041.72	5,994.76	11.13	11.12	-115.97	777.95	755.97	21.99	35.385	0		
6,200.00	6,161.34	6,140.95	6,093.01	11.31	11.30	-115.91	789.72	767.36	22.35	35.326	0		
6,300.00	6,261.21	6,250.27	6,201.34	11.48	11.51	-115.58	799.67	776.94	22.73	35.176	0		
6,396.19	6,357.38	6,364.76	6,315.27	11.64	11.71	179.68	805.89	783.22	22.67	35.548	0		
6,400.00	6,361.19	6,369.30	6,319.80	11.65	11.72	179.70	806.06	783.38	22.69	35.533	0		
6,496.19	6,457.38	6,484.45	6,434.75	11.81	11.92	-179.93	809.28	786.23	23.05	35.108	0		
6,500.00	6,461.19	6,489.02	6,439.32	11.81	11.93	90.08	809.37	785.88	23.49	34.458	0		
6,550.00	6,511.12	6,548.93	6,499.21	11.89	12.02	90.29	810.11	786.44	23.67	34.229	0		
6,600.00	6,560.73	6,605.45	6,555.73	11.96	12.12	90.77	810.32	786.47	23.84	33.988	0		
6,650.00	6,609.70	6,654.42	6,604.70	12.03	12.20	91.45	810.52	786.51	24.00	33.765	0		
6,700.00	6,657.72	6,703.16	6,653.44	12.10	12.28	92.35	810.99	786.82	24.17	33.553	0		
6,750.00	6,704.52	6,754.34	6,704.51	12.16	12.36	93.35	811.76	787.42	24.34	33.355	0		
6,800.00	6,749.79	6,806.86	6,756.49	12.21	12.43	94.33	812.78	788.28	24.50	33.174	0		
6,850.00	6,793.25	6,860.81	6,809.05	12.27	12.50	95.31	814.03	789.37	24.66	33.011	0		
6,900.00	6,834.65	6,916.27	6,861.82	12.32	12.57	96.26	815.50	790.69	24.81	32.867	0		
6,950.00	6,873.72	6,973.30	6,914.33	12.38	12.64	97.19	817.14	792.19	24.96	32.742	0		
7,000.00	6,910.22	7,031.98	6,966.06	12.43	12.71	98.08	818.92	793.83	25.09	32.637	0		
7,050.00	6,943.93	7,092.33	7,016.37	12.49	12.77	98.94	820.78	795.56	25.22	32.549	0		
7,100.00	6,974.65	7,154.36	7,064.57	12.55	12.84	99.74	822.67	797.34	25.33	32.477	0		
7,150.00	7,002.17	7,218.06	7,109.87	12.61	12.91	100.48	824.53	799.09	25.43	32.418	0		
7,200.00	7,026.33	7,283.36	7,151.42	12.67	12.98	101.14	826.29	800.76	25.53	32.362	0		
7,250.00	7,046.99	7,350.15	7,188.37	12.74	13.07	101.73	827.89	802.26	25.63	32.300	0		
7,300.00	7,064.01	7,418.27	7,219.84	12.82	13.15	102.22	829.28	803.55	25.73	32.224	0		
7,350.00	7,077.29	7,487.51	7,245.04	12.90	13.26	102.60	830.40	804.55	25.85	32.122	0		
7,400.00	7,086.75	7,557.62	7,263.27	13.01	13.37	102.88	831.21	805.22	25.99	31.984	0		
7,450.00	7,092.32	7,628.31	7,274.00	13.13	13.52	103.03	831.67	805.51	26.15	31.799	0		
7,496.19	7,094.00	7,692.73	7,277.00	13.25	13.67	103.06	831.76	805.41	26.35	31.564	0		
7,500.00	7,094.00	7,696.54	7,277.00	13.26	13.68	103.06	831.76	805.39	26.37	31.541	0		
7,600.00	7,094.00	7,796.54	7,277.00	13.54	13.96	103.06	831.76	804.85	26.91	30.905	0		
7,700.00	7,094.00	7,896.54	7,277.00	13.85	14.26	103.06	831.76	804.25	27.51	30.231	0		
7,800.00	7,094.00	7,996.54	7,277.00	14.18	14.59	103.06	831.76	803.60	28.17	29.529	0		
7,900.00	7,094.00	8,096.54	7,277.00	14.54	14.95	103.06	831.76	802.89	28.87	28.807	0		
8,000.00	7,094.00	8,196.54	7,277.00	14.92	15.32	103.06	831.76	802.14	29.63	28.075	0		
8,100.00	7,094.00	8,296.54	7,277.00	15.33	15.72	103.06	831.76	801.34	30.42	27.339	0		
8,200.00	7,094.00	8,396.54	7,277.00	15.75	16.14	103.06	831.76	800.50	31.26	26.607	0		
8,300.00	7,094.00	8,496.54	7,277.00	16.20	16.58	103.06	831.76	799.63	32.14	25.883	0		
8,400.00	7,094.00	8,596.54	7,277.00	16.66	17.04	103.06	831.76	798.72	33.04	25.171	0		
8,500.00	7,094.00	8,696.54	7,277.00	17.14	17.51	103.06	831.76	797.78	33.99	24.474	0		
8,600.00	7,094.00	8,796.54	7,277.00	17.63	18.00	103.06	831.76	796.81	34.96	23.795	0		
8,700.00	7,094.00	8,896.54	7,277.00	18.14	18.50	103.06	831.76	795.81	35.95	23.136	0		
8,800.00	7,094.00	8,996.54	7,277.00	18.66	19.02	103.06	831.76	794.79	36.97	22.497	0		
8,900.00	7,094.00	9,096.54	7,277.00	19.19	19.54	103.06	831.76	793.75	38.02	21.880	0		
9,000.00	7,094.00	9,196.54	7,277.00	19.74	20.08	103.06	831.76	792.69	39.08	21.284	0		
9,100.00	7,094.00	9,296.54	7,277.00	20.29	20.63	103.06	831.76	791.60	40.16	20.710	0		
9,200.00	7,094.00	9,396.54	7,277.00	20.85	21.18	103.06	831.76	790.50	41.26	20.157	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	Riskd Separation Factor	Probability of Collision				
9,300.00	7,094.00	9,496.54	7,277.00	21.42	21.75	103.06	831.76	789.38	42.38	19.626	0					
9,400.00	7,094.00	9,596.54	7,277.00	22.00	22.32	103.06	831.76	788.25	43.51	19.115	0					
9,500.00	7,094.00	9,696.54	7,277.00	22.58	22.90	103.06	831.76	787.11	44.66	18.625	0					
9,600.00	7,094.00	9,796.54	7,277.00	23.18	23.49	103.06	831.76	785.95	45.82	18.154	0					
9,700.00	7,094.00	9,896.54	7,277.00	23.77	24.08	103.06	831.76	784.78	46.99	17.702	0					
9,800.00	7,094.00	9,996.54	7,277.00	24.38	24.68	103.06	831.76	783.60	48.17	17.268	0					
9,900.00	7,094.00	10,096.54	7,277.00	24.99	25.28	103.06	831.76	782.40	49.36	16.851	0					
10,000.00	7,094.00	10,196.54	7,277.00	25.60	25.89	103.06	831.76	781.20	50.56	16.450	0					
10,100.00	7,094.00	10,296.54	7,277.00	26.22	26.50	103.06	831.76	779.99	51.77	16.066	0					
10,200.00	7,094.00	10,396.54	7,277.00	26.84	27.12	103.06	831.76	778.77	52.99	15.697	0					
10,300.00	7,094.00	10,496.54	7,277.00	27.47	27.74	103.06	831.76	777.55	54.22	15.342	0					
10,400.00	7,094.00	10,596.54	7,277.00	28.10	28.37	103.06	831.76	776.32	55.45	15.001	0					
10,500.00	7,094.00	10,696.54	7,277.00	28.73	29.00	103.06	831.76	775.08	56.69	14.673	0					
10,600.00	7,094.00	10,796.54	7,277.00	29.36	29.63	103.06	831.76	773.83	57.93	14.357	0					
10,700.00	7,094.00	10,896.54	7,277.00	30.00	30.27	103.06	831.76	772.58	59.19	14.053	0					
10,800.00	7,094.00	10,996.54	7,277.00	30.65	30.91	103.06	831.76	771.32	60.44	13.761	0					
10,900.00	7,094.00	11,096.54	7,277.00	31.29	31.55	103.06	831.76	770.06	61.71	13.480	0					
11,000.00	7,094.00	11,196.54	7,277.00	31.94	32.19	103.06	831.76	768.79	62.97	13.208	0					
11,100.00	7,094.00	11,296.54	7,277.00	32.59	32.84	103.06	831.76	767.52	64.24	12.947	0					
11,200.00	7,094.00	11,396.54	7,277.00	33.24	33.49	103.06	831.76	766.24	65.52	12.695	0					
11,300.00	7,094.00	11,496.54	7,277.00	33.89	34.14	103.06	831.76	764.96	66.80	12.451	0					
11,400.00	7,094.00	11,596.54	7,277.00	34.55	34.79	103.06	831.76	763.68	68.09	12.217	0					
11,500.00	7,094.00	11,696.54	7,277.00	35.21	35.45	103.06	831.76	762.39	69.37	11.990	0					
11,600.00	7,094.00	11,796.54	7,277.00	35.87	36.10	103.06	831.76	761.10	70.66	11.771	0					
11,700.00	7,094.00	11,896.54	7,277.00	36.53	36.76	103.06	831.76	759.81	71.96	11.559	0					
11,800.00	7,094.00	11,996.54	7,277.00	37.19	37.42	103.06	831.76	758.51	73.26	11.354	0					
11,900.00	7,094.00	12,096.54	7,277.00	37.85	38.08	103.06	831.76	757.21	74.56	11.156	0					
12,000.00	7,094.00	12,196.54	7,277.00	38.52	38.75	103.06	831.76	755.91	75.86	10.965	0					
12,100.00	7,094.00	12,296.54	7,277.00	39.19	39.41	103.06	831.76	754.60	77.16	10.779	0					
12,200.00	7,094.00	12,396.54	7,277.00	39.85	40.08	103.06	831.76	753.29	78.47	10.599	0					
12,300.00	7,094.00	12,496.54	7,277.00	40.52	40.74	103.06	831.76	751.98	79.78	10.425	0					
12,400.00	7,094.00	12,596.54	7,277.00	41.19	41.41	103.06	831.76	750.67	81.10	10.257	0					
12,500.00	7,094.00	12,696.54	7,277.00	41.87	42.08	103.06	831.76	749.35	82.41	10.093	0					
12,600.00	7,094.00	12,796.54	7,277.00	42.54	42.75	103.06	831.76	748.04	83.73	9.934	0					
12,700.00	7,094.00	12,896.54	7,277.00	43.21	43.43	103.06	831.76	746.72	85.05	9.780	0					
12,800.00	7,094.00	12,996.54	7,277.00	43.89	44.10	103.06	831.76	745.40	86.37	9.631	0					
12,900.00	7,094.00	13,096.54	7,277.00	44.56	44.77	103.06	831.76	744.08	87.69	9.485	0					
13,000.00	7,094.00	13,196.54	7,277.00	45.24	45.45	103.06	831.76	742.75	89.01	9.344	0					
13,100.00	7,094.00	13,296.54	7,277.00	45.92	46.12	103.06	831.76	741.43	90.34	9.207	0					
13,200.00	7,094.00	13,396.54	7,277.00	46.59	46.80	103.06	831.76	740.10	91.67	9.074	0					
13,300.00	7,094.00	13,496.54	7,277.00	47.27	47.47	103.06	831.76	738.77	92.99	8.944	0					
13,400.00	7,094.00	13,596.54	7,277.00	47.95	48.15	103.06	831.76	737.44	94.32	8.818	0					
13,500.00	7,094.00	13,696.54	7,277.00	48.63	48.83	103.06	831.76	736.11	95.66	8.695	0					
13,600.00	7,094.00	13,796.54	7,277.00	49.31	49.51	103.06	831.76	734.78	96.99	8.576	0					
13,700.00	7,094.00	13,896.54	7,277.00	49.99	50.19	103.06	831.76	733.44	98.32	8.460	0					
13,800.00	7,094.00	13,996.54	7,277.00	50.68	50.87	103.06	831.76	732.11	99.66	8.346	0					
13,900.00	7,094.00	14,096.54	7,277.00	51.36	51.55	103.06	831.76	730.77	100.99	8.236	0					
14,000.00	7,094.00	14,196.54	7,277.00	52.04	52.23	103.06	831.76	729.43	102.33	8.128	0					
14,100.00	7,094.00	14,296.54	7,277.00	52.72	52.92	103.06	831.76	728.09	103.67	8.023	0					
14,200.00	7,094.00	14,396.54	7,277.00	53.41	53.60	103.06	831.76	726.75	105.01	7.921	0					
14,300.00	7,094.00	14,496.54	7,277.00	54.09	54.28	103.06	831.76	725.41	106.35	7.821	0					
14,400.00	7,094.00	14,596.54	7,277.00	54.78	54.97	103.06	831.76	724.07	107.69	7.724	0					
14,500.00	7,094.00	14,696.54	7,277.00	55.46	55.65	103.06	831.76	722.73	109.03	7.628	0					
14,600.00	7,094.00	14,796.54	7,277.00	56.15	56.34	103.06	831.76	721.39	110.38	7.536	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	14,896.54	7,277.00	56.84	57.02	103.06	831.76	720.04	111.72	7.445	0			
14,800.00	7,094.00	14,996.54	7,277.00	57.52	57.71	103.06	831.76	718.70	113.07	7.356	0			
14,867.11	7,094.00	15,063.69	7,277.00	57.98	58.17	103.06	831.76	717.79	113.97	7.298	0		SF	



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Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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					
0.00	0.00	0.00	0.00	0.00	0.00	-179.70	140.03										
100.00	100.00	94.00	94.00	0.15	0.14	-179.70	139.90	139.62	0.28	491.883	0						
200.00	200.00	194.00	194.00	0.32	0.31	-179.70	139.90	139.27	0.63	221.429	0						
300.00	300.00	294.00	294.00	0.50	0.49	-179.70	139.90	138.92	0.98	142.629	0						
400.00	400.00	394.00	394.00	0.67	0.66	-179.70	139.90	138.57	1.33	105.193	0						
500.00	500.00	494.00	494.00	0.84	0.83	-179.70	139.90	138.22	1.68	83.324	0						
600.00	600.00	594.00	594.00	1.02	1.01	-179.70	139.90	137.87	2.03	68.982	0						
700.00	700.00	694.00	694.00	1.19	1.18	-179.70	139.90	137.52	2.38	58.853	0						
800.00	800.00	794.00	794.00	1.37	1.36	-179.70	139.90	137.17	2.73	51.317	0		CC, ES				
900.00	899.98	893.98	893.98	1.54	1.53	-115.17	140.63	137.56	3.08	45.727	0						
1,000.00	999.84	990.81	990.79	1.72	1.70	-116.52	143.93	140.51	3.42	42.079	0						
1,100.00	1,099.45	1,087.21	1,087.08	1.90	1.87	-117.93	151.12	147.35	3.77	40.122	0						
1,152.76	1,151.87	1,137.90	1,137.63	1.99	1.96	-118.66	156.49	152.54	3.95	39.623	0						
1,200.00	1,198.75	1,183.20	1,182.74	2.07	2.04	-119.27	162.02	157.91	4.11	39.383	0						
1,300.00	1,297.99	1,278.80	1,277.70	2.25	2.21	-119.82	175.30	170.84	4.46	39.282	0						
1,400.00	1,397.24	1,374.38	1,372.22	2.43	2.38	-119.53	190.61	185.80	4.81	39.608	0						
1,500.00	1,496.48	1,473.06	1,469.62	2.62	2.56	-119.01	206.69	201.52	5.17	39.984	0						
1,600.00	1,595.72	1,571.74	1,567.03	2.80	2.75	-118.56	222.79	217.26	5.53	40.305	0						
1,700.00	1,694.97	1,670.42	1,664.44	2.98	2.93	-118.18	238.90	233.01	5.89	40.580	0						
1,800.00	1,794.21	1,769.11	1,761.84	3.16	3.11	-117.84	255.02	248.77	6.25	40.819	0						
1,900.00	1,893.45	1,867.79	1,859.25	3.35	3.30	-117.54	271.14	264.53	6.61	41.027	0						
2,000.00	1,992.69	1,966.47	1,956.66	3.53	3.48	-117.28	287.27	280.30	6.97	41.211	0						
2,100.00	2,091.94	2,065.15	2,054.06	3.71	3.67	-117.04	303.41	296.08	7.33	41.375	0						
2,200.00	2,191.18	2,163.83	2,151.47	3.90	3.86	-116.83	319.55	311.86	7.70	41.521	0						
2,300.00	2,290.42	2,262.52	2,248.87	4.08	4.05	-116.64	335.70	327.64	8.06	41.652	0						
2,400.00	2,389.67	2,361.20	2,346.28	4.27	4.23	-116.47	351.85	343.42	8.42	41.771	0						
2,500.00	2,488.91	2,459.88	2,443.69	4.45	4.42	-116.31	368.00	359.21	8.79	41.878	0						
2,600.00	2,588.15	2,558.56	2,541.09	4.64	4.61	-116.16	384.15	375.00	9.15	41.976	0						
2,700.00	2,687.39	2,657.25	2,638.50	4.82	4.80	-116.03	400.31	390.79	9.52	42.066	0						
2,800.00	2,786.64	2,755.93	2,735.91	5.01	4.99	-115.91	416.47	406.58	9.88	42.148	0						
2,900.00	2,885.88	2,854.61	2,833.31	5.19	5.17	-115.79	432.63	422.38	10.25	42.224	0						
3,000.00	2,985.12	2,953.29	2,930.72	5.38	5.36	-115.69	448.79	438.18	10.61	42.294	0						
3,100.00	3,084.37	3,051.97	3,028.12	5.56	5.55	-115.59	464.95	453.97	10.98	42.359	0						
3,200.00	3,183.61	3,150.66	3,125.53	5.75	5.74	-115.50	481.11	469.77	11.34	42.420	0						
3,300.00	3,282.85	3,249.34	3,222.94	5.93	5.93	-115.41	497.28	485.57	11.71	42.476	0						
3,400.00	3,382.09	3,348.02	3,320.34	6.12	6.12	-115.33	513.44	501.37	12.07	42.529	0						
3,500.00	3,481.34	3,446.70	3,417.75	6.30	6.31	-115.26	529.61	517.17	12.44	42.578	0						
3,600.00	3,580.58	3,545.38	3,515.16	6.49	6.50	-115.19	545.78	532.98	12.80	42.624	0						
3,700.00	3,679.82	3,644.07	3,612.56	6.67	6.69	-115.12	561.95	548.78	13.17	42.667	0						
3,800.00	3,779.07	3,742.75	3,709.97	6.86	6.88	-115.06	578.12	564.58	13.54	42.708	0						
3,900.00	3,878.31	3,841.43	3,807.38	7.05	7.07	-115.00	594.29	580.39	13.90	42.747	0						
4,000.00	3,977.55	3,940.11	3,904.78	7.23	7.26	-114.94	610.46	596.19	14.27	42.783	0						
4,100.00	4,076.79	4,038.80	4,002.19	7.42	7.45	-114.89	626.63	611.99	14.63	42.817	0						
4,200.00	4,176.04	4,137.48	4,099.59	7.60	7.64	-114.84	642.80	627.80	15.00	42.850	0						
4,300.00	4,275.28	4,236.16	4,197.00	7.79	7.83	-114.79	658.97	643.61	15.37	42.880	0						
4,400.00	4,374.52	4,334.84	4,294.41	7.97	8.02	-114.74	675.15	659.41	15.73	42.909	0						
4,500.00	4,473.77	4,433.52	4,391.81	8.16	8.21	-114.70	691.32	675.22	16.10	42.937	0						
4,600.00	4,573.01	4,532.21	4,489.22	8.34	8.40	-114.65	707.49	691.03	16.47	42.963	0						
4,700.00	4,672.25	4,630.89	4,586.63	8.53	8.59	-114.61	723.67	706.83	16.83	42.989	0						
4,800.00	4,771.49	4,729.57	4,684.03	8.72	8.78	-114.58	739.84	722.64	17.20	43.012	0						
4,900.00	4,870.74	4,828.25	4,781.44	8.90	8.97	-114.54	756.01	738.45	17.57	43.035	0						
5,000.00	4,969.98	4,926.94	4,878.84	9.09	9.16	-114.50	772.19	754.26	17.93	43.057	0						
5,100.00	5,069.22	5,025.62	4,976.25	9.27	9.35	-114.47	788.36	770.06	18.30	43.078	0						
5,200.00	5,168.47	5,124.30	5,073.66	9.46	9.54	-114.44	804.54	785.87	18.67	43.098	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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				
5,300.00	5,267.71	5,222.98	5,171.06	9.64	9.74	-114.41	820.72	801.68	19.03	43.118	0					
5,400.00	5,366.95	5,321.66	5,268.47	9.83	9.93	-114.38	836.89	817.49	19.40	43.136	0					
5,500.00	5,466.19	5,420.35	5,365.88	10.02	10.12	-114.35	853.07	833.30	19.77	43.154	0					
5,600.00	5,565.44	5,519.03	5,463.28	10.20	10.31	-114.32	869.24	849.11	20.13	43.171	0					
5,700.00	5,664.68	5,617.71	5,560.69	10.39	10.50	-114.29	885.42	864.92	20.50	43.187	0					
5,800.00	5,763.92	5,716.39	5,658.10	10.57	10.69	-114.27	901.60	880.73	20.87	43.203	0					
5,900.00	5,863.17	5,815.07	5,755.50	10.76	10.88	-114.24	917.77	896.54	21.24	43.219	0					
6,000.00	5,962.41	5,913.76	5,852.91	10.95	11.07	-114.22	933.95	912.35	21.60	43.233	0					
6,043.43	6,005.51	5,956.62	5,895.22	11.03	11.15	-114.21	940.98	919.21	21.76	43.240	0					
6,100.00	6,061.72	6,028.19	5,965.99	11.13	11.29	-114.35	949.46	927.46	22.00	43.149	0					
6,200.00	6,161.34	6,157.32	6,094.26	11.31	11.52	-114.52	960.94	938.51	22.43	42.851	0					
6,300.00	6,261.21	6,287.39	6,224.01	11.48	11.75	-114.62	967.86	945.02	22.83	42.389	0					
6,396.19	6,357.38	6,412.97	6,349.54	11.64	11.95	-179.81	970.17	947.26	22.91	42.339	0					
6,400.00	6,361.19	6,417.95	6,354.52	11.65	11.96	-179.81	970.18	947.25	22.93	42.312	0					
6,496.19	6,457.38	6,514.81	6,451.38	11.81	12.12	-179.81	970.18	946.92	23.26	41.715	0					
6,500.00	6,461.19	6,518.62	6,455.19	11.81	12.12	90.19	970.18	946.61	23.56	41.172	0					
6,550.00	6,511.12	6,568.88	6,505.40	11.89	12.20	90.22	970.18	946.46	23.72	40.899	0					
6,600.00	6,560.73	6,619.19	6,555.37	11.96	12.27	90.24	970.18	946.31	23.87	40.647	0					
6,650.00	6,609.70	6,669.53	6,604.75	12.03	12.34	90.27	970.18	946.18	24.01	40.415	0					
6,700.00	6,657.72	6,719.90	6,653.24	12.10	12.41	90.29	970.19	946.05	24.13	40.199	0					
6,750.00	6,704.52	6,770.31	6,700.54	12.16	12.46	90.31	970.19	945.93	24.26	39.997	0					
6,800.00	6,749.79	6,820.74	6,746.34	12.21	12.52	90.33	970.19	945.82	24.37	39.808	0					
6,850.00	6,793.25	6,871.20	6,790.34	12.27	12.58	90.35	970.19	945.71	24.48	39.627	0					
6,900.00	6,834.65	6,921.67	6,832.27	12.32	12.63	90.36	970.19	945.60	24.59	39.451	0					
6,950.00	6,873.72	6,972.17	6,871.86	12.38	12.68	90.38	970.19	945.49	24.70	39.277	0					
7,000.00	6,910.22	7,022.68	6,908.86	12.43	12.73	90.39	970.20	945.38	24.81	39.100	0					
7,050.00	6,943.93	7,073.20	6,943.02	12.49	12.79	90.39	970.20	945.27	24.93	38.917	0					
7,100.00	6,974.65	7,123.74	6,974.13	12.55	12.85	90.40	970.20	945.14	25.05	38.724	0					
7,150.00	7,002.17	7,174.28	7,001.99	12.61	12.91	90.40	970.20	945.01	25.19	38.516	0					
7,200.00	7,026.33	7,224.82	7,026.42	12.67	12.97	90.40	970.20	944.86	25.34	38.292	0					
7,250.00	7,046.99	7,275.36	7,047.26	12.74	13.04	90.40	970.20	944.70	25.50	38.049	0					
7,300.00	7,064.01	7,325.89	7,064.39	12.82	13.11	90.40	970.20	944.52	25.68	37.785	0					
7,350.00	7,077.29	7,376.42	7,077.69	12.90	13.20	90.39	970.20	944.32	25.87	37.499	0					
7,400.00	7,086.75	7,426.93	7,087.09	13.01	13.29	90.38	970.19	944.11	26.09	37.192	0					
7,450.00	7,092.32	7,477.43	7,092.52	13.13	13.40	90.37	970.19	943.88	26.32	36.865	0					
7,496.19	7,094.00	7,524.04	7,094.00	13.25	13.51	90.35	970.19	943.65	26.55	36.549	0					
7,500.00	7,094.00	7,527.85	7,094.00	13.26	13.51	90.35	970.19	943.63	26.57	36.521	0					
7,600.00	7,094.00	7,627.85	7,094.00	13.54	13.78	90.35	970.19	943.08	27.11	35.788	0					
7,700.00	7,094.00	7,727.85	7,094.00	13.85	14.08	90.35	970.19	942.48	27.71	35.009	0					
7,800.00	7,094.00	7,827.85	7,094.00	14.18	14.41	90.35	970.19	941.82	28.37	34.195	0					
7,900.00	7,094.00	7,927.85	7,094.00	14.54	14.77	90.35	970.19	941.11	29.09	33.356	0					
8,000.00	7,094.00	8,027.85	7,094.00	14.92	15.15	90.35	970.19	940.34	29.85	32.504	0					
8,100.00	7,094.00	8,127.85	7,094.00	15.33	15.55	90.35	970.19	939.54	30.66	31.648	0					
8,200.00	7,094.00	8,227.85	7,094.00	15.75	15.97	90.35	970.19	938.69	31.51	30.793	0					
8,300.00	7,094.00	8,327.85	7,094.00	16.20	16.41	90.35	970.19	937.80	32.40	29.948	0					
8,400.00	7,094.00	8,427.85	7,094.00	16.66	16.87	90.35	970.19	936.87	33.32	29.117	0					
8,500.00	7,094.00	8,527.85	7,094.00	17.14	17.35	90.35	970.19	935.91	34.28	28.304	0					
8,600.00	7,094.00	8,627.85	7,094.00	17.63	17.84	90.35	970.19	934.93	35.27	27.511	0					
8,700.00	7,094.00	8,727.85	7,094.00	18.14	18.34	90.35	970.19	933.91	36.28	26.741	0					
8,800.00	7,094.00	8,827.85	7,094.00	18.66	18.86	90.35	970.19	932.87	37.32	25.995	0					
8,900.00	7,094.00	8,927.85	7,094.00	19.19	19.38	90.35	970.19	931.81	38.39	25.274	0					
9,000.00	7,094.00	9,027.85	7,094.00	19.74	19.92	90.35	970.19	930.72	39.47	24.579	0					
9,100.00	7,094.00	9,127.85	7,094.00	20.29	20.47	90.35	970.19	929.61	40.58	23.909	0					
9,200.00	7,094.00	9,227.85	7,094.00	20.85	21.03	90.35	970.19	928.49	41.70	23.265	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	9,327.85	7,094.00	21.42	21.60	90.35	970.19	927.35	42.84	22.646	0			
9,400.00	7,094.00	9,427.85	7,094.00	22.00	22.17	90.35	970.19	926.19	44.00	22.051	0			
9,500.00	7,094.00	9,527.85	7,094.00	22.58	22.75	90.35	970.19	925.02	45.17	21.480	0			
9,600.00	7,094.00	9,627.85	7,094.00	23.18	23.34	90.35	970.19	923.84	46.35	20.931	0			
9,700.00	7,094.00	9,727.85	7,094.00	23.77	23.93	90.35	970.19	922.64	47.55	20.405	0			
9,800.00	7,094.00	9,827.85	7,094.00	24.38	24.53	90.35	970.19	921.44	48.75	19.900	0			
9,900.00	7,094.00	9,927.85	7,094.00	24.99	25.14	90.35	970.19	920.22	49.97	19.415	0			
10,000.00	7,094.00	10,027.85	7,094.00	25.60	25.75	90.35	970.19	918.99	51.20	18.950	0			
10,100.00	7,094.00	10,127.85	7,094.00	26.22	26.36	90.35	970.19	917.76	52.43	18.503	0			
10,200.00	7,094.00	10,227.85	7,094.00	26.84	26.98	90.35	970.19	916.51	53.68	18.074	0			
10,300.00	7,094.00	10,327.85	7,094.00	27.47	27.61	90.35	970.19	915.26	54.93	17.662	0			
10,400.00	7,094.00	10,427.85	7,094.00	28.10	28.23	90.35	970.19	914.00	56.19	17.266	0			
10,500.00	7,094.00	10,527.85	7,094.00	28.73	28.86	90.35	970.19	912.73	57.46	16.886	0			
10,600.00	7,094.00	10,627.85	7,094.00	29.36	29.50	90.35	970.19	911.46	58.73	16.520	0			
10,700.00	7,094.00	10,727.85	7,094.00	30.00	30.13	90.35	970.19	910.18	60.01	16.167	0			
10,800.00	7,094.00	10,827.85	7,094.00	30.65	30.77	90.35	970.19	908.90	61.29	15.829	0			
10,900.00	7,094.00	10,927.85	7,094.00	31.29	31.42	90.35	970.19	907.61	62.58	15.502	0			
11,000.00	7,094.00	11,027.85	7,094.00	31.94	32.06	90.35	970.19	906.31	63.88	15.188	0			
11,100.00	7,094.00	11,127.85	7,094.00	32.59	32.71	90.35	970.19	905.01	65.18	14.885	0			
11,200.00	7,094.00	11,227.85	7,094.00	33.24	33.36	90.35	970.19	903.71	66.48	14.593	0			
11,300.00	7,094.00	11,327.85	7,094.00	33.89	34.01	90.35	970.19	902.40	67.79	14.312	0			
11,400.00	7,094.00	11,427.85	7,094.00	34.55	34.67	90.35	970.19	901.09	69.10	14.040	0			
11,500.00	7,094.00	11,527.85	7,094.00	35.21	35.32	90.35	970.19	899.78	70.42	13.778	0			
11,600.00	7,094.00	11,627.85	7,094.00	35.87	35.98	90.35	970.19	898.46	71.74	13.525	0			
11,700.00	7,094.00	11,727.85	7,094.00	36.53	36.64	90.35	970.19	897.13	73.06	13.280	0			
11,800.00	7,094.00	11,827.85	7,094.00	37.19	37.30	90.35	970.19	895.81	74.38	13.043	0			
11,900.00	7,094.00	11,927.85	7,094.00	37.85	37.96	90.35	970.19	894.48	75.71	12.814	0			
12,000.00	7,094.00	12,027.85	7,094.00	38.52	38.63	90.35	970.19	893.15	77.04	12.593	0			
12,100.00	7,094.00	12,127.85	7,094.00	39.19	39.29	90.35	970.19	891.82	78.38	12.379	0			
12,200.00	7,094.00	12,227.85	7,094.00	39.85	39.96	90.35	970.19	890.48	79.71	12.171	0			
12,300.00	7,094.00	12,327.85	7,094.00	40.52	40.63	90.35	970.19	889.14	81.05	11.970	0			
12,400.00	7,094.00	12,427.85	7,094.00	41.19	41.30	90.35	970.19	887.80	82.39	11.775	0			
12,500.00	7,094.00	12,527.85	7,094.00	41.87	41.97	90.35	970.19	886.46	83.74	11.586	0			
12,600.00	7,094.00	12,627.85	7,094.00	42.54	42.64	90.35	970.19	885.11	85.08	11.403	0			
12,700.00	7,094.00	12,727.85	7,094.00	43.21	43.31	90.35	970.19	883.76	86.43	11.225	0			
12,800.00	7,094.00	12,827.85	7,094.00	43.89	43.98	90.35	970.19	882.41	87.78	11.053	0			
12,900.00	7,094.00	12,927.85	7,094.00	44.56	44.66	90.35	970.19	881.06	89.13	10.885	0			
13,000.00	7,094.00	13,027.85	7,094.00	45.24	45.33	90.35	970.19	879.71	90.48	10.723	0			
13,100.00	7,094.00	13,127.85	7,094.00	45.92	46.01	90.35	970.19	878.36	91.83	10.565	0			
13,200.00	7,094.00	13,227.85	7,094.00	46.59	46.68	90.35	970.19	877.00	93.19	10.411	0			
13,300.00	7,094.00	13,327.85	7,094.00	47.27	47.36	90.35	970.19	875.64	94.55	10.261	0			
13,400.00	7,094.00	13,427.85	7,094.00	47.95	48.04	90.35	970.19	874.29	95.91	10.116	0			
13,500.00	7,094.00	13,527.85	7,094.00	48.63	48.72	90.35	970.19	872.92	97.27	9.975	0			
13,600.00	7,094.00	13,627.85	7,094.00	49.31	49.40	90.35	970.19	871.56	98.63	9.837	0			
13,700.00	7,094.00	13,727.85	7,094.00	49.99	50.08	90.35	970.19	870.20	99.99	9.703	0			
13,800.00	7,094.00	13,827.85	7,094.00	50.68	50.76	90.35	970.19	868.84	101.35	9.572	0			
13,900.00	7,094.00	13,927.85	7,094.00	51.36	51.44	90.35	970.19	867.47	102.72	9.445	0			
14,000.00	7,094.00	14,027.85	7,094.00	52.04	52.12	90.35	970.19	866.11	104.09	9.321	0			
14,100.00	7,094.00	14,127.85	7,094.00	52.72	52.81	90.35	970.19	864.74	105.45	9.200	0			
14,200.00	7,094.00	14,227.85	7,094.00	53.41	53.49	90.35	970.19	863.37	106.82	9.082	0			
14,300.00	7,094.00	14,327.85	7,094.00	54.09	54.17	90.35	970.19	862.00	108.19	8.967	0			
14,400.00	7,094.00	14,427.85	7,094.00	54.78	54.86	90.35	970.19	860.63	109.56	8.855	0			
14,500.00	7,094.00	14,527.85	7,094.00	55.46	55.54	90.35	970.19	859.26	110.93	8.746	0			
14,600.00	7,094.00	14,627.85	7,094.00	56.15	56.23	90.35	970.19	857.89	112.30	8.639	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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		
14,700.00	7,094.00	14,727.85	7,094.00	56.84	56.91	90.35	970.19	856.51	113.68	8.535	0			
14,800.00	7,094.00	14,827.88	7,094.00	57.52	57.60	90.35	970.19	855.14	115.05	8.433	0			
14,815.12	7,094.00	14,843.00	7,094.00	57.63	57.70	90.35	970.19	854.73	115.46	8.403	0			
14,867.11	7,094.00	14,894.99	7,094.00	57.98	58.06	90.35	970.19	854.22	115.97	8.366	0		SF	



Schlumberger

Anticollision Risk Report



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	-179.72	168.10					0	
100.00	100.00	93.00	93.00	0.15	0.14	-179.72	167.95	167.67	0.28	593.576	0		
200.00	200.00	193.00	193.00	0.32	0.31	-179.72	167.95	167.32	0.63	266.567	0		
300.00	300.00	293.00	293.00	0.50	0.48	-179.72	167.95	166.98	0.98	171.534	0		
400.00	400.00	393.00	393.00	0.67	0.66	-179.72	167.95	166.63	1.33	126.453	0		
500.00	500.00	493.00	493.00	0.84	0.83	-179.72	167.95	166.28	1.68	100.136	0		
600.00	600.00	593.00	593.00	1.02	1.01	-179.72	167.95	165.93	2.03	82.886	0		
700.00	700.00	693.00	693.00	1.19	1.18	-179.72	167.95	165.58	2.38	70.706	0		
800.00	800.00	793.00	793.00	1.37	1.36	-179.72	167.95	165.23	2.72	61.647	0		CC, ES
900.00	899.98	888.65	888.64	1.54	1.52	-114.77	169.87	166.81	3.07	55.403	0		
1,000.00	999.84	983.72	983.59	1.72	1.69	-115.30	176.00	172.60	3.41	51.646	0		
1,100.00	1,099.45	1,078.26	1,077.82	1.90	1.86	-116.08	186.36	182.61	3.75	49.683	0		
1,152.76	1,151.87	1,127.84	1,127.12	1.99	1.94	-116.55	193.54	189.60	3.93	49.215	0		
1,200.00	1,198.75	1,172.05	1,171.01	2.07	2.02	-117.03	200.78	196.69	4.10	49.022	0		
1,300.00	1,297.99	1,265.13	1,263.09	2.25	2.19	-117.57	218.03	213.59	4.44	49.093	0		
1,400.00	1,397.24	1,357.35	1,353.84	2.43	2.37	-117.58	237.81	233.02	4.79	49.685	0		
1,500.00	1,496.48	1,452.50	1,447.00	2.62	2.55	-117.24	259.62	254.49	5.14	50.529	0		
1,600.00	1,595.72	1,550.04	1,542.45	2.80	2.73	-116.92	281.64	276.14	5.50	51.249	0		
1,700.00	1,694.97	1,647.57	1,637.90	2.98	2.92	-116.64	303.66	297.81	5.85	51.872	0		
1,800.00	1,794.21	1,745.11	1,733.35	3.16	3.11	-116.40	325.69	319.48	6.21	52.415	0		
1,900.00	1,893.45	1,842.64	1,828.80	3.35	3.30	-116.20	347.73	341.15	6.57	52.893	0		
2,000.00	1,992.69	1,940.18	1,924.25	3.53	3.49	-116.01	369.76	362.83	6.94	53.317	0		
2,100.00	2,091.94	2,037.71	2,019.69	3.71	3.69	-115.85	391.80	384.51	7.30	53.695	0		
2,200.00	2,191.18	2,135.25	2,115.14	3.90	3.88	-115.70	413.85	406.19	7.66	54.034	0		
2,300.00	2,290.42	2,232.78	2,210.59	4.08	4.08	-115.57	435.89	427.87	8.02	54.340	0		
2,400.00	2,389.67	2,330.32	2,306.04	4.27	4.27	-115.45	457.94	449.56	8.38	54.617	0		
2,500.00	2,488.91	2,427.85	2,401.49	4.45	4.47	-115.35	479.99	471.24	8.75	54.869	0		
2,600.00	2,588.15	2,525.39	2,496.94	4.64	4.66	-115.25	502.04	492.93	9.11	55.100	0		
2,700.00	2,687.39	2,622.92	2,592.38	4.82	4.86	-115.16	524.09	514.62	9.48	55.312	0		
2,800.00	2,786.64	2,720.46	2,687.83	5.01	5.06	-115.08	546.15	536.31	9.84	55.507	0		
2,900.00	2,885.88	2,817.99	2,783.28	5.19	5.25	-115.00	568.20	558.00	10.20	55.687	0		
3,000.00	2,985.12	2,915.53	2,878.73	5.38	5.45	-114.93	590.26	579.69	10.57	55.853	0		
3,100.00	3,084.37	3,013.06	2,974.18	5.56	5.65	-114.86	612.31	601.38	10.93	56.008	0		
3,200.00	3,183.61	3,110.60	3,069.62	5.75	5.84	-114.80	634.37	623.07	11.30	56.153	0		
3,300.00	3,282.85	3,208.13	3,165.07	5.93	6.04	-114.75	656.43	644.77	11.66	56.287	0		
3,400.00	3,382.09	3,305.67	3,260.52	6.12	6.24	-114.69	678.49	666.46	12.03	56.413	0		
3,500.00	3,481.34	3,403.20	3,355.97	6.30	6.44	-114.64	700.54	688.15	12.39	56.532	0		
3,600.00	3,580.58	3,500.74	3,451.42	6.49	6.64	-114.60	722.60	709.85	12.76	56.643	0		
3,700.00	3,679.82	3,598.27	3,546.87	6.67	6.83	-114.55	744.66	731.54	13.12	56.747	0		
3,800.00	3,779.07	3,695.81	3,642.31	6.86	7.03	-114.51	766.72	753.23	13.49	56.846	0		
3,900.00	3,878.31	3,793.34	3,737.76	7.05	7.23	-114.47	788.78	774.93	13.85	56.939	0		
4,000.00	3,977.55	3,890.88	3,833.21	7.23	7.43	-114.44	810.84	796.62	14.22	57.027	0		
4,100.00	4,076.79	3,988.41	3,928.66	7.42	7.63	-114.40	832.90	818.32	14.58	57.110	0		
4,200.00	4,176.04	4,085.95	4,024.11	7.60	7.83	-114.37	854.97	840.02	14.95	57.189	0		
4,300.00	4,275.28	4,183.48	4,119.56	7.79	8.03	-114.34	877.03	861.71	15.32	57.265	0		
4,400.00	4,374.52	4,281.02	4,215.00	7.97	8.23	-114.31	899.09	883.41	15.68	57.336	0		
4,500.00	4,473.77	4,378.55	4,310.45	8.16	8.42	-114.28	921.15	905.10	16.05	57.404	0		
4,600.00	4,573.01	4,476.09	4,405.90	8.34	8.62	-114.25	943.21	926.80	16.41	57.469	0		
4,700.00	4,672.25	4,573.62	4,501.35	8.53	8.82	-114.22	965.27	948.50	16.78	57.531	0		
4,800.00	4,771.49	4,671.16	4,596.80	8.72	9.02	-114.20	987.34	970.19	17.14	57.590	0		
4,900.00	4,870.74	4,768.69	4,692.25	8.90	9.22	-114.18	1,009.40	991.89	17.51	57.647	0		
5,000.00	4,969.98	4,866.23	4,787.69	9.09	9.42	-114.15	1,031.46	1,013.59	17.88	57.701	0		
5,100.00	5,069.22	4,963.76	4,883.14	9.27	9.62	-114.13	1,053.52	1,035.28	18.24	57.753	0		
5,200.00	5,168.47	5,061.30	4,978.59	9.46	9.82	-114.11	1,075.59	1,056.98	18.61	57.803	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	5,267.71	5,158.83	5,074.04	9.64	10.02	-114.09	1,097.65	1,078.68	18.97	57.851	0					
5,400.00	5,366.95	5,256.37	5,169.49	9.83	10.22	-114.07	1,119.71	1,100.37	19.34	57.897	0					
5,500.00	5,466.19	5,353.90	5,264.94	10.02	10.42	-114.05	1,141.78	1,122.07	19.71	57.941	0					
5,600.00	5,565.44	5,451.44	5,360.38	10.20	10.62	-114.04	1,163.84	1,143.77	20.07	57.983	0					
5,700.00	5,664.68	5,548.97	5,455.83	10.39	10.82	-114.02	1,185.90	1,165.47	20.44	58.024	0					
5,800.00	5,763.92	5,646.51	5,551.28	10.57	11.02	-114.00	1,207.97	1,187.16	20.80	58.064	0					
5,900.00	5,863.17	5,744.04	5,646.73	10.76	11.22	-113.99	1,230.03	1,208.86	21.17	58.102	0					
6,000.00	5,962.41	5,841.58	5,742.18	10.95	11.42	-113.97	1,252.10	1,230.56	21.54	58.138	0					
6,043.43	6,005.51	5,893.13	5,792.65	11.03	11.52	-113.97	1,261.62	1,239.91	21.71	58.107	0					
6,100.00	6,061.72	5,980.62	5,878.67	11.13	11.69	-114.18	1,272.78	1,250.79	21.98	57.894	0					
6,200.00	6,161.34	6,137.52	6,034.00	11.31	11.98	-114.45	1,287.92	1,265.46	22.46	57.341	0					
6,300.00	6,261.21	6,296.46	6,192.35	11.48	12.25	-114.61	1,297.11	1,274.18	22.93	56.580	0					
6,396.19	6,357.38	6,450.37	6,346.17	11.64	12.50	-179.82	1,300.23	1,276.76	23.48	55.388	0					
6,400.00	6,361.19	6,456.47	6,352.27	11.65	12.51	-179.82	1,300.24	1,276.75	23.49	55.349	0					
6,496.19	6,457.38	6,554.58	6,450.38	11.81	12.66	-179.82	1,300.24	1,276.43	23.82	54.597	0					
6,500.00	6,461.19	6,558.39	6,454.19	11.81	12.67	90.18	1,300.24	1,276.53	23.71	54.837	0					
6,550.00	6,511.12	6,608.71	6,504.47	11.89	12.74	90.20	1,300.24	1,276.38	23.87	54.476	0					
6,600.00	6,560.73	6,659.10	6,554.51	11.96	12.81	90.23	1,300.25	1,276.23	24.01	54.144	0					
6,650.00	6,609.70	6,709.52	6,603.99	12.03	12.88	90.25	1,300.25	1,276.10	24.15	53.836	0					
6,700.00	6,657.72	6,759.98	6,652.58	12.10	12.94	90.27	1,300.25	1,275.97	24.28	53.551	0					
6,750.00	6,704.52	6,810.48	6,699.98	12.16	13.00	90.28	1,300.25	1,275.85	24.40	53.285	0					
6,800.00	6,749.79	6,861.00	6,745.88	12.21	13.05	90.30	1,300.25	1,275.74	24.52	53.035	0					
6,850.00	6,793.25	6,911.56	6,789.99	12.27	13.11	90.31	1,300.26	1,275.63	24.63	52.796	0					
6,900.00	6,834.65	6,962.13	6,832.02	12.32	13.16	90.33	1,300.26	1,275.52	24.74	52.563	0					
6,950.00	6,873.72	7,012.73	6,871.71	12.38	13.21	90.34	1,300.26	1,275.41	24.85	52.333	0					
7,000.00	6,910.22	7,063.35	6,908.79	12.43	13.26	90.35	1,300.26	1,275.30	24.96	52.099	0					
7,050.00	6,943.93	7,113.98	6,943.02	12.49	13.31	90.35	1,300.26	1,275.19	25.07	51.856	0					
7,100.00	6,974.65	7,164.62	6,974.19	12.55	13.37	90.36	1,300.26	1,275.06	25.20	51.600	0					
7,150.00	7,002.17	7,215.26	7,002.10	12.61	13.42	90.36	1,300.26	1,274.93	25.33	51.326	0					
7,200.00	7,026.33	7,265.91	7,026.56	12.67	13.49	90.36	1,300.26	1,274.78	25.48	51.030	0					
7,250.00	7,046.99	7,316.55	7,047.42	12.74	13.55	90.35	1,300.26	1,274.62	25.64	50.708	0					
7,300.00	7,064.01	7,367.18	7,064.55	12.82	13.63	90.35	1,300.26	1,274.44	25.82	50.358	0					
7,350.00	7,077.29	7,417.80	7,077.83	12.90	13.71	90.34	1,300.26	1,274.24	26.02	49.980	0					
7,400.00	7,086.75	7,468.41	7,087.19	13.01	13.80	90.33	1,300.26	1,274.03	26.23	49.574	0					
7,450.00	7,092.32	7,519.00	7,092.58	13.13	13.90	90.32	1,300.26	1,273.80	26.46	49.141	0					
7,496.19	7,094.00	7,565.67	7,094.00	13.25	14.00	90.31	1,300.26	1,273.57	26.69	48.723	0					
7,500.00	7,094.00	7,569.47	7,094.00	13.26	14.00	90.31	1,300.26	1,273.55	26.71	48.687	0					
7,600.00	7,094.00	7,669.47	7,094.00	13.54	14.24	90.31	1,300.26	1,273.01	27.25	47.716	0					
7,700.00	7,094.00	7,769.47	7,094.00	13.85	14.52	90.31	1,300.26	1,272.40	27.85	46.687	0					
7,800.00	7,094.00	7,869.47	7,094.00	14.18	14.84	90.31	1,300.26	1,271.75	28.51	45.609	0					
7,900.00	7,094.00	7,969.47	7,094.00	14.54	15.18	90.31	1,300.26	1,271.04	29.22	44.500	0					
8,000.00	7,094.00	8,069.47	7,094.00	14.92	15.55	90.31	1,300.26	1,270.28	29.98	43.372	0					
8,100.00	7,094.00	8,169.47	7,094.00	15.33	15.94	90.31	1,300.26	1,269.47	30.79	42.237	0					
8,200.00	7,094.00	8,269.47	7,094.00	15.75	16.35	90.31	1,300.26	1,268.62	31.63	41.105	0					
8,300.00	7,094.00	8,369.47	7,094.00	16.20	16.78	90.31	1,300.26	1,267.74	32.52	39.984	0					
8,400.00	7,094.00	8,469.47	7,094.00	16.66	17.23	90.31	1,300.26	1,266.81	33.44	38.881	0					
8,500.00	7,094.00	8,569.47	7,094.00	17.14	17.70	90.31	1,300.26	1,265.86	34.40	37.802	0					
8,600.00	7,094.00	8,669.47	7,094.00	17.63	18.18	90.31	1,300.26	1,264.87	35.38	36.749	0					
8,700.00	7,094.00	8,769.47	7,094.00	18.14	18.68	90.31	1,300.26	1,263.86	36.40	35.726	0					
8,800.00	7,094.00	8,869.47	7,094.00	18.66	19.18	90.31	1,300.26	1,262.82	37.43	34.735	0					
8,900.00	7,094.00	8,969.47	7,094.00	19.19	19.70	90.31	1,300.26	1,261.76	38.50	33.777	0					
9,000.00	7,094.00	9,069.47	7,094.00	19.74	20.24	90.31	1,300.26	1,260.68	39.58	32.852	0					
9,100.00	7,094.00	9,169.47	7,094.00	20.29	20.78	90.31	1,300.26	1,259.57	40.68	31.961	0					
9,200.00	7,094.00	9,269.47	7,094.00	20.85	21.33	90.31	1,300.26	1,258.45	41.80	31.104	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 #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	9,369.47	7,094.00	21.42	21.89	90.31	1,300.26	1,257.31	42.94	30.279	0				
9,400.00	7,094.00	9,469.47	7,094.00	22.00	22.46	90.31	1,300.26	1,256.16	44.10	29.487	0				
9,500.00	7,094.00	9,569.47	7,094.00	22.58	23.03	90.31	1,300.26	1,254.99	45.26	28.726	0				
9,600.00	7,094.00	9,669.47	7,094.00	23.18	23.61	90.31	1,300.26	1,253.81	46.45	27.995	0				
9,700.00	7,094.00	9,769.47	7,094.00	23.77	24.20	90.31	1,300.26	1,252.62	47.64	27.293	0				
9,800.00	7,094.00	9,869.47	7,094.00	24.38	24.80	90.31	1,300.26	1,251.41	48.85	26.620	0				
9,900.00	7,094.00	9,969.47	7,094.00	24.99	25.40	90.31	1,300.26	1,250.19	50.06	25.974	0				
10,000.00	7,094.00	10,069.47	7,094.00	25.60	26.00	90.31	1,300.26	1,248.97	51.29	25.353	0				
10,100.00	7,094.00	10,169.47	7,094.00	26.22	26.61	90.31	1,300.26	1,247.73	52.52	24.757	0				
10,200.00	7,094.00	10,269.47	7,094.00	26.84	27.23	90.31	1,300.26	1,246.49	53.76	24.185	0				
10,300.00	7,094.00	10,369.47	7,094.00	27.47	27.84	90.31	1,300.26	1,245.24	55.01	23.635	0				
10,400.00	7,094.00	10,469.47	7,094.00	28.10	28.47	90.31	1,300.26	1,243.98	56.27	23.106	0				
10,500.00	7,094.00	10,569.47	7,094.00	28.73	29.09	90.31	1,300.26	1,242.72	57.54	22.598	0				
10,600.00	7,094.00	10,669.47	7,094.00	29.36	29.72	90.31	1,300.26	1,241.45	58.81	22.109	0				
10,700.00	7,094.00	10,769.47	7,094.00	30.00	30.36	90.31	1,300.26	1,240.17	60.09	21.639	0				
10,800.00	7,094.00	10,869.47	7,094.00	30.65	30.99	90.31	1,300.26	1,238.88	61.37	21.187	0				
10,900.00	7,094.00	10,969.47	7,094.00	31.29	31.63	90.31	1,300.26	1,237.60	62.66	20.751	0				
11,000.00	7,094.00	11,069.47	7,094.00	31.94	32.27	90.31	1,300.26	1,236.30	63.95	20.331	0				
11,100.00	7,094.00	11,169.47	7,094.00	32.59	32.92	90.31	1,300.26	1,235.00	65.25	19.927	0				
11,200.00	7,094.00	11,269.47	7,094.00	33.24	33.56	90.31	1,300.26	1,233.70	66.55	19.537	0				
11,300.00	7,094.00	11,369.47	7,094.00	33.89	34.21	90.31	1,300.26	1,232.39	67.86	19.160	0				
11,400.00	7,094.00	11,469.47	7,094.00	34.55	34.86	90.31	1,300.26	1,231.08	69.17	18.797	0				
11,500.00	7,094.00	11,569.47	7,094.00	35.21	35.51	90.31	1,300.26	1,229.77	70.49	18.447	0				
11,600.00	7,094.00	11,669.47	7,094.00	35.87	36.17	90.31	1,300.26	1,228.45	71.81	18.108	0				
11,700.00	7,094.00	11,769.47	7,094.00	36.53	36.83	90.31	1,300.26	1,227.13	73.13	17.781	0				
11,800.00	7,094.00	11,869.47	7,094.00	37.19	37.48	90.31	1,300.26	1,225.80	74.45	17.465	0				
11,900.00	7,094.00	11,969.47	7,094.00	37.85	38.14	90.31	1,300.26	1,224.48	75.78	17.159	0				
12,000.00	7,094.00	12,069.47	7,094.00	38.52	38.80	90.31	1,300.26	1,223.15	77.11	16.863	0				
12,100.00	7,094.00	12,169.47	7,094.00	39.19	39.47	90.31	1,300.26	1,221.81	78.44	16.576	0				
12,200.00	7,094.00	12,269.47	7,094.00	39.85	40.13	90.31	1,300.26	1,220.48	79.78	16.298	0				
12,300.00	7,094.00	12,369.47	7,094.00	40.52	40.80	90.31	1,300.26	1,219.14	81.12	16.030	0				
12,400.00	7,094.00	12,469.47	7,094.00	41.19	41.46	90.31	1,300.26	1,217.80	82.46	15.769	0				
12,500.00	7,094.00	12,569.47	7,094.00	41.87	42.13	90.31	1,300.26	1,216.46	83.80	15.516	0				
12,600.00	7,094.00	12,669.47	7,094.00	42.54	42.80	90.31	1,300.26	1,215.11	85.14	15.271	0				
12,700.00	7,094.00	12,769.47	7,094.00	43.21	43.47	90.31	1,300.26	1,213.77	86.49	15.034	0				
12,800.00	7,094.00	12,869.47	7,094.00	43.89	44.14	90.31	1,300.26	1,212.42	87.84	14.803	0				
12,900.00	7,094.00	12,969.47	7,094.00	44.56	44.81	90.31	1,300.26	1,211.07	89.19	14.579	0				
13,000.00	7,094.00	13,069.47	7,094.00	45.24	45.49	90.31	1,300.26	1,209.71	90.54	14.361	0				
13,100.00	7,094.00	13,169.47	7,094.00	45.92	46.16	90.31	1,300.26	1,208.36	91.89	14.149	0				
13,200.00	7,094.00	13,269.47	7,094.00	46.59	46.84	90.31	1,300.26	1,207.01	93.25	13.944	0				
13,300.00	7,094.00	13,369.47	7,094.00	47.27	47.51	90.31	1,300.26	1,205.65	94.61	13.744	0				
13,400.00	7,094.00	13,469.47	7,094.00	47.95	48.19	90.31	1,300.26	1,204.29	95.96	13.549	0				
13,500.00	7,094.00	13,569.47	7,094.00	48.63	48.87	90.31	1,300.26	1,202.93	97.32	13.360	0				
13,600.00	7,094.00	13,669.47	7,094.00	49.31	49.54	90.31	1,300.26	1,201.57	98.68	13.176	0				
13,700.00	7,094.00	13,769.47	7,094.00	49.99	50.22	90.31	1,300.26	1,200.21	100.05	12.996	0				
13,800.00	7,094.00	13,869.47	7,094.00	50.68	50.90	90.31	1,300.26	1,198.84	101.41	12.822	0				
13,900.00	7,094.00	13,969.47	7,094.00	51.36	51.58	90.31	1,300.26	1,197.48	102.78	12.651	0				
14,000.00	7,094.00	14,069.47	7,094.00	52.04	52.26	90.31	1,300.26	1,196.11	104.14	12.486	0				
14,100.00	7,094.00	14,169.47	7,094.00	52.72	52.94	90.31	1,300.26	1,194.75	105.51	12.324	0				
14,200.00	7,094.00	14,269.47	7,094.00	53.41	53.63	90.31	1,300.26	1,193.38	106.88	12.166	0				
14,300.00	7,094.00	14,369.47	7,094.00	54.09	54.31	90.31	1,300.26	1,192.01	108.24	12.012	0				
14,400.00	7,094.00	14,469.47	7,094.00	54.78	54.99	90.31	1,300.26	1,190.64	109.61	11.862	0				
14,500.00	7,094.00	14,569.47	7,094.00	55.46	55.67	90.31	1,300.26	1,189.27	110.99	11.716	0				
14,600.00	7,094.00	14,669.47	7,094.00	56.15	56.36	90.31	1,300.26	1,187.90	112.36	11.573	0				

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



Schlumberger
Anticollision Risk Report

PATHFINDER
A Schlumberger Company

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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	14,769.47	7,094.00	56.84	57.04	90.31	1,300.26	1,186.53	113.73	11.433	0			
14,800.00	7,094.00	14,869.47	7,094.00	57.52	57.73	90.31	1,300.26	1,185.15	115.10	11.296	0			
14,867.11	7,094.00	14,936.43	7,094.00	57.98	58.19	90.31	1,300.26	1,184.24	116.02	11.207	0		SF	

Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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 @ 4989.00usft (Xtreme 7 - 16')

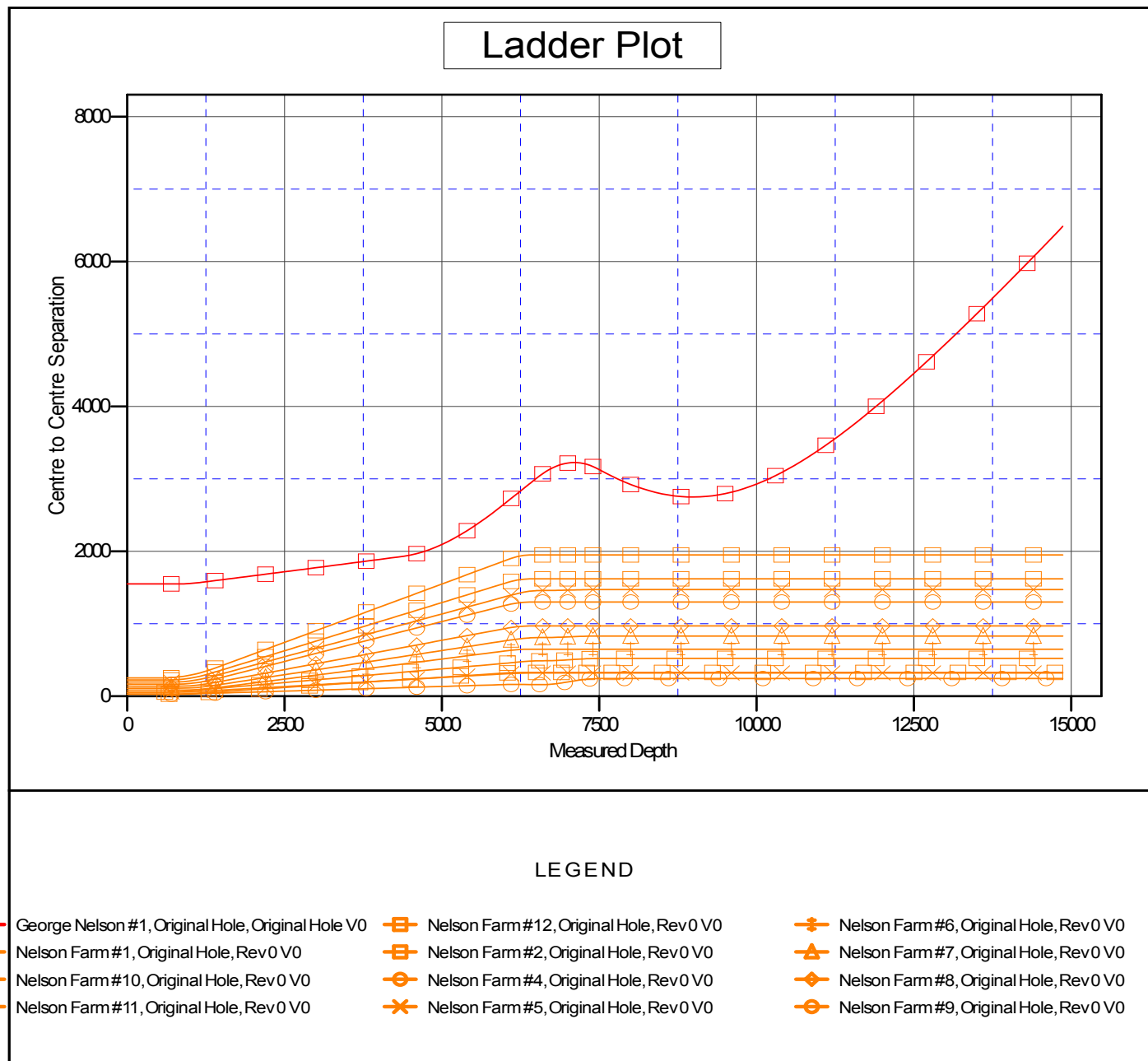
Offset Depths are relative to Offset Datum

Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Nelson Farm #3

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.38°



Company:	Extraction Oil & Gas	Local Co-ordinate Reference:	Well Nelson Farm #3
Project:	Weld Co., Co	TVD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Reference Site:	Sec.28-T07N-R67W	MD Reference:	KB @ 4989.00usft (Xtreme 7 - 16')
Site Error:	0.00	North Reference:	Grid
Reference Well:	Nelson Farm #3	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 @ 4989.00usft (Xtreme 7 - 16')

Offset Depths are relative to Offset Datum

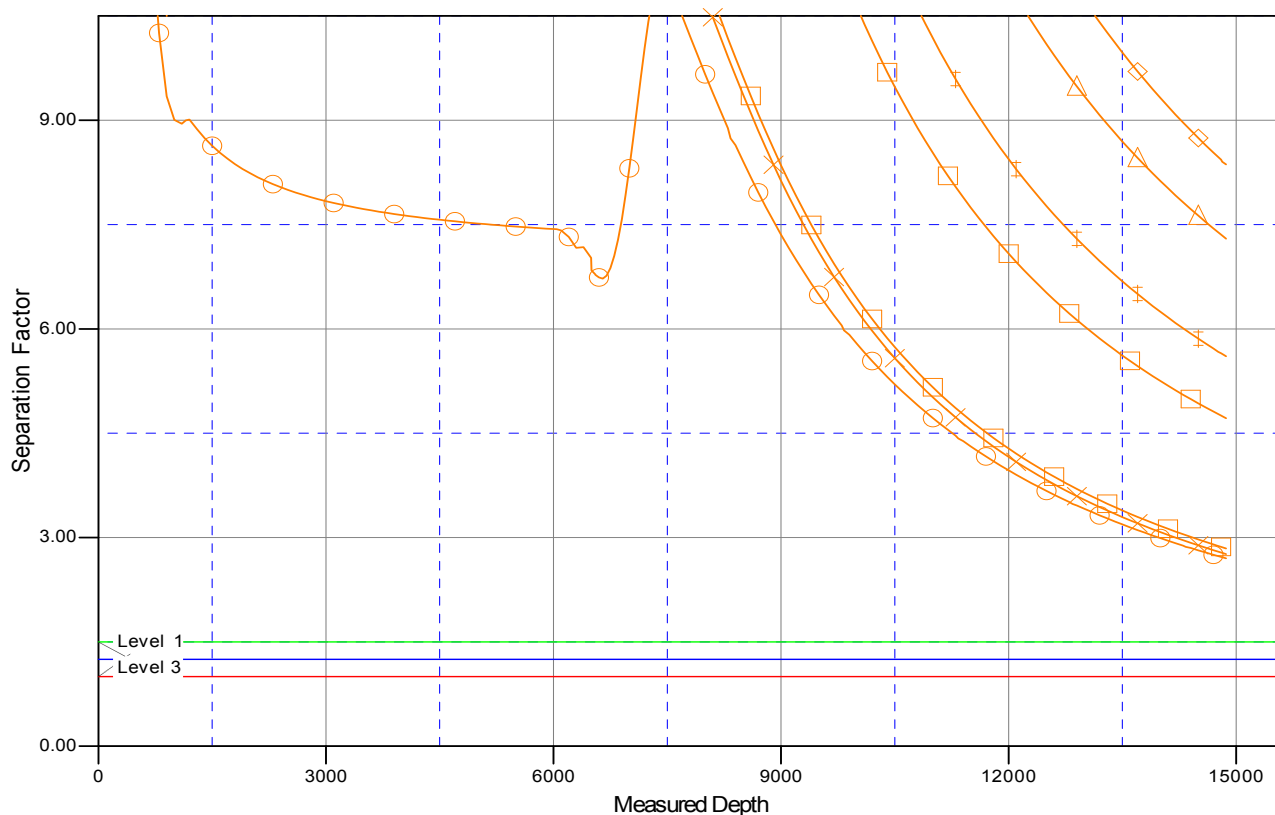
Central Meridian is 105° 30' 0.000 W °

Coordinates are relative to: Nelson Farm #3

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.38°

Separation Factor Plot



LEGEND

George Nelson #1, Original Hole, Original Hole V0	Nelson Farm #12, Original Hole, Rev0 V0	Nelson Farm #6, Original Hole, Rev0 V0
Nelson Farm #1, Original Hole, Rev0 V0	Nelson Farm #2, Original Hole, Rev0 V0	Nelson Farm #7, Original Hole, Rev0 V0
Nelson Farm #10, Original Hole, Rev0 V0	Nelson Farm #4, Original Hole, Rev0 V0	Nelson Farm #8, Original Hole, Rev0 V0
Nelson Farm #11, Original Hole, Rev0 V0	Nelson Farm #5, Original Hole, Rev0 V0	Nelson Farm #9, Original Hole, Rev0 V0