

# **EXTRACTION OIL & GAS**

**WELD COUNTY, COLORADO (NAD 83)  
SW NW SEC. 15 T5N R65W 6th P.M.  
VETTING 22**

**ORIGINAL WELLBORE  
PROPOSAL #2**

## **Anticollision Report**

**09 March, 2016**



# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	PROPOSAL #2		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD + Stations Interval 98.4usft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.0 us	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma	<b>Casing Method:</b>	Not applied

<b>Survey Tool Program</b>	<b>Date</b>	09/03/2016		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	16,129.6	PROPOSAL #2 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 15 T5N R65W 6th P.M.						
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	5,188.3	4,413.4	1,368.4	1,239.2	10.589	CC
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	5,216.5	4,433.7	1,368.6	1,238.6	10.533	ES
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	5,500.0	4,600.0	1,384.6	1,249.0	10.212	SF
CARLSON A-15-16HN - Wellbore #1 - Design #1	200.0	179.5	4,427.5	4,426.9	7,887.175	CC
CARLSON A-15-16HN - Wellbore #1 - Design #1	11,000.0	14,862.7	4,659.4	4,335.1	14.365	ES
CARLSON A-15-16HN - Wellbore #1 - Design #1	12,700.0	14,862.7	5,011.6	4,640.5	13.503	SF
CARLSON B-15-16HC - Wellbore #1 - Design #1	400.0	379.5	4,412.8	4,411.3	3,021.606	CC
CARLSON B-15-16HC - Wellbore #1 - Design #1	11,000.0	14,905.1	4,492.5	4,168.1	13.849	ES
CARLSON B-15-16HC - Wellbore #1 - Design #1	12,598.4	14,905.1	4,819.2	4,450.8	13.082	SF
CARLSON C-15-16HN - Wellbore #1 - Design #1	4,492.6	11,459.3	4,248.7	4,136.6	37.905	CC
CARLSON C-15-16HN - Wellbore #1 - Design #1	11,000.0	14,796.3	4,330.3	4,006.3	13.369	ES
CARLSON C-15-16HN - Wellbore #1 - Design #1	12,500.0	14,796.3	4,632.6	4,267.4	12.686	SF
CARLSON D-15-16HN - Wellbore #1 - Design #1	10,845.5	14,777.6	3,997.7	3,678.4	12.520	CC
CARLSON D-15-16HN - Wellbore #1 - Design #1	10,925.2	14,777.6	3,998.5	3,677.0	12.438	ES
CARLSON D-15-16HN - Wellbore #1 - Design #1	12,204.7	14,777.6	4,222.5	3,865.9	11.841	SF
CARLSON E-15-16HC - Wellbore #1 - Design #1	10,844.8	14,848.6	3,830.3	3,510.6	11.983	CC
CARLSON E-15-16HC - Wellbore #1 - Design #1	10,925.2	14,848.6	3,831.1	3,509.3	11.904	ES
CARLSON E-15-16HC - Wellbore #1 - Design #1	12,106.3	14,848.6	4,032.7	3,678.4	11.384	SF
CARLSON F-15-16HN - Wellbore #1 - Design #1	10,844.3	14,769.7	3,717.8	3,398.8	11.656	CC
CARLSON F-15-16HN - Wellbore #1 - Design #1	10,925.2	14,769.7	3,718.7	3,397.5	11.579	ES
CARLSON F-15-16HN - Wellbore #1 - Design #1	12,007.8	14,769.7	3,895.6	3,544.8	11.104	SF
CARLSON G-15-16HN - Wellbore #1 - Design #1	10,842.5	14,787.6	3,298.2	2,979.7	10.356	CC
CARLSON G-15-16HN - Wellbore #1 - Design #1	10,925.2	14,787.6	3,299.2	2,978.5	10.287	ES
CARLSON G-15-16HN - Wellbore #1 - Design #1	11,800.0	14,787.6	3,434.3	3,089.7	9.964	SF
CARLSON H-15-16HC - Wellbore #1 - Design #1	10,841.8	14,883.6	3,130.2	2,811.5	9.821	CC
CARLSON H-15-16HC - Wellbore #1 - Design #1	10,925.2	14,883.6	3,131.4	2,810.3	9.755	ES
CARLSON H-15-16HC - Wellbore #1 - Design #1	11,700.0	14,883.6	3,245.8	2,903.5	9.485	SF
CARLSON I-15-16HN - Wellbore #1 - Design #1	10,840.9	14,836.2	2,918.7	2,600.6	9.175	CC
CARLSON I-15-16HN - Wellbore #1 - Design #1	10,925.2	14,836.2	2,920.0	2,599.5	9.113	ES
CARLSON I-15-16HN - Wellbore #1 - Design #1	11,600.0	14,836.2	3,015.8	2,677.0	8.899	SF
CARLSON J-15-16HN - Wellbore #1 - Design #1	10,839.5	14,901.4	2,589.2	2,271.5	8.150	CC
CARLSON J-15-16HN - Wellbore #1 - Design #1	10,900.0	14,901.4	2,589.9	2,270.6	8.110	ES
CARLSON J-15-16HN - Wellbore #1 - Design #1	11,417.3	14,901.4	2,652.9	2,319.4	7.956	SF
CARLSON K-15-16HC - Wellbore #1 - Design #1	10,838.8	15,013.6	2,420.5	2,102.3	7.607	CC
CARLSON K-15-16HC - Wellbore #1 - Design #1	10,900.0	15,013.6	2,421.3	2,101.4	7.570	ES
CARLSON K-15-16HC - Wellbore #1 - Design #1	11,318.9	15,013.6	2,467.7	2,136.4	7.449	SF
CARLSON L-15-16HN - Wellbore #1 - Design #1	10,838.1	14,977.0	2,259.8	1,942.5	7.123	CC

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

## Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

## Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 15 T5N R65W 6th P.M.						
CARLSON L-15-16HN - Wellbore #1 - Design #1	10,900.0	14,977.0	2,260.7	1,941.7	7.088	ES
CARLSON L-15-16HN - Wellbore #1 - Design #1	11,300.0	14,977.0	2,306.5	1,976.7	6.993	SF
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	15,091.9	7,285.4	61.4	-174.8	0.260	Level 1, CC, ES, SF
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	12,494.0	7,432.5	156.2	-14.3	0.916	Level 1, CC
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	12,500.0	7,432.4	156.3	-14.4	0.916	Level 1, ES, SF
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	15,821.2	7,352.1	440.8	178.3	1.679	CC, ES
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	15,846.4	7,352.1	441.6	178.3	1.678	SF
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	14,418.3	7,110.6	458.0	250.4	2.206	CC, ES
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	14,468.5	7,110.3	460.7	251.7	2.204	SF
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	13,287.4	7,042.8	626.5	493.7	4.716	SF
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	13,383.6	7,012.9	619.8	490.2	4.783	CC, ES
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	16,129.6	7,777.0	1,524.3	1,237.4	5.313	CC, ES, SF
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	13,255.0	7,733.8	2,157.4	1,967.9	11.385	CC
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	13,300.0	7,736.7	2,157.9	1,967.1	11.312	ES
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	13,976.3	7,777.5	2,274.5	2,064.8	10.849	SF
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	12,492.8	7,391.4	1,440.1	1,270.7	8.501	CC
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	12,500.0	7,390.3	1,440.1	1,270.6	8.493	ES
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	12,795.2	7,344.8	1,470.9	1,294.4	8.332	SF
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	15,190.8	8,037.3	2,757.2	2,512.3	11.261	CC
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	15,255.9	8,039.4	2,758.0	2,511.3	11.181	ES
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	16,043.3	8,065.3	2,885.8	2,617.1	10.740	SF
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	15,653.3	7,508.7	767.7	509.0	2.967	CC, ES
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	15,700.0	7,506.0	769.2	509.1	2.957	SF
EXIST DD EHRlich MOTORS #D8 - Wellbore #1 - Well	16,129.6	7,486.3	999.1	719.7	3.575	CC, ES, SF
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	16,129.6	7,385.9	364.6	119.1	1.485	Level 3, CC, ES, SF
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	15,141.8	7,342.8	1,354.0	1,114.8	5.661	CC
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	15,200.0	7,351.5	1,355.2	1,114.2	5.623	ES
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	15,400.0	7,380.0	1,378.0	1,130.8	5.574	SF
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	13,079.0	7,156.5	559.2	382.3	3.160	CC
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	13,090.5	7,156.5	559.3	382.1	3.155	ES
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	13,100.0	7,156.5	559.6	382.1	3.152	SF
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	11,855.8	7,496.1	553.1	387.7	3.344	CC, ES
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	11,909.4	7,495.5	555.7	388.8	3.329	SF
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	13,707.5	7,184.9	122.4	-66.9	0.647	Level 1, CC, ES, SF
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	13,936.8	7,027.2	1,409.4	1,216.9	7.319	CC
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	13,976.3	7,026.5	1,410.0	1,216.4	7.282	ES
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	14,200.0	7,022.7	1,433.8	1,234.3	7.187	SF
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	13,874.7	6,505.0	2,603.5	2,426.9	14.744	CC
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	13,900.0	6,505.0	2,603.6	2,426.5	14.694	ES
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	14,800.0	6,505.0	2,763.1	2,564.2	13.893	SF
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	2,291.8	3,229.9	2,374.3	2,362.5	201.049	CC
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	2,300.0	3,238.6	2,374.4	2,362.5	200.211	ES
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	16,129.6	7,157.5	9,713.6	9,454.8	37.535	SF
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	1,820.3	2,389.3	2,394.3	2,383.9	229.535	CC, ES
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	14,960.6	7,297.2	9,982.2	9,749.8	42.952	SF
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	2,199.5	3,022.5	2,119.5	2,106.6	163.251	CC
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	2,200.0	3,022.9	2,119.5	2,106.5	163.222	ES
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	15,846.4	7,250.0	9,979.4	9,728.0	39.696	SF
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	11,392.3	7,662.3	1,567.3	1,409.1	9.906	CC
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	11,417.3	7,656.5	1,567.5	1,408.7	9.873	ES
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	11,700.0	7,580.2	1,595.5	1,431.2	9.708	SF
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	11,101.3	7,753.1	215.6	56.9	1.358	Level 3, CC, ES, SF
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	11,943.4	7,480.7	681.9	518.3	4.168	CC, ES

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

## Anticollision Report



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<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

## Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 15 T5N R65W 6th P.M.						
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	12,000.0	7,469.8	684.1	519.4	4.152	SF
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	2,292.0	2,050.0	2,697.5	2,687.4	269.080	CC
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	11,200.0	7,321.0	2,723.3	2,590.3	20.469	ES
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	12,696.8	7,321.0	3,144.7	2,970.4	18.042	SF
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	14,498.9	7,724.1	2,128.8	1,910.0	9.730	CC
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	14,566.9	7,727.5	2,129.9	1,909.2	9.651	ES
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	15,059.0	7,753.1	2,201.1	1,966.7	9.390	SF
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	16,129.6	7,818.4	1,231.2	932.5	4.122	CC, ES, SF
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	16,129.6	7,267.0	1,599.8	1,505.8	17.019	CC, ES, SF
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	15,755.5	7,930.1	2,098.1	1,831.7	7.876	CC
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	15,800.0	7,930.1	2,098.6	1,830.9	7.842	ES
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	16,129.6	7,930.1	2,131.2	1,854.3	7.698	SF
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	16,129.6	8,180.2	2,084.3	1,770.1	6.633	CC, ES, SF
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	1,299.2	1,291.4	1,462.7	1,459.2	423.163	CC
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	1,377.9	1,371.2	1,462.8	1,459.1	402.046	ES
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	15,300.0	6,600.0	9,958.4	9,742.1	46.047	SF
EXIST VERT FAY #1 - Wellbore #1 - Design #1	2,990.8	2,867.7	2,635.6	2,566.4	38.090	CC
EXIST VERT FAY #1 - Wellbore #1 - Design #1	3,149.6	2,992.6	2,637.4	2,563.9	35.890	ES
EXIST VERT FAY #1 - Wellbore #1 - Design #1	10,900.0	7,059.0	3,005.2	2,768.3	12.686	SF
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	3,883.1	3,485.1	92.1	-1.1	0.988	Level 1, CC, ES, SF
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	377.8	359.8	105.7	104.7	100.688	CC
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	500.0	481.8	105.9	104.5	75.969	ES
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	1,602.6	1,580.3	125.3	121.1	29.980	SF
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	100.0	239.0	238.8	1,265.865	CC, ES
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	16,129.6	15,063.3	2,169.2	1,693.3	4.558	SF
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	200.0	200.0	213.7	213.0	334.730	CC, ES
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	16,129.6	15,275.3	1,978.2	1,499.9	4.136	SF
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	191.1	190.0	175.666	CC, ES
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	16,129.6	15,094.1	1,824.7	1,349.4	3.839	SF
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	400.0	400.0	165.8	164.2	107.827	CC, ES
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	16,129.6	15,167.3	1,495.5	1,020.4	3.148	SF
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	143.7	141.7	72.331	CC, ES
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	16,129.6	15,405.6	1,318.8	838.7	2.747	SF
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	600.0	600.0	118.4	116.0	48.590	CC, ES
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	16,129.6	15,280.5	1,171.2	698.2	2.476	SF
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	700.0	700.0	95.8	92.9	33.198	CC
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	3,600.0	3,514.3	127.1	87.8	3.234	ES
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	16,129.6	15,418.7	845.9	378.9	1.811	SF
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	800.0	800.0	70.5	67.1	21.138	CC
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	3,600.0	3,530.3	96.3	57.0	2.453	ES
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	16,129.6	15,680.8	659.4	178.5	1.371	Level 3, SF
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	900.0	900.0	47.9	44.1	12.656	CC
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	3,838.6	3,782.1	72.4	26.6	1.581	ES
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	16,129.6	15,614.4	532.5	84.6	1.189	Level 2, SF
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	1,000.0	1,000.0	22.6	18.3	5.332	CC
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	5,314.9	5,281.3	30.8	-52.9	0.368	Level 1, SF
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	16,129.6	15,843.4	254.8	-68.0	0.789	Level 1, ES
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	1,100.0	1,100.0	25.3	20.6	5.407	CC
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	16,129.6	16,069.4	254.8	-82.4	0.756	Level 1, ES, SF
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	1,100.0	1,100.0	47.5	42.8	10.138	CC
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	2,854.3	2,879.2	54.2	32.0	2.446	ES
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	16,129.6	16,281.8	532.5	76.5	1.168	Level 2, SF
VT-ALLES 1-16-18 - ORIGINAL WELLBORE - PROPOS	100.0	99.0	259.1	258.9	1,379.225	CC, ES

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-172.73	-1,172.0	-149.6	1,182.1				
98.4	98.4	59.4	59.4	0.1	0.6	-172.73	-1,172.0	-149.6	1,181.5	1,180.8	0.69	1,722.292	
100.0	100.0	61.0	61.0	0.1	0.6	-172.73	-1,172.0	-149.6	1,181.5	1,180.8	0.70	1,679.457	
196.8	196.8	157.8	157.8	0.3	2.3	-172.73	-1,172.0	-149.6	1,181.5	1,178.8	2.66	443.826	
200.0	200.0	161.0	161.0	0.3	2.4	-172.73	-1,172.0	-149.6	1,181.5	1,178.8	2.74	430.772	
295.3	295.3	256.3	256.3	0.5	4.5	-172.73	-1,172.0	-149.6	1,181.5	1,176.5	5.04	234.464	
300.0	300.0	261.0	261.0	0.5	4.6	-172.73	-1,172.0	-149.6	1,181.5	1,176.3	5.15	229.502	
393.7	393.7	354.7	354.7	0.8	6.5	-172.73	-1,172.0	-149.6	1,181.5	1,174.2	7.29	162.122	
400.0	400.0	361.0	361.0	0.8	6.7	-172.73	-1,172.0	-149.6	1,181.5	1,174.1	7.43	159.005	
492.1	492.1	453.1	453.1	1.0	8.5	-172.73	-1,172.0	-149.6	1,181.5	1,172.0	9.51	124.208	
500.0	500.0	461.0	461.0	1.0	8.7	-172.73	-1,172.0	-149.6	1,181.5	1,171.8	9.69	121.933	
590.5	590.5	551.5	551.5	1.2	10.5	-172.73	-1,172.0	-149.6	1,181.5	1,169.8	11.73	100.747	
600.0	600.0	561.0	561.0	1.2	10.7	-172.73	-1,172.0	-149.6	1,181.5	1,169.6	11.94	98.955	
689.0	689.0	650.0	650.0	1.4	12.5	-172.73	-1,172.0	-149.6	1,181.5	1,167.6	13.94	84.770	
700.0	700.0	661.0	661.0	1.4	12.7	-172.73	-1,172.0	-149.6	1,181.5	1,167.3	14.19	83.291	
787.4	787.4	748.4	748.4	1.6	14.5	-172.73	-1,172.0	-149.6	1,181.5	1,165.3	16.15	73.179	
800.0	800.0	761.0	761.0	1.7	14.8	-172.73	-1,172.0	-149.6	1,181.5	1,165.1	16.43	71.920	
885.8	885.8	846.8	846.8	1.9	16.5	-172.73	-1,172.0	-149.6	1,181.5	1,163.1	18.35	64.382	
900.0	900.0	861.0	861.0	1.9	16.8	-172.73	-1,172.0	-149.6	1,181.5	1,162.8	18.67	63.287	
984.2	984.2	945.2	945.2	2.1	18.5	-172.73	-1,172.0	-149.6	1,181.5	1,160.9	20.56	57.477	
1,000.0	1,000.0	961.0	961.0	2.1	18.8	-172.73	-1,172.0	-149.6	1,181.5	1,160.6	20.91	56.507	
1,082.7	1,082.7	1,043.7	1,043.7	2.3	20.5	-172.73	-1,172.0	-149.6	1,181.5	1,158.7	22.76	51.911	
1,100.0	1,100.0	1,061.0	1,061.0	2.3	20.8	-172.73	-1,172.0	-149.6	1,181.5	1,158.3	23.15	51.042	
1,181.1	1,181.1	1,142.1	1,142.1	2.5	22.4	-4.47	-1,172.0	-149.6	1,180.4	1,155.4	24.93	47.345	
1,200.0	1,200.0	1,161.0	1,161.0	2.5	22.8	-4.48	-1,172.0	-149.6	1,179.8	1,154.4	25.34	46.551	
1,279.5	1,279.4	1,240.4	1,240.4	2.7	24.4	-4.50	-1,172.0	-149.6	1,175.9	1,148.8	27.05	43.478	
1,300.0	1,299.8	1,260.8	1,260.8	2.7	24.8	-4.50	-1,172.0	-149.6	1,174.5	1,147.1	27.48	42.743	
1,377.9	1,377.5	1,338.5	1,338.5	2.9	26.4	-4.54	-1,172.0	-149.6	1,168.1	1,138.9	29.12	40.115	
1,400.0	1,399.5	1,360.5	1,360.5	2.9	26.8	-4.55	-1,172.0	-149.6	1,165.8	1,136.3	29.58	39.420	
1,476.4	1,475.3	1,436.3	1,436.3	3.1	28.4	-4.60	-1,172.0	-149.6	1,156.9	1,125.7	31.14	37.146	
1,500.0	1,498.7	1,459.7	1,459.7	3.1	28.8	-4.62	-1,172.0	-149.6	1,153.7	1,122.1	31.62	36.484	
1,574.8	1,572.6	1,533.6	1,533.6	3.3	30.3	-4.68	-1,172.0	-149.6	1,142.4	1,109.2	33.12	34.495	
1,602.6	1,600.0	1,561.0	1,561.0	3.4	30.9	-4.71	-1,172.0	-149.6	1,137.7	1,104.0	33.66	33.798	
1,667.6	1,664.0	1,625.0	1,625.0	3.5	32.2	-4.76	-1,172.0	-149.6	1,126.4	1,091.3	35.07	32.120	
1,673.2	1,669.6	1,630.6	1,630.6	3.6	32.3	-4.77	-1,172.0	-149.6	1,125.4	1,090.2	35.18	31.990	
1,700.0	1,695.9	1,656.9	1,656.9	3.6	32.8	-4.80	-1,172.0	-149.6	1,120.5	1,084.8	35.70	31.389	
1,771.6	1,766.1	1,727.1	1,727.1	3.9	34.2	-4.88	-1,172.0	-149.6	1,106.4	1,069.3	37.06	29.853	
1,800.0	1,793.8	1,754.8	1,754.8	4.0	34.8	-4.92	-1,172.0	-149.6	1,100.3	1,062.7	37.59	29.273	
1,870.1	1,862.0	1,823.0	1,823.0	4.2	36.1	-5.02	-1,172.0	-149.6	1,084.1	1,045.3	38.87	27.893	
1,900.0	1,891.0	1,852.0	1,852.0	4.3	36.7	-5.07	-1,172.0	-149.6	1,076.7	1,037.3	39.40	27.328	
1,968.5	1,957.0	1,918.0	1,918.0	4.6	38.1	-5.19	-1,172.0	-149.6	1,058.6	1,018.0	40.59	26.079	
2,000.0	1,987.2	1,948.2	1,948.2	4.7	38.7	-5.25	-1,172.0	-149.6	1,049.8	1,008.6	41.12	25.526	
2,066.9	2,051.1	2,012.1	2,012.1	5.1	39.9	-5.39	-1,172.0	-149.6	1,029.9	987.6	42.23	24.385	
2,100.0	2,082.5	2,043.5	2,043.5	5.2	40.6	-5.47	-1,172.0	-149.6	1,019.5	976.7	42.76	23.843	
2,165.3	2,144.1	2,105.1	2,105.1	5.6	41.8	-5.63	-1,172.0	-149.6	997.9	954.2	43.77	22.798	
2,200.0	2,176.6	2,137.6	2,137.6	5.8	42.5	-5.73	-1,172.0	-149.6	985.9	941.6	44.29	22.259	
2,263.8	2,236.0	2,197.0	2,197.0	6.2	43.7	-5.91	-1,172.0	-149.6	962.8	917.6	45.22	21.292	
2,300.0	2,269.5	2,230.5	2,230.5	6.4	44.3	-6.03	-1,172.0	-149.6	949.1	903.4	45.73	20.757	
2,362.2	2,326.7	2,287.7	2,287.7	6.8	45.5	-6.25	-1,172.0	-149.6	924.6	878.1	46.56	19.857	
2,400.0	2,361.1	2,322.1	2,322.1	7.1	46.2	-6.39	-1,172.0	-149.6	909.1	862.1	47.05	19.322	
2,460.6	2,415.9	2,376.9	2,376.9	7.5	47.3	-6.65	-1,172.0	-149.6	883.3	835.5	47.80	18.479	
2,500.0	2,451.2	2,412.2	2,412.2	7.8	48.0	-6.82	-1,172.0	-149.6	866.0	817.7	48.27	17.941	

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



# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,559.0	2,503.7	2,464.7	2,464.7	8.3	49.1	-7.12	-1,172.0	-149.6	839.1	790.1	48.94	17.146	
2,600.0	2,539.7	2,500.7	2,500.7	8.6	49.8	-7.34	-1,172.0	-149.6	819.8	770.4	49.37	16.603	
2,657.5	2,589.9	2,550.9	2,550.9	9.1	50.8	-7.69	-1,172.0	-149.6	791.9	741.9	49.96	15.849	
2,700.0	2,626.6	2,587.6	2,587.6	9.5	51.5	-7.97	-1,172.0	-149.6	770.6	720.2	50.37	15.297	
2,755.9	2,674.4	2,635.4	2,635.4	10.0	52.5	-8.37	-1,172.0	-149.6	741.8	690.9	50.89	14.577	
2,800.0	2,711.7	2,672.7	2,672.7	10.5	53.2	-8.73	-1,172.0	-149.6	718.4	667.2	51.27	14.013	
2,854.3	2,757.1	2,718.1	2,718.1	11.0	54.1	-9.22	-1,172.0	-149.6	688.9	637.2	51.72	13.319	
2,900.0	2,794.9	2,755.9	2,755.9	11.5	54.9	-9.67	-1,172.0	-149.6	663.5	611.4	52.08	12.739	
2,952.7	2,838.0	2,799.0	2,799.0	12.0	55.8	-10.26	-1,172.0	-149.6	633.3	580.9	52.48	12.067	
3,000.0	2,876.1	2,837.1	2,837.1	12.5	56.5	-10.86	-1,172.0	-149.6	605.7	552.9	52.83	11.466	
3,051.2	2,916.8	2,877.8	2,877.8	13.1	57.4	-11.59	-1,172.0	-149.6	575.2	522.0	53.20	10.810	
3,100.0	2,955.2	2,916.2	2,916.2	13.6	58.1	-12.38	-1,172.0	-149.6	545.4	491.8	53.56	10.182	
3,149.6	2,993.6	2,954.6	2,954.6	14.2	58.9	-13.30	-1,172.0	-149.6	514.5	460.5	53.95	9.537	
3,200.0	3,032.1	2,993.1	2,993.1	14.8	59.7	-14.38	-1,172.0	-149.6	482.5	428.2	54.37	8.875	
3,248.0	3,068.3	3,029.3	3,029.3	15.4	60.4	-15.58	-1,172.0	-149.6	451.5	396.7	54.83	8.235	
3,300.0	3,106.8	3,067.8	3,067.8	16.0	61.2	-17.10	-1,172.0	-149.6	417.4	362.0	55.42	7.531	
3,346.4	3,140.7	3,101.7	3,101.7	16.6	61.9	-18.72	-1,172.0	-149.6	386.5	330.4	56.09	6.891	
3,385.9	3,169.0	3,130.0	3,130.0	17.1	62.4	-20.33	-1,172.0	-149.6	359.9	303.2	56.78	6.339	
3,400.0	3,179.1	3,140.1	3,140.1	17.3	62.6	-20.87	-1,172.0	-149.6	350.4	293.2	57.23	6.123	
3,444.9	3,211.2	3,172.2	3,172.2	17.9	63.3	-22.80	-1,172.0	-149.6	320.2	261.4	58.76	5.450	
3,500.0	3,250.5	3,211.5	3,211.5	18.6	64.1	-25.68	-1,172.0	-149.6	283.5	222.5	60.96	4.650	
3,543.3	3,281.5	3,242.5	3,242.5	19.2	64.7	-28.46	-1,172.0	-149.6	255.0	192.0	63.03	4.046	
3,600.0	3,322.0	3,283.0	3,283.0	19.9	65.5	-33.05	-1,172.0	-149.6	218.5	152.1	66.36	3.292	
3,641.7	3,351.8	3,312.8	3,312.8	20.4	66.1	-37.35	-1,172.0	-149.6	192.4	123.0	69.41	2.771	
3,700.0	3,393.4	3,354.4	3,354.4	21.2	66.9	-45.17	-1,172.0	-149.6	157.8	83.0	74.75	2.111	
3,740.1	3,422.1	3,383.1	3,383.1	21.7	67.5	-52.19	-1,172.0	-149.6	135.9	56.7	79.20	1.716	
3,800.0	3,464.8	3,425.8	3,425.8	22.5	68.4	-65.73	-1,172.0	-149.6	108.9	22.4	86.44	1.260 Level 3	
3,838.6	3,492.4	3,453.4	3,453.4	23.0	68.9	-76.42	-1,172.0	-149.6	97.2	6.7	90.51	1.074 Level 2	
3,883.1	3,524.1	3,485.1	3,485.1	23.6	69.6	-90.00	-1,172.0	-149.6	92.1	-1.1	93.19	0.988 Level 1, CC, ES, SF	
3,900.0	3,536.2	3,497.2	3,497.2	23.8	69.8	-95.26	-1,172.0	-149.6	92.8	-0.6	93.43	0.994 Level 1	
3,937.0	3,562.7	3,523.7	3,523.7	24.3	70.4	-106.32	-1,172.0	-149.6	99.5	7.0	92.52	1.076 Level 2	
4,000.0	3,607.7	3,568.7	3,568.7	25.2	71.3	-122.41	-1,172.0	-149.6	123.2	35.1	88.12	1.398 Level 3	
4,035.4	3,633.0	3,594.0	3,594.0	25.6	71.8	-129.60	-1,172.0	-149.6	140.9	55.6	85.27	1.652	
4,100.0	3,679.1	3,640.1	3,640.1	26.5	72.7	-139.67	-1,172.0	-149.6	177.6	96.8	80.81	2.197	
4,133.8	3,703.3	3,664.3	3,664.3	26.9	73.2	-143.71	-1,172.0	-149.6	198.2	119.2	79.03	2.508	
4,200.0	3,750.5	3,711.5	3,711.5	27.8	74.1	-149.84	-1,172.0	-149.6	240.2	163.6	76.54	3.138	
4,232.3	3,773.6	3,734.6	3,734.6	28.2	74.6	-152.19	-1,172.0	-149.6	261.2	185.4	75.73	3.449	
4,300.0	3,821.9	3,782.9	3,782.9	29.1	75.6	-156.17	-1,172.0	-149.6	306.0	231.4	74.63	4.100	
4,330.7	3,843.9	3,804.9	3,804.9	29.5	76.0	-157.64	-1,172.0	-149.6	326.5	252.2	74.34	4.393	
4,400.0	3,893.4	3,854.4	3,854.4	30.5	77.0	-160.39	-1,172.0	-149.6	373.3	299.3	74.05	5.042	
4,429.1	3,914.2	3,875.2	3,875.2	30.8	77.4	-161.36	-1,172.0	-149.6	393.1	319.1	74.04	5.309	
4,500.0	3,964.8	3,925.8	3,925.8	31.8	78.4	-163.38	-1,172.0	-149.6	441.5	367.3	74.23	5.948	
4,527.5	3,984.5	3,945.5	3,945.5	32.1	78.8	-164.05	-1,172.0	-149.6	460.4	386.0	74.37	6.190	
4,600.0	4,036.2	3,997.2	3,997.2	33.1	79.9	-165.59	-1,172.0	-149.6	510.2	435.3	74.86	6.815	
4,626.0	4,054.8	4,015.8	4,015.8	33.5	80.2	-166.08	-1,172.0	-149.6	528.0	453.0	75.07	7.034	
4,700.0	4,107.6	4,068.6	4,068.6	34.4	81.3	-167.30	-1,172.0	-149.6	579.1	503.4	75.75	7.645	
4,724.4	4,125.1	4,086.1	4,086.1	34.8	81.7	-167.65	-1,172.0	-149.6	596.0	520.0	76.00	7.842	
4,800.0	4,179.1	4,140.1	4,140.1	35.8	82.7	-168.64	-1,172.0	-149.6	648.3	571.5	76.83	8.439	
4,822.8	4,195.4	4,156.4	4,156.4	36.1	83.1	-168.91	-1,172.0	-149.6	664.1	587.0	77.09	8.615	
4,900.0	4,250.5	4,211.5	4,211.5	37.1	84.2	-169.73	-1,172.0	-149.6	717.7	639.6	78.02	9.198	
4,921.2	4,265.7	4,226.7	4,226.7	37.4	84.5	-169.94	-1,172.0	-149.6	732.4	654.1	78.29	9.355	
5,000.0	4,321.9	4,282.9	4,282.9	38.4	85.6	-170.64	-1,172.0	-149.6	787.1	707.8	79.30	9.926	

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,019.7	4,336.0	4,297.0	4,297.0	38.7	85.9	-170.80	-1,172.0	-149.6	800.8	721.2	79.56	10.066	
5,100.0	4,393.3	4,354.3	4,354.3	39.8	87.1	-171.39	-1,172.0	-149.6	856.7	776.0	80.64	10.624	
5,118.1	4,406.3	4,367.3	4,367.3	40.0	87.3	-171.52	-1,172.0	-149.6	869.3	788.4	80.88	10.747	
5,182.1	4,452.0	4,413.0	4,413.0	40.9	88.2	-171.93	-1,172.0	-149.6	913.8	832.1	81.77	11.176	
5,200.0	4,464.8	4,425.8	4,425.8	41.1	88.5	-172.09	-1,172.0	-149.6	926.2	843.9	82.39	11.243	
5,216.5	4,476.7	4,437.7	4,437.7	41.2	88.7	-172.22	-1,172.0	-149.6	937.7	854.7	82.96	11.302	
5,300.0	4,537.9	4,498.9	4,498.9	42.0	90.0	-172.86	-1,172.0	-149.6	994.2	908.3	85.90	11.574	
5,314.9	4,549.0	4,510.0	4,510.0	42.2	90.2	-172.96	-1,172.0	-149.6	1,004.2	917.7	86.43	11.618	
5,400.0	4,613.3	4,574.3	4,574.3	43.0	91.5	-173.50	-1,172.0	-149.6	1,059.6	970.1	89.47	11.843	
5,413.4	4,623.5	4,584.5	4,584.5	43.1	91.7	-173.58	-1,172.0	-149.6	1,068.2	978.2	89.95	11.875	
5,500.0	4,690.9	4,651.9	4,651.9	43.9	93.0	-174.03	-1,172.0	-149.6	1,122.4	1,029.3	93.08	12.058	
5,511.8	4,700.2	4,661.2	4,661.2	44.0	93.2	-174.09	-1,172.0	-149.6	1,129.6	1,036.1	93.51	12.081	
5,600.0	4,770.7	4,731.7	4,731.7	44.7	94.6	-174.48	-1,172.0	-149.6	1,182.5	1,085.8	96.70	12.228	
5,610.2	4,779.0	4,740.0	4,740.0	44.8	94.8	-174.52	-1,172.0	-149.6	1,188.5	1,091.4	97.07	12.243	
5,700.0	4,852.6	4,813.6	4,813.6	45.6	96.3	-174.86	-1,172.0	-149.6	1,239.7	1,139.4	100.32	12.358	
5,708.6	4,859.7	4,820.7	4,820.7	45.7	96.4	-174.89	-1,172.0	-149.6	1,244.6	1,143.9	100.63	12.368	
5,800.0	4,936.4	4,897.4	4,897.4	46.4	98.0	-175.19	-1,172.0	-149.6	1,294.2	1,190.2	103.91	12.454	
5,807.1	4,942.4	4,903.4	4,903.4	46.5	98.1	-175.21	-1,172.0	-149.6	1,297.9	1,193.7	104.16	12.460	
5,900.0	5,022.0	4,983.0	4,983.0	47.2	99.7	-175.47	-1,172.0	-149.6	1,345.6	1,238.1	107.48	12.520	
5,905.5	5,026.8	4,987.8	4,987.8	47.3	99.8	-175.48	-1,172.0	-149.6	1,348.4	1,240.7	107.67	12.523	
6,000.0	5,109.4	5,070.4	5,070.4	48.0	101.5	-175.71	-1,172.0	-149.6	1,394.1	1,283.1	110.99	12.560	
6,003.9	5,112.9	5,073.9	5,073.9	48.0	101.5	-175.72	-1,172.0	-149.6	1,395.9	1,284.8	111.13	12.561	
6,100.0	5,198.5	5,159.5	5,159.5	48.7	103.2	-175.92	-1,172.0	-149.6	1,439.5	1,325.0	114.46	12.576	
6,102.3	5,200.6	5,161.6	5,161.6	48.7	103.3	-175.92	-1,172.0	-149.6	1,440.5	1,326.0	114.54	12.577	
6,200.0	5,289.1	5,250.1	5,250.1	49.4	105.1	-176.10	-1,172.0	-149.6	1,481.7	1,363.9	117.86	12.573	
6,200.8	5,289.8	5,250.8	5,250.8	49.4	105.1	-176.10	-1,172.0	-149.6	1,482.1	1,364.2	117.88	12.572	
6,299.2	5,380.3	5,341.3	5,341.3	50.0	106.9	-176.25	-1,172.0	-149.6	1,520.5	1,399.4	121.15	12.551	
6,300.0	5,381.1	5,342.1	5,342.1	50.0	106.9	-176.26	-1,172.0	-149.6	1,520.8	1,399.7	121.18	12.550	
6,397.6	5,472.2	5,433.2	5,433.2	50.6	108.8	-176.39	-1,172.0	-149.6	1,555.9	1,431.6	124.34	12.514	
6,400.0	5,474.4	5,435.4	5,435.4	50.6	108.8	-176.39	-1,172.0	-149.6	1,556.7	1,432.3	124.41	12.512	
6,496.0	5,565.1	5,526.1	5,526.1	51.1	110.6	-176.50	-1,172.0	-149.6	1,588.1	1,460.6	127.43	12.463	
6,500.0	5,568.9	5,529.9	5,529.9	51.1	110.7	-176.51	-1,172.0	-149.6	1,589.3	1,461.7	127.55	12.460	
6,594.5	5,659.2	5,620.2	5,620.2	51.6	112.5	-176.60	-1,172.0	-149.6	1,617.1	1,486.6	130.42	12.399	
6,600.0	5,664.5	5,625.5	5,625.5	51.6	112.6	-176.61	-1,172.0	-149.6	1,618.6	1,488.0	130.58	12.395	
6,692.9	5,754.2	5,715.2	5,715.2	52.0	114.4	-176.69	-1,172.0	-149.6	1,642.8	1,509.5	133.29	12.325	
6,700.0	5,761.1	5,722.1	5,722.1	52.1	114.6	-176.69	-1,172.0	-149.6	1,644.5	1,511.0	133.50	12.319	
6,791.3	5,850.0	5,811.0	5,811.0	52.4	116.4	-176.76	-1,172.0	-149.6	1,665.3	1,529.2	136.05	12.241	
6,800.0	5,858.5	5,819.5	5,819.5	52.5	116.5	-176.76	-1,172.0	-149.6	1,667.1	1,530.8	136.28	12.233	
6,889.7	5,946.5	5,907.5	5,907.5	52.8	118.3	-176.82	-1,172.0	-149.6	1,684.4	1,545.8	138.67	12.147	
6,900.0	5,956.6	5,917.6	5,917.6	52.8	118.5	-176.82	-1,172.0	-149.6	1,686.2	1,547.3	138.93	12.137	
6,988.2	6,043.6	6,004.6	6,004.6	53.0	120.2	-176.86	-1,172.0	-149.6	1,700.3	1,559.1	141.15	12.046	
7,000.0	6,055.4	6,016.4	6,016.4	53.1	120.5	-176.87	-1,172.0	-149.6	1,702.0	1,560.5	141.43	12.034	
7,086.6	6,141.3	6,102.3	6,102.3	53.3	122.2	-176.90	-1,172.0	-149.6	1,712.8	1,569.3	143.47	11.938	
7,100.0	6,154.6	6,115.6	6,115.6	53.3	122.5	-176.90	-1,172.0	-149.6	1,714.2	1,570.5	143.78	11.923	
7,185.0	6,239.3	6,200.3	6,200.3	53.5	124.2	-176.93	-1,172.0	-149.6	1,721.9	1,576.3	145.64	11.823	
7,200.0	6,254.2	6,215.2	6,215.2	53.5	124.5	-176.93	-1,172.0	-149.6	1,723.0	1,577.1	145.96	11.805	
7,283.4	6,337.5	6,298.5	6,298.5	53.6	126.2	-176.94	-1,172.0	-149.6	1,727.7	1,580.1	147.64	11.702	
7,300.0	6,354.0	6,315.0	6,315.0	53.6	126.5	-176.94	-1,172.0	-149.6	1,728.4	1,580.4	147.96	11.681	
7,381.9	6,435.9	6,396.9	6,396.9	53.7	128.1	-176.95	-1,172.0	-149.6	1,730.1	1,580.7	149.46	11.576	
7,403.0	6,457.0	6,418.0	6,418.0	53.7	128.6	14.79	-1,172.0	-149.6	1,730.2	1,548.0	182.21	9.496	
7,433.0	6,487.0	6,448.0	6,448.0	53.7	129.2	14.79	-1,172.0	-149.6	1,730.2	1,547.4	182.83	9.464	
7,450.0	6,504.0	6,465.0	6,465.0	53.7	129.5	104.83	-1,172.0	-149.6	1,730.3	1,579.4	150.92	11.465	

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,480.3	6,534.3	6,495.3	6,495.3	53.8	130.1	104.84	-1,172.0	-149.6	1,730.7	1,579.0	151.69	11.410	
7,500.0	6,553.9	6,514.9	6,514.9	53.8	130.5	104.86	-1,172.0	-149.6	1,731.2	1,579.0	152.17	11.377	
7,550.0	6,603.2	6,564.2	6,564.2	53.8	131.5	104.91	-1,172.0	-149.6	1,733.3	1,580.0	153.33	11.305	
7,578.7	6,631.2	6,592.2	6,592.2	53.9	132.1	104.95	-1,172.0	-149.6	1,735.0	1,581.1	153.95	11.270	
7,600.0	6,651.7	6,612.7	6,612.7	53.9	132.5	104.97	-1,172.0	-149.6	1,736.6	1,582.2	154.39	11.248	
7,650.0	6,698.9	6,659.9	6,659.9	54.0	133.4	105.03	-1,172.0	-149.6	1,741.1	1,585.7	155.35	11.207	
7,677.1	6,723.9	6,684.9	6,684.9	54.1	133.9	105.06	-1,172.0	-149.6	1,744.0	1,588.2	155.84	11.191	
7,700.0	6,744.5	6,705.5	6,705.5	54.1	134.3	105.07	-1,172.0	-149.6	1,746.9	1,590.6	156.23	11.182	
7,750.0	6,788.1	6,749.1	6,749.1	54.2	135.2	105.04	-1,172.0	-149.6	1,754.0	1,597.0	157.04	11.169	
7,775.6	6,809.5	6,770.5	6,770.5	54.3	135.6	105.00	-1,172.0	-149.6	1,758.3	1,600.8	157.45	11.167	
7,800.0	6,829.4	6,790.4	6,790.4	54.4	136.0	104.94	-1,172.0	-149.6	1,762.7	1,604.9	157.83	11.168	
7,850.0	6,868.2	6,829.2	6,829.2	54.5	136.8	104.71	-1,172.0	-149.6	1,772.9	1,614.3	158.65	11.175	
7,874.0	6,885.8	6,846.8	6,846.8	54.6	137.2	104.55	-1,172.0	-149.6	1,778.4	1,619.3	159.08	11.179	
7,900.0	6,904.0	6,865.0	6,865.0	54.7	137.5	104.33	-1,172.0	-149.6	1,784.8	1,625.2	159.57	11.185	
7,950.0	6,936.7	6,897.7	6,897.7	54.9	138.2	103.76	-1,172.0	-149.6	1,798.3	1,637.7	160.64	11.195	
7,972.4	6,950.2	6,911.2	6,911.2	55.0	138.5	103.43	-1,172.0	-149.6	1,805.0	1,643.8	161.20	11.197	
8,000.0	6,965.9	6,926.9	6,926.9	55.1	138.8	102.96	-1,172.0	-149.6	1,813.6	1,651.7	161.93	11.200	
8,050.0	6,991.5	6,952.5	6,952.5	55.4	139.3	101.91	-1,172.0	-149.6	1,830.7	1,667.2	163.46	11.200	
8,070.8	7,001.1	6,962.1	6,962.1	55.5	139.5	101.39	-1,172.0	-149.6	1,838.3	1,674.1	164.17	11.197	
8,100.0	7,013.3	6,974.3	6,974.3	55.6	139.7	100.57	-1,172.0	-149.6	1,849.4	1,684.2	165.20	11.195	
8,150.0	7,031.0	6,992.0	6,992.0	55.9	140.1	98.92	-1,172.0	-149.6	1,869.8	1,702.7	167.09	11.190	
8,169.3	7,036.8	6,997.8	6,997.8	56.0	140.2	98.19	-1,172.0	-149.6	1,878.1	1,710.3	167.84	11.190	
8,200.0	7,044.6	7,005.6	7,005.6	56.2	140.4	96.93	-1,172.0	-149.6	1,891.8	1,722.8	168.98	11.195	
8,250.0	7,054.0	7,015.0	7,015.0	56.6	140.6	94.61	-1,172.0	-149.6	1,915.3	1,744.6	170.67	11.222	
8,267.7	7,056.3	7,017.3	7,017.3	56.7	140.6	93.70	-1,172.0	-149.6	1,923.9	1,752.7	171.18	11.239	
8,300.0	7,059.0	7,020.0	7,020.0	56.9	140.7	91.94	-1,172.0	-149.6	1,940.0	1,768.1	171.91	11.285	
8,333.0	7,060.0	7,021.0	7,021.0	57.2	140.7	90.00	-1,172.0	-149.6	1,956.9	1,784.5	172.37	11.353	
8,366.1	7,060.0	7,021.0	7,021.0	57.4	140.7	90.00	-1,172.0	-149.6	1,974.3	1,801.3	172.99	11.413	
8,400.0	7,060.0	7,021.0	7,021.0	57.7	140.7	90.00	-1,172.0	-149.6	1,992.5	1,818.9	173.63	11.476	
8,464.5	7,060.0	7,021.0	7,021.0	58.2	140.7	90.00	-1,172.0	-149.6	2,028.3	1,853.4	174.91	11.596	
8,500.0	7,060.0	7,021.0	7,021.0	58.6	140.7	90.00	-1,172.0	-149.6	2,048.6	1,872.9	175.61	11.665	
8,563.0	7,060.0	7,021.0	7,021.0	59.1	140.7	90.00	-1,172.0	-149.6	2,085.5	1,908.6	176.92	11.788	
8,600.0	7,060.0	7,021.0	7,021.0	59.5	140.7	90.00	-1,172.0	-149.6	2,107.9	1,930.2	177.70	11.862	
8,661.4	7,060.0	7,021.0	7,021.0	60.1	140.7	90.00	-1,172.0	-149.6	2,145.8	1,966.8	179.03	11.986	
8,700.0	7,060.0	7,021.0	7,021.0	60.6	140.7	90.00	-1,172.0	-149.6	2,170.2	1,990.3	179.87	12.065	
8,759.8	7,060.0	7,021.0	7,021.0	61.2	140.7	90.00	-1,172.0	-149.6	2,208.8	2,027.6	181.22	12.188	
8,800.0	7,060.0	7,021.0	7,021.0	61.7	140.7	90.00	-1,172.0	-149.6	2,235.2	2,053.1	182.13	12.273	
8,858.2	7,060.0	7,021.0	7,021.0	62.4	140.7	90.00	-1,172.0	-149.6	2,274.3	2,090.8	183.48	12.396	
8,900.0	7,060.0	7,021.0	7,021.0	62.9	140.7	90.00	-1,172.0	-149.6	2,302.8	2,118.3	184.44	12.485	
8,956.7	7,060.0	7,021.0	7,021.0	63.7	140.7	90.00	-1,172.0	-149.6	2,342.1	2,156.3	185.79	12.606	
9,000.0	7,060.0	7,021.0	7,021.0	64.3	140.7	90.00	-1,172.0	-149.6	2,372.6	2,185.8	186.82	12.700	
9,055.1	7,060.0	7,021.0	7,021.0	65.0	140.7	90.00	-1,172.0	-149.6	2,412.0	2,223.9	188.15	12.820	
9,100.0	7,060.0	7,021.0	7,021.0	65.7	140.7	90.00	-1,172.0	-149.6	2,444.6	2,255.3	189.24	12.918	
9,153.5	7,060.0	7,021.0	7,021.0	66.5	140.7	90.00	-1,172.0	-149.6	2,483.9	2,293.3	190.55	13.035	
9,200.0	7,060.0	7,021.0	7,021.0	67.2	140.7	90.00	-1,172.0	-149.6	2,518.4	2,326.7	191.70	13.138	
9,251.9	7,060.0	7,021.0	7,021.0	68.0	140.7	90.00	-1,172.0	-149.6	2,557.5	2,364.5	192.99	13.252	
9,300.0	7,060.0	7,021.0	7,021.0	68.8	140.7	90.00	-1,172.0	-149.6	2,594.1	2,399.9	194.19	13.358	
9,350.4	7,060.0	7,021.0	7,021.0	69.7	140.7	90.00	-1,172.0	-149.6	2,632.8	2,437.3	195.46	13.469	
9,400.0	7,060.0	7,021.0	7,021.0	70.5	140.7	90.00	-1,172.0	-149.6	2,671.3	2,474.6	196.71	13.579	
9,448.8	7,060.0	7,021.0	7,021.0	71.4	140.7	90.00	-1,172.0	-149.6	2,709.5	2,511.5	197.96	13.687	
9,500.0	7,060.0	7,021.0	7,021.0	72.3	140.7	90.00	-1,172.0	-149.6	2,750.0	2,550.7	199.26	13.801	
9,547.2	7,060.0	7,021.0	7,021.0	73.2	140.7	90.00	-1,172.0	-149.6	2,787.6	2,587.1	200.48	13.905	

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



# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,600.0	7,060.0	7,021.0	7,021.0	74.1	140.7	90.00	-1,172.0	-149.6	2,830.0	2,628.1	201.84	14.021	
9,645.6	7,060.0	7,021.0	7,021.0	75.0	140.7	90.00	-1,172.0	-149.6	2,866.9	2,663.9	203.02	14.121	
9,700.0	7,060.0	7,021.0	7,021.0	76.1	140.7	90.00	-1,172.0	-149.6	2,911.3	2,706.8	204.43	14.241	
9,744.1	7,060.0	7,021.0	7,021.0	76.9	140.7	90.00	-1,172.0	-149.6	2,947.4	2,741.9	205.58	14.337	
9,800.0	7,060.0	7,021.0	7,021.0	78.1	140.7	90.00	-1,172.0	-149.6	2,993.7	2,786.6	207.04	14.459	
9,842.5	7,060.0	7,021.0	7,021.0	78.9	140.7	90.00	-1,172.0	-149.6	3,029.0	2,820.8	208.16	14.552	
9,900.0	7,060.0	7,021.0	7,021.0	80.1	140.7	90.00	-1,172.0	-149.6	3,077.1	2,867.4	209.67	14.676	
9,940.9	7,060.0	7,021.0	7,021.0	81.0	140.7	90.00	-1,172.0	-149.6	3,111.5	2,900.8	210.75	14.764	
10,000.0	7,060.0	7,021.0	7,021.0	82.2	140.7	90.00	-1,172.0	-149.6	3,161.5	2,949.2	212.31	14.891	
10,039.3	7,060.0	7,021.0	7,021.0	83.1	140.7	90.00	-1,172.0	-149.6	3,195.0	2,981.6	213.35	14.975	
10,100.0	7,060.0	7,021.0	7,021.0	84.4	140.7	90.00	-1,172.0	-149.6	3,246.8	3,031.8	214.96	15.104	
10,137.8	7,060.0	7,021.0	7,021.0	85.2	140.7	90.00	-1,172.0	-149.6	3,279.2	3,063.3	215.97	15.184	
10,200.0	7,060.0	7,021.0	7,021.0	86.6	140.7	90.00	-1,172.0	-149.6	3,332.9	3,115.3	217.62	15.315	
10,236.2	7,060.0	7,021.0	7,021.0	87.4	140.7	90.00	-1,172.0	-149.6	3,364.3	3,145.7	218.59	15.391	
10,300.0	7,060.0	7,021.0	7,021.0	88.9	140.7	90.00	-1,172.0	-149.6	3,419.8	3,199.5	220.30	15.523	
10,334.6	7,060.0	7,021.0	7,021.0	89.7	140.7	90.00	-1,172.0	-149.6	3,450.0	3,228.8	221.23	15.595	
10,400.0	7,060.0	7,021.0	7,021.0	91.2	140.7	90.00	-1,172.0	-149.6	3,507.3	3,284.4	222.98	15.729	
10,433.0	7,060.0	7,021.0	7,021.0	91.9	140.7	90.00	-1,172.0	-149.6	3,536.4	3,312.6	223.87	15.797	
10,500.0	7,060.0	7,021.0	7,021.0	93.5	140.7	90.00	-1,172.0	-149.6	3,595.6	3,369.9	225.67	15.933	
10,531.5	7,060.0	7,021.0	7,021.0	94.2	140.7	90.00	-1,172.0	-149.6	3,623.4	3,396.9	226.52	15.996	
10,600.0	7,060.0	7,021.0	7,021.0	95.9	140.7	90.00	-1,172.0	-149.6	3,684.4	3,456.0	228.37	16.133	
10,629.9	7,060.0	7,021.0	7,021.0	96.6	140.7	90.00	-1,172.0	-149.6	3,711.0	3,481.9	229.18	16.193	
10,700.0	7,060.0	7,021.0	7,021.0	98.3	140.7	90.00	-1,172.0	-149.6	3,773.7	3,542.7	231.08	16.331	
10,728.3	7,060.0	7,021.0	7,021.0	98.9	140.7	90.00	-1,172.0	-149.6	3,799.2	3,567.3	231.84	16.387	
10,800.0	7,060.0	7,021.0	7,021.0	100.7	140.7	90.00	-1,172.0	-149.6	3,863.6	3,629.9	233.79	16.526	
10,826.7	7,060.0	7,021.0	7,021.0	101.3	140.7	90.00	-1,172.0	-149.6	3,887.8	3,653.3	234.51	16.578	
10,900.0	7,060.0	7,021.0	7,021.0	103.1	140.7	90.00	-1,172.0	-149.6	3,954.0	3,717.5	236.50	16.719	
10,925.2	7,060.0	7,021.0	7,021.0	103.7	140.7	90.00	-1,172.0	-149.6	3,976.8	3,739.7	237.19	16.767	
11,000.0	7,060.0	7,021.0	7,021.0	105.6	140.7	90.00	-1,172.0	-149.6	4,044.9	3,805.6	239.23	16.908	
11,023.6	7,060.0	7,021.0	7,021.0	106.2	140.7	90.00	-1,172.0	-149.6	4,066.4	3,826.5	239.87	16.952	
11,100.0	7,060.0	7,021.0	7,021.0	108.1	140.7	90.00	-1,172.0	-149.6	4,136.1	3,894.2	241.95	17.095	
11,122.0	7,060.0	7,021.0	7,021.0	108.6	140.7	90.00	-1,172.0	-149.6	4,156.3	3,913.7	242.56	17.135	
11,200.0	7,060.0	7,021.0	7,021.0	110.6	140.7	90.00	-1,172.0	-149.6	4,227.8	3,983.1	244.69	17.278	
11,220.4	7,060.0	7,021.0	7,021.0	111.1	140.7	90.00	-1,172.0	-149.6	4,246.6	4,001.3	245.24	17.316	
11,300.0	7,060.0	7,021.0	7,021.0	113.1	140.7	90.00	-1,172.0	-149.6	4,319.8	4,072.4	247.42	17.459	
11,318.9	7,060.0	7,021.0	7,021.0	113.6	140.7	90.00	-1,172.0	-149.6	4,337.2	4,089.3	247.94	17.493	
11,400.0	7,060.0	7,021.0	7,021.0	115.7	140.7	90.00	-1,172.0	-149.6	4,412.2	4,162.0	250.16	17.637	
11,417.3	7,060.0	7,021.0	7,021.0	116.1	140.7	90.00	-1,172.0	-149.6	4,428.2	4,177.5	250.63	17.668	
11,500.0	7,060.0	7,021.0	7,021.0	118.2	140.7	90.00	-1,172.0	-149.6	4,504.9	4,252.0	252.90	17.813	
11,515.7	7,060.0	7,021.0	7,021.0	118.6	140.7	90.00	-1,172.0	-149.6	4,519.5	4,266.1	253.34	17.840	
11,600.0	7,060.0	7,021.0	7,021.0	120.8	140.7	90.00	-1,172.0	-149.6	4,597.9	4,342.2	255.65	17.985	
11,614.1	7,060.0	7,021.0	7,021.0	121.1	140.7	90.00	-1,172.0	-149.6	4,611.0	4,355.0	256.04	18.009	
11,700.0	7,060.0	7,021.0	7,021.0	123.4	140.7	90.00	-1,172.0	-149.6	4,691.2	4,432.8	258.40	18.155	
11,712.6	7,060.0	7,021.0	7,021.0	123.7	140.7	90.00	-1,172.0	-149.6	4,702.9	4,444.2	258.74	18.176	
11,800.0	7,060.0	7,021.0	7,021.0	126.0	140.7	90.00	-1,172.0	-149.6	4,784.7	4,523.6	261.15	18.322	
11,811.0	7,060.0	7,021.0	7,021.0	126.2	140.7	90.00	-1,172.0	-149.6	4,795.0	4,533.6	261.45	18.340	
11,900.0	7,060.0	7,021.0	7,021.0	128.6	140.7	90.00	-1,172.0	-149.6	4,878.5	4,614.6	263.91	18.486	
11,909.4	7,060.0	7,021.0	7,021.0	128.8	140.7	90.00	-1,172.0	-149.6	4,887.4	4,623.2	264.17	18.501	
12,000.0	7,060.0	7,021.0	7,021.0	131.2	140.7	90.00	-1,172.0	-149.6	4,972.6	4,705.9	266.66	18.648	
12,007.8	7,060.0	7,021.0	7,021.0	131.4	140.7	90.00	-1,172.0	-149.6	4,980.0	4,713.1	266.88	18.660	
12,100.0	7,060.0	7,021.0	7,021.0	133.8	140.7	90.00	-1,172.0	-149.6	5,066.9	4,797.5	269.42	18.807	
12,106.3	7,060.0	7,021.0	7,021.0	134.0	140.7	90.00	-1,172.0	-149.6	5,072.8	4,803.2	269.59	18.816	

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-INC													Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,200.0	7,060.0	7,021.0	7,021.0	136.4	140.7	90.00	-1,172.0	-149.6	5,161.4	4,889.2	272.18	18.963		
12,204.7	7,060.0	7,021.0	7,021.0	136.6	140.7	90.00	-1,172.0	-149.6	5,165.8	4,893.5	272.31	18.970		
12,300.0	7,060.0	7,021.0	7,021.0	139.1	140.7	90.00	-1,172.0	-149.6	5,256.1	4,981.1	274.95	19.117		
12,303.1	7,060.0	7,021.0	7,021.0	139.2	140.7	90.00	-1,172.0	-149.6	5,259.1	4,984.0	275.03	19.122		
12,400.0	7,060.0	7,021.0	7,021.0	141.7	140.7	90.00	-1,172.0	-149.6	5,351.0	5,073.3	277.71	19.268		
12,401.5	7,060.0	7,021.0	7,021.0	141.8	140.7	90.00	-1,172.0	-149.6	5,352.5	5,074.7	277.75	19.270		
12,500.0	7,060.0	7,021.0	7,021.0	144.4	140.7	90.00	-1,172.0	-149.6	5,446.1	5,165.6	280.48	19.417		
12,598.4	7,060.0	7,021.0	7,021.0	147.0	140.7	90.00	-1,172.0	-149.6	5,539.8	5,256.6	283.20	19.561		
12,600.0	7,060.0	7,021.0	7,021.0	147.0	140.7	90.00	-1,172.0	-149.6	5,541.3	5,258.1	283.25	19.563		
12,696.8	7,060.0	7,021.0	7,021.0	149.6	140.7	90.00	-1,172.0	-149.6	5,633.7	5,347.8	285.93	19.703		
12,700.0	7,060.0	7,021.0	7,021.0	149.7	140.7	90.00	-1,172.0	-149.6	5,636.7	5,350.7	286.02	19.708		
12,795.2	7,060.0	7,021.0	7,021.0	152.3	140.7	90.00	-1,172.0	-149.6	5,727.8	5,439.1	288.66	19.843		
12,800.0	7,060.0	7,021.0	7,021.0	152.4	140.7	90.00	-1,172.0	-149.6	5,732.3	5,443.5	288.79	19.849		
12,893.7	7,060.0	7,021.0	7,021.0	154.9	140.7	90.00	-1,172.0	-149.6	5,822.0	5,530.6	291.39	19.980		
12,900.0	7,060.0	7,021.0	7,021.0	155.1	140.7	90.00	-1,172.0	-149.6	5,828.0	5,536.5	291.56	19.989		
12,992.1	7,060.0	7,021.0	7,021.0	157.5	140.7	90.00	-1,172.0	-149.6	5,916.3	5,622.2	294.12	20.115		
13,000.0	7,060.0	7,021.0	7,021.0	157.8	140.7	90.00	-1,172.0	-149.6	5,923.9	5,629.6	294.34	20.126		
13,090.5	7,060.0	7,021.0	7,021.0	160.2	140.7	90.00	-1,172.0	-149.6	6,010.8	5,713.9	296.85	20.249		
13,100.0	7,060.0	7,021.0	7,021.0	160.4	140.7	90.00	-1,172.0	-149.6	6,019.9	5,722.8	297.11	20.261		
13,188.9	7,060.0	7,021.0	7,021.0	162.8	140.7	90.00	-1,172.0	-149.6	6,105.4	5,805.8	299.58	20.380		
13,200.0	7,060.0	7,021.0	7,021.0	163.1	140.7	90.00	-1,172.0	-149.6	6,116.0	5,816.1	299.89	20.394		
13,287.4	7,060.0	7,021.0	7,021.0	165.5	140.7	90.00	-1,172.0	-149.6	6,200.1	5,897.8	302.32	20.509		
13,300.0	7,060.0	7,021.0	7,021.0	165.8	140.7	90.00	-1,172.0	-149.6	6,212.3	5,909.6	302.67	20.525		
13,385.8	7,060.0	7,021.0	7,021.0	168.2	140.7	90.00	-1,172.0	-149.6	6,295.0	5,989.9	305.05	20.636		
13,400.0	7,060.0	7,021.0	7,021.0	168.5	140.7	90.00	-1,172.0	-149.6	6,308.6	6,003.2	305.45	20.654		
13,484.2	7,060.0	7,021.0	7,021.0	170.8	140.7	90.00	-1,172.0	-149.6	6,389.9	6,082.1	307.79	20.761		
13,500.0	7,060.0	7,021.0	7,021.0	171.3	140.7	90.00	-1,172.0	-149.6	6,405.1	6,096.9	308.23	20.780		
13,582.6	7,060.0	7,021.0	7,021.0	173.5	140.7	90.00	-1,172.0	-149.6	6,484.9	6,174.4	310.53	20.884		
13,600.0	7,060.0	7,021.0	7,021.0	174.0	140.7	90.00	-1,172.0	-149.6	6,501.7	6,190.7	311.01	20.905		
13,681.1	7,060.0	7,021.0	7,021.0	176.2	140.7	90.00	-1,172.0	-149.6	6,580.1	6,266.8	313.27	21.005		
13,700.0	7,060.0	7,021.0	7,021.0	176.7	140.7	90.00	-1,172.0	-149.6	6,598.4	6,284.6	313.79	21.028		
13,779.5	7,060.0	7,021.0	7,021.0	178.8	140.7	90.00	-1,172.0	-149.6	6,675.3	6,359.3	316.01	21.124		
13,800.0	7,060.0	7,021.0	7,021.0	179.4	140.7	90.00	-1,172.0	-149.6	6,695.2	6,378.6	316.58	21.149		
13,877.9	7,060.0	7,021.0	7,021.0	181.5	140.7	90.00	-1,172.0	-149.6	6,770.7	6,451.9	318.75	21.242		
13,900.0	7,060.0	7,021.0	7,021.0	182.1	140.7	90.00	-1,172.0	-149.6	6,792.1	6,472.7	319.36	21.268		
13,976.3	7,060.0	7,021.0	7,021.0	184.2	140.7	90.00	-1,172.0	-149.6	6,866.1	6,544.6	321.49	21.357		
14,000.0	7,060.0	7,021.0	7,021.0	184.8	140.7	90.00	-1,172.0	-149.6	6,889.0	6,566.9	322.14	21.385		
14,074.8	7,060.0	7,021.0	7,021.0	186.9	140.7	90.00	-1,172.0	-149.6	6,961.6	6,637.4	324.23	21.471		
14,100.0	7,060.0	7,021.0	7,021.0	187.6	140.7	90.00	-1,172.0	-149.6	6,986.1	6,661.1	324.93	21.500		
14,173.2	7,060.0	7,021.0	7,021.0	189.6	140.7	90.00	-1,172.0	-149.6	7,057.2	6,730.2	326.97	21.584		
14,200.0	7,060.0	7,021.0	7,021.0	190.3	140.7	90.00	-1,172.0	-149.6	7,083.2	6,755.5	327.72	21.614		
14,271.6	7,060.0	7,021.0	7,021.0	192.3	140.7	90.00	-1,172.0	-149.6	7,152.8	6,823.1	329.71	21.694		
14,300.0	7,060.0	7,021.0	7,021.0	193.0	140.7	90.00	-1,172.0	-149.6	7,180.4	6,849.9	330.50	21.726		
14,370.0	7,060.0	7,021.0	7,021.0	195.0	140.7	90.00	-1,172.0	-149.6	7,248.6	6,916.1	332.46	21.803		
14,400.0	7,060.0	7,021.0	7,021.0	195.8	140.7	90.00	-1,172.0	-149.6	7,277.7	6,944.4	333.29	21.836		
14,468.5	7,060.0	7,021.0	7,021.0	197.6	140.7	90.00	-1,172.0	-149.6	7,344.4	7,009.2	335.20	21.910		
14,500.0	7,060.0	7,021.0	7,021.0	198.5	140.7	90.00	-1,172.0	-149.6	7,375.1	7,039.0	336.08	21.944		
14,566.9	7,060.0	7,021.0	7,021.0	200.3	140.7	90.00	-1,172.0	-149.6	7,440.2	7,102.3	337.95	22.016		
14,600.0	7,060.0	7,021.0	7,021.0	201.2	140.7	90.00	-1,172.0	-149.6	7,472.5	7,133.6	338.87	22.051		
14,665.3	7,060.0	7,021.0	7,021.0	203.0	140.7	90.00	-1,172.0	-149.6	7,536.2	7,195.5	340.69	22.120		
14,700.0	7,060.0	7,021.0	7,021.0	204.0	140.7	90.00	-1,172.0	-149.6	7,570.0	7,228.3	341.66	22.157		
14,763.7	7,060.0	7,021.0	7,021.0	205.7	140.7	90.00	-1,172.0	-149.6	7,632.2	7,288.7	343.44	22.223		

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
14,800.0	7,060.0	7,021.0	7,021.0	206.7	140.7	90.00	-1,172.0	-149.6	7,667.6	7,323.1	344.45	22.260	
14,862.2	7,060.0	7,021.0	7,021.0	208.4	140.7	90.00	-1,172.0	-149.6	7,728.2	7,382.1	346.18	22.324	
14,900.0	7,060.0	7,021.0	7,021.0	209.5	140.7	90.00	-1,172.0	-149.6	7,765.2	7,417.9	347.24	22.363	
14,960.6	7,060.0	7,021.0	7,021.0	211.1	140.7	90.00	-1,172.0	-149.6	7,824.4	7,475.4	348.93	22.424	
15,000.0	7,060.0	7,021.0	7,021.0	212.2	140.7	90.00	-1,172.0	-149.6	7,862.9	7,512.8	350.03	22.463	
15,059.0	7,060.0	7,021.0	7,021.0	213.8	140.7	90.00	-1,172.0	-149.6	7,920.5	7,568.9	351.68	22.522	
15,100.0	7,060.0	7,021.0	7,021.0	215.0	140.7	90.00	-1,172.0	-149.6	7,960.6	7,607.8	352.82	22.563	
15,157.4	7,060.0	7,021.0	7,021.0	216.6	140.7	90.00	-1,172.0	-149.6	8,016.8	7,662.4	354.43	22.619	
15,200.0	7,060.0	7,021.0	7,021.0	217.7	140.7	90.00	-1,172.0	-149.6	8,058.4	7,702.8	355.61	22.661	
15,255.9	7,060.0	7,021.0	7,021.0	219.3	140.7	90.00	-1,172.0	-149.6	8,113.1	7,755.9	357.17	22.715	
15,300.0	7,060.0	7,021.0	7,021.0	220.5	140.7	90.00	-1,172.0	-149.6	8,156.2	7,797.8	358.41	22.757	
15,354.3	7,060.0	7,021.0	7,021.0	222.0	140.7	90.00	-1,172.0	-149.6	8,209.4	7,849.5	359.92	22.809	
15,400.0	7,060.0	7,021.0	7,021.0	223.2	140.7	90.00	-1,172.0	-149.6	8,254.2	7,893.0	361.20	22.852	
15,452.7	7,060.0	7,021.0	7,021.0	224.7	140.7	90.00	-1,172.0	-149.6	8,305.8	7,943.1	362.67	22.902	
15,500.0	7,060.0	7,021.0	7,021.0	226.0	140.7	90.00	-1,172.0	-149.6	8,352.1	7,988.1	363.99	22.946	
15,551.1	7,060.0	7,021.0	7,021.0	227.4	140.7	90.00	-1,172.0	-149.6	8,402.2	8,036.8	365.42	22.993	
15,600.0	7,060.0	7,021.0	7,021.0	228.7	140.7	90.00	-1,172.0	-149.6	8,450.1	8,083.3	366.79	23.038	
15,649.6	7,060.0	7,021.0	7,021.0	230.1	140.7	90.00	-1,172.0	-149.6	8,498.7	8,130.5	368.17	23.084	
15,700.0	7,060.0	7,021.0	7,021.0	231.5	140.7	90.00	-1,172.0	-149.6	8,548.1	8,178.6	369.58	23.129	
15,748.0	7,060.0	7,021.0	7,021.0	232.8	140.7	90.00	-1,172.0	-149.6	8,595.2	8,224.3	370.92	23.173	
15,800.0	7,060.0	7,021.0	7,021.0	234.3	140.7	90.00	-1,172.0	-149.6	8,646.2	8,273.9	372.37	23.219	
15,846.4	7,060.0	7,021.0	7,021.0	235.5	140.7	90.00	-1,172.0	-149.6	8,691.8	8,318.1	373.67	23.260	
15,900.0	7,060.0	7,021.0	7,021.0	237.0	140.7	90.00	-1,172.0	-149.6	8,744.4	8,369.2	375.17	23.308	
15,944.8	7,060.0	7,021.0	7,021.0	238.3	140.7	90.00	-1,172.0	-149.6	8,788.4	8,412.0	376.42	23.347	
16,000.0	7,060.0	7,021.0	7,021.0	239.8	140.7	90.00	-1,172.0	-149.6	8,842.5	8,464.6	377.96	23.395	
16,043.3	7,060.0	7,021.0	7,021.0	241.0	140.7	90.00	-1,172.0	-149.6	8,885.0	8,505.9	379.17	23.433	
16,100.0	7,060.0	7,021.0	7,021.0	242.5	140.7	90.00	-1,172.0	-149.6	8,940.8	8,560.0	380.76	23.481	
16,129.6	7,060.0	7,021.0	7,021.0	243.4	140.7	90.00	-1,172.0	-149.6	8,969.9	8,588.3	381.59	23.507	

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
0.0	0.0	0.0	0.0	0.0	0.0	-74.44	28.8	-103.3	108.8				
98.4	98.4	81.0	81.0	0.1	0.0	-74.46	28.7	-103.1	107.0	106.9	0.14	762.295	
100.0	100.0	82.6	82.6	0.1	0.0	-74.46	28.7	-103.1	107.0	106.9	0.14	747.822	
196.8	196.8	179.6	179.6	0.3	0.2	-74.55	28.3	-102.5	106.4	105.9	0.50	212.896	
200.0	200.0	182.7	182.7	0.3	0.2	-74.55	28.3	-102.5	106.4	105.8	0.51	207.790	
295.3	295.3	277.6	277.6	0.5	0.3	-74.70	27.9	-102.1	105.8	105.0	0.81	130.418	
300.0	300.0	282.3	282.3	0.5	0.3	-74.72	27.9	-102.1	105.8	105.0	0.83	128.172	
377.8	377.8	359.8	359.8	0.7	0.3	-74.93	27.5	-102.1	105.7	104.7	1.05	100.688	CC
393.7	393.7	375.6	375.6	0.8	0.3	-74.99	27.4	-102.1	105.7	104.6	1.10	96.522	
400.0	400.0	381.9	381.9	0.8	0.4	-75.01	27.3	-102.1	105.7	104.6	1.11	94.967	
492.1	492.1	473.9	473.9	1.0	0.4	-75.36	26.8	-102.4	105.9	104.5	1.37	77.176	
500.0	500.0	481.8	481.7	1.0	0.4	-75.38	26.7	-102.5	105.9	104.5	1.39	75.969	ES
590.5	590.5	572.2	572.1	1.2	0.5	-75.70	26.2	-102.9	106.2	104.5	1.64	64.645	
600.0	600.0	581.6	581.6	1.2	0.5	-75.73	26.2	-102.9	106.2	104.5	1.67	63.666	
689.0	689.0	670.6	670.6	1.4	0.5	-76.02	25.7	-103.4	106.6	104.7	1.91	55.821	
700.0	700.0	681.6	681.6	1.4	0.5	-76.06	25.7	-103.5	106.6	104.7	1.94	54.985	
787.4	787.4	768.9	768.9	1.6	0.6	-76.38	25.2	-103.9	106.9	104.8	2.17	49.219	
800.0	800.0	781.5	781.5	1.7	0.6	-76.42	25.1	-104.0	107.0	104.8	2.21	48.493	
885.8	885.8	867.3	867.3	1.9	0.6	-76.70	24.7	-104.5	107.4	105.0	2.43	44.115	
900.0	900.0	881.5	881.5	1.9	0.6	-76.74	24.6	-104.6	107.5	105.0	2.47	43.470	
984.2	984.2	965.6	965.6	2.1	0.6	-76.94	24.4	-105.1	107.9	105.2	2.69	40.053	
1,000.0	1,000.0	981.3	981.3	2.1	0.7	-76.97	24.4	-105.2	108.0	105.3	2.74	39.484	
1,082.7	1,082.7	1,063.8	1,063.7	2.3	0.7	-77.09	24.3	-105.9	108.7	105.7	2.95	36.789	
1,100.0	1,100.0	1,081.1	1,081.0	2.3	0.7	-77.10	24.3	-106.1	108.8	105.8	3.00	36.279	
1,181.1	1,181.1	1,161.9	1,161.9	2.5	0.7	91.69	24.4	-106.9	109.7	106.5	3.18	34.465	
1,200.0	1,200.0	1,180.8	1,180.8	2.5	0.7	92.00	24.4	-107.1	109.9	106.7	3.23	34.067	
1,279.5	1,279.4	1,260.0	1,260.0	2.7	0.8	94.01	24.7	-108.0	111.0	107.6	3.39	32.733	
1,300.0	1,299.8	1,280.4	1,280.4	2.7	0.8	94.73	24.9	-108.2	111.4	108.0	3.43	32.433	
1,377.9	1,377.5	1,357.9	1,357.8	2.9	0.8	98.17	25.6	-109.1	113.2	109.6	3.61	31.384	
1,400.0	1,399.5	1,379.7	1,379.7	2.9	0.8	99.36	25.9	-109.3	113.9	110.2	3.66	31.150	
1,476.4	1,475.3	1,455.5	1,455.5	3.1	0.8	104.16	27.3	-110.0	117.0	113.1	3.84	30.447	
1,500.0	1,498.7	1,479.0	1,478.9	3.1	0.8	105.84	27.9	-110.1	118.2	114.3	3.90	30.304	
1,574.8	1,572.6	1,552.9	1,552.8	3.3	0.8	111.58	29.8	-110.3	123.0	118.9	4.10	29.987	
1,602.6	1,600.0	1,580.3	1,580.2	3.4	0.8	113.81	30.6	-110.3	125.3	121.1	4.18	29.980	SF
1,667.6	1,664.0	1,644.2	1,644.1	3.5	0.8	118.95	32.3	-110.0	131.3	126.9	4.37	30.066	
1,673.2	1,669.6	1,649.8	1,649.6	3.6	0.8	119.38	32.5	-110.0	131.9	127.5	4.38	30.080	
1,700.0	1,695.9	1,676.0	1,675.8	3.6	0.9	121.38	33.2	-109.8	134.8	130.3	4.46	30.187	
1,771.6	1,766.1	1,746.0	1,745.9	3.9	0.9	126.78	35.4	-109.2	144.0	139.3	4.68	30.732	
1,800.0	1,793.8	1,773.7	1,773.5	4.0	0.9	128.87	36.2	-108.9	148.2	143.4	4.77	31.073	
1,870.1	1,862.0	1,841.9	1,841.7	4.2	0.9	133.87	38.1	-108.0	160.2	155.2	4.99	32.076	
1,900.0	1,891.0	1,871.0	1,870.7	4.3	0.9	135.91	38.9	-107.5	165.9	160.8	5.08	32.631	
1,968.5	1,957.0	1,936.8	1,936.5	4.6	0.9	140.33	40.7	-106.1	180.6	175.3	5.31	34.029	
2,000.0	1,987.2	1,966.7	1,966.4	4.7	0.9	142.25	41.5	-105.4	188.1	182.7	5.40	34.801	
2,066.9	2,051.1	2,030.5	2,030.1	5.1	0.9	146.09	43.3	-103.6	205.5	199.9	5.62	36.551	
2,100.0	2,082.5	2,062.1	2,061.8	5.2	0.9	147.87	44.1	-102.6	214.9	209.1	5.72	37.547	
2,165.3	2,144.1	2,124.2	2,123.8	5.6	0.9	151.11	45.5	-100.4	234.5	228.6	5.93	39.549	
2,200.0	2,176.6	2,156.8	2,156.4	5.8	1.0	152.69	46.2	-99.2	245.6	239.6	6.04	40.682	
2,263.8	2,236.0	2,216.5	2,216.0	6.2	1.0	155.33	47.2	-96.8	267.2	261.0	6.24	42.828	
2,300.0	2,269.5	2,250.0	2,249.5	6.4	1.0	156.69	47.7	-95.5	280.2	273.9	6.35	44.107	
2,362.2	2,326.7	2,307.4	2,306.8	6.8	1.0	158.82	48.4	-93.2	303.7	297.1	6.56	46.324	
2,400.0	2,361.1	2,342.1	2,341.5	7.1	1.0	160.00	48.8	-91.8	318.6	311.9	6.68	47.722	
2,460.6	2,415.9	2,397.4	2,396.7	7.5	1.0	161.74	49.3	-89.4	343.6	336.7	6.88	49.956	

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,451.2	2,432.4	2,431.7	7.8	1.0	162.75	49.5	-87.9	360.5	353.5	7.01	51.440	
2,559.0	2,503.7	2,484.4	2,483.7	8.3	1.0	164.14	49.9	-85.6	386.9	379.7	7.21	53.651	
2,600.0	2,539.7	2,520.0	2,519.2	8.6	1.0	165.01	50.2	-84.0	406.0	398.6	7.35	55.213	
2,657.5	2,589.9	2,569.2	2,568.4	9.1	1.0	166.13	50.5	-81.9	433.8	426.2	7.56	57.370	
2,700.0	2,626.6	2,605.4	2,604.5	9.5	1.0	166.88	50.9	-80.3	455.1	447.4	7.71	58.998	
2,755.9	2,674.4	2,653.0	2,652.1	10.0	1.1	167.80	51.2	-78.1	484.0	476.1	7.92	61.096	
2,800.0	2,711.7	2,690.2	2,689.2	10.5	1.1	168.48	51.5	-76.4	507.5	499.4	8.09	62.770	
2,854.3	2,757.1	2,735.0	2,734.0	11.0	1.1	169.23	51.8	-74.4	537.3	529.0	8.30	64.775	
2,900.0	2,794.9	2,772.1	2,771.0	11.5	1.1	169.80	52.1	-72.7	563.1	554.6	8.47	66.475	
2,952.7	2,838.0	2,814.4	2,813.3	12.0	1.1	170.40	52.5	-70.9	593.7	585.0	8.68	68.378	
3,000.0	2,876.1	2,851.8	2,850.7	12.5	1.1	170.89	52.8	-69.3	621.8	612.9	8.87	70.085	
3,051.2	2,916.8	2,891.8	2,890.6	13.1	1.1	171.38	53.1	-67.6	653.0	643.9	9.09	71.875	
3,100.0	2,955.2	2,930.6	2,929.3	13.6	1.1	171.81	53.5	-66.1	683.5	674.2	9.29	73.594	
3,149.6	2,993.6	2,969.8	2,968.5	14.2	1.1	172.23	53.7	-64.5	715.1	705.6	9.50	75.275	
3,200.0	3,032.1	3,008.6	3,007.4	14.8	1.1	172.61	53.9	-63.0	747.8	738.1	9.71	76.978	
3,248.0	3,068.3	3,043.5	3,042.2	15.4	1.2	172.92	54.1	-61.6	779.6	769.7	9.93	78.534	
3,300.0	3,106.8	3,080.6	3,079.3	16.0	1.2	173.23	54.4	-60.3	814.8	804.7	10.16	80.224	
3,346.4	3,140.7	3,113.8	3,112.5	16.6	1.2	173.48	54.6	-59.2	846.9	836.5	10.37	81.680	
3,385.9	3,169.0	3,142.4	3,141.1	17.1	1.2	173.68	54.9	-58.2	874.5	864.0	10.55	82.911	
3,400.0	3,179.1	3,152.6	3,151.2	17.3	1.2	173.78	54.9	-57.9	884.5	873.9	10.62	83.302	
3,444.9	3,211.2	3,185.0	3,183.7	17.9	1.2	174.08	55.2	-56.9	916.2	905.3	10.84	84.494	
3,500.0	3,250.5	3,226.2	3,224.8	18.6	1.2	174.43	55.4	-55.7	955.0	943.9	11.12	85.887	
3,543.3	3,281.5	3,259.2	3,257.8	19.2	1.2	174.68	55.5	-54.8	985.5	974.1	11.34	86.909	
3,600.0	3,322.0	3,302.6	3,301.2	19.9	1.2	174.99	55.5	-53.7	1,025.2	1,013.6	11.63	88.169	
3,641.7	3,351.8	3,333.4	3,331.9	20.4	1.2	175.19	55.5	-52.9	1,054.4	1,042.6	11.84	89.036	
3,700.0	3,393.4	3,376.5	3,375.0	21.2	1.2	175.45	55.4	-51.9	1,095.2	1,083.1	12.14	90.180	
3,740.1	3,422.1	3,406.1	3,404.6	21.7	1.2	175.62	55.3	-51.2	1,123.3	1,110.9	12.35	90.917	
3,800.0	3,464.8	3,449.6	3,448.1	22.5	1.3	175.85	55.1	-50.2	1,165.0	1,152.4	12.67	91.952	
3,838.6	3,492.4	3,477.7	3,476.2	23.0	1.3	175.98	55.0	-49.6	1,192.0	1,179.1	12.88	92.580	
3,900.0	3,536.2	3,521.9	3,520.4	23.8	1.3	176.19	54.7	-48.7	1,234.8	1,221.6	13.20	93.528	
3,937.0	3,562.7	3,548.2	3,546.7	24.3	1.3	176.30	54.6	-48.1	1,260.7	1,247.3	13.40	94.066	
4,000.0	3,607.7	3,593.0	3,591.5	25.2	1.3	176.48	54.4	-47.2	1,304.6	1,290.9	13.74	94.943	
4,035.4	3,633.0	3,619.4	3,617.9	25.6	1.3	176.59	54.2	-46.6	1,329.4	1,315.4	13.93	95.409	
4,100.0	3,679.1	3,668.7	3,667.2	26.5	1.3	176.78	53.9	-45.5	1,374.4	1,360.1	14.29	96.209	
4,133.8	3,703.3	3,694.7	3,693.1	26.9	1.3	176.87	53.6	-44.9	1,397.9	1,383.4	14.47	96.607	
4,200.0	3,750.5	3,741.5	3,740.0	27.8	1.3	177.04	53.2	-43.7	1,443.9	1,429.1	14.83	97.353	
4,232.3	3,773.6	3,764.1	3,762.5	28.2	1.3	177.11	53.0	-43.1	1,466.4	1,451.4	15.01	97.701	
4,300.0	3,821.9	3,811.4	3,809.9	29.1	1.3	177.27	52.5	-41.8	1,513.5	1,498.2	15.38	98.401	
4,330.7	3,843.9	3,832.8	3,831.3	29.5	1.3	177.34	52.4	-41.3	1,534.9	1,519.4	15.55	98.699	
4,400.0	3,893.4	3,881.1	3,879.5	30.5	1.4	177.49	52.0	-39.9	1,583.3	1,567.3	15.94	99.348	
4,429.1	3,914.2	3,900.0	3,898.4	30.8	1.4	177.55	51.8	-39.4	1,603.6	1,587.5	16.10	99.613	
4,500.0	3,964.8	3,948.0	3,946.4	31.8	1.4	177.68	51.6	-38.2	1,653.1	1,636.6	16.49	100.222	
4,527.5	3,984.5	3,966.1	3,964.5	32.1	1.4	177.72	51.5	-37.8	1,672.4	1,655.8	16.65	100.452	
4,600.0	4,036.2	4,013.6	4,012.0	33.1	1.4	177.82	51.5	-37.0	1,723.2	1,706.2	17.06	101.028	
4,626.0	4,054.8	4,030.6	4,029.0	33.5	1.4	177.85	51.5	-36.7	1,741.5	1,724.3	17.20	101.227	
4,700.0	4,107.6	4,078.8	4,077.2	34.4	1.4	177.93	51.7	-36.3	1,793.6	1,775.9	17.62	101.775	
4,724.4	4,125.1	4,094.7	4,093.1	34.8	1.4	177.95	51.8	-36.2	1,810.7	1,793.0	17.76	101.948	
4,800.0	4,179.1	4,148.7	4,147.0	35.8	1.4	178.01	52.2	-36.1	1,864.1	1,845.9	18.19	102.454	
4,822.8	4,195.4	4,165.2	4,163.5	36.1	1.4	178.02	52.4	-36.1	1,880.2	1,861.8	18.33	102.599	
4,900.0	4,250.5	4,220.4	4,218.7	37.1	1.4	178.07	52.8	-36.3	1,934.5	1,915.8	18.77	103.074	
4,921.2	4,265.7	4,235.3	4,233.6	37.4	1.4	178.08	52.9	-36.3	1,949.5	1,930.6	18.89	103.200	
5,000.0	4,321.9	4,290.5	4,288.9	38.4	1.4	178.12	53.4	-36.6	2,005.0	1,985.7	19.34	103.654	

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



# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
5,019.7	4,336.0	4,304.3	4,302.7	38.7	1.4	178.13	53.5	-36.7	2,018.9	1,999.4	19.46	103.763		
5,100.0	4,393.3	4,360.9	4,359.2	39.8	1.4	178.16	54.0	-37.0	2,075.5	2,055.6	19.92	104.188		
5,118.1	4,406.3	4,373.6	4,372.0	40.0	1.4	178.17	54.1	-37.1	2,088.3	2,068.3	20.03	104.280		
5,182.1	4,452.0	4,419.4	4,417.7	40.9	1.5	178.20	54.5	-37.3	2,133.4	2,113.1	20.40	104.595		
5,200.0	4,464.8	4,432.5	4,430.8	41.1	1.5	178.21	54.6	-37.4	2,146.0	2,125.5	20.50	104.679		
5,216.5	4,476.7	4,444.7	4,443.0	41.2	1.5	178.23	54.7	-37.5	2,157.6	2,137.0	20.59	104.767		
5,300.0	4,537.9	4,507.4	4,505.8	42.0	1.5	178.30	55.3	-37.9	2,214.8	2,193.7	21.05	105.199		
5,314.9	4,549.0	4,519.0	4,517.3	42.2	1.5	178.32	55.3	-38.0	2,224.8	2,203.7	21.13	105.283		
5,400.0	4,613.3	4,585.9	4,584.2	43.0	1.5	178.39	55.8	-38.4	2,280.9	2,259.3	21.57	105.748		
5,413.4	4,623.5	4,596.5	4,594.9	43.1	1.5	178.40	55.9	-38.5	2,289.5	2,267.9	21.63	105.829		
5,500.0	4,690.9	4,666.2	4,664.5	43.9	1.5	178.46	56.2	-38.9	2,344.2	2,322.2	22.05	106.335		
5,511.8	4,700.2	4,675.8	4,674.1	44.0	1.5	178.47	56.3	-39.0	2,351.5	2,329.4	22.10	106.411		
5,600.0	4,770.7	4,746.9	4,745.3	44.7	1.5	178.52	56.6	-39.3	2,404.7	2,382.2	22.48	106.969		
5,610.2	4,779.0	4,755.2	4,753.5	44.8	1.5	178.53	56.6	-39.4	2,410.7	2,388.2	22.52	107.040		
5,700.0	4,852.6	4,828.1	4,826.4	45.6	1.5	178.58	56.9	-39.7	2,462.4	2,439.5	22.87	107.654		
5,708.6	4,859.7	4,835.1	4,833.4	45.7	1.5	178.59	56.9	-39.7	2,467.2	2,444.3	22.90	107.719		
5,800.0	4,936.4	4,910.5	4,908.9	46.4	1.5	178.64	57.2	-39.9	2,517.2	2,494.0	23.22	108.394		
5,807.1	4,942.4	4,916.6	4,914.9	46.5	1.5	178.64	57.3	-39.9	2,521.0	2,497.7	23.25	108.450		
5,900.0	5,022.0	4,996.9	4,995.2	47.2	1.5	178.69	57.6	-39.9	2,569.1	2,545.6	23.53	109.185		
5,905.5	5,026.8	5,001.7	5,000.1	47.3	1.5	178.69	57.6	-39.9	2,571.9	2,548.3	23.54	109.233		
6,000.0	5,109.4	5,088.8	5,087.1	48.0	1.5	178.75	57.7	-39.6	2,617.9	2,594.1	23.79	110.037		
6,003.9	5,112.9	5,092.4	5,090.7	48.0	1.5	178.75	57.7	-39.6	2,619.7	2,595.9	23.80	110.074		
6,100.0	5,198.5	5,180.7	5,179.0	48.7	1.6	178.80	57.7	-39.1	2,663.5	2,639.5	24.00	110.958		
6,102.3	5,200.6	5,182.9	5,181.2	48.7	1.6	178.80	57.7	-39.1	2,664.5	2,640.5	24.01	110.981		
6,200.0	5,289.1	5,270.6	5,268.9	49.4	1.6	178.85	57.7	-38.5	2,705.9	2,681.7	24.17	111.954		
6,200.8	5,289.8	5,271.3	5,269.6	49.4	1.6	178.85	57.7	-38.5	2,706.2	2,682.0	24.17	111.962		
6,299.2	5,380.3	5,356.5	5,354.8	50.0	1.6	178.90	57.6	-37.6	2,744.9	2,720.6	24.29	113.023		
6,300.0	5,381.1	5,357.2	5,355.5	50.0	1.6	178.91	57.6	-37.6	2,745.2	2,720.9	24.29	113.031		
6,397.6	5,472.2	5,440.4	5,438.7	50.6	1.6	178.95	57.8	-36.8	2,780.7	2,756.3	24.36	114.164		
6,400.0	5,474.4	5,442.4	5,440.7	50.6	1.6	178.95	57.9	-36.8	2,781.5	2,757.1	24.36	114.191		
6,496.0	5,565.1	5,527.4	5,525.7	51.1	1.6	178.99	58.3	-36.1	2,813.5	2,789.2	24.39	115.379		
6,500.0	5,568.9	5,531.2	5,529.5	51.1	1.7	178.99	58.3	-36.0	2,814.8	2,790.4	24.39	115.427		
6,594.5	5,659.2	5,624.7	5,623.0	51.6	1.7	179.02	58.9	-35.3	2,843.3	2,818.9	24.37	116.657		
6,600.0	5,664.5	5,630.6	5,628.9	51.6	1.7	179.02	58.9	-35.2	2,844.8	2,820.5	24.37	116.729		
6,692.9	5,754.2	5,729.3	5,727.6	52.0	1.7	179.07	59.1	-33.7	2,869.5	2,845.1	24.31	118.015		
6,700.0	5,761.1	5,736.6	5,734.9	52.1	1.7	179.08	59.1	-33.5	2,871.2	2,846.9	24.31	118.114		
6,791.3	5,850.0	5,834.2	5,832.4	52.4	1.7	179.13	58.9	-31.8	2,892.1	2,867.9	24.21	119.455		
6,800.0	5,858.5	5,844.2	5,842.5	52.5	1.7	179.13	58.9	-31.6	2,894.0	2,869.8	24.20	119.580		
6,889.7	5,946.5	5,939.6	5,937.9	52.8	1.7	179.17	58.3	-30.1	2,911.1	2,887.0	24.07	120.959		
6,900.0	5,956.6	5,949.3	5,947.6	52.8	1.7	179.18	58.3	-30.0	2,912.9	2,888.8	24.05	121.116		
6,988.2	6,043.6	6,036.9	6,035.2	53.0	1.8	179.21	57.8	-28.8	2,926.7	2,902.8	23.88	122.536		
7,000.0	6,055.4	6,049.5	6,047.7	53.1	1.8	179.21	57.7	-28.6	2,928.3	2,904.5	23.86	122.723		
7,086.6	6,141.3	6,136.7	6,135.0	53.3	1.8	179.24	57.1	-27.6	2,938.8	2,915.1	23.67	124.157		
7,100.0	6,154.6	6,149.3	6,147.5	53.3	1.8	179.25	57.0	-27.4	2,940.2	2,916.6	23.64	124.375		
7,185.0	6,239.3	6,228.0	6,226.2	53.5	1.8	179.27	56.7	-26.6	2,947.7	2,924.2	23.43	125.816		
7,200.0	6,254.2	6,241.5	6,239.7	53.5	1.8	179.27	56.6	-26.5	2,948.8	2,925.4	23.39	126.063		
7,283.4	6,337.5	6,318.9	6,317.2	53.6	1.8	179.29	56.5	-25.6	2,953.5	2,930.3	23.17	127.484		
7,300.0	6,354.0	6,335.7	6,333.9	53.6	1.8	179.29	56.4	-25.5	2,954.1	2,931.0	23.12	127.753		
7,381.9	6,435.9	6,418.5	6,416.7	53.7	1.9	179.31	56.3	-24.6	2,955.9	2,933.0	22.89	129.122		
7,403.0	6,457.0	6,439.8	6,438.0	53.7	1.9	11.06	56.3	-24.4	2,956.0	2,900.5	55.51	53.248		
7,433.0	6,487.0	6,470.0	6,468.2	53.7	1.9	11.06	56.2	-24.1	2,956.0	2,900.5	55.54	53.226		
7,450.0	6,504.0	6,487.1	6,485.3	53.7	1.9	101.10	56.2	-24.0	2,956.1	2,933.1	22.96	128.723		

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1		Offset Site Error:		0.0 usft
Survey Program: 100-GYD_CT															Offset Well Error:		0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
7,480.3	6,534.3	6,518.0	6,516.2	53.8	1.9	101.11	56.2	-23.7	2,956.4	2,933.3	23.13	127.810					
7,500.0	6,553.9	6,538.2	6,536.4	53.8	1.9	101.11	56.1	-23.5	2,956.8	2,933.5	23.24	127.227					
7,550.0	6,603.2	6,589.0	6,587.2	53.8	1.9	101.12	56.0	-23.2	2,958.3	2,934.8	23.53	125.742					
7,578.7	6,631.2	6,616.9	6,615.1	53.9	1.9	101.12	56.0	-23.0	2,959.6	2,935.9	23.70	124.884					
7,600.0	6,651.7	6,636.9	6,635.2	53.9	1.9	101.12	55.9	-22.8	2,960.7	2,936.9	23.83	124.258					
7,650.0	6,698.9	6,683.1	6,681.3	54.0	1.9	101.08	55.8	-22.5	2,964.1	2,939.9	24.15	122.752					
7,677.1	6,723.9	6,700.0	6,698.2	54.1	1.9	100.99	55.8	-22.4	2,966.3	2,941.9	24.33	121.912					
7,700.0	6,744.5	6,700.0	6,698.2	54.1	1.9	100.77	55.8	-22.4	2,968.5	2,944.0	24.49	121.226					
7,750.0	6,788.1	6,700.0	6,698.2	54.2	1.9	100.18	55.8	-22.4	2,974.5	2,949.6	24.87	119.604					
7,775.6	6,809.5	6,700.0	6,698.2	54.3	1.9	99.81	55.8	-22.4	2,978.2	2,953.1	25.09	118.684					
7,800.0	6,829.4	6,700.0	6,698.2	54.4	1.9	99.42	55.8	-22.4	2,982.1	2,956.8	25.32	117.791					
7,850.0	6,868.2	6,700.0	6,698.2	54.5	1.9	98.50	55.8	-22.4	2,991.2	2,965.4	25.84	115.744					
7,874.0	6,885.8	6,700.0	6,698.2	54.6	1.9	98.01	55.8	-22.4	2,996.1	2,970.0	26.13	114.650					
7,900.0	6,904.0	6,700.0	6,698.2	54.7	1.9	97.43	55.8	-22.4	3,001.8	2,975.3	26.46	113.465					
7,950.0	6,936.7	6,700.0	6,698.2	54.9	1.9	96.21	55.8	-22.4	3,013.7	2,986.6	27.15	111.007					
7,972.4	6,950.2	6,700.0	6,698.2	55.0	1.9	95.62	55.8	-22.4	3,019.4	2,992.0	27.49	109.839					
8,000.0	6,965.9	6,700.0	6,698.2	55.1	1.9	94.86	55.8	-22.4	3,026.8	2,998.9	27.91	108.462					
8,050.0	6,991.5	6,700.0	6,698.2	55.4	1.9	93.38	55.8	-22.4	3,041.1	3,012.4	28.70	105.944					
8,070.8	7,001.1	6,700.0	6,698.2	55.5	1.9	92.72	55.8	-22.4	3,047.3	3,018.3	29.05	104.903					
8,100.0	7,013.3	6,700.0	6,698.2	55.6	1.9	91.78	55.8	-22.4	3,056.3	3,026.8	29.51	103.572					
8,150.0	7,031.0	6,700.0	6,698.2	55.9	1.9	90.08	55.8	-22.4	3,072.5	3,042.2	30.28	101.453					
8,169.3	7,036.8	6,700.0	6,698.2	56.0	1.9	89.40	55.8	-22.4	3,078.9	3,048.3	30.57	100.700					
8,200.0	7,044.6	6,700.0	6,698.2	56.2	1.9	88.29	55.8	-22.4	3,089.3	3,058.3	30.99	99.675					
8,250.0	7,054.0	6,700.0	6,698.2	56.6	1.9	86.43	55.8	-22.4	3,106.7	3,075.1	31.60	98.312					
8,267.7	7,056.3	6,700.0	6,698.2	56.7	1.9	85.76	55.8	-22.4	3,113.0	3,081.2	31.79	97.926					
8,300.0	7,059.0	6,700.0	6,698.2	56.9	1.9	84.52	55.8	-22.4	3,124.6	3,092.5	32.07	97.424					
8,333.0	7,060.0	6,700.0	6,698.2	57.2	1.9	83.24	55.8	-22.4	3,136.6	3,104.3	32.30	97.119					
8,366.1	7,060.0	6,700.0	6,698.2	57.4	1.9	83.24	55.8	-22.4	3,148.8	3,115.9	32.92	95.640					
8,400.0	7,060.0	6,700.0	6,698.2	57.7	1.9	83.24	55.8	-22.4	3,161.6	3,128.1	33.57	94.194					
8,464.5	7,060.0	6,700.0	6,698.2	58.2	1.9	83.24	55.8	-22.4	3,186.9	3,152.1	34.85	91.445					
8,500.0	7,060.0	6,700.0	6,698.2	58.6	1.9	83.24	55.8	-22.4	3,201.3	3,165.7	35.56	90.035					
8,563.0	7,060.0	6,700.0	6,698.2	59.1	1.9	83.24	55.8	-22.4	3,227.6	3,190.7	36.88	87.521					
8,600.0	7,060.0	6,700.0	6,698.2	59.5	1.9	83.24	55.8	-22.4	3,243.5	3,205.9	37.65	86.139					
8,661.4	7,060.0	6,700.0	6,698.2	60.1	1.9	83.24	55.8	-22.4	3,270.7	3,231.7	39.00	83.869					
8,700.0	7,060.0	6,700.0	6,698.2	60.6	1.9	83.24	55.8	-22.4	3,288.2	3,248.4	39.84	82.532					
8,759.8	7,060.0	6,700.0	6,698.2	61.2	1.9	83.24	55.8	-22.4	3,316.1	3,275.0	41.20	80.497					
8,800.0	7,060.0	6,700.0	6,698.2	61.7	1.9	83.24	55.8	-22.4	3,335.4	3,293.3	42.10	79.217					
8,858.2	7,060.0	6,700.0	6,698.2	62.4	1.9	83.24	55.8	-22.4	3,363.9	3,320.4	43.46	77.403					
8,900.0	7,060.0	6,700.0	6,698.2	62.9	1.9	83.24	55.8	-22.4	3,384.8	3,340.4	44.43	76.183					
8,956.7	7,060.0	6,700.0	6,698.2	63.7	1.9	83.24	55.8	-22.4	3,413.8	3,368.0	45.78	74.572					
9,000.0	7,060.0	6,700.0	6,698.2	64.3	1.9	83.24	55.8	-22.4	3,436.4	3,389.6	46.81	73.414					
9,055.1	7,060.0	6,700.0	6,698.2	65.0	1.9	83.24	55.8	-22.4	3,465.8	3,417.6	48.14	71.986					
9,100.0	7,060.0	6,700.0	6,698.2	65.7	1.9	83.24	55.8	-22.4	3,490.2	3,440.9	49.23	70.891					
9,153.5	7,060.0	6,700.0	6,698.2	66.5	1.9	83.24	55.8	-22.4	3,519.7	3,469.2	50.55	69.627					
9,200.0	7,060.0	6,700.0	6,698.2	67.2	1.9	83.24	55.8	-22.4	3,545.9	3,494.2	51.70	68.592					
9,251.9	7,060.0	6,700.0	6,698.2	68.0	1.9	83.24	55.8	-22.4	3,575.6	3,522.6	52.99	67.474					
9,300.0	7,060.0	6,700.0	6,698.2	68.8	1.9	83.24	55.8	-22.4	3,603.5	3,549.3	54.19	66.497					
9,350.4	7,060.0	6,700.0	6,698.2	69.7	1.9	83.24	55.8	-22.4	3,633.3	3,577.8	55.46	65.508					
9,400.0	7,060.0	6,700.0	6,698.2	70.5	1.9	83.24	55.8	-22.4	3,663.0	3,606.3	56.72	64.585					
9,448.8	7,060.0	6,700.0	6,698.2	71.4	1.9	83.24	55.8	-22.4	3,692.7	3,634.7	57.96	63.711					
9,500.0	7,060.0	6,700.0	6,698.2	72.3	1.9	83.24	55.8	-22.4	3,724.2	3,665.0	59.27	62.840					
9,547.2	7,060.0	6,700.0	6,698.2	73.2	1.9	83.24	55.8	-22.4	3,753.7	3,693.2	60.48	62.066					

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,600.0	7,060.0	6,700.0	6,698.2	74.1	1.9	83.24	55.8	-22.4	3,787.1	3,725.3	61.84	61.244	
9,645.6	7,060.0	6,700.0	6,698.2	75.0	1.9	83.24	55.8	-22.4	3,816.3	3,753.3	63.02	60.559	
9,700.0	7,060.0	6,700.0	6,698.2	76.1	1.9	83.24	55.8	-22.4	3,851.5	3,787.1	64.43	59.782	
9,744.1	7,060.0	6,700.0	6,698.2	76.9	1.9	83.24	55.8	-22.4	3,880.4	3,814.8	65.57	59.175	
9,800.0	7,060.0	6,700.0	6,698.2	78.1	1.9	83.24	55.8	-22.4	3,917.4	3,850.4	67.03	58.441	
9,842.5	7,060.0	6,700.0	6,698.2	78.9	1.9	83.24	55.8	-22.4	3,945.9	3,877.8	68.15	57.903	
9,900.0	7,060.0	6,700.0	6,698.2	80.1	1.9	83.24	55.8	-22.4	3,984.8	3,915.1	69.65	57.208	
9,940.9	7,060.0	6,700.0	6,698.2	81.0	1.9	83.24	55.8	-22.4	4,012.7	3,942.0	70.73	56.731	
10,000.0	7,060.0	6,700.0	6,698.2	82.2	1.9	83.24	55.8	-22.4	4,053.5	3,981.2	72.29	56.074	
10,039.3	7,060.0	6,700.0	6,698.2	83.1	1.9	83.24	55.8	-22.4	4,080.9	4,007.5	73.33	55.651	
10,100.0	7,060.0	6,700.0	6,698.2	84.4	1.9	83.24	55.8	-22.4	4,123.5	4,048.5	74.94	55.027	
10,137.8	7,060.0	6,700.0	6,698.2	85.2	1.9	83.24	55.8	-22.4	4,150.2	4,074.3	75.94	54.652	
10,200.0	7,060.0	6,700.0	6,698.2	86.6	1.9	83.24	55.8	-22.4	4,194.7	4,117.1	77.59	54.060	
10,236.2	7,060.0	6,700.0	6,698.2	87.4	1.9	83.24	55.8	-22.4	4,220.7	4,142.2	78.56	53.728	
10,300.0	7,060.0	6,700.0	6,698.2	88.9	1.9	83.24	55.8	-22.4	4,267.0	4,186.7	80.26	53.166	
10,334.6	7,060.0	6,700.0	6,698.2	89.7	1.9	83.24	55.8	-22.4	4,292.3	4,211.1	81.18	52.871	
10,400.0	7,060.0	6,700.0	6,698.2	91.2	1.9	83.24	55.8	-22.4	4,340.4	4,257.5	82.93	52.337	
10,433.0	7,060.0	6,700.0	6,698.2	91.9	1.9	83.24	55.8	-22.4	4,365.0	4,281.1	83.82	52.076	
10,500.0	7,060.0	6,700.0	6,698.2	93.5	1.9	83.24	55.8	-22.4	4,414.9	4,329.3	85.62	51.567	
10,531.5	7,060.0	6,700.0	6,698.2	94.2	1.9	83.24	55.8	-22.4	4,438.6	4,352.1	86.46	51.336	
10,600.0	7,060.0	6,700.0	6,698.2	95.9	1.9	83.24	55.8	-22.4	4,490.4	4,402.1	88.30	50.851	
10,629.9	7,060.0	6,700.0	6,698.2	96.6	1.9	83.24	55.8	-22.4	4,513.2	4,424.1	89.11	50.647	
10,700.0	7,060.0	6,700.0	6,698.2	98.3	1.9	83.24	55.8	-22.4	4,566.8	4,475.8	91.00	50.185	
10,728.3	7,060.0	6,700.0	6,698.2	98.9	1.9	83.24	55.8	-22.4	4,588.7	4,496.9	91.77	50.004	
10,800.0	7,060.0	6,700.0	6,698.2	100.7	1.9	83.24	55.8	-22.4	4,644.2	4,550.5	93.70	49.563	
10,826.7	7,060.0	6,700.0	6,698.2	101.3	1.9	83.24	55.8	-22.4	4,665.0	4,570.6	94.43	49.404	
10,900.0	7,060.0	6,700.0	6,698.2	103.1	1.9	83.24	55.8	-22.4	4,722.3	4,625.9	96.41	48.982	
10,925.2	7,060.0	6,700.0	6,698.2	103.7	1.9	83.24	55.8	-22.4	4,742.1	4,645.0	97.09	48.842	
11,000.0	7,060.0	6,700.0	6,698.2	105.6	1.9	83.24	55.8	-22.4	4,801.3	4,702.2	99.12	48.439	
11,023.6	7,060.0	6,700.0	6,698.2	106.2	1.9	83.24	55.8	-22.4	4,820.1	4,720.3	99.76	48.316	
11,100.0	7,060.0	6,700.0	6,698.2	108.1	1.9	83.24	55.8	-22.4	4,881.1	4,779.2	101.84	47.930	
11,122.0	7,060.0	6,700.0	6,698.2	108.6	1.9	83.24	55.8	-22.4	4,898.7	4,796.3	102.44	47.822	
11,200.0	7,060.0	6,700.0	6,698.2	110.6	1.9	83.24	55.8	-22.4	4,961.5	4,857.0	104.56	47.453	
11,220.4	7,060.0	6,700.0	6,698.2	111.1	1.9	83.24	55.8	-22.4	4,978.1	4,873.0	105.11	47.359	
11,300.0	7,060.0	6,700.0	6,698.2	113.1	1.9	83.24	55.8	-22.4	5,042.7	4,935.5	107.28	47.005	
11,318.9	7,060.0	6,700.0	6,698.2	113.6	1.9	83.24	55.8	-22.4	5,058.1	4,950.3	107.80	46.923	
11,400.0	7,060.0	6,700.0	6,698.2	115.7	1.9	83.24	55.8	-22.4	5,124.6	5,014.6	110.01	46.584	
11,417.3	7,060.0	6,700.0	6,698.2	116.1	1.9	83.24	55.8	-22.4	5,138.8	5,028.3	110.48	46.513	
11,500.0	7,060.0	6,700.0	6,698.2	118.2	1.9	83.24	55.8	-22.4	5,207.1	5,094.3	112.74	46.187	
11,515.7	7,060.0	6,700.0	6,698.2	118.6	1.9	83.24	55.8	-22.4	5,220.1	5,106.9	113.17	46.127	
11,600.0	7,060.0	6,700.0	6,698.2	120.8	1.9	83.24	55.8	-22.4	5,290.2	5,174.7	115.47	45.813	
11,614.1	7,060.0	6,700.0	6,698.2	121.1	1.9	83.24	55.8	-22.4	5,302.0	5,186.1	115.86	45.762	
11,700.0	7,060.0	6,700.0	6,698.2	123.4	1.9	83.24	55.8	-22.4	5,373.8	5,255.6	118.21	45.460	
11,712.6	7,060.0	6,700.0	6,698.2	123.7	1.9	83.24	55.8	-22.4	5,384.4	5,265.8	118.55	45.417	
11,800.0	7,060.0	6,700.0	6,698.2	126.0	1.9	83.24	55.8	-22.4	5,458.0	5,337.1	120.95	45.127	
11,811.0	7,060.0	6,700.0	6,698.2	126.2	1.9	83.24	55.8	-22.4	5,467.3	5,346.1	121.25	45.091	
11,900.0	7,060.0	6,700.0	6,698.2	128.6	1.9	83.24	55.8	-22.4	5,542.8	5,419.1	123.69	44.812	
11,909.4	7,060.0	6,700.0	6,698.2	128.8	1.9	83.24	55.8	-22.4	5,550.8	5,426.8	123.95	44.783	
12,000.0	7,060.0	6,700.0	6,698.2	131.2	1.9	83.24	55.8	-22.4	5,628.0	5,501.6	126.43	44.514	
12,007.8	7,060.0	6,700.0	6,698.2	131.4	1.9	83.24	55.8	-22.4	5,634.7	5,508.1	126.65	44.491	
12,100.0	7,060.0	6,700.0	6,698.2	133.8	1.9	83.24	55.8	-22.4	5,713.7	5,584.6	129.18	44.231	
12,106.3	7,060.0	6,700.0	6,698.2	134.0	1.9	83.24	55.8	-22.4	5,719.1	5,589.8	129.35	44.214	

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
12,200.0	7,060.0	6,700.0	6,698.2	136.4	1.9	83.24	55.8	-22.4	5,799.9	5,668.0	131.93	43.963		
12,204.7	7,060.0	6,700.0	6,698.2	136.6	1.9	83.24	55.8	-22.4	5,804.0	5,671.9	132.06	43.951		
12,300.0	7,060.0	6,700.0	6,698.2	139.1	1.9	83.24	55.8	-22.4	5,886.5	5,751.8	134.68	43.708		
12,303.1	7,060.0	6,700.0	6,698.2	139.2	1.9	83.24	55.8	-22.4	5,889.2	5,754.5	134.76	43.701		
12,400.0	7,060.0	6,700.0	6,698.2	141.7	1.9	83.24	55.8	-22.4	5,973.6	5,836.1	137.43	43.467		
12,401.5	7,060.0	6,700.0	6,698.2	141.8	1.9	83.24	55.8	-22.4	5,974.9	5,837.4	137.47	43.463		
12,500.0	7,060.0	6,700.0	6,698.2	144.4	1.9	83.24	55.8	-22.4	6,061.0	5,920.8	140.18	43.237		
12,598.4	7,060.0	6,700.0	6,698.2	147.0	1.9	83.24	55.8	-22.4	6,147.4	6,004.5	142.89	43.021		
12,600.0	7,060.0	6,700.0	6,698.2	147.0	1.9	83.24	55.8	-22.4	6,148.8	6,005.9	142.94	43.018		
12,696.8	7,060.0	6,700.0	6,698.2	149.6	1.9	83.24	55.8	-22.4	6,234.2	6,088.6	145.60	42.816		
12,700.0	7,060.0	6,700.0	6,698.2	149.7	1.9	83.24	55.8	-22.4	6,237.0	6,091.3	145.69	42.809		
12,795.2	7,060.0	6,700.0	6,698.2	152.3	1.9	83.24	55.8	-22.4	6,321.3	6,173.0	148.32	42.620		
12,800.0	7,060.0	6,700.0	6,698.2	152.4	1.9	83.24	55.8	-22.4	6,325.5	6,177.1	148.45	42.610		
12,893.7	7,060.0	6,700.0	6,698.2	154.9	1.9	83.24	55.8	-22.4	6,408.8	6,257.7	151.03	42.433		
12,900.0	7,060.0	6,700.0	6,698.2	155.1	1.9	83.24	55.8	-22.4	6,414.4	6,263.2	151.21	42.421		
12,992.1	7,060.0	6,700.0	6,698.2	157.5	1.9	83.24	55.8	-22.4	6,496.5	6,342.8	153.75	42.254		
13,000.0	7,060.0	6,700.0	6,698.2	157.8	1.9	83.24	55.8	-22.4	6,503.6	6,349.6	153.97	42.240		
13,090.5	7,060.0	6,700.0	6,698.2	160.2	1.9	83.24	55.8	-22.4	6,584.6	6,428.1	156.47	42.083		
13,100.0	7,060.0	6,700.0	6,698.2	160.4	1.9	83.24	55.8	-22.4	6,593.1	6,436.4	156.73	42.067		
13,188.9	7,060.0	6,700.0	6,698.2	162.8	1.9	83.24	55.8	-22.4	6,673.0	6,513.8	159.19	41.919		
13,200.0	7,060.0	6,700.0	6,698.2	163.1	1.9	83.24	55.8	-22.4	6,682.9	6,523.4	159.49	41.901		
13,287.4	7,060.0	6,700.0	6,698.2	165.5	1.9	83.24	55.8	-22.4	6,761.6	6,599.7	161.91	41.762		
13,300.0	7,060.0	6,700.0	6,698.2	165.8	1.9	83.24	55.8	-22.4	6,773.0	6,610.7	162.26	41.743		
13,385.8	7,060.0	6,700.0	6,698.2	168.2	1.9	83.24	55.8	-22.4	6,850.5	6,685.9	164.63	41.612		
13,400.0	7,060.0	6,700.0	6,698.2	168.5	1.9	83.24	55.8	-22.4	6,863.3	6,698.3	165.02	41.591		
13,484.2	7,060.0	6,700.0	6,698.2	170.8	1.9	83.24	55.8	-22.4	6,939.7	6,772.3	167.35	41.468		
13,500.0	7,060.0	6,700.0	6,698.2	171.3	1.9	83.24	55.8	-22.4	6,954.0	6,786.2	167.79	41.446		
13,582.6	7,060.0	6,700.0	6,698.2	173.5	1.9	83.24	55.8	-22.4	7,029.1	6,859.0	170.07	41.330		
13,600.0	7,060.0	6,700.0	6,698.2	174.0	1.9	83.24	55.8	-22.4	7,044.8	6,874.3	170.55	41.306		
13,681.1	7,060.0	6,700.0	6,698.2	176.2	1.9	83.24	55.8	-22.4	7,118.7	6,945.9	172.79	41.198		
13,700.0	7,060.0	6,700.0	6,698.2	176.7	1.9	83.24	55.8	-22.4	7,136.0	6,962.7	173.32	41.173		
13,779.5	7,060.0	6,700.0	6,698.2	178.8	1.9	83.24	55.8	-22.4	7,208.6	7,033.1	175.52	41.070		
13,800.0	7,060.0	6,700.0	6,698.2	179.4	1.9	83.24	55.8	-22.4	7,227.3	7,051.2	176.09	41.044		
13,877.9	7,060.0	6,700.0	6,698.2	181.5	1.9	83.24	55.8	-22.4	7,298.7	7,120.4	178.24	40.948		
13,900.0	7,060.0	6,700.0	6,698.2	182.1	1.9	83.24	55.8	-22.4	7,318.9	7,140.1	178.85	40.921		
13,976.3	7,060.0	6,700.0	6,698.2	184.2	1.9	83.24	55.8	-22.4	7,389.0	7,208.0	180.97	40.830		
14,000.0	7,060.0	6,700.0	6,698.2	184.8	1.9	83.24	55.8	-22.4	7,410.7	7,229.1	181.62	40.803		
14,074.8	7,060.0	6,700.0	6,698.2	186.9	1.9	83.24	55.8	-22.4	7,479.5	7,295.8	183.70	40.717		
14,100.0	7,060.0	6,700.0	6,698.2	187.6	1.9	83.24	55.8	-22.4	7,502.7	7,318.3	184.39	40.689		
14,173.2	7,060.0	6,700.0	6,698.2	189.6	1.9	83.24	55.8	-22.4	7,570.2	7,383.8	186.42	40.608		
14,200.0	7,060.0	6,700.0	6,698.2	190.3	1.9	83.24	55.8	-22.4	7,594.9	7,407.8	187.16	40.579		
14,271.6	7,060.0	6,700.0	6,698.2	192.3	1.9	83.24	55.8	-22.4	7,661.1	7,472.0	189.15	40.503		
14,300.0	7,060.0	6,700.0	6,698.2	193.0	1.9	83.24	55.8	-22.4	7,687.4	7,497.4	189.94	40.473		
14,370.0	7,060.0	6,700.0	6,698.2	195.0	1.9	83.24	55.8	-22.4	7,752.2	7,560.3	191.88	40.402		
14,400.0	7,060.0	6,700.0	6,698.2	195.8	1.9	83.24	55.8	-22.4	7,780.0	7,587.2	192.71	40.372		
14,468.5	7,060.0	6,700.0	6,698.2	197.6	1.9	83.24	55.8	-22.4	7,843.5	7,648.9	194.61	40.304		
14,500.0	7,060.0	6,700.0	6,698.2	198.5	1.9	83.24	55.8	-22.4	7,872.7	7,677.3	195.48	40.274		
14,566.9	7,060.0	6,700.0	6,698.2	200.3	1.9	83.24	55.8	-22.4	7,934.9	7,737.6	197.34	40.210		
14,600.0	7,060.0	6,700.0	6,698.2	201.2	1.9	83.24	55.8	-22.4	7,965.7	7,767.4	198.25	40.179		
14,665.3	7,060.0	6,700.0	6,698.2	203.0	1.9	83.24	55.8	-22.4	8,026.5	7,826.4	200.07	40.119		
14,700.0	7,060.0	6,700.0	6,698.2	204.0	1.9	83.24	55.8	-22.4	8,058.8	7,857.8	201.03	40.088		
14,763.7	7,060.0	6,700.0	6,698.2	205.7	1.9	83.24	55.8	-22.4	8,118.3	7,915.5	202.80	40.032		

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	0.0 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 (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,800.0	7,060.0	6,700.0	6,698.2	206.7	1.9	83.24	55.8	-22.4	8,152.1	7,948.3	203.80	40.000	
14,862.2	7,060.0	6,700.0	6,698.2	208.4	1.9	83.24	55.8	-22.4	8,210.2	8,004.6	205.53	39.947	
14,900.0	7,060.0	6,700.0	6,698.2	209.5	1.9	83.24	55.8	-22.4	8,245.5	8,039.0	206.58	39.915	
14,960.6	7,060.0	6,700.0	6,698.2	211.1	1.9	83.24	55.8	-22.4	8,302.2	8,094.0	208.26	39.865	
15,000.0	7,060.0	6,700.0	6,698.2	212.2	1.9	83.24	55.8	-22.4	8,339.1	8,129.8	209.35	39.833	
15,059.0	7,060.0	6,700.0	6,698.2	213.8	1.9	83.24	55.8	-22.4	8,394.4	8,183.5	210.99	39.786	
15,100.0	7,060.0	6,700.0	6,698.2	215.0	1.9	83.24	55.8	-22.4	8,432.9	8,220.7	212.13	39.754	
15,157.4	7,060.0	6,700.0	6,698.2	216.6	1.9	83.24	55.8	-22.4	8,486.8	8,273.1	213.72	39.710	
15,200.0	7,060.0	6,700.0	6,698.2	217.7	1.9	83.24	55.8	-22.4	8,526.8	8,311.8	214.90	39.677	
15,255.9	7,060.0	6,700.0	6,698.2	219.3	1.9	83.24	55.8	-22.4	8,579.3	8,362.8	216.45	39.636	
15,300.0	7,060.0	6,700.0	6,698.2	220.5	1.9	83.24	55.8	-22.4	8,620.8	8,403.1	217.68	39.603	
15,354.3	7,060.0	6,700.0	6,698.2	222.0	1.9	83.24	55.8	-22.4	8,671.9	8,452.7	219.19	39.564	
15,400.0	7,060.0	6,700.0	6,698.2	223.2	1.9	83.24	55.8	-22.4	8,714.9	8,494.5	220.46	39.531	
15,452.7	7,060.0	6,700.0	6,698.2	224.7	1.9	83.24	55.8	-22.4	8,764.6	8,542.7	221.92	39.494	
15,500.0	7,060.0	6,700.0	6,698.2	226.0	1.9	83.24	55.8	-22.4	8,809.2	8,586.0	223.23	39.462	
15,551.1	7,060.0	6,700.0	6,698.2	227.4	1.9	83.24	55.8	-22.4	8,857.5	8,632.8	224.65	39.427	
15,600.0	7,060.0	6,700.0	6,698.2	228.7	1.9	83.24	55.8	-22.4	8,903.6	8,677.6	226.01	39.395	
15,649.6	7,060.0	6,700.0	6,698.2	230.1	1.9	83.24	55.8	-22.4	8,950.5	8,723.1	227.39	39.362	
15,700.0	7,060.0	6,700.0	6,698.2	231.5	1.9	83.24	55.8	-22.4	8,998.1	8,769.4	228.79	39.329	
15,748.0	7,060.0	6,700.0	6,698.2	232.8	1.9	83.24	55.8	-22.4	9,043.6	8,813.4	230.12	39.299	
15,800.0	7,060.0	6,700.0	6,698.2	234.3	1.9	83.24	55.8	-22.4	9,092.8	8,861.2	231.57	39.266	
15,846.4	7,060.0	6,700.0	6,698.2	235.5	1.9	83.24	55.8	-22.4	9,136.8	8,903.9	232.86	39.238	
15,900.0	7,060.0	6,700.0	6,698.2	237.0	1.9	83.24	55.8	-22.4	9,187.6	8,953.2	234.35	39.205	
15,944.8	7,060.0	6,700.0	6,698.2	238.3	1.9	83.24	55.8	-22.4	9,230.1	8,994.5	235.59	39.178	
16,000.0	7,060.0	6,700.0	6,698.2	239.8	1.9	83.24	55.8	-22.4	9,282.4	9,045.3	237.12	39.146	
16,043.3	7,060.0	6,700.0	6,698.2	241.0	1.9	83.24	55.8	-22.4	9,323.5	9,085.2	238.33	39.121	
16,100.0	7,060.0	6,700.0	6,698.2	242.5	1.9	83.24	55.8	-22.4	9,377.4	9,137.5	239.90	39.088	
16,129.6	7,060.0	6,700.0	6,698.2	243.4	1.9	83.24	55.8	-22.4	9,405.6	9,164.8	240.73	39.071	



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 22
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VETTING 22	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB-EST @ 4664.0usft (Original Well ECoordinates are relative to: VETTING 22

Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000

Grid Convergence at Surface is: 0.55°

## Separation Factor Plot

