

# **EXTRACTION OIL & GAS**

**WELD COUNTY, COLORADO (NAD 83)  
SW NW SEC. 15 T5N R65W 6th P.M.  
VETTING 21**

**ORIGINAL WELLBORE  
PROPOSAL #2**

## **Anticollision Report**

**10 March, 2016**



## Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 21
<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 21	<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>	10/03/2016		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	15,843.4	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
Offet Well - Wellbore - Design						
SW NW SEC. 15 T5N R65W 6th P.M.						
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	5,132.7	4,389.8	1,398.8	1,270.8	10.926	CC
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	5,216.5	4,455.1	1,399.8	1,269.8	10.763	ES
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	5,413.4	4,600.0	1,409.0	1,274.6	10.482	SF
CARLSON A-15-16HN - Wellbore #1 - Design #1	200.0	179.5	4,450.0	4,449.5	7,927.333	CC
CARLSON A-15-16HN - Wellbore #1 - Design #1	10,700.0	14,862.7	4,492.5	4,168.6	13.869	ES
CARLSON A-15-16HN - Wellbore #1 - Design #1	12,303.1	14,862.7	4,816.1	4,448.0	13.084	SF
CARLSON B-15-16HC - Wellbore #1 - Design #1	10,561.5	14,905.1	4,326.8	4,006.8	13.523	CC
CARLSON B-15-16HC - Wellbore #1 - Design #1	10,700.0	14,905.1	4,329.0	4,005.3	13.372	ES
CARLSON B-15-16HC - Wellbore #1 - Design #1	12,200.0	14,905.1	4,626.6	4,261.6	12.675	SF
CARLSON C-15-16HN - Wellbore #1 - Design #1	10,560.7	14,796.3	4,160.8	3,841.1	13.013	CC
CARLSON C-15-16HN - Wellbore #1 - Design #1	10,700.0	14,796.3	4,163.1	3,839.6	12.868	ES
CARLSON C-15-16HN - Wellbore #1 - Design #1	12,100.0	14,796.3	4,436.4	4,074.3	12.253	SF
CARLSON D-15-16HN - Wellbore #1 - Design #1	10,559.4	14,777.6	3,830.7	3,511.3	11.994	CC
CARLSON D-15-16HN - Wellbore #1 - Design #1	10,629.9	14,777.6	3,831.4	3,510.1	11.924	ES
CARLSON D-15-16HN - Wellbore #1 - Design #1	11,811.0	14,777.6	4,030.0	3,676.2	11.392	SF
CARLSON E-15-16HC - Wellbore #1 - Design #1	10,558.7	14,848.6	3,667.3	3,347.9	11.480	CC
CARLSON E-15-16HC - Wellbore #1 - Design #1	10,629.9	14,848.6	3,668.0	3,346.6	11.413	ES
CARLSON E-15-16HC - Wellbore #1 - Design #1	11,712.6	14,848.6	3,844.6	3,493.5	10.950	SF
CARLSON F-15-16HN - Wellbore #1 - Design #1	10,558.2	14,769.7	3,550.6	3,231.5	11.126	CC
CARLSON F-15-16HN - Wellbore #1 - Design #1	10,629.9	14,769.7	3,551.3	3,230.2	11.061	ES
CARLSON F-15-16HN - Wellbore #1 - Design #1	11,614.1	14,769.7	3,704.3	3,356.2	10.642	SF
CARLSON G-15-16HN - Wellbore #1 - Design #1	10,556.4	14,787.6	3,130.5	2,811.7	9.820	CC
CARLSON G-15-16HN - Wellbore #1 - Design #1	10,629.9	14,787.6	3,131.4	2,810.6	9.761	ES
CARLSON G-15-16HN - Wellbore #1 - Design #1	11,400.0	14,787.6	3,242.2	2,900.3	9.482	SF
CARLSON H-15-16HC - Wellbore #1 - Design #1	10,555.7	14,883.6	2,967.5	2,648.8	9.313	CC
CARLSON H-15-16HC - Wellbore #1 - Design #1	10,629.9	14,883.6	2,968.4	2,647.8	9.257	ES
CARLSON H-15-16HC - Wellbore #1 - Design #1	11,318.9	14,883.6	3,064.1	2,724.5	9.024	SF
CARLSON I-15-16HN - Wellbore #1 - Design #1	10,554.8	14,836.2	2,750.6	2,432.0	8.632	CC
CARLSON I-15-16HN - Wellbore #1 - Design #1	10,629.9	14,836.2	2,751.6	2,430.9	8.580	ES
CARLSON I-15-16HN - Wellbore #1 - Design #1	11,200.0	14,836.2	2,825.3	2,489.0	8.401	SF
CARLSON J-15-16HN - Wellbore #1 - Design #1	10,553.4	14,901.4	2,420.5	2,102.1	7.601	CC
CARLSON J-15-16HN - Wellbore #1 - Design #1	10,629.9	14,901.4	2,421.8	2,101.2	7.556	ES
CARLSON J-15-16HN - Wellbore #1 - Design #1	11,023.6	14,901.4	2,465.8	2,134.5	7.443	SF
CARLSON K-15-16HC - Wellbore #1 - Design #1	10,552.7	15,013.6	2,258.2	1,939.9	7.095	CC
CARLSON K-15-16HC - Wellbore #1 - Design #1	10,600.0	15,013.6	2,258.7	1,939.1	7.068	ES
CARLSON K-15-16HC - Wellbore #1 - Design #1	11,000.0	15,013.6	2,302.0	1,971.6	6.966	SF
CARLSON L-15-16HN - Wellbore #1 - Design #1	10,552.0	14,977.0	2,090.5	1,772.1	6.567	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 21
<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 21	<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.						
CARLSON L-15-16HN - Wellbore #1 - Design #1	10,600.0	14,977.0	2,091.0	1,771.4	6.542	ES
CARLSON L-15-16HN - Wellbore #1 - Design #1	10,925.2	14,977.0	2,123.5	1,795.0	6.464	SF
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	14,806.7	7,088.6	100.3	-135.5	0.425	Level 1, CC, ES, SF
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	12,214.5	7,236.2	7.5	-162.6	0.044	Level 1, CC, ES, SF
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	15,535.5	7,154.2	604.4	342.3	2.306	CC
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	15,551.1	7,154.2	604.6	342.0	2.303	ES, SF
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	14,133.2	6,913.9	619.6	412.6	2.994	CC, ES
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	14,173.2	6,913.7	620.9	412.8	2.984	SF
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	13,000.0	7,032.7	377.7	241.2	2.767	SF
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	13,090.5	7,004.3	365.4	235.2	2.806	ES
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	13,101.4	7,000.8	365.3	235.9	2.823	CC
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	15,843.4	7,586.0	1,358.0	1,071.5	4.740	CC, ES, SF
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	12,958.3	7,533.4	1,984.0	1,795.3	10.511	CC
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	13,000.0	7,535.7	1,984.5	1,794.5	10.449	ES
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	13,582.6	7,568.7	2,079.7	1,873.4	10.084	SF
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	12,231.8	7,200.3	1,243.5	1,074.9	7.375	CC, ES
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	12,401.5	7,173.9	1,254.8	1,082.3	7.275	SF
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	14,898.7	7,850.0	2,586.2	2,342.1	10.591	CC
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	14,960.6	7,852.0	2,587.0	2,341.1	10.520	ES
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	15,649.6	7,874.7	2,692.9	2,427.7	10.154	SF
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	15,380.0	7,302.2	610.5	351.6	2.358	CC
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	15,400.0	7,300.9	610.9	351.4	2.354	ES, SF
EXIST DD EHRlich MOTORS #D8 - Wellbore #1 - Well	15,843.4	7,183.0	1,041.5	767.6	3.802	CC, ES, SF
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	15,843.4	7,222.3	241.0	142.7	2.453	CC, ES, SF
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	14,830.5	7,165.8	1,165.8	928.2	4.906	CC
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	14,862.2	7,171.6	1,166.3	927.6	4.887	ES
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	15,000.0	7,195.5	1,177.8	934.7	4.845	SF
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	12,792.9	6,961.0	720.5	544.1	4.085	CC
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	12,800.0	6,961.0	720.6	544.0	4.081	ES
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	12,893.7	6,961.1	727.5	548.4	4.060	SF
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	11,571.9	7,301.3	715.4	550.4	4.337	CC
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	11,600.0	7,300.9	715.9	550.2	4.320	ES
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	11,700.0	7,299.6	726.8	558.3	4.313	SF
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	13,421.9	6,987.8	39.2	-149.4	0.208	Level 1, CC, ES, SF
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	13,653.6	6,878.8	1,198.8	1,007.0	6.249	CC
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	13,681.1	6,878.1	1,199.1	1,006.6	6.228	ES
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	13,877.9	6,873.1	1,219.6	1,022.0	6.171	SF
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	13,588.6	6,505.0	2,362.8	2,183.5	13.179	CC
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	13,681.1	6,505.0	2,364.6	2,183.1	13.025	ES
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	14,370.0	6,505.0	2,488.7	2,290.2	12.539	SF
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	2,202.0	3,159.1	2,420.1	2,408.7	212.934	CC, ES
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	15,843.4	7,010.5	9,643.7	9,385.3	37.313	SF
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	1,374.0	1,688.2	2,425.2	2,418.9	387.469	CC
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	1,771.6	2,360.2	2,428.6	2,418.5	239.512	ES
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	14,763.7	7,124.3	9,997.6	9,763.1	42.638	SF
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	2,126.3	2,979.2	2,166.0	2,153.2	170.167	CC, ES
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	15,600.0	7,123.1	9,957.5	9,705.2	39.473	SF
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	11,155.8	7,450.7	1,366.1	1,208.9	8.695	CC
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	11,200.0	7,434.6	1,366.7	1,208.9	8.660	ES
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	11,318.9	7,394.3	1,374.9	1,215.3	8.611	SF
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	10,855.7	7,562.9	39.1	-119.3	0.247	Level 1, CC, ES, SF
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	11,693.4	7,289.3	493.7	330.8	3.030	CC
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	11,700.0	7,287.9	493.8	330.7	3.028	ES

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

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<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 21	<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	11,712.6	7,285.2	494.1	330.8	3.027	SF
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	10,835.0	7,144.3	2,555.3	2,425.0	19.599	CC
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	10,900.0	7,144.7	2,556.2	2,424.0	19.341	ES
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	12,204.7	7,153.6	2,899.3	2,731.1	17.240	SF
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	14,206.4	7,514.0	1,959.8	1,741.7	8.988	CC
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	14,271.6	7,514.0	1,960.9	1,741.0	8.918	ES
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	14,700.0	7,515.8	2,021.0	1,789.1	8.717	SF
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	15,843.4	7,611.4	1,118.3	821.5	3.768	CC, ES, SF
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	15,843.4	6,994.7	1,508.7	1,411.0	15.454	CC, ES, SF
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	15,469.6	7,735.1	1,934.2	1,668.2	7.271	CC
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	15,500.0	7,735.1	1,934.4	1,667.5	7.249	ES
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	15,843.4	7,735.1	1,970.0	1,693.5	7.126	SF
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	15,843.4	7,919.4	1,968.3	1,656.3	6.309	CC, ES, SF
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	1,113.2	1,100.8	1,485.3	1,482.3	494.510	CC
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	1,200.0	1,191.6	1,485.3	1,482.1	465.013	ES
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	15,100.0	6,600.0	9,992.1	9,771.9	45.371	SF
EXIST VERT FAY #1 - Wellbore #1 - Design #1	2,893.0	2,769.0	2,611.9	2,544.7	38.880	CC
EXIST VERT FAY #1 - Wellbore #1 - Design #1	9,645.6	6,863.9	2,657.9	2,451.4	12.872	ES
EXIST VERT FAY #1 - Wellbore #1 - Design #1	10,531.5	6,863.9	2,823.0	2,592.6	12.257	SF
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	3,786.1	3,399.2	118.4	27.1	1.297	Level 3, CC, ES
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	3,800.0	3,409.4	118.8	27.2	1.297	Level 3, SF
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	398.2	380.2	85.6	84.5	77.208	CC
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	590.5	572.3	86.0	84.3	52.315	ES
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	1,400.0	1,379.0	99.2	95.5	27.159	SF
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	100.0	216.4	216.2	1,146.324	CC, ES
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	15,843.4	15,063.1	1,996.4	1,518.5	4.177	SF
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	200.0	200.0	191.1	190.5	299.374	CC, ES
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	15,843.4	15,275.1	1,824.7	1,348.6	3.832	SF
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	168.5	167.4	154.921	CC, ES
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	15,843.4	15,093.9	1,650.3	1,172.0	3.450	SF
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	400.0	400.0	143.2	141.7	93.149	CC, ES
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	15,843.4	15,167.2	1,318.8	839.3	2.750	SF
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	121.1	119.2	60.968	CC, ES
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	15,843.4	15,405.5	1,171.2	696.3	2.466	SF
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	600.0	600.0	95.8	93.4	39.324	CC, ES
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	15,843.4	15,280.3	990.9	510.7	2.064	SF
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	700.0	700.0	73.2	70.3	25.376	CC
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	3,346.4	3,284.4	98.1	62.8	2.782	ES
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	15,843.4	15,418.5	659.4	179.1	1.373	Level 3, SF
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	800.0	800.0	47.9	44.6	14.367	CC
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	3,300.0	3,255.6	67.3	33.2	1.972	ES
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	15,843.4	15,680.7	532.5	79.3	1.175	Level 2, SF
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	900.0	900.0	25.3	21.5	6.692	CC
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	15,843.4	15,614.2	331.5	-149.6	0.689	Level 1, ES, SF
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	1,000.0	1,000.0	22.6	18.3	5.332	CC
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	5,259.3	5,292.9	30.7	-52.5	0.369	Level 1, SF
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	15,843.4	16,129.4	254.8	-68.0	0.789	Level 1, ES
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	1,000.0	1,000.0	47.9	43.7	11.312	CC
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	15,843.4	16,069.4	327.9	-154.1	0.680	Level 1, ES, SF
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	1,000.0	1,000.0	70.0	65.8	16.533	CC
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	3,444.9	3,501.8	87.0	48.6	2.266	ES
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	15,843.4	16,281.8	659.4	177.2	1.367	Level 3, SF
VT-ALLES 1-16-18 - ORIGINAL WELLBORE - PROPOS	100.0	99.0	238.6	238.5	1,270.325	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 21
<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 21	<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	-173.78	-1,168.3	-127.3	1,175.9				
98.4	98.4	59.4	59.4	0.1	0.6	-173.78	-1,168.3	-127.3	1,175.3	1,174.6	0.69	1,713.202	
100.0	100.0	61.0	61.0	0.1	0.6	-173.78	-1,168.3	-127.3	1,175.3	1,174.6	0.70	1,670.593	
196.8	196.8	157.8	157.8	0.3	2.3	-173.78	-1,168.3	-127.3	1,175.3	1,172.6	2.66	441.484	
200.0	200.0	161.0	161.0	0.3	2.4	-173.78	-1,168.3	-127.3	1,175.3	1,172.5	2.74	428.499	
295.3	295.3	256.3	256.3	0.5	4.5	-173.78	-1,168.3	-127.3	1,175.3	1,170.2	5.04	233.227	
300.0	300.0	261.0	261.0	0.5	4.6	-173.78	-1,168.3	-127.3	1,175.3	1,170.1	5.15	228.291	
393.7	393.7	354.7	354.7	0.8	6.5	-173.78	-1,168.3	-127.3	1,175.3	1,168.0	7.29	161.267	
400.0	400.0	361.0	361.0	0.8	6.7	-173.78	-1,168.3	-127.3	1,175.3	1,167.8	7.43	158.166	
492.1	492.1	453.1	453.1	1.0	8.5	-173.78	-1,168.3	-127.3	1,175.3	1,165.7	9.51	123.552	
500.0	500.0	461.0	461.0	1.0	8.7	-173.78	-1,168.3	-127.3	1,175.3	1,165.6	9.69	121.289	
590.5	590.5	551.5	551.5	1.2	10.5	-173.78	-1,168.3	-127.3	1,175.3	1,163.5	11.73	100.215	
600.0	600.0	561.0	561.0	1.2	10.7	-173.78	-1,168.3	-127.3	1,175.3	1,163.3	11.94	98.433	
689.0	689.0	650.0	650.0	1.4	12.5	-173.78	-1,168.3	-127.3	1,175.3	1,161.3	13.94	84.322	
700.0	700.0	661.0	661.0	1.4	12.7	-173.78	-1,168.3	-127.3	1,175.3	1,161.1	14.19	82.852	
787.4	787.4	748.4	748.4	1.6	14.5	-173.78	-1,168.3	-127.3	1,175.3	1,159.1	16.15	72.793	
800.0	800.0	761.0	761.0	1.7	14.8	-173.78	-1,168.3	-127.3	1,175.3	1,158.8	16.43	71.541	
885.8	885.8	846.8	846.8	1.9	16.5	-173.78	-1,168.3	-127.3	1,175.3	1,156.9	18.35	64.043	
900.0	900.0	861.0	861.0	1.9	16.8	-173.78	-1,168.3	-127.3	1,175.3	1,156.6	18.67	62.953	
984.2	984.2	945.2	945.2	2.1	18.5	-173.78	-1,168.3	-127.3	1,175.3	1,154.7	20.56	57.174	
1,000.0	1,000.0	961.0	961.0	2.1	18.8	-173.78	-1,168.3	-127.3	1,175.3	1,154.4	20.91	56.209	
1,082.7	1,082.7	1,043.7	1,043.7	2.3	20.5	-5.79	-1,168.3	-127.3	1,174.1	1,151.3	22.73	51.658	
1,100.0	1,100.0	1,061.0	1,061.0	2.3	20.8	-5.79	-1,168.3	-127.3	1,173.5	1,150.4	23.11	50.788	
1,181.1	1,181.0	1,142.0	1,142.0	2.5	22.4	-5.82	-1,168.3	-127.3	1,169.6	1,144.7	24.85	47.071	
1,200.0	1,199.8	1,160.8	1,160.8	2.5	22.8	-5.83	-1,168.3	-127.3	1,168.3	1,143.1	25.25	46.274	
1,279.5	1,279.1	1,240.1	1,240.1	2.6	24.4	-5.88	-1,168.3	-127.3	1,161.7	1,134.8	26.93	43.143	
1,300.0	1,299.5	1,260.5	1,260.5	2.7	24.8	-5.89	-1,168.3	-127.3	1,159.6	1,132.3	27.35	42.395	
1,377.9	1,376.9	1,337.9	1,337.9	2.8	26.4	-5.96	-1,168.3	-127.3	1,150.5	1,121.5	28.96	39.722	
1,400.0	1,398.7	1,359.7	1,359.7	2.9	26.8	-5.98	-1,168.3	-127.3	1,147.5	1,118.1	29.41	39.015	
1,476.4	1,474.2	1,435.2	1,435.2	3.1	28.3	-6.07	-1,168.3	-127.3	1,136.0	1,105.0	30.95	36.704	
1,500.0	1,497.5	1,458.5	1,458.5	3.1	28.8	-6.10	-1,168.3	-127.3	1,132.0	1,100.6	31.42	36.031	
1,574.8	1,571.0	1,532.0	1,532.0	3.4	30.3	-6.20	-1,168.3	-127.3	1,118.1	1,085.2	32.88	34.010	
1,604.5	1,600.0	1,561.0	1,561.0	3.5	30.9	-6.25	-1,168.3	-127.3	1,112.1	1,078.6	33.44	33.253	
1,669.5	1,663.6	1,624.6	1,624.6	3.7	32.1	-6.33	-1,168.3	-127.3	1,098.5	1,063.7	34.84	31.534	
1,673.2	1,667.2	1,628.2	1,628.2	3.7	32.2	-6.33	-1,168.3	-127.3	1,097.7	1,062.8	34.91	31.447	
1,700.0	1,693.4	1,654.4	1,654.4	3.8	32.7	-6.38	-1,168.3	-127.3	1,092.0	1,056.6	35.41	30.837	
1,771.6	1,763.1	1,724.1	1,724.1	4.0	34.2	-6.52	-1,168.3	-127.3	1,075.5	1,038.8	36.74	29.274	
1,800.0	1,790.5	1,751.5	1,751.5	4.1	34.7	-6.57	-1,168.3	-127.3	1,068.5	1,031.2	37.25	28.684	
1,870.1	1,858.1	1,819.1	1,819.1	4.5	36.1	-6.74	-1,168.3	-127.3	1,050.0	1,011.5	38.49	27.279	
1,900.0	1,886.8	1,847.8	1,847.8	4.6	36.6	-6.81	-1,168.3	-127.3	1,041.6	1,002.6	39.00	26.704	
1,968.5	1,952.2	1,913.2	1,913.2	4.9	38.0	-7.00	-1,168.3	-127.3	1,021.3	981.1	40.16	25.428	
2,000.0	1,982.0	1,943.0	1,943.0	5.1	38.6	-7.09	-1,168.3	-127.3	1,011.4	970.7	40.67	24.867	
2,066.9	2,045.2	2,006.2	2,006.2	5.5	39.8	-7.31	-1,168.3	-127.3	989.3	947.6	41.74	23.705	
2,100.0	2,076.2	2,037.2	2,037.2	5.6	40.5	-7.43	-1,168.3	-127.3	977.9	935.7	42.25	23.147	
2,165.3	2,137.1	2,098.1	2,098.1	6.1	41.7	-7.68	-1,168.3	-127.3	954.3	911.1	43.23	22.077	
2,200.0	2,169.1	2,130.1	2,130.1	6.3	42.3	-7.83	-1,168.3	-127.3	941.2	897.5	43.73	21.526	
2,263.8	2,227.7	2,188.7	2,188.7	6.7	43.5	-8.12	-1,168.3	-127.3	916.2	871.6	44.62	20.534	
2,300.0	2,260.7	2,221.7	2,221.7	7.0	44.2	-8.30	-1,168.3	-127.3	901.4	856.3	45.10	19.984	
2,362.2	2,316.9	2,277.9	2,277.9	7.4	45.3	-8.63	-1,168.3	-127.3	875.0	829.1	45.91	19.058	
2,400.0	2,350.8	2,311.8	2,311.8	7.7	46.0	-8.86	-1,168.3	-127.3	858.4	812.0	46.38	18.507	
2,460.6	2,404.6	2,365.6	2,365.6	8.2	47.1	-9.25	-1,168.3	-127.3	830.9	783.8	47.11	17.636	
2,500.0	2,439.3	2,400.3	2,400.3	8.6	47.8	-9.53	-1,168.3	-127.3	812.4	764.8	47.56	17.080	

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 21
<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 21	<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	2,490.8	2,451.8	2,451.8	9.1	48.8	-9.99	-1,168.3	-127.3	783.8	735.6	48.22	16.256	
2,600.0	2,526.2	2,487.2	2,487.2	9.4	49.5	-10.35	-1,168.3	-127.3	763.4	714.8	48.65	15.691	
2,657.5	2,575.3	2,536.3	2,536.3	10.0	50.5	-10.89	-1,168.3	-127.3	733.9	684.7	49.24	14.905	
2,700.0	2,611.2	2,572.2	2,572.2	10.4	51.2	-11.34	-1,168.3	-127.3	711.5	661.9	49.66	14.328	
2,755.9	2,658.0	2,619.0	2,619.0	11.0	52.2	-11.99	-1,168.3	-127.3	681.3	631.1	50.20	13.572	
2,800.0	2,694.4	2,655.4	2,655.4	11.4	52.9	-12.56	-1,168.3	-127.3	656.9	606.3	50.61	12.979	
2,854.3	2,738.8	2,699.8	2,699.8	12.0	53.8	-13.35	-1,168.3	-127.3	626.1	575.0	51.13	12.246	
2,900.0	2,775.6	2,736.6	2,736.6	12.5	54.5	-14.10	-1,168.3	-127.3	599.6	548.0	51.55	11.630	
2,952.7	2,817.6	2,778.6	2,778.6	13.1	55.4	-15.08	-1,168.3	-127.3	568.4	516.3	52.07	10.915	
3,000.0	2,854.7	2,815.7	2,815.7	13.6	56.1	-16.07	-1,168.3	-127.3	539.8	487.2	52.56	10.271	
3,051.2	2,894.4	2,855.4	2,855.4	14.2	56.9	-17.30	-1,168.3	-127.3	508.3	455.1	53.13	9.566	
3,100.0	2,931.7	2,892.7	2,892.7	14.8	57.7	-18.65	-1,168.3	-127.3	477.7	423.9	53.75	8.887	
3,149.6	2,969.0	2,930.0	2,930.0	15.4	58.4	-20.23	-1,168.3	-127.3	446.1	391.6	54.49	8.187	
3,191.9	3,000.4	2,961.4	2,961.4	15.9	59.0	-21.80	-1,168.3	-127.3	418.8	363.6	55.22	7.584	
3,200.0	3,006.4	2,967.4	2,967.4	16.0	59.2	-22.07	-1,168.3	-127.3	413.6	358.1	55.46	7.457	
3,248.0	3,041.7	3,002.7	3,002.7	16.6	59.9	-23.83	-1,168.3	-127.3	382.6	325.6	56.94	6.718	
3,300.0	3,080.0	3,041.0	3,041.0	17.2	60.6	-26.05	-1,168.3	-127.3	349.3	290.6	58.74	5.947	
3,346.4	3,114.3	3,075.3	3,075.3	17.8	61.3	-28.39	-1,168.3	-127.3	320.0	259.4	60.57	5.283	
3,400.0	3,153.7	3,114.7	3,114.7	18.5	62.1	-31.61	-1,168.3	-127.3	286.6	223.6	62.99	4.550	
3,444.9	3,186.8	3,147.8	3,147.8	19.1	62.8	-34.85	-1,168.3	-127.3	259.3	193.9	65.36	3.967	
3,500.0	3,227.4	3,188.4	3,188.4	19.8	63.6	-39.71	-1,168.3	-127.3	226.8	158.0	68.80	3.297	
3,543.3	3,259.3	3,220.3	3,220.3	20.3	64.2	-44.38	-1,168.3	-127.3	202.4	130.4	71.97	2.812	
3,600.0	3,301.1	3,262.1	3,262.1	21.0	65.1	-51.93	-1,168.3	-127.3	172.8	96.0	76.77	2.251	
3,641.7	3,331.8	3,292.8	3,292.8	21.6	65.7	-58.72	-1,168.3	-127.3	153.4	72.8	80.66	1.902	
3,700.0	3,374.8	3,335.8	3,335.8	22.3	66.6	-70.08	-1,168.3	-127.3	131.9	45.9	86.04	1.533	
3,740.1	3,404.3	3,365.3	3,365.3	22.8	67.2	-79.05	-1,168.3	-127.3	122.4	33.3	89.10	1.374 Level 3	
3,786.1	3,438.2	3,399.2	3,399.2	23.4	67.8	-90.00	-1,168.3	-127.3	118.4	27.1	91.26	1.297 Level 3, CC, ES	
3,800.0	3,448.4	3,409.4	3,409.4	23.6	68.1	-93.34	-1,168.3	-127.3	118.8	27.2	91.56	1.297 Level 3, SF	
3,838.6	3,476.9	3,437.9	3,437.9	24.1	68.6	-102.45	-1,168.3	-127.3	123.6	32.1	91.53	1.350 Level 3	
3,900.0	3,522.1	3,483.1	3,483.1	24.9	69.5	-115.60	-1,168.3	-127.3	141.2	51.8	89.44	1.579	
3,937.0	3,549.4	3,510.4	3,510.4	25.3	70.1	-122.41	-1,168.3	-127.3	156.3	68.7	87.57	1.785	
4,000.0	3,595.8	3,556.8	3,556.8	26.1	71.0	-131.99	-1,168.3	-127.3	186.9	102.6	84.29	2.217	
4,035.4	3,621.9	3,582.9	3,582.9	26.6	71.5	-136.37	-1,168.3	-127.3	206.0	123.3	82.66	2.492	
4,100.0	3,669.5	3,630.5	3,630.5	27.4	72.5	-142.87	-1,168.3	-127.3	243.0	162.7	80.26	3.028	
4,133.8	3,694.4	3,655.4	3,655.4	27.9	73.0	-145.65	-1,168.3	-127.3	263.2	183.9	79.31	3.319	
4,200.0	3,743.2	3,704.2	3,704.2	28.7	74.0	-150.14	-1,168.3	-127.3	303.8	225.9	77.97	3.897	
4,232.3	3,767.0	3,728.0	3,728.0	29.1	74.5	-151.96	-1,168.3	-127.3	324.0	246.5	77.53	4.180	
4,300.0	3,816.9	3,777.9	3,777.9	30.0	75.5	-155.18	-1,168.3	-127.3	367.0	290.1	76.96	4.769	
4,330.7	3,839.5	3,800.5	3,800.5	30.4	75.9	-156.42	-1,168.3	-127.3	386.8	309.9	76.83	5.034	
4,400.0	3,890.5	3,851.5	3,851.5	31.3	76.9	-158.84	-1,168.3	-127.3	431.6	354.8	76.77	5.622	
4,429.1	3,912.0	3,873.0	3,873.0	31.7	77.4	-159.72	-1,168.3	-127.3	450.6	373.7	76.83	5.865	
4,500.0	3,964.2	3,925.2	3,925.2	32.6	78.4	-161.59	-1,168.3	-127.3	497.0	419.8	77.12	6.444	
4,527.5	3,984.5	3,945.5	3,945.5	32.9	78.8	-162.23	-1,168.3	-127.3	515.1	437.8	77.28	6.665	
4,600.0	4,037.9	3,998.9	3,998.9	33.9	79.9	-163.72	-1,168.3	-127.3	562.8	485.0	77.81	7.234	
4,626.0	4,057.0	4,018.0	4,018.0	34.2	80.3	-164.20	-1,168.3	-127.3	580.0	502.0	78.03	7.433	
4,700.0	4,111.6	4,072.6	4,072.6	35.2	81.4	-165.42	-1,168.3	-127.3	629.1	550.4	78.73	7.990	
4,724.4	4,129.6	4,090.6	4,090.6	35.5	81.8	-165.79	-1,168.3	-127.3	645.3	566.3	78.99	8.170	
4,800.0	4,185.3	4,146.3	4,146.3	36.5	82.9	-166.81	-1,168.3	-127.3	695.6	615.8	79.82	8.715	
4,822.8	4,202.1	4,163.1	4,163.1	36.7	83.2	-167.09	-1,168.3	-127.3	710.8	630.7	80.08	8.876	
4,900.0	4,259.0	4,220.0	4,220.0	37.7	84.4	-167.96	-1,168.3	-127.3	762.3	681.3	81.02	9.409	
4,921.2	4,274.6	4,235.6	4,235.6	38.0	84.7	-168.18	-1,168.3	-127.3	776.5	695.2	81.29	9.553	
4,989.9	4,325.2	4,286.2	4,286.2	38.9	85.7	-168.83	-1,168.3	-127.3	822.4	740.2	82.17	10.009	

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 21
<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 21	<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	
5,000.0	4,332.6	4,293.6	4,293.6	39.0	85.8	-168.96	-1,168.3	-127.3	829.2	746.7	82.49	10.052	
5,019.7	4,347.2	4,308.2	4,308.2	39.2	86.1	-169.19	-1,168.3	-127.3	842.2	759.1	83.11	10.134	
5,100.0	4,407.7	4,368.7	4,368.7	39.9	87.3	-170.07	-1,168.3	-127.3	894.6	808.9	85.70	10.438	
5,118.1	4,421.6	4,382.6	4,382.6	40.1	87.6	-170.24	-1,168.3	-127.3	906.2	819.9	86.30	10.500	
5,200.0	4,485.1	4,446.1	4,446.1	40.8	88.9	-170.97	-1,168.3	-127.3	957.4	868.4	89.04	10.753	
5,216.5	4,498.1	4,459.1	4,459.1	41.0	89.2	-171.11	-1,168.3	-127.3	967.6	878.0	89.59	10.800	
5,300.0	4,564.6	4,525.6	4,525.6	41.7	90.5	-171.73	-1,168.3	-127.3	1,017.7	925.2	92.44	11.009	
5,314.9	4,576.6	4,537.6	4,537.6	41.8	90.7	-171.83	-1,168.3	-127.3	1,026.4	933.5	92.95	11.042	
5,400.0	4,646.1	4,607.1	4,607.1	42.6	92.1	-172.36	-1,168.3	-127.3	1,075.1	979.2	95.89	11.212	
5,413.4	4,657.2	4,618.2	4,618.2	42.7	92.4	-172.44	-1,168.3	-127.3	1,082.6	986.2	96.35	11.236	
5,500.0	4,729.7	4,690.7	4,690.7	43.4	93.8	-172.89	-1,168.3	-127.3	1,129.8	1,030.4	99.34	11.372	
5,511.8	4,739.7	4,700.7	4,700.7	43.5	94.0	-172.95	-1,168.3	-127.3	1,136.0	1,036.3	99.75	11.388	
5,600.0	4,815.1	4,776.1	4,776.1	44.2	95.5	-173.34	-1,168.3	-127.3	1,181.5	1,078.7	102.79	11.494	
5,610.2	4,823.9	4,784.9	4,784.9	44.2	95.7	-173.39	-1,168.3	-127.3	1,186.6	1,083.5	103.15	11.504	
5,700.0	4,902.3	4,863.3	4,863.3	44.9	97.3	-173.73	-1,168.3	-127.3	1,230.2	1,124.0	106.22	11.582	
5,708.6	4,909.9	4,870.9	4,870.9	45.0	97.4	-173.76	-1,168.3	-127.3	1,234.3	1,127.8	106.52	11.588	
5,800.0	4,991.1	4,952.1	4,952.1	45.6	99.1	-174.06	-1,168.3	-127.3	1,275.9	1,166.3	109.61	11.640	
5,807.1	4,997.4	4,958.4	4,958.4	45.7	99.2	-174.09	-1,168.3	-127.3	1,279.1	1,169.2	109.85	11.644	
5,900.0	5,081.5	5,042.5	5,042.5	46.3	100.9	-174.35	-1,168.3	-127.3	1,318.6	1,205.6	112.95	11.674	
5,905.5	5,086.5	5,047.5	5,047.5	46.3	101.0	-174.36	-1,168.3	-127.3	1,320.8	1,207.7	113.13	11.675	
6,000.0	5,173.3	5,134.3	5,134.3	46.9	102.7	-174.60	-1,168.3	-127.3	1,358.0	1,241.8	116.23	11.684	
6,003.9	5,176.9	5,137.9	5,137.9	47.0	102.8	-174.60	-1,168.3	-127.3	1,359.5	1,243.1	116.36	11.684	
6,100.0	5,266.4	5,227.4	5,227.4	47.5	104.6	-174.81	-1,168.3	-127.3	1,394.3	1,274.8	119.43	11.674	
6,102.3	5,268.6	5,229.6	5,229.6	47.5	104.7	-174.81	-1,168.3	-127.3	1,395.1	1,275.6	119.50	11.674	
6,200.0	5,360.8	5,321.8	5,321.8	48.1	106.5	-174.99	-1,168.3	-127.3	1,427.5	1,304.9	122.57	11.646	
6,200.8	5,361.5	5,322.5	5,322.5	48.1	106.5	-174.99	-1,168.3	-127.3	1,427.5	1,304.9	122.57	11.646	
6,299.2	5,455.5	5,416.5	5,416.5	48.6	108.4	-175.14	-1,168.3	-127.3	1,456.7	1,331.2	125.54	11.604	
6,300.0	5,456.2	5,417.2	5,417.2	48.6	108.4	-175.14	-1,168.3	-127.3	1,456.9	1,331.4	125.56	11.603	
6,397.6	5,550.4	5,511.4	5,511.4	49.0	110.3	-175.27	-1,168.3	-127.3	1,482.7	1,354.3	128.41	11.547	
6,400.0	5,552.7	5,513.7	5,513.7	49.0	110.4	-175.28	-1,168.3	-127.3	1,483.3	1,354.8	128.48	11.545	
6,496.0	5,646.1	5,607.1	5,607.1	49.4	112.3	-175.38	-1,168.3	-127.3	1,505.5	1,374.3	131.16	11.478	
6,500.0	5,650.0	5,611.0	5,611.0	49.4	112.3	-175.39	-1,168.3	-127.3	1,506.3	1,375.0	131.27	11.475	
6,594.5	5,742.6	5,703.6	5,703.6	49.7	114.2	-175.47	-1,168.3	-127.3	1,524.9	1,391.1	133.79	11.398	
6,600.0	5,748.0	5,709.0	5,709.0	49.8	114.3	-175.48	-1,168.3	-127.3	1,525.9	1,392.0	133.93	11.393	
6,692.9	5,839.7	5,800.7	5,800.7	50.0	116.1	-175.55	-1,168.3	-127.3	1,541.0	1,404.7	136.29	11.307	
6,700.0	5,846.7	5,807.7	5,807.7	50.1	116.3	-175.55	-1,168.3	-127.3	1,542.1	1,405.6	136.46	11.300	
6,791.3	5,937.2	5,898.2	5,898.2	50.3	118.1	-175.60	-1,168.3	-127.3	1,553.8	1,415.2	138.64	11.208	
6,800.0	5,945.9	5,906.9	5,906.9	50.3	118.3	-175.61	-1,168.3	-127.3	1,554.8	1,416.0	138.84	11.199	
6,889.7	6,035.2	5,996.2	5,996.2	50.5	120.1	-175.64	-1,168.3	-127.3	1,563.3	1,422.4	140.84	11.100	
6,900.0	6,045.4	6,006.4	6,006.4	50.5	120.3	-175.65	-1,168.3	-127.3	1,564.1	1,423.0	141.06	11.088	
6,988.2	6,133.4	6,094.4	6,094.4	50.6	122.1	-175.67	-1,168.3	-127.3	1,569.4	1,426.5	142.88	10.984	
7,000.0	6,145.3	6,106.3	6,106.3	50.6	122.3	-175.67	-1,168.3	-127.3	1,569.9	1,426.8	143.11	10.970	
7,086.6	6,231.8	6,192.8	6,192.8	50.7	124.0	-175.68	-1,168.3	-127.3	1,572.1	1,427.3	144.74	10.861	
7,100.0	6,245.2	6,206.2	6,206.2	50.7	124.3	-175.68	-1,168.3	-127.3	1,572.2	1,427.2	144.99	10.844	
7,116.8	6,262.0	6,223.0	6,223.0	50.7	124.6	16.32	-1,168.3	-127.3	1,572.2	1,397.0	175.24	8.972	
7,146.8	6,292.0	6,253.0	6,253.0	50.7	125.2	16.32	-1,168.3	-127.3	1,572.2	1,396.4	175.86	8.940	
7,150.0	6,295.2	6,256.2	6,256.2	50.8	125.3	106.36	-1,168.3	-127.3	1,572.2	1,426.2	146.01	10.768	
7,185.0	6,330.2	6,291.2	6,291.2	50.8	126.0	106.37	-1,168.3	-127.3	1,572.6	1,425.7	146.91	10.705	
7,200.0	6,345.1	6,306.1	6,306.1	50.8	126.3	106.38	-1,168.3	-127.3	1,572.9	1,425.7	147.28	10.680	
7,250.0	6,394.7	6,355.7	6,355.7	50.8	127.3	106.43	-1,168.3	-127.3	1,574.9	1,426.4	148.43	10.610	
7,283.4	6,427.4	6,388.4	6,388.4	50.9	128.0	106.47	-1,168.3	-127.3	1,576.9	1,427.7	149.14	10.573	
7,300.0	6,443.4	6,404.4	6,404.4	50.9	128.3	106.49	-1,168.3	-127.3	1,578.1	1,428.6	149.47	10.558	

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 21
<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 21	<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	
7,350.0	6,491.0	6,452.0	6,452.0	51.0	129.2	106.56	-1,168.3	-127.3	1,582.7	1,432.3	150.40	10.523	
7,381.9	6,520.6	6,481.6	6,481.6	51.1	129.8	106.60	-1,168.3	-127.3	1,586.3	1,435.4	150.93	10.510	
7,400.0	6,537.1	6,498.1	6,498.1	51.1	130.2	106.61	-1,168.3	-127.3	1,588.6	1,437.4	151.21	10.506	
7,450.0	6,581.3	6,542.3	6,542.3	51.2	131.1	106.60	-1,168.3	-127.3	1,596.1	1,444.1	151.94	10.504	
7,480.3	6,607.0	6,568.0	6,568.0	51.3	131.6	106.56	-1,168.3	-127.3	1,601.4	1,449.0	152.36	10.510	
7,500.0	6,623.3	6,584.3	6,584.3	51.4	131.9	106.52	-1,168.3	-127.3	1,605.1	1,452.5	152.63	10.516	
7,550.0	6,662.8	6,623.8	6,623.8	51.5	132.7	106.31	-1,168.3	-127.3	1,615.9	1,462.5	153.33	10.538	
7,578.7	6,684.2	6,645.2	6,645.2	51.6	133.1	106.12	-1,168.3	-127.3	1,622.8	1,469.0	153.77	10.553	
7,600.0	6,699.4	6,660.4	6,660.4	51.7	133.4	105.94	-1,168.3	-127.3	1,628.3	1,474.2	154.12	10.565	
7,650.0	6,733.0	6,694.0	6,694.0	51.9	134.1	105.38	-1,168.3	-127.3	1,642.6	1,487.6	155.07	10.593	
7,677.1	6,749.8	6,710.8	6,710.8	52.0	134.4	104.98	-1,168.3	-127.3	1,651.2	1,495.5	155.69	10.606	
7,700.0	6,763.2	6,724.2	6,724.2	52.1	134.7	104.58	-1,168.3	-127.3	1,658.8	1,502.5	156.26	10.616	
7,750.0	6,789.8	6,750.8	6,750.8	52.4	135.3	103.51	-1,168.3	-127.3	1,676.8	1,519.1	157.73	10.631	
7,775.6	6,802.0	6,763.0	6,763.0	52.5	135.5	102.85	-1,168.3	-127.3	1,686.8	1,528.2	158.60	10.636	
7,800.0	6,812.6	6,773.6	6,773.6	52.6	135.7	102.13	-1,168.3	-127.3	1,696.7	1,537.2	159.48	10.639	
7,850.0	6,831.5	6,792.5	6,792.5	52.9	136.1	100.41	-1,168.3	-127.3	1,718.4	1,556.9	161.44	10.644	
7,874.0	6,839.1	6,800.1	6,800.1	53.1	136.2	99.45	-1,168.3	-127.3	1,729.4	1,567.0	162.43	10.647	
7,900.0	6,846.3	6,807.3	6,807.3	53.2	136.4	98.32	-1,168.3	-127.3	1,741.8	1,578.3	163.49	10.654	
7,950.0	6,856.8	6,817.8	6,817.8	53.6	136.6	95.85	-1,168.3	-127.3	1,766.7	1,601.3	165.39	10.682	
7,972.4	6,860.2	6,821.2	6,821.2	53.7	136.7	94.62	-1,168.3	-127.3	1,778.3	1,612.2	166.14	10.704	
8,000.0	6,863.1	6,824.1	6,824.1	53.9	136.7	93.00	-1,168.3	-127.3	1,793.0	1,626.1	166.90	10.743	
8,046.9	6,865.0	6,826.0	6,826.0	54.3	136.8	90.00	-1,168.3	-127.3	1,818.7	1,651.0	167.68	10.847	
8,070.8	6,865.0	6,826.0	6,826.0	54.5	136.8	90.00	-1,168.3	-127.3	1,832.2	1,664.1	168.13	10.897	
8,100.0	6,865.0	6,826.0	6,826.0	54.8	136.8	90.00	-1,168.3	-127.3	1,848.9	1,680.2	168.69	10.960	
8,169.3	6,865.0	6,826.0	6,826.0	55.4	136.8	90.00	-1,168.3	-127.3	1,889.8	1,719.7	170.07	11.112	
8,200.0	6,865.0	6,826.0	6,826.0	55.6	136.8	90.00	-1,168.3	-127.3	1,908.5	1,737.8	170.68	11.181	
8,267.7	6,865.0	6,826.0	6,826.0	56.3	136.8	90.00	-1,168.3	-127.3	1,950.7	1,778.6	172.10	11.334	
8,300.0	6,865.0	6,826.0	6,826.0	56.6	136.8	90.00	-1,168.3	-127.3	1,971.3	1,798.5	172.78	11.409	
8,366.1	6,865.0	6,826.0	6,826.0	57.3	136.8	90.00	-1,168.3	-127.3	2,014.5	1,840.3	174.23	11.562	
8,400.0	6,865.0	6,826.0	6,826.0	57.7	136.8	90.00	-1,168.3	-127.3	2,037.1	1,862.1	174.97	11.643	
8,464.5	6,865.0	6,826.0	6,826.0	58.5	136.8	90.00	-1,168.3	-127.3	2,081.0	1,904.6	176.43	11.795	
8,500.0	6,865.0	6,826.0	6,826.0	58.9	136.8	90.00	-1,168.3	-127.3	2,105.6	1,928.4	177.24	11.880	
8,563.0	6,865.0	6,826.0	6,826.0	59.7	136.8	90.00	-1,168.3	-127.3	2,150.0	1,971.3	178.70	12.031	
8,600.0	6,865.0	6,826.0	6,826.0	60.2	136.8	90.00	-1,168.3	-127.3	2,176.6	1,997.0	179.57	12.121	
8,661.4	6,865.0	6,826.0	6,826.0	61.0	136.8	90.00	-1,168.3	-127.3	2,221.2	2,040.2	181.03	12.270	
8,700.0	6,865.0	6,826.0	6,826.0	61.6	136.8	90.00	-1,168.3	-127.3	2,249.7	2,067.8	181.95	12.364	
8,759.8	6,865.0	6,826.0	6,826.0	62.4	136.8	90.00	-1,168.3	-127.3	2,294.4	2,111.0	183.41	12.510	
8,800.0	6,865.0	6,826.0	6,826.0	63.0	136.8	90.00	-1,168.3	-127.3	2,324.9	2,140.5	184.38	12.609	
8,858.2	6,865.0	6,826.0	6,826.0	64.0	136.8	90.00	-1,168.3	-127.3	2,369.5	2,183.7	185.82	12.751	
8,900.0	6,865.0	6,826.0	6,826.0	64.6	136.8	90.00	-1,168.3	-127.3	2,401.8	2,215.0	186.85	12.854	
8,956.7	6,865.0	6,826.0	6,826.0	65.6	136.8	90.00	-1,168.3	-127.3	2,446.2	2,257.9	188.27	12.993	
9,000.0	6,865.0	6,826.0	6,826.0	66.3	136.8	90.00	-1,168.3	-127.3	2,480.4	2,291.1	189.36	13.099	
9,055.1	6,865.0	6,826.0	6,826.0	67.3	136.8	90.00	-1,168.3	-127.3	2,524.4	2,333.6	190.76	13.234	
9,100.0	6,865.0	6,826.0	6,826.0	68.1	136.8	90.00	-1,168.3	-127.3	2,560.5	2,368.6	191.89	13.344	
9,153.5	6,865.0	6,826.0	6,826.0	69.0	136.8	90.00	-1,168.3	-127.3	2,604.0	2,410.7	193.26	13.474	
9,200.0	6,865.0	6,826.0	6,826.0	69.9	136.8	90.00	-1,168.3	-127.3	2,642.0	2,447.5	194.45	13.587	
9,251.9	6,865.0	6,826.0	6,826.0	70.9	136.8	90.00	-1,168.3	-127.3	2,684.8	2,489.0	195.80	13.712	
9,300.0	6,864.9	6,825.9	6,825.9	71.8	136.8	90.00	-1,168.3	-127.3	2,724.7	2,527.7	197.04	13.828	
9,350.4	6,864.9	6,825.9	6,825.9	72.8	136.8	90.00	-1,168.3	-127.3	2,766.8	2,568.4	198.35	13.949	
9,400.0	6,864.9	6,825.9	6,825.9	73.8	136.8	90.00	-1,168.3	-127.3	2,808.5	2,608.9	199.64	14.068	
9,448.8	6,864.9	6,825.9	6,825.9	74.8	136.8	90.00	-1,168.3	-127.3	2,849.8	2,648.9	200.92	14.184	
9,500.0	6,864.9	6,825.9	6,825.9	75.9	136.8	90.00	-1,168.3	-127.3	2,893.4	2,691.1	202.26	14.305	

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 21
<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 21	<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	
9,547.2	6,864.9	6,825.9	6,825.9	76.9	136.8	90.00	-1,168.3	-127.3	2,933.8	2,730.3	203.50	14.416	
9,600.0	6,864.9	6,825.9	6,825.9	78.0	136.8	90.00	-1,168.3	-127.3	2,979.1	2,774.2	204.89	14.540	
9,645.6	6,864.9	6,825.9	6,825.9	79.0	136.8	90.00	-1,168.3	-127.3	3,018.6	2,812.5	206.10	14.646	
9,700.0	6,864.9	6,825.9	6,825.9	80.2	136.8	90.00	-1,168.3	-127.3	3,065.8	2,858.2	207.54	14.772	
9,744.1	6,864.9	6,825.9	6,825.9	81.1	136.8	90.00	-1,168.3	-127.3	3,104.2	2,895.5	208.72	14.873	
9,800.0	6,864.9	6,825.9	6,825.9	82.4	136.8	90.00	-1,168.3	-127.3	3,153.2	2,943.0	210.20	15.001	
9,842.5	6,864.9	6,825.9	6,825.9	83.4	136.8	90.00	-1,168.3	-127.3	3,190.6	2,979.3	211.34	15.097	
9,900.0	6,864.9	6,825.9	6,825.9	84.7	136.8	90.00	-1,168.3	-127.3	3,241.4	3,028.5	212.88	15.227	
9,940.9	6,864.9	6,825.9	6,825.9	85.6	136.8	90.00	-1,168.3	-127.3	3,277.7	3,063.7	213.97	15.318	
10,000.0	6,864.9	6,825.9	6,825.9	87.0	136.8	90.00	-1,168.3	-127.3	3,330.2	3,114.7	215.56	15.449	
10,039.3	6,864.9	6,825.9	6,825.9	87.9	136.8	90.00	-1,168.3	-127.3	3,365.4	3,148.7	216.61	15.536	
10,100.0	6,864.9	6,825.9	6,825.9	89.3	136.8	90.00	-1,168.3	-127.3	3,419.7	3,201.4	218.25	15.669	
10,137.8	6,864.9	6,825.9	6,825.9	90.2	136.8	90.00	-1,168.3	-127.3	3,453.6	3,234.4	219.27	15.751	
10,200.0	6,864.9	6,825.9	6,825.9	91.7	136.8	90.00	-1,168.3	-127.3	3,509.7	3,288.8	220.94	15.885	
10,236.2	6,864.9	6,825.9	6,825.9	92.6	136.8	90.00	-1,168.3	-127.3	3,542.4	3,320.5	221.92	15.962	
10,300.0	6,864.9	6,825.9	6,825.9	94.1	136.8	90.00	-1,168.3	-127.3	3,600.3	3,376.6	223.65	16.098	
10,334.6	6,864.9	6,825.9	6,825.9	94.9	136.8	90.00	-1,168.3	-127.3	3,631.7	3,407.1	224.59	16.171	
10,400.0	6,864.9	6,825.9	6,825.9	96.5	136.8	90.00	-1,168.3	-127.3	3,691.3	3,464.9	226.36	16.307	
10,433.0	6,864.9	6,825.9	6,825.9	97.3	136.8	90.00	-1,168.3	-127.3	3,721.5	3,494.2	227.26	16.376	
10,500.0	6,864.9	6,825.9	6,825.9	99.0	136.8	90.00	-1,168.3	-127.3	3,782.8	3,553.7	229.08	16.513	
10,531.5	6,864.9	6,825.9	6,825.9	99.8	136.8	90.00	-1,168.3	-127.3	3,811.7	3,581.7	229.94	16.577	
10,600.0	6,864.9	6,825.9	6,825.9	101.5	136.8	90.00	-1,168.3	-127.3	3,874.7	3,642.9	231.80	16.716	
10,629.9	6,864.9	6,825.9	6,825.9	102.2	136.8	90.00	-1,168.3	-127.3	3,902.2	3,669.6	232.62	16.775	
10,700.0	6,864.9	6,825.9	6,825.9	104.0	136.8	90.00	-1,168.3	-127.3	3,967.0	3,732.5	234.53	16.915	
10,728.3	6,864.9	6,825.9	6,825.9	104.7	136.8	90.00	-1,168.3	-127.3	3,993.2	3,757.9	235.30	16.970	
10,800.0	6,864.9	6,825.9	6,825.9	106.5	136.8	90.00	-1,168.3	-127.3	4,059.7	3,822.4	237.26	17.110	
10,826.7	6,864.9	6,825.9	6,825.9	107.2	136.8	90.00	-1,168.3	-127.3	4,084.5	3,846.5	237.99	17.162	
10,900.0	6,864.9	6,825.9	6,825.9	109.0	136.8	90.00	-1,168.3	-127.3	4,152.7	3,912.7	240.00	17.303	
10,925.2	6,864.9	6,825.9	6,825.9	109.7	136.8	90.00	-1,168.3	-127.3	4,176.1	3,935.4	240.69	17.351	
11,000.0	6,864.9	6,825.9	6,825.9	111.6	136.8	90.00	-1,168.3	-127.3	4,246.0	4,003.2	242.74	17.492	
11,023.6	6,864.9	6,825.9	6,825.9	112.2	136.8	90.00	-1,168.3	-127.3	4,268.1	4,024.7	243.39	17.536	
11,100.0	6,864.9	6,825.9	6,825.9	114.2	136.8	90.00	-1,168.3	-127.3	4,339.6	4,094.1	245.48	17.678	
11,122.0	6,864.9	6,825.9	6,825.9	114.7	136.8	90.00	-1,168.3	-127.3	4,360.3	4,114.2	246.09	17.718	
11,200.0	6,864.9	6,825.9	6,825.9	116.7	136.8	90.00	-1,168.3	-127.3	4,433.5	4,185.3	248.23	17.860	
11,220.4	6,864.9	6,825.9	6,825.9	117.3	136.8	90.00	-1,168.3	-127.3	4,452.7	4,203.9	248.79	17.897	
11,300.0	6,864.9	6,825.9	6,825.9	119.3	136.8	90.00	-1,168.3	-127.3	4,527.7	4,276.7	250.98	18.040	
11,318.9	6,864.9	6,825.9	6,825.9	119.8	136.8	90.00	-1,168.3	-127.3	4,545.5	4,294.0	251.50	18.073	
11,400.0	6,864.9	6,825.9	6,825.9	121.9	136.8	90.00	-1,168.3	-127.3	4,622.1	4,368.3	253.74	18.216	
11,417.3	6,864.9	6,825.9	6,825.9	122.4	136.8	90.00	-1,168.3	-127.3	4,638.4	4,384.2	254.21	18.246	
11,500.0	6,864.9	6,825.9	6,825.9	124.6	136.8	90.00	-1,168.3	-127.3	4,716.7	4,460.2	256.49	18.389	
11,515.7	6,864.9	6,825.9	6,825.9	125.0	136.8	90.00	-1,168.3	-127.3	4,731.6	4,474.7	256.93	18.416	
11,600.0	6,864.9	6,825.9	6,825.9	127.2	136.8	90.00	-1,168.3	-127.3	4,811.6	4,552.3	259.25	18.560	
11,614.1	6,864.9	6,825.9	6,825.9	127.6	136.8	90.00	-1,168.3	-127.3	4,825.0	4,565.4	259.64	18.583	
11,700.0	6,864.9	6,825.9	6,825.9	129.8	136.8	90.00	-1,168.3	-127.3	4,906.6	4,644.6	262.01	18.727	
11,712.6	6,864.9	6,825.9	6,825.9	130.2	136.8	90.00	-1,168.3	-127.3	4,918.6	4,656.2	262.36	18.748	
11,800.0	6,864.9	6,825.9	6,825.9	132.5	136.8	90.00	-1,168.3	-127.3	5,001.9	4,737.1	264.77	18.891	
11,811.0	6,864.9	6,825.9	6,825.9	132.8	136.8	90.00	-1,168.3	-127.3	5,012.4	4,747.3	265.08	18.909	
11,900.0	6,864.9	6,825.9	6,825.9	135.1	136.8	90.00	-1,168.3	-127.3	5,097.3	4,829.8	267.54	19.052	
11,909.4	6,864.9	6,825.9	6,825.9	135.4	136.8	90.00	-1,168.3	-127.3	5,106.3	4,838.5	267.80	19.068	
12,000.0	6,864.9	6,825.9	6,825.9	137.8	136.8	90.00	-1,168.3	-127.3	5,192.9	4,922.6	270.31	19.211	
12,007.8	6,864.9	6,825.9	6,825.9	138.0	136.8	90.00	-1,168.3	-127.3	5,200.4	4,929.9	270.52	19.223	
12,100.0	6,864.9	6,825.9	6,825.9	140.4	136.8	90.00	-1,168.3	-127.3	5,288.7	5,015.6	273.08	19.367	

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 21
<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 21	<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	
12,106.3	6,864.9	6,825.9	6,825.9	140.6	136.8	90.00	-1,168.3	-127.3	5,294.7	5,021.4	273.25	19.377	
12,200.0	6,864.9	6,825.9	6,825.9	143.1	136.8	90.00	-1,168.3	-127.3	5,384.6	5,108.8	275.85	19.520	
12,204.7	6,864.9	6,825.9	6,825.9	143.2	136.8	90.00	-1,168.3	-127.3	5,389.1	5,113.1	275.98	19.527	
12,300.0	6,864.9	6,825.9	6,825.9	145.8	136.8	90.00	-1,168.3	-127.3	5,480.7	5,202.0	278.62	19.671	
12,303.1	6,864.9	6,825.9	6,825.9	145.9	136.8	90.00	-1,168.3	-127.3	5,483.7	5,205.0	278.71	19.675	
12,400.0	6,864.9	6,825.9	6,825.9	148.5	136.8	90.00	-1,168.3	-127.3	5,576.9	5,295.5	281.39	19.819	
12,401.5	6,864.9	6,825.9	6,825.9	148.5	136.8	90.00	-1,168.3	-127.3	5,578.4	5,296.9	281.44	19.821	
12,500.0	6,864.9	6,825.9	6,825.9	151.2	136.8	90.00	-1,168.3	-127.3	5,673.2	5,389.0	284.17	19.964	
12,598.4	6,864.9	6,825.9	6,825.9	153.8	136.8	90.00	-1,168.3	-127.3	5,768.1	5,481.2	286.90	20.105	
12,600.0	6,864.9	6,825.9	6,825.9	153.9	136.8	90.00	-1,168.3	-127.3	5,769.7	5,482.7	286.95	20.107	
12,696.8	6,864.9	6,825.9	6,825.9	156.5	136.8	90.00	-1,168.3	-127.3	5,863.2	5,573.5	289.64	20.243	
12,700.0	6,864.9	6,825.9	6,825.9	156.6	136.8	90.00	-1,168.3	-127.3	5,866.3	5,576.5	289.72	20.248	
12,795.2	6,864.9	6,825.9	6,825.9	159.1	136.8	90.00	-1,168.3	-127.3	5,958.3	5,666.0	292.37	20.379	
12,800.0	6,864.9	6,825.9	6,825.9	159.3	136.8	90.00	-1,168.3	-127.3	5,962.9	5,670.4	292.50	20.386	
12,893.7	6,864.9	6,825.9	6,825.9	161.8	136.8	90.00	-1,168.3	-127.3	6,053.6	5,758.5	295.11	20.513	
12,900.0	6,864.9	6,825.9	6,825.9	162.0	136.8	90.00	-1,168.3	-127.3	6,059.7	5,764.5	295.28	20.522	
12,992.1	6,864.9	6,825.9	6,825.9	164.5	136.8	90.00	-1,168.3	-127.3	6,149.0	5,851.1	297.84	20.645	
13,000.0	6,864.9	6,825.9	6,825.9	164.7	136.8	90.00	-1,168.3	-127.3	6,156.6	5,858.6	298.06	20.655	
13,090.5	6,864.9	6,825.9	6,825.9	167.2	136.8	90.00	-1,168.3	-127.3	6,244.5	5,943.9	300.58	20.775	
13,100.0	6,864.9	6,825.9	6,825.9	167.4	136.8	90.00	-1,168.3	-127.3	6,253.6	5,952.8	300.85	20.787	
13,188.9	6,864.9	6,825.9	6,825.9	169.8	136.8	90.00	-1,168.3	-127.3	6,340.0	6,036.7	303.32	20.902	
13,200.0	6,864.9	6,825.9	6,825.9	170.1	136.8	90.00	-1,168.3	-127.3	6,350.7	6,047.1	303.63	20.916	
13,287.4	6,864.9	6,825.9	6,825.9	172.5	136.8	90.00	-1,168.3	-127.3	6,435.6	6,129.6	306.06	21.027	
13,300.0	6,864.9	6,825.9	6,825.9	172.9	136.8	90.00	-1,168.3	-127.3	6,447.9	6,141.5	306.41	21.043	
13,385.8	6,864.9	6,825.9	6,825.9	175.2	136.8	90.00	-1,168.3	-127.3	6,531.4	6,222.6	308.80	21.151	
13,400.0	6,864.9	6,825.9	6,825.9	175.6	136.8	90.00	-1,168.3	-127.3	6,545.2	6,236.0	309.20	21.168	
13,484.2	6,864.9	6,825.9	6,825.9	177.9	136.8	90.00	-1,168.3	-127.3	6,627.2	6,315.6	311.55	21.272	
13,500.0	6,864.9	6,825.9	6,825.9	178.3	136.8	90.00	-1,168.3	-127.3	6,642.5	6,330.6	311.98	21.291	
13,582.6	6,864.9	6,825.9	6,825.9	180.6	136.8	90.00	-1,168.3	-127.3	6,723.1	6,408.8	314.29	21.391	
13,600.0	6,864.9	6,825.9	6,825.9	181.0	136.8	90.01	-1,168.3	-127.3	6,740.0	6,425.2	314.77	21.412	
13,681.1	6,864.9	6,825.9	6,825.9	183.3	136.8	90.01	-1,168.3	-127.3	6,819.0	6,502.0	317.03	21.509	
13,700.0	6,864.9	6,825.9	6,825.9	183.8	136.8	90.01	-1,168.3	-127.3	6,837.5	6,519.9	317.56	21.531	
13,779.5	6,864.9	6,825.9	6,825.9	186.0	136.8	90.01	-1,168.3	-127.3	6,915.0	6,595.3	319.78	21.625	
13,800.0	6,864.9	6,825.9	6,825.9	186.5	136.8	90.01	-1,168.3	-127.3	6,935.0	6,614.7	320.35	21.649	
13,877.9	6,864.9	6,825.9	6,825.9	188.6	136.8	90.01	-1,168.3	-127.3	7,011.1	6,688.6	322.52	21.739	
13,900.0	6,864.9	6,825.9	6,825.9	189.3	136.8	90.01	-1,168.3	-127.3	7,032.7	6,709.5	323.14	21.764	
13,976.3	6,864.9	6,825.9	6,825.9	191.3	136.8	90.01	-1,168.3	-127.3	7,107.3	6,782.0	325.27	21.851	
14,000.0	6,864.9	6,825.9	6,825.9	192.0	136.8	90.01	-1,168.3	-127.3	7,130.4	6,804.5	325.93	21.877	
14,074.8	6,864.9	6,825.9	6,825.9	194.0	136.8	90.01	-1,168.3	-127.3	7,203.5	6,875.5	328.01	21.961	
14,100.0	6,864.9	6,825.9	6,825.9	194.7	136.8	90.01	-1,168.3	-127.3	7,228.1	6,899.4	328.72	21.989	
14,173.2	6,864.9	6,825.9	6,825.9	196.7	136.8	90.01	-1,168.3	-127.3	7,299.8	6,969.0	330.76	22.070	
14,200.0	6,864.9	6,825.9	6,825.9	197.5	136.8	90.01	-1,168.3	-127.3	7,326.0	6,994.5	331.51	22.099	
14,271.6	6,864.9	6,825.9	6,825.9	199.5	136.8	90.01	-1,168.3	-127.3	7,396.1	7,062.6	333.51	22.177	
14,300.0	6,864.9	6,825.9	6,825.9	200.2	136.8	90.01	-1,168.3	-127.3	7,423.9	7,089.6	334.30	22.207	
14,370.0	6,864.9	6,825.9	6,825.9	202.2	136.8	90.01	-1,168.3	-127.3	7,492.5	7,156.2	336.25	22.282	
14,400.0	6,864.9	6,825.9	6,825.9	203.0	136.8	90.01	-1,168.3	-127.3	7,521.8	7,184.7	337.09	22.314	
14,468.5	6,864.9	6,825.9	6,825.9	204.9	136.8	90.01	-1,168.3	-127.3	7,588.9	7,249.9	339.00	22.386	
14,500.0	6,864.9	6,825.9	6,825.9	205.7	136.8	90.01	-1,168.3	-127.3	7,619.8	7,279.9	339.88	22.419	
14,566.9	6,864.9	6,825.9	6,825.9	207.6	136.8	90.01	-1,168.3	-127.3	7,685.4	7,343.6	341.75	22.488	
14,600.0	6,864.9	6,825.9	6,825.9	208.5	136.8	90.01	-1,168.3	-127.3	7,717.8	7,375.2	342.68	22.522	
14,665.3	6,865.0	6,826.0	6,826.0	210.3	136.8	90.01	-1,168.3	-127.3	7,781.9	7,437.4	344.50	22.589	
14,700.0	6,865.0	6,826.0	6,826.0	211.2	136.8	90.01	-1,168.3	-127.3	7,815.9	7,470.5	345.47	22.624	

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 21
<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 21	<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
14,763.7	6,865.0	6,826.0	6,826.0	213.0	136.8	90.01	-1,168.3	-127.3	7,878.5	7,531.3	347.25	22.688	
14,800.0	6,865.0	6,826.0	6,826.0	214.0	136.8	90.01	-1,168.3	-127.3	7,914.1	7,565.8	348.26	22.724	
14,862.2	6,865.0	6,826.0	6,826.0	215.7	136.8	90.01	-1,168.3	-127.3	7,975.1	7,625.1	350.00	22.786	
14,900.0	6,865.0	6,826.0	6,826.0	216.8	136.8	90.01	-1,168.3	-127.3	8,012.3	7,661.2	351.06	22.823	
14,960.6	6,865.0	6,826.0	6,826.0	218.4	136.8	90.01	-1,168.3	-127.3	8,071.8	7,719.1	352.75	22.882	
15,000.0	6,865.0	6,826.0	6,826.0	219.5	136.8	90.01	-1,168.3	-127.3	8,110.5	7,756.7	353.85	22.921	
15,059.0	6,865.0	6,826.0	6,826.0	221.1	136.8	90.01	-1,168.3	-127.3	8,168.5	7,813.0	355.50	22.977	
15,100.0	6,865.0	6,826.0	6,826.0	222.3	136.8	90.01	-1,168.3	-127.3	8,208.8	7,852.1	356.65	23.017	
15,157.4	6,865.0	6,826.0	6,826.0	223.9	136.8	90.01	-1,168.3	-127.3	8,265.3	7,907.0	358.25	23.071	
15,200.0	6,865.0	6,826.0	6,826.0	225.0	136.8	90.01	-1,168.3	-127.3	8,307.1	7,947.7	359.44	23.111	
15,255.9	6,865.0	6,826.0	6,826.0	226.6	136.8	90.01	-1,168.3	-127.3	8,362.1	8,001.1	361.01	23.163	
15,300.0	6,865.0	6,826.0	6,826.0	227.8	136.8	90.01	-1,168.3	-127.3	8,405.5	8,043.2	362.24	23.204	
15,354.3	6,865.0	6,826.0	6,826.0	229.3	136.8	90.01	-1,168.3	-127.3	8,458.9	8,095.1	363.76	23.254	
15,400.0	6,865.0	6,826.0	6,826.0	230.6	136.8	90.01	-1,168.3	-127.3	8,503.9	8,138.8	365.04	23.296	
15,452.7	6,865.0	6,826.0	6,826.0	232.0	136.8	90.01	-1,168.3	-127.3	8,555.8	8,189.2	366.51	23.344	
15,500.0	6,865.0	6,826.0	6,826.0	233.3	136.8	90.01	-1,168.3	-127.3	8,602.3	8,234.5	367.83	23.386	
15,551.1	6,865.0	6,826.0	6,826.0	234.7	136.8	90.01	-1,168.3	-127.3	8,652.7	8,283.4	369.26	23.432	
15,600.0	6,865.0	6,826.0	6,826.0	236.1	136.8	90.01	-1,168.3	-127.3	8,700.8	8,330.1	370.63	23.476	
15,649.6	6,865.0	6,826.0	6,826.0	237.5	136.8	90.01	-1,168.3	-127.3	8,749.6	8,377.6	372.02	23.519	
15,700.0	6,865.0	6,826.0	6,826.0	238.9	136.8	90.02	-1,168.3	-127.3	8,799.3	8,425.8	373.43	23.564	
15,748.0	6,865.0	6,826.0	6,826.0	240.2	136.8	90.02	-1,168.3	-127.3	8,846.6	8,471.8	374.77	23.605	
15,800.0	6,865.0	6,826.0	6,826.0	241.6	136.8	90.02	-1,168.3	-127.3	8,897.8	8,521.6	376.23	23.650	
15,843.4	6,865.0	6,826.0	6,826.0	242.8	136.8	90.02	-1,168.3	-127.3	8,940.6	8,563.2	377.44	23.688	

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 21
<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 21	<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	-68.20	32.4	-81.0	89.1				
98.4	98.4	80.9	80.9	0.1	0.0	-68.21	32.3	-80.8	87.1	86.9	0.14	619.611	
100.0	100.0	82.5	82.5	0.1	0.0	-68.21	32.3	-80.8	87.1	86.9	0.14	607.835	
196.8	196.8	179.5	179.5	0.3	0.2	-68.27	32.0	-80.2	86.4	85.9	0.50	172.856	
200.0	200.0	182.6	182.6	0.3	0.2	-68.28	32.0	-80.2	86.4	85.9	0.51	168.701	
295.3	295.3	277.6	277.6	0.5	0.3	-68.42	31.6	-79.8	85.8	85.0	0.81	105.662	
300.0	300.0	282.3	282.3	0.5	0.3	-68.43	31.5	-79.8	85.8	85.0	0.83	103.834	
393.7	393.7	375.7	375.7	0.8	0.3	-68.76	31.0	-79.8	85.6	84.5	1.10	78.115	
398.2	398.2	380.2	380.2	0.8	0.3	-68.78	31.0	-79.8	85.6	84.5	1.11	77.208 CC	
400.0	400.0	382.0	382.0	0.8	0.4	-68.79	31.0	-79.8	85.6	84.5	1.11	76.854	
492.1	492.1	474.0	474.0	1.0	0.4	-69.22	30.4	-80.2	85.7	84.4	1.37	62.441	
500.0	500.0	481.9	481.9	1.0	0.4	-69.26	30.4	-80.2	85.7	84.4	1.40	61.464	
590.5	590.5	572.3	572.3	1.2	0.5	-69.67	29.9	-80.6	86.0	84.3	1.64	52.315 ES	
600.0	600.0	581.7	581.7	1.2	0.5	-69.71	29.8	-80.7	86.0	84.3	1.67	51.525	
689.0	689.0	670.7	670.7	1.4	0.5	-70.09	29.4	-81.1	86.3	84.4	1.91	45.192	
700.0	700.0	681.8	681.7	1.4	0.5	-70.14	29.3	-81.2	86.3	84.4	1.94	44.518	
787.4	787.4	769.1	769.1	1.6	0.6	-70.55	28.8	-81.7	86.6	84.4	2.17	39.863	
800.0	800.0	781.7	781.7	1.7	0.6	-70.61	28.8	-81.7	86.6	84.4	2.21	39.277	
885.8	885.8	867.5	867.5	1.9	0.6	-70.99	28.3	-82.2	87.0	84.6	2.43	35.750	
900.0	900.0	881.7	881.6	1.9	0.6	-71.04	28.3	-82.3	87.1	84.6	2.47	35.231	
984.2	984.2	965.7	965.7	2.1	0.6	-71.31	28.0	-82.9	87.5	84.8	2.69	32.487	
1,000.0	1,000.0	981.5	981.4	2.1	0.7	-71.35	28.0	-83.0	87.6	84.8	2.73	32.032	
1,082.7	1,082.7	1,064.0	1,063.9	2.3	0.7	97.22	27.9	-83.6	88.3	85.4	2.92	30.227	
1,100.0	1,100.0	1,081.2	1,081.2	2.3	0.7	97.53	27.9	-83.8	88.5	85.6	2.96	29.892	
1,181.1	1,181.0	1,162.1	1,162.0	2.5	0.7	99.90	28.0	-84.6	89.9	86.8	3.13	28.697	
1,200.0	1,199.8	1,180.9	1,180.8	2.5	0.7	100.65	28.1	-84.8	90.4	87.2	3.17	28.471	
1,279.5	1,279.1	1,259.9	1,259.9	2.6	0.8	104.58	28.4	-85.7	92.8	89.4	3.35	27.657	
1,300.0	1,299.5	1,280.2	1,280.2	2.7	0.8	105.79	28.5	-85.9	93.6	90.2	3.40	27.517	
1,377.9	1,376.9	1,357.3	1,357.2	2.8	0.8	110.99	29.2	-86.8	97.7	94.1	3.60	27.162	
1,400.0	1,398.7	1,379.0	1,378.9	2.9	0.8	112.63	29.5	-87.0	99.2	95.5	3.65	27.159 SF	
1,476.4	1,474.2	1,454.2	1,454.1	3.1	0.8	118.70	31.0	-87.7	105.7	101.8	3.86	27.357	
1,500.0	1,497.5	1,477.4	1,477.3	3.1	0.8	120.67	31.5	-87.9	108.2	104.2	3.93	27.529	
1,574.8	1,571.0	1,550.7	1,550.6	3.4	0.8	126.94	33.4	-88.0	117.6	113.4	4.16	28.290	
1,604.5	1,600.0	1,579.7	1,579.6	3.5	0.8	129.37	34.2	-88.0	122.0	117.7	4.25	28.733	
1,669.5	1,663.6	1,642.9	1,642.8	3.7	0.8	134.40	35.9	-87.8	132.5	128.1	4.43	29.884	
1,673.2	1,667.2	1,646.6	1,646.4	3.7	0.8	134.66	36.0	-87.7	133.1	128.7	4.45	29.951	
1,700.0	1,693.4	1,672.5	1,672.3	3.8	0.9	136.50	36.8	-87.6	137.9	133.4	4.53	30.463	
1,771.6	1,763.1	1,741.8	1,741.7	4.0	0.9	141.19	38.9	-87.0	152.2	147.4	4.75	32.023	
1,800.0	1,790.5	1,769.2	1,769.0	4.1	0.9	142.92	39.7	-86.7	158.4	153.6	4.84	32.747	
1,870.1	1,858.1	1,836.7	1,836.4	4.5	0.9	146.91	41.6	-85.8	175.3	170.3	5.06	34.648	
1,900.0	1,886.8	1,865.3	1,865.1	4.6	0.9	148.49	42.4	-85.3	183.2	178.0	5.15	35.559	
1,968.5	1,952.2	1,930.3	1,930.0	4.9	0.9	151.82	44.1	-84.0	202.4	197.1	5.37	37.679	
2,000.0	1,982.0	1,959.8	1,959.5	5.1	0.9	153.22	44.9	-83.3	212.0	206.5	5.47	38.780	
2,066.9	2,045.2	2,022.5	2,022.1	5.5	0.9	156.00	46.7	-81.6	233.7	228.0	5.68	41.152	
2,100.0	2,076.2	2,053.7	2,053.3	5.6	0.9	157.28	47.5	-80.6	245.0	239.2	5.78	42.361	
2,165.3	2,137.1	2,115.0	2,114.6	6.1	0.9	159.60	49.0	-78.5	268.4	262.4	5.99	44.795	
2,200.0	2,169.1	2,147.2	2,146.7	6.3	1.0	160.72	49.6	-77.3	281.5	275.4	6.10	46.134	
2,263.8	2,227.7	2,206.0	2,205.5	6.7	1.0	162.60	50.7	-75.0	306.5	300.2	6.31	48.589	
2,300.0	2,260.7	2,239.1	2,238.5	7.0	1.0	163.57	51.2	-73.7	321.3	314.9	6.42	50.012	
2,362.2	2,316.9	2,295.5	2,294.9	7.4	1.0	165.07	51.9	-71.4	347.8	341.2	6.63	52.425	
2,400.0	2,350.8	2,329.7	2,329.1	7.7	1.0	165.91	52.3	-70.0	364.5	357.7	6.76	53.917	
2,460.6	2,404.6	2,384.1	2,383.4	8.2	1.0	167.14	52.8	-67.7	392.2	385.2	6.97	56.262	

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 21
<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 21	<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	
2,500.0	2,439.3	2,418.7	2,418.0	8.6	1.0	167.86	53.1	-66.2	410.8	403.7	7.11	57.797	
2,559.0	2,490.8	2,469.7	2,468.9	9.1	1.0	168.85	53.4	-64.0	439.7	432.3	7.32	60.047	
2,600.0	2,526.2	2,504.6	2,503.8	9.4	1.0	169.47	53.7	-62.4	460.4	452.9	7.47	61.626	
2,657.5	2,575.3	2,552.8	2,551.9	10.0	1.0	170.27	54.1	-60.3	490.4	482.7	7.69	63.771	
2,700.0	2,611.2	2,588.0	2,587.1	10.4	1.0	170.80	54.3	-58.8	513.3	505.4	7.85	65.375	
2,755.9	2,658.0	2,634.4	2,633.4	11.0	1.1	171.46	54.7	-56.7	544.2	536.2	8.07	67.427	
2,800.0	2,694.4	2,670.7	2,669.7	11.4	1.1	171.94	55.0	-55.1	569.3	561.1	8.24	69.055	
2,854.3	2,738.8	2,714.7	2,713.7	12.0	1.1	172.49	55.3	-53.0	601.0	592.5	8.47	70.993	
2,900.0	2,775.6	2,750.8	2,749.8	12.5	1.1	172.90	55.6	-51.4	628.3	619.6	8.65	72.628	
2,952.7	2,817.6	2,792.1	2,791.0	13.1	1.1	173.34	55.9	-49.6	660.6	651.7	8.87	74.451	
3,000.0	2,854.7	2,828.5	2,827.4	13.6	1.1	173.70	56.2	-48.0	690.2	681.1	9.07	76.082	
3,051.2	2,894.4	2,867.4	2,866.2	14.2	1.1	174.05	56.6	-46.3	723.0	713.7	9.30	77.781	
3,100.0	2,931.7	2,904.1	2,902.9	14.8	1.1	174.36	56.9	-44.8	755.0	745.5	9.51	79.407	
3,149.6	2,969.0	2,942.2	2,941.0	15.4	1.1	174.66	57.2	-43.3	788.1	778.3	9.73	81.001	
3,191.9	3,000.4	2,974.3	2,973.1	15.9	1.1	174.90	57.4	-42.0	816.7	806.8	9.92	82.358	
3,200.0	3,006.4	2,980.5	2,979.2	16.0	1.1	174.96	57.4	-41.8	822.3	812.3	9.96	82.590	
3,248.0	3,041.7	3,015.8	3,014.5	16.6	1.1	175.27	57.6	-40.4	855.0	844.9	10.19	83.909	
3,300.0	3,080.0	3,052.6	3,051.3	17.2	1.2	175.57	57.8	-39.0	890.6	880.1	10.45	85.260	
3,346.4	3,114.3	3,085.5	3,084.2	17.8	1.2	175.81	58.1	-37.8	922.3	911.7	10.68	86.393	
3,400.0	3,153.7	3,124.7	3,123.4	18.5	1.2	176.07	58.4	-36.5	959.0	948.1	10.94	87.626	
3,444.9	3,186.8	3,158.3	3,156.9	19.1	1.2	176.28	58.6	-35.5	989.7	978.6	11.17	88.588	
3,500.0	3,227.4	3,199.6	3,198.2	19.8	1.2	176.51	58.9	-34.2	1,027.4	1,016.0	11.45	89.707	
3,543.3	3,259.3	3,233.8	3,232.4	20.3	1.2	176.68	59.1	-33.3	1,057.0	1,045.3	11.67	90.538	
3,600.0	3,301.1	3,279.0	3,277.5	21.0	1.2	176.89	59.2	-32.0	1,095.6	1,083.6	11.97	91.561	
3,641.7	3,331.8	3,311.8	3,310.3	21.6	1.2	177.03	59.2	-31.2	1,123.9	1,111.7	12.18	92.263	
3,700.0	3,374.8	3,356.3	3,354.9	22.3	1.2	177.21	59.1	-30.1	1,163.3	1,150.9	12.48	93.195	
3,740.1	3,404.3	3,387.1	3,385.6	22.8	1.2	177.32	59.0	-29.4	1,190.5	1,177.8	12.69	93.796	
3,800.0	3,448.4	3,432.3	3,430.8	23.6	1.2	177.48	58.8	-28.3	1,230.9	1,217.9	13.01	94.639	
3,838.6	3,476.9	3,461.3	3,459.8	24.1	1.3	177.57	58.7	-27.7	1,257.0	1,243.8	13.21	95.150	
3,900.0	3,522.1	3,507.3	3,505.8	24.9	1.3	177.71	58.4	-26.7	1,298.5	1,284.9	13.54	95.924	
3,937.0	3,549.4	3,534.4	3,533.0	25.3	1.3	177.79	58.3	-26.1	1,323.4	1,309.7	13.73	96.362	
4,000.0	3,595.8	3,580.6	3,579.1	26.1	1.3	177.91	58.1	-25.2	1,366.0	1,351.9	14.07	97.077	
4,035.4	3,621.9	3,607.1	3,605.5	26.6	1.3	177.98	57.9	-24.6	1,389.9	1,375.6	14.26	97.459	
4,100.0	3,669.5	3,658.0	3,656.5	27.4	1.3	178.11	57.6	-23.5	1,433.4	1,418.8	14.61	98.113	
4,133.8	3,694.4	3,684.8	3,683.2	27.9	1.3	178.18	57.4	-22.8	1,456.2	1,441.4	14.79	98.436	
4,200.0	3,743.2	3,733.9	3,732.3	28.7	1.3	178.30	56.9	-21.6	1,500.6	1,485.5	15.15	99.046	
4,232.3	3,767.0	3,757.1	3,755.6	29.1	1.3	178.35	56.7	-21.0	1,522.4	1,507.0	15.33	99.332	
4,300.0	3,816.9	3,805.9	3,804.3	30.0	1.3	178.47	56.2	-19.7	1,567.9	1,552.2	15.69	99.909	
4,330.7	3,839.5	3,827.9	3,826.3	30.4	1.3	178.52	56.0	-19.1	1,588.6	1,572.8	15.86	100.153	
4,400.0	3,890.5	3,877.6	3,876.0	31.3	1.4	178.63	55.7	-17.7	1,635.3	1,619.1	16.24	100.687	
4,429.1	3,912.0	3,898.5	3,896.9	31.7	1.4	178.67	55.5	-17.2	1,655.0	1,638.6	16.40	100.903	
4,500.0	3,964.2	3,946.8	3,945.2	32.6	1.4	178.76	55.2	-15.9	1,702.9	1,686.1	16.79	101.412	
4,527.5	3,984.5	3,965.6	3,963.9	32.9	1.4	178.79	55.2	-15.5	1,721.5	1,704.6	16.94	101.604	
4,600.0	4,037.9	4,014.6	4,013.0	33.9	1.4	178.86	55.1	-14.7	1,770.6	1,753.3	17.34	102.086	
4,626.0	4,057.0	4,032.2	4,030.5	34.2	1.4	178.88	55.2	-14.4	1,788.3	1,770.8	17.49	102.253	
4,700.0	4,111.6	4,082.0	4,080.4	35.2	1.4	178.93	55.4	-14.0	1,838.6	1,820.7	17.90	102.715	
4,724.4	4,129.6	4,100.0	4,098.4	35.5	1.4	178.94	55.5	-13.9	1,855.3	1,837.2	18.04	102.856	
4,800.0	4,185.3	4,154.7	4,153.1	36.5	1.4	178.97	55.9	-13.8	1,906.8	1,888.3	18.46	103.288	
4,822.8	4,202.1	4,171.8	4,170.2	36.7	1.4	178.97	56.0	-13.8	1,922.4	1,903.8	18.59	103.411	
4,900.0	4,259.0	4,228.6	4,227.0	37.7	1.4	178.99	56.5	-14.0	1,974.9	1,955.9	19.02	103.813	
4,921.2	4,274.6	4,244.0	4,242.4	38.0	1.4	178.99	56.6	-14.1	1,989.4	1,970.3	19.14	103.921	
4,989.9	4,325.2	4,293.7	4,292.1	38.9	1.4	179.00	57.0	-14.4	2,036.1	2,016.6	19.53	104.259	

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 21
<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 21	<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		
5,000.0	4,332.6	4,301.1	4,299.4	39.0	1.4	179.01	57.1	-14.4	2,043.0	2,023.5	19.59	104.310		
5,019.7	4,347.2	4,315.5	4,313.8	39.2	1.4	179.02	57.2	-14.5	2,056.4	2,036.7	19.69	104.422		
5,100.0	4,407.7	4,375.1	4,373.5	39.9	1.4	179.05	57.8	-14.8	2,109.7	2,089.5	20.12	104.863		
5,118.1	4,421.6	4,388.8	4,387.1	40.1	1.4	179.06	57.9	-14.9	2,121.4	2,101.2	20.21	104.972		
5,200.0	4,485.1	4,453.4	4,451.8	40.8	1.5	179.09	58.5	-15.3	2,173.6	2,153.0	20.61	105.442		
5,216.5	4,498.1	4,466.8	4,465.1	41.0	1.5	179.09	58.6	-15.3	2,183.9	2,163.2	20.69	105.545		
5,300.0	4,564.6	4,535.5	4,533.8	41.7	1.5	179.11	59.1	-15.8	2,234.8	2,213.7	21.07	106.051		
5,314.9	4,576.6	4,548.0	4,546.3	41.8	1.5	179.12	59.2	-15.9	2,243.7	2,222.5	21.14	106.150		
5,400.0	4,646.1	4,620.2	4,618.5	42.6	1.5	179.14	59.6	-16.4	2,293.0	2,271.5	21.49	106.699		
5,413.4	4,657.2	4,631.6	4,630.0	42.7	1.5	179.14	59.7	-16.4	2,300.6	2,279.0	21.54	106.793		
5,500.0	4,729.7	4,706.3	4,704.7	43.4	1.5	179.16	60.0	-16.8	2,348.2	2,326.4	21.87	107.390		
5,511.8	4,739.7	4,716.3	4,714.6	43.5	1.5	179.16	60.1	-16.9	2,354.6	2,332.6	21.91	107.479		
5,600.0	4,815.1	4,791.4	4,789.8	44.2	1.5	179.18	60.4	-17.3	2,400.5	2,378.3	22.20	108.134		
5,610.2	4,823.9	4,800.0	4,798.3	44.2	1.5	179.19	60.4	-17.3	2,405.7	2,383.4	22.23	108.218		
5,700.0	4,902.3	4,877.1	4,875.4	44.9	1.5	179.21	60.7	-17.5	2,449.8	2,427.3	22.49	108.932		
5,708.6	4,909.9	4,884.5	4,882.9	45.0	1.5	179.21	60.8	-17.6	2,453.9	2,431.4	22.51	109.007		
5,800.0	4,991.1	4,965.9	4,964.2	45.6	1.5	179.23	61.1	-17.6	2,496.0	2,473.3	22.74	109.784		
5,807.1	4,997.4	4,972.3	4,970.6	45.7	1.5	179.23	61.1	-17.6	2,499.2	2,476.4	22.75	109.849		
5,900.0	5,081.5	5,059.4	5,057.7	46.3	1.5	179.26	61.3	-17.5	2,539.1	2,516.1	22.94	110.697		
5,905.5	5,086.5	5,064.6	5,062.9	46.3	1.5	179.26	61.4	-17.4	2,541.3	2,518.4	22.95	110.752		
6,000.0	5,173.3	5,154.6	5,153.0	46.9	1.6	179.29	61.4	-17.0	2,578.8	2,555.7	23.09	111.676		
6,003.9	5,176.9	5,158.4	5,156.7	47.0	1.6	179.30	61.4	-17.0	2,580.3	2,557.2	23.10	111.718		
6,100.0	5,266.4	5,248.1	5,246.5	47.5	1.6	179.33	61.3	-16.4	2,615.3	2,592.1	23.20	112.727		
6,102.3	5,268.6	5,250.3	5,248.6	47.5	1.6	179.33	61.3	-16.3	2,616.1	2,592.9	23.20	112.754		
6,200.0	5,360.8	5,338.4	5,336.7	48.1	1.6	179.36	61.3	-15.5	2,648.5	2,625.2	23.26	113.856		
6,200.8	5,361.5	5,339.1	5,337.4	48.1	1.6	179.36	61.3	-15.5	2,648.7	2,625.5	23.26	113.865		
6,299.2	5,455.5	5,425.4	5,423.8	48.6	1.6	179.39	61.4	-14.7	2,678.4	2,655.1	23.28	115.053		
6,300.0	5,456.2	5,426.1	5,424.4	48.6	1.6	179.39	61.4	-14.7	2,678.6	2,655.3	23.28	115.062		
6,397.6	5,550.4	5,513.1	5,511.4	49.0	1.6	179.42	61.9	-13.9	2,705.1	2,681.9	23.26	116.310		
6,400.0	5,552.7	5,515.4	5,513.7	49.0	1.6	179.42	61.9	-13.9	2,705.7	2,682.5	23.26	116.340		
6,496.0	5,646.1	5,610.6	5,608.9	49.4	1.7	179.44	62.5	-13.1	2,728.6	2,705.4	23.20	117.620		
6,500.0	5,650.0	5,614.9	5,613.2	49.4	1.7	179.44	62.5	-13.1	2,729.5	2,706.3	23.20	117.672		
6,594.5	5,742.6	5,716.9	5,715.2	49.7	1.7	179.48	62.7	-11.6	2,748.6	2,725.5	23.10	118.996		
6,600.0	5,748.0	5,722.6	5,720.9	49.8	1.7	179.49	62.7	-11.5	2,749.6	2,726.6	23.09	119.073		
6,692.9	5,839.7	5,821.3	5,819.6	50.0	1.7	179.53	62.6	-9.7	2,765.0	2,742.1	22.96	120.434		
6,700.0	5,846.7	5,829.6	5,827.9	50.1	1.7	179.53	62.6	-9.6	2,766.1	2,743.1	22.95	120.535		
6,791.3	5,937.2	5,929.8	5,928.1	50.3	1.7	179.57	62.0	-8.0	2,777.7	2,754.9	22.79	121.904		
6,800.0	5,945.9	5,938.1	5,936.4	50.3	1.7	179.57	62.0	-7.9	2,778.6	2,755.9	22.77	122.031		
6,889.7	6,035.2	6,026.9	6,025.2	50.5	1.8	179.60	61.5	-6.7	2,786.9	2,764.3	22.58	123.408		
6,900.0	6,045.4	6,037.9	6,036.1	50.5	1.8	179.61	61.4	-6.5	2,787.7	2,765.1	22.56	123.560		
6,988.2	6,133.4	6,128.4	6,126.6	50.6	1.8	179.63	60.8	-5.4	2,792.6	2,770.3	22.36	124.907		
7,000.0	6,145.3	6,139.6	6,137.8	50.6	1.8	179.63	60.7	-5.3	2,793.1	2,770.7	22.33	125.081		
7,086.6	6,231.8	6,220.7	6,218.9	50.7	1.8	179.65	60.3	-4.4	2,795.0	2,772.9	22.11	126.389		
7,100.0	6,245.2	6,232.9	6,231.1	50.7	1.8	179.66	60.3	-4.3	2,795.1	2,773.1	22.08	126.581		
7,116.8	6,262.0	6,248.1	6,246.4	50.7	1.8	11.66	60.2	-4.1	2,795.2	2,742.7	52.48	53.258		
7,142.8	6,288.0	6,271.8	6,270.0	50.7	1.8	11.66	60.2	-3.9	2,795.2	2,742.7	52.50	53.238		
7,146.8	6,292.0	6,275.4	6,273.6	50.7	1.8	11.67	60.2	-3.8	2,795.2	2,742.6	52.51	53.235		
7,150.0	6,295.2	6,278.3	6,276.6	50.8	1.8	101.71	60.2	-3.8	2,795.2	2,773.1	22.09	126.506		
7,185.0	6,330.2	6,311.3	6,309.5	50.8	1.8	101.71	60.1	-3.4	2,795.4	2,773.2	22.28	125.460		
7,200.0	6,345.1	6,326.4	6,324.7	50.8	1.8	101.71	60.1	-3.3	2,795.7	2,773.3	22.36	125.021		
7,250.0	6,394.7	6,376.5	6,374.7	50.8	1.8	101.72	60.0	-2.8	2,797.1	2,774.5	22.64	123.558		
7,283.4	6,427.4	6,409.5	6,407.8	50.9	1.9	101.72	60.0	-2.4	2,798.6	2,775.8	22.83	122.585		

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 21
<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 21	<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	
7,300.0	6,443.4	6,425.6	6,423.8	50.9	1.9	101.72	59.9	-2.3	2,799.5	2,776.5	22.93	122.112	
7,350.0	6,491.0	6,473.4	6,471.6	51.0	1.9	101.70	59.9	-1.8	2,802.8	2,779.5	23.23	120.661	
7,381.9	6,520.6	6,503.1	6,501.4	51.1	1.9	101.67	59.8	-1.6	2,805.4	2,781.9	23.44	119.706	
7,400.0	6,537.1	6,520.1	6,518.3	51.1	1.9	101.65	59.8	-1.4	2,807.0	2,783.5	23.56	119.167	
7,450.0	6,581.3	6,565.5	6,563.7	51.2	1.9	101.56	59.7	-1.1	2,812.3	2,788.4	23.92	117.586	
7,480.3	6,607.0	6,592.0	6,590.2	51.3	1.9	101.48	59.7	-0.9	2,816.0	2,791.9	24.16	116.547	
7,500.0	6,623.3	6,608.2	6,606.4	51.4	1.9	101.40	59.6	-0.7	2,818.7	2,794.3	24.33	115.869	
7,550.0	6,662.8	6,646.7	6,645.0	51.5	1.9	101.14	59.6	-0.5	2,826.2	2,801.4	24.80	113.967	
7,578.7	6,684.2	6,667.6	6,665.8	51.6	1.9	100.94	59.5	-0.3	2,831.0	2,805.9	25.11	112.750	
7,600.0	6,699.4	6,682.5	6,680.7	51.7	1.9	100.77	59.5	-0.2	2,834.8	2,809.5	25.35	111.844	
7,650.0	6,733.0	6,700.0	6,698.2	51.9	1.9	100.03	59.5	-0.1	2,844.8	2,818.8	25.98	109.484	
7,677.1	6,749.8	6,700.0	6,698.2	52.0	1.9	99.42	59.5	-0.1	2,850.9	2,824.5	26.38	108.079	
7,700.0	6,763.2	6,700.0	6,698.2	52.1	1.9	98.86	59.5	-0.1	2,856.3	2,829.6	26.72	106.913	
7,750.0	6,789.8	6,700.0	6,698.2	52.4	1.9	97.53	59.5	-0.1	2,869.3	2,841.7	27.53	104.225	
7,775.6	6,802.0	6,700.0	6,698.2	52.5	1.9	96.79	59.5	-0.1	2,876.4	2,848.4	27.98	102.816	
7,800.0	6,812.6	6,700.0	6,698.2	52.6	1.9	96.05	59.5	-0.1	2,883.6	2,855.2	28.40	101.549	
7,850.0	6,831.5	6,700.0	6,698.2	52.9	1.9	94.42	59.5	-0.1	2,899.1	2,869.8	29.28	99.015	
7,874.0	6,839.1	6,700.0	6,698.2	53.1	1.9	93.59	59.5	-0.1	2,907.0	2,877.3	29.71	97.860	
7,900.0	6,846.3	6,700.0	6,698.2	53.2	1.9	92.66	59.5	-0.1	2,915.7	2,885.6	30.14	96.741	
7,950.0	6,856.8	6,700.0	6,698.2	53.6	1.9	90.79	59.5	-0.1	2,933.3	2,902.4	30.94	94.821	
7,972.4	6,860.2	6,700.0	6,698.2	53.7	1.9	89.91	59.5	-0.1	2,941.5	2,910.2	31.27	94.078	
8,000.0	6,863.1	6,700.0	6,698.2	53.9	1.9	88.81	59.5	-0.1	2,951.7	2,920.1	31.63	93.325	
8,046.9	6,865.0	6,700.0	6,698.2	54.3	1.9	86.89	59.5	-0.1	2,969.5	2,937.4	32.15	92.359	
8,070.8	6,865.0	6,700.0	6,698.2	54.5	1.9	86.89	59.5	-0.1	2,978.8	2,946.2	32.61	91.344	
8,100.0	6,865.0	6,700.0	6,698.2	54.8	1.9	86.89	59.5	-0.1	2,990.4	2,957.2	33.17	90.155	
8,169.3	6,865.0	6,700.0	6,698.2	55.4	1.9	86.89	59.5	-0.1	3,018.8	2,984.2	34.56	87.357	
8,200.0	6,865.0	6,700.0	6,698.2	55.6	1.9	86.89	59.5	-0.1	3,031.8	2,996.6	35.17	86.199	
8,267.7	6,865.0	6,700.0	6,698.2	56.3	1.9	86.89	59.5	-0.1	3,061.4	3,024.8	36.60	83.652	
8,300.0	6,865.0	6,700.0	6,698.2	56.6	1.9	86.89	59.5	-0.1	3,075.9	3,038.6	37.28	82.517	
8,366.1	6,865.0	6,700.0	6,698.2	57.3	1.9	86.89	59.5	-0.1	3,106.5	3,067.8	38.73	80.213	
8,400.0	6,865.0	6,700.0	6,698.2	57.7	1.9	86.89	59.5	-0.1	3,122.6	3,083.1	39.47	79.109	
8,464.5	6,865.0	6,700.0	6,698.2	58.5	1.9	86.89	59.5	-0.1	3,154.0	3,113.1	40.94	77.043	
8,500.0	6,865.0	6,700.0	6,698.2	58.9	1.9	86.89	59.5	-0.1	3,171.7	3,130.0	41.74	75.980	
8,563.0	6,865.0	6,700.0	6,698.2	59.7	1.9	86.89	59.5	-0.1	3,203.9	3,160.7	43.22	74.137	
8,600.0	6,865.0	6,700.0	6,698.2	60.2	1.9	86.89	59.5	-0.1	3,223.2	3,179.2	44.08	73.121	
8,661.4	6,865.0	6,700.0	6,698.2	61.0	1.9	86.89	59.5	-0.1	3,256.0	3,210.4	45.55	71.483	
8,700.0	6,865.0	6,700.0	6,698.2	61.6	1.9	86.89	59.5	-0.1	3,277.0	3,230.5	46.47	70.516	
8,759.8	6,865.0	6,700.0	6,698.2	62.4	1.9	86.89	59.5	-0.1	3,310.2	3,262.2	47.93	69.063	
8,800.0	6,865.0	6,700.0	6,698.2	63.0	1.9	86.89	59.5	-0.1	3,332.9	3,284.0	48.91	68.145	
8,858.2	6,865.0	6,700.0	6,698.2	64.0	1.9	86.89	59.5	-0.1	3,366.4	3,316.0	50.35	66.858	
8,900.0	6,865.0	6,700.0	6,698.2	64.6	1.9	86.89	59.5	-0.1	3,390.8	3,339.4	51.38	65.989	
8,956.7	6,865.0	6,700.0	6,698.2	65.6	1.9	86.89	59.5	-0.1	3,424.5	3,371.7	52.81	64.849	
9,000.0	6,865.0	6,700.0	6,698.2	66.3	1.9	86.89	59.5	-0.1	3,450.6	3,396.7	53.89	64.026	
9,055.1	6,865.0	6,700.0	6,698.2	67.3	1.9	86.89	59.5	-0.1	3,484.4	3,429.1	55.29	63.017	
9,100.0	6,865.0	6,700.0	6,698.2	68.1	1.9	86.89	59.5	-0.1	3,512.3	3,455.9	56.43	62.239	
9,153.5	6,865.0	6,700.0	6,698.2	69.0	1.9	86.89	59.5	-0.1	3,546.0	3,488.2	57.80	61.345	
9,200.0	6,865.0	6,700.0	6,698.2	69.9	1.9	86.89	59.5	-0.1	3,575.7	3,516.7	59.00	60.609	
9,251.9	6,865.0	6,700.0	6,698.2	70.9	1.9	86.89	59.5	-0.1	3,609.3	3,549.0	60.34	59.816	
9,300.0	6,864.9	6,700.0	6,698.2	71.8	1.9	86.89	59.5	-0.1	3,640.7	3,579.2	61.58	59.120	
9,350.4	6,864.9	6,700.0	6,698.2	72.8	1.9	86.89	59.5	-0.1	3,674.1	3,611.2	62.89	58.417	
9,400.0	6,864.9	6,700.0	6,698.2	73.8	1.9	86.89	59.5	-0.1	3,707.3	3,643.2	64.19	57.759	
9,448.8	6,864.9	6,700.0	6,698.2	74.8	1.9	86.89	59.5	-0.1	3,740.4	3,674.9	65.47	57.135	

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 21
<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 21	<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						
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
9,500.0	6,864.9	6,700.0	6,698.2	75.9	1.9	86.89	59.5	-0.1	3,775.4	3,708.6	66.81	56.511	
9,547.2	6,864.9	6,700.0	6,698.2	76.9	1.9	86.89	59.5	-0.1	3,808.1	3,740.0	68.05	55.957	
9,600.0	6,864.9	6,700.0	6,698.2	78.0	1.9	86.89	59.5	-0.1	3,844.9	3,775.5	69.45	55.366	
9,645.6	6,864.9	6,700.0	6,698.2	79.0	1.9	86.89	59.5	-0.1	3,877.1	3,806.4	70.65	54.873	
9,700.0	6,864.9	6,700.0	6,698.2	80.2	1.9	86.89	59.5	-0.1	3,915.7	3,843.6	72.09	54.313	
9,744.1	6,864.9	6,700.0	6,698.2	81.1	1.9	86.89	59.5	-0.1	3,947.3	3,874.0	73.27	53.875	
9,800.0	6,864.9	6,700.0	6,698.2	82.4	1.9	86.89	59.5	-0.1	3,987.7	3,913.0	74.76	53.343	
9,842.5	6,864.9	6,700.0	6,698.2	83.4	1.9	86.89	59.5	-0.1	4,018.7	3,942.8	75.89	52.953	
9,900.0	6,864.9	6,700.0	6,698.2	84.7	1.9	86.89	59.5	-0.1	4,061.0	3,983.5	77.43	52.448	
9,940.9	6,864.9	6,700.0	6,698.2	85.6	1.9	86.89	59.5	-0.1	4,091.3	4,012.7	78.53	52.100	
10,000.0	6,864.9	6,700.0	6,698.2	87.0	1.9	86.89	59.5	-0.1	4,135.3	4,055.2	80.11	51.620	
10,039.3	6,864.9	6,700.0	6,698.2	87.9	1.9	86.89	59.5	-0.1	4,164.9	4,083.7	81.17	51.311	
10,100.0	6,864.9	6,700.0	6,698.2	89.3	1.9	86.89	59.5	-0.1	4,210.7	4,127.9	82.80	50.854	
10,137.8	6,864.9	6,700.0	6,698.2	90.2	1.9	86.89	59.5	-0.1	4,239.5	4,155.7	83.82	50.578	
10,200.0	6,864.9	6,700.0	6,698.2	91.7	1.9	86.89	59.5	-0.1	4,287.1	4,201.6	85.50	50.143	
10,236.2	6,864.9	6,700.0	6,698.2	92.6	1.9	86.89	59.5	-0.1	4,315.0	4,228.6	86.48	49.898	
10,300.0	6,864.9	6,700.0	6,698.2	94.1	1.9	86.89	59.5	-0.1	4,364.5	4,276.3	88.20	49.482	
10,334.6	6,864.9	6,700.0	6,698.2	94.9	1.9	86.89	59.5	-0.1	4,391.5	4,302.4	89.14	49.264	
10,400.0	6,864.9	6,700.0	6,698.2	96.5	1.9	86.89	59.5	-0.1	4,442.8	4,351.9	90.91	48.868	
10,433.0	6,864.9	6,700.0	6,698.2	97.3	1.9	86.89	59.5	-0.1	4,468.9	4,377.0	91.81	48.674	
10,500.0	6,864.9	6,700.0	6,698.2	99.0	1.9	86.89	59.5	-0.1	4,521.9	4,428.3	93.63	48.295	
10,531.5	6,864.9	6,700.0	6,698.2	99.8	1.9	86.89	59.5	-0.1	4,547.0	4,452.5	94.49	48.122	
10,600.0	6,864.9	6,700.0	6,698.2	101.5	1.9	86.89	59.5	-0.1	4,601.9	4,505.5	96.35	47.760	
10,629.9	6,864.9	6,700.0	6,698.2	102.2	1.9	86.89	59.5	-0.1	4,625.9	4,528.8	97.17	47.607	
10,700.0	6,864.9	6,700.0	6,698.2	104.0	1.9	86.89	59.5	-0.1	4,682.6	4,583.5	99.08	47.260	
10,728.3	6,864.9	6,700.0	6,698.2	104.7	1.9	86.89	59.5	-0.1	4,705.6	4,605.7	99.85	47.124	
10,800.0	6,864.9	6,700.0	6,698.2	106.5	1.9	86.89	59.5	-0.1	4,764.0	4,662.2	101.81	46.792	
10,826.7	6,864.9	6,700.0	6,698.2	107.2	1.9	86.89	59.5	-0.1	4,785.9	4,683.4	102.54	46.672	
10,900.0	6,864.9	6,700.0	6,698.2	109.0	1.9	86.89	59.5	-0.1	4,846.2	4,741.6	104.55	46.353	
10,925.2	6,864.9	6,700.0	6,698.2	109.7	1.9	86.89	59.5	-0.1	4,867.0	4,761.7	105.24	46.247	
11,000.0	6,864.9	6,700.0	6,698.2	111.6	1.9	86.89	59.5	-0.1	4,929.0	4,821.7	107.29	45.942	
11,023.6	6,864.9	6,700.0	6,698.2	112.2	1.9	86.89	59.5	-0.1	4,948.6	4,840.7	107.94	45.848	
11,100.0	6,864.9	6,700.0	6,698.2	114.2	1.9	86.89	59.5	-0.1	5,012.4	4,902.4	110.03	45.554	
11,122.0	6,864.9	6,700.0	6,698.2	114.7	1.9	86.89	59.5	-0.1	5,030.9	4,920.2	110.64	45.472	
11,200.0	6,864.9	6,700.0	6,698.2	116.7	1.9	86.89	59.5	-0.1	5,096.4	4,983.7	112.78	45.190	
11,220.4	6,864.9	6,700.0	6,698.2	117.3	1.9	86.89	59.5	-0.1	5,113.7	5,000.4	113.34	45.118	
11,300.0	6,864.9	6,700.0	6,698.2	119.3	1.9	86.89	59.5	-0.1	5,181.0	5,065.5	115.53	44.847	
11,318.9	6,864.9	6,700.0	6,698.2	119.8	1.9	86.89	59.5	-0.1	5,197.1	5,081.0	116.05	44.784	
11,400.0	6,864.9	6,700.0	6,698.2	121.9	1.9	86.89	59.5	-0.1	5,266.2	5,147.9	118.28	44.523	
11,417.3	6,864.9	6,700.0	6,698.2	122.4	1.9	86.89	59.5	-0.1	5,280.9	5,162.2	118.76	44.469	
11,500.0	6,864.9	6,700.0	6,698.2	124.6	1.9	86.89	59.5	-0.1	5,351.8	5,230.8	121.03	44.218	
11,515.7	6,864.9	6,700.0	6,698.2	125.0	1.9	86.89	59.5	-0.1	5,365.3	5,243.9	121.47	44.171	
11,600.0	6,864.9	6,700.0	6,698.2	127.2	1.9	86.89	59.5	-0.1	5,438.0	5,314.2	123.79	43.929	
11,614.1	6,864.9	6,700.0	6,698.2	127.6	1.9	86.89	59.5	-0.1	5,450.2	5,326.0	124.18	43.889	
11,700.0	6,864.9	6,700.0	6,698.2	129.8	1.9	86.89	59.5	-0.1	5,524.6	5,398.0	126.55	43.655	
11,712.6	6,864.9	6,700.0	6,698.2	130.2	1.9	86.89	59.5	-0.1	5,535.5	5,408.6	126.90	43.622	
11,800.0	6,864.9	6,700.0	6,698.2	132.5	1.9	86.89	59.5	-0.1	5,611.6	5,482.3	129.31	43.396	
11,811.0	6,864.9	6,700.0	6,698.2	132.8	1.9	86.89	59.5	-0.1	5,621.2	5,491.6	129.61	43.369	
11,900.0	6,864.9	6,700.0	6,698.2	135.1	1.9	86.89	59.5	-0.1	5,699.1	5,567.0	132.07	43.151	
11,909.4	6,864.9	6,700.0	6,698.2	135.4	1.9	86.89	59.5	-0.1	5,707.3	5,575.0	132.33	43.128	
12,000.0	6,864.9	6,700.0	6,698.2	137.8	1.9	86.89	59.5	-0.1	5,787.0	5,652.1	134.84	42.917	
12,007.8	6,864.9	6,700.0	6,698.2	138.0	1.9	86.89	59.5	-0.1	5,793.9	5,658.8	135.06	42.900	

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 21
<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 21	<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
12,100.0	6,864.9	6,700.0	6,698.2	140.4	1.9	86.89	59.5	-0.1	5,875.2	5,737.6	137.61	42.696	
12,106.3	6,864.9	6,700.0	6,698.2	140.6	1.9	86.89	59.5	-0.1	5,880.8	5,743.0	137.78	42.682	
12,200.0	6,864.9	6,700.0	6,698.2	143.1	1.9	86.89	59.5	-0.1	5,963.9	5,823.5	140.37	42.485	
12,204.7	6,864.9	6,700.0	6,698.2	143.2	1.9	86.89	59.5	-0.1	5,968.0	5,827.5	140.51	42.476	
12,300.0	6,864.9	6,700.0	6,698.2	145.8	1.9	86.89	59.5	-0.1	6,052.9	5,909.7	143.15	42.285	
12,303.1	6,864.9	6,700.0	6,698.2	145.9	1.9	86.89	59.5	-0.1	6,055.7	5,912.4	143.23	42.279	
12,400.0	6,864.9	6,700.0	6,698.2	148.5	1.9	86.89	59.5	-0.1	6,142.2	5,996.3	145.92	42.094	
12,401.5	6,864.9	6,700.0	6,698.2	148.5	1.9	86.89	59.5	-0.1	6,143.6	5,997.6	145.96	42.091	
12,500.0	6,864.9	6,700.0	6,698.2	151.2	1.9	86.89	59.5	-0.1	6,231.9	6,083.2	148.69	41.912	
12,598.4	6,864.9	6,700.0	6,698.2	153.8	1.9	86.89	59.5	-0.1	6,320.4	6,169.0	151.42	41.741	
12,600.0	6,864.9	6,700.0	6,698.2	153.9	1.9	86.89	59.5	-0.1	6,321.8	6,170.4	151.46	41.738	
12,696.8	6,864.9	6,700.0	6,698.2	156.5	1.9	86.89	59.5	-0.1	6,409.2	6,255.1	154.15	41.577	
12,700.0	6,864.9	6,700.0	6,698.2	156.6	1.9	86.89	59.5	-0.1	6,412.1	6,257.8	154.24	41.572	
12,795.2	6,864.9	6,700.0	6,698.2	159.1	1.9	86.89	59.5	-0.1	6,498.3	6,341.4	156.88	41.421	
12,800.0	6,864.9	6,700.0	6,698.2	159.3	1.9	86.89	59.5	-0.1	6,502.6	6,345.6	157.02	41.414	
12,893.7	6,864.9	6,700.0	6,698.2	161.8	1.9	86.89	59.5	-0.1	6,587.7	6,428.1	159.62	41.272	
12,900.0	6,864.9	6,700.0	6,698.2	162.0	1.9	86.89	59.5	-0.1	6,593.5	6,433.7	159.79	41.262	
12,992.1	6,864.9	6,700.0	6,698.2	164.5	1.9	86.89	59.5	-0.1	6,677.3	6,515.0	162.35	41.129	
13,000.0	6,864.9	6,700.0	6,698.2	164.7	1.9	86.89	59.5	-0.1	6,684.5	6,522.0	162.57	41.117	
13,090.5	6,864.9	6,700.0	6,698.2	167.2	1.9	86.89	59.5	-0.1	6,767.2	6,602.1	165.09	40.991	
13,100.0	6,864.9	6,700.0	6,698.2	167.4	1.9	86.89	59.5	-0.1	6,775.9	6,610.5	165.35	40.978	
13,188.9	6,864.9	6,700.0	6,698.2	169.8	1.9	86.89	59.5	-0.1	6,857.3	6,689.5	167.83	40.860	
13,200.0	6,864.9	6,700.0	6,698.2	170.1	1.9	86.89	59.5	-0.1	6,867.5	6,699.3	168.13	40.845	
13,287.4	6,864.9	6,700.0	6,698.2	172.5	1.9	86.89	59.5	-0.1	6,947.7	6,777.1	170.56	40.734	
13,300.0	6,864.9	6,700.0	6,698.2	172.9	1.9	86.89	59.5	-0.1	6,959.3	6,788.4	170.91	40.718	
13,385.8	6,864.9	6,700.0	6,698.2	175.2	1.9	86.89	59.5	-0.1	7,038.2	6,864.9	173.30	40.612	
13,400.0	6,864.9	6,700.0	6,698.2	175.6	1.9	86.89	59.5	-0.1	7,051.3	6,877.6	173.70	40.595	
13,484.2	6,864.9	6,700.0	6,698.2	177.9	1.9	86.89	59.5	-0.1	7,129.0	6,952.9	176.04	40.496	
13,500.0	6,864.9	6,700.0	6,698.2	178.3	1.9	86.89	59.5	-0.1	7,143.5	6,967.1	176.48	40.478	
13,582.6	6,864.9	6,700.0	6,698.2	180.6	1.9	86.89	59.5	-0.1	7,219.9	7,041.2	178.78	40.384	
13,600.0	6,864.9	6,700.0	6,698.2	181.0	1.9	86.89	59.5	-0.1	7,236.0	7,056.7	179.26	40.365	
13,681.1	6,864.9	6,700.0	6,698.2	183.3	1.9	86.89	59.5	-0.1	7,311.1	7,129.6	181.52	40.277	
13,700.0	6,864.9	6,700.0	6,698.2	183.8	1.9	86.89	59.5	-0.1	7,328.6	7,146.6	182.05	40.256	
13,779.5	6,864.9	6,700.0	6,698.2	186.0	1.9	86.89	59.5	-0.1	7,402.4	7,218.2	184.26	40.173	
13,800.0	6,864.9	6,700.0	6,698.2	186.5	1.9	86.89	59.5	-0.1	7,421.5	7,236.7	184.83	40.152	
13,877.9	6,864.9	6,700.0	6,698.2	188.6	1.9	86.89	59.5	-0.1	7,494.0	7,307.0	187.01	40.073	
13,900.0	6,864.9	6,700.0	6,698.2	189.3	1.9	86.89	59.5	-0.1	7,514.5	7,326.9	187.62	40.052	
13,976.3	6,864.9	6,700.0	6,698.2	191.3	1.9	86.89	59.5	-0.1	7,585.7	7,395.9	189.75	39.977	
14,000.0	6,864.9	6,700.0	6,698.2	192.0	1.9	86.89	59.5	-0.1	7,607.7	7,417.3	190.41	39.955	
14,074.8	6,864.9	6,700.0	6,698.2	194.0	1.9	86.89	59.5	-0.1	7,677.5	7,485.0	192.49	39.885	
14,100.0	6,864.9	6,700.0	6,698.2	194.7	1.9	86.89	59.5	-0.1	7,701.1	7,507.9	193.19	39.862	
14,173.2	6,864.9	6,700.0	6,698.2	196.7	1.9	86.89	59.5	-0.1	7,769.5	7,574.3	195.24	39.796	
14,200.0	6,864.9	6,700.0	6,698.2	197.5	1.9	86.89	59.5	-0.1	7,794.6	7,598.6	195.98	39.772	
14,271.6	6,864.9	6,700.0	6,698.2	199.5	1.9	86.89	59.5	-0.1	7,861.7	7,663.7	197.98	39.710	
14,300.0	6,864.9	6,700.0	6,698.2	200.2	1.9	86.89	59.5	-0.1	7,888.3	7,689.6	198.77	39.685	
14,370.0	6,864.9	6,700.0	6,698.2	202.2	1.9	86.89	59.5	-0.1	7,954.0	7,753.3	200.72	39.627	
14,400.0	6,864.9	6,700.0	6,698.2	203.0	1.9	86.89	59.5	-0.1	7,982.2	7,780.6	201.56	39.602	
14,468.5	6,864.9	6,700.0	6,698.2	204.9	1.9	86.89	59.5	-0.1	8,046.5	7,843.0	203.47	39.546	
14,500.0	6,864.9	6,700.0	6,698.2	205.7	1.9	86.89	59.5	-0.1	8,076.2	7,871.8	204.35	39.521	
14,566.9	6,864.9	6,700.0	6,698.2	207.6	1.9	86.89	59.5	-0.1	8,139.1	7,932.9	206.22	39.469	
14,600.0	6,864.9	6,700.0	6,698.2	208.5	1.9	86.89	59.5	-0.1	8,170.3	7,963.2	207.14	39.443	
14,665.3	6,865.0	6,700.0	6,698.2	210.3	1.9	86.89	59.5	-0.1	8,231.9	8,022.9	208.96	39.394	

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 21
<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 21	<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
14,700.0	6,865.0	6,700.0	6,698.2	211.2	1.9	86.89	59.5	-0.1	8,264.6	8,054.7	209.93	39.368	
14,763.7	6,865.0	6,700.0	6,698.2	213.0	1.9	86.89	59.5	-0.1	8,324.8	8,113.0	211.71	39.322	
14,800.0	6,865.0	6,700.0	6,698.2	214.0	1.9	86.89	59.5	-0.1	8,359.0	8,146.3	212.72	39.295	
14,862.2	6,865.0	6,700.0	6,698.2	215.7	1.9	86.89	59.5	-0.1	8,417.8	8,203.3	214.46	39.251	
14,900.0	6,865.0	6,700.0	6,698.2	216.8	1.9	86.89	59.5	-0.1	8,453.5	8,238.0	215.51	39.225	
14,960.6	6,865.0	6,700.0	6,698.2	218.4	1.9	86.89	59.5	-0.1	8,510.9	8,293.7	217.20	39.184	
15,000.0	6,865.0	6,700.0	6,698.2	219.5	1.9	86.89	59.5	-0.1	8,548.2	8,329.9	218.30	39.157	
15,059.0	6,865.0	6,700.0	6,698.2	221.1	1.9	86.89	59.5	-0.1	8,604.1	8,384.2	219.95	39.118	
15,100.0	6,865.0	6,700.0	6,698.2	222.3	1.9	86.89	59.5	-0.1	8,643.0	8,421.9	221.10	39.091	
15,157.4	6,865.0	6,700.0	6,698.2	223.9	1.9	86.89	59.5	-0.1	8,697.5	8,474.8	222.70	39.054	
15,200.0	6,865.0	6,700.0	6,698.2	225.0	1.9	86.89	59.5	-0.1	8,737.9	8,514.0	223.89	39.028	
15,255.9	6,865.0	6,700.0	6,698.2	226.6	1.9	86.89	59.5	-0.1	8,791.0	8,565.5	225.45	38.993	
15,300.0	6,865.0	6,700.0	6,698.2	227.8	1.9	86.89	59.5	-0.1	8,832.9	8,606.2	226.68	38.966	
15,354.3	6,865.0	6,700.0	6,698.2	229.3	1.9	86.89	59.5	-0.1	8,884.5	8,656.3	228.20	38.933	
15,400.0	6,865.0	6,700.0	6,698.2	230.6	1.9	86.90	59.5	-0.1	8,928.0	8,698.5	229.48	38.906	
15,452.7	6,865.0	6,700.0	6,698.2	232.0	1.9	86.90	59.5	-0.1	8,978.2	8,747.3	230.95	38.875	
15,500.0	6,865.0	6,700.0	6,698.2	233.3	1.9	86.90	59.5	-0.1	9,023.2	8,791.0	232.27	38.848	
15,551.1	6,865.0	6,700.0	6,698.2	234.7	1.9	86.90	59.5	-0.1	9,072.0	8,838.3	233.70	38.819	
15,600.0	6,865.0	6,700.0	6,698.2	236.1	1.9	86.90	59.5	-0.1	9,118.6	8,883.5	235.06	38.792	
15,649.6	6,865.0	6,700.0	6,698.2	237.5	1.9	86.90	59.5	-0.1	9,165.9	8,929.4	236.45	38.765	
15,700.0	6,865.0	6,700.0	6,698.2	238.9	1.9	86.90	59.5	-0.1	9,214.0	8,976.1	237.86	38.737	
15,748.0	6,865.0	6,700.0	6,698.2	240.2	1.9	86.90	59.5	-0.1	9,259.8	9,020.6	239.20	38.712	
15,800.0	6,865.0	6,700.0	6,698.2	241.6	1.9	86.90	59.5	-0.1	9,309.5	9,068.9	240.65	38.684	
15,843.4	6,865.0	6,700.0	6,698.2	242.8	1.9	86.90	59.5	-0.1	9,351.0	9,109.2	241.87	38.662	



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VETTING 21
<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 21	<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 21

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

