

EXTRACTION OIL & GAS

**WELD COUNTY, COLORADO (NAD 83)
SW NW SEC. 15 T5N R65W 6th P.M.
VETTING 24**

**ORIGINAL WELLBORE
PROPOSAL #2**

Anticollision Report

09 March, 2016



Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

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

Survey Tool Program	Date 09/03/2016			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	16,281.8	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	5,078.9	4,204.5	1,288.5	1,163.0	10.267	CC
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	5,118.1	4,231.0	1,288.9	1,162.3	10.182	ES
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	5,600.0	4,557.3	1,344.4	1,206.2	9.731	SF
CARLSON A-15-16HN - Wellbore #1 - Design #1	200.0	179.5	4,380.5	4,379.9	7,803.428	CC
CARLSON A-15-16HN - Wellbore #1 - Design #1	295.3	250.9	4,380.7	4,379.7	4,680.295	ES
CARLSON A-15-16HN - Wellbore #1 - Design #1	13,300.0	14,862.7	5,639.0	5,254.4	14.663	SF
CARLSON B-15-16HC - Wellbore #1 - Design #1	400.0	379.5	4,365.8	4,364.3	2,989.418	CC
CARLSON B-15-16HC - Wellbore #1 - Design #1	492.1	446.7	4,366.0	4,364.2	2,401.158	ES
CARLSON B-15-16HC - Wellbore #1 - Design #1	13,188.9	14,905.1	5,444.5	5,063.2	14.278	SF
CARLSON C-15-16HN - Wellbore #1 - Design #1	600.0	579.5	4,351.2	4,348.8	1,844.136	CC
CARLSON C-15-16HN - Wellbore #1 - Design #1	4,300.0	11,376.4	4,383.8	4,278.7	41.727	ES
CARLSON C-15-16HN - Wellbore #1 - Design #1	13,000.0	14,796.3	5,218.1	4,842.3	13.883	SF
CARLSON D-15-16HN - Wellbore #1 - Design #1	4,515.4	11,388.1	4,158.1	4,051.0	38.818	CC
CARLSON D-15-16HN - Wellbore #1 - Design #1	4,527.5	11,389.9	4,158.1	4,050.9	38.777	ES
CARLSON D-15-16HN - Wellbore #1 - Design #1	12,700.0	14,777.6	4,801.2	4,433.9	13.074	SF
CARLSON E-15-16HC - Wellbore #1 - Design #1	4,692.3	11,484.1	4,103.5	3,994.6	37.678	CC
CARLSON E-15-16HC - Wellbore #1 - Design #1	4,724.4	11,488.6	4,103.7	3,994.5	37.576	ES
CARLSON E-15-16HC - Wellbore #1 - Design #1	12,600.0	14,848.6	4,613.1	4,248.5	12.653	SF
CARLSON F-15-16HN - Wellbore #1 - Design #1	4,721.8	11,409.4	3,966.5	3,857.3	36.348	CC
CARLSON F-15-16HN - Wellbore #1 - Design #1	4,724.4	11,409.7	3,966.5	3,857.3	36.340	ES
CARLSON F-15-16HN - Wellbore #1 - Design #1	12,500.0	14,769.7	4,469.6	4,108.1	12.365	SF
CARLSON G-15-16HN - Wellbore #1 - Design #1	5,031.3	11,471.1	3,679.2	3,566.9	32.768	CC
CARLSON G-15-16HN - Wellbore #1 - Design #1	11,100.0	14,787.6	3,791.3	3,468.4	11.745	ES
CARLSON G-15-16HN - Wellbore #1 - Design #1	12,204.7	14,787.6	3,977.7	3,624.6	11.266	SF
CARLSON H-15-16HC - Wellbore #1 - Design #1	5,208.2	11,592.0	3,624.6	3,510.6	31.782	CC
CARLSON H-15-16HC - Wellbore #1 - Design #1	11,100.0	14,883.6	3,627.9	3,305.2	11.241	ES
CARLSON H-15-16HC - Wellbore #1 - Design #1	12,106.3	14,883.6	3,792.5	3,442.3	10.828	SF
CARLSON I-15-16HN - Wellbore #1 - Design #1	10,995.3	14,836.2	3,409.9	3,090.1	10.661	CC
CARLSON I-15-16HN - Wellbore #1 - Design #1	11,100.0	14,836.2	3,411.5	3,088.8	10.572	ES
CARLSON I-15-16HN - Wellbore #1 - Design #1	12,000.0	14,836.2	3,554.9	3,207.6	10.235	SF
CARLSON J-15-16HN - Wellbore #1 - Design #1	10,993.9	14,901.4	3,079.9	2,760.2	9.635	CC
CARLSON J-15-16HN - Wellbore #1 - Design #1	11,100.0	14,901.4	3,081.7	2,759.2	9.555	ES
CARLSON J-15-16HN - Wellbore #1 - Design #1	11,811.0	14,901.4	3,186.4	2,844.5	9.319	SF
CARLSON K-15-16HC - Wellbore #1 - Design #1	10,993.3	15,013.6	2,916.9	2,597.3	9.127	CC
CARLSON K-15-16HC - Wellbore #1 - Design #1	11,100.0	15,013.6	2,918.8	2,596.3	9.051	ES
CARLSON K-15-16HC - Wellbore #1 - Design #1	11,712.6	15,013.6	3,004.3	2,665.1	8.857	SF
CARLSON L-15-16HN - Wellbore #1 - Design #1	10,992.5	14,977.0	2,749.8	2,430.2	8.606	CC

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

Anticollision Report



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Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	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	11,100.0	14,977.0	2,751.9	2,429.4	8.535	ES
CARLSON L-15-16HN - Wellbore #1 - Design #1	11,614.1	14,977.0	2,819.2	2,482.7	8.379	SF
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	15,247.1	7,095.8	559.1	322.3	2.362	CC
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	15,255.9	7,095.8	559.1	322.2	2.359	ES
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	15,300.0	7,095.6	561.6	323.4	2.357	SF
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	12,651.0	7,241.0	652.9	481.8	3.816	CC, ES
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	12,700.0	7,240.3	654.8	482.3	3.797	SF
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	15,976.0	7,156.8	55.0	-208.1	0.209	Level 1, CC, ES, SF
EXIST DD CDOT 3 #D2 - Wellbore #1 - Wellbore #1	14,573.6	6,921.9	39.7	-168.3	0.191	Level 1, CC, ES, SF
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	13,582.6	6,605.0	834.5	691.1	5.822	SF
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	13,680.1	6,574.8	829.2	687.4	5.850	CC, ES
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	16,281.8	7,570.3	2,008.2	1,720.8	6.990	CC, ES, SF
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	13,396.9	7,496.4	2,642.5	2,452.9	13.935	CC
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	13,484.2	7,501.1	2,643.9	2,451.9	13.765	ES
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	14,400.0	7,553.6	2,826.0	2,608.3	12.983	SF
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	12,696.5	7,024.9	1,889.5	1,720.7	11.199	CC
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	12,700.0	7,024.2	1,889.5	1,720.7	11.194	ES
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	13,188.9	6,926.1	1,950.8	1,771.2	10.860	SF
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	15,338.3	7,825.5	3,245.2	3,000.1	13.243	CC
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	15,452.7	7,829.0	3,247.2	2,998.9	13.081	ES
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	16,281.8	7,855.8	3,379.4	3,108.0	12.450	SF
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	15,819.1	7,323.2	1,269.6	1,009.8	4.886	CC
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	15,846.4	7,321.3	1,269.9	1,009.3	4.873	ES
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	16,000.0	7,311.0	1,282.4	1,017.5	4.841	SF
EXIST DD EHRlich MOTORS #D8 - Wellbore #1 - Well	16,281.8	7,138.1	823.5	734.2	9.218	CC, ES, SF
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	16,281.8	7,121.5	711.9	439.4	2.612	CC, ES, SF
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	15,247.4	7,033.6	1,818.5	1,582.0	7.687	CC
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	15,300.0	7,049.6	1,819.2	1,580.9	7.632	ES
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	15,700.0	7,147.4	1,871.2	1,619.9	7.446	SF
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	13,233.4	6,969.2	61.2	-116.2	0.345	Level 1, CC, ES, SF
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	12,012.3	7,306.0	56.0	-110.0	0.337	Level 1, CC, ES, SF
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	13,862.4	6,994.8	620.1	430.4	3.269	CC
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	13,877.9	6,994.8	620.3	430.2	3.263	ES
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	13,900.0	6,994.8	621.2	430.5	3.257	SF
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	14,098.1	6,648.6	1,830.0	1,639.4	9.599	CC
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	14,173.2	6,647.8	1,831.6	1,638.9	9.508	ES
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	14,566.9	6,643.8	1,889.1	1,686.1	9.305	SF
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	14,037.6	6,346.2	2,943.6	2,759.5	15.987	CC
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	14,100.0	6,337.0	2,944.3	2,758.9	15.878	ES
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	15,000.0	6,222.9	3,096.3	2,892.1	15.161	SF
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	2,218.8	3,143.4	2,326.3	2,315.1	207.217	CC, ES
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	16,281.8	7,017.3	9,931.5	9,672.1	38.293	SF
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	1,886.9	2,431.0	2,338.0	2,327.2	216.384	CC, ES
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	14,862.2	7,124.3	9,971.5	9,745.6	44.144	SF
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	2,170.9	2,995.0	2,062.5	2,049.9	163.757	CC, ES
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	15,800.0	7,126.0	9,985.9	9,739.4	40.514	SF
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	11,662.0	7,199.4	2,003.4	1,846.7	12.788	CC
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	11,700.0	7,186.3	2,003.7	1,846.4	12.736	ES
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	12,100.0	7,018.3	2,045.1	1,882.2	12.556	SF
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	11,307.6	7,515.2	696.8	537.2	4.365	CC
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	11,318.9	7,512.5	696.9	537.0	4.359	ES
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	11,400.0	7,492.8	702.5	541.1	4.351	SF
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	12,155.4	7,187.1	1,145.8	982.0	6.992	CC

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Anticollision Report



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Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Summary

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SW NW SEC. 15 T5N R65W 6th P.M.						
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	12,200.0	7,177.2	1,146.7	981.8	6.957	ES
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	12,303.1	7,153.5	1,154.9	987.9	6.917	SF
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	2,324.9	2,050.0	2,756.0	2,746.3	283.116	CC
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	2,362.2	2,050.0	2,756.2	2,746.2	276.030	ES
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	13,484.2	7,152.4	3,900.3	3,707.8	20.262	SF
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	14,646.5	7,493.0	2,618.9	2,399.9	11.961	CC
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	14,700.0	7,493.6	2,619.4	2,399.0	11.882	ES
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	15,500.0	7,503.7	2,754.4	2,511.6	11.345	SF
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	16,281.8	7,575.7	1,583.6	1,284.7	5.298	CC, ES, SF
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	16,281.8	6,907.8	1,600.6	1,421.4	8.930	CC, ES, SF
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	15,910.0	7,735.1	2,593.6	2,326.6	9.716	CC
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	16,000.0	7,735.1	2,595.1	2,325.7	9.631	ES
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	16,281.8	7,735.1	2,620.1	2,342.7	9.448	SF
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	16,281.8	6,980.3	2,413.3	2,143.5	8.945	CC, ES, SF
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	1,488.7	1,477.8	1,414.2	1,410.3	357.346	CC
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	1,600.6	1,594.5	1,414.4	1,410.2	336.209	ES
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	15,300.0	6,600.0	9,949.8	9,735.0	46.323	SF
EXIST VERT FAY #1 - Wellbore #1 - Design #1	2,925.1	2,785.5	2,690.3	2,623.4	40.203	CC
EXIST VERT FAY #1 - Wellbore #1 - Design #1	3,051.2	2,873.5	2,691.8	2,621.6	38.301	ES
EXIST VERT FAY #1 - Wellbore #1 - Design #1	11,500.0	6,864.1	3,632.3	3,386.4	14.771	SF
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	3,809.6	3,349.1	27.1	-63.4	0.300	Level 1, CC, ES, SF
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	360.9	342.9	151.3	150.3	151.197	CC
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	492.1	473.7	151.6	150.2	110.542	ES
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	1,968.5	1,944.6	179.4	174.2	34.693	SF
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	100.0	286.4	286.2	1,516.996	CC, ES
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	16,281.8	15,061.0	2,655.8	2,177.1	5.547	SF
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	200.0	200.0	261.1	260.4	409.014	CC, ES
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	16,281.8	15,273.3	2,481.4	2,003.3	5.190	SF
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	238.5	237.4	219.261	CC, ES
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	16,281.8	15,091.8	2,309.7	1,830.6	4.821	SF
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	400.0	400.0	213.2	211.7	138.679	CC, ES
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	16,281.8	15,164.9	1,978.2	1,497.9	4.118	SF
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	191.1	189.1	96.179	CC, ES
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	16,281.8	15,403.4	1,824.7	1,345.7	3.809	SF
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	600.0	600.0	165.8	163.3	68.038	CC, ES
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	16,281.8	15,278.3	1,650.3	1,169.3	3.431	SF
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	700.0	700.0	143.2	140.3	49.621	CC, ES
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	16,281.8	15,416.7	1,318.8	837.6	2.741	SF
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	800.0	800.0	117.9	114.5	35.353	CC, ES
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	16,281.8	15,678.6	1,171.2	694.3	2.456	SF
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	900.0	900.0	95.3	91.5	25.184	CC
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	3,444.9	3,357.8	127.2	90.3	3.442	ES
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	16,281.8	15,612.1	990.9	509.0	2.056	SF
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	1,000.0	1,000.0	70.0	65.8	16.533	CC
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	3,500.0	3,441.1	86.9	48.6	2.269	ES
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	16,281.8	15,841.4	659.4	177.2	1.368	Level 3, SF
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	1,100.0	1,100.0	47.5	42.8	10.138	CC
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	2,854.3	2,828.3	53.7	32.0	2.476	ES
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	16,281.8	16,127.4	532.5	76.6	1.168	Level 2, SF
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	1,200.0	1,200.0	22.3	17.1	4.340	CC
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	16,281.8	16,069.4	331.5	-151.4	0.687	Level 1, ES, SF
VT-ALLES 1-16-18 - ORIGINAL WELLBORE - PROPOS	100.0	99.0	304.4	304.2	1,620.253	CC, ES
VT-ALLES 1-16-18 - ORIGINAL WELLBORE - PROPOS	16,281.8	13,053.8	2,973.3	2,514.2	6.478	SF

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	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	-170.49	-1,175.6	-196.9	1,192.6				
98.4	98.4	59.4	59.4	0.1	0.6	-170.49	-1,175.6	-196.9	1,192.0	1,191.3	0.69	1,737.620	
100.0	100.0	61.0	61.0	0.1	0.6	-170.49	-1,175.6	-196.9	1,192.0	1,191.3	0.70	1,694.404	
196.8	196.8	157.8	157.8	0.3	2.3	-170.49	-1,175.6	-196.9	1,192.0	1,189.3	2.66	447.776	
200.0	200.0	161.0	161.0	0.3	2.4	-170.49	-1,175.6	-196.9	1,192.0	1,189.3	2.74	434.606	
295.3	295.3	256.3	256.3	0.5	4.5	-170.49	-1,175.6	-196.9	1,192.0	1,187.0	5.04	236.551	
300.0	300.0	261.0	261.0	0.5	4.6	-170.49	-1,175.6	-196.9	1,192.0	1,186.9	5.15	231.545	
393.7	393.7	354.7	354.7	0.8	6.5	-170.49	-1,175.6	-196.9	1,192.0	1,184.7	7.29	163.565	
400.0	400.0	361.0	361.0	0.8	6.7	-170.49	-1,175.6	-196.9	1,192.0	1,184.6	7.43	160.421	
492.1	492.1	453.1	453.1	1.0	8.5	-170.49	-1,175.6	-196.9	1,192.0	1,182.5	9.51	125.313	
500.0	500.0	461.0	461.0	1.0	8.7	-170.49	-1,175.6	-196.9	1,192.0	1,182.3	9.69	123.018	
590.5	590.5	551.5	551.5	1.2	10.5	-170.49	-1,175.6	-196.9	1,192.0	1,180.3	11.73	101.644	
600.0	600.0	561.0	561.0	1.2	10.7	-170.49	-1,175.6	-196.9	1,192.0	1,180.1	11.94	99.835	
689.0	689.0	650.0	650.0	1.4	12.5	-170.49	-1,175.6	-196.9	1,192.0	1,178.1	13.94	85.524	
700.0	700.0	661.0	661.0	1.4	12.7	-170.49	-1,175.6	-196.9	1,192.0	1,177.8	14.19	84.032	
787.4	787.4	748.4	748.4	1.6	14.5	-170.49	-1,175.6	-196.9	1,192.0	1,175.9	16.15	73.830	
800.0	800.0	761.0	761.0	1.7	14.8	-170.49	-1,175.6	-196.9	1,192.0	1,175.6	16.43	72.561	
885.8	885.8	846.8	846.8	1.9	16.5	-170.49	-1,175.6	-196.9	1,192.0	1,173.7	18.35	64.955	
900.0	900.0	861.0	861.0	1.9	16.8	-170.49	-1,175.6	-196.9	1,192.0	1,173.3	18.67	63.850	
984.2	984.2	945.2	945.2	2.1	18.5	-170.49	-1,175.6	-196.9	1,192.0	1,171.5	20.56	57.989	
1,000.0	1,000.0	961.0	961.0	2.1	18.8	-170.49	-1,175.6	-196.9	1,192.0	1,171.1	20.91	57.010	
1,082.7	1,082.7	1,043.7	1,043.7	2.3	20.5	-170.49	-1,175.6	-196.9	1,192.0	1,169.3	22.76	52.373	
1,100.0	1,100.0	1,061.0	1,061.0	2.3	20.8	-170.49	-1,175.6	-196.9	1,192.0	1,168.9	23.15	51.496	
1,181.1	1,181.1	1,142.1	1,142.1	2.5	22.4	-170.49	-1,175.6	-196.9	1,192.0	1,167.0	24.96	47.751	
1,200.0	1,200.0	1,161.0	1,161.0	2.6	22.8	-170.49	-1,175.6	-196.9	1,192.0	1,166.6	25.39	46.955	
1,279.5	1,279.5	1,240.5	1,240.5	2.7	24.4	-170.49	-1,175.6	-196.9	1,192.0	1,164.8	27.17	43.879	
1,300.0	1,300.0	1,261.0	1,261.0	2.8	24.8	-170.49	-1,175.6	-196.9	1,192.0	1,164.4	27.62	43.151	
1,377.9	1,377.9	1,338.9	1,338.9	2.9	26.4	-1.30	-1,175.6	-196.9	1,190.9	1,161.6	29.34	40.597	
1,400.0	1,400.0	1,361.0	1,361.0	3.0	26.8	-1.30	-1,175.6	-196.9	1,190.3	1,160.4	29.82	39.921	
1,476.4	1,476.3	1,437.3	1,437.3	3.1	28.4	-1.31	-1,175.6	-196.9	1,186.6	1,155.1	31.44	37.737	
1,500.0	1,499.8	1,460.8	1,460.8	3.2	28.9	-1.31	-1,175.6	-196.9	1,185.0	1,153.1	31.94	37.101	
1,574.8	1,574.4	1,535.4	1,535.4	3.3	30.4	-1.32	-1,175.6	-196.9	1,178.8	1,145.3	33.50	35.187	
1,600.6	1,600.0	1,561.0	1,561.0	3.4	30.9	-1.33	-1,175.6	-196.9	1,176.3	1,142.2	34.03	34.564	
1,665.6	1,664.6	1,625.6	1,625.6	3.5	32.2	-1.34	-1,175.6	-196.9	1,169.5	1,134.0	35.45	32.986	
1,673.2	1,672.3	1,633.3	1,633.3	3.5	32.3	-1.34	-1,175.6	-196.9	1,168.6	1,133.0	35.61	32.821	
1,700.0	1,698.9	1,659.9	1,659.9	3.6	32.9	-1.34	-1,175.6	-196.9	1,165.5	1,129.4	36.13	32.256	
1,771.6	1,769.8	1,730.8	1,730.8	3.7	34.3	-1.36	-1,175.6	-196.9	1,155.4	1,117.9	37.49	30.817	
1,800.0	1,797.7	1,758.7	1,758.7	3.8	34.8	-1.37	-1,175.6	-196.9	1,150.7	1,112.7	38.01	30.273	
1,870.1	1,866.5	1,827.5	1,827.5	4.0	36.2	-1.40	-1,175.6	-196.9	1,137.2	1,098.0	39.24	28.982	
1,900.0	1,895.7	1,856.7	1,856.7	4.1	36.8	-1.41	-1,175.6	-196.9	1,130.7	1,090.9	39.74	28.454	
1,968.5	1,962.2	1,923.2	1,923.2	4.3	38.2	-1.45	-1,175.6	-196.9	1,114.0	1,073.2	40.83	27.286	
2,000.0	1,992.5	1,953.5	1,953.5	4.4	38.8	-1.46	-1,175.6	-196.9	1,105.6	1,064.3	41.30	26.770	
2,066.9	2,056.5	2,017.5	2,017.5	4.7	40.1	-1.51	-1,175.6	-196.9	1,086.0	1,043.7	42.25	25.705	
2,100.0	2,087.8	2,048.8	2,048.8	4.8	40.7	-1.53	-1,175.6	-196.9	1,075.5	1,032.8	42.68	25.198	
2,165.3	2,149.2	2,110.2	2,110.2	5.1	41.9	-1.58	-1,175.6	-196.9	1,053.1	1,009.6	43.48	24.220	
2,200.0	2,181.5	2,142.5	2,142.5	5.3	42.6	-1.61	-1,175.6	-196.9	1,040.4	996.5	43.86	23.718	
2,263.8	2,240.2	2,201.2	2,201.2	5.7	43.7	-1.68	-1,175.6	-196.9	1,015.5	971.0	44.51	22.813	
2,300.0	2,273.1	2,234.1	2,234.1	5.9	44.4	-1.72	-1,175.6	-196.9	1,000.4	955.6	44.84	22.312	
2,362.2	2,329.0	2,290.0	2,290.0	6.3	45.5	-1.79	-1,175.6	-196.9	973.2	927.9	45.34	21.467	
2,400.0	2,362.6	2,323.6	2,323.6	6.6	46.2	-1.84	-1,175.6	-196.9	955.8	910.2	45.60	20.962	
2,460.6	2,415.6	2,376.6	2,376.6	7.1	47.3	-1.94	-1,175.6	-196.9	926.4	880.5	45.95	20.164	
2,500.0	2,449.6	2,410.6	2,410.6	7.4	48.0	-2.00	-1,175.6	-196.9	906.5	860.4	46.13	19.653	

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	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	2,499.7	2,460.7	2,460.7	7.9	49.0	-2.11	-1,175.6	-196.9	875.3	829.0	46.33	18.892	
2,600.0	2,533.9	2,494.9	2,494.9	8.3	49.7	-2.20	-1,175.6	-196.9	852.7	806.3	46.42	18.370	
2,657.5	2,581.0	2,542.0	2,542.0	8.8	50.6	-2.34	-1,175.6	-196.9	819.9	773.4	46.49	17.637	
2,700.0	2,615.2	2,576.2	2,576.2	9.2	51.3	-2.45	-1,175.6	-196.9	794.6	748.2	46.48	17.097	
2,755.9	2,659.3	2,620.3	2,620.3	9.8	52.2	-2.62	-1,175.6	-196.9	760.3	713.9	46.41	16.384	
2,800.0	2,693.4	2,654.4	2,654.4	10.3	52.9	-2.77	-1,175.6	-196.9	732.4	686.1	46.30	15.819	
2,854.3	2,734.5	2,695.5	2,695.5	10.9	53.7	-2.99	-1,175.6	-196.9	696.9	650.8	46.10	15.116	
2,900.0	2,768.2	2,729.2	2,729.2	11.5	54.4	-3.19	-1,175.6	-196.9	666.1	620.2	45.88	14.519	
2,952.7	2,806.3	2,767.3	2,767.3	12.1	55.1	-3.47	-1,175.6	-196.9	629.6	584.0	45.57	13.817	
3,000.0	2,839.5	2,800.5	2,800.5	12.7	55.8	-3.76	-1,175.6	-196.9	596.0	550.8	45.24	13.176	
3,044.6	2,870.1	2,831.1	2,831.1	13.3	56.4	-4.07	-1,175.6	-196.9	563.6	518.7	44.88	12.558	
3,051.2	2,874.5	2,835.5	2,835.5	13.4	56.5	-4.11	-1,175.6	-196.9	558.8	513.8	44.98	12.424	
3,100.0	2,907.6	2,868.6	2,868.6	14.0	57.2	-4.39	-1,175.6	-196.9	522.9	477.2	45.69	11.444	
3,149.6	2,941.2	2,902.2	2,902.2	14.7	57.9	-4.72	-1,175.6	-196.9	486.4	440.0	46.43	10.478	
3,200.0	2,975.3	2,936.3	2,936.3	15.4	58.5	-5.11	-1,175.6	-196.9	449.4	402.2	47.19	9.524	
3,248.0	3,007.8	2,968.8	2,968.8	16.0	59.2	-5.54	-1,175.6	-196.9	414.1	366.2	47.93	8.641	
3,300.0	3,043.0	3,004.0	3,004.0	16.7	59.9	-6.10	-1,175.6	-196.9	376.0	327.2	48.75	7.713	
3,346.4	3,074.5	3,035.5	3,035.5	17.4	60.5	-6.71	-1,175.6	-196.9	341.9	292.4	49.51	6.905	
3,400.0	3,110.7	3,071.7	3,071.7	18.1	61.3	-7.58	-1,175.6	-196.9	302.6	252.2	50.44	6.000	
3,444.9	3,141.1	3,102.1	3,102.1	18.7	61.9	-8.50	-1,175.6	-196.9	269.8	218.5	51.28	5.260	
3,500.0	3,178.4	3,139.4	3,139.4	19.5	62.6	-9.98	-1,175.6	-196.9	229.4	177.0	52.44	4.376	
3,543.3	3,207.8	3,168.8	3,168.8	20.1	63.2	-11.56	-1,175.6	-196.9	197.8	144.3	53.51	3.697	
3,600.0	3,246.1	3,207.1	3,207.1	20.8	64.0	-14.57	-1,175.6	-196.9	156.6	101.3	55.34	2.830	
3,641.7	3,274.4	3,235.4	3,235.4	21.4	64.6	-17.98	-1,175.6	-196.9	126.5	69.2	57.32	2.206	
3,700.0	3,313.9	3,274.9	3,274.9	22.2	65.3	-26.43	-1,175.6	-196.9	85.1	22.7	62.40	1.364 Level 3	
3,740.1	3,341.0	3,302.0	3,302.0	22.8	65.9	-38.12	-1,175.6	-196.9	57.9	-12.0	69.85	0.828 Level 1	
3,800.0	3,381.6	3,342.6	3,342.6	23.6	66.7	-80.02	-1,175.6	-196.9	28.0	-61.4	89.46	0.314 Level 1	
3,809.6	3,388.1	3,349.1	3,349.1	23.7	66.8	-90.00	-1,175.6	-196.9	27.1	-63.4	90.56	0.300 Level 1, CC, ES, SF	
3,838.6	3,407.7	3,368.7	3,368.7	24.1	67.2	-118.02	-1,175.6	-196.9	34.5	-50.4	84.96	0.406 Level 1	
3,900.0	3,449.3	3,410.3	3,410.3	25.0	68.1	-148.93	-1,175.6	-196.9	71.9	3.1	68.76	1.045 Level 2	
3,937.0	3,474.3	3,435.3	3,435.3	25.5	68.6	-156.85	-1,175.6	-196.9	97.6	32.8	64.79	1.507	
4,000.0	3,517.0	3,478.0	3,478.0	26.4	69.4	-164.03	-1,175.6	-196.9	142.7	80.5	62.24	2.293	
4,035.4	3,541.0	3,502.0	3,502.0	26.9	69.9	-166.44	-1,175.6	-196.9	168.4	106.6	61.79	2.725	
4,100.0	3,584.7	3,545.7	3,545.7	27.7	70.8	-169.38	-1,175.6	-196.9	215.4	153.7	61.72	3.491	
4,133.8	3,607.6	3,568.6	3,568.6	28.2	71.3	-170.46	-1,175.6	-196.9	240.2	178.3	61.89	3.881	
4,200.0	3,652.4	3,613.4	3,613.4	29.1	72.2	-172.06	-1,175.6	-196.9	288.6	226.1	62.43	4.622	
4,232.3	3,674.3	3,635.3	3,635.3	29.6	72.6	-172.66	-1,175.6	-196.9	312.2	249.5	62.76	4.975	
4,300.0	3,720.1	3,681.1	3,681.1	30.5	73.5	-173.66	-1,175.6	-196.9	361.9	298.4	63.54	5.696	
4,330.7	3,740.9	3,701.9	3,701.9	31.0	73.9	-174.03	-1,175.6	-196.9	384.4	320.5	63.92	6.015	
4,400.0	3,787.8	3,748.8	3,748.8	31.9	74.9	-174.73	-1,175.6	-196.9	435.3	370.5	64.81	6.717	
4,429.1	3,807.5	3,768.5	3,768.5	32.3	75.3	-174.97	-1,175.6	-196.9	456.7	391.5	65.19	7.005	
4,500.0	3,855.5	3,816.5	3,816.5	33.3	76.2	-175.49	-1,175.6	-196.9	508.8	442.6	66.15	7.691	
4,527.5	3,874.2	3,835.2	3,835.2	33.7	76.6	-175.66	-1,175.6	-196.9	529.0	462.5	66.53	7.951	
4,600.0	3,923.2	3,884.2	3,884.2	34.7	77.6	-176.06	-1,175.6	-196.9	582.3	514.7	67.54	8.621	
4,626.0	3,940.8	3,901.8	3,901.8	35.1	78.0	-176.18	-1,175.6	-196.9	601.4	533.5	67.91	8.856	
4,700.0	3,991.0	3,952.0	3,952.0	36.1	79.0	-176.50	-1,175.6	-196.9	655.8	586.9	68.96	9.510	
4,724.4	4,007.5	3,968.5	3,968.5	36.5	79.3	-176.59	-1,175.6	-196.9	673.8	604.4	69.31	9.721	
4,800.0	4,058.7	4,019.7	4,019.7	37.5	80.3	-176.85	-1,175.6	-196.9	729.3	659.0	70.39	10.361	
4,822.8	4,074.1	4,035.1	4,035.1	37.8	80.6	-176.92	-1,175.6	-196.9	746.1	675.4	70.72	10.550	
4,900.0	4,126.4	4,087.4	4,087.4	38.9	81.7	-177.14	-1,175.6	-196.9	802.9	731.1	71.84	11.177	
4,921.2	4,140.8	4,101.8	4,101.8	39.2	82.0	-177.19	-1,175.6	-196.9	818.5	746.4	72.14	11.346	
5,000.0	4,194.1	4,155.1	4,155.1	40.3	83.0	-177.38	-1,175.6	-196.9	876.4	803.2	73.29	11.959	

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	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	
5,019.7	4,207.4	4,168.4	4,168.4	40.6	83.3	-177.42	-1,175.6	-196.9	890.9	817.3	73.57	12.109	
5,100.0	4,261.8	4,222.8	4,222.8	41.7	84.4	-177.58	-1,175.6	-196.9	950.0	875.3	74.74	12.710	
5,118.1	4,274.0	4,235.0	4,235.0	42.0	84.7	-177.62	-1,175.6	-196.9	963.3	888.3	75.01	12.843	
5,200.0	4,329.5	4,290.5	4,290.5	43.1	85.8	-177.76	-1,175.6	-196.9	1,023.6	947.4	76.21	13.431	
5,216.5	4,340.7	4,301.7	4,301.7	43.4	86.0	-177.78	-1,175.6	-196.9	1,035.7	959.3	76.45	13.548	
5,300.0	4,397.2	4,358.2	4,358.2	44.5	87.1	-177.91	-1,175.6	-196.9	1,097.1	1,019.5	77.67	14.125	
5,314.9	4,407.3	4,368.3	4,368.3	44.7	87.3	-177.93	-1,175.6	-196.9	1,108.1	1,030.2	77.89	14.227	
5,400.0	4,464.9	4,425.9	4,425.9	45.9	88.5	-178.04	-1,175.6	-196.9	1,170.7	1,091.6	79.14	14.793	
5,413.4	4,474.0	4,435.0	4,435.0	46.1	88.7	-178.05	-1,175.6	-196.9	1,180.5	1,101.2	79.34	14.880	
5,500.0	4,532.6	4,493.6	4,493.6	47.3	89.9	-178.15	-1,175.6	-196.9	1,244.3	1,163.7	80.61	15.436	
5,511.8	4,540.6	4,501.6	4,501.6	47.5	90.0	-178.17	-1,175.6	-196.9	1,252.9	1,172.2	80.78	15.510	
5,600.0	4,600.3	4,561.3	4,561.3	48.7	91.2	-178.26	-1,175.6	-196.9	1,317.8	1,235.8	82.08	16.055	
5,610.2	4,607.3	4,568.3	4,568.3	48.9	91.4	-178.27	-1,175.6	-196.9	1,325.4	1,243.1	82.23	16.117	
5,700.0	4,668.0	4,629.0	4,629.0	50.1	92.6	-178.35	-1,175.6	-196.9	1,391.4	1,307.9	83.56	16.652	
5,708.6	4,673.9	4,634.9	4,634.9	50.3	92.7	-178.36	-1,175.6	-196.9	1,397.8	1,314.1	83.68	16.703	
5,800.0	4,735.8	4,696.8	4,696.8	51.5	93.9	-178.43	-1,175.6	-196.9	1,465.0	1,380.0	85.03	17.229	
5,807.1	4,740.5	4,701.5	4,701.5	51.6	94.0	-178.44	-1,175.6	-196.9	1,470.2	1,385.1	85.14	17.269	
5,900.0	4,803.5	4,764.5	4,764.5	53.0	95.3	-178.51	-1,175.6	-196.9	1,538.6	1,452.1	86.51	17.785	
5,905.5	4,807.2	4,768.2	4,768.2	53.0	95.4	-178.51	-1,175.6	-196.9	1,542.6	1,456.0	86.59	17.815	
5,978.4	4,856.5	4,817.5	4,817.5	54.1	96.4	-178.56	-1,175.6	-196.9	1,596.2	1,508.6	87.67	18.208	
6,000.0	4,871.3	4,832.3	4,832.3	54.3	96.7	-178.59	-1,175.6	-196.9	1,612.1	1,523.3	88.81	18.153	
6,003.9	4,874.0	4,835.0	4,835.0	54.4	96.7	-178.60	-1,175.6	-196.9	1,614.9	1,525.9	89.01	18.143	
6,100.0	4,941.7	4,902.7	4,902.7	55.3	98.1	-178.72	-1,175.6	-196.9	1,683.0	1,589.0	94.01	17.902	
6,102.3	4,943.4	4,904.4	4,904.4	55.3	98.1	-178.72	-1,175.6	-196.9	1,684.7	1,590.5	94.13	17.897	
6,200.0	5,015.7	4,976.7	4,976.7	56.2	99.6	-178.83	-1,175.6	-196.9	1,750.2	1,651.1	99.10	17.660	
6,200.8	5,016.3	4,977.3	4,977.3	56.2	99.6	-178.83	-1,175.6	-196.9	1,750.7	1,651.6	99.14	17.659	
6,299.2	5,092.5	5,053.5	5,053.5	57.1	101.1	-178.91	-1,175.6	-196.9	1,813.0	1,709.0	104.03	17.428	
6,300.0	5,093.2	5,054.2	5,054.2	57.1	101.1	-178.92	-1,175.6	-196.9	1,813.5	1,709.4	104.07	17.426	
6,397.6	5,171.9	5,132.9	5,132.9	58.0	102.7	-178.99	-1,175.6	-196.9	1,871.2	1,762.5	108.76	17.205	
6,400.0	5,173.8	5,134.8	5,134.8	58.0	102.8	-178.99	-1,175.6	-196.9	1,872.6	1,763.7	108.88	17.199	
6,496.0	5,254.1	5,215.1	5,215.1	58.8	104.4	-179.05	-1,175.6	-196.9	1,925.3	1,812.0	113.33	16.988	
6,500.0	5,257.4	5,218.4	5,218.4	58.8	104.4	-179.05	-1,175.6	-196.9	1,927.4	1,813.9	113.51	16.979	
6,594.5	5,339.0	5,300.0	5,300.0	59.5	106.1	-179.10	-1,175.6	-196.9	1,975.0	1,857.3	117.72	16.777	
6,600.0	5,343.8	5,304.8	5,304.8	59.6	106.2	-179.10	-1,175.6	-196.9	1,977.7	1,859.7	117.96	16.766	
6,692.9	5,426.3	5,387.3	5,387.3	60.2	107.8	-179.14	-1,175.6	-196.9	2,020.4	1,898.5	121.90	16.574	
6,700.0	5,432.7	5,393.7	5,393.7	60.2	108.0	-179.15	-1,175.6	-196.9	2,023.5	1,901.3	122.20	16.559	
6,791.3	5,515.9	5,476.9	5,476.9	60.8	109.6	-179.18	-1,175.6	-196.9	2,061.1	1,935.3	125.86	16.376	
6,800.0	5,523.9	5,484.9	5,484.9	60.9	109.8	-179.18	-1,175.6	-196.9	2,064.5	1,938.3	126.20	16.359	
6,889.7	5,607.5	5,568.5	5,568.5	61.4	111.5	-179.21	-1,175.6	-196.9	2,097.2	1,967.7	129.57	16.186	
6,900.0	5,617.1	5,578.1	5,578.1	61.4	111.7	-179.21	-1,175.6	-196.9	2,100.7	1,970.8	129.94	16.167	
6,988.2	5,700.8	5,661.8	5,661.8	61.9	113.3	-179.24	-1,175.6	-196.9	2,128.6	1,995.5	133.01	16.003	
7,000.0	5,712.1	5,673.1	5,673.1	61.9	113.6	-179.24	-1,175.6	-196.9	2,132.0	1,998.6	133.41	15.981	
7,086.6	5,795.5	5,756.5	5,756.5	62.3	115.3	-179.26	-1,175.6	-196.9	2,155.0	2,018.9	136.16	15.827	
7,100.0	5,808.6	5,769.6	5,769.6	62.4	115.5	-179.26	-1,175.6	-196.9	2,158.3	2,021.7	136.57	15.803	
7,185.0	5,891.6	5,852.6	5,852.6	62.6	117.2	-179.27	-1,175.6	-196.9	2,176.6	2,037.6	139.00	15.659	
7,200.0	5,906.3	5,867.3	5,867.3	62.7	117.5	-179.27	-1,175.6	-196.9	2,179.5	2,040.1	139.41	15.634	
7,283.4	5,988.6	5,949.6	5,949.6	62.9	119.1	-179.28	-1,175.6	-196.9	2,193.2	2,051.7	141.51	15.498	
7,300.0	6,005.0	5,966.0	5,966.0	63.0	119.5	-179.29	-1,175.6	-196.9	2,195.5	2,053.6	141.90	15.472	
7,381.9	6,086.3	6,047.3	6,047.3	63.1	121.1	-179.29	-1,175.6	-196.9	2,204.8	2,061.1	143.67	15.346	
7,400.0	6,104.4	6,065.4	6,065.4	63.2	121.5	-179.29	-1,175.6	-196.9	2,206.4	2,062.3	144.03	15.319	
7,480.3	6,184.5	6,145.5	6,145.5	63.3	123.1	-179.30	-1,175.6	-196.9	2,211.3	2,065.9	145.45	15.203	
7,500.0	6,204.2	6,165.2	6,165.2	63.3	123.5	-179.30	-1,175.6	-196.9	2,212.0	2,066.2	145.77	15.175	

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #1												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	
7,557.8	6,262.0	6,223.0	6,223.0	63.3	124.6	11.52	-1,175.6	-196.9	2,212.9	2,024.9	187.96	11.773	
7,578.7	6,282.9	6,243.9	6,243.9	63.3	125.1	11.52	-1,175.6	-196.9	2,212.9	2,024.5	188.39	11.746	
7,587.8	6,292.0	6,253.0	6,253.0	63.3	125.2	11.52	-1,175.6	-196.9	2,212.9	2,024.3	188.58	11.735	
7,600.0	6,304.2	6,265.2	6,265.2	63.3	125.5	101.56	-1,175.6	-196.9	2,212.9	2,065.4	147.54	14.998	
7,650.0	6,354.1	6,315.1	6,315.1	63.4	126.5	101.57	-1,175.6	-196.9	2,213.6	2,064.7	148.84	14.872	
7,677.1	6,381.0	6,342.0	6,342.0	63.4	127.0	101.59	-1,175.6	-196.9	2,214.3	2,064.8	149.52	14.809	
7,700.0	6,403.5	6,364.5	6,364.5	63.4	127.5	101.61	-1,175.6	-196.9	2,215.1	2,065.0	150.08	14.759	
7,750.0	6,452.0	6,413.0	6,413.0	63.5	128.5	101.66	-1,175.6	-196.9	2,217.6	2,066.3	151.27	14.660	
7,775.6	6,476.4	6,437.4	6,437.4	63.5	128.9	101.69	-1,175.6	-196.9	2,219.2	2,067.3	151.86	14.614	
7,800.0	6,499.4	6,460.4	6,460.4	63.6	129.4	101.71	-1,175.6	-196.9	2,221.0	2,068.6	152.40	14.573	
7,850.0	6,545.1	6,506.1	6,506.1	63.7	130.3	101.74	-1,175.6	-196.9	2,225.4	2,072.0	153.48	14.500	
7,874.0	6,566.4	6,527.4	6,527.4	63.7	130.8	101.74	-1,175.6	-196.9	2,228.0	2,074.0	153.98	14.469	
7,900.0	6,589.0	6,550.0	6,550.0	63.8	131.2	101.73	-1,175.6	-196.9	2,231.0	2,076.5	154.52	14.438	
7,950.0	6,630.5	6,591.5	6,591.5	63.9	132.0	101.65	-1,175.6	-196.9	2,237.7	2,082.1	155.54	14.386	
7,972.4	6,648.4	6,609.4	6,609.4	64.0	132.4	101.58	-1,175.6	-196.9	2,241.1	2,085.1	156.01	14.365	
8,000.0	6,669.5	6,630.5	6,630.5	64.0	132.8	101.48	-1,175.6	-196.9	2,245.6	2,089.0	156.59	14.341	
8,050.0	6,705.7	6,666.7	6,666.7	64.2	133.6	101.19	-1,175.6	-196.9	2,254.9	2,097.2	157.70	14.299	
8,070.8	6,719.8	6,680.8	6,680.8	64.3	133.8	101.03	-1,175.6	-196.9	2,259.1	2,100.9	158.20	14.281	
8,100.0	6,738.7	6,699.7	6,699.7	64.4	134.2	100.75	-1,175.6	-196.9	2,265.5	2,106.6	158.91	14.257	
8,150.0	6,768.2	6,729.2	6,729.2	64.6	134.8	100.14	-1,175.6	-196.9	2,277.5	2,117.3	160.24	14.213	
8,169.3	6,778.7	6,739.7	6,739.7	64.6	135.0	99.86	-1,175.6	-196.9	2,282.5	2,121.7	160.80	14.194	
8,200.0	6,794.2	6,755.2	6,755.2	64.8	135.3	99.34	-1,175.6	-196.9	2,290.9	2,129.2	161.72	14.166	
8,250.0	6,816.3	6,777.3	6,777.3	65.0	135.8	98.31	-1,175.6	-196.9	2,305.8	2,142.5	163.32	14.119	
8,267.7	6,823.2	6,784.2	6,784.2	65.1	135.9	97.89	-1,175.6	-196.9	2,311.4	2,147.5	163.91	14.102	
8,300.0	6,834.5	6,795.5	6,795.5	65.3	136.1	97.04	-1,175.6	-196.9	2,322.1	2,157.1	164.97	14.076	
8,350.0	6,848.5	6,809.5	6,809.5	65.5	136.4	95.52	-1,175.6	-196.9	2,339.7	2,173.1	166.58	14.045	
8,366.1	6,852.1	6,813.1	6,813.1	65.6	136.5	94.98	-1,175.6	-196.9	2,345.7	2,178.6	167.08	14.039	
8,400.0	6,858.3	6,819.3	6,819.3	65.8	136.6	93.74	-1,175.6	-196.9	2,358.6	2,190.6	168.02	14.038	
8,450.0	6,863.7	6,824.7	6,824.7	66.1	136.7	91.71	-1,175.6	-196.9	2,378.6	2,209.5	169.10	14.066	
8,464.5	6,864.5	6,825.5	6,825.5	66.2	136.8	91.07	-1,175.6	-196.9	2,384.6	2,215.3	169.33	14.082	
8,487.9	6,865.0	6,826.0	6,826.0	66.4	136.8	90.00	-1,175.6	-196.9	2,394.4	2,224.8	169.59	14.118	
8,500.0	6,865.0	6,826.0	6,826.0	66.4	136.8	90.00	-1,175.6	-196.9	2,399.6	2,229.7	169.82	14.130	
8,563.0	6,865.0	6,826.0	6,826.0	66.9	136.8	90.00	-1,175.6	-196.9	2,427.2	2,256.2	171.01	14.193	
8,600.0	6,865.0	6,826.0	6,826.0	67.1	136.8	90.00	-1,175.6	-196.9	2,444.1	2,272.4	171.72	14.233	
8,661.4	6,865.0	6,826.0	6,826.0	67.6	136.8	90.00	-1,175.6	-196.9	2,473.0	2,300.1	172.95	14.299	
8,700.0	6,865.0	6,826.0	6,826.0	67.9	136.8	90.00	-1,175.6	-196.9	2,491.8	2,318.1	173.73	14.344	
8,759.8	6,865.0	6,826.0	6,826.0	68.4	136.8	90.00	-1,175.6	-196.9	2,521.9	2,346.9	174.99	14.412	
8,800.0	6,865.0	6,826.0	6,826.0	68.7	136.8	90.00	-1,175.6	-196.9	2,542.6	2,366.8	175.83	14.460	
8,858.2	6,865.0	6,826.0	6,826.0	69.2	136.8	90.00	-1,175.6	-196.9	2,573.5	2,396.4	177.11	14.531	
8,900.0	6,865.0	6,826.0	6,826.0	69.6	136.8	90.00	-1,175.6	-196.9	2,596.3	2,418.2	178.03	14.584	
8,956.7	6,865.0	6,826.0	6,826.0	70.2	136.8	90.00	-1,175.6	-196.9	2,627.9	2,448.6	179.31	14.656	
9,000.0	6,865.0	6,826.0	6,826.0	70.6	136.8	90.00	-1,175.6	-196.9	2,652.6	2,472.3	180.29	14.713	
9,055.1	6,865.0	6,826.0	6,826.0	71.2	136.8	90.00	-1,175.6	-196.9	2,684.7	2,503.2	181.57	14.786	
9,100.0	6,865.0	6,826.0	6,826.0	71.7	136.8	90.00	-1,175.6	-196.9	2,711.4	2,528.8	182.61	14.848	
9,153.5	6,865.0	6,826.0	6,826.0	72.3	136.8	90.00	-1,175.6	-196.9	2,743.9	2,560.0	183.88	14.922	
9,200.0	6,865.0	6,826.0	6,826.0	72.8	136.8	90.00	-1,175.6	-196.9	2,772.7	2,587.7	184.99	14.988	
9,251.9	6,865.0	6,826.0	6,826.0	73.5	136.8	90.00	-1,175.6	-196.9	2,805.3	2,619.1	186.25	15.063	
9,300.0	6,865.0	6,826.0	6,826.0	74.1	136.8	90.00	-1,175.6	-196.9	2,836.1	2,648.7	187.41	15.133	
9,350.4	6,865.0	6,826.0	6,826.0	74.7	136.8	90.00	-1,175.6	-196.9	2,868.8	2,680.2	188.65	15.207	
9,400.0	6,865.0	6,826.0	6,826.0	75.4	136.8	90.00	-1,175.6	-196.9	2,901.5	2,711.7	189.87	15.282	
9,448.8	6,865.0	6,826.0	6,826.0	76.1	136.8	90.00	-1,175.6	-196.9	2,934.2	2,743.1	191.08	15.356	
9,500.0	6,865.0	6,826.0	6,826.0	76.8	136.8	90.00	-1,175.6	-196.9	2,968.9	2,776.6	192.36	15.434	

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
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
9,547.2	6,865.0	6,826.0	6,826.0	77.5	136.8	90.00	-1,175.6	-196.9	3,001.4	2,807.9	193.55	15.507	
9,600.0	6,865.0	6,826.0	6,826.0	78.3	136.8	90.00	-1,175.6	-196.9	3,038.1	2,843.3	194.88	15.590	
9,645.6	6,865.0	6,826.0	6,826.0	79.0	136.8	90.00	-1,175.6	-196.9	3,070.3	2,874.3	196.04	15.661	
9,700.0	6,865.0	6,826.0	6,826.0	79.8	136.8	90.00	-1,175.6	-196.9	3,109.0	2,911.6	197.43	15.748	
9,744.1	6,865.0	6,826.0	6,826.0	80.5	136.8	90.00	-1,175.6	-196.9	3,140.8	2,942.2	198.56	15.818	
9,800.0	6,865.0	6,826.0	6,826.0	81.5	136.8	90.00	-1,175.6	-196.9	3,181.5	2,981.5	200.00	15.908	
9,842.5	6,865.0	6,826.0	6,826.0	82.2	136.8	90.00	-1,175.6	-196.9	3,212.7	3,011.6	201.10	15.976	
9,900.0	6,865.0	6,826.0	6,826.0	83.2	136.8	90.00	-1,175.6	-196.9	3,255.4	3,052.8	202.59	16.069	
9,940.9	6,865.0	6,826.0	6,826.0	83.9	136.8	90.00	-1,175.6	-196.9	3,286.0	3,082.4	203.65	16.135	
10,000.0	6,865.0	6,826.0	6,826.0	85.0	136.8	90.00	-1,175.6	-196.9	3,330.6	3,125.4	205.19	16.232	
10,039.3	6,865.0	6,826.0	6,826.0	85.7	136.8	90.00	-1,175.6	-196.9	3,360.6	3,154.4	206.22	16.296	
10,100.0	6,865.0	6,826.0	6,826.0	86.8	136.8	90.00	-1,175.6	-196.9	3,407.2	3,199.3	207.81	16.395	
10,137.8	6,865.0	6,826.0	6,826.0	87.5	136.8	90.00	-1,175.6	-196.9	3,436.4	3,227.6	208.81	16.457	
10,200.0	6,865.0	6,826.0	6,826.0	88.7	136.8	90.00	-1,175.6	-196.9	3,484.9	3,274.4	210.45	16.559	
10,236.2	6,865.0	6,826.0	6,826.0	89.5	136.8	90.00	-1,175.6	-196.9	3,513.3	3,301.9	211.41	16.618	
10,300.0	6,865.0	6,826.0	6,826.0	90.7	136.8	90.00	-1,175.6	-196.9	3,563.7	3,350.6	213.10	16.723	
10,334.6	6,865.0	6,826.0	6,826.0	91.4	136.8	90.00	-1,175.6	-196.9	3,591.3	3,377.2	214.02	16.780	
10,400.0	6,865.0	6,826.0	6,826.0	92.8	136.8	90.00	-1,175.6	-196.9	3,643.6	3,427.8	215.76	16.887	
10,433.0	6,865.0	6,826.0	6,826.0	93.4	136.8	90.00	-1,175.6	-196.9	3,670.2	3,453.6	216.64	16.941	
10,500.0	6,865.0	6,826.0	6,826.0	94.8	136.8	90.00	-1,175.6	-196.9	3,724.4	3,506.0	218.43	17.051	
10,531.5	6,865.0	6,826.0	6,826.0	95.5	136.8	90.00	-1,175.6	-196.9	3,750.1	3,530.8	219.27	17.102	
10,600.0	6,865.0	6,826.0	6,826.0	97.0	136.8	90.00	-1,175.6	-196.9	3,806.2	3,585.1	221.11	17.214	
10,629.9	6,865.0	6,826.0	6,826.0	97.6	136.8	90.00	-1,175.6	-196.9	3,830.8	3,608.9	221.91	17.263	
10,700.0	6,865.0	6,826.0	6,826.0	99.2	136.8	90.00	-1,175.6	-196.9	3,888.8	3,665.0	223.80	17.377	
10,728.3	6,865.0	6,826.0	6,826.0	99.8	136.8	90.00	-1,175.6	-196.9	3,912.4	3,687.8	224.56	17.422	
10,800.0	6,865.0	6,826.0	6,826.0	101.4	136.8	90.00	-1,175.6	-196.9	3,972.2	3,745.7	226.49	17.538	
10,826.7	6,865.0	6,826.0	6,826.0	102.0	136.8	90.00	-1,175.6	-196.9	3,994.7	3,767.5	227.21	17.581	
10,900.0	6,865.0	6,826.0	6,826.0	103.6	136.8	90.00	-1,175.6	-196.9	4,056.4	3,827.2	229.19	17.699	
10,925.2	6,865.0	6,826.0	6,826.0	104.2	136.8	90.00	-1,175.6	-196.9	4,077.7	3,847.8	229.87	17.739	
11,000.0	6,865.1	6,826.1	6,826.1	105.9	136.8	90.00	-1,175.6	-196.9	4,141.2	3,909.3	231.90	17.858	
11,023.6	6,865.1	6,826.1	6,826.1	106.5	136.8	90.00	-1,175.6	-196.9	4,161.4	3,928.8	232.54	17.895	
11,100.0	6,865.1	6,826.1	6,826.1	108.2	136.8	90.00	-1,175.6	-196.9	4,226.8	3,992.2	234.61	18.016	
11,122.0	6,865.1	6,826.1	6,826.1	108.8	136.8	90.00	-1,175.6	-196.9	4,245.7	4,010.5	235.21	18.050	
11,200.0	6,865.1	6,826.1	6,826.1	110.6	136.8	90.00	-1,175.6	-196.9	4,312.9	4,075.6	237.33	18.172	
11,220.4	6,865.1	6,826.1	6,826.1	111.1	136.8	90.00	-1,175.6	-196.9	4,330.6	4,092.7	237.89	18.204	
11,300.0	6,865.1	6,826.1	6,826.1	113.0	136.8	90.00	-1,175.6	-196.9	4,399.7	4,159.6	240.06	18.327	
11,318.9	6,865.1	6,826.1	6,826.1	113.4	136.8	90.00	-1,175.6	-196.9	4,416.1	4,175.5	240.57	18.357	
11,400.0	6,865.1	6,826.1	6,826.1	115.4	136.8	90.00	-1,175.6	-196.9	4,486.9	4,244.2	242.79	18.481	
11,417.3	6,865.1	6,826.1	6,826.1	115.8	136.8	90.00	-1,175.6	-196.9	4,502.1	4,258.8	243.26	18.507	
11,500.0	6,865.1	6,826.1	6,826.1	117.8	136.8	90.00	-1,175.6	-196.9	4,574.8	4,329.2	245.52	18.633	
11,515.7	6,865.1	6,826.1	6,826.1	118.2	136.8	90.00	-1,175.6	-196.9	4,588.6	4,342.7	245.95	18.657	
11,600.0	6,865.1	6,826.1	6,826.1	120.3	136.8	90.00	-1,175.6	-196.9	4,663.1	4,414.8	248.26	18.783	
11,614.1	6,865.1	6,826.1	6,826.1	120.6	136.8	90.00	-1,175.6	-196.9	4,675.6	4,426.9	248.65	18.804	
11,700.0	6,865.1	6,826.1	6,826.1	122.7	136.8	90.00	-1,175.6	-196.9	4,751.8	4,500.8	251.00	18.932	
11,712.6	6,865.1	6,826.1	6,826.1	123.0	136.8	90.00	-1,175.6	-196.9	4,763.0	4,511.7	251.34	18.950	
11,800.0	6,865.1	6,826.1	6,826.1	125.2	136.8	90.00	-1,175.6	-196.9	4,841.0	4,587.3	253.74	19.079	
11,811.0	6,865.1	6,826.1	6,826.1	125.5	136.8	90.00	-1,175.6	-196.9	4,850.9	4,596.8	254.04	19.095	
11,900.0	6,865.1	6,826.1	6,826.1	127.7	136.8	90.00	-1,175.6	-196.9	4,930.6	4,674.1	256.49	19.224	
11,909.4	6,865.1	6,826.1	6,826.1	128.0	136.8	90.00	-1,175.6	-196.9	4,939.1	4,682.4	256.75	19.237	
12,000.0	6,865.1	6,826.1	6,826.1	130.2	136.8	90.00	-1,175.6	-196.9	5,020.6	4,761.4	259.24	19.367	
12,007.8	6,865.1	6,826.1	6,826.1	130.4	136.8	90.00	-1,175.6	-196.9	5,027.7	4,768.3	259.45	19.378	
12,100.0	6,865.1	6,826.1	6,826.1	132.8	136.8	90.00	-1,175.6	-196.9	5,111.0	4,849.0	261.99	19.508	

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	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	6,865.1	6,826.1	6,826.1	132.9	136.8	90.00	-1,175.6	-196.9	5,116.7	4,854.5	262.16	19.517	
12,200.0	6,865.1	6,826.1	6,826.1	135.3	136.8	90.00	-1,175.6	-196.9	5,201.8	4,937.0	264.75	19.648	
12,204.7	6,865.1	6,826.1	6,826.1	135.5	136.8	90.00	-1,175.6	-196.9	5,206.0	4,941.2	264.88	19.655	
12,300.0	6,865.1	6,826.1	6,826.1	137.9	136.8	90.00	-1,175.6	-196.9	5,292.8	5,025.3	267.50	19.786	
12,303.1	6,865.1	6,826.1	6,826.1	138.0	136.8	90.00	-1,175.6	-196.9	5,295.7	5,028.1	267.59	19.790	
12,400.0	6,865.1	6,826.1	6,826.1	140.5	136.8	90.00	-1,175.6	-196.9	5,384.2	5,113.9	270.26	19.922	
12,401.5	6,865.1	6,826.1	6,826.1	140.5	136.8	90.00	-1,175.6	-196.9	5,385.6	5,115.3	270.31	19.924	
12,500.0	6,865.1	6,826.1	6,826.1	143.1	136.8	90.00	-1,175.6	-196.9	5,475.9	5,202.9	273.03	20.056	
12,598.4	6,865.1	6,826.1	6,826.1	145.6	136.8	90.00	-1,175.6	-196.9	5,566.4	5,290.6	275.75	20.187	
12,600.0	6,865.1	6,826.1	6,826.1	145.7	136.8	90.00	-1,175.6	-196.9	5,567.9	5,292.1	275.79	20.189	
12,696.8	6,865.1	6,826.1	6,826.1	148.2	136.8	90.00	-1,175.6	-196.9	5,657.2	5,378.7	278.47	20.315	
12,700.0	6,865.1	6,826.1	6,826.1	148.3	136.8	90.00	-1,175.6	-196.9	5,660.1	5,381.5	278.56	20.320	
12,795.2	6,865.1	6,826.1	6,826.1	150.7	136.8	90.00	-1,175.6	-196.9	5,748.2	5,467.0	281.19	20.442	
12,800.0	6,865.1	6,826.1	6,826.1	150.9	136.8	90.00	-1,175.6	-196.9	5,752.6	5,471.3	281.32	20.448	
12,893.7	6,865.1	6,826.1	6,826.1	153.3	136.8	90.00	-1,175.6	-196.9	5,839.5	5,555.6	283.92	20.568	
12,900.0	6,865.1	6,826.1	6,826.1	153.5	136.8	90.00	-1,175.6	-196.9	5,845.4	5,561.3	284.09	20.576	
12,992.1	6,865.1	6,826.1	6,826.1	155.9	136.8	90.00	-1,175.6	-196.9	5,931.0	5,644.3	286.64	20.691	
13,000.0	6,865.1	6,826.1	6,826.1	156.1	136.8	90.00	-1,175.6	-196.9	5,938.3	5,651.5	286.86	20.701	
13,090.5	6,865.1	6,826.1	6,826.1	158.5	136.8	90.00	-1,175.6	-196.9	6,022.7	5,733.3	289.37	20.813	
13,100.0	6,865.1	6,826.1	6,826.1	158.8	136.8	90.00	-1,175.6	-196.9	6,031.5	5,741.9	289.63	20.825	
13,188.9	6,865.1	6,826.1	6,826.1	161.1	136.8	90.00	-1,175.6	-196.9	6,114.6	5,822.5	292.10	20.933	
13,200.0	6,865.1	6,826.1	6,826.1	161.4	136.8	90.00	-1,175.6	-196.9	6,125.0	5,832.6	292.41	20.947	
13,287.4	6,865.1	6,826.1	6,826.1	163.7	136.8	90.00	-1,175.6	-196.9	6,206.8	5,911.9	294.83	21.052	
13,300.0	6,865.1	6,826.1	6,826.1	164.1	136.8	90.00	-1,175.6	-196.9	6,218.6	5,923.4	295.18	21.067	
13,385.8	6,865.1	6,826.1	6,826.1	166.3	136.8	90.00	-1,175.6	-196.9	6,299.1	6,001.5	297.56	21.169	
13,400.0	6,865.1	6,826.1	6,826.1	166.7	136.8	90.00	-1,175.6	-196.9	6,312.4	6,014.5	297.96	21.186	
13,484.2	6,865.1	6,826.1	6,826.1	169.0	136.8	90.00	-1,175.6	-196.9	6,391.6	6,091.3	300.30	21.284	
13,500.0	6,865.1	6,826.1	6,826.1	169.4	136.8	90.00	-1,175.6	-196.9	6,406.4	6,105.7	300.74	21.303	
13,582.6	6,865.1	6,826.1	6,826.1	171.6	136.8	90.00	-1,175.6	-196.9	6,484.3	6,181.2	303.03	21.398	
13,600.0	6,865.1	6,826.1	6,826.1	172.1	136.8	90.00	-1,175.6	-196.9	6,500.6	6,197.1	303.51	21.418	
13,681.1	6,865.1	6,826.1	6,826.1	174.2	136.8	90.00	-1,175.6	-196.9	6,577.1	6,271.3	305.77	21.510	
13,700.0	6,865.1	6,826.1	6,826.1	174.7	136.8	90.00	-1,175.6	-196.9	6,595.0	6,288.7	306.29	21.532	
13,779.5	6,865.1	6,826.1	6,826.1	176.9	136.8	90.00	-1,175.6	-196.9	6,670.1	6,361.6	308.50	21.621	
13,800.0	6,865.1	6,826.1	6,826.1	177.4	136.8	90.00	-1,175.6	-196.9	6,689.5	6,380.4	309.07	21.644	
13,877.9	6,865.0	6,826.0	6,826.0	179.5	136.8	90.00	-1,175.6	-196.9	6,763.3	6,452.0	311.24	21.730	
13,900.0	6,865.0	6,826.0	6,826.0	180.1	136.8	90.00	-1,175.6	-196.9	6,784.2	6,472.3	311.86	21.754	
13,976.3	6,865.0	6,826.0	6,826.0	182.2	136.8	90.00	-1,175.6	-196.9	6,856.6	6,542.6	313.98	21.838	
14,000.0	6,865.0	6,826.0	6,826.0	182.8	136.8	90.00	-1,175.6	-196.9	6,879.0	6,564.4	314.64	21.863	
14,074.8	6,865.0	6,826.0	6,826.0	184.8	136.8	90.00	-1,175.6	-196.9	6,950.0	6,633.3	316.72	21.944	
14,100.0	6,865.0	6,826.0	6,826.0	185.5	136.8	90.00	-1,175.6	-196.9	6,974.0	6,656.6	317.42	21.971	
14,173.2	6,865.0	6,826.0	6,826.0	187.5	136.8	90.00	-1,175.6	-196.9	7,043.6	6,724.2	319.46	22.049	
14,200.0	6,865.0	6,826.0	6,826.0	188.2	136.8	90.00	-1,175.6	-196.9	7,069.1	6,748.9	320.21	22.077	
14,271.6	6,865.0	6,826.0	6,826.0	190.1	136.8	90.00	-1,175.6	-196.9	7,137.3	6,815.1	322.20	22.152	
14,300.0	6,865.0	6,826.0	6,826.0	190.9	136.8	90.00	-1,175.6	-196.9	7,164.4	6,841.4	322.99	22.181	
14,370.0	6,865.0	6,826.0	6,826.0	192.8	136.8	90.00	-1,175.6	-196.9	7,231.2	6,906.2	324.94	22.254	
14,400.0	6,865.0	6,826.0	6,826.0	193.6	136.8	90.00	-1,175.6	-196.9	7,259.7	6,934.0	325.78	22.284	
14,468.5	6,865.0	6,826.0	6,826.0	195.4	136.8	90.00	-1,175.6	-196.9	7,325.1	6,997.4	327.68	22.354	
14,500.0	6,865.0	6,826.0	6,826.0	196.3	136.8	90.00	-1,175.6	-196.9	7,355.2	7,026.7	328.56	22.386	
14,566.9	6,865.0	6,826.0	6,826.0	198.1	136.8	90.00	-1,175.6	-196.9	7,419.2	7,088.8	330.43	22.453	
14,600.0	6,865.0	6,826.0	6,826.0	199.0	136.8	90.00	-1,175.6	-196.9	7,450.9	7,119.5	331.35	22.486	
14,665.3	6,865.0	6,826.0	6,826.0	200.8	136.8	90.00	-1,175.6	-196.9	7,513.4	7,180.2	333.17	22.551	
14,700.0	6,865.0	6,826.0	6,826.0	201.7	136.8	90.00	-1,175.6	-196.9	7,546.6	7,212.4	334.14	22.585	

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-INC												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
14,763.7	6,865.0	6,826.0	6,826.0	203.5	136.8	90.00	-1,175.6	-196.9	7,607.7	7,271.8	335.92	22.648	
14,800.0	6,865.0	6,826.0	6,826.0	204.4	136.8	90.00	-1,175.6	-196.9	7,642.4	7,305.5	336.93	22.683	
14,862.2	6,865.0	6,826.0	6,826.0	206.1	136.8	90.00	-1,175.6	-196.9	7,702.1	7,363.4	338.66	22.743	
14,900.0	6,865.0	6,826.0	6,826.0	207.2	136.8	90.00	-1,175.6	-196.9	7,738.4	7,398.7	339.72	22.779	
14,960.6	6,865.0	6,826.0	6,826.0	208.8	136.8	90.00	-1,175.6	-196.9	7,796.6	7,455.2	341.41	22.837	
15,000.0	6,865.0	6,826.0	6,826.0	209.9	136.8	90.00	-1,175.6	-196.9	7,834.4	7,491.9	342.51	22.874	
15,059.0	6,865.0	6,826.0	6,826.0	211.5	136.8	90.00	-1,175.6	-196.9	7,891.2	7,547.0	344.15	22.929	
15,100.0	6,865.0	6,826.0	6,826.0	212.6	136.8	90.00	-1,175.6	-196.9	7,930.6	7,585.3	345.30	22.967	
15,157.4	6,865.0	6,826.0	6,826.0	214.2	136.8	90.00	-1,175.6	-196.9	7,985.8	7,638.9	346.90	23.021	
15,200.0	6,865.0	6,826.0	6,826.0	215.3	136.8	90.00	-1,175.6	-196.9	8,026.8	7,678.7	348.09	23.060	
15,255.9	6,865.0	6,826.0	6,826.0	216.9	136.8	90.00	-1,175.6	-196.9	8,080.6	7,731.0	349.65	23.111	
15,300.0	6,865.0	6,826.0	6,826.0	218.1	136.8	90.00	-1,175.6	-196.9	8,123.1	7,772.3	350.88	23.151	
15,354.3	6,865.0	6,826.0	6,826.0	219.6	136.8	90.00	-1,175.6	-196.9	8,175.5	7,823.1	352.39	23.200	
15,400.0	6,865.0	6,826.0	6,826.0	220.8	136.8	90.00	-1,175.6	-196.9	8,219.6	7,865.9	353.67	23.241	
15,452.7	6,865.0	6,826.0	6,826.0	222.2	136.8	90.00	-1,175.6	-196.9	8,270.4	7,915.3	355.14	23.288	
15,500.0	6,865.0	6,826.0	6,826.0	223.5	136.8	89.99	-1,175.6	-196.9	8,316.1	7,959.6	356.46	23.329	
15,551.1	6,865.0	6,826.0	6,826.0	224.9	136.8	89.99	-1,175.6	-196.9	8,365.4	8,007.6	357.89	23.374	
15,600.0	6,865.0	6,826.0	6,826.0	226.3	136.8	89.99	-1,175.6	-196.9	8,412.6	8,053.4	359.26	23.417	
15,649.6	6,865.0	6,826.0	6,826.0	227.6	136.8	89.99	-1,175.6	-196.9	8,460.5	8,099.9	360.64	23.460	
15,700.0	6,865.0	6,826.0	6,826.0	229.0	136.8	89.99	-1,175.6	-196.9	8,509.3	8,147.3	362.05	23.503	
15,748.0	6,865.0	6,826.0	6,826.0	230.3	136.8	89.99	-1,175.6	-196.9	8,555.7	8,192.3	363.39	23.544	
15,800.0	6,865.0	6,826.0	6,826.0	231.8	136.8	89.99	-1,175.6	-196.9	8,606.0	8,241.2	364.84	23.588	
15,846.4	6,865.0	6,826.0	6,826.0	233.0	136.8	89.99	-1,175.6	-196.9	8,651.0	8,284.8	366.14	23.628	
15,900.0	6,865.0	6,826.0	6,826.0	234.5	136.8	89.99	-1,175.6	-196.9	8,702.9	8,335.2	367.64	23.672	
15,944.8	6,865.0	6,826.0	6,826.0	235.7	136.8	89.99	-1,175.6	-196.9	8,746.3	8,377.4	368.89	23.710	
16,000.0	6,865.0	6,826.0	6,826.0	237.3	136.8	89.99	-1,175.6	-196.9	8,799.7	8,429.3	370.43	23.755	
16,043.3	6,865.0	6,826.0	6,826.0	238.4	136.8	89.99	-1,175.6	-196.9	8,841.7	8,470.0	371.64	23.791	
16,100.0	6,865.0	6,826.0	6,826.0	240.0	136.8	89.99	-1,175.6	-196.9	8,896.7	8,523.5	373.23	23.837	
16,141.7	6,865.0	6,826.0	6,826.0	241.1	136.8	89.99	-1,175.6	-196.9	8,937.1	8,562.7	374.39	23.871	
16,200.0	6,865.0	6,826.0	6,826.0	242.7	136.8	89.99	-1,175.6	-196.9	8,993.7	8,617.7	376.02	23.918	
16,240.1	6,865.0	6,826.0	6,826.0	243.8	136.8	89.99	-1,175.6	-196.9	9,032.7	8,655.5	377.14	23.950	
16,281.8	6,865.0	6,826.0	6,826.0	245.0	136.8	89.99	-1,175.6	-196.9	9,073.2	8,694.8	378.31	23.983	

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	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	-80.53	25.1	-150.7	153.8				
98.4	98.4	81.2	81.2	0.1	0.0	-80.56	25.0	-150.5	152.5	152.4	0.14	1,086.589	
100.0	100.0	82.8	82.8	0.1	0.0	-80.56	25.0	-150.5	152.5	152.4	0.14	1,065.987	
196.8	196.8	179.9	179.9	0.3	0.2	-80.64	24.7	-149.9	151.9	151.4	0.50	303.921	
200.0	200.0	183.0	183.0	0.3	0.2	-80.65	24.7	-149.9	151.9	151.4	0.51	296.658	
295.3	295.3	277.7	277.7	0.5	0.3	-80.77	24.3	-149.4	151.4	150.6	0.81	186.697	
300.0	300.0	282.4	282.4	0.5	0.3	-80.78	24.3	-149.4	151.4	150.6	0.82	183.495	
360.9	360.9	342.9	342.9	0.7	0.3	-80.90	23.9	-149.4	151.3	150.3	1.00	151.197 CC	
393.7	393.7	375.5	375.5	0.8	0.3	-80.97	23.7	-149.5	151.3	150.2	1.09	138.289	
400.0	400.0	381.8	381.8	0.8	0.4	-80.99	23.7	-149.5	151.3	150.2	1.11	136.064	
492.1	492.1	473.7	473.7	1.0	0.4	-81.22	23.1	-149.8	151.6	150.2	1.37	110.542 ES	
500.0	500.0	481.5	481.5	1.0	0.4	-81.24	23.1	-149.8	151.6	150.2	1.39	108.809	
590.5	590.5	571.9	571.9	1.2	0.5	-81.45	22.6	-150.2	151.9	150.3	1.64	92.519	
600.0	600.0	581.3	581.3	1.2	0.5	-81.47	22.5	-150.3	152.0	150.3	1.67	91.110	
689.0	689.0	670.3	670.3	1.4	0.5	-81.66	22.1	-150.8	152.4	150.5	1.91	79.812	
700.0	700.0	681.4	681.3	1.4	0.5	-81.68	22.0	-150.8	152.4	150.5	1.94	78.608	
787.4	787.4	768.7	768.6	1.6	0.6	-81.89	21.5	-151.3	152.8	150.6	2.17	70.304	
800.0	800.0	781.2	781.2	1.7	0.6	-81.92	21.5	-151.4	152.9	150.7	2.21	69.258	
885.8	885.8	867.1	867.0	1.9	0.6	-82.11	21.1	-151.9	153.3	150.9	2.44	62.940	
900.0	900.0	881.2	881.2	1.9	0.6	-82.13	21.0	-152.0	153.4	150.9	2.47	62.010	
984.2	984.2	965.2	965.2	2.1	0.6	-82.25	20.7	-152.5	153.9	151.2	2.70	57.065	
1,000.0	1,000.0	980.9	980.9	2.1	0.7	-82.27	20.7	-152.6	154.0	151.3	2.74	56.239	
1,082.7	1,082.7	1,063.3	1,063.3	2.3	0.7	-82.33	20.6	-153.3	154.7	151.7	2.96	52.307	
1,100.0	1,100.0	1,080.6	1,080.6	2.3	0.7	-82.34	20.6	-153.4	154.8	151.8	3.00	51.560	
1,181.1	1,181.1	1,161.5	1,161.4	2.5	0.7	-82.34	20.7	-154.2	155.6	152.4	3.22	48.379	
1,200.0	1,200.0	1,180.3	1,180.3	2.6	0.7	-82.34	20.8	-154.4	155.8	152.6	3.27	47.703	
1,279.5	1,279.5	1,259.6	1,259.6	2.7	0.8	-82.27	21.1	-155.3	156.7	153.3	3.47	45.107	
1,300.0	1,300.0	1,280.1	1,280.0	2.8	0.8	-82.23	21.2	-155.5	157.0	153.5	3.53	44.494	
1,377.9	1,377.9	1,357.9	1,357.9	2.9	0.8	87.54	21.9	-156.4	157.9	154.2	3.70	42.709	
1,400.0	1,400.0	1,380.0	1,379.9	3.0	0.8	87.88	22.3	-156.7	158.2	154.5	3.75	42.206	
1,476.4	1,476.3	1,456.7	1,456.6	3.1	0.8	89.68	23.7	-157.4	159.0	155.1	3.90	40.749	
1,500.0	1,499.8	1,480.5	1,480.4	3.2	0.8	90.43	24.3	-157.5	159.3	155.3	3.95	40.316	
1,574.8	1,574.4	1,555.5	1,555.4	3.3	0.8	93.32	26.3	-157.6	160.0	155.9	4.11	38.944	
1,600.6	1,600.0	1,581.3	1,581.2	3.4	0.8	94.48	27.0	-157.6	160.4	156.2	4.16	38.510	
1,665.6	1,664.6	1,646.2	1,646.0	3.5	0.8	97.51	28.7	-157.4	161.4	157.0	4.32	37.360	
1,673.2	1,672.3	1,653.8	1,653.7	3.5	0.8	97.87	28.9	-157.3	161.5	157.2	4.34	37.230	
1,700.0	1,698.9	1,680.5	1,680.3	3.6	0.9	99.21	29.7	-157.1	162.1	157.7	4.40	36.801	
1,771.6	1,769.8	1,751.6	1,751.4	3.7	0.9	103.38	31.9	-156.5	164.3	159.7	4.58	35.841	
1,800.0	1,797.7	1,779.6	1,779.4	3.8	0.9	105.22	32.7	-156.2	165.5	160.9	4.65	35.561	
1,870.1	1,866.5	1,848.7	1,848.5	4.0	0.9	110.17	34.7	-155.2	169.8	164.9	4.86	34.956	
1,900.0	1,895.7	1,878.1	1,877.8	4.1	0.9	112.42	35.5	-154.7	172.2	167.3	4.94	34.837	
1,968.5	1,962.2	1,944.6	1,944.3	4.3	0.9	117.75	37.2	-153.3	179.4	174.2	5.17	34.693 SF	
2,000.0	1,992.5	1,974.9	1,974.6	4.4	0.9	120.25	38.1	-152.5	183.6	178.3	5.27	34.818	
2,066.9	2,056.5	2,039.1	2,038.8	4.7	0.9	125.59	39.9	-150.7	194.6	189.1	5.52	35.267	
2,100.0	2,087.8	2,070.8	2,070.4	4.8	0.9	128.18	40.7	-149.7	201.0	195.4	5.63	35.694	
2,165.3	2,149.2	2,132.6	2,132.1	5.1	0.9	133.07	42.0	-147.4	215.9	210.0	5.88	36.703	
2,200.0	2,181.5	2,164.9	2,164.4	5.3	1.0	135.52	42.7	-146.2	224.9	218.9	6.01	37.458	
2,263.8	2,240.2	2,223.7	2,223.2	5.7	1.0	139.70	43.7	-143.9	243.8	237.5	6.25	38.989	
2,300.0	2,273.1	2,256.7	2,256.1	5.9	1.0	141.89	44.2	-142.6	255.7	249.3	6.38	40.062	
2,362.2	2,329.0	2,312.7	2,312.1	6.3	1.0	145.33	44.9	-140.3	278.2	271.5	6.62	42.024	
2,400.0	2,362.6	2,346.5	2,345.8	6.6	1.0	147.25	45.2	-139.0	293.0	286.3	6.76	43.365	
2,460.6	2,415.6	2,399.9	2,399.3	7.1	1.0	150.05	45.7	-136.7	318.7	311.7	6.99	45.604	

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	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	2,449.6	2,433.6	2,432.9	7.4	1.0	151.66	45.9	-135.2	336.5	329.4	7.13	47.177	
2,559.0	2,499.7	2,483.2	2,482.4	7.9	1.0	153.86	46.3	-133.0	365.0	357.6	7.36	49.582	
2,600.0	2,533.9	2,516.9	2,516.1	8.3	1.0	155.22	46.5	-131.5	385.9	378.4	7.51	51.349	
2,657.5	2,581.0	2,563.1	2,562.3	8.8	1.0	156.93	46.9	-129.5	416.8	409.1	7.74	53.823	
2,700.0	2,615.2	2,596.6	2,595.7	9.2	1.0	158.07	47.1	-128.0	440.9	432.9	7.91	55.737	
2,755.9	2,659.3	2,640.5	2,639.5	9.8	1.1	159.43	47.5	-126.1	473.8	465.7	8.14	58.230	
2,800.0	2,693.4	2,674.4	2,673.4	10.3	1.1	160.41	47.8	-124.5	500.9	492.6	8.31	60.254	
2,854.3	2,734.5	2,715.1	2,714.0	10.9	1.1	161.48	48.1	-122.6	535.5	526.9	8.54	62.686	
2,900.0	2,768.2	2,748.1	2,747.0	11.5	1.1	162.26	48.3	-121.1	565.6	556.8	8.73	64.765	
2,952.7	2,806.3	2,785.3	2,784.2	12.1	1.1	163.07	48.6	-119.5	601.4	592.5	8.96	67.091	
3,000.0	2,839.5	2,817.7	2,816.6	12.7	1.1	163.71	48.8	-118.1	634.6	625.4	9.17	69.193	
3,044.6	2,870.1	2,847.5	2,846.3	13.3	1.1	164.25	49.1	-116.8	666.7	657.3	9.37	71.122	
3,051.2	2,874.5	2,851.8	2,850.7	13.4	1.1	164.38	49.1	-116.6	671.5	662.1	9.40	71.407	
3,100.0	2,907.6	2,884.0	2,882.8	14.0	1.1	165.29	49.4	-115.3	707.2	697.5	9.63	73.467	
3,149.6	2,941.2	2,917.4	2,916.2	14.7	1.1	166.14	49.7	-113.9	743.5	733.6	9.85	75.451	
3,200.0	2,975.3	2,952.2	2,951.0	15.4	1.1	166.95	50.0	-112.5	780.4	770.3	10.09	77.370	
3,248.0	3,007.8	2,985.5	2,984.2	16.0	1.1	167.65	50.2	-111.2	815.6	805.3	10.31	79.084	
3,300.0	3,043.0	3,020.1	3,018.8	16.7	1.1	168.32	50.3	-109.9	853.7	843.1	10.56	80.821	
3,346.4	3,074.5	3,050.2	3,048.9	17.4	1.2	168.86	50.5	-108.7	887.8	877.0	10.79	82.270	
3,400.0	3,110.7	3,084.8	3,083.5	18.1	1.2	169.42	50.8	-107.5	927.2	916.1	11.06	83.856	
3,444.9	3,141.1	3,114.6	3,113.2	18.7	1.2	169.86	51.0	-106.5	960.3	949.0	11.28	85.107	
3,500.0	3,178.4	3,152.2	3,150.9	19.5	1.2	170.37	51.3	-105.3	1,001.0	989.4	11.56	86.563	
3,543.3	3,207.8	3,181.9	3,180.5	20.1	1.2	170.74	51.5	-104.4	1,032.9	1,021.1	11.79	87.634	
3,600.0	3,246.1	3,222.0	3,220.6	20.8	1.2	171.21	51.7	-103.2	1,074.7	1,062.6	12.08	88.974	
3,641.7	3,274.4	3,252.4	3,251.0	21.4	1.2	171.53	51.8	-102.4	1,105.4	1,093.1	12.30	89.903	
3,700.0	3,313.9	3,295.1	3,293.7	22.2	1.2	171.95	51.9	-101.2	1,148.2	1,135.6	12.60	91.126	
3,740.1	3,341.0	3,323.5	3,322.1	22.8	1.2	172.21	51.9	-100.5	1,177.7	1,164.9	12.81	91.912	
3,800.0	3,381.6	3,365.5	3,364.1	23.6	1.2	172.57	51.8	-99.5	1,221.6	1,208.4	13.13	93.019	
3,838.6	3,407.7	3,392.7	3,391.2	24.1	1.2	172.79	51.7	-98.9	1,249.8	1,236.5	13.34	93.690	
3,900.0	3,449.3	3,435.3	3,433.8	25.0	1.2	173.11	51.5	-97.9	1,294.8	1,281.1	13.67	94.693	
3,937.0	3,474.3	3,460.8	3,459.3	25.5	1.3	173.29	51.4	-97.3	1,321.9	1,308.0	13.88	95.262	
4,000.0	3,517.0	3,504.3	3,502.8	26.4	1.3	173.58	51.2	-96.4	1,368.0	1,353.8	14.22	96.185	
4,035.4	3,541.0	3,528.2	3,526.7	26.9	1.3	173.73	51.1	-95.9	1,393.9	1,379.5	14.42	96.671	
4,100.0	3,584.7	3,571.7	3,570.2	27.7	1.3	173.98	50.8	-95.0	1,441.2	1,426.4	14.78	97.521	
4,133.8	3,607.6	3,594.5	3,593.0	28.2	1.3	174.11	50.7	-94.5	1,466.0	1,451.0	14.97	97.944	
4,200.0	3,652.4	3,642.3	3,640.8	29.1	1.3	174.37	50.4	-93.4	1,514.4	1,499.1	15.34	98.736	
4,232.3	3,674.3	3,666.0	3,664.5	29.6	1.3	174.50	50.3	-92.9	1,538.0	1,522.5	15.52	99.098	
4,300.0	3,720.1	3,714.3	3,712.7	30.5	1.3	174.74	49.8	-91.7	1,587.5	1,571.6	15.90	99.829	
4,330.7	3,740.9	3,734.7	3,733.1	31.0	1.3	174.84	49.6	-91.2	1,609.9	1,593.8	16.08	100.143	
4,400.0	3,787.8	3,780.7	3,779.1	31.9	1.3	175.06	49.2	-90.0	1,660.5	1,644.0	16.47	100.828	
4,429.1	3,807.5	3,800.0	3,798.4	32.3	1.3	175.15	49.0	-89.5	1,681.8	1,665.2	16.63	101.104	
4,500.0	3,855.5	3,846.7	3,845.1	33.3	1.4	175.35	48.6	-88.2	1,733.6	1,716.6	17.04	101.736	
4,527.5	3,874.2	3,864.8	3,863.2	33.7	1.4	175.43	48.5	-87.7	1,753.8	1,736.6	17.20	101.972	
4,600.0	3,923.2	3,911.7	3,910.0	34.7	1.4	175.62	48.1	-86.4	1,806.9	1,789.2	17.62	102.568	
4,626.0	3,940.8	3,927.6	3,926.0	35.1	1.4	175.68	48.0	-86.0	1,825.9	1,808.1	17.77	102.772	
4,700.0	3,991.0	3,973.1	3,971.4	36.1	1.4	175.84	47.9	-85.0	1,880.3	1,862.1	18.20	103.339	
4,724.4	4,007.5	3,988.0	3,986.3	36.5	1.4	175.88	47.8	-84.7	1,898.3	1,879.9	18.34	103.515	
4,800.0	4,058.7	4,034.0	4,032.4	37.5	1.4	176.02	47.9	-84.1	1,954.0	1,935.2	18.78	104.043	
4,822.8	4,074.1	4,047.9	4,046.2	37.8	1.4	176.06	47.9	-83.9	1,970.8	1,951.9	18.91	104.196	
4,900.0	4,126.4	4,094.6	4,092.9	38.9	1.4	176.17	48.2	-83.6	2,027.9	2,008.5	19.37	104.694	
4,921.2	4,140.8	4,108.4	4,106.7	39.2	1.4	176.20	48.3	-83.5	2,043.6	2,024.1	19.50	104.824	
5,000.0	4,194.1	4,162.0	4,160.4	40.3	1.4	176.30	48.7	-83.4	2,101.9	2,082.0	19.96	105.283	

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	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)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,019.7	4,207.4	4,175.4	4,173.8	40.6	1.4	176.33	48.8	-83.5	2,116.5	2,096.4	20.08	105.392	
5,100.0	4,261.8	4,229.4	4,227.7	41.7	1.4	176.42	49.2	-83.7	2,175.9	2,155.4	20.56	105.824	
5,118.1	4,274.0	4,241.4	4,239.7	42.0	1.4	176.44	49.3	-83.7	2,189.3	2,168.7	20.67	105.918	
5,200.0	4,329.5	4,295.7	4,294.0	43.1	1.4	176.52	49.8	-84.0	2,250.0	2,228.8	21.16	106.332	
5,216.5	4,340.7	4,306.7	4,305.0	43.4	1.4	176.53	49.9	-84.1	2,262.2	2,241.0	21.26	106.411	
5,300.0	4,397.2	4,362.3	4,360.7	44.5	1.4	176.61	50.4	-84.4	2,324.0	2,302.3	21.76	106.798	
5,314.9	4,407.3	4,372.3	4,370.6	44.7	1.4	176.62	50.5	-84.4	2,335.1	2,313.3	21.85	106.866	
5,400.0	4,464.9	4,430.1	4,428.4	45.9	1.5	176.70	51.0	-84.7	2,398.1	2,375.7	22.36	107.231	
5,413.4	4,474.0	4,439.4	4,437.7	46.1	1.5	176.71	51.0	-84.8	2,408.0	2,385.6	22.44	107.285	
5,500.0	4,532.6	4,499.5	4,497.8	47.3	1.5	176.78	51.5	-85.2	2,472.1	2,449.2	22.97	107.627	
5,511.8	4,540.6	4,507.8	4,506.2	47.5	1.5	176.79	51.6	-85.3	2,480.9	2,457.8	23.04	107.670	
5,600.0	4,600.3	4,570.3	4,568.6	48.7	1.5	176.86	52.1	-85.7	2,546.1	2,522.5	23.58	107.987	
5,610.2	4,607.3	4,577.5	4,575.9	48.9	1.5	176.87	52.1	-85.7	2,553.6	2,530.0	23.64	108.023	
5,700.0	4,668.0	4,640.8	4,639.1	50.1	1.5	176.94	52.5	-86.1	2,619.9	2,595.8	24.19	108.321	
5,708.6	4,673.9	4,646.9	4,645.2	50.3	1.5	176.94	52.5	-86.1	2,626.3	2,602.1	24.24	108.349	
5,800.0	4,735.8	4,710.7	4,709.0	51.5	1.5	177.01	52.8	-86.5	2,693.7	2,668.9	24.80	108.632	
5,807.1	4,740.5	4,715.4	4,713.8	51.6	1.5	177.02	52.8	-86.5	2,698.9	2,674.1	24.84	108.653	
5,900.0	4,803.5	4,778.1	4,776.4	53.0	1.5	177.08	53.0	-86.8	2,767.5	2,742.1	25.41	108.924	
5,905.5	4,807.2	4,781.8	4,780.1	53.0	1.5	177.08	53.1	-86.8	2,771.6	2,746.1	25.44	108.940	
5,978.4	4,856.5	4,830.5	4,828.8	54.1	1.5	177.13	53.3	-87.0	2,825.3	2,799.4	25.89	109.141	
6,000.0	4,871.3	4,844.9	4,843.2	54.3	1.5	177.18	53.3	-87.1	2,841.2	2,815.2	26.01	109.237	
6,003.9	4,874.0	4,847.5	4,845.8	54.4	1.5	177.19	53.3	-87.1	2,844.1	2,818.0	26.03	109.258	
6,100.0	4,941.7	4,914.2	4,912.5	55.3	1.5	177.38	53.6	-87.2	2,912.4	2,885.9	26.52	109.821	
6,102.3	4,943.4	4,915.9	4,914.3	55.3	1.5	177.39	53.6	-87.2	2,914.0	2,887.5	26.53	109.838	
6,200.0	5,015.7	4,989.1	4,987.4	56.2	1.5	177.56	53.9	-87.2	2,979.8	2,952.9	26.95	110.589	
6,200.8	5,016.3	4,989.7	4,988.0	56.2	1.5	177.56	53.9	-87.2	2,980.4	2,953.4	26.95	110.596	
6,299.2	5,092.5	5,070.4	5,068.7	57.1	1.5	177.72	54.1	-87.0	3,042.8	3,015.5	27.28	111.543	
6,300.0	5,093.2	5,071.0	5,069.4	57.1	1.5	177.72	54.1	-87.0	3,043.3	3,016.0	27.28	111.551	
6,397.6	5,171.9	5,153.4	5,151.7	58.0	1.6	177.86	54.1	-86.6	3,101.1	3,073.6	27.52	112.694	
6,400.0	5,173.8	5,155.4	5,153.7	58.0	1.6	177.86	54.1	-86.6	3,102.4	3,074.9	27.52	112.723	
6,496.0	5,254.1	5,236.6	5,234.9	58.8	1.6	177.97	54.1	-86.1	3,155.2	3,127.5	27.66	114.062	
6,500.0	5,257.4	5,239.9	5,238.2	58.8	1.6	177.98	54.1	-86.1	3,157.2	3,129.6	27.67	114.120	
6,594.5	5,339.0	5,318.5	5,316.8	59.5	1.6	178.08	54.0	-85.3	3,205.0	3,177.3	27.71	115.664	
6,600.0	5,343.8	5,322.9	5,321.2	59.6	1.6	178.09	54.0	-85.3	3,207.6	3,179.9	27.71	115.758	
6,692.9	5,426.3	5,400.0	5,398.3	60.2	1.6	178.17	54.1	-84.5	3,250.5	3,222.8	27.66	117.510	
6,700.0	5,432.7	5,400.0	5,398.3	60.2	1.6	178.17	54.1	-84.5	3,253.6	3,226.0	27.65	117.663	
6,791.3	5,515.9	5,477.5	5,475.8	60.8	1.6	178.25	54.4	-83.8	3,291.7	3,264.2	27.52	119.618	
6,800.0	5,523.9	5,484.6	5,482.9	60.9	1.6	178.25	54.4	-83.8	3,295.1	3,267.6	27.50	119.812	
6,889.7	5,607.5	5,566.9	5,565.2	61.4	1.7	178.31	54.9	-83.1	3,328.5	3,301.2	27.29	121.976	
6,900.0	5,617.1	5,576.6	5,574.9	61.4	1.7	178.32	55.0	-83.0	3,332.0	3,304.8	27.26	122.230	
6,988.2	5,700.8	5,670.2	5,668.5	61.9	1.7	178.37	55.4	-82.0	3,360.4	3,333.4	26.97	124.605	
7,000.0	5,712.1	5,683.3	5,681.6	61.9	1.7	178.38	55.4	-81.8	3,363.9	3,336.9	26.93	124.933	
7,086.6	5,795.5	5,773.5	5,771.8	62.3	1.7	178.44	55.4	-80.2	3,387.1	3,360.5	26.56	127.543	
7,100.0	5,808.6	5,787.4	5,785.6	62.4	1.7	178.45	55.4	-79.9	3,390.4	3,363.9	26.50	127.958	
7,185.0	5,891.6	5,867.2	5,865.5	62.6	1.7	178.51	55.0	-78.2	3,408.6	3,382.6	26.06	130.778	
7,200.0	5,906.3	5,904.1	5,902.4	62.7	1.7	178.52	54.9	-78.0	3,411.4	3,385.4	25.98	131.286	
7,283.4	5,988.6	5,982.6	5,980.9	62.9	1.8	178.55	54.4	-76.9	3,424.9	3,399.4	25.50	134.327	
7,300.0	6,005.0	6,000.0	5,998.2	63.0	1.8	178.56	54.3	-76.6	3,427.1	3,401.7	25.40	134.939	
7,381.9	6,086.3	6,086.5	6,084.7	63.1	1.8	178.59	53.8	-75.5	3,436.1	3,411.2	24.87	138.144	
7,400.0	6,104.4	6,105.3	6,103.5	63.2	1.8	178.59	53.7	-75.3	3,437.6	3,412.8	24.76	138.860	
7,480.3	6,184.5	6,180.0	6,178.2	63.3	1.8	178.62	53.2	-74.5	3,442.2	3,418.0	24.21	142.195	
7,500.0	6,204.2	6,200.0	6,198.2	63.3	1.8	178.62	53.1	-74.3	3,442.8	3,418.7	24.07	143.012	

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	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	
7,557.8	6,262.0	6,249.9	6,248.1	63.3	1.8	9.44	52.9	-73.7	3,443.6	3,378.5	65.07	52.918	
7,578.7	6,282.9	6,268.5	6,266.8	63.3	1.8	9.45	52.9	-73.5	3,443.5	3,378.5	65.09	52.907	
7,587.8	6,292.0	6,276.6	6,274.9	63.3	1.8	9.45	52.9	-73.5	3,443.5	3,378.5	65.09	52.902	
7,588.6	6,292.8	6,277.3	6,275.6	63.3	1.8	99.49	52.9	-73.4	3,443.5	3,419.8	23.71	145.246	
7,600.0	6,304.2	6,287.5	6,285.7	63.3	1.8	99.49	52.9	-73.3	3,443.6	3,419.8	23.77	144.851	
7,650.0	6,354.1	6,336.3	6,334.6	63.4	1.8	99.49	52.8	-72.8	3,444.1	3,420.1	24.07	143.099	
7,677.1	6,381.0	6,363.6	6,361.8	63.4	1.8	99.50	52.7	-72.5	3,444.7	3,420.5	24.24	142.133	
7,700.0	6,403.5	6,386.4	6,384.6	63.4	1.8	99.50	52.7	-72.3	3,445.4	3,421.0	24.38	141.332	
7,750.0	6,452.0	6,435.3	6,433.5	63.5	1.9	99.50	52.6	-71.8	3,447.4	3,422.7	24.70	139.546	
7,775.6	6,476.4	6,459.8	6,458.0	63.5	1.9	99.49	52.6	-71.6	3,448.8	3,423.9	24.88	138.608	
7,800.0	6,499.4	6,482.8	6,481.0	63.6	1.9	99.48	52.6	-71.4	3,450.2	3,425.2	25.05	137.719	
7,850.0	6,545.1	6,529.5	6,527.8	63.7	1.9	99.44	52.5	-71.0	3,453.8	3,428.4	25.43	135.820	
7,874.0	6,566.4	6,551.5	6,549.7	63.7	1.9	99.41	52.5	-70.8	3,455.9	3,430.2	25.63	134.854	
7,900.0	6,589.0	6,574.8	6,573.0	63.8	1.9	99.36	52.4	-70.6	3,458.3	3,432.4	25.85	133.806	
7,950.0	6,630.5	6,616.7	6,614.9	63.9	1.9	99.22	52.3	-70.3	3,463.6	3,437.3	26.31	131.635	
7,972.4	6,648.4	6,634.0	6,632.2	64.0	1.9	99.12	52.3	-70.2	3,466.3	3,439.7	26.55	130.577	
8,000.0	6,669.5	6,654.5	6,652.7	64.0	1.9	98.99	52.3	-70.1	3,469.9	3,443.0	26.84	129.270	
8,050.0	6,705.7	6,689.6	6,687.8	64.2	1.9	98.66	52.2	-69.8	3,477.1	3,449.7	27.45	126.686	
8,070.8	6,719.8	6,700.0	6,698.2	64.3	1.9	98.46	52.2	-69.7	3,480.4	3,452.7	27.73	125.514	
8,100.0	6,738.7	6,700.0	6,698.2	64.4	1.9	97.95	52.2	-69.7	3,485.5	3,457.3	28.14	123.878	
8,150.0	6,768.2	6,700.0	6,698.2	64.6	1.9	96.98	52.2	-69.7	3,495.1	3,466.2	28.91	120.905	
8,169.3	6,778.7	6,700.0	6,698.2	64.6	1.9	96.57	52.2	-69.7	3,499.1	3,469.9	29.23	119.708	
8,200.0	6,794.2	6,700.0	6,698.2	64.8	1.9	95.88	52.2	-69.7	3,505.9	3,476.1	29.74	117.880	
8,250.0	6,816.3	6,700.0	6,698.2	65.0	1.9	94.66	52.2	-69.7	3,517.8	3,487.2	30.61	114.932	
8,267.7	6,823.2	6,700.0	6,698.2	65.1	1.9	94.20	52.2	-69.7	3,522.3	3,491.4	30.92	113.905	
8,300.0	6,834.5	6,700.0	6,698.2	65.3	1.9	93.32	52.2	-69.7	3,530.7	3,499.3	31.47	112.189	
8,350.0	6,848.5	6,700.0	6,698.2	65.5	1.9	91.88	52.2	-69.7	3,544.6	3,512.3	32.29	109.765	
8,366.1	6,852.1	6,700.0	6,698.2	65.6	1.9	91.40	52.2	-69.7	3,549.2	3,516.7	32.55	109.049	
8,400.0	6,858.3	6,700.0	6,698.2	65.8	1.9	90.36	52.2	-69.7	3,559.2	3,526.2	33.03	107.754	
8,450.0	6,863.7	6,700.0	6,698.2	66.1	1.9	88.75	52.2	-69.7	3,574.5	3,540.8	33.65	106.226	
8,464.5	6,864.5	6,700.0	6,698.2	66.2	1.9	88.27	52.2	-69.7	3,579.1	3,545.2	33.81	105.873	
8,487.9	6,865.0	6,700.0	6,698.2	66.4	1.9	87.49	52.2	-69.7	3,586.4	3,552.4	34.02	105.423	
8,500.0	6,865.0	6,700.0	6,698.2	66.4	1.9	87.49	52.2	-69.7	3,590.3	3,556.1	34.24	104.847	
8,563.0	6,865.0	6,700.0	6,698.2	66.9	1.9	87.49	52.2	-69.7	3,611.1	3,575.7	35.45	101.872	
8,600.0	6,865.0	6,700.0	6,698.2	67.1	1.9	87.49	52.2	-69.7	3,623.8	3,587.6	36.15	100.229	
8,661.4	6,865.0	6,700.0	6,698.2	67.6	1.9	87.49	52.2	-69.7	3,645.5	3,608.1	37.40	97.486	
8,700.0	6,865.0	6,700.0	6,698.2	67.9	1.9	87.49	52.2	-69.7	3,659.6	3,621.5	38.17	95.866	
8,759.8	6,865.0	6,700.0	6,698.2	68.4	1.9	87.49	52.2	-69.7	3,682.2	3,642.8	39.44	93.357	
8,800.0	6,865.0	6,700.0	6,698.2	68.7	1.9	87.49	52.2	-69.7	3,697.9	3,657.6	40.29	91.773	
8,858.2	6,865.0	6,700.0	6,698.2	69.2	1.9	87.49	52.2	-69.7	3,721.2	3,679.6	41.58	89.502	
8,900.0	6,865.0	6,700.0	6,698.2	69.6	1.9	87.49	52.2	-69.7	3,738.4	3,695.9	42.50	87.971	
8,956.7	6,865.0	6,700.0	6,698.2	70.2	1.9	87.49	52.2	-69.7	3,762.3	3,718.6	43.78	85.929	
9,000.0	6,865.0	6,700.0	6,698.2	70.6	1.9	87.49	52.2	-69.7	3,781.1	3,736.3	44.77	84.459	
9,055.1	6,865.0	6,700.0	6,698.2	71.2	1.9	87.49	52.2	-69.7	3,805.6	3,759.5	46.05	82.632	
9,100.0	6,865.0	6,700.0	6,698.2	71.7	1.9	87.49	52.2	-69.7	3,826.0	3,778.9	47.10	81.228	
9,153.5	6,865.0	6,700.0	6,698.2	72.3	1.9	87.49	52.2	-69.7	3,850.8	3,802.5	48.38	79.599	
9,200.0	6,865.0	6,700.0	6,698.2	72.8	1.9	87.49	52.2	-69.7	3,872.9	3,823.4	49.49	78.262	
9,251.9	6,865.0	6,700.0	6,698.2	73.5	1.9	87.49	52.2	-69.7	3,898.1	3,847.3	50.75	76.812	
9,300.0	6,865.0	6,700.0	6,698.2	74.1	1.9	87.49	52.2	-69.7	3,921.8	3,869.9	51.91	75.544	
9,350.4	6,865.0	6,700.0	6,698.2	74.7	1.9	87.49	52.2	-69.7	3,947.2	3,894.0	53.16	74.255	
9,400.0	6,865.0	6,700.0	6,698.2	75.4	1.9	87.49	52.2	-69.7	3,972.7	3,918.3	54.38	73.052	
9,448.8	6,865.0	6,700.0	6,698.2	76.1	1.9	87.49	52.2	-69.7	3,998.1	3,942.5	55.60	71.908	

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,500.0	6,865.0	6,700.0	6,698.2	76.8	1.9	87.49	52.2	-69.7	4,025.3	3,968.4	56.88	70.769	
9,547.2	6,865.0	6,700.0	6,698.2	77.5	1.9	87.49	52.2	-69.7	4,050.8	3,992.7	58.07	69.753	
9,600.0	6,865.0	6,700.0	6,698.2	78.3	1.9	87.49	52.2	-69.7	4,079.8	4,020.4	59.41	68.675	
9,645.6	6,865.0	6,700.0	6,698.2	79.0	1.9	87.49	52.2	-69.7	4,105.2	4,044.6	60.57	67.773	
9,700.0	6,865.0	6,700.0	6,698.2	79.8	1.9	87.49	52.2	-69.7	4,135.9	4,074.0	61.96	66.752	
9,744.1	6,865.0	6,700.0	6,698.2	80.5	1.9	87.49	52.2	-69.7	4,161.2	4,098.1	63.09	65.952	
9,800.0	6,865.0	6,700.0	6,698.2	81.5	1.9	87.49	52.2	-69.7	4,193.7	4,129.2	64.53	64.984	
9,842.5	6,865.0	6,700.0	6,698.2	82.2	1.9	87.49	52.2	-69.7	4,218.7	4,153.1	65.64	64.274	
9,900.0	6,865.0	6,700.0	6,698.2	83.2	1.9	87.49	52.2	-69.7	4,253.0	4,185.9	67.13	63.358	
9,940.9	6,865.0	6,700.0	6,698.2	83.9	1.9	87.49	52.2	-69.7	4,277.8	4,209.6	68.20	62.727	
10,000.0	6,865.0	6,700.0	6,698.2	85.0	1.9	87.49	52.2	-69.7	4,313.9	4,244.2	69.74	61.858	
10,039.3	6,865.0	6,700.0	6,698.2	85.7	1.9	87.49	52.2	-69.7	4,338.2	4,267.5	70.77	61.299	
10,100.0	6,865.0	6,700.0	6,698.2	86.8	1.9	87.49	52.2	-69.7	4,376.2	4,303.8	72.36	60.474	
10,137.8	6,865.0	6,700.0	6,698.2	87.5	1.9	87.49	52.2	-69.7	4,400.1	4,326.7	73.36	59.978	
10,200.0	6,865.0	6,700.0	6,698.2	88.7	1.9	87.49	52.2	-69.7	4,439.9	4,364.8	75.00	59.195	
10,236.2	6,865.0	6,700.0	6,698.2	89.5	1.9	87.49	52.2	-69.7	4,463.2	4,387.3	75.96	58.755	
10,300.0	6,865.0	6,700.0	6,698.2	90.7	1.9	87.49	52.2	-69.7	4,504.8	4,427.2	77.66	58.011	
10,334.6	6,865.0	6,700.0	6,698.2	91.4	1.9	87.49	52.2	-69.7	4,527.6	4,449.1	78.58	57.620	
10,400.0	6,865.0	6,700.0	6,698.2	92.8	1.9	87.49	52.2	-69.7	4,571.1	4,490.8	80.32	56.912	
10,433.0	6,865.0	6,700.0	6,698.2	93.4	1.9	87.49	52.2	-69.7	4,593.3	4,512.1	81.20	56.566	
10,500.0	6,865.0	6,700.0	6,698.2	94.8	1.9	87.49	52.2	-69.7	4,638.6	4,555.6	82.99	55.893	
10,531.5	6,865.0	6,700.0	6,698.2	95.5	1.9	87.49	52.2	-69.7	4,660.0	4,576.2	83.83	55.586	
10,600.0	6,865.0	6,700.0	6,698.2	97.0	1.9	87.49	52.2	-69.7	4,707.2	4,621.5	85.67	54.944	
10,629.9	6,865.0	6,700.0	6,698.2	97.6	1.9	87.49	52.2	-69.7	4,727.9	4,641.4	86.48	54.673	
10,700.0	6,865.0	6,700.0	6,698.2	99.2	1.9	87.49	52.2	-69.7	4,776.9	4,688.5	88.36	54.061	
10,728.3	6,865.0	6,700.0	6,698.2	99.8	1.9	87.49	52.2	-69.7	4,796.8	4,707.7	89.13	53.821	
10,800.0	6,865.0	6,700.0	6,698.2	101.4	1.9	87.49	52.2	-69.7	4,847.7	4,756.6	91.06	53.237	
10,826.7	6,865.0	6,700.0	6,698.2	102.0	1.9	87.49	52.2	-69.7	4,866.8	4,775.0	91.78	53.026	
10,900.0	6,865.0	6,700.0	6,698.2	103.6	1.9	87.49	52.2	-69.7	4,919.5	4,825.7	93.76	52.468	
10,925.2	6,865.0	6,700.0	6,698.2	104.2	1.9	87.49	52.2	-69.7	4,937.7	4,843.3	94.44	52.282	
11,000.0	6,865.1	6,700.0	6,698.2	105.9	1.9	87.49	52.2	-69.7	4,992.3	4,895.8	96.47	51.749	
11,023.6	6,865.1	6,700.0	6,698.2	106.5	1.9	87.49	52.2	-69.7	5,009.6	4,912.5	97.11	51.586	
11,100.0	6,865.1	6,700.0	6,698.2	108.2	1.9	87.49	52.2	-69.7	5,066.0	4,966.8	99.19	51.075	
11,122.0	6,865.1	6,700.0	6,698.2	108.8	1.9	87.49	52.2	-69.7	5,082.3	4,982.5	99.79	50.932	
11,200.0	6,865.1	6,700.0	6,698.2	110.6	1.9	87.49	52.2	-69.7	5,140.6	5,038.6	101.91	50.444	
11,220.4	6,865.1	6,700.0	6,698.2	111.1	1.9	87.49	52.2	-69.7	5,155.9	5,053.4	102.46	50.319	
11,300.0	6,865.1	6,700.0	6,698.2	113.0	1.9	87.49	52.2	-69.7	5,216.0	5,111.4	104.63	49.851	
11,318.9	6,865.1	6,700.0	6,698.2	113.4	1.9	87.49	52.2	-69.7	5,230.3	5,125.2	105.15	49.743	
11,400.0	6,865.1	6,700.0	6,698.2	115.4	1.9	87.49	52.2	-69.7	5,292.2	5,184.9	107.36	49.294	
11,417.3	6,865.1	6,700.0	6,698.2	115.8	1.9	87.49	52.2	-69.7	5,305.5	5,197.7	107.83	49.201	
11,500.0	6,865.1	6,700.0	6,698.2	117.8	1.9	87.49	52.2	-69.7	5,369.3	5,259.2	110.10	48.769	
11,515.7	6,865.1	6,700.0	6,698.2	118.2	1.9	87.49	52.2	-69.7	5,381.5	5,270.9	110.53	48.690	
11,600.0	6,865.1	6,700.0	6,698.2	120.3	1.9	87.49	52.2	-69.7	5,447.1	5,334.2	112.83	48.276	
11,614.1	6,865.1	6,700.0	6,698.2	120.6	1.9	87.49	52.2	-69.7	5,458.1	5,344.9	113.22	48.208	
11,700.0	6,865.1	6,700.0	6,698.2	122.7	1.9	87.49	52.2	-69.7	5,525.6	5,410.0	115.57	47.810	
11,712.6	6,865.1	6,700.0	6,698.2	123.0	1.9	87.49	52.2	-69.7	5,535.5	5,419.6	115.92	47.753	
11,800.0	6,865.1	6,700.0	6,698.2	125.2	1.9	87.49	52.2	-69.7	5,604.7	5,486.4	118.32	47.370	
11,811.0	6,865.1	6,700.0	6,698.2	125.5	1.9	87.49	52.2	-69.7	5,613.5	5,494.9	118.62	47.324	
11,900.0	6,865.1	6,700.0	6,698.2	127.7	1.9	87.49	52.2	-69.7	5,684.6	5,563.5	121.06	46.955	
11,909.4	6,865.1	6,700.0	6,698.2	128.0	1.9	87.49	52.2	-69.7	5,692.1	5,570.8	121.32	46.917	
12,000.0	6,865.1	6,700.0	6,698.2	130.2	1.9	87.49	52.2	-69.7	5,765.0	5,641.2	123.81	46.562	
12,007.8	6,865.1	6,700.0	6,698.2	130.4	1.9	87.49	52.2	-69.7	5,771.4	5,647.4	124.03	46.532	

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	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		
12,100.0	6,865.1	6,700.0	6,698.2	132.8	1.9	87.49	52.2	-69.7	5,846.1	5,719.5	126.57	46.190		
12,106.3	6,865.1	6,700.0	6,698.2	132.9	1.9	87.49	52.2	-69.7	5,851.2	5,724.5	126.74	46.167		
12,200.0	6,865.1	6,700.0	6,698.2	135.3	1.9	87.49	52.2	-69.7	5,927.8	5,798.4	129.32	45.837		
12,204.7	6,865.1	6,700.0	6,698.2	135.5	1.9	87.49	52.2	-69.7	5,931.6	5,802.2	129.45	45.821		
12,300.0	6,865.1	6,700.0	6,698.2	137.9	1.9	87.49	52.2	-69.7	6,010.0	5,877.9	132.08	45.503		
12,303.1	6,865.1	6,700.0	6,698.2	138.0	1.9	87.49	52.2	-69.7	6,012.5	5,880.4	132.17	45.493		
12,400.0	6,865.1	6,700.0	6,698.2	140.5	1.9	87.49	52.2	-69.7	6,092.7	5,957.9	134.84	45.185		
12,401.5	6,865.1	6,700.0	6,698.2	140.5	1.9	87.49	52.2	-69.7	6,094.0	5,959.1	134.88	45.180		
12,500.0	6,865.1	6,700.0	6,698.2	143.1	1.9	87.49	52.2	-69.7	6,175.9	6,038.3	137.60	44.883		
12,598.4	6,865.1	6,700.0	6,698.2	145.6	1.9	87.49	52.2	-69.7	6,258.3	6,118.0	140.32	44.601		
12,600.0	6,865.1	6,700.0	6,698.2	145.7	1.9	87.49	52.2	-69.7	6,259.7	6,119.3	140.36	44.596		
12,696.8	6,865.1	6,700.0	6,698.2	148.2	1.9	87.49	52.2	-69.7	6,341.2	6,198.2	143.04	44.332		
12,700.0	6,865.1	6,700.0	6,698.2	148.3	1.9	87.49	52.2	-69.7	6,343.9	6,200.8	143.13	44.323		
12,795.2	6,865.1	6,700.0	6,698.2	150.7	1.9	87.49	52.2	-69.7	6,424.5	6,278.8	145.76	44.075		
12,800.0	6,865.1	6,700.0	6,698.2	150.9	1.9	87.49	52.2	-69.7	6,428.5	6,282.7	145.90	44.063		
12,893.7	6,865.1	6,700.0	6,698.2	153.3	1.9	87.49	52.2	-69.7	6,508.3	6,359.8	148.49	43.830		
12,900.0	6,865.1	6,700.0	6,698.2	153.5	1.9	87.49	52.2	-69.7	6,513.6	6,365.0	148.66	43.815		
12,992.1	6,865.1	6,700.0	6,698.2	155.9	1.9	87.49	52.2	-69.7	6,592.4	6,441.2	151.21	43.596		
13,000.0	6,865.1	6,700.0	6,698.2	156.1	1.9	87.49	52.2	-69.7	6,599.2	6,447.7	151.43	43.578		
13,090.5	6,865.1	6,700.0	6,698.2	158.5	1.9	87.49	52.2	-69.7	6,676.9	6,523.0	153.94	43.373		
13,100.0	6,865.1	6,700.0	6,698.2	158.8	1.9	87.49	52.2	-69.7	6,685.1	6,530.9	154.20	43.352		
13,188.9	6,865.1	6,700.0	6,698.2	161.1	1.9	87.49	52.2	-69.7	6,761.8	6,605.2	156.67	43.159		
13,200.0	6,865.1	6,700.0	6,698.2	161.4	1.9	87.49	52.2	-69.7	6,771.4	6,614.4	156.98	43.136		
13,287.4	6,865.1	6,700.0	6,698.2	163.7	1.9	87.49	52.2	-69.7	6,847.1	6,687.7	159.40	42.955		
13,300.0	6,865.1	6,700.0	6,698.2	164.1	1.9	87.49	52.2	-69.7	6,858.1	6,698.3	159.75	42.929		
13,385.8	6,865.1	6,700.0	6,698.2	166.3	1.9	87.49	52.2	-69.7	6,932.7	6,770.6	162.13	42.759		
13,400.0	6,865.1	6,700.0	6,698.2	166.7	1.9	87.49	52.2	-69.7	6,945.1	6,782.6	162.53	42.732		
13,484.2	6,865.1	6,700.0	6,698.2	169.0	1.9	87.49	52.2	-69.7	7,018.7	6,853.8	164.87	42.572		
13,500.0	6,865.1	6,700.0	6,698.2	169.4	1.9	87.49	52.2	-69.7	7,032.5	6,867.2	165.30	42.543		
13,582.6	6,865.1	6,700.0	6,698.2	171.6	1.9	87.49	52.2	-69.7	7,104.9	6,937.3	167.60	42.393		
13,600.0	6,865.1	6,700.0	6,698.2	172.1	1.9	87.49	52.2	-69.7	7,120.2	6,952.1	168.08	42.362		
13,681.1	6,865.1	6,700.0	6,698.2	174.2	1.9	87.49	52.2	-69.7	7,191.5	7,021.2	170.33	42.220		
13,700.0	6,865.1	6,700.0	6,698.2	174.7	1.9	87.49	52.2	-69.7	7,208.2	7,037.3	170.86	42.188		
13,779.5	6,865.1	6,700.0	6,698.2	176.9	1.9	87.49	52.2	-69.7	7,278.4	7,105.3	173.07	42.055		
13,800.0	6,865.1	6,700.0	6,698.2	177.4	1.9	87.49	52.2	-69.7	7,296.5	7,122.9	173.64	42.021		
13,877.9	6,865.0	6,700.0	6,698.2	179.5	1.9	87.49	52.2	-69.7	7,365.6	7,189.8	175.81	41.896		
13,900.0	6,865.0	6,700.0	6,698.2	180.1	1.9	87.49	52.2	-69.7	7,385.2	7,208.8	176.42	41.862		
13,976.3	6,865.0	6,700.0	6,698.2	182.2	1.9	87.49	52.2	-69.7	7,453.0	7,274.5	178.54	41.744		
14,000.0	6,865.0	6,700.0	6,698.2	182.8	1.9	87.49	52.2	-69.7	7,474.1	7,294.9	179.20	41.708		
14,074.8	6,865.0	6,700.0	6,698.2	184.8	1.9	87.49	52.2	-69.7	7,540.8	7,359.5	181.28	41.597		
14,100.0	6,865.0	6,700.0	6,698.2	185.5	1.9	87.49	52.2	-69.7	7,563.3	7,381.3	181.98	41.561		
14,173.2	6,865.0	6,700.0	6,698.2	187.5	1.9	87.49	52.2	-69.7	7,628.8	7,444.7	184.02	41.456		
14,200.0	6,865.0	6,700.0	6,698.2	188.2	1.9	87.49	52.2	-69.7	7,652.8	7,468.0	184.77	41.419		
14,271.6	6,865.0	6,700.0	6,698.2	190.1	1.9	87.49	52.2	-69.7	7,717.0	7,530.2	186.76	41.321		
14,300.0	6,865.0	6,700.0	6,698.2	190.9	1.9	87.49	52.2	-69.7	7,742.5	7,554.9	187.55	41.283		
14,370.0	6,865.0	6,700.0	6,698.2	192.8	1.9	87.49	52.2	-69.7	7,805.5	7,616.0	189.50	41.190		
14,400.0	6,865.0	6,700.0	6,698.2	193.6	1.9	87.49	52.2	-69.7	7,832.5	7,642.1	190.33	41.151		
14,468.5	6,865.0	6,700.0	6,698.2	195.4	1.9	87.49	52.2	-69.7	7,894.2	7,702.0	192.24	41.064		
14,500.0	6,865.0	6,700.0	6,698.2	196.3	1.9	87.49	52.2	-69.7	7,922.7	7,729.6	193.12	41.025		
14,566.9	6,865.0	6,700.0	6,698.2	198.1	1.9	87.49	52.2	-69.7	7,983.2	7,788.2	194.98	40.943		
14,600.0	6,865.0	6,700.0	6,698.2	199.0	1.9	87.49	52.2	-69.7	8,013.1	7,817.2	195.90	40.903		
14,665.3	6,865.0	6,700.0	6,698.2	200.8	1.9	87.49	52.2	-69.7	8,072.3	7,874.6	197.72	40.826		

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
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	201.7	1.9	87.49	52.2	-69.7	8,103.8	7,905.1	198.69	40.786	
14,763.7	6,865.0	6,700.0	6,698.2	203.5	1.9	87.49	52.2	-69.7	8,161.7	7,961.2	200.47	40.713	
14,800.0	6,865.0	6,700.0	6,698.2	204.4	1.9	87.49	52.2	-69.7	8,194.7	7,993.2	201.48	40.673	
14,862.2	6,865.0	6,700.0	6,698.2	206.1	1.9	87.49	52.2	-69.7	8,251.3	8,048.1	203.21	40.605	
14,900.0	6,865.0	6,700.0	6,698.2	207.2	1.9	87.49	52.2	-69.7	8,285.8	8,081.5	204.27	40.564	
14,960.6	6,865.0	6,700.0	6,698.2	208.8	1.9	87.49	52.2	-69.7	8,341.1	8,135.1	205.96	40.499	
15,000.0	6,865.0	6,700.0	6,698.2	209.9	1.9	87.49	52.2	-69.7	8,377.1	8,170.0	207.05	40.458	
15,059.0	6,865.0	6,700.0	6,698.2	211.5	1.9	87.49	52.2	-69.7	8,431.1	8,222.4	208.70	40.398	
15,100.0	6,865.0	6,700.0	6,698.2	212.6	1.9	87.49	52.2	-69.7	8,468.6	8,258.7	209.84	40.357	
15,157.4	6,865.0	6,700.0	6,698.2	214.2	1.9	87.49	52.2	-69.7	8,521.2	8,309.8	211.45	40.300	
15,200.0	6,865.0	6,700.0	6,698.2	215.3	1.9	87.49	52.2	-69.7	8,560.3	8,347.6	212.63	40.259	
15,255.9	6,865.0	6,700.0	6,698.2	216.9	1.9	87.49	52.2	-69.7	8,611.6	8,397.4	214.19	40.205	
15,300.0	6,865.0	6,700.0	6,698.2	218.1	1.9	87.49	52.2	-69.7	8,652.1	8,436.7	215.42	40.164	
15,354.3	6,865.0	6,700.0	6,698.2	219.6	1.9	87.49	52.2	-69.7	8,702.1	8,485.2	216.94	40.113	
15,400.0	6,865.0	6,700.0	6,698.2	220.8	1.9	87.49	52.2	-69.7	8,744.2	8,526.0	218.21	40.072	
15,452.7	6,865.0	6,700.0	6,698.2	222.2	1.9	87.49	52.2	-69.7	8,792.8	8,573.1	219.68	40.025	
15,500.0	6,865.0	6,700.0	6,698.2	223.5	1.9	87.49	52.2	-69.7	8,836.4	8,615.4	221.00	39.983	
15,551.1	6,865.0	6,700.0	6,698.2	224.9	1.9	87.49	52.2	-69.7	8,883.7	8,661.2	222.43	39.939	
15,600.0	6,865.0	6,700.0	6,698.2	226.3	1.9	87.49	52.2	-69.7	8,928.8	8,705.0	223.79	39.897	
15,649.6	6,865.0	6,700.0	6,698.2	227.6	1.9	87.49	52.2	-69.7	8,974.7	8,749.5	225.18	39.856	
15,700.0	6,865.0	6,700.0	6,698.2	229.0	1.9	87.49	52.2	-69.7	9,021.4	8,794.8	226.59	39.814	
15,748.0	6,865.0	6,700.0	6,698.2	230.3	1.9	87.49	52.2	-69.7	9,065.8	8,837.9	227.93	39.775	
15,800.0	6,865.0	6,700.0	6,698.2	231.8	1.9	87.49	52.2	-69.7	9,114.1	8,884.7	229.38	39.734	
15,846.4	6,865.0	6,700.0	6,698.2	233.0	1.9	87.49	52.2	-69.7	9,157.2	8,926.5	230.68	39.697	
15,900.0	6,865.0	6,700.0	6,698.2	234.5	1.9	87.49	52.2	-69.7	9,206.9	8,974.8	232.17	39.656	
15,944.8	6,865.0	6,700.0	6,698.2	235.7	1.9	87.49	52.2	-69.7	9,248.6	9,015.2	233.42	39.622	
16,000.0	6,865.0	6,700.0	6,698.2	237.3	1.9	87.49	52.2	-69.7	9,300.0	9,065.0	234.96	39.580	
16,043.3	6,865.0	6,700.0	6,698.2	238.4	1.9	87.49	52.2	-69.7	9,340.2	9,104.1	236.17	39.548	
16,100.0	6,865.0	6,700.0	6,698.2	240.0	1.9	87.49	52.2	-69.7	9,393.1	9,155.3	237.76	39.507	
16,141.7	6,865.0	6,700.0	6,698.2	241.1	1.9	87.49	52.2	-69.7	9,432.0	9,193.1	238.92	39.477	
16,200.0	6,865.0	6,700.0	6,698.2	242.7	1.9	87.49	52.2	-69.7	9,486.4	9,245.8	240.55	39.436	
16,240.1	6,865.0	6,700.0	6,698.2	243.8	1.9	87.49	52.2	-69.7	9,523.9	9,282.2	241.67	39.408	
16,281.8	6,865.0	6,700.0	6,698.2	245.0	1.9	87.49	52.2	-69.7	9,562.8	9,320.0	242.84	39.380	

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 24
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 24	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB-EST @ 4664.0usft (Original Well ECoordinates are relative to: VETTING 24

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

