

EXTRACTION OIL & GAS

**WELD COUNTY, COLORADO (NAD 83)
SW NW SEC. 15 T5N R65W 6th P.M.
VETTING 18**

**ORIGINAL WELLBORE
PROPOSAL #2**

Anticollision Report

10 March, 2016



Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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	10/03/2016		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	15,420.3	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	5,165.5	4,600.0	1,580.0	1,455.5	12.688	CC, ES
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	5,314.9	4,600.0	1,587.1	1,461.3	12.617	SF
CARLSON A-15-16HN - Wellbore #1 - Design #1	10,135.0	14,862.7	3,828.7	3,509.8	12.006	CC
CARLSON A-15-16HN - Wellbore #1 - Design #1	10,236.2	14,862.7	3,830.1	3,508.4	11.907	ES
CARLSON A-15-16HN - Wellbore #1 - Design #1	11,417.3	14,862.7	4,037.7	3,683.5	11.399	SF
CARLSON B-15-16HC - Wellbore #1 - Design #1	10,134.5	14,905.1	3,665.3	3,346.7	11.503	CC
CARLSON B-15-16HC - Wellbore #1 - Design #1	10,236.2	14,905.1	3,666.7	3,345.3	11.408	ES
CARLSON B-15-16HC - Wellbore #1 - Design #1	11,300.0	14,905.1	3,846.2	3,495.5	10.967	SF
CARLSON C-15-16HN - Wellbore #1 - Design #1	10,133.8	14,796.3	3,499.1	3,180.6	10.987	CC
CARLSON C-15-16HN - Wellbore #1 - Design #1	10,236.2	14,796.3	3,500.6	3,179.3	10.896	ES
CARLSON C-15-16HN - Wellbore #1 - Design #1	11,200.0	14,796.3	3,657.9	3,310.1	10.517	SF
CARLSON D-15-16HN - Wellbore #1 - Design #1	10,132.6	14,777.6	3,169.0	2,850.9	9.962	CC
CARLSON D-15-16HN - Wellbore #1 - Design #1	10,236.2	14,777.6	3,170.7	2,849.8	9.879	ES
CARLSON D-15-16HN - Wellbore #1 - Design #1	11,000.0	14,777.6	3,285.6	2,943.6	9.608	SF
CARLSON E-15-16HC - Wellbore #1 - Design #1	10,132.0	14,848.6	3,006.0	2,687.9	9.449	CC
CARLSON E-15-16HC - Wellbore #1 - Design #1	10,200.0	14,848.6	3,006.8	2,686.8	9.397	ES
CARLSON E-15-16HC - Wellbore #1 - Design #1	10,925.2	14,848.6	3,108.9	2,769.0	9.147	SF
CARLSON F-15-16HN - Wellbore #1 - Design #1	10,131.5	14,769.7	2,888.9	2,571.1	9.088	CC
CARLSON F-15-16HN - Wellbore #1 - Design #1	10,200.0	14,769.7	2,889.7	2,570.0	9.038	ES
CARLSON F-15-16HN - Wellbore #1 - Design #1	10,826.7	14,769.7	2,971.4	2,634.4	8.818	SF
CARLSON G-15-16HN - Wellbore #1 - Design #1	10,129.9	14,787.6	2,468.9	2,151.3	7.775	CC
CARLSON G-15-16HN - Wellbore #1 - Design #1	10,200.0	14,787.6	2,469.8	2,150.4	7.731	ES
CARLSON G-15-16HN - Wellbore #1 - Design #1	10,629.9	14,787.6	2,519.0	2,187.7	7.604	SF
CARLSON H-15-16HC - Wellbore #1 - Design #1	10,129.3	14,883.6	2,306.4	1,989.1	7.269	CC
CARLSON H-15-16HC - Wellbore #1 - Design #1	10,200.0	14,883.6	2,307.5	1,988.3	7.229	ES
CARLSON H-15-16HC - Wellbore #1 - Design #1	10,600.0	14,883.6	2,353.9	2,023.7	7.129	SF
CARLSON I-15-16HN - Wellbore #1 - Design #1	10,128.5	14,836.2	2,089.0	1,771.6	6.581	CC
CARLSON I-15-16HN - Wellbore #1 - Design #1	10,200.0	14,836.2	2,090.2	1,770.8	6.545	ES
CARLSON I-15-16HN - Wellbore #1 - Design #1	10,500.0	14,836.2	2,121.7	1,794.1	6.477	SF
CARLSON J-15-16HN - Wellbore #1 - Design #1	10,127.3	14,901.4	1,758.9	1,441.7	5.545	CC
CARLSON J-15-16HN - Wellbore #1 - Design #1	10,200.0	14,901.4	1,760.4	1,441.2	5.515	ES
CARLSON J-15-16HN - Wellbore #1 - Design #1	10,400.0	14,901.4	1,779.9	1,455.3	5.482	SF
CARLSON K-15-16HC - Wellbore #1 - Design #1	10,126.7	15,013.6	1,597.6	1,280.8	5.044	CC
CARLSON K-15-16HC - Wellbore #1 - Design #1	10,200.0	15,013.6	1,599.3	1,280.5	5.017	ES
CARLSON K-15-16HC - Wellbore #1 - Design #1	10,334.6	15,013.6	1,611.1	1,288.6	4.997	SF
CARLSON L-15-16HN - Wellbore #1 - Design #1	10,126.0	14,977.0	1,428.9	1,111.8	4.506	CC
CARLSON L-15-16HN - Wellbore #1 - Design #1	10,137.8	14,977.0	1,428.9	1,111.5	4.502	ES

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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	10,300.0	14,977.0	1,439.4	1,117.6	4.472	SF
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	14,381.8	7,082.4	760.1	525.3	3.238	CC
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	14,400.0	7,082.4	760.3	525.0	3.232	ES
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	14,468.5	7,082.2	765.0	527.8	3.226	SF
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	11,785.7	7,232.7	667.3	498.4	3.950	CC
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	11,800.0	7,232.5	667.5	498.1	3.942	ES
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	11,900.0	7,231.3	677.0	504.9	3.934	SF
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	15,110.8	7,152.6	1,263.9	1,002.8	4.840	CC
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	15,157.4	7,152.6	1,264.8	1,002.3	4.820	ES
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	15,300.0	7,152.6	1,278.0	1,011.6	4.797	SF
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	13,708.6	6,907.3	1,279.6	1,073.7	6.214	CC
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	13,779.5	6,906.8	1,281.6	1,073.7	6.165	ES
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	13,900.0	6,906.2	1,293.9	1,082.6	6.125	SF
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	12,513.3	7,513.6	84.2	-43.9	0.657	Level 1, CC, ES, SF
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	15,420.3	7,602.6	724.4	438.9	2.537	CC, ES, SF
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	12,534.4	7,569.9	1,324.4	1,136.5	7.051	CC
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	12,598.4	7,573.3	1,325.9	1,136.3	6.992	ES
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	12,795.2	7,583.9	1,349.7	1,154.6	6.917	SF
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	11,788.2	7,337.3	594.1	426.0	3.535	CC
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	11,800.0	7,335.6	594.2	425.9	3.530	ES
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	11,811.0	7,334.1	594.5	426.0	3.527	SF
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	14,473.6	7,875.9	1,927.0	1,683.7	7.923	CC
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	14,500.0	7,876.8	1,927.1	1,683.2	7.899	ES
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	14,900.0	7,889.9	1,973.5	1,718.4	7.734	SF
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	14,956.0	7,283.1	48.8	-209.1	0.189	Level 1, CC, ES, SF
EXIST DD EHRlich MOTORS #D8 - Wellbore #1 - Well	15,420.3	7,228.8	1,535.6	1,247.2	5.325	CC, ES, SF
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	15,420.3	7,318.9	679.2	397.9	2.415	CC, ES, SF
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	14,418.8	7,257.1	511.8	274.4	2.156	CC, ES
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	14,468.5	7,263.9	514.2	275.0	2.150	SF
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	12,368.3	6,953.9	1,381.1	1,205.8	7.879	CC
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	12,401.5	6,953.9	1,381.5	1,205.3	7.840	ES
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	12,696.8	6,954.1	1,419.7	1,235.2	7.697	SF
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	11,147.4	7,297.8	1,376.6	1,212.7	8.401	CC
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	11,200.0	7,297.1	1,377.6	1,212.3	8.334	ES
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	11,500.0	7,293.1	1,421.0	1,247.4	8.185	SF
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	12,997.0	6,981.9	699.6	512.0	3.730	CC
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	13,000.0	6,981.9	699.6	511.9	3.728	ES
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	13,090.5	6,981.8	705.8	515.6	3.711	SF
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	13,224.7	7,062.6	563.5	371.9	2.941	CC, ES
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	13,287.4	7,061.6	567.0	373.8	2.935	SF
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	13,145.9	6,693.0	1,809.3	1,637.4	10.525	CC
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	13,188.9	6,693.0	1,809.8	1,636.9	10.466	ES
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	13,300.0	6,693.0	1,815.8	1,640.3	10.345	SF
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	765.2	808.0	2,454.3	2,451.7	927.905	CC
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	787.4	830.7	2,454.4	2,451.6	897.402	ES
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	15,420.3	7,003.7	9,393.5	9,136.0	36.484	SF
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	764.7	811.5	2,475.3	2,472.6	918.027	CC, ES
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	14,566.9	7,125.2	9,971.0	9,731.1	41.575	SF
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	1,875.9	2,798.7	2,311.3	2,299.6	197.405	CC
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	1,900.0	2,817.8	2,311.4	2,299.6	195.155	ES
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	15,420.3	7,116.8	9,983.3	9,725.2	38.681	SF
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	10,686.7	7,635.5	719.8	562.8	4.584	CC
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	10,700.0	7,632.4	720.0	562.7	4.578	ES

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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)	Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 15 T5N R65W 6th P.M.						
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	10,728.3	7,625.7	721.0	563.3	4.571	SF
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	10,419.4	7,612.7	620.6	463.3	3.945	CC
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	10,433.0	7,609.8	620.8	463.0	3.936	ES
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	10,500.0	7,595.4	625.6	465.8	3.916	SF
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	11,249.2	7,385.5	160.9	-1.2	0.993	Level 1, CC, ES, SF
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	10,408.9	7,152.2	1,893.8	1,764.6	14.658	CC
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	10,433.0	7,152.3	1,894.0	1,764.1	14.584	ES
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	11,200.0	7,157.7	2,052.4	1,901.4	13.589	SF
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	13,781.0	7,528.5	1,300.1	1,083.0	5.989	CC
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	13,800.0	7,528.9	1,300.2	1,082.6	5.975	ES
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	14,000.0	7,533.4	1,318.4	1,095.2	5.907	SF
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	15,420.3	7,652.9	927.3	733.6	4.786	CC, ES, SF
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	15,420.3	7,176.6	1,685.7	1,440.6	6.878	CC, ES, SF
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	15,043.9	7,736.1	1,274.6	1,009.7	4.811	CC
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	15,100.0	7,736.1	1,275.8	1,009.3	4.787	ES
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	15,200.0	7,736.1	1,284.1	1,014.8	4.768	SF
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	15,420.3	7,957.1	1,642.1	1,334.6	5.340	CC, ES, SF
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	805.6	795.9	1,558.6	1,556.4	711.021	CC
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	885.8	879.4	1,558.7	1,556.3	656.397	ES
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	14,800.0	6,600.0	9,969.9	9,748.0	44.920	SF
EXIST VERT FAY #1 - Wellbore #1 - Design #1	9,151.5	6,864.9	1,994.8	1,791.4	9.809	CC
EXIST VERT FAY #1 - Wellbore #1 - Design #1	9,200.0	6,864.9	1,995.4	1,790.7	9.750	ES
EXIST VERT FAY #1 - Wellbore #1 - Design #1	9,700.0	6,864.9	2,068.8	1,850.7	9.486	SF
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	3,943.1	3,665.3	226.7	130.4	2.354	CC, ES
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	4,000.0	3,716.4	228.1	130.4	2.335	SF
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	714.5	696.7	41.2	39.2	20.639	CC, ES
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	885.8	867.9	45.9	43.5	19.076	SF
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	100.0	143.2	143.0	758.500	CC, ES
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	15,420.3	15,065.1	1,337.0	860.0	2.803	SF
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	200.0	200.0	117.9	117.2	184.670	CC, ES
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	15,420.3	15,276.8	1,171.1	699.2	2.482	SF
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	95.3	94.2	87.625	CC, ES
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	15,420.3	15,096.0	990.9	513.5	2.076	SF
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	400.0	400.0	70.0	68.5	45.538	CC, ES
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	15,420.3	15,169.5	659.4	180.7	1.378	Level 3, SF
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	47.9	45.9	24.110	CC
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	2,300.0	2,280.3	63.3	45.3	3.506	ES
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	15,420.3	15,407.5	532.1	81.4	1.181	Level 2, SF
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	600.0	600.0	22.6	20.1	9.266	CC
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	15,420.3	15,282.4	331.5	-147.8	0.692	Level 1, ES, SF
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	700.0	700.0	25.3	22.4	8.780	CC
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	3,937.0	3,952.5	32.5	-13.4	0.708	Level 1, SF
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	15,420.3	15,682.8	254.0	-67.2	0.791	Level 1, ES
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	700.0	700.0	47.9	45.0	16.599	CC
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	15,420.3	15,616.3	327.9	-152.4	0.683	Level 1, ES, SF
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	700.0	700.0	73.2	70.3	25.376	CC
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	3,300.0	3,360.1	98.4	62.8	2.766	ES
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	15,420.3	15,843.4	659.4	179.0	1.373	Level 3, SF
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	700.0	700.0	95.8	92.9	33.198	CC
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	3,543.3	3,626.1	127.7	87.9	3.202	ES
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	15,420.3	16,129.6	845.9	378.8	1.811	SF
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	700.0	700.0	121.1	118.3	41.974	CC
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	3,400.0	3,501.7	151.8	114.3	4.045	ES

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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	-177.29	-1,157.4	-54.9	1,159.4				
98.4	98.4	59.4	59.4	0.1	0.6	-177.29	-1,157.4	-54.9	1,158.7	1,158.0	0.69	1,689.088	
100.0	100.0	61.0	61.0	0.1	0.6	-177.29	-1,157.4	-54.9	1,158.7	1,158.0	0.70	1,647.079	
196.8	196.8	157.8	157.8	0.3	2.3	-177.29	-1,157.4	-54.9	1,158.7	1,156.1	2.66	435.270	
200.0	200.0	161.0	161.0	0.3	2.4	-177.29	-1,157.4	-54.9	1,158.7	1,156.0	2.74	422.468	
295.3	295.3	256.3	256.3	0.5	4.5	-177.29	-1,157.4	-54.9	1,158.7	1,153.7	5.04	229.944	
300.0	300.0	261.0	261.0	0.5	4.6	-177.29	-1,157.4	-54.9	1,158.7	1,153.6	5.15	225.078	
393.7	393.7	354.7	354.7	0.8	6.5	-177.29	-1,157.4	-54.9	1,158.7	1,151.4	7.29	158.997	
400.0	400.0	361.0	361.0	0.8	6.7	-177.29	-1,157.4	-54.9	1,158.7	1,151.3	7.43	155.940	
492.1	492.1	453.1	453.1	1.0	8.5	-177.29	-1,157.4	-54.9	1,158.7	1,149.2	9.51	121.813	
500.0	500.0	461.0	461.0	1.0	8.7	-177.29	-1,157.4	-54.9	1,158.7	1,149.0	9.69	119.582	
590.5	590.5	551.5	551.5	1.2	10.5	-177.29	-1,157.4	-54.9	1,158.7	1,147.0	11.73	98.805	
600.0	600.0	561.0	561.0	1.2	10.7	-177.29	-1,157.4	-54.9	1,158.7	1,146.8	11.94	97.047	
689.0	689.0	650.0	650.0	1.4	12.5	-177.29	-1,157.4	-54.9	1,158.7	1,144.8	13.94	83.135	
700.0	700.0	661.0	661.0	1.4	12.7	-177.29	-1,157.4	-54.9	1,158.7	1,144.5	14.19	81.685	
787.4	787.4	748.4	748.4	1.6	14.5	-11.30	-1,157.4	-54.9	1,157.4	1,141.3	16.12	71.821	
800.0	800.0	761.0	761.0	1.6	14.8	-11.31	-1,157.4	-54.9	1,157.0	1,140.6	16.39	70.585	
885.8	885.7	846.7	846.7	1.8	16.5	-11.37	-1,157.4	-54.9	1,152.8	1,134.6	18.25	63.170	
900.0	899.8	860.8	860.8	1.8	16.8	-11.38	-1,157.4	-54.9	1,151.9	1,133.3	18.55	62.084	
984.2	983.8	944.8	944.8	2.0	18.5	-11.48	-1,157.4	-54.9	1,144.9	1,124.5	20.36	56.244	
1,000.0	999.5	960.5	960.5	2.0	18.8	-11.50	-1,157.4	-54.9	1,143.3	1,122.6	20.69	55.262	
1,082.7	1,081.5	1,042.5	1,042.5	2.2	20.4	-11.64	-1,157.4	-54.9	1,133.7	1,111.3	22.43	50.543	
1,100.0	1,098.7	1,059.7	1,059.7	2.3	20.8	-11.67	-1,157.4	-54.9	1,131.4	1,108.6	22.79	49.643	
1,181.1	1,178.8	1,139.8	1,139.8	2.5	22.4	-11.85	-1,157.4	-54.9	1,119.2	1,094.8	24.46	45.750	
1,200.0	1,197.5	1,158.5	1,158.5	2.5	22.8	-11.90	-1,157.4	-54.9	1,116.1	1,091.2	24.85	44.916	
1,279.5	1,275.6	1,236.6	1,236.6	2.8	24.3	-12.12	-1,157.4	-54.9	1,101.5	1,075.0	26.45	41.645	
1,300.0	1,295.6	1,256.6	1,256.6	2.9	24.7	-12.18	-1,157.4	-54.9	1,097.4	1,070.5	26.85	40.864	
1,377.9	1,371.6	1,332.6	1,332.6	3.1	26.3	-12.45	-1,157.4	-54.9	1,080.5	1,052.1	28.38	38.072	
1,400.0	1,393.1	1,354.1	1,354.1	3.2	26.7	-12.53	-1,157.4	-54.9	1,075.4	1,046.6	28.80	37.334	
1,476.4	1,466.9	1,427.9	1,427.9	3.6	28.2	-12.85	-1,157.4	-54.9	1,056.4	1,026.1	30.25	34.916	
1,500.0	1,489.6	1,450.6	1,450.6	3.7	28.6	-12.96	-1,157.4	-54.9	1,050.1	1,019.4	30.69	34.213	
1,574.8	1,561.3	1,522.3	1,522.3	4.0	30.1	-13.33	-1,157.4	-54.9	1,029.1	997.0	32.06	32.094	
1,600.0	1,585.3	1,546.3	1,546.3	4.2	30.6	-13.46	-1,157.4	-54.9	1,021.6	989.1	32.52	31.419	
1,615.5	1,600.0	1,561.0	1,561.0	4.3	30.9	-13.55	-1,157.4	-54.9	1,016.9	984.1	32.79	31.010	
1,673.2	1,654.8	1,615.8	1,615.8	4.6	32.0	-13.79	-1,157.4	-54.9	999.2	965.2	34.01	29.380	
1,680.5	1,661.7	1,622.7	1,622.7	4.6	32.1	-13.82	-1,157.4	-54.9	997.0	962.8	34.16	29.183	
1,700.0	1,680.2	1,641.2	1,641.2	4.7	32.5	-13.94	-1,157.4	-54.9	991.0	956.4	34.51	28.718	
1,771.6	1,747.8	1,708.8	1,708.8	5.1	33.8	-14.40	-1,157.4	-54.9	967.8	932.0	35.75	27.074	
1,800.0	1,774.3	1,735.3	1,735.3	5.3	34.4	-14.59	-1,157.4	-54.9	958.2	921.9	36.23	26.445	
1,870.1	1,839.6	1,800.6	1,800.6	5.8	35.7	-15.12	-1,157.4	-54.9	933.3	895.9	37.40	24.954	
1,900.0	1,867.2	1,828.2	1,828.2	6.0	36.2	-15.37	-1,157.4	-54.9	922.3	884.4	37.89	24.341	
1,968.5	1,930.1	1,891.1	1,891.1	6.5	37.5	-15.99	-1,157.4	-54.9	896.0	857.0	38.99	22.978	
2,000.0	1,958.8	1,919.8	1,919.8	6.7	38.1	-16.29	-1,157.4	-54.9	883.4	843.9	39.49	22.372	
2,066.9	2,019.3	1,980.3	1,980.3	7.2	39.3	-17.01	-1,157.4	-54.9	855.7	815.2	40.52	21.117	
2,069.5	2,021.6	1,982.6	1,982.6	7.2	39.4	-17.03	-1,157.4	-54.9	854.6	814.0	40.56	21.069	
2,100.0	2,049.0	2,010.0	2,010.0	7.5	39.9	-17.30	-1,157.4	-54.9	841.7	800.5	41.20	20.429	
2,165.3	2,107.7	2,068.7	2,068.7	8.0	41.1	-17.90	-1,157.4	-54.9	814.0	771.5	42.58	19.118	
2,200.0	2,138.8	2,099.8	2,099.8	8.3	41.7	-18.23	-1,157.4	-54.9	799.4	756.1	43.32	18.455	
2,263.8	2,196.1	2,157.1	2,157.1	8.8	42.9	-18.87	-1,157.4	-54.9	772.6	727.9	44.69	17.288	
2,300.0	2,228.6	2,189.6	2,189.6	9.1	43.5	-19.26	-1,157.4	-54.9	757.4	711.9	45.47	16.655	
2,362.2	2,284.5	2,245.5	2,245.5	9.6	44.6	-19.96	-1,157.4	-54.9	731.3	684.5	46.83	15.615	
2,400.0	2,318.4	2,279.4	2,279.4	10.0	45.3	-20.41	-1,157.4	-54.9	715.5	667.8	47.67	15.010	

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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	
2,460.6	2,372.9	2,333.9	2,333.9	10.5	46.4	-21.17	-1,157.4	-54.9	690.3	641.3	49.02	14.081	
2,500.0	2,408.2	2,369.2	2,369.2	10.8	47.1	-21.69	-1,157.4	-54.9	673.9	624.0	49.91	13.502	
2,559.0	2,461.3	2,422.3	2,422.3	11.3	48.2	-22.53	-1,157.4	-54.9	649.5	598.3	51.27	12.670	
2,600.0	2,498.0	2,459.0	2,459.0	11.6	48.9	-23.14	-1,157.4	-54.9	632.7	580.5	52.22	12.116	
2,657.5	2,549.7	2,510.7	2,510.7	12.1	50.0	-24.06	-1,157.4	-54.9	609.2	555.6	53.58	11.370	
2,700.0	2,587.8	2,548.8	2,548.8	12.5	50.7	-24.79	-1,157.4	-54.9	591.9	537.3	54.60	10.841	
2,755.9	2,638.0	2,599.0	2,599.0	12.9	51.8	-25.81	-1,157.4	-54.9	569.2	513.3	55.96	10.171	
2,800.0	2,677.7	2,638.7	2,638.7	13.3	52.5	-26.67	-1,157.4	-54.9	551.5	494.4	57.06	9.665	
2,854.3	2,726.4	2,687.4	2,687.4	13.8	53.5	-27.80	-1,157.4	-54.9	529.8	471.4	58.45	9.065	
2,900.0	2,767.5	2,728.5	2,728.5	14.2	54.4	-28.83	-1,157.4	-54.9	511.7	452.1	59.64	8.580	
2,952.7	2,814.8	2,775.8	2,775.8	14.6	55.3	-30.10	-1,157.4	-54.9	491.0	430.0	61.05	8.043	
3,000.0	2,857.3	2,818.3	2,818.3	15.0	56.2	-31.33	-1,157.4	-54.9	472.7	410.3	62.35	7.581	
3,051.2	2,903.2	2,864.2	2,864.2	15.5	57.1	-32.77	-1,157.4	-54.9	453.1	389.3	63.80	7.101	
3,100.0	2,947.1	2,908.1	2,908.1	15.9	58.0	-34.25	-1,157.4	-54.9	434.6	369.4	65.24	6.662	
3,149.6	2,991.6	2,952.6	2,952.6	16.3	58.9	-35.88	-1,157.4	-54.9	416.2	349.4	66.74	6.236	
3,200.0	3,036.9	2,997.9	2,997.9	16.7	59.8	-37.69	-1,157.4	-54.9	397.8	329.4	68.32	5.822	
3,248.0	3,080.0	3,041.0	3,041.0	17.1	60.6	-39.55	-1,157.4	-54.9	380.6	310.7	69.89	5.445	
3,300.0	3,126.7	3,087.7	3,087.7	17.6	61.6	-41.75	-1,157.4	-54.9	362.5	290.8	71.66	5.058	
3,346.4	3,168.4	3,129.4	3,129.4	18.0	62.4	-43.89	-1,157.4	-54.9	346.8	273.5	73.31	4.731	
3,400.0	3,216.5	3,177.5	3,177.5	18.4	63.4	-46.59	-1,157.4	-54.9	329.3	254.0	75.28	4.375	
3,444.9	3,256.8	3,217.8	3,217.8	18.8	64.2	-49.04	-1,157.4	-54.9	315.3	238.3	77.00	4.095	
3,500.0	3,306.3	3,267.3	3,267.3	19.3	65.2	-52.34	-1,157.4	-54.9	299.0	219.8	79.19	3.776	
3,543.3	3,345.2	3,306.2	3,306.2	19.7	66.0	-55.14	-1,157.4	-54.9	286.9	206.0	80.96	3.544	
3,600.0	3,396.1	3,357.1	3,357.1	20.2	67.0	-59.13	-1,157.4	-54.9	272.4	189.0	83.33	3.268	
3,641.7	3,433.6	3,394.6	3,394.6	20.5	67.8	-62.30	-1,157.4	-54.9	262.6	177.5	85.10	3.086	
3,700.0	3,485.9	3,446.9	3,446.9	21.0	68.8	-67.05	-1,157.4	-54.9	250.7	163.1	87.57	2.863	
3,740.1	3,522.0	3,483.0	3,483.0	21.4	69.5	-70.53	-1,157.4	-54.9	243.7	154.4	89.23	2.731	
3,800.0	3,575.8	3,536.8	3,536.8	21.9	70.6	-76.00	-1,157.4	-54.9	235.3	143.7	91.60	2.569	
3,838.6	3,610.4	3,571.4	3,571.4	22.2	71.3	-79.68	-1,157.4	-54.9	231.3	138.3	93.03	2.487	
3,900.0	3,665.6	3,626.6	3,626.6	22.7	72.4	-85.71	-1,157.4	-54.9	227.5	132.5	95.07	2.393	
3,937.0	3,698.8	3,659.8	3,659.8	23.1	73.1	-89.39	-1,157.4	-54.9	226.7	130.6	96.14	2.358	
3,943.1	3,704.3	3,665.3	3,665.3	23.1	73.2	-90.00	-1,157.4	-54.9	226.7	130.4	96.31	2.354 CC, ES	
4,000.0	3,755.4	3,716.4	3,716.4	23.6	74.2	-95.66	-1,157.4	-54.9	228.1	130.4	97.67	2.335 SF	
4,035.4	3,787.2	3,748.2	3,748.2	23.9	74.9	-99.14	-1,157.4	-54.9	230.3	132.0	98.36	2.342	
4,100.0	3,845.2	3,806.2	3,806.2	24.5	76.0	-105.29	-1,157.4	-54.9	237.0	137.7	99.33	2.386	
4,133.8	3,875.6	3,836.6	3,836.6	24.8	76.6	-108.38	-1,157.4	-54.9	241.8	142.0	99.71	2.425	
4,200.0	3,935.0	3,896.0	3,896.0	25.3	77.8	-114.11	-1,157.4	-54.9	253.3	153.1	100.24	2.527	
4,232.3	3,964.0	3,925.0	3,925.0	25.6	78.4	-116.74	-1,157.4	-54.9	260.0	159.5	100.43	2.589	
4,300.0	4,024.8	3,985.8	3,985.8	26.2	79.6	-121.87	-1,157.4	-54.9	275.8	175.0	100.71	2.738	
4,330.7	4,052.4	4,013.4	4,013.4	26.5	80.2	-124.03	-1,157.4	-54.9	283.7	182.8	100.82	2.814	
4,400.0	4,114.6	4,075.6	4,075.6	27.0	81.5	-128.52	-1,157.4	-54.9	303.0	201.9	101.04	2.999	
4,429.1	4,140.8	4,101.8	4,101.8	27.3	82.0	-130.25	-1,157.4	-54.9	311.6	210.5	101.13	3.081	
4,500.0	4,204.4	4,165.4	4,165.4	27.9	83.3	-134.13	-1,157.4	-54.9	333.8	232.4	101.40	3.291	
4,527.5	4,229.2	4,190.2	4,190.2	28.1	83.8	-135.52	-1,157.4	-54.9	342.7	241.2	101.53	3.376	
4,600.0	4,294.2	4,255.2	4,255.2	28.8	85.1	-138.85	-1,157.4	-54.9	367.2	265.3	101.91	3.604	
4,626.0	4,317.6	4,278.6	4,278.6	29.0	85.5	-139.95	-1,157.4	-54.9	376.3	274.2	102.07	3.687	
4,700.0	4,384.0	4,345.0	4,345.0	29.6	86.9	-142.82	-1,157.4	-54.9	402.8	300.2	102.59	3.926	
4,724.4	4,406.0	4,367.0	4,367.0	29.8	87.3	-143.69	-1,157.4	-54.9	411.7	308.9	102.78	4.005	
4,800.0	4,473.9	4,434.9	4,434.9	30.5	88.7	-146.18	-1,157.4	-54.9	439.8	336.4	103.45	4.251	
4,822.8	4,494.4	4,455.4	4,455.4	30.7	89.1	-146.87	-1,157.4	-54.9	448.4	344.8	103.67	4.326	
4,900.0	4,563.7	4,524.7	4,524.7	31.4	90.5	-149.04	-1,157.4	-54.9	478.0	373.6	104.47	4.576	
4,921.2	4,582.8	4,543.8	4,543.8	31.5	90.9	-149.59	-1,157.4	-54.9	486.3	381.6	104.70	4.644	

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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	
5,000.0	4,653.5	4,614.5	4,614.5	32.2	92.3	-151.49	-1,157.4	-54.9	517.2	411.5	105.63	4.896	
5,019.7	4,671.1	4,632.1	4,632.1	32.4	92.6	-151.93	-1,157.4	-54.9	525.0	419.1	105.87	4.958	
5,100.0	4,743.3	4,704.3	4,704.3	33.1	94.1	-153.61	-1,157.4	-54.9	557.0	450.1	106.91	5.210	
5,118.1	4,759.5	4,720.5	4,720.5	33.2	94.4	-153.96	-1,157.4	-54.9	564.3	457.2	107.15	5.266	
5,200.0	4,833.1	4,794.1	4,794.1	34.0	95.9	-155.45	-1,157.4	-54.9	597.5	489.2	108.29	5.517	
5,216.5	4,847.9	4,808.9	4,808.9	34.1	96.2	-155.73	-1,157.4	-54.9	604.2	495.7	108.53	5.567	
5,300.0	4,922.9	4,883.9	4,883.9	34.8	97.7	-157.07	-1,157.4	-54.9	638.4	528.6	109.76	5.816	
5,314.9	4,936.3	4,897.3	4,897.3	34.9	98.0	-157.29	-1,157.4	-54.9	644.5	534.5	109.98	5.860	
5,389.3	5,003.1	4,964.1	4,964.1	35.6	99.3	-158.35	-1,157.4	-54.9	675.2	564.1	111.13	6.076	
5,400.0	5,012.7	4,973.7	4,973.7	35.7	99.5	-158.53	-1,157.4	-54.9	679.7	568.2	111.42	6.100	
5,413.4	5,024.8	4,985.8	4,985.8	35.7	99.8	-158.75	-1,157.4	-54.9	685.1	573.4	111.78	6.129	
5,500.0	5,103.4	5,064.4	5,064.4	36.3	101.3	-160.04	-1,157.4	-54.9	719.4	605.3	114.17	6.302	
5,511.8	5,114.2	5,075.2	5,075.2	36.3	101.6	-160.20	-1,157.4	-54.9	724.0	609.5	114.50	6.323	
5,600.0	5,195.6	5,156.6	5,156.6	36.8	103.2	-161.30	-1,157.4	-54.9	756.4	639.4	117.01	6.465	
5,610.2	5,205.1	5,166.1	5,166.1	36.9	103.4	-161.41	-1,157.4	-54.9	760.1	642.7	117.31	6.479	
5,700.0	5,289.0	5,250.0	5,250.0	37.3	105.1	-162.34	-1,157.4	-54.9	790.5	670.6	119.91	6.593	
5,708.6	5,297.1	5,258.1	5,258.1	37.4	105.2	-162.42	-1,157.4	-54.9	793.3	673.1	120.16	6.602	
5,800.0	5,383.6	5,344.6	5,344.6	37.8	107.0	-163.21	-1,157.4	-54.9	821.5	698.7	122.80	6.690	
5,807.1	5,390.4	5,351.4	5,351.4	37.9	107.1	-163.27	-1,157.4	-54.9	823.6	700.6	123.01	6.696	
5,900.0	5,479.3	5,440.3	5,440.3	38.3	108.9	-163.94	-1,157.4	-54.9	849.5	723.8	125.68	6.759	
5,905.5	5,484.6	5,445.6	5,445.6	38.3	109.0	-163.97	-1,157.4	-54.9	850.9	725.1	125.84	6.762	
6,000.0	5,576.0	5,537.0	5,537.0	38.7	110.8	-164.54	-1,157.4	-54.9	874.2	745.7	128.51	6.803	
6,003.9	5,579.8	5,540.8	5,540.8	38.7	110.9	-164.56	-1,157.4	-54.9	875.2	746.5	128.61	6.804	
6,100.0	5,673.4	5,634.4	5,634.4	39.0	112.8	-165.03	-1,157.4	-54.9	895.8	764.5	131.26	6.825	
6,102.3	5,675.7	5,636.7	5,636.7	39.0	112.8	-165.04	-1,157.4	-54.9	896.3	764.9	131.32	6.825	
6,200.0	5,771.6	5,732.6	5,732.6	39.3	114.8	-165.43	-1,157.4	-54.9	914.1	780.1	133.92	6.825	
6,200.8	5,772.4	5,733.4	5,733.4	39.3	114.8	-165.43	-1,157.4	-54.9	914.2	780.2	133.94	6.825	
6,299.2	5,869.6	5,830.6	5,830.6	39.6	116.7	-165.74	-1,157.4	-54.9	928.9	792.4	136.46	6.807	
6,300.0	5,870.4	5,831.4	5,831.4	39.6	116.8	-165.74	-1,157.4	-54.9	929.0	792.5	136.48	6.807	
6,397.6	5,967.3	5,928.3	5,928.3	39.8	118.7	-165.98	-1,157.4	-54.9	940.4	801.5	138.85	6.772	
6,400.0	5,969.7	5,930.7	5,930.7	39.8	118.8	-165.98	-1,157.4	-54.9	940.6	801.7	138.91	6.771	
6,496.0	6,065.4	6,026.4	6,026.4	40.0	120.7	-166.14	-1,157.4	-54.9	948.6	807.5	141.12	6.722	
6,500.0	6,069.3	6,030.3	6,030.3	40.0	120.8	-166.15	-1,157.4	-54.9	948.9	807.7	141.21	6.719	
6,594.5	6,163.7	6,124.7	6,124.7	40.1	122.7	-166.24	-1,157.4	-54.9	953.6	810.3	143.25	6.656	
6,600.0	6,169.2	6,130.2	6,130.2	40.1	122.8	-166.24	-1,157.4	-54.9	953.7	810.4	143.37	6.652	
6,692.9	6,262.1	6,223.1	6,223.1	40.2	124.6	-166.27	-1,157.4	-54.9	955.2	810.0	145.24	6.577	
6,693.8	6,263.0	6,224.0	6,224.0	40.2	124.7	27.73	-1,157.4	-54.9	955.2	791.3	163.96	5.826	
6,700.0	6,269.2	6,230.2	6,230.2	40.2	124.8	27.73	-1,157.4	-54.9	955.2	791.1	164.09	5.821	
6,723.8	6,293.0	6,254.0	6,254.0	40.2	125.3	27.73	-1,157.4	-54.9	955.2	790.7	164.59	5.804	
6,750.0	6,319.2	6,280.2	6,280.2	40.3	125.8	117.81	-1,157.4	-54.9	955.5	809.0	146.54	6.521	
6,791.3	6,360.4	6,321.4	6,321.4	40.3	126.6	117.85	-1,157.4	-54.9	957.1	809.7	147.39	6.494	
6,800.0	6,369.0	6,330.0	6,330.0	40.3	126.8	117.86	-1,157.4	-54.9	957.6	810.1	147.54	6.490	
6,850.0	6,418.2	6,379.2	6,379.2	40.4	127.8	117.95	-1,157.4	-54.9	961.8	813.5	148.24	6.488	
6,889.7	6,456.6	6,417.6	6,417.6	40.5	128.6	118.03	-1,157.4	-54.9	966.6	818.0	148.58	6.505	
6,900.0	6,466.4	6,427.4	6,427.4	40.5	128.7	118.05	-1,157.4	-54.9	968.1	819.4	148.64	6.513	
6,950.0	6,513.4	6,474.4	6,474.4	40.6	129.7	118.14	-1,157.4	-54.9	976.6	827.8	148.74	6.566	
6,988.2	6,548.1	6,509.1	6,509.1	40.7	130.4	118.17	-1,157.4	-54.9	984.6	836.0	148.64	6.624	
7,000.0	6,558.6	6,519.6	6,519.6	40.7	130.6	118.18	-1,157.4	-54.9	987.4	838.8	148.58	6.645	
7,050.0	6,601.9	6,562.9	6,562.9	40.9	131.5	118.11	-1,157.4	-54.9	1,000.6	852.4	148.23	6.750	
7,086.6	6,632.0	6,593.0	6,593.0	41.0	132.1	117.97	-1,157.4	-54.9	1,011.8	863.9	147.90	6.841	
7,100.0	6,642.7	6,603.7	6,603.7	41.0	132.3	117.89	-1,157.4	-54.9	1,016.3	868.5	147.78	6.877	
7,150.0	6,681.0	6,642.0	6,642.0	41.2	133.1	117.47	-1,157.4	-54.9	1,034.5	887.1	147.40	7.018	

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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
7,185.0	6,706.0	6,667.0	6,667.0	41.4	133.6	117.01	-1,157.4	-54.9	1,048.8	901.6	147.27	7.122	
7,200.0	6,716.2	6,677.2	6,677.2	41.4	133.8	116.77	-1,157.4	-54.9	1,055.3	908.1	147.26	7.166	
7,250.0	6,748.3	6,709.3	6,709.3	41.7	134.4	115.73	-1,157.4	-54.9	1,078.8	931.2	147.59	7.309	
7,283.4	6,767.8	6,728.8	6,728.8	41.9	134.8	114.81	-1,157.4	-54.9	1,095.8	947.7	148.18	7.395	
7,300.0	6,776.9	6,737.9	6,737.9	42.0	135.0	114.28	-1,157.4	-54.9	1,104.7	956.1	148.58	7.435	
7,350.0	6,801.8	6,762.8	6,762.8	42.3	135.5	112.34	-1,157.4	-54.9	1,133.1	982.7	150.39	7.535	
7,381.9	6,815.7	6,776.7	6,776.7	42.5	135.8	110.81	-1,157.4	-54.9	1,152.4	1,000.4	151.99	7.583	
7,400.0	6,822.8	6,783.8	6,783.8	42.6	135.9	109.83	-1,157.4	-54.9	1,163.8	1,010.8	153.03	7.605	
7,450.0	6,839.8	6,800.8	6,800.8	43.0	136.3	106.68	-1,157.4	-54.9	1,196.6	1,040.3	156.36	7.653	
7,480.3	6,848.1	6,809.1	6,809.1	43.2	136.4	104.42	-1,157.4	-54.9	1,217.4	1,058.9	158.57	7.678	
7,500.0	6,852.7	6,813.7	6,813.7	43.3	136.5	102.81	-1,157.4	-54.9	1,231.3	1,071.3	160.00	7.696	
7,550.0	6,861.2	6,822.2	6,822.2	43.8	136.7	98.18	-1,157.4	-54.9	1,267.6	1,104.2	163.33	7.761	
7,578.7	6,864.2	6,825.2	6,825.2	44.0	136.7	95.18	-1,157.4	-54.9	1,289.0	1,124.2	164.81	7.821	
7,600.0	6,865.5	6,826.5	6,826.5	44.2	136.8	92.81	-1,157.4	-54.9	1,305.1	1,139.6	165.56	7.883	
7,623.9	6,866.0	6,827.0	6,827.0	44.5	136.8	89.99	-1,157.4	-54.9	1,323.4	1,157.4	165.99	7.973	
7,677.1	6,866.0	6,827.0	6,827.0	45.0	136.8	89.99	-1,157.4	-54.9	1,364.8	1,197.8	167.03	8.171	
7,700.0	6,866.0	6,827.0	6,827.0	45.2	136.8	89.99	-1,157.4	-54.9	1,382.8	1,215.4	167.47	8.257	
7,775.6	6,866.0	6,827.0	6,827.0	46.1	136.8	89.99	-1,157.4	-54.9	1,443.4	1,274.4	169.02	8.540	
7,800.0	6,866.0	6,827.0	6,827.0	46.3	136.8	89.99	-1,157.4	-54.9	1,463.3	1,293.8	169.52	8.632	
7,874.0	6,866.0	6,827.0	6,827.0	47.2	136.8	89.99	-1,157.4	-54.9	1,524.3	1,353.2	171.12	8.908	
7,900.0	6,866.0	6,827.0	6,827.0	47.6	136.8	89.99	-1,157.4	-54.9	1,546.0	1,374.3	171.68	9.005	
7,972.4	6,866.0	6,827.0	6,827.0	48.5	136.8	89.99	-1,157.4	-54.9	1,607.1	1,433.8	173.31	9.273	
8,000.0	6,866.0	6,827.0	6,827.0	48.9	136.8	89.99	-1,157.4	-54.9	1,630.7	1,456.7	173.93	9.375	
8,070.8	6,866.0	6,827.0	6,827.0	50.0	136.8	89.99	-1,157.4	-54.9	1,691.6	1,516.1	175.57	9.635	
8,100.0	6,866.0	6,827.0	6,827.0	50.4	136.8	89.99	-1,157.4	-54.9	1,717.0	1,540.7	176.25	9.742	
8,169.3	6,866.0	6,827.0	6,827.0	51.5	136.8	89.99	-1,157.4	-54.9	1,777.6	1,599.7	177.89	9.992	
8,200.0	6,866.0	6,827.0	6,827.0	52.0	136.8	89.99	-1,157.4	-54.9	1,804.7	1,626.1	178.63	10.103	
8,267.7	6,866.0	6,827.0	6,827.0	53.2	136.8	89.99	-1,157.4	-54.9	1,864.8	1,684.5	180.27	10.344	
8,300.0	6,865.9	6,826.9	6,826.9	53.7	136.8	89.99	-1,157.4	-54.9	1,893.6	1,712.6	181.05	10.459	
8,366.1	6,865.9	6,826.9	6,826.9	54.9	136.8	89.99	-1,157.4	-54.9	1,953.0	1,770.3	182.69	10.690	
8,400.0	6,865.9	6,826.9	6,826.9	55.6	136.8	89.99	-1,157.4	-54.9	1,983.6	1,800.1	183.53	10.808	
8,464.5	6,865.9	6,826.9	6,826.9	56.8	136.8	89.99	-1,157.4	-54.9	2,042.2	1,857.1	185.15	11.030	
8,500.0	6,865.9	6,826.9	6,826.9	57.5	136.8	89.99	-1,157.4	-54.9	2,074.5	1,888.5	186.03	11.151	
8,563.0	6,865.9	6,826.9	6,826.9	58.7	136.8	89.99	-1,157.4	-54.9	2,132.2	1,944.6	187.63	11.364	
8,600.0	6,865.9	6,826.9	6,826.9	59.5	136.8	89.99	-1,157.4	-54.9	2,166.2	1,977.7	188.57	11.487	
8,661.4	6,865.9	6,826.9	6,826.9	60.8	136.8	89.99	-1,157.4	-54.9	2,222.9	2,032.8	190.15	11.690	
8,700.0	6,865.9	6,826.9	6,826.9	61.6	136.8	89.99	-1,157.4	-54.9	2,258.7	2,067.5	191.14	11.817	
8,759.8	6,865.9	6,826.9	6,826.9	62.8	136.8	89.99	-1,157.4	-54.9	2,314.2	2,121.6	192.69	12.010	
8,800.0	6,865.9	6,826.9	6,826.9	63.7	136.8	89.99	-1,157.4	-54.9	2,351.7	2,158.0	193.73	12.139	
8,858.2	6,865.9	6,826.9	6,826.9	65.0	136.8	89.99	-1,157.4	-54.9	2,406.1	2,210.9	195.25	12.323	
8,900.0	6,865.9	6,826.9	6,826.9	65.9	136.8	89.99	-1,157.4	-54.9	2,445.3	2,248.9	196.34	12.454	
8,956.7	6,865.9	6,826.9	6,826.9	67.2	136.8	89.99	-1,157.4	-54.9	2,498.5	2,300.7	197.83	12.630	
9,000.0	6,865.9	6,826.9	6,826.9	68.2	136.8	89.99	-1,157.4	-54.9	2,539.4	2,340.4	198.97	12.763	
9,055.1	6,865.9	6,826.9	6,826.9	69.5	136.8	89.99	-1,157.4	-54.9	2,591.4	2,391.0	200.42	12.930	
9,100.0	6,865.9	6,826.9	6,826.9	70.5	136.8	89.99	-1,157.4	-54.9	2,633.9	2,432.3	201.61	13.064	
9,153.5	6,865.9	6,826.9	6,826.9	71.8	136.8	89.99	-1,157.4	-54.9	2,684.6	2,481.6	203.03	13.223	
9,200.0	6,865.9	6,826.9	6,826.9	72.9	136.8	89.99	-1,157.4	-54.9	2,728.8	2,524.5	204.26	13.359	
9,251.9	6,865.9	6,826.9	6,826.9	74.1	136.8	89.99	-1,157.4	-54.9	2,778.2	2,572.6	205.65	13.509	
9,300.0	6,865.9	6,826.9	6,826.9	75.3	136.8	89.99	-1,157.4	-54.9	2,824.0	2,617.1	206.93	13.647	
9,350.4	6,865.9	6,826.9	6,826.9	76.5	136.8	89.99	-1,157.4	-54.9	2,872.1	2,663.8	208.28	13.790	
9,400.0	6,865.9	6,826.9	6,826.9	77.7	136.8	89.99	-1,157.4	-54.9	2,919.6	2,710.0	209.61	13.929	
9,448.8	6,865.9	6,826.9	6,826.9	78.9	136.8	89.99	-1,157.4	-54.9	2,966.3	2,755.4	210.92	14.064	

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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	
9,500.0	6,865.9	6,826.9	6,826.9	80.2	136.8	89.99	-1,157.4	-54.9	3,015.5	2,803.2	212.30	14.204	
9,547.2	6,865.9	6,826.9	6,826.9	81.4	136.8	89.99	-1,157.4	-54.9	3,060.8	2,847.2	213.57	14.332	
9,600.0	6,865.9	6,826.9	6,826.9	82.7	136.8	89.99	-1,157.4	-54.9	3,111.6	2,896.6	214.99	14.473	
9,645.6	6,865.9	6,826.9	6,826.9	83.8	136.8	89.99	-1,157.4	-54.9	3,155.5	2,939.3	216.23	14.593	
9,700.0	6,865.9	6,826.9	6,826.9	85.2	136.8	89.99	-1,157.4	-54.9	3,207.9	2,990.2	217.70	14.736	
9,744.1	6,865.9	6,826.9	6,826.9	86.3	136.8	89.99	-1,157.4	-54.9	3,250.5	3,031.6	218.89	14.849	
9,800.0	6,865.9	6,826.9	6,826.9	87.7	136.8	89.99	-1,157.4	-54.9	3,304.5	3,084.1	220.41	14.992	
9,842.5	6,865.9	6,826.9	6,826.9	88.8	136.8	89.99	-1,157.4	-54.9	3,345.6	3,124.0	221.57	15.100	
9,900.0	6,865.9	6,826.9	6,826.9	90.3	136.8	89.99	-1,157.4	-54.9	3,401.3	3,178.1	223.13	15.244	
9,940.9	6,865.9	6,826.9	6,826.9	91.3	136.8	89.99	-1,157.4	-54.9	3,440.9	3,216.7	224.24	15.345	
10,000.0	6,865.9	6,826.9	6,826.9	92.9	136.8	89.99	-1,157.4	-54.9	3,498.2	3,272.4	225.85	15.489	
10,039.3	6,865.9	6,826.9	6,826.9	93.9	136.8	89.99	-1,157.4	-54.9	3,536.4	3,309.5	226.93	15.584	
10,100.0	6,865.9	6,826.9	6,826.9	95.4	136.8	89.99	-1,157.4	-54.9	3,595.3	3,366.8	228.58	15.729	
10,137.8	6,865.9	6,826.9	6,826.9	96.4	136.8	89.99	-1,157.4	-54.9	3,632.1	3,402.5	229.61	15.818	
10,200.0	6,865.9	6,826.9	6,826.9	98.0	136.8	89.99	-1,157.4	-54.9	3,692.6	3,461.3	231.31	15.964	
10,236.2	6,865.9	6,826.9	6,826.9	99.0	136.8	89.99	-1,157.4	-54.9	3,727.9	3,495.6	232.31	16.047	
10,300.0	6,865.9	6,826.9	6,826.9	100.7	136.8	89.99	-1,157.4	-54.9	3,790.0	3,556.0	234.05	16.193	
10,334.6	6,865.9	6,826.9	6,826.9	101.6	136.8	89.99	-1,157.4	-54.9	3,823.8	3,588.8	235.00	16.271	
10,400.0	6,865.9	6,826.9	6,826.9	103.3	136.8	89.99	-1,157.4	-54.9	3,887.6	3,650.8	236.79	16.418	
10,433.0	6,865.9	6,826.9	6,826.9	104.2	136.8	89.99	-1,157.4	-54.9	3,919.8	3,682.1	237.70	16.491	
10,500.0	6,865.9	6,826.9	6,826.9	105.9	136.8	89.99	-1,157.4	-54.9	3,985.2	3,745.7	239.54	16.637	
10,531.5	6,865.8	6,826.8	6,826.8	106.8	136.8	89.99	-1,157.4	-54.9	4,016.0	3,775.6	240.41	16.705	
10,600.0	6,865.8	6,826.8	6,826.8	108.6	136.8	89.99	-1,157.4	-54.9	4,083.0	3,840.7	242.29	16.852	
10,629.9	6,865.8	6,826.8	6,826.8	109.4	136.8	89.99	-1,157.4	-54.9	4,112.3	3,869.2	243.11	16.915	
10,700.0	6,865.8	6,826.8	6,826.8	111.2	136.8	90.00	-1,157.4	-54.9	4,180.9	3,935.9	245.04	17.062	
10,728.3	6,865.8	6,826.8	6,826.8	112.0	136.8	90.00	-1,157.4	-54.9	4,208.7	3,962.8	245.82	17.121	
10,800.0	6,865.8	6,826.8	6,826.8	113.9	136.8	90.00	-1,157.4	-54.9	4,278.9	4,031.1	247.80	17.268	
10,826.7	6,865.8	6,826.8	6,826.8	114.6	136.8	90.00	-1,157.4	-54.9	4,305.1	4,056.6	248.53	17.322	
10,900.0	6,865.8	6,826.8	6,826.8	116.6	136.8	90.00	-1,157.4	-54.9	4,377.0	4,126.4	250.55	17.469	
10,925.2	6,865.8	6,826.8	6,826.8	117.3	136.8	90.00	-1,157.4	-54.9	4,401.7	4,150.4	251.25	17.519	
11,000.0	6,865.8	6,826.8	6,826.8	119.3	136.8	90.00	-1,157.4	-54.9	4,475.1	4,221.8	253.32	17.666	
11,023.6	6,865.8	6,826.8	6,826.8	119.9	136.8	90.00	-1,157.4	-54.9	4,498.3	4,244.3	253.97	17.712	
11,100.0	6,865.8	6,826.8	6,826.8	121.9	136.8	90.00	-1,157.4	-54.9	4,573.4	4,317.3	256.08	17.859	
11,122.0	6,865.8	6,826.8	6,826.8	122.5	136.8	90.00	-1,157.4	-54.9	4,595.0	4,338.3	256.69	17.901	
11,200.0	6,865.8	6,826.8	6,826.8	124.6	136.8	90.00	-1,157.4	-54.9	4,671.7	4,412.8	258.84	18.048	
11,220.4	6,865.8	6,826.8	6,826.8	125.2	136.8	90.00	-1,157.4	-54.9	4,691.8	4,432.4	259.41	18.086	
11,300.0	6,865.8	6,826.8	6,826.8	127.3	136.8	90.00	-1,157.4	-54.9	4,770.1	4,508.5	261.61	18.233	
11,318.9	6,865.8	6,826.8	6,826.8	127.9	136.8	90.00	-1,157.4	-54.9	4,788.6	4,526.5	262.13	18.268	
11,400.0	6,865.8	6,826.8	6,826.8	130.0	136.8	90.00	-1,157.4	-54.9	4,868.5	4,604.1	264.38	18.415	
11,417.3	6,865.8	6,826.8	6,826.8	130.5	136.8	90.00	-1,157.4	-54.9	4,885.6	4,620.7	264.86	18.446	
11,500.0	6,865.8	6,826.8	6,826.8	132.8	136.8	90.00	-1,157.4	-54.9	4,967.0	4,699.9	267.15	18.593	
11,515.7	6,865.8	6,826.8	6,826.8	133.2	136.8	90.00	-1,157.4	-54.9	4,982.5	4,714.9	267.59	18.620	
11,600.0	6,865.8	6,826.8	6,826.8	135.5	136.8	90.00	-1,157.4	-54.9	5,065.6	4,795.7	269.92	18.767	
11,614.1	6,865.8	6,826.8	6,826.8	135.9	136.8	90.00	-1,157.4	-54.9	5,079.6	4,809.2	270.32	18.791	
11,700.0	6,865.8	6,826.8	6,826.8	138.2	136.8	90.00	-1,157.4	-54.9	5,164.2	4,891.5	272.70	18.938	
11,712.6	6,865.8	6,826.8	6,826.8	138.5	136.8	90.00	-1,157.4	-54.9	5,176.6	4,903.6	273.05	18.959	
11,800.0	6,865.8	6,826.8	6,826.8	140.9	136.8	90.00	-1,157.4	-54.9	5,262.9	4,987.4	275.47	19.105	
11,811.0	6,865.8	6,826.8	6,826.8	141.2	136.8	90.00	-1,157.4	-54.9	5,273.8	4,998.0	275.78	19.123	
11,900.0	6,865.8	6,826.8	6,826.8	143.6	136.8	90.00	-1,157.4	-54.9	5,361.6	5,083.4	278.25	19.269	
11,909.4	6,865.8	6,826.8	6,826.8	143.9	136.8	90.00	-1,157.4	-54.9	5,370.9	5,092.4	278.51	19.284	
12,000.0	6,865.8	6,826.8	6,826.8	146.4	136.8	90.00	-1,157.4	-54.9	5,460.4	5,179.4	281.03	19.430	
12,007.8	6,865.8	6,826.8	6,826.8	146.6	136.8	90.00	-1,157.4	-54.9	5,468.2	5,186.9	281.25	19.443	

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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
12,100.0	6,865.8	6,826.8	6,826.8	149.1	136.8	90.00	-1,157.4	-54.9	5,559.2	5,275.4	283.81	19.588	
12,106.3	6,865.8	6,826.8	6,826.8	149.3	136.8	90.00	-1,157.4	-54.9	5,565.4	5,281.4	283.98	19.598	
12,200.0	6,865.8	6,826.8	6,826.8	151.8	136.8	90.01	-1,157.4	-54.9	5,658.1	5,371.5	286.59	19.743	
12,204.7	6,865.8	6,826.8	6,826.8	152.0	136.8	90.01	-1,157.4	-54.9	5,662.7	5,376.0	286.72	19.750	
12,300.0	6,865.8	6,826.8	6,826.8	154.6	136.8	90.01	-1,157.4	-54.9	5,757.0	5,467.6	289.37	19.895	
12,303.1	6,865.8	6,826.8	6,826.8	154.7	136.8	90.01	-1,157.4	-54.9	5,760.1	5,470.6	289.46	19.900	
12,400.0	6,865.8	6,826.8	6,826.8	157.3	136.8	90.01	-1,157.4	-54.9	5,855.9	5,563.8	292.15	20.044	
12,401.5	6,865.8	6,826.8	6,826.8	157.4	136.8	90.01	-1,157.4	-54.9	5,857.4	5,565.2	292.19	20.046	
12,500.0	6,865.8	6,826.8	6,826.8	160.1	136.8	90.01	-1,157.4	-54.9	5,954.9	5,659.9	294.94	20.190	
12,598.4	6,865.9	6,826.9	6,826.9	162.8	136.8	90.01	-1,157.4	-54.9	6,052.3	5,754.6	297.68	20.332	
12,600.0	6,865.9	6,826.9	6,826.9	162.8	136.8	90.01	-1,157.4	-54.9	6,053.9	5,756.2	297.72	20.334	
12,696.8	6,865.9	6,826.9	6,826.9	165.5	136.8	90.01	-1,157.4	-54.9	6,149.8	5,849.4	300.42	20.471	
12,700.0	6,865.9	6,826.9	6,826.9	165.6	136.8	90.01	-1,157.4	-54.9	6,152.9	5,852.4	300.51	20.475	
12,795.2	6,865.9	6,826.9	6,826.9	168.2	136.8	90.01	-1,157.4	-54.9	6,247.3	5,944.1	303.16	20.607	
12,800.0	6,865.9	6,826.9	6,826.9	168.3	136.8	90.01	-1,157.4	-54.9	6,252.0	5,948.7	303.29	20.614	
12,893.7	6,865.9	6,826.9	6,826.9	170.9	136.8	90.01	-1,157.4	-54.9	6,344.8	6,038.9	305.90	20.741	
12,900.0	6,865.9	6,826.9	6,826.9	171.1	136.8	90.01	-1,157.4	-54.9	6,351.1	6,045.0	306.08	20.750	
12,992.1	6,865.9	6,826.9	6,826.9	173.6	136.8	90.01	-1,157.4	-54.9	6,442.4	6,133.7	308.65	20.873	
13,000.0	6,865.9	6,826.9	6,826.9	173.8	136.8	90.01	-1,157.4	-54.9	6,450.2	6,141.3	308.87	20.883	
13,090.5	6,865.9	6,826.9	6,826.9	176.3	136.8	90.01	-1,157.4	-54.9	6,540.0	6,228.6	311.39	21.002	
13,100.0	6,865.9	6,826.9	6,826.9	176.6	136.8	90.01	-1,157.4	-54.9	6,549.4	6,237.7	311.66	21.015	
13,188.9	6,865.9	6,826.9	6,826.9	179.0	136.8	90.01	-1,157.4	-54.9	6,637.6	6,323.4	314.14	21.130	
13,200.0	6,865.9	6,826.9	6,826.9	179.3	136.8	90.02	-1,157.4	-54.9	6,648.5	6,334.1	314.45	21.144	
13,287.4	6,865.9	6,826.9	6,826.9	181.8	136.8	90.02	-1,157.4	-54.9	6,735.2	6,418.3	316.88	21.255	
13,300.0	6,865.9	6,826.9	6,826.9	182.1	136.8	90.02	-1,157.4	-54.9	6,747.7	6,430.5	317.24	21.270	
13,385.8	6,865.9	6,826.9	6,826.9	184.5	136.8	90.02	-1,157.4	-54.9	6,832.9	6,513.2	319.63	21.377	
13,400.0	6,865.9	6,826.9	6,826.9	184.9	136.8	90.02	-1,157.4	-54.9	6,847.0	6,526.9	320.03	21.395	
13,484.2	6,865.9	6,826.9	6,826.9	187.2	136.8	90.02	-1,157.4	-54.9	6,930.5	6,608.2	322.38	21.498	
13,500.0	6,865.9	6,826.9	6,826.9	187.6	136.8	90.02	-1,157.4	-54.9	6,946.2	6,623.4	322.82	21.517	
13,582.6	6,865.9	6,826.9	6,826.9	189.9	136.8	90.02	-1,157.4	-54.9	7,028.2	6,703.1	325.13	21.617	
13,600.0	6,865.9	6,826.9	6,826.9	190.4	136.8	90.02	-1,157.4	-54.9	7,045.5	6,719.9	325.61	21.638	
13,681.1	6,865.9	6,826.9	6,826.9	192.6	136.8	90.02	-1,157.4	-54.9	7,126.0	6,798.1	327.87	21.734	
13,700.0	6,865.9	6,826.9	6,826.9	193.2	136.8	90.02	-1,157.4	-54.9	7,144.8	6,816.4	328.40	21.756	
13,779.5	6,865.9	6,826.9	6,826.9	195.4	136.8	90.02	-1,157.4	-54.9	7,223.7	6,893.1	330.62	21.849	
13,800.0	6,865.9	6,826.9	6,826.9	195.9	136.8	90.02	-1,157.4	-54.9	7,244.1	6,912.9	331.20	21.872	
13,877.9	6,865.9	6,826.9	6,826.9	198.1	136.8	90.02	-1,157.4	-54.9	7,321.5	6,988.1	333.37	21.962	
13,900.0	6,865.9	6,826.9	6,826.9	198.7	136.8	90.02	-1,157.4	-54.9	7,343.4	7,009.4	333.99	21.987	
13,976.3	6,865.9	6,826.9	6,826.9	200.8	136.8	90.03	-1,157.4	-54.9	7,419.2	7,083.1	336.12	22.073	
14,000.0	6,865.9	6,826.9	6,826.9	201.5	136.8	90.03	-1,157.4	-54.9	7,442.7	7,106.0	336.78	22.100	
14,074.8	6,865.9	6,826.9	6,826.9	203.5	136.8	90.03	-1,157.4	-54.9	7,517.0	7,178.2	338.87	22.182	
14,100.0	6,865.9	6,826.9	6,826.9	204.2	136.8	90.03	-1,157.4	-54.9	7,542.1	7,202.5	339.58	22.210	
14,173.2	6,865.9	6,826.9	6,826.9	206.3	136.8	90.03	-1,157.4	-54.9	7,614.8	7,273.2	341.62	22.290	
14,200.0	6,865.9	6,826.9	6,826.9	207.0	136.8	90.03	-1,157.4	-54.9	7,641.5	7,299.1	342.37	22.319	
14,271.6	6,865.9	6,826.9	6,826.9	209.0	136.8	90.03	-1,157.4	-54.9	7,712.7	7,368.3	344.37	22.396	
14,300.0	6,865.9	6,826.9	6,826.9	209.8	136.8	90.03	-1,157.4	-54.9	7,740.9	7,395.7	345.17	22.426	
14,370.0	6,865.9	6,826.9	6,826.9	211.7	136.8	90.03	-1,157.4	-54.9	7,810.5	7,463.4	347.13	22.500	
14,400.0	6,865.9	6,826.9	6,826.9	212.6	136.8	90.03	-1,157.4	-54.9	7,840.3	7,492.3	347.96	22.532	
14,468.5	6,865.9	6,826.9	6,826.9	214.5	136.8	90.03	-1,157.4	-54.9	7,908.4	7,558.5	349.88	22.603	
14,500.0	6,865.9	6,826.9	6,826.9	215.3	136.8	90.03	-1,157.4	-54.9	7,939.7	7,588.9	350.76	22.636	
14,566.9	6,865.9	6,826.9	6,826.9	217.2	136.8	90.03	-1,157.4	-54.9	8,006.2	7,653.6	352.63	22.704	
14,600.0	6,865.9	6,826.9	6,826.9	218.1	136.8	90.04	-1,157.4	-54.9	8,039.1	7,685.6	353.56	22.738	
14,665.3	6,865.9	6,826.9	6,826.9	219.9	136.8	90.04	-1,157.4	-54.9	8,104.1	7,748.7	355.38	22.804	

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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
14,700.0	6,865.9	6,826.9	6,826.9	220.9	136.8	90.04	-1,157.4	-54.9	8,138.6	7,782.2	356.35	22.839	
14,763.7	6,866.0	6,827.0	6,827.0	222.7	136.8	90.04	-1,157.4	-54.9	8,202.0	7,843.9	358.14	22.902	
14,800.0	6,866.0	6,827.0	6,827.0	223.7	136.8	90.04	-1,157.4	-54.9	8,238.1	7,878.9	359.15	22.938	
14,862.2	6,866.0	6,827.0	6,827.0	225.4	136.8	90.04	-1,157.4	-54.9	8,299.9	7,939.0	360.89	22.998	
14,900.0	6,866.0	6,827.0	6,827.0	226.5	136.8	90.04	-1,157.4	-54.9	8,337.5	7,975.6	361.95	23.035	
14,960.6	6,866.0	6,827.0	6,827.0	228.1	136.8	90.04	-1,157.4	-54.9	8,397.8	8,034.2	363.64	23.094	
15,000.0	6,866.0	6,827.0	6,827.0	229.2	136.8	90.04	-1,157.4	-54.9	8,437.0	8,072.3	364.75	23.131	
15,059.0	6,866.0	6,827.0	6,827.0	230.9	136.8	90.04	-1,157.4	-54.9	8,495.8	8,129.4	366.40	23.187	
15,100.0	6,866.0	6,827.0	6,827.0	232.0	136.8	90.04	-1,157.4	-54.9	8,536.5	8,169.0	367.54	23.226	
15,157.4	6,866.0	6,827.0	6,827.0	233.6	136.8	90.04	-1,157.4	-54.9	8,593.7	8,224.5	369.15	23.280	
15,200.0	6,866.0	6,827.0	6,827.0	234.8	136.8	90.05	-1,157.4	-54.9	8,636.0	8,265.7	370.34	23.319	
15,255.9	6,866.0	6,827.0	6,827.0	236.4	136.8	90.05	-1,157.4	-54.9	8,691.7	8,319.7	371.91	23.371	
15,300.0	6,866.0	6,827.0	6,827.0	237.6	136.8	90.05	-1,157.4	-54.9	8,735.6	8,362.4	373.14	23.411	
15,354.3	6,866.0	6,827.0	6,827.0	239.1	136.8	90.05	-1,157.4	-54.9	8,789.6	8,415.0	374.66	23.460	
15,400.0	6,866.0	6,827.0	6,827.0	240.4	136.8	90.05	-1,157.4	-54.9	8,835.1	8,459.2	375.94	23.501	
15,420.3	6,866.0	6,827.0	6,827.0	240.9	136.8	90.05	-1,157.4	-54.9	8,855.3	8,478.8	376.51	23.520	

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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
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
0.0	0.0	0.0	0.0	0.0	0.0	-11.26	43.4	-8.6	47.7				
98.4	98.4	80.6	80.6	0.1	0.0	-11.03	43.2	-8.4	44.1	43.9	0.14	315.378	
100.0	100.0	82.2	82.2	0.1	0.0	-11.03	43.2	-8.4	44.1	43.9	0.14	309.377	
196.8	196.8	179.1	179.1	0.3	0.2	-10.35	42.9	-7.8	43.6	43.1	0.50	87.567	
200.0	200.0	182.2	182.2	0.3	0.2	-10.33	42.9	-7.8	43.6	43.1	0.51	85.449	
295.3	295.3	277.5	277.5	0.5	0.3	-9.87	42.5	-7.4	43.1	42.3	0.81	53.082	
300.0	300.0	282.2	282.2	0.5	0.3	-9.86	42.5	-7.4	43.1	42.3	0.83	52.138	
393.7	393.7	375.9	375.9	0.8	0.3	-10.02	42.0	-7.4	42.6	41.5	1.10	38.681	
400.0	400.0	382.3	382.2	0.8	0.4	-10.05	41.9	-7.4	42.6	41.5	1.12	38.015	
492.1	492.1	474.3	474.3	1.0	0.4	-10.61	41.3	-7.7	42.1	40.7	1.38	30.402	
500.0	500.0	482.2	482.2	1.0	0.4	-10.67	41.3	-7.8	42.0	40.6	1.41	29.888	
590.5	590.5	572.7	572.7	1.2	0.5	-11.36	40.8	-8.2	41.6	40.0	1.66	25.113	
600.0	600.0	582.2	582.2	1.2	0.5	-11.44	40.8	-8.2	41.6	39.9	1.68	24.703	
689.0	689.0	671.2	671.1	1.4	0.5	-12.21	40.3	-8.7	41.2	39.3	1.93	21.419	
700.0	700.0	682.2	682.2	1.4	0.5	-12.30	40.3	-8.8	41.2	39.2	1.96	21.069	
714.5	714.5	696.7	696.7	1.5	0.5	153.60	40.2	-8.9	41.2	39.2	1.99	20.639 CC, ES	
787.4	787.4	769.6	769.6	1.6	0.6	153.73	39.8	-9.2	42.0	39.8	2.17	19.324	
800.0	800.0	782.2	782.2	1.6	0.6	153.85	39.7	-9.3	42.3	40.1	2.21	19.195	
885.8	885.7	867.9	867.8	1.8	0.6	155.44	39.3	-9.8	45.9	43.5	2.41	19.076 SF	
900.0	899.8	882.0	882.0	1.8	0.6	155.81	39.2	-9.9	46.7	44.3	2.44	19.157	
984.2	983.8	965.9	965.8	2.0	0.6	158.30	39.0	-10.4	53.1	50.5	2.65	20.062	
1,000.0	999.5	981.5	981.5	2.0	0.7	158.79	38.9	-10.6	54.6	51.9	2.69	20.321	
1,082.7	1,081.5	1,063.5	1,063.5	2.2	0.7	161.30	38.9	-11.2	63.8	60.9	2.90	22.000	
1,100.0	1,098.7	1,080.7	1,080.6	2.3	0.7	161.81	38.9	-11.4	66.1	63.1	2.95	22.431	
1,181.1	1,178.8	1,160.7	1,160.7	2.5	0.7	164.01	39.0	-12.2	78.1	74.9	3.16	24.678	
1,200.0	1,197.5	1,179.3	1,179.2	2.5	0.7	164.48	39.0	-12.4	81.2	78.0	3.22	25.266	
1,279.5	1,275.6	1,257.1	1,257.1	2.8	0.8	166.25	39.3	-13.2	96.0	92.5	3.44	27.904	
1,300.0	1,295.6	1,277.0	1,277.0	2.9	0.8	166.66	39.4	-13.5	100.2	96.7	3.50	28.645	
1,377.9	1,371.6	1,352.3	1,352.2	3.1	0.8	168.07	40.1	-14.3	117.7	113.9	3.73	31.582	
1,400.0	1,393.1	1,373.4	1,373.3	3.2	0.8	168.43	40.4	-14.6	123.1	119.3	3.79	32.477	
1,476.4	1,466.9	1,445.9	1,445.9	3.6	0.8	169.58	41.7	-15.3	143.5	139.5	4.03	35.649	
1,500.0	1,489.6	1,468.2	1,468.2	3.7	0.8	169.92	42.2	-15.4	150.4	146.3	4.10	36.684	
1,574.8	1,561.3	1,538.8	1,538.7	4.0	0.8	170.97	44.0	-15.6	173.5	169.1	4.34	39.986	
1,600.0	1,585.3	1,562.5	1,562.4	4.2	0.8	171.30	44.7	-15.6	181.7	177.3	4.42	41.140	
1,615.5	1,600.0	1,577.1	1,577.0	4.3	0.8	171.50	45.1	-15.6	186.9	182.4	4.47	41.839	
1,673.2	1,654.8	1,631.1	1,631.0	4.6	0.8	172.25	46.5	-15.4	206.3	201.7	4.63	44.532	
1,680.5	1,661.7	1,637.9	1,637.7	4.6	0.8	172.34	46.7	-15.4	208.8	204.2	4.65	44.867	
1,700.0	1,680.2	1,656.0	1,655.9	4.7	0.9	172.55	47.2	-15.3	215.5	210.8	4.72	45.689	
1,771.6	1,747.8	1,722.4	1,722.2	5.1	0.9	173.28	49.2	-14.7	241.2	236.3	4.95	48.752	
1,800.0	1,774.3	1,748.7	1,748.6	5.3	0.9	173.56	50.0	-14.5	251.9	246.8	5.05	49.895	
1,870.1	1,839.6	1,813.4	1,813.1	5.8	0.9	174.20	51.9	-13.7	279.3	274.0	5.29	52.825	
1,900.0	1,867.2	1,840.8	1,840.6	6.0	0.9	174.46	52.7	-13.3	291.5	286.1	5.39	54.083	
1,968.5	1,930.1	1,903.0	1,902.8	6.5	0.9	175.05	54.3	-12.2	320.4	314.8	5.63	56.910	
2,000.0	1,958.8	1,930.9	1,930.6	6.7	0.9	175.30	55.1	-11.6	334.2	328.5	5.74	58.205	
2,066.9	2,019.3	1,989.5	1,989.2	7.2	0.9	175.82	56.7	-10.1	364.7	358.7	5.99	60.922	
2,069.5	2,021.6	1,991.8	1,991.5	7.2	0.9	175.84	56.8	-10.0	366.0	360.0	6.00	61.028	
2,100.0	2,049.0	2,018.9	2,018.6	7.5	0.9	176.09	57.5	-9.3	380.2	374.1	6.10	62.297	
2,165.3	2,107.7	2,077.8	2,077.4	8.0	0.9	176.62	59.1	-7.4	410.7	404.4	6.34	64.833	
2,200.0	2,138.8	2,109.1	2,108.7	8.3	0.9	176.89	59.8	-6.3	426.9	420.4	6.46	66.090	
2,263.8	2,196.1	2,166.7	2,166.3	8.8	1.0	177.35	60.9	-4.1	456.4	449.7	6.69	68.265	
2,300.0	2,228.6	2,199.5	2,199.0	9.1	1.0	177.60	61.5	-2.8	473.2	466.3	6.82	69.419	
2,362.2	2,284.5	2,255.9	2,255.3	9.6	1.0	177.99	62.4	-0.6	501.8	494.7	7.04	71.255	

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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		
2,400.0	2,318.4	2,290.2	2,289.6	10.0	1.0	178.21	62.8	0.8	519.1	512.0	7.18	72.300		
2,460.6	2,372.9	2,345.3	2,344.6	10.5	1.0	178.54	63.4	3.0	546.9	539.5	7.40	73.856		
2,500.0	2,408.2	2,381.1	2,380.5	10.8	1.0	178.75	63.7	4.6	564.8	557.3	7.55	74.804		
2,559.0	2,461.3	2,434.0	2,433.3	11.3	1.0	179.04	64.1	6.9	591.7	583.9	7.77	76.118		
2,600.0	2,498.0	2,470.4	2,469.6	11.6	1.0	179.22	64.4	8.5	610.3	602.4	7.93	76.980		
2,657.5	2,549.7	2,521.3	2,520.4	12.1	1.0	179.47	64.7	10.7	636.4	628.3	8.15	78.110		
2,700.0	2,587.8	2,558.7	2,557.8	12.5	1.0	179.63	65.0	12.4	655.8	647.5	8.31	78.900		
2,755.9	2,638.0	2,608.0	2,607.1	12.9	1.0	179.84	65.5	14.5	681.3	672.8	8.53	79.882		
2,800.0	2,677.7	2,647.5	2,646.6	13.3	1.1	179.99	65.8	16.3	701.5	692.8	8.70	80.619		
2,854.3	2,726.4	2,696.2	2,695.2	13.8	1.1	-179.82	66.1	18.5	726.3	717.4	8.91	81.475		
2,900.0	2,767.5	2,736.8	2,735.7	14.2	1.1	-179.68	66.4	20.4	747.1	738.0	9.09	82.162		
2,952.7	2,814.8	2,783.6	2,782.5	14.6	1.1	-179.53	66.8	22.5	771.2	761.9	9.30	82.914		
3,000.0	2,857.3	2,825.5	2,824.4	15.0	1.1	-179.40	67.1	24.3	792.7	783.3	9.49	83.556		
3,051.2	2,903.2	2,870.9	2,869.7	15.5	1.1	-179.28	67.5	26.2	816.1	806.4	9.69	84.213		
3,100.0	2,947.1	2,914.9	2,913.7	15.9	1.1	-179.17	67.9	28.0	838.4	828.5	9.89	84.816		
3,149.6	2,991.6	2,960.8	2,959.6	16.3	1.1	-179.07	68.3	29.8	861.0	850.9	10.08	85.394		
3,200.0	3,036.9	3,007.2	3,005.9	16.7	1.1	-178.97	68.5	31.7	883.8	873.6	10.28	85.948		
3,248.0	3,080.0	3,049.1	3,047.8	17.1	1.2	-178.89	68.7	33.3	905.6	895.1	10.48	86.450		
3,300.0	3,126.7	3,094.5	3,093.2	17.6	1.2	-178.81	69.1	34.9	929.2	918.5	10.68	86.978		
3,346.4	3,168.4	3,136.9	3,135.6	18.0	1.2	-178.75	69.4	36.3	950.3	939.5	10.87	87.418		
3,400.0	3,216.5	3,186.3	3,184.9	18.4	1.2	-178.69	69.7	37.8	974.6	963.5	11.09	87.899		
3,444.9	3,256.8	3,228.9	3,227.5	18.8	1.2	-178.65	70.0	39.0	994.8	983.6	11.27	88.288		
3,500.0	3,306.3	3,282.3	3,280.9	19.3	1.2	-178.60	70.1	40.5	1,019.5	1,008.0	11.49	88.738		
3,543.3	3,345.2	3,323.4	3,321.9	19.7	1.2	-178.56	70.1	41.5	1,038.8	1,027.1	11.66	89.067		
3,600.0	3,396.1	3,376.2	3,374.8	20.2	1.2	-178.52	69.9	42.8	1,063.9	1,052.1	11.89	89.476		
3,641.7	3,433.6	3,414.9	3,413.4	20.5	1.2	-178.49	69.8	43.7	1,082.4	1,070.3	12.06	89.754		
3,700.0	3,485.9	3,468.2	3,466.7	21.0	1.3	-178.46	69.6	44.9	1,108.1	1,095.8	12.30	90.120		
3,740.1	3,522.0	3,504.8	3,503.3	21.4	1.3	-178.44	69.4	45.6	1,125.8	1,113.3	12.46	90.358		
3,800.0	3,575.8	3,558.3	3,556.8	21.9	1.3	-178.41	69.1	46.8	1,152.1	1,139.4	12.70	90.693		
3,838.6	3,610.4	3,592.7	3,591.2	22.2	1.3	-178.39	68.9	47.5	1,169.1	1,156.3	12.86	90.902		
3,900.0	3,665.6	3,650.4	3,648.9	22.7	1.3	-178.36	68.6	48.8	1,196.1	1,183.0	13.11	91.215		
3,937.0	3,698.8	3,685.4	3,683.9	23.1	1.3	-178.34	68.3	49.6	1,212.3	1,199.1	13.27	91.388		
4,000.0	3,755.4	3,741.8	3,740.3	23.6	1.3	-178.30	67.8	51.0	1,239.9	1,226.3	13.52	91.677		
4,035.4	3,787.2	3,773.0	3,771.4	23.9	1.3	-178.28	67.5	51.8	1,255.4	1,241.7	13.67	91.835		
4,100.0	3,845.2	3,829.7	3,828.1	24.5	1.3	-178.23	67.0	53.4	1,283.7	1,269.8	13.94	92.108		
4,133.8	3,875.6	3,859.4	3,857.8	24.8	1.4	-178.21	66.7	54.2	1,298.6	1,284.5	14.08	92.243		
4,200.0	3,935.0	3,917.0	3,915.3	25.3	1.4	-178.17	66.3	55.8	1,327.7	1,313.3	14.35	92.501		
4,232.3	3,964.0	3,944.5	3,942.9	25.6	1.4	-178.16	66.2	56.4	1,341.9	1,327.4	14.49	92.629		
4,300.0	4,024.8	4,000.0	3,998.4	26.2	1.4	-178.14	66.1	57.5	1,371.9	1,357.1	14.77	92.894		
4,330.7	4,052.4	4,028.4	4,026.7	26.5	1.4	-178.14	66.1	57.9	1,385.5	1,370.6	14.90	93.008		
4,400.0	4,114.6	4,087.3	4,085.7	27.0	1.4	-178.16	66.3	58.5	1,416.4	1,401.2	15.19	93.272		
4,429.1	4,140.8	4,113.0	4,111.4	27.3	1.4	-178.17	66.5	58.6	1,429.4	1,414.1	15.31	93.381		
4,500.0	4,204.4	4,178.1	4,176.4	27.9	1.4	-178.22	67.0	58.6	1,461.0	1,445.4	15.60	93.634		
4,527.5	4,229.2	4,203.2	4,201.6	28.1	1.4	-178.24	67.2	58.5	1,473.3	1,457.6	15.72	93.728		
4,600.0	4,294.2	4,267.7	4,266.1	28.8	1.4	-178.30	67.8	58.2	1,505.6	1,489.6	16.02	93.972		
4,626.0	4,317.6	4,290.8	4,289.2	29.0	1.4	-178.32	68.0	58.1	1,517.2	1,501.1	16.13	94.057		
4,700.0	4,384.0	4,356.7	4,355.0	29.6	1.4	-178.37	68.5	57.7	1,550.2	1,533.7	16.44	94.287		
4,724.4	4,406.0	4,378.4	4,376.7	29.8	1.4	-178.39	68.7	57.6	1,561.1	1,544.5	16.54	94.360		
4,800.0	4,473.9	4,447.1	4,445.4	30.5	1.5	-178.45	69.3	57.2	1,594.8	1,577.9	16.86	94.577		
4,822.8	4,494.4	4,468.0	4,466.4	30.7	1.5	-178.46	69.5	57.1	1,605.0	1,588.0	16.96	94.640		
4,900.0	4,563.7	4,539.0	4,537.4	31.4	1.5	-178.52	70.1	56.6	1,639.3	1,622.0	17.28	94.843		
4,921.2	4,582.8	4,558.6	4,557.0	31.5	1.5	-178.53	70.2	56.4	1,648.7	1,631.3	17.37	94.896		

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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		
5,000.0	4,653.5	4,631.2	4,629.5	32.2	1.5	-178.59	70.6	56.0	1,683.6	1,665.9	17.71	95.084		
5,019.7	4,671.1	4,649.2	4,647.6	32.4	1.5	-178.60	70.7	55.9	1,692.3	1,674.5	17.79	95.128		
5,100.0	4,743.3	4,722.5	4,720.8	33.1	1.5	-178.64	71.0	55.5	1,727.9	1,709.7	18.13	95.301		
5,118.1	4,759.5	4,738.7	4,737.0	33.2	1.5	-178.65	71.1	55.4	1,735.9	1,717.7	18.21	95.339		
5,200.0	4,833.1	4,811.8	4,810.1	34.0	1.5	-178.70	71.4	55.1	1,772.1	1,753.5	18.56	95.503		
5,216.5	4,847.9	4,826.4	4,824.7	34.1	1.5	-178.70	71.5	55.0	1,779.4	1,760.8	18.63	95.534		
5,300.0	4,922.9	4,900.0	4,898.3	34.8	1.5	-178.74	71.8	54.8	1,816.3	1,797.3	18.98	95.688		
5,314.9	4,936.3	4,913.5	4,911.8	34.9	1.5	-178.74	71.8	54.8	1,823.0	1,803.9	19.05	95.713		
5,389.3	5,003.1	4,980.3	4,978.6	35.6	1.5	-178.77	72.1	54.8	1,855.9	1,836.5	19.37	95.836		
5,400.0	5,012.7	4,989.9	4,988.2	35.7	1.5	-178.77	72.1	54.8	1,860.6	1,841.2	19.40	95.902		
5,413.4	5,024.8	5,002.0	5,000.4	35.7	1.5	-178.78	72.1	54.8	1,866.5	1,847.0	19.44	95.997		
5,500.0	5,103.4	5,083.1	5,081.5	36.3	1.5	-178.82	72.3	55.0	1,902.9	1,883.2	19.70	96.584		
5,511.8	5,114.2	5,094.3	5,092.6	36.3	1.5	-178.82	72.3	55.1	1,907.7	1,888.0	19.73	96.669		
5,600.0	5,195.6	5,177.2	5,175.5	36.8	1.6	-178.84	72.3	55.6	1,941.9	1,922.0	19.96	97.272		
5,610.2	5,205.1	5,186.9	5,185.2	36.9	1.6	-178.84	72.3	55.6	1,945.7	1,925.7	19.99	97.346		
5,700.0	5,289.0	5,269.8	5,268.1	37.3	1.6	-178.86	72.2	56.2	1,977.7	1,957.5	20.19	97.974		
5,708.6	5,297.1	5,277.7	5,276.1	37.4	1.6	-178.86	72.2	56.3	1,980.6	1,960.4	20.20	98.039		
5,800.0	5,383.6	5,360.1	5,358.4	37.8	1.6	-178.86	72.2	57.1	2,010.2	1,989.8	20.37	98.694		
5,807.1	5,390.4	5,366.5	5,364.8	37.9	1.6	-178.86	72.2	57.2	2,012.4	1,992.0	20.38	98.749		
5,900.0	5,479.3	5,449.7	5,448.1	38.3	1.6	-178.87	72.5	58.0	2,039.7	2,019.2	20.51	99.434		
5,905.5	5,484.6	5,454.7	5,453.0	38.3	1.6	-178.87	72.5	58.0	2,041.3	2,020.7	20.52	99.478		
6,000.0	5,576.0	5,543.0	5,541.3	38.7	1.7	-178.87	73.0	58.8	2,066.1	2,045.5	20.62	100.187		
6,003.9	5,579.8	5,546.8	5,545.2	38.7	1.7	-178.87	73.0	58.8	2,067.1	2,046.5	20.63	100.218		
6,100.0	5,673.4	5,643.5	5,641.8	39.0	1.7	-178.88	73.5	59.6	2,089.2	2,068.5	20.70	100.942		
6,102.3	5,675.7	5,646.0	5,644.3	39.0	1.7	-178.88	73.6	59.7	2,089.6	2,069.0	20.70	100.961		
6,200.0	5,771.6	5,746.9	5,745.2	39.3	1.7	-178.85	73.6	61.4	2,108.5	2,087.8	20.73	101.700		
6,200.8	5,772.4	5,747.7	5,745.9	39.3	1.7	-178.85	73.6	61.4	2,108.7	2,087.9	20.73	101.706		
6,299.2	5,869.6	5,853.2	5,851.5	39.6	1.7	-178.81	73.4	63.3	2,124.1	2,103.4	20.74	102.439		
6,300.0	5,870.4	5,854.1	5,852.4	39.6	1.7	-178.81	73.4	63.3	2,124.2	2,103.5	20.74	102.445		
6,397.6	5,967.3	5,955.1	5,953.4	39.8	1.7	-178.78	72.8	64.8	2,135.7	2,115.0	20.71	103.142		
6,400.0	5,969.7	5,957.4	5,955.7	39.8	1.7	-178.78	72.8	64.8	2,136.0	2,115.3	20.71	103.158		
6,496.0	6,065.4	6,054.8	6,053.1	40.0	1.8	-178.75	72.2	66.1	2,144.0	2,123.4	20.65	103.806		
6,500.0	6,069.3	6,059.0	6,057.2	40.0	1.8	-178.75	72.2	66.2	2,144.3	2,123.6	20.65	103.830		
6,594.5	6,163.7	6,153.3	6,151.6	40.1	1.8	-178.72	71.6	67.3	2,148.8	2,128.2	20.58	104.399		
6,600.0	6,169.2	6,158.6	6,156.9	40.1	1.8	-178.72	71.6	67.4	2,149.0	2,128.4	20.58	104.428		
6,692.9	6,262.1	6,246.3	6,244.5	40.2	1.8	-178.69	71.2	68.3	2,150.4	2,129.9	20.50	104.872		
6,693.8	6,263.0	6,247.2	6,245.4	40.2	1.8	15.30	71.2	68.3	2,150.4	2,108.4	41.95	51.262		
6,699.3	6,268.4	6,252.2	6,250.4	40.2	1.8	15.31	71.1	68.3	2,150.4	2,108.4	41.95	51.256		
6,700.0	6,269.2	6,252.9	6,251.1	40.2	1.8	15.31	71.1	68.3	2,150.4	2,108.4	41.95	51.255		
6,723.8	6,293.0	6,275.0	6,273.3	40.2	1.8	15.31	71.1	68.6	2,150.4	2,108.4	41.97	51.232		
6,750.0	6,319.2	6,300.0	6,298.2	40.3	1.8	105.39	71.0	68.8	2,150.6	2,129.9	20.67	104.063		
6,791.3	6,360.4	6,340.9	6,339.1	40.3	1.8	105.39	71.0	69.3	2,151.6	2,130.7	20.86	103.148		
6,800.0	6,369.0	6,349.6	6,347.8	40.3	1.8	105.40	71.0	69.4	2,151.9	2,131.0	20.90	102.963		
6,850.0	6,418.2	6,399.3	6,397.5	40.4	1.8	105.40	70.9	69.9	2,154.3	2,133.2	21.14	101.921		
6,889.7	6,456.6	6,437.9	6,436.1	40.5	1.9	105.39	70.9	70.3	2,157.1	2,135.8	21.33	101.122		
6,900.0	6,466.4	6,447.7	6,445.9	40.5	1.9	105.38	70.8	70.4	2,157.9	2,136.5	21.38	100.921		
6,950.0	6,513.4	6,494.8	6,493.0	40.6	1.9	105.33	70.8	70.8	2,162.8	2,141.2	21.64	99.930		
6,988.2	6,548.1	6,530.2	6,528.5	40.7	1.9	105.27	70.7	71.1	2,167.4	2,145.6	21.86	99.144		
7,000.0	6,558.6	6,541.0	6,539.2	40.7	1.9	105.25	70.7	71.2	2,169.0	2,147.1	21.93	98.902		
7,050.0	6,601.9	6,585.2	6,583.4	40.9	1.9	105.09	70.6	71.5	2,176.5	2,154.3	22.26	97.785		
7,086.6	6,632.0	6,615.4	6,613.6	41.0	1.9	104.91	70.5	71.7	2,182.9	2,160.4	22.54	96.863		
7,100.0	6,642.7	6,625.9	6,624.1	41.0	1.9	104.82	70.5	71.8	2,185.5	2,162.8	22.64	96.521		

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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						
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
7,150.0	6,681.0	6,663.3	6,661.5	41.2	1.9	104.42	70.5	72.0	2,195.9	2,172.8	23.10	95.050	
7,185.0	6,706.0	6,687.8	6,686.0	41.4	1.9	104.04	70.4	72.2	2,204.2	2,180.7	23.49	93.854	
7,200.0	6,716.2	6,697.8	6,696.0	41.4	1.9	103.86	70.4	72.3	2,207.9	2,184.3	23.66	93.335	
7,250.0	6,748.3	6,700.0	6,698.2	41.7	1.9	102.51	70.4	72.3	2,221.7	2,197.3	24.32	91.341	
7,283.4	6,767.8	6,700.0	6,698.2	41.9	1.9	101.45	70.4	72.3	2,231.9	2,207.1	24.84	89.853	
7,300.0	6,776.9	6,700.0	6,698.2	42.0	1.9	100.89	70.4	72.3	2,237.3	2,212.2	25.10	89.129	
7,350.0	6,801.8	6,700.0	6,698.2	42.3	1.9	99.06	70.4	72.3	2,254.8	2,228.8	25.97	86.820	
7,381.9	6,815.7	6,700.0	6,698.2	42.5	1.9	97.78	70.4	72.3	2,266.7	2,240.2	26.56	85.338	
7,400.0	6,822.8	6,700.0	6,698.2	42.6	1.9	97.02	70.4	72.3	2,273.8	2,246.9	26.89	84.556	
7,450.0	6,839.8	6,700.0	6,698.2	43.0	1.9	94.79	70.4	72.3	2,294.3	2,266.5	27.82	82.466	
7,480.3	6,848.1	6,700.0	6,698.2	43.2	1.9	93.35	70.4	72.3	2,307.3	2,278.9	28.38	81.309	
7,500.0	6,852.7	6,700.0	6,698.2	43.3	1.9	92.39	70.4	72.3	2,316.0	2,287.2	28.72	80.653	
7,550.0	6,861.2	6,700.0	6,698.2	43.8	1.9	89.84	70.4	72.3	2,338.7	2,309.1	29.53	79.191	
7,578.7	6,864.2	6,700.0	6,698.2	44.0	1.9	88.32	70.4	72.3	2,352.1	2,322.2	29.96	78.520	
7,600.0	6,865.5	6,700.0	6,698.2	44.2	1.9	87.17	70.4	72.3	2,362.2	2,332.0	30.23	78.138	
7,623.9	6,866.0	6,700.0	6,698.2	44.5	1.9	85.86	70.4	72.3	2,373.7	2,343.2	30.51	77.794	
7,677.1	6,866.0	6,700.0	6,698.2	45.0	1.9	85.86	70.4	72.3	2,399.9	2,368.3	31.55	76.062	
7,700.0	6,866.0	6,700.0	6,698.2	45.2	1.9	85.86	70.4	72.3	2,411.4	2,379.4	32.00	75.361	
7,775.6	6,866.0	6,700.0	6,698.2	46.1	1.9	85.86	70.4	72.3	2,450.6	2,417.1	33.55	73.046	
7,800.0	6,866.0	6,700.0	6,698.2	46.3	1.9	85.86	70.4	72.3	2,463.6	2,429.6	34.05	72.353	
7,874.0	6,866.0	6,700.0	6,698.2	47.2	1.9	85.86	70.4	72.3	2,504.2	2,468.5	35.65	70.248	
7,900.0	6,866.0	6,700.0	6,698.2	47.6	1.9	85.86	70.4	72.3	2,518.8	2,482.6	36.21	69.563	
7,972.4	6,866.0	6,700.0	6,698.2	48.5	1.9	85.86	70.4	72.3	2,560.4	2,522.6	37.84	67.672	
8,000.0	6,866.0	6,700.0	6,698.2	48.9	1.9	85.86	70.4	72.3	2,576.6	2,538.1	38.45	67.003	
8,070.8	6,866.0	6,700.0	6,698.2	50.0	1.9	85.86	70.4	72.3	2,619.1	2,579.0	40.10	65.319	
8,100.0	6,866.0	6,700.0	6,698.2	50.4	1.9	85.86	70.4	72.3	2,637.0	2,596.2	40.77	64.674	
8,169.3	6,866.0	6,700.0	6,698.2	51.5	1.9	85.86	70.4	72.3	2,680.2	2,637.7	42.42	63.180	
8,200.0	6,866.0	6,700.0	6,698.2	52.0	1.9	85.86	70.4	72.3	2,699.7	2,656.5	43.15	62.562	
8,267.7	6,866.0	6,700.0	6,698.2	53.2	1.9	85.86	70.4	72.3	2,743.4	2,698.6	44.80	61.241	
8,300.0	6,865.9	6,700.0	6,698.2	53.7	1.9	85.86	70.4	72.3	2,764.6	2,719.0	45.58	60.652	
8,366.1	6,865.9	6,700.0	6,698.2	54.9	1.9	85.86	70.4	72.3	2,808.6	2,761.4	47.21	59.486	
8,400.0	6,865.9	6,700.0	6,698.2	55.6	1.9	85.86	70.4	72.3	2,831.5	2,783.5	48.05	58.926	
8,464.5	6,865.9	6,700.0	6,698.2	56.8	1.9	85.86	70.4	72.3	2,875.8	2,826.1	49.67	57.897	
8,500.0	6,865.9	6,700.0	6,698.2	57.5	1.9	85.86	70.4	72.3	2,900.4	2,849.8	50.56	57.366	
8,563.0	6,865.9	6,700.0	6,698.2	58.7	1.9	85.86	70.4	72.3	2,944.7	2,892.5	52.16	56.457	
8,600.0	6,865.9	6,700.0	6,698.2	59.5	1.9	85.86	70.4	72.3	2,971.0	2,917.9	53.10	55.954	
8,661.4	6,865.9	6,700.0	6,698.2	60.8	1.9	85.86	70.4	72.3	3,015.2	2,960.5	54.67	55.150	
8,700.0	6,865.9	6,700.0	6,698.2	61.6	1.9	85.86	70.4	72.3	3,043.3	2,987.6	55.66	54.674	
8,759.8	6,865.9	6,700.0	6,698.2	62.8	1.9	85.86	70.4	72.3	3,087.3	3,030.0	57.21	53.964	
8,800.0	6,865.9	6,700.0	6,698.2	63.7	1.9	85.86	70.4	72.3	3,117.1	3,058.8	58.25	53.513	
8,858.2	6,865.9	6,700.0	6,698.2	65.0	1.9	85.86	70.4	72.3	3,160.7	3,101.0	59.77	52.883	
8,900.0	6,865.9	6,700.0	6,698.2	65.9	1.9	85.87	70.4	72.3	3,192.3	3,131.5	60.86	52.456	
8,956.7	6,865.9	6,700.0	6,698.2	67.2	1.9	85.87	70.4	72.3	3,235.6	3,173.2	62.34	51.898	
9,000.0	6,865.9	6,700.0	6,698.2	68.2	1.9	85.87	70.4	72.3	3,268.9	3,205.4	63.48	51.494	
9,055.1	6,865.9	6,700.0	6,698.2	69.5	1.9	85.87	70.4	72.3	3,311.6	3,246.7	64.94	50.998	
9,100.0	6,865.9	6,700.0	6,698.2	70.5	1.9	85.87	70.4	72.3	3,346.7	3,280.6	66.12	50.615	
9,153.5	6,865.9	6,700.0	6,698.2	71.8	1.9	85.87	70.4	72.3	3,388.8	3,321.3	67.54	50.174	
9,200.0	6,865.9	6,700.0	6,698.2	72.9	1.9	85.87	70.4	72.3	3,425.6	3,356.8	68.77	49.810	
9,251.9	6,865.9	6,700.0	6,698.2	74.1	1.9	85.87	70.4	72.3	3,467.1	3,396.9	70.16	49.418	
9,300.0	6,865.9	6,700.0	6,698.2	75.3	1.9	85.87	70.4	72.3	3,505.6	3,434.2	71.44	49.072	
9,350.4	6,865.9	6,700.0	6,698.2	76.5	1.9	85.87	70.4	72.3	3,546.3	3,473.6	72.79	48.723	
9,400.0	6,865.9	6,700.0	6,698.2	77.7	1.9	85.87	70.4	72.3	3,586.7	3,512.6	74.11	48.394	

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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	
9,448.8	6,865.9	6,700.0	6,698.2	78.9	1.9	85.87	70.4	72.3	3,626.6	3,551.1	75.42	48.082	
9,500.0	6,865.9	6,700.0	6,698.2	80.2	1.9	85.87	70.4	72.3	3,668.6	3,591.8	76.80	47.770	
9,547.2	6,865.9	6,700.0	6,698.2	81.4	1.9	85.87	70.4	72.3	3,707.6	3,629.6	78.07	47.491	
9,600.0	6,865.9	6,700.0	6,698.2	82.7	1.9	85.87	70.4	72.3	3,751.5	3,672.0	79.49	47.193	
9,645.6	6,865.9	6,700.0	6,698.2	83.8	1.9	85.87	70.4	72.3	3,789.6	3,708.8	80.72	46.945	
9,700.0	6,865.9	6,700.0	6,698.2	85.2	1.9	85.87	70.4	72.3	3,835.1	3,752.9	82.19	46.661	
9,744.1	6,865.9	6,700.0	6,698.2	86.3	1.9	85.87	70.4	72.3	3,872.2	3,788.9	83.39	46.438	
9,800.0	6,865.9	6,700.0	6,698.2	87.7	1.9	85.87	70.4	72.3	3,919.5	3,834.6	84.90	46.167	
9,842.5	6,865.9	6,700.0	6,698.2	88.8	1.9	85.87	70.4	72.3	3,955.6	3,869.6	86.05	45.968	
9,900.0	6,865.9	6,700.0	6,698.2	90.3	1.9	85.87	70.4	72.3	4,004.7	3,917.1	87.61	45.709	
9,940.9	6,865.9	6,700.0	6,698.2	91.3	1.9	85.87	70.4	72.3	4,039.7	3,951.0	88.73	45.530	
10,000.0	6,865.9	6,700.0	6,698.2	92.9	1.9	85.87	70.4	72.3	4,090.5	4,000.2	90.33	45.282	
10,039.3	6,865.9	6,700.0	6,698.2	93.9	1.9	85.87	70.4	72.3	4,124.4	4,033.0	91.41	45.123	
10,100.0	6,865.9	6,700.0	6,698.2	95.4	1.9	85.87	70.4	72.3	4,176.9	4,083.9	93.06	44.886	
10,137.8	6,865.9	6,700.0	6,698.2	96.4	1.9	85.87	70.4	72.3	4,209.8	4,115.7	94.09	44.742	
10,200.0	6,865.9	6,700.0	6,698.2	98.0	1.9	85.87	70.4	72.3	4,264.0	4,168.2	95.79	44.515	
10,236.2	6,865.9	6,700.0	6,698.2	99.0	1.9	85.87	70.4	72.3	4,295.6	4,198.8	96.78	44.387	
10,300.0	6,865.9	6,700.0	6,698.2	100.7	1.9	85.87	70.4	72.3	4,351.6	4,253.0	98.52	44.169	
10,334.6	6,865.9	6,700.0	6,698.2	101.6	1.9	85.87	70.4	72.3	4,382.0	4,282.6	99.47	44.054	
10,400.0	6,865.9	6,700.0	6,698.2	103.3	1.9	85.87	70.4	72.3	4,439.7	4,338.4	101.26	43.845	
10,433.0	6,865.9	6,700.0	6,698.2	104.2	1.9	85.87	70.4	72.3	4,468.9	4,366.8	102.16	43.743	
10,500.0	6,865.9	6,700.0	6,698.2	105.9	1.9	85.87	70.4	72.3	4,528.3	4,424.3	104.00	43.542	
10,531.5	6,865.8	6,700.0	6,698.2	106.8	1.9	85.87	70.4	72.3	4,556.3	4,451.4	104.86	43.450	
10,600.0	6,865.8	6,700.0	6,698.2	108.6	1.9	85.87	70.4	72.3	4,617.4	4,510.6	106.74	43.257	
10,629.9	6,865.8	6,700.0	6,698.2	109.4	1.9	85.87	70.4	72.3	4,644.1	4,536.5	107.56	43.175	
10,700.0	6,865.8	6,700.0	6,698.2	111.2	1.9	85.87	70.4	72.3	4,706.9	4,597.4	109.49	42.989	
10,728.3	6,865.8	6,700.0	6,698.2	112.0	1.9	85.87	70.4	72.3	4,732.3	4,622.0	110.27	42.916	
10,800.0	6,865.8	6,700.0	6,698.2	113.9	1.9	85.87	70.4	72.3	4,796.8	4,684.6	112.24	42.737	
10,826.7	6,865.8	6,700.0	6,698.2	114.6	1.9	85.87	70.4	72.3	4,820.9	4,708.0	112.98	42.672	
10,900.0	6,865.8	6,700.0	6,698.2	116.6	1.9	85.87	70.4	72.3	4,887.1	4,772.1	114.99	42.499	
10,925.2	6,865.8	6,700.0	6,698.2	117.3	1.9	85.87	70.4	72.3	4,909.9	4,794.2	115.69	42.441	
11,000.0	6,865.8	6,700.0	6,698.2	119.3	1.9	85.87	70.4	72.3	4,977.8	4,860.1	117.75	42.275	
11,023.6	6,865.8	6,700.0	6,698.2	119.9	1.9	85.87	70.4	72.3	4,999.3	4,880.9	118.40	42.223	
11,100.0	6,865.8	6,700.0	6,698.2	121.9	1.9	85.87	70.4	72.3	5,068.9	4,948.4	120.51	42.063	
11,122.0	6,865.8	6,700.0	6,698.2	122.5	1.9	85.87	70.4	72.3	5,089.0	4,967.8	121.12	42.017	
11,200.0	6,865.8	6,700.0	6,698.2	124.6	1.9	85.87	70.4	72.3	5,160.2	5,037.0	123.27	41.862	
11,220.4	6,865.8	6,700.0	6,698.2	125.2	1.9	85.87	70.4	72.3	5,179.0	5,055.1	123.83	41.822	
11,300.0	6,865.8	6,700.0	6,698.2	127.3	1.9	85.87	70.4	72.3	5,251.9	5,125.9	126.03	41.672	
11,318.9	6,865.8	6,700.0	6,698.2	127.9	1.9	85.87	70.4	72.3	5,269.3	5,142.7	126.55	41.637	
11,400.0	6,865.8	6,700.0	6,698.2	130.0	1.9	85.87	70.4	72.3	5,343.9	5,215.1	128.79	41.492	
11,417.3	6,865.8	6,700.0	6,698.2	130.5	1.9	85.87	70.4	72.3	5,359.9	5,230.6	129.27	41.462	
11,500.0	6,865.8	6,700.0	6,698.2	132.8	1.9	85.87	70.4	72.3	5,436.2	5,304.6	131.56	41.321	
11,515.7	6,865.8	6,700.0	6,698.2	133.2	1.9	85.87	70.4	72.3	5,450.7	5,318.7	131.99	41.295	
11,600.0	6,865.8	6,700.0	6,698.2	135.5	1.9	85.87	70.4	72.3	5,528.7	5,394.4	134.33	41.159	
11,614.1	6,865.8	6,700.0	6,698.2	135.9	1.9	85.87	70.4	72.3	5,541.8	5,407.1	134.72	41.137	
11,700.0	6,865.8	6,700.0	6,698.2	138.2	1.9	85.87	70.4	72.3	5,621.5	5,484.4	137.09	41.005	
11,712.6	6,865.8	6,700.0	6,698.2	138.5	1.9	85.87	70.4	72.3	5,633.2	5,495.7	137.44	40.986	
11,800.0	6,865.8	6,700.0	6,698.2	140.9	1.9	85.87	70.4	72.3	5,714.5	5,574.7	139.86	40.858	
11,811.0	6,865.8	6,700.0	6,698.2	141.2	1.9	85.87	70.4	72.3	5,724.8	5,584.6	140.17	40.842	
11,900.0	6,865.8	6,700.0	6,698.2	143.6	1.9	85.87	70.4	72.3	5,807.8	5,665.2	142.64	40.718	
11,909.4	6,865.8	6,700.0	6,698.2	143.9	1.9	85.87	70.4	72.3	5,816.6	5,673.7	142.90	40.705	
12,000.0	6,865.8	6,700.0	6,698.2	146.4	1.9	85.87	70.4	72.3	5,901.3	5,755.9	145.41	40.584	

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning	
12,007.8	6,865.8	6,700.0	6,698.2	146.6	1.9	85.87	70.4	72.3	5,908.6	5,763.0	145.63	40.574		
12,100.0	6,865.8	6,700.0	6,698.2	149.1	1.9	85.87	70.4	72.3	5,995.0	5,846.8	148.18	40.457		
12,106.3	6,865.8	6,700.0	6,698.2	149.3	1.9	85.87	70.4	72.3	6,000.9	5,852.5	148.36	40.449		
12,200.0	6,865.8	6,700.0	6,698.2	151.8	1.9	85.87	70.4	72.3	6,088.9	5,937.9	150.96	40.335		
12,204.7	6,865.8	6,700.0	6,698.2	152.0	1.9	85.87	70.4	72.3	6,093.3	5,942.2	151.09	40.330		
12,300.0	6,865.8	6,700.0	6,698.2	154.6	1.9	85.87	70.4	72.3	6,183.0	6,029.2	153.73	40.219		
12,303.1	6,865.8	6,700.0	6,698.2	154.7	1.9	85.87	70.4	72.3	6,185.9	6,032.1	153.82	40.215		
12,400.0	6,865.8	6,700.0	6,698.2	157.3	1.9	85.87	70.4	72.3	6,277.2	6,120.7	156.51	40.107		
12,401.5	6,865.8	6,700.0	6,698.2	157.4	1.9	85.87	70.4	72.3	6,278.7	6,122.2	156.55	40.106		
12,500.0	6,865.8	6,700.0	6,698.2	160.1	1.9	85.87	70.4	72.3	6,371.7	6,212.4	159.29	40.001		
12,598.4	6,865.9	6,700.0	6,698.2	162.8	1.9	85.87	70.4	72.3	6,464.8	6,302.8	162.02	39.900		
12,600.0	6,865.9	6,700.0	6,698.2	162.8	1.9	85.87	70.4	72.3	6,466.3	6,304.2	162.07	39.899		
12,696.8	6,865.9	6,700.0	6,698.2	165.5	1.9	85.87	70.4	72.3	6,558.1	6,393.3	164.76	39.804		
12,700.0	6,865.9	6,700.0	6,698.2	165.6	1.9	85.88	70.4	72.3	6,561.1	6,396.2	164.85	39.801		
12,795.2	6,865.9	6,700.0	6,698.2	168.2	1.9	85.88	70.4	72.3	6,651.5	6,484.0	167.50	39.711		
12,800.0	6,865.9	6,700.0	6,698.2	168.3	1.9	85.88	70.4	72.3	6,656.0	6,488.4	167.63	39.707		
12,893.7	6,865.9	6,700.0	6,698.2	170.9	1.9	85.88	70.4	72.3	6,745.1	6,574.8	170.23	39.622		
12,900.0	6,865.9	6,700.0	6,698.2	171.1	1.9	85.88	70.4	72.3	6,751.1	6,580.7	170.41	39.617		
12,992.1	6,865.9	6,700.0	6,698.2	173.6	1.9	85.88	70.4	72.3	6,838.8	6,665.8	172.97	39.537		
13,000.0	6,865.9	6,700.0	6,698.2	173.8	1.9	85.88	70.4	72.3	6,846.3	6,673.1	173.19	39.530		
13,090.5	6,865.9	6,700.0	6,698.2	176.3	1.9	85.88	70.4	72.3	6,932.6	6,756.9	175.71	39.454		
13,100.0	6,865.9	6,700.0	6,698.2	176.6	1.9	85.88	70.4	72.3	6,941.6	6,765.7	175.98	39.447		
13,188.9	6,865.9	6,700.0	6,698.2	179.0	1.9	85.88	70.4	72.3	7,026.6	6,848.1	178.45	39.375		
13,200.0	6,865.9	6,700.0	6,698.2	179.3	1.9	85.88	70.4	72.3	7,037.1	6,858.4	178.76	39.367		
13,287.4	6,865.9	6,700.0	6,698.2	181.8	1.9	85.88	70.4	72.3	7,120.6	6,939.4	181.19	39.299		
13,300.0	6,865.9	6,700.0	6,698.2	182.1	1.9	85.88	70.4	72.3	7,132.7	6,951.2	181.54	39.289		
13,385.8	6,865.9	6,700.0	6,698.2	184.5	1.9	85.88	70.4	72.3	7,214.8	7,030.9	183.93	39.225		
13,400.0	6,865.9	6,700.0	6,698.2	184.9	1.9	85.88	70.4	72.3	7,228.4	7,044.1	184.33	39.215		
13,484.2	6,865.9	6,700.0	6,698.2	187.2	1.9	85.88	70.4	72.3	7,309.1	7,122.5	186.67	39.155		
13,500.0	6,865.9	6,700.0	6,698.2	187.6	1.9	85.88	70.4	72.3	7,324.3	7,137.2	187.11	39.143		
13,582.6	6,865.9	6,700.0	6,698.2	189.9	1.9	85.88	70.4	72.3	7,403.6	7,214.1	189.42	39.086		
13,600.0	6,865.9	6,700.0	6,698.2	190.4	1.9	85.88	70.4	72.3	7,420.2	7,230.3	189.90	39.074		
13,681.1	6,865.9	6,700.0	6,698.2	192.6	1.9	85.88	70.4	72.3	7,498.1	7,305.9	192.16	39.020		
13,700.0	6,865.9	6,700.0	6,698.2	193.2	1.9	85.88	70.4	72.3	7,516.3	7,323.6	192.69	39.008		
13,779.5	6,865.9	6,700.0	6,698.2	195.4	1.9	85.88	70.4	72.3	7,592.7	7,397.8	194.90	38.957		
13,800.0	6,865.9	6,700.0	6,698.2	195.9	1.9	85.88	70.4	72.3	7,612.4	7,416.9	195.47	38.944		
13,877.9	6,865.9	6,700.0	6,698.2	198.1	1.9	85.88	70.4	72.3	7,687.4	7,489.8	197.65	38.895		
13,900.0	6,865.9	6,700.0	6,698.2	198.7	1.9	85.88	70.4	72.3	7,708.7	7,510.4	198.26	38.881		
13,976.3	6,865.9	6,700.0	6,698.2	200.8	1.9	85.88	70.4	72.3	7,782.2	7,581.8	200.39	38.835		
14,000.0	6,865.9	6,700.0	6,698.2	201.5	1.9	85.88	70.4	72.3	7,805.0	7,604.0	201.05	38.821		
14,074.8	6,865.9	6,700.0	6,698.2	203.5	1.9	85.88	70.4	72.3	7,877.1	7,674.0	203.13	38.778		
14,100.0	6,865.9	6,700.0	6,698.2	204.2	1.9	85.88	70.4	72.3	7,901.4	7,697.6	203.84	38.763		
14,173.2	6,865.9	6,700.0	6,698.2	206.3	1.9	85.88	70.4	72.3	7,972.1	7,766.2	205.88	38.722		
14,200.0	6,865.9	6,700.0	6,698.2	207.0	1.9	85.88	70.4	72.3	7,998.0	7,791.3	206.63	38.707		
14,271.6	6,865.9	6,700.0	6,698.2	209.0	1.9	85.88	70.4	72.3	8,067.1	7,858.5	208.62	38.668		
14,300.0	6,865.9	6,700.0	6,698.2	209.8	1.9	85.88	70.4	72.3	8,094.6	7,885.1	209.42	38.653		
14,370.0	6,865.9	6,700.0	6,698.2	211.7	1.9	85.88	70.4	72.3	8,162.3	7,950.9	211.37	38.616		
14,400.0	6,865.9	6,700.0	6,698.2	212.6	1.9	85.88	70.4	72.3	8,191.3	7,979.0	212.21	38.601		
14,468.5	6,865.9	6,700.0	6,698.2	214.5	1.9	85.88	70.4	72.3	8,257.5	8,043.4	214.12	38.566		
14,500.0	6,865.9	6,700.0	6,698.2	215.3	1.9	85.88	70.4	72.3	8,288.0	8,073.0	215.00	38.550		
14,566.9	6,865.9	6,700.0	6,698.2	217.2	1.9	85.88	70.4	72.3	8,352.8	8,135.9	216.86	38.517		
14,600.0	6,865.9	6,700.0	6,698.2	218.1	1.9	85.88	70.4	72.3	8,384.9	8,167.1	217.79	38.500		

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 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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

SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (")	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
14,665.3	6,865.9	6,700.0	6,698.2	219.9	1.9	85.88	70.4	72.3	8,448.2	8,228.6	219.61	38.469		
14,700.0	6,865.9	6,700.0	6,698.2	220.9	1.9	85.88	70.4	72.3	8,481.8	8,261.2	220.58	38.453		
14,763.7	6,866.0	6,700.0	6,698.2	222.7	1.9	85.88	70.4	72.3	8,543.6	8,321.2	222.36	38.423		
14,800.0	6,866.0	6,700.0	6,698.2	223.7	1.9	85.88	70.4	72.3	8,578.8	8,355.4	223.37	38.406		
14,862.2	6,866.0	6,700.0	6,698.2	225.4	1.9	85.88	70.4	72.3	8,639.1	8,414.0	225.10	38.378		
14,900.0	6,866.0	6,700.0	6,698.2	226.5	1.9	85.88	70.4	72.3	8,675.8	8,449.7	226.16	38.361		
14,960.6	6,866.0	6,700.0	6,698.2	228.1	1.9	85.88	70.4	72.3	8,734.7	8,506.8	227.85	38.335		
15,000.0	6,866.0	6,700.0	6,698.2	229.2	1.9	85.89	70.4	72.3	8,772.9	8,544.0	228.95	38.318		
15,059.0	6,866.0	6,700.0	6,698.2	230.9	1.9	85.89	70.4	72.3	8,830.3	8,599.7	230.60	38.293		
15,100.0	6,866.0	6,700.0	6,698.2	232.0	1.9	85.89	70.4	72.3	8,870.1	8,638.4	231.74	38.276		
15,157.4	6,866.0	6,700.0	6,698.2	233.6	1.9	85.89	70.4	72.3	8,926.0	8,692.6	233.35	38.252		
15,200.0	6,866.0	6,700.0	6,698.2	234.8	1.9	85.89	70.4	72.3	8,967.4	8,732.8	234.54	38.234		
15,255.9	6,866.0	6,700.0	6,698.2	236.4	1.9	85.89	70.4	72.3	9,021.7	8,785.6	236.10	38.212		
15,300.0	6,866.0	6,700.0	6,698.2	237.6	1.9	85.89	70.4	72.3	9,064.7	8,827.3	237.33	38.195		
15,354.3	6,866.0	6,700.0	6,698.2	239.1	1.9	85.89	70.4	72.3	9,117.5	8,878.7	238.85	38.173		
15,400.0	6,866.0	6,700.0	6,698.2	240.4	1.9	85.89	70.4	72.3	9,162.0	8,921.9	240.12	38.156		
15,420.3	6,866.0	6,700.0	6,698.2	240.9	1.9	85.89	70.4	72.3	9,181.8	8,941.1	240.69	38.148		

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 18	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

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: VETTING 18

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.54°

Separation Factor Plot

