

EXTRACTION OIL & GAS

**WELD COUNTY, COLORADO (NAD 83)
SW NW SEC. 15 T5N R65W 6th P.M.
VETTING 16**

**ORIGINAL WELLBORE
PROPOSAL #2**

Anticollision Report

10 March, 2016



Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	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	15,409.8	PROPOSAL #2 (ORIGINAL WELLBORE)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offet Well - Wellbore - Design						
SW NW SEC. 15 T5N R65W 6th P.M.						
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	5,032.4	4,600.0	1,824.8	1,709.3	15.799	CC, ES
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	5,200.0	4,600.0	1,832.5	1,716.0	15.736	SF
CARLSON A-15-16HN - Wellbore #1 - Design #1	10,124.2	14,862.7	3,339.4	3,021.4	10.503	CC
CARLSON A-15-16HN - Wellbore #1 - Design #1	10,200.0	14,862.7	3,340.2	3,020.2	10.438	ES
CARLSON A-15-16HN - Wellbore #1 - Design #1	11,100.0	14,862.7	3,479.0	3,134.2	10.089	SF
CARLSON B-15-16HC - Wellbore #1 - Design #1	10,123.4	14,905.1	3,171.5	2,853.5	9.973	CC
CARLSON B-15-16HC - Wellbore #1 - Design #1	10,200.0	14,905.1	3,172.4	2,852.3	9.910	ES
CARLSON B-15-16HC - Wellbore #1 - Design #1	11,000.0	14,905.1	3,290.4	2,948.2	9.616	SF
CARLSON C-15-16HN - Wellbore #1 - Design #1	10,122.7	14,796.3	3,010.2	2,692.8	9.484	CC
CARLSON C-15-16HN - Wellbore #1 - Design #1	10,200.0	14,796.3	3,011.2	2,691.6	9.424	ES
CARLSON C-15-16HN - Wellbore #1 - Design #1	10,900.0	14,796.3	3,108.9	2,770.1	9.177	SF
CARLSON D-15-16HN - Wellbore #1 - Design #1	10,121.4	14,777.6	2,680.6	2,363.7	8.460	CC
CARLSON D-15-16HN - Wellbore #1 - Design #1	10,200.0	14,777.6	2,681.8	2,362.7	8.406	ES
CARLSON D-15-16HN - Wellbore #1 - Design #1	10,728.3	14,777.6	2,748.5	2,414.9	8.240	SF
CARLSON E-15-16HC - Wellbore #1 - Design #1	10,120.7	14,848.6	2,512.1	2,194.7	7.915	CC
CARLSON E-15-16HC - Wellbore #1 - Design #1	10,200.0	14,848.6	2,513.3	2,193.8	7.865	ES
CARLSON E-15-16HC - Wellbore #1 - Design #1	10,700.0	14,848.6	2,578.0	2,244.7	7.734	SF
CARLSON F-15-16HN - Wellbore #1 - Design #1	10,120.2	14,769.7	2,401.0	2,084.6	7.588	CC
CARLSON F-15-16HN - Wellbore #1 - Design #1	10,200.0	14,769.7	2,402.4	2,083.8	7.540	ES
CARLSON F-15-16HN - Wellbore #1 - Design #1	10,629.9	14,769.7	2,454.5	2,124.1	7.429	SF
CARLSON G-15-16HN - Wellbore #1 - Design #1	10,118.4	14,787.6	1,982.1	1,666.4	6.279	CC
CARLSON G-15-16HN - Wellbore #1 - Design #1	10,200.0	14,787.6	1,983.8	1,665.9	6.240	ES
CARLSON G-15-16HN - Wellbore #1 - Design #1	10,433.0	14,787.6	2,006.9	1,682.6	6.189	SF
CARLSON H-15-16HC - Wellbore #1 - Design #1	10,117.7	14,883.6	1,812.3	1,496.0	5.729	CC
CARLSON H-15-16HC - Wellbore #1 - Design #1	10,137.8	14,883.6	1,812.4	1,495.6	5.720	ES
CARLSON H-15-16HC - Wellbore #1 - Design #1	10,400.0	14,883.6	1,834.2	1,510.1	5.660	SF
CARLSON I-15-16HN - Wellbore #1 - Design #1	10,116.8	14,836.2	1,603.7	1,288.9	5.094	CC
CARLSON I-15-16HN - Wellbore #1 - Design #1	10,137.8	14,836.2	1,603.8	1,288.4	5.085	ES
CARLSON I-15-16HN - Wellbore #1 - Design #1	10,334.6	14,836.2	1,618.4	1,297.6	5.045	SF
CARLSON J-15-16HN - Wellbore #1 - Design #1	10,115.4	14,901.4	1,275.7	962.2	4.068	CC
CARLSON J-15-16HN - Wellbore #1 - Design #1	10,137.8	14,901.4	1,275.9	961.7	4.061	ES
CARLSON J-15-16HN - Wellbore #1 - Design #1	10,236.2	14,901.4	1,281.4	964.6	4.044	SF
CARLSON K-15-16HC - Wellbore #1 - Design #1	10,114.7	15,013.6	1,103.5	788.2	3.500	CC
CARLSON K-15-16HC - Wellbore #1 - Design #1	10,137.8	15,013.6	1,103.7	787.8	3.494	ES
CARLSON K-15-16HC - Wellbore #1 - Design #1	10,236.2	15,013.6	1,110.1	791.6	3.485	SF
CARLSON L-15-16HN - Wellbore #1 - Design #1	10,114.0	14,977.0	949.1	637.9	3.050	CC
CARLSON L-15-16HN - Wellbore #1 - Design #1	10,137.8	14,977.0	949.4	637.6	3.045	ES

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

Anticollision Report



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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.						
CARLSON L-15-16HN - Wellbore #1 - Design #1	10,200.0	14,977.0	953.0	639.5	3.040	SF
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	14,368.0	7,270.1	1,257.2	1,022.8	5.363	CC
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	14,400.0	7,269.9	1,257.6	1,022.3	5.344	ES
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	14,566.9	7,268.9	1,272.9	1,032.9	5.304	SF
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	11,770.1	7,423.9	1,162.5	994.0	6.898	CC
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	11,800.0	7,423.5	1,162.9	993.5	6.866	ES
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	12,000.0	7,420.7	1,185.0	1,010.1	6.775	SF
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	15,097.1	7,353.7	1,759.6	1,498.8	6.746	CC
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	15,157.4	7,353.7	1,760.7	1,498.2	6.707	ES
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	15,409.8	7,353.5	1,787.2	1,517.6	6.630	SF
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	13,694.4	7,094.7	1,776.6	1,570.8	8.634	CC
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	13,779.5	7,094.3	1,778.6	1,570.5	8.545	ES
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	14,100.0	7,092.8	1,822.3	1,605.2	8.394	SF
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	12,364.1	7,950.0	287.9	132.7	1.855	CC, ES, SF
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	15,409.8	7,808.2	330.7	45.7	1.160	Level 2, CC, ES, SF
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	12,534.1	7,799.2	839.9	652.0	4.470	CC, ES
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	12,600.0	7,802.5	842.4	652.7	4.440	SF
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	11,742.6	7,620.7	139.6	-28.6	0.830	Level 1, CC, ES, SF
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	14,468.7	8,087.0	1,439.4	1,196.1	5.915	CC
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	14,500.0	8,087.0	1,439.7	1,195.5	5.896	ES
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	14,700.0	8,094.7	1,457.9	1,208.1	5.836	SF
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	14,932.2	7,459.2	550.1	293.1	2.140	CC
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	14,960.6	7,457.5	550.9	293.0	2.137	ES, SF
EXIST DD EHRlich MOTORS #D8 - Wellbore #1 - Well	15,409.8	7,558.9	1,983.7	1,690.8	6.774	CC, ES, SF
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	15,409.8	7,579.7	1,139.2	857.2	4.040	CC, ES, SF
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	14,438.6	7,517.3	45.3	-193.8	0.190	Level 1, CC, ES, SF
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	12,355.0	7,137.5	1,877.8	1,702.7	10.729	CC
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	12,401.5	7,137.5	1,878.3	1,702.0	10.653	ES
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	12,900.0	7,137.4	1,955.3	1,765.0	10.279	SF
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	11,131.9	7,483.9	1,871.7	1,708.4	11.457	CC
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	11,200.0	7,483.2	1,873.0	1,707.7	11.334	ES
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	11,712.6	7,478.0	1,959.7	1,780.3	10.919	SF
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	12,983.6	7,168.6	1,196.2	1,008.8	6.383	CC
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	13,000.0	7,168.5	1,196.3	1,008.4	6.368	ES
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	13,200.0	7,167.7	1,215.6	1,022.1	6.284	SF
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	13,206.1	7,383.8	139.9	-52.4	0.728	Level 1, CC, ES, SF
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	13,039.1	7,898.0	1,377.0	1,177.0	6.887	CC
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	13,090.5	7,898.4	1,377.9	1,176.6	6.843	ES
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	13,300.0	7,900.0	1,401.5	1,194.3	6.763	SF
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	0.0	0.0	2,470.1			
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	295.3	273.9	2,470.5	2,469.7	3,037.366	ES
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	15,409.8	7,154.0	9,233.9	8,976.8	35.912	SF
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	0.0	0.0	2,492.8			
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	393.7	376.2	2,493.4	2,492.3	2,203.385	ES
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	14,700.0	7,303.3	9,958.6	9,714.9	40.874	SF
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	3,449.0	4,199.6	2,330.7	2,307.5	100.409	CC, ES
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	15,409.8	7,250.0	9,858.7	9,601.0	38.260	SF
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	10,610.9	7,939.3	272.1	115.1	1.733	CC, ES, SF
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	10,363.5	7,825.1	1,101.1	944.4	7.029	CC
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	10,400.0	7,818.8	1,101.7	944.0	6.987	ES
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	10,600.0	7,783.0	1,125.4	962.1	6.893	SF
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	11,196.2	7,625.0	629.3	467.2	3.882	CC
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	11,220.4	7,621.5	629.7	466.9	3.867	ES

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Anticollision Report



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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.						
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	11,300.0	7,609.9	637.6	472.4	3.859	SF
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	10,398.5	7,321.0	1,404.0	1,275.2	10.907	CC
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	10,433.0	7,321.0	1,404.4	1,274.7	10.830	ES
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	10,826.7	7,321.0	1,467.8	1,327.3	10.445	SF
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	13,776.0	7,750.2	810.3	593.2	3.732	CC
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	13,800.0	7,751.3	810.6	592.8	3.722	ES
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	13,877.9	7,754.8	816.7	596.7	3.713	SF
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	15,409.8	7,883.8	1,066.9	768.4	3.574	CC, ES, SF
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	15,409.8	7,423.6	2,010.1	1,728.5	7.138	CC, ES, SF
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	15,031.7	7,930.1	779.3	514.6	2.944	CC
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	15,059.0	7,930.1	779.8	514.3	2.938	ES
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	15,100.0	7,930.1	782.3	515.7	2.934	SF
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	15,409.8	8,216.9	1,552.1	1,290.1	5.925	CC, ES, SF
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	583.7	574.9	1,606.5	1,604.9	1,008.313	CC
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	600.0	590.3	1,606.6	1,604.9	983.876	ES
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	14,862.2	6,600.0	9,970.8	9,755.1	46.225	SF
EXIST VERT FAY #1 - Wellbore #1 - Design #1	9,139.8	7,059.1	1,502.2	1,295.6	7.273	CC
EXIST VERT FAY #1 - Wellbore #1 - Design #1	9,200.0	7,059.1	1,503.4	1,295.2	7.222	ES
EXIST VERT FAY #1 - Wellbore #1 - Design #1	9,448.8	7,059.1	1,533.6	1,318.8	7.138	SF
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	4,670.7	4,471.9	323.8	211.0	2.870	CC
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	4,724.4	4,523.2	324.2	210.1	2.840	ES
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	4,900.0	4,691.0	330.8	212.7	2.800	SF
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	522.1	504.6	62.6	61.1	43.049	CC, ES
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	800.0	782.1	75.2	73.0	34.642	SF
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	100.0	95.3	95.1	504.889	CC, ES
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	15,409.8	15,067.4	863.9	399.4	1.860	SF
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	200.0	200.0	70.0	69.4	109.675	CC, ES
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	15,409.8	15,278.9	659.4	182.6	1.383	Level 3, SF
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	47.5	46.4	43.652	CC, ES
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	15,409.8	15,098.2	532.5	87.6	1.197	Level 2, SF
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	400.0	400.0	22.3	20.7	14.493	CC
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	15,409.8	15,171.7	254.8	-64.8	0.797	Level 1, ES, SF
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	25.3	23.3	12.748	CC
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	15,409.8	15,284.6	254.8	-72.9	0.778	Level 1, ES, SF
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	47.9	45.9	24.110	CC
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	2,300.0	2,319.2	63.5	45.1	3.455	ES
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	15,409.8	15,420.3	532.1	81.3	1.180	Level 2, SF
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	73.2	71.2	36.879	CC, ES
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	15,409.8	15,682.9	659.4	180.0	1.375	Level 3, SF
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	95.8	93.8	48.220	CC, ES
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	15,409.8	15,616.6	846.1	376.7	1.802	SF
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	121.1	119.2	60.968	CC, ES
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	15,409.8	15,843.4	1,171.2	696.2	2.466	SF
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	143.7	141.7	72.331	CC, ES
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	15,409.8	16,129.6	1,318.8	838.6	2.746	SF
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	169.0	167.1	85.077	CC, ES
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	15,409.8	16,069.4	1,495.5	1,017.6	3.129	SF
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	191.1	189.1	96.179	CC, ES
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	15,409.8	16,281.8	1,824.7	1,345.5	3.808	SF
VT-ALLES 1-16-18 - ORIGINAL WELLBORE - PROPOS	100.0	99.0	139.4	139.3	742.255	CC, ES
VT-ALLES 1-16-18 - ORIGINAL WELLBORE - PROPOS	15,409.8	13,072.5	1,175.4	724.4	2.607	SF
VT-GLENMERE 3-16-18 - ORIGINAL WELLBORE - PRC	500.0	499.0	157.5	155.5	79.335	CC, ES
VT-GLENMERE 3-16-18 - ORIGINAL WELLBORE - PRC	15,409.8	13,524.9	3,149.6	2,683.0	6.751	SF

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

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	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
0.0	0.0	0.0	0.0	0.0	0.0	-179.63	-1,150.1	-7.5	1,150.8				
98.4	98.4	59.4	59.4	0.1	0.6	-179.63	-1,150.1	-7.5	1,150.2	1,149.5	0.69	1,676.608	
100.0	100.0	61.0	61.0	0.1	0.6	-179.63	-1,150.1	-7.5	1,150.2	1,149.5	0.70	1,634.909	
196.8	196.8	157.8	157.8	0.3	2.3	-179.63	-1,150.1	-7.5	1,150.2	1,147.5	2.66	432.054	
200.0	200.0	161.0	161.0	0.3	2.4	-179.63	-1,150.1	-7.5	1,150.2	1,147.4	2.74	419.346	
295.3	295.3	256.3	256.3	0.5	4.5	-179.63	-1,150.1	-7.5	1,150.2	1,145.1	5.04	228.245	
300.0	300.0	261.0	261.0	0.5	4.6	-179.63	-1,150.1	-7.5	1,150.2	1,145.0	5.15	223.415	
393.7	393.7	354.7	354.7	0.8	6.5	-179.63	-1,150.1	-7.5	1,150.2	1,142.9	7.29	157.822	
400.0	400.0	361.0	361.0	0.8	6.7	-179.63	-1,150.1	-7.5	1,150.2	1,142.7	7.43	154.788	
492.1	492.1	453.1	453.1	1.0	8.5	-179.63	-1,150.1	-7.5	1,150.2	1,140.6	9.51	120.913	
500.0	500.0	461.0	461.0	1.0	8.7	-179.63	-1,150.1	-7.5	1,150.2	1,140.5	9.69	118.698	
590.5	590.5	551.5	551.5	1.2	10.5	-16.38	-1,150.1	-7.5	1,148.8	1,137.1	11.70	98.193	
600.0	600.0	561.0	561.0	1.2	10.7	-16.39	-1,150.1	-7.5	1,148.5	1,136.6	11.91	96.448	
689.0	688.8	649.8	649.8	1.4	12.5	-16.47	-1,150.1	-7.5	1,144.2	1,130.3	13.85	82.615	
700.0	699.8	660.8	660.8	1.4	12.7	-16.49	-1,150.1	-7.5	1,143.5	1,129.4	14.09	81.165	
787.4	786.9	747.9	747.9	1.6	14.5	-16.64	-1,150.1	-7.5	1,136.3	1,120.4	15.98	71.110	
800.0	799.5	760.5	760.5	1.6	14.7	-16.66	-1,150.1	-7.5	1,135.1	1,118.9	16.25	69.852	
885.8	884.7	845.7	845.7	1.8	16.5	-16.87	-1,150.1	-7.5	1,125.3	1,107.2	18.09	62.220	
900.0	898.7	859.7	859.7	1.8	16.8	-16.91	-1,150.1	-7.5	1,123.4	1,105.0	18.39	61.105	
984.2	981.9	942.9	942.9	2.1	18.4	-17.18	-1,150.1	-7.5	1,111.0	1,090.9	20.16	55.114	
1,000.0	997.5	958.5	958.5	2.1	18.7	-17.23	-1,150.1	-7.5	1,108.5	1,088.0	20.49	54.108	
1,082.7	1,078.7	1,039.7	1,039.7	2.4	20.4	-17.56	-1,150.1	-7.5	1,093.6	1,071.4	22.19	49.274	
1,100.0	1,095.6	1,056.6	1,056.6	2.5	20.7	-17.64	-1,150.1	-7.5	1,090.2	1,067.7	22.55	48.353	
1,181.1	1,174.7	1,135.7	1,135.7	2.8	22.3	-18.04	-1,150.1	-7.5	1,073.1	1,048.9	24.19	44.363	
1,200.0	1,193.1	1,154.1	1,154.1	2.9	22.7	-18.14	-1,150.1	-7.5	1,068.8	1,044.2	24.56	43.509	
1,279.5	1,269.9	1,230.9	1,230.9	3.3	24.2	-18.61	-1,150.1	-7.5	1,049.4	1,023.3	26.14	40.152	
1,300.0	1,289.6	1,250.6	1,250.6	3.4	24.6	-18.74	-1,150.1	-7.5	1,044.1	1,017.6	26.53	39.351	
1,356.8	1,344.1	1,305.1	1,305.1	3.6	25.7	-19.14	-1,150.1	-7.5	1,028.7	1,001.1	27.63	37.230	
1,377.9	1,364.3	1,325.3	1,325.3	3.8	26.1	-19.25	-1,150.1	-7.5	1,022.8	994.7	28.09	36.414	
1,400.0	1,385.4	1,346.4	1,346.4	3.9	26.6	-19.37	-1,150.1	-7.5	1,016.7	988.1	28.57	35.590	
1,476.4	1,458.4	1,419.4	1,419.4	4.3	28.0	-19.80	-1,150.1	-7.5	995.4	965.1	30.23	32.928	
1,500.0	1,480.9	1,441.9	1,441.9	4.4	28.5	-19.94	-1,150.1	-7.5	988.8	958.0	30.74	32.164	
1,574.8	1,552.4	1,513.4	1,513.4	4.9	29.9	-20.38	-1,150.1	-7.5	968.0	935.6	32.37	29.900	
1,600.0	1,576.5	1,537.5	1,537.5	5.0	30.4	-20.53	-1,150.1	-7.5	961.0	928.1	32.93	29.182	
1,673.2	1,646.5	1,607.5	1,607.5	5.4	31.8	-20.99	-1,150.1	-7.5	940.7	906.2	34.54	27.233	
1,700.0	1,672.0	1,633.0	1,633.0	5.6	32.3	-21.16	-1,150.1	-7.5	933.3	898.2	35.13	26.564	
1,771.6	1,740.5	1,701.5	1,701.5	6.0	33.7	-21.64	-1,150.1	-7.5	913.5	876.8	36.72	24.878	
1,800.0	1,767.6	1,728.6	1,728.6	6.1	34.2	-21.83	-1,150.1	-7.5	905.7	868.4	37.35	24.249	
1,870.1	1,834.6	1,795.6	1,795.6	6.6	35.6	-22.32	-1,150.1	-7.5	886.5	847.6	38.91	22.782	
1,900.0	1,863.2	1,824.2	1,824.2	6.7	36.2	-22.54	-1,150.1	-7.5	878.3	838.7	39.58	22.190	
1,968.5	1,928.6	1,889.6	1,889.6	7.1	37.5	-23.05	-1,150.1	-7.5	859.5	818.4	41.12	20.905	
2,000.0	1,958.7	1,919.7	1,919.7	7.3	38.1	-23.30	-1,150.1	-7.5	851.0	809.1	41.82	20.346	
2,066.9	2,022.7	1,983.7	1,983.7	7.7	39.4	-23.83	-1,150.1	-7.5	832.8	789.4	43.33	19.217	
2,100.0	2,054.3	2,015.3	2,015.3	7.9	40.0	-24.10	-1,150.1	-7.5	823.8	779.7	44.08	18.687	
2,165.3	2,116.7	2,077.7	2,077.7	8.3	41.3	-24.66	-1,150.1	-7.5	806.1	760.5	45.57	17.690	
2,200.0	2,149.8	2,110.8	2,110.8	8.5	41.9	-24.96	-1,150.1	-7.5	796.8	750.4	46.36	17.187	
2,263.8	2,210.8	2,171.8	2,171.8	8.9	43.2	-25.54	-1,150.1	-7.5	779.6	731.8	47.82	16.304	
2,300.0	2,245.4	2,206.4	2,206.4	9.1	43.9	-25.88	-1,150.1	-7.5	769.9	721.3	48.65	15.825	
2,362.2	2,304.8	2,265.8	2,265.8	9.5	45.1	-26.48	-1,150.1	-7.5	753.4	703.3	50.09	15.040	
2,400.0	2,341.0	2,302.0	2,302.0	9.7	45.8	-26.86	-1,150.1	-7.5	743.3	692.3	50.97	14.585	
2,460.6	2,398.9	2,359.9	2,359.9	10.1	46.9	-27.49	-1,150.1	-7.5	727.3	674.9	52.38	13.885	
2,500.0	2,436.5	2,397.5	2,397.5	10.3	47.7	-27.91	-1,150.1	-7.5	716.9	663.6	53.30	13.450	

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 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	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						
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
2,559.0	2,493.0	2,454.0	2,454.0	10.6	48.8	-28.57	-1,150.1	-7.5	701.4	646.7	54.69	12.825	
2,600.0	2,532.1	2,493.1	2,493.1	10.9	49.6	-29.05	-1,150.1	-7.5	690.7	635.1	55.66	12.410	
2,657.5	2,587.0	2,548.0	2,548.0	11.2	50.7	-29.74	-1,150.1	-7.5	675.8	618.8	57.03	11.851	
2,700.0	2,627.7	2,588.7	2,588.7	11.5	51.5	-30.27	-1,150.1	-7.5	664.9	606.8	58.05	11.454	
2,755.9	2,681.1	2,642.1	2,642.1	11.8	52.6	-30.99	-1,150.1	-7.5	650.5	591.1	59.40	10.953	
2,800.0	2,723.2	2,684.2	2,684.2	12.1	53.5	-31.58	-1,150.1	-7.5	639.3	578.8	60.47	10.573	
2,854.3	2,775.1	2,736.1	2,736.1	12.4	54.5	-32.34	-1,150.1	-7.5	625.5	563.7	61.79	10.123	
2,900.0	2,818.8	2,779.8	2,779.8	12.7	55.4	-33.00	-1,150.1	-7.5	614.1	551.1	62.92	9.760	
2,952.7	2,869.2	2,830.2	2,830.2	13.0	56.4	-33.80	-1,150.1	-7.5	600.9	536.7	64.22	9.356	
3,000.0	2,914.3	2,875.3	2,875.3	13.3	57.3	-34.54	-1,150.1	-7.5	589.2	523.8	65.41	9.009	
3,051.2	2,963.2	2,924.2	2,924.2	13.6	58.3	-35.38	-1,150.1	-7.5	576.7	510.0	66.70	8.647	
3,100.0	3,009.9	2,970.9	2,970.9	13.9	59.2	-36.21	-1,150.1	-7.5	564.8	496.9	67.94	8.314	
3,149.6	3,057.3	3,018.3	3,018.3	14.2	60.2	-37.09	-1,150.1	-7.5	552.9	483.7	69.21	7.989	
3,200.0	3,105.5	3,066.5	3,066.5	14.5	61.2	-38.02	-1,150.1	-7.5	541.0	470.5	70.52	7.672	
3,248.0	3,151.3	3,112.3	3,112.3	14.8	62.1	-38.95	-1,150.1	-7.5	529.7	457.9	71.77	7.380	
3,300.0	3,201.0	3,162.0	3,162.0	15.1	63.1	-40.00	-1,150.1	-7.5	517.7	444.5	73.15	7.077	
3,346.4	3,245.4	3,206.4	3,206.4	15.4	64.0	-40.97	-1,150.1	-7.5	507.1	432.7	74.39	6.817	
3,400.0	3,296.6	3,257.6	3,257.6	15.7	65.0	-42.15	-1,150.1	-7.5	495.0	419.2	75.83	6.528	
3,444.9	3,339.5	3,300.5	3,300.5	16.0	65.9	-43.17	-1,150.1	-7.5	485.1	408.0	77.06	6.295	
3,500.0	3,392.1	3,353.1	3,353.1	16.3	66.9	-44.49	-1,150.1	-7.5	473.1	394.6	78.58	6.021	
3,543.3	3,433.5	3,394.5	3,394.5	16.6	67.8	-45.57	-1,150.1	-7.5	463.9	384.1	79.78	5.815	
3,600.0	3,487.7	3,448.7	3,448.7	16.9	68.8	-47.05	-1,150.1	-7.5	452.1	370.7	81.38	5.555	
3,641.7	3,527.6	3,488.6	3,488.6	17.2	69.6	-48.18	-1,150.1	-7.5	443.6	361.0	82.57	5.372	
3,700.0	3,583.3	3,544.3	3,544.3	17.5	70.8	-49.83	-1,150.1	-7.5	432.0	347.8	84.25	5.128	
3,740.1	3,621.6	3,582.6	3,582.6	17.8	71.5	-51.02	-1,150.1	-7.5	424.3	338.9	85.43	4.967	
3,800.0	3,678.8	3,639.8	3,639.8	18.1	72.7	-52.87	-1,150.1	-7.5	413.1	325.9	87.19	4.738	
3,838.6	3,715.7	3,676.7	3,676.7	18.4	73.4	-54.11	-1,150.1	-7.5	406.2	317.8	88.34	4.598	
3,900.0	3,774.4	3,735.4	3,735.4	18.7	74.6	-56.17	-1,150.1	-7.5	395.5	305.3	90.18	4.386	
3,937.0	3,809.7	3,770.7	3,770.7	19.0	75.3	-57.46	-1,150.1	-7.5	389.4	298.1	91.30	4.265	
4,000.0	3,869.9	3,830.9	3,830.9	19.3	76.5	-59.75	-1,150.1	-7.5	379.4	286.1	93.21	4.070	
4,035.4	3,903.8	3,864.8	3,864.8	19.5	77.2	-61.08	-1,150.1	-7.5	374.0	279.7	94.30	3.966	
4,100.0	3,965.5	3,926.5	3,926.5	19.9	78.5	-63.61	-1,150.1	-7.5	364.9	268.6	96.28	3.790	
4,133.8	3,997.8	3,958.8	3,958.8	20.1	79.1	-64.98	-1,150.1	-7.5	360.4	263.1	97.32	3.703	
4,200.0	4,061.1	4,022.1	4,022.1	20.5	80.4	-67.74	-1,150.1	-7.5	352.3	252.9	99.35	3.546	
4,232.3	4,091.9	4,052.9	4,052.9	20.7	81.0	-69.13	-1,150.1	-7.5	348.6	248.3	100.33	3.475	
4,300.0	4,156.6	4,117.6	4,117.6	21.1	82.3	-72.13	-1,150.1	-7.5	341.7	239.4	102.39	3.338	
4,330.7	4,186.0	4,147.0	4,147.0	21.3	82.9	-73.53	-1,150.1	-7.5	339.0	235.6	103.31	3.281	
4,400.0	4,252.2	4,213.2	4,213.2	21.8	84.2	-76.75	-1,150.1	-7.5	333.5	228.1	105.37	3.165	
4,429.1	4,280.0	4,241.0	4,241.0	21.9	84.8	-78.14	-1,150.1	-7.5	331.5	225.3	106.22	3.121	
4,500.0	4,347.7	4,308.7	4,308.7	22.4	86.1	-81.56	-1,150.1	-7.5	327.7	219.5	108.24	3.027	
4,527.5	4,374.1	4,335.1	4,335.1	22.5	86.7	-82.90	-1,150.1	-7.5	326.5	217.5	109.01	2.996	
4,600.0	4,443.3	4,404.3	4,404.3	23.0	88.1	-86.48	-1,150.1	-7.5	324.5	213.5	110.98	2.924	
4,626.0	4,468.1	4,429.1	4,429.1	23.1	88.6	-87.77	-1,150.1	-7.5	324.1	212.4	111.66	2.902	
4,670.7	4,510.9	4,471.9	4,471.9	23.4	89.4	-90.00	-1,150.1	-7.5	323.8	211.0	112.81	2.870 CC	
4,700.0	4,538.9	4,499.9	4,499.9	23.6	90.0	-91.46	-1,150.1	-7.5	323.9	210.4	113.55	2.853	
4,724.4	4,562.2	4,523.2	4,523.2	23.7	90.5	-92.67	-1,150.1	-7.5	324.2	210.1	114.15	2.840 ES	
4,800.0	4,634.4	4,595.4	4,595.4	24.2	91.9	-96.41	-1,150.1	-7.5	326.0	210.1	115.93	2.812	
4,822.8	4,656.2	4,617.2	4,617.2	24.3	92.3	-97.53	-1,150.1	-7.5	326.9	210.5	116.45	2.807	
4,900.0	4,730.0	4,691.0	4,691.0	24.8	93.8	-101.28	-1,150.1	-7.5	330.8	212.7	118.12	2.800 SF	
4,921.2	4,750.3	4,711.3	4,711.3	24.9	94.2	-102.29	-1,150.1	-7.5	332.1	213.6	118.57	2.801	
5,000.0	4,825.5	4,786.5	4,786.5	25.4	95.7	-105.98	-1,150.1	-7.5	338.0	217.9	120.14	2.814	
5,019.7	4,844.3	4,805.3	4,805.3	25.5	96.1	-106.88	-1,150.1	-7.5	339.7	219.2	120.52	2.819	

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 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	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
5,100.0	4,921.1	4,882.1	4,882.1	26.0	97.7	-110.47	-1,150.1	-7.5	347.6	225.6	122.01	2.849	
5,118.1	4,938.4	4,899.4	4,899.4	26.1	98.0	-111.26	-1,150.1	-7.5	349.6	227.3	122.33	2.858	
5,200.0	5,016.7	4,977.7	4,977.7	26.6	99.6	-114.71	-1,150.1	-7.5	359.4	235.7	123.75	2.904	
5,216.5	5,032.5	4,993.5	4,993.5	26.7	99.9	-115.39	-1,150.1	-7.5	361.6	237.5	124.03	2.915	
5,300.0	5,112.2	5,073.2	5,073.2	27.2	101.5	-118.69	-1,150.1	-7.5	373.1	247.7	125.40	2.976	
5,314.9	5,126.5	5,087.5	5,087.5	27.3	101.8	-119.26	-1,150.1	-7.5	375.4	249.7	125.64	2.988	
5,400.0	5,207.8	5,168.8	5,168.8	27.8	103.4	-122.38	-1,150.1	-7.5	388.6	261.6	126.98	3.061	
5,413.4	5,220.6	5,181.6	5,181.6	27.9	103.7	-122.85	-1,150.1	-7.5	390.8	263.6	127.19	3.073	
5,500.0	5,303.3	5,264.3	5,264.3	28.4	105.4	-125.80	-1,150.1	-7.5	405.7	277.1	128.53	3.156	
5,511.8	5,314.6	5,275.6	5,275.6	28.5	105.6	-126.18	-1,150.1	-7.5	407.8	279.1	128.71	3.168	
5,600.0	5,398.9	5,359.9	5,359.9	29.0	107.3	-128.94	-1,150.1	-7.5	424.1	294.0	130.06	3.261	
5,610.2	5,408.7	5,369.7	5,369.7	29.1	107.5	-129.25	-1,150.1	-7.5	426.0	295.8	130.21	3.272	
5,700.0	5,494.5	5,455.5	5,455.5	29.6	109.2	-131.83	-1,150.1	-7.5	443.7	312.1	131.59	3.372	
5,708.6	5,502.7	5,463.7	5,463.7	29.7	109.4	-132.07	-1,150.1	-7.5	445.4	313.7	131.72	3.381	
5,800.0	5,590.0	5,551.0	5,551.0	30.2	111.1	-134.48	-1,150.1	-7.5	464.3	331.2	133.13	3.487	
5,807.1	5,596.8	5,557.8	5,557.8	30.3	111.3	-134.66	-1,150.1	-7.5	465.8	332.6	133.24	3.496	
5,823.9	5,612.9	5,573.9	5,573.9	30.4	111.6	-135.08	-1,150.1	-7.5	469.4	335.9	133.51	3.516	
5,900.0	5,685.9	5,646.9	5,646.9	30.8	113.0	-137.05	-1,150.1	-7.5	485.1	350.1	135.05	3.592	
5,905.5	5,691.2	5,652.2	5,652.2	30.8	113.2	-137.19	-1,150.1	-7.5	486.2	351.1	135.16	3.598	
6,000.0	5,782.6	5,743.6	5,743.6	31.1	115.0	-139.24	-1,150.1	-7.5	504.2	367.1	137.13	3.677	
6,003.9	5,786.4	5,747.4	5,747.4	31.1	115.1	-139.31	-1,150.1	-7.5	504.9	367.7	137.22	3.680	
6,100.0	5,880.2	5,841.2	5,841.2	31.5	117.0	-141.01	-1,150.1	-7.5	521.1	381.8	139.32	3.740	
6,102.3	5,882.5	5,843.5	5,843.5	31.5	117.0	-141.04	-1,150.1	-7.5	521.5	382.1	139.37	3.742	
6,200.0	5,978.5	5,939.5	5,939.5	31.8	118.9	-142.42	-1,150.1	-7.5	535.7	394.1	141.56	3.784	
6,200.8	5,979.3	5,940.3	5,940.3	31.8	119.0	-142.43	-1,150.1	-7.5	535.8	394.2	141.58	3.784	
6,299.2	6,076.6	6,037.6	6,037.6	32.0	120.9	-143.51	-1,150.1	-7.5	547.6	403.8	143.80	3.808	
6,300.0	6,077.4	6,038.4	6,038.4	32.0	120.9	-143.51	-1,150.1	-7.5	547.7	403.9	143.82	3.808	
6,397.6	6,174.3	6,135.3	6,135.3	32.2	122.9	-144.31	-1,150.1	-7.5	556.8	410.8	146.00	3.814	
6,400.0	6,176.7	6,137.7	6,137.7	32.2	122.9	-144.33	-1,150.1	-7.5	557.0	411.0	146.06	3.814	
6,496.0	6,272.4	6,233.4	6,233.4	32.4	124.8	-144.86	-1,150.1	-7.5	563.4	415.2	148.17	3.802	
6,500.0	6,276.4	6,237.4	6,237.4	32.4	124.9	-144.88	-1,150.1	-7.5	563.6	415.3	148.25	3.802	
6,594.5	6,370.7	6,331.7	6,331.7	32.5	126.8	-145.17	-1,150.1	-7.5	567.2	416.9	150.28	3.774	
6,600.0	6,376.3	6,337.3	6,337.3	32.5	126.9	-145.19	-1,150.1	-7.5	567.3	416.9	150.39	3.772	
6,680.8	6,457.0	6,418.0	6,418.0	32.6	128.6	51.46	-1,150.1	-7.5	568.3	411.1	157.12	3.617	
6,692.9	6,469.1	6,430.1	6,430.1	32.6	128.8	51.46	-1,150.1	-7.5	568.3	410.9	157.38	3.611	
6,700.0	6,476.2	6,437.2	6,437.2	32.6	128.9	51.46	-1,150.1	-7.5	568.3	410.7	157.53	3.607	
6,710.8	6,487.0	6,448.0	6,448.0	32.6	129.2	51.46	-1,150.1	-7.5	568.3	410.5	157.75	3.602	
6,750.0	6,526.2	6,487.2	6,487.2	32.7	129.9	141.53	-1,150.1	-7.5	569.3	415.9	153.45	3.710	
6,791.3	6,567.3	6,528.3	6,528.3	32.7	130.8	141.58	-1,150.1	-7.5	572.7	419.0	153.70	3.726	
6,800.0	6,575.9	6,536.9	6,536.9	32.8	130.9	141.60	-1,150.1	-7.5	573.7	420.0	153.68	3.733	
6,850.0	6,624.9	6,585.9	6,585.9	32.8	131.9	141.71	-1,150.1	-7.5	581.5	428.4	153.13	3.798	
6,889.7	6,663.1	6,624.1	6,624.1	32.9	132.7	141.81	-1,150.1	-7.5	590.2	438.1	152.12	3.880	
6,900.0	6,672.8	6,633.8	6,633.8	33.0	132.9	141.83	-1,150.1	-7.5	592.8	441.0	151.79	3.906	
6,950.0	6,719.4	6,680.4	6,680.4	33.1	133.8	141.93	-1,150.1	-7.5	607.6	457.9	149.67	4.059	
6,988.2	6,753.7	6,714.7	6,714.7	33.2	134.5	141.95	-1,150.1	-7.5	621.2	473.6	147.57	4.209	
7,000.0	6,764.1	6,725.1	6,725.1	33.3	134.7	141.95	-1,150.1	-7.5	625.8	478.9	146.84	4.262	
7,050.0	6,806.8	6,767.8	6,767.8	33.4	135.6	141.83	-1,150.1	-7.5	647.4	504.0	143.40	4.515	
7,086.6	6,836.5	6,797.5	6,797.5	33.6	136.2	141.63	-1,150.1	-7.5	665.5	524.9	140.61	4.733	
7,100.0	6,847.0	6,808.0	6,808.0	33.6	136.4	141.52	-1,150.1	-7.5	672.5	533.0	139.55	4.819	
7,150.0	6,884.5	6,845.5	6,845.5	33.9	137.2	140.94	-1,150.1	-7.5	700.8	565.3	135.55	5.170	
7,185.0	6,908.9	6,869.9	6,869.9	34.1	137.6	140.32	-1,150.1	-7.5	722.6	589.7	132.88	5.438	
7,200.0	6,918.9	6,879.9	6,879.9	34.1	137.8	139.99	-1,150.1	-7.5	732.3	600.5	131.82	5.556	

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 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	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						
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
7,250.0	6,950.1	6,911.1	6,911.1	34.4	138.5	138.56	-1,150.1	-7.5	766.8	637.9	128.90	5.949	
7,283.4	6,969.0	6,930.0	6,930.0	34.6	138.9	137.26	-1,150.1	-7.5	791.4	663.6	127.76	6.194	
7,300.0	6,977.7	6,938.7	6,938.7	34.8	139.0	136.50	-1,150.1	-7.5	804.0	676.4	127.51	6.305	
7,350.0	7,001.7	6,962.7	6,962.7	35.1	139.5	133.59	-1,150.1	-7.5	843.6	715.1	128.46	6.567	
7,381.9	7,014.9	6,975.9	6,975.9	35.4	139.8	131.16	-1,150.1	-7.5	870.0	739.4	130.66	6.659	
7,400.0	7,021.7	6,982.7	6,982.7	35.5	139.9	129.54	-1,150.1	-7.5	885.4	752.9	132.52	6.681	
7,450.0	7,037.6	6,998.6	6,998.6	35.9	140.2	123.93	-1,150.1	-7.5	929.0	788.9	140.09	6.632	
7,480.3	7,045.2	7,006.2	7,006.2	36.2	140.4	119.56	-1,150.1	-7.5	956.2	810.0	146.22	6.540	
7,500.0	7,049.3	7,010.3	7,010.3	36.4	140.5	116.25	-1,150.1	-7.5	974.1	823.5	150.61	6.468	
7,550.0	7,056.8	7,017.8	7,017.8	36.9	140.6	106.00	-1,150.1	-7.5	1,020.3	858.7	161.68	6.311	
7,578.7	7,059.1	7,020.1	7,020.1	37.3	140.7	98.87	-1,150.1	-7.5	1,047.2	880.8	166.44	6.292	
7,600.0	7,059.9	7,020.9	7,020.9	37.5	140.7	93.08	-1,150.1	-7.5	1,067.3	898.9	168.34	6.340	
7,610.8	7,060.0	7,021.0	7,021.0	37.6	140.7	90.01	-1,150.1	-7.5	1,077.5	908.9	168.60	6.390	
7,677.1	7,060.0	7,021.0	7,021.0	38.4	140.7	90.01	-1,150.1	-7.5	1,140.3	970.4	169.93	6.710	
7,700.0	7,060.0	7,021.0	7,021.0	38.7	140.7	90.01	-1,150.1	-7.5	1,162.1	991.7	170.39	6.820	
7,775.6	7,060.0	7,021.0	7,021.0	39.8	140.7	90.01	-1,150.1	-7.5	1,234.3	1,062.3	172.00	7.176	
7,800.0	7,060.0	7,021.0	7,021.0	40.1	140.7	90.01	-1,150.1	-7.5	1,257.7	1,085.2	172.52	7.290	
7,874.0	7,060.0	7,021.0	7,021.0	41.2	140.7	90.01	-1,150.1	-7.5	1,328.9	1,154.7	174.16	7.630	
7,900.0	7,060.0	7,021.0	7,021.0	41.7	140.7	90.01	-1,150.1	-7.5	1,354.0	1,179.2	174.74	7.748	
7,972.4	7,060.0	7,021.0	7,021.0	42.9	140.7	90.01	-1,150.1	-7.5	1,424.0	1,247.6	176.41	8.072	
8,000.0	7,060.0	7,021.0	7,021.0	43.3	140.7	90.01	-1,150.1	-7.5	1,450.7	1,273.7	177.04	8.194	
8,070.8	7,060.0	7,021.0	7,021.0	44.6	140.7	90.01	-1,150.1	-7.5	1,519.5	1,340.8	178.72	8.502	
8,100.0	7,060.0	7,021.0	7,021.0	45.1	140.7	90.01	-1,150.1	-7.5	1,547.9	1,368.5	179.41	8.628	
8,169.3	7,060.0	7,021.0	7,021.0	46.5	140.7	90.01	-1,150.1	-7.5	1,615.4	1,434.3	181.09	8.920	
8,200.0	7,060.0	7,021.0	7,021.0	47.1	140.7	90.01	-1,150.1	-7.5	1,645.4	1,463.6	181.84	9.049	
8,267.7	7,060.0	7,021.0	7,021.0	48.4	140.7	90.01	-1,150.1	-7.5	1,711.6	1,528.1	183.51	9.327	
8,300.0	7,060.0	7,021.0	7,021.0	49.1	140.7	90.01	-1,150.1	-7.5	1,743.2	1,558.9	184.31	9.458	
8,366.1	7,060.0	7,021.0	7,021.0	50.5	140.7	90.01	-1,150.1	-7.5	1,808.0	1,622.0	185.97	9.722	
8,400.0	7,060.0	7,021.0	7,021.0	51.2	140.7	90.01	-1,150.1	-7.5	1,841.2	1,654.4	186.82	9.855	
8,464.5	7,060.0	7,021.0	7,021.0	52.6	140.7	90.01	-1,150.1	-7.5	1,904.6	1,716.2	188.47	10.106	
8,500.0	7,060.0	7,021.0	7,021.0	53.4	140.7	90.01	-1,150.1	-7.5	1,939.5	1,750.1	189.37	10.242	
8,563.0	7,060.0	7,021.0	7,021.0	54.8	140.7	90.01	-1,150.1	-7.5	2,001.4	1,810.4	190.99	10.479	
8,600.0	7,060.0	7,021.0	7,021.0	55.7	140.7	90.01	-1,150.1	-7.5	2,037.9	1,845.9	191.94	10.617	
8,661.4	7,060.0	7,021.0	7,021.0	57.1	140.7	90.01	-1,150.1	-7.5	2,098.4	1,904.8	193.53	10.842	
8,700.0	7,060.0	7,021.0	7,021.0	58.0	140.7	90.01	-1,150.1	-7.5	2,136.4	1,941.9	194.53	10.982	
8,759.8	7,060.0	7,021.0	7,021.0	59.4	140.7	90.01	-1,150.1	-7.5	2,195.5	1,999.4	196.10	11.196	
8,800.0	7,060.0	7,021.0	7,021.0	60.3	140.7	90.01	-1,150.1	-7.5	2,235.1	2,038.0	197.15	11.337	
8,858.2	7,060.0	7,021.0	7,021.0	61.7	140.7	90.01	-1,150.1	-7.5	2,292.6	2,094.0	198.68	11.539	
8,900.0	7,060.0	7,021.0	7,021.0	62.7	140.7	90.01	-1,150.1	-7.5	2,333.9	2,134.1	199.78	11.682	
8,956.7	7,060.0	7,021.0	7,021.0	64.1	140.7	90.01	-1,150.1	-7.5	2,389.9	2,188.7	201.29	11.873	
9,000.0	7,060.1	7,021.1	7,021.1	65.2	140.7	90.01	-1,150.1	-7.5	2,432.8	2,230.4	202.43	12.018	
9,055.1	7,060.1	7,021.1	7,021.1	66.6	140.7	90.01	-1,150.1	-7.5	2,487.3	2,283.4	203.90	12.199	
9,100.0	7,060.1	7,021.1	7,021.1	67.7	140.7	90.01	-1,150.1	-7.5	2,531.8	2,326.7	205.10	12.344	
9,153.5	7,060.1	7,021.1	7,021.1	69.0	140.7	90.01	-1,150.1	-7.5	2,584.8	2,378.3	206.53	12.515	
9,200.0	7,060.1	7,021.1	7,021.1	70.2	140.7	90.01	-1,150.1	-7.5	2,630.8	2,423.1	207.77	12.662	
9,251.9	7,060.1	7,021.1	7,021.1	71.5	140.7	90.01	-1,150.1	-7.5	2,682.3	2,473.2	209.17	12.824	
9,300.0	7,060.1	7,021.1	7,021.1	72.7	140.7	90.01	-1,150.1	-7.5	2,730.0	2,519.5	210.46	12.972	
9,350.4	7,060.1	7,021.1	7,021.1	74.0	140.7	90.01	-1,150.1	-7.5	2,779.9	2,568.1	211.81	13.124	
9,400.0	7,060.1	7,021.1	7,021.1	75.3	140.7	90.01	-1,150.1	-7.5	2,829.1	2,616.0	213.15	13.273	
9,448.8	7,060.1	7,021.1	7,021.1	76.5	140.7	90.01	-1,150.1	-7.5	2,877.6	2,663.1	214.47	13.417	
9,500.0	7,060.1	7,021.1	7,021.1	77.9	140.7	90.01	-1,150.1	-7.5	2,928.4	2,712.5	215.86	13.566	
9,547.2	7,060.1	7,021.1	7,021.1	79.1	140.7	90.01	-1,150.1	-7.5	2,975.3	2,758.1	217.14	13.702	

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 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	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		
9,600.0	7,060.1	7,021.1	7,021.1	80.5	140.7	90.01	-1,150.1	-7.5	3,027.7	2,809.1	218.57	13.852		
9,645.6	7,060.1	7,021.1	7,021.1	81.6	140.7	90.01	-1,150.1	-7.5	3,073.0	2,853.2	219.81	13.981		
9,700.0	7,060.1	7,021.1	7,021.1	83.1	140.7	90.01	-1,150.1	-7.5	3,127.0	2,905.7	221.28	14.131		
9,744.1	7,060.1	7,021.1	7,021.1	84.2	140.7	90.01	-1,150.1	-7.5	3,170.8	2,948.3	222.48	14.252		
9,800.0	7,060.1	7,021.1	7,021.1	85.7	140.7	90.01	-1,150.1	-7.5	3,226.4	3,002.4	224.01	14.403		
9,842.5	7,060.1	7,021.1	7,021.1	86.8	140.7	90.01	-1,150.1	-7.5	3,268.6	3,043.5	225.17	14.516		
9,900.0	7,060.1	7,021.1	7,021.1	88.3	140.7	90.01	-1,150.1	-7.5	3,325.8	3,099.1	226.74	14.668		
9,940.9	7,060.1	7,021.1	7,021.1	89.4	140.7	90.01	-1,150.1	-7.5	3,366.5	3,138.6	227.86	14.775		
10,000.0	7,060.1	7,021.1	7,021.1	91.0	140.7	90.01	-1,150.1	-7.5	3,425.3	3,195.8	229.47	14.927		
10,039.3	7,060.1	7,021.1	7,021.1	92.0	140.7	90.01	-1,150.1	-7.5	3,464.4	3,233.9	230.55	15.027		
10,100.0	7,060.1	7,021.1	7,021.1	93.6	140.7	90.01	-1,150.1	-7.5	3,524.7	3,292.5	232.21	15.179		
10,137.8	7,060.1	7,021.1	7,021.1	94.6	140.7	90.01	-1,150.1	-7.5	3,562.3	3,329.1	233.25	15.273		
10,200.0	7,060.1	7,021.1	7,021.1	96.3	140.7	90.01	-1,150.1	-7.5	3,624.2	3,389.3	234.95	15.425		
10,236.2	7,060.1	7,021.1	7,021.1	97.3	140.7	90.01	-1,150.1	-7.5	3,660.3	3,424.3	235.95	15.513		
10,300.0	7,060.1	7,021.1	7,021.1	99.0	140.7	90.01	-1,150.1	-7.5	3,723.8	3,486.1	237.70	15.666		
10,334.6	7,060.1	7,021.1	7,021.1	99.9	140.7	90.01	-1,150.1	-7.5	3,758.3	3,519.6	238.65	15.748		
10,400.0	7,060.1	7,021.1	7,021.1	101.7	140.7	90.01	-1,150.1	-7.5	3,823.3	3,582.9	240.45	15.901		
10,433.0	7,060.1	7,021.1	7,021.1	102.6	140.7	90.01	-1,150.1	-7.5	3,856.3	3,614.9	241.36	15.977		
10,500.0	7,060.1	7,021.1	7,021.1	104.4	140.7	90.01	-1,150.1	-7.5	3,922.9	3,679.7	243.21	16.130		
10,531.5	7,060.1	7,021.1	7,021.1	105.2	140.7	90.01	-1,150.1	-7.5	3,954.3	3,710.2	244.07	16.201		
10,600.0	7,060.1	7,021.1	7,021.1	107.1	140.7	90.01	-1,150.1	-7.5	4,022.5	3,776.6	245.96	16.354		
10,629.9	7,060.1	7,021.1	7,021.1	107.9	140.7	90.01	-1,150.1	-7.5	4,052.3	3,805.5	246.79	16.420		
10,700.0	7,060.1	7,021.1	7,021.1	109.8	140.7	90.01	-1,150.1	-7.5	4,122.2	3,873.4	248.72	16.573		
10,728.3	7,060.1	7,021.1	7,021.1	110.5	140.7	90.01	-1,150.1	-7.5	4,150.4	3,900.9	249.50	16.634		
10,800.0	7,060.1	7,021.1	7,021.1	112.5	140.7	90.01	-1,150.1	-7.5	4,221.8	3,970.3	251.48	16.788		
10,826.7	7,060.1	7,021.1	7,021.1	113.2	140.7	90.01	-1,150.1	-7.5	4,248.4	3,996.2	252.22	16.844		
10,900.0	7,060.1	7,021.1	7,021.1	115.2	140.7	90.00	-1,150.1	-7.5	4,321.4	4,067.2	254.25	16.997		
10,925.2	7,060.1	7,021.1	7,021.1	115.9	140.7	90.00	-1,150.1	-7.5	4,346.5	4,091.6	254.94	17.049		
11,000.0	7,060.1	7,021.1	7,021.1	117.9	140.7	90.00	-1,150.1	-7.5	4,421.1	4,164.1	257.01	17.202		
11,023.6	7,060.1	7,021.1	7,021.1	118.6	140.7	90.00	-1,150.1	-7.5	4,444.6	4,187.0	257.67	17.249		
11,100.0	7,060.1	7,021.1	7,021.1	120.7	140.7	90.00	-1,150.1	-7.5	4,520.8	4,261.0	259.78	17.402		
11,122.0	7,060.1	7,021.1	7,021.1	121.3	140.7	90.00	-1,150.1	-7.5	4,542.8	4,282.4	260.39	17.446		
11,200.0	7,060.1	7,021.1	7,021.1	123.4	140.7	90.00	-1,150.1	-7.5	4,620.5	4,358.0	262.55	17.598		
11,220.4	7,060.1	7,021.1	7,021.1	123.9	140.7	90.00	-1,150.1	-7.5	4,640.9	4,377.8	263.12	17.638		
11,300.0	7,060.1	7,021.1	7,021.1	126.1	140.7	90.00	-1,150.1	-7.5	4,720.2	4,454.9	265.33	17.790		
11,318.9	7,060.1	7,021.1	7,021.1	126.6	140.7	90.00	-1,150.1	-7.5	4,739.0	4,473.2	265.85	17.826		
11,400.0	7,060.1	7,021.1	7,021.1	128.9	140.7	90.00	-1,150.1	-7.5	4,819.9	4,551.8	268.10	17.978		
11,417.3	7,060.1	7,021.1	7,021.1	129.3	140.7	90.00	-1,150.1	-7.5	4,837.2	4,568.6	268.58	18.010		
11,500.0	7,060.1	7,021.1	7,021.1	131.6	140.7	90.00	-1,150.1	-7.5	4,919.7	4,648.8	270.88	18.162		
11,515.7	7,060.1	7,021.1	7,021.1	132.0	140.7	90.00	-1,150.1	-7.5	4,935.4	4,664.1	271.31	18.191		
11,600.0	7,060.1	7,021.1	7,021.1	134.3	140.7	90.00	-1,150.1	-7.5	5,019.4	4,745.8	273.65	18.342		
11,614.1	7,060.1	7,021.1	7,021.1	134.7	140.7	90.00	-1,150.1	-7.5	5,033.5	4,759.5	274.05	18.368		
11,700.0	7,060.1	7,021.1	7,021.1	137.1	140.7	90.00	-1,150.1	-7.5	5,119.2	4,842.8	276.43	18.519		
11,712.6	7,060.1	7,021.1	7,021.1	137.4	140.7	90.00	-1,150.1	-7.5	5,131.7	4,854.9	276.78	18.541		
11,800.0	7,060.1	7,021.1	7,021.1	139.8	140.7	90.00	-1,150.1	-7.5	5,218.9	4,939.7	279.21	18.692		
11,811.0	7,060.1	7,021.1	7,021.1	140.1	140.7	90.00	-1,150.1	-7.5	5,229.9	4,950.4	279.52	18.711		
11,900.0	7,060.1	7,021.1	7,021.1	142.6	140.7	90.00	-1,150.1	-7.5	5,318.7	5,036.7	281.99	18.861		
11,909.4	7,060.1	7,021.1	7,021.1	142.8	140.7	90.00	-1,150.1	-7.5	5,328.1	5,045.9	282.25	18.877		
12,000.0	7,060.1	7,021.1	7,021.1	145.3	140.7	90.00	-1,150.1	-7.5	5,418.5	5,133.7	284.77	19.027		
12,007.8	7,060.1	7,021.1	7,021.1	145.6	140.7	90.00	-1,150.1	-7.5	5,426.3	5,141.3	284.99	19.040		
12,100.0	7,060.1	7,021.1	7,021.1	148.1	140.7	89.99	-1,150.1	-7.5	5,518.3	5,230.7	287.56	19.190		
12,106.3	7,060.1	7,021.1	7,021.1	148.3	140.7	89.99	-1,150.1	-7.5	5,524.6	5,236.8	287.73	19.200		

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 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	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						
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
12,200.0	7,060.1	7,021.1	7,021.1	150.9	140.7	89.99	-1,150.1	-7.5	5,618.1	5,327.8	290.34	19.350	
12,204.7	7,060.1	7,021.1	7,021.1	151.0	140.7	89.99	-1,150.1	-7.5	5,622.8	5,332.3	290.47	19.358	
12,300.0	7,060.1	7,021.1	7,021.1	153.6	140.7	89.99	-1,150.1	-7.5	5,717.9	5,424.8	293.12	19.507	
12,303.1	7,060.1	7,021.1	7,021.1	153.7	140.7	89.99	-1,150.1	-7.5	5,721.0	5,427.8	293.21	19.512	
12,400.0	7,060.1	7,021.1	7,021.1	156.4	140.7	89.99	-1,150.1	-7.5	5,817.7	5,521.8	295.91	19.660	
12,401.5	7,060.1	7,021.1	7,021.1	156.4	140.7	89.99	-1,150.1	-7.5	5,819.3	5,523.3	295.95	19.663	
12,500.0	7,060.1	7,021.1	7,021.1	159.1	140.7	89.99	-1,150.1	-7.5	5,917.5	5,618.8	298.70	19.811	
12,598.4	7,060.1	7,021.1	7,021.1	161.9	140.7	89.99	-1,150.1	-7.5	6,015.8	5,714.3	301.44	19.957	
12,600.0	7,060.1	7,021.1	7,021.1	161.9	140.7	89.99	-1,150.1	-7.5	6,017.4	5,715.9	301.48	19.959	
12,696.8	7,060.1	7,021.1	7,021.1	164.6	140.7	89.99	-1,150.1	-7.5	6,114.0	5,809.8	304.18	20.100	
12,700.0	7,060.1	7,021.1	7,021.1	164.7	140.7	89.99	-1,150.1	-7.5	6,117.2	5,812.9	304.27	20.104	
12,795.2	7,060.1	7,021.1	7,021.1	167.3	140.7	89.99	-1,150.1	-7.5	6,212.3	5,905.3	306.93	20.240	
12,800.0	7,060.1	7,021.1	7,021.1	167.4	140.7	89.99	-1,150.1	-7.5	6,217.0	5,910.0	307.06	20.247	
12,893.7	7,060.1	7,021.1	7,021.1	170.0	140.7	89.98	-1,150.1	-7.5	6,310.5	6,000.9	309.67	20.378	
12,900.0	7,060.1	7,021.1	7,021.1	170.2	140.7	89.98	-1,150.1	-7.5	6,316.9	6,007.0	309.85	20.387	
12,992.1	7,060.1	7,021.1	7,021.1	172.8	140.7	89.98	-1,150.1	-7.5	6,408.8	6,096.4	312.42	20.513	
13,000.0	7,060.1	7,021.1	7,021.1	173.0	140.7	89.98	-1,150.1	-7.5	6,416.7	6,104.1	312.64	20.524	
13,090.5	7,060.1	7,021.1	7,021.1	175.5	140.7	89.98	-1,150.1	-7.5	6,507.1	6,191.9	315.17	20.646	
13,100.0	7,060.1	7,021.1	7,021.1	175.8	140.7	89.98	-1,150.1	-7.5	6,516.6	6,201.1	315.43	20.659	
13,188.9	7,060.1	7,021.1	7,021.1	178.2	140.7	89.98	-1,150.1	-7.5	6,605.4	6,287.5	317.92	20.777	
13,200.0	7,060.1	7,021.1	7,021.1	178.5	140.7	89.98	-1,150.1	-7.5	6,616.4	6,298.2	318.22	20.792	
13,287.4	7,060.1	7,021.1	7,021.1	181.0	140.7	89.98	-1,150.1	-7.5	6,703.7	6,383.0	320.66	20.906	
13,300.0	7,060.1	7,021.1	7,021.1	181.3	140.7	89.98	-1,150.1	-7.5	6,716.3	6,395.3	321.02	20.922	
13,385.8	7,060.1	7,021.1	7,021.1	183.7	140.7	89.98	-1,150.1	-7.5	6,802.0	6,478.5	323.41	21.032	
13,400.0	7,060.1	7,021.1	7,021.1	184.1	140.7	89.98	-1,150.1	-7.5	6,816.1	6,492.3	323.81	21.050	
13,484.2	7,060.1	7,021.1	7,021.1	186.4	140.7	89.98	-1,150.1	-7.5	6,900.2	6,574.1	326.16	21.156	
13,500.0	7,060.1	7,021.1	7,021.1	186.9	140.7	89.97	-1,150.1	-7.5	6,916.0	6,589.4	326.60	21.176	
13,582.6	7,060.1	7,021.1	7,021.1	189.2	140.7	89.97	-1,150.1	-7.5	6,998.5	6,669.6	328.91	21.278	
13,600.0	7,060.1	7,021.1	7,021.1	189.6	140.7	89.97	-1,150.1	-7.5	7,015.9	6,686.5	329.40	21.299	
13,681.1	7,060.1	7,021.1	7,021.1	191.9	140.7	89.97	-1,150.1	-7.5	7,096.8	6,765.2	331.66	21.398	
13,700.0	7,060.1	7,021.1	7,021.1	192.4	140.7	89.97	-1,150.1	-7.5	7,115.7	6,783.6	332.19	21.421	
13,779.5	7,060.1	7,021.1	7,021.1	194.6	140.7	89.97	-1,150.1	-7.5	7,195.1	6,860.7	334.41	21.516	
13,800.0	7,060.1	7,021.1	7,021.1	195.2	140.7	89.97	-1,150.1	-7.5	7,215.6	6,880.6	334.98	21.540	
13,877.9	7,060.1	7,021.1	7,021.1	197.4	140.7	89.97	-1,150.1	-7.5	7,293.5	6,956.3	337.16	21.632	
13,900.0	7,060.1	7,021.1	7,021.1	198.0	140.7	89.97	-1,150.1	-7.5	7,315.5	6,977.7	337.78	21.658	
13,976.3	7,060.1	7,021.1	7,021.1	200.1	140.7	89.97	-1,150.1	-7.5	7,391.8	7,051.9	339.91	21.746	
14,000.0	7,060.1	7,021.1	7,021.1	200.8	140.7	89.97	-1,150.1	-7.5	7,415.4	7,074.8	340.57	21.773	
14,074.8	7,060.0	7,021.0	7,021.0	202.8	140.7	89.97	-1,150.1	-7.5	7,490.1	7,147.4	342.66	21.858	
14,100.0	7,060.0	7,021.0	7,021.0	203.6	140.7	89.96	-1,150.1	-7.5	7,515.3	7,171.9	343.37	21.887	
14,173.2	7,060.0	7,021.0	7,021.0	205.6	140.7	89.96	-1,150.1	-7.5	7,588.4	7,243.0	345.42	21.969	
14,200.0	7,060.0	7,021.0	7,021.0	206.3	140.7	89.96	-1,150.1	-7.5	7,615.2	7,269.0	346.17	21.999	
14,271.6	7,060.0	7,021.0	7,021.0	208.3	140.7	89.96	-1,150.1	-7.5	7,686.7	7,338.5	348.17	22.078	
14,300.0	7,060.0	7,021.0	7,021.0	209.1	140.7	89.96	-1,150.1	-7.5	7,715.1	7,366.1	348.96	22.109	
14,370.0	7,060.0	7,021.0	7,021.0	211.1	140.7	89.96	-1,150.1	-7.5	7,785.0	7,434.1	350.92	22.185	
14,400.0	7,060.0	7,021.0	7,021.0	211.9	140.7	89.96	-1,150.1	-7.5	7,815.0	7,463.2	351.76	22.217	
14,468.5	7,060.0	7,021.0	7,021.0	213.8	140.7	89.96	-1,150.1	-7.5	7,883.4	7,529.7	353.68	22.290	
14,500.0	7,060.0	7,021.0	7,021.0	214.7	140.7	89.96	-1,150.1	-7.5	7,914.9	7,560.3	354.56	22.323	
14,566.9	7,060.0	7,021.0	7,021.0	216.6	140.7	89.96	-1,150.1	-7.5	7,981.7	7,625.3	356.43	22.394	
14,600.0	7,060.0	7,021.0	7,021.0	217.5	140.7	89.95	-1,150.1	-7.5	8,014.8	7,657.4	357.35	22.428	
14,665.3	7,060.0	7,021.0	7,021.0	219.3	140.7	89.95	-1,150.1	-7.5	8,080.0	7,720.8	359.18	22.496	
14,700.0	7,060.0	7,021.0	7,021.0	220.3	140.7	89.95	-1,150.1	-7.5	8,114.7	7,754.5	360.15	22.531	
14,763.7	7,060.0	7,021.0	7,021.0	222.0	140.7	89.95	-1,150.1	-7.5	8,178.4	7,816.4	361.94	22.596	

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 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	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
14,800.0	7,060.0	7,021.0	7,021.0	223.1	140.7	89.95	-1,150.1	-7.5	8,214.6	7,851.6	362.95	22.633	
14,862.2	7,060.0	7,021.0	7,021.0	224.8	140.7	89.95	-1,150.1	-7.5	8,276.7	7,912.0	364.69	22.695	
14,900.0	7,060.0	7,021.0	7,021.0	225.8	140.7	89.95	-1,150.1	-7.5	8,314.5	7,948.7	365.75	22.733	
14,960.6	7,060.0	7,021.0	7,021.0	227.5	140.7	89.95	-1,150.1	-7.5	8,375.0	8,007.6	367.45	22.793	
15,000.0	7,060.0	7,021.0	7,021.0	228.6	140.7	89.95	-1,150.1	-7.5	8,414.4	8,045.8	368.55	22.831	
15,059.0	7,060.0	7,021.0	7,021.0	230.3	140.7	89.94	-1,150.1	-7.5	8,473.4	8,103.2	370.20	22.889	
15,100.0	7,060.0	7,021.0	7,021.0	231.4	140.7	89.94	-1,150.1	-7.5	8,514.3	8,143.0	371.35	22.928	
15,157.4	7,060.0	7,021.0	7,021.0	233.0	140.7	89.94	-1,150.1	-7.5	8,571.7	8,198.7	372.96	22.983	
15,200.0	7,060.0	7,021.0	7,021.0	234.2	140.7	89.94	-1,150.1	-7.5	8,614.2	8,240.1	374.15	23.024	
15,255.9	7,060.0	7,021.0	7,021.0	235.8	140.7	89.94	-1,150.1	-7.5	8,670.0	8,294.3	375.71	23.076	
15,300.0	7,060.0	7,021.0	7,021.0	237.0	140.7	89.94	-1,150.1	-7.5	8,714.1	8,337.2	376.95	23.118	
15,354.3	7,060.0	7,021.0	7,021.0	238.5	140.7	89.94	-1,150.1	-7.5	8,768.4	8,389.9	378.47	23.168	
15,409.8	7,060.0	7,021.0	7,021.0	240.1	140.7	89.94	-1,150.1	-7.5	8,823.8	8,443.8	380.02	23.219	

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Tooface (")	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	37.40	50.6	38.7	66.2				
98.4	98.4	80.4	80.4	0.1	0.0	37.60	50.5	38.9	63.8	63.6	0.14	461.736	
100.0	100.0	81.9	81.9	0.1	0.0	37.61	50.5	38.9	63.8	63.6	0.14	453.020	
196.8	196.8	178.8	178.8	0.3	0.2	38.21	50.2	39.5	63.9	63.4	0.50	129.033	
200.0	200.0	182.0	181.9	0.3	0.2	38.23	50.2	39.5	63.9	63.4	0.51	125.952	
295.3	295.3	277.4	277.4	0.5	0.3	38.75	49.8	40.0	63.8	63.0	0.81	79.089	
300.0	300.0	282.2	282.2	0.5	0.3	38.77	49.8	40.0	63.8	63.0	0.82	77.717	
393.7	393.7	376.1	376.1	0.8	0.3	39.04	49.2	39.9	63.4	62.3	1.09	57.924	
400.0	400.0	382.4	382.4	0.8	0.4	39.05	49.2	39.9	63.4	62.2	1.11	56.936	
492.1	492.1	474.6	474.6	1.0	0.4	39.16	48.6	39.6	62.7	61.3	1.38	45.512	
500.0	500.0	482.5	482.4	1.0	0.4	39.17	48.6	39.6	62.7	61.3	1.40	44.738	
522.1	522.1	504.6	504.6	1.0	0.4	-157.58	48.4	39.5	62.6	61.1	1.45	43.049 CC, ES	
590.5	590.5	573.0	573.0	1.2	0.5	-158.06	48.1	39.2	63.3	61.7	1.63	38.854	
600.0	600.0	582.4	582.4	1.2	0.5	-158.17	48.0	39.1	63.6	61.9	1.65	38.415	
689.0	688.8	671.4	671.3	1.4	0.5	-159.66	47.6	38.6	67.1	65.2	1.88	35.769	
700.0	699.8	682.4	682.3	1.4	0.5	-159.88	47.5	38.6	67.7	65.8	1.90	35.575	
787.4	786.9	769.5	769.5	1.6	0.6	-161.88	47.0	38.1	74.1	71.9	2.14	34.652	
800.0	799.5	782.1	782.0	1.6	0.6	-162.19	47.0	38.0	75.2	73.0	2.17	34.642 SF	
885.8	884.7	867.2	867.2	1.8	0.6	-164.40	46.6	37.5	84.4	82.0	2.41	34.987	
900.0	898.7	881.3	881.2	1.8	0.6	-164.76	46.5	37.4	86.2	83.7	2.45	35.151	
984.2	981.9	964.5	964.5	2.1	0.6	-166.87	46.3	36.9	98.3	95.6	2.70	36.434	
1,000.0	997.5	980.0	980.0	2.1	0.7	-167.25	46.2	36.8	100.8	98.1	2.74	36.764	
1,082.7	1,078.7	1,061.2	1,061.1	2.4	0.7	-169.16	46.1	36.1	115.6	112.6	2.99	38.681	
1,100.0	1,095.6	1,078.1	1,078.1	2.5	0.7	-169.53	46.1	36.0	119.1	116.0	3.04	39.163	
1,181.1	1,174.7	1,157.1	1,157.1	2.8	0.7	-171.16	46.2	35.2	136.5	133.2	3.29	41.528	
1,200.0	1,193.1	1,175.4	1,175.4	2.9	0.7	-171.50	46.3	35.0	141.0	137.6	3.34	42.142	
1,279.5	1,269.9	1,251.9	1,251.9	3.3	0.7	-172.84	46.5	34.2	161.0	157.4	3.60	44.764	
1,300.0	1,289.6	1,271.5	1,271.5	3.4	0.8	-173.16	46.7	33.9	166.5	162.9	3.66	45.505	
1,356.8	1,344.1	1,325.3	1,325.3	3.6	0.8	-173.96	47.1	33.3	182.8	178.9	3.84	47.555	
1,377.9	1,364.3	1,345.1	1,345.0	3.8	0.8	-174.25	47.3	33.1	189.1	185.2	3.91	48.406	
1,400.0	1,385.4	1,365.7	1,365.6	3.9	0.8	-174.53	47.6	32.9	195.7	191.7	3.97	49.283	
1,476.4	1,458.4	1,436.8	1,436.7	4.3	0.8	-175.39	48.8	32.2	219.1	214.9	4.20	52.097	
1,500.0	1,480.9	1,458.7	1,458.6	4.4	0.8	-175.61	49.3	32.0	226.4	222.1	4.27	52.973	
1,574.8	1,552.4	1,528.4	1,528.3	4.9	0.8	-176.20	51.0	31.8	250.0	245.5	4.50	55.564	
1,600.0	1,576.5	1,552.1	1,552.0	5.0	0.8	-176.36	51.7	31.8	258.0	253.4	4.58	56.313	
1,673.2	1,646.5	1,620.9	1,620.8	5.4	0.8	-176.74	53.5	31.9	281.4	276.6	4.81	58.557	
1,700.0	1,672.0	1,645.9	1,645.7	5.6	0.8	-176.85	54.2	32.0	290.0	285.1	4.89	59.324	
1,771.6	1,740.5	1,712.8	1,712.6	6.0	0.9	-177.11	56.2	32.5	313.1	308.0	5.11	61.287	
1,800.0	1,767.6	1,739.6	1,739.4	6.1	0.9	-177.19	57.0	32.8	322.3	317.1	5.20	62.020	
1,870.1	1,834.6	1,805.9	1,805.7	6.6	0.9	-177.34	59.0	33.6	345.0	339.6	5.42	63.719	
1,900.0	1,863.2	1,834.3	1,834.0	6.7	0.9	-177.38	59.8	34.0	354.7	349.2	5.51	64.410	
1,968.5	1,928.6	1,899.1	1,898.8	7.1	0.9	-177.44	61.5	35.1	377.0	371.2	5.72	65.889	
2,000.0	1,958.7	1,928.3	1,928.0	7.3	0.9	-177.45	62.3	35.7	387.2	381.4	5.82	66.521	
2,066.9	2,022.7	1,990.3	1,989.9	7.7	0.9	-177.44	64.0	37.3	409.1	403.0	6.03	67.802	
2,100.0	2,054.3	2,021.6	2,021.3	7.9	0.9	-177.42	64.9	38.2	419.9	413.8	6.14	68.412	
2,165.3	2,116.7	2,084.4	2,084.0	8.3	0.9	-177.34	66.5	40.2	441.3	435.0	6.35	69.529	
2,200.0	2,149.8	2,117.7	2,117.3	8.5	0.9	-177.28	67.2	41.4	452.6	446.2	6.46	70.093	
2,263.8	2,210.8	2,179.2	2,178.7	8.9	1.0	-177.16	68.4	43.7	473.3	466.6	6.66	71.067	
2,300.0	2,245.4	2,214.2	2,213.7	9.1	1.0	-177.09	69.0	45.1	484.9	478.2	6.77	71.582	
2,362.2	2,304.8	2,274.3	2,273.8	9.5	1.0	-176.96	69.9	47.5	504.8	497.9	6.97	72.401	
2,400.0	2,341.0	2,310.9	2,310.3	9.7	1.0	-176.88	70.3	49.0	516.9	509.8	7.09	72.863	
2,460.6	2,398.9	2,369.5	2,368.9	10.1	1.0	-176.75	70.9	51.4	536.1	528.8	7.29	73.550	

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 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,436.5	2,407.5	2,406.8	10.3	1.0	-176.66	71.2	53.0	548.5	541.0	7.42	73.962	
2,559.0	2,493.0	2,463.4	2,462.7	10.6	1.0	-176.53	71.6	55.5	567.0	559.4	7.61	74.536	
2,600.0	2,532.1	2,502.1	2,501.4	10.9	1.0	-176.45	71.9	57.2	579.9	572.2	7.74	74.916	
2,657.5	2,587.0	2,556.2	2,555.4	11.2	1.0	-176.34	72.3	59.6	598.1	590.1	7.93	75.413	
2,700.0	2,627.7	2,596.2	2,595.3	11.5	1.0	-176.26	72.6	61.4	611.5	603.4	8.07	75.767	
2,755.9	2,681.1	2,649.4	2,648.5	11.8	1.1	-176.16	73.1	63.7	629.2	620.9	8.26	76.213	
2,800.0	2,723.2	2,691.5	2,690.5	12.1	1.1	-176.08	73.4	65.7	643.1	634.7	8.40	76.547	
2,854.3	2,775.1	2,743.1	2,742.0	12.4	1.1	-175.98	73.8	68.0	660.3	651.7	8.58	76.940	
2,900.0	2,818.8	2,786.4	2,785.3	12.7	1.1	-175.91	74.1	70.0	674.7	666.0	8.73	77.260	
2,952.7	2,869.2	2,836.5	2,835.3	13.0	1.1	-175.84	74.5	72.1	691.4	682.5	8.91	77.611	
3,000.0	2,914.3	2,881.4	2,880.2	13.3	1.1	-175.78	74.9	74.0	706.3	697.2	9.06	77.913	
3,051.2	2,963.2	2,931.0	2,929.8	13.6	1.1	-175.73	75.3	76.0	722.4	713.2	9.23	78.229	
3,100.0	3,009.9	2,978.9	2,977.7	13.9	1.1	-175.68	75.6	77.9	737.7	728.3	9.40	78.511	
3,149.6	3,057.3	3,026.5	3,025.2	14.2	1.1	-175.63	75.9	79.8	753.2	743.6	9.56	78.777	
3,200.0	3,105.5	3,073.8	3,072.5	14.5	1.2	-175.59	76.2	81.5	768.9	759.2	9.73	79.042	
3,248.0	3,151.3	3,119.7	3,118.3	14.8	1.2	-175.57	76.6	83.1	783.9	774.0	9.89	79.286	
3,300.0	3,201.0	3,170.6	3,169.2	15.1	1.2	-175.55	76.9	84.7	800.1	790.0	10.06	79.530	
3,346.4	3,245.4	3,216.7	3,215.3	15.4	1.2	-175.55	77.2	86.0	814.5	804.2	10.21	79.738	
3,400.0	3,296.6	3,271.2	3,269.7	15.7	1.2	-175.54	77.4	87.5	830.8	820.4	10.39	79.965	
3,444.9	3,339.5	3,316.3	3,314.9	16.0	1.2	-175.54	77.4	88.7	844.4	833.9	10.54	80.134	
3,500.0	3,392.1	3,370.7	3,369.2	16.3	1.2	-175.53	77.2	90.0	861.0	850.2	10.72	80.327	
3,543.3	3,433.5	3,413.2	3,411.8	16.6	1.2	-175.53	77.1	91.0	873.9	863.0	10.86	80.463	
3,600.0	3,487.7	3,468.3	3,466.8	16.9	1.3	-175.54	76.9	92.2	890.8	879.7	11.05	80.625	
3,641.7	3,527.6	3,508.6	3,507.1	17.2	1.3	-175.54	76.7	93.1	903.1	891.9	11.19	80.735	
3,700.0	3,583.3	3,564.0	3,562.5	17.5	1.3	-175.54	76.4	94.2	920.4	909.0	11.38	80.879	
3,740.1	3,621.6	3,602.3	3,600.8	17.8	1.3	-175.55	76.2	95.1	932.3	920.8	11.51	80.976	
3,800.0	3,678.8	3,661.6	3,660.0	18.1	1.3	-175.55	75.8	96.4	950.0	938.3	11.71	81.107	
3,838.6	3,715.7	3,699.8	3,698.3	18.4	1.3	-175.54	75.5	97.3	961.4	949.5	11.84	81.183	
3,900.0	3,774.4	3,757.4	3,755.8	18.7	1.3	-175.53	74.9	98.8	979.4	967.4	12.05	81.299	
3,937.0	3,809.7	3,792.0	3,790.4	19.0	1.3	-175.52	74.6	99.7	990.3	978.1	12.17	81.370	
4,000.0	3,869.9	3,851.1	3,849.5	19.3	1.4	-175.50	74.1	101.3	1,008.9	996.6	12.38	81.479	
4,035.4	3,903.8	3,884.3	3,882.7	19.5	1.4	-175.48	73.8	102.2	1,019.4	1,006.9	12.50	81.539	
4,100.0	3,965.5	3,944.5	3,942.9	19.9	1.4	-175.47	73.5	103.8	1,038.6	1,025.9	12.72	81.653	
4,133.8	3,997.8	3,975.9	3,974.3	20.1	1.4	-175.48	73.4	104.4	1,048.7	1,035.9	12.83	81.717	
4,200.0	4,061.1	4,037.4	4,035.8	20.5	1.4	-175.51	73.4	105.4	1,068.6	1,055.5	13.06	81.844	
4,232.3	4,091.9	4,067.4	4,065.8	20.7	1.4	-175.54	73.5	105.7	1,078.3	1,065.1	13.16	81.910	
4,300.0	4,156.6	4,132.0	4,130.3	21.1	1.4	-175.61	74.0	105.9	1,098.7	1,085.3	13.39	82.050	
4,330.7	4,186.0	4,162.1	4,160.4	21.3	1.4	-175.65	74.2	105.9	1,107.9	1,094.4	13.49	82.111	
4,400.0	4,252.2	4,229.1	4,227.4	21.8	1.4	-175.75	74.7	105.7	1,128.7	1,115.0	13.72	82.242	
4,429.1	4,280.0	4,256.8	4,255.1	21.9	1.4	-175.80	74.9	105.6	1,137.4	1,123.6	13.82	82.296	
4,500.0	4,347.7	4,324.1	4,322.5	22.4	1.4	-175.90	75.5	105.2	1,158.7	1,144.6	14.06	82.421	
4,527.5	4,374.1	4,350.3	4,348.6	22.5	1.4	-175.94	75.8	105.1	1,166.9	1,152.8	14.15	82.467	
4,600.0	4,443.3	4,419.5	4,417.8	23.0	1.5	-176.04	76.4	104.7	1,188.7	1,174.3	14.39	82.586	
4,626.0	4,468.1	4,444.8	4,443.1	23.1	1.5	-176.08	76.6	104.6	1,196.5	1,182.0	14.48	82.627	
4,700.0	4,538.9	4,516.9	4,515.2	23.6	1.5	-176.18	77.2	104.1	1,218.6	1,203.9	14.73	82.737	
4,724.4	4,562.2	4,540.6	4,538.9	23.7	1.5	-176.22	77.4	103.9	1,225.9	1,211.1	14.81	82.772	
4,800.0	4,634.4	4,614.1	4,612.4	24.2	1.5	-176.31	77.8	103.4	1,248.4	1,233.3	15.06	82.873	
4,822.8	4,656.2	4,636.3	4,634.6	24.3	1.5	-176.34	77.9	103.3	1,255.2	1,240.0	15.14	82.901	
4,900.0	4,730.0	4,711.0	4,709.4	24.8	1.5	-176.43	78.3	102.9	1,278.0	1,262.6	15.40	82.991	
4,921.2	4,750.3	4,731.3	4,729.6	24.9	1.5	-176.45	78.4	102.8	1,284.3	1,268.9	15.47	83.014	
5,000.0	4,825.5	4,806.1	4,804.5	25.4	1.5	-176.54	78.7	102.4	1,307.7	1,291.9	15.74	83.096	
5,019.7	4,844.3	4,824.7	4,823.0	25.5	1.5	-176.55	78.7	102.4	1,313.5	1,297.7	15.80	83.114	

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 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	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	
5,100.0	4,921.1	4,900.3	4,898.6	26.0	1.5	-176.63	79.0	102.2	1,337.3	1,321.3	16.08	83.189	
5,118.1	4,938.4	4,917.5	4,915.8	26.1	1.5	-176.64	79.1	102.2	1,342.7	1,326.6	16.14	83.204	
5,200.0	5,016.7	4,995.6	4,993.9	26.6	1.5	-176.71	79.4	102.1	1,367.1	1,350.7	16.42	83.270	
5,216.5	5,032.5	5,011.5	5,009.9	26.7	1.5	-176.72	79.5	102.2	1,372.0	1,355.5	16.47	83.283	
5,300.0	5,112.2	5,092.7	5,091.0	27.2	1.5	-176.77	79.6	102.4	1,396.8	1,380.0	16.76	83.348	
5,314.9	5,126.5	5,107.2	5,105.5	27.3	1.6	-176.78	79.6	102.5	1,401.2	1,384.4	16.81	83.359	
5,400.0	5,207.8	5,189.4	5,187.8	27.8	1.6	-176.81	79.6	103.0	1,426.4	1,409.3	17.10	83.414	
5,413.4	5,220.6	5,202.3	5,200.6	27.9	1.6	-176.82	79.6	103.1	1,430.4	1,413.2	17.15	83.422	
5,500.0	5,303.3	5,283.6	5,281.9	28.4	1.6	-176.85	79.5	103.7	1,456.0	1,438.6	17.44	83.475	
5,511.8	5,314.6	5,294.7	5,293.0	28.5	1.6	-176.85	79.5	103.8	1,459.5	1,442.0	17.48	83.483	
5,600.0	5,398.9	5,375.5	5,373.8	29.0	1.6	-176.87	79.5	104.6	1,485.8	1,468.0	17.79	83.534	
5,610.2	5,408.7	5,384.9	5,383.2	29.1	1.6	-176.88	79.5	104.7	1,488.8	1,471.0	17.82	83.541	
5,700.0	5,494.5	5,466.6	5,464.9	29.6	1.6	-176.90	79.8	105.5	1,515.8	1,497.6	18.13	83.595	
5,708.6	5,502.7	5,474.4	5,472.7	29.7	1.6	-176.91	79.9	105.5	1,518.4	1,500.2	18.16	83.600	
5,800.0	5,590.0	5,560.7	5,559.0	30.2	1.7	-176.94	80.4	106.2	1,546.0	1,527.5	18.48	83.653	
5,807.1	5,596.8	5,567.5	5,565.8	30.3	1.7	-176.94	80.4	106.3	1,548.1	1,529.6	18.51	83.656	
5,823.9	5,612.9	5,583.7	5,582.0	30.4	1.7	-176.95	80.5	106.4	1,553.2	1,534.7	18.56	83.665	
5,900.0	5,685.9	5,658.5	5,656.8	30.8	1.7	-177.00	80.9	107.2	1,575.2	1,556.5	18.72	84.131	
5,905.5	5,691.2	5,663.9	5,662.2	30.8	1.7	-177.00	80.9	107.2	1,576.7	1,558.0	18.73	84.169	
6,000.0	5,782.6	5,758.0	5,756.3	31.1	1.7	-177.01	80.9	108.9	1,601.0	1,582.1	18.88	84.778	
6,003.9	5,786.4	5,761.9	5,760.2	31.1	1.7	-177.01	80.9	109.0	1,601.9	1,583.1	18.89	84.803	
6,100.0	5,880.2	5,862.5	5,860.8	31.5	1.7	-177.01	80.6	110.8	1,623.2	1,604.2	19.01	85.367	
6,102.3	5,882.5	5,865.1	5,863.3	31.5	1.7	-177.01	80.6	110.8	1,623.6	1,604.6	19.02	85.381	
6,200.0	5,978.5	5,963.3	5,961.5	31.8	1.8	-177.01	80.0	112.3	1,641.5	1,622.4	19.11	85.892	
6,200.8	5,979.3	5,964.0	5,962.3	31.8	1.8	-177.01	80.0	112.3	1,641.6	1,622.5	19.11	85.896	
6,299.2	6,076.6	6,063.3	6,061.5	32.0	1.8	-177.00	79.5	113.6	1,656.3	1,637.1	19.18	86.349	
6,300.0	6,077.4	6,064.1	6,062.3	32.0	1.8	-177.00	79.5	113.6	1,656.4	1,637.2	19.18	86.352	
6,397.6	6,174.3	6,160.8	6,159.1	32.2	1.8	-176.99	78.8	114.7	1,667.4	1,648.2	19.23	86.718	
6,400.0	6,176.7	6,163.1	6,161.4	32.2	1.8	-176.99	78.8	114.7	1,667.7	1,648.4	19.23	86.725	
6,496.0	6,272.4	6,254.6	6,252.9	32.4	1.8	-176.97	78.4	115.7	1,675.4	1,656.1	19.26	86.995	
6,500.0	6,276.4	6,258.4	6,256.6	32.4	1.8	-176.97	78.4	115.7	1,675.6	1,656.4	19.26	87.003	
6,594.5	6,370.7	6,350.7	6,349.0	32.5	1.8	-176.95	78.3	116.7	1,680.2	1,661.0	19.28	87.157	
6,600.0	6,376.3	6,356.3	6,354.5	32.5	1.8	-176.95	78.3	116.8	1,680.4	1,661.1	19.28	87.160	
6,680.8	6,457.0	6,437.7	6,436.0	32.6	1.9	19.80	78.1	117.6	1,681.7	1,647.4	34.35	48.957	
6,692.9	6,469.1	6,450.0	6,448.2	32.6	1.9	19.80	78.1	117.7	1,681.7	1,647.4	34.36	48.938	
6,700.0	6,476.2	6,457.1	6,455.3	32.6	1.9	19.81	78.1	117.8	1,681.7	1,647.4	34.37	48.927	
6,710.8	6,487.0	6,467.9	6,466.2	32.6	1.9	19.81	78.1	117.9	1,681.8	1,647.4	34.38	48.913	
6,750.0	6,526.2	6,507.5	6,505.7	32.7	1.9	109.86	78.0	118.2	1,682.3	1,662.8	19.51	86.209	
6,791.3	6,567.3	6,549.5	6,547.7	32.7	1.9	109.87	78.0	118.6	1,683.8	1,664.1	19.69	85.517	
6,800.0	6,575.9	6,558.2	6,556.5	32.8	1.9	109.87	77.9	118.7	1,684.3	1,664.5	19.73	85.378	
6,850.0	6,624.9	6,608.0	6,606.2	32.8	1.9	109.87	77.8	119.0	1,687.7	1,667.8	19.94	84.621	
6,889.7	6,663.1	6,645.7	6,643.9	32.9	1.9	109.84	77.8	119.3	1,691.6	1,671.4	20.12	84.061	
6,900.0	6,672.8	6,655.3	6,653.5	33.0	1.9	109.83	77.8	119.3	1,692.7	1,672.6	20.17	83.923	
6,950.0	6,719.4	6,700.0	6,698.2	33.1	1.9	109.74	77.7	119.7	1,699.4	1,679.0	20.41	83.258	
6,988.2	6,753.7	6,700.0	6,698.2	33.2	1.9	109.11	77.7	119.7	1,705.9	1,685.3	20.59	82.846	
7,000.0	6,764.1	6,700.0	6,698.2	33.3	1.9	108.88	77.7	119.7	1,708.3	1,687.7	20.65	82.721	
7,050.0	6,806.8	6,700.0	6,698.2	33.4	1.9	107.73	77.7	119.7	1,720.0	1,699.1	20.95	82.088	
7,086.6	6,836.5	6,700.0	6,698.2	33.6	1.9	106.71	77.7	119.7	1,730.3	1,709.0	21.23	81.484	
7,100.0	6,847.0	6,700.0	6,698.2	33.6	1.9	106.30	77.7	119.7	1,734.4	1,713.0	21.35	81.248	
7,150.0	6,884.5	6,700.0	6,698.2	33.9	1.9	104.58	77.7	119.7	1,751.2	1,729.3	21.85	80.131	
7,185.0	6,908.9	6,700.0	6,698.2	34.1	1.9	103.20	77.7	119.7	1,764.3	1,742.0	22.29	79.158	
7,200.0	6,918.9	6,700.0	6,698.2	34.1	1.9	102.57	77.7	119.7	1,770.3	1,747.8	22.48	78.734	

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 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,250.0	6,950.1	6,700.0	6,698.2	34.4	1.9	100.29	77.7	119.7	1,791.4	1,768.2	23.23	77.121	
7,283.4	6,969.0	6,700.0	6,698.2	34.6	1.9	98.61	77.7	119.7	1,806.6	1,782.8	23.79	75.952	
7,300.0	6,977.7	6,700.0	6,698.2	34.8	1.9	97.74	77.7	119.7	1,814.3	1,790.3	24.06	75.405	
7,350.0	7,001.7	6,700.0	6,698.2	35.1	1.9	94.94	77.7	119.7	1,838.9	1,813.9	24.95	73.708	
7,381.9	7,014.9	6,700.0	6,698.2	35.4	1.9	93.04	77.7	119.7	1,855.2	1,829.7	25.53	72.664	
7,400.0	7,021.7	6,700.0	6,698.2	35.5	1.9	91.92	77.7	119.7	1,864.8	1,838.9	25.85	72.137	
7,450.0	7,037.6	6,700.0	6,698.2	35.9	1.9	88.72	77.7	119.7	1,891.7	1,865.0	26.73	70.774	
7,480.3	7,045.2	6,700.0	6,698.2	36.2	1.9	86.71	77.7	119.7	1,908.5	1,881.2	27.24	70.063	
7,500.0	7,049.3	6,700.0	6,698.2	36.4	1.9	85.38	77.7	119.7	1,919.5	1,892.0	27.54	69.694	
7,550.0	7,056.8	6,700.0	6,698.2	36.9	1.9	81.95	77.7	119.7	1,947.9	1,919.7	28.24	68.988	
7,578.7	7,059.1	6,700.0	6,698.2	37.3	1.9	79.96	77.7	119.7	1,964.4	1,935.9	28.56	68.779	
7,600.0	7,059.9	6,700.0	6,698.2	37.5	1.9	78.48	77.7	119.7	1,976.7	1,947.9	28.75	68.753	
7,610.8	7,060.0	6,700.0	6,698.2	37.6	1.9	77.74	77.7	119.7	1,982.9	1,954.1	28.83	68.772	
7,677.1	7,060.0	6,700.0	6,698.2	38.4	1.9	77.74	77.7	119.7	2,022.0	1,991.9	30.14	67.095	
7,700.0	7,060.0	6,700.0	6,698.2	38.7	1.9	77.74	77.7	119.7	2,035.8	2,005.2	30.58	66.562	
7,775.6	7,060.0	6,700.0	6,698.2	39.8	1.9	77.74	77.7	119.7	2,082.5	2,050.3	32.16	64.761	
7,800.0	7,060.0	6,700.0	6,698.2	40.1	1.9	77.74	77.7	119.7	2,097.9	2,065.3	32.66	64.228	
7,874.0	7,060.0	6,700.0	6,698.2	41.2	1.9	77.74	77.7	119.7	2,145.8	2,111.5	34.28	62.602	
7,900.0	7,060.0	6,700.0	6,698.2	41.7	1.9	77.74	77.7	119.7	2,163.0	2,128.1	34.84	62.077	
7,972.4	7,060.0	6,700.0	6,698.2	42.9	1.9	77.74	77.7	119.7	2,211.7	2,175.2	36.48	60.627	
8,000.0	7,060.0	6,700.0	6,698.2	43.3	1.9	77.74	77.7	119.7	2,230.6	2,193.5	37.10	60.118	
8,070.8	7,060.0	6,700.0	6,698.2	44.6	1.9	77.74	77.7	119.7	2,279.9	2,241.1	38.75	58.833	
8,100.0	7,060.0	6,700.0	6,698.2	45.1	1.9	77.74	77.7	119.7	2,300.5	2,261.1	39.43	58.345	
8,169.3	7,060.0	6,700.0	6,698.2	46.5	1.9	77.74	77.7	119.7	2,350.3	2,309.2	41.08	57.213	
8,200.0	7,060.0	6,700.0	6,698.2	47.1	1.9	77.74	77.7	119.7	2,372.6	2,330.8	41.81	56.747	
8,267.7	7,060.0	6,700.0	6,698.2	48.4	1.9	77.74	77.7	119.7	2,422.6	2,379.1	43.45	55.751	
8,300.0	7,060.0	6,700.0	6,698.2	49.1	1.9	77.74	77.7	119.7	2,446.7	2,402.5	44.24	55.309	
8,366.1	7,060.0	6,700.0	6,698.2	50.5	1.9	77.74	77.7	119.7	2,496.7	2,450.8	45.87	54.433	
8,400.0	7,060.0	6,700.0	6,698.2	51.2	1.9	77.74	77.7	119.7	2,522.6	2,475.9	46.70	54.015	
8,464.5	7,060.0	6,700.0	6,698.2	52.6	1.9	77.74	77.7	119.7	2,572.4	2,524.1	48.31	53.245	
8,500.0	7,060.0	6,700.0	6,698.2	53.4	1.9	77.74	77.7	119.7	2,600.1	2,550.9	49.20	52.850	
8,563.0	7,060.0	6,700.0	6,698.2	54.8	1.9	77.74	77.7	119.7	2,649.7	2,598.9	50.79	52.172	
8,600.0	7,060.0	6,700.0	6,698.2	55.7	1.9	77.74	77.7	119.7	2,679.1	2,627.3	51.72	51.799	
8,661.4	7,060.0	6,700.0	6,698.2	57.1	1.9	77.74	77.7	119.7	2,728.3	2,675.0	53.28	51.202	
8,700.0	7,060.0	6,700.0	6,698.2	58.0	1.9	77.74	77.7	119.7	2,759.4	2,705.2	54.27	50.849	
8,759.8	7,060.0	6,700.0	6,698.2	59.4	1.9	77.74	77.7	119.7	2,808.1	2,752.3	55.80	50.322	
8,800.0	7,060.0	6,700.0	6,698.2	60.3	1.9	77.74	77.7	119.7	2,841.0	2,784.2	56.83	49.988	
8,858.2	7,060.0	6,700.0	6,698.2	61.7	1.9	77.74	77.7	119.7	2,889.1	2,830.8	58.34	49.523	
8,900.0	7,060.0	6,700.0	6,698.2	62.7	1.9	77.74	77.7	119.7	2,923.8	2,864.4	59.42	49.207	
8,956.7	7,060.0	6,700.0	6,698.2	64.1	1.9	77.74	77.7	119.7	2,971.1	2,910.2	60.89	48.795	
9,000.0	7,060.1	6,700.0	6,698.2	65.2	1.9	77.74	77.7	119.7	3,007.6	2,945.5	62.02	48.497	
9,055.1	7,060.1	6,700.0	6,698.2	66.6	1.9	77.74	77.7	119.7	3,054.2	2,990.7	63.46	48.131	
9,100.0	7,060.1	6,700.0	6,698.2	67.7	1.9	77.74	77.7	119.7	3,092.3	3,027.7	64.63	47.848	
9,153.5	7,060.1	6,700.0	6,698.2	69.0	1.9	77.74	77.7	119.7	3,138.1	3,072.0	66.03	47.523	
9,200.0	7,060.1	6,700.0	6,698.2	70.2	1.9	77.74	77.7	119.7	3,178.0	3,110.7	67.25	47.255	
9,251.9	7,060.1	6,700.0	6,698.2	71.5	1.9	77.74	77.7	119.7	3,222.8	3,154.2	68.62	46.966	
9,300.0	7,060.1	6,700.0	6,698.2	72.7	1.9	77.74	77.7	119.7	3,264.4	3,194.5	69.88	46.712	
9,350.4	7,060.1	6,700.0	6,698.2	74.0	1.9	77.74	77.7	119.7	3,308.3	3,237.1	71.22	46.454	
9,400.0	7,060.1	6,700.0	6,698.2	75.3	1.9	77.74	77.7	119.7	3,351.6	3,279.1	72.53	46.213	
9,448.8	7,060.1	6,700.0	6,698.2	76.5	1.9	77.74	77.7	119.7	3,394.5	3,320.6	73.82	45.983	
9,500.0	7,060.1	6,700.0	6,698.2	77.9	1.9	77.74	77.7	119.7	3,439.5	3,364.4	75.18	45.753	
9,547.2	7,060.1	6,700.0	6,698.2	79.1	1.9	77.74	77.7	119.7	3,481.3	3,404.9	76.43	45.547	

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 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	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	
9,600.0	7,060.1	6,700.0	6,698.2	80.5	1.9	77.74	77.7	119.7	3,528.1	3,450.3	77.83	45.328	
9,645.6	7,060.1	6,700.0	6,698.2	81.6	1.9	77.74	77.7	119.7	3,568.7	3,489.7	79.05	45.145	
9,700.0	7,060.1	6,700.0	6,698.2	83.1	1.9	77.73	77.7	119.7	3,617.2	3,536.8	80.50	44.935	
9,744.1	7,060.1	6,700.0	6,698.2	84.2	1.9	77.73	77.7	119.7	3,656.7	3,575.0	81.68	44.771	
9,800.0	7,060.1	6,700.0	6,698.2	85.7	1.9	77.73	77.7	119.7	3,707.0	3,623.8	83.17	44.571	
9,842.5	7,060.1	6,700.0	6,698.2	86.8	1.9	77.73	77.7	119.7	3,745.2	3,660.9	84.31	44.424	
9,900.0	7,060.1	6,700.0	6,698.2	88.3	1.9	77.73	77.7	119.7	3,797.2	3,711.3	85.84	44.233	
9,940.9	7,060.1	6,700.0	6,698.2	89.4	1.9	77.73	77.7	119.7	3,834.2	3,747.3	86.94	44.101	
10,000.0	7,060.1	6,700.0	6,698.2	91.0	1.9	77.73	77.7	119.7	3,887.9	3,799.3	88.52	43.919	
10,039.3	7,060.1	6,700.0	6,698.2	92.0	1.9	77.73	77.7	119.7	3,923.7	3,834.1	89.58	43.800	
10,100.0	7,060.1	6,700.0	6,698.2	93.6	1.9	77.73	77.7	119.7	3,979.0	3,887.8	91.21	43.625	
10,137.8	7,060.1	6,700.0	6,698.2	94.6	1.9	77.73	77.7	119.7	4,013.5	3,921.3	92.22	43.519	
10,200.0	7,060.1	6,700.0	6,698.2	96.3	1.9	77.73	77.7	119.7	4,070.6	3,976.7	93.90	43.351	
10,236.2	7,060.1	6,700.0	6,698.2	97.3	1.9	77.73	77.7	119.7	4,103.8	4,008.9	94.87	43.256	
10,300.0	7,060.1	6,700.0	6,698.2	99.0	1.9	77.73	77.7	119.7	4,162.5	4,065.9	96.59	43.095	
10,334.6	7,060.1	6,700.0	6,698.2	99.9	1.9	77.73	77.7	119.7	4,194.4	4,096.9	97.52	43.010	
10,400.0	7,060.1	6,700.0	6,698.2	101.7	1.9	77.73	77.7	119.7	4,254.8	4,155.5	99.28	42.855	
10,433.0	7,060.1	6,700.0	6,698.2	102.6	1.9	77.73	77.7	119.7	4,285.4	4,185.2	100.18	42.779	
10,500.0	7,060.1	6,700.0	6,698.2	104.4	1.9	77.73	77.7	119.7	4,347.5	4,245.5	101.98	42.629	
10,531.5	7,060.1	6,700.0	6,698.2	105.2	1.9	77.73	77.7	119.7	4,376.7	4,273.9	102.83	42.561	
10,600.0	7,060.1	6,700.0	6,698.2	107.1	1.9	77.73	77.7	119.7	4,440.4	4,335.8	104.68	42.417	
10,629.9	7,060.1	6,700.0	6,698.2	107.9	1.9	77.73	77.7	119.7	4,468.3	4,362.8	105.49	42.356	
10,700.0	7,060.1	6,700.0	6,698.2	109.8	1.9	77.73	77.7	119.7	4,533.7	4,426.3	107.39	42.218	
10,728.3	7,060.1	6,700.0	6,698.2	110.5	1.9	77.73	77.7	119.7	4,560.2	4,452.0	108.15	42.163	
10,800.0	7,060.1	6,700.0	6,698.2	112.5	1.9	77.73	77.7	119.7	4,627.3	4,517.2	110.09	42.030	
10,826.7	7,060.1	6,700.0	6,698.2	113.2	1.9	77.73	77.7	119.7	4,652.3	4,541.5	110.82	41.981	
10,900.0	7,060.1	6,700.0	6,698.2	115.2	1.9	77.73	77.7	119.7	4,721.1	4,608.3	112.80	41.852	
10,925.2	7,060.1	6,700.0	6,698.2	115.9	1.9	77.73	77.7	119.7	4,744.7	4,631.2	113.49	41.809	
11,000.0	7,060.1	6,700.0	6,698.2	117.9	1.9	77.73	77.7	119.7	4,815.1	4,699.6	115.51	41.685	
11,023.6	7,060.1	6,700.0	6,698.2	118.6	1.9	77.73	77.7	119.7	4,837.4	4,721.2	116.15	41.646	
11,100.0	7,060.1	6,700.0	6,698.2	120.7	1.9	77.73	77.7	119.7	4,909.4	4,791.2	118.23	41.526	
11,122.0	7,060.1	6,700.0	6,698.2	121.3	1.9	77.73	77.7	119.7	4,930.2	4,811.4	118.82	41.492	
11,200.0	7,060.1	6,700.0	6,698.2	123.4	1.9	77.73	77.7	119.7	5,004.0	4,883.0	120.94	41.375	
11,220.4	7,060.1	6,700.0	6,698.2	123.9	1.9	77.73	77.7	119.7	5,023.3	4,901.8	121.50	41.346	
11,300.0	7,060.1	6,700.0	6,698.2	126.1	1.9	77.73	77.7	119.7	5,098.7	4,975.0	123.66	41.233	
11,318.9	7,060.1	6,700.0	6,698.2	126.6	1.9	77.73	77.7	119.7	5,116.6	4,992.4	124.17	41.207	
11,400.0	7,060.1	6,700.0	6,698.2	128.9	1.9	77.73	77.7	119.7	5,193.6	5,067.2	126.37	41.097	
11,417.3	7,060.1	6,700.0	6,698.2	129.3	1.9	77.73	77.7	119.7	5,210.1	5,083.2	126.84	41.074	
11,500.0	7,060.1	6,700.0	6,698.2	131.6	1.9	77.73	77.7	119.7	5,288.7	5,159.6	129.09	40.968	
11,515.7	7,060.1	6,700.0	6,698.2	132.0	1.9	77.73	77.7	119.7	5,303.7	5,174.2	129.52	40.949	
11,600.0	7,060.1	6,700.0	6,698.2	134.3	1.9	77.73	77.7	119.7	5,384.0	5,252.2	131.81	40.846	
11,614.1	7,060.1	6,700.0	6,698.2	134.7	1.9	77.73	77.7	119.7	5,397.5	5,265.3	132.20	40.829	
11,700.0	7,060.1	6,700.0	6,698.2	137.1	1.9	77.73	77.7	119.7	5,479.5	5,344.9	134.53	40.729	
11,712.6	7,060.1	6,700.0	6,698.2	137.4	1.9	77.73	77.7	119.7	5,491.5	5,356.6	134.88	40.715	
11,800.0	7,060.1	6,700.0	6,698.2	139.8	1.9	77.73	77.7	119.7	5,575.1	5,437.8	137.26	40.618	
11,811.0	7,060.1	6,700.0	6,698.2	140.1	1.9	77.73	77.7	119.7	5,585.6	5,448.1	137.56	40.606	
11,900.0	7,060.1	6,700.0	6,698.2	142.6	1.9	77.73	77.7	119.7	5,670.9	5,530.9	139.98	40.512	
11,909.4	7,060.1	6,700.0	6,698.2	142.8	1.9	77.73	77.7	119.7	5,679.9	5,539.7	140.24	40.502	
12,000.0	7,060.1	6,700.0	6,698.2	145.3	1.9	77.73	77.7	119.7	5,766.8	5,624.1	142.71	40.410	
12,007.8	7,060.1	6,700.0	6,698.2	145.6	1.9	77.73	77.7	119.7	5,774.3	5,631.4	142.92	40.402	
12,100.0	7,060.1	6,700.0	6,698.2	148.1	1.9	77.73	77.7	119.7	5,862.8	5,717.4	145.43	40.313	
12,106.3	7,060.1	6,700.0	6,698.2	148.3	1.9	77.73	77.7	119.7	5,868.8	5,723.2	145.60	40.307	

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 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design													SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1		Offset Site Error:		0.0 usft
Survey Program: 100-GYD_CT													Offset Well Error:		0.0 usft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor					
12,200.0	7,060.1	6,700.0	6,698.2	150.9	1.9	77.73	77.7	119.7	5,959.0	5,810.8	148.16	40.220					
12,204.7	7,060.1	6,700.0	6,698.2	151.0	1.9	77.73	77.7	119.7	5,963.5	5,815.2	148.29	40.216					
12,300.0	7,060.1	6,700.0	6,698.2	153.6	1.9	77.73	77.7	119.7	6,055.3	5,904.4	150.89	40.131					
12,303.1	7,060.1	6,700.0	6,698.2	153.7	1.9	77.73	77.7	119.7	6,058.3	5,907.3	150.97	40.129					
12,400.0	7,060.1	6,700.0	6,698.2	156.4	1.9	77.73	77.7	119.7	6,151.7	5,998.1	153.62	40.046					
12,401.5	7,060.1	6,700.0	6,698.2	156.4	1.9	77.73	77.7	119.7	6,153.2	5,999.6	153.66	40.045					
12,500.0	7,060.1	6,700.0	6,698.2	159.1	1.9	77.73	77.7	119.7	6,248.3	6,091.9	156.35	39.964					
12,598.4	7,060.1	6,700.0	6,698.2	161.9	1.9	77.73	77.7	119.7	6,343.3	6,184.3	159.03	39.887					
12,600.0	7,060.1	6,700.0	6,698.2	161.9	1.9	77.73	77.7	119.7	6,344.9	6,185.8	159.08	39.886					
12,696.8	7,060.1	6,700.0	6,698.2	164.6	1.9	77.73	77.7	119.7	6,438.6	6,276.8	161.72	39.813					
12,700.0	7,060.1	6,700.0	6,698.2	164.7	1.9	77.73	77.7	119.7	6,441.6	6,279.8	161.81	39.811					
12,795.2	7,060.1	6,700.0	6,698.2	167.3	1.9	77.73	77.7	119.7	6,533.9	6,369.5	164.41	39.742					
12,800.0	7,060.1	6,700.0	6,698.2	167.4	1.9	77.73	77.7	119.7	6,538.5	6,373.9	164.54	39.738					
12,893.7	7,060.1	6,700.0	6,698.2	170.0	1.9	77.73	77.7	119.7	6,629.3	6,462.2	167.10	39.673					
12,900.0	7,060.1	6,700.0	6,698.2	170.2	1.9	77.73	77.7	119.7	6,635.4	6,468.1	167.27	39.669					
12,992.1	7,060.1	6,700.0	6,698.2	172.8	1.9	77.73	77.7	119.7	6,724.8	6,555.0	169.79	39.607					
13,000.0	7,060.1	6,700.0	6,698.2	173.0	1.9	77.73	77.7	119.7	6,732.4	6,562.4	170.00	39.602					
13,090.5	7,060.1	6,700.0	6,698.2	175.5	1.9	77.73	77.7	119.7	6,820.3	6,647.9	172.48	39.543					
13,100.0	7,060.1	6,700.0	6,698.2	175.8	1.9	77.73	77.7	119.7	6,829.5	6,656.8	172.74	39.537					
13,188.9	7,060.1	6,700.0	6,698.2	178.2	1.9	77.73	77.7	119.7	6,916.0	6,740.8	175.17	39.482					
13,200.0	7,060.1	6,700.0	6,698.2	178.5	1.9	77.73	77.7	119.7	6,926.7	6,751.3	175.47	39.475					
13,287.4	7,060.1	6,700.0	6,698.2	181.0	1.9	77.73	77.7	119.7	7,011.7	6,833.9	177.86	39.423					
13,300.0	7,060.1	6,700.0	6,698.2	181.3	1.9	77.73	77.7	119.7	7,024.0	6,845.8	178.21	39.415					
13,385.8	7,060.1	6,700.0	6,698.2	183.7	1.9	77.73	77.7	119.7	7,107.5	6,927.0	180.55	39.366					
13,400.0	7,060.1	6,700.0	6,698.2	184.1	1.9	77.73	77.7	119.7	7,121.4	6,940.4	180.94	39.358					
13,484.2	7,060.1	6,700.0	6,698.2	186.4	1.9	77.73	77.7	119.7	7,203.4	7,020.2	183.24	39.310					
13,500.0	7,060.1	6,700.0	6,698.2	186.9	1.9	77.73	77.7	119.7	7,218.8	7,035.1	183.68	39.302					
13,582.6	7,060.1	6,700.0	6,698.2	189.2	1.9	77.73	77.7	119.7	7,299.3	7,113.4	185.94	39.257					
13,600.0	7,060.1	6,700.0	6,698.2	189.6	1.9	77.73	77.7	119.7	7,316.3	7,129.9	186.41	39.248					
13,681.1	7,060.1	6,700.0	6,698.2	191.9	1.9	77.73	77.7	119.7	7,395.4	7,206.7	188.63	39.206					
13,700.0	7,060.1	6,700.0	6,698.2	192.4	1.9	77.73	77.7	119.7	7,413.8	7,224.7	189.15	39.196					
13,779.5	7,060.1	6,700.0	6,698.2	194.6	1.9	77.73	77.7	119.7	7,491.4	7,300.1	191.32	39.156					
13,800.0	7,060.1	6,700.0	6,698.2	195.2	1.9	77.73	77.7	119.7	7,511.4	7,319.6	191.88	39.146					
13,877.9	7,060.1	6,700.0	6,698.2	197.4	1.9	77.73	77.7	119.7	7,587.6	7,393.5	194.02	39.107					
13,900.0	7,060.1	6,700.0	6,698.2	198.0	1.9	77.73	77.7	119.7	7,609.1	7,414.5	194.62	39.097					
13,976.3	7,060.1	6,700.0	6,698.2	200.1	1.9	77.73	77.7	119.7	7,683.7	7,487.0	196.71	39.061					
14,000.0	7,060.1	6,700.0	6,698.2	200.8	1.9	77.73	77.7	119.7	7,706.9	7,509.5	197.36	39.050					
14,074.8	7,060.0	6,700.0	6,698.2	202.8	1.9	77.73	77.7	119.7	7,780.0	7,580.6	199.41	39.016					
14,100.0	7,060.0	6,700.0	6,698.2	203.6	1.9	77.73	77.7	119.7	7,804.7	7,604.6	200.10	39.004					
14,173.2	7,060.0	6,700.0	6,698.2	205.6	1.9	77.73	77.7	119.7	7,876.3	7,674.2	202.10	38.972					
14,200.0	7,060.0	6,700.0	6,698.2	206.3	1.9	77.72	77.7	119.7	7,902.5	7,699.7	202.84	38.960					
14,271.6	7,060.0	6,700.0	6,698.2	208.3	1.9	77.72	77.7	119.7	7,972.6	7,767.8	204.80	38.929					
14,300.0	7,060.0	6,700.0	6,698.2	209.1	1.9	77.72	77.7	119.7	8,000.4	7,794.8	205.57	38.917					
14,370.0	7,060.0	6,700.0	6,698.2	211.1	1.9	77.72	77.7	119.7	8,069.0	7,861.5	207.49	38.888					
14,400.0	7,060.0	6,700.0	6,698.2	211.9	1.9	77.72	77.7	119.7	8,098.4	7,890.1	208.31	38.876					
14,468.5	7,060.0	6,700.0	6,698.2	213.8	1.9	77.72	77.7	119.7	8,165.5	7,955.3	210.19	38.848					
14,500.0	7,060.0	6,700.0	6,698.2	214.7	1.9	77.72	77.7	119.7	8,196.4	7,985.3	211.05	38.836					
14,566.9	7,060.0	6,700.0	6,698.2	216.6	1.9	77.72	77.7	119.7	8,262.0	8,049.1	212.89	38.809					
14,600.0	7,060.0	6,700.0	6,698.2	217.5	1.9	77.72	77.7	119.7	8,294.4	8,080.6	213.79	38.797					
14,665.3	7,060.0	6,700.0	6,698.2	219.3	1.9	77.72	77.7	119.7	8,358.5	8,142.9	215.58	38.772					
14,700.0	7,060.0	6,700.0	6,698.2	220.3	1.9	77.72	77.7	119.7	8,392.5	8,176.0	216.53	38.759					
14,763.7	7,060.0	6,700.0	6,698.2	222.0	1.9	77.72	77.7	119.7	8,455.1	8,236.8	218.28	38.735					

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 16
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,800.0	7,060.0	6,700.0	6,698.2	223.1	1.9	77.72	77.7	119.7	8,490.7	8,271.4	219.27	38.722	
14,862.2	7,060.0	6,700.0	6,698.2	224.8	1.9	77.72	77.7	119.7	8,551.7	8,330.8	220.98	38.700	
14,900.0	7,060.0	6,700.0	6,698.2	225.8	1.9	77.72	77.7	119.7	8,588.9	8,366.9	222.01	38.686	
14,960.6	7,060.0	6,700.0	6,698.2	227.5	1.9	77.72	77.7	119.7	8,648.4	8,424.7	223.67	38.665	
15,000.0	7,060.0	6,700.0	6,698.2	228.6	1.9	77.72	77.7	119.7	8,687.1	8,462.3	224.75	38.652	
15,059.0	7,060.0	6,700.0	6,698.2	230.3	1.9	77.72	77.7	119.7	8,745.1	8,518.7	226.37	38.632	
15,100.0	7,060.0	6,700.0	6,698.2	231.4	1.9	77.72	77.7	119.7	8,785.4	8,557.9	227.50	38.618	
15,157.4	7,060.0	6,700.0	6,698.2	233.0	1.9	77.72	77.7	119.7	8,841.8	8,612.8	229.07	38.599	
15,200.0	7,060.0	6,700.0	6,698.2	234.2	1.9	77.72	77.7	119.7	8,883.7	8,653.4	230.24	38.585	
15,255.9	7,060.0	6,700.0	6,698.2	235.8	1.9	77.72	77.7	119.7	8,938.6	8,706.9	231.77	38.567	
15,300.0	7,060.0	6,700.0	6,698.2	237.0	1.9	77.72	77.7	119.7	8,982.0	8,749.0	232.98	38.553	
15,354.3	7,060.0	6,700.0	6,698.2	238.5	1.9	77.72	77.7	119.7	9,035.4	8,801.0	234.47	38.536	
15,409.8	7,060.0	6,700.0	6,698.2	240.1	1.9	77.72	77.7	119.7	9,090.0	8,854.0	235.99	38.519	

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VETTING 16
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Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4664.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VETTING 16	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	Database:	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB-EST @ 4664.0usft (Original Well ECoordinates are relative to: VETTING 16

Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000

Grid Convergence at Surface is: 0.54°

Separation Factor Plot

