

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

SW NW SEC. 15 T5N R65W 6th P.M.

VT-ALLES 1-16-18

ORIGINAL WELLBORE

PROPOSAL #2

Anticollision Report

10 March, 2016



Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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	20,226.0	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	100.0	58.0	2,660.3	2,659.6	3,776.483	CC
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	300.0	257.8	2,662.4	2,657.3	519.948	ES
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	5,118.1	4,597.5	3,808.1	3,686.6	31.328	SF
CARLSON A-15-16HN - Wellbore #1 - Design #1	7,541.7	14,651.1	2,209.4	1,918.8	7.603	CC
CARLSON A-15-16HN - Wellbore #1 - Design #1	7,850.0	14,862.7	2,212.3	1,908.1	7.273	ES
CARLSON A-15-16HN - Wellbore #1 - Design #1	8,200.0	14,862.7	2,246.5	1,933.7	7.180	SF
CARLSON B-15-16HC - Wellbore #1 - Design #1	7,793.9	14,905.1	2,049.8	1,747.8	6.786	CC
CARLSON B-15-16HC - Wellbore #1 - Design #1	7,850.0	14,905.1	2,050.5	1,747.1	6.757	ES
CARLSON B-15-16HC - Wellbore #1 - Design #1	8,169.3	14,905.1	2,081.9	1,770.4	6.684	SF
CARLSON C-15-16HN - Wellbore #1 - Design #1	7,590.9	14,623.6	1,880.5	1,588.1	6.432	CC
CARLSON C-15-16HN - Wellbore #1 - Design #1	7,850.0	14,796.3	1,882.9	1,579.1	6.198	ES
CARLSON C-15-16HN - Wellbore #1 - Design #1	8,100.0	14,796.3	1,905.6	1,595.7	6.148	SF
CARLSON D-15-16HN - Wellbore #1 - Design #1	7,649.8	14,655.0	1,551.3	1,256.5	5.262	CC
CARLSON D-15-16HN - Wellbore #1 - Design #1	7,800.0	14,777.6	1,551.8	1,249.6	5.135	ES
CARLSON D-15-16HN - Wellbore #1 - Design #1	8,000.0	14,777.6	1,565.3	1,258.2	5.097	SF
CARLSON E-15-16HC - Wellbore #1 - Design #1	7,800.9	14,848.6	1,392.1	1,090.9	4.623	CC
CARLSON E-15-16HC - Wellbore #1 - Design #1	7,850.0	14,848.6	1,393.0	1,090.6	4.607	ES
CARLSON E-15-16HC - Wellbore #1 - Design #1	7,972.4	14,848.6	1,402.7	1,097.0	4.589	SF
CARLSON F-15-16HN - Wellbore #1 - Design #1	7,717.7	14,708.3	1,271.7	973.7	4.267	CC
CARLSON F-15-16HN - Wellbore #1 - Design #1	7,800.0	14,769.7	1,271.9	970.0	4.213	ES
CARLSON F-15-16HN - Wellbore #1 - Design #1	7,934.7	14,769.7	1,279.9	974.7	4.193	SF
CARLSON G-15-16HN - Wellbore #1 - Design #1	7,787.1	14,787.6	852.2	551.2	2.831	CC
CARLSON G-15-16HN - Wellbore #1 - Design #1	7,800.0	14,787.6	852.3	551.0	2.828	ES
CARLSON G-15-16HN - Wellbore #1 - Design #1	7,850.0	14,787.6	854.4	551.8	2.824	SF
CARLSON H-15-16HC - Wellbore #1 - Design #1	7,807.0	14,883.6	698.0	401.3	2.352	CC, ES
CARLSON H-15-16HC - Wellbore #1 - Design #1	7,850.0	14,883.6	699.5	401.5	2.347	SF
CARLSON I-15-16HN - Wellbore #1 - Design #1	7,791.5	14,836.2	473.6	173.8	1.580	CC
CARLSON I-15-16HN - Wellbore #1 - Design #1	7,800.0	14,836.2	473.7	173.7	1.579	ES, SF
CARLSON J-15-16HN - Wellbore #1 - Design #1	7,795.0	14,901.4	150.0	-133.4	0.529	Level 1, CC, SF
CARLSON J-15-16HN - Wellbore #1 - Design #1	7,800.0	14,901.4	150.0	-133.5	0.529	Level 1, ES
CARLSON K-15-16HC - Wellbore #1 - Design #1	7,812.1	15,013.6	132.2	33.8	1.343	Level 3, CC, ES, SF
CARLSON L-15-16HN - Wellbore #1 - Design #1	7,798.1	14,977.0	196.5	-96.0	0.672	Level 1, CC
CARLSON L-15-16HN - Wellbore #1 - Design #1	7,800.0	14,977.0	196.5	-96.0	0.672	Level 1, ES, SF
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	12,023.0	7,064.0	2,407.0	2,193.9	11.299	CC
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	12,100.0	7,063.8	2,408.2	2,193.1	11.193	ES
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	12,795.2	7,062.6	2,527.8	2,293.5	10.788	SF
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	9,427.8	7,220.8	2,295.6	2,146.5	15.399	CC

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)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 15 T5N R65W 6th P.M.						
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	9,500.0	7,219.9	2,296.7	2,145.7	15.211	ES
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	10,400.0	7,208.9	2,492.9	2,317.8	14.236	SF
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	12,748.4	7,145.4	2,916.1	2,677.1	12.199	CC
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	12,800.0	7,145.5	2,916.6	2,676.1	12.129	ES
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	13,700.0	7,146.0	3,067.5	2,802.1	11.559	SF
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	11,346.1	6,888.2	2,921.7	2,737.3	15.846	CC
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	11,417.3	6,887.9	2,922.6	2,736.2	15.685	ES
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	12,600.0	6,882.2	3,179.4	2,960.6	14.529	SF
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	10,025.2	7,950.0	1,427.0	1,272.9	9.261	CC
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	10,039.3	7,950.0	1,427.1	1,272.6	9.239	ES
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	10,400.0	7,950.0	1,475.4	1,311.5	9.001	SF
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	13,346.7	7,648.2	985.5	713.7	3.627	CC
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	13,385.8	7,649.3	986.2	713.4	3.615	ES
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	13,484.2	7,652.0	995.0	719.5	3.611	SF
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	10,195.1	7,651.4	307.4	139.6	1.831	CC
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	10,200.0	7,651.7	307.5	139.5	1.830	ES, SF
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	9,407.7	7,608.2	1,011.2	861.6	6.760	CC
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	9,448.8	7,604.0	1,012.1	861.3	6.714	ES
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	9,600.0	7,592.0	1,029.2	874.3	6.645	SF
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	12,136.0	7,935.9	280.3	57.8	1.260	Level 3, CC, ES, SF
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	12,606.2	7,224.0	1,699.1	1,462.9	7.194	CC
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	12,696.8	7,216.9	1,701.5	1,462.9	7.130	ES
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	12,900.0	7,201.1	1,724.2	1,480.1	7.062	SF
EXIST DD EHRlich MOTORS #D8 - Wellbore #1 - Well	13,943.2	7,565.0	2,941.0	2,645.3	9.946	CC
EXIST DD EHRlich MOTORS #D8 - Wellbore #1 - Well	14,000.0	7,565.0	2,941.5	2,644.2	9.895	ES
EXIST DD EHRlich MOTORS #D8 - Wellbore #1 - Well	14,763.7	7,698.9	3,049.9	2,731.7	9.584	SF
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	13,406.5	7,623.0	2,264.0	1,995.4	8.430	CC
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	13,484.2	7,636.5	2,265.2	1,994.6	8.372	ES
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	13,976.3	7,699.0	2,331.4	2,048.0	8.227	SF
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	12,095.4	7,461.8	1,122.2	903.9	5.141	CC
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	12,106.3	7,462.9	1,122.2	903.7	5.135	ES
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	12,204.7	7,473.4	1,127.4	906.3	5.100	SF
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	10,005.0	6,933.1	3,013.5	2,858.8	19.479	CC
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	10,100.0	6,933.2	3,015.0	2,857.7	19.172	ES
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	11,614.1	6,934.2	3,416.2	3,217.8	17.214	SF
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	8,784.3	7,286.7	3,000.2	2,855.4	20.712	CC
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	8,858.2	7,285.7	3,001.1	2,854.4	20.447	ES
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	10,500.0	7,265.4	3,456.1	3,265.6	18.143	SF
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	10,638.7	6,964.0	2,336.6	2,170.0	14.025	CC
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	10,700.0	6,963.9	2,337.4	2,169.1	13.891	ES
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	11,515.7	6,963.1	2,495.7	2,305.2	13.100	SF
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	10,869.2	7,497.8	1,014.5	840.9	5.845	CC
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	10,900.0	7,497.7	1,015.0	840.6	5.820	ES
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	11,023.6	7,497.2	1,026.2	848.5	5.776	SF
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	10,710.0	7,783.6	222.2	42.3	1.235	Level 2, CC, ES, SF
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	0.0	0.0	2,407.7			
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	100.0	85.4	2,407.7	2,407.5	10,000.000	ES
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	14,100.0	6,945.5	9,950.3	9,686.8	37.769	SF
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	0.0	0.0	2,430.4			
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	100.0	90.2	2,430.4	2,430.2	10,000.000	ES
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	12,600.0	7,124.0	9,923.9	9,695.0	43.347	SF
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	1,580.6	2,246.0	2,354.0	2,340.8	178.874	CC
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	1,673.2	2,315.7	2,354.7	2,340.5	166.203	ES

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

Summary

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SW NW SEC. 15 T5N R65W 6th P.M.						
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	13,400.0	7,095.3	9,969.9	9,724.6	40.648	SF
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	8,275.5	7,939.6	871.3	730.8	6.201	CC
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	8,300.0	7,935.3	871.6	730.4	6.174	ES
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	8,400.0	7,918.0	879.8	735.9	6.112	SF
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	8,041.4	7,708.9	2,235.4	2,095.2	15.940	CC
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	8,100.0	7,698.7	2,236.2	2,094.5	15.783	ES
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	8,956.7	7,509.3	2,408.5	2,245.7	14.792	SF
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	8,865.4	7,557.3	1,773.9	1,630.0	12.323	CC
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	8,900.0	7,552.7	1,774.2	1,629.4	12.248	ES
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	9,448.8	7,478.8	1,865.4	1,706.0	11.702	SF
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	8,069.5	7,170.4	275.5	163.0	2.449	CC
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	8,070.8	7,170.5	275.5	163.0	2.448	ES
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	8,100.0	7,170.7	277.2	163.9	2.447	SF
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	11,438.2	7,577.4	342.0	145.7	1.742	CC, ES, SF
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	13,998.3	7,786.1	1,690.1	1,387.6	5.586	CC
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	14,074.8	7,788.7	1,691.9	1,387.2	5.553	ES
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	14,271.6	7,795.2	1,712.1	1,402.0	5.521	SF
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	14,802.1	8,191.9	2,329.6	1,991.5	6.891	CC
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	14,862.2	8,199.0	2,330.3	1,990.7	6.862	ES
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	15,255.9	8,199.0	2,373.0	2,022.6	6.771	SF
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	12,699.7	7,735.1	377.2	133.6	1.548	CC
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	12,700.0	7,735.1	377.2	133.6	1.548	ES, SF
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	14,617.9	8,091.9	1,102.6	767.7	3.293	CC
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	14,665.3	8,094.3	1,103.6	767.4	3.283	ES
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	14,700.0	8,096.0	1,105.6	768.5	3.279	SF
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	119.8	113.4	1,725.6	1,725.4	7,946.407	CC, ES
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	12,600.0	6,600.0	9,940.4	9,781.1	62.415	SF
EXIST VERT FAY #1 - Wellbore #1 - Design #1	5,970.5	5,392.1	262.3	100.9	1.625	CC
EXIST VERT FAY #1 - Wellbore #1 - Design #1	6,000.0	5,418.2	262.7	100.6	1.620	ES
EXIST VERT FAY #1 - Wellbore #1 - Design #1	6,003.9	5,421.7	262.8	100.6	1.620	SF
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	770.8	726.7	1,239.2	1,223.0	76.198	CC
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	1,100.0	1,041.8	1,242.8	1,218.3	50.661	ES
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	7,934.7	6,826.0	3,751.2	3,534.2	17.291	SF
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	98.4	80.6	152.1	151.9	1,100.075	CC, ES
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	14,100.0	6,700.0	9,974.2	9,735.5	41.788	SF
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	98.6	99.6	99.3	99.2	531.921	CC
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	13,090.5	15,072.1	317.6	-138.1	0.697	Level 1, ES, SF
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	101.0	102.4	102.2	536.153	CC
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	196.8	197.8	102.8	102.2	166.168	ES
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	13,100.0	15,280.6	536.8	110.4	1.259	Level 3, SF
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	101.0	109.8	109.6	574.562	CC, ES
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	13,100.0	15,100.4	664.0	207.7	1.455	Level 3, SF
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	101.0	122.9	122.7	643.208	CC, ES
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	13,100.0	15,171.7	995.5	537.9	2.176	SF
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	101.0	139.4	139.2	729.855	CC, ES
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	13,188.9	15,409.8	1,181.1	727.2	2.602	SF
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	101.0	157.8	157.6	825.835	CC, ES
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	13,188.9	15,284.8	1,328.2	867.5	2.883	SF
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	101.0	175.4	175.2	917.855	CC, ES
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	13,200.0	15,420.3	1,659.8	1,198.9	3.601	SF
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	101.0	196.5	196.3	1,034.804	CC, ES
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	13,287.4	15,682.9	1,842.2	1,381.3	3.997	SF
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	101.0	216.0	215.8	1,130.475	CC, 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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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.						
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	13,300.0	15,616.6	1,996.3	1,531.7	4.297	SF
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	101.0	238.6	238.5	1,249.103	CC, ES
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	13,385.8	15,843.4	2,336.6	1,869.6	5.003	SF
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	101.0	259.1	258.9	1,356.183	CC, ES
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	13,400.0	16,129.6	2,508.7	2,042.8	5.384	SF
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	101.0	282.6	282.4	1,479.205	CC, ES
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	13,484.2	16,069.4	2,676.3	2,205.8	5.689	SF
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	101.0	304.4	304.2	1,593.185	CC, ES
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	13,582.6	16,281.8	3,019.9	2,546.6	6.381	SF
VT-GLENMERE 3-16-18 - ORIGINAL WELLBORE - PRC	100.0	100.0	216.4	216.2	1,146.316	CC, ES
VT-GLENMERE 3-16-18 - ORIGINAL WELLBORE - PRC	20,226.0	20,681.5	2,003.6	1,158.3	2.370	SF
VT-GLENMERE C1-16-18 - ORIGINAL WELLBORE - PF	100.0	100.0	241.8	241.6	1,280.468	CC, ES
VT-GLENMERE C1-16-18 - ORIGINAL WELLBORE - PF	20,226.0	20,854.6	2,176.4	1,334.4	2.585	SF
VT-LDS 1-16-18 - ORIGINAL WELLBORE - PROPOSAL	100.0	101.0	191.1	190.9	1,000.256	CC, ES
VT-LDS 1-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,226.0	20,531.2	1,672.1	828.1	1.981	SF
VT-LDS 2-16-18 - ORIGINAL WELLBORE - PROPOSAL	100.0	101.0	143.2	143.0	749.571	CC, ES
VT-LDS 2-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,226.0	20,454.9	1,344.2	502.4	1.597	SF
VT-LDS 3-16-18 - ORIGINAL WELLBORE - PROPOSAL	100.0	101.0	120.6	120.5	631.476	CC, ES
VT-LDS 3-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,226.0	20,392.6	1,012.7	172.1	1.205	Level 2, SF
VT-LDS 4-16-18 - ORIGINAL WELLBORE - PROPOSAL	100.0	100.0	73.2	73.0	387.886	CC
VT-LDS 4-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,226.0	20,280.7	663.0	-175.1	0.791	Level 1, ES, SF
VT-LDS 5-16-18 - ORIGINAL WELLBORE - PROPOSAL	100.0	101.0	47.9	47.7	250.745	CC
VT-LDS 5-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,226.0	20,294.0	331.5	-505.5	0.396	Level 1, ES, SF
VT-LDS C2-16-18 - ORIGINAL WELLBORE - PROPOSAL	100.0	100.0	168.5	168.3	892.635	CC, ES
VT-LDS C2-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,226.0	20,641.1	1,520.7	685.4	1.820	SF
VT-LDS C3-16-18 - ORIGINAL WELLBORE - PROPOSAL	100.0	101.0	95.8	95.6	501.489	CC
VT-LDS C3-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,226.0	20,502.9	846.3	29.3	1.036	Level 2, ES, SF
VT-LDS C4-16-18 - ORIGINAL WELLBORE - PROPOSAL	100.0	100.0	25.3	25.1	133.366	CC
VT-LDS C4-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,226.0	20,469.9	257.9	-307.4	0.456	Level 1, ES, SF

Offset Design													SW NW SEC. 15 T5N R65W 6th P.M. - ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1		Offset Site Error:		0.0 usft	
Survey Program: 0-INC															Offset Well Error:		0.0 usft	
Reference		Offset		Semi Major Axis			Distance							Warning				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor						
0.0	0.0	0.0	0.0	0.0	0.0	154.03	-2,391.7	1,164.9	2,660.6									
98.4	98.4	56.4	56.4	0.1	0.6	154.03	-2,391.7	1,164.9	2,660.3	2,659.6		0.69	3,877.407					
100.0	100.0	58.0	58.0	0.1	0.6	154.03	-2,391.7	1,164.9	2,660.3	2,659.6		0.70	3,776.483	CC				
196.8	196.8	154.8	154.8	0.3	2.3	-107.71	-2,391.7	1,164.9	2,660.8	2,658.1		2.63	1,011.804					
200.0	200.0	158.0	158.0	0.3	2.4	-107.71	-2,391.7	1,164.9	2,660.8	2,658.1		2.71	981.974					
295.3	295.1	253.1	253.1	0.5	4.5	-107.79	-2,391.7	1,164.9	2,662.3	2,657.3		5.01	531.233					
300.0	299.8	257.8	257.8	0.5	4.6	-107.79	-2,391.7	1,164.9	2,662.4	2,657.3		5.12	519.948	ES				
393.7	393.2	351.2	351.2	0.8	6.5	-107.91	-2,391.7	1,164.9	2,664.9	2,657.6		7.29	365.724					
400.0	399.5	357.5	357.5	0.8	6.6	-107.92	-2,391.7	1,164.9	2,665.1	2,657.6		7.43	358.646					
492.1	490.9	448.9	448.9	1.1	8.5	-108.08	-2,391.7	1,164.9	2,668.5	2,659.0		9.56	279.033					
500.0	498.7	456.7	456.7	1.1	8.6	-108.09	-2,391.7	1,164.9	2,668.9	2,659.1		9.74	273.874					
590.5	588.2	546.2	546.2	1.4	10.5	-108.29	-2,391.7	1,164.9	2,673.3	2,661.4		11.86	225.386					
600.0	597.5	555.5	555.5	1.5	10.6	-108.31	-2,391.7	1,164.9	2,673.8	2,661.7		12.08	221.326					
689.0	684.8	642.8	642.8	1.8	12.4	-108.55	-2,391.7	1,164.9	2,679.2	2,665.0		14.19	188.858					
700.0	695.6	653.6	653.6	1.9	12.6	-108.58	-2,391.7	1,164.9	2,680.0	2,665.5		14.45	185.514					

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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-MWD												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	78.64	891.9	4,438.6	4,527.3				
98.4	98.4	78.9	78.9	0.1	0.1	78.64	891.9	4,438.6	4,527.3	4,527.1	0.14	N/A	
100.0	100.0	80.5	80.5	0.1	0.1	78.64	891.9	4,438.6	4,527.3	4,527.1	0.15	N/A	
196.8	196.8	177.3	177.3	0.3	0.2	176.92	891.9	4,438.6	4,528.9	4,528.3	0.56	8,142.401	
200.0	200.0	180.5	180.5	0.3	0.2	176.92	891.9	4,438.6	4,529.0	4,528.4	0.57	7,941.566	
295.3	295.1	275.6	275.6	0.5	0.5	176.92	891.9	4,438.6	4,533.9	4,532.9	1.01	4,498.134	
300.0	299.8	280.3	280.3	0.5	0.5	176.92	891.9	4,438.6	4,534.2	4,533.2	1.03	4,405.378	
393.7	393.2	373.7	373.7	0.8	0.7	176.91	891.9	4,438.6	4,542.3	4,540.8	1.46	3,104.510	
400.0	399.5	380.0	380.0	0.8	0.7	176.91	891.9	4,438.6	4,542.9	4,541.4	1.49	3,045.035	
492.1	490.9	471.4	471.4	1.1	0.9	176.91	891.9	4,438.6	4,554.0	4,552.1	1.92	2,370.828	
500.0	498.7	479.2	479.2	1.1	0.9	176.91	891.9	4,438.6	4,555.1	4,553.1	1.96	2,327.486	
590.5	588.2	568.7	568.7	1.4	1.1	176.90	891.9	4,438.6	4,569.1	4,566.7	2.38	1,918.856	
600.0	597.5	578.0	578.0	1.5	1.1	176.90	891.9	4,438.6	4,570.7	4,568.3	2.42	1,884.933	
689.0	684.8	660.4	660.4	1.8	1.3	176.90	891.4	4,438.7	4,587.5	4,584.7	2.82	1,627.369	
700.0	695.6	670.3	670.3	1.9	1.3	176.90	891.2	4,438.7	4,589.8	4,587.0	2.87	1,601.386	
787.4	780.8	748.9	748.9	2.3	1.5	176.92	889.1	4,439.3	4,609.4	4,606.2	3.24	1,421.599	
800.0	793.1	760.2	760.2	2.3	1.5	176.92	888.6	4,439.4	4,612.5	4,609.2	3.30	1,399.718	
885.8	876.0	836.5	836.3	2.8	1.6	176.96	884.8	4,440.5	4,634.8	4,631.1	3.67	1,262.606	
900.0	889.6	849.0	848.8	2.9	1.7	176.97	884.0	4,440.7	4,638.7	4,635.0	3.73	1,242.699	
984.2	970.3	922.7	922.4	3.4	1.8	177.03	878.7	4,442.1	4,663.5	4,659.4	4.12	1,133.046	
1,000.0	985.3	936.4	936.0	3.5	1.8	177.04	877.6	4,442.4	4,668.4	4,664.2	4.19	1,114.770	
1,082.7	1,063.5	1,007.6	1,006.8	4.0	2.0	177.12	870.9	4,444.3	4,695.6	4,691.1	4.58	1,025.619	
1,100.0	1,079.8	1,022.3	1,021.5	4.1	2.0	177.13	869.3	4,444.7	4,701.6	4,697.0	4.66	1,008.731	
1,181.1	1,155.6	1,090.8	1,089.4	4.7	2.2	177.23	861.5	4,446.8	4,731.1	4,726.0	5.06	934.641	
1,200.0	1,173.2	1,106.6	1,105.1	4.9	2.3	177.25	859.5	4,447.4	4,738.3	4,733.1	5.15	919.591	
1,279.5	1,246.5	1,172.2	1,170.0	5.5	2.4	177.35	850.6	4,449.8	4,769.9	4,764.3	5.55	859.033	
1,300.0	1,265.2	1,188.9	1,186.5	5.7	2.5	177.38	848.1	4,450.5	4,778.4	4,772.7	5.67	843.391	
1,377.9	1,336.0	1,251.6	1,248.5	6.4	2.7	177.50	838.4	4,453.1	4,811.9	4,805.9	6.08	791.399	
1,400.0	1,355.8	1,269.1	1,265.7	6.6	2.7	177.53	835.4	4,453.9	4,821.8	4,815.6	6.20	777.868	
1,476.4	1,424.0	1,329.0	1,324.5	7.3	3.0	177.66	824.9	4,456.8	4,857.2	4,850.6	6.62	734.110	
1,500.0	1,444.9	1,347.2	1,342.4	7.5	3.0	177.70	821.6	4,457.7	4,868.6	4,861.8	6.75	721.527	
1,574.8	1,511.0	1,400.0	1,394.2	8.3	3.2	177.85	811.3	4,460.5	4,904.9	4,897.7	7.19	682.638	
1,600.0	1,533.2	1,423.7	1,417.3	8.5	3.3	177.93	806.5	4,461.8	4,917.1	4,909.7	7.36	668.099	
1,673.2	1,597.9	1,479.1	1,471.4	9.3	3.5	178.10	794.7	4,465.0	4,952.8	4,945.0	7.82	633.009	
1,700.0	1,621.5	1,500.0	1,491.7	9.5	3.6	178.17	790.0	4,466.3	4,965.9	4,957.9	8.00	620.956	
1,771.6	1,684.8	1,552.9	1,543.1	10.3	3.9	178.34	777.8	4,469.6	5,001.0	4,992.5	8.47	590.342	
1,800.0	1,709.8	1,574.0	1,563.5	10.6	4.0	178.42	772.7	4,471.0	5,014.9	5,006.2	8.66	579.059	
1,870.1	1,771.7	1,628.8	1,616.4	11.3	4.2	178.61	759.1	4,474.7	5,049.4	5,040.3	9.14	552.150	
1,900.0	1,798.1	1,653.8	1,640.6	11.6	4.3	178.70	752.8	4,476.4	5,064.2	5,054.8	9.36	540.814	
1,968.5	1,858.6	12,027.6	6,878.5	12.3	144.7	-174.40	-311.5	-548.1	5,044.7	5,009.5	35.25	143.097	
2,000.0	1,886.4	12,042.2	6,878.5	12.6	145.1	-174.42	-311.6	-562.8	5,016.8	4,981.4	35.40	141.704	
2,066.9	1,945.5	12,073.3	6,878.5	13.3	146.0	-174.46	-311.7	-593.9	4,957.6	4,921.9	35.72	138.781	
2,100.0	1,974.7	12,088.7	6,878.5	13.6	146.4	-174.48	-311.8	-609.3	4,928.3	4,892.5	35.88	137.356	
2,165.3	2,032.4	12,119.1	6,878.5	14.3	147.2	-174.52	-312.0	-639.7	4,870.5	4,834.3	36.19	134.572	
2,200.0	2,063.0	12,135.2	6,878.5	14.7	147.7	-174.54	-312.1	-655.8	4,839.8	4,803.5	36.36	133.115	
2,263.8	2,119.3	12,164.9	6,878.5	15.3	148.5	-174.58	-312.3	-685.4	4,783.4	4,746.7	36.66	130.466	
2,300.0	2,151.3	12,181.7	6,878.5	15.7	149.0	-174.61	-312.4	-702.3	4,751.3	4,714.5	36.84	128.981	
2,362.2	2,206.2	12,210.6	6,878.5	16.3	149.8	-174.65	-312.5	-731.2	4,696.3	4,659.2	37.14	126.461	
2,400.0	2,239.6	12,228.2	6,878.5	16.7	150.3	-174.67	-312.6	-748.8	4,662.9	4,625.5	37.32	124.949	
2,460.6	2,293.1	12,256.4	6,878.5	17.4	151.0	-174.72	-312.8	-776.9	4,609.2	4,571.6	37.61	122.552	
2,500.0	2,327.9	12,274.7	6,878.5	17.8	151.6	-174.74	-312.9	-795.3	4,574.4	4,536.6	37.80	121.015	
2,559.0	2,380.0	12,302.1	6,878.5	18.4	152.3	-174.79	-313.1	-822.7	4,522.1	4,484.0	38.08	118.738	

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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. - CARLSON J-15-16HN - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													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		
2,600.0	2,416.2	12,321.2	6,878.5	18.8	152.9	-174.82	-313.2	-841.8	4,485.9	4,447.6	38.28	117.178		
2,657.5	2,466.9	12,347.9	6,878.5	19.4	153.6	-174.86	-313.3	-868.5	4,435.0	4,396.4	38.56	115.014		
2,700.0	2,504.5	12,367.7	6,878.5	19.8	154.1	-174.89	-313.5	-888.2	4,397.4	4,358.6	38.77	113.432		
2,755.9	2,553.8	12,393.7	6,878.5	20.4	154.9	-174.94	-313.6	-914.2	4,347.9	4,308.9	39.04	111.377		
2,800.0	2,592.8	12,414.2	6,878.5	20.9	155.4	-174.97	-313.7	-934.7	4,308.9	4,269.6	39.25	109.776		
2,854.3	2,640.7	12,439.4	6,878.5	21.4	156.1	-175.02	-313.9	-960.0	4,260.8	4,221.3	39.52	107.825		
2,900.0	2,681.1	12,460.7	6,878.5	21.9	156.7	-175.06	-314.0	-981.2	4,220.4	4,180.7	39.74	106.205		
2,952.7	2,727.6	12,485.2	6,878.5	22.5	157.4	-175.10	-314.2	-1,005.8	4,173.7	4,133.7	40.00	104.355		
3,000.0	2,769.4	12,507.2	6,878.5	23.0	158.0	-175.14	-314.3	-1,027.7	4,131.9	4,091.7	40.23	102.717		
3,051.2	2,814.5	12,531.0	6,878.5	23.5	158.7	-175.19	-314.4	-1,051.5	4,086.6	4,046.2	40.48	100.962		
3,100.0	2,857.7	12,553.7	6,878.5	24.0	159.3	-175.23	-314.6	-1,074.2	4,043.4	4,002.7	40.72	99.308		
3,149.6	2,901.4	12,576.7	6,878.5	24.5	160.0	-175.28	-314.7	-1,097.3	3,999.6	3,958.6	40.96	97.646		
3,200.0	2,945.9	12,600.2	6,878.5	25.0	160.6	-175.33	-314.8	-1,120.7	3,955.0	3,913.7	41.21	95.976		
3,248.0	2,988.4	12,622.5	6,878.5	25.5	161.2	-175.37	-315.0	-1,143.1	3,912.5	3,871.0	41.45	94.401		
3,300.0	3,034.2	12,646.7	6,878.5	26.1	161.9	-175.43	-315.1	-1,167.2	3,866.5	3,824.8	41.70	92.717		
3,346.4	3,075.3	12,668.3	6,878.5	26.5	162.5	-175.47	-315.2	-1,188.8	3,825.4	3,783.5	41.93	91.227		
3,400.0	3,122.5	12,693.2	6,878.5	27.1	163.2	-175.53	-315.4	-1,213.7	3,778.0	3,735.8	42.20	89.528		
3,444.9	3,162.2	12,714.0	6,878.5	27.6	163.8	-175.58	-315.5	-1,234.6	3,738.3	3,695.9	42.42	88.120		
3,500.0	3,210.8	12,739.7	6,878.5	28.1	164.5	-175.64	-315.6	-1,260.2	3,689.5	3,646.8	42.70	86.408		
3,543.3	3,249.1	12,759.8	6,878.5	28.6	165.1	-175.68	-315.8	-1,280.3	3,651.2	3,608.3	42.92	85.077		
3,600.0	3,299.1	12,786.2	6,878.5	29.2	165.8	-175.75	-315.9	-1,306.7	3,601.1	3,557.9	43.20	83.353		
3,641.7	3,336.0	12,805.6	6,878.5	29.6	166.3	-175.80	-316.0	-1,326.1	3,564.2	3,520.7	43.41	82.097		
3,700.0	3,387.4	12,832.6	6,878.5	30.2	167.1	-175.87	-316.2	-1,353.2	3,512.6	3,468.9	43.71	80.360		
3,740.1	3,422.9	12,851.3	6,878.5	30.6	167.6	-175.92	-316.3	-1,371.9	3,477.1	3,433.2	43.92	79.176		
3,800.0	3,475.7	12,879.1	6,878.5	31.3	168.4	-175.99	-316.5	-1,399.7	3,424.1	3,379.9	44.22	77.428		
3,838.6	3,509.8	12,897.1	6,878.5	31.7	168.9	-176.04	-316.6	-1,417.6	3,390.0	3,345.6	44.42	76.312		
3,900.0	3,564.0	12,925.6	6,878.5	32.3	169.7	-176.12	-316.7	-1,446.2	3,335.7	3,290.9	44.74	74.553		
3,937.0	3,596.7	12,942.8	6,878.5	32.7	170.2	-176.17	-316.8	-1,463.4	3,302.9	3,258.0	44.94	73.503		
4,000.0	3,652.3	12,972.1	6,878.5	33.3	171.0	-176.26	-317.0	-1,492.7	3,247.2	3,202.0	45.27	71.732		
4,035.4	3,683.6	12,988.6	6,878.5	33.7	171.5	-176.31	-317.1	-1,509.2	3,215.9	3,170.4	45.46	70.746		
4,100.0	3,740.6	13,018.6	6,878.5	34.4	172.3	-176.41	-317.3	-1,539.2	3,158.8	3,113.0	45.80	68.965		
4,133.8	3,770.5	13,034.4	6,878.5	34.7	172.7	-176.46	-317.4	-1,554.9	3,128.8	3,082.8	45.99	68.039		
4,200.0	3,828.9	13,065.1	6,878.5	35.4	173.6	-176.56	-317.6	-1,585.7	3,070.3	3,024.0	46.35	66.247		
4,232.3	3,857.4	13,080.1	6,878.5	35.8	174.0	-176.62	-317.6	-1,600.7	3,041.8	2,995.3	46.52	65.381		
4,300.0	3,917.2	13,111.6	6,878.5	36.5	174.9	-176.73	-317.8	-1,632.2	2,981.9	2,935.0	46.90	63.578		
4,330.7	3,944.3	13,125.9	6,878.5	36.8	175.3	-176.78	-317.9	-1,646.5	2,954.7	2,907.7	47.07	62.767		
4,400.0	4,005.5	13,158.1	6,878.5	37.5	176.2	-176.90	-318.1	-1,678.7	2,893.5	2,846.0	47.47	60.953		
4,429.1	4,031.2	13,171.7	6,878.5	37.8	176.6	-176.95	-318.2	-1,692.2	2,867.7	2,820.1	47.64	60.197		
4,500.0	4,093.8	13,204.6	6,878.5	38.5	177.5	-177.09	-318.4	-1,725.2	2,805.0	2,757.0	48.05	58.373		
4,527.5	4,118.1	13,217.4	6,878.5	38.8	177.8	-177.14	-318.4	-1,738.0	2,780.7	2,732.4	48.22	57.669		
4,600.0	4,182.1	13,251.1	6,878.5	39.6	178.8	-177.28	-318.6	-1,771.7	2,716.6	2,667.9	48.66	55.833		
4,626.0	4,205.0	13,263.2	6,878.5	39.8	179.1	-177.33	-318.7	-1,783.7	2,693.6	2,644.8	48.82	55.179		
4,700.0	4,270.4	13,297.6	6,878.5	40.6	180.1	-177.49	-318.9	-1,818.2	2,628.2	2,578.9	49.28	53.331		
4,724.4	4,291.9	13,309.0	6,878.5	40.9	180.4	-177.54	-319.0	-1,829.5	2,606.6	2,557.2	49.44	52.727		
4,800.0	4,358.7	13,344.1	6,878.5	41.7	181.4	-177.72	-319.2	-1,864.7	2,539.8	2,489.9	49.93	50.867		
4,822.8	4,378.8	13,354.7	6,878.5	41.9	181.7	-177.77	-319.3	-1,875.3	2,519.6	2,469.5	50.08	50.309		
4,900.0	4,447.0	13,390.6	6,878.5	42.7	182.7	-177.96	-319.5	-1,911.2	2,451.4	2,400.8	50.61	48.437		
4,921.2	4,465.7	13,400.5	6,878.5	42.9	182.9	-178.01	-319.5	-1,921.0	2,432.6	2,381.8	50.76	47.924		
5,000.0	4,535.3	13,437.1	6,878.5	43.7	184.0	-178.21	-319.7	-1,957.7	2,363.0	2,311.7	51.33	46.039		
5,019.7	4,552.6	13,446.3	6,878.5	43.9	184.2	-178.27	-319.8	-1,966.8	2,345.6	2,294.1	51.47	45.571		
5,100.0	4,623.5	13,483.6	6,878.5	44.8	185.3	-178.49	-320.0	-2,004.1	2,274.6	2,222.5	52.09	43.671		
5,118.1	4,639.5	13,492.0	6,878.5	45.0	185.5	-178.54	-320.1	-2,012.6	2,258.6	2,206.4	52.23	43.246		

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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. - CARLSON J-15-16HN - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												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	
5,200.0	4,711.8	13,530.1	6,878.5	45.8	186.6	-178.79	-320.3	-2,050.6	2,186.3	2,133.4	52.89	41.332	
5,216.5	4,726.4	13,537.8	6,878.5	46.0	186.8	-178.84	-320.3	-2,058.3	2,171.7	2,118.6	53.03	40.949	
5,300.0	4,800.1	13,576.6	6,878.5	46.9	187.9	-179.11	-320.6	-2,097.1	2,097.9	2,044.2	53.76	39.020	
5,314.9	4,813.3	13,583.5	6,878.5	47.0	188.1	-179.16	-320.6	-2,104.1	2,084.7	2,030.8	53.90	38.677	
5,400.0	4,888.4	13,623.1	6,878.5	47.9	189.2	-179.47	-320.8	-2,143.6	2,009.6	1,954.9	54.71	36.733	
5,413.4	4,900.2	13,629.3	6,878.5	48.0	189.3	-179.52	-320.9	-2,149.9	1,997.8	1,942.9	54.84	36.429	
5,500.0	4,976.7	13,669.6	6,878.5	48.9	190.5	-179.85	-321.1	-2,190.1	1,921.3	1,865.5	55.74	34.470	
5,511.8	4,987.1	13,675.1	6,878.5	49.1	190.6	-179.90	-321.1	-2,195.6	1,910.9	1,855.0	55.86	34.205	
5,600.0	5,065.0	13,716.1	6,878.5	50.0	191.8	-179.73	-321.4	-2,236.6	1,833.0	1,776.1	56.87	32.231	
5,610.2	5,074.1	13,720.8	6,878.5	50.1	191.9	-179.68	-321.4	-2,241.4	1,824.0	1,767.0	56.99	32.003	
5,700.0	5,153.3	13,762.6	6,878.5	51.0	193.1	-179.27	-321.7	-2,283.1	1,744.7	1,686.6	58.13	30.014	
5,708.6	5,161.0	13,766.6	6,878.5	51.1	193.2	-179.22	-321.7	-2,287.1	1,737.1	1,678.8	58.25	29.823	
5,800.0	5,241.6	13,809.1	6,878.5	52.1	194.4	-178.76	-321.9	-2,329.6	1,656.5	1,596.9	59.54	27.820	
5,807.1	5,247.9	13,812.4	6,878.5	52.1	194.5	-178.72	-321.9	-2,332.9	1,650.2	1,590.6	59.65	27.665	
5,900.0	5,329.9	13,855.6	6,878.5	53.1	195.7	-178.19	-322.2	-2,376.1	1,568.3	1,507.1	61.14	25.650	
5,905.5	5,334.8	13,858.1	6,878.5	53.2	195.7	-178.16	-322.2	-2,378.7	1,563.4	1,502.2	61.24	25.531	
6,000.0	5,418.2	13,902.1	6,878.5	54.1	197.0	-177.56	-322.5	-2,422.6	1,480.1	1,417.1	62.97	23.506	
6,003.9	5,421.7	13,903.9	6,878.5	54.2	197.0	-177.53	-322.5	-2,424.4	1,476.6	1,413.6	63.04	23.423	
6,100.0	5,506.5	13,948.6	6,878.5	55.2	198.3	-176.85	-322.7	-2,469.1	1,392.0	1,326.9	65.07	21.392	
6,102.3	5,508.6	13,949.7	6,878.5	55.2	198.3	-176.83	-322.8	-2,470.2	1,389.9	1,324.8	65.12	21.343	
6,200.0	5,594.8	13,995.1	6,878.5	56.2	199.6	-176.05	-323.0	-2,515.6	1,303.9	1,236.4	67.52	19.312	
6,200.8	5,595.5	13,995.4	6,878.5	56.2	199.6	-176.04	-323.0	-2,516.0	1,303.2	1,235.7	67.54	19.296	
6,299.2	5,682.4	14,041.2	6,878.5	57.3	200.8	-175.14	-323.3	-2,561.7	1,216.6	1,146.3	70.37	17.289	
6,300.0	5,683.1	14,041.6	6,878.5	57.3	200.9	-175.14	-323.3	-2,562.1	1,215.9	1,145.5	70.39	17.273	
6,397.6	5,769.3	14,087.0	6,878.5	58.3	202.1	-174.12	-323.6	-2,607.5	1,130.1	1,056.4	73.72	15.330	
6,400.0	5,771.4	14,088.1	6,878.5	58.3	202.2	-174.09	-323.6	-2,608.6	1,128.0	1,054.2	73.81	15.284	
6,496.0	5,856.2	14,132.7	6,878.5	59.3	203.4	-172.93	-323.8	-2,653.3	1,043.7	966.0	77.72	13.429	
6,500.0	5,859.7	14,134.6	6,878.5	59.3	203.5	-172.87	-323.8	-2,655.1	1,040.2	962.3	77.89	13.354	
6,525.7	5,882.1	14,147.0	6,878.5	59.6	203.8	-173.08	-323.9	-2,667.5	1,017.9	939.8	78.10	13.034	
6,594.5	5,941.3	14,181.6	6,878.5	60.4	204.8	-172.13	-324.1	-2,702.2	959.2	877.8	81.37	11.788	
6,600.0	5,946.1	14,184.4	6,878.5	60.5	204.8	-172.05	-324.1	-2,705.0	954.5	872.8	81.65	11.690	
6,692.9	6,026.1	14,231.2	6,878.5	61.5	206.2	-170.56	-324.4	-2,751.8	875.3	788.3	86.92	10.070	
6,700.0	6,032.2	14,234.8	6,878.5	61.6	206.3	-170.43	-324.4	-2,755.3	869.2	781.8	87.37	9.949	
6,791.3	6,110.8	14,280.8	6,878.5	62.7	207.5	-168.68	-324.7	-2,801.3	791.6	697.8	93.77	8.442	
6,800.0	6,118.3	14,285.2	6,878.5	62.8	207.7	-168.50	-324.7	-2,805.7	784.2	689.7	94.45	8.303	
6,889.7	6,195.5	14,330.4	6,878.5	63.8	208.9	-166.41	-325.0	-2,850.9	708.2	605.9	102.32	6.921	
6,900.0	6,204.4	14,335.5	6,878.5	63.9	209.1	-166.14	-325.0	-2,856.1	699.5	596.2	103.33	6.770	
6,988.2	6,280.3	14,380.0	6,878.5	64.9	210.3	-163.61	-325.3	-2,900.5	625.2	512.1	113.14	5.526	
7,000.0	6,290.5	14,385.9	6,878.5	65.0	210.5	-163.23	-325.3	-2,906.4	615.3	500.7	114.62	5.368	
7,086.6	6,365.0	14,429.5	6,878.5	66.0	211.7	-160.09	-325.6	-2,950.1	543.0	416.0	126.97	4.276	
7,100.0	6,376.6	14,436.3	6,878.5	66.2	211.9	-159.54	-325.6	-2,956.8	531.8	402.7	129.13	4.118	
7,185.0	6,449.8	14,479.1	6,878.5	67.1	213.1	-155.57	-325.9	-2,999.6	461.7	316.9	144.80	3.188	
7,200.0	6,462.7	14,486.7	6,878.5	67.3	213.3	-154.78	-325.9	-3,007.2	449.4	301.5	147.94	3.038	
7,283.4	6,534.5	14,528.7	6,878.5	68.3	214.5	-149.66	-326.2	-3,049.2	382.0	214.2	167.80	2.277	
7,300.0	6,548.8	14,537.0	6,878.5	68.5	214.7	-148.49	-326.2	-3,057.5	368.8	196.6	172.25	2.141	
7,336.6	6,580.2	14,555.4	6,878.5	68.9	215.2	-145.70	-326.3	-3,076.0	340.1	157.4	182.71	1.861	
7,350.0	6,591.7	14,562.3	6,878.5	69.0	215.4	-145.37	-326.4	-3,082.9	329.7	146.9	182.78	1.804	
7,381.9	6,618.3	14,579.8	6,878.5	69.4	215.9	-144.36	-326.5	-3,100.3	306.0	121.9	184.19	1.662	
7,400.0	6,633.0	14,590.4	6,878.5	69.7	216.2	-143.65	-326.5	-3,110.9	293.2	107.5	185.72	1.579	
7,450.0	6,671.7	14,621.9	6,878.5	70.4	217.1	-141.18	-326.7	-3,142.4	260.3	67.8	192.50	1.352 Level 3	
7,480.3	6,693.7	14,642.6	6,878.5	70.9	217.7	-139.32	-326.8	-3,163.1	242.3	43.9	198.32	1.222 Level 2	
7,500.0	6,707.5	14,656.6	6,878.5	71.2	218.1	-137.95	-326.9	-3,177.2	231.4	28.7	202.71	1.141 Level 2	

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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. - CARLSON J-15-16HN - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												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
7,550.0	6,740.1	14,694.4	6,878.5	72.1	219.1	133.95	-327.1	-3,214.9	206.9	-8.9	215.81	0.959	Level 1
7,578.7	6,757.4	14,717.4	6,878.5	72.7	219.8	131.34	-327.3	-3,237.9	194.9	-29.4	224.35	0.869	Level 1
7,600.0	6,769.4	14,734.9	6,878.5	73.1	220.2	129.27	-327.4	-3,255.4	187.1	-43.9	230.98	0.810	Level 1
7,650.0	6,795.0	14,777.8	6,878.5	74.2	221.4	124.07	-327.6	-3,298.3	171.9	-75.1	247.01	0.696	Level 1
7,677.1	6,807.3	14,802.0	6,878.5	74.8	222.1	121.14	-327.8	-3,322.5	165.5	-90.1	255.55	0.648	Level 1
7,700.0	6,816.8	14,822.7	6,878.5	75.3	222.7	118.68	-327.9	-3,343.3	161.0	-101.4	262.39	0.614	Level 1
7,750.0	6,834.6	14,869.4	6,878.5	76.5	224.0	113.52	-328.2	-3,390.0	153.7	-122.0	275.74	0.557	Level 1
7,775.6	6,842.1	14,893.9	6,878.5	77.1	224.7	111.13	-328.3	-3,414.4	151.1	-130.4	281.49	0.537	Level 1
7,795.0	6,847.1	14,901.4	6,878.5	77.5	224.9	110.46	-328.4	-3,421.9	150.0	-133.4	283.36	0.529	Level 1, CC, SF
7,800.0	6,848.3	14,901.4	6,878.5	77.6	224.9	110.44	-328.4	-3,421.9	150.0	-133.5	283.53	0.529	Level 1, ES
7,850.0	6,857.8	14,901.4	6,878.5	78.9	224.9	109.32	-328.4	-3,421.9	160.4	-126.4	286.82	0.559	Level 1
7,874.0	6,860.8	14,901.4	6,878.5	79.4	224.9	108.17	-328.4	-3,421.9	170.7	-118.6	289.34	0.590	Level 1
7,900.0	6,863.0	14,901.4	6,878.5	80.1	224.9	106.47	-328.4	-3,421.9	185.1	-107.5	292.60	0.632	Level 1
7,934.7	6,864.0	14,901.4	6,878.5	80.9	224.9	103.44	-328.4	-3,421.9	208.0	-89.5	297.42	0.699	Level 1
7,972.4	6,864.0	14,901.4	6,878.5	81.8	224.9	103.44	-328.4	-3,421.9	236.3	-62.0	298.33	0.792	Level 1
8,000.0	6,864.0	14,901.4	6,878.5	82.5	224.9	103.44	-328.4	-3,421.9	258.5	-40.5	298.99	0.865	Level 1
8,070.8	6,864.0	14,901.4	6,878.5	84.2	224.9	103.44	-328.4	-3,421.9	319.5	18.8	300.70	1.062	Level 2
8,100.0	6,864.0	14,901.4	6,878.5	85.0	224.9	103.44	-328.4	-3,421.9	345.6	44.2	301.40	1.147	Level 2
8,169.3	6,864.0	14,901.4	6,878.5	86.7	224.9	103.44	-328.4	-3,421.9	409.5	106.4	303.09	1.351	Level 3
8,200.0	6,864.0	14,901.4	6,878.5	87.4	224.9	103.44	-328.4	-3,421.9	438.3	134.5	303.84	1.443	Level 3
8,267.7	6,864.0	14,901.4	6,878.5	89.1	224.9	103.44	-328.4	-3,421.9	502.6	197.1	305.50	1.645	
8,300.0	6,864.0	14,901.4	6,878.5	89.9	224.9	103.44	-328.4	-3,421.9	533.6	227.3	306.29	1.742	
8,366.1	6,864.0	14,901.4	6,878.5	91.6	224.9	103.44	-328.4	-3,421.9	597.5	289.6	307.92	1.940	
8,400.0	6,864.0	14,901.4	6,878.5	92.4	224.9	103.44	-328.4	-3,421.9	630.4	321.6	308.76	2.042	
8,464.5	6,864.0	14,901.4	6,878.5	94.1	224.9	103.44	-328.4	-3,421.9	693.3	383.0	310.36	2.234	
8,500.0	6,864.0	14,901.4	6,878.5	95.0	224.9	103.44	-328.4	-3,421.9	728.0	416.8	311.24	2.339	
8,563.0	6,864.0	14,901.4	6,878.5	96.6	224.9	103.44	-328.4	-3,421.9	789.8	477.0	312.82	2.525	
8,600.0	6,864.0	14,901.4	6,878.5	97.5	224.9	103.44	-328.4	-3,421.9	826.2	512.5	313.74	2.633	
8,661.4	6,864.0	14,901.4	6,878.5	99.1	224.9	103.44	-328.4	-3,421.9	886.7	571.4	315.28	2.812	
8,700.0	6,864.0	14,901.4	6,878.5	100.1	224.9	103.44	-328.4	-3,421.9	924.8	608.6	316.25	2.924	
8,759.8	6,864.0	14,901.4	6,878.5	101.6	224.9	103.44	-328.4	-3,421.9	983.9	666.2	317.76	3.096	
8,800.0	6,864.0	14,901.4	6,878.5	102.6	224.9	103.44	-328.4	-3,421.9	1,023.7	704.9	318.78	3.211	
8,858.2	6,864.0	14,901.4	6,878.5	104.2	224.9	103.44	-328.4	-3,421.9	1,081.4	761.1	320.25	3.377	
8,900.0	6,864.0	14,901.4	6,878.5	105.2	224.9	103.44	-328.4	-3,421.9	1,122.7	801.4	321.31	3.494	
8,956.7	6,864.0	14,901.4	6,878.5	106.7	224.9	103.44	-328.4	-3,421.9	1,179.0	856.2	322.75	3.653	
9,000.0	6,864.0	14,901.4	6,878.5	107.8	224.9	103.44	-328.4	-3,421.9	1,222.0	898.1	323.86	3.773	
9,055.1	6,864.0	14,901.4	6,878.5	109.3	224.9	103.44	-328.4	-3,421.9	1,276.7	951.4	325.26	3.925	
9,100.0	6,864.0	14,901.4	6,878.5	110.4	224.9	103.44	-328.4	-3,421.9	1,321.3	994.9	326.41	4.048	
9,153.5	6,864.0	14,901.4	6,878.5	111.8	224.9	103.44	-328.4	-3,421.9	1,374.5	1,046.7	327.78	4.193	
9,200.0	6,864.0	14,901.4	6,878.5	113.1	224.9	103.44	-328.4	-3,421.9	1,420.7	1,091.7	328.97	4.319	
9,251.9	6,864.0	14,901.4	6,878.5	114.4	224.9	103.44	-328.4	-3,421.9	1,472.4	1,142.1	330.31	4.458	
9,300.0	6,864.0	14,901.4	6,878.5	115.7	224.9	103.44	-328.4	-3,421.9	1,520.2	1,188.7	331.55	4.585	
9,350.4	6,864.0	14,901.4	6,878.5	117.0	224.9	103.44	-328.4	-3,421.9	1,570.4	1,237.5	332.85	4.718	
9,400.0	6,864.0	14,901.4	6,878.5	118.3	224.9	103.44	-328.4	-3,421.9	1,619.8	1,285.7	334.13	4.848	
9,448.8	6,864.0	14,901.4	6,878.5	119.6	224.9	103.44	-328.4	-3,421.9	1,668.4	1,333.0	335.39	4.975	
9,500.0	6,864.0	14,901.4	6,878.5	121.0	224.9	103.44	-328.4	-3,421.9	1,719.4	1,382.7	336.71	5.106	
9,547.2	6,864.0	14,901.4	6,878.5	122.2	224.9	103.44	-328.4	-3,421.9	1,766.5	1,428.5	337.94	5.227	
9,600.0	6,864.0	14,901.4	6,878.5	123.6	224.9	103.44	-328.4	-3,421.9	1,819.1	1,479.8	339.31	5.361	
9,645.6	6,864.0	14,901.4	6,878.5	124.8	224.9	103.44	-328.4	-3,421.9	1,864.6	1,524.1	340.49	5.476	
9,700.0	6,864.0	14,901.4	6,878.5	126.3	224.9	103.44	-328.4	-3,421.9	1,918.8	1,576.9	341.90	5.612	
9,744.1	6,864.0	14,901.4	6,878.5	127.4	224.9	103.44	-328.4	-3,421.9	1,962.7	1,619.7	343.05	5.721	
9,800.0	6,864.0	14,901.4	6,878.5	128.9	224.9	103.44	-328.4	-3,421.9	2,018.5	1,674.0	344.51	5.859	

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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. - CARLSON J-15-16HN - Wellbore #1 - Design #1													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													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		
9,842.5	6,864.0	14,901.4	6,878.5	130.1	224.9	103.44	-328.4	-3,421.9	2,060.9	1,715.3	345.62	5.963		
9,900.0	6,864.0	14,901.4	6,878.5	131.6	224.9	103.44	-328.4	-3,421.9	2,118.2	1,771.1	347.12	6.102		
9,940.9	6,864.0	14,901.4	6,878.5	132.7	224.9	103.44	-328.4	-3,421.9	2,159.1	1,810.9	348.19	6.201		
10,000.0	6,864.0	14,901.4	6,878.5	134.3	224.9	103.44	-328.4	-3,421.9	2,218.0	1,868.3	349.74	6.342		
10,039.3	6,864.0	14,901.4	6,878.5	135.3	224.9	103.44	-328.4	-3,421.9	2,257.3	1,906.5	350.77	6.435		
10,100.0	6,864.0	14,901.4	6,878.5	136.9	224.9	103.44	-328.4	-3,421.9	2,317.8	1,965.4	352.36	6.578		
10,137.8	6,864.0	14,901.4	6,878.5	138.0	224.9	103.44	-328.4	-3,421.9	2,355.5	2,002.1	353.35	6.666		
10,200.0	6,864.0	14,901.4	6,878.5	139.6	224.9	103.44	-328.4	-3,421.9	2,417.6	2,062.6	354.98	6.810		
10,236.2	6,864.0	14,901.4	6,878.5	140.6	224.9	103.44	-328.4	-3,421.9	2,453.7	2,097.8	355.94	6.894		
10,300.0	6,864.0	14,901.4	6,878.5	142.3	224.9	103.44	-328.4	-3,421.9	2,517.4	2,159.8	357.61	7.039		
10,334.6	6,864.0	14,901.4	6,878.5	143.3	224.9	103.44	-328.4	-3,421.9	2,552.0	2,193.5	358.53	7.118		
10,400.0	6,864.0	14,901.4	6,878.5	145.0	224.9	103.44	-328.4	-3,421.9	2,617.3	2,257.0	360.25	7.265		
10,433.0	6,864.0	14,901.4	6,878.5	145.9	224.9	103.44	-328.4	-3,421.9	2,650.3	2,289.1	361.12	7.339		
10,500.0	6,864.0	14,901.4	6,878.5	147.7	224.9	103.44	-328.4	-3,421.9	2,717.1	2,354.2	362.89	7.487		
10,531.5	6,864.0	14,901.4	6,878.5	148.6	224.9	103.44	-328.4	-3,421.9	2,748.5	2,384.8	363.72	7.557		
10,600.0	6,864.0	14,901.4	6,878.5	150.4	224.9	103.44	-328.4	-3,421.9	2,817.0	2,451.4	365.53	7.707		
10,629.9	6,864.0	14,901.4	6,878.5	151.2	224.9	103.44	-328.4	-3,421.9	2,846.8	2,480.5	366.32	7.771		
10,700.0	6,864.0	14,901.4	6,878.5	153.1	224.9	103.44	-328.4	-3,421.9	2,916.8	2,548.7	368.17	7.922		
10,728.3	6,864.0	14,901.4	6,878.5	153.9	224.9	103.44	-328.4	-3,421.9	2,945.1	2,576.2	368.92	7.983		
10,800.0	6,864.0	14,901.4	6,878.5	155.8	224.9	103.44	-328.4	-3,421.9	3,016.7	2,645.9	370.82	8.135		
10,826.7	6,864.0	14,901.4	6,878.5	156.6	224.9	103.44	-328.4	-3,421.9	3,043.4	2,671.9	371.53	8.192		
10,900.0	6,864.0	14,901.4	6,878.5	158.6	224.9	103.44	-328.4	-3,421.9	3,116.6	2,743.1	373.48	8.345		
10,925.2	6,864.0	14,901.4	6,878.5	159.2	224.9	103.44	-328.4	-3,421.9	3,141.8	2,767.6	374.14	8.397		
11,000.0	6,864.0	14,901.4	6,878.5	161.3	224.9	103.44	-328.4	-3,421.9	3,216.5	2,840.4	376.13	8.552		
11,023.6	6,864.0	14,901.4	6,878.5	161.9	224.9	103.44	-328.4	-3,421.9	3,240.1	2,863.3	376.76	8.600		
11,100.0	6,864.0	14,901.4	6,878.5	164.0	224.9	103.44	-328.4	-3,421.9	3,316.4	2,937.6	378.79	8.755		
11,122.0	6,864.0	14,901.4	6,878.5	164.6	224.9	103.44	-328.4	-3,421.9	3,338.4	2,959.0	379.37	8.800		
11,200.0	6,864.0	14,901.4	6,878.5	166.7	224.9	103.44	-328.4	-3,421.9	3,416.3	3,034.9	381.45	8.956		
11,220.4	6,864.0	14,901.4	6,878.5	167.3	224.9	103.44	-328.4	-3,421.9	3,436.7	3,054.7	381.99	8.997		
11,300.0	6,864.0	14,901.4	6,878.5	169.4	224.9	103.44	-328.4	-3,421.9	3,516.2	3,132.1	384.11	9.154		
11,318.9	6,864.0	14,901.4	6,878.5	170.0	224.9	103.44	-328.4	-3,421.9	3,535.1	3,150.5	384.61	9.191		
11,400.0	6,864.0	14,901.4	6,878.5	172.2	224.9	103.44	-328.4	-3,421.9	3,616.1	3,229.4	386.78	9.349		
11,417.3	6,864.0	14,901.4	6,878.5	172.7	224.9	103.44	-328.4	-3,421.9	3,633.4	3,246.2	387.24	9.383		
11,500.0	6,864.0	14,901.4	6,878.5	174.9	224.9	103.44	-328.4	-3,421.9	3,716.1	3,326.6	389.44	9.542		
11,515.7	6,864.0	14,901.4	6,878.5	175.3	224.9	103.44	-328.4	-3,421.9	3,731.8	3,341.9	389.86	9.572		
11,600.0	6,864.0	14,901.4	6,878.5	177.6	224.9	103.44	-328.4	-3,421.9	3,816.0	3,423.9	392.11	9.732		
11,614.1	6,864.0	14,901.4	6,878.5	178.0	224.9	103.44	-328.4	-3,421.9	3,830.1	3,437.6	392.49	9.758		
11,700.0	6,864.0	14,901.4	6,878.5	180.4	224.9	103.44	-328.4	-3,421.9	3,915.9	3,521.1	394.79	9.919		
11,712.6	6,864.0	14,901.4	6,878.5	180.7	224.9	103.44	-328.4	-3,421.9	3,928.5	3,533.4	395.12	9.942		
11,800.0	6,864.0	14,901.4	6,878.5	183.1	224.9	103.44	-328.4	-3,421.9	4,015.8	3,618.4	397.46	10.104		
11,811.0	6,864.0	14,901.4	6,878.5	183.4	224.9	103.44	-328.4	-3,421.9	4,026.8	3,629.1	397.75	10.124		
11,900.0	6,864.0	14,901.4	6,878.5	185.9	224.9	103.44	-328.4	-3,421.9	4,115.8	3,715.6	400.14	10.286		
11,909.4	6,864.0	14,901.4	6,878.5	186.1	224.9	103.44	-328.4	-3,421.9	4,125.2	3,724.8	400.39	10.303		
12,000.0	6,864.0	14,901.4	6,878.5	188.6	224.9	103.44	-328.4	-3,421.9	4,215.7	3,812.9	402.81	10.466		
12,007.8	6,864.0	14,901.4	6,878.5	188.8	224.9	103.44	-328.4	-3,421.9	4,223.6	3,820.5	403.02	10.480		
12,100.0	6,864.0	14,901.4	6,878.5	191.4	224.9	103.44	-328.4	-3,421.9	4,315.7	3,910.2	405.49	10.643		
12,106.3	6,864.0	14,901.4	6,878.5	191.5	224.9	103.44	-328.4	-3,421.9	4,321.9	3,916.3	405.66	10.654		
12,200.0	6,864.0	14,901.4	6,878.5	194.1	224.9	103.44	-328.4	-3,421.9	4,415.6	4,007.4	408.17	10.818		
12,204.7	6,864.0	14,901.4	6,878.5	194.2	224.9	103.44	-328.4	-3,421.9	4,420.3	4,012.0	408.30	10.826		
12,300.0	6,864.0	14,901.4	6,878.5	196.9	224.9	103.44	-328.4	-3,421.9	4,515.5	4,104.7	410.86	10.991		
12,303.1	6,864.0	14,901.4	6,878.5	196.9	224.9	103.44	-328.4	-3,421.9	4,518.7	4,107.7	410.94	10.996		
12,400.0	6,864.0	14,901.4	6,878.5	199.6	224.9	103.44	-328.4	-3,421.9	4,615.5	4,202.0	413.54	11.161		

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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-MWD												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	
12,401.5	6,864.0	14,901.4	6,878.5	199.6	224.9	103.44	-328.4	-3,421.9	4,617.0	4,203.5	413.58	11.164	
12,500.0	6,864.0	14,901.4	6,878.5	202.4	224.9	103.44	-328.4	-3,421.9	4,715.4	4,299.2	416.23	11.329	
12,598.4	6,864.0	14,901.4	6,878.5	205.1	224.9	103.44	-328.4	-3,421.9	4,813.8	4,394.9	418.87	11.492	
12,600.0	6,864.0	14,901.4	6,878.5	205.1	224.9	103.44	-328.4	-3,421.9	4,815.4	4,396.5	418.91	11.495	
12,696.8	6,864.0	14,901.4	6,878.5	207.8	224.9	103.44	-328.4	-3,421.9	4,912.2	4,490.7	421.52	11.654	
12,700.0	6,864.0	14,901.4	6,878.5	207.9	224.9	103.44	-328.4	-3,421.9	4,915.4	4,493.7	421.60	11.659	
12,795.2	6,864.0	14,901.4	6,878.5	210.5	224.9	103.44	-328.4	-3,421.9	5,010.6	4,586.4	424.17	11.813	
12,800.0	6,864.0	14,901.4	6,878.5	210.6	224.9	103.44	-328.4	-3,421.9	5,015.3	4,591.0	424.29	11.820	
12,893.7	6,864.0	14,901.4	6,878.5	213.2	224.9	103.44	-328.4	-3,421.9	5,108.9	4,682.1	426.81	11.970	
12,900.0	6,864.0	14,901.4	6,878.5	213.4	224.9	103.44	-328.4	-3,421.9	5,115.3	4,688.3	426.98	11.980	
12,992.1	6,864.0	14,901.4	6,878.5	215.9	224.9	103.44	-328.4	-3,421.9	5,207.3	4,777.9	429.46	12.125	
13,000.0	6,864.0	14,901.4	6,878.5	216.1	224.9	103.44	-328.4	-3,421.9	5,215.2	4,785.5	429.68	12.138	
13,090.5	6,864.0	14,901.4	6,878.5	218.6	224.9	103.44	-328.4	-3,421.9	5,305.7	4,873.6	432.12	12.278	
13,100.0	6,864.0	14,901.4	6,878.5	218.9	224.9	103.44	-328.4	-3,421.9	5,315.2	4,882.8	432.37	12.293	
13,188.9	6,864.0	14,901.4	6,878.5	221.4	224.9	103.44	-328.4	-3,421.9	5,404.1	4,969.3	434.77	12.430	
13,200.0	6,864.0	14,901.4	6,878.5	221.7	224.9	103.44	-328.4	-3,421.9	5,415.1	4,980.1	435.07	12.447	
13,287.4	6,864.0	14,901.4	6,878.5	224.1	224.9	103.44	-328.4	-3,421.9	5,502.5	5,065.1	437.42	12.579	
13,300.0	6,864.0	14,901.4	6,878.5	224.4	224.9	103.44	-328.4	-3,421.9	5,515.1	5,077.4	437.76	12.598	
13,385.8	6,864.0	14,901.4	6,878.5	226.8	224.9	103.44	-328.4	-3,421.9	5,600.9	5,160.8	440.08	12.727	
13,400.0	6,864.0	14,901.4	6,878.5	227.2	224.9	103.44	-328.4	-3,421.9	5,615.1	5,174.6	440.46	12.748	
13,484.2	6,864.0	14,901.4	6,878.5	229.5	224.9	103.44	-328.4	-3,421.9	5,699.3	5,256.5	442.73	12.873	
13,500.0	6,864.0	14,901.4	6,878.5	230.0	224.9	103.44	-328.4	-3,421.9	5,715.0	5,271.9	443.16	12.896	
13,582.6	6,864.0	14,901.4	6,878.5	232.3	224.9	103.44	-328.4	-3,421.9	5,797.7	5,352.3	445.39	13.017	
13,600.0	6,864.0	14,901.4	6,878.5	232.7	224.9	103.44	-328.4	-3,421.9	5,815.0	5,369.2	445.85	13.042	
13,681.1	6,864.0	14,901.4	6,878.5	235.0	224.9	103.44	-328.4	-3,421.9	5,896.1	5,448.0	448.04	13.160	
13,700.0	6,864.0	14,901.4	6,878.5	235.5	224.9	103.44	-328.4	-3,421.9	5,915.0	5,466.4	448.55	13.187	
13,779.5	6,864.0	14,901.4	6,878.5	237.7	224.9	103.44	-328.4	-3,421.9	5,994.5	5,543.8	450.70	13.300	
13,800.0	6,864.0	14,901.4	6,878.5	238.3	224.9	103.44	-328.4	-3,421.9	6,015.0	5,563.7	451.26	13.329	
13,877.9	6,864.0	14,901.4	6,878.5	240.4	224.9	103.44	-328.4	-3,421.9	6,092.9	5,639.5	453.36	13.439	
13,900.0	6,864.0	14,901.4	6,878.5	241.0	224.9	103.44	-328.4	-3,421.9	6,114.9	5,661.0	453.96	13.470	
13,976.3	6,864.0	14,901.4	6,878.5	243.2	224.9	103.44	-328.4	-3,421.9	6,191.3	5,735.2	456.02	13.577	
14,000.0	6,864.0	14,901.4	6,878.5	243.8	224.9	103.44	-328.4	-3,421.9	6,214.9	5,758.2	456.66	13.609	
14,074.8	6,864.0	14,901.4	6,878.5	245.9	224.9	103.44	-328.4	-3,421.9	6,289.7	5,831.0	458.68	13.712	
14,100.0	6,864.0	14,901.4	6,878.5	246.6	224.9	103.44	-328.4	-3,421.9	6,314.9	5,855.5	459.36	13.747	
14,173.2	6,864.0	14,901.4	6,878.5	248.6	224.9	103.44	-328.4	-3,421.9	6,388.0	5,926.7	461.34	13.847	
14,200.0	6,864.0	14,901.4	6,878.5	249.4	224.9	103.44	-328.4	-3,421.9	6,414.8	5,952.8	462.07	13.883	
14,271.6	6,864.0	14,901.4	6,878.5	251.3	224.9	103.44	-328.4	-3,421.9	6,486.4	6,022.4	464.00	13.979	
14,300.0	6,864.0	14,901.4	6,878.5	252.1	224.9	103.44	-328.4	-3,421.9	6,514.8	6,050.0	464.77	14.017	
14,370.0	6,864.0	14,901.4	6,878.5	254.1	224.9	103.44	-328.4	-3,421.9	6,584.8	6,118.2	466.67	14.110	
14,400.0	6,864.0	14,901.4	6,878.5	254.9	224.9	103.44	-328.4	-3,421.9	6,614.8	6,147.3	467.48	14.150	
14,468.5	6,864.0	14,901.4	6,878.5	256.8	224.9	103.44	-328.4	-3,421.9	6,683.3	6,213.9	469.33	14.240	
14,500.0	6,864.0	14,901.4	6,878.5	257.7	224.9	103.44	-328.4	-3,421.9	6,714.8	6,244.6	470.18	14.281	
14,566.9	6,864.0	14,901.4	6,878.5	259.5	224.9	103.44	-328.4	-3,421.9	6,781.7	6,309.7	471.99	14.368	
14,600.0	6,864.0	14,901.4	6,878.5	260.5	224.9	103.44	-328.4	-3,421.9	6,814.7	6,341.9	472.89	14.411	
14,665.3	6,864.0	14,901.4	6,878.5	262.3	224.9	103.44	-328.4	-3,421.9	6,880.1	6,405.4	474.66	14.495	
14,700.0	6,864.0	14,901.4	6,878.5	263.2	224.9	103.44	-328.4	-3,421.9	6,914.7	6,439.1	475.60	14.539	
14,763.7	6,864.0	14,901.4	6,878.5	265.0	224.9	103.44	-328.4	-3,421.9	6,978.5	6,501.1	477.32	14.620	
14,800.0	6,864.0	14,901.4	6,878.5	266.0	224.9	103.44	-328.4	-3,421.9	7,014.7	6,536.4	478.31	14.666	
14,862.2	6,864.0	14,901.4	6,878.5	267.7	224.9	103.44	-328.4	-3,421.9	7,076.9	6,596.9	479.99	14.744	
14,900.0	6,864.0	14,901.4	6,878.5	268.8	224.9	103.44	-328.4	-3,421.9	7,114.7	6,633.7	481.02	14.791	
14,960.6	6,864.0	14,901.4	6,878.5	270.5	224.9	103.44	-328.4	-3,421.9	7,175.3	6,692.6	482.66	14.866	
15,000.0	6,864.0	14,901.4	6,878.5	271.6	224.9	103.44	-328.4	-3,421.9	7,214.7	6,730.9	483.72	14.915	

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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-MWD													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		
15,059.0	6,864.0	14,901.4	6,878.5	273.2	224.9	103.44	-328.4	-3,421.9	7,273.7	6,788.3	485.32	14.987		
15,100.0	6,864.0	14,901.4	6,878.5	274.4	224.9	103.44	-328.4	-3,421.9	7,314.6	6,828.2	486.43	15.037		
15,157.4	6,864.0	14,901.4	6,878.5	276.0	224.9	103.44	-328.4	-3,421.9	7,372.1	6,884.1	487.99	15.107		
15,200.0	6,864.0	14,901.4	6,878.5	277.1	224.9	103.44	-328.4	-3,421.9	7,414.6	6,925.5	489.15	15.158		
15,255.9	6,864.0	14,901.4	6,878.5	278.7	224.9	103.44	-328.4	-3,421.9	7,470.5	6,979.8	490.66	15.225		
15,300.0	6,864.0	14,901.4	6,878.5	279.9	224.9	103.44	-328.4	-3,421.9	7,514.6	7,022.7	491.86	15.278		
15,354.3	6,864.0	14,901.4	6,878.5	281.4	224.9	103.44	-328.4	-3,421.9	7,568.9	7,075.6	493.33	15.342		
15,400.0	6,864.0	14,901.4	6,878.5	282.7	224.9	103.44	-328.4	-3,421.9	7,614.6	7,120.0	494.57	15.396		
15,452.7	6,864.0	14,901.4	6,878.5	284.2	224.9	103.44	-328.4	-3,421.9	7,667.3	7,171.3	496.00	15.458		
15,500.0	6,864.0	14,901.4	6,878.5	285.5	224.9	103.44	-328.4	-3,421.9	7,714.6	7,217.3	497.28	15.513		
15,551.1	6,864.0	14,901.4	6,878.5	286.9	224.9	103.44	-328.4	-3,421.9	7,765.7	7,267.0	498.67	15.573		
15,600.0	6,864.0	14,901.4	6,878.5	288.3	224.9	103.44	-328.4	-3,421.9	7,814.5	7,314.5	499.99	15.629		
15,649.6	6,864.0	14,901.4	6,878.5	289.6	224.9	103.44	-328.4	-3,421.9	7,864.1	7,362.8	501.34	15.686		
15,700.0	6,864.0	14,901.4	6,878.5	291.0	224.9	103.44	-328.4	-3,421.9	7,914.5	7,411.8	502.71	15.744		
15,748.0	6,864.0	14,901.4	6,878.5	292.4	224.9	103.44	-328.4	-3,421.9	7,962.5	7,458.5	504.01	15.798		
15,800.0	6,864.0	14,901.4	6,878.5	293.8	224.9	103.44	-328.4	-3,421.9	8,014.5	7,509.1	505.42	15.857		
15,846.4	6,864.0	14,901.4	6,878.5	295.1	224.9	103.44	-328.4	-3,421.9	8,060.9	7,554.2	506.68	15.909		
15,900.0	6,864.0	14,901.4	6,878.5	296.6	224.9	103.44	-328.4	-3,421.9	8,114.5	7,606.4	508.14	15.969		
15,944.8	6,864.0	14,901.4	6,878.5	297.9	224.9	103.44	-328.4	-3,421.9	8,159.3	7,650.0	509.35	16.019		
16,000.0	6,864.0	14,901.4	6,878.5	299.4	224.9	103.44	-328.4	-3,421.9	8,214.5	7,703.6	510.85	16.080		
16,043.3	6,864.0	14,901.4	6,878.5	300.6	224.9	103.44	-328.4	-3,421.9	8,257.7	7,745.7	512.02	16.128		
16,100.0	6,864.0	14,901.4	6,878.5	302.2	224.9	103.44	-328.4	-3,421.9	8,314.5	7,800.9	513.56	16.190		
16,141.7	6,864.0	14,901.4	6,878.5	303.4	224.9	103.44	-328.4	-3,421.9	8,356.2	7,841.5	514.70	16.235		
16,200.0	6,864.0	14,901.4	6,878.5	305.0	224.9	103.44	-328.4	-3,421.9	8,414.4	7,898.2	516.28	16.298		
16,240.1	6,864.0	14,901.4	6,878.5	306.1	224.9	103.44	-328.4	-3,421.9	8,454.6	7,937.2	517.37	16.341		
16,300.0	6,864.0	14,901.4	6,878.5	307.8	224.9	103.44	-328.4	-3,421.9	8,514.4	7,995.4	519.00	16.406		
16,338.5	6,864.0	14,901.4	6,878.5	308.8	224.9	103.44	-328.4	-3,421.9	8,553.0	8,032.9	520.04	16.447		
16,400.0	6,864.0	14,901.4	6,878.5	310.5	224.9	103.44	-328.4	-3,421.9	8,614.4	8,092.7	521.71	16.512		
16,437.0	6,864.0	14,901.4	6,878.5	311.6	224.9	103.44	-328.4	-3,421.9	8,651.4	8,128.7	522.72	16.551		
16,500.0	6,864.0	14,901.4	6,878.5	313.3	224.9	103.44	-328.4	-3,421.9	8,714.4	8,190.0	524.43	16.617		
16,535.4	6,864.0	14,901.4	6,878.5	314.3	224.9	103.44	-328.4	-3,421.9	8,749.8	8,224.4	525.39	16.654		
16,600.0	6,864.0	14,901.4	6,878.5	316.1	224.9	103.44	-328.4	-3,421.9	8,814.4	8,287.2	527.15	16.721		
16,633.8	6,864.0	14,901.4	6,878.5	317.1	224.9	103.44	-328.4	-3,421.9	8,848.2	8,320.1	528.07	16.756		
16,700.0	6,864.0	14,901.4	6,878.5	318.9	224.9	103.44	-328.4	-3,421.9	8,914.4	8,384.5	529.86	16.824		
16,732.2	6,864.0	14,901.4	6,878.5	319.8	224.9	103.44	-328.4	-3,421.9	8,946.6	8,415.9	530.74	16.857		
16,800.0	6,864.0	14,901.4	6,878.5	321.7	224.9	103.44	-328.4	-3,421.9	9,014.4	8,481.8	532.58	16.926		
16,830.7	6,864.0	14,901.4	6,878.5	322.6	224.9	103.44	-328.4	-3,421.9	9,045.0	8,511.6	533.42	16.957		
16,900.0	6,864.0	14,901.4	6,878.5	324.5	224.9	103.44	-328.4	-3,421.9	9,114.3	8,579.0	535.30	17.027		
16,929.1	6,864.0	14,901.4	6,878.5	325.3	224.9	103.44	-328.4	-3,421.9	9,143.4	8,607.4	536.09	17.056		
17,000.0	6,864.0	14,901.4	6,878.5	327.3	224.9	103.44	-328.4	-3,421.9	9,214.3	8,676.3	538.02	17.126		
17,027.5	6,864.0	14,901.4	6,878.5	328.0	224.9	103.44	-328.4	-3,421.9	9,241.9	8,703.1	538.77	17.154		
17,100.0	6,864.0	14,901.4	6,878.5	330.1	224.9	103.44	-328.4	-3,421.9	9,314.3	8,773.6	540.74	17.225		
17,125.9	6,864.0	14,901.4	6,878.5	330.8	224.9	103.44	-328.4	-3,421.9	9,340.3	8,798.8	541.44	17.251		
17,200.0	6,864.0	14,901.4	6,878.5	332.9	224.9	103.44	-328.4	-3,421.9	9,414.3	8,870.9	543.46	17.323		
17,224.4	6,864.0	14,901.4	6,878.5	333.5	224.9	103.44	-328.4	-3,421.9	9,438.7	8,894.6	544.12	17.347		
17,300.0	6,864.0	14,901.4	6,878.5	335.7	224.9	103.44	-328.4	-3,421.9	9,514.3	8,968.1	546.18	17.420		
17,322.8	6,864.0	14,901.4	6,878.5	336.3	224.9	103.44	-328.4	-3,421.9	9,537.1	8,990.3	546.80	17.442		
17,400.0	6,864.0	14,901.4	6,878.5	338.4	224.9	103.44	-328.4	-3,421.9	9,614.3	9,065.4	548.90	17.516		
17,421.2	6,864.0	14,901.4	6,878.5	339.0	224.9	103.44	-328.4	-3,421.9	9,635.5	9,086.0	549.47	17.536		
17,500.0	6,864.0	14,901.4	6,878.5	341.2	224.9	103.44	-328.4	-3,421.9	9,714.3	9,162.7	551.62	17.611		
17,519.6	6,864.0	14,901.4	6,878.5	341.8	224.9	103.44	-328.4	-3,421.9	9,733.9	9,181.8	552.15	17.629		
17,600.0	6,864.0	14,901.4	6,878.5	344.0	224.9	103.44	-328.4	-3,421.9	9,814.3	9,259.9	554.34	17.704		

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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. - CARLSON J-15-16HN - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
17,618.1	6,864.0	14,901.4	6,878.5	344.5	224.9	103.44	-328.4	-3,421.9	9,832.3	9,277.5	554.83	17.721	
17,700.0	6,864.0	14,901.4	6,878.5	346.8	224.9	103.44	-328.4	-3,421.9	9,914.3	9,357.2	557.06	17.798	
17,716.5	6,864.0	14,901.4	6,878.5	347.3	224.9	103.44	-328.4	-3,421.9	9,930.8	9,373.2	557.51	17.813	

Anticollision Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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-MWD												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	78.60	892.2	4,423.5	4,512.6				
98.4	98.4	78.9	78.9	0.1	0.1	78.60	892.2	4,423.5	4,512.6	4,512.5	0.14	N/A	
100.0	100.0	80.5	80.5	0.1	0.1	78.60	892.2	4,423.5	4,512.6	4,512.5	0.15	N/A	
196.8	196.8	177.3	177.3	0.3	0.2	176.88	892.2	4,423.5	4,514.2	4,513.7	0.56	8,116.047	
200.0	200.0	180.5	180.5	0.3	0.2	176.88	892.2	4,423.5	4,514.3	4,513.8	0.57	7,915.863	
295.3	295.1	275.6	275.6	0.5	0.5	176.87	892.2	4,423.5	4,519.2	4,518.2	1.01	4,483.594	
300.0	299.8	280.3	280.3	0.5	0.5	176.87	892.2	4,423.5	4,519.6	4,518.5	1.03	4,391.139	
393.7	393.2	373.7	373.7	0.8	0.7	176.87	892.2	4,423.5	4,527.6	4,526.2	1.46	3,094.493	
400.0	399.5	380.0	380.0	0.8	0.7	176.87	892.2	4,423.5	4,528.3	4,526.8	1.49	3,035.211	
492.1	490.9	467.7	467.7	1.1	0.9	176.87	891.6	4,423.7	4,539.4	4,537.5	1.90	2,393.455	
500.0	498.7	475.1	475.1	1.1	0.9	176.87	891.5	4,423.7	4,540.5	4,538.5	1.93	2,352.335	
590.5	588.2	559.7	559.7	1.4	1.1	176.90	889.0	4,424.3	4,554.6	4,552.3	2.32	1,963.480	
600.0	597.5	568.5	568.5	1.5	1.1	176.90	888.6	4,424.4	4,556.2	4,553.9	2.36	1,930.946	
689.0	684.8	651.0	650.8	1.8	1.2	176.95	884.2	4,425.5	4,573.3	4,570.5	2.75	1,660.638	
700.0	695.6	661.1	660.9	1.9	1.3	176.96	883.6	4,425.7	4,575.6	4,572.8	2.80	1,632.429	
787.4	780.8	741.2	740.7	2.3	1.4	177.03	877.5	4,427.2	4,595.3	4,592.1	3.21	1,431.924	
800.0	793.1	752.6	752.1	2.3	1.5	177.05	876.4	4,427.5	4,598.4	4,595.1	3.27	1,407.053	
885.8	876.0	830.1	829.2	2.8	1.7	177.14	868.8	4,429.4	4,620.8	4,617.1	3.69	1,253.577	
900.0	889.6	842.8	841.8	2.9	1.7	177.15	867.4	4,429.7	4,624.8	4,621.0	3.76	1,231.326	
984.2	970.3	917.5	916.0	3.4	1.9	177.26	858.3	4,432.0	4,649.7	4,645.5	4.19	1,110.922	
1,000.0	985.3	931.4	929.7	3.5	1.9	177.29	856.4	4,432.5	4,654.6	4,650.4	4.27	1,090.808	
1,082.7	1,063.5	1,000.0	997.5	4.0	2.1	177.40	846.6	4,434.9	4,682.0	4,677.3	4.70	996.760	
1,100.0	1,079.8	1,018.3	1,015.6	4.1	2.2	177.44	843.8	4,435.6	4,688.0	4,683.2	4.80	976.355	
1,181.1	1,155.6	1,087.3	1,083.6	4.7	2.4	177.58	832.4	4,438.5	4,717.6	4,712.3	5.26	897.618	
1,200.0	1,173.2	1,100.0	1,096.1	4.9	2.5	177.60	830.2	4,439.0	4,724.8	4,719.4	5.35	883.633	
1,279.5	1,246.5	1,169.3	1,164.1	5.5	2.8	177.76	817.3	4,442.2	4,756.5	4,750.7	5.81	818.427	
1,300.0	1,265.2	1,186.1	1,180.5	5.7	2.8	177.81	814.0	4,443.1	4,765.0	4,759.0	5.94	802.429	
1,377.9	1,336.0	1,249.1	1,242.1	6.4	3.1	177.97	801.0	4,446.3	4,798.6	4,792.2	6.40	749.300	
1,400.0	1,355.8	1,266.7	1,259.3	6.6	3.2	178.02	797.2	4,447.2	4,808.5	4,802.0	6.54	735.585	
1,476.4	1,424.0	1,326.7	1,317.6	7.3	3.4	178.19	783.7	4,450.6	4,844.1	4,837.1	7.00	691.725	
1,500.0	1,444.9	1,345.0	1,335.3	7.5	3.5	178.24	779.4	4,451.7	4,855.5	4,848.3	7.15	679.190	
1,574.8	1,511.0	1,400.0	1,388.6	8.3	3.8	178.44	766.0	4,455.1	4,891.8	4,884.2	7.65	639.765	
1,600.0	1,533.2	1,421.5	1,409.4	8.5	3.9	178.52	760.5	4,456.4	4,904.1	4,896.3	7.83	625.979	
1,673.2	1,597.9	1,479.3	1,465.0	9.3	4.2	178.73	745.3	4,460.2	4,939.9	4,931.6	8.36	590.744	
1,700.0	1,621.5	1,499.0	1,483.9	9.5	4.3	178.81	739.9	4,461.6	4,953.1	4,944.5	8.55	579.093	
1,771.6	1,684.8	1,558.8	1,541.4	10.3	4.6	179.04	723.8	4,465.6	4,988.2	4,979.1	9.10	547.897	
1,800.0	1,709.8	1,582.5	1,564.1	10.6	4.7	179.12	717.4	4,467.2	5,002.2	4,992.8	9.32	536.633	
1,870.1	1,771.7	1,641.0	1,620.3	11.3	5.1	179.34	701.5	4,471.2	5,036.6	5,026.8	9.86	510.612	
1,900.0	1,798.1	1,666.0	1,644.3	11.6	5.2	179.43	694.8	4,472.9	5,051.4	5,041.3	10.10	500.270	
1,968.5	1,858.6	1,723.2	1,699.2	12.3	5.5	179.64	679.3	4,476.7	5,085.2	5,074.5	10.63	478.194	
2,000.0	1,886.4	1,749.5	1,724.4	12.6	5.7	179.74	672.2	4,478.5	5,100.7	5,089.8	10.88	468.713	
2,066.9	1,945.5	12,185.3	6,958.5	13.3	146.0	-170.53	-476.6	-592.9	5,047.6	5,006.6	41.02	123.052	
2,100.0	1,974.7	12,200.7	6,958.5	13.6	146.4	-170.52	-476.7	-608.3	5,018.3	4,977.1	41.20	121.798	
2,165.3	2,032.4	12,231.1	6,958.5	14.3	147.3	-170.52	-476.9	-638.7	4,960.4	4,918.9	41.56	119.350	
2,200.0	2,063.0	12,247.2	6,958.5	14.7	147.7	-170.52	-477.0	-654.8	4,929.8	4,888.0	41.75	118.067	
2,263.8	2,119.3	12,276.9	6,958.5	15.3	148.5	-170.51	-477.2	-684.4	4,873.3	4,831.2	42.11	115.736	
2,300.0	2,151.3	12,293.7	6,958.5	15.7	149.0	-170.51	-477.3	-701.3	4,841.2	4,798.9	42.31	114.428	
2,362.2	2,206.2	12,322.6	6,958.5	16.3	149.8	-170.50	-477.4	-730.2	4,786.2	4,743.5	42.65	112.208	
2,400.0	2,239.6	12,340.2	6,958.5	16.7	150.3	-170.50	-477.5	-747.8	4,752.7	4,709.8	42.86	110.876	
2,460.6	2,293.1	12,368.4	6,958.5	17.4	151.1	-170.49	-477.7	-776.0	4,699.0	4,655.8	43.20	108.765	
2,500.0	2,327.9	12,386.7	6,958.5	17.8	151.6	-170.49	-477.8	-794.3	4,664.2	4,620.8	43.42	107.411	
2,559.0	2,380.0	12,414.2	6,958.5	18.4	152.4	-170.48	-478.0	-821.7	4,611.9	4,568.1	43.75	105.404	

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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-MWD													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		
2,600.0	2,416.2	12,433.2	6,958.5	18.8	152.9	-170.48	-478.1	-840.8	4,575.6	4,531.7	43.98	104.028		
2,657.5	2,466.9	12,459.9	6,958.5	19.4	153.6	-170.47	-478.2	-867.5	4,524.8	4,480.5	44.31	102.121		
2,700.0	2,504.5	12,479.7	6,958.5	19.8	154.2	-170.47	-478.4	-887.3	4,487.1	4,442.6	44.55	100.727		
2,755.9	2,553.8	12,505.7	6,958.5	20.4	154.9	-170.46	-478.5	-913.3	4,437.6	4,392.8	44.86	98.915		
2,800.0	2,592.8	12,526.2	6,958.5	20.9	155.5	-170.45	-478.6	-933.8	4,398.6	4,353.5	45.11	97.504		
2,854.3	2,640.7	12,551.5	6,958.5	21.4	156.2	-170.45	-478.8	-959.0	4,350.5	4,305.1	45.42	95.784		
2,900.0	2,681.1	12,572.7	6,958.5	21.9	156.8	-170.44	-478.9	-980.3	4,310.0	4,264.4	45.68	94.356		
2,952.7	2,727.6	12,597.2	6,958.5	22.5	157.5	-170.44	-479.0	-1,004.8	4,263.3	4,217.4	45.98	92.725		
3,000.0	2,769.4	12,619.2	6,958.5	23.0	158.1	-170.43	-479.2	-1,026.8	4,221.5	4,175.3	46.25	91.281		
3,051.2	2,814.5	12,643.0	6,958.5	23.5	158.7	-170.42	-479.3	-1,050.5	4,176.2	4,129.7	46.54	89.736		
3,100.0	2,857.7	12,665.7	6,958.5	24.0	159.4	-170.42	-479.4	-1,073.3	4,133.0	4,086.2	46.82	88.278		
3,149.6	2,901.4	12,688.8	6,958.5	24.5	160.0	-170.41	-479.6	-1,096.3	4,089.1	4,042.0	47.10	86.814		
3,200.0	2,945.9	12,712.2	6,958.5	25.0	160.7	-170.41	-479.7	-1,119.7	4,044.5	3,997.1	47.39	85.344		
3,248.0	2,988.4	12,734.5	6,958.5	25.5	161.3	-170.40	-479.9	-1,142.1	4,001.9	3,954.3	47.67	83.958		
3,300.0	3,034.2	12,758.7	6,958.5	26.1	162.0	-170.39	-480.0	-1,166.2	3,955.9	3,908.0	47.96	82.475		
3,346.4	3,075.3	12,780.3	6,958.5	26.5	162.6	-170.38	-480.1	-1,187.8	3,914.8	3,866.6	48.23	81.165		
3,400.0	3,122.5	12,805.2	6,958.5	27.1	163.2	-170.38	-480.3	-1,212.7	3,867.4	3,818.8	48.54	79.672		
3,444.9	3,162.2	12,826.0	6,958.5	27.6	163.8	-170.37	-480.4	-1,233.6	3,827.7	3,778.9	48.80	78.434		
3,500.0	3,210.8	12,851.7	6,958.5	28.1	164.5	-170.36	-480.5	-1,259.2	3,778.9	3,729.7	49.12	76.931		
3,543.3	3,249.1	12,871.8	6,958.5	28.6	165.1	-170.35	-480.7	-1,279.4	3,740.5	3,691.2	49.37	75.763		
3,600.0	3,299.1	12,898.2	6,958.5	29.2	165.8	-170.35	-480.8	-1,305.7	3,690.3	3,640.6	49.70	74.250		
3,641.7	3,336.0	12,917.6	6,958.5	29.6	166.4	-170.34	-480.9	-1,325.1	3,653.4	3,603.4	49.94	73.149		
3,700.0	3,387.4	12,944.7	6,958.5	30.2	167.1	-170.33	-481.1	-1,352.2	3,601.8	3,551.5	50.28	71.628		
3,740.1	3,422.9	12,963.3	6,958.5	30.6	167.7	-170.32	-481.2	-1,370.9	3,566.3	3,515.7	50.52	70.592		
3,800.0	3,475.7	12,991.2	6,958.5	31.3	168.4	-170.31	-481.4	-1,398.7	3,513.3	3,462.4	50.87	69.063		
3,838.6	3,509.8	13,009.1	6,958.5	31.7	168.9	-170.30	-481.5	-1,416.7	3,479.1	3,428.0	51.10	68.088		
3,900.0	3,564.0	13,037.7	6,958.5	32.3	169.7	-170.29	-481.6	-1,445.2	3,424.7	3,373.3	51.46	66.553		
3,937.0	3,596.7	13,054.9	6,958.5	32.7	170.2	-170.29	-481.7	-1,462.4	3,392.0	3,340.3	51.68	65.638		
4,000.0	3,652.3	13,084.2	6,958.5	33.3	171.0	-170.27	-481.9	-1,491.7	3,336.2	3,284.2	52.05	64.096		
4,035.4	3,683.6	13,100.6	6,958.5	33.7	171.5	-170.27	-482.0	-1,508.2	3,304.8	3,252.6	52.26	63.238		
4,100.0	3,740.6	13,130.7	6,958.5	34.4	172.3	-170.25	-482.2	-1,538.2	3,247.7	3,195.0	52.64	61.691		
4,133.8	3,770.5	13,146.4	6,958.5	34.7	172.8	-170.25	-482.3	-1,553.9	3,217.7	3,164.9	52.85	60.888		
4,200.0	3,828.9	13,177.2	6,958.5	35.4	173.6	-170.23	-482.5	-1,584.7	3,159.1	3,105.9	53.24	59.336		
4,232.3	3,857.4	13,192.2	6,958.5	35.8	174.0	-170.23	-482.6	-1,599.7	3,130.6	3,077.1	53.43	58.587		
4,300.0	3,917.2	13,223.6	6,958.5	36.5	174.9	-170.21	-482.7	-1,631.2	3,070.6	3,016.8	53.84	57.030		
4,330.7	3,944.3	13,237.9	6,958.5	36.8	175.3	-170.20	-482.8	-1,645.5	3,043.4	2,989.4	54.03	56.332		
4,400.0	4,005.5	13,270.1	6,958.5	37.5	176.2	-170.19	-483.0	-1,677.7	2,982.1	2,927.6	54.45	54.771		
4,429.1	4,031.2	13,283.7	6,958.5	37.8	176.6	-170.18	-483.1	-1,691.2	2,956.3	2,901.7	54.62	54.122		
4,500.0	4,093.8	13,316.6	6,958.5	38.5	177.5	-170.16	-483.3	-1,724.2	2,893.5	2,838.5	55.05	52.558		
4,527.5	4,118.1	13,329.5	6,958.5	38.8	177.9	-170.15	-483.4	-1,737.0	2,869.2	2,813.9	55.22	51.956		
4,600.0	4,182.1	13,363.1	6,958.5	39.6	178.8	-170.13	-483.6	-1,770.7	2,805.0	2,749.4	55.67	50.390		
4,626.0	4,205.0	13,375.2	6,958.5	39.8	179.1	-170.13	-483.6	-1,782.8	2,782.0	2,726.2	55.83	49.834		
4,700.0	4,270.4	13,409.6	6,958.5	40.6	180.1	-170.10	-483.8	-1,817.2	2,716.5	2,660.2	56.28	48.265		
4,724.4	4,291.9	13,421.0	6,958.5	40.9	180.4	-170.10	-483.9	-1,828.5	2,694.9	2,638.5	56.43	47.753		
4,800.0	4,358.7	13,456.1	6,958.5	41.7	181.4	-170.07	-484.1	-1,863.7	2,628.0	2,571.1	56.90	46.182		
4,822.8	4,378.8	13,466.7	6,958.5	41.9	181.7	-170.07	-484.2	-1,874.3	2,607.8	2,550.7	57.05	45.712		
4,900.0	4,447.0	13,502.6	6,958.5	42.7	182.7	-170.04	-484.4	-1,910.2	2,539.4	2,481.9	57.53	44.139		
4,921.2	4,465.7	13,512.5	6,958.5	42.9	183.0	-170.03	-484.5	-1,920.1	2,520.6	2,462.9	57.67	43.710		
5,000.0	4,535.3	13,549.1	6,958.5	43.7	184.0	-170.00	-484.7	-1,956.7	2,450.9	2,392.7	58.17	42.136		
5,019.7	4,552.6	13,558.3	6,958.5	43.9	184.2	-170.00	-484.7	-1,965.8	2,433.5	2,375.2	58.29	41.747		
5,100.0	4,623.5	13,595.6	6,958.5	44.8	185.3	-169.97	-484.9	-2,003.2	2,362.4	2,303.6	58.81	40.172		
5,118.1	4,639.5	13,604.0	6,958.5	45.0	185.5	-169.96	-485.0	-2,011.6	2,346.3	2,287.4	58.92	39.821		

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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-MWD													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		
5,200.0	4,711.8	13,642.1	6,958.5	45.8	186.6	-169.92	-485.2	-2,049.7	2,273.8	2,214.4	59.45	38.246		
5,216.5	4,726.4	13,649.8	6,958.5	46.0	186.8	-169.92	-485.3	-2,057.3	2,259.2	2,199.6	59.56	37.931		
5,300.0	4,800.1	13,688.6	6,958.5	46.9	187.9	-169.88	-485.5	-2,096.2	2,185.3	2,125.2	60.11	36.355		
5,314.9	4,813.3	13,695.6	6,958.5	47.0	188.1	-169.87	-485.5	-2,103.1	2,172.1	2,111.9	60.21	36.076		
5,400.0	4,888.4	13,735.1	6,958.5	47.9	189.2	-169.83	-485.8	-2,142.7	2,096.8	2,036.0	60.78	34.500		
5,413.4	4,900.2	13,741.3	6,958.5	48.0	189.3	-169.82	-485.8	-2,148.9	2,084.9	2,024.1	60.87	34.255		
5,500.0	4,976.7	13,781.6	6,958.5	48.9	190.5	-169.78	-486.1	-2,189.2	2,008.3	1,946.8	61.45	32.680		
5,511.8	4,987.1	13,787.1	6,958.5	49.1	190.6	-169.77	-486.1	-2,194.6	1,997.8	1,936.3	61.53	32.467		
5,600.0	5,065.0	13,828.1	6,958.5	50.0	191.8	-169.72	-486.3	-2,235.6	1,919.7	1,857.6	62.14	30.893		
5,610.2	5,074.1	13,832.9	6,958.5	50.1	191.9	-169.72	-486.4	-2,240.4	1,910.7	1,848.5	62.21	30.712		
5,700.0	5,153.3	13,874.6	6,958.5	51.0	193.1	-169.66	-486.6	-2,282.1	1,831.2	1,768.4	62.84	29.139		
5,708.6	5,161.0	13,878.6	6,958.5	51.1	193.2	-169.65	-486.6	-2,286.2	1,823.5	1,760.6	62.91	28.988		
5,800.0	5,241.6	13,921.1	6,958.5	52.1	194.4	-169.59	-486.9	-2,328.6	1,742.7	1,679.1	63.56	27.416		
5,807.1	5,247.9	13,924.4	6,958.5	52.1	194.5	-169.58	-486.9	-2,331.9	1,736.4	1,672.8	63.62	27.295		
5,900.0	5,329.9	13,967.6	6,958.5	53.1	195.7	-169.51	-487.2	-2,375.1	1,654.1	1,589.8	64.30	25.724		
5,905.5	5,334.8	13,970.2	6,958.5	53.2	195.7	-169.51	-487.2	-2,377.7	1,649.3	1,584.9	64.34	25.632		
6,000.0	5,418.2	14,014.1	6,958.5	54.1	197.0	-169.43	-487.4	-2,421.6	1,565.6	1,500.6	65.06	24.063		
6,003.9	5,421.7	14,015.9	6,958.5	54.2	197.0	-169.42	-487.4	-2,423.5	1,562.1	1,497.1	65.09	23.998		
6,100.0	5,506.5	14,060.6	6,958.5	55.2	198.3	-169.33	-487.7	-2,468.1	1,477.1	1,411.2	65.85	22.430		
6,102.3	5,508.6	14,061.7	6,958.5	55.2	198.3	-169.33	-487.7	-2,469.2	1,475.0	1,409.1	65.87	22.392		
6,200.0	5,594.8	14,107.1	6,958.5	56.2	199.6	-169.22	-488.0	-2,514.6	1,388.6	1,321.9	66.67	20.826		
6,200.8	5,595.5	14,107.5	6,958.5	56.2	199.6	-169.22	-488.0	-2,515.0	1,387.9	1,321.2	66.68	20.814		
6,299.2	5,682.4	14,153.2	6,958.5	57.3	200.8	-169.10	-488.3	-2,560.7	1,300.8	1,233.2	67.53	19.263		
6,300.0	5,683.1	14,153.6	6,958.5	57.3	200.9	-169.10	-488.3	-2,561.1	1,300.1	1,232.5	67.53	19.250		
6,397.6	5,769.3	14,199.0	6,958.5	58.3	202.1	-168.96	-488.5	-2,606.5	1,213.6	1,145.2	68.42	17.738		
6,400.0	5,771.4	14,200.1	6,958.5	58.3	202.2	-168.96	-488.5	-2,607.6	1,211.5	1,143.1	68.44	17.701		
6,496.0	5,856.2	14,244.7	6,958.5	59.3	203.4	-168.81	-488.8	-2,652.3	1,126.5	1,057.1	69.38	16.238		
6,500.0	5,859.7	14,246.6	6,958.5	59.3	203.4	-168.80	-488.8	-2,654.1	1,123.0	1,053.6	69.42	16.178		
6,525.7	5,882.1	14,259.0	6,958.5	59.6	203.8	-169.63	-488.9	-2,666.6	1,100.5	1,031.7	68.84	15.988		
6,594.5	5,941.3	14,293.7	6,958.5	60.4	204.8	-169.57	-489.1	-2,701.2	1,041.1	971.7	69.42	14.998		
6,600.0	5,946.1	14,296.5	6,958.5	60.5	204.8	-169.56	-489.1	-2,704.0	1,036.3	966.9	69.47	14.919		
6,692.9	6,026.1	14,343.2	6,958.5	61.5	206.1	-169.46	-489.4	-2,750.8	956.1	885.8	70.29	13.603		
6,700.0	6,032.2	14,346.8	6,958.5	61.6	206.2	-169.45	-489.4	-2,754.4	950.0	879.6	70.35	13.503		
6,791.3	6,110.8	14,392.8	6,958.5	62.7	207.5	-169.33	-489.7	-2,800.4	871.1	799.9	71.21	12.233		
6,800.0	6,118.3	14,397.2	6,958.5	62.8	207.7	-169.31	-489.7	-2,804.7	863.6	792.3	71.29	12.113		
6,889.7	6,195.5	14,442.4	6,958.5	63.8	208.9	-169.17	-490.0	-2,849.9	786.1	713.9	72.21	10.886		
6,900.0	6,204.4	14,447.6	6,958.5	63.9	209.1	-169.15	-490.0	-2,855.1	777.2	704.9	72.32	10.747		
6,988.2	6,280.3	14,492.0	6,958.5	64.9	210.3	-168.97	-490.3	-2,899.5	701.0	627.7	73.31	9.563		
7,000.0	6,290.5	14,497.9	6,958.5	65.0	210.5	-168.94	-490.3	-2,905.5	690.8	617.4	73.45	9.406		
7,086.6	6,365.0	14,541.6	6,958.5	66.0	211.7	-168.72	-490.6	-2,949.1	616.0	541.5	74.56	8.262		
7,100.0	6,376.6	14,548.3	6,958.5	66.2	211.9	-168.68	-490.6	-2,955.8	604.5	529.7	74.75	8.087		
7,185.0	6,449.8	14,591.1	6,958.5	67.1	213.1	-168.38	-490.9	-2,998.7	531.0	455.0	76.04	6.983		
7,200.0	6,462.7	14,598.7	6,958.5	67.3	213.3	-168.32	-490.9	-3,006.2	518.1	441.8	76.29	6.791		
7,283.4	6,534.5	14,640.7	6,958.5	68.3	214.5	-167.92	-491.2	-3,048.2	446.0	368.1	77.90	5.726		
7,300.0	6,548.8	14,649.0	6,958.5	68.5	214.7	-167.83	-491.2	-3,056.6	431.7	353.5	78.26	5.516		
7,336.6	6,580.2	14,667.5	6,958.5	68.9	215.2	-167.59	-491.3	-3,075.0	400.2	321.0	79.15	5.056		
7,350.0	6,591.7	14,674.4	6,958.5	69.0	215.4	-167.97	-491.4	-3,081.9	388.6	308.8	79.86	4.866		
7,381.9	6,618.3	14,691.8	6,958.5	69.4	215.9	-168.72	-491.5	-3,099.3	362.0	280.4	81.58	4.437		
7,400.0	6,633.0	14,702.4	6,958.5	69.7	216.2	-169.07	-491.5	-3,109.9	347.2	264.7	82.56	4.206		
7,450.0	6,671.7	14,733.9	6,958.5	70.4	217.1	-169.79	-491.7	-3,141.4	308.5	223.2	85.23	3.619		
7,480.3	6,693.7	14,754.6	6,958.5	70.9	217.6	-170.09	-491.8	-3,162.1	286.4	199.6	86.81	3.299		
7,500.0	6,707.5	14,768.7	6,958.5	71.2	218.0	-170.23	-491.9	-3,176.2	272.6	184.8	87.81	3.105		

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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-MWD												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	
7,550.0	6,740.1	14,806.4	6,958.5	72.1	219.1	-170.45	-492.1	-3,214.0	239.9	149.7	90.25	2.659	
7,578.7	6,757.4	14,829.4	6,958.5	72.7	219.7	-170.48	-492.3	-3,236.9	222.7	131.1	91.58	2.432	
7,600.0	6,769.4	14,846.9	6,958.5	73.1	220.2	-170.47	-492.4	-3,254.5	210.7	118.1	92.53	2.277	
7,650.0	6,795.0	14,889.8	6,958.5	74.2	221.4	-170.32	-492.6	-3,297.3	185.1	90.4	94.63	1.956	
7,677.1	6,807.3	14,914.0	6,958.5	74.8	222.1	-170.17	-492.8	-3,321.5	172.8	77.1	95.70	1.805	
7,700.0	6,816.8	14,934.8	6,958.5	75.3	222.7	-170.01	-492.9	-3,342.3	163.3	66.7	96.55	1.691	
7,750.0	6,834.6	14,981.5	6,958.5	76.5	224.0	-169.58	-493.2	-3,389.0	145.6	47.3	98.23	1.482 Level 3	
7,775.6	6,842.1	15,005.9	6,958.5	77.1	224.7	-169.32	-493.3	-3,413.4	138.1	39.1	98.98	1.395 Level 3	
7,800.0	6,848.3	15,013.6	6,958.5	77.6	224.9	-169.31	-493.4	-3,421.1	132.9	34.1	98.77	1.346 Level 3	
7,812.1	6,851.0	15,013.6	6,958.5	77.9	224.9	-169.34	-493.4	-3,421.1	132.2	33.8	98.47	1.343 Level 3, CC, ES, SF	
7,850.0	6,857.8	15,013.6	6,958.5	78.9	224.9	-169.33	-493.4	-3,421.1	138.8	41.2	97.59	1.422 Level 3	
7,874.0	6,860.8	15,013.6	6,958.5	79.4	224.9	-169.25	-493.4	-3,421.1	149.0	51.9	97.09	1.535	
7,900.0	6,863.0	15,013.6	6,958.5	80.1	224.9	-169.08	-493.4	-3,421.1	164.3	67.6	96.63	1.700	
7,934.7	6,864.0	15,013.6	6,958.5	80.9	224.9	-168.70	-493.4	-3,421.1	189.5	93.3	96.24	1.969	
7,972.4	6,864.0	15,013.6	6,958.5	81.8	224.9	-168.70	-493.4	-3,421.1	220.5	124.0	96.52	2.285	
8,000.0	6,864.0	15,013.6	6,958.5	82.5	224.9	-168.70	-493.4	-3,421.1	244.4	147.7	96.73	2.526	
8,070.8	6,864.0	15,013.6	6,958.5	84.2	224.9	-168.70	-493.4	-3,421.1	308.5	211.3	97.27	3.172	
8,100.0	6,864.0	15,013.6	6,958.5	85.0	224.9	-168.70	-493.4	-3,421.1	335.7	238.2	97.49	3.444	
8,169.3	6,864.0	15,013.6	6,958.5	86.7	224.9	-168.70	-493.4	-3,421.1	401.4	303.4	98.02	4.096	
8,200.0	6,864.0	15,013.6	6,958.5	87.4	224.9	-168.70	-493.4	-3,421.1	430.9	332.7	98.25	4.386	
8,267.7	6,864.0	15,013.6	6,958.5	89.1	224.9	-168.70	-493.4	-3,421.1	496.5	397.7	98.78	5.026	
8,300.0	6,864.0	15,013.6	6,958.5	89.9	224.9	-168.70	-493.4	-3,421.1	527.9	428.9	99.03	5.331	
8,366.1	6,864.0	15,013.6	6,958.5	91.6	224.9	-168.70	-493.4	-3,421.1	592.6	493.0	99.55	5.953	
8,400.0	6,864.0	15,013.6	6,958.5	92.4	224.9	-168.70	-493.4	-3,421.1	625.9	526.0	99.82	6.270	
8,464.5	6,864.0	15,013.6	6,958.5	94.1	224.9	-168.70	-493.4	-3,421.1	689.4	589.1	100.33	6.871	
8,500.0	6,864.0	15,013.6	6,958.5	95.0	224.9	-168.70	-493.4	-3,421.1	724.4	623.7	100.61	7.199	
8,563.0	6,864.0	15,013.6	6,958.5	96.6	224.9	-168.70	-493.4	-3,421.1	786.6	685.5	101.12	7.779	
8,600.0	6,864.0	15,013.6	6,958.5	97.5	224.9	-168.70	-493.4	-3,421.1	823.2	721.8	101.41	8.117	
8,661.4	6,864.0	15,013.6	6,958.5	99.1	224.9	-168.70	-493.4	-3,421.1	884.0	782.1	101.91	8.675	
8,700.0	6,864.0	15,013.6	6,958.5	100.1	224.9	-168.70	-493.4	-3,421.1	922.3	820.1	102.22	9.023	
8,759.8	6,864.0	15,013.6	6,958.5	101.6	224.9	-168.70	-493.4	-3,421.1	981.7	879.0	102.71	9.558	
8,800.0	6,864.0	15,013.6	6,958.5	102.6	224.9	-168.70	-493.4	-3,421.1	1,021.6	918.6	103.03	9.915	
8,858.2	6,864.0	15,013.6	6,958.5	104.2	224.9	-168.70	-493.4	-3,421.1	1,079.5	976.0	103.51	10.429	
8,900.0	6,864.0	15,013.6	6,958.5	105.2	224.9	-168.70	-493.4	-3,421.1	1,121.0	1,017.2	103.85	10.794	
8,956.7	6,864.0	15,013.6	6,958.5	106.7	224.9	-168.70	-493.4	-3,421.1	1,177.4	1,073.1	104.32	11.286	
9,000.0	6,864.0	15,013.6	6,958.5	107.8	224.9	-168.70	-493.4	-3,421.1	1,220.5	1,115.8	104.68	11.660	
9,055.1	6,864.0	15,013.6	6,958.5	109.3	224.9	-168.70	-493.4	-3,421.1	1,275.4	1,170.2	105.13	12.131	
9,100.0	6,864.0	15,013.6	6,958.5	110.4	224.9	-168.70	-493.4	-3,421.1	1,320.1	1,214.6	105.50	12.512	
9,153.5	6,864.0	15,013.6	6,958.5	111.8	224.9	-168.70	-493.4	-3,421.1	1,373.4	1,267.5	105.95	12.963	
9,200.0	6,864.0	15,013.6	6,958.5	113.1	224.9	-168.70	-493.4	-3,421.1	1,419.7	1,313.4	106.34	13.351	
9,251.9	6,864.0	15,013.6	6,958.5	114.4	224.9	-168.70	-493.4	-3,421.1	1,471.5	1,364.7	106.77	13.782	
9,300.0	6,864.0	15,013.6	6,958.5	115.7	224.9	-168.70	-493.4	-3,421.1	1,519.4	1,412.2	107.17	14.177	
9,350.4	6,864.0	15,013.6	6,958.5	117.0	224.9	-168.70	-493.4	-3,421.1	1,569.6	1,462.0	107.60	14.588	
9,400.0	6,864.0	15,013.6	6,958.5	118.3	224.9	-168.70	-493.4	-3,421.1	1,619.1	1,511.1	108.01	14.990	
9,448.8	6,864.0	15,013.6	6,958.5	119.6	224.9	-168.70	-493.4	-3,421.1	1,667.8	1,559.4	108.43	15.382	
9,500.0	6,864.0	15,013.6	6,958.5	121.0	224.9	-168.70	-493.4	-3,421.1	1,718.9	1,610.0	108.86	15.790	
9,547.2	6,864.0	15,013.6	6,958.5	122.2	224.9	-168.70	-493.4	-3,421.1	1,766.0	1,656.8	109.26	16.164	
9,600.0	6,864.0	15,013.6	6,958.5	123.6	224.9	-168.70	-493.4	-3,421.1	1,818.7	1,709.0	109.71	16.578	
9,645.6	6,864.0	15,013.6	6,958.5	124.8	224.9	-168.70	-493.4	-3,421.1	1,864.2	1,754.1	110.09	16.933	
9,700.0	6,864.0	15,013.6	6,958.5	126.3	224.9	-168.70	-493.4	-3,421.1	1,918.5	1,807.9	110.56	17.353	
9,744.1	6,864.0	15,013.6	6,958.5	127.4	224.9	-168.70	-493.4	-3,421.1	1,962.5	1,851.6	110.93	17.691	
9,800.0	6,864.0	15,013.6	6,958.5	128.9	224.9	-168.70	-493.4	-3,421.1	2,018.3	1,906.9	111.41	18.116	

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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-MWD													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		
9,842.5	6,864.0	15,013.6	6,958.5	130.1	224.9	-168.70	-493.4	-3,421.1	2,060.7	1,949.0	111.77	18.437		
9,900.0	6,864.0	15,013.6	6,958.5	131.6	224.9	-168.70	-493.4	-3,421.1	2,118.2	2,005.9	112.26	18.868		
9,940.9	6,864.0	15,013.6	6,958.5	132.7	224.9	-168.70	-493.4	-3,421.1	2,159.0	2,046.4	112.61	19.172		
10,000.0	6,864.0	15,013.6	6,958.5	134.3	224.9	-168.70	-493.4	-3,421.1	2,218.0	2,104.9	113.12	19.607		
10,039.3	6,864.0	15,013.6	6,958.5	135.3	224.9	-168.70	-493.4	-3,421.1	2,257.3	2,143.8	113.46	19.895		
10,100.0	6,864.0	15,013.6	6,958.5	136.9	224.9	-168.70	-493.4	-3,421.1	2,317.9	2,203.9	113.98	20.336		
10,137.8	6,864.0	15,013.6	6,958.5	138.0	224.9	-168.70	-493.4	-3,421.1	2,355.6	2,241.3	114.31	20.608		
10,200.0	6,864.0	15,013.6	6,958.5	139.6	224.9	-168.70	-493.4	-3,421.1	2,417.8	2,302.9	114.84	21.053		
10,236.2	6,864.0	15,013.6	6,958.5	140.6	224.9	-168.70	-493.4	-3,421.1	2,453.9	2,338.8	115.16	21.309		
10,300.0	6,864.0	15,013.6	6,958.5	142.3	224.9	-168.70	-493.4	-3,421.1	2,517.6	2,401.9	115.71	21.759		
10,334.6	6,864.0	15,013.6	6,958.5	143.3	224.9	-168.70	-493.4	-3,421.1	2,552.2	2,436.2	116.01	22.001		
10,400.0	6,864.0	15,013.6	6,958.5	145.0	224.9	-168.70	-493.4	-3,421.1	2,617.5	2,501.0	116.57	22.454		
10,433.0	6,864.0	15,013.6	6,958.5	145.9	224.9	-168.70	-493.4	-3,421.1	2,650.6	2,533.7	116.86	22.681		
10,500.0	6,864.0	15,013.6	6,958.5	147.7	224.9	-168.70	-493.4	-3,421.1	2,717.4	2,600.0	117.44	23.139		
10,531.5	6,864.0	15,013.6	6,958.5	148.6	224.9	-168.70	-493.4	-3,421.1	2,748.9	2,631.2	117.72	23.352		
10,600.0	6,864.0	15,013.6	6,958.5	150.4	224.9	-168.70	-493.4	-3,421.1	2,817.4	2,699.0	118.31	23.813		
10,629.9	6,864.0	15,013.6	6,958.5	151.2	224.9	-168.70	-493.4	-3,421.1	2,847.2	2,728.7	118.57	24.013		
10,700.0	6,864.0	15,013.6	6,958.5	153.1	224.9	-168.70	-493.4	-3,421.1	2,917.3	2,798.1	119.18	24.477		
10,728.3	6,864.0	15,013.6	6,958.5	153.9	224.9	-168.70	-493.4	-3,421.1	2,945.6	2,826.2	119.43	24.664		
10,800.0	6,864.0	15,013.6	6,958.5	155.8	224.9	-168.70	-493.4	-3,421.1	3,017.2	2,897.1	120.05	25.132		
10,826.7	6,864.0	15,013.6	6,958.5	156.6	224.9	-168.70	-493.4	-3,421.1	3,043.9	2,923.6	120.29	25.305		
10,900.0	6,864.0	15,013.6	6,958.5	158.6	224.9	-168.70	-493.4	-3,421.1	3,117.1	2,996.2	120.93	25.777		
10,925.2	6,864.0	15,013.6	6,958.5	159.2	224.9	-168.70	-493.4	-3,421.1	3,142.3	3,021.1	121.15	25.937		
11,000.0	6,864.0	15,013.6	6,958.5	161.3	224.9	-168.70	-493.4	-3,421.1	3,217.1	3,095.3	121.80	26.412		
11,023.6	6,864.0	15,013.6	6,958.5	161.9	224.9	-168.70	-493.4	-3,421.1	3,240.6	3,118.6	122.01	26.560		
11,100.0	6,864.0	15,013.6	6,958.5	164.0	224.9	-168.70	-493.4	-3,421.1	3,317.0	3,194.3	122.68	27.038		
11,122.0	6,864.0	15,013.6	6,958.5	164.6	224.9	-168.70	-493.4	-3,421.1	3,339.0	3,216.1	122.87	27.174		
11,200.0	6,864.0	15,013.6	6,958.5	166.7	224.9	-168.70	-493.4	-3,421.1	3,416.9	3,293.4	123.56	27.655		
11,220.4	6,864.0	15,013.6	6,958.5	167.3	224.9	-168.70	-493.4	-3,421.1	3,437.4	3,313.6	123.74	27.780		
11,300.0	6,864.0	15,013.6	6,958.5	169.4	224.9	-168.70	-493.4	-3,421.1	3,516.9	3,392.4	124.44	28.262		
11,318.9	6,864.0	15,013.6	6,958.5	170.0	224.9	-168.70	-493.4	-3,421.1	3,535.7	3,411.1	124.60	28.376		
11,400.0	6,864.0	15,013.6	6,958.5	172.2	224.9	-168.70	-493.4	-3,421.1	3,616.8	3,491.5	125.32	28.862		
11,417.3	6,864.0	15,013.6	6,958.5	172.7	224.9	-168.70	-493.4	-3,421.1	3,634.1	3,508.7	125.47	28.964		
11,500.0	6,864.0	15,013.6	6,958.5	174.9	224.9	-168.70	-493.4	-3,421.1	3,716.8	3,590.6	126.20	29.452		
11,515.7	6,864.0	15,013.6	6,958.5	175.3	224.9	-168.70	-493.4	-3,421.1	3,732.5	3,606.2	126.34	29.544		
11,600.0	6,864.0	15,013.6	6,958.5	177.6	224.9	-168.70	-493.4	-3,421.1	3,816.7	3,689.7	127.08	30.034		
11,614.1	6,864.0	15,013.6	6,958.5	178.0	224.9	-168.70	-493.4	-3,421.1	3,830.9	3,703.7	127.20	30.116		
11,700.0	6,864.0	15,013.6	6,958.5	180.4	224.9	-168.70	-493.4	-3,421.1	3,916.7	3,788.7	127.96	30.608		
11,712.6	6,864.0	15,013.6	6,958.5	180.7	224.9	-168.70	-493.4	-3,421.1	3,929.3	3,801.2	128.07	30.680		
11,800.0	6,864.0	15,013.6	6,958.5	183.1	224.9	-168.70	-493.4	-3,421.1	4,016.6	3,887.8	128.84	31.174		
11,811.0	6,864.0	15,013.6	6,958.5	183.4	224.9	-168.70	-493.4	-3,421.1	4,027.6	3,898.7	128.94	31.236		
11,900.0	6,864.0	15,013.6	6,958.5	185.9	224.9	-168.70	-493.4	-3,421.1	4,116.6	3,986.9	129.73	31.732		
11,909.4	6,864.0	15,013.6	6,958.5	186.1	224.9	-168.70	-493.4	-3,421.1	4,126.0	3,996.2	129.81	31.784		
12,000.0	6,864.0	15,013.6	6,958.5	188.6	224.9	-168.70	-493.4	-3,421.1	4,216.6	4,085.9	130.61	32.283		
12,007.8	6,864.0	15,013.6	6,958.5	188.8	224.9	-168.70	-493.4	-3,421.1	4,224.4	4,093.7	130.68	32.325		
12,100.0	6,864.0	15,013.6	6,958.5	191.4	224.9	-168.70	-493.4	-3,421.1	4,316.5	4,185.0	131.50	32.825		
12,106.3	6,864.0	15,013.6	6,958.5	191.5	224.9	-168.70	-493.4	-3,421.1	4,322.8	4,191.2	131.56	32.859		
12,200.0	6,864.0	15,013.6	6,958.5	194.1	224.9	-168.70	-493.4	-3,421.1	4,416.5	4,284.1	132.39	33.361		
12,204.7	6,864.0	15,013.6	6,958.5	194.2	224.9	-168.70	-493.4	-3,421.1	4,421.2	4,288.8	132.43	33.385		
12,300.0	6,864.0	15,013.6	6,958.5	196.9	224.9	-168.70	-493.4	-3,421.1	4,516.5	4,383.2	133.27	33.888		
12,303.1	6,864.0	15,013.6	6,958.5	196.9	224.9	-168.70	-493.4	-3,421.1	4,519.6	4,386.3	133.30	33.905		
12,400.0	6,864.0	15,013.6	6,958.5	199.6	224.9	-168.70	-493.4	-3,421.1	4,616.4	4,482.3	134.16	34.409		

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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. - CARLSON K-15-16HC - Wellbore #1 - Design #1		Offset Site Error:		0.0 usft
Survey Program: 0-MWD												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				
12,401.5	6,864.0	15,013.6	6,958.5	199.6	224.9	-168.70	-493.4	-3,421.1	4,618.0	4,483.8	134.18	34.417				
12,500.0	6,864.0	15,013.6	6,958.5	202.4	224.9	-168.70	-493.4	-3,421.1	4,716.4	4,581.3	135.05	34.923				
12,598.4	6,864.0	15,013.6	6,958.5	205.1	224.9	-168.70	-493.4	-3,421.1	4,814.8	4,678.8	135.93	35.422				
12,600.0	6,864.0	15,013.6	6,958.5	205.1	224.9	-168.70	-493.4	-3,421.1	4,816.4	4,680.4	135.94	35.430				
12,696.8	6,864.0	15,013.6	6,958.5	207.8	224.9	-168.70	-493.4	-3,421.1	4,913.2	4,776.4	136.80	35.915				
12,700.0	6,864.0	15,013.6	6,958.5	207.9	224.9	-168.70	-493.4	-3,421.1	4,916.3	4,779.5	136.83	35.930				
12,795.2	6,864.0	15,013.6	6,958.5	210.5	224.9	-168.70	-493.4	-3,421.1	5,011.6	4,873.9	137.68	36.401				
12,800.0	6,864.0	15,013.6	6,958.5	210.6	224.9	-168.70	-493.4	-3,421.1	5,016.3	4,878.6	137.72	36.424				
12,893.7	6,864.0	15,013.6	6,958.5	213.2	224.9	-168.70	-493.4	-3,421.1	5,110.0	4,971.4	138.55	36.881				
12,900.0	6,864.0	15,013.6	6,958.5	213.4	224.9	-168.70	-493.4	-3,421.1	5,116.3	4,977.7	138.61	36.911				
12,992.1	6,864.0	15,013.6	6,958.5	215.9	224.9	-168.70	-493.4	-3,421.1	5,208.4	5,068.9	139.43	37.354				
13,000.0	6,864.0	15,013.6	6,958.5	216.1	224.9	-168.70	-493.4	-3,421.1	5,216.3	5,076.8	139.50	37.392				
13,090.5	6,864.0	15,013.6	6,958.5	218.6	224.9	-168.70	-493.4	-3,421.1	5,306.8	5,166.4	140.31	37.822				
13,100.0	6,864.0	15,013.6	6,958.5	218.9	224.9	-168.70	-493.4	-3,421.1	5,316.2	5,175.8	140.39	37.867				
13,188.9	6,864.0	15,013.6	6,958.5	221.4	224.9	-168.70	-493.4	-3,421.1	5,405.2	5,264.0	141.19	38.284				
13,200.0	6,864.0	15,013.6	6,958.5	221.7	224.9	-168.70	-493.4	-3,421.1	5,416.2	5,274.9	141.29	38.335				
13,287.4	6,864.0	15,013.6	6,958.5	224.1	224.9	-168.70	-493.4	-3,421.1	5,503.6	5,361.5	142.07	38.740				
13,300.0	6,864.0	15,013.6	6,958.5	224.4	224.9	-168.70	-493.4	-3,421.1	5,516.2	5,374.0	142.18	38.798				
13,385.8	6,864.0	15,013.6	6,958.5	226.8	224.9	-168.70	-493.4	-3,421.1	5,602.0	5,459.0	142.94	39.190				
13,400.0	6,864.0	15,013.6	6,958.5	227.2	224.9	-168.70	-493.4	-3,421.1	5,616.2	5,473.1	143.07	39.254				
13,484.2	6,864.0	15,013.6	6,958.5	229.5	224.9	-168.70	-493.4	-3,421.1	5,700.4	5,556.5	143.82	39.634				
13,500.0	6,864.0	15,013.6	6,958.5	230.0	224.9	-168.70	-493.4	-3,421.1	5,716.1	5,572.2	143.97	39.705				
13,582.6	6,864.0	15,013.6	6,958.5	232.3	224.9	-168.70	-493.4	-3,421.1	5,798.8	5,654.1	144.70	40.073				
13,600.0	6,864.0	15,013.6	6,958.5	232.7	224.9	-168.70	-493.4	-3,421.1	5,816.1	5,671.3	144.86	40.150				
13,681.1	6,864.0	15,013.6	6,958.5	235.0	224.9	-168.70	-493.4	-3,421.1	5,897.2	5,751.6	145.58	40.507				
13,700.0	6,864.0	15,013.6	6,958.5	235.5	224.9	-168.70	-493.4	-3,421.1	5,916.1	5,770.3	145.75	40.590				
13,779.5	6,864.0	15,013.6	6,958.5	237.7	224.9	-168.70	-493.4	-3,421.1	5,995.6	5,849.1	146.46	40.935				
13,800.0	6,864.0	15,013.6	6,958.5	238.3	224.9	-168.70	-493.4	-3,421.1	6,016.1	5,869.4	146.65	41.024				
13,877.9	6,864.0	15,013.6	6,958.5	240.4	224.9	-168.70	-493.4	-3,421.1	6,094.0	5,946.6	147.35	41.359				
13,900.0	6,864.0	15,013.6	6,958.5	241.0	224.9	-168.70	-493.4	-3,421.1	6,116.1	5,968.5	147.54	41.453				
13,976.3	6,864.0	15,013.6	6,958.5	243.2	224.9	-168.70	-493.4	-3,421.1	6,192.4	6,044.2	148.23	41.777				
14,000.0	6,864.0	15,013.6	6,958.5	243.8	224.9	-168.70	-493.4	-3,421.1	6,216.0	6,067.6	148.44	41.876				
14,074.8	6,864.0	15,013.6	6,958.5	245.9	224.9	-168.70	-493.4	-3,421.1	6,290.8	6,141.7	149.11	42.190				
14,100.0	6,864.0	15,013.6	6,958.5	246.6	224.9	-168.70	-493.4	-3,421.1	6,316.0	6,166.7	149.33	42.295				
14,173.2	6,864.0	15,013.6	6,958.5	248.6	224.9	-168.70	-493.4	-3,421.1	6,389.2	6,239.2	149.99	42.598				
14,200.0	6,864.0	15,013.6	6,958.5	249.4	224.9	-168.70	-493.4	-3,421.1	6,416.0	6,265.8	150.23	42.708				
14,271.6	6,864.0	15,013.6	6,958.5	251.3	224.9	-168.70	-493.4	-3,421.1	6,487.6	6,336.8	150.87	43.001				
14,300.0	6,864.0	15,013.6	6,958.5	252.1	224.9	-168.70	-493.4	-3,421.1	6,516.0	6,364.9	151.13	43.116				
14,370.0	6,864.0	15,013.6	6,958.5	254.1	224.9	-168.70	-493.4	-3,421.1	6,586.0	6,434.3	151.75	43.399				
14,400.0	6,864.0	15,013.6	6,958.5	254.9	224.9	-168.70	-493.4	-3,421.1	6,616.0	6,464.0	152.02	43.520				
14,468.5	6,864.0	15,013.6	6,958.5	256.8	224.9	-168.70	-493.4	-3,421.1	6,684.4	6,531.8	152.64	43.793				
14,500.0	6,864.0	15,013.6	6,958.5	257.7	224.9	-168.70	-493.4	-3,421.1	6,716.0	6,563.0	152.92	43.918				
14,566.9	6,864.0	15,013.6	6,958.5	259.5	224.9	-168.70	-493.4	-3,421.1	6,782.9	6,629.3	153.52	44.182				
14,600.0	6,864.0	15,013.6	6,958.5	260.5	224.9	-168.70	-493.4	-3,421.1	6,816.0	6,662.1	153.82	44.312				
14,665.3	6,864.0	15,013.6	6,958.5	262.3	224.9	-168.70	-493.4	-3,421.1	6,881.3	6,726.9	154.40	44.567				
14,700.0	6,864.0	15,013.6	6,958.5	263.2	224.9	-168.70	-493.4	-3,421.1	6,915.9	6,761.2	154.71	44.701				
14,763.7	6,864.0	15,013.6	6,958.5	265.0	224.9	-168.70	-493.4	-3,421.1	6,979.7	6,824.4	155.29	44.947				
14,800.0	6,864.0	15,013.6	6,958.5	266.0	224.9	-168.70	-493.4	-3,421.1	7,015.9	6,860.3	155.61	45.086				
14,862.2	6,864.0	15,013.6	6,958.5	267.7	224.9	-168.70	-493.4	-3,421.1	7,078.1	6,921.9	156.17	45.323				
14,900.0	6,864.0	15,013.6	6,958.5	268.8	224.9	-168.70	-493.4	-3,421.1	7,115.9	6,959.4	156.51	45.466				
14,960.6	6,864.0	15,013.6	6,958.5	270.5	224.9	-168.70	-493.4	-3,421.1	7,176.5	7,019.4	157.06	45.694				
15,000.0	6,864.0	15,013.6	6,958.5	271.6	224.9	-168.70	-493.4	-3,421.1	7,215.9	7,058.5	157.41	45.842				

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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-MWD													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		
15,059.0	6,864.0	15,013.6	6,958.5	273.2	224.9	-168.70	-493.4	-3,421.1	7,274.9	7,117.0	157.94	46.061		
15,100.0	6,864.0	15,013.6	6,958.5	274.4	224.9	-168.70	-493.4	-3,421.1	7,315.9	7,157.6	158.31	46.213		
15,157.4	6,864.0	15,013.6	6,958.5	276.0	224.9	-168.70	-493.4	-3,421.1	7,373.3	7,214.5	158.82	46.425		
15,200.0	6,864.0	15,013.6	6,958.5	277.1	224.9	-168.70	-493.4	-3,421.1	7,415.9	7,256.7	159.21	46.580		
15,255.9	6,864.0	15,013.6	6,958.5	278.7	224.9	-168.70	-493.4	-3,421.1	7,471.7	7,312.0	159.71	46.784		
15,300.0	6,864.0	15,013.6	6,958.5	279.9	224.9	-168.70	-493.4	-3,421.1	7,515.9	7,355.8	160.11	46.943		
15,354.3	6,864.0	15,013.6	6,958.5	281.4	224.9	-168.70	-493.4	-3,421.1	7,570.2	7,409.6	160.59	47.139		
15,400.0	6,864.0	15,013.6	6,958.5	282.7	224.9	-168.70	-493.4	-3,421.1	7,615.8	7,454.8	161.00	47.302		
15,452.7	6,864.0	15,013.6	6,958.5	284.2	224.9	-168.70	-493.4	-3,421.1	7,668.6	7,507.1	161.48	47.490		
15,500.0	6,864.0	15,013.6	6,958.5	285.5	224.9	-168.70	-493.4	-3,421.1	7,715.8	7,553.9	161.90	47.657		
15,551.1	6,864.0	15,013.6	6,958.5	286.9	224.9	-168.70	-493.4	-3,421.1	7,767.0	7,604.6	162.36	47.837		
15,600.0	6,864.0	15,013.6	6,958.5	288.3	224.9	-168.70	-493.4	-3,421.1	7,815.8	7,653.0	162.80	48.008		
15,649.6	6,864.0	15,013.6	6,958.5	289.6	224.9	-168.70	-493.4	-3,421.1	7,865.4	7,702.1	163.25	48.180		
15,700.0	6,864.0	15,013.6	6,958.5	291.0	224.9	-168.70	-493.4	-3,421.1	7,915.8	7,752.1	163.70	48.355		
15,748.0	6,864.0	15,013.6	6,958.5	292.4	224.9	-168.70	-493.4	-3,421.1	7,963.8	7,799.7	164.13	48.520		
15,800.0	6,864.0	15,013.6	6,958.5	293.8	224.9	-168.70	-493.4	-3,421.1	8,015.8	7,851.2	164.60	48.698		
15,846.4	6,864.0	15,013.6	6,958.5	295.1	224.9	-168.70	-493.4	-3,421.1	8,062.2	7,897.2	165.02	48.856		
15,900.0	6,864.0	15,013.6	6,958.5	296.6	224.9	-168.70	-493.4	-3,421.1	8,115.8	7,950.3	165.50	49.037		
15,944.8	6,864.0	15,013.6	6,958.5	297.9	224.9	-168.70	-493.4	-3,421.1	8,160.6	7,994.7	165.91	49.188		
16,000.0	6,864.0	15,013.6	6,958.5	299.4	224.9	-168.70	-493.4	-3,421.1	8,215.8	8,049.4	166.40	49.373		
16,043.3	6,864.0	15,013.6	6,958.5	300.6	224.9	-168.70	-493.4	-3,421.1	8,259.1	8,092.3	166.79	49.517		
16,100.0	6,864.0	15,013.6	6,958.5	302.2	224.9	-168.70	-493.4	-3,421.1	8,315.8	8,148.5	167.30	49.705		
16,141.7	6,864.0	15,013.6	6,958.5	303.4	224.9	-168.70	-493.4	-3,421.1	8,357.5	8,189.8	167.68	49.842		
16,200.0	6,864.0	15,013.6	6,958.5	305.0	224.9	-168.70	-493.4	-3,421.1	8,415.8	8,247.6	168.20	50.033		
16,240.1	6,864.0	15,013.6	6,958.5	306.1	224.9	-168.70	-493.4	-3,421.1	8,455.9	8,287.3	168.57	50.164		
16,300.0	6,864.0	15,013.6	6,958.5	307.8	224.9	-168.70	-493.4	-3,421.1	8,515.8	8,346.6	169.11	50.358		
16,338.5	6,864.0	15,013.6	6,958.5	308.8	224.9	-168.70	-493.4	-3,421.1	8,554.3	8,384.8	169.45	50.482		
16,400.0	6,864.0	15,013.6	6,958.5	310.5	224.9	-168.70	-493.4	-3,421.1	8,615.7	8,445.7	170.01	50.679		
16,437.0	6,864.0	15,013.6	6,958.5	311.6	224.9	-168.70	-493.4	-3,421.1	8,652.7	8,482.4	170.34	50.797		
16,500.0	6,864.0	15,013.6	6,958.5	313.3	224.9	-168.70	-493.4	-3,421.1	8,715.7	8,544.8	170.91	50.997		
16,535.4	6,864.0	15,013.6	6,958.5	314.3	224.9	-168.70	-493.4	-3,421.1	8,751.1	8,579.9	171.23	51.109		
16,600.0	6,864.0	15,013.6	6,958.5	316.1	224.9	-168.70	-493.4	-3,421.1	8,815.7	8,643.9	171.81	51.311		
16,633.8	6,864.0	15,013.6	6,958.5	317.1	224.9	-168.70	-493.4	-3,421.1	8,849.5	8,677.4	172.11	51.417		
16,700.0	6,864.0	15,013.6	6,958.5	318.9	224.9	-168.70	-493.4	-3,421.1	8,915.7	8,743.0	172.71	51.623		
16,732.2	6,864.0	15,013.6	6,958.5	319.8	224.9	-168.70	-493.4	-3,421.1	8,948.0	8,775.0	173.00	51.722		
16,800.0	6,864.0	15,013.6	6,958.5	321.7	224.9	-168.70	-493.4	-3,421.1	9,015.7	8,842.1	173.61	51.930		
16,830.7	6,864.0	15,013.6	6,958.5	322.6	224.9	-168.70	-493.4	-3,421.1	9,046.4	8,872.5	173.89	52.024		
16,900.0	6,864.0	15,013.6	6,958.5	324.5	224.9	-168.70	-493.4	-3,421.1	9,115.7	8,941.2	174.51	52.235		
16,929.1	6,864.0	15,013.6	6,958.5	325.3	224.9	-168.70	-493.4	-3,421.1	9,144.8	8,970.0	174.78	52.323		
17,000.0	6,864.0	15,013.6	6,958.5	327.3	224.9	-168.70	-493.4	-3,421.1	9,215.7	9,040.3	175.41	52.537		
17,027.5	6,864.0	15,013.6	6,958.5	328.0	224.9	-168.70	-493.4	-3,421.1	9,243.2	9,067.6	175.66	52.619		
17,100.0	6,864.0	15,013.6	6,958.5	330.1	224.9	-168.70	-493.4	-3,421.1	9,315.7	9,139.4	176.32	52.835		
17,125.9	6,864.0	15,013.6	6,958.5	330.8	224.9	-168.70	-493.4	-3,421.1	9,341.6	9,165.1	176.55	52.912		
17,200.0	6,864.0	15,013.6	6,958.5	332.9	224.9	-168.70	-493.4	-3,421.1	9,415.7	9,238.5	177.22	53.130		
17,224.4	6,864.0	15,013.6	6,958.5	333.5	224.9	-168.70	-493.4	-3,421.1	9,440.1	9,262.6	177.44	53.202		
17,300.0	6,864.0	15,013.6	6,958.5	335.7	224.9	-168.70	-493.4	-3,421.1	9,515.7	9,337.5	178.12	53.422		
17,322.8	6,864.0	15,013.6	6,958.5	336.3	224.9	-168.70	-493.4	-3,421.1	9,538.5	9,360.1	178.33	53.489		
17,400.0	6,864.0	15,013.6	6,958.5	338.4	224.9	-168.70	-493.4	-3,421.1	9,615.7	9,436.6	179.02	53.712		
17,421.2	6,864.0	15,013.6	6,958.5	339.0	224.9	-168.70	-493.4	-3,421.1	9,636.9	9,457.7	179.22	53.773		
17,500.0	6,864.0	15,013.6	6,958.5	341.2	224.9	-168.70	-493.4	-3,421.1	9,715.7	9,535.7	179.93	53.998		
17,519.6	6,864.0	15,013.6	6,958.5	341.8	224.9	-168.70	-493.4	-3,421.1	9,735.3	9,555.2	180.10	54.054		
17,600.0	6,864.0	15,013.6	6,958.5	344.0	224.9	-168.70	-493.4	-3,421.1	9,815.6	9,634.8	180.83	54.282		

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 VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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. - CARLSON K-15-16HC - Wellbore #1 - Design #1												Offset Site Error:	0.0 usft
Survey Program: 0-MWD												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)	Offset Wellbore Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
17,618.1	6,864.0	15,013.6	6,958.5	344.5	224.9	-168.70	-493.4	-3,421.1	9,833.7	9,652.7	180.99	54.332	
17,700.0	6,864.0	15,013.6	6,958.5	346.8	224.9	-168.70	-493.4	-3,421.1	9,915.6	9,733.9	181.73	54.562	
17,716.5	6,864.0	15,013.6	6,958.5	347.3	224.9	-168.70	-493.4	-3,421.1	9,932.1	9,750.3	181.88	54.608	

Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well VT-ALLES 1-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB-EST @ 4663.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	MD Reference:	KB-EST @ 4663.0usft
Site Error:	0.0 usft	North Reference:	True
Reference Well:	VT-ALLES 1-16-18	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 @ 4663.0usft

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: VT-ALLES 1-16-18

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.54°

Separation Factor Plot

