

# **EXTRACTION OIL & GAS**

**WELD COUNTY, COLORADO (NAD 83)  
SW NW SEC. 15 T5N R65W 6th P.M.  
VT-LDS 5-16-18**

**ORIGINAL WELLBORE  
PROPOSAL #2**

## **Anticollision Report**

**10 March, 2016**



## Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

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

<b>Survey Tool Program</b>	<b>Date</b>	10/03/2016		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	20,298.7	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	300.0	257.0	2,646.5	2,641.4	518.422	CC
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	492.1	449.0	2,649.0	2,639.5	280.423	ES
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Design #1	5,118.1	4,599.7	3,864.5	3,745.3	32.427	SF
CARLSON A-15-16HN - Wellbore #1 - Design #1	7,619.3	14,640.3	1,875.0	1,583.1	6.424	CC
CARLSON A-15-16HN - Wellbore #1 - Design #1	7,874.0	14,862.7	1,880.5	1,576.2	6.180	ES
CARLSON A-15-16HN - Wellbore #1 - Design #1	8,169.3	14,862.7	1,906.9	1,594.7	6.108	SF
CARLSON B-15-16HC - Wellbore #1 - Design #1	7,705.6	14,760.5	1,716.7	1,421.6	5.817	CC
CARLSON B-15-16HC - Wellbore #1 - Design #1	7,874.0	14,905.1	1,719.6	1,416.1	5.667	ES
CARLSON B-15-16HC - Wellbore #1 - Design #1	8,100.0	14,905.1	1,737.5	1,427.9	5.612	SF
CARLSON C-15-16HN - Wellbore #1 - Design #1	7,642.2	14,593.7	1,546.0	1,253.5	5.286	CC
CARLSON C-15-16HN - Wellbore #1 - Design #1	7,874.0	14,796.3	1,551.0	1,247.0	5.102	ES
CARLSON C-15-16HN - Wellbore #1 - Design #1	8,070.8	14,796.3	1,567.4	1,258.1	5.067	SF
CARLSON D-15-16HN - Wellbore #1 - Design #1	7,670.1	14,599.9	1,216.9	923.6	4.148	CC
CARLSON D-15-16HN - Wellbore #1 - Design #1	7,874.0	14,777.6	1,221.1	917.4	4.020	ES
CARLSON D-15-16HN - Wellbore #1 - Design #1	8,000.0	14,777.6	1,231.8	924.7	4.010	SF
CARLSON E-15-16HC - Wellbore #1 - Design #1	7,766.1	14,761.1	1,061.3	764.8	3.580	CC
CARLSON E-15-16HC - Wellbore #1 - Design #1	7,874.0	14,848.6	1,062.8	760.8	3.520	ES
CARLSON E-15-16HC - Wellbore #1 - Design #1	7,972.4	14,848.6	1,070.5	765.7	3.513	SF
CARLSON F-15-16HN - Wellbore #1 - Design #1	7,698.7	14,618.2	937.8	643.5	3.187	CC
CARLSON F-15-16HN - Wellbore #1 - Design #1	7,874.0	14,769.7	941.3	637.8	3.102	ES
CARLSON F-15-16HN - Wellbore #1 - Design #1	7,900.0	14,769.7	942.9	638.8	3.101	SF
CARLSON G-15-16HN - Wellbore #1 - Design #1	7,758.1	14,692.1	520.1	224.3	1.758	CC
CARLSON G-15-16HN - Wellbore #1 - Design #1	7,874.0	14,787.6	522.3	219.8	1.727	ES, SF
CARLSON H-15-16HC - Wellbore #1 - Design #1	7,860.8	14,883.6	376.9	90.5	1.316	Level 3, CC
CARLSON H-15-16HC - Wellbore #1 - Design #1	7,874.0	14,883.6	377.2	90.4	1.315	Level 3, ES, SF
CARLSON I-15-16HN - Wellbore #1 - Design #1	7,857.6	14,836.2	147.7	-139.8	0.514	Level 1, CC, ES, SF
CARLSON J-15-16HN - Wellbore #1 - Design #1	7,869.7	14,901.4	196.5	-98.4	0.666	Level 1, CC
CARLSON J-15-16HN - Wellbore #1 - Design #1	7,874.0	14,901.4	196.6	-98.5	0.666	Level 1, ES, SF
CARLSON K-15-16HC - Wellbore #1 - Design #1	7,886.7	15,013.6	377.3	89.9	1.313	Level 3, CC
CARLSON K-15-16HC - Wellbore #1 - Design #1	7,900.0	15,013.6	377.5	89.8	1.312	Level 3, ES, SF
CARLSON L-15-16HN - Wellbore #1 - Design #1	7,881.6	14,977.0	522.6	219.9	1.726	CC
CARLSON L-15-16HN - Wellbore #1 - Design #1	7,900.0	14,977.0	522.9	219.8	1.725	ES, SF
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	12,090.3	7,060.5	2,736.0	2,520.8	12.712	CC
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	12,200.0	7,060.3	2,738.2	2,520.0	12.546	ES
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	13,090.5	7,058.8	2,913.1	2,670.3	11.996	SF
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	9,495.1	7,218.6	2,623.9	2,472.8	17.366	CC
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	9,547.2	7,218.0	2,624.4	2,471.9	17.212	ES

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

## Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 15 T5N R65W 6th P.M.						
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	10,728.3	7,203.0	2,899.2	2,714.9	15.731	SF
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	12,815.5	7,144.2	3,245.4	3,004.2	13.452	CC
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	12,900.0	7,144.3	3,246.5	3,002.9	13.328	ES
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	14,000.0	7,145.0	3,454.8	3,180.7	12.605	SF
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	11,413.3	6,884.7	3,250.5	3,064.0	17.426	CC
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	11,500.0	6,884.3	3,251.7	3,062.8	17.213	ES
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	12,992.1	6,877.4	3,613.7	3,383.7	15.711	SF
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	10,092.8	7,950.0	1,747.6	1,590.1	11.096	CC
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	10,137.8	7,950.0	1,748.2	1,589.5	11.016	ES
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	10,600.0	7,950.0	1,819.7	1,648.8	10.643	SF
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	13,414.6	7,655.9	1,314.8	1,040.8	4.798	CC
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	13,484.2	7,657.8	1,316.7	1,040.7	4.771	ES
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	13,582.6	7,660.6	1,325.5	1,046.8	4.756	SF
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	10,263.8	7,667.7	635.6	465.5	3.738	CC, ES
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	10,334.6	7,671.5	639.5	467.5	3.719	SF
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	9,470.1	7,656.6	1,335.4	1,183.7	8.801	CC
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	9,500.0	7,653.5	1,335.8	1,183.2	8.756	ES
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	9,800.0	7,623.4	1,375.1	1,214.4	8.553	SF
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	12,204.5	7,947.8	48.6	-176.1	0.216	Level 1, CC
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	12,204.7	7,947.8	48.6	-176.1	0.216	Level 1, ES, SF
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	12,674.6	7,208.5	2,028.1	1,789.7	8.507	CC
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	12,700.0	7,206.4	2,028.3	1,789.2	8.483	ES
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	13,100.0	7,174.4	2,072.0	1,822.1	8.290	SF
EXIST DD EHRlich MOTORS #D8 - Wellbore #1 - Well	14,010.3	7,565.0	3,270.4	2,972.4	10.974	CC
EXIST DD EHRlich MOTORS #D8 - Wellbore #1 - Well	14,100.0	7,579.0	3,271.6	2,971.1	10.887	ES
EXIST DD EHRlich MOTORS #D8 - Wellbore #1 - Well	15,000.0	7,721.0	3,412.0	3,086.7	10.488	SF
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	13,481.9	7,654.0	2,590.7	2,319.3	9.545	CC
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	13,582.6	7,669.5	2,592.6	2,318.5	9.459	ES
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	14,173.2	7,699.0	2,678.8	2,388.7	9.234	SF
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	12,167.2	7,498.5	1,448.9	1,228.1	6.562	CC
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	12,204.7	7,502.4	1,449.4	1,227.6	6.535	ES
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - V	12,401.5	7,522.5	1,467.5	1,240.6	6.467	SF
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	10,072.1	6,929.1	3,341.9	3,185.2	21.317	CC
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	10,137.8	6,929.1	3,342.6	3,184.0	21.083	ES
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	12,007.8	6,930.4	3,862.1	3,652.5	18.426	SF
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	8,851.4	7,284.7	3,328.3	3,181.5	22.675	CC
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	8,956.7	7,283.3	3,330.0	3,180.4	22.269	ES
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	10,925.2	7,259.3	3,921.4	3,719.1	19.380	SF
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	10,706.0	6,960.5	2,665.2	2,496.5	15.797	CC
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	10,800.0	6,960.4	2,666.9	2,495.6	15.571	ES
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	11,900.0	6,959.3	2,920.4	2,719.0	14.501	SF
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	10,936.6	7,571.1	1,332.1	1,155.7	7.553	CC
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	11,000.0	7,570.9	1,333.6	1,155.6	7.490	ES
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	11,200.0	7,570.3	1,357.9	1,174.5	7.405	SF
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	10,778.4	7,811.5	105.3	-76.8	0.578	Level 1, CC, ES, SF
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	3,481.9	4,106.0	2,267.6	2,237.5	75.310	CC, ES
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	14,200.0	6,941.0	9,930.4	9,664.1	37.292	SF
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	0.0	0.0	2,412.5			
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	300.0	285.1	2,412.9	2,412.0	2,910.073	ES
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	12,795.2	7,124.0	9,998.6	9,763.9	42.601	SF
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	2,177.9	2,839.6	2,229.6	2,209.8	112.679	CC
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	2,200.0	2,853.5	2,229.7	2,209.6	111.287	ES
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	13,500.0	7,090.9	9,967.0	9,718.6	40.133	SF

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

## Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 15 T5N R65W 6th P.M.						
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	8,333.7	7,989.3	1,194.5	1,052.1	8.385	CC
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	8,366.1	7,984.0	1,195.0	1,051.6	8.337	ES
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	8,600.0	7,945.0	1,222.9	1,073.3	8.174	SF
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	8,105.2	7,726.6	2,562.7	2,420.7	18.044	CC
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	8,169.3	7,715.8	2,563.5	2,419.9	17.849	ES
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	9,300.0	7,462.1	2,817.0	2,645.3	16.404	SF
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	8,928.4	7,585.6	2,100.2	1,954.3	14.389	CC
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	9,000.0	7,576.6	2,101.4	1,953.6	14.213	ES
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	9,744.1	7,478.7	2,250.0	2,082.4	13.424	SF
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	8,137.6	7,174.6	52.3	-62.0	0.458	Level 1, CC, ES, SF
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	11,506.3	7,586.5	670.7	472.2	3.378	CC
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	11,515.7	7,586.8	670.8	472.0	3.374	ES
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbore	11,600.0	7,589.1	677.3	476.1	3.367	SF
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	14,066.3	7,800.5	2,019.4	1,714.4	6.622	CC
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	14,100.0	7,801.6	2,019.6	1,713.8	6.603	ES
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	14,468.5	7,813.0	2,059.0	1,742.9	6.515	SF
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	14,871.1	8,199.0	2,656.4	2,315.3	7.788	CC
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	14,960.6	8,199.0	2,657.9	2,314.3	7.736	ES
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	15,452.7	8,199.0	2,719.3	2,362.2	7.614	SF
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	12,767.5	7,735.1	706.5	460.6	2.873	CC
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	12,795.2	7,735.1	707.0	460.4	2.866	ES
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	12,800.0	7,735.1	707.2	460.4	2.866	SF
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	14,685.8	8,098.8	1,432.4	1,095.2	4.248	CC
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	14,700.0	8,099.5	1,432.4	1,094.9	4.243	ES
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	14,862.2	8,107.4	1,443.2	1,101.1	4.219	SF
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	309.4	295.8	1,678.3	1,677.4	1,981.075	CC, ES
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	7,972.4	6,600.0	5,244.2	5,164.4	65.742	SF
EXIST VERT FAY #1 - Wellbore #1 - Design #1	6,195.8	5,586.6	5.8	-161.2	0.035	Level 1, CC, ES, SF
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	300.0	261.0	1,246.0	1,240.9	242.034	CC
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	1,100.0	1,050.6	1,251.1	1,227.4	52.708	ES
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	8,000.0	6,826.0	3,827.2	3,608.7	17.518	SF
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	98.4	79.8	109.5	109.4	794.681	CC, ES
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #	14,200.0	6,700.0	9,995.6	9,805.0	52.434	SF
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	100.0	110.8	110.6	586.930	CC, ES
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	13,188.9	15,072.1	648.1	189.2	1.412	Level 3, SF
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	200.0	200.0	102.3	101.7	160.337	CC, ES
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	13,188.9	15,280.6	852.7	405.4	1.906	SF
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	99.3	98.3	91.321	CC, ES
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	13,200.0	15,100.4	994.5	535.0	2.164	SF
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	102.4	101.4	94.166	CC, ES
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	13,287.4	15,171.7	1,332.6	869.4	2.877	SF
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	112.8	111.7	103.700	CC, ES
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	13,287.4	15,409.8	1,508.4	1,048.9	3.283	SF
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	125.5	124.4	115.362	CC, ES
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	13,300.0	15,284.8	1,660.2	1,196.1	3.577	SF
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	139.4	138.4	128.177	CC, ES
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	13,385.8	15,420.3	1,999.7	1,533.3	4.287	SF
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	157.8	156.7	145.183	CC, ES
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	13,400.0	15,682.9	2,173.1	1,707.9	4.672	SF
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	175.4	174.3	161.194	CC, ES
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	13,484.2	15,616.6	2,338.4	1,868.4	4.975	SF
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	196.5	195.4	180.663	CC, ES
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	13,582.6	15,843.4	2,682.1	2,209.3	5.672	SF

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

## Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 15 T5N R65W 6th P.M.						
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	216.0	214.9	198.534	CC, ES
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	13,600.0	16,129.6	2,853.5	2,381.3	6.043	SF
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	238.6	237.6	219.371	CC, ES
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	13,681.1	16,069.4	3,023.1	2,546.8	6.348	SF
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	260.0	259.0	239.042	CC, ES
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	13,779.5	16,281.8	3,367.6	2,888.5	7.029	SF
VT-ALLES 1-16-18 - ORIGINAL WELLBORE - PROPOS	100.0	99.0	47.9	47.7	255.005	CC
VT-ALLES 1-16-18 - ORIGINAL WELLBORE - PROPOS	20,298.7	20,226.0	331.5	-505.6	0.396	Level 1, ES, SF
VT-GLENMERE 3-16-18 - ORIGINAL WELLBORE - PRC	300.0	299.0	168.5	167.4	155.241	CC, ES
VT-GLENMERE 3-16-18 - ORIGINAL WELLBORE - PRC	20,298.7	20,687.0	1,672.1	824.2	1.972	SF
VT-GLENMERE C1-16-18 - ORIGINAL WELLBORE - PF	300.0	299.0	193.9	192.8	178.571	CC, ES
VT-GLENMERE C1-16-18 - ORIGINAL WELLBORE - PF	20,298.7	20,860.1	1,846.5	1,003.2	2.190	SF
VT-LDS 1-16-18 - ORIGINAL WELLBORE - PROPOSAL	300.0	300.0	143.2	142.1	131.640	CC, ES
VT-LDS 1-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,298.7	20,536.6	1,340.6	494.0	1.583	SF
VT-LDS 2-16-18 - ORIGINAL WELLBORE - PROPOSAL	300.0	300.0	95.3	94.2	87.625	CC, ES
VT-LDS 2-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,298.7	20,460.4	1,012.7	168.3	1.199	Level 2, SF
VT-LDS 3-16-18 - ORIGINAL WELLBORE - PROPOSAL	300.0	300.0	72.8	71.7	66.901	CC
VT-LDS 3-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,298.7	20,398.1	681.2	-162.0	0.808	Level 1, ES, SF
VT-LDS 4-16-18 - ORIGINAL WELLBORE - PROPOSAL	300.0	299.0	25.3	24.2	23.332	CC
VT-LDS 4-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,298.7	20,285.4	331.5	-509.2	0.394	Level 1, ES, SF
VT-LDS C2-16-18 - ORIGINAL WELLBORE - PROPOSAL	300.0	299.0	120.6	119.6	111.130	CC, ES
VT-LDS C2-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,298.7	20,646.5	1,192.7	359.0	1.431	Level 3, SF
VT-LDS C3-16-18 - ORIGINAL WELLBORE - PROPOSAL	300.0	300.0	47.9	46.8	44.036	CC
VT-LDS C3-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,298.7	20,507.5	529.4	-255.3	0.675	Level 1, ES, SF
VT-LDS C4-16-18 - ORIGINAL WELLBORE - PROPOSAL	200.0	199.0	22.6	21.9	35.431	CC
VT-LDS C4-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,298.7	20,473.7	255.5	-306.1	0.455	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								
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning		
0.0	0.0	0.0	0.0	0.0	0.0	155.02	-2,399.0	1,117.5	2,646.8						
98.4	98.4	55.4	55.4	0.1	0.6	155.02	-2,399.0	1,117.5	2,646.5	2,645.8	0.68	3,917.366			
100.0	100.0	57.0	57.0	0.1	0.6	155.02	-2,399.0	1,117.5	2,646.5	2,645.8	0.69	3,813.856			
196.8	196.8	153.8	153.8	0.3	2.3	155.02	-2,399.0	1,117.5	2,646.5	2,643.9	2.61	1,012.061			
200.0	200.0	157.0	157.0	0.3	2.4	155.02	-2,399.0	1,117.5	2,646.5	2,643.8	2.70	981.922			
295.3	295.3	252.3	252.3	0.5	4.5	155.02	-2,399.0	1,117.5	2,646.5	2,641.5	5.00	529.725			
300.0	300.0	257.0	257.0	0.5	4.6	155.02	-2,399.0	1,117.5	2,646.5	2,641.4	5.10	518.422	CC		
393.7	393.7	350.7	350.7	0.7	6.5	-112.61	-2,399.0	1,117.5	2,647.1	2,639.8	7.23	365.913			
400.0	400.0	357.0	357.0	0.8	6.6	-112.61	-2,399.0	1,117.5	2,647.2	2,639.8	7.38	358.883			
492.1	492.0	449.0	449.0	1.0	8.5	-112.67	-2,399.0	1,117.5	2,649.0	2,639.5	9.45	280.423	ES		
500.0	499.8	456.8	456.8	1.0	8.7	-112.68	-2,399.0	1,117.5	2,649.2	2,639.5	9.62	275.310			
590.5	590.1	547.1	547.1	1.2	10.5	-112.78	-2,399.0	1,117.5	2,652.2	2,640.5	11.66	227.386			
600.0	599.5	556.5	556.5	1.2	10.7	-112.79	-2,399.0	1,117.5	2,652.5	2,640.7	11.88	223.354			
689.0	687.8	644.8	644.8	1.5	12.5	-112.92	-2,399.0	1,117.5	2,656.7	2,642.8	13.90	191.186			
700.0	698.7	655.7	655.7	1.5	12.7	-112.94	-2,399.0	1,117.5	2,657.3	2,643.2	14.15	187.858			
787.4	785.1	742.1	742.1	1.8	14.4	-113.11	-2,399.0	1,117.5	2,662.6	2,646.5	16.15	164.876			
800.0	797.5	754.5	754.5	1.8	14.7	-113.13	-2,399.0	1,117.5	2,663.5	2,647.1	16.44	162.043			
885.8	881.8	838.8	838.8	2.2	16.4	-113.33	-2,399.0	1,117.5	2,670.0	2,651.5	18.43	144.888			

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



# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 508-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	-96.03	-266.2	-2,519.8	2,533.8					
98.4	98.4	97.4	97.4	0.1	0.1	-96.03	-266.2	-2,519.8	2,533.8	2,533.6	0.19	N/A		
100.0	100.0	99.0	99.0	0.1	0.1	-96.03	-266.2	-2,519.8	2,533.8	2,533.6	0.19	N/A		
196.8	196.8	195.8	195.8	0.3	0.2	-96.03	-266.2	-2,519.8	2,533.8	2,533.3	0.50	5,018.449		
200.0	200.0	199.0	199.0	0.3	0.2	-96.03	-266.2	-2,519.8	2,533.8	2,533.3	0.52	4,919.252		
295.3	295.3	294.3	294.3	0.5	0.3	-96.03	-266.2	-2,519.8	2,533.8	2,533.0	0.82	3,078.660		
300.0	300.0	299.0	299.0	0.5	0.3	-96.03	-266.2	-2,519.8	2,533.8	2,532.9	0.84	3,022.574		
393.7	393.7	392.7	392.7	0.7	0.4	-3.64	-266.2	-2,519.8	2,532.3	2,531.1	1.13	2,231.485		
400.0	400.0	399.0	399.0	0.8	0.4	-3.64	-266.2	-2,519.8	2,532.0	2,530.9	1.15	2,192.599		
492.1	492.0	491.0	491.0	1.0	0.5	-3.66	-266.2	-2,519.8	2,527.4	2,525.9	1.46	1,736.340		
500.0	499.8	498.8	498.8	1.0	0.5	-3.66	-266.2	-2,519.8	2,526.8	2,525.3	1.48	1,705.577		
590.5	590.1	584.1	584.1	1.2	0.7	-3.68	-266.1	-2,519.8	2,519.2	2,517.3	1.87	1,348.867		
600.0	599.5	592.9	592.9	1.2	0.7	-3.68	-266.1	-2,519.9	2,518.2	2,516.3	1.91	1,319.584		
689.0	687.8	675.8	675.8	1.5	0.9	-3.70	-265.9	-2,520.2	2,507.9	2,505.6	2.30	1,090.826		
700.0	698.7	686.1	686.1	1.5	0.9	-3.71	-265.9	-2,520.2	2,506.4	2,504.1	2.35	1,067.942		
787.4	785.1	767.2	767.2	1.8	1.1	-3.73	-265.5	-2,520.7	2,493.4	2,490.7	2.73	912.279		
800.0	797.5	778.9	778.9	1.8	1.1	-3.74	-265.4	-2,520.8	2,491.4	2,488.6	2.79	893.519		
885.8	881.8	858.2	858.2	2.2	1.3	-3.77	-264.9	-2,521.5	2,475.9	2,472.7	3.17	781.031		
900.0	895.6	871.3	871.3	2.2	1.3	-3.77	-264.8	-2,521.6	2,473.1	2,469.9	3.23	765.119		
984.2	977.8	948.6	948.6	2.6	1.5	-3.81	-264.2	-2,522.5	2,455.3	2,451.7	3.61	680.168		
1,000.0	993.1	963.1	963.0	2.6	1.5	-3.81	-264.1	-2,522.7	2,451.7	2,448.0	3.68	666.326		
1,082.7	1,073.0	1,042.1	1,042.1	3.1	1.7	-3.85	-263.3	-2,523.8	2,431.6	2,427.6	4.06	599.586		
1,100.0	1,089.6	1,059.8	1,059.7	3.1	1.7	-3.86	-263.1	-2,524.0	2,427.1	2,423.0	4.13	587.123		
1,181.1	1,167.3	1,142.0	1,142.0	3.6	1.9	-3.91	-262.4	-2,525.0	2,404.6	2,400.0	4.51	533.184		
1,200.0	1,185.3	1,161.1	1,161.0	3.7	1.9	-3.93	-262.3	-2,525.2	2,399.0	2,394.4	4.60	522.000		
1,279.5	1,260.6	1,240.8	1,240.7	4.2	2.1	-3.99	-261.8	-2,526.0	2,374.1	2,369.1	4.97	477.896		
1,300.0	1,279.8	1,261.1	1,261.1	4.4	2.1	-4.01	-261.7	-2,526.1	2,367.3	2,362.2	5.06	467.758		
1,377.9	1,352.7	1,338.2	1,338.1	4.9	2.3	-4.09	-261.3	-2,526.7	2,340.2	2,334.8	5.43	430.731		
1,400.0	1,373.2	1,359.8	1,359.8	5.1	2.3	-4.12	-261.2	-2,526.8	2,332.1	2,326.6	5.53	421.754		
1,476.4	1,443.6	1,434.2	1,434.1	5.7	2.5	-4.21	-261.0	-2,527.2	2,303.0	2,297.1	5.89	391.220		
1,500.0	1,465.2	1,457.0	1,456.9	5.9	2.5	-4.24	-260.9	-2,527.3	2,293.5	2,287.5	6.00	382.145		
1,574.8	1,533.1	1,526.0	1,525.9	6.5	2.7	-4.35	-260.8	-2,527.5	2,262.5	2,256.1	6.36	355.916		
1,600.0	1,555.8	1,548.8	1,548.8	6.8	2.7	-4.39	-260.8	-2,527.5	2,251.6	2,245.2	6.48	347.657		
1,649.3	1,600.0	1,593.2	1,593.2	7.2	2.8	-4.47	-260.6	-2,527.7	2,229.8	2,223.1	6.71	332.212		
1,673.2	1,621.3	1,614.7	1,614.6	7.4	2.8	-4.49	-260.6	-2,527.7	2,219.0	2,212.2	6.84	324.636		
1,700.0	1,645.1	1,638.7	1,638.6	7.7	2.9	-4.51	-260.5	-2,527.8	2,207.0	2,200.0	6.97	316.421		
1,714.3	1,657.9	1,651.5	1,651.5	7.8	2.9	-4.52	-260.4	-2,527.8	2,200.5	2,193.5	7.05	312.148		
1,771.6	1,708.7	1,702.7	1,702.6	8.4	3.0	-4.62	-260.3	-2,528.0	2,174.2	2,166.9	7.33	296.762		
1,802.5	1,735.9	1,730.0	1,729.9	8.7	3.1	-4.67	-260.1	-2,528.1	2,159.6	2,152.1	7.47	288.922		
1,870.1	1,795.1	1,789.6	1,789.5	9.4	3.2	-4.73	-259.9	-2,528.2	2,127.3	2,119.5	7.84	271.439		
1,900.0	1,821.3	1,816.0	1,815.9	9.7	3.3	-4.76	-259.7	-2,528.3	2,113.0	2,105.0	8.00	264.165		
1,968.5	1,881.4	1,876.4	1,876.3	10.4	3.4	-4.83	-259.4	-2,528.5	2,080.3	2,071.9	8.37	248.509		
2,000.0	1,909.0	1,904.2	1,904.1	10.8	3.4	-4.86	-259.3	-2,528.5	2,065.2	2,056.7	8.54	241.739		
2,066.9	1,967.7	1,960.0	1,959.9	11.5	3.6	-4.92	-258.9	-2,528.7	2,033.2	2,024.3	8.91	228.323		
2,100.0	1,996.7	1,960.0	1,959.9	11.8	3.6	-4.92	-258.9	-2,528.7	2,017.7	2,008.6	9.04	223.316		
2,165.3	2,054.0	1,992.4	1,992.3	12.5	3.6	-4.96	-258.8	-2,529.2	1,987.5	1,978.1	9.35	212.650		
2,200.0	2,084.4	2,003.6	2,003.5	12.9	3.7	-4.97	-258.9	-2,529.6	1,971.9	1,962.4	9.50	207.501		
2,263.8	2,140.3	2,050.0	2,049.8	13.5	3.8	-5.04	-259.4	-2,532.4	1,944.6	1,934.8	9.83	197.886		
2,300.0	2,172.0	2,050.0	2,049.8	13.9	3.8	-5.04	-259.4	-2,532.4	1,929.0	1,919.1	9.97	193.456		
2,362.2	2,226.6	2,050.0	2,049.8	14.6	3.8	-5.04	-259.4	-2,532.4	1,903.5	1,893.3	10.22	186.253		
2,400.0	2,259.7	2,050.0	2,049.8	15.0	3.8	-5.04	-259.4	-2,532.4	1,888.9	1,878.5	10.37	182.122		
2,460.6	2,312.8	2,090.5	2,090.2	15.6	3.8	-5.10	-259.9	-2,536.4	1,865.5	1,854.8	10.68	174.705		

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 508-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		
2,500.0	2,347.4	2,104.1	2,103.6	16.0	3.9	-5.11	-260.0	-2,538.1	1,851.1	1,840.2	10.86	170.507		
2,559.0	2,399.1	2,142.0	2,141.1	16.7	4.0	-5.15	-260.2	-2,543.8	1,830.6	1,819.4	11.15	164.200		
2,600.0	2,435.0	2,142.0	2,141.1	17.1	4.0	-5.15	-260.2	-2,543.8	1,816.6	1,805.3	11.31	160.565		
2,657.5	2,485.4	2,142.0	2,141.1	17.7	4.0	-5.15	-260.2	-2,543.8	1,798.3	1,786.8	11.55	155.751		
2,700.0	2,522.7	2,177.2	2,175.7	18.2	4.1	-5.17	-260.2	-2,550.2	1,785.1	1,773.3	11.78	151.534		
2,755.9	2,571.7	2,199.0	2,197.1	18.8	4.1	-5.18	-260.0	-2,554.6	1,768.8	1,756.7	12.04	146.852		
2,800.0	2,610.4	2,235.0	2,232.1	19.2	4.2	-5.19	-259.7	-2,562.9	1,756.8	1,744.5	12.29	143.004		
2,854.3	2,658.0	2,235.0	2,232.1	19.8	4.2	-5.19	-259.7	-2,562.9	1,742.4	1,729.9	12.51	139.325		
2,900.0	2,698.1	2,259.3	2,255.6	20.3	4.3	-5.19	-259.3	-2,569.0	1,731.2	1,718.4	12.74	135.880		
2,952.7	2,744.3	2,283.6	2,279.0	20.9	4.4	-5.18	-258.8	-2,575.5	1,718.9	1,705.9	13.00	132.194		
3,000.0	2,785.7	2,326.0	2,319.6	21.4	4.5	-5.14	-257.4	-2,587.7	1,708.9	1,695.6	13.28	128.702		
3,051.2	2,830.6	2,326.0	2,319.6	21.9	4.5	-5.14	-257.4	-2,587.7	1,698.3	1,684.8	13.49	125.920		
3,100.0	2,873.4	2,326.0	2,319.6	22.4	4.5	-5.14	-257.4	-2,587.7	1,689.5	1,675.8	13.69	123.445		
3,149.6	2,916.9	2,366.7	2,358.0	23.0	4.7	-5.09	-255.7	-2,600.8	1,680.7	1,666.8	13.98	120.243		
3,200.0	2,961.1	2,386.3	2,376.4	23.5	4.8	-5.05	-254.8	-2,607.6	1,673.1	1,658.9	14.23	117.605		
3,248.0	3,003.2	2,419.0	2,406.7	24.0	4.9	-4.99	-253.2	-2,619.8	1,666.8	1,652.3	14.49	115.003		
3,300.0	3,048.8	2,419.0	2,406.7	24.6	4.9	-4.99	-253.2	-2,619.8	1,660.6	1,645.9	14.71	112.921		
3,346.4	3,089.5	2,419.0	2,406.7	25.1	4.9	-4.99	-253.2	-2,619.8	1,656.5	1,641.6	14.90	111.201		
3,400.0	3,136.4	2,468.1	2,451.6	25.6	5.2	-4.89	-250.8	-2,639.6	1,651.6	1,636.3	15.24	108.399		
3,444.9	3,175.8	2,512.0	2,491.0	26.1	5.5	-4.81	-248.9	-2,658.8	1,649.1	1,633.5	15.53	106.211		
3,500.0	3,224.1	2,512.0	2,491.0	26.7	5.5	-4.81	-248.9	-2,658.8	1,646.0	1,630.2	15.75	104.496		
3,543.3	3,262.1	2,512.0	2,491.0	27.2	5.5	-4.81	-248.9	-2,658.8	1,644.9	1,629.0	15.93	103.262		
3,600.0	3,311.8	2,550.3	2,524.9	27.8	5.8	-4.74	-247.8	-2,676.8	1,644.0	1,627.7	16.27	101.040		
3,604.0	3,315.3	2,551.9	2,526.2	27.8	5.8	-4.74	-247.8	-2,677.6	1,644.0	1,627.7	16.29	100.911		
3,641.7	3,348.4	2,566.9	2,539.3	28.2	5.9	-4.72	-247.6	-2,684.9	1,644.3	1,627.8	16.49	99.730		
3,700.0	3,399.4	2,605.0	2,572.1	28.9	6.2	-4.70	-247.8	-2,704.3	1,645.9	1,629.0	16.83	97.814		
3,740.1	3,434.6	2,605.0	2,572.1	29.3	6.2	-4.70	-247.8	-2,704.3	1,647.4	1,630.4	16.99	96.957		
3,800.0	3,487.1	2,605.0	2,572.1	29.9	6.2	-4.70	-247.8	-2,704.3	1,651.5	1,634.3	17.24	95.815		
3,838.6	3,520.9	2,643.6	2,604.6	30.3	6.5	-4.69	-248.5	-2,725.2	1,654.1	1,636.6	17.50	94.542		
3,900.0	3,574.8	2,667.1	2,623.9	31.0	6.8	-4.69	-249.2	-2,738.4	1,660.1	1,642.3	17.82	93.159		
3,937.0	3,607.2	2,698.0	2,649.0	31.4	7.1	-4.69	-250.3	-2,756.5	1,664.6	1,646.5	18.09	92.040		
4,000.0	3,662.5	2,712.5	2,660.6	32.1	7.2	-4.69	-250.9	-2,765.1	1,672.8	1,654.4	18.39	90.960		
4,035.4	3,693.5	2,740.3	2,682.9	32.4	7.5	-4.69	-252.0	-2,781.8	1,677.9	1,659.3	18.63	90.076		
4,100.0	3,750.1	2,791.7	2,723.7	33.1	8.1	-4.70	-254.2	-2,812.8	1,687.5	1,668.5	19.07	88.497		
4,133.8	3,779.8	2,828.3	2,752.8	33.5	8.5	-4.71	-255.9	-2,835.1	1,692.7	1,673.3	19.33	87.566		
4,200.0	3,837.8	2,917.5	2,823.9	34.2	9.5	-4.74	-260.1	-2,888.7	1,702.4	1,682.5	19.91	85.507		
4,232.3	3,866.1	2,983.9	2,877.6	34.6	10.3	-4.75	-262.5	-2,927.7	1,706.5	1,686.2	20.28	84.145		
4,300.0	3,925.5	3,084.4	2,960.2	35.3	11.4	-4.74	-265.6	-2,984.9	1,713.6	1,692.7	20.93	81.884		
4,330.7	3,952.4	3,112.7	2,983.6	35.6	11.7	-4.73	-266.2	-3,000.9	1,716.6	1,695.4	21.16	81.124		
4,400.0	4,013.2	3,201.2	3,056.4	36.4	12.7	-4.65	-266.7	-3,051.0	1,723.4	1,701.7	21.78	79.135		
4,429.1	4,038.7	3,258.9	3,104.6	36.7	13.3	-4.59	-266.6	-3,082.7	1,725.7	1,703.6	22.12	78.020		
4,500.0	4,100.8	3,334.6	3,168.1	37.4	14.2	-4.49	-265.6	-3,123.9	1,730.7	1,708.0	22.70	76.241		
4,527.5	4,125.0	3,385.1	3,210.7	37.7	14.8	-4.40	-264.3	-3,151.2	1,732.4	1,709.4	23.01	75.305		
4,600.0	4,188.5	3,511.1	3,318.3	38.5	16.1	-4.16	-260.2	-3,216.5	1,735.1	1,711.3	23.78	72.954		
4,626.0	4,211.3	3,545.4	3,347.8	38.8	16.5	-4.07	-258.1	-3,233.9	1,735.6	1,711.6	24.02	72.266		
4,700.0	4,276.2	3,668.8	3,454.7	39.6	17.7	-3.72	-250.3	-3,295.1	1,736.6	1,711.8	24.78	70.072		
4,724.4	4,297.6	3,721.0	3,500.5	39.8	18.3	-3.55	-246.2	-3,319.8	1,736.1	1,711.0	25.08	69.232		
4,800.0	4,363.8	3,801.0	3,570.9	40.6	19.0	-3.26	-238.9	-3,356.9	1,734.1	1,708.4	25.68	67.526		
4,822.8	4,383.9	3,801.0	3,570.9	40.9	19.0	-3.26	-238.9	-3,356.9	1,733.6	1,707.9	25.77	67.264		
4,900.0	4,451.5	3,863.5	3,625.6	41.7	19.7	-3.02	-232.7	-3,386.5	1,732.5	1,706.2	26.32	65.813		
4,906.7	4,457.4	3,867.6	3,629.2	41.8	19.7	-3.00	-232.3	-3,388.5	1,732.5	1,706.1	26.37	65.706		
4,921.2	4,470.1	3,894.0	3,652.1	41.9	20.0	-2.90	-229.6	-3,401.4	1,732.6	1,706.1	26.53	65.316		

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 508-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		
4,938.6	4,485.3	3,894.0	3,652.1	42.1	20.0	-2.90	-229.6	-3,401.4	1,732.5	1,705.9	26.60	65.140		
5,000.0	4,539.2	3,937.4	3,689.5	42.8	20.5	-2.73	-225.6	-3,422.9	1,733.0	1,706.0	27.01	64.155		
5,019.7	4,556.4	3,954.4	3,704.3	43.0	20.6	-2.67	-224.1	-3,431.3	1,733.2	1,706.0	27.16	63.819		
5,100.0	4,626.9	4,026.8	3,766.8	43.9	21.4	-2.44	-218.6	-3,467.5	1,734.4	1,706.6	27.76	62.468		
5,118.1	4,642.7	4,043.6	3,781.2	44.1	21.6	-2.39	-217.4	-3,475.9	1,734.7	1,706.8	27.90	62.169		
5,200.0	4,714.5	4,924.1	4,615.2	44.9	26.6	-0.61	-171.7	-3,720.4	1,710.4	1,679.7	30.70	55.710		
5,216.5	4,729.0	4,940.6	4,631.7	45.1	26.7	-0.60	-171.3	-3,721.3	1,703.3	1,672.5	30.79	55.315		
5,300.0	4,802.2	5,023.9	4,714.8	46.0	26.8	-0.54	-169.7	-3,725.9	1,667.1	1,635.9	31.25	53.346		
5,314.9	4,815.3	5,038.7	4,729.7	46.2	26.8	-0.53	-169.5	-3,726.7	1,660.6	1,629.3	31.33	52.998		
5,400.0	4,889.9	5,123.1	4,814.0	47.1	26.9	-0.50	-168.3	-3,730.8	1,623.4	1,591.6	31.80	51.045		
5,413.4	4,901.6	5,136.4	4,827.2	47.2	26.9	-0.49	-168.2	-3,731.5	1,617.5	1,585.6	31.88	50.742		
5,500.0	4,977.6	5,221.8	4,912.6	48.2	27.0	-0.47	-167.6	-3,735.2	1,579.1	1,546.8	32.36	48.805		
5,511.8	4,987.9	5,233.5	4,924.2	48.3	27.0	-0.47	-167.6	-3,735.6	1,573.9	1,541.5	32.42	48.545		
5,600.0	5,065.2	5,320.0	5,010.7	49.2	27.1	-0.48	-167.5	-3,738.9	1,534.4	1,501.5	32.91	46.624		
5,610.2	5,074.2	5,330.0	5,020.7	49.3	27.1	-0.48	-167.5	-3,739.2	1,529.8	1,496.8	32.97	46.404		
5,700.0	5,152.9	5,417.6	5,108.3	50.3	27.2	-0.51	-168.0	-3,742.0	1,489.1	1,455.7	33.47	44.497		
5,708.6	5,160.5	5,426.1	5,116.7	50.4	27.2	-0.52	-168.1	-3,742.2	1,485.2	1,451.7	33.51	44.316		
5,800.0	5,240.6	5,514.7	5,205.3	51.4	27.4	-0.58	-169.2	-3,744.5	1,443.4	1,409.3	34.02	42.424		
5,807.1	5,246.8	5,521.5	5,212.1	51.5	27.4	-0.58	-169.3	-3,744.7	1,440.1	1,406.0	34.06	42.279		
5,900.0	5,328.2	5,611.2	5,301.7	52.5	27.5	-0.67	-170.9	-3,746.4	1,397.1	1,362.5	34.58	40.402		
5,905.5	5,333.1	5,616.4	5,307.0	52.5	27.5	-0.68	-171.0	-3,746.5	1,394.6	1,360.0	34.61	40.292		
6,000.0	5,415.9	5,707.0	5,397.5	53.5	27.6	-0.81	-173.2	-3,747.8	1,350.4	1,315.3	35.14	38.427		
6,003.9	5,419.4	5,710.8	5,401.3	53.6	27.6	-0.81	-173.3	-3,747.9	1,348.6	1,313.4	35.16	38.350		
6,100.0	5,503.6	5,802.3	5,492.8	54.6	27.7	-0.98	-176.1	-3,748.6	1,303.2	1,267.5	35.71	36.498		
6,102.3	5,505.6	5,804.6	5,495.0	54.6	27.7	-0.98	-176.2	-3,748.6	1,302.1	1,266.4	35.72	36.453		
6,200.0	5,591.3	5,897.0	5,587.4	55.7	27.8	-1.20	-179.5	-3,748.9	1,255.5	1,219.3	36.28	34.611		
6,200.8	5,591.9	5,897.7	5,588.1	55.7	27.8	-1.20	-179.6	-3,748.9	1,255.2	1,218.9	36.28	34.597		
6,299.2	5,678.2	5,987.9	5,678.2	56.7	27.9	-1.45	-183.3	-3,748.7	1,207.8	1,171.0	36.84	32.784		
6,300.0	5,678.9	5,988.6	5,678.9	56.7	27.9	-1.46	-183.4	-3,748.7	1,207.5	1,170.6	36.85	32.770		
6,397.6	5,764.5	6,073.4	5,763.6	57.8	28.0	-1.71	-186.8	-3,748.4	1,160.5	1,123.1	37.40	31.029		
6,400.0	5,766.6	6,075.5	5,765.7	57.8	28.0	-1.71	-186.9	-3,748.4	1,159.3	1,121.9	37.41	30.987		
6,496.0	5,850.8	6,159.0	5,849.2	58.9	28.1	-1.96	-189.9	-3,748.2	1,113.2	1,075.2	37.96	29.324		
6,500.0	5,854.3	6,162.4	5,852.6	58.9	28.1	-1.97	-190.0	-3,748.2	1,111.3	1,073.3	37.98	29.257		
6,594.5	5,937.1	6,244.6	5,934.8	59.9	28.2	-2.22	-192.6	-3,748.1	1,065.9	1,027.4	38.53	27.668		
6,600.0	5,942.0	6,249.5	5,939.6	60.0	28.2	-2.23	-192.8	-3,748.1	1,063.3	1,024.7	38.56	27.577		
6,692.9	6,023.4	6,330.4	6,020.5	61.0	28.2	-2.47	-195.0	-3,748.0	1,018.7	979.7	39.09	26.059		
6,700.0	6,029.6	6,336.6	6,026.7	61.0	28.2	-2.49	-195.2	-3,748.0	1,015.3	976.2	39.14	25.944		
6,791.3	6,109.7	6,416.2	6,106.3	62.0	28.3	-2.73	-197.1	-3,748.0	971.6	932.0	39.67	24.494		
6,800.0	6,117.3	6,423.8	6,113.9	62.1	28.3	-2.75	-197.3	-3,748.0	967.5	927.8	39.72	24.359		
6,889.7	6,196.0	6,502.1	6,192.2	63.1	28.4	-2.99	-198.8	-3,748.1	924.6	884.3	40.25	22.973		
6,900.0	6,205.0	6,511.1	6,201.2	63.2	28.4	-3.02	-199.0	-3,748.1	919.7	879.4	40.31	22.818		
6,988.2	6,282.3	6,588.1	6,278.2	64.1	28.5	-3.25	-200.2	-3,748.3	877.6	836.7	40.83	21.495		
7,000.0	6,292.6	6,598.5	6,288.5	64.3	28.5	-3.28	-200.4	-3,748.3	871.9	831.0	40.90	21.320		
7,086.6	6,368.6	6,674.2	6,364.2	65.2	28.6	-3.52	-201.3	-3,748.5	830.6	789.2	41.41	20.056		
7,100.0	6,380.3	6,685.9	6,376.0	65.3	28.6	-3.55	-201.4	-3,748.5	824.2	782.7	41.49	19.863		
7,185.0	6,454.9	6,760.3	6,450.4	66.3	28.7	-3.79	-202.0	-3,748.8	783.7	741.7	42.01	18.657		
7,200.0	6,468.0	6,773.4	6,463.5	66.4	28.7	-3.83	-202.1	-3,748.9	776.6	734.5	42.10	18.447		
7,283.4	6,541.1	6,846.5	6,536.5	67.3	28.7	-4.06	-202.4	-3,749.2	736.9	694.3	42.60	17.295		
7,299.0	6,554.8	6,860.1	6,550.2	67.5	28.7	-4.10	-202.4	-3,749.2	729.5	686.8	42.70	17.084		
7,350.0	6,598.3	6,903.7	6,593.7	68.1	28.8	-4.49	-202.4	-3,749.5	703.3	660.6	42.64	16.491		
7,381.9	6,624.3	6,929.6	6,619.7	68.5	28.8	-4.79	-202.4	-3,749.6	684.9	642.4	42.50	16.117		
7,400.0	6,638.6	6,944.0	6,634.0	68.8	28.8	-4.98	-202.4	-3,749.7	673.9	631.5	42.38	15.903		

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



# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 508-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		
7,450.0	6,676.1	6,981.6	6,671.6	69.5	28.9	-5.63	-202.3	-3,749.9	641.2	599.2	41.93	15.290		
7,480.3	6,697.4	7,002.9	6,693.0	70.1	28.9	-6.13	-202.2	-3,750.0	619.8	578.2	41.61	14.896		
7,500.0	6,710.6	7,016.2	6,706.2	70.4	28.9	-6.50	-202.1	-3,750.1	605.3	563.9	41.38	14.628		
7,550.0	6,741.8	7,047.6	6,737.6	71.4	28.9	-7.69	-201.9	-3,750.3	566.5	525.7	40.83	13.874		
7,578.7	6,758.2	7,064.0	6,754.1	72.0	28.9	-8.58	-201.8	-3,750.4	543.1	502.5	40.61	13.373		
7,600.0	6,769.5	7,075.5	6,765.5	72.4	29.0	-9.37	-201.7	-3,750.5	525.2	484.7	40.54	12.957		
7,650.0	6,793.5	7,099.7	6,789.7	73.5	29.0	-11.86	-201.5	-3,750.7	481.7	440.7	40.97	11.756		
7,677.1	6,804.9	7,111.2	6,801.3	74.1	29.0	-13.72	-201.3	-3,750.7	457.2	415.4	41.85	10.924		
7,700.0	6,813.6	7,120.0	6,810.1	74.6	29.0	-15.71	-201.3	-3,750.8	436.2	393.0	43.19	10.101		
7,750.0	6,829.5	7,136.3	6,826.4	75.8	29.0	-22.09	-201.1	-3,750.9	389.2	339.9	49.36	7.885		
7,775.6	6,836.1	7,143.0	6,833.1	76.4	29.0	-27.04	-201.0	-3,751.0	364.7	309.5	55.27	6.599		
7,800.0	6,841.3	7,148.4	6,838.5	77.0	29.0	-33.42	-200.9	-3,751.0	341.1	277.7	63.42	5.379		
7,832.7	6,846.7	7,154.1	6,844.1	77.8	29.0	-45.46	-200.9	-3,751.1	309.2	230.7	78.54	3.937		
7,874.0	6,852.4	7,160.0	6,850.1	78.9	29.0	-49.56	-200.8	-3,751.1	268.8	184.8	83.98	3.201		
7,900.0	6,856.0	7,163.8	6,853.8	79.5	29.0	-52.43	-200.7	-3,751.1	243.4	155.8	87.59	2.779		
7,924.0	6,859.3	7,167.2	6,857.3	80.1	29.0	-55.31	-200.7	-3,751.2	220.1	129.1	91.02	2.418		
7,950.0	6,862.3	7,170.4	6,860.5	80.7	29.0	-68.37	-200.7	-3,751.2	194.9	92.6	102.35	1.905		
7,972.4	6,864.0	7,172.3	6,862.4	81.3	29.1	-78.30	-200.6	-3,751.2	173.4	65.4	108.02	1.605		
8,000.0	6,865.0	7,173.5	6,863.5	82.0	29.1	-87.66	-200.6	-3,751.2	147.3	36.4	110.82	1.329 Level 3		
8,007.5	6,865.0	7,173.6	6,863.6	82.2	29.1	-89.61	-200.6	-3,751.2	140.3	29.2	111.09	1.263 Level 3		
8,070.8	6,865.0	7,174.1	6,864.1	83.8	29.1	-90.16	-200.6	-3,751.2	84.9	-27.8	112.67	0.753 Level 1		
8,100.0	6,865.0	7,174.3	6,864.4	84.5	29.1	-90.41	-200.6	-3,751.2	64.5	-48.9	113.40	0.569 Level 1		
8,137.6	6,865.0	7,174.6	6,864.7	85.4	29.1	-90.74	-200.6	-3,751.2	52.3	-62.0	114.34	0.458 Level 1, CC, ES, SF		
8,169.3	6,865.0	7,174.9	6,864.9	86.2	29.1	-91.02	-200.6	-3,751.2	61.2	-54.0	115.13	0.531 Level 1		
8,200.0	6,865.0	7,175.1	6,865.2	87.0	29.1	-91.28	-200.6	-3,751.2	81.4	-34.5	115.89	0.703 Level 1		
8,267.7	6,865.0	7,175.7	6,865.7	88.7	29.1	-91.87	-200.6	-3,751.2	140.2	22.6	117.58	1.192 Level 2		
8,300.0	6,865.0	7,175.9	6,866.0	89.5	29.1	-92.15	-200.6	-3,751.2	170.6	52.2	118.37	1.441 Level 3		
8,366.1	6,865.0	7,176.4	6,866.5	91.2	29.1	-92.73	-200.6	-3,751.2	234.4	114.4	120.01	1.953		
8,400.0	6,865.0	7,176.7	6,866.8	92.1	29.1	-93.02	-200.6	-3,751.2	267.5	146.7	120.84	2.214		
8,464.5	6,865.0	7,177.2	6,867.3	93.7	29.1	-93.58	-200.6	-3,751.2	331.1	208.6	122.43	2.704		
8,500.0	6,865.0	7,177.5	6,867.6	94.6	29.1	-93.89	-200.6	-3,751.2	366.1	242.8	123.30	2.969		
8,563.0	6,865.0	7,178.0	6,868.1	96.2	29.1	-94.44	-200.6	-3,751.2	428.5	303.7	124.84	3.433		
8,600.0	6,865.0	7,178.3	6,868.4	97.2	29.1	-94.76	-200.6	-3,751.2	465.3	339.6	125.74	3.701		
8,661.4	6,865.0	7,178.8	6,868.8	98.8	29.1	-95.30	-200.6	-3,751.3	526.4	399.1	127.22	4.137		
8,700.0	6,865.0	7,179.1	6,869.2	99.8	29.1	-95.63	-200.6	-3,751.3	564.8	436.6	128.15	4.407		
8,759.8	6,865.0	7,179.6	6,869.6	101.3	29.1	-96.15	-200.5	-3,751.3	624.4	494.8	129.59	4.818		
8,800.0	6,865.0	7,179.9	6,870.0	102.4	29.1	-96.50	-200.5	-3,751.3	664.4	533.9	130.54	5.090		
8,858.2	6,865.0	7,180.4	6,870.4	103.9	29.1	-97.01	-200.5	-3,751.3	722.5	590.6	131.93	5.476		
8,900.0	6,865.0	7,180.7	6,870.8	105.0	29.1	-97.37	-200.5	-3,751.3	764.1	631.2	132.91	5.749		
8,956.7	6,865.0	7,181.2	6,871.2	106.5	29.1	-97.86	-200.5	-3,751.3	820.7	686.4	134.24	6.113		
9,000.0	6,865.0	7,181.5	6,871.6	107.6	29.1	-98.24	-200.5	-3,751.3	863.9	728.7	135.25	6.388		
9,055.1	6,865.0	7,182.0	6,872.0	109.0	29.1	-98.72	-200.5	-3,751.3	918.9	782.4	136.53	6.731		
9,100.0	6,865.0	7,182.3	6,872.4	110.2	29.1	-99.11	-200.5	-3,751.3	963.8	826.2	137.56	7.006		
9,153.5	6,865.0	7,182.8	6,872.8	111.6	29.1	-99.57	-200.5	-3,751.3	1,017.2	878.4	138.78	7.329		
9,200.0	6,865.0	7,183.1	6,873.2	112.8	29.1	-99.97	-200.5	-3,751.3	1,063.6	923.8	139.84	7.606		
9,251.9	6,865.0	7,183.6	6,873.6	114.2	29.1	-100.42	-200.5	-3,751.3	1,115.5	974.5	141.01	7.911		
9,300.0	6,865.0	7,184.0	6,874.0	115.5	29.1	-100.83	-200.5	-3,751.3	1,163.5	1,021.4	142.08	8.189		
9,350.4	6,865.0	7,184.4	6,874.4	116.8	29.1	-101.26	-200.5	-3,751.3	1,213.8	1,070.6	143.20	8.476		
9,400.0	6,865.0	7,184.8	6,874.8	118.1	29.1	-101.69	-200.5	-3,751.3	1,263.4	1,119.1	144.29	8.756		
9,448.8	6,865.0	7,185.2	6,875.2	119.4	29.1	-102.11	-200.5	-3,751.3	1,312.2	1,166.8	145.36	9.027		
9,500.0	6,865.0	7,185.6	6,875.6	120.8	29.1	-102.55	-200.5	-3,751.3	1,363.3	1,216.9	146.46	9.308		
9,547.2	6,865.0	7,186.0	6,876.0	122.1	29.1	-102.95	-200.5	-3,751.3	1,410.5	1,263.0	147.48	9.564		

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													SW NW SEC. 15 T5N R65W 6th P.M. - EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1		Offset Site Error:		0.0 usft
Survey Program: 508-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					
9,600.0	6,865.0	7,186.4	6,876.4	123.5	29.1	-103.40	-200.5	-3,751.3	1,463.3	1,314.7	148.60	9.847					
9,645.6	6,865.0	7,186.8	6,876.8	124.7	29.1	-103.78	-200.4	-3,751.3	1,508.9	1,359.3	149.56	10.089					
9,700.0	6,865.0	7,187.2	6,877.2	126.1	29.1	-104.25	-200.4	-3,751.3	1,563.2	1,412.5	150.69	10.373					
9,744.1	6,865.0	7,187.6	6,877.6	127.3	29.1	-104.62	-200.4	-3,751.3	1,607.2	1,455.6	151.60	10.602					
9,800.0	6,865.0	7,188.0	6,878.1	128.8	29.1	-105.09	-200.4	-3,751.3	1,663.1	1,510.4	152.75	10.888					
9,842.5	6,865.0	7,188.4	6,878.4	130.0	29.1	-105.45	-200.4	-3,751.3	1,705.6	1,552.0	153.61	11.104					
9,900.0	6,865.0	7,188.8	6,878.9	131.5	29.1	-105.93	-200.4	-3,751.3	1,763.1	1,608.3	154.76	11.392					
9,940.9	6,865.0	7,189.2	6,879.2	132.6	29.1	-106.27	-200.4	-3,751.3	1,804.0	1,648.4	155.57	11.596					
10,000.0	6,865.0	7,189.7	6,879.7	134.2	29.1	-106.76	-200.4	-3,751.3	1,863.0	1,706.3	156.73	11.887					
10,039.3	6,865.0	7,190.0	6,880.0	135.3	29.1	-107.09	-200.4	-3,751.3	1,902.4	1,744.9	157.50	12.079					
10,100.0	6,865.0	7,190.5	6,880.5	136.9	29.1	-107.59	-200.4	-3,751.3	1,963.0	1,804.3	158.66	12.372					
10,137.8	6,865.0	7,190.8	6,880.8	137.9	29.1	-107.90	-200.4	-3,751.3	2,000.8	1,841.4	159.38	12.554					
10,200.0	6,865.0	7,191.3	6,881.4	139.6	29.1	-108.41	-200.4	-3,751.4	2,063.0	1,902.4	160.54	12.850					
10,236.2	6,865.0	7,191.6	6,881.7	140.6	29.1	-108.71	-200.4	-3,751.4	2,099.1	1,937.9	161.22	13.021					
10,300.0	6,865.0	7,192.1	6,882.2	142.3	29.1	-109.23	-200.4	-3,751.4	2,162.9	2,000.5	162.39	13.320					
10,334.6	6,865.0	7,192.4	6,882.5	143.2	29.1	-109.51	-200.4	-3,751.4	2,197.5	2,034.5	163.01	13.481					
10,400.0	6,865.0	7,193.0	6,883.0	145.0	29.1	-110.04	-200.4	-3,751.4	2,262.9	2,098.7	164.18	13.783					
10,433.0	6,865.0	7,193.2	6,883.3	145.9	29.1	-110.31	-200.4	-3,751.4	2,295.9	2,131.2	164.77	13.934					
10,500.0	6,865.0	7,193.8	6,883.8	147.7	29.1	-110.85	-200.4	-3,751.4	2,362.9	2,196.9	165.93	14.240					
10,531.5	6,865.0	7,194.1	6,884.1	148.6	29.1	-111.10	-200.3	-3,751.4	2,394.3	2,227.9	166.48	14.382					
10,600.0	6,865.0	7,194.6	6,884.7	150.4	29.1	-111.65	-200.3	-3,751.4	2,462.8	2,295.2	167.64	14.691					
10,629.9	6,865.0	7,194.9	6,884.9	151.2	29.1	-111.88	-200.3	-3,751.4	2,492.7	2,324.6	168.14	14.825					
10,700.0	6,865.0	7,195.5	6,885.5	153.1	29.1	-112.44	-200.3	-3,751.4	2,562.8	2,393.5	169.30	15.138					
10,728.3	6,865.0	7,195.7	6,885.7	153.9	29.1	-112.66	-200.3	-3,751.4	2,591.1	2,421.4	169.76	15.263					
10,800.0	6,865.0	7,196.3	6,886.3	155.9	29.1	-113.22	-200.3	-3,751.4	2,662.8	2,491.9	170.92	15.579					
10,826.7	6,865.0	7,196.5	6,886.6	156.6	29.1	-113.43	-200.3	-3,751.4	2,689.5	2,518.2	171.34	15.697					
10,900.0	6,865.0	7,197.1	6,887.2	158.6	29.1	-114.00	-200.3	-3,751.4	2,762.8	2,590.3	172.49	16.017					
10,925.2	6,865.0	7,197.3	6,887.4	159.3	29.1	-114.20	-200.3	-3,751.4	2,787.9	2,615.1	172.88	16.126					
11,000.0	6,865.0	7,198.0	6,888.0	161.3	29.1	-114.77	-200.3	-3,751.4	2,862.7	2,688.7	174.02	16.451					
11,023.6	6,865.0	7,198.2	6,888.2	162.0	29.1	-114.95	-200.3	-3,751.4	2,886.3	2,712.0	174.37	16.553					
11,100.0	6,865.0	7,198.8	6,888.8	164.0	29.1	-115.53	-200.3	-3,751.4	2,962.7	2,787.2	175.50	16.882					
11,122.0	6,865.0	7,199.0	6,889.0	164.6	29.1	-115.70	-200.3	-3,751.4	2,984.7	2,808.9	175.82	16.976					
11,200.0	6,865.0	7,199.7	6,889.7	166.8	29.1	-116.29	-200.3	-3,751.4	3,062.7	2,885.8	176.94	17.309					
11,220.4	6,865.0	7,199.8	6,889.9	167.3	29.1	-116.44	-200.3	-3,751.4	3,083.2	2,905.9	177.23	17.396					
11,300.0	6,865.0	7,200.5	6,890.5	169.5	29.1	-117.04	-200.3	-3,751.4	3,162.7	2,984.4	178.34	17.735					
11,318.9	6,865.0	7,200.7	6,890.7	170.0	29.1	-117.18	-200.3	-3,751.4	3,181.6	3,003.0	178.59	17.814					
11,400.0	6,865.0	7,201.3	6,891.4	172.2	29.1	-117.78	-200.2	-3,751.4	3,262.7	3,083.0	179.69	18.157					
11,417.3	6,865.0	7,201.5	6,891.5	172.7	29.1	-117.90	-200.2	-3,751.4	3,280.0	3,100.1	179.92	18.230					
11,500.0	6,865.0	7,202.2	6,892.2	175.0	29.1	-118.51	-200.2	-3,751.4	3,362.7	3,181.7	181.00	18.578					
11,515.7	6,865.0	7,202.3	6,892.4	175.4	29.1	-118.62	-200.2	-3,751.4	3,378.4	3,197.2	181.20	18.645					
11,600.0	6,865.0	7,203.0	6,893.1	177.7	29.1	-119.23	-200.2	-3,751.4	3,462.6	3,280.4	182.26	18.998					
11,614.1	6,865.0	7,203.2	6,893.2	178.1	29.1	-119.33	-200.2	-3,751.4	3,476.8	3,294.4	182.44	19.057					
11,700.0	6,865.0	7,203.9	6,893.9	180.5	29.1	-119.94	-200.2	-3,751.5	3,562.6	3,379.1	183.49	19.416					
11,712.6	6,865.0	7,204.0	6,894.0	180.8	29.1	-120.03	-200.2	-3,751.5	3,575.2	3,391.6	183.64	19.468					
11,800.0	6,865.0	7,204.7	6,894.8	183.2	29.1	-120.65	-200.2	-3,751.5	3,662.6	3,477.9	184.68	19.833					
11,811.0	6,865.0	7,204.8	6,894.9	183.5	29.1	-120.73	-200.2	-3,751.5	3,673.6	3,488.8	184.80	19.878					
11,900.0	6,865.0	7,205.6	6,895.6	186.0	29.1	-121.35	-200.2	-3,751.5	3,762.6	3,576.8	185.82	20.248					
11,909.4	6,865.0	7,205.7	6,895.7	186.2	29.1	-121.41	-200.2	-3,751.5	3,772.0	3,586.1	185.93	20.288					
12,000.0	6,865.0	7,206.4	6,896.5	188.7	29.1	-122.04	-200.2	-3,751.5	3,862.6	3,675.7	186.93	20.663					
12,007.8	6,865.0	7,206.5	6,896.5	188.9	29.1	-122.09	-200.2	-3,751.5	3,870.4	3,683.4	187.01	20.696					
12,100.0	6,865.0	7,207.3	6,897.3	191.5	29.1	-122.72	-200.2	-3,751.5	3,962.6	3,774.6	188.00	21.078					
12,106.3	6,865.0	7,207.4	6,897.4	191.6	29.1	-122.76	-200.2	-3,751.5	3,968.9	3,780.8	188.06	21.104					

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

## Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		SW NW SEC. 15 T5N R65W 6th P.M. - EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 usft	
Survey Program: 508-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				
12,200.0	6,865.0	7,208.2	6,898.2	194.2	29.1	-123.39	-200.1	-3,751.5	4,062.6	3,873.5	189.03	21.492				
12,204.7	6,865.0	7,208.2	6,898.2	194.4	29.1	-123.42	-200.1	-3,751.5	4,067.3	3,878.2	189.07	21.511				
12,300.0	6,865.0	7,209.0	6,899.1	197.0	29.1	-124.05	-200.1	-3,751.5	4,162.6	3,972.5	190.02	21.906				
12,303.1	6,865.0	7,209.0	6,899.1	197.1	29.1	-124.08	-200.1	-3,751.5	4,165.7	3,975.6	190.05	21.919				
12,400.0	6,865.0	7,209.9	6,899.9	199.7	29.1	-124.71	-200.1	-3,751.5	4,262.5	4,071.6	190.98	22.319				
12,401.5	6,865.0	7,209.9	6,899.9	199.8	29.1	-124.72	-200.1	-3,751.5	4,264.1	4,073.1	190.99	22.326				
12,500.0	6,865.0	7,210.7	6,900.8	202.5	29.1	-125.36	-200.1	-3,751.5	4,362.5	4,170.6	191.90	22.733				
12,598.4	6,865.0	7,211.6	6,901.6	205.2	29.1	-125.98	-200.1	-3,751.5	4,460.9	4,268.1	192.78	23.140				
12,600.0	6,865.0	7,211.6	6,901.6	205.3	29.1	-125.99	-200.1	-3,751.5	4,462.5	4,269.7	192.79	23.147				
12,696.8	6,865.0	7,212.5	6,902.5	207.9	29.1	-126.60	-200.1	-3,751.5	4,559.3	4,365.7	193.62	23.548				
12,700.0	6,865.0	7,212.5	6,902.5	208.0	29.1	-126.62	-200.1	-3,751.5	4,562.5	4,368.9	193.65	23.561				
12,795.2	6,865.0	7,213.3	6,903.3	210.7	29.1	-127.22	-200.1	-3,751.5	4,657.8	4,463.3	194.43	23.956				
12,800.0	6,865.0	7,213.4	6,903.4	210.8	29.1	-127.24	-200.1	-3,751.5	4,662.5	4,468.0	194.47	23.975				
12,893.7	6,865.0	7,214.2	6,904.2	213.4	29.1	-127.82	-200.1	-3,751.5	4,756.2	4,561.0	195.21	24.364				
12,900.0	6,865.0	7,214.2	6,904.3	213.5	29.1	-127.86	-200.1	-3,751.5	4,762.5	4,567.2	195.26	24.390				
12,992.1	6,865.0	7,215.0	6,905.1	216.1	29.1	-128.41	-200.0	-3,751.5	4,854.6	4,658.6	195.96	24.773				
13,000.0	6,865.0	7,215.1	6,905.1	216.3	29.1	-128.46	-200.0	-3,751.5	4,862.5	4,666.5	196.02	24.806				
13,090.5	6,865.0	7,215.9	6,905.9	218.8	29.1	-129.00	-200.0	-3,751.6	4,953.0	4,756.3	196.69	25.182				
13,100.0	6,865.0	7,216.0	6,906.0	219.1	29.1	-129.06	-200.0	-3,751.6	4,962.5	4,765.7	196.76	25.222				
13,188.9	6,865.0	7,216.7	6,906.8	221.5	29.1	-129.58	-200.0	-3,751.6	5,051.4	4,854.0	197.38	25.592				
13,200.0	6,865.0	7,216.8	6,906.9	221.8	29.1	-129.64	-200.0	-3,751.6	5,062.5	4,865.0	197.46	25.638				
13,287.4	6,865.0	7,217.6	6,907.6	224.3	29.1	-130.15	-200.0	-3,751.6	5,149.8	4,951.8	198.05	26.003				
13,300.0	6,865.0	7,217.7	6,907.8	224.6	29.1	-130.22	-200.0	-3,751.6	5,162.5	4,964.3	198.13	26.055				
13,385.8	6,865.0	7,218.5	6,908.5	227.0	29.1	-130.71	-200.0	-3,751.6	5,248.2	5,049.6	198.69	26.414				
13,400.0	6,865.0	7,218.6	6,908.6	227.4	29.1	-130.79	-200.0	-3,751.6	5,262.4	5,063.7	198.78	26.473				
13,484.2	6,865.0	7,219.3	6,909.4	229.7	29.1	-131.27	-200.0	-3,751.6	5,346.7	5,147.4	199.31	26.826				
13,500.0	6,865.0	7,219.5	6,909.5	230.2	29.1	-131.36	-200.0	-3,751.6	5,362.4	5,163.0	199.41	26.892				
13,582.6	6,865.0	7,220.2	6,910.3	232.4	29.1	-131.82	-200.0	-3,751.6	5,445.1	5,245.2	199.90	27.239				
13,600.0	6,865.0	7,220.4	6,910.4	232.9	29.1	-131.91	-200.0	-3,751.6	5,462.4	5,262.4	200.00	27.312				
13,681.1	6,865.0	7,221.1	6,911.1	235.2	29.1	-132.35	-200.0	-3,751.6	5,543.5	5,343.0	200.47	27.652				
13,700.0	6,865.0	7,221.3	6,911.3	235.7	29.1	-132.46	-200.0	-3,751.6	5,562.4	5,361.8	200.58	27.732				
13,779.5	6,865.0	7,222.0	6,912.0	237.9	29.1	-132.89	-199.9	-3,751.6	5,641.9	5,440.9	201.02	28.067				
13,800.0	6,865.0	7,222.1	6,912.2	238.5	29.1	-133.00	-199.9	-3,751.6	5,662.4	5,461.3	201.13	28.153				
13,877.9	6,865.0	7,222.8	6,912.9	240.6	29.1	-133.41	-199.9	-3,751.6	5,740.3	5,538.8	201.54	28.482				
13,900.0	6,865.0	7,223.0	6,913.1	241.3	29.1	-133.53	-199.9	-3,751.6	5,762.4	5,560.8	201.66	28.575				
13,976.3	6,865.0	7,223.7	6,913.7	243.4	29.1	-133.93	-199.9	-3,751.6	5,838.8	5,636.7	202.05	28.898				
14,000.0	6,865.0	7,223.9	6,914.0	244.0	29.1	-134.05	-199.9	-3,751.6	5,862.4	5,660.2	202.16	28.998				
14,074.8	6,865.0	7,224.6	6,914.6	246.1	29.1	-134.43	-199.9	-3,751.6	5,937.2	5,734.6	202.53	29.315				
14,100.0	6,865.0	7,224.8	6,914.9	246.8	29.1	-134.56	-199.9	-3,751.6	5,962.4	5,759.7	202.65	29.422				
14,173.2	6,865.0	7,225.5	6,915.5	248.8	29.1	-134.94	-199.9	-3,751.6	6,035.6	5,832.6	202.99	29.733				
14,200.0	6,865.0	7,225.7	6,915.7	249.6	29.1	-135.07	-199.9	-3,751.6	6,062.4	5,859.3	203.11	29.847				
14,271.6	6,865.0	7,226.4	6,916.4	251.6	29.1	-135.43	-199.9	-3,751.6	6,134.0	5,930.6	203.44	30.152				
14,300.0	6,865.0	7,226.6	6,916.6	252.4	29.1	-135.57	-199.9	-3,751.6	6,162.4	5,958.8	203.56	30.273				
14,370.0	6,865.0	7,227.2	6,917.3	254.3	29.1	-135.92	-199.9	-3,751.6	6,232.4	6,028.6	203.86	30.572				
14,400.0	6,865.0	7,227.5	6,917.5	255.1	29.1	-136.06	-199.9	-3,751.6	6,262.4	6,058.4	203.99	30.700				
14,468.5	6,865.0	7,228.1	6,918.2	257.0	29.1	-136.40	-199.8	-3,751.7	6,330.8	6,126.6	204.27	30.992				
14,500.0	6,865.0	7,228.4	6,918.4	257.9	29.1	-136.55	-199.8	-3,751.7	6,362.4	6,158.0	204.40	31.127				
14,566.9	6,865.0	7,229.0	6,919.0	259.8	29.1	-136.87	-199.8	-3,751.7	6,429.3	6,224.6	204.66	31.414				
14,600.0	6,865.0	7,229.3	6,919.3	260.7	29.1	-137.03	-199.8	-3,751.7	6,462.4	6,257.6	204.79	31.556				
14,665.3	6,865.0	7,229.9	6,919.9	262.5	29.1	-137.34	-199.8	-3,751.7	6,527.7	6,322.6	205.04	31.836				
14,700.0	6,865.0	7,230.2	6,920.3	263.5	29.1	-137.50	-199.8	-3,751.7	6,562.3	6,357.2	205.17	31.985				
14,763.7	6,865.0	7,230.8	6,920.8	265.2	29.1	-137.79	-199.8	-3,751.7	6,626.1	6,420.7	205.40	32.259				

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 508-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		
14,800.0	6,865.0	7,231.1	6,921.2	266.3	29.1	-137.96	-199.8	-3,751.7	6,662.3	6,456.8	205.53	32.415		
14,862.2	6,865.0	7,231.7	6,921.7	268.0	29.1	-138.25	-199.8	-3,751.7	6,724.5	6,518.8	205.75	32.683		
14,900.0	6,865.0	7,232.0	6,922.1	269.0	29.1	-138.42	-199.8	-3,751.7	6,762.3	6,556.5	205.88	32.847		
14,960.6	6,865.0	7,232.6	6,922.6	270.7	29.1	-138.69	-199.8	-3,751.7	6,822.9	6,616.9	206.08	33.108		
15,000.0	6,865.0	7,232.9	6,923.0	271.8	29.1	-138.87	-199.8	-3,751.7	6,862.3	6,656.1	206.21	33.279		
15,059.0	6,865.0	7,233.5	6,923.5	273.5	29.1	-139.13	-199.8	-3,751.7	6,921.4	6,715.0	206.40	33.534		
15,100.0	6,865.0	7,233.9	6,923.9	274.6	29.1	-139.31	-199.8	-3,751.7	6,962.3	6,755.8	206.53	33.712		
15,157.4	6,865.0	7,234.4	6,924.4	276.2	29.1	-139.56	-199.8	-3,751.7	7,019.8	6,813.1	206.70	33.961		
15,200.0	6,865.0	7,234.8	6,924.8	277.4	29.1	-139.75	-199.7	-3,751.7	7,062.3	6,855.5	206.83	34.145		
15,255.9	6,865.0	7,235.3	6,925.3	278.9	29.1	-139.99	-199.7	-3,751.7	7,118.2	6,911.2	207.00	34.388		
15,300.0	6,865.0	7,235.7	6,925.7	280.2	29.1	-140.18	-199.7	-3,751.7	7,162.3	6,955.2	207.12	34.580		
15,354.3	6,865.0	7,236.2	6,926.2	281.7	29.1	-140.41	-199.7	-3,751.7	7,216.6	7,009.3	207.28	34.816		
15,400.0	6,865.0	7,236.6	6,926.6	283.0	29.1	-140.60	-199.7	-3,751.7	7,262.3	7,054.9	207.41	35.015		
15,452.7	6,865.0	7,237.1	6,927.1	284.4	29.1	-140.82	-199.7	-3,751.7	7,315.0	7,107.5	207.55	35.245		
15,500.0	6,865.0	7,237.5	6,927.6	285.7	29.1	-141.02	-199.7	-3,751.7	7,362.3	7,154.6	207.67	35.451		
15,551.1	6,865.0	7,238.0	6,928.0	287.2	29.1	-141.23	-199.7	-3,751.7	7,413.4	7,205.6	207.81	35.674		
15,600.0	6,865.0	7,238.4	6,928.5	288.5	29.1	-141.43	-199.7	-3,751.7	7,462.3	7,254.4	207.93	35.888		
15,649.6	6,865.0	7,238.9	6,928.9	289.9	29.1	-141.63	-199.7	-3,751.7	7,511.9	7,303.8	208.06	36.105		
15,700.0	6,865.0	7,239.4	6,929.4	291.3	29.1	-141.83	-199.7	-3,751.7	7,562.3	7,354.1	208.18	36.325		
15,748.0	6,865.0	7,239.8	6,929.8	292.7	29.1	-142.03	-199.7	-3,751.8	7,610.3	7,402.0	208.30	36.535		
15,800.0	6,865.0	7,240.3	6,930.3	294.1	29.1	-142.23	-199.7	-3,751.8	7,662.3	7,453.9	208.42	36.763		
15,846.4	6,865.0	7,240.7	6,930.8	295.4	29.1	-142.41	-199.7	-3,751.8	7,708.7	7,500.2	208.53	36.967		
15,900.0	6,865.0	7,241.2	6,931.3	296.9	29.1	-142.62	-199.6	-3,751.8	7,762.3	7,553.6	208.65	37.202		
15,944.8	6,865.0	7,241.6	6,931.7	298.1	29.1	-142.80	-199.6	-3,751.8	7,807.1	7,598.4	208.75	37.399		
16,000.0	6,865.0	7,242.2	6,932.2	299.7	29.1	-143.01	-199.6	-3,751.8	7,862.3	7,653.4	208.87	37.641		
16,043.3	6,865.0	7,242.6	6,932.6	300.9	29.1	-143.18	-199.6	-3,751.8	7,905.5	7,696.6	208.97	37.832		
16,100.0	6,865.0	7,243.1	6,933.1	302.5	29.1	-143.39	-199.6	-3,751.8	7,962.3	7,753.2	209.09	38.081		
16,141.7	6,865.0	7,243.5	6,933.5	303.6	29.1	-143.55	-199.6	-3,751.8	8,004.0	7,794.8	209.17	38.265		
16,200.0	6,865.0	7,244.0	6,934.1	305.3	29.1	-143.77	-199.6	-3,751.8	8,062.3	7,853.0	209.29	38.522		
16,240.1	6,865.0	7,244.4	6,934.4	306.4	29.1	-143.92	-199.6	-3,751.8	8,102.4	7,893.0	209.37	38.699		
16,300.0	6,865.0	7,245.0	6,935.0	308.0	29.1	-144.14	-199.6	-3,751.8	8,162.3	7,952.8	209.49	38.963		
16,338.5	6,865.0	7,245.3	6,935.3	309.1	29.1	-144.28	-199.6	-3,751.8	8,200.8	7,991.2	209.56	39.133		
16,400.0	6,865.0	7,245.9	6,935.9	310.8	29.1	-144.50	-199.6	-3,751.8	8,262.2	8,052.6	209.68	39.404		
16,437.0	6,865.0	7,246.2	6,936.3	311.9	29.1	-144.63	-199.6	-3,751.8	8,299.2	8,089.5	209.75	39.568		
16,500.0	6,865.0	7,246.8	6,936.9	313.6	29.1	-144.86	-199.6	-3,751.8	8,362.2	8,152.4	209.86	39.846		
16,535.4	6,865.0	7,247.2	6,937.2	314.6	29.1	-144.99	-199.5	-3,751.8	8,397.6	8,187.7	209.93	40.003		
16,600.0	6,865.0	7,247.8	6,937.8	316.4	29.1	-145.21	-199.5	-3,751.8	8,462.2	8,252.2	210.04	40.288		
16,633.8	6,865.0	7,248.1	6,938.1	317.4	29.1	-145.33	-199.5	-3,751.8	8,496.1	8,286.0	210.10	40.438		
16,700.0	6,865.0	7,248.7	6,938.8	319.2	29.1	-145.56	-199.5	-3,751.8	8,562.2	8,352.0	210.21	40.731		
16,732.2	6,865.0	7,249.0	6,939.1	320.1	29.1	-145.67	-199.5	-3,751.8	8,594.5	8,384.2	210.27	40.874		
16,800.0	6,865.0	7,249.7	6,939.7	322.0	29.1	-145.91	-199.5	-3,751.8	8,662.2	8,451.8	210.38	41.174		
16,830.7	6,865.0	7,250.0	6,940.0	322.8	29.1	-146.01	-199.5	-3,751.8	8,692.9	8,482.5	210.43	41.310		
16,900.0	6,865.0	7,250.6	6,940.6	324.8	29.1	-146.24	-199.5	-3,751.8	8,762.2	8,551.7	210.54	41.618		
16,929.1	6,865.0	7,250.9	6,940.9	325.6	29.1	-146.34	-199.5	-3,751.8	8,791.3	8,580.7	210.59	41.747		
17,000.0	6,865.0	7,251.6	6,941.6	327.6	29.1	-146.58	-199.5	-3,751.8	8,862.2	8,651.5	210.70	42.061		
17,027.5	6,865.0	7,251.8	6,941.9	328.3	29.1	-146.67	-199.5	-3,751.9	8,889.7	8,679.0	210.74	42.183		
17,100.0	6,865.0	7,252.5	6,942.5	330.4	29.1	-146.91	-199.5	-3,751.9	8,962.2	8,751.4	210.85	42.505		
17,125.9	6,865.0	7,252.8	6,942.8	331.1	29.1	-146.99	-199.5	-3,751.9	8,988.2	8,777.3	210.89	42.620		
17,200.0	6,865.0	7,253.5	6,943.5	333.2	29.1	-147.23	-199.4	-3,751.9	9,062.2	8,851.2	211.00	42.949		
17,224.4	6,865.0	7,253.7	6,943.7	333.8	29.1	-147.31	-199.4	-3,751.9	9,086.6	8,875.5	211.03	43.057		
17,300.0	6,865.0	7,254.4	6,944.5	336.0	29.1	-147.55	-199.4	-3,751.9	9,162.2	8,951.1	211.14	43.393		
17,322.8	6,865.0	7,254.6	6,944.7	336.6	29.1	-147.62	-199.4	-3,751.9	9,185.0	8,973.8	211.18	43.494		

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 15 T5N R65W 6th P.M. - EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 508-MWD												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
17,400.0	6,865.0	7,255.4	6,945.4	338.7	29.1	-147.86	-199.4	-3,751.9	9,262.2	9,050.9	211.28	43.838	
17,421.2	6,865.0	7,255.6	6,945.6	339.3	29.1	-147.93	-199.4	-3,751.9	9,283.4	9,072.1	211.31	43.932	
17,500.0	6,865.0	7,256.3	6,946.4	341.5	29.1	-148.17	-199.4	-3,751.9	9,362.2	9,150.8	211.42	44.282	
17,519.6	6,865.0	7,256.5	6,946.6	342.1	29.1	-148.23	-199.4	-3,751.9	9,381.8	9,170.4	211.45	44.369	
17,600.0	6,865.0	7,257.3	6,947.3	344.3	29.1	-148.48	-199.4	-3,751.9	9,462.2	9,250.6	211.56	44.726	
17,618.1	6,865.0	7,257.5	6,947.5	344.8	29.1	-148.53	-199.4	-3,751.9	9,480.3	9,268.7	211.58	44.807	
17,700.0	6,865.0	7,258.3	6,948.3	347.1	29.1	-148.78	-199.4	-3,751.9	9,562.2	9,350.5	211.69	45.171	
17,716.5	6,865.0	7,258.4	6,948.5	347.6	29.1	-148.83	-199.4	-3,751.9	9,578.7	9,367.0	211.71	45.244	
17,800.0	6,865.0	7,259.2	6,949.3	349.9	29.1	-149.08	-199.3	-3,751.9	9,662.2	9,450.3	211.82	45.615	
17,814.9	6,865.0	7,259.4	6,949.4	350.3	29.1	-149.12	-199.3	-3,751.9	9,677.1	9,465.3	211.84	45.682	
17,900.0	6,865.0	7,260.2	6,950.2	352.7	29.1	-149.37	-199.3	-3,751.9	9,762.2	9,550.2	211.95	46.060	
17,913.3	6,865.0	7,260.3	6,950.4	353.1	29.1	-149.41	-199.3	-3,751.9	9,775.5	9,563.5	211.96	46.119	
18,000.0	6,865.0	7,261.2	6,951.2	355.5	29.1	-149.66	-199.3	-3,751.9	9,862.2	9,650.1	212.07	46.504	
18,011.8	6,865.0	7,261.3	6,951.3	355.8	29.1	-149.69	-199.3	-3,751.9	9,873.9	9,661.8	212.09	46.556	
18,100.0	6,865.0	7,262.2	6,952.2	358.3	29.1	-149.94	-199.3	-3,751.9	9,962.2	9,750.0	212.19	46.948	
18,110.2	6,865.0	7,262.3	6,952.3	358.6	29.1	-149.97	-199.3	-3,751.9	9,972.4	9,760.1	212.21	46.994	



# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-INC													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-92.26	-98.2	-2,493.8	2,495.8					
98.4	98.4	97.4	97.4	0.1	0.5	-92.26	-98.2	-2,493.8	2,495.8	2,495.2	0.57	4,359.053		
100.0	100.0	99.0	99.0	0.1	0.5	-92.26	-98.2	-2,493.8	2,495.8	2,495.2	0.58	4,287.696		
196.8	196.8	195.8	195.8	0.3	2.9	-92.26	-98.2	-2,493.8	2,495.8	2,492.6	3.18	784.695		
200.0	200.0	199.0	199.0	0.3	2.9	-92.26	-98.2	-2,493.8	2,495.8	2,492.5	3.27	764.232		
295.3	295.3	294.3	294.3	0.5	4.9	-92.26	-98.2	-2,493.8	2,495.8	2,490.3	5.46	456.738		
300.0	300.0	299.0	299.0	0.5	5.0	-92.26	-98.2	-2,493.8	2,495.8	2,490.2	5.57	447.819		
393.7	393.7	392.7	392.7	0.7	6.9	0.13	-98.2	-2,493.8	2,494.2	2,486.6	7.68	324.719		
400.0	400.0	399.0	399.0	0.8	7.1	0.13	-98.2	-2,493.8	2,494.0	2,486.2	7.82	318.836		
492.1	492.0	491.0	491.0	1.0	8.9	0.13	-98.2	-2,493.8	2,489.3	2,479.5	9.87	252.318		
500.0	499.8	498.8	498.8	1.0	9.1	0.13	-98.2	-2,493.8	2,488.8	2,478.8	10.04	247.907		
590.5	590.1	589.1	589.1	1.2	10.9	0.14	-98.2	-2,493.8	2,481.1	2,469.0	12.03	206.303		
600.0	599.5	598.5	598.5	1.2	11.1	0.14	-98.2	-2,493.8	2,480.1	2,467.9	12.23	202.758		
689.0	687.8	686.8	686.8	1.5	12.9	0.14	-98.2	-2,493.8	2,469.4	2,455.3	14.16	174.441		
700.0	698.7	697.7	697.7	1.5	13.1	0.14	-98.2	-2,493.8	2,467.9	2,453.5	14.39	171.477		
787.4	785.1	784.1	784.1	1.8	14.9	0.14	-98.2	-2,493.8	2,454.4	2,438.2	16.25	151.060		
800.0	797.5	796.5	796.5	1.8	15.1	0.14	-98.2	-2,493.8	2,452.3	2,435.7	16.51	148.513		
885.8	881.8	880.8	880.8	2.2	16.8	0.14	-98.2	-2,493.8	2,436.1	2,417.8	18.29	133.161		
900.0	895.6	894.6	894.6	2.2	17.1	0.14	-98.2	-2,493.8	2,433.2	2,414.6	18.58	130.928		
984.2	977.8	976.8	976.8	2.6	18.7	0.14	-98.2	-2,493.8	2,414.5	2,394.2	20.29	119.009		
1,000.0	993.1	992.1	992.1	2.6	19.0	0.14	-98.2	-2,493.8	2,410.7	2,390.1	20.60	117.019		
1,082.7	1,073.0	1,072.0	1,072.0	3.1	20.7	0.15	-98.2	-2,493.8	2,389.5	2,367.3	22.22	107.530		
1,100.0	1,089.6	1,088.6	1,088.6	3.1	21.0	0.15	-98.2	-2,493.8	2,384.8	2,362.2	22.55	105.736		
1,181.1	1,167.3	1,166.3	1,166.3	3.6	22.5	0.15	-98.2	-2,493.8	2,361.3	2,337.3	24.09	98.027		
1,200.0	1,185.3	1,184.3	1,184.3	3.7	22.9	0.15	-98.2	-2,493.8	2,355.6	2,331.1	24.44	96.392		
1,279.5	1,260.6	1,259.6	1,259.6	4.2	24.4	0.15	-98.2	-2,493.8	2,329.9	2,304.1	25.88	90.020		
1,300.0	1,279.8	1,278.8	1,278.8	4.4	24.8	0.15	-98.2	-2,493.8	2,323.0	2,296.8	26.24	88.518		
1,377.9	1,352.7	1,351.7	1,351.7	4.9	26.3	0.16	-98.2	-2,493.8	2,295.4	2,267.8	27.60	83.166		
1,400.0	1,373.2	1,372.2	1,372.2	5.1	26.7	0.16	-98.2	-2,493.8	2,287.2	2,259.2	27.96	81.788		
1,476.4	1,443.6	1,442.6	1,442.6	5.7	28.1	0.16	-98.2	-2,493.8	2,257.6	2,228.4	29.22	77.276		
1,500.0	1,465.2	1,464.2	1,464.2	5.9	28.5	0.16	-98.2	-2,493.8	2,248.1	2,218.5	29.60	75.962		
1,574.8	1,533.1	1,532.1	1,532.1	6.5	29.9	0.17	-98.2	-2,493.8	2,216.8	2,186.0	30.75	72.087		
1,600.0	1,555.8	1,554.8	1,554.8	6.8	30.4	0.17	-98.2	-2,493.8	2,205.8	2,174.7	31.13	70.863		
1,649.3	1,600.0	1,599.0	1,599.0	7.2	31.3	0.17	-98.2	-2,493.8	2,183.8	2,152.0	31.85	68.573		
1,673.2	1,621.3	1,620.3	1,620.3	7.4	31.7	0.17	-98.2	-2,493.8	2,173.0	2,140.7	32.31	67.248		
1,700.0	1,645.1	1,644.1	1,644.1	7.7	32.2	0.17	-98.2	-2,493.8	2,160.8	2,128.0	32.84	65.805		
1,714.3	1,657.9	1,656.9	1,656.9	7.8	32.4	0.17	-98.2	-2,493.8	2,154.3	2,121.2	33.12	65.051		
1,771.6	1,708.7	1,707.7	1,707.7	8.4	33.4	0.18	-98.2	-2,493.8	2,127.8	2,093.9	33.91	62.745		
1,802.5	1,735.9	1,734.9	1,734.9	8.7	34.0	0.18	-98.2	-2,493.8	2,113.1	2,078.8	34.32	61.565		
1,870.1	1,795.1	1,794.1	1,794.1	9.4	35.2	0.18	-98.2	-2,493.8	2,080.6	2,045.0	35.62	58.407		
1,900.0	1,821.3	1,820.3	1,820.3	9.7	35.7	0.18	-98.2	-2,493.8	2,066.2	2,030.0	36.20	57.080		
1,968.5	1,881.4	1,880.4	1,880.4	10.4	36.9	0.19	-98.2	-2,493.8	2,033.3	1,995.8	37.52	54.193		
2,000.0	1,909.0	1,908.0	1,908.0	10.8	37.5	0.19	-98.2	-2,493.8	2,018.1	1,980.0	38.13	52.932		
2,066.9	1,967.7	1,966.7	1,966.7	11.5	38.7	0.19	-98.2	-2,493.8	1,985.9	1,946.5	39.42	50.379		
2,100.0	1,996.7	1,995.7	1,995.7	11.8	39.2	0.19	-98.2	-2,493.8	1,970.0	1,930.0	40.06	49.178		
2,165.3	2,054.0	2,053.0	2,053.0	12.5	40.4	0.20	-98.2	-2,493.8	1,938.6	1,897.3	41.32	46.913		
2,200.0	2,084.4	2,083.4	2,083.4	12.9	41.0	0.20	-98.2	-2,493.8	1,921.9	1,879.9	41.99	45.767		
2,263.8	2,140.3	2,139.3	2,139.3	13.5	42.1	0.20	-98.2	-2,493.8	1,891.3	1,848.0	43.23	43.749		
2,300.0	2,172.0	2,171.0	2,171.0	13.9	42.8	0.20	-98.2	-2,493.8	1,873.8	1,829.9	43.93	42.654		
2,362.2	2,226.6	2,225.6	2,225.6	14.6	43.9	0.21	-98.2	-2,493.8	1,843.9	1,798.8	45.14	40.851		
2,400.0	2,259.7	2,258.7	2,258.7	15.0	44.5	0.21	-98.2	-2,493.8	1,825.7	1,779.9	45.87	39.802		
2,460.6	2,312.8	2,311.8	2,311.8	15.6	45.6	0.21	-98.2	-2,493.8	1,796.6	1,749.5	47.05	38.187		

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-INC													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
2,500.0	2,347.4	2,346.4	2,346.4	16.0	46.3	0.21	-98.2	-2,493.8	1,777.6	1,729.8	47.81	37.180		
2,559.0	2,399.1	2,398.1	2,398.1	16.7	47.3	0.22	-98.2	-2,493.8	1,749.2	1,700.3	48.96	35.729		
2,600.0	2,435.0	2,434.0	2,434.0	17.1	48.1	0.22	-98.2	-2,493.8	1,729.5	1,679.8	49.75	34.762		
2,657.5	2,485.4	2,484.4	2,484.4	17.7	49.1	0.22	-98.2	-2,493.8	1,701.9	1,651.0	50.87	33.455		
2,700.0	2,522.7	2,521.7	2,521.7	18.2	49.8	0.23	-98.2	-2,493.8	1,681.4	1,629.7	51.70	32.524		
2,755.9	2,571.7	2,570.7	2,570.7	18.8	50.8	0.23	-98.2	-2,493.8	1,654.6	1,601.8	52.79	31.345		
2,800.0	2,610.4	2,609.4	2,609.4	19.2	51.6	0.23	-98.2	-2,493.8	1,633.3	1,579.7	53.64	30.448		
2,854.3	2,658.0	2,657.0	2,657.0	19.8	52.5	0.24	-98.2	-2,493.8	1,607.2	1,552.5	54.70	29.382		
2,900.0	2,698.1	2,697.1	2,697.1	20.3	53.3	0.24	-98.2	-2,493.8	1,585.2	1,529.7	55.59	28.517		
2,952.7	2,744.3	2,743.3	2,743.3	20.9	54.3	0.24	-98.2	-2,493.8	1,559.9	1,503.3	56.62	27.552		
3,000.0	2,785.7	2,784.7	2,784.7	21.4	55.1	0.25	-98.2	-2,493.8	1,537.2	1,479.6	57.54	26.717		
3,051.2	2,830.6	2,829.6	2,829.6	21.9	56.0	0.25	-98.2	-2,493.8	1,512.5	1,454.0	58.53	25.841		
3,100.0	2,873.4	2,872.4	2,872.4	22.4	56.9	0.26	-98.2	-2,493.8	1,489.1	1,429.6	59.48	25.033		
3,149.6	2,916.9	2,915.9	2,915.9	23.0	57.7	0.26	-98.2	-2,493.8	1,465.2	1,404.7	60.45	24.239		
3,200.0	2,961.1	2,960.1	2,960.1	23.5	58.6	0.27	-98.2	-2,493.8	1,441.0	1,379.5	61.43	23.457		
3,248.0	3,003.2	3,002.2	3,002.2	24.0	59.5	0.27	-98.2	-2,493.8	1,417.9	1,355.5	62.37	22.734		
3,300.0	3,048.8	3,047.8	3,047.8	24.6	60.4	0.27	-98.2	-2,493.8	1,392.9	1,329.5	63.38	21.977		
3,346.4	3,089.5	3,088.5	3,088.5	25.1	61.2	0.28	-98.2	-2,493.8	1,370.5	1,306.2	64.28	21.319		
3,400.0	3,136.4	3,135.4	3,135.4	25.6	62.2	0.28	-98.2	-2,493.8	1,344.8	1,279.4	65.33	20.585		
3,444.9	3,175.8	3,174.8	3,174.8	26.1	63.0	0.29	-98.2	-2,493.8	1,323.2	1,257.0	66.20	19.987		
3,500.0	3,224.1	3,223.1	3,223.1	26.7	63.9	0.29	-98.2	-2,493.8	1,296.7	1,229.4	67.28	19.273		
3,543.3	3,262.1	3,261.1	3,261.1	27.2	64.7	0.30	-98.2	-2,493.8	1,275.8	1,207.7	68.12	18.729		
3,600.0	3,311.8	3,310.8	3,310.8	27.8	65.7	0.31	-98.2	-2,493.8	1,248.6	1,179.3	69.23	18.036		
3,641.7	3,348.4	3,347.4	3,347.4	28.2	66.4	0.31	-98.2	-2,493.8	1,228.5	1,158.4	70.04	17.539		
3,700.0	3,399.4	3,398.4	3,398.4	28.9	67.5	0.32	-98.2	-2,493.8	1,200.5	1,129.3	71.18	16.866		
3,740.1	3,434.6	3,433.6	3,433.6	29.3	68.2	0.32	-98.2	-2,493.8	1,181.1	1,109.2	71.96	16.414		
3,800.0	3,487.1	3,486.1	3,486.1	29.9	69.2	0.33	-98.2	-2,493.8	1,152.4	1,079.2	73.13	15.758		
3,838.6	3,520.9	3,519.9	3,519.9	30.3	69.9	0.34	-98.2	-2,493.8	1,133.8	1,059.9	73.88	15.346		
3,900.0	3,574.8	3,573.8	3,573.8	31.0	71.0	0.35	-98.2	-2,493.8	1,104.3	1,029.2	75.08	14.708		
3,937.0	3,607.2	3,606.2	3,606.2	31.4	71.6	0.35	-98.2	-2,493.8	1,086.5	1,010.7	75.80	14.333		
4,000.0	3,662.5	3,661.5	3,661.5	32.1	72.7	0.36	-98.2	-2,493.8	1,056.2	979.1	77.03	13.711		
4,035.4	3,693.5	3,692.5	3,692.5	32.4	73.4	0.37	-98.2	-2,493.8	1,039.1	961.4	77.72	13.370		
4,100.0	3,750.1	3,749.1	3,749.1	33.1	74.5	0.38	-98.2	-2,493.8	1,008.1	929.1	78.98	12.763		
4,133.8	3,779.8	3,778.8	3,778.8	33.5	75.1	0.39	-98.2	-2,493.8	991.8	912.1	79.64	12.453		
4,200.0	3,837.8	3,836.8	3,836.8	34.2	76.3	0.40	-98.2	-2,493.8	960.0	879.0	80.94	11.861		
4,232.3	3,866.1	3,865.1	3,865.1	34.6	76.8	0.40	-98.2	-2,493.8	944.4	862.9	81.57	11.579		
4,300.0	3,925.5	3,924.5	3,924.5	35.3	78.0	0.42	-98.2	-2,493.8	911.9	829.0	82.89	11.001		
4,330.7	3,952.4	3,951.4	3,951.4	35.6	78.6	0.43	-98.2	-2,493.8	897.1	813.6	83.49	10.745		
4,400.0	4,013.2	4,012.2	4,012.2	36.4	79.8	0.44	-98.2	-2,493.8	863.8	778.9	84.84	10.181		
4,429.1	4,038.7	4,037.7	4,037.7	36.7	80.3	0.45	-98.2	-2,493.8	849.8	764.4	85.41	9.949		
4,500.0	4,100.8	4,099.8	4,099.8	37.4	81.6	0.47	-98.2	-2,493.8	815.7	728.9	86.79	9.398		
4,527.5	4,125.0	4,124.0	4,124.0	37.7	82.0	0.48	-98.2	-2,493.8	802.4	715.1	87.33	9.188		
4,600.0	4,188.5	4,187.5	4,187.5	38.5	83.3	0.50	-98.2	-2,493.8	767.6	678.8	88.75	8.649		
4,626.0	4,211.3	4,210.3	4,210.3	38.8	83.8	0.51	-98.2	-2,493.8	755.1	665.8	89.25	8.460		
4,700.0	4,276.2	4,275.2	4,275.2	39.6	85.1	0.53	-98.2	-2,493.8	719.5	628.8	90.70	7.933		
4,724.4	4,297.6	4,296.6	4,296.6	39.8	85.5	0.54	-98.2	-2,493.8	707.7	616.6	91.18	7.762		
4,800.0	4,363.8	4,362.8	4,362.8	40.6	86.8	0.57	-98.2	-2,493.8	671.4	578.7	92.65	7.246		
4,822.8	4,383.9	4,382.9	4,382.9	40.9	87.2	0.58	-98.2	-2,493.8	660.4	567.3	93.10	7.093		
4,900.0	4,451.5	4,450.5	4,450.5	41.7	88.6	0.61	-98.2	-2,493.8	623.3	528.7	94.61	6.588		
4,921.2	4,470.1	4,469.1	4,469.1	41.9	89.0	0.62	-98.2	-2,493.8	613.1	518.0	95.02	6.452		
5,000.0	4,539.2	4,538.2	4,538.2	42.8	90.4	0.66	-98.2	-2,493.8	575.2	478.6	96.56	5.957		
5,019.7	4,556.4	4,555.4	4,555.4	43.0	90.7	0.68	-98.2	-2,493.8	565.7	468.8	96.95	5.835		

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
5,100.0	4,626.9	4,625.9	4,625.9	43.9	92.1	0.72	-98.2	-2,493.8	527.1	428.6	98.52	5.350	
5,118.1	4,642.7	4,641.7	4,641.7	44.1	92.5	0.74	-98.2	-2,493.8	518.4	419.5	98.87	5.243	
5,200.0	4,714.5	4,713.5	4,713.5	44.9	93.9	0.80	-98.2	-2,493.8	479.0	378.5	100.48	4.767	
5,216.5	4,729.0	4,728.0	4,728.0	45.1	94.2	0.81	-98.2	-2,493.8	471.1	370.3	100.80	4.673	
5,300.0	4,802.2	4,801.2	4,801.2	46.0	95.7	0.89	-98.2	-2,493.8	430.9	328.5	102.44	4.207	
5,314.9	4,815.3	4,814.3	4,814.3	46.2	95.9	0.90	-98.2	-2,493.8	423.7	321.0	102.73	4.125	
5,400.0	4,889.9	4,888.9	4,888.9	47.1	97.4	1.00	-98.2	-2,493.8	382.8	278.4	104.40	3.667	
5,413.4	4,901.6	4,900.6	4,900.6	47.2	97.7	1.01	-98.2	-2,493.8	376.4	271.7	104.66	3.596	
5,500.0	4,977.6	4,976.6	4,976.6	48.2	99.2	1.14	-98.2	-2,493.8	334.7	228.4	106.36	3.147	
5,511.8	4,987.9	4,986.9	4,986.9	48.3	99.4	1.16	-98.2	-2,493.8	329.0	222.5	106.59	3.087	
5,600.0	5,065.2	5,064.2	5,064.2	49.2	101.0	1.33	-98.2	-2,493.8	286.6	178.3	108.33	2.646	
5,610.2	5,074.2	5,073.2	5,073.2	49.3	101.1	1.36	-98.2	-2,493.8	281.7	173.2	108.53	2.596	
5,700.0	5,152.9	5,151.9	5,151.9	50.3	102.7	1.60	-98.2	-2,493.8	238.5	128.2	110.30	2.163	
5,708.6	5,160.5	5,159.5	5,159.5	50.4	102.9	1.63	-98.2	-2,493.8	234.4	123.9	110.48	2.122	
5,800.0	5,240.6	5,239.6	5,239.6	51.4	104.5	2.01	-98.2	-2,493.8	190.5	78.2	112.30	1.696	
5,807.1	5,246.8	5,245.8	5,245.8	51.5	104.6	2.04	-98.2	-2,493.8	187.1	74.6	112.44	1.664	
5,900.0	5,328.2	5,327.2	5,327.2	52.5	106.2	2.68	-98.2	-2,493.8	142.4	28.1	114.34	1.245 Level 2	
5,905.5	5,333.1	5,332.1	5,332.1	52.5	106.3	2.73	-98.2	-2,493.8	139.7	25.3	114.45	1.221 Level 2	
6,000.0	5,415.9	5,414.9	5,414.9	53.5	108.0	4.05	-98.2	-2,493.8	94.4	-22.2	116.52	0.810 Level 1	
6,003.9	5,419.4	5,418.4	5,418.4	53.6	108.1	4.13	-98.2	-2,493.8	92.5	-24.1	116.62	0.793 Level 1	
6,100.0	5,503.6	5,502.6	5,502.6	54.6	109.8	8.23	-98.2	-2,493.8	46.4	-73.2	119.67	0.388 Level 1	
6,102.3	5,505.6	5,504.6	5,504.6	54.6	109.8	8.44	-98.2	-2,493.8	45.3	-74.5	119.79	0.378 Level 1	
6,195.8	5,587.6	5,586.6	5,586.6	55.6	111.5	89.98	-98.2	-2,493.8	5.8	-161.2	167.08	0.035 Level 1, CC, ES, SF	
6,200.0	5,591.3	5,590.3	5,590.3	55.7	111.5	106.90	-98.2	-2,493.8	6.2	-157.7	163.93	0.038 Level 1	
6,200.8	5,591.9	5,590.9	5,590.9	55.7	111.5	109.78	-98.2	-2,493.8	6.3	-156.5	162.79	0.039 Level 1	
6,299.2	5,678.2	5,677.2	5,677.2	56.7	113.3	172.37	-98.2	-2,493.8	50.1	-73.0	123.03	0.407 Level 1	
6,300.0	5,678.9	5,677.9	5,677.9	56.7	113.3	172.43	-98.2	-2,493.8	50.5	-72.6	123.03	0.410 Level 1	
6,397.6	5,764.5	5,763.5	5,763.5	57.8	115.0	176.07	-98.2	-2,493.8	97.3	-26.8	124.10	0.784 Level 1	
6,400.0	5,766.6	5,765.6	5,765.6	57.8	115.1	176.12	-98.2	-2,493.8	98.4	-25.7	124.14	0.793 Level 1	
6,496.0	5,850.8	5,849.8	5,849.8	58.9	116.8	177.36	-98.2	-2,493.8	144.5	18.7	125.86	1.148 Level 2	
6,500.0	5,854.3	5,853.3	5,853.3	58.9	116.8	177.39	-98.2	-2,493.8	146.4	20.5	125.94	1.163 Level 2	
6,594.5	5,937.1	5,936.1	5,936.1	59.9	118.5	178.01	-98.2	-2,493.8	191.9	64.1	127.73	1.502	
6,600.0	5,942.0	5,941.0	5,941.0	60.0	118.6	178.04	-98.2	-2,493.8	194.5	66.7	127.84	1.521	
6,692.9	6,023.4	6,022.4	6,022.4	61.0	120.2	178.40	-98.2	-2,493.8	239.2	109.5	129.63	1.845	
6,700.0	6,029.6	6,028.6	6,028.6	61.0	120.3	178.43	-98.2	-2,493.8	242.6	112.8	129.77	1.869	
6,791.3	6,109.7	6,108.7	6,108.7	62.0	122.0	178.67	-98.2	-2,493.8	286.5	155.0	131.55	2.178	
6,800.0	6,117.3	6,116.3	6,116.3	62.1	122.1	178.69	-98.2	-2,493.8	290.7	159.0	131.72	2.207	
6,889.7	6,196.0	6,195.0	6,195.0	63.1	123.7	178.86	-98.2	-2,493.8	333.8	200.4	133.46	2.501	
6,900.0	6,205.0	6,204.0	6,204.0	63.2	123.9	178.87	-98.2	-2,493.8	338.8	205.1	133.66	2.534	
6,988.2	6,282.3	6,281.3	6,281.3	64.1	125.4	179.00	-98.2	-2,493.8	381.2	245.8	135.38	2.816	
7,000.0	6,292.6	6,291.6	6,291.6	64.3	125.6	179.01	-98.2	-2,493.8	386.9	251.2	135.61	2.853	
7,086.6	6,368.6	6,367.6	6,367.6	65.2	127.2	179.11	-98.2	-2,493.8	428.5	291.2	137.30	3.121	
7,100.0	6,380.3	6,379.3	6,379.3	65.3	127.4	179.12	-98.2	-2,493.8	435.0	297.4	137.57	3.162	
7,185.0	6,454.9	6,453.9	6,453.9	66.3	128.9	179.20	-98.2	-2,493.8	475.8	336.6	139.23	3.418	
7,200.0	6,468.0	6,467.0	6,467.0	66.4	129.2	179.21	-98.2	-2,493.8	483.0	343.5	139.52	3.462	
7,283.4	6,541.1	6,540.1	6,540.1	67.3	130.6	179.27	-98.2	-2,493.8	523.2	382.0	141.15	3.707	
7,299.0	6,554.8	6,553.8	6,553.8	67.5	130.9	179.28	-98.2	-2,493.8	530.7	389.2	141.45	3.751	
7,350.0	6,598.3	6,597.3	6,597.3	68.1	131.8	179.28	-98.2	-2,493.8	557.1	421.0	136.20	4.091	
7,381.9	6,624.3	6,623.3	6,623.3	68.5	132.3	179.27	-98.2	-2,493.8	575.6	443.3	132.32	4.350	
7,400.0	6,638.6	6,637.6	6,637.6	68.8	132.6	179.27	-98.2	-2,493.8	586.8	456.9	129.92	4.517	
7,450.0	6,676.1	6,675.1	6,675.1	69.5	133.3	179.25	-98.2	-2,493.8	619.8	497.2	122.56	5.057	
7,480.3	6,697.4	6,696.4	6,696.4	70.1	133.8	179.23	-98.2	-2,493.8	641.4	523.8	117.60	5.454	

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
7,500.0	6,710.6	6,709.6	6,709.6	70.4	134.0	179.22	-98.2	-2,493.8	656.0	541.8	114.18	5.745	
7,550.0	6,741.8	6,740.8	6,740.8	71.4	134.7	179.18	-98.2	-2,493.8	695.0	590.1	104.85	6.628	
7,578.7	6,758.2	6,757.2	6,757.2	72.0	135.0	179.15	-98.2	-2,493.8	718.6	619.5	99.09	7.252	
7,600.0	6,769.5	6,768.5	6,768.5	72.4	135.2	179.12	-98.2	-2,493.8	736.6	642.0	94.65	7.782	
7,650.0	6,793.5	6,792.5	6,792.5	73.5	135.7	179.02	-98.2	-2,493.8	780.5	696.8	83.68	9.327	
7,677.1	6,804.9	6,803.9	6,803.9	74.1	135.9	178.95	-98.2	-2,493.8	805.1	727.7	77.44	10.396	
7,700.0	6,813.6	6,812.6	6,812.6	74.6	136.1	178.87	-98.2	-2,493.8	826.2	754.2	72.06	11.467	
7,750.0	6,829.5	6,828.5	6,828.5	75.8	136.4	178.62	-98.2	-2,493.8	873.6	813.7	59.96	14.571	
7,775.6	6,836.1	6,835.1	6,835.1	76.4	136.6	178.41	-98.2	-2,493.8	898.3	844.6	53.68	16.736	
7,800.0	6,841.3	6,840.3	6,840.3	77.0	136.7	178.11	-98.2	-2,493.8	922.2	874.5	47.72	19.325	
7,832.7	6,846.7	6,845.7	6,845.7	77.8	136.8	177.43	-98.2	-2,493.8	954.4	914.2	40.20	23.739	
7,874.0	6,852.4	6,851.4	6,851.4	78.9	136.9	177.54	-98.2	-2,493.8	995.3	954.9	40.39	24.643	
7,900.0	6,856.0	6,855.0	6,855.0	79.5	137.0	177.60	-98.2	-2,493.8	1,021.1	980.6	40.51	25.204	
7,924.0	6,859.3	6,858.3	6,858.3	80.1	137.0	177.65	-98.2	-2,493.8	1,044.9	1,004.3	40.63	25.717	
7,950.0	6,862.3	6,861.3	6,861.3	80.7	137.1	167.86	-98.2	-2,493.8	1,070.7	1,013.6	57.04	18.771	
7,972.4	6,864.0	6,863.0	6,863.0	81.3	137.1	150.49	-98.2	-2,493.8	1,093.0	982.1	110.95	9.852	
8,000.0	6,865.0	6,864.0	6,864.0	82.0	137.1	104.55	-98.2	-2,493.8	1,120.6	908.5	212.09	5.283	
8,007.5	6,865.0	6,864.0	6,864.0	82.2	137.1	90.00	-98.2	-2,493.8	1,128.0	908.8	219.21	5.146	
8,070.8	6,865.0	6,864.0	6,864.0	83.8	137.1	90.00	-98.2	-2,493.8	1,191.3	970.5	220.79	5.396	
8,100.0	6,865.0	6,864.0	6,864.0	84.5	137.1	90.00	-98.2	-2,493.8	1,220.4	998.9	221.52	5.509	
8,169.3	6,865.0	6,864.0	6,864.0	86.2	137.1	90.00	-98.2	-2,493.8	1,289.6	1,066.4	223.26	5.776	
8,200.0	6,865.0	6,864.0	6,864.0	87.0	137.1	90.00	-98.2	-2,493.8	1,320.3	1,096.3	224.03	5.894	
8,267.7	6,865.0	6,864.0	6,864.0	88.7	137.1	90.00	-98.2	-2,493.8	1,388.0	1,162.2	225.74	6.149	
8,300.0	6,865.0	6,864.0	6,864.0	89.5	137.1	90.00	-98.2	-2,493.8	1,420.2	1,193.7	226.56	6.269	
8,366.1	6,865.0	6,864.0	6,864.0	91.2	137.1	90.00	-98.2	-2,493.8	1,486.3	1,258.1	228.24	6.512	
8,400.0	6,865.0	6,864.0	6,864.0	92.1	137.1	90.00	-98.2	-2,493.8	1,520.2	1,291.1	229.10	6.635	
8,464.5	6,865.0	6,864.0	6,864.0	93.7	137.1	90.00	-98.2	-2,493.8	1,584.7	1,353.9	230.75	6.867	
8,500.0	6,865.0	6,864.0	6,864.0	94.6	137.1	90.00	-98.2	-2,493.8	1,620.1	1,388.4	231.66	6.993	
8,563.0	6,865.0	6,864.0	6,864.0	96.2	137.1	90.00	-98.2	-2,493.8	1,683.0	1,449.8	233.28	7.215	
8,600.0	6,865.0	6,864.0	6,864.0	97.2	137.1	90.00	-98.2	-2,493.8	1,720.0	1,485.8	234.24	7.343	
8,661.4	6,865.0	6,864.0	6,864.0	98.8	137.1	90.00	-98.2	-2,493.8	1,781.4	1,545.6	235.82	7.554	
8,700.0	6,865.0	6,864.0	6,864.0	99.8	137.1	90.00	-98.2	-2,493.8	1,820.0	1,583.2	236.82	7.685	
8,759.8	6,865.0	6,864.0	6,864.0	101.3	137.1	90.00	-98.2	-2,493.8	1,879.8	1,641.4	238.38	7.886	
8,800.0	6,865.0	6,864.0	6,864.0	102.4	137.1	90.00	-98.2	-2,493.8	1,919.9	1,680.5	239.42	8.019	
8,858.2	6,865.0	6,864.0	6,864.0	103.9	137.1	90.00	-98.2	-2,493.8	1,978.2	1,737.2	240.94	8.210	
8,900.0	6,865.0	6,864.0	6,864.0	105.0	137.1	90.00	-98.2	-2,493.8	2,019.9	1,777.9	242.03	8.346	
8,956.7	6,865.0	6,864.0	6,864.0	106.5	137.1	90.00	-98.2	-2,493.8	2,076.5	1,833.0	243.51	8.527	
9,000.0	6,865.0	6,864.0	6,864.0	107.6	137.1	90.00	-98.2	-2,493.8	2,119.9	1,875.2	244.65	8.665	
9,055.1	6,865.0	6,864.0	6,864.0	109.0	137.1	90.00	-98.2	-2,493.8	2,174.9	1,928.8	246.10	8.838	
9,100.0	6,865.0	6,864.0	6,864.0	110.2	137.1	90.00	-98.2	-2,493.8	2,219.8	1,972.5	247.28	8.977	
9,153.5	6,865.0	6,864.0	6,864.0	111.6	137.1	90.00	-98.2	-2,493.8	2,273.3	2,024.6	248.69	9.141	
9,200.0	6,865.0	6,864.0	6,864.0	112.8	137.1	90.00	-98.2	-2,493.8	2,319.8	2,069.9	249.92	9.282	
9,251.9	6,865.0	6,864.0	6,864.0	114.2	137.1	90.00	-98.2	-2,493.8	2,371.7	2,120.4	251.29	9.438	
9,300.0	6,865.0	6,864.0	6,864.0	115.5	137.1	90.00	-98.2	-2,493.8	2,419.8	2,167.2	252.56	9.581	
9,350.4	6,865.0	6,864.0	6,864.0	116.8	137.1	90.00	-98.2	-2,493.8	2,470.1	2,216.2	253.90	9.729	
9,400.0	6,865.0	6,864.0	6,864.0	118.1	137.1	90.00	-98.2	-2,493.8	2,519.7	2,264.5	255.22	9.873	
9,448.8	6,865.0	6,864.0	6,864.0	119.4	137.1	90.00	-98.2	-2,493.8	2,568.5	2,312.0	256.52	10.013	
9,500.0	6,865.0	6,864.0	6,864.0	120.8	137.1	90.00	-98.2	-2,493.8	2,619.7	2,361.8	257.88	10.159	
9,547.2	6,865.0	6,864.0	6,864.0	122.1	137.1	90.00	-98.2	-2,493.8	2,666.9	2,407.8	259.14	10.292	
9,600.0	6,865.0	6,864.0	6,864.0	123.5	137.1	90.00	-98.2	-2,493.8	2,719.7	2,459.1	260.55	10.438	
9,645.6	6,865.0	6,864.0	6,864.0	124.7	137.1	90.00	-98.2	-2,493.8	2,765.3	2,503.6	261.77	10.564	
9,700.0	6,865.0	6,864.0	6,864.0	126.1	137.1	90.00	-98.2	-2,493.8	2,819.7	2,556.4	263.22	10.712	

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 0-INC												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,744.1	6,865.0	6,864.0	6,864.0	127.3	137.1	90.00	-98.2	-2,493.8	2,863.7	2,599.3	264.40	10.831	
9,800.0	6,865.0	6,864.0	6,864.0	128.8	137.1	90.00	-98.2	-2,493.8	2,919.6	2,653.7	265.90	10.980	
9,842.5	6,865.0	6,864.0	6,864.0	130.0	137.1	90.00	-98.2	-2,493.8	2,962.1	2,695.1	267.04	11.092	
9,900.0	6,865.0	6,864.0	6,864.0	131.5	137.1	90.00	-98.2	-2,493.8	3,019.6	2,751.0	268.58	11.243	
9,940.9	6,865.0	6,864.0	6,864.0	132.6	137.1	90.00	-98.2	-2,493.8	3,060.5	2,790.9	269.68	11.349	
10,000.0	6,865.0	6,864.0	6,864.0	134.2	137.1	90.00	-98.2	-2,493.8	3,119.6	2,848.3	271.27	11.500	
10,039.3	6,865.0	6,864.0	6,864.0	135.3	137.1	90.00	-98.2	-2,493.8	3,158.9	2,886.6	272.33	11.599	
10,100.0	6,865.0	6,864.0	6,864.0	136.9	137.1	90.00	-98.2	-2,493.8	3,219.6	2,945.6	273.97	11.752	
10,137.8	6,865.0	6,864.0	6,864.0	137.9	137.1	90.00	-98.2	-2,493.8	3,257.4	2,982.4	274.99	11.845	
10,200.0	6,865.0	6,864.0	6,864.0	139.6	137.1	90.00	-98.2	-2,493.8	3,319.6	3,042.9	276.67	11.998	
10,236.2	6,865.0	6,864.0	6,864.0	140.6	137.1	90.00	-98.2	-2,493.8	3,355.8	3,078.1	277.65	12.086	
10,300.0	6,865.0	6,864.0	6,864.0	142.3	137.1	90.00	-98.2	-2,493.8	3,419.6	3,140.2	279.37	12.240	
10,334.6	6,865.0	6,864.0	6,864.0	143.2	137.1	90.00	-98.2	-2,493.8	3,454.2	3,173.9	280.31	12.323	
10,400.0	6,865.0	6,864.0	6,864.0	145.0	137.1	90.00	-98.2	-2,493.8	3,519.5	3,237.5	282.08	12.477	
10,433.0	6,865.0	6,864.0	6,864.0	145.9	137.1	90.00	-98.2	-2,493.8	3,552.6	3,269.6	282.98	12.554	
10,500.0	6,865.0	6,864.0	6,864.0	147.7	137.1	90.00	-98.2	-2,493.8	3,619.5	3,334.7	284.79	12.709	
10,531.5	6,865.0	6,864.0	6,864.0	148.6	137.1	90.00	-98.2	-2,493.8	3,651.0	3,365.4	285.65	12.781	
10,600.0	6,865.0	6,864.0	6,864.0	150.4	137.1	90.00	-98.2	-2,493.8	3,719.5	3,432.0	287.51	12.937	
10,629.9	6,865.0	6,864.0	6,864.0	151.2	137.1	90.00	-98.2	-2,493.8	3,749.4	3,461.1	288.32	13.004	
10,700.0	6,865.0	6,864.0	6,864.0	153.1	137.1	90.00	-98.2	-2,493.8	3,819.5	3,529.3	290.23	13.160	
10,728.3	6,865.0	6,864.0	6,864.0	153.9	137.1	90.00	-98.2	-2,493.8	3,847.8	3,556.8	291.00	13.223	
10,800.0	6,865.0	6,864.0	6,864.0	155.9	137.1	90.00	-98.2	-2,493.8	3,919.5	3,626.5	292.95	13.379	
10,826.7	6,865.0	6,864.0	6,864.0	156.6	137.1	90.00	-98.2	-2,493.8	3,946.2	3,652.6	293.68	13.437	
10,900.0	6,865.0	6,864.0	6,864.0	158.6	137.1	90.00	-98.2	-2,493.8	4,019.5	3,723.8	295.68	13.594	
10,925.2	6,865.0	6,864.0	6,864.0	159.3	137.1	90.00	-98.2	-2,493.8	4,044.7	3,748.3	296.36	13.648	
11,000.0	6,865.0	6,864.0	6,864.0	161.3	137.1	90.00	-98.2	-2,493.8	4,119.5	3,821.1	298.41	13.805	
11,023.6	6,865.0	6,864.0	6,864.0	162.0	137.1	90.00	-98.2	-2,493.8	4,143.1	3,844.0	299.05	13.854	
11,100.0	6,865.0	6,864.0	6,864.0	164.0	137.1	90.00	-98.2	-2,493.8	4,219.5	3,918.3	301.14	14.012	
11,122.0	6,865.0	6,864.0	6,864.0	164.6	137.1	90.00	-98.2	-2,493.8	4,241.5	3,939.7	301.74	14.057	
11,200.0	6,865.0	6,864.0	6,864.0	166.8	137.1	90.00	-98.2	-2,493.8	4,319.5	4,015.6	303.87	14.215	
11,220.4	6,865.0	6,864.0	6,864.0	167.3	137.1	90.00	-98.2	-2,493.8	4,339.9	4,035.5	304.43	14.256	
11,300.0	6,865.0	6,864.0	6,864.0	169.5	137.1	90.00	-98.2	-2,493.8	4,419.4	4,112.8	306.61	14.414	
11,318.9	6,865.0	6,864.0	6,864.0	170.0	137.1	90.00	-98.2	-2,493.8	4,438.3	4,131.2	307.12	14.451	
11,400.0	6,865.0	6,864.0	6,864.0	172.2	137.1	90.00	-98.2	-2,493.8	4,519.4	4,210.1	309.35	14.610	
11,417.3	6,865.0	6,864.0	6,864.0	172.7	137.1	90.00	-98.2	-2,493.8	4,536.7	4,226.9	309.82	14.643	
11,500.0	6,865.0	6,864.0	6,864.0	175.0	137.1	90.00	-98.2	-2,493.8	4,619.4	4,307.3	312.09	14.802	
11,515.7	6,865.0	6,864.0	6,864.0	175.4	137.1	90.00	-98.2	-2,493.8	4,635.2	4,322.6	312.52	14.832	
11,600.0	6,865.0	6,864.0	6,864.0	177.7	137.1	90.00	-98.2	-2,493.8	4,719.4	4,404.6	314.83	14.990	
11,614.1	6,865.0	6,864.0	6,864.0	178.1	137.1	90.00	-98.2	-2,493.8	4,733.6	4,418.3	315.22	15.017	
11,700.0	6,865.0	6,864.0	6,864.0	180.5	137.1	90.00	-98.2	-2,493.8	4,819.4	4,501.8	317.58	15.176	
11,712.6	6,865.0	6,864.0	6,864.0	180.8	137.1	90.00	-98.2	-2,493.8	4,832.0	4,514.1	317.92	15.199	
11,800.0	6,865.0	6,864.0	6,864.0	183.2	137.1	90.00	-98.2	-2,493.8	4,919.4	4,599.1	320.32	15.358	
11,811.0	6,865.0	6,864.0	6,864.0	183.5	137.1	90.00	-98.2	-2,493.8	4,930.4	4,609.8	320.63	15.377	
11,900.0	6,865.0	6,864.0	6,864.0	186.0	137.1	90.00	-98.2	-2,493.8	5,019.4	4,696.3	323.07	15.536	
11,909.4	6,865.0	6,864.0	6,864.0	186.2	137.1	90.00	-98.2	-2,493.8	5,028.8	4,705.5	323.33	15.553	
12,000.0	6,865.0	6,864.0	6,864.0	188.7	137.1	90.00	-98.2	-2,493.8	5,119.4	4,793.6	325.83	15.712	
12,007.8	6,865.0	6,864.0	6,864.0	188.9	137.1	90.00	-98.2	-2,493.8	5,127.2	4,801.2	326.04	15.726	
12,100.0	6,865.0	6,864.0	6,864.0	191.5	137.1	90.00	-98.2	-2,493.8	5,219.4	4,890.8	328.58	15.885	
12,106.3	6,865.0	6,864.0	6,864.0	191.6	137.1	90.00	-98.2	-2,493.8	5,225.7	4,896.9	328.75	15.895	
12,200.0	6,865.0	6,864.0	6,864.0	194.2	137.1	90.00	-98.2	-2,493.8	5,319.4	4,988.0	331.33	16.054	
12,204.7	6,865.0	6,864.0	6,864.0	194.4	137.1	90.00	-98.2	-2,493.8	5,324.1	4,992.6	331.46	16.062	
12,300.0	6,865.0	6,864.0	6,864.0	197.0	137.1	90.00	-98.2	-2,493.8	5,419.4	5,085.3	334.09	16.221	

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



# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 usft
Survey Program: 0-INC													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor		
12,303.1	6,865.0	6,864.0	6,864.0	197.1	137.1	90.00	-98.2	-2,493.8	5,422.5	5,088.3	334.18	16.226		
12,400.0	6,865.0	6,864.0	6,864.0	199.7	137.1	90.00	-98.2	-2,493.8	5,519.4	5,182.5	336.85	16.385		
12,401.5	6,865.0	6,864.0	6,864.0	199.8	137.1	90.00	-98.2	-2,493.8	5,520.9	5,184.0	336.89	16.388		
12,500.0	6,865.0	6,864.0	6,864.0	202.5	137.1	90.00	-98.2	-2,493.8	5,619.4	5,279.8	339.61	16.547		
12,598.4	6,865.0	6,864.0	6,864.0	205.2	137.1	90.00	-98.2	-2,493.8	5,717.8	5,375.4	342.32	16.703		
12,600.0	6,865.0	6,864.0	6,864.0	205.3	137.1	90.00	-98.2	-2,493.8	5,719.4	5,377.0	342.37	16.705		
12,696.8	6,865.0	6,864.0	6,864.0	207.9	137.1	90.00	-98.2	-2,493.8	5,816.2	5,471.1	345.04	16.856		
12,700.0	6,865.0	6,864.0	6,864.0	208.0	137.1	90.00	-98.2	-2,493.8	5,819.4	5,474.2	345.13	16.861		
12,795.2	6,865.0	6,864.0	6,864.0	210.7	137.1	90.00	-98.2	-2,493.8	5,914.6	5,566.8	347.76	17.008		
12,800.0	6,865.0	6,864.0	6,864.0	210.8	137.1	90.00	-98.2	-2,493.8	5,919.3	5,571.5	347.89	17.015		
12,893.7	6,865.0	6,864.0	6,864.0	213.4	137.1	90.00	-98.2	-2,493.8	6,013.0	5,662.5	350.48	17.156		
12,900.0	6,865.0	6,864.0	6,864.0	213.5	137.1	90.00	-98.2	-2,493.8	6,019.3	5,668.7	350.66	17.166		
12,992.1	6,865.0	6,864.0	6,864.0	216.1	137.1	90.00	-98.2	-2,493.8	6,111.4	5,758.2	353.21	17.303		
13,000.0	6,865.0	6,864.0	6,864.0	216.3	137.1	90.00	-98.2	-2,493.8	6,119.3	5,765.9	353.42	17.314		
13,090.5	6,865.0	6,864.0	6,864.0	218.8	137.1	90.00	-98.2	-2,493.8	6,209.9	5,853.9	355.93	17.447		
13,100.0	6,865.0	6,864.0	6,864.0	219.1	137.1	90.00	-98.2	-2,493.8	6,219.3	5,863.1	356.19	17.461		
13,188.9	6,865.0	6,864.0	6,864.0	221.5	137.1	90.00	-98.2	-2,493.8	6,308.3	5,949.6	358.65	17.589		
13,200.0	6,865.0	6,864.0	6,864.0	221.8	137.1	90.00	-98.2	-2,493.8	6,319.3	5,960.4	358.96	17.605		
13,287.4	6,865.0	6,864.0	6,864.0	224.3	137.1	90.00	-98.2	-2,493.8	6,406.7	6,045.3	361.38	17.728		
13,300.0	6,865.0	6,864.0	6,864.0	224.6	137.1	90.00	-98.2	-2,493.8	6,419.3	6,057.6	361.73	17.746		
13,385.8	6,865.0	6,864.0	6,864.0	227.0	137.1	90.00	-98.2	-2,493.8	6,505.1	6,141.0	364.11	17.866		
13,400.0	6,865.0	6,864.0	6,864.0	227.4	137.1	90.00	-98.2	-2,493.8	6,519.3	6,154.8	364.50	17.886		
13,484.2	6,865.0	6,864.0	6,864.0	229.7	137.1	90.00	-98.2	-2,493.8	6,603.5	6,236.7	366.83	18.001		
13,500.0	6,865.0	6,864.0	6,864.0	230.2	137.1	90.00	-98.2	-2,493.8	6,619.3	6,252.0	367.27	18.023		
13,582.6	6,865.0	6,864.0	6,864.0	232.4	137.1	90.00	-98.2	-2,493.8	6,702.0	6,332.4	369.56	18.135		
13,600.0	6,865.0	6,864.0	6,864.0	232.9	137.1	90.00	-98.2	-2,493.8	6,719.3	6,349.3	370.04	18.158		
13,681.1	6,865.0	6,864.0	6,864.0	235.2	137.1	90.00	-98.2	-2,493.8	6,800.4	6,428.1	372.29	18.266		
13,700.0	6,865.0	6,864.0	6,864.0	235.7	137.1	90.00	-98.2	-2,493.8	6,819.3	6,446.5	372.82	18.291		
13,779.5	6,865.0	6,864.0	6,864.0	237.9	137.1	90.00	-98.2	-2,493.8	6,898.8	6,523.8	375.02	18.396		
13,800.0	6,865.0	6,864.0	6,864.0	238.5	137.1	90.00	-98.2	-2,493.8	6,919.3	6,543.7	375.59	18.422		
13,877.9	6,865.0	6,864.0	6,864.0	240.6	137.1	90.00	-98.2	-2,493.8	6,997.2	6,619.5	377.75	18.523		
13,900.0	6,865.0	6,864.0	6,864.0	241.3	137.1	90.00	-98.2	-2,493.8	7,019.3	6,640.9	378.37	18.552		
13,976.3	6,865.0	6,864.0	6,864.0	243.4	137.1	90.00	-98.2	-2,493.8	7,095.7	6,715.2	380.48	18.649		
14,000.0	6,865.0	6,864.0	6,864.0	244.0	137.1	90.00	-98.2	-2,493.8	7,119.3	6,738.2	381.14	18.679		
14,074.8	6,865.0	6,864.0	6,864.0	246.1	137.1	90.00	-98.2	-2,493.8	7,194.1	6,810.9	383.22	18.773		
14,100.0	6,865.0	6,864.0	6,864.0	246.8	137.1	90.00	-98.2	-2,493.8	7,219.3	6,835.4	383.92	18.804		
14,173.2	6,865.0	6,864.0	6,864.0	248.8	137.1	90.00	-98.2	-2,493.8	7,292.5	6,906.5	385.95	18.895		
14,200.0	6,865.0	6,864.0	6,864.0	249.6	137.1	90.00	-98.2	-2,493.8	7,319.3	6,932.6	386.69	18.928		
14,271.6	6,865.0	6,864.0	6,864.0	251.6	137.1	90.00	-98.2	-2,493.8	7,390.9	7,002.2	388.68	19.015		
14,300.0	6,865.0	6,864.0	6,864.0	252.4	137.1	90.00	-98.2	-2,493.8	7,419.3	7,029.8	389.47	19.050		
14,370.0	6,865.0	6,864.0	6,864.0	254.3	137.1	90.00	-98.2	-2,493.8	7,489.3	7,097.9	391.42	19.134		
14,400.0	6,865.0	6,864.0	6,864.0	255.1	137.1	90.00	-98.2	-2,493.8	7,519.3	7,127.0	392.25	19.170		
14,468.5	6,865.0	6,864.0	6,864.0	257.0	137.1	90.00	-98.2	-2,493.8	7,587.8	7,193.6	394.16	19.251		
14,500.0	6,865.0	6,864.0	6,864.0	257.9	137.1	90.00	-98.2	-2,493.8	7,619.3	7,224.3	395.03	19.288		
14,566.9	6,865.0	6,864.0	6,864.0	259.8	137.1	90.00	-98.2	-2,493.8	7,686.2	7,289.3	396.89	19.366		
14,600.0	6,865.0	6,864.0	6,864.0	260.7	137.1	90.00	-98.2	-2,493.8	7,719.3	7,321.5	397.81	19.404		
14,665.3	6,865.0	6,864.0	6,864.0	262.5	137.1	90.00	-98.2	-2,493.8	7,784.6	7,385.0	399.63	19.480		
14,700.0	6,865.0	6,864.0	6,864.0	263.5	137.1	90.00	-98.2	-2,493.8	7,819.3	7,418.7	400.59	19.519		
14,763.7	6,865.0	6,864.0	6,864.0	265.2	137.1	90.00	-98.2	-2,493.8	7,883.0	7,480.7	402.37	19.592		
14,800.0	6,865.0	6,864.0	6,864.0	266.3	137.1	90.00	-98.2	-2,493.8	7,919.3	7,515.9	403.37	19.633		
14,862.2	6,865.0	6,864.0	6,864.0	268.0	137.1	90.00	-98.2	-2,493.8	7,981.4	7,576.3	405.10	19.702		
14,900.0	6,865.0	6,864.0	6,864.0	269.0	137.1	90.00	-98.2	-2,493.8	8,019.3	7,613.1	406.16	19.744		

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT FAY #1 - Wellbore #1 - Design #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 0-INC												<b>Offset Well Error:</b>	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,960.6	6,865.0	6,864.0	6,864.0	270.7	137.1	90.00	-98.2	-2,493.8	8,079.9	7,672.0	407.84	19.811	
15,000.0	6,865.0	6,864.0	6,864.0	271.8	137.1	90.00	-98.2	-2,493.8	8,119.3	7,710.3	408.94	19.854	
15,059.0	6,865.0	6,864.0	6,864.0	273.5	137.1	90.00	-98.2	-2,493.8	8,178.3	7,767.7	410.58	19.919	
15,100.0	6,865.0	6,864.0	6,864.0	274.6	137.1	90.00	-98.2	-2,493.8	8,219.3	7,807.5	411.72	19.963	
15,157.4	6,865.0	6,864.0	6,864.0	276.2	137.1	90.00	-98.2	-2,493.8	8,276.7	7,863.4	413.32	20.025	
15,200.0	6,865.0	6,864.0	6,864.0	277.4	137.1	90.00	-98.2	-2,493.8	8,319.3	7,904.8	414.51	20.070	
15,255.9	6,865.0	6,864.0	6,864.0	278.9	137.1	90.00	-98.2	-2,493.8	8,375.1	7,959.1	416.06	20.130	
15,300.0	6,865.0	6,864.0	6,864.0	280.2	137.1	90.00	-98.2	-2,493.8	8,419.3	8,002.0	417.29	20.176	
15,354.3	6,865.0	6,864.0	6,864.0	281.7	137.1	90.00	-98.2	-2,493.8	8,473.6	8,054.8	418.80	20.233	
15,400.0	6,865.0	6,864.0	6,864.0	283.0	137.1	90.00	-98.2	-2,493.8	8,519.3	8,099.2	420.08	20.280	
15,452.7	6,865.0	6,864.0	6,864.0	284.4	137.1	90.00	-98.2	-2,493.8	8,572.0	8,150.4	421.54	20.335	
15,500.0	6,865.0	6,864.0	6,864.0	285.7	137.1	90.00	-98.2	-2,493.8	8,619.3	8,196.4	422.86	20.383	
15,551.1	6,865.0	6,864.0	6,864.0	287.2	137.1	90.00	-98.2	-2,493.8	8,670.4	8,246.1	424.29	20.435	
15,600.0	6,865.0	6,864.0	6,864.0	288.5	137.1	90.00	-98.2	-2,493.8	8,719.3	8,293.6	425.65	20.485	
15,649.6	6,865.0	6,864.0	6,864.0	289.9	137.1	90.00	-98.2	-2,493.8	8,768.8	8,341.8	427.03	20.534	
15,700.0	6,865.0	6,864.0	6,864.0	291.3	137.1	90.00	-98.2	-2,493.8	8,819.3	8,390.8	428.43	20.585	
15,748.0	6,865.0	6,864.0	6,864.0	292.7	137.1	90.00	-98.2	-2,493.8	8,867.3	8,437.5	429.77	20.632	
15,800.0	6,865.0	6,864.0	6,864.0	294.1	137.1	90.00	-98.2	-2,493.8	8,919.3	8,488.0	431.22	20.684	
15,846.4	6,865.0	6,864.0	6,864.0	295.4	137.1	90.00	-98.2	-2,493.8	8,965.7	8,533.2	432.52	20.729	
15,900.0	6,865.0	6,864.0	6,864.0	296.9	137.1	90.00	-98.2	-2,493.8	9,019.3	8,585.2	434.01	20.781	
15,944.8	6,865.0	6,864.0	6,864.0	298.1	137.1	90.00	-98.2	-2,493.8	9,064.1	8,628.8	435.26	20.825	
16,000.0	6,865.0	6,864.0	6,864.0	299.7	137.1	90.00	-98.2	-2,493.8	9,119.2	8,682.5	436.80	20.878	
16,043.3	6,865.0	6,864.0	6,864.0	300.9	137.1	90.00	-98.2	-2,493.8	9,162.5	8,724.5	438.00	20.919	
16,100.0	6,865.0	6,864.0	6,864.0	302.5	137.1	90.00	-98.2	-2,493.8	9,219.2	8,779.7	439.59	20.973	
16,141.7	6,865.0	6,864.0	6,864.0	303.6	137.1	90.00	-98.2	-2,493.8	9,260.9	8,820.2	440.75	21.012	
16,200.0	6,865.0	6,864.0	6,864.0	305.3	137.1	90.00	-98.2	-2,493.8	9,319.2	8,876.9	442.37	21.066	
16,240.1	6,865.0	6,864.0	6,864.0	306.4	137.1	90.00	-98.2	-2,493.8	9,359.4	8,915.9	443.49	21.104	
16,300.0	6,865.0	6,864.0	6,864.0	308.0	137.1	90.00	-98.2	-2,493.8	9,419.2	8,974.1	445.16	21.159	
16,338.5	6,865.0	6,864.0	6,864.0	309.1	137.1	90.00	-98.2	-2,493.8	9,457.8	9,011.6	446.24	21.194	
16,400.0	6,865.0	6,864.0	6,864.0	310.8	137.1	90.00	-98.2	-2,493.8	9,519.2	9,071.3	447.95	21.251	
16,437.0	6,865.0	6,864.0	6,864.0	311.9	137.1	90.00	-98.2	-2,493.8	9,556.2	9,107.2	448.98	21.284	
16,500.0	6,865.0	6,864.0	6,864.0	313.6	137.1	90.00	-98.2	-2,493.8	9,619.2	9,168.5	450.74	21.341	
16,535.4	6,865.0	6,864.0	6,864.0	314.6	137.1	90.00	-98.2	-2,493.8	9,654.6	9,202.9	451.73	21.373	
16,600.0	6,865.0	6,864.0	6,864.0	316.4	137.1	90.00	-98.2	-2,493.8	9,719.2	9,265.7	453.53	21.430	
16,633.8	6,865.0	6,864.0	6,864.0	317.4	137.1	90.00	-98.2	-2,493.8	9,753.1	9,298.6	454.48	21.460	
16,700.0	6,865.0	6,864.0	6,864.0	319.2	137.1	90.00	-98.2	-2,493.8	9,819.2	9,362.9	456.32	21.518	
16,732.2	6,865.0	6,864.0	6,864.0	320.1	137.1	90.00	-98.2	-2,493.8	9,851.5	9,394.3	457.22	21.546	
16,800.0	6,865.0	6,864.0	6,864.0	322.0	137.1	90.00	-98.2	-2,493.8	9,919.2	9,460.1	459.12	21.605	
16,830.7	6,865.0	6,864.0	6,864.0	322.8	137.1	90.00	-98.2	-2,493.8	9,949.9	9,489.9	459.97	21.632	

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	113.79	-44.1	100.0	110.7				
98.4	98.4	79.8	79.8	0.1	0.0	113.80	-44.2	100.2	109.5	109.4	0.14	794.681 CC, ES	
100.0	100.0	81.4	81.4	0.1	0.0	113.80	-44.2	100.2	109.5	109.4	0.14	779.725	
196.8	196.8	178.1	178.1	0.3	0.2	113.83	-44.5	100.8	110.2	109.7	0.49	223.111	
200.0	200.0	181.2	181.2	0.3	0.2	113.84	-44.5	100.8	110.2	109.7	0.51	217.809	
295.3	295.3	276.9	276.9	0.5	0.3	113.94	-44.9	101.2	110.8	110.0	0.81	137.353	
300.0	300.0	281.6	281.6	0.5	0.3	113.95	-45.0	101.2	110.8	110.0	0.82	135.017	
393.7	393.7	375.6	375.6	0.7	0.3	-153.75	-45.5	101.2	112.3	111.2	1.10	102.526	
400.0	400.0	382.0	382.0	0.8	0.4	-153.78	-45.5	101.2	112.5	111.4	1.11	101.047	
492.1	492.0	474.1	474.1	1.0	0.4	-154.44	-46.1	100.9	116.7	115.3	1.38	84.838	
500.0	499.8	482.0	482.0	1.0	0.4	-154.52	-46.1	100.8	117.2	115.8	1.40	83.833	
590.5	590.1	572.4	572.4	1.2	0.5	-155.72	-46.6	100.4	124.0	122.3	1.66	74.547	
600.0	599.5	581.9	581.8	1.2	0.5	-155.87	-46.7	100.4	124.9	123.2	1.69	73.838	
689.0	687.8	670.2	670.2	1.5	0.5	-157.41	-47.1	99.9	134.4	132.4	1.96	68.458	
700.0	698.7	681.1	681.1	1.5	0.5	-157.61	-47.2	99.8	135.7	133.7	2.00	67.999	
787.4	785.1	767.6	767.6	1.8	0.6	-159.27	-47.7	99.4	148.0	145.8	2.27	65.127	
800.0	797.5	780.1	780.1	1.8	0.6	-159.51	-47.7	99.3	150.0	147.7	2.31	64.869	
885.8	881.8	864.5	864.5	2.2	0.6	-161.19	-48.1	98.8	164.9	162.3	2.59	63.594	
900.0	895.6	878.4	878.4	2.2	0.6	-161.46	-48.2	98.7	167.6	165.0	2.64	63.517	
984.2	977.8	960.9	960.9	2.6	0.6	-163.08	-48.5	98.2	185.1	182.1	2.92	63.346	
1,000.0	993.1	976.3	976.3	2.6	0.7	-163.38	-48.5	98.1	188.6	185.6	2.97	63.421	
1,082.7	1,073.0	1,056.8	1,056.7	3.1	0.7	-164.88	-48.6	97.5	208.4	205.1	3.26	63.948	
1,100.0	1,089.6	1,073.5	1,073.5	3.1	0.7	-165.18	-48.6	97.3	212.8	209.5	3.32	64.153	
1,181.1	1,167.3	1,151.8	1,151.7	3.6	0.7	-166.52	-48.5	96.6	234.8	231.2	3.60	65.145	
1,200.0	1,185.3	1,169.9	1,169.9	3.7	0.7	-166.81	-48.5	96.4	240.3	236.6	3.67	65.464	
1,279.5	1,260.6	1,245.8	1,245.8	4.2	0.7	-168.00	-48.2	95.5	264.5	260.5	3.96	66.776	
1,300.0	1,279.8	1,265.2	1,265.2	4.4	0.8	-168.29	-48.1	95.3	271.0	267.0	4.03	67.203	
1,377.9	1,352.7	1,338.5	1,338.5	4.9	0.8	-169.36	-47.5	94.4	297.3	293.0	4.33	68.672	
1,400.0	1,373.2	1,359.1	1,359.0	5.1	0.8	-169.66	-47.3	94.2	305.1	300.7	4.40	69.263	
1,476.4	1,443.6	1,429.1	1,429.1	5.7	0.8	-170.66	-46.1	93.5	333.4	328.7	4.69	71.042	
1,500.0	1,465.2	1,450.3	1,450.3	5.9	0.8	-170.96	-45.6	93.3	342.6	337.8	4.79	71.561	
1,574.8	1,533.1	1,516.8	1,516.7	6.5	0.8	-171.87	-44.0	93.1	373.2	368.1	5.08	73.407	
1,600.0	1,555.8	1,539.0	1,538.9	6.8	0.8	-172.16	-43.4	93.0	384.0	378.8	5.19	74.043	
1,649.3	1,600.0	1,582.1	1,582.0	7.2	0.8	-172.69	-42.2	93.1	405.8	400.4	5.38	75.371	
1,673.2	1,621.3	1,602.8	1,602.7	7.4	0.8	-172.96	-41.7	93.1	416.6	411.1	5.47	76.116	
1,700.0	1,645.1	1,626.1	1,626.0	7.7	0.8	-173.25	-41.1	93.2	428.7	423.1	5.57	76.914	
1,714.3	1,657.9	1,638.6	1,638.5	7.8	0.8	-173.40	-40.7	93.3	435.2	429.6	5.63	77.330	
1,771.6	1,708.7	1,688.0	1,687.9	8.4	0.9	-173.91	-39.3	93.6	461.8	456.0	5.87	78.743	
1,802.5	1,735.9	1,714.4	1,714.2	8.7	0.9	-174.17	-38.5	93.8	476.7	470.7	5.99	79.539	
1,870.1	1,795.1	1,771.9	1,771.7	9.4	0.9	-174.75	-36.7	94.4	509.6	503.3	6.26	81.414	
1,900.0	1,821.3	1,797.3	1,797.1	9.7	0.9	-174.99	-36.0	94.7	524.2	517.9	6.38	82.191	
1,968.5	1,881.4	1,854.6	1,854.3	10.4	0.9	-175.47	-34.4	95.6	557.9	551.3	6.65	83.873	
2,000.0	1,909.0	1,880.8	1,880.6	10.8	0.9	-175.66	-33.7	96.0	573.5	566.7	6.78	84.603	
2,066.9	1,967.7	1,936.3	1,936.0	11.5	0.9	-176.05	-32.2	97.2	606.8	599.8	7.05	86.072	
2,100.0	1,996.7	1,963.6	1,963.3	11.8	0.9	-176.22	-31.5	97.8	623.4	616.2	7.19	86.763	
2,165.3	2,054.0	2,017.2	2,016.9	12.5	0.9	-176.55	-29.9	99.3	656.3	648.9	7.45	88.064	
2,200.0	2,084.4	2,045.5	2,045.1	12.9	0.9	-176.71	-29.2	100.2	673.9	666.3	7.60	88.725	
2,263.8	2,140.3	2,100.0	2,099.6	13.5	0.9	-176.97	-27.9	102.0	706.4	698.5	7.86	89.876	
2,300.0	2,172.0	2,127.5	2,127.1	13.9	0.9	-177.09	-27.3	103.0	724.9	716.9	8.01	90.518	
2,362.2	2,226.6	2,179.5	2,179.0	14.6	1.0	-177.29	-26.3	105.0	756.9	748.6	8.27	91.555	
2,400.0	2,259.7	2,211.3	2,210.8	15.0	1.0	-177.40	-25.8	106.3	776.3	767.9	8.42	92.160	
2,460.6	2,312.8	2,263.1	2,262.5	15.6	1.0	-177.56	-25.0	108.3	807.6	798.9	8.68	93.093	

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
2,500.0	2,347.4	2,296.7	2,296.1	16.0	1.0	-177.65	-24.5	109.7	827.9	819.0	8.84	93.667	
2,559.0	2,399.1	2,346.0	2,345.3	16.7	1.0	-177.77	-24.0	111.7	858.4	849.3	9.08	94.484	
2,600.0	2,435.0	2,380.0	2,379.4	17.1	1.0	-177.84	-23.7	113.1	879.5	870.3	9.26	95.026	
2,657.5	2,485.4	2,428.3	2,427.6	17.7	1.0	-177.93	-23.4	115.2	909.3	899.8	9.50	95.747	
2,700.0	2,522.7	2,464.3	2,463.6	18.2	1.0	-177.99	-23.1	116.8	931.4	921.7	9.68	96.255	
2,755.9	2,571.7	2,511.8	2,511.0	18.8	1.0	-178.07	-22.8	118.9	960.4	950.5	9.91	96.893	
2,800.0	2,610.4	2,549.6	2,548.8	19.2	1.0	-178.13	-22.5	120.6	983.3	973.2	10.10	97.378	
2,854.3	2,658.0	2,596.3	2,595.4	19.8	1.0	-178.20	-22.1	122.6	1,011.5	1,001.2	10.33	97.946	
2,900.0	2,698.1	2,634.5	2,633.5	20.3	1.1	-178.26	-21.8	124.3	1,035.2	1,024.7	10.52	98.400	
2,952.7	2,744.3	2,678.4	2,677.4	20.9	1.1	-178.32	-21.4	126.3	1,062.7	1,051.9	10.74	98.903	
3,000.0	2,785.7	2,718.7	2,717.7	21.4	1.1	-178.37	-21.1	128.2	1,087.3	1,076.4	10.95	99.335	
3,051.2	2,830.6	2,763.7	2,762.6	21.9	1.1	-178.42	-20.8	130.2	1,113.9	1,102.8	11.16	99.777	
3,100.0	2,873.4	2,806.8	2,805.7	22.4	1.1	-178.47	-20.5	132.1	1,139.3	1,127.9	11.37	100.180	
3,149.6	2,916.9	2,851.0	2,849.9	23.0	1.1	-178.53	-20.1	134.0	1,165.0	1,153.4	11.58	100.574	
3,200.0	2,961.1	2,896.1	2,894.9	23.5	1.1	-178.58	-19.7	135.9	1,191.0	1,179.2	11.80	100.953	
3,248.0	3,003.2	2,937.7	2,936.5	24.0	1.1	-178.62	-19.3	137.5	1,215.8	1,203.8	12.00	101.290	
3,300.0	3,048.8	2,982.6	2,981.4	24.6	1.1	-178.66	-19.1	139.3	1,242.6	1,230.3	12.23	101.638	
3,346.4	3,089.5	3,024.2	3,022.9	25.1	1.1	-178.70	-18.8	141.0	1,266.5	1,254.1	12.43	101.930	
3,400.0	3,136.4	3,073.6	3,072.3	25.6	1.2	-178.74	-18.5	142.8	1,294.0	1,281.3	12.66	102.243	
3,444.9	3,175.8	3,115.1	3,113.7	26.1	1.2	-178.78	-18.2	144.2	1,316.9	1,304.0	12.85	102.491	
3,500.0	3,224.1	3,166.3	3,164.9	26.7	1.2	-178.82	-17.8	145.8	1,344.9	1,331.8	13.09	102.779	
3,543.3	3,262.1	3,206.4	3,205.0	27.2	1.2	-178.85	-17.6	147.0	1,366.9	1,353.6	13.27	102.987	
3,600.0	3,311.8	3,257.4	3,256.0	27.8	1.2	-178.88	-17.4	148.4	1,395.5	1,382.0	13.52	103.238	
3,641.7	3,348.4	3,295.0	3,293.6	28.2	1.2	-178.90	-17.3	149.4	1,416.5	1,402.8	13.70	103.410	
3,700.0	3,399.4	3,347.8	3,346.4	28.9	1.2	-178.91	-17.4	150.7	1,445.8	1,431.9	13.95	103.625	
3,740.1	3,434.6	3,384.2	3,382.8	29.3	1.2	-178.92	-17.5	151.6	1,466.0	1,451.8	14.13	103.764	
3,800.0	3,487.1	3,437.7	3,436.3	29.9	1.2	-178.93	-17.7	152.8	1,495.9	1,481.5	14.39	103.954	
3,838.6	3,520.9	3,472.1	3,470.6	30.3	1.3	-178.94	-17.9	153.6	1,515.2	1,500.6	14.56	104.070	
3,900.0	3,574.8	3,525.8	3,524.3	31.0	1.3	-178.95	-18.2	154.7	1,545.9	1,531.0	14.83	104.241	
3,937.0	3,607.2	3,557.7	3,556.2	31.4	1.3	-178.95	-18.3	155.4	1,564.3	1,549.4	14.99	104.338	
4,000.0	3,662.5	3,611.4	3,609.9	32.1	1.3	-178.96	-18.6	156.5	1,595.8	1,580.5	15.27	104.497	
4,035.4	3,693.5	3,640.8	3,639.3	32.4	1.3	-178.96	-18.8	157.2	1,613.5	1,598.1	15.43	104.582	
4,100.0	3,750.1	3,694.3	3,692.7	33.1	1.3	-178.96	-19.2	158.4	1,645.9	1,630.2	15.72	104.734	
4,133.8	3,779.8	3,722.2	3,720.6	33.5	1.3	-178.96	-19.5	159.1	1,662.9	1,647.0	15.87	104.809	
4,200.0	3,837.8	3,776.5	3,775.0	34.2	1.3	-178.96	-20.0	160.5	1,696.2	1,680.0	16.16	104.954	
4,232.3	3,866.1	3,803.2	3,801.6	34.6	1.3	-178.96	-20.2	161.3	1,712.5	1,696.1	16.31	105.024	
4,300.0	3,925.5	3,861.3	3,859.7	35.3	1.4	-178.95	-20.7	162.8	1,746.6	1,730.0	16.61	105.162	
4,330.7	3,952.4	3,887.6	3,886.0	35.6	1.4	-178.96	-20.9	163.6	1,762.1	1,745.4	16.75	105.223	
4,400.0	4,013.2	3,959.2	3,957.5	36.4	1.4	-178.96	-21.3	165.4	1,797.0	1,779.9	17.06	105.336	
4,429.1	4,038.7	3,990.8	3,989.1	36.7	1.4	-178.97	-21.4	166.0	1,811.5	1,794.3	17.19	105.373	
4,500.0	4,100.8	4,070.2	4,068.6	37.4	1.4	-179.00	-21.2	167.0	1,846.3	1,828.8	17.51	105.470	
4,527.5	4,125.0	4,101.3	4,099.6	37.7	1.4	-179.02	-21.0	167.1	1,859.7	1,842.1	17.63	105.498	
4,600.0	4,188.5	4,175.9	4,174.3	38.5	1.4	-179.06	-20.4	167.2	1,894.6	1,876.7	17.95	105.575	
4,626.0	4,211.3	4,202.5	4,200.8	38.8	1.4	-179.07	-20.2	167.1	1,907.0	1,889.0	18.06	105.594	
4,700.0	4,276.2	4,269.6	4,267.9	39.6	1.4	-179.11	-19.7	166.8	1,942.4	1,924.0	18.39	105.644	
4,724.4	4,297.6	4,291.7	4,290.1	39.8	1.4	-179.12	-19.5	166.7	1,954.0	1,935.5	18.49	105.658	
4,800.0	4,363.8	4,357.7	4,356.0	40.6	1.4	-179.15	-18.9	166.3	1,990.0	1,971.2	18.83	105.690	
4,822.8	4,383.9	4,377.5	4,375.8	40.9	1.4	-179.17	-18.7	166.2	2,000.9	1,981.9	18.93	105.699	
4,900.0	4,451.5	4,447.4	4,445.7	41.7	1.5	-179.20	-18.1	165.8	2,037.6	2,018.3	19.27	105.720	
4,921.2	4,470.1	4,467.1	4,465.4	41.9	1.5	-179.21	-17.9	165.7	2,047.7	2,028.4	19.37	105.723	
5,000.0	4,539.2	4,536.8	4,535.1	42.8	1.5	-179.24	-17.4	165.2	2,085.1	2,065.4	19.72	105.736	
5,019.7	4,556.4	4,553.6	4,551.9	43.0	1.5	-179.25	-17.3	165.1	2,094.5	2,074.7	19.81	105.740	

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.0	4,626.9	4,622.4	4,620.8	43.9	1.5	-179.28	-16.9	164.7	2,132.7	2,112.5	20.17	105.754	
5,118.1	4,642.7	4,638.2	4,636.5	44.1	1.5	-179.28	-16.8	164.6	2,141.3	2,121.1	20.25	105.755	
5,200.0	4,714.5	4,709.5	4,707.8	44.9	1.5	-179.30	-16.4	164.2	2,180.3	2,159.7	20.62	105.760	
5,216.5	4,729.0	4,723.6	4,721.9	45.1	1.5	-179.31	-16.4	164.1	2,188.2	2,167.5	20.69	105.761	
5,300.0	4,802.2	4,795.1	4,793.4	46.0	1.5	-179.33	-16.1	163.8	2,228.0	2,206.9	21.07	105.766	
5,314.9	4,815.3	4,807.6	4,806.0	46.2	1.5	-179.33	-16.1	163.7	2,235.1	2,214.0	21.13	105.767	
5,400.0	4,889.9	4,878.4	4,876.7	47.1	1.5	-179.35	-15.8	163.5	2,275.8	2,254.3	21.52	105.771	
5,413.4	4,901.6	4,889.5	4,887.8	47.2	1.5	-179.36	-15.7	163.5	2,282.2	2,260.6	21.58	105.773	
5,500.0	4,977.6	4,960.7	4,959.0	48.2	1.5	-179.37	-15.4	163.4	2,323.8	2,301.9	21.97	105.776	
5,511.8	4,987.9	4,970.4	4,968.7	48.3	1.5	-179.38	-15.4	163.4	2,329.5	2,307.5	22.02	105.777	
5,600.0	5,065.2	5,041.8	5,040.1	49.2	1.5	-179.39	-15.2	163.5	2,372.1	2,349.6	22.42	105.782	
5,610.2	5,074.2	5,050.0	5,048.3	49.3	1.5	-179.39	-15.2	163.5	2,377.0	2,354.5	22.47	105.783	
5,700.0	5,152.9	5,123.4	5,121.7	50.3	1.6	-179.41	-15.1	163.9	2,420.5	2,397.7	22.88	105.786	
5,708.6	5,160.5	5,130.8	5,129.1	50.4	1.6	-179.41	-15.1	163.9	2,424.7	2,401.8	22.92	105.785	
5,800.0	5,240.6	5,208.2	5,206.5	51.4	1.6	-179.42	-15.1	164.4	2,469.2	2,445.8	23.34	105.775	
5,807.1	5,246.8	5,213.8	5,212.1	51.5	1.6	-179.42	-15.1	164.4	2,472.6	2,449.2	23.38	105.775	
5,900.0	5,328.2	5,287.8	5,286.1	52.5	1.6	-179.42	-15.2	165.0	2,518.0	2,494.2	23.80	105.782	
5,905.5	5,333.1	5,292.2	5,290.5	52.5	1.6	-179.42	-15.2	165.1	2,520.6	2,496.8	23.83	105.783	
6,000.0	5,415.9	5,374.4	5,372.7	53.5	1.6	-179.43	-15.2	165.9	2,566.9	2,542.7	24.27	105.772	
6,003.9	5,419.4	5,377.8	5,376.2	53.6	1.6	-179.43	-15.2	165.9	2,568.8	2,544.6	24.29	105.771	
6,100.0	5,503.6	5,463.7	5,462.0	54.6	1.6	-179.45	-14.9	166.7	2,615.8	2,591.1	24.73	105.756	
6,102.3	5,505.6	5,465.8	5,464.1	54.6	1.6	-179.45	-14.9	166.7	2,617.0	2,592.2	24.75	105.756	
6,200.0	5,591.3	5,553.4	5,551.7	55.7	1.7	-179.47	-14.4	167.5	2,664.7	2,639.5	25.20	105.736	
6,200.8	5,591.9	5,554.1	5,552.4	55.7	1.7	-179.47	-14.4	167.5	2,665.1	2,639.9	25.20	105.736	
6,299.2	5,678.2	5,631.8	5,630.1	56.7	1.7	-179.49	-13.9	168.1	2,713.1	2,687.5	25.66	105.736	
6,300.0	5,678.9	5,632.4	5,630.7	56.7	1.7	-179.49	-13.9	168.1	2,713.5	2,687.9	25.66	105.736	
6,397.6	5,764.5	5,700.0	5,698.3	57.8	1.7	-179.50	-13.8	169.1	2,761.7	2,735.6	26.11	105.772	
6,400.0	5,766.6	5,700.0	5,698.3	57.8	1.7	-179.50	-13.8	169.1	2,762.9	2,736.8	26.12	105.777	
6,496.0	5,850.8	5,783.3	5,781.6	58.9	1.7	-179.51	-13.9	170.7	2,810.7	2,784.1	26.58	105.762	
6,500.0	5,854.3	5,786.8	5,785.1	58.9	1.7	-179.51	-13.9	170.7	2,812.6	2,786.0	26.59	105.761	
6,594.5	5,937.1	5,876.4	5,874.7	59.9	1.7	-179.51	-14.2	172.3	2,859.5	2,832.4	27.04	105.731	
6,600.0	5,942.0	5,881.7	5,880.0	60.0	1.7	-179.51	-14.2	172.3	2,862.2	2,835.1	27.07	105.729	
6,692.9	6,023.4	5,967.6	5,965.9	61.0	1.8	-179.50	-14.7	173.6	2,908.1	2,880.5	27.51	105.697	
6,700.0	6,029.6	5,974.1	5,972.4	61.0	1.8	-179.50	-14.8	173.7	2,911.5	2,884.0	27.55	105.695	
6,791.3	6,109.7	6,056.8	6,055.0	62.0	1.8	-179.50	-15.2	174.8	2,956.5	2,928.5	27.98	105.661	
6,800.0	6,117.3	6,064.6	6,062.8	62.1	1.8	-179.50	-15.3	174.9	2,960.8	2,932.7	28.02	105.658	
6,889.7	6,196.0	6,146.7	6,144.9	63.1	1.8	-179.49	-15.8	175.8	3,004.9	2,976.4	28.45	105.615	
6,900.0	6,205.0	6,156.2	6,154.4	63.2	1.8	-179.49	-15.9	175.9	3,009.9	2,981.4	28.50	105.610	
6,988.2	6,282.3	6,234.6	6,232.9	64.1	1.8	-179.49	-16.2	176.8	3,053.1	3,024.2	28.92	105.568	
7,000.0	6,292.6	6,244.7	6,242.9	64.3	1.8	-179.49	-16.3	176.9	3,058.9	3,029.9	28.98	105.564	
7,086.6	6,368.6	6,319.2	6,317.4	65.2	1.8	-179.50	-16.4	177.7	3,101.3	3,072.0	29.39	105.528	
7,100.0	6,380.3	6,331.2	6,329.4	65.3	1.8	-179.50	-16.4	177.8	3,107.9	3,078.5	29.45	105.520	
7,185.0	6,454.9	6,407.6	6,405.8	66.3	1.9	-179.50	-16.5	178.6	3,149.6	3,119.7	29.86	105.472	
7,200.0	6,468.0	6,421.2	6,419.4	66.4	1.9	-179.50	-16.6	178.7	3,156.9	3,127.0	29.93	105.462	
7,283.4	6,541.1	6,496.9	6,495.2	67.3	1.9	-179.50	-16.7	179.4	3,197.7	3,167.4	30.34	105.410	
7,299.0	6,554.8	6,511.3	6,509.6	67.5	1.9	-179.51	-16.7	179.5	3,205.3	3,174.9	30.41	105.399	
7,350.0	6,598.3	6,557.6	6,555.8	68.1	1.9	-179.48	-16.8	179.9	3,232.1	3,201.2	30.94	104.456	
7,381.9	6,624.3	6,585.2	6,583.4	68.5	1.9	-179.46	-16.8	180.1	3,250.8	3,219.6	31.19	104.239	
7,400.0	6,638.6	6,600.0	6,598.2	68.8	1.9	-179.45	-16.9	180.2	3,262.1	3,230.8	31.29	104.260	
7,450.0	6,676.1	6,637.2	6,635.5	69.5	1.9	-179.41	-16.9	180.5	3,295.3	3,263.9	31.45	104.790	
7,480.3	6,697.4	6,658.1	6,656.3	70.1	1.9	-179.38	-17.0	180.6	3,317.0	3,285.6	31.45	105.461	
7,500.0	6,710.6	6,671.1	6,669.3	70.4	1.9	-179.36	-17.0	180.7	3,331.7	3,300.3	31.42	106.055	

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



# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,550.0	6,741.8	6,700.0	6,698.2	71.4	1.9	-179.29	-17.0	180.9	3,371.0	3,339.8	31.19	108.089	
7,578.7	6,758.2	6,700.0	6,698.2	72.0	1.9	-179.23	-17.0	180.9	3,394.8	3,363.8	30.95	109.691	
7,600.0	6,769.5	6,700.0	6,698.2	72.4	1.9	-179.18	-17.0	180.9	3,412.9	3,382.2	30.73	111.068	
7,650.0	6,793.5	6,700.0	6,698.2	73.5	1.9	-179.04	-17.0	180.9	3,457.2	3,427.1	30.08	114.932	
7,677.1	6,804.9	6,700.0	6,698.2	74.1	1.9	-178.92	-17.0	180.9	3,482.1	3,452.5	29.65	117.422	
7,700.0	6,813.6	6,700.0	6,698.2	74.6	1.9	-178.81	-17.0	180.9	3,503.5	3,474.2	29.26	119.750	
7,750.0	6,829.5	6,700.0	6,698.2	75.8	1.9	-178.41	-17.0	180.9	3,551.3	3,523.0	28.29	125.553	
7,775.6	6,836.1	6,700.0	6,698.2	76.4	1.9	-178.07	-17.0	180.9	3,576.2	3,548.5	27.76	128.848	
7,800.0	6,841.3	6,700.0	6,698.2	77.0	1.9	-177.56	-17.0	180.9	3,600.3	3,573.0	27.26	132.052	
7,832.7	6,846.7	6,700.0	6,698.2	77.8	1.9	-176.21	-17.0	180.9	3,632.6	3,605.8	26.82	135.435	
7,874.0	6,852.4	6,700.0	6,698.2	78.9	1.9	-176.21	-17.0	180.9	3,673.8	3,646.7	27.09	135.637	
7,900.0	6,856.0	6,700.0	6,698.2	79.5	1.9	-176.21	-17.0	180.9	3,699.6	3,672.4	27.25	135.762	
7,924.0	6,859.3	6,700.0	6,698.2	80.1	1.9	-176.21	-17.0	180.9	3,723.5	3,696.1	27.40	135.871	
7,950.0	6,862.3	6,700.0	6,698.2	80.7	1.9	171.37	-17.0	180.9	3,749.4	3,720.4	29.04	129.111	
7,972.4	6,864.0	6,700.0	6,698.2	81.3	1.9	131.18	-17.0	180.9	3,771.8	3,704.8	66.99	56.308	
8,000.0	6,865.0	6,700.0	6,698.2	82.0	1.9	53.91	-17.0	180.9	3,799.4	3,727.9	71.53	53.118	
8,007.5	6,865.0	6,700.0	6,698.2	82.2	1.9	46.37	-17.0	180.9	3,806.9	3,741.1	65.76	57.889	
8,070.8	6,865.0	6,700.0	6,698.2	83.8	1.9	46.37	-17.0	180.9	3,870.1	3,803.2	66.93	57.819	
8,100.0	6,865.0	6,700.0	6,698.2	84.5	1.9	46.37	-17.0	180.9	3,899.2	3,831.8	67.47	57.788	
8,169.3	6,865.0	6,700.0	6,698.2	86.2	1.9	46.37	-17.0	180.9	3,968.4	3,899.6	68.76	57.710	
8,200.0	6,865.0	6,700.0	6,698.2	87.0	1.9	46.37	-17.0	180.9	3,999.1	3,929.8	69.34	57.677	
8,267.7	6,865.0	6,700.0	6,698.2	88.7	1.9	46.37	-17.0	180.9	4,066.7	3,996.1	70.61	57.596	
8,300.0	6,865.0	6,700.0	6,698.2	89.5	1.9	46.37	-17.0	180.9	4,098.9	4,027.7	71.21	57.559	
8,366.1	6,865.0	6,700.0	6,698.2	91.2	1.9	46.37	-17.0	180.9	4,165.0	4,092.5	72.46	57.478	
8,400.0	6,865.0	6,700.0	6,698.2	92.1	1.9	46.37	-17.0	180.9	4,198.8	4,125.7	73.10	57.438	
8,464.5	6,865.0	6,700.0	6,698.2	93.7	1.9	46.37	-17.0	180.9	4,263.3	4,188.9	74.33	57.357	
8,500.0	6,865.0	6,700.0	6,698.2	94.6	1.9	46.37	-17.0	180.9	4,298.7	4,223.7	75.00	57.313	
8,563.0	6,865.0	6,700.0	6,698.2	96.2	1.9	46.37	-17.0	180.9	4,361.6	4,285.4	76.21	57.233	
8,600.0	6,865.0	6,700.0	6,698.2	97.2	1.9	46.37	-17.0	180.9	4,398.6	4,321.6	76.92	57.187	
8,661.4	6,865.0	6,700.0	6,698.2	98.8	1.9	46.37	-17.0	180.9	4,459.9	4,381.8	78.10	57.108	
8,700.0	6,865.0	6,700.0	6,698.2	99.8	1.9	46.37	-17.0	180.9	4,498.4	4,419.6	78.84	57.059	
8,759.8	6,865.0	6,700.0	6,698.2	101.3	1.9	46.37	-17.0	180.9	4,558.2	4,478.2	79.99	56.982	
8,800.0	6,865.0	6,700.0	6,698.2	102.4	1.9	46.37	-17.0	180.9	4,598.3	4,517.6	80.77	56.931	
8,858.2	6,865.0	6,700.0	6,698.2	103.9	1.9	46.37	-17.0	180.9	4,656.5	4,574.6	81.90	56.855	
8,900.0	6,865.0	6,700.0	6,698.2	105.0	1.9	46.37	-17.0	180.9	4,698.2	4,615.5	82.71	56.803	
8,956.7	6,865.0	6,700.0	6,698.2	106.5	1.9	46.37	-17.0	180.9	4,754.8	4,671.0	83.82	56.729	
9,000.0	6,865.0	6,700.0	6,698.2	107.6	1.9	46.37	-17.0	180.9	4,798.1	4,713.5	84.66	56.675	
9,055.1	6,865.0	6,700.0	6,698.2	109.0	1.9	46.37	-17.0	180.9	4,853.2	4,767.4	85.74	56.604	
9,100.0	6,865.0	6,700.0	6,698.2	110.2	1.9	46.37	-17.0	180.9	4,898.0	4,811.4	86.62	56.548	
9,153.5	6,865.0	6,700.0	6,698.2	111.6	1.9	46.37	-17.0	180.9	4,951.5	4,863.8	87.67	56.480	
9,200.0	6,865.0	6,700.0	6,698.2	112.8	1.9	46.37	-17.0	180.9	4,997.9	4,909.3	88.58	56.422	
9,251.9	6,865.0	6,700.0	6,698.2	114.2	1.9	46.37	-17.0	180.9	5,049.8	4,960.2	89.60	56.357	
9,300.0	6,865.0	6,700.0	6,698.2	115.5	1.9	46.37	-17.0	180.9	5,097.8	5,007.3	90.55	56.298	
9,350.4	6,865.0	6,700.0	6,698.2	116.8	1.9	46.37	-17.0	180.9	5,148.2	5,056.6	91.55	56.236	
9,400.0	6,865.0	6,700.0	6,698.2	118.1	1.9	46.37	-17.0	180.9	5,197.7	5,105.2	92.53	56.175	
9,448.8	6,865.0	6,700.0	6,698.2	119.4	1.9	46.37	-17.0	180.9	5,246.5	5,153.0	93.49	56.116	
9,500.0	6,865.0	6,700.0	6,698.2	120.8	1.9	46.37	-17.0	180.9	5,297.7	5,203.2	94.51	56.055	
9,547.2	6,865.0	6,700.0	6,698.2	122.1	1.9	46.37	-17.0	180.9	5,344.8	5,249.4	95.45	55.998	
9,600.0	6,865.0	6,700.0	6,698.2	123.5	1.9	46.37	-17.0	180.9	5,397.6	5,301.1	96.50	55.936	
9,645.6	6,865.0	6,700.0	6,698.2	124.7	1.9	46.37	-17.0	180.9	5,443.2	5,345.8	97.41	55.882	
9,700.0	6,865.0	6,700.0	6,698.2	126.1	1.9	46.37	-17.0	180.9	5,497.5	5,399.0	98.49	55.819	
9,744.1	6,865.0	6,700.0	6,698.2	127.3	1.9	46.37	-17.0	180.9	5,541.5	5,442.2	99.37	55.768	

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 usft
Survey Program: 100-GYD_CT												Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	
9,800.0	6,865.0	6,700.0	6,698.2	128.8	1.9	46.37	-17.0	180.9	5,597.4	5,496.9	100.48	55.704	
9,842.5	6,865.0	6,700.0	6,698.2	130.0	1.9	46.37	-17.0	180.9	5,639.9	5,538.6	101.34	55.656	
9,900.0	6,865.0	6,700.0	6,698.2	131.5	1.9	46.37	-17.0	180.9	5,697.4	5,594.9	102.49	55.591	
9,940.9	6,865.0	6,700.0	6,698.2	132.6	1.9	46.37	-17.0	180.9	5,738.2	5,634.9	103.31	55.546	
10,000.0	6,865.0	6,700.0	6,698.2	134.2	1.9	46.37	-17.0	180.9	5,797.3	5,692.8	104.49	55.481	
10,039.3	6,865.0	6,700.0	6,698.2	135.3	1.9	46.37	-17.0	180.9	5,836.6	5,731.3	105.28	55.438	
10,100.0	6,865.0	6,700.0	6,698.2	136.9	1.9	46.37	-17.0	180.9	5,897.2	5,790.7	106.50	55.373	
10,137.8	6,865.0	6,700.0	6,698.2	137.9	1.9	46.37	-17.0	180.9	5,935.0	5,827.7	107.26	55.332	
10,200.0	6,865.0	6,700.0	6,698.2	139.6	1.9	46.37	-17.0	180.9	5,997.1	5,888.6	108.51	55.266	
10,236.2	6,865.0	6,700.0	6,698.2	140.6	1.9	46.37	-17.0	180.9	6,033.3	5,924.1	109.24	55.228	
10,300.0	6,865.0	6,700.0	6,698.2	142.3	1.9	46.37	-17.0	180.9	6,097.1	5,986.6	110.53	55.162	
10,334.6	6,865.0	6,700.0	6,698.2	143.2	1.9	46.37	-17.0	180.9	6,131.7	6,020.5	111.23	55.127	
10,400.0	6,865.0	6,700.0	6,698.2	145.0	1.9	46.37	-17.0	180.9	6,197.0	6,084.5	112.55	55.061	
10,433.0	6,865.0	6,700.0	6,698.2	145.9	1.9	46.37	-17.0	180.9	6,230.1	6,116.8	113.22	55.027	
10,500.0	6,865.0	6,700.0	6,698.2	147.7	1.9	46.37	-17.0	180.9	6,297.0	6,182.4	114.57	54.961	
10,531.5	6,865.0	6,700.0	6,698.2	148.6	1.9	46.37	-17.0	180.9	6,328.4	6,213.2	115.21	54.930	
10,600.0	6,865.0	6,700.0	6,698.2	150.4	1.9	46.37	-17.0	180.9	6,396.9	6,280.3	116.60	54.863	
10,629.9	6,865.0	6,700.0	6,698.2	151.2	1.9	46.37	-17.0	180.9	6,426.8	6,309.6	117.20	54.834	
10,700.0	6,865.0	6,700.0	6,698.2	153.1	1.9	46.37	-17.0	180.9	6,496.9	6,378.2	118.63	54.768	
10,728.3	6,865.0	6,700.0	6,698.2	153.9	1.9	46.37	-17.0	180.9	6,525.2	6,406.0	119.20	54.741	
10,800.0	6,865.0	6,700.0	6,698.2	155.9	1.9	46.37	-17.0	180.9	6,596.8	6,476.1	120.66	54.674	
10,826.7	6,865.0	6,700.0	6,698.2	156.6	1.9	46.37	-17.0	180.9	6,623.5	6,502.3	121.20	54.650	
10,900.0	6,865.0	6,700.0	6,698.2	158.6	1.9	46.37	-17.0	180.9	6,696.7	6,574.1	122.69	54.583	
10,925.2	6,865.0	6,700.0	6,698.2	159.3	1.9	46.37	-17.0	180.9	6,721.9	6,598.7	123.20	54.560	
11,000.0	6,865.0	6,700.0	6,698.2	161.3	1.9	46.37	-17.0	180.9	6,796.7	6,672.0	124.72	54.494	
11,023.6	6,865.0	6,700.0	6,698.2	162.0	1.9	46.37	-17.0	180.9	6,820.3	6,695.1	125.21	54.473	
11,100.0	6,865.0	6,700.0	6,698.2	164.0	1.9	46.37	-17.0	180.9	6,896.6	6,769.9	126.76	54.406	
11,122.0	6,865.0	6,700.0	6,698.2	164.6	1.9	46.37	-17.0	180.9	6,918.7	6,791.4	127.21	54.387	
11,200.0	6,865.0	6,700.0	6,698.2	166.8	1.9	46.37	-17.0	180.9	6,996.6	6,867.8	128.80	54.320	
11,220.4	6,865.0	6,700.0	6,698.2	167.3	1.9	46.37	-17.0	180.9	7,017.0	6,887.8	129.22	54.303	
11,300.0	6,865.0	6,700.0	6,698.2	169.5	1.9	46.37	-17.0	180.9	7,096.5	6,965.7	130.84	54.237	
11,318.9	6,865.0	6,700.0	6,698.2	170.0	1.9	46.37	-17.0	180.9	7,115.4	6,984.2	131.23	54.221	
11,400.0	6,865.0	6,700.0	6,698.2	172.2	1.9	46.37	-17.0	180.9	7,196.5	7,063.6	132.89	54.155	
11,417.3	6,865.0	6,700.0	6,698.2	172.7	1.9	46.37	-17.0	180.9	7,213.8	7,080.6	133.24	54.141	
11,500.0	6,865.0	6,700.0	6,698.2	175.0	1.9	46.37	-17.0	180.9	7,296.5	7,161.5	134.93	54.075	
11,515.7	6,865.0	6,700.0	6,698.2	175.4	1.9	46.37	-17.0	180.9	7,312.2	7,176.9	135.26	54.062	
11,600.0	6,865.0	6,700.0	6,698.2	177.7	1.9	46.37	-17.0	180.9	7,396.4	7,259.4	136.98	53.996	
11,614.1	6,865.0	6,700.0	6,698.2	178.1	1.9	46.37	-17.0	180.9	7,410.6	7,273.3	137.27	53.985	
11,700.0	6,865.0	6,700.0	6,698.2	180.5	1.9	46.37	-17.0	180.9	7,496.4	7,357.3	139.03	53.919	
11,712.6	6,865.0	6,700.0	6,698.2	180.8	1.9	46.37	-17.0	180.9	7,508.9	7,369.7	139.29	53.910	
11,800.0	6,865.0	6,700.0	6,698.2	183.2	1.9	46.37	-17.0	180.9	7,596.3	7,455.3	141.08	53.844	
11,811.0	6,865.0	6,700.0	6,698.2	183.5	1.9	46.37	-17.0	180.9	7,607.3	7,466.0	141.31	53.836	
11,900.0	6,865.0	6,700.0	6,698.2	186.0	1.9	46.37	-17.0	180.9	7,696.3	7,553.2	143.13	53.771	
11,909.4	6,865.0	6,700.0	6,698.2	186.2	1.9	46.37	-17.0	180.9	7,705.7	7,562.4	143.33	53.764	
12,000.0	6,865.0	6,700.0	6,698.2	188.7	1.9	46.37	-17.0	180.9	7,796.3	7,651.1	145.19	53.698	
12,007.8	6,865.0	6,700.0	6,698.2	188.9	1.9	46.37	-17.0	180.9	7,804.1	7,658.8	145.35	53.693	
12,100.0	6,865.0	6,700.0	6,698.2	191.5	1.9	46.37	-17.0	180.9	7,896.2	7,749.0	147.24	53.628	
12,106.3	6,865.0	6,700.0	6,698.2	191.6	1.9	46.37	-17.0	180.9	7,902.5	7,755.1	147.37	53.624	
12,200.0	6,865.0	6,700.0	6,698.2	194.2	1.9	46.37	-17.0	180.9	7,996.2	7,846.9	149.30	53.559	
12,204.7	6,865.0	6,700.0	6,698.2	194.4	1.9	46.37	-17.0	180.9	8,000.9	7,851.5	149.39	53.556	
12,300.0	6,865.0	6,700.0	6,698.2	197.0	1.9	46.37	-17.0	180.9	8,096.1	7,944.8	151.35	53.491	
12,303.1	6,865.0	6,700.0	6,698.2	197.1	1.9	46.37	-17.0	180.9	8,099.3	7,947.8	151.42	53.489	

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

# Anticollision Report



<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 usft
Survey Program: 100-GYD_CT												<b>Offset Well Error:</b>	0.0 usft
Reference	Offset	Semi Major Axis		Distance									
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,400.0	6,865.0	6,700.0	6,698.2	199.7	1.9	46.37	-17.0	180.9	8,196.1	8,042.7	153.41	53.425	
12,401.5	6,865.0	6,700.0	6,698.2	199.8	1.9	46.37	-17.0	180.9	8,197.7	8,044.2	153.44	53.424	
12,500.0	6,865.0	6,700.0	6,698.2	202.5	1.9	46.37	-17.0	180.9	8,296.1	8,140.6	155.47	53.360	
12,598.4	6,865.0	6,700.0	6,698.2	205.2	1.9	46.37	-17.0	180.9	8,394.4	8,236.9	157.50	53.298	
12,600.0	6,865.0	6,700.0	6,698.2	205.3	1.9	46.37	-17.0	180.9	8,396.0	8,238.5	157.53	53.297	
12,696.8	6,865.0	6,700.0	6,698.2	207.9	1.9	46.37	-17.0	180.9	8,492.8	8,333.3	159.53	53.237	
12,700.0	6,865.0	6,700.0	6,698.2	208.0	1.9	46.37	-17.0	180.9	8,496.0	8,336.4	159.60	53.235	
12,795.2	6,865.0	6,700.0	6,698.2	210.7	1.9	46.37	-17.0	180.9	8,591.2	8,429.7	161.56	53.176	
12,800.0	6,865.0	6,700.0	6,698.2	210.8	1.9	46.37	-17.0	180.9	8,596.0	8,434.3	161.66	53.174	
12,893.7	6,865.0	6,700.0	6,698.2	213.4	1.9	46.37	-17.0	180.9	8,689.6	8,526.0	163.59	53.118	
12,900.0	6,865.0	6,700.0	6,698.2	213.5	1.9	46.37	-17.0	180.9	8,695.9	8,532.2	163.72	53.114	
12,992.1	6,865.0	6,700.0	6,698.2	216.1	1.9	46.37	-17.0	180.9	8,788.0	8,622.4	165.62	53.060	
13,000.0	6,865.0	6,700.0	6,698.2	216.3	1.9	46.37	-17.0	180.9	8,795.9	8,630.1	165.79	53.055	
13,090.5	6,865.0	6,700.0	6,698.2	218.8	1.9	46.37	-17.0	180.9	8,886.4	8,718.8	167.66	53.003	
13,100.0	6,865.0	6,700.0	6,698.2	219.1	1.9	46.37	-17.0	180.9	8,895.9	8,728.0	167.85	52.998	
13,188.9	6,865.0	6,700.0	6,698.2	221.5	1.9	46.37	-17.0	180.9	8,984.8	8,815.1	169.69	52.948	
13,200.0	6,865.0	6,700.0	6,698.2	221.8	1.9	46.37	-17.0	180.9	8,995.9	8,825.9	169.92	52.942	
13,287.4	6,865.0	6,700.0	6,698.2	224.3	1.9	46.37	-17.0	180.9	9,083.2	8,911.5	171.73	52.893	
13,300.0	6,865.0	6,700.0	6,698.2	224.6	1.9	46.37	-17.0	180.9	9,095.8	8,923.8	171.99	52.886	
13,385.8	6,865.0	6,700.0	6,698.2	227.0	1.9	46.37	-17.0	180.9	9,181.6	9,007.8	173.76	52.840	
13,400.0	6,865.0	6,700.0	6,698.2	227.4	1.9	46.37	-17.0	180.9	9,195.8	9,021.7	174.06	52.832	
13,484.2	6,865.0	6,700.0	6,698.2	229.7	1.9	46.37	-17.0	180.9	9,280.0	9,104.2	175.80	52.787	
13,500.0	6,865.0	6,700.0	6,698.2	230.2	1.9	46.37	-17.0	180.9	9,295.8	9,119.6	176.13	52.779	
13,582.6	6,865.0	6,700.0	6,698.2	232.4	1.9	46.37	-17.0	180.9	9,378.4	9,200.6	177.84	52.736	
13,600.0	6,865.0	6,700.0	6,698.2	232.9	1.9	46.37	-17.0	180.9	9,395.7	9,217.5	178.20	52.727	
13,681.1	6,865.0	6,700.0	6,698.2	235.2	1.9	46.37	-17.0	180.9	9,476.8	9,296.9	179.87	52.686	
13,700.0	6,865.0	6,700.0	6,698.2	235.7	1.9	46.37	-17.0	180.9	9,495.7	9,315.5	180.27	52.676	
13,779.5	6,865.0	6,700.0	6,698.2	237.9	1.9	46.37	-17.0	180.9	9,575.2	9,393.3	181.91	52.636	
13,800.0	6,865.0	6,700.0	6,698.2	238.5	1.9	46.37	-17.0	180.9	9,595.7	9,413.4	182.34	52.626	
13,877.9	6,865.0	6,700.0	6,698.2	240.6	1.9	46.37	-17.0	180.9	9,673.6	9,489.6	183.95	52.587	
13,900.0	6,865.0	6,700.0	6,698.2	241.3	1.9	46.37	-17.0	180.9	9,695.7	9,511.3	184.41	52.577	
13,976.3	6,865.0	6,700.0	6,698.2	243.4	1.9	46.37	-17.0	180.9	9,772.0	9,586.0	185.99	52.540	
14,000.0	6,865.0	6,700.0	6,698.2	244.0	1.9	46.37	-17.0	180.9	9,795.6	9,609.2	186.48	52.528	
14,074.8	6,865.0	6,700.0	6,698.2	246.1	1.9	46.37	-17.0	180.9	9,870.4	9,682.4	188.03	52.493	
14,100.0	6,865.0	6,700.0	6,698.2	246.8	1.9	46.37	-17.0	180.9	9,895.6	9,707.1	188.56	52.481	
14,173.2	6,865.0	6,700.0	6,698.2	248.8	1.9	46.37	-17.0	180.9	9,968.8	9,778.7	190.07	52.447	
14,200.0	6,865.0	6,700.0	6,698.2	249.6	1.9	46.37	-17.0	180.9	9,995.6	9,805.0	190.63	52.434 SF	

<b>Company:</b>	EXTRACTION OIL & GAS	<b>Local Co-ordinate Reference:</b>	Well VT-LDS 5-16-18
<b>Project:</b>	WELD COUNTY, COLORADO (NAD 83)	<b>TVD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Reference Site:</b>	SW NW SEC. 15 T5N R65W 6th P.M.	<b>MD Reference:</b>	KB-EST @ 4664.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	True
<b>Reference Well:</b>	VT-LDS 5-16-18	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	ORIGINAL WELLBORE	<b>Database:</b>	EDM 5000.1 Single User Db
<b>Reference Design:</b>	PROPOSAL #2	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB-EST @ 4664.0usft (Original Well ECoordinates are relative to: VT-LDS 5-16-18

Offset Depths are relative to Offset Datum

Coordinate System is US State Plane 1983, Colorado Northern Zone

Central Meridian is -105.500000

Grid Convergence at Surface is: 0.54°

## Separation Factor Plot

