EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)
SW NW SEC. 15 T5N R65W 6th P.M.
VT-LDS C3-16-18

ORIGINAL WELLBORE
PROPOSAL #2

Anticollision Report

10 March, 2016

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

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

Survey Tool Program **Date** 10/03/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	20,510.3	PROPOSAL #2 (ORIGINAL WELLBORE)	MWD	MWD - Standard

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.						
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Des	500.0	457.0	2,633.5	2,623.8	272.948	CC
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Des	600.0	557.0	2,634.4	2,622.5	221.637	ES
ABDN VERT LORENZ FARM INC #1 - Wellbore #1 - Des	7,834.4	4,600.0	5,643.6	5,476.9	33.856	SF
CARLSON A-15-16HN - Wellbore #1 - Design #1	8,107.9	14,862.7	1,402.9	1,096.8	4.583	CC
CARLSON A-15-16HN - Wellbore #1 - Design #1	8,150.0	14,862.7	1,403.6	1,096.6	4.571	ES
CARLSON A-15-16HN - Wellbore #1 - Design #1	8,267.7	14,862.7	1,413.5	1,103.8	4.565	SF
CARLSON B-15-16HC - Wellbore #1 - Design #1	8,114.0	14,905.1	1,231.8	924.7	4.011	CC
CARLSON B-15-16HC - Wellbore #1 - Design #1	8,150.0	14,905.1	1,232.5	924.6	4.002	ES
CARLSON B-15-16HC - Wellbore #1 - Design #1	8,200.0	14,905.1	1,235.6	926.6	3.998	SF
CARLSON C-15-16HN - Wellbore #1 - Design #1	8,093.5	14,796.3	1,075.8	771.6	3.537	CC
CARLSON C-15-16HN - Wellbore #1 - Design #1	8,100.0	14,796.3	1,075.8	771.5	3.535	ES
CARLSON C-15-16HN - Wellbore #1 - Design #1	8,169.3	14,796.3	1,078.7	772.8	3.527	SF
CARLSON D-15-16HN - Wellbore #1 - Design #1	8,076.2	14,777.6	750.1	449.4	2.494	CC
CARLSON D-15-16HN - Wellbore #1 - Design #1	8,100.0	14,777.6	750.5	449.2	2.491	ES, SF
CARLSON E-15-16HC - Wellbore #1 - Design #1	8,086.0	14,848.6	574.6	270.3	1.888	CC
CARLSON E-15-16HC - Wellbore #1 - Design #1	8,100.0	14,848.6	574.8	270.2	1.887	ES, SF
CARLSON F-15-16HN - Wellbore #1 - Design #1	7,947.1	14,656.3	476.2	182.9	1.623	CC, ES, SF
CARLSON G-15-16HN - Wellbore #1 - Design #1	7,750.0	14,499.5	63.9	-223.0	0.223	Level 1, ES, SF
CARLSON G-15-16HN - Wellbore #1 - Design #1	7,751.1	14,500.4	63.9	-222.7	0.223	Level 1, CC
CARLSON H-15-16HC - Wellbore #1 - Design #1	7,849.0	14,681.4	112.8	-175.3	0.392	Level 1, CC
CARLSON H-15-16HC - Wellbore #1 - Design #1	7,874.0	14,703.9	113.3	-179.4	0.387	Level 1, SF
CARLSON H-15-16HC - Wellbore #1 - Design #1	7,900.0	14,727.3	115.0	-180.4	0.389	Level 1, ES
CARLSON I-15-16HN - Wellbore #1 - Design #1	7,676.6	14,489.8	312.9	28.2	1.099	Level 2, CC
CARLSON I-15-16HN - Wellbore #1 - Design #1	7,700.0	14,507.6	313.3	27.2	1.095	Level 2, ES, SF
CARLSON J-15-16HN - Wellbore #1 - Design #1	7,635.9	14,525.1	641.1	357.8	2.263	CC
CARLSON J-15-16HN - Wellbore #1 - Design #1	7,677.1	14,555.0	641.9	356.8	2.252	ES
CARLSON J-15-16HN - Wellbore #1 - Design #1	7,750.0	14,612.6	646.8	358.9	2.246	SF
CARLSON K-15-16HC - Wellbore #1 - Design #1	7,699.9	14,684.4	813.9	529.1	2.857	CC
CARLSON K-15-16HC - Wellbore #1 - Design #1	7,775.6	14,746.1	815.9	527.4	2.828	ES
CARLSON K-15-16HC - Wellbore #1 - Design #1	8,070.8	15,013.6	841.2	538.1	2.776	SF
CARLSON L-15-16HN - Wellbore #1 - Design #1	7,604.8	14,579.3	969.8	687.4	3.435	CC
CARLSON L-15-16HN - Wellbore #1 - Design #1	7,650.0	14,610.5	970.6	686.7	3.419	ES
CARLSON L-15-16HN - Wellbore #1 - Design #1	8,100.0	14,977.0	1,017.0	715.0	3.368	SF
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	12,298.5	7,248.5	3,230.0	3,012.8	14.873	CC
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	12,400.0	7,247.9	3,231.6	3,011.6	14.692	ES
EXIST DD BMC #B8 - Wellbore #1 - Wellbore #1	13,600.0	7,241.7	3,482.3	3,229.2	13.759	SF
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	9,701.4	7,412.3	3,116.9	2,964.0	20.374	CC

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

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Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 15 T5N R65W 6th P.M.						
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	9,800.0	7,410.9	3,118.5	2,962.9	20.040	ES
EXIST DD BUS BARN #A5 - Wellbore #1 - Wellbore #1	11,417.3	7,388.6	3,558.0	3,358.6	17.847	SF
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	13,023.9	7,357.1	3,737.6	3,494.4	15.368	CC
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	13,100.0	7,357.1	3,738.4	3,493.1	15.239	ES
EXIST DD CDOT 2 #D7 - Wellbore #1 - Wellbore #1	14,600.0	7,356.3	4,056.3	3,769.4	14.139	SF
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	11,621.2	7,073.6	3,744.5	3,555.9	19.850	CC
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	11,712.6	7,073.2	3,745.7	3,554.5	19.596	ES
EXIST DD CDOT 3 # D2 - Wellbore #1 - Wellbore #1	13,681.1	7,065.5	4,273.7	4,028.3	17.414	SF
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	10,301.6	7,950.0	2,210.2	2,049.0	13.708	CC
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	10,334.6	7,950.0	2,210.5	2,048.3	13.635	ES
EXIST DD CLARK #A1 - Wellbore #1 - Wellbore #1	11,122.0	7,950.0	2,357.6	2,174.1	12.851	SF
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	13,629.3	7,863.4	1,801.9	1,525.7	6.524	CC
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	13,681.1	7,864.9	1,802.6	1,525.0	6.493	ES
EXIST DD CLASSIC LANES #C9 - Wellbore #1 - Wellbo	13,976.3	7,873.2	1,835.0	1,549.2	6.421	SF
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	10,482.4	7,869.0	1,118.8	946.6	6.498	CC
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	10,500.0	7,869.7	1,119.0	946.3	6.481	ES
EXIST DD COUNTRYSIDE CENTER C3 - Wellbore #1 -	10,700.0	7,877.0	1,139.8	961.7	6.399	SF
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	9,657.2	7,850.0	1,794.6	1,640.4	11.640	CC
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	9,700.0	7,850.0	1,795.1	1,639.8	11.558	ES
EXIST DD DELTA PARK #A2 - Wellbore #1 - Wellbore #	10,236.2	7,826.0	1,885.5	1,715.8	11.112	SF
EXIST DD DISTRICT SIX #C6 - Wellbore #1 - Wellbore #	12,420.4	8,158.4	533.0	306.0	2.348	CC, ES, SF
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	12,871.3	7,398.0	2,525.9	2,286.0	10.531	CC
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	12,900.0	7,398.0	2,526.0	2,285.4	10.497	ES
EXIST DD DRIFTWOOD #D1 - Wellbore #1 - Wellbore #	13,600.0	7,353.5	2,628.5	2,368.7	10.119	SF
EXIST DD EHRLICH MOTORS #D8 - Wellbore #1 - Well	14,253.8	7,754.0	3,756.1	3,454.6	12.459	CC
EXIST DD EHRLICH MOTORS #D8 - Wellbore #1 - Well	14,370.0	7,762.7	3,757.9	3,453.1	12.332	ES
EXIST DD EHRLICH MOTORS #D8 - Wellbore #1 - Well	15,551.1	7,840.0	3,971.0	3,633.5	11.763	SF
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	13,702.7	7,699.0	3,061.3	2,785.9	11.118	CC
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	13,779.5	7,699.0	3,062.2	2,784.8	11.037	ES
EXIST DD GARDEN CITY #D5 - Wellbore #1 - Wellbore	14,665.3	7,699.0	3,209.0	2,907.0	10.626	SF
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - W	12,398.4	7,705.0	1,917.0	1,692.8	8.549	CC
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - W	12,401.5	7,705.0	1,917.0	1,692.7	8.546	ES
EXIST DD GREELEY IND SOUTH #B9 - Wellbore #1 - W	12,800.0	7,742.7	1,958.3	1,723.3	8.332	SF
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	10,281.1	7,111.7	3,836.2	3,677.4	24.161	CC
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	10,400.0	7,111.7	3,838.0	3,676.1	23.694	ES
EXIST DD HWY 34-1 #A-7 - Wellbore #1 - Wellbore #1	12,893.7	7,111.7	4,641.4	4,411.1	20.158	SF
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	9,058.2	7,467.6	3,821.6	3,673.0	25.715	CC
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	9,153.5	7,466.7	3,822.8	3,671.7	25.298	ES
EXIST DD HWY 34-2 #A-8 - Wellbore #1 - Wellbore #1	11,800.0	7,442.6	4,703.4	4,480.9	21.142	SF
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	10,914.5	7,146.2	3,159.1	2,988.3	18.497	CC
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	11,000.0	7,146.0	3,160.3	2,987.1	18.255	ES
EXIST DD HWY 85-1 #B-12 - Wellbore #1 - Wellbore #1	12,500.0	7,141.1	3,534.6	3,320.4	16.499	SF
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	11,145.3	7,819.0	1,763.9	1,583.7	9.789	CC
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	11,200.0	7,819.0	1,764.7	1,583.1	9.715	ES
EXIST DD HWY 85-2 #B11 - Wellbore #1 - Wellbore #1	11,614.1	7,819.0	1,825.1	1,632.4	9.470	SF
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	10,988.9	8,032.2	581.6	397.4	3.157	CC
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	11,000.0	8,032.2	581.7	397.2	3.152	ES
EXIST DD HWY 85-3 #C4 - Wellbore #1 - Wellbore #1	11,023.6	8,032.3	582.6	397.5	3.146	SF
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	3,625.3	4,141.3	2,058.9	2,027.2	64.991	CC
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	3,641.7	4,148.2	2,058.9	2,027.1	64.685	ES
EXIST DD KUETTEL #11-15 - Wellbore #1 - Wellbore #1	8,222.2	7,197.8	3,756.5	3,654.7	36.909	SF
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	1,897.4	2,254.9	2,359.1	2,345.4	172.769	CC
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	1,900.0	2,256.3	2,359.1	2,345.4	172.393	ES

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

Summary

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SW NW SEC. 15 T5N R65W 6th P.M.						
EXIST DD KUETTEL #21-15 - Wellbore #1 - Wellbore #1	13,000.0	7,314.2	9,938.4	9,701.9	42.012	SF
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	2,464.5	3,020.1	2,075.1	2,052.7	92.604	CC
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	2,500.0	3,038.0	2,075.3	2,052.5	91.019	ES
EXIST DD KUETTEL #CNW-15 - Wellbore #1 - Wellbore	13,700.0	7,217.6	9,927.4	9,683.6	40.716	SF
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	8,515.5	8,140.0	1,653.4	1,508.3	11.394	CC
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	8,563.0	8,140.0	1,654.1	1,507.8	11.305	ES
EXIST DD PARKVIEW AOUTH #A3 - Wellbore #1 - Well	9,000.0	8,140.0	1,722.9	1,565.4	10.936	SF
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	8,280.7	7,906.5	3,043.2	2,899.5	21.178	CC
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	8,366.1	7,897.3	3,044.4	2,898.5	20.878	ES
EXIST DD SAM PAK #A6 - Wellbore #1 - Wellbore #1	9,940.9	7,619.7	3,455.2	3,269.6	18.615	SF
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	9,112.6	7,752.0	2,572.3	2,424.4	17.385	CC
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	9,200.0	7,752.0	2,573.8	2,423.6	17.131	ES
EXIST DD SMITH 5 SPOT #A4 - Wellbore #1 - Wellbore	10,334.6	7,629.0	2,844.6	2,664.3	15.779	SF
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	8,347.8	7,321.0	544.0	428.2	4.701	CC
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	8,366.1	7,321.0	544.3	428.1	4.685	ES
EXIST DD STATE #16-6B - Wellbore #1 - Wellbore #1	8,400.0	7,321.0	546.5	429.4	4.670	SF
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbor	11,722.2	7,778.5	1,158.2	957.5	5.771	CC, ES
EXIST DD UNION PACIFIC #C5 - Wellbore #1 - Wellbor	11,909.4	7,786.1	1,173.3	967.4	5.698	SF
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	14,281.0	7,975.3	2,502.5	2,195.3	8.145	CC
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	14,370.0	7,977.5	2,504.1	2,194.4	8.086	ES
EXIST DD UNIVERSITY 5 SPOT #D4 - Wellbore #1 - W	14,862.2	7,989.3	2,569.0	2,245.7	7.945	SF
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	15,080.0	8,199.0	3,129.9	2,784.9	9.071	CC
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	15,157.4	8,199.0	3,130.9	2,783.7	9.018	ES
EXIST DD UNIVERSITY SQUARE #D6 - Wellbore #1 - V	15,846.4	8,199.0	3,222.4	2,856.0	8.796	SF
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	12,976.4	7,931.1	1,198.3	950.5	4.836	CC
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	13,000.0	7,931.1	1,198.5	950.1	4.824	ES
EXIST DD VOLK #C7 - Wellbore #1 - Wellbore #1	13,100.0	7,931.1	1,204.7	953.4	4.795	SF
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	14,901.7	8,310.4	1,919.6	1,580.2	5.657	CC
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	14,960.6	8,311.8	1,920.5	1,579.5	5.632	ES
EXIST DD WHEELER #D3 - Wellbore #1 - Wellbore #1	15,200.0	8,318.0	1,942.6	1,595.0	5.588	SF
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	523.2	517.3	1,631.5	1,630.0	1,125.655	CC, ES
EXIST VERT EISENMAN #22-15 - Wellbore #1 - Wellbor	12,900.0	6,600.0	9,981.7	9,811.6	58.683	SF
EXIST VERT FAY #1 - Wellbore #1 - Design #1	6,370.0	5,743.2	344.2	173.1	2.012	CC
EXIST VERT FAY #1 - Wellbore #1 - Design #1	6,400.0	5,769.3	344.5	172.6	2.004	ES, SF
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	500.0	461.0	1,252.2	1,242.5	129.225	CC
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	1,000.0	958.5	1,257.2	1,236.3	59.977	ES
EXIST VERT HARRINGTON #1 - Wellbore #1 - Design #	8,222.2	7,022.0	4,005.3	3,780.6	17.831	SF
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1	98.4	80.0	73.8	73.6	534.568	CC, ES
EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1	885.8	866.9	96.5	94.1	39.183	SF
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	100.0	100.0	138.9	138.7	735.421	CC, ES
VETTING 12 - ORIGINAL WELLBORE - PROPOSAL #2	13,400.0	15,072.1	1,156.2	701.8	2.544	SF
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	200.0	200.0	122.7	122.0	192.172	CC, ES
VETTING 13 - ORIGINAL WELLBORE - PROPOSAL #2	13,484.2	15,280.6	1,327.1	864.0	2.866	SF
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	300.0	300.0	110.8	109.7	101.860	CC, ES
VETTING 14 - ORIGINAL WELLBORE - PROPOSAL #2	13,484.2	15,100.4	1,503.3	1,043.6	3.270	SF
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	400.0	400.0	102.4	100.8	66.578	CC, ES
VETTING 15 - ORIGINAL WELLBORE - PROPOSAL #2	13,582.6	15,171.7	1,841.6	1,376.7	3.962	SF
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	103.0	101.0	51.815	CC, ES
VETTING 16 - ORIGINAL WELLBORE - PROPOSAL #2	13,582.6	15,409.8	1,994.0	1,526.4	4.264	SF
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	105.8	103.8	53.253	CC, ES
VETTING 17 - ORIGINAL WELLBORE - PROPOSAL #2	13,600.0	15,284.8	2,167.8	1,701.1	4.645	SF
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	112.8	110.8	56.777	CC, ES
VETTING 18 - ORIGINAL WELLBORE - PROPOSAL #2	13,700.0	15,420.3	2,508.8	2,038.8	5.338	SF

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
SW NW SEC. 15 T5N R65W 6th P.M.						
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	125.5	123.5	63.198	CC, ES
VETTING 19 - ORIGINAL WELLBORE - PROPOSAL #2	13,779.5	15,682.9	2,675.6	2,201.8	5.648	SF
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	139.4	137.5	70.178	CC, ES
VETTING 20 - ORIGINAL WELLBORE - PROPOSAL #2	13,800.0	15,616.6	2,847.6	2,373.7	6.009	SF
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	157.8	155.8	79.407	CC, ES
VETTING 21 - ORIGINAL WELLBORE - PROPOSAL #2	13,900.0	15,843.4	3,191.3	2,714.3	6.691	SF
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	175.4	173.4	88.255	CC, ES
VETTING 22 - ORIGINAL WELLBORE - PROPOSAL #2	14,000.0	16,129.6	3,365.2	2,884.6	7.002	SF
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	196.5	194.6	98.918	CC, ES
VETTING 23 - ORIGINAL WELLBORE - PROPOSAL #2	14,074.8	16,069.4	3,547.1	3,064.5	7.350	SF
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	500.0	500.0	217.2	215.2	109.332	CC, ES
VETTING 24 - ORIGINAL WELLBORE - PROPOSAL #2	14,200.0	16,281.8	3,897.9	3,411.5	8.014	SF
VT-ALLES 1-16-18 - ORIGINAL WELLBORE - PROPOS	100.0	99.0	95.8	95.6	510.009	CC
VT-ALLES 1-16-18 - ORIGINAL WELLBORE - PROPOS	20,510.3	20,226.0	846.4	29.1	1.036	Level 2, ES, SF
VT-GLENMERE 3-16-18 - ORIGINAL WELLBORE - PRC	500.0	499.0	120.6	118.7	60.788	CC, ES
VT-GLENMERE 3-16-18 - ORIGINAL WELLBORE - PRC	20,510.3	20,691.0	1,196.5	356.7	1.425	Level 3, SF
VT-GLENMERE C1-16-18 - ORIGINAL WELLBORE - PF	500.0	499.0	146.0	144.0	73.548	CC, ES
VT-GLENMERE C1-16-18 - ORIGINAL WELLBORE - PF	20,510.3	20,864.0	1,344.2	494.2	1.581	SF
VT-LDS 1-16-18 - ORIGINAL WELLBORE - PROPOSAL	500.0	500.0	95.3	93.3	47.976	CC
VT-LDS 1-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,510.3	20,540.6	871.1	42.1	1.051	Level 2, ES, SF
VT-LDS 2-16-18 - ORIGINAL WELLBORE - PROPOSAL	500.0	500.0	47.5	45.5	23.900	CC
VT-LDS 2-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,510.3	20,464.3	556.6	-240.3	0.698	Level 1, ES, SF
VT-LDS 3-16-18 - ORIGINAL WELLBORE - PROPOSAL	500.0	500.0	25.1	23.1	12.616	CC
VT-LDS 3-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,510.3	20,402.0	272.6	-336.0	0.448	Level 1, ES, SF
VT-LDS 4-16-18 - ORIGINAL WELLBORE - PROPOSAL	400.0	399.0	22.6	21.0	14.707	CC
VT-LDS 4-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,510.3	20,287.9	253.2	-302.7	0.455	Level 1, ES, SF
VT-LDS 5-16-18 - ORIGINAL WELLBORE - PROPOSAL	300.0	300.0	47.9	46.8	44.036	CC
VT-LDS 5-16-18 - ORIGINAL WELLBORE - PROPOSAL	20,510.3	20,298.7	529.4	-255.4	0.675	Level 1, ES, SF
VT-LDS C2-16-18 - ORIGINAL WELLBORE - PROPOSA	500.0	499.0	72.8	70.8	36.671	CC
VT-LDS C2-16-18 - ORIGINAL WELLBORE - PROPOSA	20,510.3	20,650.5	684.9	-161.9	0.809	Level 1, ES, SF
VT-LDS C4-16-18 - ORIGINAL WELLBORE - PROPOSA	200.0	199.0	70.5	69.8	110.609	CC
VT-LDS C4-16-18 - ORIGINAL WELLBORE - PROPOSA	20,510.3	20,473.7	655.8	-184.0	0.781	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

Survey Program: 0-INC

Offset Site Error: 0.0 usft

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	156.02	-2,406.3	1,070.2	2,633.8				
98.4	98.4	55.4	55.4	0.1	0.6	156.02	-2,406.3	1,070.2	2,633.5	2,632.8	0.68	3,898.143	
100.0	100.0	57.0	57.0	0.1	0.6	156.02	-2,406.3	1,070.2	2,633.5	2,632.8	0.69	3,795.141	
196.8	196.8	153.8	153.8	0.3	2.3	156.02	-2,406.3	1,070.2	2,633.5	2,630.9	2.61	1,007.095	
200.0	200.0	157.0	157.0	0.3	2.4	156.02	-2,406.3	1,070.2	2,633.5	2,630.8	2.70	977.104	
295.3	295.3	252.3	252.3	0.5	4.5	156.02	-2,406.3	1,070.2	2,633.5	2,628.5	5.00	527.125	
300.0	300.0	257.0	257.0	0.5	4.6	156.02	-2,406.3	1,070.2	2,633.5	2,628.4	5.10	515.878	
393.7	393.7	350.7	350.7	0.8	6.5	156.02	-2,406.3	1,070.2	2,633.5	2,626.2	7.25	363.454	
400.0	400.0	357.0	357.0	0.8	6.6	156.02	-2,406.3	1,070.2	2,633.5	2,626.1	7.39	356.427	
492.1	492.1	449.1	449.1	1.0	8.5	156.02	-2,406.3	1,070.2	2,633.5	2,624.0	9.47	278.064	
500.0	500.0	457.0	457.0	1.0	8.7	156.02	-2,406.3	1,070.2	2,633.5	2,623.8	9.65	272.948	CC
590.5	590.5	547.5	547.5	1.2	10.5	-119.39	-2,406.3	1,070.2	2,634.2	2,622.5	11.67	225.628	

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

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON G-15-16HN - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	78.70	876.9	4,389.0	4,475.8				
98.4	98.4	77.9	77.9	0.1	0.0	78.70	876.9	4,389.0	4,475.7	4,475.6	0.14	N/A	
100.0	100.0	79.5	79.5	0.1	0.1	78.70	876.9	4,389.0	4,475.7	4,475.6	0.14	N/A	
196.8	196.8	176.3	176.3	0.3	0.2	78.70	876.9	4,389.0	4,475.7	4,475.2	0.55	8,179.425	
200.0	200.0	179.5	179.5	0.3	0.2	78.70	876.9	4,389.0	4,475.7	4,475.2	0.56	7,973.097	
295.3	295.3	274.8	274.8	0.5	0.5	78.70	876.9	4,389.0	4,475.7	4,474.7	0.99	4,522.556	
300.0	300.0	279.5	279.5	0.5	0.5	78.70	876.9	4,389.0	4,475.7	4,474.7	1.01	4,427.529	
393.7	393.7	373.2	373.2	0.8	0.7	78.70	876.9	4,389.0	4,475.7	4,474.3	1.43	3,125.295	
400.0	400.0	379.5	379.5	0.8	0.7	78.70	876.9	4,389.0	4,475.7	4,474.3	1.46	3,064.689	
492.1	492.1	471.6	471.6	1.0	0.9	78.70	876.9	4,389.0	4,475.7	4,473.9	1.87	2,387.628	
500.0	500.0	479.5	479.5	1.0	0.9	78.70	876.9	4,389.0	4,475.7	4,473.8	1.91	2,343.373	
590.5	590.5	570.0	570.0	1.2	1.1	163.30	876.9	4,389.0	4,477.1	4,474.8	2.31	1,939.430	
600.0	600.0	579.5	579.5	1.2	1.1	163.30	876.9	4,389.0	4,477.4	4,475.0	2.35	1,905.351	
689.0	688.8	668.3	668.3	1.4	1.3	163.29	876.9	4,389.0	4,481.7	4,479.0	2.74	1,637.244	
700.0	699.8	679.3	679.3	1.4	1.4	163.29	876.9	4,389.0	4,482.4	4,479.6	2.78	1,609.563	
787.4	786.9	766.4	766.4	1.6	1.6	163.27	876.9	4,389.0	4,489.5	4,486.4	3.17	1,416.465	
800.0	799.5	779.0	779.0	1.7	1.6	163.27	876.9	4,389.0	4,490.8	4,487.5	3.22	1,392.710	
885.8	884.7	864.2	864.2	1.9	1.8	163.25	876.9	4,389.0	4,500.6	4,497.0	3.61	1,248.312	
900.0	898.7	878.2	878.2	1.9	1.8	163.25	876.9	4,389.0	4,502.4	4,498.8	3.67	1,227.593	
984.2	981.9	961.4	961.4	2.2	2.0	163.22	876.9	4,389.0	4,514.8	4,510.8	4.04	1,116.188	
1,000.0	997.5	977.0	977.0	2.2	2.0	163.22	876.9	4,389.0	4,517.4	4,513.3	4.11	1,097.865	
1,082.7	1,078.7	1,058.2	1,058.2	2.5	2.2	163.19	876.9	4,389.0	4,532.3	4,527.8	4.49	1,009.679	
1,100.0	1,095.6	1,075.1	1,075.1	2.6	2.3	163.18	876.9	4,389.0	4,535.7	4,531.2	4.57	993.267	
1,181.1	1,174.7	1,154.2	1,154.2	2.9	2.4	163.14	876.9	4,389.0	4,553.0	4,548.0	4.94	921.957	
1,200.0	1,193.1	1,172.6	1,172.6	3.0	2.5	163.13	876.9	4,389.0	4,557.3	4,552.3	5.02	907.092	
1,279.5	1,269.9	1,249.4	1,249.4	3.4	2.6	163.09	876.9	4,389.0	4,576.8	4,571.4	5.39	848.396	
1,300.0	1,289.6	1,269.1	1,269.1	3.5	2.7	163.08	876.9	4,389.0	4,582.1	4,576.6	5.49	834.798	
1,377.9	1,364.3	1,343.8	1,343.8	3.9	2.9	163.03	876.9	4,389.0	4,603.7	4,597.9	5.86	785.709	
1,400.0	1,385.3	1,364.8	1,364.8	4.0	2.9	163.02	876.9	4,389.0	4,610.2	4,604.2	5.96	773.215	
1,476.4	1,457.6	1,426.2	1,426.2	4.5	3.0	162.95	876.8	4,389.0	4,633.8	4,627.5	6.31	734.938	
1,500.0	1,479.8	1,441.9	1,441.9	4.6	3.1	162.92	876.7	4,389.1	4,641.6	4,635.2	6.40	725.226	
1,574.8	1,549.8	1,500.0	1,500.0	5.2	3.2	162.85	875.8	4,389.6	4,667.5	4,660.7	6.73	693.339	
1,600.0	1,573.2	1,500.0	1,500.0	5.3	3.2	162.79	875.8	4,389.6	4,676.7	4,669.8	6.81	686.498	
1,629.0	1,600.0	1,526.2	1,526.1	5.6	3.2	162.77	875.1	4,390.0	4,687.5	4,680.6	6.95	674.784	
1,673.2	1,640.8	1,554.5	1,554.5	5.9	3.3	162.83	874.2	4,390.6	4,704.4	4,697.2	7.15	657.967	
1,694.0	1,660.0	1,567.8	1,567.8	6.1	3.3	162.85	873.7	4,390.9	4,712.3	4,705.1	7.25	650.229	
1,700.0	1,665.6	1,571.7	1,571.6	6.1	3.3	162.85	873.6	4,390.9	4,714.6	4,707.4	7.27	648.237	
1,771.6	1,731.3	1,617.0	1,616.9	6.7	3.4	162.76	871.6	4,392.1	4,743.2	4,735.6	7.59	625.071	
1,800.0	1,757.1	1,634.7	1,634.5	6.9	3.4	162.73	870.7	4,392.7	4,755.0	4,747.3	7.71	616.387	
1,870.1	1,820.4	1,677.7	1,677.5	7.5	3.5	162.63	868.2	4,394.1	4,785.4	4,777.4	8.04	595.435	
1,900.0	1,847.2	1,700.0	1,699.7	7.8	3.5	162.60	866.8	4,395.0	4,799.0	4,790.8	8.18	586.612	
1,968.5	1,908.0	1,736.7	1,736.3	8.5	3.6	162.49	864.2	4,396.5	4,831.1	4,822.6	8.51	567.994	
2,000.0	1,935.8	1,755.2	1,754.7	8.8	3.7	162.44	862.7	4,397.4	4,846.5	4,837.8	8.66	559.783	
2,033.5	1,965.0	1,774.6	1,774.0	9.1	3.7	162.39	861.1	4,398.3	4,863.1	4,854.3	8.82	551.123	
2,066.9	1,994.2	1,800.0	1,799.3	9.5	3.7	162.47	858.9	4,399.6	4,880.0	4,871.0	9.02	541.271	
2,100.0	2,023.0	11,693.4	6,878.5	9.8	138.4	171.72	385.2	-425.9	4,888.2	4,859.2	28.99	168.590	
2,165.3	2,079.9	11,725.2	6,878.5	10.5	139.3	171.70	385.1	-457.8	4,831.2	4,801.8	29.36	164.545	
2,200.0	2,110.1	11,742.2	6,878.5	10.9	139.8	171.69	385.0	-474.7	4,800.9	4,771.4	29.56	162.434	
2,263.8	2,165.7	11,773.3	6,878.5	11.5	140.6	171.67	384.8	-505.8	4,745.3	4,715.3	29.92	158.608	
2,300.0	2,197.3	11,791.0	6,878.5	11.9	141.1	171.66	384.7	-523.5	4,713.7	4,683.5	30.12	156.470	
2,362.2	2,251.5	11,821.3	6,878.5	12.6	142.0	171.64	384.5	-553.9	4,659.4	4,628.9	30.48	152.854	
2,400.0	2,284.4	11,839.8	6,878.5	13.0	142.5	171.63	384.4	-572.3	4,626.4	4,595.7	30.70	150.693	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON G-15-16HN - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,460.6	2,337.3	11,869.3	6,878.5	13.7	143.3	171.61	384.2	-601.9	4,573.5	4,542.4	31.05	147.280	
2,500.0	2,371.6	11,888.6	6,878.5	14.1	143.9	171.59	384.1	-621.1	4,539.1	4,507.8	31.28	145.101	
2,559.0	2,423.0	11,917.4	6,878.5	14.7	144.7	171.57	383.9	-649.9	4,487.6	4,455.9	31.63	141.883	
2,600.0	2,458.7	11,937.4	6,878.5	15.2	145.2	171.56	383.8	-669.9	4,451.8	4,420.0	31.87	139.688	
2,657.5	2,508.8	11,965.4	6,878.5	15.8	146.0	171.54	383.7	-697.9	4,401.7	4,369.5	32.21	136.656	
2,700.0	2,545.9	11,986.2	6,878.5	16.2	146.6	171.52	383.5	-718.7	4,364.6	4,332.1	32.46	134.450	
2,755.9	2,594.6	12,013.4	6,878.5	16.8	147.3	171.50	383.4	-746.0	4,315.8	4,283.0	32.80	131.595	
2,800.0	2,633.0	12,035.0	6,878.5	17.3	147.9	171.48	383.2	-767.5	4,277.3	4,244.2	33.06	129.379	
2,854.3	2,680.4	12,061.5	6,878.5	17.9	148.7	171.46	383.1	-794.0	4,229.9	4,196.5	33.39	126.692	
2,900.0	2,720.2	12,083.8	6,878.5	18.4	149.3	171.44	383.0	-816.3	4,190.0	4,156.3	33.66	124.471	
2,952.7	2,766.1	12,109.5	6,878.5	19.0	150.0	171.42	382.8	-842.0	4,144.0	4,110.0	33.98	121.944	
3,000.0	2,807.3	12,132.6	6,878.5	19.5	150.7	171.40	382.7	-865.1	4,102.7	4,068.5	34.27	119.717	
3,051.2	2,851.9	12,157.5	6,878.5	20.1	151.4	171.38	382.5	-890.1	4,058.1	4,023.5	34.58	117.343	
3,100.0	2,894.5	12,181.3	6,878.5	20.6	152.0	171.35	382.4	-913.9	4,015.5	3,980.6	34.88	115.114	
3,149.6	2,937.7	12,205.6	6,878.5	21.1	152.7	171.33	382.3	-938.1	3,972.2	3,937.0	35.19	112.884	
3,200.0	2,981.6	12,230.1	6,878.5	21.7	153.4	171.31	382.1	-962.7	3,928.2	3,892.7	35.50	110.653	
3,248.0	3,023.5	12,253.6	6,878.5	22.2	154.1	171.29	382.0	-986.1	3,886.3	3,850.5	35.80	108.560	
3,300.0	3,068.8	12,278.9	6,878.5	22.8	154.8	171.26	381.8	-1,011.5	3,840.9	3,804.8	36.12	106.331	
3,346.4	3,109.2	12,301.6	6,878.5	23.3	155.4	171.24	381.7	-1,034.2	3,800.4	3,764.0	36.41	104.368	
3,400.0	3,155.9	12,327.7	6,878.5	23.9	156.1	171.21	381.5	-1,060.3	3,753.7	3,716.9	36.75	102.140	
3,444.9	3,195.0	12,349.6	6,878.5	24.3	156.7	171.19	381.4	-1,082.2	3,714.5	3,677.5	37.03	100.300	
3,500.0	3,243.1	12,376.5	6,878.5	25.0	157.5	171.16	381.3	-1,109.1	3,666.4	3,629.0	37.38	98.075	
3,543.3	3,280.8	12,397.7	6,878.5	25.4	158.1	171.13	381.1	-1,130.2	3,628.6	3,590.9	37.66	96.353	
3,600.0	3,330.2	12,425.3	6,878.5	26.0	158.9	171.10	381.0	-1,157.9	3,579.1	3,541.1	38.02	94.131	
3,641.7	3,366.6	12,445.7	6,878.5	26.5	159.4	171.08	380.8	-1,178.2	3,542.7	3,504.4	38.29	92.520	
3,700.0	3,417.4	12,474.1	6,878.5	27.1	160.2	171.04	380.7	-1,206.7	3,491.9	3,453.2	38.67	90.303	
3,740.1	3,452.3	12,493.7	6,878.5	27.6	160.8	171.02	380.6	-1,226.3	3,456.8	3,417.9	38.93	88.798	
3,800.0	3,504.5	12,522.9	6,878.5	28.2	161.6	170.98	380.4	-1,255.5	3,404.6	3,365.3	39.32	86.587	
3,838.6	3,538.1	12,541.8	6,878.5	28.7	162.1	170.96	380.3	-1,274.3	3,370.9	3,331.3	39.57	85.182	
3,900.0	3,591.6	12,571.7	6,878.5	29.3	162.9	170.92	380.1	-1,304.3	3,317.3	3,277.3	39.98	82.977	
3,937.0	3,623.9	12,589.8	6,878.5	29.7	163.4	170.89	380.0	-1,322.3	3,285.0	3,244.8	40.22	81.667	
4,000.0	3,678.8	12,620.5	6,878.5	30.4	164.3	170.85	379.8	-1,353.1	3,230.1	3,189.4	40.65	79.469	
4,035.4	3,709.7	12,637.8	6,878.5	30.8	164.8	170.83	379.7	-1,370.4	3,199.1	3,158.3	40.88	78.250	
4,100.0	3,765.9	12,669.3	6,878.5	31.5	165.7	170.78	379.5	-1,401.9	3,142.8	3,101.5	41.32	76.059	
4,133.8	3,795.4	12,685.9	6,878.5	31.9	166.1	170.76	379.4	-1,418.4	3,113.3	3,071.7	41.55	74.926	
4,200.0	3,853.1	12,718.1	6,878.5	32.6	167.0	170.70	379.3	-1,450.7	3,055.5	3,013.5	42.00	72.743	
4,232.3	3,881.2	12,733.9	6,878.5	33.0	167.5	170.68	379.2	-1,466.4	3,027.4	2,985.1	42.23	71.692	
4,300.0	3,940.2	12,766.9	6,878.5	33.7	168.4	170.62	379.0	-1,499.5	2,968.3	2,925.6	42.70	69.517	
4,330.7	3,967.0	12,781.9	6,878.5	34.1	168.8	170.60	378.9	-1,514.5	2,941.5	2,898.6	42.91	68.544	
4,400.0	4,027.4	12,815.7	6,878.5	34.8	169.8	170.54	378.7	-1,548.3	2,881.0	2,837.6	43.40	66.378	
4,429.1	4,052.8	12,830.0	6,878.5	35.1	170.2	170.51	378.6	-1,562.5	2,855.6	2,812.0	43.61	65.479	
4,500.0	4,114.5	12,864.5	6,878.5	35.9	171.1	170.45	378.4	-1,597.1	2,793.8	2,749.6	44.12	63.321	
4,527.5	4,138.5	12,878.0	6,878.5	36.2	171.5	170.42	378.3	-1,610.5	2,769.7	2,725.4	44.32	62.493	
4,600.0	4,201.7	12,913.3	6,878.5	37.0	172.5	170.35	378.1	-1,645.9	2,706.5	2,661.6	44.85	60.345	
4,626.0	4,224.3	12,926.0	6,878.5	37.3	172.8	170.33	378.0	-1,658.5	2,683.8	2,638.8	45.04	59.584	
4,700.0	4,288.8	12,962.1	6,878.5	38.1	173.9	170.25	377.8	-1,694.7	2,619.2	2,573.6	45.60	57.445	
4,724.4	4,310.1	12,974.0	6,878.5	38.4	174.2	170.23	377.8	-1,706.6	2,598.0	2,552.2	45.78	56.748	
4,800.0	4,376.0	13,010.9	6,878.5	39.2	175.2	170.14	377.5	-1,743.5	2,532.0	2,485.6	46.36	54.618	
4,822.8	4,395.9	13,022.1	6,878.5	39.5	175.5	170.12	377.5	-1,754.6	2,512.1	2,465.5	46.53	53.983	
4,900.0	4,463.1	13,059.7	6,878.5	40.3	176.6	170.03	377.3	-1,792.3	2,444.7	2,397.6	47.14	51.862	
4,921.2	4,481.6	13,070.1	6,878.5	40.5	176.9	170.00	377.2	-1,802.6	2,426.2	2,378.9	47.31	51.286	
5,000.0	4,550.3	13,108.5	6,878.5	41.4	178.0	169.90	377.0	-1,841.1	2,357.5	2,309.6	47.94	49.174	

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

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON G-15-16HN - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,019.7	4,567.4	13,118.1	6,878.5	41.6	178.2	169.87	376.9	-1,850.7	2,340.3	2,292.2	48.10	48.653	
5,100.0	4,637.4	13,157.3	6,878.5	42.5	179.3	169.76	376.7	-1,889.9	2,270.3	2,221.5	48.77	46.552	
5,118.1	4,653.2	13,166.2	6,878.5	42.7	179.6	169.74	376.6	-1,898.7	2,254.5	2,205.5	48.92	46.084	
5,200.0	4,724.6	13,206.1	6,878.5	43.6	180.7	169.62	376.4	-1,938.7	2,183.0	2,133.4	49.62	43.992	
5,216.5	4,739.0	13,214.2	6,878.5	43.8	180.9	169.59	376.3	-1,946.7	2,168.6	2,118.8	49.77	43.575	
5,300.0	4,811.7	13,254.9	6,878.5	44.7	182.0	169.46	376.1	-1,987.5	2,095.8	2,045.3	50.51	41.493	
5,314.9	4,824.7	13,262.2	6,878.5	44.9	182.3	169.44	376.1	-1,994.8	2,082.7	2,032.1	50.65	41.124	
5,400.0	4,898.9	13,303.7	6,878.5	45.8	183.4	169.29	375.8	-2,036.3	2,008.5	1,957.1	51.43	39.051	
5,413.4	4,910.5	13,310.3	6,878.5	45.9	183.6	169.26	375.8	-2,042.8	1,996.9	1,945.3	51.56	38.729	
5,500.0	4,986.0	13,352.5	6,878.5	46.9	184.8	169.10	375.5	-2,085.1	1,921.3	1,868.9	52.40	36.666	
5,511.8	4,996.3	13,358.3	6,878.5	47.0	184.9	169.08	375.5	-2,090.8	1,911.0	1,858.5	52.52	36.388	
5,600.0	5,073.1	13,401.3	6,878.5	48.0	186.1	168.90	375.3	-2,133.9	1,834.1	1,780.7	53.42	34.335	
5,610.2	5,082.1	13,406.3	6,878.5	48.1	186.3	168.87	375.2	-2,138.8	1,825.2	1,771.6	53.52	34.100	
5,700.0	5,160.3	13,450.1	6,878.5	49.1	187.5	168.67	375.0	-2,182.7	1,746.9	1,692.4	54.49	32.056	
5,708.6	5,167.8	13,454.4	6,878.5	49.2	187.6	168.65	374.9	-2,186.9	1,739.3	1,684.7	54.59	31.862	
5,800.0	5,247.4	13,498.9	6,878.5	50.2	188.9	168.42	374.7	-2,231.5	1,659.7	1,604.0	55.64	29.828	
5,807.1	5,253.6	13,502.4	6,878.5	50.3	189.0	168.40	374.7	-2,234.9	1,653.5	1,597.8	55.73	29.672	
5,900.0	5,334.6	13,547.7	6,878.5	51.3	190.2	168.15	374.4	-2,280.3	1,572.5	1,515.6	56.87	27.648	
5,905.5	5,339.4	13,550.4	6,878.5	51.4	190.3	168.13	374.4	-2,282.9	1,567.7	1,510.7	56.94	27.530	
6,000.0	5,421.7	13,596.5	6,878.5	52.4	191.6	167.84	374.1	-2,329.1	1,485.3	1,427.1	58.21	25.517	
6,003.9	5,425.2	13,598.4	6,878.5	52.4	191.7	167.82	374.1	-2,331.0	1,481.9	1,423.6	58.26	25.434	
6,100.0	5,508.9	13,645.3	6,878.5	53.5	193.0	167.49	373.8	-2,377.9	1,398.1	1,338.4	59.67	23.432	
6,102.3	5,510.9	13,646.5	6,878.5	53.5	193.0	167.48	373.8	-2,379.0	1,396.0	1,336.3	59.70	23.383	
6,200.0	5,596.0	13,694.1	6,878.5	54.6	194.3	167.10	373.5	-2,426.6	1,310.9	1,249.7	61.28	21.393	
6,200.8	5,596.7	13,694.5	6,878.5	54.6	194.4	167.09	373.5	-2,427.0	1,310.3	1,249.0	61.29	21.377	
6,299.2	5,682.5	13,742.5	6,878.5	55.7	195.7	166.65	373.3	-2,475.1	1,224.5	1,161.4	63.07	19.416	
6,300.0	5,683.2	13,742.9	6,878.5	55.7	195.7	166.65	373.2	-2,475.4	1,223.8	1,160.7	63.08	19.400	
6,397.6	5,768.3	13,790.6	6,878.5	56.8	197.0	166.15	373.0	-2,523.1	1,138.7	1,073.6	65.07	17.499	
6,400.0	5,770.3	13,791.7	6,878.5	56.8	197.1	166.13	373.0	-2,524.2	1,136.7	1,071.5	65.13	17.453	
6,496.0	5,854.0	13,838.6	6,878.5	57.9	198.4	165.56	372.7	-2,571.1	1,053.0	985.6	67.38	15.628	
6,500.0	5,857.5	13,840.5	6,878.5	57.9	198.4	165.53	372.7	-2,573.0	1,049.6	982.1	67.48	15.554	
6,594.5	5,939.8	13,886.6	6,878.5	58.9	199.7	164.87	372.4	-2,619.1	967.3	897.2	70.07	13.805	
6,600.0	5,944.6	13,889.3	6,878.5	59.0	199.8	164.83	372.4	-2,621.8	962.5	892.3	70.23	13.704	
6,692.9	6,025.6	13,934.7	6,878.5	60.0	201.1	164.05	372.1	-2,667.2	881.6	808.4	73.26	12.034	
6,700.0	6,031.8	13,938.1	6,878.5	60.1	201.2	163.98	372.1	-2,670.6	875.5	801.9	73.52	11.908	
6,791.3	6,111.4	13,982.7	6,878.5	61.1	202.4	163.05	371.8	-2,715.2	796.0	718.9	77.14	10.320	
6,800.0	6,118.9	13,986.9	6,878.5	61.2	202.5	162.95	371.8	-2,719.4	788.5	711.0	77.52	10.171	
6,889.7	6,197.1	14,030.7	6,878.5	62.2	203.8	161.82	371.6	-2,763.2	710.5	628.6	81.95	8.670	
6,900.0	6,206.1	14,035.7	6,878.5	62.3	203.9	161.68	371.5	-2,768.2	701.6	619.1	82.52	8.502	
6,988.2	6,282.9	14,078.8	6,878.5	63.3	205.1	160.27	371.3	-2,811.3	625.1	537.0	88.08	7.096	
7,000.0	6,293.2	14,084.5	6,878.5	63.4	205.3	160.06	371.2	-2,817.0	614.8	525.9	88.94	6.913	
7,086.6	6,368.7	14,126.8	6,878.5	64.3	206.5	158.25	371.0	-2,859.3	539.8	443.7	96.15	5.614	
7,100.0	6,380.4	14,133.3	6,878.5	64.5	206.6	157.93	371.0	-2,865.8	528.2	430.8	97.45	5.420	
7,185.0	6,454.4	14,174.8	6,878.5	65.4	207.8	155.52	370.7	-2,907.3	454.8	347.6	107.16	4.244	
7,200.0	6,467.5	14,182.1	6,878.5	65.6	208.0	155.02	370.7	-2,914.6	441.9	332.7	109.19	4.047	
7,283.4	6,540.2	14,222.8	6,878.5	66.5	209.1	151.65	370.4	-2,955.4	370.2	247.3	122.83	3.014	
7,300.0	6,554.6	14,230.9	6,878.5	66.7	209.4	150.84	370.4	-2,963.4	356.0	229.9	126.11	2.823	
7,381.9	6,626.0	14,270.9	6,878.5	67.6	210.5	145.81	370.1	-3,003.4	286.3	140.1	146.20	1.958	
7,400.0	6,641.8	14,279.7	6,878.5	67.8	210.7	144.40	370.1	-3,012.2	271.0	119.3	151.72	1.786	
7,480.3	6,711.8	14,318.9	6,878.5	68.7	211.8	136.27	369.9	-3,051.4	204.2	21.7	182.44	1.119	Level 2
7,481.0	6,712.4	14,319.3	6,878.5	68.7	211.8	136.18	369.9	-3,051.8	203.6	20.9	182.76	1.114	Level 2
7,500.0	6,728.8	14,328.8	6,878.5	68.9	212.1	135.50	369.8	-3,061.3	188.3	2.4	185.90	1.013	Level 2

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON G-15-16HN - Wellbore #1 - Design #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,550.0	6,770.3	14,356.4	6,878.5	69.5	212.9	132.10	369.6	-3,088.9	150.3	-49.2	199.53	0.753	Level 1
7,578.7	6,793.1	14,373.9	6,878.5	70.0	213.4	128.91	369.5	-3,106.4	130.3	-80.7	211.07	0.618	Level 1
7,600.0	6,809.3	14,387.6	6,878.5	70.3	213.8	125.82	369.5	-3,120.1	116.6	-104.7	221.39	0.527	Level 1
7,650.0	6,845.4	14,422.0	6,878.5	71.1	214.7	115.55	369.3	-3,154.5	89.1	-161.6	250.63	0.355	Level 1
7,677.1	6,863.7	14,441.9	6,878.5	71.6	215.3	107.82	369.1	-3,174.4	77.6	-189.7	267.32	0.290	Level 1
7,700.0	6,878.3	14,459.4	6,878.5	72.0	215.8	100.07	369.0	-3,191.9	70.5	-208.8	279.26	0.252	Level 1
7,750.0	6,907.9	14,499.5	6,878.5	73.0	216.9	80.18	368.8	-3,232.0	63.9	-223.0	286.91	0.223	Level 1, ES, SF
7,751.1	6,908.5	14,500.4	6,878.5	73.1	216.9	79.72	368.8	-3,232.9	63.9	-222.7	286.69	0.223	Level 1, CC
7,775.6	6,921.6	14,521.0	6,878.5	73.6	217.5	69.70	368.7	-3,253.5	65.2	-212.3	277.52	0.235	Level 1
7,800.0	6,933.8	14,542.0	6,878.5	74.1	218.1	60.42	368.6	-3,274.5	68.5	-193.2	261.75	0.262	Level 1
7,834.4	6,949.4	14,572.5	6,878.5	74.9	218.9	49.26	368.4	-3,305.0	75.3	-159.0	234.31	0.322	Level 1
7,874.0	6,966.3	14,608.2	6,878.5	75.8	219.9	39.56	368.2	-3,340.7	85.3	-119.7	205.07	0.416	Level 1
7,900.0	6,977.4	14,631.5	6,878.5	76.4	220.6	34.28	368.0	-3,364.0	93.1	-94.2	187.29	0.497	Level 1
7,964.6	7,005.0	14,689.7	6,878.5	77.9	222.2	24.23	367.7	-3,422.2	114.9	-36.3	151.22	0.760	Level 1
7,972.4	7,008.3	14,696.7	6,878.5	78.0	222.4	23.17	367.6	-3,429.2	117.7	-29.1	146.83	0.801	Level 1
8,000.0	7,019.2	14,722.0	6,878.5	78.7	223.1	19.98	367.5	-3,454.5	127.0	-6.6	133.61	0.951	Level 1
8,050.0	7,035.8	14,769.0	6,878.5	79.9	224.4	15.88	367.2	-3,501.5	141.8	24.9	116.96	1.213	Level 2
8,070.8	7,041.5	14,787.6	6,878.5	80.4	225.0	14.72	367.1	-3,520.1	147.0	34.7	112.34	1.309	Level 3
8,100.0	7,048.2	14,787.6	6,878.5	81.1	225.0	14.44	367.1	-3,520.1	156.1	45.6	110.48	1.413	Level 3
8,150.0	7,056.5	14,787.6	6,878.5	82.3	225.0	13.51	367.1	-3,520.1	179.2	73.1	106.01	1.690	
8,169.3	7,058.6	14,787.6	6,878.5	82.8	225.0	13.01	367.1	-3,520.1	190.0	86.1	103.95	1.828	
8,200.0	7,060.6	14,787.6	6,878.5	83.6	225.0	12.11	367.1	-3,520.1	208.9	108.5	100.41	2.080	
8,222.2	7,061.0	14,787.6	6,878.5	84.1	225.0	11.38	367.1	-3,520.1	223.5	125.8	97.72	2.287	
8,267.7	7,061.0	14,787.6	6,878.5	85.3	225.0	11.38	367.1	-3,520.1	256.4	158.3	98.08	2.614	
8,300.0	7,061.0	14,787.6	6,878.5	86.1	225.0	11.38	367.1	-3,520.1	281.8	183.5	98.32	2.866	
8,366.1	7,061.0	14,787.6	6,878.5	87.7	225.0	11.38	367.1	-3,520.1	337.6	238.8	98.84	3.416	
8,400.0	7,061.0	14,787.6	6,878.5	88.6	225.0	11.38	367.1	-3,520.1	367.5	268.4	99.10	3.709	
8,464.5	7,061.0	14,787.6	6,878.5	90.2	225.0	11.38	367.1	-3,520.1	426.2	326.6	99.61	4.279	
8,500.0	7,061.0	14,787.6	6,878.5	91.1	225.0	11.38	367.1	-3,520.1	459.1	359.2	99.89	4.596	
8,563.0	7,061.0	14,787.6	6,878.5	92.7	225.0	11.38	367.1	-3,520.1	518.3	417.9	100.39	5.163	
8,600.0	7,061.0	14,787.6	6,878.5	93.7	225.0	11.38	367.1	-3,520.1	553.5	452.9	100.68	5.498	
8,661.4	7,061.0	14,787.6	6,878.5	95.2	225.0	11.38	367.1	-3,520.1	612.4	511.2	101.17	6.053	
8,700.0	7,061.0	14,787.6	6,878.5	96.2	225.0	11.38	367.1	-3,520.1	649.7	548.2	101.48	6.402	
8,759.8	7,061.0	14,787.6	6,878.5	97.8	225.0	11.38	367.1	-3,520.1	707.7	605.7	101.97	6.940	
8,800.0	7,061.0	14,787.6	6,878.5	98.8	225.0	11.38	367.1	-3,520.1	746.8	644.5	102.29	7.301	
8,858.2	7,061.0	14,787.6	6,878.5	100.3	225.0	11.38	367.1	-3,520.1	803.7	701.0	102.76	7.821	
8,900.0	7,061.0	14,787.6	6,878.5	101.4	225.0	11.38	367.1	-3,520.1	844.6	741.5	103.10	8.192	
8,956.7	7,061.0	14,787.6	6,878.5	102.8	225.0	11.38	367.1	-3,520.1	900.3	796.7	103.57	8.693	
9,000.0	7,061.0	14,787.6	6,878.5	104.0	225.0	11.38	367.1	-3,520.1	942.9	839.0	103.92	9.073	
9,055.1	7,061.0	14,787.6	6,878.5	105.4	225.0	11.38	367.1	-3,520.1	997.2	892.8	104.38	9.554	
9,100.0	7,061.0	14,787.6	6,878.5	106.6	225.0	11.38	367.1	-3,520.1	1,041.5	936.8	104.75	9.943	
9,153.5	7,061.0	14,787.6	6,878.5	108.0	225.0	11.38	367.1	-3,520.1	1,094.4	989.2	105.19	10.404	
9,200.0	7,061.0	14,787.6	6,878.5	109.2	225.0	11.38	367.1	-3,520.1	1,140.3	1,034.8	105.58	10.801	
9,251.9	7,061.0	14,787.6	6,878.5	110.6	225.0	11.38	367.1	-3,520.1	1,191.8	1,085.8	106.01	11.242	
9,300.0	7,061.0	14,787.6	6,878.5	111.8	225.0	11.38	367.1	-3,520.1	1,239.4	1,133.0	106.41	11.647	
9,350.4	7,061.0	14,787.6	6,878.5	113.1	225.0	11.38	367.1	-3,520.1	1,289.3	1,182.5	106.83	12.069	
9,400.0	7,061.0	14,787.6	6,878.5	114.5	225.0	11.38	367.1	-3,520.1	1,338.5	1,231.3	107.25	12.481	
9,448.8	7,061.0	14,787.6	6,878.5	115.7	225.0	11.38	367.1	-3,520.1	1,387.0	1,279.3	107.66	12.883	
9,500.0	7,061.0	14,787.6	6,878.5	117.1	225.0	11.38	367.1	-3,520.1	1,437.8	1,329.7	108.09	13.302	
9,547.2	7,061.0	14,787.6	6,878.5	118.3	225.0	11.38	367.1	-3,520.1	1,484.8	1,376.3	108.49	13.686	
9,600.0	7,061.0	14,787.6	6,878.5	119.7	225.0	11.38	367.1	-3,520.1	1,537.2	1,428.3	108.93	14.112	
9,645.6	7,061.0	14,787.6	6,878.5	121.0	225.0	11.38	367.1	-3,520.1	1,582.6	1,473.3	109.32	14.477	

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

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON G-15-16HN - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,700.0	7,061.0	14,787.6	6,878.5	122.4	225.0	11.38	367.1	-3,520.1	1,636.7	1,526.9	109.78	14.909	
9,744.1	7,061.0	14,787.6	6,878.5	123.6	225.0	11.38	367.1	-3,520.1	1,680.5	1,570.4	110.16	15.256	
9,800.0	7,061.0	14,787.6	6,878.5	125.1	225.0	11.38	367.1	-3,520.1	1,736.2	1,625.6	110.63	15.694	
9,842.5	7,061.0	14,787.6	6,878.5	126.2	225.0	11.38	367.1	-3,520.1	1,778.5	1,667.5	110.99	16.023	
9,900.0	7,061.0	14,787.6	6,878.5	127.7	225.0	11.38	367.1	-3,520.1	1,835.8	1,724.3	111.48	16.467	
9,940.9	7,061.0	14,787.6	6,878.5	128.8	225.0	11.38	367.1	-3,520.1	1,876.5	1,764.7	111.83	16.779	
10,000.0	7,061.0	14,787.6	6,878.5	130.4	225.0	11.38	367.1	-3,520.1	1,935.4	1,823.0	112.34	17.228	
10,039.3	7,061.0	14,787.6	6,878.5	131.5	225.0	11.38	367.1	-3,520.1	1,974.6	1,861.9	112.68	17.524	
10,100.0	7,061.0	14,787.6	6,878.5	133.1	225.0	11.38	367.1	-3,520.1	2,035.0	1,921.8	113.20	17.977	
10,137.8	7,061.0	14,787.6	6,878.5	134.1	225.0	11.38	367.1	-3,520.1	2,072.7	1,959.2	113.52	18.258	
10,200.0	7,061.0	14,787.6	6,878.5	135.8	225.0	11.38	367.1	-3,520.1	2,134.7	2,020.7	114.06	18.716	
10,236.2	7,061.0	14,787.6	6,878.5	136.8	225.0	11.38	367.1	-3,520.1	2,170.8	2,056.4	114.37	18.980	
10,300.0	7,061.0	14,787.6	6,878.5	138.5	225.0	11.38	367.1	-3,520.1	2,234.4	2,119.5	114.92	19.443	
10,334.6	7,061.0	14,787.6	6,878.5	139.4	225.0	11.38	367.1	-3,520.1	2,269.0	2,153.7	115.22	19.692	
10,400.0	7,061.0	14,787.6	6,878.5	141.2	225.0	11.38	367.1	-3,520.1	2,334.2	2,218.4	115.79	20.159	
10,433.0	7,061.0	14,787.6	6,878.5	142.1	225.0	11.38	367.1	-3,520.1	2,367.1	2,251.1	116.07	20.393	
10,500.0	7,061.0	14,787.6	6,878.5	143.9	225.0	11.38	367.1	-3,520.1	2,433.9	2,317.3	116.65	20.864	
10,531.5	7,061.0	14,787.6	6,878.5	144.7	225.0	11.38	367.1	-3,520.1	2,465.3	2,348.4	116.93	21.084	
10,600.0	7,061.0	14,787.6	6,878.5	146.6	225.0	11.38	367.1	-3,520.1	2,533.7	2,416.2	117.52	21.559	
10,629.9	7,061.0	14,787.6	6,878.5	147.4	225.0	11.38	367.1	-3,520.1	2,563.5	2,445.8	117.78	21.765	
10,700.0	7,061.0	14,787.6	6,878.5	149.3	225.0	11.38	367.1	-3,520.1	2,633.5	2,515.1	118.39	22.244	
10,728.3	7,061.0	14,787.6	6,878.5	150.1	225.0	11.38	367.1	-3,520.1	2,661.8	2,543.1	118.64	22.436	
10,800.0	7,061.0	14,787.6	6,878.5	152.0	225.0	11.38	367.1	-3,520.1	2,733.3	2,614.0	119.27	22.918	
10,826.7	7,061.0	14,787.6	6,878.5	152.7	225.0	11.38	367.1	-3,520.1	2,760.0	2,640.5	119.50	23.096	
10,900.0	7,061.0	14,787.6	6,878.5	154.7	225.0	11.38	367.1	-3,520.1	2,833.1	2,713.0	120.14	23.582	
10,925.2	7,061.0	14,787.6	6,878.5	155.4	225.0	11.38	367.1	-3,520.1	2,858.3	2,737.9	120.36	23.748	
11,000.0	7,061.0	14,787.6	6,878.5	157.4	225.0	11.38	367.1	-3,520.1	2,933.0	2,812.0	121.01	24.237	
11,023.6	7,061.0	14,787.6	6,878.5	158.1	225.0	11.38	367.1	-3,520.1	2,956.5	2,835.3	121.22	24.390	
11,100.0	7,061.0	14,787.6	6,878.5	160.2	225.0	11.38	367.1	-3,520.1	3,032.8	2,910.9	121.89	24.881	
11,122.0	7,061.0	14,787.6	6,878.5	160.8	225.0	11.38	367.1	-3,520.1	3,054.8	2,932.7	122.08	25.022	
11,200.0	7,061.0	14,787.6	6,878.5	162.9	225.0	11.38	367.1	-3,520.1	3,132.7	3,009.9	122.77	25.517	
11,220.4	7,061.0	14,787.6	6,878.5	163.5	225.0	11.38	367.1	-3,520.1	3,153.1	3,030.1	122.95	25.646	
11,300.0	7,061.0	14,787.6	6,878.5	165.6	225.0	11.38	367.1	-3,520.1	3,232.5	3,108.9	123.65	26.143	
11,318.9	7,061.0	14,787.6	6,878.5	166.1	225.0	11.38	367.1	-3,520.1	3,251.4	3,127.6	123.81	26.260	
11,400.0	7,061.0	14,787.6	6,878.5	168.4	225.0	11.38	367.1	-3,520.1	3,332.4	3,207.9	124.53	26.761	
11,417.3	7,061.0	14,787.6	6,878.5	168.8	225.0	11.38	367.1	-3,520.1	3,349.7	3,225.0	124.68	26.866	
11,500.0	7,061.0	14,787.6	6,878.5	171.1	225.0	11.38	367.1	-3,520.1	3,432.3	3,306.9	125.41	27.369	
11,515.7	7,061.0	14,787.6	6,878.5	171.5	225.0	11.38	367.1	-3,520.1	3,448.0	3,322.4	125.55	27.464	
11,600.0	7,061.0	14,787.6	6,878.5	173.8	225.0	11.38	367.1	-3,520.1	3,532.2	3,405.9	126.29	27.969	
11,614.1	7,061.0	14,787.6	6,878.5	174.2	225.0	11.38	367.1	-3,520.1	3,546.3	3,419.9	126.41	28.053	
11,700.0	7,061.0	14,787.6	6,878.5	176.6	225.0	11.38	367.1	-3,520.1	3,632.1	3,504.9	127.17	28.560	
11,712.6	7,061.0	14,787.6	6,878.5	176.9	225.0	11.38	367.1	-3,520.1	3,644.6	3,517.3	127.28	28.634	
11,800.0	7,061.0	14,787.6	6,878.5	179.3	225.0	11.38	367.1	-3,520.1	3,732.0	3,603.9	128.06	29.143	
11,811.0	7,061.0	14,787.6	6,878.5	179.6	225.0	11.38	367.1	-3,520.1	3,743.0	3,614.8	128.15	29.207	
11,900.0	7,061.0	14,787.6	6,878.5	182.1	225.0	11.38	367.1	-3,520.1	3,831.9	3,702.9	128.94	29.718	
11,909.4	7,061.0	14,787.6	6,878.5	182.3	225.0	11.38	367.1	-3,520.1	3,841.3	3,712.3	129.02	29.772	
12,000.0	7,061.0	14,787.6	6,878.5	184.8	225.0	11.38	367.1	-3,520.1	3,931.8	3,802.0	129.83	30.285	
12,007.8	7,061.0	14,787.6	6,878.5	185.0	225.0	11.38	367.1	-3,520.1	3,939.6	3,809.7	129.90	30.329	
12,100.0	7,061.0	14,787.6	6,878.5	187.5	225.0	11.38	367.1	-3,520.1	4,031.7	3,901.0	130.71	30.844	
12,106.3	7,061.0	14,787.6	6,878.5	187.7	225.0	11.38	367.1	-3,520.1	4,038.0	3,907.2	130.77	30.879	
12,200.0	7,061.0	14,787.6	6,878.5	190.3	225.0	11.38	367.1	-3,520.1	4,131.6	4,000.0	131.60	31.395	
12,204.7	7,061.0	14,787.6	6,878.5	190.4	225.0	11.38	367.1	-3,520.1	4,136.3	4,004.7	131.64	31.421	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON G-15-16HN - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,300.0	7,061.0	14,787.6	6,878.5	193.0	225.0	11.38	367.1	-3,520.1	4,231.5	4,099.0	132.49	31.939	
12,303.1	7,061.0	14,787.6	6,878.5	193.1	225.0	11.38	367.1	-3,520.1	4,234.7	4,102.1	132.52	31.956	
12,400.0	7,061.0	14,787.6	6,878.5	195.8	225.0	11.38	367.1	-3,520.1	4,331.5	4,198.1	133.38	32.475	
12,401.5	7,061.0	14,787.6	6,878.5	195.8	225.0	11.38	367.1	-3,520.1	4,333.0	4,199.6	133.39	32.484	
12,500.0	7,061.0	14,787.6	6,878.5	198.6	225.0	11.38	367.1	-3,520.1	4,431.4	4,297.1	134.27	33.004	
12,598.4	7,061.0	14,787.6	6,878.5	201.3	225.0	11.38	367.1	-3,520.1	4,529.7	4,394.6	135.14	33.518	
12,600.0	7,061.0	14,787.6	6,878.5	201.3	225.0	11.38	367.1	-3,520.1	4,531.3	4,396.2	135.16	33.527	
12,696.8	7,061.0	14,787.6	6,878.5	204.0	225.0	11.38	367.1	-3,520.1	4,628.1	4,492.1	136.02	34.025	
12,700.0	7,061.0	14,787.6	6,878.5	204.1	225.0	11.38	367.1	-3,520.1	4,631.3	4,495.2	136.05	34.042	
12,795.2	7,061.0	14,787.6	6,878.5	206.7	225.0	11.38	367.1	-3,520.1	4,726.4	4,589.5	136.90	34.526	
12,800.0	7,061.0	14,787.6	6,878.5	206.8	225.0	11.38	367.1	-3,520.1	4,731.2	4,594.3	136.94	34.550	
12,893.7	7,061.0	14,787.6	6,878.5	209.4	225.0	11.38	367.1	-3,520.1	4,824.8	4,687.0	137.77	35.020	
12,900.0	7,061.0	14,787.6	6,878.5	209.6	225.0	11.38	367.1	-3,520.1	4,831.1	4,693.3	137.83	35.051	
12,992.1	7,061.0	14,787.6	6,878.5	212.1	225.0	11.38	367.1	-3,520.1	4,923.2	4,784.5	138.65	35.508	
13,000.0	7,061.0	14,787.6	6,878.5	212.3	225.0	11.38	367.1	-3,520.1	4,931.1	4,792.4	138.72	35.546	
13,090.5	7,061.0	14,787.6	6,878.5	214.8	225.0	11.38	367.1	-3,520.1	5,021.5	4,882.0	139.53	35.989	
13,100.0	7,061.0	14,787.6	6,878.5	215.1	225.0	11.38	367.1	-3,520.1	5,031.0	4,891.4	139.62	36.035	
13,188.9	7,061.0	14,787.6	6,878.5	217.6	225.0	11.38	367.1	-3,520.1	5,119.9	4,979.5	140.41	36.464	
13,200.0	7,061.0	14,787.6	6,878.5	217.9	225.0	11.38	367.1	-3,520.1	5,131.0	4,990.5	140.51	36.517	
13,287.4	7,061.0	14,787.6	6,878.5	220.3	225.0	11.38	367.1	-3,520.1	5,218.3	5,077.0	141.29	36.933	
13,300.0	7,061.0	14,787.6	6,878.5	220.6	225.0	11.38	367.1	-3,520.1	5,230.9	5,089.5	141.40	36.993	
13,385.8	7,061.0	14,787.6	6,878.5	223.0	225.0	11.38	367.1	-3,520.1	5,316.7	5,174.5	142.17	37.397	
13,400.0	7,061.0	14,787.6	6,878.5	223.4	225.0	11.38	367.1	-3,520.1	5,330.9	5,188.6	142.30	37.463	
13,484.2	7,061.0	14,787.6	6,878.5	225.7	225.0	11.38	367.1	-3,520.1	5,415.1	5,272.0	143.05	37.854	
13,500.0	7,061.0	14,787.6	6,878.5	226.2	225.0	11.38	367.1	-3,520.1	5,430.8	5,287.6	143.19	37.927	
13,582.6	7,061.0	14,787.6	6,878.5	228.5	225.0	11.38	367.1	-3,520.1	5,513.4	5,369.5	143.93	38.306	
13,600.0	7,061.0	14,787.6	6,878.5	228.9	225.0	11.38	367.1	-3,520.1	5,530.8	5,386.7	144.09	38.385	
13,681.1	7,061.0	14,787.6	6,878.5	231.2	225.0	11.38	367.1	-3,520.1	5,611.8	5,467.0	144.81	38.752	
13,700.0	7,061.0	14,787.6	6,878.5	231.7	225.0	11.38	367.1	-3,520.1	5,630.7	5,485.7	144.98	38.837	
13,779.5	7,061.0	14,787.6	6,878.5	233.9	225.0	11.38	367.1	-3,520.1	5,710.2	5,564.5	145.69	39.193	
13,800.0	7,061.0	14,787.6	6,878.5	234.5	225.0	11.38	367.1	-3,520.1	5,730.7	5,584.8	145.88	39.284	
13,877.9	7,061.0	14,787.6	6,878.5	236.6	225.0	11.38	367.1	-3,520.1	5,808.6	5,662.0	146.58	39.628	
13,900.0	7,061.0	14,787.6	6,878.5	237.3	225.0	11.38	367.1	-3,520.1	5,830.6	5,683.9	146.77	39.725	
13,976.3	7,061.0	14,787.6	6,878.5	239.4	225.0	11.38	367.1	-3,520.1	5,907.0	5,759.5	147.46	40.058	
14,000.0	7,061.0	14,787.6	6,878.5	240.0	225.0	11.38	367.1	-3,520.1	5,930.6	5,782.9	147.67	40.161	
14,074.8	7,061.0	14,787.6	6,878.5	242.1	225.0	11.38	367.1	-3,520.1	6,005.4	5,857.0	148.34	40.483	
14,100.0	7,061.0	14,787.6	6,878.5	242.8	225.0	11.38	367.1	-3,520.1	6,030.6	5,882.0	148.57	40.591	
14,173.2	7,061.0	14,787.6	6,878.5	244.8	225.0	11.38	367.1	-3,520.1	6,103.7	5,954.5	149.22	40.903	
14,200.0	7,061.0	14,787.6	6,878.5	245.6	225.0	11.38	367.1	-3,520.1	6,130.5	5,981.1	149.47	41.016	
14,271.6	7,061.0	14,787.6	6,878.5	247.6	225.0	11.38	367.1	-3,520.1	6,202.1	6,052.0	150.11	41.318	
14,300.0	7,061.0	14,787.6	6,878.5	248.4	225.0	11.38	367.1	-3,520.1	6,230.5	6,080.1	150.36	41.436	
14,370.0	7,061.0	14,787.6	6,878.5	250.3	225.0	11.38	367.1	-3,520.1	6,300.5	6,149.5	150.99	41.728	
14,400.0	7,061.0	14,787.6	6,878.5	251.1	225.0	11.38	367.1	-3,520.1	6,330.5	6,179.2	151.26	41.851	
14,468.5	7,061.0	14,787.6	6,878.5	253.0	225.0	11.38	367.1	-3,520.1	6,398.9	6,247.0	151.88	42.132	
14,500.0	7,061.0	14,787.6	6,878.5	253.9	225.0	11.38	367.1	-3,520.1	6,430.4	6,278.3	152.16	42.261	
14,566.9	7,061.0	14,787.6	6,878.5	255.8	225.0	11.38	367.1	-3,520.1	6,497.3	6,344.5	152.76	42.533	
14,600.0	7,061.0	14,787.6	6,878.5	256.7	225.0	11.38	367.1	-3,520.1	6,530.4	6,377.3	153.06	42.666	
14,665.3	7,061.0	14,787.6	6,878.5	258.5	225.0	11.38	367.1	-3,520.1	6,595.7	6,442.1	153.65	42.928	
14,700.0	7,061.0	14,787.6	6,878.5	259.5	225.0	11.38	367.1	-3,520.1	6,630.4	6,476.4	153.96	43.066	
14,763.7	7,061.0	14,787.6	6,878.5	261.2	225.0	11.38	367.1	-3,520.1	6,694.1	6,539.6	154.53	43.319	
14,800.0	7,061.0	14,787.6	6,878.5	262.2	225.0	11.38	367.1	-3,520.1	6,730.3	6,575.5	154.86	43.462	
14,862.2	7,061.0	14,787.6	6,878.5	264.0	225.0	11.38	367.1	-3,520.1	6,792.5	6,637.1	155.42	43.705	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON G-15-16HN - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,900.0	7,061.0	14,787.6	6,878.5	265.0	225.0	11.38	367.1	-3,520.1	6,830.3	6,674.5	155.76	43.853	
14,960.6	7,061.0	14,787.6	6,878.5	266.7	225.0	11.38	367.1	-3,520.1	6,890.9	6,734.6	156.30	44.087	
15,000.0	7,061.0	14,787.6	6,878.5	267.8	225.0	11.38	367.1	-3,520.1	6,930.3	6,773.6	156.66	44.239	
15,059.0	7,061.0	14,787.6	6,878.5	269.4	225.0	11.38	367.1	-3,520.1	6,989.3	6,832.1	157.19	44.465	
15,100.0	7,061.0	14,787.6	6,878.5	270.6	225.0	11.38	367.1	-3,520.1	7,030.2	6,872.7	157.56	44.621	
15,157.4	7,061.0	14,787.6	6,878.5	272.2	225.0	11.38	367.1	-3,520.1	7,087.7	6,929.6	158.07	44.838	
15,200.0	7,061.0	14,787.6	6,878.5	273.4	225.0	11.38	367.1	-3,520.1	7,130.2	6,971.8	158.46	44.998	
15,255.9	7,061.0	14,787.6	6,878.5	274.9	225.0	11.38	367.1	-3,520.1	7,186.1	7,027.1	158.96	45.207	
15,300.0	7,061.0	14,787.6	6,878.5	276.1	225.0	11.38	367.1	-3,520.1	7,230.2	7,070.8	159.36	45.371	
15,354.3	7,061.0	14,787.6	6,878.5	277.7	225.0	11.38	367.1	-3,520.1	7,284.5	7,124.6	159.85	45.572	
15,400.0	7,061.0	14,787.6	6,878.5	278.9	225.0	11.38	367.1	-3,520.1	7,330.2	7,169.9	160.26	45.740	
15,452.7	7,061.0	14,787.6	6,878.5	280.4	225.0	11.38	367.1	-3,520.1	7,382.9	7,222.1	160.73	45.933	
15,500.0	7,061.0	14,787.6	6,878.5	281.7	225.0	11.38	367.1	-3,520.1	7,430.1	7,269.0	161.16	46.105	
15,551.1	7,061.0	14,787.6	6,878.5	283.1	225.0	11.38	367.1	-3,520.1	7,481.3	7,319.7	161.62	46.290	
15,600.0	7,061.0	14,787.6	6,878.5	284.5	225.0	11.38	367.1	-3,520.1	7,530.1	7,368.1	162.06	46.465	
15,649.6	7,061.0	14,787.6	6,878.5	285.9	225.0	11.38	367.1	-3,520.1	7,579.7	7,417.2	162.51	46.643	
15,700.0	7,061.0	14,787.6	6,878.5	287.3	225.0	11.38	367.1	-3,520.1	7,630.1	7,467.1	162.96	46.822	
15,748.0	7,061.0	14,787.6	6,878.5	288.6	225.0	11.38	367.1	-3,520.1	7,678.1	7,514.7	163.39	46.992	
15,800.0	7,061.0	14,787.6	6,878.5	290.1	225.0	11.38	367.1	-3,520.1	7,730.1	7,566.2	163.86	47.174	
15,846.4	7,061.0	14,787.6	6,878.5	291.4	225.0	11.38	367.1	-3,520.1	7,776.5	7,612.2	164.28	47.337	
15,900.0	7,061.0	14,787.6	6,878.5	292.9	225.0	11.38	367.1	-3,520.1	7,830.0	7,665.3	164.76	47.523	
15,944.8	7,061.0	14,787.6	6,878.5	294.1	225.0	11.38	367.1	-3,520.1	7,874.9	7,709.7	165.17	47.678	
16,000.0	7,061.0	14,787.6	6,878.5	295.6	225.0	11.38	367.1	-3,520.1	7,930.0	7,764.4	165.67	47.868	
16,043.3	7,061.0	14,787.6	6,878.5	296.8	225.0	11.38	367.1	-3,520.1	7,973.3	7,807.2	166.06	48.016	
16,100.0	7,061.0	14,787.6	6,878.5	298.4	225.0	11.38	367.1	-3,520.1	8,030.0	7,863.4	166.57	48.209	
16,141.7	7,061.0	14,787.6	6,878.5	299.6	225.0	11.38	367.1	-3,520.1	8,071.7	7,904.8	166.94	48.350	
16,200.0	7,061.0	14,787.6	6,878.5	301.2	225.0	11.38	367.1	-3,520.1	8,130.0	7,962.5	167.47	48.546	
16,240.1	7,061.0	14,787.6	6,878.5	302.3	225.0	11.38	367.1	-3,520.1	8,170.1	8,002.3	167.83	48.680	
16,300.0	7,061.0	14,787.6	6,878.5	304.0	225.0	11.38	367.1	-3,520.1	8,230.0	8,061.6	168.37	48.880	
16,338.5	7,061.0	14,787.6	6,878.5	305.1	225.0	11.38	367.1	-3,520.1	8,268.5	8,099.8	168.72	49.007	
16,400.0	7,061.0	14,787.6	6,878.5	306.8	225.0	11.38	367.1	-3,520.1	8,329.9	8,160.7	169.28	49.209	
16,437.0	7,061.0	14,787.6	6,878.5	307.8	225.0	11.38	367.1	-3,520.1	8,366.9	8,197.3	169.61	49.331	
16,500.0	7,061.0	14,787.6	6,878.5	309.6	225.0	11.38	367.1	-3,520.1	8,429.9	8,259.7	170.18	49.536	
16,535.4	7,061.0	14,787.6	6,878.5	310.6	225.0	11.38	367.1	-3,520.1	8,465.3	8,294.8	170.50	49.651	
16,600.0	7,061.0	14,787.6	6,878.5	312.4	225.0	11.38	367.1	-3,520.1	8,529.9	8,358.8	171.08	49.859	
16,633.8	7,061.0	14,787.6	6,878.5	313.3	225.0	11.38	367.1	-3,520.1	8,563.7	8,392.3	171.39	49.967	
16,700.0	7,061.0	14,787.6	6,878.5	315.2	225.0	11.38	367.1	-3,520.1	8,629.9	8,457.9	171.98	50.178	
16,732.2	7,061.0	14,787.6	6,878.5	316.1	225.0	11.38	367.1	-3,520.1	8,662.1	8,489.9	172.28	50.281	
16,800.0	7,061.0	14,787.6	6,878.5	317.9	225.0	11.38	367.1	-3,520.1	8,729.9	8,557.0	172.89	50.495	
16,830.7	7,061.0	14,787.6	6,878.5	318.8	225.0	11.38	367.1	-3,520.1	8,760.5	8,587.4	173.16	50.591	
16,900.0	7,061.0	14,787.6	6,878.5	320.7	225.0	11.38	367.1	-3,520.1	8,829.9	8,656.1	173.79	50.807	
16,929.1	7,061.0	14,787.6	6,878.5	321.5	225.0	11.38	367.1	-3,520.1	8,858.9	8,684.9	174.05	50.898	
17,000.0	7,061.0	14,787.6	6,878.5	323.5	225.0	11.38	367.1	-3,520.1	8,929.8	8,755.1	174.69	51.117	
17,027.5	7,061.0	14,787.6	6,878.5	324.3	225.0	11.38	367.1	-3,520.1	8,957.4	8,782.4	174.94	51.202	
17,100.0	7,061.0	14,787.6	6,878.5	326.3	225.0	11.38	367.1	-3,520.1	9,029.8	8,854.2	175.60	51.423	
17,125.9	7,061.0	14,787.6	6,878.5	327.0	225.0	11.38	367.1	-3,520.1	9,055.8	8,879.9	175.83	51.502	
17,200.0	7,061.0	14,787.6	6,878.5	329.1	225.0	11.38	367.1	-3,520.1	9,129.8	8,953.3	176.50	51.726	
17,224.4	7,061.0	14,787.6	6,878.5	329.8	225.0	11.38	367.1	-3,520.1	9,154.2	8,977.4	176.72	51.800	
17,300.0	7,061.0	14,787.6	6,878.5	331.9	225.0	11.38	367.1	-3,520.1	9,229.8	9,052.4	177.41	52.026	
17,322.8	7,061.0	14,787.6	6,878.5	332.5	225.0	11.38	367.1	-3,520.1	9,252.6	9,075.0	177.61	52.094	
17,400.0	7,061.0	14,787.6	6,878.5	334.7	225.0	11.38	367.1	-3,520.1	9,329.8	9,151.5	178.31	52.323	
17,421.2	7,061.0	14,787.6	6,878.5	335.3	225.0	11.38	367.1	-3,520.1	9,351.0	9,172.5	178.50	52.386	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON G-15-16HN - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
17,500.0	7,061.0	14,787.6	6,878.5	337.5	225.0	11.38	367.1	-3,520.1	9,429.8	9,250.5	179.21	52.617	
17,519.6	7,061.0	14,787.6	6,878.5	338.0	225.0	11.38	367.1	-3,520.1	9,449.4	9,270.0	179.39	52.675	
17,600.0	7,061.0	14,787.6	6,878.5	340.3	225.0	11.38	367.1	-3,520.1	9,529.7	9,349.6	180.12	52.908	
17,618.1	7,061.0	14,787.6	6,878.5	340.8	225.0	11.38	367.1	-3,520.1	9,547.8	9,367.5	180.28	52.960	
17,700.0	7,061.0	14,787.6	6,878.5	343.1	225.0	11.38	367.1	-3,520.1	9,629.7	9,448.7	181.02	53.196	
17,716.5	7,061.0	14,787.6	6,878.5	343.5	225.0	11.38	367.1	-3,520.1	9,646.2	9,465.0	181.17	53.243	
17,800.0	7,061.0	14,787.6	6,878.5	345.9	225.0	11.38	367.1	-3,520.1	9,729.7	9,547.8	181.93	53.481	
17,814.9	7,061.0	14,787.6	6,878.5	346.3	225.0	11.38	367.1	-3,520.1	9,744.6	9,562.6	182.06	53.523	
17,900.0	7,061.0	14,787.6	6,878.5	348.7	225.0	11.38	367.1	-3,520.1	9,829.7	9,646.9	182.83	53.763	
17,913.3	7,061.0	14,787.6	6,878.5	349.0	225.0	11.38	367.1	-3,520.1	9,843.0	9,660.1	182.95	53.801	
18,000.0	7,061.0	14,787.6	6,878.5	351.4	225.0	11.38	367.1	-3,520.1	9,929.7	9,745.9	183.74	54.043	
18,011.8	7,061.0	14,787.6	6,878.5	351.8	225.0	11.38	367.1	-3,520.1	9,941.5	9,757.6	183.84	54.075	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON H-15-16HC - Wellbore #1 - Design #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	78.66	877.3	4,373.9	4,461.1				
98.4	98.4	77.9	77.9	0.1	0.0	78.66	877.3	4,373.9	4,461.1	4,460.9	0.14	N/A	
100.0	100.0	79.5	79.5	0.1	0.1	78.66	877.3	4,373.9	4,461.1	4,460.9	0.14	N/A	
196.8	196.8	176.3	176.3	0.3	0.2	78.66	877.3	4,373.9	4,461.1	4,460.5	0.55	8,152.608	
200.0	200.0	179.5	179.5	0.3	0.2	78.66	877.3	4,373.9	4,461.1	4,460.5	0.56	7,946.956	
295.3	295.3	274.8	274.8	0.5	0.5	78.66	877.3	4,373.9	4,461.1	4,460.1	0.99	4,507.728	
300.0	300.0	279.5	279.5	0.5	0.5	78.66	877.3	4,373.9	4,461.1	4,460.0	1.01	4,413.013	
393.7	393.7	373.2	373.2	0.8	0.7	78.66	877.3	4,373.9	4,461.1	4,459.6	1.43	3,115.048	
400.0	400.0	379.5	379.5	0.8	0.7	78.66	877.3	4,373.9	4,461.1	4,459.6	1.46	3,054.641	
492.1	492.1	471.6	471.6	1.0	0.9	78.66	877.3	4,373.9	4,461.1	4,459.2	1.87	2,379.800	
500.0	500.0	479.5	479.5	1.0	0.9	78.66	877.3	4,373.9	4,461.1	4,459.1	1.91	2,335.690	
590.5	590.5	570.0	570.0	1.2	1.1	163.26	877.3	4,373.9	4,462.4	4,460.1	2.31	1,933.074	
600.0	600.0	579.5	579.5	1.2	1.1	163.26	877.3	4,373.9	4,462.7	4,460.4	2.35	1,899.107	
689.0	688.8	668.3	668.3	1.4	1.3	163.25	877.3	4,373.9	4,467.0	4,464.3	2.74	1,631.883	
700.0	699.8	679.3	679.3	1.4	1.4	163.25	877.3	4,373.9	4,467.7	4,464.9	2.78	1,604.293	
787.4	786.9	766.4	766.4	1.6	1.6	163.23	877.3	4,373.9	4,474.8	4,471.7	3.17	1,411.832	
800.0	799.5	779.0	779.0	1.7	1.6	163.23	877.3	4,373.9	4,476.1	4,472.9	3.22	1,388.156	
885.8	884.7	864.2	864.2	1.9	1.8	163.21	877.3	4,373.9	4,485.9	4,482.3	3.61	1,244.233	
900.0	898.7	878.2	878.2	1.9	1.8	163.21	877.3	4,373.9	4,487.8	4,484.1	3.67	1,223.583	
984.2	981.9	961.4	961.4	2.2	2.0	163.18	877.3	4,373.9	4,500.2	4,496.1	4.04	1,112.545	
1,000.0	997.5	977.0	977.0	2.2	2.0	163.18	877.3	4,373.9	4,502.7	4,498.6	4.11	1,094.282	
1,082.7	1,078.7	1,075.3	1,075.3	2.5	2.2	163.17	876.5	4,373.9	4,517.5	4,513.0	4.50	1,002.904	
1,100.0	1,095.6	1,097.3	1,097.3	2.6	2.3	163.17	876.0	4,373.9	4,520.9	4,516.3	4.59	985.745	
1,181.1	1,174.7	1,199.4	1,199.3	2.9	2.5	163.21	872.1	4,373.9	4,537.5	4,532.6	4.96	915.407	
1,200.0	1,193.1	1,200.0	1,199.9	3.0	2.5	163.18	872.0	4,373.9	4,541.7	4,536.7	5.00	907.591	
1,279.5	1,269.9	1,261.5	1,261.3	3.4	2.6	163.18	868.4	4,374.2	4,560.7	4,555.4	5.32	857.033	
1,300.0	1,289.6	1,274.3	1,274.0	3.5	2.6	163.17	867.6	4,374.4	4,566.0	4,560.6	5.40	845.994	
1,377.9	1,364.3	1,322.3	1,321.9	3.9	2.7	163.14	864.1	4,375.1	4,587.8	4,582.1	5.70	804.571	
1,400.0	1,385.3	1,335.7	1,335.3	4.0	2.7	163.12	863.0	4,375.4	4,594.4	4,588.6	5.79	793.754	
1,476.4	1,457.6	1,381.7	1,381.1	4.5	2.8	163.09	859.1	4,376.6	4,618.7	4,612.6	6.10	756.937	
1,500.0	1,479.8	1,400.0	1,399.3	4.6	2.9	163.08	857.4	4,377.1	4,626.6	4,620.4	6.20	745.682	
1,574.8	1,549.8	1,439.8	1,438.9	5.2	2.9	163.02	853.5	4,378.5	4,653.3	4,646.8	6.52	714.199	
1,600.0	1,573.2	1,454.4	1,453.4	5.3	3.0	163.01	852.0	4,379.1	4,662.8	4,656.1	6.63	703.663	
1,629.0	1,600.0	1,471.1	1,470.0	5.6	3.0	162.98	850.3	4,379.8	4,673.9	4,667.2	6.75	692.035	
1,673.2	1,640.8	1,500.0	1,498.7	5.9	3.1	163.07	847.0	4,381.1	4,691.3	4,684.4	6.97	673.048	
1,694.0	1,660.0	1,500.0	1,498.7	6.1	3.1	163.07	847.0	4,381.1	4,699.5	4,692.5	7.05	666.947	
1,700.0	1,665.6	1,500.0	1,498.7	6.1	3.1	163.06	847.0	4,381.1	4,701.9	4,694.9	7.07	665.404	
1,771.6	1,731.3	1,551.8	1,550.1	6.7	3.2	163.03	840.8	4,383.8	4,731.4	4,724.0	7.42	637.288	
1,800.0	1,757.1	1,567.5	1,565.6	6.9	3.3	163.01	838.8	4,384.7	4,743.6	4,736.1	7.56	627.771	
1,870.1	1,820.4	1,608.7	1,606.4	7.5	3.4	162.95	833.4	4,387.2	4,775.0	4,767.1	7.90	604.425	
1,900.0	1,847.2	1,634.2	1,631.6	7.8	3.4	162.95	830.0	4,388.9	4,789.0	4,780.9	8.07	593.709	
1,968.5	1,908.0	1,692.0	1,688.7	8.5	3.6	162.95	822.2	4,392.6	4,821.9	4,813.4	8.46	570.174	
2,000.0	1,935.8	1,718.2	1,714.7	8.8	3.7	162.94	818.6	4,394.2	4,837.5	4,828.9	8.64	560.125	
2,033.5	1,965.0	1,746.0	1,742.1	9.1	3.7	162.93	814.9	4,396.0	4,854.4	4,845.6	8.83	549.663	
2,066.9	1,994.2	1,773.5	1,769.3	9.5	3.8	163.04	811.2	4,397.8	4,871.5	4,862.5	9.04	538.682	
2,100.0	2,023.0	1,800.8	1,796.3	9.8	3.9	163.15	807.5	4,399.5	4,888.4	4,879.1	9.25	528.284	
2,165.3	2,079.9	11,821.0	6,958.5	10.5	139.3	175.78	220.0	-456.8	4,902.2	4,871.5	30.78	159.257	
2,200.0	2,110.1	11,837.9	6,958.5	10.9	139.7	175.80	219.9	-473.7	4,872.0	4,841.0	30.97	157.310	
2,263.8	2,165.7	11,869.0	6,958.5	11.5	140.6	175.82	219.8	-504.9	4,816.4	4,785.0	31.32	153.774	
2,300.0	2,197.3	11,886.7	6,958.5	11.9	141.1	175.84	219.7	-522.5	4,784.7	4,753.2	31.52	151.796	
2,362.2	2,251.5	11,917.1	6,958.5	12.6	141.9	175.87	219.5	-552.9	4,730.5	4,698.6	31.87	148.447	
2,400.0	2,284.4	11,935.5	6,958.5	13.0	142.5	175.88	219.4	-571.3	4,697.5	4,665.4	32.08	146.443	

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

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON H-15-16HC - Wellbore #1 - Design #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,460.6	2,337.3	11,965.1	6,958.5	13.7	143.3	175.91	219.2	-600.9	4,644.6	4,612.2	32.42	143.274	
2,500.0	2,371.6	11,984.3	6,958.5	14.1	143.8	175.93	219.1	-620.1	4,610.2	4,577.6	32.64	141.248	
2,559.0	2,423.0	12,013.1	6,958.5	14.7	144.6	175.96	218.9	-649.0	4,558.7	4,525.7	32.97	138.252	
2,600.0	2,458.7	12,033.1	6,958.5	15.2	145.2	175.98	218.8	-668.9	4,522.9	4,489.7	33.21	136.206	
2,657.5	2,508.8	12,061.2	6,958.5	15.8	146.0	176.01	218.6	-697.0	4,472.8	4,439.3	33.54	133.376	
2,700.0	2,545.9	12,081.9	6,958.5	16.2	146.5	176.03	218.5	-717.7	4,435.7	4,401.9	33.78	131.315	
2,755.9	2,594.6	12,109.2	6,958.5	16.8	147.3	176.06	218.4	-745.0	4,386.9	4,352.8	34.10	128.644	
2,800.0	2,633.0	12,130.7	6,958.5	17.3	147.9	176.08	218.2	-766.5	4,348.4	4,314.1	34.36	126.569	
2,854.3	2,680.4	12,157.2	6,958.5	17.9	148.6	176.11	218.1	-793.0	4,301.0	4,266.3	34.67	124.049	
2,900.0	2,720.2	12,179.5	6,958.5	18.4	149.3	176.14	217.9	-815.3	4,261.2	4,226.2	34.94	121.963	
2,952.7	2,766.1	12,205.3	6,958.5	19.0	150.0	176.17	217.8	-841.1	4,215.1	4,179.9	35.25	119.588	
3,000.0	2,807.3	12,228.3	6,958.5	19.5	150.6	176.19	217.7	-864.1	4,173.9	4,138.4	35.52	117.492	
3,051.2	2,851.9	12,253.3	6,958.5	20.1	151.3	176.22	217.5	-889.1	4,129.2	4,093.4	35.83	115.255	
3,100.0	2,894.5	12,277.1	6,958.5	20.6	152.0	176.25	217.4	-912.9	4,086.6	4,050.5	36.12	113.152	
3,149.6	2,937.7	12,301.3	6,958.5	21.1	152.7	176.28	217.2	-937.1	4,043.4	4,006.9	36.41	111.046	
3,200.0	2,981.6	12,325.9	6,958.5	21.7	153.4	176.31	217.1	-961.7	3,999.4	3,962.7	36.71	108.937	
3,248.0	3,023.5	12,349.3	6,958.5	22.2	154.0	176.34	217.0	-985.2	3,957.5	3,920.5	37.00	106.956	
3,300.0	3,068.8	12,374.7	6,958.5	22.8	154.7	176.38	216.8	-1,010.5	3,912.1	3,874.8	37.31	104.843	
3,346.4	3,109.2	12,397.4	6,958.5	23.3	155.3	176.41	216.7	-1,033.2	3,871.6	3,834.0	37.60	102.981	
3,400.0	3,155.9	12,423.5	6,958.5	23.9	156.1	176.44	216.5	-1,059.3	3,824.9	3,786.9	37.92	100.865	
3,444.9	3,195.0	12,445.4	6,958.5	24.3	156.7	176.48	216.4	-1,081.2	3,785.7	3,747.5	38.19	99.115	
3,500.0	3,243.1	12,472.3	6,958.5	25.0	157.4	176.52	216.2	-1,108.1	3,737.6	3,699.1	38.53	96.997	
3,543.3	3,280.8	12,493.4	6,958.5	25.4	158.0	176.55	216.1	-1,129.3	3,699.8	3,661.0	38.80	95.356	
3,600.0	3,330.2	12,521.1	6,958.5	26.0	158.8	176.59	215.9	-1,156.9	3,650.4	3,611.2	39.15	93.237	
3,641.7	3,366.6	12,541.5	6,958.5	26.5	159.4	176.62	215.8	-1,177.3	3,613.9	3,574.5	39.41	91.699	
3,700.0	3,417.4	12,569.9	6,958.5	27.1	160.2	176.67	215.7	-1,205.7	3,563.1	3,523.3	39.78	89.580	
3,740.1	3,452.3	12,589.5	6,958.5	27.6	160.7	176.70	215.5	-1,225.3	3,528.1	3,488.0	40.03	88.139	
3,800.0	3,504.5	12,618.7	6,958.5	28.2	161.5	176.75	215.4	-1,254.5	3,475.8	3,435.4	40.41	86.021	
3,838.6	3,538.1	12,637.5	6,958.5	28.7	162.1	176.78	215.3	-1,273.3	3,442.2	3,401.5	40.65	84.673	
3,900.0	3,591.6	12,667.5	6,958.5	29.3	162.9	176.83	215.1	-1,303.3	3,388.6	3,347.6	41.05	82.556	
3,937.0	3,623.9	12,685.6	6,958.5	29.7	163.4	176.87	215.0	-1,321.4	3,356.3	3,315.0	41.28	81.298	
4,000.0	3,678.8	12,716.3	6,958.5	30.4	164.3	176.92	214.8	-1,352.1	3,301.4	3,259.7	41.69	79.183	
4,035.4	3,709.7	12,733.6	6,958.5	30.8	164.7	176.96	214.7	-1,369.4	3,270.4	3,228.5	41.92	78.009	
4,100.0	3,765.9	12,765.1	6,958.5	31.5	165.6	177.02	214.5	-1,400.9	3,214.1	3,171.8	42.35	75.897	
4,133.8	3,795.4	12,781.6	6,958.5	31.9	166.1	177.05	214.4	-1,417.4	3,184.6	3,142.0	42.57	74.803	
4,200.0	3,853.1	12,813.9	6,958.5	32.6	167.0	177.12	214.2	-1,449.7	3,126.9	3,083.9	43.01	72.694	
4,232.3	3,881.2	12,829.7	6,958.5	33.0	167.4	177.15	214.1	-1,465.5	3,098.7	3,055.5	43.23	71.678	
4,300.0	3,940.2	12,862.7	6,958.5	33.7	168.3	177.22	213.9	-1,498.5	3,039.6	2,995.9	43.69	69.572	
4,330.7	3,967.0	12,877.7	6,958.5	34.1	168.8	177.26	213.9	-1,513.5	3,012.8	2,968.9	43.90	68.629	
4,400.0	4,027.4	12,911.5	6,958.5	34.8	169.7	177.34	213.7	-1,547.3	2,952.4	2,908.0	44.38	66.528	
4,429.1	4,052.8	12,925.7	6,958.5	35.1	170.1	177.37	213.6	-1,561.5	2,927.0	2,882.4	44.58	65.655	
4,500.0	4,114.5	12,960.3	6,958.5	35.9	171.1	177.45	213.4	-1,596.1	2,865.2	2,820.1	45.08	63.557	
4,527.5	4,138.5	12,973.7	6,958.5	36.2	171.4	177.49	213.3	-1,609.6	2,841.1	2,795.8	45.28	62.752	
4,600.0	4,201.7	13,009.1	6,958.5	37.0	172.4	177.58	213.1	-1,644.9	2,777.9	2,732.1	45.80	60.658	
4,626.0	4,224.3	13,021.8	6,958.5	37.3	172.8	177.61	213.0	-1,657.6	2,755.3	2,709.3	45.99	59.916	
4,700.0	4,288.8	13,057.9	6,958.5	38.1	173.8	177.71	212.8	-1,693.7	2,690.7	2,644.2	46.53	57.828	
4,724.4	4,310.1	13,069.8	6,958.5	38.4	174.1	177.75	212.7	-1,705.6	2,669.4	2,622.7	46.71	57.147	
4,800.0	4,376.0	13,106.7	6,958.5	39.2	175.2	177.86	212.5	-1,742.5	2,603.5	2,556.2	47.28	55.063	
4,822.8	4,395.9	13,117.8	6,958.5	39.5	175.5	177.89	212.5	-1,753.6	2,583.6	2,536.1	47.46	54.441	
4,900.0	4,463.1	13,155.5	6,958.5	40.3	176.5	178.01	212.2	-1,791.3	2,516.2	2,468.2	48.06	52.362	
4,921.2	4,481.6	13,165.9	6,958.5	40.5	176.8	178.05	212.2	-1,801.7	2,497.7	2,449.5	48.22	51.795	
5,000.0	4,550.3	13,204.3	6,958.5	41.4	177.9	178.18	211.9	-1,840.1	2,429.0	2,380.2	48.85	49.721	

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

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON H-15-16HC - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,019.7	4,567.4	13,213.9	6,958.5	41.6	178.2	178.21	211.9	-1,849.7	2,411.9	2,362.9	49.01	49.208	
5,100.0	4,637.4	13,253.1	6,958.5	42.5	179.3	178.35	211.7	-1,888.9	2,341.8	2,292.1	49.68	47.139	
5,118.1	4,653.2	13,261.9	6,958.5	42.7	179.5	178.39	211.6	-1,897.7	2,326.0	2,276.2	49.83	46.677	
5,200.0	4,724.6	13,301.9	6,958.5	43.6	180.6	178.54	211.4	-1,937.7	2,254.6	2,204.1	50.54	44.613	
5,216.5	4,739.0	13,310.0	6,958.5	43.8	180.8	178.57	211.3	-1,945.8	2,240.2	2,189.5	50.68	44.201	
5,300.0	4,811.7	13,350.7	6,958.5	44.7	182.0	178.75	211.1	-1,986.5	2,167.4	2,116.0	51.43	42.141	
5,314.9	4,824.7	13,358.0	6,958.5	44.9	182.2	178.78	211.0	-1,993.8	2,154.4	2,102.8	51.57	41.776	
5,400.0	4,898.9	13,399.5	6,958.5	45.8	183.4	178.97	210.8	-2,035.3	2,080.2	2,027.9	52.37	39.721	
5,413.4	4,910.5	13,406.0	6,958.5	45.9	183.5	179.00	210.8	-2,041.8	2,068.6	2,016.1	52.50	39.401	
5,500.0	4,986.0	13,448.3	6,958.5	46.9	184.7	179.21	210.5	-2,084.1	1,993.0	1,939.7	53.36	37.351	
5,511.8	4,996.3	13,454.1	6,958.5	47.0	184.9	179.24	210.5	-2,089.8	1,982.8	1,929.3	53.48	37.075	
5,600.0	5,073.1	13,497.1	6,958.5	48.0	186.1	179.47	210.2	-2,132.9	1,905.9	1,851.5	54.41	35.030	
5,610.2	5,082.1	13,502.1	6,958.5	48.1	186.2	179.50	210.2	-2,137.9	1,897.0	1,842.4	54.52	34.796	
5,700.0	5,160.3	13,545.9	6,958.5	49.1	187.4	179.76	209.9	-2,181.7	1,818.7	1,763.2	55.52	32.756	
5,708.6	5,167.8	13,550.1	6,958.5	49.2	187.6	179.79	209.9	-2,185.9	1,811.2	1,755.5	55.62	32.561	
5,800.0	5,247.4	13,594.7	6,958.5	50.2	188.8	-179.92	209.7	-2,230.5	1,731.6	1,674.8	56.72	30.527	
5,807.1	5,253.6	13,598.1	6,958.5	50.3	188.9	-179.90	209.6	-2,233.9	1,725.4	1,668.6	56.81	30.371	
5,900.0	5,334.6	13,643.5	6,958.5	51.3	190.2	-179.57	209.4	-2,279.3	1,644.4	1,586.4	58.02	28.343	
5,905.5	5,339.4	13,646.2	6,958.5	51.4	190.3	-179.55	209.4	-2,282.0	1,639.6	1,581.5	58.09	28.224	
6,000.0	5,421.7	13,692.3	6,958.5	52.4	191.5	-179.18	209.1	-2,328.1	1,557.3	1,497.9	59.43	26.202	
6,003.9	5,425.2	13,694.2	6,958.5	52.4	191.6	-179.16	209.1	-2,330.0	1,553.9	1,494.4	59.49	26.119	
6,100.0	5,508.9	13,741.1	6,958.5	53.5	192.9	-178.75	208.8	-2,376.9	1,470.2	1,409.2	60.99	24.105	
6,102.3	5,510.9	13,742.2	6,958.5	53.5	192.9	-178.74	208.8	-2,378.0	1,468.2	1,407.1	61.03	24.056	
6,200.0	5,596.0	13,789.9	6,958.5	54.6	194.3	-178.26	208.5	-2,425.7	1,383.1	1,320.4	62.73	22.050	
6,200.8	5,596.7	13,790.3	6,958.5	54.6	194.3	-178.25	208.5	-2,426.1	1,382.5	1,319.7	62.74	22.034	
6,299.2	5,682.5	13,838.3	6,958.5	55.7	195.6	-177.71	208.2	-2,474.1	1,296.8	1,232.1	64.66	20.055	
6,300.0	5,683.2	13,838.7	6,958.5	55.7	195.6	-177.70	208.2	-2,474.5	1,296.1	1,231.4	64.68	20.039	
6,397.6	5,768.3	13,886.3	6,958.5	56.8	197.0	-177.09	207.9	-2,522.1	1,211.1	1,144.3	66.84	18.119	
6,400.0	5,770.3	13,887.5	6,958.5	56.8	197.0	-177.07	207.9	-2,523.3	1,209.1	1,142.2	66.90	18.073	
6,496.0	5,854.0	13,934.4	6,958.5	57.9	198.3	-176.38	207.7	-2,570.1	1,125.5	1,056.2	69.35	16.229	
6,500.0	5,857.5	13,936.3	6,958.5	57.9	198.4	-176.35	207.7	-2,572.1	1,122.1	1,052.6	69.46	16.155	
6,594.5	5,939.8	13,982.4	6,958.5	58.9	199.7	-175.55	207.4	-2,618.2	1,040.0	967.7	72.28	14.389	
6,600.0	5,944.6	13,985.1	6,958.5	59.0	199.7	-175.50	207.4	-2,620.9	1,035.2	962.7	72.46	14.287	
6,692.9	6,025.6	14,030.4	6,958.5	60.0	201.0	-174.58	207.1	-2,666.2	954.5	878.7	75.74	12.601	
6,700.0	6,031.8	14,033.9	6,958.5	60.1	201.1	-174.50	207.1	-2,669.7	948.3	872.3	76.02	12.475	
6,791.3	6,111.4	14,078.5	6,958.5	61.1	202.3	-173.43	206.8	-2,714.2	869.1	789.2	79.92	10.874	
6,800.0	6,118.9	14,082.7	6,958.5	61.2	202.5	-173.31	206.8	-2,718.5	861.6	781.2	80.33	10.725	
6,889.7	6,197.1	14,126.5	6,958.5	62.2	203.7	-172.03	206.5	-2,762.3	783.8	698.7	85.04	9.216	
6,900.0	6,206.1	14,131.5	6,958.5	62.3	203.8	-171.87	206.5	-2,767.3	774.9	689.3	85.64	9.048	
6,988.2	6,282.9	14,174.5	6,958.5	63.3	205.0	-170.32	206.3	-2,810.3	698.6	607.2	91.45	7.639	
7,000.0	6,293.2	14,180.3	6,958.5	63.4	205.2	-170.08	206.2	-2,816.1	688.4	596.1	92.33	7.456	
7,086.6	6,368.7	14,222.5	6,958.5	64.3	206.4	-168.16	206.0	-2,858.3	613.7	514.0	99.67	6.157	
7,100.0	6,380.4	14,229.1	6,958.5	64.5	206.6	-167.82	205.9	-2,864.9	602.2	501.2	100.97	5.964	
7,185.0	6,454.4	14,270.6	6,958.5	65.4	207.7	-165.37	205.7	-2,906.4	529.1	418.6	110.46	4.790	
7,200.0	6,467.5	14,277.9	6,958.5	65.6	207.9	-164.87	205.6	-2,913.7	516.2	403.8	112.40	4.593	
7,283.4	6,540.2	14,318.6	6,958.5	66.5	209.1	-161.64	205.4	-2,954.4	445.0	319.9	125.04	3.559	
7,300.0	6,554.6	14,326.7	6,958.5	66.7	209.3	-160.89	205.4	-2,962.5	430.9	302.9	127.98	3.367	
7,381.9	6,626.0	14,366.6	6,958.5	67.6	210.4	-156.48	205.1	-3,002.4	361.7	216.4	145.24	2.490	
7,400.0	6,641.8	14,375.5	6,958.5	67.8	210.7	-155.31	205.1	-3,011.3	346.5	196.7	149.77	2.313	
7,480.3	6,711.8	14,414.7	6,958.5	68.7	211.8	-148.99	204.8	-3,050.4	280.0	106.3	173.69	1.612	
7,481.0	6,712.4	14,415.0	6,958.5	68.7	211.8	-148.93	204.8	-3,050.8	279.4	105.5	173.93	1.607	
7,500.0	6,728.8	14,424.5	6,958.5	68.9	212.0	-148.47	204.8	-3,060.3	264.1	88.5	175.66	1.504	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON H-15-16HC - Wellbore #1 - Design #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,550.0	6,770.3	14,452.2	6,958.5	69.5	212.8	-146.34	204.6	-3,088.0	226.2	42.9	183.30	1.234	Level 2
7,578.7	6,793.1	14,469.7	6,958.5	70.0	213.3	-144.50	204.5	-3,105.5	206.2	16.5	189.70	1.087	Level 2
7,600.0	6,809.3	14,483.3	6,958.5	70.3	213.7	-142.83	204.4	-3,119.1	192.3	-3.1	195.38	0.984	Level 1
7,650.0	6,845.4	14,517.7	6,958.5	71.1	214.6	-137.79	204.2	-3,153.5	163.3	-48.6	211.87	0.771	Level 1
7,677.1	6,863.7	14,537.7	6,958.5	71.6	215.2	-134.35	204.1	-3,173.5	150.0	-72.5	222.51	0.674	Level 1
7,700.0	6,878.3	14,555.1	6,958.5	72.0	215.7	-131.05	204.0	-3,190.9	140.3	-91.9	232.14	0.604	Level 1
7,750.0	6,907.9	14,595.3	6,958.5	73.0	216.8	-122.63	203.8	-3,231.0	124.1	-130.0	254.13	0.488	Level 1
7,775.6	6,921.6	14,616.7	6,958.5	73.6	217.4	-117.80	203.7	-3,252.5	118.7	-146.2	264.86	0.448	Level 1
7,800.0	6,933.8	14,637.8	6,958.5	74.1	218.0	-112.99	203.5	-3,273.6	115.2	-158.9	274.07	0.420	Level 1
7,834.4	6,949.4	14,668.3	6,958.5	74.9	218.9	-106.14	203.3	-3,304.1	113.0	-171.5	284.51	0.397	Level 1
7,849.0	6,955.6	14,681.4	6,958.5	75.2	219.2	-103.24	203.3	-3,317.2	112.8	-175.3	288.10	0.392	Level 1, CC
7,874.0	6,966.3	14,703.9	6,958.5	75.8	219.9	-98.26	203.1	-3,339.7	113.3	-179.4	292.71	0.387	Level 1, SF
7,900.0	6,977.4	14,727.3	6,958.5	76.4	220.5	-93.16	203.0	-3,363.1	115.0	-180.4	295.34	0.389	Level 1, ES
7,964.6	7,005.0	14,785.4	6,958.5	77.9	222.1	-81.30	202.7	-3,421.2	123.6	-169.7	293.24	0.421	Level 1
7,972.4	7,008.3	14,792.5	6,958.5	78.0	222.3	-79.78	202.6	-3,428.2	125.0	-167.3	292.31	0.428	Level 1
8,000.0	7,019.2	14,817.7	6,958.5	78.7	223.0	-74.89	202.5	-3,453.5	130.2	-158.2	288.35	0.452	Level 1
8,050.0	7,035.8	14,864.7	6,958.5	79.9	224.4	-67.86	202.2	-3,500.5	139.6	-140.9	280.43	0.498	Level 1
8,070.8	7,041.5	14,883.6	6,958.5	80.4	224.9	-65.69	202.1	-3,519.3	143.2	-134.5	277.61	0.516	Level 1
8,100.0	7,048.2	14,883.6	6,958.5	81.1	224.9	-64.93	202.1	-3,519.3	150.6	-126.8	277.39	0.543	Level 1
8,150.0	7,056.5	14,883.6	6,958.5	82.3	224.9	-62.80	202.1	-3,519.3	172.6	-102.2	274.72	0.628	Level 1
8,169.3	7,058.6	14,883.6	6,958.5	82.8	224.9	-61.73	202.1	-3,519.3	183.4	-89.5	272.90	0.672	Level 1
8,200.0	7,060.6	14,883.6	6,958.5	83.6	224.9	-59.78	202.1	-3,519.3	202.7	-66.3	269.08	0.753	Level 1
8,222.2	7,061.0	14,883.6	6,958.5	84.1	224.9	-58.23	202.1	-3,519.3	217.8	-47.8	265.64	0.820	Level 1
8,267.7	7,061.0	14,883.6	6,958.5	85.3	224.9	-58.23	202.1	-3,519.3	251.8	-14.8	266.61	0.944	Level 1
8,300.0	7,061.0	14,883.6	6,958.5	86.1	224.9	-58.23	202.1	-3,519.3	277.9	10.6	267.31	1.040	Level 2
8,366.1	7,061.0	14,883.6	6,958.5	87.7	224.9	-58.23	202.1	-3,519.3	334.7	66.0	268.73	1.245	Level 2
8,400.0	7,061.0	14,883.6	6,958.5	88.6	224.9	-58.23	202.1	-3,519.3	365.0	95.6	269.47	1.355	Level 3
8,464.5	7,061.0	14,883.6	6,958.5	90.2	224.9	-58.23	202.1	-3,519.3	424.3	153.4	270.87	1.566	
8,500.0	7,061.0	14,883.6	6,958.5	91.1	224.9	-58.23	202.1	-3,519.3	457.5	185.8	271.64	1.684	
8,563.0	7,061.0	14,883.6	6,958.5	92.7	224.9	-58.23	202.1	-3,519.3	517.1	244.1	273.02	1.894	
8,600.0	7,061.0	14,883.6	6,958.5	93.7	224.9	-58.23	202.1	-3,519.3	552.5	278.7	273.83	2.018	
8,661.4	7,061.0	14,883.6	6,958.5	95.2	224.9	-58.23	202.1	-3,519.3	611.7	336.5	275.19	2.223	
8,700.0	7,061.0	14,883.6	6,958.5	96.2	224.9	-58.23	202.1	-3,519.3	649.1	373.1	276.04	2.352	
8,759.8	7,061.0	14,883.6	6,958.5	97.8	224.9	-58.23	202.1	-3,519.3	707.3	430.0	277.36	2.550	
8,800.0	7,061.0	14,883.6	6,958.5	98.8	224.9	-58.23	202.1	-3,519.3	746.6	468.3	278.25	2.683	
8,858.2	7,061.0	14,883.6	6,958.5	100.3	224.9	-58.23	202.1	-3,519.3	803.6	524.1	279.55	2.875	
8,900.0	7,061.0	14,883.6	6,958.5	101.4	224.9	-58.23	202.1	-3,519.3	844.6	564.1	280.48	3.011	
8,956.7	7,061.0	14,883.6	6,958.5	102.8	224.9	-58.23	202.1	-3,519.3	900.4	618.6	281.74	3.196	
9,000.0	7,061.0	14,883.6	6,958.5	104.0	224.9	-58.23	202.1	-3,519.3	943.1	660.4	282.71	3.336	
9,055.1	7,061.0	14,883.6	6,958.5	105.4	224.9	-58.23	202.1	-3,519.3	997.5	713.5	283.95	3.513	
9,100.0	7,061.0	14,883.6	6,958.5	106.6	224.9	-58.23	202.1	-3,519.3	1,041.8	756.9	284.96	3.656	
9,153.5	7,061.0	14,883.6	6,958.5	108.0	224.9	-58.23	202.1	-3,519.3	1,094.8	808.6	286.16	3.826	
9,200.0	7,061.0	14,883.6	6,958.5	109.2	224.9	-58.23	202.1	-3,519.3	1,140.8	853.6	287.21	3.972	
9,251.9	7,061.0	14,883.6	6,958.5	110.6	224.9	-58.23	202.1	-3,519.3	1,192.3	903.9	288.39	4.134	
9,300.0	7,061.0	14,883.6	6,958.5	111.8	224.9	-58.23	202.1	-3,519.3	1,240.0	950.5	289.47	4.284	
9,350.4	7,061.0	14,883.6	6,958.5	113.1	224.9	-58.23	202.1	-3,519.3	1,290.0	999.3	290.61	4.439	
9,400.0	7,061.0	14,883.6	6,958.5	114.5	224.9	-58.23	202.1	-3,519.3	1,339.2	1,047.5	291.74	4.590	
9,448.8	7,061.0	14,883.6	6,958.5	115.7	224.9	-58.23	202.1	-3,519.3	1,387.7	1,094.9	292.85	4.739	
9,500.0	7,061.0	14,883.6	6,958.5	117.1	224.9	-58.23	202.1	-3,519.3	1,438.6	1,144.6	294.02	4.893	
9,547.2	7,061.0	14,883.6	6,958.5	118.3	224.9	-58.23	202.1	-3,519.3	1,485.6	1,190.5	295.10	5.034	
9,600.0	7,061.0	14,883.6	6,958.5	119.7	224.9	-58.23	202.1	-3,519.3	1,538.0	1,241.7	296.30	5.191	
9,645.6	7,061.0	14,883.6	6,958.5	121.0	224.9	-58.23	202.1	-3,519.3	1,583.5	1,286.1	297.35	5.325	

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

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON H-15-16HC - Wellbore #1 - Design #1 — **Offset Site Error:** 0.0 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,700.0	7,061.0	14,883.6	6,958.5	122.4	224.9	-58.23	202.1	-3,519.3	1,637.6	1,339.0	298.59	5.484	
9,744.1	7,061.0	14,883.6	6,958.5	123.6	224.9	-58.23	202.1	-3,519.3	1,681.4	1,381.8	299.60	5.612	
9,800.0	7,061.0	14,883.6	6,958.5	125.1	224.9	-58.23	202.1	-3,519.3	1,737.1	1,436.3	300.88	5.773	
9,842.5	7,061.0	14,883.6	6,958.5	126.2	224.9	-58.23	202.1	-3,519.3	1,779.5	1,477.6	301.86	5.895	
9,900.0	7,061.0	14,883.6	6,958.5	127.7	224.9	-58.23	202.1	-3,519.3	1,836.8	1,533.6	303.18	6.058	
9,940.9	7,061.0	14,883.6	6,958.5	128.8	224.9	-58.23	202.1	-3,519.3	1,877.5	1,573.4	304.13	6.174	
10,000.0	7,061.0	14,883.6	6,958.5	130.4	224.9	-58.23	202.1	-3,519.3	1,936.4	1,630.9	305.49	6.339	
10,039.3	7,061.0	14,883.6	6,958.5	131.5	224.9	-58.23	202.1	-3,519.3	1,975.6	1,669.2	306.40	6.448	
10,100.0	7,061.0	14,883.6	6,958.5	133.1	224.9	-58.23	202.1	-3,519.3	2,036.1	1,728.3	307.80	6.615	
10,137.8	7,061.0	14,883.6	6,958.5	134.1	224.9	-58.23	202.1	-3,519.3	2,073.8	1,765.1	308.67	6.718	
10,200.0	7,061.0	14,883.6	6,958.5	135.8	224.9	-58.23	202.1	-3,519.3	2,135.8	1,825.7	310.11	6.887	
10,236.2	7,061.0	14,883.6	6,958.5	136.8	224.9	-58.23	202.1	-3,519.3	2,171.9	1,861.0	310.95	6.985	
10,300.0	7,061.0	14,883.6	6,958.5	138.5	224.9	-58.23	202.1	-3,519.3	2,235.6	1,923.1	312.43	7.155	
10,334.6	7,061.0	14,883.6	6,958.5	139.4	224.9	-58.23	202.1	-3,519.3	2,270.1	1,956.9	313.23	7.247	
10,400.0	7,061.0	14,883.6	6,958.5	141.2	224.9	-58.23	202.1	-3,519.3	2,335.3	2,020.6	314.75	7.420	
10,433.0	7,061.0	14,883.6	6,958.5	142.1	224.9	-58.23	202.1	-3,519.3	2,368.3	2,052.8	315.52	7.506	
10,500.0	7,061.0	14,883.6	6,958.5	143.9	224.9	-58.23	202.1	-3,519.3	2,435.1	2,118.0	317.08	7.680	
10,531.5	7,061.0	14,883.6	6,958.5	144.7	224.9	-58.23	202.1	-3,519.3	2,466.5	2,148.7	317.81	7.761	
10,600.0	7,061.0	14,883.6	6,958.5	146.6	224.9	-58.23	202.1	-3,519.3	2,534.9	2,215.5	319.41	7.936	
10,629.9	7,061.0	14,883.6	6,958.5	147.4	224.9	-58.23	202.1	-3,519.3	2,564.8	2,244.7	320.11	8.012	
10,700.0	7,061.0	14,883.6	6,958.5	149.3	224.9	-58.23	202.1	-3,519.3	2,634.7	2,313.0	321.74	8.189	
10,728.3	7,061.0	14,883.6	6,958.5	150.1	224.9	-58.23	202.1	-3,519.3	2,663.0	2,340.6	322.40	8.260	
10,800.0	7,061.0	14,883.6	6,958.5	152.0	224.9	-58.23	202.1	-3,519.3	2,734.6	2,410.5	324.08	8.438	
10,826.7	7,061.0	14,883.6	6,958.5	152.7	224.9	-58.23	202.1	-3,519.3	2,761.3	2,436.6	324.70	8.504	
10,900.0	7,061.0	14,883.6	6,958.5	154.7	224.9	-58.23	202.1	-3,519.3	2,834.4	2,508.0	326.42	8.683	
10,925.2	7,061.0	14,883.6	6,958.5	155.4	224.9	-58.23	202.1	-3,519.3	2,859.6	2,532.6	327.01	8.745	
11,000.0	7,061.0	14,883.6	6,958.5	157.4	224.9	-58.23	202.1	-3,519.3	2,934.3	2,605.5	328.76	8.925	
11,023.6	7,061.0	14,883.6	6,958.5	158.1	224.9	-58.23	202.1	-3,519.3	2,957.8	2,628.5	329.31	8.982	
11,100.0	7,061.0	14,883.6	6,958.5	160.2	224.9	-58.23	202.1	-3,519.3	3,034.1	2,703.0	331.10	9.164	
11,122.0	7,061.0	14,883.6	6,958.5	160.8	224.9	-58.23	202.1	-3,519.3	3,056.1	2,724.5	331.62	9.216	
11,200.0	7,061.0	14,883.6	6,958.5	162.9	224.9	-58.23	202.1	-3,519.3	3,134.0	2,800.6	333.45	9.399	
11,220.4	7,061.0	14,883.6	6,958.5	163.5	224.9	-58.23	202.1	-3,519.3	3,154.4	2,820.5	333.93	9.446	
11,300.0	7,061.0	14,883.6	6,958.5	165.6	224.9	-58.23	202.1	-3,519.3	3,233.9	2,898.1	335.80	9.630	
11,318.9	7,061.0	14,883.6	6,958.5	166.1	224.9	-58.23	202.1	-3,519.3	3,252.7	2,916.5	336.24	9.674	
11,400.0	7,061.0	14,883.6	6,958.5	168.4	224.9	-58.23	202.1	-3,519.3	3,333.8	2,995.6	338.15	9.859	
11,417.3	7,061.0	14,883.6	6,958.5	168.8	224.9	-58.23	202.1	-3,519.3	3,351.1	3,012.5	338.56	9.898	
11,500.0	7,061.0	14,883.6	6,958.5	171.1	224.9	-58.23	202.1	-3,519.3	3,433.7	3,093.2	340.50	10.084	
11,515.7	7,061.0	14,883.6	6,958.5	171.5	224.9	-58.23	202.1	-3,519.3	3,449.4	3,108.5	340.87	10.119	
11,600.0	7,061.0	14,883.6	6,958.5	173.8	224.9	-58.23	202.1	-3,519.3	3,533.6	3,190.7	342.86	10.306	
11,614.1	7,061.0	14,883.6	6,958.5	174.2	224.9	-58.23	202.1	-3,519.3	3,547.7	3,204.5	343.19	10.337	
11,700.0	7,061.0	14,883.6	6,958.5	176.6	224.9	-58.23	202.1	-3,519.3	3,633.5	3,288.3	345.22	10.525	
11,712.6	7,061.0	14,883.6	6,958.5	176.9	224.9	-58.23	202.1	-3,519.3	3,646.0	3,300.5	345.51	10.553	
11,800.0	7,061.0	14,883.6	6,958.5	179.3	224.9	-58.23	202.1	-3,519.3	3,733.4	3,385.8	347.58	10.741	
11,811.0	7,061.0	14,883.6	6,958.5	179.6	224.9	-58.23	202.1	-3,519.3	3,744.4	3,396.5	347.84	10.765	
11,900.0	7,061.0	14,883.6	6,958.5	182.1	224.9	-58.23	202.1	-3,519.3	3,833.3	3,483.4	349.94	10.954	
11,909.4	7,061.0	14,883.6	6,958.5	182.3	224.9	-58.23	202.1	-3,519.3	3,842.7	3,492.6	350.16	10.974	
12,000.0	7,061.0	14,883.6	6,958.5	184.8	224.9	-58.23	202.1	-3,519.3	3,933.2	3,580.9	352.30	11.164	
12,007.8	7,061.0	14,883.6	6,958.5	185.0	224.9	-58.23	202.1	-3,519.3	3,941.1	3,588.6	352.49	11.181	
12,100.0	7,061.0	14,883.6	6,958.5	187.5	224.9	-58.23	202.1	-3,519.3	4,033.1	3,678.5	354.67	11.372	
12,106.3	7,061.0	14,883.6	6,958.5	187.7	224.9	-58.23	202.1	-3,519.3	4,039.4	3,684.6	354.81	11.385	
12,200.0	7,061.0	14,883.6	6,958.5	190.3	224.9	-58.23	202.1	-3,519.3	4,133.1	3,776.0	357.03	11.576	
12,204.7	7,061.0	14,883.6	6,958.5	190.4	224.9	-58.23	202.1	-3,519.3	4,137.8	3,780.6	357.14	11.586	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON H-15-16HC - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,300.0	7,061.0	14,883.6	6,958.5	193.0	224.9	-58.23	202.1	-3,519.3	4,233.0	3,873.6	359.40	11.778	
12,303.1	7,061.0	14,883.6	6,958.5	193.1	224.9	-58.23	202.1	-3,519.3	4,236.1	3,876.7	359.47	11.784	
12,400.0	7,061.0	14,883.6	6,958.5	195.8	224.9	-58.23	202.1	-3,519.3	4,332.9	3,971.2	361.77	11.977	
12,401.5	7,061.0	14,883.6	6,958.5	195.8	224.9	-58.23	202.1	-3,519.3	4,334.5	3,972.7	361.81	11.980	
12,500.0	7,061.0	14,883.6	6,958.5	198.6	224.9	-58.23	202.1	-3,519.3	4,432.9	4,068.7	364.14	12.174	
12,598.4	7,061.0	14,883.6	6,958.5	201.3	224.9	-58.23	202.1	-3,519.3	4,531.2	4,164.7	366.47	12.364	
12,600.0	7,061.0	14,883.6	6,958.5	201.3	224.9	-58.23	202.1	-3,519.3	4,532.8	4,166.3	366.51	12.367	
12,696.8	7,061.0	14,883.6	6,958.5	204.0	224.9	-58.23	202.1	-3,519.3	4,629.6	4,260.8	368.81	12.553	
12,700.0	7,061.0	14,883.6	6,958.5	204.1	224.9	-58.23	202.1	-3,519.3	4,632.8	4,263.9	368.89	12.559	
12,795.2	7,061.0	14,883.6	6,958.5	206.7	224.9	-58.23	202.1	-3,519.3	4,728.0	4,356.8	371.15	12.739	
12,800.0	7,061.0	14,883.6	6,958.5	206.8	224.9	-58.23	202.1	-3,519.3	4,732.7	4,361.4	371.26	12.748	
12,893.7	7,061.0	14,883.6	6,958.5	209.4	224.9	-58.23	202.1	-3,519.3	4,826.3	4,452.8	373.49	12.922	
12,900.0	7,061.0	14,883.6	6,958.5	209.6	224.9	-58.23	202.1	-3,519.3	4,832.7	4,459.0	373.64	12.934	
12,992.1	7,061.0	14,883.6	6,958.5	212.1	224.9	-58.23	202.1	-3,519.3	4,924.7	4,548.9	375.82	13.104	
13,000.0	7,061.0	14,883.6	6,958.5	212.3	224.9	-58.23	202.1	-3,519.3	4,932.6	4,556.6	376.01	13.118	
13,090.5	7,061.0	14,883.6	6,958.5	214.8	224.9	-58.23	202.1	-3,519.3	5,023.1	4,644.9	378.17	13.283	
13,100.0	7,061.0	14,883.6	6,958.5	215.1	224.9	-58.23	202.1	-3,519.3	5,032.6	4,654.2	378.39	13.300	
13,188.9	7,061.0	14,883.6	6,958.5	217.6	224.9	-58.23	202.1	-3,519.3	5,121.5	4,741.0	380.51	13.460	
13,200.0	7,061.0	14,883.6	6,958.5	217.9	224.9	-58.23	202.1	-3,519.3	5,132.5	4,751.7	380.77	13.479	
13,287.4	7,061.0	14,883.6	6,958.5	220.3	224.9	-58.23	202.1	-3,519.3	5,219.8	4,837.0	382.85	13.634	
13,300.0	7,061.0	14,883.6	6,958.5	220.6	224.9	-58.23	202.1	-3,519.3	5,232.5	4,849.3	383.15	13.656	
13,385.8	7,061.0	14,883.6	6,958.5	223.0	224.9	-58.23	202.1	-3,519.3	5,318.2	4,933.0	385.19	13.807	
13,400.0	7,061.0	14,883.6	6,958.5	223.4	224.9	-58.23	202.1	-3,519.3	5,332.4	4,946.9	385.53	13.831	
13,484.2	7,061.0	14,883.6	6,958.5	225.7	224.9	-58.23	202.1	-3,519.3	5,416.6	5,029.1	387.54	13.977	
13,500.0	7,061.0	14,883.6	6,958.5	226.2	224.9	-58.23	202.1	-3,519.3	5,432.4	5,044.5	387.91	14.004	
13,582.6	7,061.0	14,883.6	6,958.5	228.5	224.9	-58.23	202.1	-3,519.3	5,515.0	5,125.1	389.88	14.145	
13,600.0	7,061.0	14,883.6	6,958.5	228.9	224.9	-58.23	202.1	-3,519.3	5,532.3	5,142.0	390.29	14.175	
13,681.1	7,061.0	14,883.6	6,958.5	231.2	224.9	-58.23	202.1	-3,519.3	5,613.4	5,221.1	392.23	14.312	
13,700.0	7,061.0	14,883.6	6,958.5	231.7	224.9	-58.23	202.1	-3,519.3	5,632.3	5,239.6	392.68	14.343	
13,779.5	7,061.0	14,883.6	6,958.5	233.9	224.9	-58.23	202.1	-3,519.3	5,711.8	5,317.2	394.57	14.476	
13,800.0	7,061.0	14,883.6	6,958.5	234.5	224.9	-58.23	202.1	-3,519.3	5,732.3	5,337.2	395.06	14.510	
13,877.9	7,061.0	14,883.6	6,958.5	236.6	224.9	-58.23	202.1	-3,519.3	5,810.2	5,413.2	396.92	14.638	
13,900.0	7,061.0	14,883.6	6,958.5	237.3	224.9	-58.23	202.1	-3,519.3	5,832.2	5,434.8	397.45	14.674	
13,976.3	7,061.0	14,883.6	6,958.5	239.4	224.9	-58.23	202.1	-3,519.3	5,908.5	5,509.3	399.27	14.798	
14,000.0	7,061.0	14,883.6	6,958.5	240.0	224.9	-58.23	202.1	-3,519.3	5,932.2	5,532.4	399.83	14.837	
14,074.8	7,061.0	14,883.6	6,958.5	242.1	224.9	-58.23	202.1	-3,519.3	6,006.9	5,605.3	401.62	14.957	
14,100.0	7,061.0	14,883.6	6,958.5	242.8	224.9	-58.23	202.1	-3,519.3	6,032.2	5,629.9	402.22	14.997	
14,173.2	7,061.0	14,883.6	6,958.5	244.8	224.9	-58.23	202.1	-3,519.3	6,105.3	5,701.4	403.97	15.113	
14,200.0	7,061.0	14,883.6	6,958.5	245.6	224.9	-58.23	202.1	-3,519.3	6,132.1	5,727.5	404.61	15.156	
14,271.6	7,061.0	14,883.6	6,958.5	247.6	224.9	-58.23	202.1	-3,519.3	6,203.7	5,797.4	406.32	15.268	
14,300.0	7,061.0	14,883.6	6,958.5	248.4	224.9	-58.23	202.1	-3,519.3	6,232.1	5,825.1	407.00	15.312	
14,370.0	7,061.0	14,883.6	6,958.5	250.3	224.9	-58.23	202.1	-3,519.3	6,302.1	5,893.4	408.67	15.421	
14,400.0	7,061.0	14,883.6	6,958.5	251.1	224.9	-58.23	202.1	-3,519.3	6,332.1	5,922.7	409.39	15.467	
14,468.5	7,061.0	14,883.6	6,958.5	253.0	224.9	-58.23	202.1	-3,519.3	6,400.5	5,989.5	411.02	15.572	
14,500.0	7,061.0	14,883.6	6,958.5	253.9	224.9	-58.23	202.1	-3,519.3	6,432.0	6,020.3	411.77	15.620	
14,566.9	7,061.0	14,883.6	6,958.5	255.8	224.9	-58.23	202.1	-3,519.3	6,498.9	6,085.5	413.37	15.722	
14,600.0	7,061.0	14,883.6	6,958.5	256.7	224.9	-58.23	202.1	-3,519.3	6,532.0	6,117.8	414.17	15.771	
14,665.3	7,061.0	14,883.6	6,958.5	258.5	224.9	-58.23	202.1	-3,519.3	6,597.3	6,181.6	415.73	15.869	
14,700.0	7,061.0	14,883.6	6,958.5	259.5	224.9	-58.23	202.1	-3,519.3	6,632.0	6,215.4	416.56	15.921	
14,763.7	7,061.0	14,883.6	6,958.5	261.2	224.9	-58.23	202.1	-3,519.3	6,695.7	6,277.6	418.08	16.015	
14,800.0	7,061.0	14,883.6	6,958.5	262.2	224.9	-58.23	202.1	-3,519.3	6,731.9	6,313.0	418.95	16.069	
14,862.2	7,061.0	14,883.6	6,958.5	264.0	224.9	-58.23	202.1	-3,519.3	6,794.1	6,373.7	420.43	16.160	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON H-15-16HC - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,900.0	7,061.0	14,883.6	6,958.5	265.0	224.9	-58.23	202.1	-3,519.3	6,831.9	6,410.6	421.34	16.215	
14,960.6	7,061.0	14,883.6	6,958.5	266.7	224.9	-58.23	202.1	-3,519.3	6,892.5	6,469.7	422.79	16.302	
15,000.0	7,061.0	14,883.6	6,958.5	267.8	224.9	-58.23	202.1	-3,519.3	6,931.9	6,508.2	423.73	16.359	
15,059.0	7,061.0	14,883.6	6,958.5	269.4	224.9	-58.23	202.1	-3,519.3	6,990.9	6,565.8	425.14	16.444	
15,100.0	7,061.0	14,883.6	6,958.5	270.6	224.9	-58.23	202.1	-3,519.3	7,031.9	6,605.7	426.12	16.502	
15,157.4	7,061.0	14,883.6	6,958.5	272.2	224.9	-58.23	202.1	-3,519.3	7,089.3	6,661.8	427.50	16.583	
15,200.0	7,061.0	14,883.6	6,958.5	273.4	224.9	-58.23	202.1	-3,519.3	7,131.8	6,703.3	428.52	16.643	
15,255.9	7,061.0	14,883.6	6,958.5	274.9	224.9	-58.23	202.1	-3,519.3	7,187.7	6,757.8	429.86	16.721	
15,300.0	7,061.0	14,883.6	6,958.5	276.1	224.9	-58.23	202.1	-3,519.3	7,231.8	6,800.9	430.91	16.783	
15,354.3	7,061.0	14,883.6	6,958.5	277.7	224.9	-58.23	202.1	-3,519.3	7,286.1	6,853.9	432.21	16.858	
15,400.0	7,061.0	14,883.6	6,958.5	278.9	224.9	-58.23	202.1	-3,519.3	7,331.8	6,898.5	433.31	16.921	
15,452.7	7,061.0	14,883.6	6,958.5	280.4	224.9	-58.23	202.1	-3,519.3	7,384.5	6,949.9	434.57	16.993	
15,500.0	7,061.0	14,883.6	6,958.5	281.7	224.9	-58.23	202.1	-3,519.3	7,431.8	6,996.1	435.70	17.057	
15,551.1	7,061.0	14,883.6	6,958.5	283.1	224.9	-58.23	202.1	-3,519.3	7,482.9	7,046.0	436.93	17.126	
15,600.0	7,061.0	14,883.6	6,958.5	284.5	224.9	-58.23	202.1	-3,519.3	7,531.8	7,093.7	438.10	17.192	
15,649.6	7,061.0	14,883.6	6,958.5	285.9	224.9	-58.23	202.1	-3,519.3	7,581.3	7,142.0	439.28	17.258	
15,700.0	7,061.0	14,883.6	6,958.5	287.3	224.9	-58.23	202.1	-3,519.3	7,631.7	7,191.2	440.49	17.325	
15,748.0	7,061.0	14,883.6	6,958.5	288.6	224.9	-58.23	202.1	-3,519.3	7,679.7	7,238.1	441.64	17.389	
15,800.0	7,061.0	14,883.6	6,958.5	290.1	224.9	-58.23	202.1	-3,519.3	7,731.7	7,288.8	442.89	17.457	
15,846.4	7,061.0	14,883.6	6,958.5	291.4	224.9	-58.23	202.1	-3,519.3	7,778.1	7,334.1	444.00	17.518	
15,900.0	7,061.0	14,883.6	6,958.5	292.9	224.9	-58.23	202.1	-3,519.3	7,831.7	7,386.4	445.29	17.588	
15,944.8	7,061.0	14,883.6	6,958.5	294.1	224.9	-58.23	202.1	-3,519.3	7,876.5	7,430.2	446.36	17.646	
16,000.0	7,061.0	14,883.6	6,958.5	295.6	224.9	-58.23	202.1	-3,519.3	7,931.7	7,484.0	447.68	17.717	
16,043.3	7,061.0	14,883.6	6,958.5	296.8	224.9	-58.23	202.1	-3,519.3	7,974.9	7,526.2	448.72	17.773	
16,100.0	7,061.0	14,883.6	6,958.5	298.4	224.9	-58.23	202.1	-3,519.3	8,031.7	7,581.6	450.08	17.845	
16,141.7	7,061.0	14,883.6	6,958.5	299.6	224.9	-58.23	202.1	-3,519.3	8,073.3	7,622.3	451.08	17.898	
16,200.0	7,061.0	14,883.6	6,958.5	301.2	224.9	-58.23	202.1	-3,519.3	8,131.6	7,679.2	452.48	17.971	
16,240.1	7,061.0	14,883.6	6,958.5	302.3	224.9	-58.23	202.1	-3,519.3	8,171.7	7,718.3	453.44	18.022	
16,300.0	7,061.0	14,883.6	6,958.5	304.0	224.9	-58.23	202.1	-3,519.3	8,231.6	7,776.7	454.88	18.096	
16,338.5	7,061.0	14,883.6	6,958.5	305.1	224.9	-58.23	202.1	-3,519.3	8,270.2	7,814.4	455.80	18.144	
16,400.0	7,061.0	14,883.6	6,958.5	306.8	224.9	-58.23	202.1	-3,519.3	8,331.6	7,874.3	457.28	18.220	
16,437.0	7,061.0	14,883.6	6,958.5	307.8	224.9	-58.23	202.1	-3,519.3	8,368.6	7,910.4	458.16	18.265	
16,500.0	7,061.0	14,883.6	6,958.5	309.6	224.9	-58.23	202.1	-3,519.3	8,431.6	7,971.9	459.68	18.342	
16,535.4	7,061.0	14,883.6	6,958.5	310.6	224.9	-58.23	202.1	-3,519.3	8,467.0	8,006.4	460.52	18.385	
16,600.0	7,061.0	14,883.6	6,958.5	312.4	224.9	-58.23	202.1	-3,519.3	8,531.6	8,069.5	462.07	18.464	
16,633.8	7,061.0	14,883.6	6,958.5	313.3	224.9	-58.23	202.1	-3,519.3	8,565.4	8,102.5	462.89	18.504	
16,700.0	7,061.0	14,883.6	6,958.5	315.2	224.9	-58.23	202.1	-3,519.3	8,631.5	8,167.1	464.47	18.583	
16,732.2	7,061.0	14,883.6	6,958.5	316.1	224.9	-58.23	202.1	-3,519.3	8,663.8	8,198.5	465.25	18.622	
16,800.0	7,061.0	14,883.6	6,958.5	317.9	224.9	-58.23	202.1	-3,519.3	8,731.5	8,264.7	466.87	18.702	
16,830.7	7,061.0	14,883.6	6,958.5	318.8	224.9	-58.23	202.1	-3,519.3	8,762.2	8,294.6	467.61	18.738	
16,900.0	7,061.0	14,883.6	6,958.5	320.7	224.9	-58.23	202.1	-3,519.3	8,831.5	8,362.2	469.27	18.819	
16,929.1	7,061.0	14,883.6	6,958.5	321.5	224.9	-58.23	202.1	-3,519.3	8,860.6	8,390.6	469.97	18.853	
17,000.0	7,061.0	14,883.6	6,958.5	323.5	224.9	-58.23	202.1	-3,519.3	8,931.5	8,459.8	471.68	18.936	
17,027.5	7,061.0	14,883.6	6,958.5	324.3	224.9	-58.23	202.1	-3,519.3	8,959.0	8,486.7	472.34	18.967	
17,100.0	7,061.0	14,883.6	6,958.5	326.3	224.9	-58.23	202.1	-3,519.3	9,031.5	8,557.4	474.08	19.051	
17,125.9	7,061.0	14,883.6	6,958.5	327.0	224.9	-58.23	202.1	-3,519.3	9,057.4	8,582.7	474.70	19.080	
17,200.0	7,061.0	14,883.6	6,958.5	329.1	224.9	-58.23	202.1	-3,519.3	9,131.5	8,655.0	476.48	19.165	
17,224.4	7,061.0	14,883.6	6,958.5	329.8	224.9	-58.23	202.1	-3,519.3	9,155.8	8,678.8	477.06	19.192	
17,300.0	7,061.0	14,883.6	6,958.5	331.9	224.9	-58.23	202.1	-3,519.3	9,231.5	8,752.6	478.88	19.277	
17,322.8	7,061.0	14,883.6	6,958.5	332.5	224.9	-58.23	202.1	-3,519.3	9,254.3	8,774.8	479.43	19.303	
17,400.0	7,061.0	14,883.6	6,958.5	334.7	224.9	-58.23	202.1	-3,519.3	9,331.4	8,850.2	481.28	19.389	
17,421.2	7,061.0	14,883.6	6,958.5	335.3	224.9	-58.23	202.1	-3,519.3	9,352.7	8,870.9	481.79	19.412	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - CARLSON H-15-16HC - Wellbore #1 - Design #1

Offset Site Error: 0.0 usft

Survey Program: 0-MWD

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
17,500.0	7,061.0	14,883.6	6,958.5	337.5	224.9	-58.23	202.1	-3,519.3	9,431.4	8,947.7	483.68	19.499	
17,519.6	7,061.0	14,883.6	6,958.5	338.0	224.9	-58.23	202.1	-3,519.3	9,451.1	8,966.9	484.16	19.521	
17,600.0	7,061.0	14,883.6	6,958.5	340.3	224.9	-58.23	202.1	-3,519.3	9,531.4	9,045.3	486.09	19.608	
17,618.1	7,061.0	14,883.6	6,958.5	340.8	224.9	-58.23	202.1	-3,519.3	9,549.5	9,063.0	486.52	19.628	
17,700.0	7,061.0	14,883.6	6,958.5	343.1	224.9	-58.23	202.1	-3,519.3	9,631.4	9,142.9	488.49	19.717	
17,716.5	7,061.0	14,883.6	6,958.5	343.5	224.9	-58.23	202.1	-3,519.3	9,647.9	9,159.0	488.89	19.734	
17,800.0	7,061.0	14,883.6	6,958.5	345.9	224.9	-58.23	202.1	-3,519.3	9,731.4	9,240.5	490.89	19.824	
17,814.9	7,061.0	14,883.6	6,958.5	346.3	224.9	-58.23	202.1	-3,519.3	9,746.3	9,255.1	491.25	19.840	
17,900.0	7,061.0	14,883.6	6,958.5	348.7	224.9	-58.23	202.1	-3,519.3	9,831.4	9,338.1	493.29	19.930	
17,913.3	7,061.0	14,883.6	6,958.5	349.0	224.9	-58.23	202.1	-3,519.3	9,844.7	9,351.1	493.62	19.944	
18,000.0	7,061.0	14,883.6	6,958.5	351.4	224.9	-58.23	202.1	-3,519.3	9,931.4	9,435.7	495.70	20.035	
18,011.8	7,061.0	14,883.6	6,958.5	351.8	224.9	-58.23	202.1	-3,519.3	9,943.1	9,447.2	495.98	20.047	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 100-GYD_CT — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	134.30	-51.4	52.6	75.7				
98.4	98.4	80.0	80.0	0.1	0.0	134.25	-51.5	52.8	73.8	73.6	0.14	534.568	CC, ES
100.0	100.0	81.6	81.6	0.1	0.0	134.25	-51.5	52.8	73.8	73.6	0.14	524.525	
196.8	196.8	178.3	178.3	0.3	0.2	134.12	-51.8	53.4	74.4	73.9	0.49	150.556	
200.0	200.0	181.5	181.5	0.3	0.2	134.11	-51.8	53.5	74.4	73.9	0.51	146.996	
295.3	295.3	276.9	276.9	0.5	0.3	134.11	-52.2	53.9	75.0	74.2	0.81	93.100	
300.0	300.0	281.7	281.7	0.5	0.3	134.11	-52.2	53.9	75.1	74.2	0.82	91.533	
393.7	393.7	375.5	375.5	0.8	0.3	134.41	-52.8	53.9	75.4	74.3	1.09	69.053	
400.0	400.0	381.8	381.8	0.8	0.4	134.44	-52.8	53.8	75.4	74.3	1.11	67.938	
492.1	492.1	474.0	474.0	1.0	0.4	134.92	-53.4	53.5	75.6	74.2	1.37	55.032	
500.0	500.0	481.9	481.9	1.0	0.4	134.96	-53.4	53.5	75.6	74.2	1.40	54.154	
590.5	590.5	572.6	572.6	1.2	0.5	-140.62	-53.9	53.1	76.8	75.1	1.65	46.643	
600.0	600.0	582.0	582.0	1.2	0.5	-140.72	-54.0	53.0	77.0	75.3	1.67	46.079	
689.0	688.8	670.9	670.8	1.4	0.5	-142.24	-54.4	52.6	80.5	78.6	1.91	42.179	
700.0	699.8	681.8	681.8	1.4	0.5	-142.49	-54.5	52.5	81.1	79.1	1.94	41.853	
787.4	786.9	769.0	769.0	1.6	0.6	-144.95	-55.0	52.0	87.0	84.9	2.18	39.934	
800.0	799.5	781.6	781.5	1.7	0.6	-145.36	-55.0	52.0	88.1	85.9	2.21	39.778	
885.8	884.7	866.9	866.9	1.9	0.6	-148.34	-55.4	51.4	96.5	94.1	2.46	39.183	SF
900.0	898.7	880.9	880.9	1.9	0.6	-148.86	-55.5	51.4	98.2	95.7	2.50	39.196	
984.2	981.9	964.5	964.5	2.2	0.6	-152.00	-55.8	50.8	109.2	106.4	2.76	39.579	
1,000.0	997.5	980.1	980.1	2.2	0.7	-152.59	-55.8	50.7	111.5	108.7	2.81	39.745	
1,082.7	1,078.7	1,061.6	1,061.6	2.5	0.7	-155.56	-55.9	50.1	125.0	121.9	3.06	40.796	
1,100.0	1,095.6	1,078.7	1,078.7	2.6	0.7	-156.15	-55.9	49.9	128.1	125.0	3.12	41.101	
1,181.1	1,174.7	1,158.2	1,158.2	2.9	0.7	-158.81	-55.8	49.1	144.1	140.7	3.38	42.629	
1,200.0	1,193.1	1,176.7	1,176.6	3.0	0.7	-159.39	-55.7	48.9	148.1	144.7	3.44	43.065	
1,279.5	1,269.9	1,254.1	1,254.1	3.4	0.8	-161.70	-55.4	48.1	166.4	162.7	3.70	44.944	
1,300.0	1,289.6	1,273.9	1,273.9	3.5	0.8	-162.26	-55.3	47.8	171.5	167.7	3.77	45.501	
1,377.9	1,364.3	1,349.2	1,349.1	3.9	0.8	-164.27	-54.7	47.0	192.0	188.0	4.03	47.623	
1,400.0	1,385.3	1,370.3	1,370.3	4.0	0.8	-164.82	-54.4	46.7	198.2	194.1	4.10	48.291	
1,476.4	1,457.6	1,442.6	1,442.6	4.5	0.8	-166.63	-53.1	46.0	221.0	216.6	4.37	50.567	
1,500.0	1,479.8	1,464.7	1,464.6	4.6	0.8	-167.17	-52.6	45.9	228.5	224.1	4.45	51.355	
1,574.8	1,549.8	1,533.9	1,533.8	5.2	0.8	-168.76	-50.8	45.7	253.8	249.1	4.72	53.809	
1,600.0	1,573.2	1,557.0	1,556.9	5.3	0.8	-169.25	-50.2	45.7	262.8	258.0	4.81	54.649	
1,629.0	1,600.0	1,583.4	1,583.3	5.6	0.8	-169.79	-49.5	45.7	273.5	268.6	4.91	55.671	
1,673.2	1,640.8	1,623.7	1,623.6	5.9	0.8	-170.60	-48.4	45.8	290.1	285.1	5.06	57.351	
1,694.0	1,660.0	1,642.6	1,642.5	6.1	0.8	-170.96	-47.9	45.9	298.0	292.8	5.13	58.091	
1,700.0	1,665.6	1,648.1	1,647.9	6.1	0.8	-171.05	-47.7	46.0	300.2	295.1	5.15	58.285	
1,771.6	1,731.3	1,712.8	1,712.6	6.7	0.9	-172.10	-45.8	46.4	328.5	323.1	5.42	60.627	
1,800.0	1,757.1	1,738.1	1,737.9	6.9	0.9	-172.48	-45.0	46.7	340.2	334.7	5.52	61.588	
1,870.1	1,820.4	1,800.0	1,799.8	7.5	0.9	-173.33	-43.2	47.4	370.4	364.6	5.79	63.951	
1,900.0	1,847.2	1,825.9	1,825.7	7.8	0.9	-173.65	-42.5	47.8	383.9	377.9	5.91	64.986	
1,968.5	1,908.0	1,884.5	1,884.2	8.5	0.9	-174.32	-40.9	48.8	415.9	409.8	6.18	67.322	
2,000.0	1,935.8	1,911.1	1,910.8	8.8	0.9	-174.59	-40.2	49.3	431.3	425.0	6.30	68.421	
2,033.5	1,965.0	1,939.1	1,938.9	9.1	0.9	-174.87	-39.4	49.9	448.0	441.5	6.44	69.575	
2,066.9	1,994.2	1,967.0	1,966.7	9.5	0.9	-175.17	-38.7	50.6	464.9	458.3	6.57	70.761	
2,100.0	2,023.0	1,994.5	1,994.1	9.8	0.9	-175.45	-37.9	51.3	481.7	475.0	6.70	71.891	
2,165.3	2,079.9	2,048.1	2,047.7	10.5	0.9	-175.94	-36.4	52.9	515.1	508.1	6.96	74.005	
2,200.0	2,110.1	2,076.4	2,076.0	10.9	0.9	-176.17	-35.7	53.8	532.9	525.8	7.10	75.069	
2,263.8	2,165.7	2,129.0	2,128.6	11.5	0.9	-176.55	-34.5	55.7	565.9	558.6	7.36	76.927	
2,300.0	2,197.3	2,159.2	2,158.7	11.9	1.0	-176.73	-33.9	56.9	584.8	577.2	7.50	77.929	
2,362.2	2,251.5	2,211.1	2,210.5	12.6	1.0	-177.02	-33.0	58.9	617.2	609.4	7.76	79.560	
2,400.0	2,284.4	2,243.1	2,242.5	13.0	1.0	-177.18	-32.6	60.2	636.9	629.0	7.91	80.511	

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

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 100-GYD_CT — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
2,460.6	2,337.3	2,294.4	2,293.8	13.7	1.0	-177.40	-31.9	62.2	668.6	660.4	8.16	81.948	
2,500.0	2,371.6	2,327.2	2,326.5	14.1	1.0	-177.52	-31.5	63.6	689.2	680.9	8.32	82.832	
2,559.0	2,423.0	2,376.0	2,375.4	14.7	1.0	-177.69	-31.0	65.6	720.2	711.6	8.56	84.091	
2,600.0	2,458.7	2,410.1	2,409.4	15.2	1.0	-177.79	-30.8	67.1	741.7	733.0	8.73	84.924	
2,657.5	2,508.8	2,458.5	2,457.8	15.8	1.0	-177.92	-30.4	69.2	772.0	763.1	8.97	86.027	
2,700.0	2,545.9	2,494.3	2,493.6	16.2	1.0	-178.02	-30.2	70.8	794.4	785.3	9.15	86.806	
2,755.9	2,594.6	2,542.0	2,541.2	16.8	1.0	-178.13	-29.8	72.9	823.9	814.5	9.39	87.783	
2,800.0	2,633.0	2,579.7	2,578.8	17.3	1.0	-178.22	-29.5	74.6	847.2	837.6	9.57	88.519	
2,854.3	2,680.4	2,625.4	2,624.5	17.9	1.1	-178.32	-29.1	76.6	875.8	866.0	9.80	89.376	
2,900.0	2,720.2	2,663.3	2,662.3	18.4	1.1	-178.40	-28.8	78.3	899.9	889.9	9.99	90.065	
2,952.7	2,766.1	2,707.3	2,706.3	19.0	1.1	-178.49	-28.5	80.3	927.8	917.6	10.22	90.826	
3,000.0	2,807.3	2,748.5	2,747.4	19.5	1.1	-178.56	-28.2	82.2	952.8	942.4	10.42	91.473	
3,051.2	2,851.9	2,793.1	2,792.0	20.1	1.1	-178.64	-27.9	84.2	979.8	969.2	10.63	92.137	
3,100.0	2,894.5	2,836.1	2,835.0	20.6	1.1	-178.71	-27.5	86.0	1,005.5	994.7	10.84	92.747	
3,149.6	2,937.7	2,880.0	2,878.8	21.1	1.1	-178.78	-27.1	87.9	1,031.6	1,020.5	11.05	93.335	
3,200.0	2,981.6	2,923.7	2,922.5	21.7	1.1	-178.84	-26.7	89.6	1,058.0	1,046.7	11.27	93.898	
3,248.0	3,023.5	2,964.7	2,963.4	22.2	1.1	-178.90	-26.4	91.3	1,083.1	1,071.7	11.47	94.406	
3,300.0	3,068.8	3,009.6	3,008.3	22.8	1.1	-178.95	-26.2	93.0	1,110.4	1,098.7	11.70	94.932	
3,346.4	3,109.2	3,052.0	3,050.7	23.3	1.2	-179.00	-26.0	94.6	1,134.6	1,122.7	11.90	95.372	
3,400.0	3,155.9	3,101.0	3,099.6	23.9	1.2	-179.05	-25.6	96.4	1,162.5	1,150.3	12.13	95.850	
3,444.9	3,195.0	3,141.8	3,140.5	24.3	1.2	-179.10	-25.3	97.7	1,185.7	1,173.4	12.32	96.233	
3,500.0	3,243.1	3,192.2	3,190.8	25.0	1.2	-179.15	-24.9	99.3	1,214.2	1,201.6	12.56	96.676	
3,543.3	3,280.8	3,230.6	3,229.2	25.4	1.2	-179.18	-24.7	100.3	1,236.4	1,223.7	12.75	96.998	
3,600.0	3,330.2	3,280.5	3,279.1	26.0	1.2	-179.21	-24.6	101.7	1,265.5	1,252.5	12.99	97.398	
3,641.7	3,366.6	3,317.5	3,316.0	26.5	1.2	-179.23	-24.6	102.6	1,286.9	1,273.8	13.18	97.673	
3,700.0	3,417.4	3,369.4	3,368.0	27.1	1.2	-179.25	-24.8	103.9	1,316.7	1,303.3	13.43	98.031	
3,740.1	3,452.3	3,405.2	3,403.7	27.6	1.2	-179.26	-24.9	104.7	1,337.2	1,323.6	13.61	98.265	
3,800.0	3,504.5	3,457.8	3,456.3	28.2	1.3	-179.27	-25.1	105.9	1,367.8	1,353.9	13.87	98.594	
3,838.6	3,538.1	3,491.7	3,490.2	28.7	1.3	-179.27	-25.3	106.6	1,387.4	1,373.4	14.04	98.797	
3,900.0	3,591.6	3,544.5	3,543.0	29.3	1.3	-179.28	-25.5	107.8	1,418.7	1,404.4	14.32	99.101	
3,937.0	3,623.9	3,576.1	3,574.6	29.7	1.3	-179.29	-25.7	108.4	1,437.5	1,423.0	14.48	99.277	
4,000.0	3,678.8	3,628.8	3,627.2	30.4	1.3	-179.30	-26.0	109.6	1,469.6	1,454.9	14.76	99.565	
4,035.4	3,709.7	3,657.7	3,656.2	30.8	1.3	-179.30	-26.2	110.2	1,487.7	1,472.8	14.92	99.721	
4,100.0	3,765.9	3,710.6	3,709.0	31.5	1.3	-179.30	-26.7	111.5	1,520.8	1,505.6	15.21	100.000	
4,133.8	3,795.4	3,738.4	3,736.8	31.9	1.3	-179.29	-26.9	112.2	1,538.1	1,522.8	15.36	100.139	
4,200.0	3,853.1	3,792.7	3,791.1	32.6	1.3	-179.29	-27.4	113.6	1,572.1	1,556.5	15.66	100.407	
4,232.3	3,881.2	3,820.0	3,818.4	33.0	1.3	-179.29	-27.7	114.4	1,588.7	1,572.9	15.80	100.533	
4,300.0	3,940.2	3,877.9	3,876.3	33.7	1.4	-179.30	-28.1	116.0	1,623.6	1,607.5	16.11	100.788	
4,330.7	3,967.0	3,905.2	3,903.6	34.1	1.4	-179.30	-28.3	116.7	1,639.4	1,623.2	16.25	100.900	
4,400.0	4,027.4	3,979.6	3,978.0	34.8	1.4	-179.31	-28.6	118.4	1,674.8	1,658.2	16.56	101.114	
4,429.1	4,052.8	4,011.4	4,009.8	35.1	1.4	-179.32	-28.7	119.0	1,689.5	1,672.8	16.69	101.199	
4,500.0	4,114.5	4,090.8	4,089.2	35.9	1.4	-179.35	-28.4	119.7	1,724.8	1,707.8	17.01	101.395	
4,527.5	4,138.5	4,119.6	4,117.9	36.2	1.4	-179.37	-28.1	119.8	1,738.4	1,721.3	17.13	101.465	
4,600.0	4,201.7	4,193.1	4,191.4	37.0	1.4	-179.40	-27.6	119.8	1,773.9	1,756.4	17.45	101.631	
4,626.0	4,224.3	4,217.3	4,215.6	37.3	1.4	-179.41	-27.4	119.7	1,786.5	1,768.9	17.57	101.682	
4,700.0	4,288.8	4,284.1	4,282.4	38.1	1.4	-179.44	-26.8	119.4	1,822.4	1,804.5	17.90	101.820	
4,724.4	4,310.1	4,305.8	4,304.2	38.4	1.4	-179.45	-26.6	119.2	1,834.2	1,816.2	18.01	101.861	
4,800.0	4,376.0	4,371.2	4,369.5	39.2	1.4	-179.48	-26.1	118.9	1,870.9	1,852.6	18.35	101.977	
4,822.8	4,395.9	4,390.9	4,389.2	39.5	1.5	-179.49	-25.9	118.8	1,882.0	1,863.5	18.45	102.012	
4,900.0	4,463.1	4,461.0	4,459.3	40.3	1.5	-179.52	-25.3	118.4	1,919.4	1,900.6	18.80	102.112	
4,921.2	4,481.6	4,480.4	4,478.8	40.5	1.5	-179.53	-25.1	118.3	1,929.7	1,910.8	18.89	102.137	
5,000.0	4,550.3	4,548.5	4,546.8	41.4	1.5	-179.55	-24.6	117.8	1,967.7	1,948.5	19.25	102.232	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 100-GYD_CT — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,019.7	4,567.4	4,565.0	4,563.4	41.6	1.5	-179.56	-24.5	117.7	1,977.3	1,957.9	19.34	102.255	
5,100.0	4,637.4	4,633.6	4,631.9	42.5	1.5	-179.58	-24.1	117.2	2,016.2	1,996.5	19.70	102.346	
5,118.1	4,653.2	4,649.2	4,647.5	42.7	1.5	-179.58	-24.0	117.2	2,025.0	2,005.2	19.78	102.365	
5,200.0	4,724.6	4,719.7	4,718.0	43.6	1.5	-179.60	-23.7	116.8	2,064.7	2,044.6	20.15	102.446	
5,216.5	4,739.0	4,733.8	4,732.1	43.8	1.5	-179.60	-23.6	116.7	2,072.7	2,052.5	20.23	102.462	
5,300.0	4,811.7	4,804.8	4,803.1	44.7	1.5	-179.62	-23.4	116.4	2,113.3	2,092.7	20.61	102.542	
5,314.9	4,824.7	4,817.2	4,815.5	44.9	1.5	-179.62	-23.3	116.3	2,120.6	2,099.9	20.68	102.555	
5,400.0	4,898.9	4,887.8	4,886.1	45.8	1.5	-179.64	-23.0	116.1	2,162.1	2,141.0	21.07	102.633	
5,413.4	4,910.5	4,900.0	4,898.3	45.9	1.5	-179.64	-23.0	116.1	2,168.6	2,147.5	21.13	102.643	
5,500.0	4,986.0	4,969.6	4,968.0	46.9	1.5	-179.65	-22.7	116.1	2,211.0	2,189.5	21.52	102.721	
5,511.8	4,996.3	4,979.3	4,977.6	47.0	1.5	-179.65	-22.7	116.1	2,216.8	2,195.2	21.58	102.732	
5,600.0	5,073.1	5,050.0	5,048.3	48.0	1.5	-179.67	-22.5	116.2	2,260.2	2,238.2	21.98	102.809	
5,610.2	5,082.1	5,058.1	5,056.4	48.1	1.5	-179.67	-22.4	116.2	2,265.2	2,243.2	22.03	102.818	
5,700.0	5,160.3	5,131.3	5,129.6	49.1	1.6	-179.68	-22.4	116.6	2,309.6	2,287.2	22.45	102.891	
5,708.6	5,167.8	5,138.6	5,136.9	49.2	1.6	-179.68	-22.4	116.6	2,313.9	2,291.4	22.49	102.897	
5,800.0	5,247.4	5,215.0	5,213.3	50.2	1.6	-179.68	-22.4	117.1	2,359.2	2,336.3	22.91	102.959	
5,807.1	5,253.6	5,220.6	5,218.9	50.3	1.6	-179.68	-22.4	117.1	2,362.7	2,339.8	22.95	102.964	
5,900.0	5,334.6	5,294.4	5,292.7	51.3	1.6	-179.69	-22.5	117.7	2,409.0	2,385.6	23.38	103.039	
5,905.5	5,339.4	5,300.0	5,298.3	51.4	1.6	-179.69	-22.5	117.8	2,411.7	2,388.3	23.41	103.041	
6,000.0	5,421.7	5,382.0	5,380.3	52.4	1.6	-179.70	-22.5	118.6	2,458.9	2,435.0	23.85	103.096	
6,003.9	5,425.2	5,385.5	5,383.8	52.4	1.6	-179.70	-22.5	118.6	2,460.8	2,436.9	23.87	103.098	
6,100.0	5,508.9	5,472.0	5,470.3	53.5	1.6	-179.72	-22.2	119.4	2,508.7	2,484.4	24.32	103.145	
6,102.3	5,510.9	5,474.2	5,472.5	53.5	1.6	-179.72	-22.2	119.5	2,509.8	2,485.5	24.33	103.146	
6,200.0	5,596.0	5,561.4	5,559.7	54.6	1.7	-179.74	-21.6	120.2	2,558.4	2,533.6	24.79	103.187	
6,200.8	5,596.7	5,562.1	5,560.4	54.6	1.7	-179.74	-21.6	120.2	2,558.8	2,534.0	24.80	103.188	
6,299.2	5,682.5	5,637.2	5,635.5	55.7	1.7	-179.75	-21.2	120.8	2,607.7	2,582.5	25.26	103.253	
6,300.0	5,683.2	5,637.7	5,636.0	55.7	1.7	-179.75	-21.2	120.8	2,608.1	2,582.9	25.26	103.254	
6,397.6	5,768.3	5,703.1	5,701.3	56.8	1.7	-179.76	-21.1	121.8	2,657.3	2,631.6	25.71	103.354	
6,400.0	5,770.3	5,705.1	5,703.4	56.8	1.7	-179.76	-21.1	121.9	2,658.5	2,632.8	25.72	103.355	
6,496.0	5,854.0	5,788.1	5,786.4	57.9	1.7	-179.77	-21.1	123.4	2,707.1	2,680.9	26.18	103.394	
6,500.0	5,857.5	5,791.5	5,789.8	57.9	1.7	-179.77	-21.2	123.5	2,709.1	2,682.9	26.20	103.395	
6,594.5	5,939.8	5,879.1	5,877.3	58.9	1.7	-179.77	-21.5	124.9	2,756.9	2,730.2	26.66	103.423	
6,600.0	5,944.6	5,884.2	5,882.5	59.0	1.7	-179.77	-21.5	125.0	2,759.7	2,733.0	26.68	103.424	
6,692.9	6,025.6	5,969.4	5,967.6	60.0	1.8	-179.76	-22.0	126.3	2,806.4	2,779.3	27.13	103.444	
6,700.0	6,031.8	5,975.9	5,974.1	60.1	1.8	-179.76	-22.0	126.4	2,810.0	2,782.8	27.16	103.446	
6,791.3	6,111.4	6,057.5	6,055.7	61.1	1.8	-179.76	-22.5	127.4	2,855.9	2,828.3	27.60	103.462	
6,800.0	6,118.9	6,065.2	6,063.4	61.2	1.8	-179.76	-22.5	127.5	2,860.2	2,832.6	27.64	103.463	
6,889.7	6,197.1	6,146.7	6,145.0	62.2	1.8	-179.75	-23.1	128.5	2,905.2	2,877.1	28.08	103.467	
6,900.0	6,206.1	6,156.2	6,154.5	62.3	1.8	-179.75	-23.1	128.6	2,910.4	2,882.2	28.13	103.467	
6,988.2	6,282.9	6,235.1	6,233.3	63.3	1.8	-179.75	-23.5	129.4	2,954.4	2,925.9	28.55	103.466	
7,000.0	6,293.2	6,245.2	6,243.4	63.4	1.8	-179.75	-23.6	129.5	2,960.3	2,931.7	28.61	103.467	
7,086.6	6,368.7	6,320.0	6,318.2	64.3	1.8	-179.75	-23.7	130.3	3,003.6	2,974.6	29.03	103.470	
7,100.0	6,380.4	6,331.9	6,330.1	64.5	1.8	-179.75	-23.7	130.5	3,010.3	2,981.2	29.09	103.469	
7,185.0	6,454.4	6,407.7	6,405.9	65.4	1.9	-179.75	-23.8	131.2	3,052.8	3,023.3	29.51	103.459	
7,200.0	6,467.5	6,421.1	6,419.4	65.6	1.9	-179.75	-23.8	131.4	3,060.3	3,030.7	29.58	103.457	
7,283.4	6,540.2	6,496.3	6,494.5	66.5	1.9	-179.76	-24.0	132.1	3,101.9	3,071.9	29.99	103.441	
7,300.0	6,554.6	6,511.5	6,509.7	66.7	1.9	-179.76	-24.0	132.2	3,110.1	3,080.1	30.07	103.436	
7,381.9	6,626.0	6,587.0	6,585.2	67.6	1.9	-179.76	-24.1	132.8	3,150.8	3,120.4	30.47	103.410	
7,400.0	6,641.8	6,603.4	6,601.6	67.8	1.9	-179.76	-24.2	132.9	3,159.8	3,129.3	30.56	103.405	
7,480.3	6,711.8	6,672.5	6,670.7	68.7	1.9	-179.76	-24.3	133.4	3,199.7	3,168.8	30.95	103.388	
7,481.0	6,712.4	6,673.1	6,671.3	68.7	1.9	-179.76	-24.3	133.4	3,200.1	3,169.1	30.95	103.387	
7,500.0	6,728.8	6,689.3	6,687.5	68.9	1.9	-179.76	-24.3	133.5	3,209.8	3,178.6	31.17	102.966	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 100-GYD_CT — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
7,550.0	6,770.3	6,700.0	6,698.2	69.5	1.9	-179.74	-24.3	133.6	3,238.0	3,206.4	31.60	102.459	
7,578.7	6,793.1	6,700.0	6,698.2	70.0	1.9	-179.73	-24.3	133.6	3,256.0	3,224.3	31.76	102.514	
7,600.0	6,809.3	6,700.0	6,698.2	70.3	1.9	-179.72	-24.3	133.6	3,270.2	3,238.3	31.83	102.726	
7,650.0	6,845.4	6,700.0	6,698.2	71.1	1.9	-179.70	-24.3	133.6	3,306.0	3,274.1	31.87	103.733	
7,677.1	6,863.7	6,700.0	6,698.2	71.6	1.9	-179.68	-24.3	133.6	3,326.8	3,295.0	31.81	104.588	
7,700.0	6,878.3	6,700.0	6,698.2	72.0	1.9	-179.66	-24.3	133.6	3,345.0	3,313.2	31.71	105.495	
7,750.0	6,907.9	6,700.0	6,698.2	73.0	1.9	-179.61	-24.3	133.6	3,386.8	3,355.4	31.35	108.044	
7,775.6	6,921.6	6,700.0	6,698.2	73.6	1.9	-179.58	-24.3	133.6	3,409.1	3,378.0	31.09	109.664	
7,800.0	6,933.8	6,700.0	6,698.2	74.1	1.9	-179.54	-24.3	133.6	3,431.0	3,400.2	30.79	111.434	
7,834.4	6,949.4	6,700.0	6,698.2	74.9	1.9	-179.48	-24.3	133.6	3,462.6	3,432.3	30.30	114.294	
7,874.0	6,966.3	6,700.0	6,698.2	75.8	1.9	-179.48	-24.3	133.6	3,499.5	3,468.9	30.54	114.598	
7,900.0	6,977.4	6,700.0	6,698.2	76.4	1.9	-179.48	-24.3	133.6	3,523.7	3,493.0	30.70	114.795	
7,964.6	7,005.0	6,700.0	6,698.2	77.9	1.9	-179.48	-24.3	133.6	3,584.1	3,553.0	31.09	115.276	
7,972.4	7,008.3	6,700.0	6,698.2	78.0	1.9	-178.95	-24.3	133.6	3,591.4	3,560.4	31.01	115.822	
8,000.0	7,019.2	6,700.0	6,698.2	78.7	1.9	-176.77	-24.3	133.6	3,617.6	3,586.7	30.88	117.135	
8,050.0	7,035.8	6,700.0	6,698.2	79.9	1.9	-170.63	-24.3	133.6	3,666.0	3,633.4	32.63	112.366	
8,070.8	7,041.5	6,700.0	6,698.2	80.4	1.9	-166.45	-24.3	133.6	3,686.4	3,651.1	35.31	104.404	
8,100.0	7,048.2	6,700.0	6,698.2	81.1	1.9	-157.12	-24.3	133.6	3,715.3	3,671.6	43.63	85.155	
8,150.0	7,056.5	6,700.0	6,698.2	82.3	1.9	-116.58	-24.3	133.6	3,765.0	3,687.3	77.69	48.463	
8,169.3	7,058.6	6,700.0	6,698.2	82.8	1.9	-89.91	-24.3	133.6	3,784.2	3,699.8	84.41	44.833	
8,200.0	7,060.6	6,700.0	6,698.2	83.6	1.9	-57.05	-24.3	133.6	3,814.9	3,740.3	74.60	51.140	
8,222.2	7,061.0	6,700.0	6,698.2	84.1	1.9	-44.23	-24.3	133.6	3,836.9	3,772.2	64.67	59.333	
8,267.7	7,061.0	6,700.0	6,698.2	85.3	1.9	-44.23	-24.3	133.6	3,882.1	3,816.6	65.48	59.284	
8,300.0	7,061.0	6,700.0	6,698.2	86.1	1.9	-44.23	-24.3	133.6	3,914.1	3,848.1	66.06	59.250	
8,366.1	7,061.0	6,700.0	6,698.2	87.7	1.9	-44.23	-24.3	133.6	3,979.7	3,912.5	67.26	59.174	
8,400.0	7,061.0	6,700.0	6,698.2	88.6	1.9	-44.23	-24.3	133.6	4,013.4	3,945.5	67.87	59.136	
8,464.5	7,061.0	6,700.0	6,698.2	90.2	1.9	-44.23	-24.3	133.6	4,077.5	4,008.4	69.04	59.058	
8,500.0	7,061.0	6,700.0	6,698.2	91.1	1.9	-44.23	-24.3	133.6	4,112.7	4,043.0	69.69	59.016	
8,563.0	7,061.0	6,700.0	6,698.2	92.7	1.9	-44.23	-24.3	133.6	4,175.2	4,104.4	70.84	58.938	
8,600.0	7,061.0	6,700.0	6,698.2	93.7	1.9	-44.23	-24.3	133.6	4,212.0	4,140.5	71.52	58.894	
8,661.4	7,061.0	6,700.0	6,698.2	95.2	1.9	-44.23	-24.3	133.6	4,273.0	4,200.4	72.65	58.816	
8,700.0	7,061.0	6,700.0	6,698.2	96.2	1.9	-44.23	-24.3	133.6	4,311.4	4,238.0	73.36	58.769	
8,759.8	7,061.0	6,700.0	6,698.2	97.8	1.9	-44.23	-24.3	133.6	4,370.8	4,296.3	74.47	58.692	
8,800.0	7,061.0	6,700.0	6,698.2	98.8	1.9	-44.23	-24.3	133.6	4,410.8	4,335.5	75.21	58.642	
8,858.2	7,061.0	6,700.0	6,698.2	100.3	1.9	-44.23	-24.3	133.6	4,468.7	4,392.4	76.30	58.568	
8,900.0	7,061.0	6,700.0	6,698.2	101.4	1.9	-44.23	-24.3	133.6	4,510.2	4,433.1	77.08	58.515	
8,956.7	7,061.0	6,700.0	6,698.2	102.8	1.9	-44.23	-24.3	133.6	4,566.5	4,488.4	78.14	58.443	
9,000.0	7,061.0	6,700.0	6,698.2	104.0	1.9	-44.23	-24.3	133.6	4,609.6	4,530.7	78.95	58.388	
9,055.1	7,061.0	6,700.0	6,698.2	105.4	1.9	-44.23	-24.3	133.6	4,664.4	4,584.4	79.98	58.318	
9,100.0	7,061.0	6,700.0	6,698.2	106.6	1.9	-44.23	-24.3	133.6	4,709.1	4,628.2	80.83	58.261	
9,153.5	7,061.0	6,700.0	6,698.2	108.0	1.9	-44.23	-24.3	133.6	4,762.3	4,680.5	81.84	58.193	
9,200.0	7,061.0	6,700.0	6,698.2	109.2	1.9	-44.23	-24.3	133.6	4,808.6	4,725.8	82.71	58.135	
9,251.9	7,061.0	6,700.0	6,698.2	110.6	1.9	-44.23	-24.3	133.6	4,860.3	4,776.6	83.70	58.070	
9,300.0	7,061.0	6,700.0	6,698.2	111.8	1.9	-44.23	-24.3	133.6	4,908.1	4,823.5	84.61	58.011	
9,350.4	7,061.0	6,700.0	6,698.2	113.1	1.9	-44.23	-24.3	133.6	4,958.2	4,872.6	85.56	57.948	
9,400.0	7,061.0	6,700.0	6,698.2	114.5	1.9	-44.23	-24.3	133.6	5,007.6	4,921.1	86.51	57.887	
9,448.8	7,061.0	6,700.0	6,698.2	115.7	1.9	-44.23	-24.3	133.6	5,056.2	4,968.7	87.44	57.827	
9,500.0	7,061.0	6,700.0	6,698.2	117.1	1.9	-44.23	-24.3	133.6	5,107.1	5,018.7	88.41	57.765	
9,547.2	7,061.0	6,700.0	6,698.2	118.3	1.9	-44.23	-24.3	133.6	5,154.2	5,064.8	89.31	57.708	
9,600.0	7,061.0	6,700.0	6,698.2	119.7	1.9	-44.23	-24.3	133.6	5,206.7	5,116.4	90.32	57.645	
9,645.6	7,061.0	6,700.0	6,698.2	121.0	1.9	-44.23	-24.3	133.6	5,252.2	5,161.0	91.20	57.590	
9,700.0	7,061.0	6,700.0	6,698.2	122.4	1.9	-44.23	-24.3	133.6	5,306.3	5,214.0	92.24	57.527	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1 — **Offset Site Error:** 0.0 usft

Survey Program: 100-GYD_CT — **Offset Well Error:** 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,744.1	7,061.0	6,700.0	6,698.2	123.6	1.9	-44.23	-24.3	133.6	5,350.2	5,257.1	93.09	57.475	
9,800.0	7,061.0	6,700.0	6,698.2	125.1	1.9	-44.23	-24.3	133.6	5,405.9	5,311.7	94.16	57.411	
9,842.5	7,061.0	6,700.0	6,698.2	126.2	1.9	-44.23	-24.3	133.6	5,448.2	5,353.2	94.98	57.362	
9,900.0	7,061.0	6,700.0	6,698.2	127.7	1.9	-44.23	-24.3	133.6	5,505.5	5,409.4	96.09	57.296	
9,940.9	7,061.0	6,700.0	6,698.2	128.8	1.9	-44.23	-24.3	133.6	5,546.3	5,449.4	96.88	57.250	
10,000.0	7,061.0	6,700.0	6,698.2	130.4	1.9	-44.23	-24.3	133.6	5,605.1	5,507.1	98.02	57.184	
10,039.3	7,061.0	6,700.0	6,698.2	131.5	1.9	-44.23	-24.3	133.6	5,644.3	5,545.5	98.78	57.141	
10,100.0	7,061.0	6,700.0	6,698.2	133.1	1.9	-44.23	-24.3	133.6	5,704.8	5,604.8	99.95	57.075	
10,137.8	7,061.0	6,700.0	6,698.2	134.1	1.9	-44.23	-24.3	133.6	5,742.4	5,641.7	100.68	57.033	
10,200.0	7,061.0	6,700.0	6,698.2	135.8	1.9	-44.23	-24.3	133.6	5,804.4	5,702.5	101.89	56.967	
10,236.2	7,061.0	6,700.0	6,698.2	136.8	1.9	-44.23	-24.3	133.6	5,840.5	5,737.9	102.59	56.928	
10,300.0	7,061.0	6,700.0	6,698.2	138.5	1.9	-44.23	-24.3	133.6	5,904.1	5,800.2	103.83	56.861	
10,334.6	7,061.0	6,700.0	6,698.2	139.4	1.9	-44.23	-24.3	133.6	5,938.6	5,834.1	104.51	56.825	
10,400.0	7,061.0	6,700.0	6,698.2	141.2	1.9	-44.23	-24.3	133.6	6,003.7	5,898.0	105.78	56.758	
10,433.0	7,061.0	6,700.0	6,698.2	142.1	1.9	-44.23	-24.3	133.6	6,036.7	5,930.3	106.42	56.724	
10,500.0	7,061.0	6,700.0	6,698.2	143.9	1.9	-44.23	-24.3	133.6	6,103.4	5,995.7	107.73	56.657	
10,531.5	7,061.0	6,700.0	6,698.2	144.7	1.9	-44.23	-24.3	133.6	6,134.8	6,026.5	108.34	56.625	
10,600.0	7,061.0	6,700.0	6,698.2	146.6	1.9	-44.23	-24.3	133.6	6,203.1	6,093.4	109.68	56.558	
10,629.9	7,061.0	6,700.0	6,698.2	147.4	1.9	-44.23	-24.3	133.6	6,232.9	6,122.7	110.26	56.529	
10,700.0	7,061.0	6,700.0	6,698.2	149.3	1.9	-44.23	-24.3	133.6	6,302.8	6,191.2	111.63	56.461	
10,728.3	7,061.0	6,700.0	6,698.2	150.1	1.9	-44.23	-24.3	133.6	6,331.1	6,218.9	112.19	56.434	
10,800.0	7,061.0	6,700.0	6,698.2	152.0	1.9	-44.23	-24.3	133.6	6,402.5	6,288.9	113.59	56.366	
10,826.7	7,061.0	6,700.0	6,698.2	152.7	1.9	-44.23	-24.3	133.6	6,429.2	6,315.1	114.11	56.341	
10,900.0	7,061.0	6,700.0	6,698.2	154.7	1.9	-44.23	-24.3	133.6	6,502.3	6,386.7	115.55	56.274	
10,925.2	7,061.0	6,700.0	6,698.2	155.4	1.9	-44.23	-24.3	133.6	6,527.4	6,411.3	116.04	56.250	
11,000.0	7,061.0	6,700.0	6,698.2	157.4	1.9	-44.23	-24.3	133.6	6,602.0	6,484.5	117.51	56.183	
11,023.6	7,061.0	6,700.0	6,698.2	158.1	1.9	-44.23	-24.3	133.6	6,625.5	6,507.5	117.97	56.162	
11,100.0	7,061.0	6,700.0	6,698.2	160.2	1.9	-44.23	-24.3	133.6	6,701.7	6,582.2	119.47	56.094	
11,122.0	7,061.0	6,700.0	6,698.2	160.8	1.9	-44.23	-24.3	133.6	6,723.7	6,603.8	119.91	56.075	
11,200.0	7,061.0	6,700.0	6,698.2	162.9	1.9	-44.23	-24.3	133.6	6,801.5	6,680.0	121.44	56.007	
11,220.4	7,061.0	6,700.0	6,698.2	163.5	1.9	-44.23	-24.3	133.6	6,821.9	6,700.0	121.84	55.990	
11,300.0	7,061.0	6,700.0	6,698.2	165.6	1.9	-44.23	-24.3	133.6	6,901.2	6,777.8	123.41	55.922	
11,318.9	7,061.0	6,700.0	6,698.2	166.1	1.9	-44.23	-24.3	133.6	6,920.0	6,796.3	123.78	55.907	
11,400.0	7,061.0	6,700.0	6,698.2	168.4	1.9	-44.23	-24.3	133.6	7,001.0	6,875.6	125.38	55.839	
11,417.3	7,061.0	6,700.0	6,698.2	168.8	1.9	-44.23	-24.3	133.6	7,018.2	6,892.5	125.72	55.825	
11,500.0	7,061.0	6,700.0	6,698.2	171.1	1.9	-44.23	-24.3	133.6	7,100.7	6,973.4	127.35	55.758	
11,515.7	7,061.0	6,700.0	6,698.2	171.5	1.9	-44.23	-24.3	133.6	7,116.4	6,988.8	127.66	55.745	
11,600.0	7,061.0	6,700.0	6,698.2	173.8	1.9	-44.23	-24.3	133.6	7,200.5	7,071.2	129.32	55.679	
11,614.1	7,061.0	6,700.0	6,698.2	174.2	1.9	-44.23	-24.3	133.6	7,214.6	7,085.0	129.60	55.668	
11,700.0	7,061.0	6,700.0	6,698.2	176.6	1.9	-44.23	-24.3	133.6	7,300.3	7,169.0	131.30	55.601	
11,712.6	7,061.0	6,700.0	6,698.2	176.9	1.9	-44.23	-24.3	133.6	7,312.8	7,181.3	131.55	55.591	
11,800.0	7,061.0	6,700.0	6,698.2	179.3	1.9	-44.23	-24.3	133.6	7,400.1	7,266.8	133.28	55.525	
11,811.0	7,061.0	6,700.0	6,698.2	179.6	1.9	-44.23	-24.3	133.6	7,411.1	7,277.6	133.49	55.517	
11,900.0	7,061.0	6,700.0	6,698.2	182.1	1.9	-44.23	-24.3	133.6	7,499.9	7,364.6	135.25	55.450	
11,909.4	7,061.0	6,700.0	6,698.2	182.3	1.9	-44.23	-24.3	133.6	7,509.3	7,373.8	135.44	55.443	
12,000.0	7,061.0	6,700.0	6,698.2	184.8	1.9	-44.23	-24.3	133.6	7,599.7	7,462.4	137.23	55.378	
12,007.8	7,061.0	6,700.0	6,698.2	185.0	1.9	-44.23	-24.3	133.6	7,607.5	7,470.1	137.39	55.372	
12,100.0	7,061.0	6,700.0	6,698.2	187.5	1.9	-44.23	-24.3	133.6	7,699.5	7,560.3	139.22	55.306	
12,106.3	7,061.0	6,700.0	6,698.2	187.7	1.9	-44.23	-24.3	133.6	7,705.7	7,566.4	139.34	55.302	
12,200.0	7,061.0	6,700.0	6,698.2	190.3	1.9	-44.23	-24.3	133.6	7,799.3	7,658.1	141.20	55.237	
12,204.7	7,061.0	6,700.0	6,698.2	190.4	1.9	-44.23	-24.3	133.6	7,804.0	7,662.7	141.29	55.233	
12,300.0	7,061.0	6,700.0	6,698.2	193.0	1.9	-44.23	-24.3	133.6	7,899.1	7,755.9	143.18	55.168	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Offset Design SW NW SEC. 15 T5N R65W 6th P.M. - EXIST VERT SANDUSKY #1 - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 usft

Survey Program: 100-GYD_CT

Offset Well Error: 0.0 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
12,303.1	7,061.0	6,700.0	6,698.2	193.1	1.9	-44.23	-24.3	133.6	7,902.2	7,759.0	143.24	55.166	
12,400.0	7,061.0	6,700.0	6,698.2	195.8	1.9	-44.23	-24.3	133.6	7,998.9	7,853.7	145.17	55.101	
12,401.5	7,061.0	6,700.0	6,698.2	195.8	1.9	-44.23	-24.3	133.6	8,000.5	7,855.3	145.20	55.100	
12,500.0	7,061.0	6,700.0	6,698.2	198.6	1.9	-44.23	-24.3	133.6	8,098.7	7,951.6	147.15	55.036	
12,598.4	7,061.0	6,700.0	6,698.2	201.3	1.9	-44.23	-24.3	133.6	8,197.0	8,047.8	149.11	54.973	
12,600.0	7,061.0	6,700.0	6,698.2	201.3	1.9	-44.23	-24.3	133.6	8,198.6	8,049.4	149.14	54.972	
12,696.8	7,061.0	6,700.0	6,698.2	204.0	1.9	-44.23	-24.3	133.6	8,295.2	8,144.1	151.07	54.911	
12,700.0	7,061.0	6,700.0	6,698.2	204.1	1.9	-44.23	-24.3	133.6	8,298.4	8,147.3	151.13	54.909	
12,795.2	7,061.0	6,700.0	6,698.2	206.7	1.9	-44.23	-24.3	133.6	8,393.5	8,240.5	153.02	54.851	
12,800.0	7,061.0	6,700.0	6,698.2	206.8	1.9	-44.23	-24.3	133.6	8,398.2	8,245.1	153.12	54.848	
12,893.7	7,061.0	6,700.0	6,698.2	209.4	1.9	-44.23	-24.3	133.6	8,491.7	8,336.8	154.98	54.791	
12,900.0	7,061.0	6,700.0	6,698.2	209.6	1.9	-44.23	-24.3	133.6	8,498.1	8,342.9	155.11	54.787	
12,992.1	7,061.0	6,700.0	6,698.2	212.1	1.9	-44.23	-24.3	133.6	8,590.0	8,433.1	156.94	54.733	
13,000.0	7,061.0	6,700.0	6,698.2	212.3	1.9	-44.23	-24.3	133.6	8,597.9	8,440.8	157.10	54.728	
13,090.5	7,061.0	6,700.0	6,698.2	214.8	1.9	-44.23	-24.3	133.6	8,688.3	8,529.4	158.90	54.676	
13,100.0	7,061.0	6,700.0	6,698.2	215.1	1.9	-44.23	-24.3	133.6	8,697.7	8,538.6	159.09	54.671	
13,188.9	7,061.0	6,700.0	6,698.2	217.6	1.9	-44.23	-24.3	133.6	8,786.6	8,625.7	160.87	54.620	
13,200.0	7,061.0	6,700.0	6,698.2	217.9	1.9	-44.23	-24.3	133.6	8,797.6	8,636.5	161.09	54.614	
13,287.4	7,061.0	6,700.0	6,698.2	220.3	1.9	-44.23	-24.3	133.6	8,884.8	8,722.0	162.83	54.565	
13,300.0	7,061.0	6,700.0	6,698.2	220.6	1.9	-44.23	-24.3	133.6	8,897.4	8,734.4	163.08	54.558	
13,385.8	7,061.0	6,700.0	6,698.2	223.0	1.9	-44.23	-24.3	133.6	8,983.1	8,818.3	164.79	54.511	
13,400.0	7,061.0	6,700.0	6,698.2	223.4	1.9	-44.23	-24.3	133.6	8,997.3	8,832.2	165.08	54.504	
13,484.2	7,061.0	6,700.0	6,698.2	225.7	1.9	-44.23	-24.3	133.6	9,081.4	8,914.6	166.76	54.459	
13,500.0	7,061.0	6,700.0	6,698.2	226.2	1.9	-44.23	-24.3	133.6	9,097.2	8,930.1	167.07	54.450	
13,582.6	7,061.0	6,700.0	6,698.2	228.5	1.9	-44.23	-24.3	133.6	9,179.7	9,011.0	168.72	54.407	
13,600.0	7,061.0	6,700.0	6,698.2	228.9	1.9	-44.23	-24.3	133.6	9,197.0	9,027.9	169.07	54.398	
13,681.1	7,061.0	6,700.0	6,698.2	231.2	1.9	-44.23	-24.3	133.6	9,278.0	9,107.3	170.69	54.356	
13,700.0	7,061.0	6,700.0	6,698.2	231.7	1.9	-44.23	-24.3	133.6	9,296.9	9,125.8	171.07	54.347	
13,779.5	7,061.0	6,700.0	6,698.2	233.9	1.9	-44.23	-24.3	133.6	9,376.3	9,203.6	172.65	54.307	
13,800.0	7,061.0	6,700.0	6,698.2	234.5	1.9	-44.23	-24.3	133.6	9,396.8	9,223.7	173.06	54.296	
13,877.9	7,061.0	6,700.0	6,698.2	236.6	1.9	-44.23	-24.3	133.6	9,474.6	9,300.0	174.62	54.258	
13,900.0	7,061.0	6,700.0	6,698.2	237.3	1.9	-44.23	-24.3	133.6	9,496.6	9,321.6	175.06	54.247	
13,976.3	7,061.0	6,700.0	6,698.2	239.4	1.9	-44.23	-24.3	133.6	9,572.9	9,396.3	176.59	54.210	
14,000.0	7,061.0	6,700.0	6,698.2	240.0	1.9	-44.23	-24.3	133.6	9,596.5	9,419.4	177.06	54.198	
14,074.8	7,061.0	6,700.0	6,698.2	242.1	1.9	-44.23	-24.3	133.6	9,671.2	9,492.6	178.56	54.163	
14,100.0	7,061.0	6,700.0	6,698.2	242.8	1.9	-44.23	-24.3	133.6	9,696.4	9,517.3	179.06	54.151	
14,173.2	7,061.0	6,700.0	6,698.2	244.8	1.9	-44.23	-24.3	133.6	9,769.5	9,589.0	180.53	54.117	
14,200.0	7,061.0	6,700.0	6,698.2	245.6	1.9	-44.23	-24.3	133.6	9,796.2	9,615.2	181.06	54.104	
14,271.6	7,061.0	6,700.0	6,698.2	247.6	1.9	-44.23	-24.3	133.6	9,867.8	9,685.3	182.50	54.071	
14,300.0	7,061.0	6,700.0	6,698.2	248.4	1.9	-44.23	-24.3	133.6	9,896.1	9,713.1	183.06	54.058	
14,370.0	7,061.0	6,700.0	6,698.2	250.3	1.9	-44.23	-24.3	133.6	9,966.1	9,781.6	184.47	54.027	
14,400.0	7,061.0	6,700.0	6,698.2	251.1	1.9	-44.23	-24.3	133.6	9,996.0	9,810.9	185.07	54.013	

Company:	EXTRACTION OIL & GAS	**Local Co-ordinate Reference:**	Well VT-LDS C3-16-18
Project:	WELD COUNTY, COLORADO (NAD 83)	**TVD Reference:**	KB-EST @ 4664.0usft
Reference Site:	SW NW SEC. 15 T5N R65W 6th P.M.	**MD Reference:**	KB-EST @ 4664.0usft
Site Error:	0.0 usft	**North Reference:**	True
Reference Well:	VT-LDS C3-16-18	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.0 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	ORIGINAL WELLBORE	**Database:**	EDM 5000.1 Single User Db
Reference Design:	PROPOSAL #2	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB-EST @ 4664.0usft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: VT-LDS C3-16-18
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.54°