

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

NE SE SEC. 8 T5N R66W 6th P.M.

TC-MOISER HILL 3-9-11

JOB #2017-144-341

04 June, 2017

Survey: FINAL SURVEYS





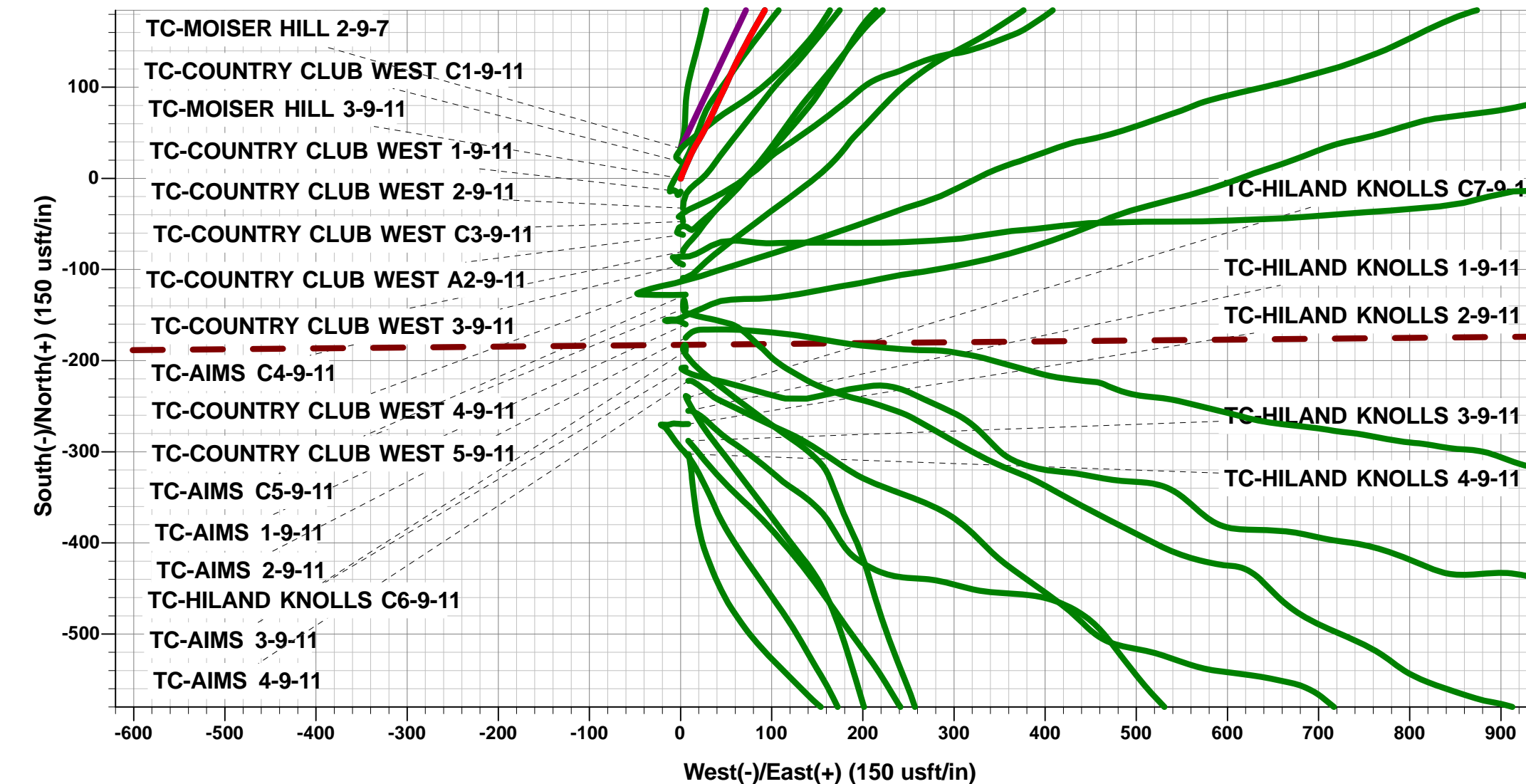
Project: WELD COUNTY, COLORADO (NAD 83)
Site: NE SE SEC. 8 T5N R66W 6th P.M.
Well: TC-MOISER HILL 3-9-11
Wellbore: JOB #2017-144-341
Design: FINAL SURVEYS

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Dep	Annotation
402.9	403.0	2.25	17.99	4.0	1.7	2.3	6.9	START NUDGE
1525.5	1560.0	19.98	28.84	228.6	116.8	148.3	259.4	SURFACE CASING
6614.0	7006.0	23.86	38.16	1910.1	1054.4	1316.9	2189.8	KOP
7155.2	8044.0	89.20	88.53	2112.3	1822.2	2105.7	3005.9	HZ LANDING POINT
7090.8	20380.0	90.30	87.70	2054.5	14143.7	14292.1	15340.2	LAST SURVEY - JUNE 4, 2017
7090.4	20444.0	90.30	87.70	2057.1	14207.6	14355.8	15404.2	EXTRAPOLATION TO TD

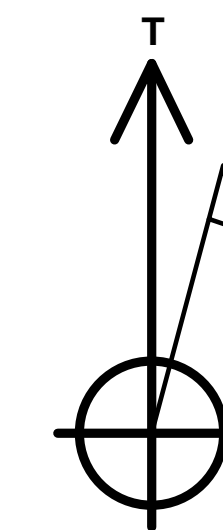
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
BHL - TC-MOISER HILL 3-9-11 (P3)	7170.0	2062.5	14264.4	40.420290	-104.747460
HZ LP - TC-MOISER HILL 3-9-11 (P3)	7170.0	2116.7	1640.0	40.420450	-104.792800



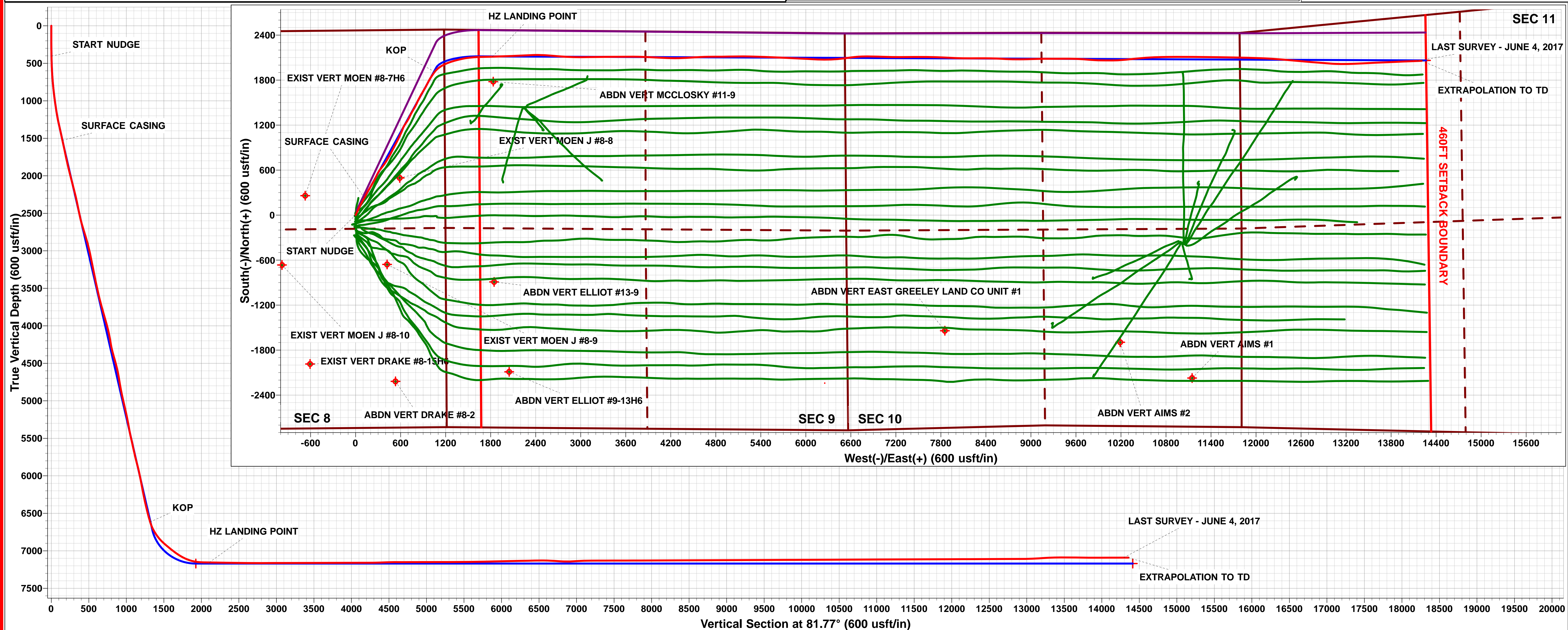
AS DRILLED LOCAL COORDINATES

SHL: 2462ft FNL & 1195ft FEL of Sec 8
HZ LP: 354.4ft FNL & 642.2ft FWL of Sec 9
BHL: 607.4ft FNL & 2422.2ft FWL of Sec 11



Azimuths to True North
Magnetic North: 8.24°

Magnetic Field
Strength: 52402.8nT
Dip Angle: 66.86°
Date: 28/05/2017
Model: IGRF2015



Survey Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well TC-MOISER HILL 3-9-11
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4812.0usft (PATT 341)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	MD Reference:	KB @ 4812.0usft (PATT 341)
Well:	TC-MOISER HILL 3-9-11	North Reference:	True
Wellbore:	JOB #2017-144-341	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	EDM 5000.1 Single User Db

Project	WELD COUNTY, COLORADO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site		NE SE SEC. 8 T5N R66W 6th P.M.			
Site Position:		Northing:	1,394,363.62 usft	Latitude:	40.413810
From:	Lat/Long	Easting:	3,195,288.63 usft	Longitude:	-104.798660
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft	Grid Convergence:	0.45 °

Well	TC-MOISER HILL 3-9-11					
Well Position	+N-S	0.0 usft	Northing:	1,394,665.90 usft	Latitude:	40.414640
	+E-W	0.0 usft	Easting:	3,195,277.88 usft	Longitude:	-104.798690
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,787.0 usft

Wellbore	JOB #2017-144-341				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	28/05/2017	8.24	66.86	52,403

Design	FINAL SURVEYS				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N-S (usft)	+E-W (usft)	Direction (°)	
	0.0	0.0	0.0	81.77	

Survey Program	Date	04/06/2017			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
25.0	20,444.0	FINAL SURVEYS (JOB #2017-144-341)	MWD	MWD - Standard	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	4,812.0	0.0	0.0	0.0	0.00	0.00	0.00
25.0	0.00	0.00	25.0	4,787.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.40	180.31	120.0	4,692.0	-0.3	0.0	0.0	0.42	0.42	0.00
START NUDGE										
403.0	2.25	17.99	402.9	4,409.1	4.0	1.7	2.3	0.93	0.65	-57.36
497.0	4.02	24.74	496.8	4,315.2	8.7	3.7	4.9	1.92	1.88	7.18
687.0	6.61	22.78	686.0	4,126.0	24.8	10.7	14.1	1.37	1.36	-1.03
782.0	9.00	31.15	780.1	4,031.9	36.2	16.6	21.7	2.78	2.52	8.81
877.0	11.27	28.53	873.6	3,938.4	50.8	24.9	31.9	2.44	2.39	-2.76
972.0	12.66	25.01	966.5	3,845.5	68.4	33.8	43.2	1.65	1.46	-3.71
1,067.0	15.00	25.47	1,058.8	3,753.2	88.9	43.4	55.7	2.47	2.46	0.48
1,161.0	16.37	24.13	1,149.3	3,662.7	112.0	54.1	69.6	1.51	1.46	-1.43
1,256.0	18.34	27.59	1,239.9	3,572.1	137.4	66.5	85.5	2.34	2.07	3.64

Survey Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well TC-MOISER HILL 3-9-11
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4812.0usft (PATT 341)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	MD Reference:	KB @ 4812.0usft (PATT 341)
Well:	TC-MOISER HILL 3-9-11	North Reference:	True
Wellbore:	JOB #2017-144-341	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,351.0	20.45	29.17	1,329.5	3,482.5	165.2	81.5	104.3	2.29	2.22	1.66
1,446.0	20.41	29.18	1,418.6	3,393.4	194.1	97.7	124.4	0.04	-0.04	0.01
1,541.0	20.08	28.97	1,507.7	3,304.3	222.9	113.6	144.4	0.36	-0.35	-0.22
SURFACE CASING										
1,560.0	19.98	28.84	1,525.5	3,286.5	228.6	116.8	148.3	0.55	-0.50	-0.69
1,637.0	19.60	28.30	1,598.0	3,214.0	251.5	129.3	163.9	0.55	-0.50	-0.70
1,732.0	19.20	25.70	1,687.6	3,124.4	279.6	143.6	182.1	1.00	-0.42	-2.74
1,825.0	20.40	30.30	1,775.1	3,036.9	307.3	158.4	200.7	2.11	1.29	4.95
1,919.0	20.30	29.20	1,863.2	2,948.8	335.7	174.6	220.9	0.42	-0.11	-1.17
2,014.0	22.40	31.90	1,951.7	2,860.3	365.5	192.2	242.5	2.44	2.21	2.84
2,108.0	21.60	28.50	2,038.9	2,773.1	395.9	209.9	264.4	1.60	-0.85	-3.62
2,203.0	23.30	30.30	2,126.7	2,685.3	427.5	227.8	286.6	1.93	1.79	1.89
2,297.0	23.50	29.20	2,212.9	2,599.1	459.9	246.3	309.6	0.51	0.21	-1.17
2,392.0	21.40	26.30	2,300.7	2,511.3	492.0	263.2	330.9	2.50	-2.21	-3.05
2,486.0	19.90	23.50	2,388.7	2,423.3	522.0	277.2	349.0	1.91	-1.60	-2.98
2,581.0	19.80	28.30	2,478.1	2,333.9	551.0	291.3	367.1	1.72	-0.11	5.05
2,675.0	20.20	30.70	2,566.4	2,245.6	579.0	307.1	386.8	0.97	0.43	2.55
2,769.0	22.40	37.50	2,654.0	2,158.0	607.2	326.3	409.8	3.52	2.34	7.23
2,864.0	23.30	38.00	2,741.5	2,070.5	636.3	348.9	436.4	0.97	0.95	0.53
2,958.0	22.40	37.90	2,828.2	1,983.8	665.1	371.3	462.7	0.96	-0.96	-0.11
3,053.0	21.10	33.80	2,916.4	1,895.6	693.6	392.0	487.2	2.10	-1.37	-4.32
3,147.0	19.80	31.60	3,004.5	1,807.5	721.2	409.7	508.7	1.61	-1.38	-2.34
3,241.0	17.70	29.70	3,093.5	1,718.5	747.2	425.1	527.7	2.33	-2.23	-2.02
3,335.0	18.30	31.60	3,182.9	1,629.1	772.2	440.0	545.9	0.89	0.64	2.02
3,430.0	17.60	30.10	3,273.2	1,538.8	797.3	455.0	564.4	0.88	-0.74	-1.58
3,524.0	19.30	25.60	3,362.4	1,449.6	823.6	468.8	581.9	2.36	1.81	-4.79
3,619.0	20.80	27.40	3,451.7	1,360.3	852.7	483.4	600.4	1.71	1.58	1.89
3,713.0	20.50	28.00	3,539.6	1,272.4	882.1	498.8	619.9	0.39	-0.32	0.64
3,807.0	22.50	27.80	3,627.1	1,184.9	912.5	514.9	640.2	2.13	2.13	-0.21
3,902.0	24.40	28.00	3,714.2	1,097.8	946.0	532.6	662.5	2.00	2.00	0.21
3,996.0	26.50	27.00	3,799.1	1,012.9	981.8	551.2	686.0	2.28	2.23	-1.06
4,090.0	26.90	25.60	3,883.1	928.9	1,019.6	569.9	710.0	0.79	0.43	-1.49
4,185.0	26.90	25.30	3,967.8	844.2	1,058.5	588.4	733.8	0.14	0.00	-0.32
4,280.0	24.20	24.60	4,053.5	758.5	1,095.6	605.7	756.2	2.86	-2.84	-0.74
4,375.0	21.20	22.00	4,141.1	670.9	1,129.2	620.2	775.5	3.33	-3.16	-2.74
4,469.0	18.60	18.90	4,229.5	582.5	1,159.2	631.5	790.8	2.98	-2.77	-3.30
4,564.0	21.00	31.60	4,318.9	493.1	1,188.0	645.3	808.7	5.17	2.53	13.37
4,658.0	23.60	33.20	4,405.9	406.1	1,218.1	664.4	831.9	2.84	2.77	1.70
4,753.0	22.70	31.90	4,493.2	318.8	1,249.6	684.5	856.3	1.09	-0.95	-1.37
4,847.0	20.40	29.80	4,580.7	231.3	1,279.2	702.3	878.1	2.58	-2.45	-2.23
4,942.0	17.50	26.10	4,670.5	141.5	1,306.4	716.8	896.4	3.30	-3.05	-3.89
5,060.0	16.60	23.80	4,783.3	28.7	1,337.8	731.4	915.3	0.95	-0.76	-1.95
5,154.0	18.30	30.60	4,873.0	-61.0	1,362.8	744.3	931.7	2.82	1.81	7.23
5,249.0	19.20	29.90	4,963.0	-151.0	1,389.2	759.7	950.7	0.98	0.95	-0.74
5,344.0	21.60	30.30	5,052.0	-240.0	1,417.8	776.3	971.2	2.53	2.53	0.42
5,438.0	19.30	28.50	5,140.1	-328.1	1,446.4	792.5	991.3	2.54	-2.45	-1.91
5,533.0	21.00	26.40	5,229.3	-417.3	1,475.4	807.5	1,010.3	1.94	1.79	-2.21
5,627.0	17.80	21.80	5,317.9	-505.9	1,503.9	820.3	1,027.1	3.77	-3.40	-4.89
5,721.0	18.50	27.80	5,407.2	-595.2	1,530.4	832.6	1,043.1	2.12	0.74	6.38
5,816.0	22.00	28.30	5,496.4	-684.4	1,559.4	848.1	1,062.5	3.69	3.68	0.53
5,911.0	20.00	26.70	5,585.0	-773.0	1,589.6	863.8	1,082.4	2.19	-2.11	-1.68
6,005.0	19.50	32.60	5,673.5	-861.5	1,617.2	879.5	1,101.9	2.19	-0.53	6.28
6,099.0	20.50	29.90	5,761.9	-949.9	1,644.7	896.2	1,122.3	1.45	1.06	-2.87

Survey Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well TC-MOISER HILL 3-9-11
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4812.0usft (PATT 341)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	MD Reference:	KB @ 4812.0usft (PATT 341)
Well:	TC-MOISER HILL 3-9-11	North Reference:	True
Wellbore:	JOB #2017-144-341	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,194.0	23.70	31.60	5,849.9	-1,037.9	1,675.4	914.5	1,144.8	3.43	3.37	1.79
6,288.0	19.80	28.00	5,937.2	-1,125.2	1,705.5	931.9	1,166.3	4.38	-4.15	-3.83
6,382.0	20.00	27.60	6,025.5	-1,213.5	1,733.8	946.8	1,185.2	0.26	0.21	-0.43
6,477.0	17.50	24.90	6,115.5	-1,303.5	1,761.2	960.3	1,202.5	2.78	-2.63	-2.84
6,571.0	18.50	29.60	6,204.9	-1,392.9	1,787.0	973.6	1,219.3	1.88	1.06	5.00
6,666.0	18.10	29.30	6,295.1	-1,483.1	1,812.9	988.3	1,237.6	0.43	-0.42	-0.32
6,760.0	19.40	34.20	6,384.1	-1,572.1	1,838.6	1,004.2	1,257.0	2.17	1.38	5.21
6,854.0	20.10	33.40	6,472.6	-1,660.6	1,865.0	1,021.9	1,278.3	0.80	0.74	-0.85
6,948.0	21.40	36.20	6,560.5	-1,748.5	1,892.3	1,040.9	1,301.0	1.74	1.38	2.98
KOP										
7,006.0	23.86	38.16	6,614.0	-1,802.0	1,910.1	1,054.4	1,316.9	4.44	4.24	3.39
7,042.0	25.40	39.20	6,646.7	-1,834.7	1,921.8	1,063.8	1,327.9	4.44	4.27	2.88
7,136.0	33.20	49.70	6,728.7	-1,916.7	1,954.1	1,096.2	1,364.6	9.91	8.30	11.17
7,231.0	38.60	58.90	6,805.7	-1,993.7	1,986.3	1,141.5	1,414.0	8.02	5.68	9.68
7,325.0	46.70	65.40	6,874.8	-2,062.8	2,015.8	1,197.8	1,474.0	9.80	8.62	6.91
7,419.0	51.20	71.80	6,936.6	-2,124.6	2,041.5	1,263.8	1,542.9	7.02	4.79	6.81
7,514.0	51.80	75.00	6,995.7	-2,183.7	2,062.7	1,335.1	1,616.5	2.71	0.63	3.37
7,608.0	56.50	77.30	7,050.7	-2,238.7	2,080.9	1,409.0	1,692.3	5.38	5.00	2.45
7,703.0	63.60	82.30	7,098.2	-2,286.2	2,095.3	1,490.0	1,774.5	8.75	7.47	5.26
7,797.0	75.00	85.60	7,131.3	-2,319.3	2,104.5	1,577.2	1,862.2	12.56	12.13	3.51
7,892.0	83.90	88.40	7,148.7	-2,336.7	2,109.3	1,670.4	1,955.1	9.81	9.37	2.95
7,986.0	89.20	89.30	7,154.4	-2,342.4	2,111.2	1,764.2	2,048.2	5.72	5.64	0.96
HZ LANDING POINT										
8,044.0	89.20	88.53	7,155.2	-2,343.2	2,112.3	1,822.2	2,105.7	1.33	0.00	-1.33
8,084.0	89.20	88.00	7,155.7	-2,343.7	2,113.5	1,862.2	2,145.4	1.33	0.00	-1.33
8,178.0	89.10	87.80	7,157.1	-2,345.1	2,117.0	1,956.1	2,238.9	0.24	-0.11	-0.21
8,273.0	89.10	88.00	7,158.6	-2,346.6	2,120.4	2,051.0	2,333.3	0.21	0.00	0.21
8,462.0	89.20	87.30	7,161.4	-2,349.4	2,128.2	2,239.8	2,521.3	0.37	0.05	-0.37
8,556.0	89.20	87.30	7,162.8	-2,350.8	2,132.6	2,333.7	2,614.9	0.00	0.00	0.00
8,651.0	90.20	89.80	7,163.2	-2,351.2	2,135.0	2,428.7	2,709.2	2.83	1.05	2.63
8,745.0	90.20	93.90	7,162.9	-2,350.9	2,132.0	2,522.6	2,801.7	4.36	0.00	4.36
8,840.0	90.20	94.70	7,162.6	-2,350.6	2,124.9	2,617.3	2,894.5	0.84	0.00	0.84
8,935.0	90.10	94.80	7,162.3	-2,350.3	2,117.0	2,712.0	2,987.0	0.15	-0.11	0.11
9,030.0	90.20	93.20	7,162.1	-2,350.1	2,110.4	2,806.8	3,079.9	1.69	0.11	-1.68
9,124.0	90.20	91.60	7,161.8	-2,349.8	2,106.4	2,900.7	3,172.3	1.70	0.00	-1.70
9,219.0	90.10	89.60	7,161.5	-2,349.5	2,105.4	2,995.7	3,266.1	2.11	-0.11	-2.11
9,314.0	90.00	89.10	7,161.4	-2,349.4	2,106.5	3,090.7	3,360.3	0.54	-0.11	-0.53
9,409.0	90.10	89.30	7,161.3	-2,349.3	2,107.8	3,185.7	3,454.5	0.24	0.11	0.21
9,504.0	90.20	89.30	7,161.1	-2,349.1	2,109.0	3,280.6	3,548.7	0.11	0.11	0.00
9,598.0	90.10	89.40	7,160.9	-2,348.9	2,110.1	3,374.6	3,641.9	0.15	-0.11	0.11
9,693.0	90.20	89.60	7,160.6	-2,348.6	2,110.9	3,469.6	3,736.0	0.24	0.11	0.21
9,788.0	90.20	89.50	7,160.3	-2,348.3	2,111.6	3,564.6	3,830.1	0.11	0.00	-0.11
9,882.0	90.20	89.90	7,159.9	-2,347.9	2,112.1	3,658.6	3,923.2	0.43	0.00	0.43
9,977.0	90.20	90.70	7,159.6	-2,347.6	2,111.6	3,753.6	4,017.2	0.84	0.00	0.84
10,071.0	90.20	92.60	7,159.3	-2,347.3	2,108.9	3,847.6	4,109.8	2.02	0.00	2.02
10,165.0	90.00	92.90	7,159.1	-2,347.1	2,104.4	3,941.5	4,202.1	0.38	-0.21	0.32
10,260.0	90.70	93.00	7,158.5	-2,346.5	2,099.5	4,036.3	4,295.3	0.74	0.74	0.11
10,354.0	92.10	92.30	7,156.2	-2,344.2	2,095.2	4,130.2	4,387.5	1.67	1.49	-0.74
10,448.0	92.80	91.20	7,152.2	-2,340.2	2,092.3	4,224.1	4,480.0	1.39	0.74	-1.17
10,542.0	89.30	88.10	7,150.5	-2,338.5	2,092.9	4,318.0	4,573.1	4.97	-3.72	-3.30
10,637.0	90.00	86.60	7,151.1	-2,339.1	2,097.3	4,412.9	4,667.6	1.74	0.74	-1.58
10,730.0	90.20	86.70	7,150.9	-2,338.9	2,102.7	4,505.8	4,760.3	0.24	0.22	0.11
10,825.0	90.20	87.30	7,150.6	-2,338.6	2,107.7	4,600.6	4,854.9	0.63	0.00	0.63

Survey Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well TC-MOISER HILL 3-9-11
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4812.0usft (PATT 341)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	MD Reference:	KB @ 4812.0usft (PATT 341)
Well:	TC-MOISER HILL 3-9-11	North Reference:	True
Wellbore:	JOB #2017-144-341	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,919.0	90.20	88.90	7,150.3	-2,338.3	2,110.8	4,694.6	4,948.3	1.70	0.00	1.70
11,013.0	90.20	89.70	7,149.9	-2,337.9	2,112.0	4,788.6	5,041.5	0.85	0.00	0.85
11,108.0	90.00	89.80	7,149.8	-2,337.8	2,112.4	4,883.6	5,135.6	0.24	-0.21	0.11
11,203.0	90.20	88.60	7,149.6	-2,337.6	2,113.7	4,978.6	5,229.8	1.28	0.21	-1.26
11,297.0	90.20	89.40	7,149.3	-2,337.3	2,115.3	5,072.6	5,323.1	0.85	0.00	0.85
11,392.0	90.20	90.00	7,148.9	-2,336.9	2,115.8	5,167.5	5,417.1	0.63	0.00	0.63
11,486.0	90.20	91.00	7,148.6	-2,336.6	2,115.0	5,261.5	5,510.1	1.06	0.00	1.06
11,581.0	91.00	92.30	7,147.6	-2,335.6	2,112.3	5,356.5	5,603.6	1.61	0.84	1.37
11,675.0	91.30	92.30	7,145.7	-2,333.7	2,108.5	5,450.4	5,696.0	0.32	0.32	0.00
11,770.0	91.20	92.40	7,143.7	-2,331.7	2,104.6	5,545.3	5,789.4	0.15	-0.11	0.11
11,865.0	91.20	92.30	7,141.7	-2,329.7	2,100.7	5,640.2	5,882.8	0.11	0.00	-0.11
11,960.0	91.20	92.30	7,139.7	-2,327.7	2,096.9	5,735.1	5,976.1	0.00	0.00	0.00
12,055.0	91.20	93.20	7,137.7	-2,325.7	2,092.3	5,830.0	6,069.4	0.95	0.00	0.95
12,149.0	91.00	92.90	7,135.9	-2,323.9	2,087.3	5,923.8	6,161.6	0.38	-0.21	-0.32
12,244.0	91.10	92.90	7,134.1	-2,322.1	2,082.5	6,018.7	6,254.8	0.11	0.11	0.00
12,339.0	91.50	93.10	7,132.0	-2,320.0	2,077.6	6,113.5	6,347.9	0.47	0.42	0.21
12,434.0	91.50	91.50	7,129.5	-2,317.5	2,073.8	6,208.4	6,441.3	1.68	0.00	-1.68
12,527.0	89.70	88.50	7,128.5	-2,316.5	2,073.8	6,301.4	6,533.3	3.76	-1.94	-3.23
12,622.0	87.90	85.70	7,130.5	-2,318.5	2,078.6	6,396.2	6,627.9	3.50	-1.89	-2.95
12,716.0	85.90	83.10	7,135.6	-2,323.6	2,087.7	6,489.6	6,721.6	3.49	-2.13	-2.77
12,811.0	87.30	82.20	7,141.2	-2,329.2	2,099.9	6,583.7	6,816.4	1.75	1.47	-0.95
12,906.0	91.70	85.40	7,142.1	-2,330.1	2,110.1	6,678.1	6,911.3	5.73	4.63	3.37
13,001.0	94.70	88.90	7,136.8	-2,324.8	2,114.8	6,772.8	7,005.7	4.85	3.16	3.68
13,095.0	91.20	90.70	7,131.9	-2,319.9	2,115.2	6,866.7	7,098.7	4.19	-3.72	1.91
13,190.0	90.20	92.10	7,130.8	-2,318.8	2,112.8	6,961.6	7,192.3	1.81	-1.05	1.47
13,285.0	90.20	92.00	7,130.4	-2,318.4	2,109.4	7,056.6	7,285.8	0.11	0.00	-0.11
13,380.0	90.10	90.80	7,130.2	-2,318.2	2,107.1	7,151.5	7,379.5	1.27	-0.11	-1.26
13,475.0	90.20	89.80	7,129.9	-2,317.9	2,106.6	7,246.5	7,473.4	1.06	0.11	-1.05
13,569.0	90.10	89.30	7,129.7	-2,317.7	2,107.4	7,340.5	7,566.5	0.54	-0.11	-0.53
13,664.0	90.10	89.60	7,129.5	-2,317.5	2,108.3	7,435.5	7,660.7	0.32	0.00	0.32
13,758.0	90.10	89.90	7,129.4	-2,317.4	2,108.7	7,529.5	7,753.8	0.32	0.00	0.32
13,853.0	90.30	90.90	7,129.0	-2,317.0	2,108.0	7,624.5	7,847.7	1.07	0.21	1.05
13,947.0	90.20	91.50	7,128.6	-2,316.6	2,106.0	7,718.5	7,940.4	0.65	-0.11	0.64
14,042.0	90.30	92.60	7,128.2	-2,316.2	2,102.6	7,813.4	8,033.9	1.16	0.11	1.16
14,137.0	90.20	93.20	7,127.8	-2,315.8	2,097.8	7,908.3	8,127.1	0.64	-0.11	0.63
14,231.0	90.20	92.10	7,127.5	-2,315.5	2,093.5	8,002.2	8,219.4	1.17	0.00	-1.17
14,326.0	90.20	91.00	7,127.1	-2,315.1	2,090.9	8,097.2	8,313.0	1.16	0.00	-1.16
14,420.0	90.20	89.80	7,126.8	-2,314.8	2,090.3	8,191.2	8,406.0	1.28	0.00	-1.28
14,515.0	90.30	89.50	7,126.4	-2,314.4	2,090.8	8,286.2	8,500.1	0.33	0.11	-0.32
14,609.0	90.30	90.20	7,125.9	-2,313.9	2,091.1	8,380.2	8,593.1	0.74	0.00	0.74
14,703.0	90.30	91.30	7,125.4	-2,313.4	2,089.9	8,474.1	8,686.0	1.17	0.00	1.17
14,798.0	90.20	93.20	7,125.0	-2,313.0	2,086.1	8,569.1	8,779.4	2.00	-0.11	2.00
14,892.0	90.20	92.90	7,124.7	-2,312.7	2,081.1	8,662.9	8,871.6	0.32	0.00	-0.32
14,987.0	90.20	91.60	7,124.3	-2,312.3	2,077.4	8,757.9	8,965.0	1.37	0.00	-1.37
15,082.0	90.20	89.40	7,124.0	-2,312.0	2,076.6	8,852.8	9,058.9	2.32	0.00	-2.32
15,177.0	90.20	88.00	7,123.7	-2,311.7	2,078.7	8,947.8	9,153.2	1.47	0.00	-1.47
15,272.0	90.20	88.40	7,123.3	-2,311.3	2,081.7	9,042.8	9,247.6	0.42	0.00	0.42
15,367.0	90.20	89.00	7,123.0	-2,311.0	2,083.9	9,137.7	9,341.9	0.63	0.00	0.63
15,461.0	90.30	90.10	7,122.6	-2,310.6	2,084.6	9,231.7	9,435.0	1.18	0.11	1.17
15,555.0	90.20	89.70	7,122.2	-2,310.2	2,084.8	9,325.7	9,528.1	0.44	-0.11	-0.43
15,650.0	90.20	89.80	7,121.8	-2,309.8	2,085.2	9,420.7	9,622.2	0.11	0.00	0.11
15,745.0	90.30	90.40	7,121.4	-2,309.4	2,085.0	9,515.7	9,716.2	0.64	0.11	0.63
15,839.0	90.30	92.40	7,120.9	-2,308.9	2,082.7	9,609.7	9,808.8	2.13	0.00	2.13

Survey Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well TC-MOISER HILL 3-9-11
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4812.0usft (PATT 341)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	MD Reference:	KB @ 4812.0usft (PATT 341)
Well:	TC-MOISER HILL 3-9-11	North Reference:	True
Wellbore:	JOB #2017-144-341	Survey Calculation Method:	Minimum Curvature
Design:	FINAL SURVEYS	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,933.0	90.20	94.50	7,120.5	-2,308.5	2,077.1	9,703.5	9,900.9	2.24	-0.11	2.23
16,028.0	90.20	94.80	7,120.2	-2,308.2	2,069.4	9,798.2	9,993.5	0.32	0.00	0.32
16,123.0	90.20	91.60	7,119.9	-2,307.9	2,064.1	9,893.1	10,086.6	3.37	0.00	-3.37
16,217.0	90.20	90.00	7,119.5	-2,307.5	2,062.7	9,987.0	10,179.4	1.70	0.00	-1.70
16,312.0	90.20	90.20	7,119.2	-2,307.2	2,062.6	10,082.0	10,273.4	0.21	0.00	0.21
16,407.0	90.20	86.30	7,118.9	-2,306.9	2,065.5	10,177.0	10,367.8	4.11	0.00	-4.11
16,503.0	90.60	84.70	7,118.2	-2,306.2	2,073.0	10,272.7	10,463.6	1.72	0.42	-1.67
16,598.0	90.20	83.60	7,117.5	-2,305.5	2,082.7	10,367.2	10,558.5	1.23	-0.42	-1.16
16,692.0	90.20	84.80	7,117.2	-2,305.2	2,092.2	10,460.7	10,652.4	1.28	0.00	1.28
16,787.0	90.20	86.50	7,116.9	-2,304.9	2,099.4	10,555.4	10,747.2	1.79	0.00	1.79
16,882.0	90.20	87.50	7,116.6	-2,304.6	2,104.4	10,650.3	10,841.8	1.05	0.00	1.05
16,976.0	90.20	89.10	7,116.2	-2,304.2	2,107.2	10,744.2	10,935.2	1.70	0.00	1.70
17,071.0	90.20	88.90	7,115.9	-2,303.9	2,108.8	10,839.2	11,029.4	0.21	0.00	-0.21
17,166.0	90.20	89.70	7,115.6	-2,303.6	2,110.0	10,934.2	11,123.6	0.84	0.00	0.84
17,260.0	90.30	90.30	7,115.2	-2,303.2	2,110.0	11,028.2	11,216.7	0.65	0.11	0.64
17,355.0	90.20	91.00	7,114.7	-2,302.7	2,108.9	11,123.2	11,310.5	0.74	-0.11	0.74
17,450.0	90.20	90.20	7,114.4	-2,302.4	2,107.9	11,218.2	11,404.4	0.84	0.00	-0.84
17,544.0	90.20	90.70	7,114.1	-2,302.1	2,107.2	11,312.2	11,497.3	0.53	0.00	0.53
17,638.0	90.20	90.30	7,113.7	-2,301.7	2,106.4	11,406.2	11,590.2	0.43	0.00	-0.43
17,733.0	90.20	90.70	7,113.4	-2,301.4	2,105.5	11,501.2	11,684.1	0.42	0.00	0.42
17,827.0	90.30	91.20	7,113.0	-2,301.0	2,104.0	11,595.2	11,776.9	0.54	0.11	0.53
17,922.0	90.30	91.20	7,112.5	-2,300.5	2,102.0	11,690.2	11,870.6	0.00	0.00	0.00
18,017.0	90.20	91.20	7,112.1	-2,300.1	2,100.0	11,785.1	11,964.3	0.11	-0.11	0.00
18,112.0	90.20	91.60	7,111.8	-2,299.8	2,097.7	11,880.1	12,058.0	0.42	0.00	0.42
18,207.0	90.30	91.90	7,111.3	-2,299.3	2,094.8	11,975.1	12,151.6	0.33	0.11	0.32
18,301.0	90.30	91.80	7,110.9	-2,298.9	2,091.7	12,069.0	12,244.1	0.11	0.00	-0.11
18,397.0	90.10	93.00	7,110.5	-2,298.5	2,087.7	12,164.9	12,338.5	1.27	-0.21	1.25
18,491.0	90.30	94.50	7,110.2	-2,298.2	2,081.6	12,258.7	12,430.4	1.61	0.21	1.60
18,586.0	90.30	94.80	7,109.7	-2,297.7	2,073.9	12,353.4	12,523.0	0.32	0.00	0.32
18,680.0	90.20	95.30	7,109.3	-2,297.3	2,065.6	12,447.0	12,614.5	0.54	-0.11	0.53
18,775.0	90.30	94.90	7,108.9	-2,296.9	2,057.1	12,541.7	12,707.0	0.43	0.11	-0.42
18,870.0	90.20	94.90	7,108.5	-2,296.5	2,049.0	12,636.3	12,799.5	0.11	-0.11	0.00
18,965.0	90.10	94.70	7,108.2	-2,296.2	2,041.1	12,731.0	12,892.0	0.24	-0.11	-0.21
19,059.0	91.00	94.50	7,107.3	-2,295.3	2,033.5	12,824.7	12,983.7	0.98	0.96	-0.21
19,153.0	92.10	94.60	7,104.8	-2,292.8	2,026.1	12,918.3	13,075.3	1.18	1.17	0.11
19,247.0	93.10	93.90	7,100.5	-2,288.5	2,019.1	13,012.0	13,167.0	1.30	1.06	-0.74
19,342.0	93.30	91.20	7,095.2	-2,283.2	2,014.9	13,106.7	13,260.2	2.85	0.21	-2.84
19,437.0	92.60	88.60	7,090.3	-2,278.3	2,015.1	13,201.6	13,354.1	2.83	-0.74	-2.74
19,530.0	90.50	87.60	7,087.8	-2,275.8	2,018.2	13,294.5	13,446.5	2.50	-2.26	-1.08
19,624.0	89.20	87.40	7,088.0	-2,276.0	2,022.3	13,388.4	13,540.0	1.40	-1.38	-0.21
19,719.0	89.20	87.60	7,089.4	-2,277.4	2,026.4	13,483.3	13,634.5	0.21	0.00	0.21
19,813.0	89.30	87.50	7,090.6	-2,278.6	2,030.4	13,577.2	13,728.0	0.15	0.11	-0.11
19,907.0	89.30	87.30	7,091.7	-2,279.7	2,034.7	13,671.1	13,821.6	0.21	0.00	-0.21
20,002.0	90.20	87.60	7,092.2	-2,280.2	2,038.9	13,766.0	13,916.1	1.00	0.95	0.32
20,097.0	90.40	87.20	7,091.7	-2,279.7	2,043.2	13,860.9	14,010.6	0.47	0.21	-0.42
20,191.0	90.20	88.00	7,091.2	-2,279.2	2,047.2	13,954.8	14,104.2	0.88	-0.21	0.85
20,285.0	90.00	87.70	7,091.0	-2,279.0	2,050.7	14,048.8	14,197.6	0.38	-0.21	-0.32
LAST SURVEY - JUNE 4, 2017										
20,380.0	90.30	87.70	7,090.8	-2,278.8	2,054.5	14,143.7	14,292.1	0.32	0.32	0.00
EXTRAPOLATION TO TD										
20,444.0	90.30	87.70	7,090.4	-2,278.4	2,057.1	14,207.6	14,355.8	0.00	0.00	0.00