

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

TC-COUNTRY CLUB WEST 4-9-11

JOB #2017-114-341

06 May, 2017

Survey: FINAL SURVEYS

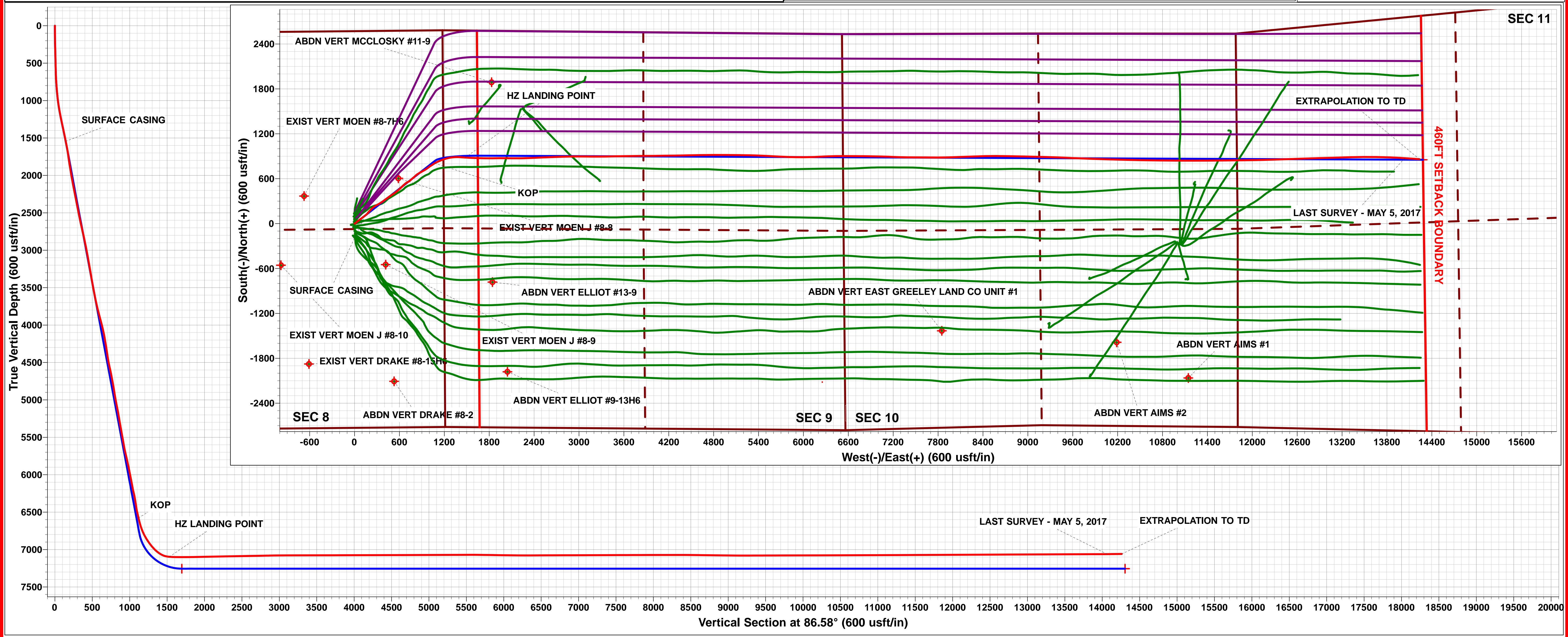
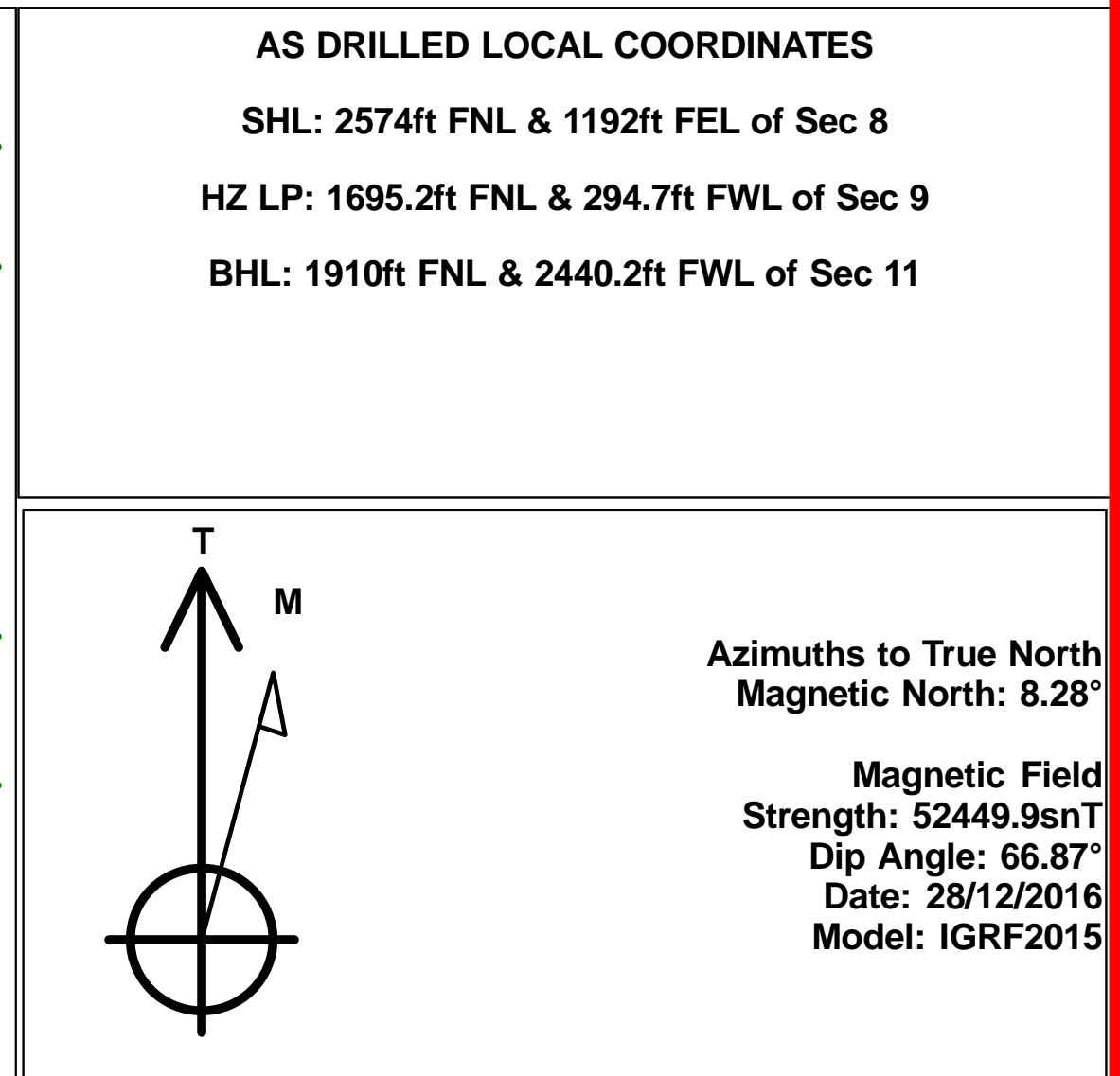
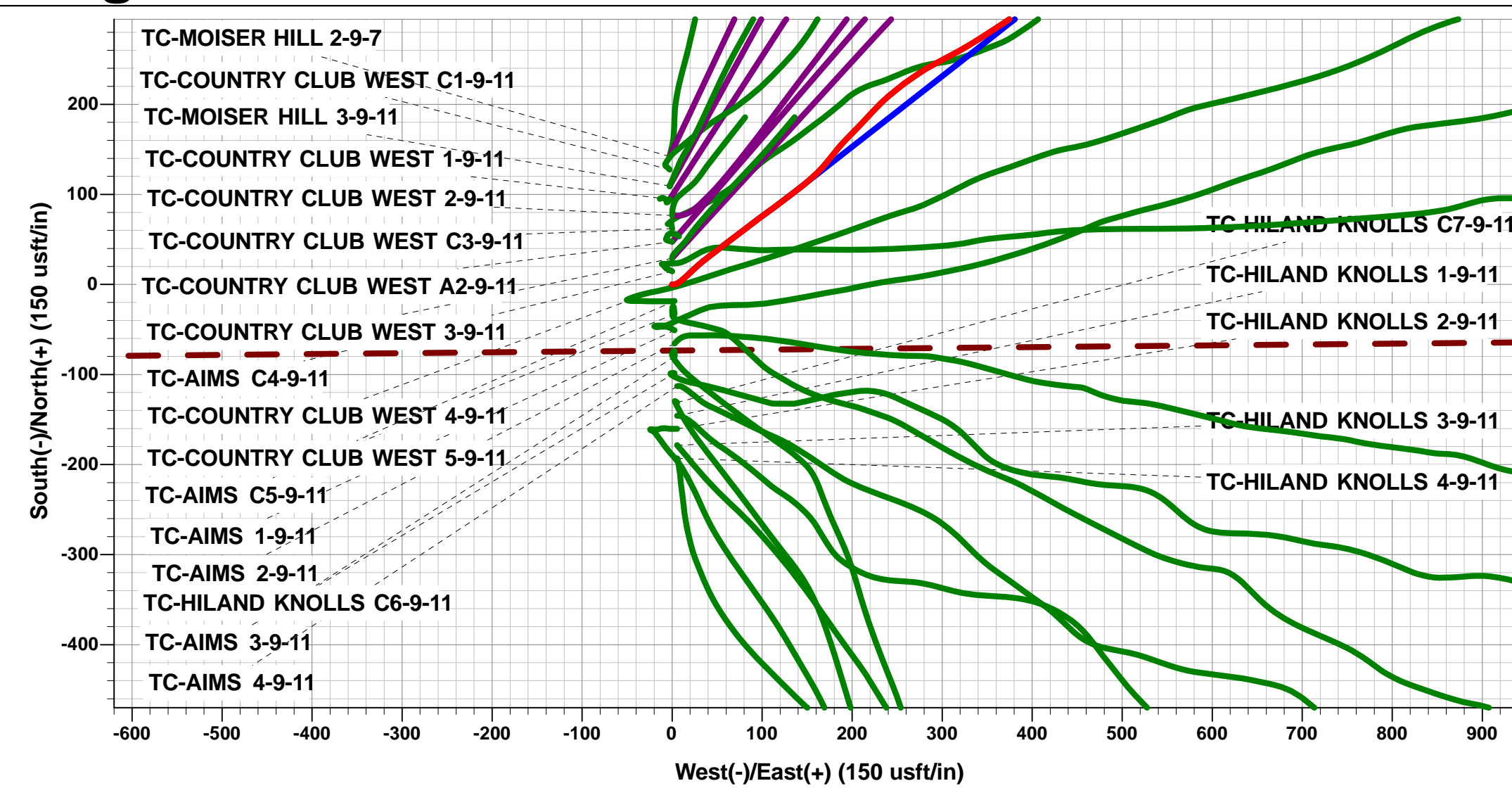




Project: WELD COUNTY, COLORADO (NAD 83)
Site: NE SE SEC. 8 T5N R66W 6th P.M.
Well: TC-COUNTRY CLUB WEST 4-9-11
Wellbore: JOB #2017-114-341
Design: FINAL SURVEYS

ANNOTATIONS										
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation		
1543.4	1560.0	13.68	51.76	104.7	138.6	144.6	175.1	SURFACE CASING		
6576.4	6730.0	14.87	58.81	806.5	1071.0	1117.2	1348.3	KOP		
7096.3	7441.0	85.04	94.04	882.0	1480.4	1530.3	1772.4	HZ LANDING POINT		
7060.4	20003.0	90.60	93.80	874.1	14037.7	14064.8	14333.9	LAST SURVEY - MAY 5, 2017		
7058.3	20200.0	90.60	93.80	861.0	14234.3	14260.3	14530.9	EXTRAPOLATION TO TD		

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
BHL - TC-COUNTRY CLUB WEST 4-9-11 (P3)	7255.0	853.0	14279.1	40.416670	-104.747400
HZ LP - TC-COUNTRY CLUB WEST 4-9-11 (P3)	7255.0	907.2	1645.7	40.416830	-104.792770



Survey Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST 4-9-11
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4814.0usft (PATT 341)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	MD Reference:	KB @ 4814.0usft (PATT 341)
Well:	TC-COUNTRY CLUB WEST 4-9-11	North Reference:	True
Wellbore:	JOB #2017-114-341	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-COUNTRY CLUB WEST 4-9-11					
Well Position	+N/-S	0.0 usft	Northing:	1,394,556.64 usft	Latitude:	40.414340
	+E/-W	0.0 usft	Easting:	3,195,281.53 usft	Longitude:	-104.798680
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	4,789.0 usft

Wellbore	JOB #2017-114-341				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	28/12/2016	8.28	66.87	52,450

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	86.58	

Survey Program	Date	06/05/2017			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
25.0	20,200.0	FINAL SURVEYS (JOB #2017-114-341)	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	4,814.0	0.0	0.0	0.0	0.00	0.00	0.00
25.0	0.00	0.00	25.0	4,789.0	0.0	0.0	0.0	0.00	0.00	0.00
212.0	1.10	92.26	212.0	4,602.0	-0.1	1.8	1.8	0.59	0.59	0.00
583.0	2.00	49.37	582.9	4,231.1	4.0	10.3	10.5	0.38	0.24	-11.56
678.0	3.33	46.21	677.8	4,136.2	7.0	13.5	13.9	1.41	1.40	-3.33
773.0	4.91	47.27	772.5	4,041.5	11.7	18.5	19.2	1.67	1.66	1.12
867.0	6.28	46.32	866.1	3,947.9	17.9	25.2	26.2	1.46	1.46	-1.01
963.0	7.71	51.41	961.3	3,852.7	25.6	34.0	35.5	1.62	1.49	5.30
1,057.0	10.27	52.77	1,054.2	3,759.8	34.6	45.6	47.6	2.73	2.72	1.45
1,152.0	12.10	52.63	1,147.4	3,666.6	45.8	60.3	62.9	1.93	1.93	-0.15
1,247.0	13.93	52.62	1,239.9	3,574.1	58.7	77.3	80.6	1.93	1.93	-0.01
1,342.0	14.53	53.36	1,332.0	3,482.0	72.8	95.9	100.1	0.66	0.63	0.78
1,437.0	14.35	54.16	1,424.0	3,390.0	86.8	115.0	120.0	0.28	-0.19	0.84

Survey Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST 4-9-11
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4814.0usft (PATT 341)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	MD Reference:	KB @ 4814.0usft (PATT 341)
Well:	TC-COUNTRY CLUB WEST 4-9-11	North Reference:	True
Wellbore:	JOB #2017-114-341	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)
1,532.0	13.68	51.76	1,516.2	3,297.8	100.7	133.4	139.1	0.93	-0.71	-2.53
SURFACE CASING										
1,560.0	13.68	51.76	1,543.4	3,270.6	104.7	138.6	144.6	0.00	0.00	0.00
1,597.0	13.68	51.76	1,579.3	3,234.7	110.2	145.5	151.8	0.00	0.00	0.00
1,642.0	13.40	48.40	1,623.1	3,190.9	116.9	153.5	160.2	1.86	-0.62	-7.47
1,737.0	12.10	42.00	1,715.7	3,098.3	131.6	168.4	176.0	2.02	-1.37	-6.74
1,830.0	11.10	36.70	1,806.8	3,007.2	146.1	180.3	188.7	1.57	-1.08	-5.70
1,924.0	13.70	44.60	1,898.7	2,915.3	161.2	193.5	202.8	3.30	2.77	8.40
2,019.0	13.20	43.80	1,991.0	2,823.0	177.1	208.9	219.1	0.56	-0.53	-0.84
2,113.0	14.10	42.50	2,082.4	2,731.6	193.3	224.1	235.2	1.01	0.96	-1.38
2,208.0	13.80	49.50	2,174.6	2,639.4	209.2	240.5	252.6	1.80	-0.32	7.37
2,302.0	13.30	53.50	2,266.0	2,548.0	222.9	257.8	270.6	1.13	-0.53	4.26
2,397.0	12.00	56.30	2,358.7	2,455.3	234.8	274.8	288.3	1.51	-1.37	2.95
2,491.0	12.90	62.50	2,450.5	2,363.5	245.1	292.2	306.3	1.71	0.96	6.60
2,586.0	12.10	62.10	2,543.2	2,270.8	254.7	310.4	325.0	0.85	-0.84	-0.42
2,680.0	13.90	59.00	2,634.8	2,179.2	265.1	328.8	344.0	2.05	1.91	-3.30
2,775.0	15.00	57.90	2,726.8	2,087.2	277.5	349.0	364.9	1.19	1.16	-1.16
2,869.0	14.60	55.60	2,817.7	1,996.3	290.7	369.1	385.7	0.76	-0.43	-2.45
2,963.0	12.60	51.50	2,909.0	1,905.0	303.7	386.9	404.3	2.36	-2.13	-4.36
3,058.0	13.60	54.90	3,001.6	1,812.4	316.6	404.1	422.3	1.33	1.05	3.58
3,152.0	13.00	54.90	3,093.0	1,721.0	329.1	421.8	440.7	0.64	-0.64	0.00
3,246.0	10.70	50.50	3,185.0	1,629.0	340.7	437.2	456.7	2.63	-2.45	-4.68
3,340.0	12.10	54.70	3,277.2	1,536.8	351.9	452.0	472.1	1.73	1.49	4.47
3,435.0	10.80	55.20	3,370.3	1,443.7	362.8	467.4	488.2	1.37	-1.37	0.53
3,529.0	11.80	56.50	3,462.5	1,351.5	373.1	482.6	504.0	1.10	1.06	1.38
3,624.0	13.10	58.00	3,555.2	1,258.8	384.2	499.9	521.9	1.41	1.37	1.58
3,718.0	13.40	56.20	3,646.7	1,167.3	395.9	518.0	540.6	0.54	0.32	-1.91
3,812.0	15.20	53.30	3,737.8	1,076.2	409.3	536.9	560.3	2.06	1.91	-3.09
3,907.0	17.50	51.40	3,829.0	985.0	425.6	558.0	582.4	2.49	2.42	-2.00
4,001.0	18.10	50.30	3,918.5	895.5	443.8	580.3	605.8	0.73	0.64	-1.17
4,095.0	18.20	48.60	4,007.8	806.2	462.8	602.6	629.1	0.57	0.11	-1.81
4,190.0	15.60	46.00	4,098.7	715.3	481.5	622.9	650.5	2.85	-2.74	-2.74
4,285.0	12.80	40.90	4,190.8	623.2	498.3	639.0	667.6	3.23	-2.95	-5.37
4,380.0	12.70	48.80	4,283.4	530.6	513.2	653.7	683.2	1.84	-0.11	8.32
4,474.0	9.90	49.10	4,375.6	438.4	525.3	667.6	697.7	2.98	-2.98	0.32
4,569.0	11.80	50.80	4,468.9	345.1	536.8	681.3	712.1	2.03	2.00	1.79
4,663.0	14.60	60.70	4,560.4	253.6	548.6	699.1	730.6	3.82	2.98	10.53
4,758.0	12.00	62.20	4,652.9	161.1	559.1	718.3	750.3	2.76	-2.74	1.58
4,852.0	12.50	53.30	4,744.7	69.3	569.7	735.1	767.7	2.08	0.53	-9.47
4,947.0	12.90	49.00	4,837.4	-23.4	582.8	751.3	784.7	1.08	0.42	-4.53
5,041.0	11.20	45.70	4,929.3	-115.3	596.1	765.8	800.0	1.95	-1.81	-3.51
5,136.0	13.00	50.90	5,022.2	-208.2	609.3	780.7	815.6	2.21	1.89	5.47
5,231.0	15.00	48.90	5,114.4	-300.4	624.1	798.2	834.0	2.17	2.11	-2.11
5,325.0	11.70	45.20	5,205.9	-391.9	638.8	814.2	850.8	3.62	-3.51	-3.94
5,420.0	12.10	50.40	5,298.8	-484.8	652.0	828.7	866.1	1.20	0.42	5.47
5,515.0	12.00	62.00	5,391.7	-577.7	663.0	845.1	883.1	2.55	-0.11	12.21
5,609.0	11.50	56.60	5,483.8	-669.8	672.7	861.5	900.1	1.28	-0.53	-5.74
5,726.0	10.70	60.00	5,598.6	-784.6	684.5	880.7	919.9	0.88	-0.68	2.91
5,821.0	13.80	62.70	5,691.4	-877.4	694.2	898.4	938.2	3.32	3.26	2.84
5,915.0	14.70	61.30	5,782.5	-968.5	705.0	918.8	959.2	1.03	0.96	-1.49
6,010.0	12.80	57.50	5,874.8	-1,060.8	716.5	938.3	979.3	2.21	-2.00	-4.00
6,104.0	13.70	56.60	5,966.3	-1,152.3	728.2	956.3	998.0	0.98	0.96	-0.96
6,199.0	12.80	52.70	6,058.8	-1,244.8	740.8	974.1	1,016.5	1.33	-0.95	-4.11

Survey Report



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Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4814.0usft (PATT 341)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	MD Reference:	KB @ 4814.0usft (PATT 341)
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Wellbore:	JOB #2017-114-341	Survey Calculation Method:	Minimum Curvature
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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)
6,293.0	12.40	52.70	6,150.5	-1,336.5	753.2	990.4	1,033.6	0.43	-0.43	0.00
6,387.0	15.50	57.40	6,241.7	-1,427.7	766.1	1,009.0	1,052.9	3.51	3.30	5.00
6,481.0	10.60	55.90	6,333.3	-1,519.3	777.7	1,026.8	1,071.3	5.22	-5.21	-1.60
6,575.0	9.70	60.10	6,425.8	-1,611.8	786.5	1,040.8	1,085.8	1.24	-0.96	4.47
6,670.0	15.40	54.10	6,518.5	-1,704.5	797.9	1,058.0	1,103.7	6.15	6.00	-6.32
KOP										
6,730.0	14.87	58.81	6,576.4	-1,762.4	806.5	1,071.0	1,117.2	2.23	-0.89	7.85
6,765.0	14.60	61.70	6,610.3	-1,796.3	811.0	1,078.7	1,125.2	2.23	-0.76	8.26
6,859.0	19.80	65.40	6,700.0	-1,886.0	823.2	1,103.7	1,150.8	5.65	5.53	3.94
6,953.0	26.90	67.10	6,786.3	-1,972.3	838.1	1,137.8	1,185.7	7.59	7.55	1.81
7,047.0	33.40	70.30	6,867.5	-2,053.5	855.2	1,181.8	1,230.6	7.12	6.91	3.40
7,141.0	39.00	75.20	6,943.4	-2,129.4	871.4	1,234.8	1,284.5	6.70	5.96	5.21
7,236.0	47.30	82.30	7,012.6	-2,198.6	883.8	1,298.4	1,348.8	10.11	8.74	7.47
7,326.0	60.80	89.70	7,065.4	-2,251.4	888.5	1,370.9	1,421.4	16.39	15.00	8.22
7,376.0	72.80	94.20	7,085.1	-2,271.1	886.8	1,416.7	1,467.1	25.38	24.00	9.00
7,425.0	84.20	94.50	7,094.8	-2,280.8	883.2	1,464.5	1,514.5	23.27	23.27	0.61
HZ LANDING POINT										
7,441.0	85.04	94.04	7,096.3	-2,282.3	882.0	1,480.4	1,530.3	5.98	5.26	-2.86
7,520.0	89.20	91.80	7,100.3	-2,286.3	878.0	1,559.2	1,608.7	5.98	5.26	-2.84
7,614.0	90.10	91.90	7,100.9	-2,286.9	874.9	1,653.1	1,702.3	0.96	0.96	0.11
7,708.0	90.80	90.40	7,100.1	-2,286.1	873.0	1,747.1	1,796.0	1.76	0.74	-1.60
7,802.0	91.10	89.30	7,098.6	-2,284.6	873.3	1,841.1	1,889.9	1.21	0.32	-1.17
7,896.0	91.10	89.80	7,096.8	-2,282.8	874.0	1,935.0	1,983.7	0.53	0.00	0.53
7,991.0	91.00	90.40	7,095.0	-2,281.0	873.9	2,030.0	2,078.5	0.64	-0.11	0.63
8,085.0	91.10	90.60	7,093.3	-2,279.3	873.0	2,124.0	2,172.3	0.24	0.11	0.21
8,179.0	91.10	89.30	7,091.5	-2,277.5	873.1	2,218.0	2,266.1	1.38	0.00	-1.38
8,274.0	91.10	88.00	7,089.7	-2,275.7	875.4	2,312.9	2,361.0	1.37	0.00	-1.37
8,368.0	91.10	87.30	7,087.9	-2,273.9	879.2	2,406.8	2,455.0	0.74	0.00	-0.74
8,463.0	91.10	87.80	7,086.0	-2,272.0	883.3	2,501.7	2,550.0	0.53	0.00	0.53
8,557.0	91.00	87.90	7,084.3	-2,270.3	886.8	2,595.7	2,643.9	0.15	-0.11	0.11
8,651.0	91.10	87.80	7,082.6	-2,268.6	890.3	2,689.6	2,737.9	0.15	0.11	-0.11
8,746.0	91.10	88.30	7,080.8	-2,266.8	893.6	2,784.5	2,832.8	0.53	0.00	0.53
8,840.0	91.30	88.60	7,078.8	-2,264.8	896.1	2,878.4	2,926.8	0.38	0.21	0.32
8,935.0	90.10	90.30	7,077.7	-2,263.7	897.0	2,973.4	3,021.6	2.19	-1.26	1.79
9,030.0	90.20	90.40	7,077.4	-2,263.4	896.4	3,068.4	3,116.4	0.15	0.11	0.11
9,125.0	90.10	90.70	7,077.2	-2,263.2	895.5	3,163.4	3,211.2	0.33	-0.11	0.32
9,220.0	90.20	89.80	7,076.9	-2,262.9	895.1	3,258.4	3,306.0	0.95	0.11	-0.95
9,315.0	90.00	89.10	7,076.7	-2,262.7	896.0	3,353.4	3,400.9	0.77	-0.21	-0.74
9,409.0	90.20	88.60	7,076.6	-2,262.6	897.9	3,447.4	3,494.8	0.57	0.21	-0.53
9,504.0	90.10	89.10	7,076.3	-2,262.3	899.8	3,542.4	3,589.7	0.54	-0.11	0.53
9,599.0	90.10	88.60	7,076.2	-2,262.2	901.7	3,637.4	3,684.7	0.53	0.00	-0.53
9,693.0	90.30	89.30	7,075.8	-2,261.8	903.4	3,731.3	3,778.6	0.77	0.21	0.74
9,788.0	90.50	90.30	7,075.2	-2,261.2	903.8	3,826.3	3,873.4	1.07	0.21	1.05
9,883.0	89.90	89.60	7,074.8	-2,260.8	903.9	3,921.3	3,968.2	0.97	-0.63	-0.74
9,978.0	90.10	88.80	7,074.8	-2,260.8	905.2	4,016.3	4,063.1	0.87	0.21	-0.84
10,072.0	90.20	89.20	7,074.6	-2,260.6	906.8	4,110.3	4,157.1	0.44	0.11	0.43
10,166.0	90.20	89.70	7,074.3	-2,260.3	907.7	4,204.3	4,250.9	0.53	0.00	0.53
10,261.0	90.10	88.80	7,074.0	-2,260.0	909.0	4,299.3	4,345.8	0.95	-0.11	-0.95
10,355.0	90.20	88.60	7,073.8	-2,259.8	911.1	4,393.3	4,439.8	0.24	0.11	-0.21
10,449.0	90.20	89.10	7,073.4	-2,259.4	913.0	4,487.2	4,533.7	0.53	0.00	0.53
10,543.0	90.20	89.00	7,073.1	-2,259.1	914.5	4,581.2	4,627.6	0.11	0.00	-0.11
10,637.0	90.20	89.20	7,072.8	-2,258.8	916.0	4,675.2	4,721.5	0.21	0.00	0.21
10,731.0	90.20	89.80	7,072.5	-2,258.5	916.8	4,769.2	4,815.4	0.64	0.00	0.64

Survey Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST 4-9-11
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4814.0usft (PATT 341)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	MD Reference:	KB @ 4814.0usft (PATT 341)
Well:	TC-COUNTRY CLUB WEST 4-9-11	North Reference:	True
Wellbore:	JOB #2017-114-341	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)
10,826.0	90.20	89.90	7,072.1	-2,258.1	917.1	4,864.2	4,910.2	0.11	0.00	0.11
10,920.0	90.20	90.70	7,071.8	-2,257.8	916.6	4,958.2	5,004.0	0.85	0.00	0.85
11,014.0	90.20	90.30	7,071.5	-2,257.5	915.8	5,052.2	5,097.8	0.43	0.00	-0.43
11,109.0	90.20	90.70	7,071.1	-2,257.1	915.0	5,147.2	5,192.6	0.42	0.00	0.42
11,203.0	90.20	91.10	7,070.8	-2,256.8	913.5	5,241.2	5,286.3	0.43	0.00	0.43
11,298.0	90.20	91.80	7,070.5	-2,256.5	911.1	5,336.2	5,381.0	0.74	0.00	0.74
11,393.0	90.30	92.10	7,070.1	-2,256.1	907.8	5,431.1	5,475.6	0.33	0.11	0.32
11,487.0	90.20	93.00	7,069.7	-2,255.7	903.7	5,525.0	5,569.1	0.96	-0.11	0.96
11,581.0	89.20	93.20	7,070.1	-2,256.1	898.6	5,618.9	5,662.5	1.08	-1.06	0.21
11,676.0	89.20	92.80	7,071.5	-2,257.5	893.6	5,713.7	5,756.8	0.42	0.00	-0.42
11,771.0	89.10	91.90	7,072.9	-2,258.9	889.7	5,808.6	5,851.4	0.95	-0.11	-0.95
11,866.0	89.20	90.80	7,074.3	-2,260.3	887.5	5,903.6	5,946.0	1.16	0.11	-1.16
11,960.0	89.10	89.60	7,075.7	-2,261.7	887.1	5,997.6	6,039.8	1.28	-0.11	-1.28
12,055.0	89.10	88.60	7,077.2	-2,263.2	888.6	6,092.6	6,134.7	1.05	0.00	-1.05
12,150.0	90.10	87.10	7,077.8	-2,263.8	892.2	6,187.5	6,229.7	1.90	1.05	-1.58
12,245.0	90.20	87.30	7,077.6	-2,263.6	896.8	6,282.4	6,324.7	0.24	0.11	0.21
12,340.0	90.10	88.60	7,077.3	-2,263.3	900.2	6,377.3	6,419.6	1.37	-0.11	1.37
12,434.0	90.30	89.60	7,077.0	-2,263.0	901.7	6,471.3	6,513.6	1.08	0.21	1.06
12,528.0	90.20	90.10	7,076.6	-2,262.6	902.0	6,565.3	6,607.4	0.54	-0.11	0.53
12,622.0	90.20	90.10	7,076.3	-2,262.3	901.8	6,659.3	6,701.2	0.00	0.00	0.00
12,717.0	90.20	90.50	7,075.9	-2,261.9	901.3	6,754.3	6,796.0	0.42	0.00	0.42
12,812.0	90.20	90.90	7,075.6	-2,261.6	900.1	6,849.3	6,890.8	0.42	0.00	0.42
12,907.0	90.20	91.20	7,075.3	-2,261.3	898.4	6,944.3	6,985.5	0.32	0.00	0.32
13,002.0	90.20	91.00	7,074.9	-2,260.9	896.6	7,039.3	7,080.2	0.21	0.00	-0.21
13,096.0	90.20	92.20	7,074.6	-2,260.6	893.9	7,133.2	7,173.8	1.28	0.00	1.28
13,191.0	90.20	92.40	7,074.3	-2,260.3	890.1	7,228.1	7,268.4	0.21	0.00	0.21
13,285.0	90.10	91.80	7,074.0	-2,260.0	886.7	7,322.1	7,361.9	0.65	-0.11	-0.64
13,380.0	90.20	90.70	7,073.8	-2,259.8	884.6	7,417.0	7,456.6	1.16	0.11	-1.16
13,474.0	90.20	89.70	7,073.5	-2,259.5	884.3	7,511.0	7,550.4	1.06	0.00	-1.06
13,569.0	90.20	90.40	7,073.1	-2,259.1	884.2	7,606.0	7,645.2	0.74	0.00	0.74
13,664.0	90.20	90.40	7,072.8	-2,258.8	883.5	7,701.0	7,740.0	0.00	0.00	0.00
13,758.0	90.20	90.30	7,072.5	-2,258.5	883.0	7,795.0	7,833.8	0.11	0.00	-0.11
13,853.0	90.10	88.60	7,072.2	-2,258.2	883.9	7,890.0	7,928.7	1.79	-0.11	-1.79
13,947.0	90.20	88.10	7,072.0	-2,258.0	886.6	7,984.0	8,022.7	0.54	0.11	-0.53
14,042.0	90.10	88.20	7,071.7	-2,257.7	889.7	8,078.9	8,117.6	0.15	-0.11	0.11
14,136.0	90.20	88.00	7,071.5	-2,257.5	892.8	8,172.9	8,211.6	0.24	0.11	-0.21
14,231.0	90.10	87.30	7,071.2	-2,257.2	896.7	8,267.8	8,306.6	0.74	-0.11	-0.74
14,326.0	89.90	88.20	7,071.2	-2,257.2	900.4	8,362.7	8,401.5	0.97	-0.21	0.95
14,420.0	89.20	89.70	7,072.0	-2,258.0	902.1	8,456.7	8,495.5	1.76	-0.74	1.60
14,515.0	89.20	90.00	7,073.3	-2,259.3	902.4	8,551.7	8,590.3	0.32	0.00	0.32
14,609.0	89.20	90.50	7,074.6	-2,260.6	902.0	8,645.7	8,684.1	0.53	0.00	0.53
14,703.0	89.30	90.90	7,075.8	-2,261.8	900.8	8,739.7	8,777.8	0.44	0.11	0.43
14,798.0	89.30	91.20	7,077.0	-2,263.0	899.1	8,834.7	8,872.5	0.32	0.00	0.32
14,892.0	89.20	91.20	7,078.2	-2,264.2	897.1	8,928.6	8,966.2	0.11	-0.11	0.00
14,987.0	89.20	91.40	7,079.6	-2,265.6	894.9	9,023.6	9,060.9	0.21	0.00	0.21
15,082.0	90.20	91.30	7,080.1	-2,266.1	892.7	9,118.6	9,155.6	1.06	1.05	-0.11
15,177.0	90.20	91.70	7,079.7	-2,265.7	890.2	9,213.5	9,250.2	0.42	0.00	0.42
15,272.0	90.10	91.80	7,079.5	-2,265.5	887.3	9,308.5	9,344.8	0.15	-0.11	0.11
15,367.0	90.10	92.20	7,079.3	-2,265.3	884.0	9,403.4	9,439.4	0.42	0.00	0.42
15,461.0	90.30	92.40	7,079.0	-2,265.0	880.2	9,497.3	9,532.9	0.30	0.21	0.21
15,555.0	90.20	92.50	7,078.6	-2,264.6	876.2	9,591.3	9,626.4	0.15	-0.11	0.11
15,650.0	90.10	92.30	7,078.3	-2,264.3	872.2	9,686.2	9,721.0	0.24	-0.11	-0.21
15,745.0	90.20	92.40	7,078.1	-2,264.1	868.3	9,781.1	9,815.5	0.15	0.11	0.11

Survey Report



Company:	EXTRACTION OIL & GAS	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST 4-9-11
Project:	WELD COUNTY, COLORADO (NAD 83)	TVD Reference:	KB @ 4814.0usft (PATT 341)
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	MD Reference:	KB @ 4814.0usft (PATT 341)
Well:	TC-COUNTRY CLUB WEST 4-9-11	North Reference:	True
Wellbore:	JOB #2017-114-341	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)
15,839.0	90.10	91.90	7,077.8	-2,263.8	864.8	9,875.0	9,909.0	0.54	-0.11	-0.53
15,933.0	90.20	91.80	7,077.6	-2,263.6	861.8	9,969.0	10,002.6	0.15	0.11	-0.11
16,028.0	90.20	91.80	7,077.3	-2,263.3	858.8	10,063.9	10,097.2	0.00	0.00	0.00
16,122.0	90.20	91.70	7,076.9	-2,262.9	855.9	10,157.9	10,190.9	0.11	0.00	-0.11
16,217.0	90.20	91.50	7,076.6	-2,262.6	853.3	10,252.9	10,285.5	0.21	0.00	-0.21
16,312.0	90.10	91.40	7,076.3	-2,262.3	850.9	10,347.8	10,380.1	0.15	-0.11	-0.11
16,407.0	90.20	91.20	7,076.1	-2,262.1	848.7	10,442.8	10,474.8	0.24	0.11	-0.21
16,502.0	90.20	90.90	7,075.8	-2,261.8	847.0	10,537.8	10,569.5	0.32	0.00	-0.32
16,598.0	90.10	90.70	7,075.5	-2,261.5	845.6	10,633.8	10,665.3	0.23	-0.10	-0.21
16,692.0	90.10	90.70	7,075.3	-2,261.3	844.5	10,727.8	10,759.0	0.00	0.00	0.00
16,882.0	90.20	90.30	7,074.9	-2,260.9	842.8	10,917.8	10,948.6	0.22	0.05	-0.21
17,071.0	90.30	90.40	7,074.0	-2,260.0	841.7	11,106.8	11,137.2	0.07	0.05	0.05
17,166.0	90.30	90.30	7,073.5	-2,259.5	841.1	11,201.7	11,232.0	0.11	0.00	-0.11
17,260.0	90.40	89.90	7,073.0	-2,259.0	840.9	11,295.7	11,325.8	0.44	0.11	-0.43
17,355.0	90.30	89.90	7,072.4	-2,258.4	841.1	11,390.7	11,420.6	0.11	-0.11	0.00
17,449.0	90.10	89.60	7,072.0	-2,258.0	841.5	11,484.7	11,514.5	0.38	-0.21	-0.32
17,544.0	90.20	89.40	7,071.8	-2,257.8	842.3	11,579.7	11,609.4	0.24	0.11	-0.21
17,638.0	90.50	88.90	7,071.2	-2,257.2	843.7	11,673.7	11,703.3	0.62	0.32	-0.53
17,732.0	90.20	89.30	7,070.6	-2,256.6	845.2	11,767.7	11,797.2	0.53	-0.32	0.43
17,827.0	90.20	89.60	7,070.3	-2,256.3	846.1	11,862.7	11,892.1	0.32	0.00	0.32
17,922.0	90.20	89.10	7,070.0	-2,256.0	847.2	11,957.7	11,986.9	0.53	0.00	-0.53
18,017.0	90.30	88.80	7,069.6	-2,255.6	848.9	12,052.7	12,081.9	0.33	0.11	-0.32
18,112.0	90.30	88.80	7,069.1	-2,255.1	850.9	12,147.7	12,176.8	0.00	0.00	0.00
18,207.0	90.30	88.30	7,068.6	-2,254.6	853.3	12,242.6	12,271.7	0.53	0.00	-0.53
18,301.0	90.20	88.10	7,068.2	-2,254.2	856.3	12,336.6	12,365.7	0.24	-0.11	-0.21
18,396.0	90.20	87.90	7,067.8	-2,253.8	859.6	12,431.5	12,460.7	0.21	0.00	-0.21
18,491.0	90.30	87.90	7,067.4	-2,253.4	863.1	12,526.5	12,555.6	0.11	0.11	0.00
18,586.0	90.30	88.10	7,066.9	-2,252.9	866.4	12,621.4	12,650.6	0.21	0.00	0.21
18,680.0	90.40	88.10	7,066.3	-2,252.3	869.5	12,715.3	12,744.6	0.11	0.11	0.00
18,775.0	90.40	88.10	7,065.7	-2,251.7	872.7	12,810.3	12,839.5	0.00	0.00	0.00
18,870.0	90.20	88.40	7,065.2	-2,251.2	875.6	12,905.2	12,934.5	0.38	-0.21	0.32
18,965.0	90.20	88.50	7,064.9	-2,250.9	878.1	13,000.2	13,029.4	0.11	0.00	0.11
19,059.0	90.20	88.50	7,064.5	-2,250.5	880.6	13,094.2	13,123.4	0.00	0.00	0.00
19,154.0	90.20	88.50	7,064.2	-2,250.2	883.1	13,189.1	13,218.3	0.00	0.00	0.00
19,248.0	90.20	88.00	7,063.9	-2,249.9	885.9	13,283.1	13,312.3	0.53	0.00	-0.53
19,343.0	90.30	88.80	7,063.5	-2,249.5	888.6	13,378.1	13,407.2	0.85	0.11	0.84
19,437.0	90.50	89.60	7,062.8	-2,248.8	889.9	13,472.0	13,501.1	0.88	0.21	0.85
19,531.0	90.20	90.30	7,062.2	-2,248.2	890.0	13,566.0	13,595.0	0.81	-0.32	0.74
19,625.0	90.10	90.90	7,062.0	-2,248.0	889.0	13,660.0	13,688.7	0.65	-0.11	0.64
19,719.0	90.10	91.40	7,061.8	-2,247.8	887.1	13,754.0	13,782.4	0.53	0.00	0.53
19,814.0	90.20	92.30	7,061.6	-2,247.6	884.1	13,849.0	13,877.0	0.95	0.11	0.95
19,908.0	90.30	93.00	7,061.2	-2,247.2	879.7	13,942.9	13,970.5	0.75	0.11	0.74
LAST SURVEY - MAY 5, 2017										
20,003.0	90.60	93.80	7,060.4	-2,246.4	874.1	14,037.7	14,064.8	0.90	0.32	0.84
EXTRAPOLATION TO TD										
20,200.0	90.60	93.80	7,058.3	-2,244.3	861.0	14,234.3	14,260.3	0.00	0.00	0.00