

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

TC-COUNTRY CLUB WEST 1-9-11

ORIGINAL WELLBORE

09 January, 2017

Plan: PROPOSAL #2





Project: WELD COUNTY, COLORADO (NAD 83)
Site: NE SE SEC. 8 T5N R66W 6th P.M.
Well: TC-COUNTRY CLUB WEST 1-9-11
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

ANNOTATIONS										FORMATION TOP DETAILS		
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSec	Dep	Annotation		TVDPath	MDPath	Formation
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	2478ft FNL & 1194ft FEL of Sec 8		3680.0	3826.7	PARKMAN
800.0	800.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE #1 (2°/100ft BUR)		4410.0	4605.9	SUSSEX
1600.0	1610.8	16.22	32.94	95.7	62.0	73.2	114.0	9 5/8" SURFACE CASING		4820.0	5043.6	SHANNON
1662.4	1675.8	16.22	32.94	110.9	71.8	84.8	132.1	START NUDGE #2 (2°/100ft BUR)		6940.0	7348.8	SHARON SPRINGS
1864.6	1888.8	20.48	32.94	167.1	108.3	127.8	199.2	EOB TO 20.48° INC		6972.0	7399.7	NIOBRARA
6648.7	6995.6	20.48	32.94	1666.5	1079.6	1274.3	1985.6	START BUILD & TURN		7092.0	7786.7	NIO B TARGET
7092.0	7786.7	90.00	90.25	1803.4	1642.8	1850.1	2579.4	HZ LP: 680ft FNL & 460ft FWL of Sec 9				
7092.0	20411.3	90.00	90.25	1749.2	14267.3	14374.1	15204.0	BHL: 931ft FNL & 2481ft FWL of Sec 11				

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LANDING PNT - TC-COUNTRY CLUB WEST 1-9-11	7092.0	1803.4	1642.8	40.419550	-104.792790
BHL - TC-COUNTRY CLUB WEST 1-9-11	7092.0	1749.2	14267.3	40.419390	-104.747450

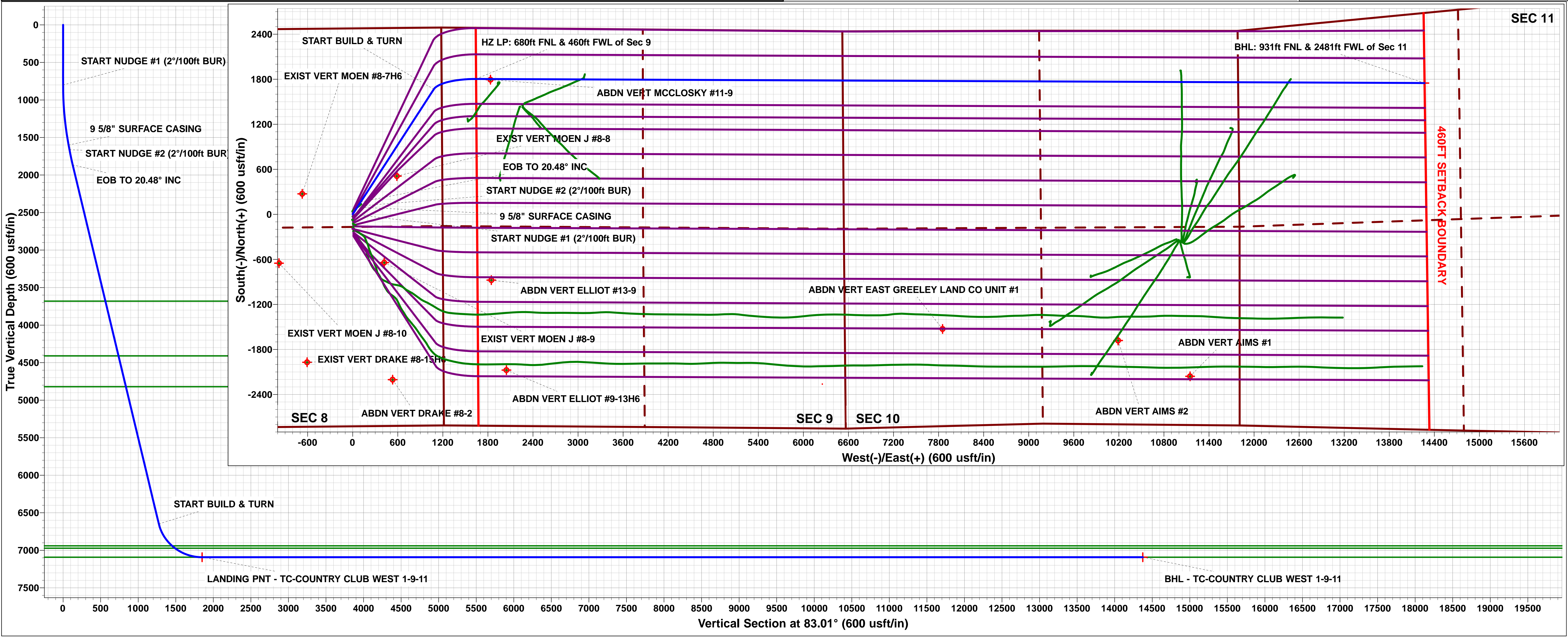
South(-)/North(+) (150 usft/in)

West(-)/East(+) (150 usft/in)

PROPOSED LOCAL COORDINATES	
SHL: 2478ft FNL & 1194ft FEL of Sec 8	
HZ LP: 680ft FNL & 460ft FWL of Sec 9	
BHL: 931ft FNL & 2481ft FWL of Sec 11	

Azimuths to True North
Magnetic North: 8.28°

Magnetic Field
Strength: 52450.1nT
Dip Angle: 66.87°
Date: 28/12/2016
Model: IGRF2015



Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST 1-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4804.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4804.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 1-9-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

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
From:	Lat/Long	Easting:	3,195,288.63 usft
Position Uncertainty:	0.0 usft	Slot Radius:	1.10000ft
		Latitude:	40.413810
		Longitude:	-104.798660
		Grid Convergence:	0.45 °

Well	TC-COUNTRY CLUB WEST 1-9-11					
Well Position	+N/-S	287.8 usft	Northing:	1,394,651.34 usfi	Latitude:	40.414600
	+E/-W	-8.4 usft	Easting:	3,195,278.00 usfi	Longitude:	-104.798690
Position Uncertainty		0.0 usft	Wellhead Elevation:	usfi	Ground Level:	4,788.0 usft

Wellbore	ORIGINAL WELLBORE				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	28/12/2016	8.28	66.87	52,450

Design	PROPOSAL #2			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	83.01

Plan Sections											
MD (usft)	Inc (°)	Azi (°)	Vertical Depth	SS (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100usf)	Turn Rate (°/100usf)	TFO (°)	Target
0.0	0.00	0.00	0.0	-4,804.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	-4,004.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,610.8	16.22	32.94	1,600.0	-3,204.0	95.6	62.0	2.00	2.00	0.00	32.94	
1,675.8	16.22	32.94	1,662.4	-3,141.6	110.9	71.8	0.00	0.00	0.00	0.00	
1,888.8	20.48	32.94	1,864.6	-2,939.4	167.1	108.3	2.00	2.00	0.00	-0.02	
6,995.6	20.48	32.94	6,648.7	1,844.7	1,666.5	1,079.6	0.00	0.00	0.00	0.00	
7,786.7	90.00	90.25	7,092.0	2,288.0	1,803.4	1,642.8	10.00	8.79	7.24	58.99	LANDING PNT - TC
20,411.3	90.00	90.25	7,092.0	2,288.0	1,749.2	14,267.3	0.00	0.00	0.00	0.00	BHL - TC-COUNTR

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Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4804.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 1-9-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2478ft FNL & 1194ft FEL of Sec 8										
0.0	0.00	0.00	0.0	4,804.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,704.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,604.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,504.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,404.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,304.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,204.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,104.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE #1 (2°/100ft BUR)										
800.0	0.00	0.00	800.0	4,004.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	2.00	32.94	900.0	3,904.02	1.5	0.9	1.1	2.00	2.00	0.00
1,000.0	4.00	32.94	999.8	3,804.16	5.9	3.8	4.5	2.00	2.00	0.00
1,100.0	6.00	32.94	1,099.5	3,704.55	13.2	8.5	10.1	2.00	2.00	0.00
1,200.0	8.00	32.94	1,198.7	3,605.30	23.4	15.2	17.9	2.00	2.00	0.00
1,300.0	10.00	32.94	1,297.5	3,506.53	36.5	23.7	27.9	2.00	2.00	0.00
1,400.0	12.00	32.94	1,395.6	3,408.38	52.5	34.0	40.2	2.00	2.00	0.00
1,500.0	14.00	32.94	1,493.1	3,310.94	71.4	46.3	54.6	2.00	2.00	0.00
1,600.0	16.00	32.94	1,589.6	3,214.36	93.1	60.3	71.2	2.00	2.00	0.00
9 5/8" SURFACE CASING										
1,610.8	16.22	32.94	1,600.0	3,203.98	95.7	62.0	73.2	2.00	2.00	0.00
START NUDGE #2 (2°/100ft BUR)										
1,675.8	16.22	32.94	1,662.4	3,141.57	110.9	71.8	84.8	0.00	0.00	0.00
1,700.0	16.70	32.94	1,685.6	3,118.36	116.6	75.6	89.2	2.00	2.00	0.00
1,800.0	18.70	32.94	1,780.9	3,023.10	142.2	92.1	108.7	2.00	2.00	0.00
EOB TO 20.48° INC										
1,888.8	20.48	32.94	1,864.6	2,939.44	167.1	108.3	127.8	2.00	2.00	0.00
1,900.0	20.48	32.94	1,875.1	2,928.95	170.4	110.4	130.3	0.00	0.00	0.00
2,000.0	20.48	32.94	1,968.7	2,835.27	199.8	129.4	152.8	0.00	0.00	0.00
2,100.0	20.48	32.94	2,062.4	2,741.58	229.1	148.5	175.2	0.00	0.00	0.00
2,200.0	20.48	32.94	2,156.1	2,647.90	258.5	167.5	197.7	0.00	0.00	0.00
2,300.0	20.48	32.94	2,249.8	2,554.22	287.9	186.5	220.1	0.00	0.00	0.00
2,400.0	20.48	32.94	2,343.5	2,460.54	317.2	205.5	242.6	0.00	0.00	0.00
2,500.0	20.48	32.94	2,437.1	2,366.86	346.6	224.5	265.0	0.00	0.00	0.00
2,600.0	20.48	32.94	2,530.8	2,273.18	375.9	243.6	287.5	0.00	0.00	0.00
2,700.0	20.48	32.94	2,624.5	2,179.49	405.3	262.6	309.9	0.00	0.00	0.00
2,800.0	20.48	32.94	2,718.2	2,085.81	434.7	281.6	332.4	0.00	0.00	0.00
2,900.0	20.48	32.94	2,811.9	1,992.13	464.0	300.6	354.8	0.00	0.00	0.00
3,000.0	20.48	32.94	2,905.5	1,898.45	493.4	319.6	377.3	0.00	0.00	0.00
3,100.0	20.48	32.94	2,999.2	1,804.77	522.7	338.7	399.7	0.00	0.00	0.00
3,200.0	20.48	32.94	3,092.9	1,711.09	552.1	357.7	422.2	0.00	0.00	0.00
3,300.0	20.48	32.94	3,186.6	1,617.41	581.5	376.7	444.7	0.00	0.00	0.00
3,400.0	20.48	32.94	3,280.3	1,523.72	610.8	395.7	467.1	0.00	0.00	0.00
3,500.0	20.48	32.94	3,374.0	1,430.04	640.2	414.7	489.6	0.00	0.00	0.00
3,600.0	20.48	32.94	3,467.6	1,336.36	669.6	433.7	512.0	0.00	0.00	0.00
3,700.0	20.48	32.94	3,561.3	1,242.68	698.9	452.8	534.5	0.00	0.00	0.00
3,800.0	20.48	32.94	3,655.0	1,149.00	728.3	471.8	556.9	0.00	0.00	0.00
PARKMAN										
3,826.7	20.48	32.94	3,680.0	1,124.00	736.1	476.9	562.9	0.00	0.00	0.00
3,900.0	20.48	32.94	3,748.7	1,055.32	757.6	490.8	579.4	0.00	0.00	0.00
4,000.0	20.48	32.94	3,842.4	961.63	787.0	509.8	601.8	0.00	0.00	0.00
4,100.0	20.48	32.94	3,936.0	867.95	816.4	528.8	624.3	0.00	0.00	0.00
4,200.0	20.48	32.94	4,029.7	774.27	845.7	547.9	646.7	0.00	0.00	0.00

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Well:	TC-COUNTRY CLUB WEST 1-9-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,300.0	20.48	32.94	4,123.4	680.59	875.1	566.9	669.2	0.00	0.00	0.00
4,400.0	20.48	32.94	4,217.1	586.91	904.4	585.9	691.6	0.00	0.00	0.00
4,500.0	20.48	32.94	4,310.8	493.23	933.8	604.9	714.1	0.00	0.00	0.00
4,600.0	20.48	32.94	4,404.5	399.54	963.2	623.9	736.5	0.00	0.00	0.00
SUSSEX										
4,605.9	20.48	32.94	4,410.0	394.00	964.9	625.1	737.8	0.00	0.00	0.00
4,700.0	20.48	32.94	4,498.1	305.86	992.5	643.0	759.0	0.00	0.00	0.00
4,800.0	20.48	32.94	4,591.8	212.18	1,021.9	662.0	781.4	0.00	0.00	0.00
4,900.0	20.48	32.94	4,685.5	118.50	1,051.2	681.0	803.9	0.00	0.00	0.00
5,000.0	20.48	32.94	4,779.2	24.82	1,080.6	700.0	826.3	0.00	0.00	0.00
SHANNON										
5,043.6	20.48	32.94	4,820.0	-16.00	1,093.4	708.3	836.1	0.00	0.00	0.00
5,100.0	20.48	32.94	4,872.9	-68.86	1,110.0	719.0	848.8	0.00	0.00	0.00
5,200.0	20.48	32.94	4,966.5	-162.54	1,139.3	738.1	871.2	0.00	0.00	0.00
5,300.0	20.48	32.94	5,060.2	-256.23	1,168.7	757.1	893.7	0.00	0.00	0.00
5,400.0	20.48	32.94	5,153.9	-349.91	1,198.0	776.1	916.1	0.00	0.00	0.00
5,500.0	20.48	32.94	5,247.6	-443.59	1,227.4	795.1	938.6	0.00	0.00	0.00
5,600.0	20.48	32.94	5,341.3	-537.27	1,256.8	814.1	961.0	0.00	0.00	0.00
5,700.0	20.48	32.94	5,435.0	-630.95	1,286.1	833.2	983.5	0.00	0.00	0.00
5,800.0	20.48	32.94	5,528.6	-724.63	1,315.5	852.2	1,005.9	0.00	0.00	0.00
5,900.0	20.48	32.94	5,622.3	-818.32	1,344.8	871.2	1,028.4	0.00	0.00	0.00
6,000.0	20.48	32.94	5,716.0	-912.00	1,374.2	890.2	1,050.8	0.00	0.00	0.00
6,100.0	20.48	32.94	5,809.7	-1,005.68	1,403.6	909.2	1,073.3	0.00	0.00	0.00
6,200.0	20.48	32.94	5,903.4	-1,099.36	1,432.9	928.3	1,095.7	0.00	0.00	0.00
6,300.0	20.48	32.94	5,997.0	-1,193.04	1,462.3	947.3	1,118.2	0.00	0.00	0.00
6,400.0	20.48	32.94	6,090.7	-1,286.72	1,491.6	966.3	1,140.6	0.00	0.00	0.00
6,500.0	20.48	32.94	6,184.4	-1,380.40	1,521.0	985.3	1,163.1	0.00	0.00	0.00
6,600.0	20.48	32.94	6,278.1	-1,474.09	1,550.4	1,004.3	1,185.5	0.00	0.00	0.00
6,700.0	20.48	32.94	6,371.8	-1,567.77	1,579.7	1,023.4	1,208.0	0.00	0.00	0.00
6,800.0	20.48	32.94	6,465.4	-1,661.45	1,609.1	1,042.4	1,230.4	0.00	0.00	0.00
6,900.0	20.48	32.94	6,559.1	-1,755.13	1,638.4	1,061.4	1,252.9	0.00	0.00	0.00
START BUILD & TURN										
6,995.6	20.48	32.94	6,648.7	-1,844.69	1,666.5	1,079.6	1,274.3	0.00	0.00	0.00
7,000.0	20.71	34.01	6,652.8	-1,848.81	1,667.8	1,080.4	1,275.4	10.05	5.25	24.36
7,100.0	27.30	52.73	6,744.2	-1,940.24	1,696.4	1,108.6	1,306.8	10.00	6.59	18.73
7,200.0	35.43	64.03	6,829.6	-2,025.64	1,723.1	1,153.1	1,354.2	10.00	8.13	11.29
7,300.0	44.25	71.42	6,906.4	-2,102.39	1,746.9	1,212.3	1,415.9	10.00	8.82	7.40
SHARON SPRINGS										
7,348.8	48.69	74.21	6,940.0	-2,136.00	1,757.3	1,246.1	1,450.7	10.00	9.10	5.72
NIOBRARA										
7,399.7	53.38	76.74	6,972.0	-2,168.00	1,767.2	1,284.4	1,489.9	10.00	9.23	4.97
7,400.0	53.41	76.75	6,972.2	-2,168.18	1,767.3	1,284.7	1,490.2	10.00	9.28	4.65
7,500.0	62.76	80.94	7,025.0	-2,221.00	1,783.5	1,367.9	1,574.7	10.00	9.35	4.18
7,600.0	72.22	84.46	7,063.2	-2,259.24	1,795.2	1,459.4	1,667.0	10.00	9.46	3.53
7,700.0	81.73	87.63	7,085.8	-2,281.76	1,801.8	1,556.5	1,764.1	10.00	9.51	3.17
HZ LP: 680ft FNL & 460ft FWL of Sec 9 - NIO B TARGET										
7,786.7	90.00	90.25	7,092.0	-2,288.00	1,803.4	1,642.8	1,850.0	10.00	9.54	3.02
7,800.0	90.00	90.25	7,092.0	-2,288.00	1,803.4	1,656.1	1,863.3	0.00	0.00	0.00
7,900.0	90.00	90.25	7,092.0	-2,288.00	1,802.9	1,756.1	1,962.5	0.00	0.00	0.00
8,000.0	90.00	90.25	7,092.0	-2,288.00	1,802.5	1,856.1	2,061.7	0.00	0.00	0.00
8,100.0	90.00	90.25	7,092.0	-2,288.00	1,802.1	1,956.1	2,160.9	0.00	0.00	0.00
8,200.0	90.00	90.25	7,092.0	-2,288.00	1,801.6	2,056.1	2,260.1	0.00	0.00	0.00
8,300.0	90.00	90.25	7,092.0	-2,288.00	1,801.2	2,156.1	2,359.3	0.00	0.00	0.00

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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4804.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4804.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 1-9-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,400.0	90.00	90.25	7,092.0	-2,288.00	1,800.8	2,256.1	2,458.5	0.00	0.00	0.00
8,500.0	90.00	90.25	7,092.0	-2,288.00	1,800.3	2,356.1	2,557.7	0.00	0.00	0.00
8,600.0	90.00	90.25	7,092.0	-2,288.00	1,799.9	2,456.1	2,656.9	0.00	0.00	0.00
8,700.0	90.00	90.25	7,092.0	-2,288.00	1,799.5	2,556.1	2,756.1	0.00	0.00	0.00
8,800.0	90.00	90.25	7,092.0	-2,288.00	1,799.1	2,656.1	2,855.3	0.00	0.00	0.00
8,900.0	90.00	90.25	7,092.0	-2,288.00	1,798.6	2,756.1	2,954.5	0.00	0.00	0.00
9,000.0	90.00	90.25	7,092.0	-2,288.00	1,798.2	2,856.1	3,053.7	0.00	0.00	0.00
9,100.0	90.00	90.25	7,092.0	-2,288.00	1,797.8	2,956.1	3,152.9	0.00	0.00	0.00
9,200.0	90.00	90.25	7,092.0	-2,288.00	1,797.3	3,056.1	3,252.1	0.00	0.00	0.00
9,300.0	90.00	90.25	7,092.0	-2,288.00	1,796.9	3,156.1	3,351.3	0.00	0.00	0.00
9,400.0	90.00	90.25	7,092.0	-2,288.00	1,796.5	3,256.1	3,450.5	0.00	0.00	0.00
9,500.0	90.00	90.25	7,092.0	-2,288.00	1,796.1	3,356.1	3,549.7	0.00	0.00	0.00
9,600.0	90.00	90.25	7,092.0	-2,288.00	1,795.6	3,456.1	3,648.9	0.00	0.00	0.00
9,700.0	90.00	90.25	7,092.0	-2,288.00	1,795.2	3,556.1	3,748.1	0.00	0.00	0.00
9,800.0	90.00	90.25	7,092.0	-2,288.00	1,794.8	3,656.1	3,847.3	0.00	0.00	0.00
9,900.0	90.00	90.25	7,092.0	-2,288.00	1,794.3	3,756.1	3,946.5	0.00	0.00	0.00
10,000.0	90.00	90.25	7,092.0	-2,288.00	1,793.9	3,856.1	4,045.7	0.00	0.00	0.00
10,100.0	90.00	90.25	7,092.0	-2,288.00	1,793.5	3,956.1	4,145.0	0.00	0.00	0.00
10,200.0	90.00	90.25	7,092.0	-2,288.00	1,793.0	4,056.1	4,244.2	0.00	0.00	0.00
10,300.0	90.00	90.25	7,092.0	-2,288.00	1,792.6	4,156.1	4,343.4	0.00	0.00	0.00
10,400.0	90.00	90.25	7,092.0	-2,288.00	1,792.2	4,256.1	4,442.6	0.00	0.00	0.00
10,500.0	90.00	90.25	7,092.0	-2,288.00	1,791.8	4,356.1	4,541.8	0.00	0.00	0.00
10,600.0	90.00	90.25	7,092.0	-2,288.00	1,791.3	4,456.1	4,641.0	0.00	0.00	0.00
10,700.0	90.00	90.25	7,092.0	-2,288.00	1,790.9	4,556.1	4,740.2	0.00	0.00	0.00
10,800.0	90.00	90.25	7,092.0	-2,288.00	1,790.5	4,656.1	4,839.4	0.00	0.00	0.00
10,900.0	90.00	90.25	7,092.0	-2,288.00	1,790.0	4,756.1	4,938.6	0.00	0.00	0.00
11,000.0	90.00	90.25	7,092.0	-2,288.00	1,789.6	4,856.1	5,037.8	0.00	0.00	0.00
11,100.0	90.00	90.25	7,092.0	-2,288.00	1,789.2	4,956.1	5,137.0	0.00	0.00	0.00
11,200.0	90.00	90.25	7,092.0	-2,288.00	1,788.7	5,056.1	5,236.2	0.00	0.00	0.00
11,300.0	90.00	90.25	7,092.0	-2,288.00	1,788.3	5,156.1	5,335.4	0.00	0.00	0.00
11,400.0	90.00	90.25	7,092.0	-2,288.00	1,787.9	5,256.1	5,434.6	0.00	0.00	0.00
11,500.0	90.00	90.25	7,092.0	-2,288.00	1,787.5	5,356.1	5,533.8	0.00	0.00	0.00
11,600.0	90.00	90.25	7,092.0	-2,288.00	1,787.0	5,456.1	5,633.0	0.00	0.00	0.00
11,700.0	90.00	90.25	7,092.0	-2,288.00	1,786.6	5,556.1	5,732.2	0.00	0.00	0.00
11,800.0	90.00	90.25	7,092.0	-2,288.00	1,786.2	5,656.1	5,831.4	0.00	0.00	0.00
11,900.0	90.00	90.25	7,092.0	-2,288.00	1,785.7	5,756.1	5,930.6	0.00	0.00	0.00
12,000.0	90.00	90.25	7,092.0	-2,288.00	1,785.3	5,856.1	6,029.8	0.00	0.00	0.00
12,100.0	90.00	90.25	7,092.0	-2,288.00	1,784.9	5,956.1	6,129.0	0.00	0.00	0.00
12,200.0	90.00	90.25	7,092.0	-2,288.00	1,784.5	6,056.1	6,228.2	0.00	0.00	0.00
12,300.0	90.00	90.25	7,092.0	-2,288.00	1,784.0	6,156.1	6,327.4	0.00	0.00	0.00
12,400.0	90.00	90.25	7,092.0	-2,288.00	1,783.6	6,256.1	6,426.6	0.00	0.00	0.00
12,500.0	90.00	90.25	7,092.0	-2,288.00	1,783.2	6,356.1	6,525.8	0.00	0.00	0.00
12,600.0	90.00	90.25	7,092.0	-2,288.00	1,782.7	6,456.1	6,625.0	0.00	0.00	0.00
12,700.0	90.00	90.25	7,092.0	-2,288.00	1,782.3	6,556.1	6,724.2	0.00	0.00	0.00
12,800.0	90.00	90.25	7,092.0	-2,288.00	1,781.9	6,656.1	6,823.5	0.00	0.00	0.00
12,900.0	90.00	90.25	7,092.0	-2,288.00	1,781.4	6,756.1	6,922.7	0.00	0.00	0.00
13,000.0	90.00	90.25	7,092.0	-2,288.00	1,781.0	6,856.1	7,021.9	0.00	0.00	0.00
13,100.0	90.00	90.25	7,092.0	-2,288.00	1,780.6	6,956.1	7,121.1	0.00	0.00	0.00
13,200.0	90.00	90.25	7,092.0	-2,288.00	1,780.2	7,056.1	7,220.3	0.00	0.00	0.00
13,300.0	90.00	90.25	7,092.0	-2,288.00	1,779.7	7,156.1	7,319.5	0.00	0.00	0.00
13,400.0	90.00	90.25	7,092.0	-2,288.00	1,779.3	7,256.1	7,418.7	0.00	0.00	0.00
13,500.0	90.00	90.25	7,092.0	-2,288.00	1,778.9	7,356.1	7,517.9	0.00	0.00	0.00
13,600.0	90.00	90.25	7,092.0	-2,288.00	1,778.4	7,456.1	7,617.1	0.00	0.00	0.00
13,700.0	90.00	90.25	7,092.0	-2,288.00	1,778.0	7,556.1	7,716.3	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST 1-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4804.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4804.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 1-9-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Planned Survey										
MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,800.0	90.00	90.25	7,092.0	-2,288.00	1,777.6	7,656.1	7,815.5	0.00	0.00	0.00
13,900.0	90.00	90.25	7,092.0	-2,288.00	1,777.2	7,756.1	7,914.7	0.00	0.00	0.00
14,000.0	90.00	90.25	7,092.0	-2,288.00	1,776.7	7,856.1	8,013.9	0.00	0.00	0.00
14,100.0	90.00	90.25	7,092.0	-2,288.00	1,776.3	7,956.1	8,113.1	0.00	0.00	0.00
14,200.0	90.00	90.25	7,092.0	-2,288.00	1,775.9	8,056.1	8,212.3	0.00	0.00	0.00
14,300.0	90.00	90.25	7,092.0	-2,288.00	1,775.4	8,156.1	8,311.5	0.00	0.00	0.00
14,400.0	90.00	90.25	7,092.0	-2,288.00	1,775.0	8,256.1	8,410.7	0.00	0.00	0.00
14,500.0	90.00	90.25	7,092.0	-2,288.00	1,774.6	8,356.1	8,509.9	0.00	0.00	0.00
14,600.0	90.00	90.25	7,092.0	-2,288.00	1,774.1	8,456.1	8,609.1	0.00	0.00	0.00
14,700.0	90.00	90.25	7,092.0	-2,288.00	1,773.7	8,556.1	8,708.3	0.00	0.00	0.00
14,800.0	90.00	90.25	7,092.0	-2,288.00	1,773.3	8,656.1	8,807.5	0.00	0.00	0.00
14,900.0	90.00	90.25	7,092.0	-2,288.00	1,772.9	8,756.1	8,906.7	0.00	0.00	0.00
15,000.0	90.00	90.25	7,092.0	-2,288.00	1,772.4	8,856.1	9,005.9	0.00	0.00	0.00
15,100.0	90.00	90.25	7,092.0	-2,288.00	1,772.0	8,956.1	9,105.1	0.00	0.00	0.00
15,200.0	90.00	90.25	7,092.0	-2,288.00	1,771.6	9,056.1	9,204.3	0.00	0.00	0.00
15,300.0	90.00	90.25	7,092.0	-2,288.00	1,771.1	9,156.1	9,303.5	0.00	0.00	0.00
15,400.0	90.00	90.25	7,092.0	-2,288.00	1,770.7	9,256.1	9,402.7	0.00	0.00	0.00
15,500.0	90.00	90.25	7,092.0	-2,288.00	1,770.3	9,356.1	9,501.9	0.00	0.00	0.00
15,600.0	90.00	90.25	7,092.0	-2,288.00	1,769.9	9,456.1	9,601.2	0.00	0.00	0.00
15,700.0	90.00	90.25	7,092.0	-2,288.00	1,769.4	9,556.1	9,700.4	0.00	0.00	0.00
15,800.0	90.00	90.25	7,092.0	-2,288.00	1,769.0	9,656.1	9,799.6	0.00	0.00	0.00
15,900.0	90.00	90.25	7,092.0	-2,288.00	1,768.6	9,756.1	9,898.8	0.00	0.00	0.00
16,000.0	90.00	90.25	7,092.0	-2,288.00	1,768.1	9,856.1	9,998.0	0.00	0.00	0.00
16,100.0	90.00	90.25	7,092.0	-2,288.00	1,767.7	9,956.1	10,097.2	0.00	0.00	0.00
16,200.0	90.00	90.25	7,092.0	-2,288.00	1,767.3	10,056.1	10,196.4	0.00	0.00	0.00
16,300.0	90.00	90.25	7,092.0	-2,288.00	1,766.8	10,156.0	10,295.6	0.00	0.00	0.00
16,400.0	90.00	90.25	7,092.0	-2,288.00	1,766.4	10,256.0	10,394.8	0.00	0.00	0.00
16,500.0	90.00	90.25	7,092.0	-2,288.00	1,766.0	10,356.0	10,494.0	0.00	0.00	0.00
16,600.0	90.00	90.25	7,092.0	-2,288.00	1,765.6	10,456.0	10,593.2	0.00	0.00	0.00
16,700.0	90.00	90.25	7,092.0	-2,288.00	1,765.1	10,556.0	10,692.4	0.00	0.00	0.00
16,800.0	90.00	90.25	7,092.0	-2,288.00	1,764.7	10,656.0	10,791.6	0.00	0.00	0.00
16,900.0	90.00	90.25	7,092.0	-2,288.00	1,764.3	10,756.0	10,890.8	0.00	0.00	0.00
17,000.0	90.00	90.25	7,092.0	-2,288.00	1,763.8	10,856.0	10,990.0	0.00	0.00	0.00
17,100.0	90.00	90.25	7,092.0	-2,288.00	1,763.4	10,956.0	11,089.2	0.00	0.00	0.00
17,200.0	90.00	90.25	7,092.0	-2,288.00	1,763.0	11,056.0	11,188.4	0.00	0.00	0.00
17,300.0	90.00	90.25	7,092.0	-2,288.00	1,762.6	11,156.0	11,287.6	0.00	0.00	0.00
17,400.0	90.00	90.25	7,092.0	-2,288.00	1,762.1	11,256.0	11,386.8	0.00	0.00	0.00
17,500.0	90.00	90.25	7,092.0	-2,288.00	1,761.7	11,356.0	11,486.0	0.00	0.00	0.00
17,600.0	90.00	90.25	7,092.0	-2,288.00	1,761.3	11,456.0	11,585.2	0.00	0.00	0.00
17,700.0	90.00	90.25	7,092.0	-2,288.00	1,760.8	11,556.0	11,684.4	0.00	0.00	0.00
17,800.0	90.00	90.25	7,092.0	-2,288.00	1,760.4	11,656.0	11,783.6	0.00	0.00	0.00
17,900.0	90.00	90.25	7,092.0	-2,288.00	1,760.0	11,756.0	11,882.8	0.00	0.00	0.00
18,000.0	90.00	90.25	7,092.0	-2,288.00	1,759.5	11,856.0	11,982.0	0.00	0.00	0.00
18,100.0	90.00	90.25	7,092.0	-2,288.00	1,759.1	11,956.0	12,081.2	0.00	0.00	0.00
18,200.0	90.00	90.25	7,092.0	-2,288.00	1,758.7	12,056.0	12,180.4	0.00	0.00	0.00
18,300.0	90.00	90.25	7,092.0	-2,288.00	1,758.3	12,156.0	12,279.7	0.00	0.00	0.00
18,400.0	90.00	90.25	7,092.0	-2,288.00	1,757.8	12,256.0	12,378.9	0.00	0.00	0.00
18,500.0	90.00	90.25	7,092.0	-2,288.00	1,757.4	12,356.0	12,478.1	0.00	0.00	0.00
18,600.0	90.00	90.25	7,092.0	-2,288.00	1,757.0	12,456.0	12,577.3	0.00	0.00	0.00
18,700.0	90.00	90.25	7,092.0	-2,288.00	1,756.5	12,556.0	12,676.5	0.00	0.00	0.00
18,800.0	90.00	90.25	7,092.0	-2,288.00	1,756.1	12,656.0	12,775.7	0.00	0.00	0.00
18,900.0	90.00	90.25	7,092.0	-2,288.00	1,755.7	12,756.0	12,874.9	0.00	0.00	0.00
19,000.0	90.00	90.25	7,092.0	-2,288.00	1,755.2	12,856.0	12,974.1	0.00	0.00	0.00
19,100.0	90.00	90.25	7,092.0	-2,288.00	1,754.8	12,956.0	13,073.3	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST 1-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4804.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4804.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 1-9-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	ORIGINAL WELLBORE		
Design:	PROPOSAL #2		

Planned Survey

MD (usft)	Inc (°)	Azi (°)	TVD (usft)	SS (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,200.0	90.00	90.25	7,092.0	-2,288.00	1,754.4	13,056.0	13,172.5	0.00	0.00	0.00
19,300.0	90.00	90.25	7,092.0	-2,288.00	1,754.0	13,156.0	13,271.7	0.00	0.00	0.00
19,400.0	90.00	90.25	7,092.0	-2,288.00	1,753.5	13,256.0	13,370.9	0.00	0.00	0.00
19,500.0	90.00	90.25	7,092.0	-2,288.00	1,753.1	13,356.0	13,470.1	0.00	0.00	0.00
19,600.0	90.00	90.25	7,092.0	-2,288.00	1,752.7	13,456.0	13,569.3	0.00	0.00	0.00
19,700.0	90.00	90.25	7,092.0	-2,288.00	1,752.2	13,556.0	13,668.5	0.00	0.00	0.00
19,800.0	90.00	90.25	7,092.0	-2,288.00	1,751.8	13,656.0	13,767.7	0.00	0.00	0.00
19,900.0	90.00	90.25	7,092.0	-2,288.00	1,751.4	13,756.0	13,866.9	0.00	0.00	0.00
20,000.0	90.00	90.25	7,092.0	-2,288.00	1,751.0	13,856.0	13,966.1	0.00	0.00	0.00
20,100.0	90.00	90.25	7,092.0	-2,288.00	1,750.5	13,956.0	14,065.3	0.00	0.00	0.00
20,200.0	90.00	90.25	7,092.0	-2,288.00	1,750.1	14,056.0	14,164.5	0.00	0.00	0.00
20,300.0	90.00	90.25	7,092.0	-2,288.00	1,749.7	14,156.0	14,263.7	0.00	0.00	0.00
20,400.0	90.00	90.25	7,092.0	-2,288.00	1,749.2	14,256.0	14,362.9	0.00	0.00	0.00
BHL: 931ft FNL & 2481ft FWL of Sec 11										
20,411.3	90.00	90.25	7,092.0	-2,288.00	1,749.2	14,267.3	14,374.1	0.00	0.00	0.00

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,826.7	3,680.0	PARKMAN		0.00	
4,605.9	4,410.0	SUSSEX		0.00	
5,043.6	4,820.0	SHANNON		0.00	
7,348.8	6,940.0	SHARON SPRINGS		0.00	
7,399.7	6,972.0	NIOBRARA		0.00	
7,786.7	7,092.0	NIO B TARGET		0.00	

Plan Annotations

MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	2478ft FNL & 1194ft FEL of Sec 8
800.0	800.0	0.0	0.0	START NUDGE #1 (2°/100ft BUR)
1,610.8	1,600.0	95.7	62.0	9 5/8" SURFACE CASING
1,675.8	1,662.4	110.9	71.8	START NUDGE #2 (2°/100ft BUR)
1,888.8	1,864.6	167.1	108.3	EOB TO 20.48° INC
6,995.6	6,648.7	1,666.5	1,079.6	START BUILD & TURN
7,786.7	7,092.0	1,803.4	1,642.8	HZ LP: 680ft FNL & 460ft FWL of Sec 9
20,411.3	7,092.0	1,749.2	14,267.3	BHL: 931ft FNL & 2481ft FWL of Sec 11