

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

TC-COUNTRY CLUB WEST 4-9-11

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 4-9-11
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

ANNOTATIONS										FORMATION TOP DETAILS		
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation		TVDPath	MDPath	Formation
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL:2574ft FNL & 1192ft FEL of Sec 8		3680.0	3743.3	PARKMAN
1700.0	1700.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDDGE (2°/100ft BUR)		4410.0	4505.7	SUSSEX
2527.3	2539.3	16.79	52.66	74.0	97.1	101.3	122.1	EOB TO 16.79° INC		4820.0	4934.0	SHANNON
6657.4	6853.2	16.79	52.66	829.6	1087.6	1135.1	1367.9	START BUILD & TURN		6940.0	7190.0	SHARON SPRINGS
7092.0	7620.9	90.00	90.25	907.2	1645.6	1696.8	1936.3	HZ LP: 1670ft FNL & 460ft FWL of Sec 9		6972.0	7240.0	NIOBRARA
7092.0	20254.4	90.00	90.25	853.0	14279.0	14304.5	14569.8	BHL: 1918ft FNL & 2485ft FWL of Sec 11		7092.0	7620.9	NIO B TARGET

WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LANDING PNT - TC-COUNTRY CLUB WEST 4-9-11	7092.0	907.2	1645.7	40.416830	-104.792770
BHL - TC-COUNTRY CLUB WEST 4-9-11	7092.0	853.0	14279.1	40.416670	-104.747400

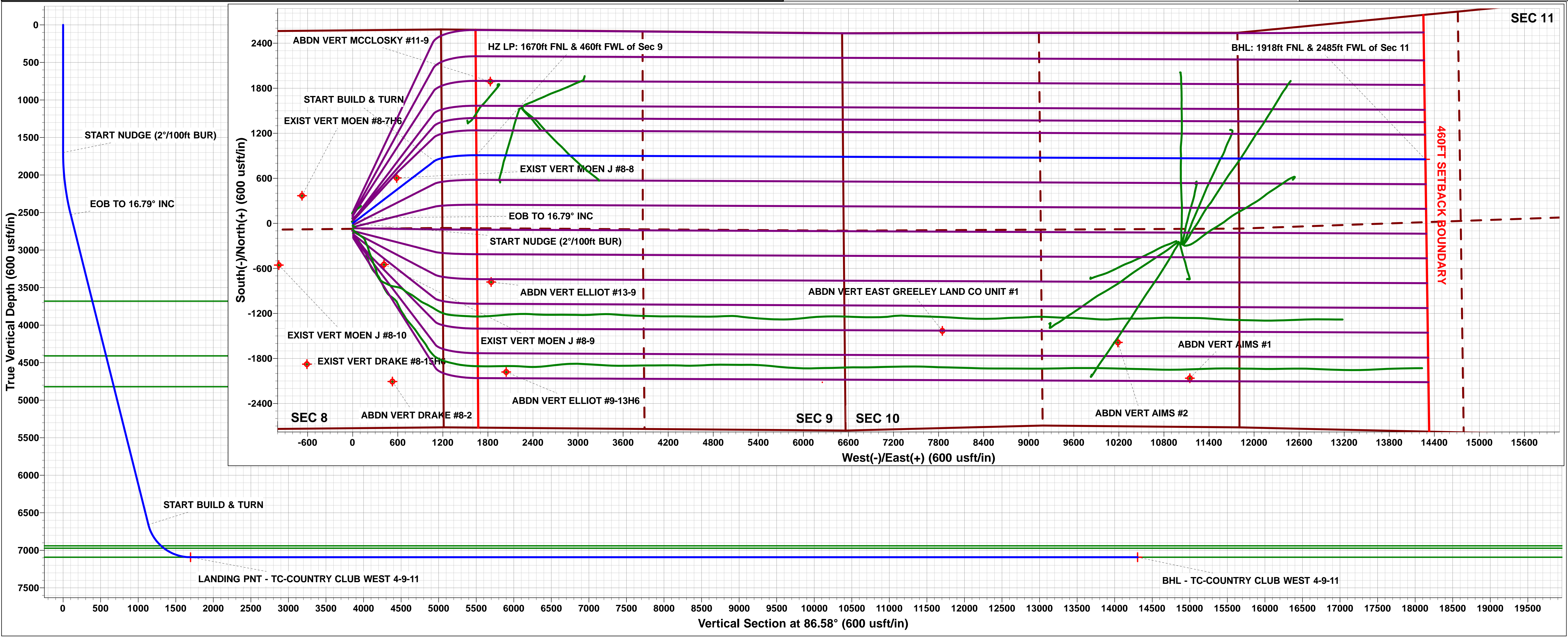
South(-)/North(+) (150 usft/in)

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

T M

Azimuths to True North
Magnetic North: 8.28°

Magnetic Field
Strength: 52449.9snT
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 4-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4805.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4805.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 4-9-11	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 4-9-11					
Well Position	+N/-S	193.1 usft	Northing:	1,394,556.64 usfi	Latitude:	40.414340
	+E/-W	-5.6 usft	Easting:	3,195,281.53 usfi	Longitude:	-104.798680
Position Uncertainty		0.0 usft	Wellhead Elevation:	usfi	Ground Level:	4,789.0 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	86.58	

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	-4,805.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,700.0	0.00	0.00	1,700.0	-3,105.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,539.3	16.79	52.66	2,527.3	-2,277.7	74.0	97.0	2.00	2.00	0.00	52.66	
6,853.2	16.79	52.66	6,657.5	1,852.5	829.6	1,087.6	0.00	0.00	0.00	0.00	
7,620.9	90.00	90.25	7,092.0	2,287.0	907.2	1,645.7	10.00	9.54	4.90	38.80	LANDING PNT - TC
20,254.4	90.00	90.25	7,092.0	2,287.0	853.0	14,279.1	0.00	0.00	0.00	0.00	BHL - TC-COUNTR

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST 4-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4805.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4805.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 4-9-11	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)
SHL:2574ft FNL & 1192ft FEL of Sec 8										
0.0	0.00	0.00	0.0	4,805.00	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	4,705.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	4,605.00	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	4,505.00	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	4,405.00	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	4,305.00	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	4,205.00	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	4,105.00	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	4,005.00	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	3,905.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,805.00	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	3,705.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	3,605.00	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	3,505.00	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	3,405.00	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	3,305.00	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	3,205.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE (2°/100ft BUR)										
1,700.0	0.00	0.00	1,700.0	3,105.00	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	2.00	52.66	1,800.0	3,005.02	1.1	1.4	1.4	2.00	2.00	0.00
1,900.0	4.00	52.66	1,899.8	2,905.16	4.2	5.5	5.8	2.00	2.00	0.00
2,000.0	6.00	52.66	1,999.5	2,805.55	9.5	12.5	13.0	2.00	2.00	0.00
2,100.0	8.00	52.66	2,098.7	2,706.30	16.9	22.2	23.1	2.00	2.00	0.00
2,200.0	10.00	52.66	2,197.5	2,607.53	26.4	34.6	36.1	2.00	2.00	0.00
2,300.0	12.00	52.66	2,295.6	2,509.38	38.0	49.8	51.9	2.00	2.00	0.00
2,400.0	14.00	52.66	2,393.1	2,411.94	51.6	67.7	70.6	2.00	2.00	0.00
2,500.0	16.00	52.66	2,489.6	2,315.36	67.3	88.2	92.1	2.00	2.00	0.00
EOB TO 16.79° INC										
2,539.3	16.79	52.66	2,527.3	2,277.66	74.0	97.1	101.3	2.00	2.00	0.00
2,600.0	16.79	52.66	2,585.5	2,219.54	84.7	111.0	115.8	0.00	0.00	0.00
2,700.0	16.79	52.66	2,681.2	2,123.80	102.2	134.0	139.8	0.00	0.00	0.00
2,800.0	16.79	52.66	2,776.9	2,028.06	119.7	156.9	163.8	0.00	0.00	0.00
2,900.0	16.79	52.66	2,872.7	1,932.32	137.2	179.9	187.7	0.00	0.00	0.00
3,000.0	16.79	52.66	2,968.4	1,836.58	154.7	202.8	211.7	0.00	0.00	0.00
3,100.0	16.79	52.66	3,064.2	1,740.85	172.2	225.8	235.7	0.00	0.00	0.00
3,200.0	16.79	52.66	3,159.9	1,645.11	189.8	248.8	259.6	0.00	0.00	0.00
3,300.0	16.79	52.66	3,255.6	1,549.37	207.3	271.7	283.6	0.00	0.00	0.00
3,400.0	16.79	52.66	3,351.4	1,453.63	224.8	294.7	307.6	0.00	0.00	0.00
3,500.0	16.79	52.66	3,447.1	1,357.89	242.3	317.6	331.5	0.00	0.00	0.00
3,600.0	16.79	52.66	3,542.9	1,262.15	259.8	340.6	355.5	0.00	0.00	0.00
3,700.0	16.79	52.66	3,638.6	1,166.41	277.3	363.6	379.4	0.00	0.00	0.00
PARKMAN										
3,743.3	16.79	52.66	3,680.0	1,125.00	284.9	373.5	389.8	0.00	0.00	0.00
3,800.0	16.79	52.66	3,734.3	1,070.67	294.9	386.5	403.4	0.00	0.00	0.00
3,900.0	16.79	52.66	3,830.1	974.93	312.4	409.5	427.4	0.00	0.00	0.00
4,000.0	16.79	52.66	3,925.8	879.19	329.9	432.4	451.3	0.00	0.00	0.00
4,100.0	16.79	52.66	4,021.5	783.45	347.4	455.4	475.3	0.00	0.00	0.00
4,200.0	16.79	52.66	4,117.3	687.71	364.9	478.4	499.3	0.00	0.00	0.00
4,300.0	16.79	52.66	4,213.0	591.97	382.4	501.3	523.2	0.00	0.00	0.00
4,400.0	16.79	52.66	4,308.8	496.23	400.0	524.3	547.2	0.00	0.00	0.00
4,500.0	16.79	52.66	4,404.5	400.50	417.5	547.2	571.2	0.00	0.00	0.00
SUSSEX										
4,505.7	16.79	52.66	4,410.0	395.00	418.5	548.6	572.5	0.00	0.00	0.00

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Well:	TC-COUNTRY CLUB WEST 4-9-11	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)
4,600.0	16.79	52.66	4,500.2	304.76	435.0	570.2	595.1	0.00	0.00	0.00
4,700.0	16.79	52.66	4,596.0	209.02	452.5	593.2	619.1	0.00	0.00	0.00
4,800.0	16.79	52.66	4,691.7	113.28	470.0	616.1	643.1	0.00	0.00	0.00
4,900.0	16.79	52.66	4,787.5	17.54	487.5	639.1	667.0	0.00	0.00	0.00
SHANNON										
4,934.0	16.79	52.66	4,820.0	-15.00	493.5	646.9	675.2	0.00	0.00	0.00
5,000.0	16.79	52.66	4,883.2	-78.20	505.0	662.0	691.0	0.00	0.00	0.00
5,100.0	16.79	52.66	4,978.9	-173.94	522.6	685.0	715.0	0.00	0.00	0.00
5,200.0	16.79	52.66	5,074.7	-269.68	540.1	708.0	738.9	0.00	0.00	0.00
5,300.0	16.79	52.66	5,170.4	-365.42	557.6	730.9	762.9	0.00	0.00	0.00
5,400.0	16.79	52.66	5,266.2	-461.16	575.1	753.9	786.8	0.00	0.00	0.00
5,500.0	16.79	52.66	5,361.9	-556.90	592.6	776.9	810.8	0.00	0.00	0.00
5,600.0	16.79	52.66	5,457.6	-652.64	610.1	799.8	834.8	0.00	0.00	0.00
5,700.0	16.79	52.66	5,553.4	-748.38	627.7	822.8	858.7	0.00	0.00	0.00
5,800.0	16.79	52.66	5,649.1	-844.11	645.2	845.7	882.7	0.00	0.00	0.00
5,900.0	16.79	52.66	5,744.9	-939.85	662.7	868.7	906.7	0.00	0.00	0.00
6,000.0	16.79	52.66	5,840.6	-1,035.59	680.2	891.7	930.6	0.00	0.00	0.00
6,100.0	16.79	52.66	5,936.3	-1,131.33	697.7	914.6	954.6	0.00	0.00	0.00
6,200.0	16.79	52.66	6,032.1	-1,227.07	715.2	937.6	978.6	0.00	0.00	0.00
6,300.0	16.79	52.66	6,127.8	-1,322.81	732.7	960.5	1,002.5	0.00	0.00	0.00
6,400.0	16.79	52.66	6,223.6	-1,418.55	750.3	983.5	1,026.5	0.00	0.00	0.00
6,500.0	16.79	52.66	6,319.3	-1,514.29	767.8	1,006.5	1,050.5	0.00	0.00	0.00
6,600.0	16.79	52.66	6,415.0	-1,610.03	785.3	1,029.4	1,074.4	0.00	0.00	0.00
6,700.0	16.79	52.66	6,510.8	-1,705.77	802.8	1,052.4	1,098.4	0.00	0.00	0.00
6,800.0	16.79	52.66	6,606.5	-1,801.51	820.3	1,075.3	1,122.3	0.00	0.00	0.00
START BUILD & TURN										
6,853.2	16.79	52.66	6,657.4	-1,852.44	829.6	1,087.6	1,135.1	0.00	0.00	0.00
6,900.0	20.63	61.00	6,701.8	-1,896.77	837.7	1,100.1	1,148.1	10.00	8.22	17.82
7,000.0	29.64	71.38	6,792.2	-1,987.25	854.2	1,139.1	1,188.0	10.00	9.01	10.39
7,100.0	39.11	77.16	6,874.7	-2,069.71	869.2	1,193.4	1,243.1	10.00	9.46	5.78
SHARON SPRINGS										
7,190.0	47.79	80.64	6,940.0	-2,135.00	880.9	1,254.1	1,304.4	10.00	9.64	3.86
7,200.0	48.76	80.96	6,946.7	-2,141.65	882.1	1,261.5	1,311.8	10.00	9.70	3.25
NIOBRARA										
7,240.0	52.65	82.17	6,972.0	-2,167.00	886.6	1,292.1	1,342.7	10.00	9.72	3.03
7,300.0	58.50	83.77	7,005.9	-2,200.89	892.7	1,341.2	1,392.0	10.00	9.76	2.67
7,400.0	68.29	86.05	7,050.6	-2,245.63	900.5	1,430.1	1,481.3	10.00	9.79	2.27
7,500.0	78.11	88.03	7,079.5	-2,274.50	905.4	1,525.6	1,576.9	10.00	9.82	1.98
7,600.0	87.94	89.87	7,091.6	-2,286.62	907.2	1,624.7	1,675.9	10.00	9.83	1.84
HZ LP: 1670ft FNL & 460ft FWL of Sec 9 - NIO B TARGET										
7,620.9	90.00	90.25	7,092.0	-2,287.00	907.2	1,645.7	1,696.8	10.00	9.83	1.81
7,700.0	90.00	90.25	7,092.0	-2,287.00	906.9	1,724.7	1,775.7	0.00	0.00	0.00
7,800.0	90.00	90.25	7,092.0	-2,287.00	906.4	1,824.7	1,875.5	0.00	0.00	0.00
7,900.0	90.00	90.25	7,092.0	-2,287.00	906.0	1,924.7	1,975.3	0.00	0.00	0.00
8,000.0	90.00	90.25	7,092.0	-2,287.00	905.6	2,024.7	2,075.1	0.00	0.00	0.00
8,100.0	90.00	90.25	7,092.0	-2,287.00	905.1	2,124.7	2,174.9	0.00	0.00	0.00
8,200.0	90.00	90.25	7,092.0	-2,287.00	904.7	2,224.7	2,274.7	0.00	0.00	0.00
8,300.0	90.00	90.25	7,092.0	-2,287.00	904.3	2,324.7	2,374.5	0.00	0.00	0.00
8,400.0	90.00	90.25	7,092.0	-2,287.00	903.9	2,424.7	2,474.3	0.00	0.00	0.00
8,500.0	90.00	90.25	7,092.0	-2,287.00	903.4	2,524.7	2,574.1	0.00	0.00	0.00
8,600.0	90.00	90.25	7,092.0	-2,287.00	903.0	2,624.7	2,673.9	0.00	0.00	0.00
8,700.0	90.00	90.25	7,092.0	-2,287.00	902.6	2,724.7	2,773.7	0.00	0.00	0.00
8,800.0	90.00	90.25	7,092.0	-2,287.00	902.1	2,824.7	2,873.5	0.00	0.00	0.00

Planning Report



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Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4805.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4805.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 4-9-11	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)
8,900.0	90.00	90.25	7,092.0	-2,287.00	901.7	2,924.7	2,973.3	0.00	0.00	0.00
9,000.0	90.00	90.25	7,092.0	-2,287.00	901.3	3,024.7	3,073.1	0.00	0.00	0.00
9,100.0	90.00	90.25	7,092.0	-2,287.00	900.9	3,124.7	3,172.9	0.00	0.00	0.00
9,200.0	90.00	90.25	7,092.0	-2,287.00	900.4	3,224.7	3,272.7	0.00	0.00	0.00
9,300.0	90.00	90.25	7,092.0	-2,287.00	900.0	3,324.7	3,372.5	0.00	0.00	0.00
9,400.0	90.00	90.25	7,092.0	-2,287.00	899.6	3,424.7	3,472.3	0.00	0.00	0.00
9,500.0	90.00	90.25	7,092.0	-2,287.00	899.1	3,524.7	3,572.1	0.00	0.00	0.00
9,600.0	90.00	90.25	7,092.0	-2,287.00	898.7	3,624.7	3,671.9	0.00	0.00	0.00
9,700.0	90.00	90.25	7,092.0	-2,287.00	898.3	3,724.7	3,771.6	0.00	0.00	0.00
9,800.0	90.00	90.25	7,092.0	-2,287.00	897.8	3,824.7	3,871.4	0.00	0.00	0.00
9,900.0	90.00	90.25	7,092.0	-2,287.00	897.4	3,924.7	3,971.2	0.00	0.00	0.00
10,000.0	90.00	90.25	7,092.0	-2,287.00	897.0	4,024.7	4,071.0	0.00	0.00	0.00
10,100.0	90.00	90.25	7,092.0	-2,287.00	896.6	4,124.7	4,170.8	0.00	0.00	0.00
10,200.0	90.00	90.25	7,092.0	-2,287.00	896.1	4,224.7	4,270.6	0.00	0.00	0.00
10,300.0	90.00	90.25	7,092.0	-2,287.00	895.7	4,324.7	4,370.4	0.00	0.00	0.00
10,400.0	90.00	90.25	7,092.0	-2,287.00	895.3	4,424.7	4,470.2	0.00	0.00	0.00
10,500.0	90.00	90.25	7,092.0	-2,287.00	894.8	4,524.7	4,570.0	0.00	0.00	0.00
10,600.0	90.00	90.25	7,092.0	-2,287.00	894.4	4,624.7	4,669.8	0.00	0.00	0.00
10,700.0	90.00	90.25	7,092.0	-2,287.00	894.0	4,724.7	4,769.6	0.00	0.00	0.00
10,800.0	90.00	90.25	7,092.0	-2,287.00	893.6	4,824.7	4,869.4	0.00	0.00	0.00
10,900.0	90.00	90.25	7,092.0	-2,287.00	893.1	4,924.7	4,969.2	0.00	0.00	0.00
11,000.0	90.00	90.25	7,092.0	-2,287.00	892.7	5,024.7	5,069.0	0.00	0.00	0.00
11,100.0	90.00	90.25	7,092.0	-2,287.00	892.3	5,124.7	5,168.8	0.00	0.00	0.00
11,200.0	90.00	90.25	7,092.0	-2,287.00	891.8	5,224.7	5,268.6	0.00	0.00	0.00
11,300.0	90.00	90.25	7,092.0	-2,287.00	891.4	5,324.7	5,368.4	0.00	0.00	0.00
11,400.0	90.00	90.25	7,092.0	-2,287.00	891.0	5,424.7	5,468.2	0.00	0.00	0.00
11,500.0	90.00	90.25	7,092.0	-2,287.00	890.6	5,524.7	5,568.0	0.00	0.00	0.00
11,600.0	90.00	90.25	7,092.0	-2,287.00	890.1	5,624.7	5,667.8	0.00	0.00	0.00
11,700.0	90.00	90.25	7,092.0	-2,287.00	889.7	5,724.7	5,767.6	0.00	0.00	0.00
11,800.0	90.00	90.25	7,092.0	-2,287.00	889.3	5,824.7	5,867.4	0.00	0.00	0.00
11,900.0	90.00	90.25	7,092.0	-2,287.00	888.8	5,924.7	5,967.1	0.00	0.00	0.00
12,000.0	90.00	90.25	7,092.0	-2,287.00	888.4	6,024.7	6,066.9	0.00	0.00	0.00
12,100.0	90.00	90.25	7,092.0	-2,287.00	888.0	6,124.7	6,166.7	0.00	0.00	0.00
12,200.0	90.00	90.25	7,092.0	-2,287.00	887.5	6,224.7	6,266.5	0.00	0.00	0.00
12,300.0	90.00	90.25	7,092.0	-2,287.00	887.1	6,324.7	6,366.3	0.00	0.00	0.00
12,400.0	90.00	90.25	7,092.0	-2,287.00	886.7	6,424.7	6,466.1	0.00	0.00	0.00
12,500.0	90.00	90.25	7,092.0	-2,287.00	886.3	6,524.7	6,565.9	0.00	0.00	0.00
12,600.0	90.00	90.25	7,092.0	-2,287.00	885.8	6,624.7	6,665.7	0.00	0.00	0.00
12,700.0	90.00	90.25	7,092.0	-2,287.00	885.4	6,724.7	6,765.5	0.00	0.00	0.00
12,800.0	90.00	90.25	7,092.0	-2,287.00	885.0	6,824.7	6,865.3	0.00	0.00	0.00
12,900.0	90.00	90.25	7,092.0	-2,287.00	884.5	6,924.7	6,965.1	0.00	0.00	0.00
13,000.0	90.00	90.25	7,092.0	-2,287.00	884.1	7,024.7	7,064.9	0.00	0.00	0.00
13,100.0	90.00	90.25	7,092.0	-2,287.00	883.7	7,124.7	7,164.7	0.00	0.00	0.00
13,200.0	90.00	90.25	7,092.0	-2,287.00	883.3	7,224.7	7,264.5	0.00	0.00	0.00
13,300.0	90.00	90.25	7,092.0	-2,287.00	882.8	7,324.7	7,364.3	0.00	0.00	0.00
13,400.0	90.00	90.25	7,092.0	-2,287.00	882.4	7,424.7	7,464.1	0.00	0.00	0.00
13,500.0	90.00	90.25	7,092.0	-2,287.00	882.0	7,524.7	7,563.9	0.00	0.00	0.00
13,600.0	90.00	90.25	7,092.0	-2,287.00	881.5	7,624.7	7,663.7	0.00	0.00	0.00
13,700.0	90.00	90.25	7,092.0	-2,287.00	881.1	7,724.7	7,763.5	0.00	0.00	0.00
13,800.0	90.00	90.25	7,092.0	-2,287.00	880.7	7,824.7	7,863.3	0.00	0.00	0.00
13,900.0	90.00	90.25	7,092.0	-2,287.00	880.3	7,924.7	7,963.1	0.00	0.00	0.00
14,000.0	90.00	90.25	7,092.0	-2,287.00	879.8	8,024.7	8,062.9	0.00	0.00	0.00
14,100.0	90.00	90.25	7,092.0	-2,287.00	879.4	8,124.7	8,162.7	0.00	0.00	0.00
14,200.0	90.00	90.25	7,092.0	-2,287.00	879.0	8,224.7	8,262.4	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST 4-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4805.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4805.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 4-9-11	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)
14,300.0	90.00	90.25	7,092.0	-2,287.00	878.5	8,324.7	8,362.2	0.00	0.00	0.00
14,400.0	90.00	90.25	7,092.0	-2,287.00	878.1	8,424.7	8,462.0	0.00	0.00	0.00
14,500.0	90.00	90.25	7,092.0	-2,287.00	877.7	8,524.7	8,561.8	0.00	0.00	0.00
14,600.0	90.00	90.25	7,092.0	-2,287.00	877.3	8,624.7	8,661.6	0.00	0.00	0.00
14,700.0	90.00	90.25	7,092.0	-2,287.00	876.8	8,724.7	8,761.4	0.00	0.00	0.00
14,800.0	90.00	90.25	7,092.0	-2,287.00	876.4	8,824.7	8,861.2	0.00	0.00	0.00
14,900.0	90.00	90.25	7,092.0	-2,287.00	876.0	8,924.7	8,961.0	0.00	0.00	0.00
15,000.0	90.00	90.25	7,092.0	-2,287.00	875.5	9,024.7	9,060.8	0.00	0.00	0.00
15,100.0	90.00	90.25	7,092.0	-2,287.00	875.1	9,124.7	9,160.6	0.00	0.00	0.00
15,200.0	90.00	90.25	7,092.0	-2,287.00	874.7	9,224.7	9,260.4	0.00	0.00	0.00
15,300.0	90.00	90.25	7,092.0	-2,287.00	874.2	9,324.7	9,360.2	0.00	0.00	0.00
15,400.0	90.00	90.25	7,092.0	-2,287.00	873.8	9,424.7	9,460.0	0.00	0.00	0.00
15,500.0	90.00	90.25	7,092.0	-2,287.00	873.4	9,524.7	9,559.8	0.00	0.00	0.00
15,600.0	90.00	90.25	7,092.0	-2,287.00	873.0	9,624.7	9,659.6	0.00	0.00	0.00
15,700.0	90.00	90.25	7,092.0	-2,287.00	872.5	9,724.7	9,759.4	0.00	0.00	0.00
15,800.0	90.00	90.25	7,092.0	-2,287.00	872.1	9,824.7	9,859.2	0.00	0.00	0.00
15,900.0	90.00	90.25	7,092.0	-2,287.00	871.7	9,924.7	9,959.0	0.00	0.00	0.00
16,000.0	90.00	90.25	7,092.0	-2,287.00	871.2	10,024.7	10,058.8	0.00	0.00	0.00
16,100.0	90.00	90.25	7,092.0	-2,287.00	870.8	10,124.7	10,158.6	0.00	0.00	0.00
16,200.0	90.00	90.25	7,092.0	-2,287.00	870.4	10,224.6	10,258.4	0.00	0.00	0.00
16,300.0	90.00	90.25	7,092.0	-2,287.00	870.0	10,324.6	10,358.2	0.00	0.00	0.00
16,400.0	90.00	90.25	7,092.0	-2,287.00	869.5	10,424.6	10,457.9	0.00	0.00	0.00
16,500.0	90.00	90.25	7,092.0	-2,287.00	869.1	10,524.6	10,557.7	0.00	0.00	0.00
16,600.0	90.00	90.25	7,092.0	-2,287.00	868.7	10,624.6	10,657.5	0.00	0.00	0.00
16,700.0	90.00	90.25	7,092.0	-2,287.00	868.2	10,724.6	10,757.3	0.00	0.00	0.00
16,800.0	90.00	90.25	7,092.0	-2,287.00	867.8	10,824.6	10,857.1	0.00	0.00	0.00
16,900.0	90.00	90.25	7,092.0	-2,287.00	867.4	10,924.6	10,956.9	0.00	0.00	0.00
17,000.0	90.00	90.25	7,092.0	-2,287.00	867.0	11,024.6	11,056.7	0.00	0.00	0.00
17,100.0	90.00	90.25	7,092.0	-2,287.00	866.5	11,124.6	11,156.5	0.00	0.00	0.00
17,200.0	90.00	90.25	7,092.0	-2,287.00	866.1	11,224.6	11,256.3	0.00	0.00	0.00
17,300.0	90.00	90.25	7,092.0	-2,287.00	865.7	11,324.6	11,356.1	0.00	0.00	0.00
17,400.0	90.00	90.25	7,092.0	-2,287.00	865.2	11,424.6	11,455.9	0.00	0.00	0.00
17,500.0	90.00	90.25	7,092.0	-2,287.00	864.8	11,524.6	11,555.7	0.00	0.00	0.00
17,600.0	90.00	90.25	7,092.0	-2,287.00	864.4	11,624.6	11,655.5	0.00	0.00	0.00
17,700.0	90.00	90.25	7,092.0	-2,287.00	863.9	11,724.6	11,755.3	0.00	0.00	0.00
17,800.0	90.00	90.25	7,092.0	-2,287.00	863.5	11,824.6	11,855.1	0.00	0.00	0.00
17,900.0	90.00	90.25	7,092.0	-2,287.00	863.1	11,924.6	11,954.9	0.00	0.00	0.00
18,000.0	90.00	90.25	7,092.0	-2,287.00	862.7	12,024.6	12,054.7	0.00	0.00	0.00
18,100.0	90.00	90.25	7,092.0	-2,287.00	862.2	12,124.6	12,154.5	0.00	0.00	0.00
18,200.0	90.00	90.25	7,092.0	-2,287.00	861.8	12,224.6	12,254.3	0.00	0.00	0.00
18,300.0	90.00	90.25	7,092.0	-2,287.00	861.4	12,324.6	12,354.1	0.00	0.00	0.00
18,400.0	90.00	90.25	7,092.0	-2,287.00	860.9	12,424.6	12,453.9	0.00	0.00	0.00
18,500.0	90.00	90.25	7,092.0	-2,287.00	860.5	12,524.6	12,553.7	0.00	0.00	0.00
18,600.0	90.00	90.25	7,092.0	-2,287.00	860.1	12,624.6	12,653.4	0.00	0.00	0.00
18,700.0	90.00	90.25	7,092.0	-2,287.00	859.7	12,724.6	12,753.2	0.00	0.00	0.00
18,800.0	90.00	90.25	7,092.0	-2,287.00	859.2	12,824.6	12,853.0	0.00	0.00	0.00
18,900.0	90.00	90.25	7,092.0	-2,287.00	858.8	12,924.6	12,952.8	0.00	0.00	0.00
19,000.0	90.00	90.25	7,092.0	-2,287.00	858.4	13,024.6	13,052.6	0.00	0.00	0.00
19,100.0	90.00	90.25	7,092.0	-2,287.00	857.9	13,124.6	13,152.4	0.00	0.00	0.00
19,200.0	90.00	90.25	7,092.0	-2,287.00	857.5	13,224.6	13,252.2	0.00	0.00	0.00
19,300.0	90.00	90.25	7,092.0	-2,287.00	857.1	13,324.6	13,352.0	0.00	0.00	0.00
19,400.0	90.00	90.25	7,092.0	-2,287.00	856.7	13,424.6	13,451.8	0.00	0.00	0.00
19,500.0	90.00	90.25	7,092.0	-2,287.00	856.2	13,524.6	13,551.6	0.00	0.00	0.00
19,600.0	90.00	90.25	7,092.0	-2,287.00	855.8	13,624.6	13,651.4	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST 4-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4805.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4805.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 4-9-11	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)
19,700.0	90.00	90.25	7,092.0	-2,287.00	855.4	13,724.6	13,751.2	0.00	0.00	0.00
19,800.0	90.00	90.25	7,092.0	-2,287.00	854.9	13,824.6	13,851.0	0.00	0.00	0.00
19,900.0	90.00	90.25	7,092.0	-2,287.00	854.5	13,924.6	13,950.8	0.00	0.00	0.00
20,000.0	90.00	90.25	7,092.0	-2,287.00	854.1	14,024.6	14,050.6	0.00	0.00	0.00
20,100.0	90.00	90.25	7,092.0	-2,287.00	853.6	14,124.6	14,150.4	0.00	0.00	0.00
20,200.0	90.00	90.25	7,092.0	-2,287.00	853.2	14,224.6	14,250.2	0.00	0.00	0.00
BHL: 1918ft FNL & 2485ft FWL of Sec 11										
20,254.4	90.00	90.25	7,092.0	-2,287.00	853.0	14,279.0	14,304.5	0.00	0.00	0.00

Formations						
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,743.3	3,680.0	PARKMAN				
4,505.7	4,410.0	SUSSEX				
4,934.0	4,820.0	SHANNON				
7,190.0	6,940.0	SHARON SPRINGS				
7,240.0	6,972.0	NIOBRARA				
7,620.9	7,092.0	NIO B TARGET				

Plan Annotations				
MD (usft)	TVD (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
0.0	0.0	0.0	0.0	SHL:2574ft FNL & 1192ft FEL of Sec 8
1,700.0	1,700.0	0.0	0.0	START NUDGE (2°/100ft BUR)
2,539.3	2,527.3	74.0	97.1	EOB TO 16.79° INC
6,853.2	6,657.4	829.6	1,087.6	START BUILD & TURN
7,620.9	7,092.0	907.2	1,645.6	HZ LP: 1670ft FNL & 460ft FWL of Sec 9
20,254.4	7,092.0	853.0	14,279.0	BHL: 1918ft FNL & 2485ft FWL of Sec 11