

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

TC-COUNTRY CLUB WEST A2-9-11

ORIGINAL WELLBORE

09 January, 2017

Plan: PROPOSAL #2

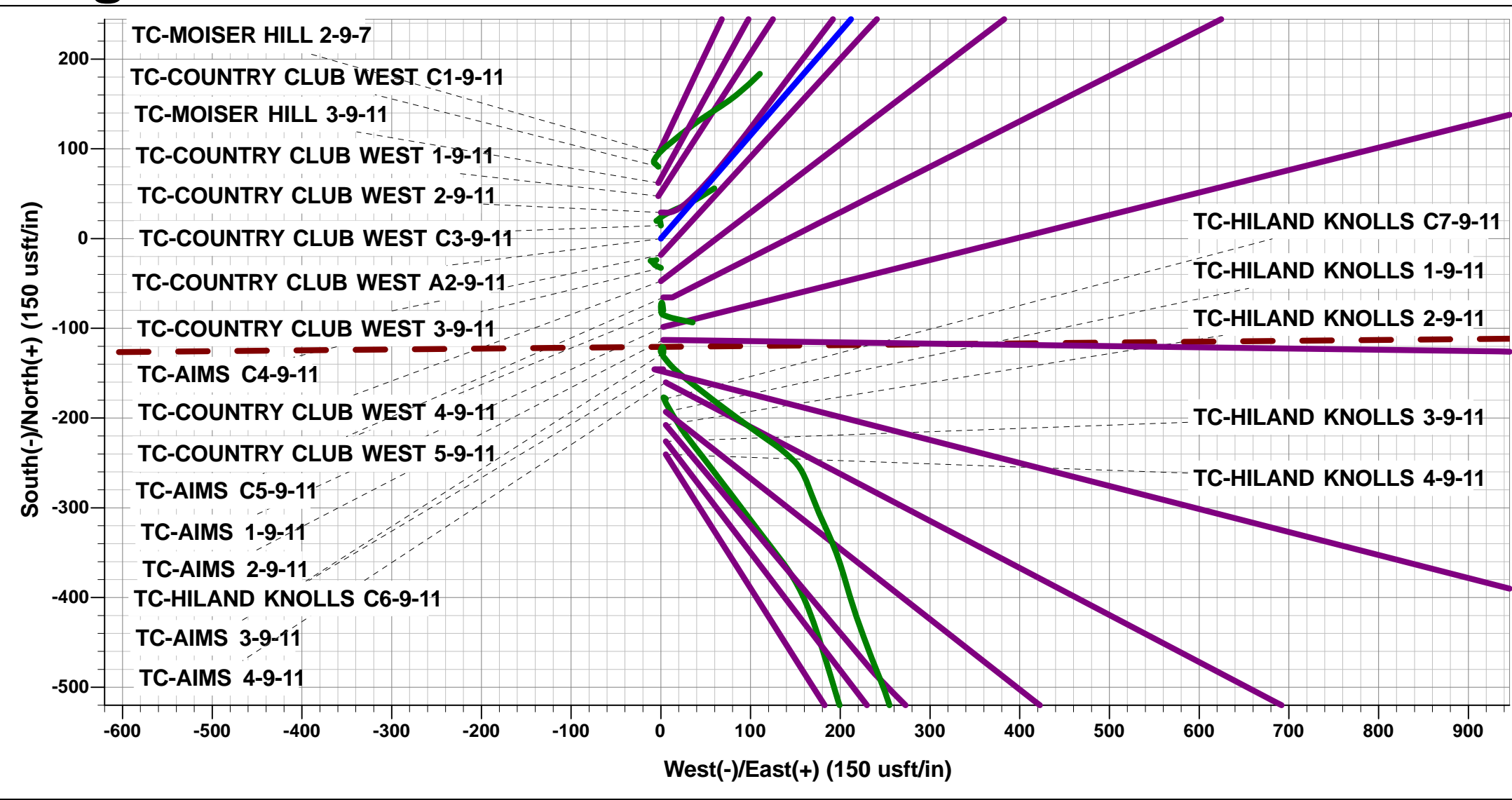




Project: WELD COUNTY, COLORADO (NAD 83)
Site: NE SE SEC. 8 T5N R66W 6th P.M.
Well: TC-COUNTRY CLUB WEST A2-9-11
Wellbore: ORIGINAL WELLBORE
Design: PROPOSAL #2

ANNOTATIONS										
TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Dep	Annotation		
0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.0	SHL: 2526ft FNL & 1193ft FEL of Sec 8		
1100.0	1100.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE #1 (2°/100ft BUR)		
1600.0	1602.6	10.05	40.91	33.2	28.8	31.7	44.0	9 5/8" SURFACE CASING		
1664.0	1667.6	10.05	40.91	41.8	36.2	39.9	55.3	START NUDGE #2 (2°/100ft BUR)		
2052.1	2068.0	18.06	40.91	115.2	99.9	109.9	152.5	EOB TO 18.06° INC		
6648.1	6902.2	18.06	40.91	1247.9	1081.2	1190.0	1651.2	START BUILD & TURN		
7092.0	7685.7	90.00	90.25	1355.3	1642.9	1759.1	2232.2	HZ LP:1175ft FNL & 460ft FWL of Sec 9		
7092.0	20316.2	90.00	90.25	1301.1	14273.2	14332.4	14862.7	BHL: 1424ft FNL & 2483ft FWL of Sec 11		

WELLBORE TARGET DETAILS (LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	
HZ LP - TC-COUNTRY CLUB WEST A2-9-11 (P2)	7092.0	1355.3	1642.8	40.418190	-104.792780	
BHL - TC-COUNTRY CLUB WEST A2-9-11 (P2)	7092.0	1301.1	14273.2	40.418030	-104.747420	



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3680.0	3780.2	PARKMAN
4410.0	4548.1	SUSSEX
4820.0	4979.3	SHANNON
6940.0	7251.8	SHARON SPRINGS
6972.0	7302.2	NIOBRARA
7092.0	7685.7	NIO B TARGET

PROPOSED LOCAL COORDINATES		
SHL: 2526ft FNL & 1193ft FEL of Sec 8		
HZ LP: 1175ft FNL & 460ft FWL of Sec 9		
BHL: 1424ft FNL & 2483ft FWL of Sec 11		

T

M

Azimuths to True North

Magnetic North: 8.28°

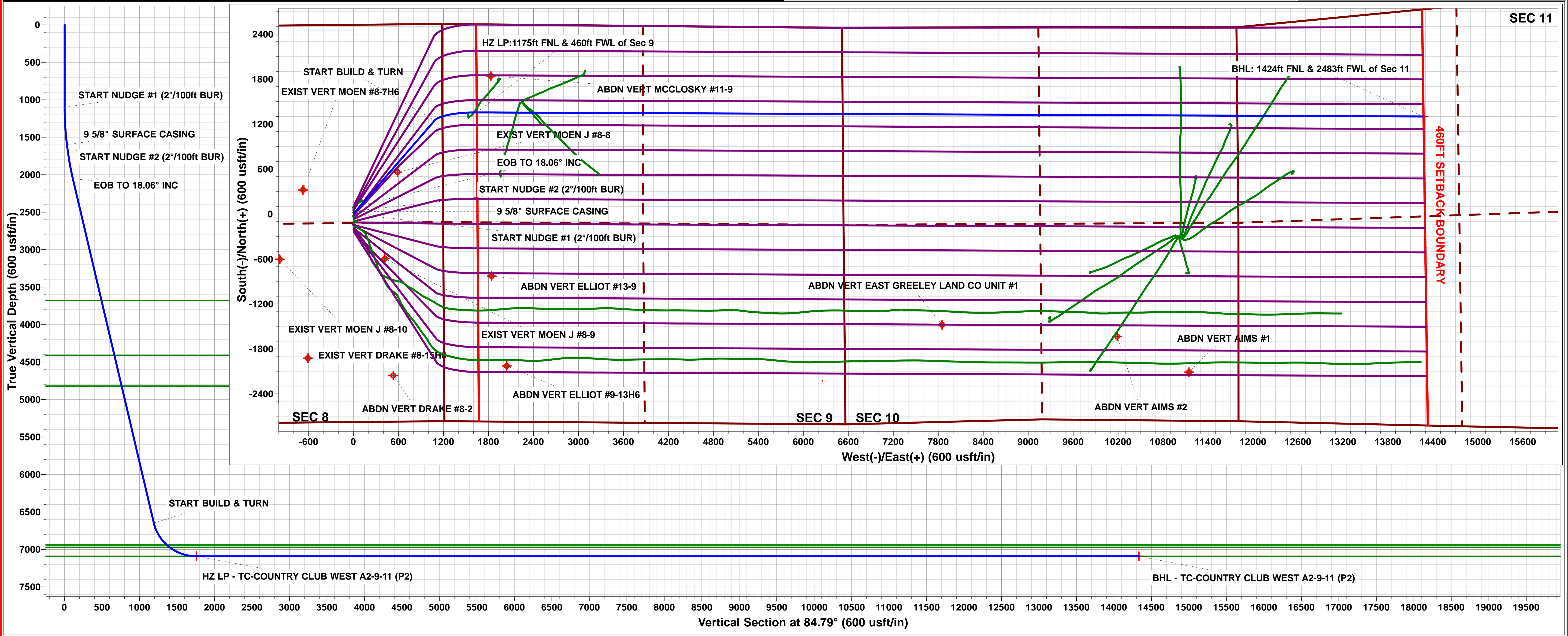
Magnetic Field

Strength: 52450.0snT

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 A2-9-11
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 A2-9-11	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 A2-9-11		
Well Position	+N/-S	240.4 usft	Northing:
	+E/-W	-5.6 usft	Easting:
Position Uncertainty		0.0 usft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

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	84.79	

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	
1,100.0	0.00	0.00	1,100.0	-3,704.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,602.6	10.05	40.91	1,600.0	-3,204.0	33.2	28.8	2.00	2.00	0.00	40.91	
1,667.6	10.05	40.91	1,664.0	-3,140.0	41.8	36.2	0.00	0.00	0.00	0.00	
2,068.0	18.06	40.91	2,052.1	-2,751.9	115.2	99.9	2.00	2.00	0.00	-0.01	
6,902.2	18.06	40.91	6,648.2	1,844.2	1,247.9	1,081.2	0.00	0.00	0.00	0.00	
7,685.7	90.00	90.25	7,092.0	2,288.0	1,355.3	1,642.8	10.00	9.18	6.30	50.76	HZ LP - TC-COUN1
20,316.2	90.00	90.25	7,092.0	2,288.0	1,301.1	14,273.2	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 A2-9-11	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: 2526ft FNL & 1193ft 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
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	0.00	0.00	900.0	3,904.00	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	3,804.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE #1 (2°/100ft BUR)										
1,100.0	0.00	0.00	1,100.0	3,704.00	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	2.00	40.91	1,200.0	3,604.02	1.3	1.1	1.3	2.00	2.00	0.00
1,300.0	4.00	40.91	1,299.8	3,504.16	5.3	4.6	5.0	2.00	2.00	0.00
1,400.0	6.00	40.91	1,399.5	3,404.55	11.9	10.3	11.3	2.00	2.00	0.00
1,500.0	8.00	40.91	1,498.7	3,305.30	21.1	18.3	20.1	2.00	2.00	0.00
1,600.0	10.00	40.91	1,597.5	3,206.53	32.9	28.5	31.4	2.00	2.00	0.00
9 5/8" SURFACE CASING										
1,602.6	10.05	40.91	1,600.0	3,203.97	33.2	28.8	31.7	1.98	1.98	0.00
START NUDGE #2 (2°/100ft BUR)										
1,667.6	10.05	40.91	1,664.0	3,139.97	41.8	36.2	39.9	0.00	0.00	0.00
1,700.0	10.70	40.91	1,695.9	3,108.10	46.2	40.0	44.1	2.00	2.00	0.00
1,800.0	12.70	40.91	1,793.8	3,010.18	61.5	53.3	58.7	2.00	2.00	0.00
1,900.0	14.70	40.91	1,891.0	2,913.03	79.4	68.8	75.8	2.00	2.00	0.00
2,000.0	16.70	40.91	1,987.2	2,816.77	99.9	86.6	95.3	2.00	2.00	0.00
EOB TO 18.06° INC										
2,068.0	18.06	40.91	2,052.1	2,751.88	115.2	99.9	109.9	2.00	2.00	0.00
2,100.0	18.06	40.91	2,082.5	2,721.45	122.7	106.4	117.1	0.00	0.00	0.00
2,200.0	18.06	40.91	2,177.6	2,626.38	146.2	126.7	139.4	0.00	0.00	0.00
2,300.0	18.06	40.91	2,272.7	2,531.31	169.6	147.0	161.7	0.00	0.00	0.00
2,400.0	18.06	40.91	2,367.8	2,436.23	193.0	167.3	184.1	0.00	0.00	0.00
2,500.0	18.06	40.91	2,462.8	2,341.16	216.5	187.6	206.4	0.00	0.00	0.00
2,600.0	18.06	40.91	2,557.9	2,246.09	239.9	207.9	228.8	0.00	0.00	0.00
2,700.0	18.06	40.91	2,653.0	2,151.01	263.3	228.2	251.1	0.00	0.00	0.00
2,800.0	18.06	40.91	2,748.1	2,055.94	286.8	248.5	273.5	0.00	0.00	0.00
2,900.0	18.06	40.91	2,843.1	1,960.87	310.2	268.8	295.8	0.00	0.00	0.00
3,000.0	18.06	40.91	2,938.2	1,865.79	333.6	289.1	318.1	0.00	0.00	0.00
3,100.0	18.06	40.91	3,033.3	1,770.72	357.0	309.4	340.5	0.00	0.00	0.00
3,200.0	18.06	40.91	3,128.4	1,675.65	380.5	329.7	362.8	0.00	0.00	0.00
3,300.0	18.06	40.91	3,223.4	1,580.58	403.9	350.0	385.2	0.00	0.00	0.00
3,400.0	18.06	40.91	3,318.5	1,485.50	427.3	370.3	407.5	0.00	0.00	0.00
3,500.0	18.06	40.91	3,413.6	1,390.43	450.8	390.6	429.9	0.00	0.00	0.00
3,600.0	18.06	40.91	3,508.6	1,295.36	474.2	410.9	452.2	0.00	0.00	0.00
3,700.0	18.06	40.91	3,603.7	1,200.28	497.6	431.2	474.6	0.00	0.00	0.00
PARKMAN										
3,780.2	18.06	40.91	3,680.0	1,124.00	516.4	447.4	492.5	0.00	0.00	0.00
3,800.0	18.06	40.91	3,698.8	1,105.21	521.1	451.5	496.9	0.00	0.00	0.00
3,900.0	18.06	40.91	3,793.9	1,010.14	544.5	471.8	519.2	0.00	0.00	0.00
4,000.0	18.06	40.91	3,888.9	915.06	567.9	492.1	541.6	0.00	0.00	0.00
4,100.0	18.06	40.91	3,984.0	819.99	591.4	512.4	563.9	0.00	0.00	0.00
4,200.0	18.06	40.91	4,079.1	724.92	614.8	532.7	586.3	0.00	0.00	0.00

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Well:	TC-COUNTRY CLUB WEST A2-9-11	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	18.06	40.91	4,174.2	629.84	638.2	553.0	608.6	0.00	0.00	0.00
4,400.0	18.06	40.91	4,269.2	534.77	661.6	573.3	631.0	0.00	0.00	0.00
4,500.0	18.06	40.91	4,364.3	439.70	685.1	593.6	653.3	0.00	0.00	0.00
SUSSEX										
4,548.1	18.06	40.91	4,410.0	394.00	696.3	603.3	664.0	0.00	0.00	0.00
4,600.0	18.06	40.91	4,459.4	344.62	708.5	613.9	675.6	0.00	0.00	0.00
4,700.0	18.06	40.91	4,554.4	249.55	731.9	634.2	698.0	0.00	0.00	0.00
4,800.0	18.06	40.91	4,649.5	154.48	755.4	654.5	720.3	0.00	0.00	0.00
4,900.0	18.06	40.91	4,744.6	59.41	778.8	674.8	742.7	0.00	0.00	0.00
SHANNON										
4,979.3	18.06	40.91	4,820.0	-16.00	797.4	690.9	760.4	0.00	0.00	0.00
5,000.0	18.06	40.91	4,839.7	-35.67	802.2	695.1	765.0	0.00	0.00	0.00
5,100.0	18.06	40.91	4,934.7	-130.74	825.7	715.4	787.4	0.00	0.00	0.00
5,200.0	18.06	40.91	5,029.8	-225.81	849.1	735.7	809.7	0.00	0.00	0.00
5,300.0	18.06	40.91	5,124.9	-320.89	872.5	756.0	832.1	0.00	0.00	0.00
5,400.0	18.06	40.91	5,220.0	-415.96	895.9	776.3	854.4	0.00	0.00	0.00
5,500.0	18.06	40.91	5,315.0	-511.03	919.4	796.6	876.7	0.00	0.00	0.00
5,600.0	18.06	40.91	5,410.1	-606.11	942.8	816.9	899.1	0.00	0.00	0.00
5,700.0	18.06	40.91	5,505.2	-701.18	966.2	837.2	921.4	0.00	0.00	0.00
5,800.0	18.06	40.91	5,600.3	-796.25	989.7	857.5	943.8	0.00	0.00	0.00
5,900.0	18.06	40.91	5,695.3	-891.33	1,013.1	877.8	966.1	0.00	0.00	0.00
6,000.0	18.06	40.91	5,790.4	-986.40	1,036.5	898.1	988.5	0.00	0.00	0.00
6,100.0	18.06	40.91	5,885.5	-1,081.47	1,060.0	918.4	1,010.8	0.00	0.00	0.00
6,200.0	18.06	40.91	5,980.5	-1,176.55	1,083.4	938.7	1,033.1	0.00	0.00	0.00
6,300.0	18.06	40.91	6,075.6	-1,271.62	1,106.8	959.0	1,055.5	0.00	0.00	0.00
6,400.0	18.06	40.91	6,170.7	-1,366.69	1,130.3	979.3	1,077.8	0.00	0.00	0.00
6,500.0	18.06	40.91	6,265.8	-1,461.76	1,153.7	999.6	1,100.2	0.00	0.00	0.00
6,600.0	18.06	40.91	6,360.8	-1,556.84	1,177.1	1,019.9	1,122.5	0.00	0.00	0.00
6,700.0	18.06	40.91	6,455.9	-1,651.91	1,200.5	1,040.2	1,144.9	0.00	0.00	0.00
6,800.0	18.06	40.91	6,551.0	-1,746.98	1,224.0	1,060.5	1,167.2	0.00	0.00	0.00
6,900.0	18.06	40.91	6,646.1	-1,842.06	1,247.4	1,080.8	1,189.5	0.00	0.00	0.00
START BUILD & TURN										
6,902.2	18.06	40.91	6,648.1	-1,844.15	1,247.9	1,081.2	1,190.0	0.00	0.00	0.00
7,000.0	25.36	58.79	6,739.0	-1,935.05	1,270.3	1,109.1	1,219.9	10.00	7.47	18.29
7,100.0	34.08	68.80	6,825.9	-2,021.86	1,291.6	1,153.7	1,266.2	10.00	8.71	10.00
7,200.0	43.30	75.03	6,903.9	-2,099.86	1,310.6	1,213.1	1,327.0	10.00	9.22	6.23
SHARON SPRINGS										
7,251.8	48.18	77.46	6,940.0	-2,136.00	1,319.4	1,249.1	1,363.7	10.00	9.42	4.69
7,300.0	52.76	79.41	6,970.7	-2,166.68	1,326.8	1,285.5	1,400.7	10.00	9.50	4.04
NIOBRARA										
7,302.2	52.97	79.49	6,972.0	-2,168.00	1,327.1	1,287.2	1,402.4	10.00	9.54	3.78
7,400.0	62.34	82.80	7,024.3	-2,220.29	1,339.7	1,368.8	1,484.8	10.00	9.59	3.38
7,500.0	72.00	85.63	7,063.1	-2,259.05	1,348.9	1,460.4	1,576.8	10.00	9.65	2.84
7,600.0	81.69	88.17	7,085.8	-2,281.79	1,354.1	1,557.5	1,674.0	10.00	9.69	2.54
HZ LP:1175ft FNL & 460ft FWL of Sec 9 - NIO B TARGET										
7,685.7	90.00	90.25	7,092.0	-2,288.00	1,355.3	1,642.8	1,759.1	10.00	9.71	2.42
7,700.0	90.00	90.25	7,092.0	-2,288.00	1,355.2	1,657.2	1,773.4	0.00	0.00	0.00
7,800.0	90.00	90.25	7,092.0	-2,288.00	1,354.8	1,757.2	1,872.9	0.00	0.00	0.00
7,900.0	90.00	90.25	7,092.0	-2,288.00	1,354.4	1,857.2	1,972.4	0.00	0.00	0.00
8,000.0	90.00	90.25	7,092.0	-2,288.00	1,354.0	1,957.2	2,072.0	0.00	0.00	0.00
8,100.0	90.00	90.25	7,092.0	-2,288.00	1,353.5	2,057.2	2,171.5	0.00	0.00	0.00
8,200.0	90.00	90.25	7,092.0	-2,288.00	1,353.1	2,157.2	2,271.1	0.00	0.00	0.00
8,300.0	90.00	90.25	7,092.0	-2,288.00	1,352.7	2,257.2	2,370.6	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST A2-9-11
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 A2-9-11	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	1,352.2	2,357.2	2,470.2	0.00	0.00	0.00
8,500.0	90.00	90.25	7,092.0	-2,288.00	1,351.8	2,457.2	2,569.7	0.00	0.00	0.00
8,600.0	90.00	90.25	7,092.0	-2,288.00	1,351.4	2,557.2	2,669.3	0.00	0.00	0.00
8,700.0	90.00	90.25	7,092.0	-2,288.00	1,351.0	2,657.2	2,768.8	0.00	0.00	0.00
8,800.0	90.00	90.25	7,092.0	-2,288.00	1,350.5	2,757.2	2,868.4	0.00	0.00	0.00
8,900.0	90.00	90.25	7,092.0	-2,288.00	1,350.1	2,857.2	2,967.9	0.00	0.00	0.00
9,000.0	90.00	90.25	7,092.0	-2,288.00	1,349.7	2,957.2	3,067.5	0.00	0.00	0.00
9,100.0	90.00	90.25	7,092.0	-2,288.00	1,349.2	3,057.2	3,167.0	0.00	0.00	0.00
9,200.0	90.00	90.25	7,092.0	-2,288.00	1,348.8	3,157.2	3,266.6	0.00	0.00	0.00
9,300.0	90.00	90.25	7,092.0	-2,288.00	1,348.4	3,257.2	3,366.1	0.00	0.00	0.00
9,400.0	90.00	90.25	7,092.0	-2,288.00	1,347.9	3,357.1	3,465.7	0.00	0.00	0.00
9,500.0	90.00	90.25	7,092.0	-2,288.00	1,347.5	3,457.1	3,565.2	0.00	0.00	0.00
9,600.0	90.00	90.25	7,092.0	-2,288.00	1,347.1	3,557.1	3,664.7	0.00	0.00	0.00
9,700.0	90.00	90.25	7,092.0	-2,288.00	1,346.7	3,657.1	3,764.3	0.00	0.00	0.00
9,800.0	90.00	90.25	7,092.0	-2,288.00	1,346.2	3,757.1	3,863.8	0.00	0.00	0.00
9,900.0	90.00	90.25	7,092.0	-2,288.00	1,345.8	3,857.1	3,963.4	0.00	0.00	0.00
10,000.0	90.00	90.25	7,092.0	-2,288.00	1,345.4	3,957.1	4,062.9	0.00	0.00	0.00
10,100.0	90.00	90.25	7,092.0	-2,288.00	1,344.9	4,057.1	4,162.5	0.00	0.00	0.00
10,200.0	90.00	90.25	7,092.0	-2,288.00	1,344.5	4,157.1	4,262.0	0.00	0.00	0.00
10,300.0	90.00	90.25	7,092.0	-2,288.00	1,344.1	4,257.1	4,361.6	0.00	0.00	0.00
10,400.0	90.00	90.25	7,092.0	-2,288.00	1,343.7	4,357.1	4,461.1	0.00	0.00	0.00
10,500.0	90.00	90.25	7,092.0	-2,288.00	1,343.2	4,457.1	4,560.7	0.00	0.00	0.00
10,600.0	90.00	90.25	7,092.0	-2,288.00	1,342.8	4,557.1	4,660.2	0.00	0.00	0.00
10,700.0	90.00	90.25	7,092.0	-2,288.00	1,342.4	4,657.1	4,759.8	0.00	0.00	0.00
10,800.0	90.00	90.25	7,092.0	-2,288.00	1,341.9	4,757.1	4,859.3	0.00	0.00	0.00
10,900.0	90.00	90.25	7,092.0	-2,288.00	1,341.5	4,857.1	4,958.9	0.00	0.00	0.00
11,000.0	90.00	90.25	7,092.0	-2,288.00	1,341.1	4,957.1	5,058.4	0.00	0.00	0.00
11,100.0	90.00	90.25	7,092.0	-2,288.00	1,340.6	5,057.1	5,158.0	0.00	0.00	0.00
11,200.0	90.00	90.25	7,092.0	-2,288.00	1,340.2	5,157.1	5,257.5	0.00	0.00	0.00
11,300.0	90.00	90.25	7,092.0	-2,288.00	1,339.8	5,257.1	5,357.1	0.00	0.00	0.00
11,400.0	90.00	90.25	7,092.0	-2,288.00	1,339.4	5,357.1	5,456.6	0.00	0.00	0.00
11,500.0	90.00	90.25	7,092.0	-2,288.00	1,338.9	5,457.1	5,556.1	0.00	0.00	0.00
11,600.0	90.00	90.25	7,092.0	-2,288.00	1,338.5	5,557.1	5,655.7	0.00	0.00	0.00
11,700.0	90.00	90.25	7,092.0	-2,288.00	1,338.1	5,657.1	5,755.2	0.00	0.00	0.00
11,800.0	90.00	90.25	7,092.0	-2,288.00	1,337.6	5,757.1	5,854.8	0.00	0.00	0.00
11,900.0	90.00	90.25	7,092.0	-2,288.00	1,337.2	5,857.1	5,954.3	0.00	0.00	0.00
12,000.0	90.00	90.25	7,092.0	-2,288.00	1,336.8	5,957.1	6,053.9	0.00	0.00	0.00
12,100.0	90.00	90.25	7,092.0	-2,288.00	1,336.4	6,057.1	6,153.4	0.00	0.00	0.00
12,200.0	90.00	90.25	7,092.0	-2,288.00	1,335.9	6,157.1	6,253.0	0.00	0.00	0.00
12,300.0	90.00	90.25	7,092.0	-2,288.00	1,335.5	6,257.1	6,352.5	0.00	0.00	0.00
12,400.0	90.00	90.25	7,092.0	-2,288.00	1,335.1	6,357.1	6,452.1	0.00	0.00	0.00
12,500.0	90.00	90.25	7,092.0	-2,288.00	1,334.6	6,457.1	6,551.6	0.00	0.00	0.00
12,600.0	90.00	90.25	7,092.0	-2,288.00	1,334.2	6,557.1	6,651.2	0.00	0.00	0.00
12,700.0	90.00	90.25	7,092.0	-2,288.00	1,333.8	6,657.1	6,750.7	0.00	0.00	0.00
12,800.0	90.00	90.25	7,092.0	-2,288.00	1,333.4	6,757.1	6,850.3	0.00	0.00	0.00
12,900.0	90.00	90.25	7,092.0	-2,288.00	1,332.9	6,857.1	6,949.8	0.00	0.00	0.00
13,000.0	90.00	90.25	7,092.0	-2,288.00	1,332.5	6,957.1	7,049.4	0.00	0.00	0.00
13,100.0	90.00	90.25	7,092.0	-2,288.00	1,332.1	7,057.1	7,148.9	0.00	0.00	0.00
13,200.0	90.00	90.25	7,092.0	-2,288.00	1,331.6	7,157.1	7,248.4	0.00	0.00	0.00
13,300.0	90.00	90.25	7,092.0	-2,288.00	1,331.2	7,257.1	7,348.0	0.00	0.00	0.00
13,400.0	90.00	90.25	7,092.0	-2,288.00	1,330.8	7,357.1	7,447.5	0.00	0.00	0.00
13,500.0	90.00	90.25	7,092.0	-2,288.00	1,330.3	7,457.1	7,547.1	0.00	0.00	0.00
13,600.0	90.00	90.25	7,092.0	-2,288.00	1,329.9	7,557.1	7,646.6	0.00	0.00	0.00
13,700.0	90.00	90.25	7,092.0	-2,288.00	1,329.5	7,657.1	7,746.2	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST A2-9-11
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 A2-9-11	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	1,329.1	7,757.1	7,845.7	0.00	0.00	0.00
13,900.0	90.00	90.25	7,092.0	-2,288.00	1,328.6	7,857.1	7,945.3	0.00	0.00	0.00
14,000.0	90.00	90.25	7,092.0	-2,288.00	1,328.2	7,957.1	8,044.8	0.00	0.00	0.00
14,100.0	90.00	90.25	7,092.0	-2,288.00	1,327.8	8,057.1	8,144.4	0.00	0.00	0.00
14,200.0	90.00	90.25	7,092.0	-2,288.00	1,327.3	8,157.1	8,243.9	0.00	0.00	0.00
14,300.0	90.00	90.25	7,092.0	-2,288.00	1,326.9	8,257.1	8,343.5	0.00	0.00	0.00
14,400.0	90.00	90.25	7,092.0	-2,288.00	1,326.5	8,357.1	8,443.0	0.00	0.00	0.00
14,500.0	90.00	90.25	7,092.0	-2,288.00	1,326.1	8,457.1	8,542.6	0.00	0.00	0.00
14,600.0	90.00	90.25	7,092.0	-2,288.00	1,325.6	8,557.1	8,642.1	0.00	0.00	0.00
14,700.0	90.00	90.25	7,092.0	-2,288.00	1,325.2	8,657.1	8,741.7	0.00	0.00	0.00
14,800.0	90.00	90.25	7,092.0	-2,288.00	1,324.8	8,757.1	8,841.2	0.00	0.00	0.00
14,900.0	90.00	90.25	7,092.0	-2,288.00	1,324.3	8,857.1	8,940.8	0.00	0.00	0.00
15,000.0	90.00	90.25	7,092.0	-2,288.00	1,323.9	8,957.1	9,040.3	0.00	0.00	0.00
15,100.0	90.00	90.25	7,092.0	-2,288.00	1,323.5	9,057.1	9,139.8	0.00	0.00	0.00
15,200.0	90.00	90.25	7,092.0	-2,288.00	1,323.0	9,157.1	9,239.4	0.00	0.00	0.00
15,300.0	90.00	90.25	7,092.0	-2,288.00	1,322.6	9,257.1	9,338.9	0.00	0.00	0.00
15,400.0	90.00	90.25	7,092.0	-2,288.00	1,322.2	9,357.1	9,438.5	0.00	0.00	0.00
15,500.0	90.00	90.25	7,092.0	-2,288.00	1,321.8	9,457.1	9,538.0	0.00	0.00	0.00
15,600.0	90.00	90.25	7,092.0	-2,288.00	1,321.3	9,557.1	9,637.6	0.00	0.00	0.00
15,700.0	90.00	90.25	7,092.0	-2,288.00	1,320.9	9,657.1	9,737.1	0.00	0.00	0.00
15,800.0	90.00	90.25	7,092.0	-2,288.00	1,320.5	9,757.1	9,836.7	0.00	0.00	0.00
15,900.0	90.00	90.25	7,092.0	-2,288.00	1,320.0	9,857.1	9,936.2	0.00	0.00	0.00
16,000.0	90.00	90.25	7,092.0	-2,288.00	1,319.6	9,957.1	10,035.8	0.00	0.00	0.00
16,100.0	90.00	90.25	7,092.0	-2,288.00	1,319.2	10,057.1	10,135.3	0.00	0.00	0.00
16,200.0	90.00	90.25	7,092.0	-2,288.00	1,318.8	10,157.1	10,234.9	0.00	0.00	0.00
16,300.0	90.00	90.25	7,092.0	-2,288.00	1,318.3	10,257.1	10,334.4	0.00	0.00	0.00
16,400.0	90.00	90.25	7,092.0	-2,288.00	1,317.9	10,357.1	10,434.0	0.00	0.00	0.00
16,500.0	90.00	90.25	7,092.0	-2,288.00	1,317.5	10,457.1	10,533.5	0.00	0.00	0.00
16,600.0	90.00	90.25	7,092.0	-2,288.00	1,317.0	10,557.1	10,633.1	0.00	0.00	0.00
16,700.0	90.00	90.25	7,092.0	-2,288.00	1,316.6	10,657.1	10,732.6	0.00	0.00	0.00
16,800.0	90.00	90.25	7,092.0	-2,288.00	1,316.2	10,757.1	10,832.1	0.00	0.00	0.00
16,900.0	90.00	90.25	7,092.0	-2,288.00	1,315.8	10,857.1	10,931.7	0.00	0.00	0.00
17,000.0	90.00	90.25	7,092.0	-2,288.00	1,315.3	10,957.1	11,031.2	0.00	0.00	0.00
17,100.0	90.00	90.25	7,092.0	-2,288.00	1,314.9	11,057.1	11,130.8	0.00	0.00	0.00
17,200.0	90.00	90.25	7,092.0	-2,288.00	1,314.5	11,157.1	11,230.3	0.00	0.00	0.00
17,300.0	90.00	90.25	7,092.0	-2,288.00	1,314.0	11,257.1	11,329.9	0.00	0.00	0.00
17,400.0	90.00	90.25	7,092.0	-2,288.00	1,313.6	11,357.1	11,429.4	0.00	0.00	0.00
17,500.0	90.00	90.25	7,092.0	-2,288.00	1,313.2	11,457.1	11,529.0	0.00	0.00	0.00
17,600.0	90.00	90.25	7,092.0	-2,288.00	1,312.7	11,557.1	11,628.5	0.00	0.00	0.00
17,700.0	90.00	90.25	7,092.0	-2,288.00	1,312.3	11,657.1	11,728.1	0.00	0.00	0.00
17,800.0	90.00	90.25	7,092.0	-2,288.00	1,311.9	11,757.1	11,827.6	0.00	0.00	0.00
17,900.0	90.00	90.25	7,092.0	-2,288.00	1,311.5	11,857.1	11,927.2	0.00	0.00	0.00
18,000.0	90.00	90.25	7,092.0	-2,288.00	1,311.0	11,957.1	12,026.7	0.00	0.00	0.00
18,100.0	90.00	90.25	7,092.0	-2,288.00	1,310.6	12,057.1	12,126.3	0.00	0.00	0.00
18,200.0	90.00	90.25	7,092.0	-2,288.00	1,310.2	12,157.1	12,225.8	0.00	0.00	0.00
18,300.0	90.00	90.25	7,092.0	-2,288.00	1,309.7	12,257.1	12,325.4	0.00	0.00	0.00
18,400.0	90.00	90.25	7,092.0	-2,288.00	1,309.3	12,357.1	12,424.9	0.00	0.00	0.00
18,500.0	90.00	90.25	7,092.0	-2,288.00	1,308.9	12,457.1	12,524.5	0.00	0.00	0.00
18,600.0	90.00	90.25	7,092.0	-2,288.00	1,308.5	12,557.1	12,624.0	0.00	0.00	0.00
18,700.0	90.00	90.25	7,092.0	-2,288.00	1,308.0	12,657.1	12,723.5	0.00	0.00	0.00
18,800.0	90.00	90.25	7,092.0	-2,288.00	1,307.6	12,757.1	12,823.1	0.00	0.00	0.00
18,900.0	90.00	90.25	7,092.0	-2,288.00	1,307.2	12,857.1	12,922.6	0.00	0.00	0.00
19,000.0	90.00	90.25	7,092.0	-2,288.00	1,306.7	12,957.1	13,022.2	0.00	0.00	0.00
19,100.0	90.00	90.25	7,092.0	-2,288.00	1,306.3	13,057.1	13,121.7	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST A2-9-11
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 A2-9-11	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	1,305.9	13,157.1	13,221.3	0.00	0.00	0.00
19,300.0	90.00	90.25	7,092.0	-2,288.00	1,305.4	13,257.1	13,320.8	0.00	0.00	0.00
19,400.0	90.00	90.25	7,092.0	-2,288.00	1,305.0	13,357.1	13,420.4	0.00	0.00	0.00
19,500.0	90.00	90.25	7,092.0	-2,288.00	1,304.6	13,457.1	13,519.9	0.00	0.00	0.00
19,600.0	90.00	90.25	7,092.0	-2,288.00	1,304.2	13,557.1	13,619.5	0.00	0.00	0.00
19,700.0	90.00	90.25	7,092.0	-2,288.00	1,303.7	13,657.1	13,719.0	0.00	0.00	0.00
19,800.0	90.00	90.25	7,092.0	-2,288.00	1,303.3	13,757.1	13,818.6	0.00	0.00	0.00
19,900.0	90.00	90.25	7,092.0	-2,288.00	1,302.9	13,857.1	13,918.1	0.00	0.00	0.00
20,000.0	90.00	90.25	7,092.0	-2,288.00	1,302.4	13,957.1	14,017.7	0.00	0.00	0.00
20,100.0	90.00	90.25	7,092.0	-2,288.00	1,302.0	14,057.1	14,117.2	0.00	0.00	0.00
20,200.0	90.00	90.25	7,092.0	-2,288.00	1,301.6	14,157.0	14,216.8	0.00	0.00	0.00
20,300.0	90.00	90.25	7,092.0	-2,288.00	1,301.2	14,257.0	14,316.3	0.00	0.00	0.00
BHL: 1424ft FNL & 2483ft FWL of Sec 11										
20,316.2	90.00	90.25	7,092.0	-2,288.00	1,301.1	14,273.2	14,332.4	0.00	0.00	0.00

Formations

MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,780.2	3,680.0	PARKMAN		0.00	
4,548.1	4,410.0	SUSSEX		0.00	
4,979.3	4,820.0	SHANNON		0.00	
7,251.8	6,940.0	SHARON SPRINGS		0.00	
7,302.2	6,972.0	NIOBRARA		0.00	
7,685.7	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	SHL: 2526ft FNL & 1193ft FEL of Sec 8
1,100.0	1,100.0	0.0	0.0	START NUDGE #1 (2°/100ft BUR)
1,602.6	1,600.0	33.2	28.8	9 5/8" SURFACE CASING
1,667.6	1,664.0	41.8	36.2	START NUDGE #2 (2°/100ft BUR)
2,068.0	2,052.1	115.2	99.9	EOB TO 18.06° INC
6,902.2	6,648.1	1,247.9	1,081.2	START BUILD & TURN
7,685.7	7,092.0	1,355.3	1,642.9	HZ LP:1175ft FNL & 460ft FWL of Sec 9
20,316.2	7,092.0	1,301.1	14,273.2	BHL: 1424ft FNL & 2483ft FWL of Sec 11