

EXTRACTION OIL & GAS

WELD COUNTY, COLORADO (NAD 83)

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

TC-COUNTRY CLUB WEST 5-9-11

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 5-9-11
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: 2590ft FNL & 1192ft FEL of Sec 8		3680.0	3729.5	PARKMAN
100.0	100.0	0.00	0.00	0.0	0.0	0.0	0.0	START NUDGE #1 (2°/100ft BUR)		4410.0	4485.7	SUSSEX
249.9	250.0	3.00	90.00	0.0	3.9	3.9	3.9	EOB TO 3° INC		4820.0	4910.4	SHANNON
290.9	291.0	3.00	90.00	0.0	6.1	6.1	6.1	END OF TANGENT		6940.0	7148.4	SHARON SPRINGS
440.8	441.0	0.00	0.00	0.0	10.0	10.0	10.0	EOD TO VERTICAL		6972.0	7198.1	NIOBRARA
1800.0	1800.2	0.00	0.00	0.0	10.0	10.0	10.0	START NUDGE #2 (2°/100ft BUR)		7092.0	7577.2	NIO B TARGET
2547.0	2555.9	15.11	63.13	44.8	98.4	100.0	109.1	EOB TO 15.11° INC				
6655.3	6811.4	15.11	63.13	546.3	1088.1	1108.0	1218.6	START BUILD & TURN				
7092.0	7577.2	90.00	90.26	597.5	1645.6	1667.0	1780.8	HZ LP: 2000ft FNL & 460ft FWL of Sec 9				
7092.0	20213.7	90.00	90.26	539.7	14282.0	14292.2	14417.3	BHL: 2247ft FNL & 2487ft FWL of Sec 11				

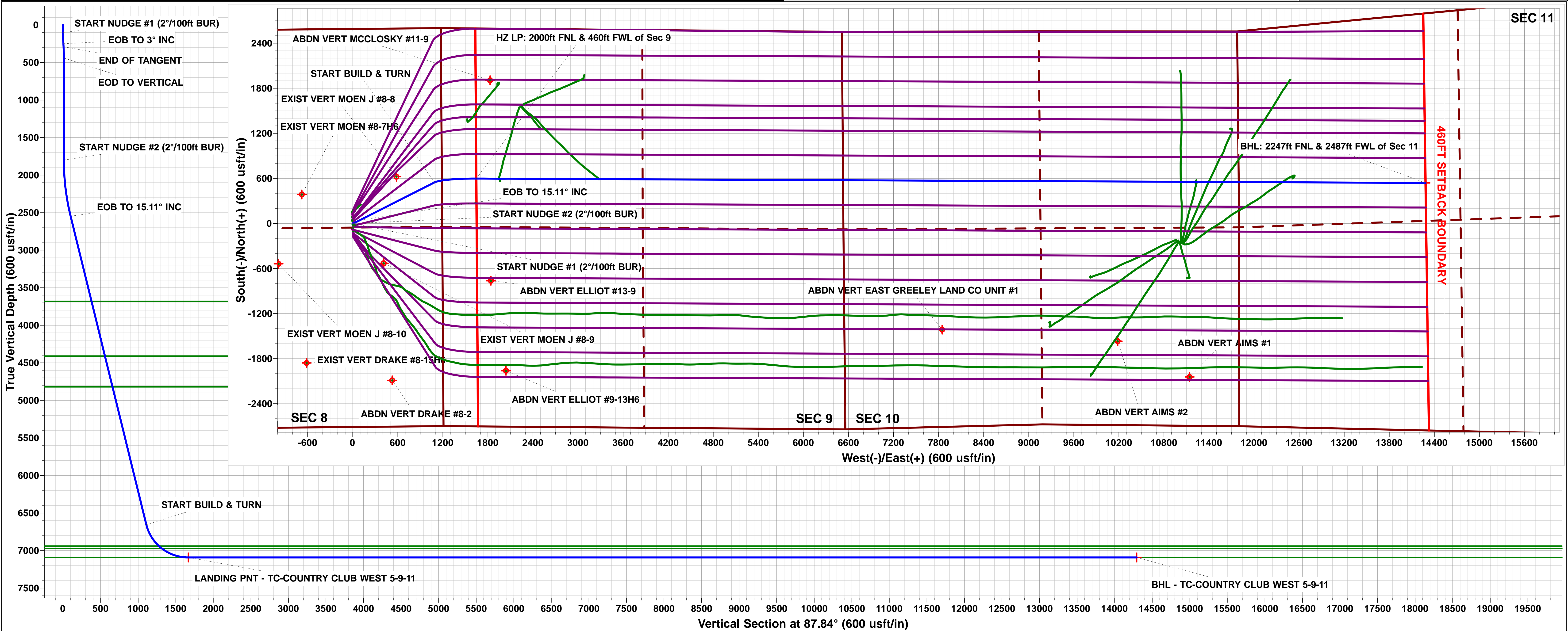
WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
LANDING PNT - TC-COUNTRY CLUB WEST 5-9-11	7092.0	597.5	1645.7	40.415930	-104.792760
BHL - TC-COUNTRY CLUB WEST 5-9-11	7092.0	539.7	14282.0	40.415760	-104.747380

TC-MOISER HILL 2-9-7
TC-COUNTRY CLUB WEST C1-9-11
TC-MOISER HILL 3-9-11
TC-COUNTRY CLUB WEST 1-9-11
TC-COUNTRY CLUB WEST 2-9-11
TC-COUNTRY CLUB WEST C3-9-11
TC-COUNTRY CLUB WEST A2-9-11
TC-COUNTRY CLUB WEST 3-9-11
TC-AIMS C4-9-11
TC-COUNTRY CLUB WEST 4-9-11
TC-COUNTRY CLUB WEST 5-9-11
TC-AIMS C5-9-11
TC-AIMS 1-9-11
TC-AIMS 2-9-11
TC-HILAND KNOLLS C6-9-11
TC-AIMS 3-9-11
TC-AIMS 4-9-11

TC-HILAND KNOLLS C7-9-11
TC-HILAND KNOLLS 1-9-11
TC-HILAND KNOLLS 2-9-11
TC-HILAND KNOLLS 3-9-11
TC-HILAND KNOLLS 4-9-11

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 5-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4806.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4806.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 5-9-11	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 5-9-11		
Well Position	+N/-S	174.8 usft	Northing:
	+E/-W	-2.8 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	87.84

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	-4,806.0	0.0	0.0	0.00	0.00	0.00	0.00	
100.0	0.00	0.00	100.0	-4,706.0	0.0	0.0	0.00	0.00	0.00	0.00	
250.0	3.00	90.00	249.9	-4,556.1	0.0	3.9	2.00	2.00	0.00	90.00	
291.0	3.00	90.00	290.9	-4,515.1	0.0	6.1	0.00	0.00	0.00	0.00	
441.0	0.00	0.00	440.8	-4,365.2	0.0	10.0	2.00	-2.00	0.00	180.00	
1,800.2	0.00	0.00	1,800.0	-3,006.0	0.0	10.0	0.00	0.00	0.00	0.00	
2,555.9	15.11	63.13	2,546.9	-2,259.1	44.8	98.4	2.00	2.00	0.00	63.13	
6,811.4	15.11	63.13	6,655.3	1,849.3	546.3	1,088.1	0.00	0.00	0.00	0.00	
7,577.2	90.00	90.26	7,092.0	2,286.0	597.5	1,645.7	10.00	9.78	3.54	27.96	LANDING PNT - TC
20,213.7	90.00	90.26	7,092.0	2,286.0	539.7	14,282.0	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 @ 4806.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 5-9-11	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: 2590ft FNL & 1192ft FEL of Sec 8										
0.0	0.00	0.00	0.0	4,806.00	0.0	0.0	0.0	0.00	0.00	0.00
START NUDGE #1 (2°/100ft BUR)										
100.0	0.00	0.00	100.0	4,706.00	0.0	0.0	0.0	0.00	0.00	0.00
200.0	2.00	90.00	200.0	4,606.02	0.0	1.7	1.7	2.00	2.00	0.00
EOB TO 3° INC										
250.0	3.00	90.00	249.9	4,556.07	0.0	3.9	3.9	2.00	2.00	0.00
END OF TANGENT										
291.0	3.00	90.00	290.9	4,515.12	0.0	6.1	6.1	0.00	0.00	0.00
300.0	2.82	90.00	299.9	4,506.14	0.0	6.5	6.5	2.00	-2.00	0.00
400.0	0.82	90.00	399.8	4,406.19	0.0	9.7	9.7	2.00	-2.00	0.00
EOD TO VERTICAL										
441.0	0.00	0.00	440.8	4,365.19	0.0	10.0	10.0	2.00	-2.00	0.00
500.0	0.00	0.00	499.8	4,306.19	0.0	10.0	10.0	0.00	0.00	0.00
600.0	0.00	0.00	599.8	4,206.19	0.0	10.0	10.0	0.00	0.00	0.00
700.0	0.00	0.00	699.8	4,106.19	0.0	10.0	10.0	0.00	0.00	0.00
800.0	0.00	0.00	799.8	4,006.19	0.0	10.0	10.0	0.00	0.00	0.00
900.0	0.00	0.00	899.8	3,906.19	0.0	10.0	10.0	0.00	0.00	0.00
1,000.0	0.00	0.00	999.8	3,806.19	0.0	10.0	10.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,099.8	3,706.19	0.0	10.0	10.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,199.8	3,606.19	0.0	10.0	10.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,299.8	3,506.19	0.0	10.0	10.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,399.8	3,406.19	0.0	10.0	10.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,499.8	3,306.19	0.0	10.0	10.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,599.8	3,206.19	0.0	10.0	10.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,699.8	3,106.19	0.0	10.0	10.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,799.8	3,006.19	0.0	10.0	10.0	0.00	0.00	0.00
START NUDGE #2 (2°/100ft BUR)										
1,800.2	0.00	0.00	1,800.0	3,005.99	0.0	10.0	10.0	0.00	0.00	0.00
1,900.0	2.00	63.13	1,899.8	2,906.21	0.8	11.5	11.6	2.00	2.00	0.00
2,000.0	4.00	63.13	1,999.6	2,806.36	3.1	16.2	16.3	2.00	2.00	0.00
2,100.0	6.00	63.13	2,099.3	2,706.74	7.1	24.0	24.2	2.00	2.00	0.00
2,200.0	8.00	63.13	2,198.5	2,607.49	12.6	34.8	35.3	2.00	2.00	0.00
2,300.0	10.00	63.13	2,297.3	2,508.72	19.7	48.8	49.5	2.00	2.00	0.00
2,400.0	12.00	63.13	2,395.4	2,410.57	28.3	65.8	66.8	2.00	2.00	0.00
2,500.0	14.00	63.13	2,492.9	2,313.13	38.4	85.9	87.3	2.00	2.00	0.00
EOB TO 15.11° INC										
2,555.9	15.11	63.13	2,547.0	2,259.03	44.8	98.4	100.0	2.00	2.00	0.00
2,600.0	15.11	63.13	2,589.5	2,216.45	50.0	108.7	110.5	0.00	0.00	0.00
2,700.0	15.11	63.13	2,686.1	2,119.91	61.8	131.9	134.1	0.00	0.00	0.00
2,800.0	15.11	63.13	2,782.6	2,023.37	73.6	155.2	157.8	0.00	0.00	0.00
2,900.0	15.11	63.13	2,879.2	1,926.83	85.3	178.4	181.5	0.00	0.00	0.00
3,000.0	15.11	63.13	2,975.7	1,830.29	97.1	201.7	205.2	0.00	0.00	0.00
3,100.0	15.11	63.13	3,072.3	1,733.75	108.9	224.9	228.9	0.00	0.00	0.00
3,200.0	15.11	63.13	3,168.8	1,637.21	120.7	248.2	252.6	0.00	0.00	0.00
3,300.0	15.11	63.13	3,265.3	1,540.66	132.5	271.5	276.3	0.00	0.00	0.00
3,400.0	15.11	63.13	3,361.9	1,444.12	144.3	294.7	299.9	0.00	0.00	0.00
3,500.0	15.11	63.13	3,458.4	1,347.58	156.1	318.0	323.6	0.00	0.00	0.00
3,600.0	15.11	63.13	3,555.0	1,251.04	167.8	341.2	347.3	0.00	0.00	0.00
3,700.0	15.11	63.13	3,651.5	1,154.50	179.6	364.5	371.0	0.00	0.00	0.00
PARKMAN										
3,729.5	15.11	63.13	3,680.0	1,126.00	183.1	371.3	378.0	0.00	0.00	0.00
3,800.0	15.11	63.13	3,748.0	1,057.96	191.4	387.7	394.7	0.00	0.00	0.00

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Well:	TC-COUNTRY CLUB WEST 5-9-11	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)
3,900.0	15.11	63.13	3,844.6	961.42	203.2	411.0	418.4	0.00	0.00	0.00
4,000.0	15.11	63.13	3,941.1	864.88	215.0	434.3	442.1	0.00	0.00	0.00
4,100.0	15.11	63.13	4,037.7	768.33	226.8	457.5	465.7	0.00	0.00	0.00
4,200.0	15.11	63.13	4,134.2	671.79	238.6	480.8	489.4	0.00	0.00	0.00
4,300.0	15.11	63.13	4,230.7	575.25	250.3	504.0	513.1	0.00	0.00	0.00
4,400.0	15.11	63.13	4,327.3	478.71	262.1	527.3	536.8	0.00	0.00	0.00
SUSSEX										
4,485.7	15.11	63.13	4,410.0	396.00	272.2	547.2	557.1	0.00	0.00	0.00
4,500.0	15.11	63.13	4,423.8	382.17	273.9	550.5	560.5	0.00	0.00	0.00
4,600.0	15.11	63.13	4,520.4	285.63	285.7	573.8	584.2	0.00	0.00	0.00
4,700.0	15.11	63.13	4,616.9	189.09	297.5	597.1	607.9	0.00	0.00	0.00
4,800.0	15.11	63.13	4,713.5	92.55	309.3	620.3	631.5	0.00	0.00	0.00
4,900.0	15.11	63.13	4,810.0	-4.00	321.0	643.6	655.2	0.00	0.00	0.00
SHANNON										
4,910.4	15.11	63.13	4,820.0	-14.00	322.3	646.0	657.7	0.00	0.00	0.00
5,000.0	15.11	63.13	4,906.5	-100.54	332.8	666.8	678.9	0.00	0.00	0.00
5,100.0	15.11	63.13	5,003.1	-197.08	344.6	690.1	702.6	0.00	0.00	0.00
5,200.0	15.11	63.13	5,099.6	-293.62	356.4	713.3	726.3	0.00	0.00	0.00
5,300.0	15.11	63.13	5,196.2	-390.16	368.2	736.6	750.0	0.00	0.00	0.00
5,400.0	15.11	63.13	5,292.7	-486.70	380.0	759.9	773.7	0.00	0.00	0.00
5,500.0	15.11	63.13	5,389.2	-583.24	391.8	783.1	797.3	0.00	0.00	0.00
5,600.0	15.11	63.13	5,485.8	-679.78	403.5	806.4	821.0	0.00	0.00	0.00
5,700.0	15.11	63.13	5,582.3	-776.33	415.3	829.6	844.7	0.00	0.00	0.00
5,800.0	15.11	63.13	5,678.9	-872.87	427.1	852.9	868.4	0.00	0.00	0.00
5,900.0	15.11	63.13	5,775.4	-969.41	438.9	876.1	892.1	0.00	0.00	0.00
6,000.0	15.11	63.13	5,871.9	-1,065.95	450.7	899.4	915.8	0.00	0.00	0.00
6,100.0	15.11	63.13	5,968.5	-1,162.49	462.5	922.7	939.5	0.00	0.00	0.00
6,200.0	15.11	63.13	6,065.0	-1,259.03	474.3	945.9	963.2	0.00	0.00	0.00
6,300.0	15.11	63.13	6,161.6	-1,355.57	486.0	969.2	986.8	0.00	0.00	0.00
6,400.0	15.11	63.13	6,258.1	-1,452.11	497.8	992.4	1,010.5	0.00	0.00	0.00
6,500.0	15.11	63.13	6,354.7	-1,548.65	509.6	1,015.7	1,034.2	0.00	0.00	0.00
6,600.0	15.11	63.13	6,451.2	-1,645.20	521.4	1,038.9	1,057.9	0.00	0.00	0.00
6,700.0	15.11	63.13	6,547.7	-1,741.74	533.2	1,062.2	1,081.6	0.00	0.00	0.00
6,800.0	15.11	63.13	6,644.3	-1,838.28	545.0	1,085.5	1,105.3	0.00	0.00	0.00
START BUILD & TURN										
6,811.4	15.11	63.13	6,655.3	-1,849.28	546.3	1,088.1	1,108.0	0.00	0.00	0.00
6,900.0	23.30	73.65	6,738.9	-1,932.90	556.5	1,115.3	1,135.5	10.00	9.24	11.87
7,000.0	32.95	79.31	6,827.0	-2,021.01	567.1	1,161.1	1,181.7	10.00	9.65	5.66
7,100.0	42.75	82.60	6,905.9	-2,099.88	576.6	1,221.6	1,242.5	10.00	9.80	3.30
SHARON SPRINGS										
7,148.4	47.51	83.78	6,940.0	-2,134.00	580.6	1,255.7	1,276.7	10.00	9.85	2.44
NIOBRARA										
7,198.1	52.42	84.82	6,972.0	-2,166.00	584.4	1,293.6	1,314.7	10.00	9.87	2.09
7,200.0	52.61	84.86	6,973.1	-2,167.13	584.5	1,295.0	1,316.2	10.00	9.88	1.94
7,300.0	62.50	86.59	7,026.7	-2,220.72	590.7	1,379.1	1,400.4	10.00	9.89	1.73
7,400.0	72.41	88.02	7,065.0	-2,259.01	595.0	1,471.2	1,492.7	10.00	9.91	1.44
7,500.0	82.33	89.31	7,086.8	-2,280.84	597.3	1,568.7	1,590.1	10.00	9.92	1.29
HZ LP: 2000ft FNL & 460ft FWL of Sec 9 - NIO B TARGET										
7,577.2	90.00	90.26	7,092.0	-2,286.00	597.5	1,645.7	1,667.1	10.00	9.92	1.23
7,600.0	90.00	90.26	7,092.0	-2,286.00	597.4	1,668.4	1,689.8	0.00	0.00	0.00
7,700.0	90.00	90.26	7,092.0	-2,286.00	597.0	1,768.4	1,789.7	0.00	0.00	0.00
7,800.0	90.00	90.26	7,092.0	-2,286.00	596.5	1,868.4	1,889.6	0.00	0.00	0.00
7,900.0	90.00	90.26	7,092.0	-2,286.00	596.1	1,968.4	1,989.5	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST 5-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4806.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4806.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 5-9-11	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)
8,000.0	90.00	90.26	7,092.0	-2,286.00	595.6	2,068.4	2,089.4	0.00	0.00	0.00
8,100.0	90.00	90.26	7,092.0	-2,286.00	595.2	2,168.4	2,189.4	0.00	0.00	0.00
8,200.0	90.00	90.26	7,092.0	-2,286.00	594.7	2,268.4	2,289.3	0.00	0.00	0.00
8,300.0	90.00	90.26	7,092.0	-2,286.00	594.2	2,368.4	2,389.2	0.00	0.00	0.00
8,400.0	90.00	90.26	7,092.0	-2,286.00	593.8	2,468.4	2,489.1	0.00	0.00	0.00
8,500.0	90.00	90.26	7,092.0	-2,286.00	593.3	2,568.4	2,589.0	0.00	0.00	0.00
8,600.0	90.00	90.26	7,092.0	-2,286.00	592.9	2,668.4	2,688.9	0.00	0.00	0.00
8,700.0	90.00	90.26	7,092.0	-2,286.00	592.4	2,768.4	2,788.8	0.00	0.00	0.00
8,800.0	90.00	90.26	7,092.0	-2,286.00	591.9	2,868.4	2,888.7	0.00	0.00	0.00
8,900.0	90.00	90.26	7,092.0	-2,286.00	591.5	2,968.4	2,988.6	0.00	0.00	0.00
9,000.0	90.00	90.26	7,092.0	-2,286.00	591.0	3,068.4	3,088.6	0.00	0.00	0.00
9,100.0	90.00	90.26	7,092.0	-2,286.00	590.6	3,168.4	3,188.5	0.00	0.00	0.00
9,200.0	90.00	90.26	7,092.0	-2,286.00	590.1	3,268.4	3,288.4	0.00	0.00	0.00
9,300.0	90.00	90.26	7,092.0	-2,286.00	589.7	3,368.4	3,388.3	0.00	0.00	0.00
9,400.0	90.00	90.26	7,092.0	-2,286.00	589.2	3,468.4	3,488.2	0.00	0.00	0.00
9,500.0	90.00	90.26	7,092.0	-2,286.00	588.7	3,568.4	3,588.1	0.00	0.00	0.00
9,600.0	90.00	90.26	7,092.0	-2,286.00	588.3	3,668.4	3,688.0	0.00	0.00	0.00
9,700.0	90.00	90.26	7,092.0	-2,286.00	587.8	3,768.4	3,787.9	0.00	0.00	0.00
9,800.0	90.00	90.26	7,092.0	-2,286.00	587.4	3,868.4	3,887.8	0.00	0.00	0.00
9,900.0	90.00	90.26	7,092.0	-2,286.00	586.9	3,968.4	3,987.7	0.00	0.00	0.00
10,000.0	90.00	90.26	7,092.0	-2,286.00	586.5	4,068.4	4,087.7	0.00	0.00	0.00
10,100.0	90.00	90.26	7,092.0	-2,286.00	586.0	4,168.4	4,187.6	0.00	0.00	0.00
10,200.0	90.00	90.26	7,092.0	-2,286.00	585.5	4,268.4	4,287.5	0.00	0.00	0.00
10,300.0	90.00	90.26	7,092.0	-2,286.00	585.1	4,368.4	4,387.4	0.00	0.00	0.00
10,400.0	90.00	90.26	7,092.0	-2,286.00	584.6	4,468.4	4,487.3	0.00	0.00	0.00
10,500.0	90.00	90.26	7,092.0	-2,286.00	584.2	4,568.4	4,587.2	0.00	0.00	0.00
10,600.0	90.00	90.26	7,092.0	-2,286.00	583.7	4,668.4	4,687.1	0.00	0.00	0.00
10,700.0	90.00	90.26	7,092.0	-2,286.00	583.2	4,768.4	4,787.0	0.00	0.00	0.00
10,800.0	90.00	90.26	7,092.0	-2,286.00	582.8	4,868.4	4,886.9	0.00	0.00	0.00
10,900.0	90.00	90.26	7,092.0	-2,286.00	582.3	4,968.4	4,986.8	0.00	0.00	0.00
11,000.0	90.00	90.26	7,092.0	-2,286.00	581.9	5,068.4	5,086.8	0.00	0.00	0.00
11,100.0	90.00	90.26	7,092.0	-2,286.00	581.4	5,168.4	5,186.7	0.00	0.00	0.00
11,200.0	90.00	90.26	7,092.0	-2,286.00	581.0	5,268.4	5,286.6	0.00	0.00	0.00
11,300.0	90.00	90.26	7,092.0	-2,286.00	580.5	5,368.4	5,386.5	0.00	0.00	0.00
11,400.0	90.00	90.26	7,092.0	-2,286.00	580.0	5,468.4	5,486.4	0.00	0.00	0.00
11,500.0	90.00	90.26	7,092.0	-2,286.00	579.6	5,568.4	5,586.3	0.00	0.00	0.00
11,600.0	90.00	90.26	7,092.0	-2,286.00	579.1	5,668.4	5,686.2	0.00	0.00	0.00
11,700.0	90.00	90.26	7,092.0	-2,286.00	578.7	5,768.4	5,786.1	0.00	0.00	0.00
11,800.0	90.00	90.26	7,092.0	-2,286.00	578.2	5,868.4	5,886.0	0.00	0.00	0.00
11,900.0	90.00	90.26	7,092.0	-2,286.00	577.8	5,968.4	5,986.0	0.00	0.00	0.00
12,000.0	90.00	90.26	7,092.0	-2,286.00	577.3	6,068.4	6,085.9	0.00	0.00	0.00
12,100.0	90.00	90.26	7,092.0	-2,286.00	576.8	6,168.4	6,185.8	0.00	0.00	0.00
12,200.0	90.00	90.26	7,092.0	-2,286.00	576.4	6,268.4	6,285.7	0.00	0.00	0.00
12,300.0	90.00	90.26	7,092.0	-2,286.00	575.9	6,368.4	6,385.6	0.00	0.00	0.00
12,400.0	90.00	90.26	7,092.0	-2,286.00	575.5	6,468.4	6,485.5	0.00	0.00	0.00
12,500.0	90.00	90.26	7,092.0	-2,286.00	575.0	6,568.4	6,585.4	0.00	0.00	0.00
12,600.0	90.00	90.26	7,092.0	-2,286.00	574.6	6,668.4	6,685.3	0.00	0.00	0.00
12,700.0	90.00	90.26	7,092.0	-2,286.00	574.1	6,768.4	6,785.2	0.00	0.00	0.00
12,800.0	90.00	90.26	7,092.0	-2,286.00	573.6	6,868.4	6,885.1	0.00	0.00	0.00
12,900.0	90.00	90.26	7,092.0	-2,286.00	573.2	6,968.4	6,985.1	0.00	0.00	0.00
13,000.0	90.00	90.26	7,092.0	-2,286.00	572.7	7,068.4	7,085.0	0.00	0.00	0.00
13,100.0	90.00	90.26	7,092.0	-2,286.00	572.3	7,168.4	7,184.9	0.00	0.00	0.00
13,200.0	90.00	90.26	7,092.0	-2,286.00	571.8	7,268.4	7,284.8	0.00	0.00	0.00
13,300.0	90.00	90.26	7,092.0	-2,286.00	571.3	7,368.4	7,384.7	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST 5-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4806.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4806.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 5-9-11	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)
13,400.0	90.00	90.26	7,092.0	-2,286.00	570.9	7,468.4	7,484.6	0.00	0.00	0.00
13,500.0	90.00	90.26	7,092.0	-2,286.00	570.4	7,568.4	7,584.5	0.00	0.00	0.00
13,600.0	90.00	90.26	7,092.0	-2,286.00	570.0	7,668.4	7,684.4	0.00	0.00	0.00
13,700.0	90.00	90.26	7,092.0	-2,286.00	569.5	7,768.4	7,784.3	0.00	0.00	0.00
13,800.0	90.00	90.26	7,092.0	-2,286.00	569.1	7,868.4	7,884.2	0.00	0.00	0.00
13,900.0	90.00	90.26	7,092.0	-2,286.00	568.6	7,968.4	7,984.2	0.00	0.00	0.00
14,000.0	90.00	90.26	7,092.0	-2,286.00	568.1	8,068.4	8,084.1	0.00	0.00	0.00
14,100.0	90.00	90.26	7,092.0	-2,286.00	567.7	8,168.4	8,184.0	0.00	0.00	0.00
14,200.0	90.00	90.26	7,092.0	-2,286.00	567.2	8,268.4	8,283.9	0.00	0.00	0.00
14,300.0	90.00	90.26	7,092.0	-2,286.00	566.8	8,368.4	8,383.8	0.00	0.00	0.00
14,400.0	90.00	90.26	7,092.0	-2,286.00	566.3	8,468.4	8,483.7	0.00	0.00	0.00
14,500.0	90.00	90.26	7,092.0	-2,286.00	565.9	8,568.4	8,583.6	0.00	0.00	0.00
14,600.0	90.00	90.26	7,092.0	-2,286.00	565.4	8,668.4	8,683.5	0.00	0.00	0.00
14,700.0	90.00	90.26	7,092.0	-2,286.00	564.9	8,768.4	8,783.4	0.00	0.00	0.00
14,800.0	90.00	90.26	7,092.0	-2,286.00	564.5	8,868.4	8,883.4	0.00	0.00	0.00
14,900.0	90.00	90.26	7,092.0	-2,286.00	564.0	8,968.4	8,983.3	0.00	0.00	0.00
15,000.0	90.00	90.26	7,092.0	-2,286.00	563.6	9,068.4	9,083.2	0.00	0.00	0.00
15,100.0	90.00	90.26	7,092.0	-2,286.00	563.1	9,168.4	9,183.1	0.00	0.00	0.00
15,200.0	90.00	90.26	7,092.0	-2,286.00	562.6	9,268.4	9,283.0	0.00	0.00	0.00
15,300.0	90.00	90.26	7,092.0	-2,286.00	562.2	9,368.4	9,382.9	0.00	0.00	0.00
15,400.0	90.00	90.26	7,092.0	-2,286.00	561.7	9,468.4	9,482.8	0.00	0.00	0.00
15,500.0	90.00	90.26	7,092.0	-2,286.00	561.3	9,568.4	9,582.7	0.00	0.00	0.00
15,600.0	90.00	90.26	7,092.0	-2,286.00	560.8	9,668.4	9,682.6	0.00	0.00	0.00
15,700.0	90.00	90.26	7,092.0	-2,286.00	560.4	9,768.4	9,782.5	0.00	0.00	0.00
15,800.0	90.00	90.26	7,092.0	-2,286.00	559.9	9,868.4	9,882.5	0.00	0.00	0.00
15,900.0	90.00	90.26	7,092.0	-2,286.00	559.4	9,968.4	9,982.4	0.00	0.00	0.00
16,000.0	90.00	90.26	7,092.0	-2,286.00	559.0	10,068.3	10,082.3	0.00	0.00	0.00
16,100.0	90.00	90.26	7,092.0	-2,286.00	558.5	10,168.3	10,182.2	0.00	0.00	0.00
16,200.0	90.00	90.26	7,092.0	-2,286.00	558.1	10,268.3	10,282.1	0.00	0.00	0.00
16,300.0	90.00	90.26	7,092.0	-2,286.00	557.6	10,368.3	10,382.0	0.00	0.00	0.00
16,400.0	90.00	90.26	7,092.0	-2,286.00	557.2	10,468.3	10,481.9	0.00	0.00	0.00
16,500.0	90.00	90.26	7,092.0	-2,286.00	556.7	10,568.3	10,581.8	0.00	0.00	0.00
16,600.0	90.00	90.26	7,092.0	-2,286.00	556.2	10,668.3	10,681.7	0.00	0.00	0.00
16,700.0	90.00	90.26	7,092.0	-2,286.00	555.8	10,768.3	10,781.6	0.00	0.00	0.00
16,800.0	90.00	90.26	7,092.0	-2,286.00	555.3	10,868.3	10,881.6	0.00	0.00	0.00
16,900.0	90.00	90.26	7,092.0	-2,286.00	554.9	10,968.3	10,981.5	0.00	0.00	0.00
17,000.0	90.00	90.26	7,092.0	-2,286.00	554.4	11,068.3	11,081.4	0.00	0.00	0.00
17,100.0	90.00	90.26	7,092.0	-2,286.00	553.9	11,168.3	11,181.3	0.00	0.00	0.00
17,200.0	90.00	90.26	7,092.0	-2,286.00	553.5	11,268.3	11,281.2	0.00	0.00	0.00
17,300.0	90.00	90.26	7,092.0	-2,286.00	553.0	11,368.3	11,381.1	0.00	0.00	0.00
17,400.0	90.00	90.26	7,092.0	-2,286.00	552.6	11,468.3	11,481.0	0.00	0.00	0.00
17,500.0	90.00	90.26	7,092.0	-2,286.00	552.1	11,568.3	11,580.9	0.00	0.00	0.00
17,600.0	90.00	90.26	7,092.0	-2,286.00	551.7	11,668.3	11,680.8	0.00	0.00	0.00
17,700.0	90.00	90.26	7,092.0	-2,286.00	551.2	11,768.3	11,780.8	0.00	0.00	0.00
17,800.0	90.00	90.26	7,092.0	-2,286.00	550.7	11,868.3	11,880.7	0.00	0.00	0.00
17,900.0	90.00	90.26	7,092.0	-2,286.00	550.3	11,968.3	11,980.6	0.00	0.00	0.00
18,000.0	90.00	90.26	7,092.0	-2,286.00	549.8	12,068.3	12,080.5	0.00	0.00	0.00
18,100.0	90.00	90.26	7,092.0	-2,286.00	549.4	12,168.3	12,180.4	0.00	0.00	0.00
18,200.0	90.00	90.26	7,092.0	-2,286.00	548.9	12,268.3	12,280.3	0.00	0.00	0.00
18,300.0	90.00	90.26	7,092.0	-2,286.00	548.5	12,368.3	12,380.2	0.00	0.00	0.00
18,400.0	90.00	90.26	7,092.0	-2,286.00	548.0	12,468.3	12,480.1	0.00	0.00	0.00
18,500.0	90.00	90.26	7,092.0	-2,286.00	547.5	12,568.3	12,580.0	0.00	0.00	0.00
18,600.0	90.00	90.26	7,092.0	-2,286.00	547.1	12,668.3	12,679.9	0.00	0.00	0.00
18,700.0	90.00	90.26	7,092.0	-2,286.00	546.6	12,768.3	12,779.9	0.00	0.00	0.00

Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well TC-COUNTRY CLUB WEST 5-9-11
Company:	EXTRACTION OIL & GAS	TVD Reference:	KB-EST @ 4806.0usft
Project:	WELD COUNTY, COLORADO (NAD 83)	MD Reference:	KB-EST @ 4806.0usft
Site:	NE SE SEC. 8 T5N R66W 6th P.M.	North Reference:	True
Well:	TC-COUNTRY CLUB WEST 5-9-11	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)
18,800.0	90.00	90.26	7,092.0	-2,286.00	546.2	12,868.3	12,879.8	0.00	0.00	0.00
18,900.0	90.00	90.26	7,092.0	-2,286.00	545.7	12,968.3	12,979.7	0.00	0.00	0.00
19,000.0	90.00	90.26	7,092.0	-2,286.00	545.2	13,068.3	13,079.6	0.00	0.00	0.00
19,100.0	90.00	90.26	7,092.0	-2,286.00	544.8	13,168.3	13,179.5	0.00	0.00	0.00
19,200.0	90.00	90.26	7,092.0	-2,286.00	544.3	13,268.3	13,279.4	0.00	0.00	0.00
19,300.0	90.00	90.26	7,092.0	-2,286.00	543.9	13,368.3	13,379.3	0.00	0.00	0.00
19,400.0	90.00	90.26	7,092.0	-2,286.00	543.4	13,468.3	13,479.2	0.00	0.00	0.00
19,500.0	90.00	90.26	7,092.0	-2,286.00	543.0	13,568.3	13,579.1	0.00	0.00	0.00
19,600.0	90.00	90.26	7,092.0	-2,286.00	542.5	13,668.3	13,679.0	0.00	0.00	0.00
19,700.0	90.00	90.26	7,092.0	-2,286.00	542.0	13,768.3	13,779.0	0.00	0.00	0.00
19,800.0	90.00	90.26	7,092.0	-2,286.00	541.6	13,868.3	13,878.9	0.00	0.00	0.00
19,900.0	90.00	90.26	7,092.0	-2,286.00	541.1	13,968.3	13,978.8	0.00	0.00	0.00
20,000.0	90.00	90.26	7,092.0	-2,286.00	540.7	14,068.3	14,078.7	0.00	0.00	0.00
20,100.0	90.00	90.26	7,092.0	-2,286.00	540.2	14,168.3	14,178.6	0.00	0.00	0.00
20,200.0	90.00	90.26	7,092.0	-2,286.00	539.8	14,268.3	14,278.5	0.00	0.00	0.00
BHL: 2247ft FNL & 2487ft FWL of Sec 11										
20,213.7	90.00	90.26	7,092.0	-2,286.00	539.7	14,282.0	14,292.2	0.00	0.00	0.00

Formations					
MD (usft)	TVD (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,729.5	3,680.0	PARKMAN		0.00	
4,485.7	4,410.0	SUSSEX		0.00	
4,910.4	4,820.0	SHANNON		0.00	
7,148.4	6,940.0	SHARON SPRINGS		0.00	
7,198.1	6,972.0	NIOBRARA		0.00	
7,577.2	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: 2590ft FNL & 1192ft FEL of Sec 8
100.0	100.0	0.0	0.0	START NUDGE #1 (2°/100ft BUR)
250.0	249.9	0.0	3.9	EOB TO 3° INC
291.0	290.9	0.0	6.1	END OF TANGENT
441.0	440.8	0.0	10.0	EOD TO VERTICAL
1,800.2	1,800.0	0.0	10.0	START NUDGE #2 (2°/100ft BUR)
2,555.9	2,547.0	44.8	98.4	EOB TO 15.11° INC
6,811.4	6,655.3	546.3	1,088.1	START BUILD & TURN
7,577.2	7,092.0	597.5	1,645.6	HZ LP: 2000ft FNL & 460ft FWL of Sec 9
20,213.7	7,092.0	539.7	14,282.0	BHL: 2247ft FNL & 2487ft FWL of Sec 11