

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.0	
3	1656.9	15.14	61.52	1648.1	47.4	87.4	2.00	61.52	99.4	
4	5079.4	15.14	61.52	4951.9	473.6	873.0	0.00	0.00	993.2	
5	5836.3	0.00	0.00	5700.0	521.0	960.3	2.00	180.00	1092.6	Target BHL 1320'FNL, 2550'FEL
6	7350.3	0.00	0.00	7214.0	521.0	960.3	0.00	0.00	1092.6	



## **Directional**

### **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.11-T3N-R65W**

**Aristocrat PC H11-18D Pad Sec. 11-T3N-R65W**

**Aristocrat PC H11-18D**

**Wellbore #1**

**Plan: Noble Aristocrat PC H11-18D Plan#1 (6-18-10)**

### **Standard Planning Report**

**23 June, 2010**



Database: EDM den0-adp01 Server Data  
 Company: NOBLE ENERGY INC WELD COUNTY CO  
 Project: SEC.11-T3N-R65W  
 Site: Aristocrat PC H11-18D Pad Sec.  
 11-T3N-R65W  
 Well: Aristocrat PC H11-18D  
 Wellbore: Wellbore #1  
 Design: Noble Aristocrat PC H11-18D Plan#1 (6-18-10)

Local Co-ordinate Reference: Well Aristocrat PC H11-18D  
 TVD Reference: WELL @ 4784.0ft (Original Well Elev)  
 MD Reference: WELL @ 4784.0ft (Original Well Elev)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature

Project	SEC.11-T3N-R65W, Weld County Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Aristocrat PC H11-18D Pad Sec. 11-T3N-R65W				
Site Position:		Northing:	1,332,210.42 ft	Latitude:	40° 14' 31.452 N
From:	Lat/Long	Easting:	3,241,957.35 ft	Longitude:	104° 37' 59.700 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.56 °

Well	Aristocrat PC H11-18D					
Well Position	+N/-S	0.0 ft	Northing:	1,332,210.39 ft	Latitude:	40° 14' 31.452 N
	+E/-W	0.0 ft	Easting:	3,241,957.35 ft	Longitude:	104° 37' 59.700 W
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,771.0 ft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/18/2010	8.91	66.98	53,168

Design: Noble Aristocrat PC H11-18D Plan#1 (6-18-10)

#### Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	61.52

#### Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,656.9	15.14	61.52	1,648.1	47.4	87.4	2.00	2.00	0.00	61.52	
5,079.4	15.14	61.52	4,951.9	473.6	873.0	0.00	0.00	0.00	0.00	
5,836.3	0.00	0.00	5,700.0	521.0	960.3	2.00	-2.00	0.00	180.00	Target BHL 1320'FI
7,350.3	0.00	0.00	7,214.0	521.0	960.3	0.00	0.00	0.00	0.00	

Database: EDM den0-adp01 Server Data  
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Project: SEC.11-T3N-R65W  
Site: Aristocrat PC H11-18D Pad Sec.  
11-T3N-R65W  
Well: Aristocrat PC H11-18D  
Wellbore #: Wellbore #1  
Design: Noble Aristocrat PC H11-18D Plan#1 (6-18-10)

Local Co-ordinate Reference: Well Aristocrat PC H11-18D  
TVD Reference: WELL @ 4784.0ft (Original Well Elev)  
MD Reference: WELL @ 4784.0ft (Original Well Elev)  
North Reference: True

Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
650.0	0.00	0.00	650.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.40	61.52	920.0	0.0	0.1	0.1	2.00	2.00	0.00
960.0	1.20	61.52	960.0	0.3	0.6	0.6	2.00	2.00	0.00
1,000.0	2.00	61.52	1,000.0	0.8	1.5	1.7	2.00	2.00	0.00
1,040.0	2.80	61.52	1,039.9	1.6	3.0	3.4	2.00	2.00	0.00
1,080.0	3.60	61.52	1,079.9	2.7	5.0	5.7	2.00	2.00	0.00
1,120.0	4.40	61.52	1,119.8	4.0	7.4	8.4	2.00	2.00	0.00
1,160.0	5.20	61.52	1,159.6	5.6	10.4	11.8	2.00	2.00	0.00
1,200.0	6.00	61.52	1,199.5	7.5	13.8	15.7	2.00	2.00	0.00
1,240.0	6.80	61.52	1,239.2	9.6	17.7	20.2	2.00	2.00	0.00
1,280.0	7.60	61.52	1,278.9	12.0	22.1	25.2	2.00	2.00	0.00
1,320.0	8.40	61.52	1,318.5	14.7	27.0	30.7	2.00	2.00	0.00
1,360.0	9.20	61.52	1,358.0	17.6	32.4	36.9	2.00	2.00	0.00
1,400.0	10.00	61.52	1,397.5	20.8	38.3	43.5	2.00	2.00	0.00
1,440.0	10.80	61.52	1,436.8	24.2	44.6	50.7	2.00	2.00	0.00
1,480.0	11.60	61.52	1,476.0	27.9	51.4	58.5	2.00	2.00	0.00
1,520.0	12.40	61.52	1,515.2	31.9	58.7	66.8	2.00	2.00	0.00
1,560.0	13.20	61.52	1,554.2	36.1	66.5	75.7	2.00	2.00	0.00
1,600.0	14.00	61.52	1,593.1	40.6	74.8	85.1	2.00	2.00	0.00
1,640.0	14.80	61.52	1,631.8	45.3	83.5	95.0	2.00	2.00	0.00
1,656.9	15.14	61.52	1,648.1	47.4	87.4	99.4	2.00	2.00	0.00
1,680.0	15.14	61.52	1,670.4	50.3	92.7	105.4	0.00	0.00	0.00
1,720.0	15.14	61.52	1,709.0	55.3	101.9	115.9	0.00	0.00	0.00
1,760.0	15.14	61.52	1,747.6	60.2	111.0	126.3	0.00	0.00	0.00
1,800.0	15.14	61.52	1,786.3	65.2	120.2	136.8	0.00	0.00	0.00
1,840.0	15.14	61.52	1,824.9	70.2	129.4	147.2	0.00	0.00	0.00
1,880.0	15.14	61.52	1,863.5	75.2	138.6	157.7	0.00	0.00	0.00
1,920.0	15.14	61.52	1,902.1	80.2	147.8	168.1	0.00	0.00	0.00

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Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.11-T3N-R65W  
Site: Aristocrat PC H11-18D Pad Sec.  
11-T3N-R65W  
Well: Aristocrat PC H11-18D  
Wellbore: Wellbore #1  
Design: Noble Aristocrat PC H11-18D Plan#1 (6-18-10)

Local Co-ordinate Reference: Well Aristocrat PC H11-18D  
TVD Reference: WELL @ 4784.0ft (Original Well Elev)  
MD Reference: WELL @ 4784.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,960.0	15.14	61.52	1,940.7	85.1	156.9	178.6	0.00	0.00	0.00
2,000.0	15.14	61.52	1,979.3	90.1	166.1	189.0	0.00	0.00	0.00
2,040.0	15.14	61.52	2,017.9	95.1	175.3	199.4	0.00	0.00	0.00
2,080.0	15.14	61.52	2,056.5	100.1	184.5	209.9	0.00	0.00	0.00
2,120.0	15.14	61.52	2,095.2	105.1	193.7	220.3	0.00	0.00	0.00
2,160.0	15.14	61.52	2,133.8	110.1	202.9	230.8	0.00	0.00	0.00
2,200.0	15.14	61.52	2,172.4	115.0	212.0	241.2	0.00	0.00	0.00
2,240.0	15.14	61.52	2,211.0	120.0	221.2	251.7	0.00	0.00	0.00
2,280.0	15.14	61.52	2,249.6	125.0	230.4	262.1	0.00	0.00	0.00
2,320.0	15.14	61.52	2,288.2	130.0	239.6	272.6	0.00	0.00	0.00
2,360.0	15.14	61.52	2,326.8	135.0	248.8	283.0	0.00	0.00	0.00
2,400.0	15.14	61.52	2,365.4	139.9	257.9	293.5	0.00	0.00	0.00
2,440.0	15.14	61.52	2,404.1	144.9	267.1	303.9	0.00	0.00	0.00
2,480.0	15.14	61.52	2,442.7	149.9	276.3	314.3	0.00	0.00	0.00
2,520.0	15.14	61.52	2,481.3	154.9	285.5	324.8	0.00	0.00	0.00
2,560.0	15.14	61.52	2,519.9	159.9	294.7	335.2	0.00	0.00	0.00
2,600.0	15.14	61.52	2,558.5	164.8	303.8	345.7	0.00	0.00	0.00
2,640.0	15.14	61.52	2,597.1	169.8	313.0	356.1	0.00	0.00	0.00
2,680.0	15.14	61.52	2,635.7	174.8	322.2	366.6	0.00	0.00	0.00
2,720.0	15.14	61.52	2,674.3	179.8	331.4	377.0	0.00	0.00	0.00
2,760.0	15.14	61.52	2,712.9	184.8	340.6	387.5	0.00	0.00	0.00
2,800.0	15.14	61.52	2,751.6	189.8	349.8	397.9	0.00	0.00	0.00
2,840.0	15.14	61.52	2,790.2	194.7	358.9	408.4	0.00	0.00	0.00
2,880.0	15.14	61.52	2,828.8	199.7	368.1	418.8	0.00	0.00	0.00
2,920.0	15.14	61.52	2,867.4	204.7	377.3	429.2	0.00	0.00	0.00
2,960.0	15.14	61.52	2,906.0	209.7	386.5	439.7	0.00	0.00	0.00
3,000.0	15.14	61.52	2,944.6	214.7	395.7	450.1	0.00	0.00	0.00
3,040.0	15.14	61.52	2,983.2	219.6	404.8	460.6	0.00	0.00	0.00
3,080.0	15.14	61.52	3,021.8	224.6	414.0	471.0	0.00	0.00	0.00
3,120.0	15.14	61.52	3,060.5	229.6	423.2	481.5	0.00	0.00	0.00
3,160.0	15.14	61.52	3,099.1	234.6	432.4	491.9	0.00	0.00	0.00
3,200.0	15.14	61.52	3,137.7	239.6	441.6	502.4	0.00	0.00	0.00
3,240.0	15.14	61.52	3,176.3	244.5	450.8	512.8	0.00	0.00	0.00
3,280.0	15.14	61.52	3,214.9	249.5	459.9	523.3	0.00	0.00	0.00
3,320.0	15.14	61.52	3,253.5	254.5	469.1	533.7	0.00	0.00	0.00
3,360.0	15.14	61.52	3,292.1	259.5	478.3	544.1	0.00	0.00	0.00
3,400.0	15.14	61.52	3,330.7	264.5	487.5	554.6	0.00	0.00	0.00
3,440.0	15.14	61.52	3,369.4	269.4	496.7	565.0	0.00	0.00	0.00
3,480.0	15.14	61.52	3,408.0	274.4	505.8	575.5	0.00	0.00	0.00
3,520.0	15.14	61.52	3,446.6	279.4	515.0	585.9	0.00	0.00	0.00
3,560.0	15.14	61.52	3,485.2	284.4	524.2	596.4	0.00	0.00	0.00
3,600.0	15.14	61.52	3,523.8	289.4	533.4	606.8	0.00	0.00	0.00
3,640.0	15.14	61.52	3,562.4	294.4	542.6	617.3	0.00	0.00	0.00
3,680.0	15.14	61.52	3,601.0	299.3	551.7	627.7	0.00	0.00	0.00
3,720.0	15.14	61.52	3,639.6	304.3	560.9	638.2	0.00	0.00	0.00
3,760.0	15.14	61.52	3,678.3	309.3	570.1	648.6	0.00	0.00	0.00
3,800.0	15.14	61.52	3,716.9	314.3	579.3	659.0	0.00	0.00	0.00
3,840.0	15.14	61.52	3,755.5	319.3	588.5	669.5	0.00	0.00	0.00
3,880.0	15.14	61.52	3,794.1	324.2	597.7	679.9	0.00	0.00	0.00
3,920.0	15.14	61.52	3,832.7	329.2	606.8	690.4	0.00	0.00	0.00
3,960.0	15.14	61.52	3,871.3	334.2	616.0	700.8	0.00	0.00	0.00
4,000.0	15.14	61.52	3,909.9	339.2	625.2	711.3	0.00	0.00	0.00
4,040.0	15.14	61.52	3,948.5	344.2	634.4	721.7	0.00	0.00	0.00

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North Reference: True

Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,080.0	15.14	61.52	3,987.1	349.1	643.6	732.2	0.00	0.00	0.00
4,120.0	15.14	61.52	4,025.8	354.1	652.7	742.6	0.00	0.00	0.00
4,160.0	15.14	61.52	4,064.4	359.1	661.9	753.1	0.00	0.00	0.00
4,200.0	15.14	61.52	4,103.0	364.1	671.1	763.5	0.00	0.00	0.00
4,240.0	15.14	61.52	4,141.6	369.1	680.3	773.9	0.00	0.00	0.00
4,280.0	15.14	61.52	4,180.2	374.0	689.5	784.4	0.00	0.00	0.00
4,320.0	15.14	61.52	4,218.8	379.0	698.6	794.8	0.00	0.00	0.00
4,360.0	15.14	61.52	4,257.4	384.0	707.8	805.3	0.00	0.00	0.00
4,400.0	15.14	61.52	4,296.0	389.0	717.0	815.7	0.00	0.00	0.00
4,440.0	15.14	61.52	4,334.7	394.0	726.2	826.2	0.00	0.00	0.00
4,480.0	15.14	61.52	4,373.3	399.0	735.4	836.6	0.00	0.00	0.00
4,520.0	15.14	61.52	4,411.9	403.9	744.6	847.1	0.00	0.00	0.00
4,560.0	15.14	61.52	4,450.5	408.9	753.7	857.5	0.00	0.00	0.00
4,600.0	15.14	61.52	4,489.1	413.9	762.9	868.0	0.00	0.00	0.00
4,640.0	15.14	61.52	4,527.7	418.9	772.1	878.4	0.00	0.00	0.00
4,680.0	15.14	61.52	4,566.3	423.9	781.3	888.8	0.00	0.00	0.00
4,720.0	15.14	61.52	4,604.9	428.8	790.5	899.3	0.00	0.00	0.00
4,760.0	15.14	61.52	4,643.6	433.8	799.6	909.7	0.00	0.00	0.00
4,800.0	15.14	61.52	4,682.2	438.8	808.8	920.2	0.00	0.00	0.00
4,840.0	15.14	61.52	4,720.8	443.8	818.0	930.6	0.00	0.00	0.00
4,880.0	15.14	61.52	4,759.4	448.8	827.2	941.1	0.00	0.00	0.00
4,920.0	15.14	61.52	4,798.0	453.7	836.4	951.5	0.00	0.00	0.00
4,960.0	15.14	61.52	4,836.6	458.7	845.5	962.0	0.00	0.00	0.00
5,000.0	15.14	61.52	4,875.2	463.7	854.7	972.4	0.00	0.00	0.00
5,040.0	15.14	61.52	4,913.8	468.7	863.9	982.9	0.00	0.00	0.00
5,079.4	15.14	61.52	4,951.9	473.6	873.0	993.2	0.00	0.00	0.00
5,080.0	15.13	61.52	4,952.5	473.7	873.1	993.3	2.00	-2.00	0.00
5,120.0	14.33	61.52	4,991.1	478.5	882.0	1,003.5	2.00	-2.00	0.00
5,160.0	13.53	61.52	5,030.0	483.1	890.5	1,013.1	2.00	-2.00	0.00
5,200.0	12.73	61.52	5,068.9	487.4	898.5	1,022.2	2.00	-2.00	0.00
5,240.0	11.93	61.52	5,108.0	491.5	906.0	1,030.7	2.00	-2.00	0.00
5,280.0	11.13	61.52	5,147.2	495.3	913.0	1,038.7	2.00	-2.00	0.00
5,320.0	10.33	61.52	5,186.5	498.9	919.5	1,046.2	2.00	-2.00	0.00
5,360.0	9.53	61.52	5,225.9	502.2	925.6	1,053.1	2.00	-2.00	0.00
5,400.0	8.73	61.52	5,265.4	505.2	931.2	1,059.4	2.00	-2.00	0.00
5,440.0	7.93	61.52	5,305.0	507.9	936.3	1,065.2	2.00	-2.00	0.00
5,480.0	7.13	61.52	5,344.6	510.4	940.9	1,070.4	2.00	-2.00	0.00
5,520.0	6.33	61.52	5,384.3	512.7	945.0	1,075.1	2.00	-2.00	0.00
5,560.0	5.53	61.52	5,424.1	514.7	948.6	1,079.2	2.00	-2.00	0.00
5,600.0	4.73	61.52	5,464.0	516.4	951.8	1,082.8	2.00	-2.00	0.00
5,640.0	3.93	61.52	5,503.8	517.8	954.4	1,085.8	2.00	-2.00	0.00
5,680.0	3.13	61.52	5,543.8	519.0	956.6	1,088.3	2.00	-2.00	0.00
5,720.0	2.33	61.52	5,583.7	519.9	958.3	1,090.2	2.00	-2.00	0.00
5,760.0	1.53	61.52	5,623.7	520.5	959.4	1,091.5	2.00	-2.00	0.00
5,800.0	0.73	61.52	5,663.7	520.9	960.1	1,092.3	2.00	-2.00	0.00
5,836.3	0.00	0.00	5,700.0	521.0	960.3	1,092.6	2.00	-2.00	-169.46
Target BHL 1320°FNL, 2550°FEL									
5,840.0	0.00	0.00	5,703.7	521.0	960.3	1,092.6	0.00	0.00	0.00
5,880.0	0.00	0.00	5,743.7	521.0	960.3	1,092.6	0.00	0.00	0.00
5,920.0	0.00	0.00	5,783.7	521.0	960.3	1,092.6	0.00	0.00	0.00
5,960.0	0.00	0.00	5,823.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,863.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,040.0	0.00	0.00	5,903.7	521.0	960.3	1,092.6	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data  
Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.11-T3N-R65W  
Site: Aristocrat PC H11-18D Pad Sec.  
11-T3N-R65W  
Well: Aristocrat PC H11-18D  
Wellbore: Wellbore #1  
Design: Noble Aristocrat PC H11-18D Plan#1 (6-18-10)

Local Co-ordinate Reference: Well Aristocrat PC H11-18D  
TVD Reference: WELL @ 4784.0ft (Original Well Elev)  
MD Reference: WELL @ 4784.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,080.0	0.00	0.00	5,943.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,120.0	0.00	0.00	5,983.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,160.0	0.00	0.00	6,023.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,200.0	0.00	0.00	6,063.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,240.0	0.00	0.00	6,103.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,280.0	0.00	0.00	6,143.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,320.0	0.00	0.00	6,183.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,360.0	0.00	0.00	6,223.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,400.0	0.00	0.00	6,263.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,440.0	0.00	0.00	6,303.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,480.0	0.00	0.00	6,343.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,520.0	0.00	0.00	6,383.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,560.0	0.00	0.00	6,423.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,600.0	0.00	0.00	6,463.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,640.0	0.00	0.00	6,503.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,680.0	0.00	0.00	6,543.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,720.0	0.00	0.00	6,583.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,760.0	0.00	0.00	6,623.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,800.0	0.00	0.00	6,663.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,840.0	0.00	0.00	6,703.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,880.0	0.00	0.00	6,743.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,880.3	0.00	0.00	6,744.0	521.0	960.3	1,092.6	0.00	0.00	0.00
<b>Niobrara - Target Circle 1320°FNL, 2550°FEL</b>									
6,920.0	0.00	0.00	6,783.7	521.0	960.3	1,092.6	0.00	0.00	0.00
6,960.0	0.00	0.00	6,823.7	521.0	960.3	1,092.6	0.00	0.00	0.00
7,000.0	0.00	0.00	6,863.7	521.0	960.3	1,092.6	0.00	0.00	0.00
7,040.0	0.00	0.00	6,903.7	521.0	960.3	1,092.6	0.00	0.00	0.00
7,080.0	0.00	0.00	6,943.7	521.0	960.3	1,092.6	0.00	0.00	0.00
7,120.0	0.00	0.00	6,983.7	521.0	960.3	1,092.6	0.00	0.00	0.00
7,160.0	0.00	0.00	7,023.7	521.0	960.3	1,092.6	0.00	0.00	0.00
7,200.0	0.00	0.00	7,063.7	521.0	960.3	1,092.6	0.00	0.00	0.00
7,200.3	0.00	0.00	7,064.0	521.0	960.3	1,092.6	0.00	0.00	0.00
<b>Codell</b>									
7,240.0	0.00	0.00	7,103.7	521.0	960.3	1,092.6	0.00	0.00	0.00
7,280.0	0.00	0.00	7,143.7	521.0	960.3	1,092.6	0.00	0.00	0.00
7,320.0	0.00	0.00	7,183.7	521.0	960.3	1,092.6	0.00	0.00	0.00
7,350.3	0.00	0.00	7,214.0	521.0	960.3	1,092.6	0.00	0.00	0.00
<b>Hardline 176°W of BHL</b>									

Database: EDM den0-adp01 Server Data  
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Project: SEC.11-T3N-R65W  
Site: Aristocrat PC H11-18D Pad Sec.  
11-T3N-R65W  
Well: Aristocrat PC H11-18D  
Wellbore #: Wellbore #1  
Design: Noble Aristocrat PC H11-18D Plan#1 (6-18-10)

Local Co-ordinate Reference: Well Aristocrat PC H11-18D  
TVD Reference: WELL @ 4784.0ft (Original Well Elev)  
MD Reference: WELL @ 4784.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

#### Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Target BHL 1320'FNL - plan hits target center - Point	0.00	353.44	5,700.0	521.0	960.3	1,332,740.73	3,242,912.50	40° 14' 36.600 N	104° 37' 47.316 W
Target Circle 1320'FN - plan hits target center - Circle (radius 75.0)	0.00	0.00	6,744.0	521.0	960.3	1,332,740.73	3,242,912.47	40° 14' 36.600 N	104° 37' 47.316 W
Hardline 176'W of BH - plan misses target center by 202.5ft at 7350.3ft MD (7214.0 TVD, 521.0 N, 960.3 E) - Polygon	0.00	0.00	7,214.0	621.0	784.3	1,332,839.00	3,242,735.51	40° 14' 37.588 N	104° 37' 49.586 W
Point 1			7,214.0	0.0	0.0	1,332,839.00	3,242,735.51		
Point 2			7,214.0	-200.0	0.0	1,332,639.02	3,242,737.46		

#### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
650.0	650.0	8 5/8"	8-5/8	12-1/4

#### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,880.3	6,744.0	Niobrara		0.00	
7,200.3	7,064.0	Codell		0.00	