

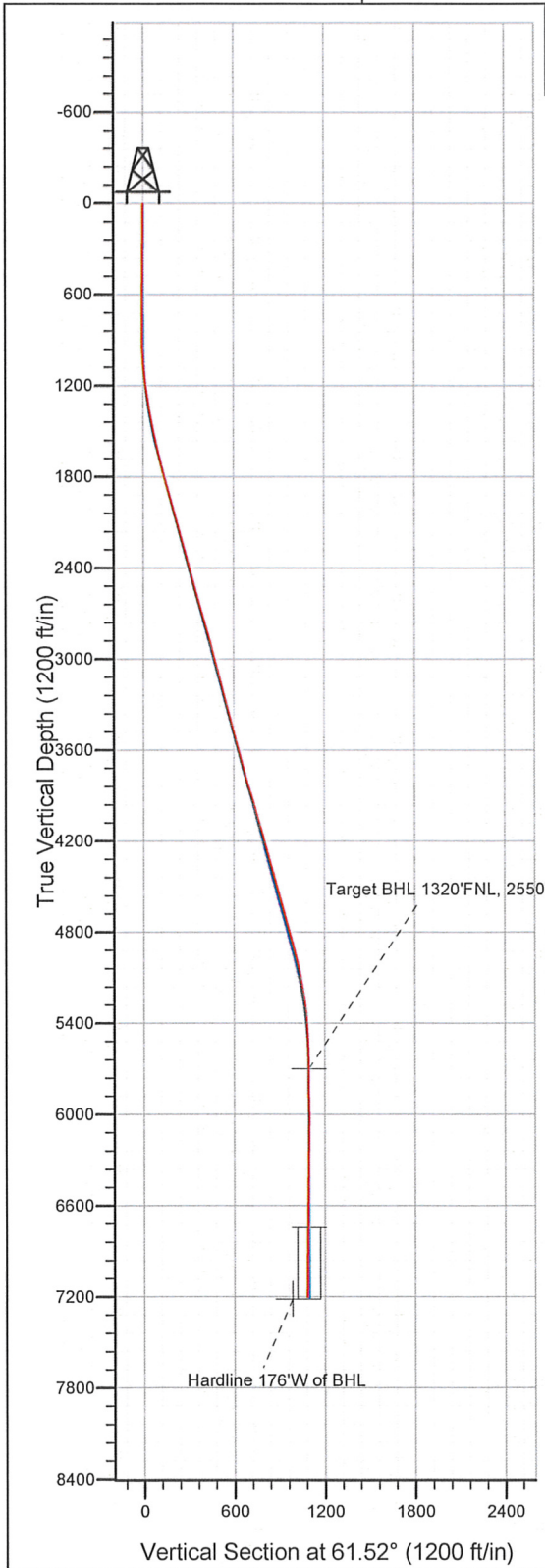
Well Name: **Aristocrat PC H11-18D**

Surface Location: Aristocrat PC H11-18D Pad Sec. 11-T3N-R65W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

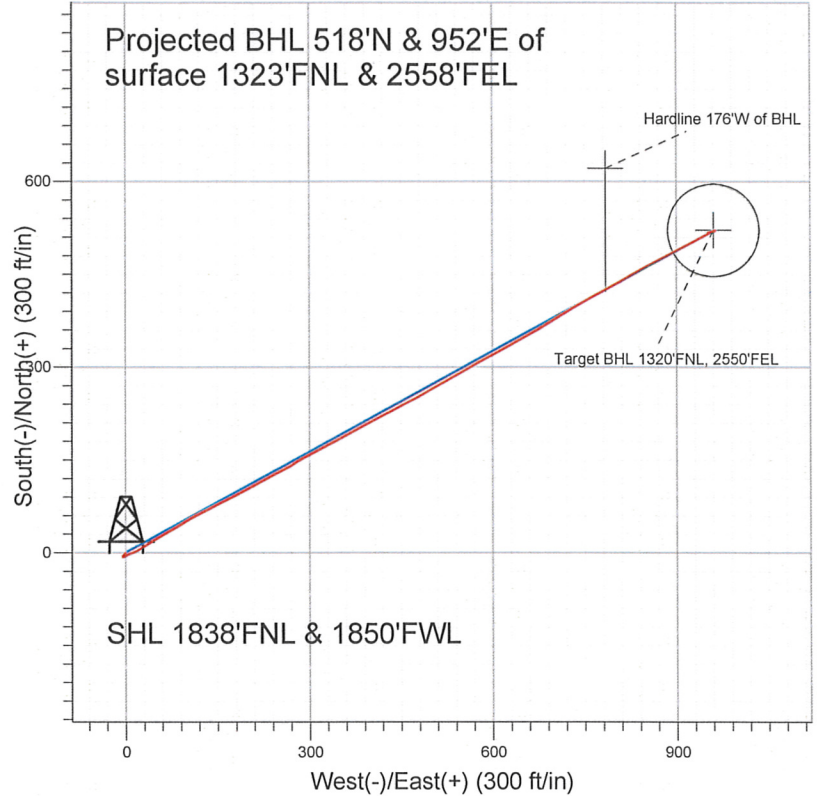
Ground Elevation: 4771.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1332210.39	3241957.35	40° 14' 31.452 N	104° 37' 59.700 W	

Original Well Elev WELL @ 4784.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- △ Aristocrat PC H11-18D, Wellbore #1, Noble Aristocrat PC H11-18D Plan#1 (6-18-10) V0
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
7341'MD & 7202'TVD @ 1084'VS
0.6 deg Inc 261.4 deg AZ

Project: SEC.11-T3N-R65W
Site: Aristocrat PC H11-18D Pad Sec. 11-T3N-R65W
Well: Aristocrat PC H11-18D
Plan: Wellbore #1

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Site Aristocrat PC H11-18D Pad Sec. 11-T3N-R65W
Project:	SEC.11-T3N-R65W	TVD Reference:	WELL @ 4784.0ft (Original Well Elev)
Site:	Aristocrat PC H11-18D Pad Sec. 11-T3N-R65W	MD Reference:	WELL @ 4784.0ft (Original Well Elev)
Well:	Aristocrat PC H11-18D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

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	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	61.52	

Survey Program	Date 3/25/2011				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
782.0	7,341.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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
782.0	1.00	222.00	782.0	-5.1	-4.6	-6.4	0.13	0.13	0.00
875.0	1.40	109.10	874.9	-6.1	-4.0	-6.4	2.16	0.43	-121.40
970.0	3.10	56.70	969.9	-5.0	-0.8	-3.1	2.64	1.79	-55.16
1,063.0	4.00	66.40	1,062.7	-2.4	4.3	2.7	1.16	0.97	10.43
1,157.0	6.80	70.20	1,156.3	0.8	12.5	11.4	3.00	2.98	4.04
1,250.0	8.30	57.90	1,248.5	6.3	23.4	23.6	2.36	1.61	-13.23
1,345.0	10.00	58.50	1,342.3	14.2	36.2	38.6	1.79	1.79	0.63
1,439.0	10.90	58.30	1,434.7	23.2	50.8	55.7	0.96	0.96	-0.21
1,532.0	12.50	60.10	1,525.8	32.8	67.0	74.5	1.76	1.72	1.94
1,627.0	13.50	59.90	1,618.3	43.5	85.5	95.9	1.05	1.05	-0.21
1,720.0	14.60	60.10	1,708.5	54.8	105.0	118.4	1.18	1.18	0.22

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: Wellbore #1

Local Co-ordinate Reference: Site Aristocrat PC H11-18D Pad Sec. 11-T3N-R65W
 TVD Reference: WELL @ 4784.0ft (Original Well Elev)
 MD Reference: WELL @ 4784.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature
 Database: Landmark

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)
1,813.0	15.50	63.00	1,798.4	66.3	126.3	142.6	1.26	0.97	3.12
1,906.0	15.60	62.80	1,888.0	77.6	148.5	167.5	0.12	0.11	-0.22
2,001.0	15.70	63.90	1,979.4	89.1	171.4	193.1	0.33	0.11	1.16
2,094.0	15.60	62.30	2,069.0	100.5	193.7	218.2	0.48	-0.11	-1.72
2,188.0	15.30	60.60	2,159.6	112.4	215.7	243.2	0.58	-0.32	-1.81
2,282.0	15.10	62.20	2,250.3	124.2	237.4	267.9	0.49	-0.21	1.70
2,376.0	15.00	62.60	2,341.1	135.5	259.0	292.3	0.15	-0.11	0.43
2,469.0	15.60	58.70	2,430.8	147.6	280.4	316.8	1.28	0.65	-4.19
2,563.0	14.60	64.10	2,521.5	159.3	301.8	341.3	1.84	-1.06	5.74
2,657.0	15.10	60.90	2,612.4	170.4	323.2	365.3	1.02	0.53	-3.40
2,750.0	16.30	63.00	2,701.9	182.2	345.4	390.5	1.43	1.29	2.26
2,843.0	16.20	61.20	2,791.2	194.4	368.4	416.5	0.55	-0.11	-1.94
2,937.0	15.30	61.20	2,881.7	206.7	390.7	442.0	0.96	-0.96	0.00
3,030.0	15.30	63.60	2,971.4	218.1	412.5	466.6	0.68	0.00	2.58
3,124.0	14.30	61.60	3,062.3	229.1	433.8	490.6	1.19	-1.06	-2.13
3,218.0	14.20	63.50	3,153.4	239.8	454.3	513.7	0.51	-0.11	2.02
3,311.0	14.90	60.70	3,243.4	250.7	475.0	537.1	1.07	0.75	-3.01
3,404.0	15.10	61.00	3,333.2	262.4	496.0	561.1	0.23	0.22	0.32
3,498.0	15.40	60.90	3,423.9	274.5	517.6	585.9	0.32	0.32	-0.11
3,593.0	15.20	61.70	3,515.5	286.5	539.6	610.9	0.31	-0.21	0.84
3,687.0	15.50	59.20	3,606.2	298.8	561.2	635.8	0.77	0.32	-2.66
3,780.0	14.50	61.50	3,696.0	310.7	582.1	659.9	1.25	-1.08	2.47
3,873.0	15.20	62.10	3,785.9	321.9	603.1	683.7	0.77	0.75	0.65
3,967.0	17.10	61.20	3,876.2	334.4	626.2	709.8	2.04	2.02	-0.96
4,060.0	16.70	60.90	3,965.2	347.5	649.8	736.9	0.44	-0.43	-0.32
4,154.0	15.60	60.90	4,055.5	360.2	672.7	763.0	1.17	-1.17	0.00
4,247.0	16.00	56.50	4,145.0	373.3	694.3	788.3	1.36	0.43	-4.73
4,341.0	15.50	58.00	4,235.4	387.1	715.7	813.7	0.69	-0.53	1.60
4,435.0	15.90	60.50	4,325.9	400.1	737.6	839.1	0.84	0.43	2.66
4,529.0	15.50	61.30	4,416.4	412.5	759.8	864.6	0.48	-0.43	0.85
4,622.0	16.00	61.10	4,505.9	424.7	781.9	889.8	0.54	0.54	-0.22
4,715.0	15.00	61.80	4,595.6	436.5	803.8	914.7	1.09	-1.08	0.75
4,808.0	14.90	59.30	4,685.4	448.3	824.6	938.7	0.70	-0.11	-2.69
4,903.0	15.70	61.30	4,777.0	460.7	846.4	963.7	1.01	0.84	2.11
4,998.0	15.30	63.00	4,868.6	472.6	868.9	989.1	0.64	-0.42	1.79
5,091.0	13.50	62.30	4,958.7	483.2	889.4	1,012.2	1.94	-1.94	-0.75
5,185.0	12.30	63.10	5,050.3	492.9	908.1	1,033.2	1.29	-1.28	0.85
5,279.0	10.20	62.40	5,142.5	501.2	924.4	1,051.5	2.24	-2.23	-0.74
5,373.0	7.70	61.40	5,235.3	508.1	937.3	1,066.2	2.66	-2.66	-1.06
5,467.0	6.20	61.60	5,328.6	513.5	947.3	1,077.5	1.60	-1.60	0.21
5,561.0	3.50	68.60	5,422.3	517.0	954.4	1,085.5	2.94	-2.87	7.45
5,654.0	2.30	73.50	5,515.2	518.6	958.8	1,090.1	1.32	-1.29	5.27
5,747.0	1.10	51.90	5,608.1	519.7	961.3	1,092.8	1.44	-1.29	-23.23
5,838.9	0.81	48.61	5,700.0	520.6	962.5	1,094.3	0.32	-0.32	-3.59
Target BHL 1320°FNL, 2550°FEL									
5,841.0	0.80	48.50	5,702.1	520.6	962.5	1,094.3	0.32	-0.32	-4.93
5,935.0	0.40	52.70	5,796.1	521.3	963.3	1,095.3	0.43	-0.43	4.47
6,029.0	0.30	63.40	5,890.1	521.6	963.8	1,095.9	0.13	-0.11	11.38
6,122.0	0.10	47.80	5,983.1	521.8	964.0	1,096.2	0.22	-0.22	-16.77
6,216.0	0.20	243.90	6,077.1	521.7	964.0	1,096.1	0.32	0.11	-174.36
6,309.0	0.40	246.50	6,170.1	521.5	963.5	1,095.6	0.22	0.22	2.80
6,402.0	0.50	251.40	6,263.1	521.3	962.8	1,094.9	0.12	0.11	5.27
6,495.0	0.60	251.90	6,356.1	521.0	962.0	1,094.0	0.11	0.11	0.54

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Wellbore: Wellbore #1
Design: Wellbore #1

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TVD Reference: WELL @ 4784.0ft (Original Well Elev)
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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)
6,588.0	0.60	252.00	6,449.1	520.7	961.1	1,093.1	0.00	0.00	0.11
6,682.0	0.60	247.40	6,543.1	520.4	960.1	1,092.1	0.05	0.00	-4.89
6,775.0	0.90	247.30	6,636.1	519.9	959.0	1,090.9	0.32	0.32	-0.11
6,869.0	0.80	251.70	6,730.1	519.4	957.7	1,089.5	0.13	-0.11	4.68
6,882.9	0.80	251.70	6,744.0	519.3	957.5	1,089.3	0.00	0.00	0.00
Target Circle 1320'FNL, 2550'FEL									
6,964.0	0.80	252.40	6,825.1	519.0	956.4	1,088.2	0.01	0.00	0.86
7,058.0	0.70	260.10	6,919.0	518.7	955.2	1,087.0	0.15	-0.11	8.19
7,151.0	0.70	258.20	7,012.0	518.5	954.1	1,085.9	0.02	0.00	-2.04
7,245.0	0.60	258.80	7,106.0	518.3	953.1	1,084.9	0.11	-0.11	0.64
7,296.0	0.60	261.40	7,157.0	518.2	952.6	1,084.4	0.05	0.00	5.10
7,341.0	0.60	261.40	7,202.0	518.1	952.1	1,083.9	0.00	0.00	0.00
Hardline 176'W of BHL									

Checked By: _____ Approved By: _____ Date: _____