

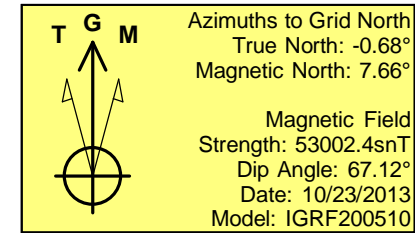
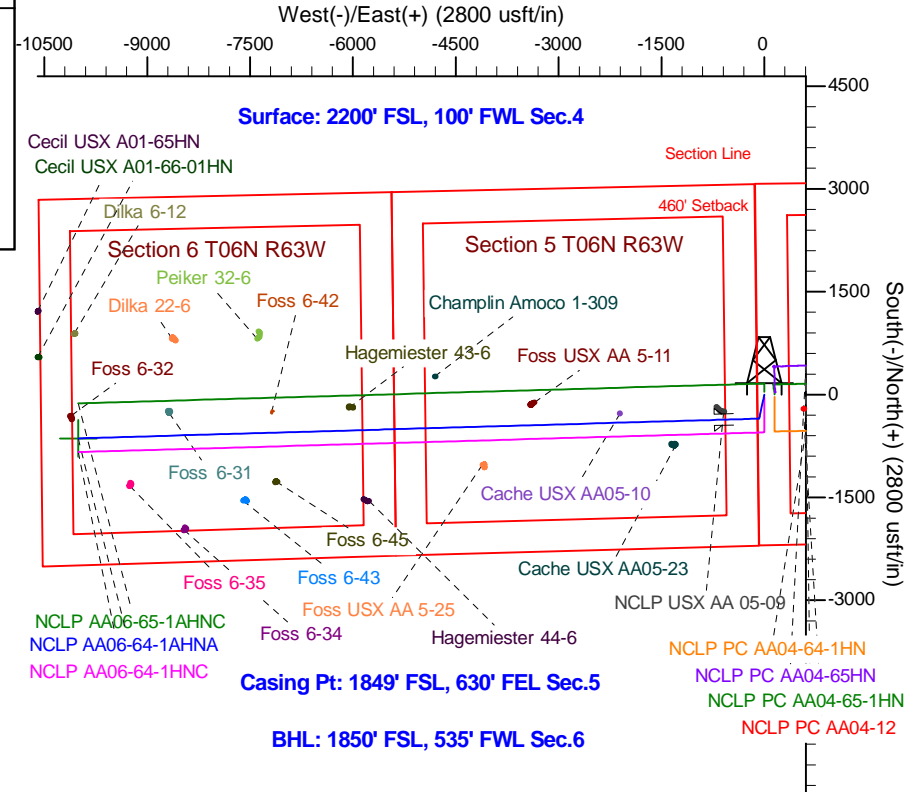
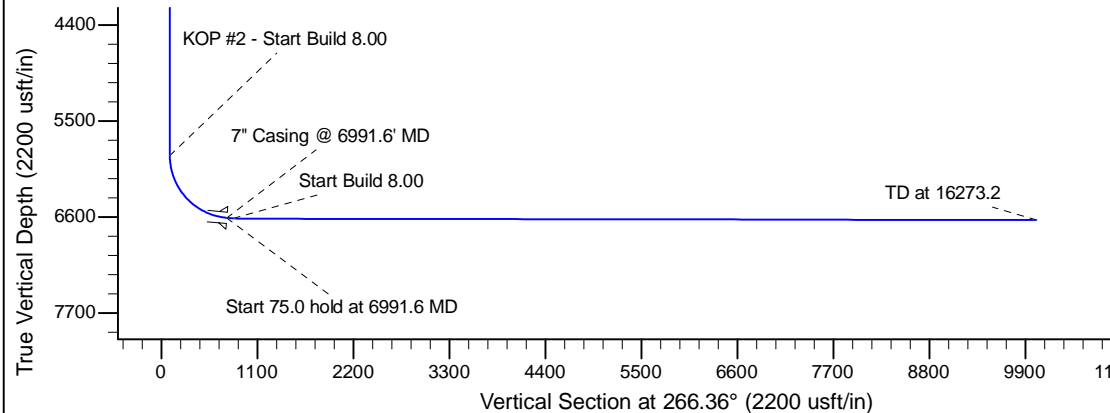
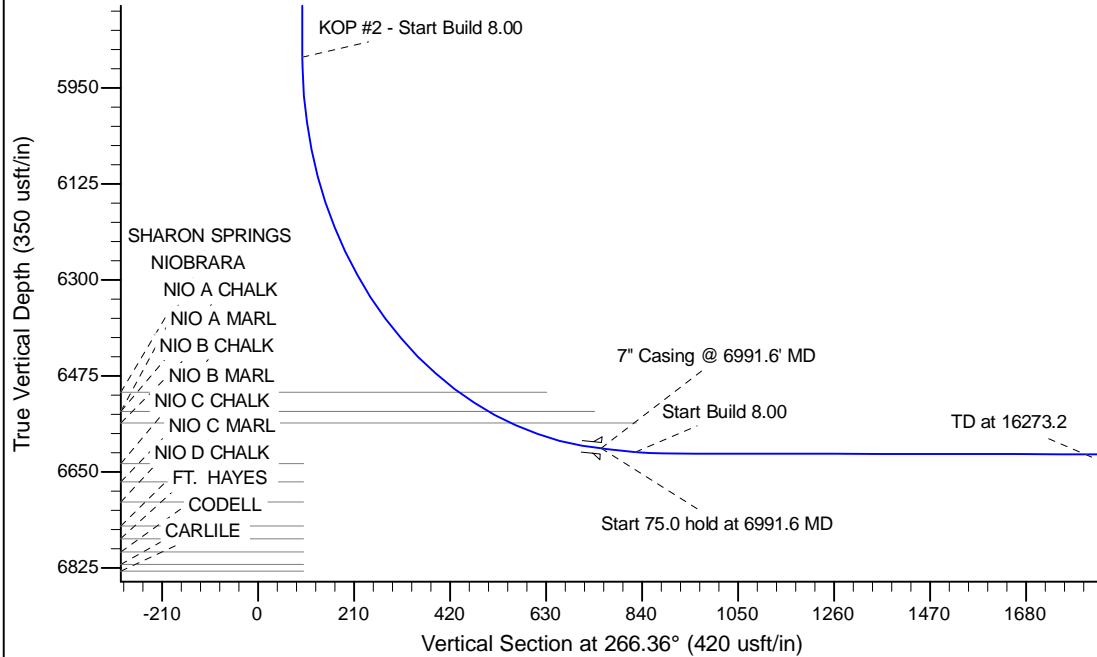
Project: Wattenberg Field
Site: AA (Sec.4-T06N-R63W) Weld County, CO
Well: NCLP AA06-64-1AHNA
Wellbore: Original Drilling
Design: APD - Rev 0

Northern Region Drilling - Working

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level

SECTION DETAILS

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	1800.0	0.00	0.00	1800.0	0.0	0.0	0.00	0.00	0.0	
3	2452.2	13.04	192.09	2446.6	-72.3	-15.5	2.00	192.09	20.1	
4	3383.0	13.04	192.09	3353.4	-277.7	-59.5	0.00	0.00	77.0	
5	4035.3	0.00	0.00	4000.0	-350.0	-75.0	2.00	180.00	97.1	
6	5929.1	0.00	0.00	5893.8	-350.0	-75.0	0.00	0.00	97.1	
7	6991.6	85.00	268.34	6607.3	-368.9	-728.5	8.00	268.34	750.5	
8	7066.6	85.00	268.34	6613.8	-371.1	-803.2	0.00	0.00	825.2	
9	7127.8	89.90	268.34	6616.5	-372.8	-864.3	8.00	0.00	886.3	
10	16273.2	89.90	268.34	6632.5	-637.4	-10005.9	0.00	0.00	10026.2	NCLP AA06-64-1AHNA BHL 1850'FSL, 535'FWL



WELL DETAILS: NCLP AA06-64-1AHNA				
Ground Level: 4711.0				
0.0	0.0	Northing 1432020.38	Easting 3291695.78	Latitude 40.514560 Longitude -104.450860
Plan: APD - Rev 0 (NCLP AA06-64-1AHNA/Original Drilling)				
Created By: Shailey Jewell		Date: 13:08, December 04 2013		
Checked: _____		Date: _____		
Reviewed: _____		Date: _____		
Approved: _____		Date: _____		

Northern Region Drilling - Working

Wattenberg Field

AA (06N-63W)

NCLP AA06-64-1AHNA

Original Drilling

Plan: APD - Rev 0

Standard Planning Report

04 December, 2013

Noble Energy Inc

Planning Report

Database:	EDM Production	Local Co-ordinate Reference:	Well NCLP AA06-64-1AHNA
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4735.0usft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4735.0usft (Original Well Elev)
Site:	AA (06N-63W)	North Reference:	Grid
Well:	NCLP AA06-64-1AHNA	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 0		

Project	Wattenberg Field, Weld County CO		
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		AA (06N-63W)			
Site Position:		Northing:	1,427,844.88 usft	Latitude:	40.502740
From:	Lat/Long	Easting:	3,302,558.01 usft	Longitude:	-104.411980
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.70 °

Well	NCLP AA06-64-1AHNA					
Well Position	+N/-S	4,175.6 usft	Northing:	1,432,020.38 usft	Latitude:	40.514560
	+E/-W	-10,862.6 usft	Easting:	3,291,695.78 usft	Longitude:	-104.450860
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	4,711.0 usft

Wellbore	Original Drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/23/2013	8.33	67.12	53,002

Design	APD - Rev 0			
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	266.36

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,452.2	13.04	192.09	2,446.6	-72.3	-15.5	2.00	2.00	0.00	192.09	
3,383.0	13.04	192.09	3,353.4	-277.7	-59.5	0.00	0.00	0.00	0.00	
4,035.3	0.00	0.00	4,000.0	-350.0	-75.0	2.00	-2.00	0.00	180.00	
5,929.1	0.00	0.00	5,893.8	-350.0	-75.0	0.00	0.00	0.00	0.00	
6,991.6	85.00	268.34	6,607.3	-368.9	-728.5	8.00	8.00	0.00	268.34	
7,066.6	85.00	268.34	6,613.8	-371.1	-803.2	0.00	0.00	0.00	0.00	
7,127.8	89.90	268.34	6,616.5	-372.8	-864.3	8.00	8.00	0.00	0.00	
16,273.2	89.90	268.34	6,632.5	-637.4	-10,005.9	0.00	0.00	0.00	0.00	NCLP AA06-64-1AHN

Noble Energy Inc

Planning Report

Database:	EDM Production	Local Co-ordinate Reference:	Well NCLP AA06-64-1AHNA
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4735.0usft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4735.0usft (Original Well Elev)
Site:	AA (06N-63W)	North Reference:	Grid
Well:	NCLP AA06-64-1AHNA	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
50.0	0.00	0.00	50.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
150.0	0.00	0.00	150.0	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
250.0	0.00	0.00	250.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
350.0	0.00	0.00	350.0	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
450.0	0.00	0.00	450.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
550.0	0.00	0.00	550.0	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
650.0	0.00	0.00	650.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
750.0	0.00	0.00	750.0	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
850.0	0.00	0.00	850.0	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
950.0	0.00	0.00	950.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,038.0	0.00	0.00	1,038.0	0.0	0.0	0.0	0.00	0.00	0.00
PIERRE									
1,050.0	0.00	0.00	1,050.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,150.0	0.00	0.00	1,150.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,250.0	0.00	0.00	1,250.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,350.0	0.00	0.00	1,350.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,450.0	0.00	0.00	1,450.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,550.0	0.00	0.00	1,550.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,650.0	0.00	0.00	1,650.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,750.0	0.00	0.00	1,750.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 2.00									
1,850.0	1.00	192.09	1,850.0	-0.4	-0.1	0.1	2.00	2.00	0.00
1,900.0	2.00	192.09	1,900.0	-1.7	-0.4	0.5	2.00	2.00	0.00
1,950.0	3.00	192.09	1,949.9	-3.8	-0.8	1.1	2.00	2.00	0.00
2,000.0	4.00	192.09	1,999.8	-6.8	-1.5	1.9	2.00	2.00	0.00
2,050.0	5.00	192.09	2,049.7	-10.7	-2.3	3.0	2.00	2.00	0.00
2,100.0	6.00	192.09	2,099.5	-15.3	-3.3	4.3	2.00	2.00	0.00
2,150.0	7.00	192.09	2,149.1	-20.9	-4.5	5.8	2.00	2.00	0.00
2,200.0	8.00	192.09	2,198.7	-27.3	-5.8	7.6	2.00	2.00	0.00
2,250.0	9.00	192.09	2,248.2	-34.5	-7.4	9.6	2.00	2.00	0.00
2,300.0	10.00	192.09	2,297.5	-42.6	-9.1	11.8	2.00	2.00	0.00
2,350.0	11.00	192.09	2,346.6	-51.5	-11.0	14.3	2.00	2.00	0.00
2,400.0	12.00	192.09	2,395.6	-61.2	-13.1	17.0	2.00	2.00	0.00
2,450.0	13.00	192.09	2,444.4	-71.8	-15.4	19.9	2.00	2.00	0.00
2,452.2	13.04	192.09	2,446.6	-72.3	-15.5	20.1	2.00	2.00	0.00

Noble Energy Inc

Planning Report

Database:	EDM Production	Local Co-ordinate Reference:	Well NCLP AA06-64-1AHNA
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4735.0usft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4735.0usft (Original Well Elev)
Site:	AA (06N-63W)	North Reference:	Grid
Well:	NCLP AA06-64-1AHNA	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
2,500.0	13.04	192.09	2,493.1	-82.8	-17.7	23.0	0.00	0.00	0.00	
2,550.0	13.04	192.09	2,541.9	-93.9	-20.1	26.0	0.00	0.00	0.00	
2,600.0	13.04	192.09	2,590.6	-104.9	-22.5	29.1	0.00	0.00	0.00	
2,650.0	13.04	192.09	2,639.3	-115.9	-24.8	32.2	0.00	0.00	0.00	
2,700.0	13.04	192.09	2,688.0	-127.0	-27.2	35.2	0.00	0.00	0.00	
2,750.0	13.04	192.09	2,736.7	-138.0	-29.6	38.3	0.00	0.00	0.00	
2,800.0	13.04	192.09	2,785.4	-149.0	-31.9	41.3	0.00	0.00	0.00	
2,850.0	13.04	192.09	2,834.1	-160.1	-34.3	44.4	0.00	0.00	0.00	
2,900.0	13.04	192.09	2,882.8	-171.1	-36.7	47.5	0.00	0.00	0.00	
2,950.0	13.04	192.09	2,931.5	-182.1	-39.0	50.5	0.00	0.00	0.00	
3,000.0	13.04	192.09	2,980.2	-193.2	-41.4	53.6	0.00	0.00	0.00	
3,050.0	13.04	192.09	3,029.0	-204.2	-43.8	56.7	0.00	0.00	0.00	
3,100.0	13.04	192.09	3,077.7	-215.2	-46.1	59.7	0.00	0.00	0.00	
3,150.0	13.04	192.09	3,126.4	-226.3	-48.5	62.8	0.00	0.00	0.00	
3,200.0	13.04	192.09	3,175.1	-237.3	-50.9	65.8	0.00	0.00	0.00	
3,250.0	13.04	192.09	3,223.8	-248.4	-53.2	68.9	0.00	0.00	0.00	
3,300.0	13.04	192.09	3,272.5	-259.4	-55.6	72.0	0.00	0.00	0.00	
3,350.0	13.04	192.09	3,321.2	-270.4	-57.9	75.0	0.00	0.00	0.00	
3,383.0	13.04	192.09	3,353.4	-277.7	-59.5	77.0	0.00	0.00	0.00	
Start Drop -2.00										
3,400.0	12.71	192.09	3,369.9	-281.4	-60.3	78.1	2.00	-2.00	0.00	
3,450.0	11.71	192.09	3,418.8	-291.7	-62.5	80.9	2.00	-2.00	0.00	
3,500.0	10.71	192.09	3,467.8	-301.2	-64.6	83.6	2.00	-2.00	0.00	
3,550.0	9.71	192.09	3,517.1	-309.9	-66.4	86.0	2.00	-2.00	0.00	
3,556.0	9.58	192.09	3,523.0	-310.9	-66.6	86.2	2.00	-2.00	0.00	
PARKMAN										
3,600.0	8.71	192.09	3,566.4	-317.7	-68.1	88.1	2.00	-2.00	0.00	
3,650.0	7.71	192.09	3,615.9	-324.7	-69.6	90.1	2.00	-2.00	0.00	
3,700.0	6.71	192.09	3,665.5	-330.8	-70.9	91.8	2.00	-2.00	0.00	
3,750.0	5.71	192.09	3,715.2	-336.1	-72.0	93.2	2.00	-2.00	0.00	
3,800.0	4.71	192.09	3,765.0	-340.6	-73.0	94.5	2.00	-2.00	0.00	
3,850.0	3.71	192.09	3,814.9	-344.1	-73.7	95.5	2.00	-2.00	0.00	
3,900.0	2.71	192.09	3,864.8	-346.9	-74.3	96.2	2.00	-2.00	0.00	
3,950.0	1.71	192.09	3,914.8	-348.8	-74.7	96.8	2.00	-2.00	0.00	
4,000.0	0.71	192.09	3,964.7	-349.8	-75.0	97.0	2.00	-2.00	0.00	
4,035.3	0.00	0.00	4,000.0	-350.0	-75.0	97.1	2.00	-2.00	0.00	
4,050.0	0.00	0.00	4,014.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,100.0	0.00	0.00	4,064.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,150.0	0.00	0.00	4,114.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,200.0	0.00	0.00	4,164.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,250.0	0.00	0.00	4,214.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,300.0	0.00	0.00	4,264.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,350.0	0.00	0.00	4,314.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,358.3	0.00	0.00	4,323.0	-350.0	-75.0	97.1	0.00	0.00	0.00	
SUSSEX										
4,400.0	0.00	0.00	4,364.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,450.0	0.00	0.00	4,414.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,500.0	0.00	0.00	4,464.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,550.0	0.00	0.00	4,514.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,600.0	0.00	0.00	4,564.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,650.0	0.00	0.00	4,614.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,700.0	0.00	0.00	4,664.7	-350.0	-75.0	97.1	0.00	0.00	0.00	
4,750.0	0.00	0.00	4,714.7	-350.0	-75.0	97.1	0.00	0.00	0.00	

Noble Energy Inc

Planning Report

Database:	EDM Production	Local Co-ordinate Reference:	Well NCLP AA06-64-1AHNA
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4735.0usft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4735.0usft (Original Well Elev)
Site:	AA (06N-63W)	North Reference:	Grid
Well:	NCLP AA06-64-1AHNA	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.0	0.00	0.00	4,764.7	-350.0	-75.0	97.1	0.00	0.00	0.00
4,850.0	0.00	0.00	4,814.7	-350.0	-75.0	97.1	0.00	0.00	0.00
4,900.0	0.00	0.00	4,864.7	-350.0	-75.0	97.1	0.00	0.00	0.00
4,938.3	0.00	0.00	4,903.0	-350.0	-75.0	97.1	0.00	0.00	0.00
SHANNON									
4,950.0	0.00	0.00	4,914.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,000.0	0.00	0.00	4,964.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,050.0	0.00	0.00	5,014.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,100.0	0.00	0.00	5,064.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,150.0	0.00	0.00	5,114.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,200.0	0.00	0.00	5,164.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,250.0	0.00	0.00	5,214.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,300.0	0.00	0.00	5,264.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,350.0	0.00	0.00	5,314.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,400.0	0.00	0.00	5,364.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,450.0	0.00	0.00	5,414.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,500.0	0.00	0.00	5,464.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,550.0	0.00	0.00	5,514.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,600.0	0.00	0.00	5,564.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,650.0	0.00	0.00	5,614.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,700.0	0.00	0.00	5,664.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,750.0	0.00	0.00	5,714.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,800.0	0.00	0.00	5,764.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,802.3	0.00	0.00	5,767.0	-350.0	-75.0	97.1	0.00	0.00	0.00
TEEPEE BUTTES									
5,850.0	0.00	0.00	5,814.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,900.0	0.00	0.00	5,864.7	-350.0	-75.0	97.1	0.00	0.00	0.00
5,929.1	0.00	0.00	5,893.8	-350.0	-75.0	97.1	0.00	0.00	0.00
KOP #2 - Start Build 8.00									
5,950.0	1.67	268.34	5,914.7	-350.0	-75.3	97.4	8.01	8.01	0.00
6,000.0	5.67	268.34	5,964.6	-350.1	-78.5	100.6	8.00	8.00	0.00
6,050.0	9.67	268.34	6,014.2	-350.3	-85.2	107.3	8.00	8.00	0.00
6,100.0	13.67	268.34	6,063.1	-350.6	-95.3	117.4	8.00	8.00	0.00
6,150.0	17.67	268.34	6,111.3	-351.0	-108.8	130.9	8.00	8.00	0.00
6,200.0	21.67	268.34	6,158.3	-351.5	-125.6	147.7	8.00	8.00	0.00
6,250.0	25.67	268.34	6,204.1	-352.0	-145.7	167.8	8.00	8.00	0.00
6,300.0	29.67	268.34	6,248.4	-352.7	-168.9	191.0	8.00	8.00	0.00
6,350.0	33.67	268.34	6,290.9	-353.5	-195.1	217.2	8.00	8.00	0.00
6,400.0	37.67	268.34	6,331.5	-354.3	-224.3	246.3	8.00	8.00	0.00
6,450.0	41.67	268.34	6,370.0	-355.2	-256.2	278.2	8.00	8.00	0.00
6,500.0	45.67	268.34	6,406.2	-356.2	-290.7	312.7	8.00	8.00	0.00
6,550.0	49.67	268.34	6,439.8	-357.3	-327.6	349.7	8.00	8.00	0.00
6,600.0	53.67	268.34	6,470.8	-358.4	-366.8	388.9	8.00	8.00	0.00
6,650.0	57.67	268.34	6,499.0	-359.6	-408.1	430.1	8.00	8.00	0.00
6,661.3	58.58	268.34	6,505.0	-359.9	-417.7	439.8	8.00	8.00	0.00
SHARON SPRINGS									
6,700.0	61.67	268.34	6,524.3	-360.9	-451.2	473.3	8.00	8.00	0.00
6,734.8	64.46	268.34	6,540.0	-361.8	-482.2	504.2	8.00	8.00	0.00
NIOBRARA - NIO A CHALK									
6,750.0	65.67	268.34	6,546.4	-362.2	-496.0	518.0	8.00	8.00	0.00
6,787.6	68.68	268.34	6,561.0	-363.2	-530.6	552.7	8.00	8.00	0.00
NIO A MARL									
6,800.0	69.67	268.34	6,565.4	-363.5	-542.2	564.2	8.00	8.00	0.00

Noble Energy Inc

Planning Report

Database:	EDM Production	Local Co-ordinate Reference:	Well NCLP AA06-64-1AHNA
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4735.0usft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4735.0usft (Original Well Elev)
Site:	AA (06N-63W)	North Reference:	Grid
Well:	NCLP AA06-64-1AHNA	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,850.0	73.67	268.34	6,581.1	-364.9	-589.7	611.7	8.00	8.00	0.00
6,900.0	77.67	268.34	6,593.5	-366.3	-638.1	660.1	8.00	8.00	0.00
6,950.0	81.67	268.34	6,602.5	-367.7	-687.2	709.2	8.00	8.00	0.00
6,991.6	85.00	268.34	6,607.3	-368.9	-728.5	750.5	7.99	7.99	0.00
Start 75.0 hold at 6991.6 MD - 7" Casing @ 6991.6' MD									
7,000.0	85.00	268.34	6,608.0	-369.2	-736.9	758.9	0.00	0.00	0.00
7,050.0	85.00	268.34	6,612.4	-370.6	-786.7	808.7	0.00	0.00	0.00
7,066.6	85.00	268.34	6,613.8	-371.1	-803.2	825.2	0.00	0.00	0.00
Start Build 8.00									
7,100.0	87.67	268.34	6,615.9	-372.0	-836.5	858.5	8.01	8.01	0.00
7,127.8	89.90	268.34	6,616.5	-372.8	-864.3	886.3	8.00	8.00	0.00
7,150.0	89.90	268.34	6,616.6	-373.5	-886.5	908.5	0.00	0.00	0.00
7,200.0	89.90	268.34	6,616.7	-374.9	-936.5	958.4	0.00	0.00	0.00
7,250.0	89.90	268.34	6,616.8	-376.4	-986.5	1,008.4	0.00	0.00	0.00
7,300.0	89.90	268.34	6,616.8	-377.8	-1,036.4	1,058.4	0.00	0.00	0.00
7,350.0	89.90	268.34	6,616.9	-379.3	-1,086.4	1,108.3	0.00	0.00	0.00
7,400.0	89.90	268.34	6,617.0	-380.7	-1,136.4	1,158.3	0.00	0.00	0.00
7,450.0	89.90	268.34	6,617.1	-382.2	-1,186.4	1,208.3	0.00	0.00	0.00
7,500.0	89.90	268.34	6,617.2	-383.6	-1,236.4	1,258.2	0.00	0.00	0.00
7,550.0	89.90	268.34	6,617.3	-385.1	-1,286.3	1,308.2	0.00	0.00	0.00
7,600.0	89.90	268.34	6,617.4	-386.5	-1,336.3	1,358.2	0.00	0.00	0.00
7,650.0	89.90	268.34	6,617.4	-387.9	-1,386.3	1,408.2	0.00	0.00	0.00
7,700.0	89.90	268.34	6,617.5	-389.4	-1,436.3	1,458.1	0.00	0.00	0.00
7,750.0	89.90	268.34	6,617.6	-390.8	-1,486.3	1,508.1	0.00	0.00	0.00
7,800.0	89.90	268.34	6,617.7	-392.3	-1,536.2	1,558.1	0.00	0.00	0.00
7,850.0	89.90	268.34	6,617.8	-393.7	-1,586.2	1,608.0	0.00	0.00	0.00
7,900.0	89.90	268.34	6,617.9	-395.2	-1,636.2	1,658.0	0.00	0.00	0.00
7,950.0	89.90	268.34	6,618.0	-396.6	-1,686.2	1,708.0	0.00	0.00	0.00
8,000.0	89.90	268.34	6,618.1	-398.1	-1,736.1	1,757.9	0.00	0.00	0.00
8,050.0	89.90	268.34	6,618.1	-399.5	-1,786.1	1,807.9	0.00	0.00	0.00
8,100.0	89.90	268.34	6,618.2	-401.0	-1,836.1	1,857.9	0.00	0.00	0.00
8,150.0	89.90	268.34	6,618.3	-402.4	-1,886.1	1,907.9	0.00	0.00	0.00
8,200.0	89.90	268.34	6,618.4	-403.9	-1,936.1	1,957.8	0.00	0.00	0.00
8,250.0	89.90	268.34	6,618.5	-405.3	-1,986.0	2,007.8	0.00	0.00	0.00
8,300.0	89.90	268.34	6,618.6	-406.7	-2,036.0	2,057.8	0.00	0.00	0.00
8,350.0	89.90	268.34	6,618.7	-408.2	-2,086.0	2,107.7	0.00	0.00	0.00
8,400.0	89.90	268.34	6,618.8	-409.6	-2,136.0	2,157.7	0.00	0.00	0.00
8,450.0	89.90	268.34	6,618.8	-411.1	-2,186.0	2,207.7	0.00	0.00	0.00
8,500.0	89.90	268.34	6,618.9	-412.5	-2,235.9	2,257.6	0.00	0.00	0.00
8,550.0	89.90	268.34	6,619.0	-414.0	-2,285.9	2,307.6	0.00	0.00	0.00
8,600.0	89.90	268.34	6,619.1	-415.4	-2,335.9	2,357.6	0.00	0.00	0.00
8,650.0	89.90	268.34	6,619.2	-416.9	-2,385.9	2,407.6	0.00	0.00	0.00
8,700.0	89.90	268.34	6,619.3	-418.3	-2,435.9	2,457.5	0.00	0.00	0.00
8,750.0	89.90	268.34	6,619.4	-419.8	-2,485.8	2,507.5	0.00	0.00	0.00
8,800.0	89.90	268.34	6,619.5	-421.2	-2,535.8	2,557.5	0.00	0.00	0.00
8,850.0	89.90	268.34	6,619.5	-422.7	-2,585.8	2,607.4	0.00	0.00	0.00
8,900.0	89.90	268.34	6,619.6	-424.1	-2,635.8	2,657.4	0.00	0.00	0.00
8,950.0	89.90	268.34	6,619.7	-425.5	-2,685.8	2,707.4	0.00	0.00	0.00
9,000.0	89.90	268.34	6,619.8	-427.0	-2,735.7	2,757.3	0.00	0.00	0.00
9,050.0	89.90	268.34	6,619.9	-428.4	-2,785.7	2,807.3	0.00	0.00	0.00
9,100.0	89.90	268.34	6,620.0	-429.9	-2,835.7	2,857.3	0.00	0.00	0.00
9,150.0	89.90	268.34	6,620.1	-431.3	-2,885.7	2,907.2	0.00	0.00	0.00
9,200.0	89.90	268.34	6,620.2	-432.8	-2,935.6	2,957.2	0.00	0.00	0.00

Noble Energy Inc

Planning Report

Database:	EDM Production	Local Co-ordinate Reference:	Well NCLP AA06-64-1AHNA
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4735.0usft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4735.0usft (Original Well Elev)
Site:	AA (06N-63W)	North Reference:	Grid
Well:	NCLP AA06-64-1AHNA	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,250.0	89.90	268.34	6,620.2	-434.2	-2,985.6	3,007.2	0.00	0.00	0.00
9,300.0	89.90	268.34	6,620.3	-435.7	-3,035.6	3,057.2	0.00	0.00	0.00
9,350.0	89.90	268.34	6,620.4	-437.1	-3,085.6	3,107.1	0.00	0.00	0.00
9,400.0	89.90	268.34	6,620.5	-438.6	-3,135.6	3,157.1	0.00	0.00	0.00
9,450.0	89.90	268.34	6,620.6	-440.0	-3,185.5	3,207.1	0.00	0.00	0.00
9,500.0	89.90	268.34	6,620.7	-441.5	-3,235.5	3,257.0	0.00	0.00	0.00
9,550.0	89.90	268.34	6,620.8	-442.9	-3,285.5	3,307.0	0.00	0.00	0.00
9,600.0	89.90	268.34	6,620.9	-444.3	-3,335.5	3,357.0	0.00	0.00	0.00
9,650.0	89.90	268.34	6,620.9	-445.8	-3,385.5	3,406.9	0.00	0.00	0.00
9,700.0	89.90	268.34	6,621.0	-447.2	-3,435.4	3,456.9	0.00	0.00	0.00
9,750.0	89.90	268.34	6,621.1	-448.7	-3,485.4	3,506.9	0.00	0.00	0.00
9,800.0	89.90	268.34	6,621.2	-450.1	-3,535.4	3,556.9	0.00	0.00	0.00
9,850.0	89.90	268.34	6,621.3	-451.6	-3,585.4	3,606.8	0.00	0.00	0.00
9,900.0	89.90	268.34	6,621.4	-453.0	-3,635.4	3,656.8	0.00	0.00	0.00
9,950.0	89.90	268.34	6,621.5	-454.5	-3,685.3	3,706.8	0.00	0.00	0.00
10,000.0	89.90	268.34	6,621.6	-455.9	-3,735.3	3,756.7	0.00	0.00	0.00
10,050.0	89.90	268.34	6,621.6	-457.4	-3,785.3	3,806.7	0.00	0.00	0.00
10,100.0	89.90	268.34	6,621.7	-458.8	-3,835.3	3,856.7	0.00	0.00	0.00
10,150.0	89.90	268.34	6,621.8	-460.3	-3,885.2	3,906.6	0.00	0.00	0.00
10,200.0	89.90	268.34	6,621.9	-461.7	-3,935.2	3,956.6	0.00	0.00	0.00
10,250.0	89.90	268.34	6,622.0	-463.1	-3,985.2	4,006.6	0.00	0.00	0.00
10,300.0	89.90	268.34	6,622.1	-464.6	-4,035.2	4,056.6	0.00	0.00	0.00
10,350.0	89.90	268.34	6,622.2	-466.0	-4,085.2	4,106.5	0.00	0.00	0.00
10,400.0	89.90	268.34	6,622.2	-467.5	-4,135.1	4,156.5	0.00	0.00	0.00
10,450.0	89.90	268.34	6,622.3	-468.9	-4,185.1	4,206.5	0.00	0.00	0.00
10,500.0	89.90	268.34	6,622.4	-470.4	-4,235.1	4,256.4	0.00	0.00	0.00
10,550.0	89.90	268.34	6,622.5	-471.8	-4,285.1	4,306.4	0.00	0.00	0.00
10,600.0	89.90	268.34	6,622.6	-473.3	-4,335.1	4,356.4	0.00	0.00	0.00
10,650.0	89.90	268.34	6,622.7	-474.7	-4,385.0	4,406.3	0.00	0.00	0.00
10,700.0	89.90	268.34	6,622.8	-476.2	-4,435.0	4,456.3	0.00	0.00	0.00
10,750.0	89.90	268.34	6,622.9	-477.6	-4,485.0	4,506.3	0.00	0.00	0.00
10,800.0	89.90	268.34	6,622.9	-479.1	-4,535.0	4,556.3	0.00	0.00	0.00
10,850.0	89.90	268.34	6,623.0	-480.5	-4,585.0	4,606.2	0.00	0.00	0.00
10,900.0	89.90	268.34	6,623.1	-481.9	-4,634.9	4,656.2	0.00	0.00	0.00
10,950.0	89.90	268.34	6,623.2	-483.4	-4,684.9	4,706.2	0.00	0.00	0.00
11,000.0	89.90	268.34	6,623.3	-484.8	-4,734.9	4,756.1	0.00	0.00	0.00
11,050.0	89.90	268.34	6,623.4	-486.3	-4,784.9	4,806.1	0.00	0.00	0.00
11,100.0	89.90	268.34	6,623.5	-487.7	-4,834.8	4,856.1	0.00	0.00	0.00
11,150.0	89.90	268.34	6,623.6	-489.2	-4,884.8	4,906.0	0.00	0.00	0.00
11,200.0	89.90	268.34	6,623.6	-490.6	-4,934.8	4,956.0	0.00	0.00	0.00
11,250.0	89.90	268.34	6,623.7	-492.1	-4,984.8	5,006.0	0.00	0.00	0.00
11,300.0	89.90	268.34	6,623.8	-493.5	-5,034.8	5,056.0	0.00	0.00	0.00
11,350.0	89.90	268.34	6,623.9	-495.0	-5,084.7	5,105.9	0.00	0.00	0.00
11,400.0	89.90	268.34	6,624.0	-496.4	-5,134.7	5,155.9	0.00	0.00	0.00
11,450.0	89.90	268.34	6,624.1	-497.9	-5,184.7	5,205.9	0.00	0.00	0.00
11,500.0	89.90	268.34	6,624.2	-499.3	-5,234.7	5,255.8	0.00	0.00	0.00
11,550.0	89.90	268.34	6,624.3	-500.7	-5,284.7	5,305.8	0.00	0.00	0.00
11,600.0	89.90	268.34	6,624.3	-502.2	-5,334.6	5,355.8	0.00	0.00	0.00
11,650.0	89.90	268.34	6,624.4	-503.6	-5,384.6	5,405.7	0.00	0.00	0.00
11,700.0	89.90	268.34	6,624.5	-505.1	-5,434.6	5,455.7	0.00	0.00	0.00
11,750.0	89.90	268.34	6,624.6	-506.5	-5,484.6	5,505.7	0.00	0.00	0.00
11,800.0	89.90	268.34	6,624.7	-508.0	-5,534.6	5,555.7	0.00	0.00	0.00
11,850.0	89.90	268.34	6,624.8	-509.4	-5,584.5	5,605.6	0.00	0.00	0.00
11,900.0	89.90	268.34	6,624.9	-510.9	-5,634.5	5,655.6	0.00	0.00	0.00

Noble Energy Inc

Planning Report

Database:	EDM Production	Local Co-ordinate Reference:	Well NCLP AA06-64-1AHNA
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4735.0usft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4735.0usft (Original Well Elev)
Site:	AA (06N-63W)	North Reference:	Grid
Well:	NCLP AA06-64-1AHNA	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 0		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,950.0	89.90	268.34	6,625.0	-512.3	-5,684.5	5,705.6	0.00	0.00	0.00
12,000.0	89.90	268.34	6,625.0	-513.8	-5,734.5	5,755.5	0.00	0.00	0.00
12,050.0	89.90	268.34	6,625.1	-515.2	-5,784.4	5,805.5	0.00	0.00	0.00
12,100.0	89.90	268.34	6,625.2	-516.7	-5,834.4	5,855.5	0.00	0.00	0.00
12,150.0	89.90	268.34	6,625.3	-518.1	-5,884.4	5,905.4	0.00	0.00	0.00
12,200.0	89.90	268.34	6,625.4	-519.5	-5,934.4	5,955.4	0.00	0.00	0.00
12,250.0	89.90	268.34	6,625.5	-521.0	-5,984.4	6,005.4	0.00	0.00	0.00
12,300.0	89.90	268.34	6,625.6	-522.4	-6,034.3	6,055.4	0.00	0.00	0.00
12,350.0	89.90	268.34	6,625.7	-523.9	-6,084.3	6,105.3	0.00	0.00	0.00
12,400.0	89.90	268.34	6,625.7	-525.3	-6,134.3	6,155.3	0.00	0.00	0.00
12,450.0	89.90	268.34	6,625.8	-526.8	-6,184.3	6,205.3	0.00	0.00	0.00
12,500.0	89.90	268.34	6,625.9	-528.2	-6,234.3	6,255.2	0.00	0.00	0.00
12,550.0	89.90	268.34	6,626.0	-529.7	-6,284.2	6,305.2	0.00	0.00	0.00
12,600.0	89.90	268.34	6,626.1	-531.1	-6,334.2	6,355.2	0.00	0.00	0.00
12,650.0	89.90	268.34	6,626.2	-532.6	-6,384.2	6,405.1	0.00	0.00	0.00
12,700.0	89.90	268.34	6,626.3	-534.0	-6,434.2	6,455.1	0.00	0.00	0.00
12,750.0	89.90	268.34	6,626.4	-535.5	-6,484.2	6,505.1	0.00	0.00	0.00
12,800.0	89.90	268.34	6,626.4	-536.9	-6,534.1	6,555.0	0.00	0.00	0.00
12,850.0	89.90	268.34	6,626.5	-538.3	-6,584.1	6,605.0	0.00	0.00	0.00
12,900.0	89.90	268.34	6,626.6	-539.8	-6,634.1	6,655.0	0.00	0.00	0.00
12,950.0	89.90	268.34	6,626.7	-541.2	-6,684.1	6,705.0	0.00	0.00	0.00
13,000.0	89.90	268.34	6,626.8	-542.7	-6,734.1	6,754.9	0.00	0.00	0.00
13,050.0	89.90	268.34	6,626.9	-544.1	-6,784.0	6,804.9	0.00	0.00	0.00
13,100.0	89.90	268.34	6,627.0	-545.6	-6,834.0	6,854.9	0.00	0.00	0.00
13,150.0	89.90	268.34	6,627.0	-547.0	-6,884.0	6,904.8	0.00	0.00	0.00
13,200.0	89.90	268.34	6,627.1	-548.5	-6,934.0	6,954.8	0.00	0.00	0.00
13,250.0	89.90	268.34	6,627.2	-549.9	-6,983.9	7,004.8	0.00	0.00	0.00
13,300.0	89.90	268.34	6,627.3	-551.4	-7,033.9	7,054.7	0.00	0.00	0.00
13,350.0	89.90	268.34	6,627.4	-552.8	-7,083.9	7,104.7	0.00	0.00	0.00
13,400.0	89.90	268.34	6,627.5	-554.3	-7,133.9	7,154.7	0.00	0.00	0.00
13,450.0	89.90	268.34	6,627.6	-555.7	-7,183.9	7,204.7	0.00	0.00	0.00
13,500.0	89.90	268.34	6,627.7	-557.2	-7,233.8	7,254.6	0.00	0.00	0.00
13,550.0	89.90	268.34	6,627.7	-558.6	-7,283.8	7,304.6	0.00	0.00	0.00
13,600.0	89.90	268.34	6,627.8	-560.0	-7,333.8	7,354.6	0.00	0.00	0.00
13,650.0	89.90	268.34	6,627.9	-561.5	-7,383.8	7,404.5	0.00	0.00	0.00
13,700.0	89.90	268.34	6,628.0	-562.9	-7,433.8	7,454.5	0.00	0.00	0.00
13,750.0	89.90	268.34	6,628.1	-564.4	-7,483.7	7,504.5	0.00	0.00	0.00
13,800.0	89.90	268.34	6,628.2	-565.8	-7,533.7	7,554.4	0.00	0.00	0.00
13,850.0	89.90	268.34	6,628.3	-567.3	-7,583.7	7,604.4	0.00	0.00	0.00
13,900.0	89.90	268.34	6,628.4	-568.7	-7,633.7	7,654.4	0.00	0.00	0.00
13,950.0	89.90	268.34	6,628.4	-570.2	-7,683.7	7,704.4	0.00	0.00	0.00
14,000.0	89.90	268.34	6,628.5	-571.6	-7,733.6	7,754.3	0.00	0.00	0.00
14,050.0	89.90	268.34	6,628.6	-573.1	-7,783.6	7,804.3	0.00	0.00	0.00
14,100.0	89.90	268.34	6,628.7	-574.5	-7,833.6	7,854.3	0.00	0.00	0.00
14,150.0	89.90	268.34	6,628.8	-576.0	-7,883.6	7,904.2	0.00	0.00	0.00
14,200.0	89.90	268.34	6,628.9	-577.4	-7,933.5	7,954.2	0.00	0.00	0.00
14,250.0	89.90	268.34	6,629.0	-578.8	-7,983.5	8,004.2	0.00	0.00	0.00
14,300.0	89.90	268.34	6,629.1	-580.3	-8,033.5	8,054.1	0.00	0.00	0.00
14,350.0	89.90	268.34	6,629.1	-581.7	-8,083.5	8,104.1	0.00	0.00	0.00
14,400.0	89.90	268.34	6,629.2	-583.2	-8,133.5	8,154.1	0.00	0.00	0.00
14,450.0	89.90	268.34	6,629.3	-584.6	-8,183.4	8,204.1	0.00	0.00	0.00
14,500.0	89.90	268.34	6,629.4	-586.1	-8,233.4	8,254.0	0.00	0.00	0.00
14,550.0	89.90	268.34	6,629.5	-587.5	-8,283.4	8,304.0	0.00	0.00	0.00
14,600.0	89.90	268.34	6,629.6	-589.0	-8,333.4	8,354.0	0.00	0.00	0.00

Noble Energy Inc

Planning Report

Database:	EDM Production	Local Co-ordinate Reference:	Well NCLP AA06-64-1AHNA
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4735.0usft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4735.0usft (Original Well Elev)
Site:	AA (06N-63W)	North Reference:	Grid
Well:	NCLP AA06-64-1AHNA	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 0		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,650.0	89.90	268.34	6,629.7	-590.4	-8,383.4	8,403.9	0.00	0.00	0.00	
14,700.0	89.90	268.34	6,629.8	-591.9	-8,433.3	8,453.9	0.00	0.00	0.00	
14,750.0	89.90	268.34	6,629.8	-593.3	-8,483.3	8,503.9	0.00	0.00	0.00	
14,800.0	89.90	268.34	6,629.9	-594.8	-8,533.3	8,553.8	0.00	0.00	0.00	
14,850.0	89.90	268.34	6,630.0	-596.2	-8,583.3	8,603.8	0.00	0.00	0.00	
14,900.0	89.90	268.34	6,630.1	-597.6	-8,633.3	8,653.8	0.00	0.00	0.00	
14,950.0	89.90	268.34	6,630.2	-599.1	-8,683.2	8,703.8	0.00	0.00	0.00	
15,000.0	89.90	268.34	6,630.3	-600.5	-8,733.2	8,753.7	0.00	0.00	0.00	
15,050.0	89.90	268.34	6,630.4	-602.0	-8,783.2	8,803.7	0.00	0.00	0.00	
15,100.0	89.90	268.34	6,630.5	-603.4	-8,833.2	8,853.7	0.00	0.00	0.00	
15,150.0	89.90	268.34	6,630.5	-604.9	-8,883.1	8,903.6	0.00	0.00	0.00	
15,200.0	89.90	268.34	6,630.6	-606.3	-8,933.1	8,953.6	0.00	0.00	0.00	
15,250.0	89.90	268.34	6,630.7	-607.8	-8,983.1	9,003.6	0.00	0.00	0.00	
15,300.0	89.90	268.34	6,630.8	-609.2	-9,033.1	9,053.5	0.00	0.00	0.00	
15,350.0	89.90	268.34	6,630.9	-610.7	-9,083.1	9,103.5	0.00	0.00	0.00	
15,400.0	89.90	268.34	6,631.0	-612.1	-9,133.0	9,153.5	0.00	0.00	0.00	
15,450.0	89.90	268.34	6,631.1	-613.6	-9,183.0	9,203.5	0.00	0.00	0.00	
15,500.0	89.90	268.34	6,631.2	-615.0	-9,233.0	9,253.4	0.00	0.00	0.00	
15,550.0	89.90	268.34	6,631.2	-616.4	-9,283.0	9,303.4	0.00	0.00	0.00	
15,600.0	89.90	268.34	6,631.3	-617.9	-9,333.0	9,353.4	0.00	0.00	0.00	
15,650.0	89.90	268.34	6,631.4	-619.3	-9,382.9	9,403.3	0.00	0.00	0.00	
15,700.0	89.90	268.34	6,631.5	-620.8	-9,432.9	9,453.3	0.00	0.00	0.00	
15,750.0	89.90	268.34	6,631.6	-622.2	-9,482.9	9,503.3	0.00	0.00	0.00	
15,800.0	89.90	268.34	6,631.7	-623.7	-9,532.9	9,553.2	0.00	0.00	0.00	
15,850.0	89.90	268.34	6,631.8	-625.1	-9,582.9	9,603.2	0.00	0.00	0.00	
15,900.0	89.90	268.34	6,631.8	-626.6	-9,632.8	9,653.2	0.00	0.00	0.00	
15,950.0	89.90	268.34	6,631.9	-628.0	-9,682.8	9,703.1	0.00	0.00	0.00	
16,000.0	89.90	268.34	6,632.0	-629.5	-9,732.8	9,753.1	0.00	0.00	0.00	
16,050.0	89.90	268.34	6,632.1	-630.9	-9,782.8	9,803.1	0.00	0.00	0.00	
16,100.0	89.90	268.34	6,632.2	-632.4	-9,832.7	9,853.1	0.00	0.00	0.00	
16,150.0	89.90	268.34	6,632.3	-633.8	-9,882.7	9,903.0	0.00	0.00	0.00	
16,200.0	89.90	268.34	6,632.4	-635.2	-9,932.7	9,953.0	0.00	0.00	0.00	
16,250.0	89.90	268.34	6,632.5	-636.7	-9,982.7	10,003.0	0.00	0.00	0.00	
16,273.2	89.90	268.34	6,632.5	-637.4	-10,005.9	10,026.2	0.00	0.00	0.00	
TD at 16273.2 - NCLP AA06-64-1AHNA BHL 1850'FSL, 535'FWL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
NCLP AA06-64-1AHNA - hit/miss target - Shape - Point	0.00	0.01	6,632.5	-637.4	-10,005.9	1,431,383.04	3,281,690.20	40.513130	-104.486870	

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
6,991.6	6,607.3	7" Casing @ 6991.6' MD	7	8-3/4	

Noble Energy Inc

Planning Report

Database:	EDM Production	Local Co-ordinate Reference:	Well NCLP AA06-64-1AHNA
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4735.0usft (Original Well Elev)
Project:	Wattenberg Field	MD Reference:	WELL @ 4735.0usft (Original Well Elev)
Site:	AA (06N-63W)	North Reference:	Grid
Well:	NCLP AA06-64-1AHNA	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 0		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,038.0	1,038.0	PIERRE		0.00	
3,556.0	3,523.0	PARKMAN		0.00	
4,358.3	4,323.0	SUSSEX		0.00	
4,938.3	4,903.0	SHANNON		0.00	
5,802.3	5,767.0	TEEPEE BUTTES		0.00	
6,661.3	6,505.0	SHARON SPRINGS		0.00	
6,734.8	6,540.0	NIOBRARA		0.00	
6,734.8	6,540.0	NIO A CHALK		0.00	
6,787.6	6,561.0	NIO A MARL		0.00	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,800.0	1,800.0	0.0	0.0	KOP - Start Build 2.00
3,383.0	3,353.4	-277.7	-59.5	Start Drop -2.00
5,929.1	5,893.8	-350.0	-75.0	KOP #2 - Start Build 8.00
6,991.6	6,607.3	-368.9	-728.5	Start 75.0 hold at 6991.6 MD
7,066.6	6,613.8	-371.1	-803.2	Start Build 8.00
16,273.2	6,632.5	-637.4	-10,005.9	TD at 16273.2

Northern Region Drilling - Working

Wattenberg Field

AA (06N-63W)

NCLP AA06-64-1AHNA

Original Drilling

APD - Rev 0

Anticollision Summary Report

04 December, 2013

Noble Energy Inc

Anticollision Summary Report

Company:	Northern Region Drilling - Working	Local Co-ordinate Reference:	Well NCLP AA06-64-1AHNA
Project:	Wattenberg Field	TVD Reference:	WELL @ 4735.0usft (Original Well Elev)
Reference Site:	AA (06N-63W)	MD Reference:	WELL @ 4735.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	NCLP AA06-64-1AHNA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM Production
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

Reference	APD - Rev 0		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	12/4/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	16,273.2	APD - Rev 0 (Original Drilling)	MWD+IFR1+MS_WY	Fixed:v2:Rockies, crustal dec + 3-axis correction

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
A (06N-64W)						
Cecil USX A01-09 - Wellbore #1 - Wellbore #1-As Drilled	16,273.2	6,674.1	1,207.4	1,060.2	8.203	CC, ES, SF
Cecil USX A01-63-1HN - Original Drilling - Original Drilling	16,273.2	11,175.0	1,405.6	1,112.8	4.800	CC, ES, SF
Cecil USX A01-63HN - Original Drilling - Original Drilling	16,273.2	11,181.0	1,233.8	952.5	4.386	CC, ES, SF
Cecil USX A01-64-1HN - Original Drilling - Original Drilling	16,273.2	11,185.0	1,096.9	832.6	4.151	CC, ES, SF
Cecil USX A01-65-1HN - Original Drilling - Original Drilling	16,273.2	6,488.0	889.9	756.6	6.674	CC, ES, SF
Cecil USX A01-65HN - Original Drilling - Original Drilling	16,273.2	6,588.8	1,952.4	1,804.1	13.162	CC, ES, SF
Cecil USX A01-66-01HN - Original Drilling - Original Drilling	16,273.2	6,462.0	1,357.4	1,211.0	9.273	CC, ES, SF
Cecil USX A1-16 - Original Drilling - Original Drilling	16,273.2	6,661.3	1,727.4	1,578.0	11.567	CC, ES, SF
AA (06N-63W)						
Cache USX AA05-10 - Wellbore #1 - Wellbore #1 - As Dr	8,364.6	6,602.5	131.2	89.2	3.121	CC, ES, SF
Cache USX AA05-23 - Wellbore #1 - Wellbore #1 - As Dr	7,563.5	6,581.5	340.9	307.9	10.322	CC, ES
Cache USX AA05-23 - Wellbore #1 - Wellbore #1 - As Dr	7,600.0	6,581.5	342.9	309.5	10.267	SF
Champlin Amoco 1-309 - Wellbore #1 - Wellbore #1 - As	11,052.3	6,588.4	752.3	555.3	3.819	CC, ES
Champlin Amoco 1-309 - Wellbore #1 - Wellbore #1 - As	11,100.0	6,588.5	753.8	556.2	3.814	SF
Dilka 22-6 - Wellbore #1 - Wellbore #1 - As Drilled	14,862.6	6,638.7	1,409.4	1,281.6	11.023	CC
Dilka 22-6 - Wellbore #1 - Wellbore #1 - As Drilled	14,900.0	6,638.4	1,409.9	1,281.6	10.984	ES
Dilka 22-6 - Wellbore #1 - Wellbore #1 - As Drilled	15,100.0	6,637.0	1,429.3	1,298.2	10.905	SF
Dilka 6-12 - Wellbore #1 - Wellbore #1 - As Drilled	16,273.2	6,600.0	1,529.6	1,382.7	10.411	CC, ES, SF
Foss 6-31 - Wellbore #1 - Wellbore #1 - As Drilled	14,939.1	6,603.3	333.8	204.8	2.588	CC, ES, SF
Foss 6-32 - Wellbore #1 - Wellbore #1 - As Drilled	16,273.2	6,622.4	346.3	199.1	2.353	CC, ES, SF
Foss 6-34 - Wellbore #1 - Wellbore #1 - As Drilled	14,775.2	6,595.1	1,375.7	1,248.9	10.848	CC
Foss 6-34 - Wellbore #1 - Wellbore #1 - As Drilled	14,800.0	6,595.0	1,375.9	1,248.8	10.821	ES
Foss 6-34 - Wellbore #1 - Wellbore #1 - As Drilled	15,000.0	6,593.7	1,393.9	1,264.1	10.734	SF
Foss 6-35 - Wellbore #1 - Wellbore #1 - As Drilled	15,543.4	6,603.5	717.4	580.1	5.226	CC, ES
Foss 6-35 - Wellbore #1 - Wellbore #1 - As Drilled	15,600.0	6,603.5	719.6	581.6	5.213	SF
Foss 6-42 - Wellbore #1 - Wellbore #1 - As Drilled	13,443.9	6,588.6	293.5	184.8	2.699	CC, ES, SF
Foss 6-43 - Wellbore #1 - Wellbore #1 - As Drilled	13,897.2	6,583.6	976.4	861.6	8.505	CC
Foss 6-43 - Wellbore #1 - Wellbore #1 - As Drilled	13,900.0	6,583.6	976.4	861.6	8.502	ES
Foss 6-43 - Wellbore #1 - Wellbore #1 - As Drilled	14,000.0	6,583.8	981.8	865.6	8.450	SF
Foss 6-45 - Wellbore #1 - Wellbore #1 - As Drilled	13,408.9	6,585.3	710.1	601.9	6.561	CC, ES
Foss 6-45 - Wellbore #1 - Wellbore #1 - As Drilled	13,500.0	6,586.0	715.9	606.4	6.541	SF
Foss USX AA 5-11 - Wellbore #1 - Wellbore #1 - As Drille	9,622.3	6,616.8	324.8	266.9	5.612	CC, ES, SF
Foss USX AA 5-25 - Wellbore #1 - Wellbore #1 - As Drille	10,382.6	6,577.2	562.2	494.3	8.288	CC, ES
Foss USX AA 5-25 - Wellbore #1 - Wellbore #1 - As Drille	10,400.0	6,577.7	562.4	494.4	8.264	SF
Hagemiester 43-6 - Wellbore #1 - Wellbore #1 - As Drille	12,312.5	5,885.0	788.7	721.1	11.668	CC, ES
Hagemiester 43-6 - Wellbore #1 - Wellbore #1 - As Drille	12,400.0	5,885.0	793.6	725.2	11.610	SF

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Noble Energy Inc
Anticollision Summary Report

Company:	Northern Region Drilling - Working	Local Co-ordinate Reference:	Well NCLP AA06-64-1AHNA
Project:	Wattenberg Field	TVD Reference:	WELL @ 4735.0usft (Original Well Elev)
Reference Site:	AA (06N-63W)	MD Reference:	WELL @ 4735.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	NCLP AA06-64-1AHNA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM Production
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
AA (06N-63W)						
Hagemiester 44-6 - Wellbore #1 - Wellbore #1 - As Drille	12,062.9	6,578.7	1,034.6	944.5	11.475	CC, ES
Hagemiester 44-6 - Wellbore #1 - Wellbore #1 - As Drille	12,200.0	6,577.6	1,043.7	951.7	11.345	SF
NCLP AA06-64-1HNC - Original Drilling - APD - Rev 0	1,500.0	1,500.0	36.4	30.0	5.637	CC
NCLP AA06-64-1HNC - Original Drilling - APD - Rev 0	16,273.2	16,486.8	252.1	19.3	1.083	Level 2, ES, SF
NCLP AA06-65-1AHNC - Original Drilling - APD - Rev 0	1,500.0	1,500.0	40.1	33.6	6.199	CC, ES
NCLP AA06-65-1AHNC - Original Drilling - APD - Rev 0	16,273.2	16,448.6	533.6	270.8	2.030	SF
NCLP PC AA04-12 - Original Drilling - As Drilled	2,500.6	2,469.7	598.0	543.4	10.949	CC
NCLP PC AA04-12 - Original Drilling - As Drilled	5,950.0	5,890.7	657.7	527.2	5.038	ES, SF
NCLP PC AA04-64-1HN - Original Drilling - APD - Rev 0	1,500.0	1,500.0	154.5	148.0	23.901	CC, ES
NCLP PC AA04-64-1HN - Original Drilling - APD - Rev 0	5,950.0	5,974.1	293.7	268.0	11.452	SF
NCLP PC AA04-65-1HN - Original Drilling - Original Drilli	1,832.7	1,833.4	149.4	142.8	22.842	CC, ES
NCLP PC AA04-65-1HN - Original Drilling - Original Drilli	2,200.0	2,196.8	163.0	155.2	20.783	SF
NCLP PC AA04-65HN - Original Drilling - Original Drilling	0.0	0.0	155.4			
NCLP PC AA04-65HN - Original Drilling - Original Drilling	100.0	99.6	155.5	155.3	798.952	ES
NCLP PC AA04-65HN - Original Drilling - Original Drilling	2,000.0	1,996.5	177.2	170.0	24.838	SF
NCLP USX AA 05-09 - Wellbore #1 - Wellbore #1 - As Dr	6,845.5	6,566.1	117.2	90.1	4.330	CC, ES
NCLP USX AA 05-09 - Wellbore #1 - Wellbore #1 - As Dr	6,850.0	6,567.4	117.3	90.2	4.327	SF
Peiker 32-6 - Wellbore #1 - Wellbore #1 - As Drilled	13,620.9	6,601.4	1,377.6	1,266.0	12.348	CC, ES
Peiker 32-6 - Wellbore #1 - Wellbore #1 - As Drilled	13,900.0	6,603.3	1,405.6	1,290.2	12.187	SF

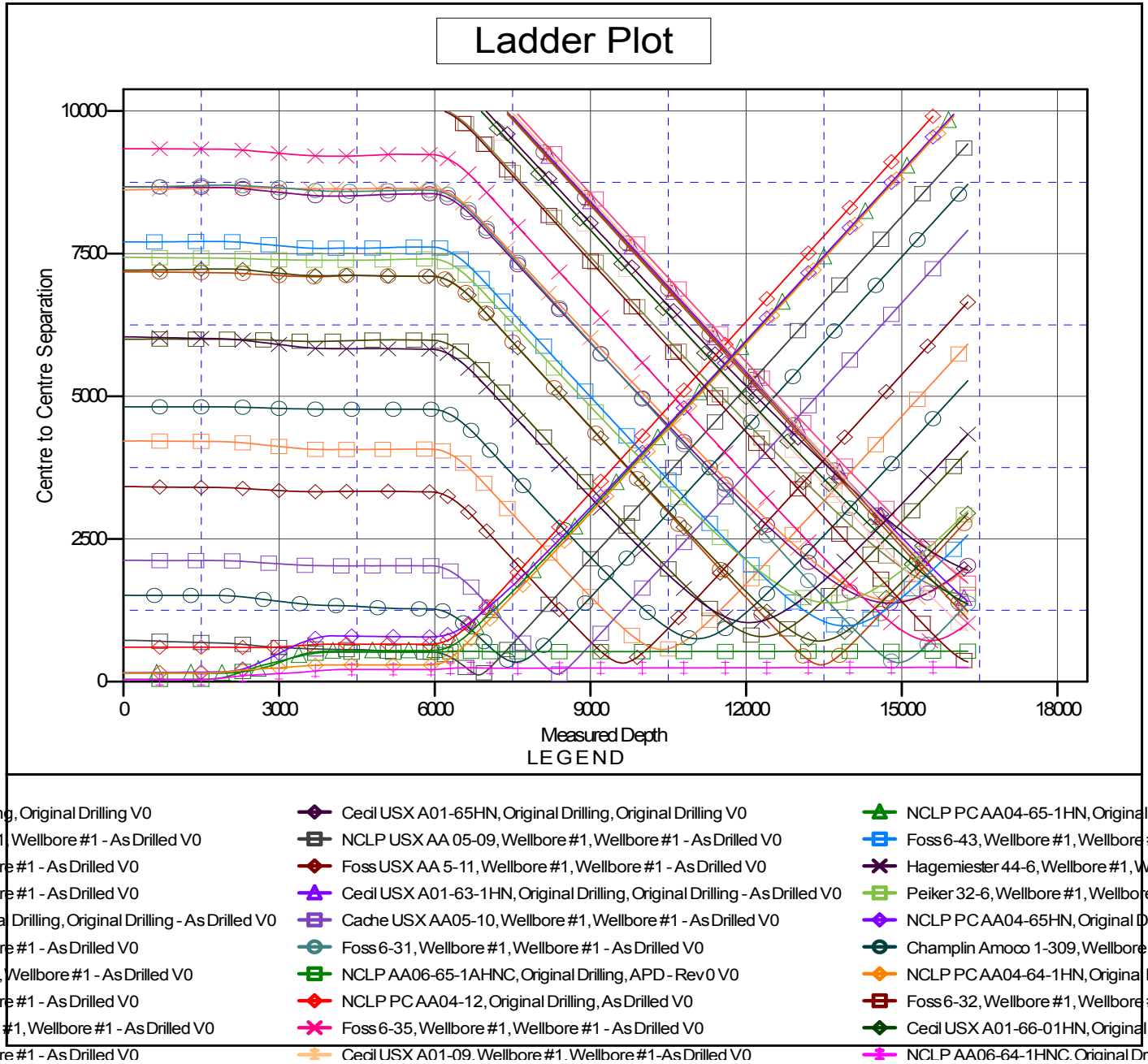
Noble Energy Inc

Anticollision Summary Report

Company:	Northern Region Drilling - Working	Local Co-ordinate Reference:	Well NCLP AA06-64-1AHNA
Project:	Wattenberg Field	TVD Reference:	WELL @ 4735.0usft (Original Well Elev)
Reference Site:	AA (06N-63W)	MD Reference:	WELL @ 4735.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	NCLP AA06-64-1AHNA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM Production
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4735.0usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: NCLP AA06-64-1AHNA
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.68°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

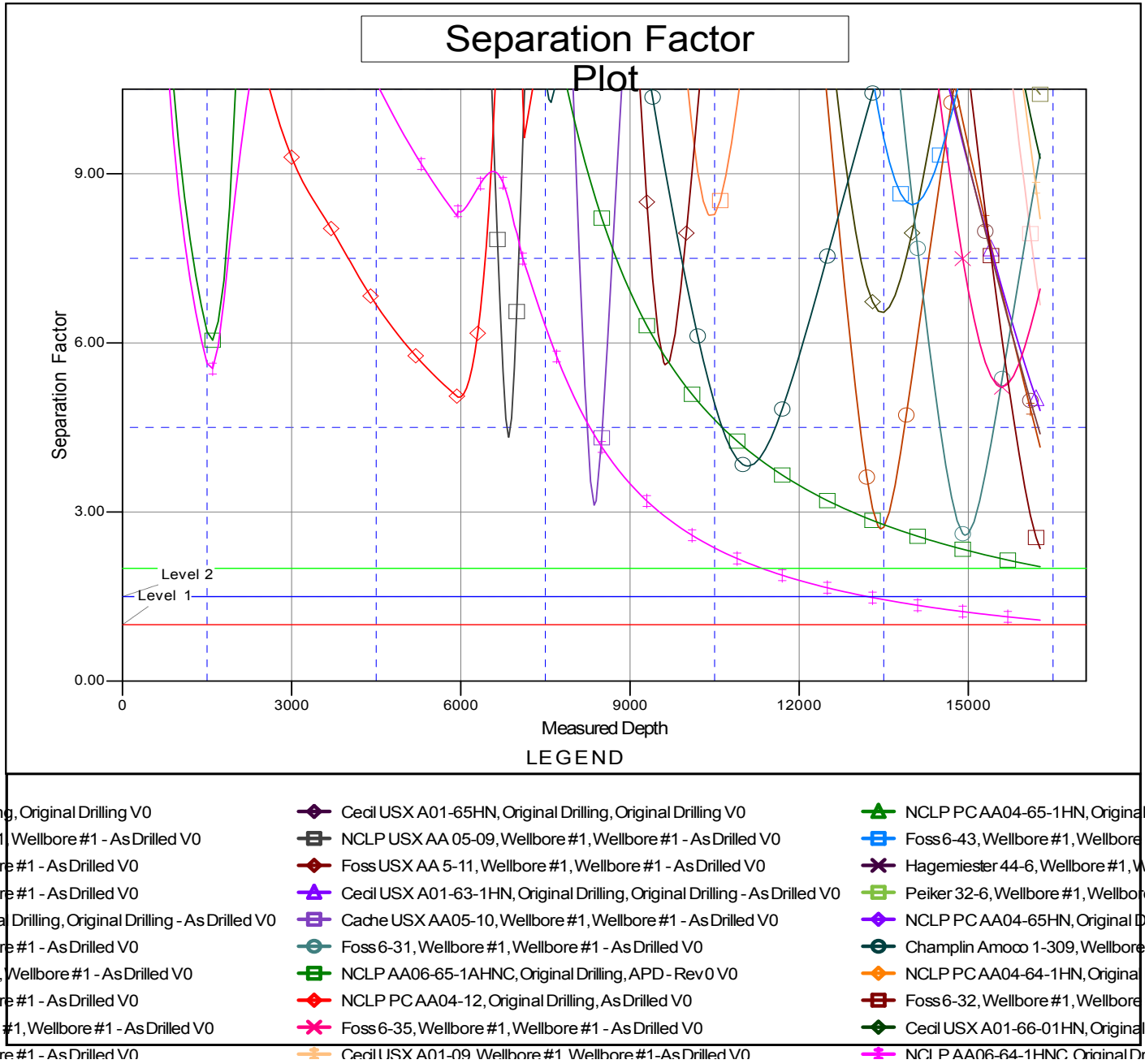
Noble Energy Inc

Anticollision Summary Report

Company:	Northern Region Drilling - Working	Local Co-ordinate Reference:	Well NCLP AA06-64-1AHNA
Project:	Wattenberg Field	TVD Reference:	WELL @ 4735.0usft (Original Well Elev)
Reference Site:	AA (06N-63W)	MD Reference:	WELL @ 4735.0usft (Original Well Elev)
Site Error:	0.0 usft	North Reference:	Grid
Reference Well:	NCLP AA06-64-1AHNA	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 usft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM Production
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4735.0usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: NCLP AA06-64-1AHNA
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.68°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation