

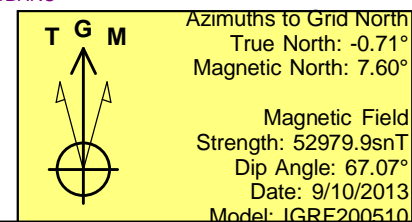
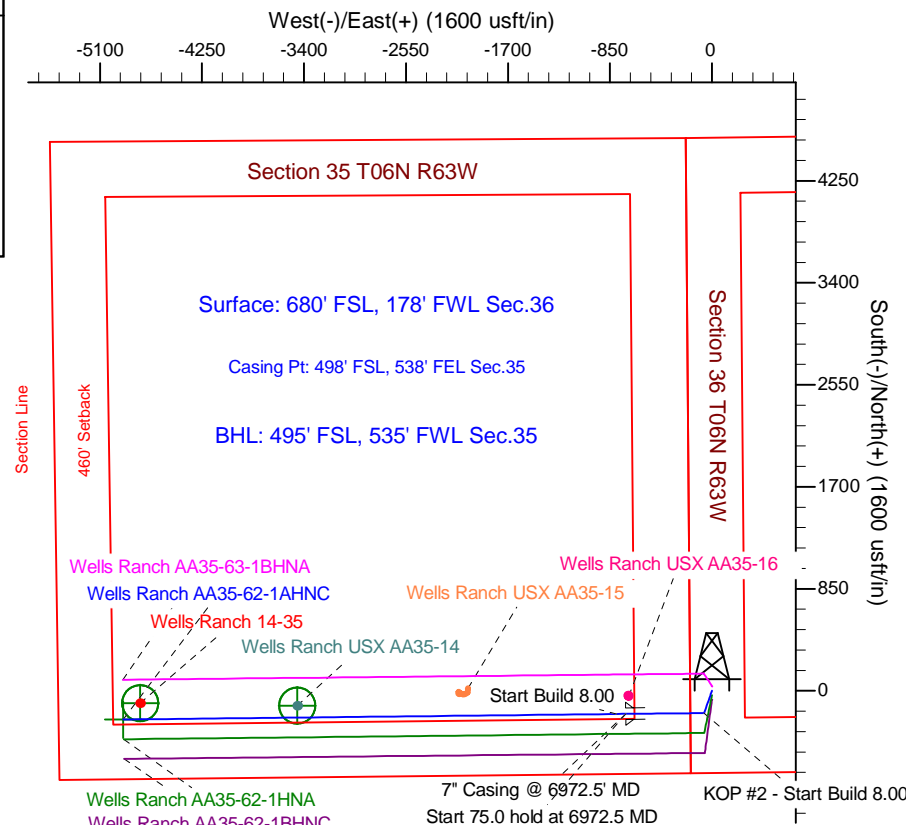
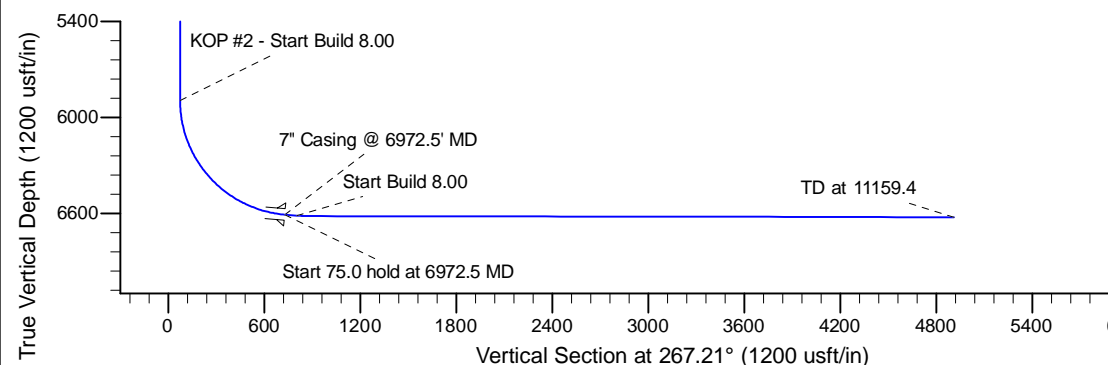
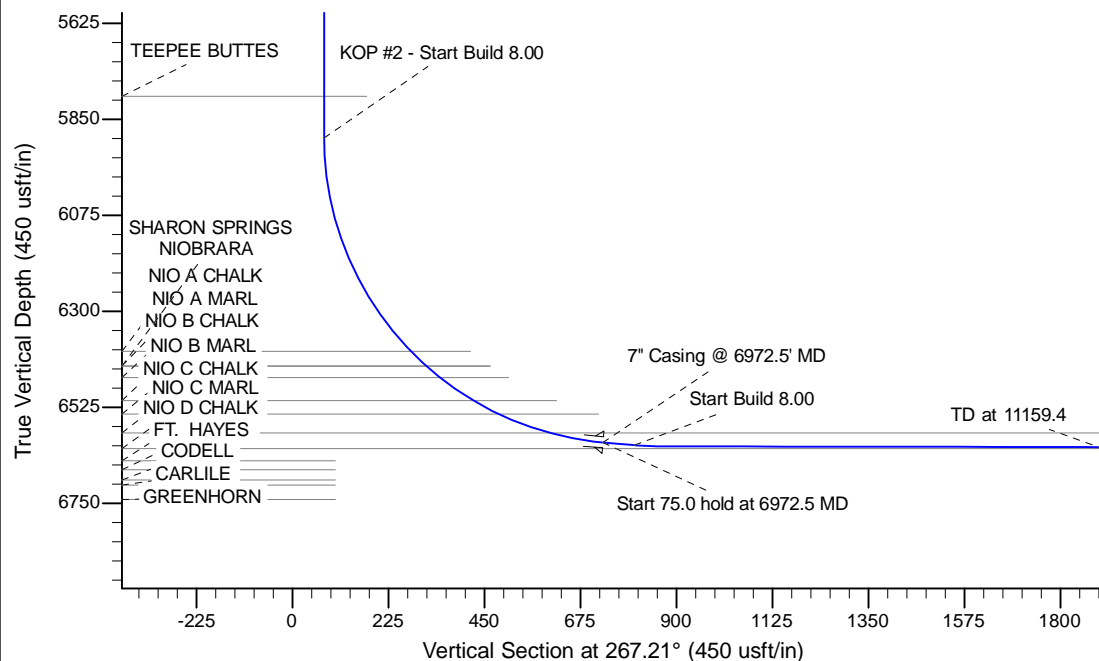
Project: Wattenberg Field  
Site: AA (Sec.36-T06N-R63W) Weld County, CO  
Well: Wells Ranch AA35-62-1AHNC  
Wellbore: Original Drilling  
Design: APD - Rev 0

# 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	Vsect	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	2399.5	11.99	199.36	2395.1	-59.0	-20.7	2.00	199.36	23.6	
4	2741.7	11.99	199.36	2729.9	-126.0	-44.3	0.00	0.00	50.4	
5	3341.2	0.00	0.00	3325.0	-185.0	-65.0	2.00	180.00	73.9	
6	5910.0	0.00	0.00	5893.8	-185.0	-65.0	0.00	0.00	73.9	
7	6972.5	85.00	269.36	6607.3	-192.3	-718.7	8.00	269.36	727.3	
8	7047.5	85.00	269.36	6613.8	-193.2	-793.4	0.00	0.00	801.9	
9	7108.7	89.90	269.36	6616.5	-193.8	-854.6	8.00	0.00	863.0	
10	11159.4	89.90	269.36	6623.6	-239.2	-4905.0	0.00	0.00	4910.9	Wells Ranch AA35-62-1AHNC BHL 495'FSL, 535'FWL



## WELL DETAILS: Wells Ranch AA35-62-1AHNC

Ground Level: 4740.0			
0.0	0.0	North	East
1404137.44	3307823.51	Latitude	Longitude
40.437490	-104.394110		

Plan: APD - Rev 0 (Wells Ranch AA35-62-1AHNC/Original Drilling)

Created By: Shailey Jewell Date: 8:04, September 11 2013

Checked: \_\_\_\_\_ Date: \_\_\_\_\_

Reviewed: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Date: \_\_\_\_\_

# **Northern Region Drilling - Working**

**Wattenberg Field**

**AA (06N-63W)**

**Wells Ranch AA35-62-1AHNC**

**Original Drilling**

**Plan: APD - Rev 0**

## **Standard Planning Report**

**11 September, 2013**

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-62-1AHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-62-1AHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 0		

<b>Project</b>	Wattenberg Field, Weld County CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	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	Wells Ranch AA35-62-1AHNC					
Well Position	+N/-S	-23,708.2 usft	Northing:	1,404,137.44 usft	Latitude:	40.437490
	+E/-W	5,265.7 usft	Easting:	3,307,823.52 usft	Longitude:	-104.394110
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	4,740.0 usft

<b>Wellbore</b>	Original Drilling				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	9/10/2013	8.31	67.07	52,980

<b>Design</b>	APD - Rev 0			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	267.21

<b>Plan Sections</b>										
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	
2,399.5	11.99	199.36	2,395.1	-59.0	-20.7	2.00	2.00	0.00	199.36	
2,741.7	11.99	199.36	2,729.9	-126.0	-44.3	0.00	0.00	0.00	0.00	
3,341.2	0.00	0.00	3,325.0	-185.0	-65.0	2.00	-2.00	0.00	180.00	
5,910.0	0.00	0.00	5,893.8	-185.0	-65.0	0.00	0.00	0.00	0.00	
6,972.5	85.00	269.36	6,607.3	-192.3	-718.7	8.00	8.00	0.00	269.36	
7,047.5	85.00	269.36	6,613.8	-193.2	-793.4	0.00	0.00	0.00	0.00	
7,108.7	89.90	269.36	6,616.5	-193.8	-854.6	8.00	8.00	0.00	0.00	
11,159.4	89.90	269.36	6,623.6	-239.2	-4,905.0	0.00	0.00	0.00	0.00	Wells Ranch AA35-62

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-62-1AHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-62-1AHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	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
1,050.0	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	199.36	1,850.0	-0.4	-0.1	0.2	2.00	2.00	0.00
1,900.0	2.00	199.36	1,900.0	-1.6	-0.6	0.7	2.00	2.00	0.00
1,950.0	3.00	199.36	1,949.9	-3.7	-1.3	1.5	2.00	2.00	0.00
2,000.0	4.00	199.36	1,999.8	-6.6	-2.3	2.6	2.00	2.00	0.00
2,050.0	5.00	199.36	2,049.7	-10.3	-3.6	4.1	2.00	2.00	0.00
2,100.0	6.00	199.36	2,099.5	-14.8	-5.2	5.9	2.00	2.00	0.00
2,150.0	7.00	199.36	2,149.1	-20.1	-7.1	8.1	2.00	2.00	0.00
2,200.0	8.00	199.36	2,198.7	-26.3	-9.2	10.5	2.00	2.00	0.00
2,250.0	9.00	199.36	2,248.2	-33.3	-11.7	13.3	2.00	2.00	0.00
2,300.0	10.00	199.36	2,297.5	-41.1	-14.4	16.4	2.00	2.00	0.00
2,350.0	11.00	199.36	2,346.6	-49.7	-17.4	19.8	2.00	2.00	0.00
2,399.5	11.99	199.36	2,395.1	-59.0	-20.7	23.6	2.00	2.00	0.00
2,400.0	11.99	199.36	2,395.6	-59.1	-20.8	23.6	0.00	0.00	0.00
2,450.0	11.99	199.36	2,444.5	-68.9	-24.2	27.5	0.00	0.00	0.00
2,500.0	11.99	199.36	2,493.4	-78.7	-27.6	31.4	0.00	0.00	0.00
2,550.0	11.99	199.36	2,542.4	-88.5	-31.1	35.4	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-62-1AHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-62-1AHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	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)
2,600.0	11.99	199.36	2,591.3	-98.3	-34.5	39.3	0.00	0.00	0.00
2,650.0	11.99	199.36	2,640.2	-108.1	-38.0	43.2	0.00	0.00	0.00
2,700.0	11.99	199.36	2,689.1	-117.9	-41.4	47.1	0.00	0.00	0.00
2,741.7	11.99	199.36	2,729.9	-126.0	-44.3	50.4	0.00	0.00	0.00
Start Drop -2.00									
2,750.0	11.82	199.36	2,738.0	-127.7	-44.9	51.0	2.00	-2.00	0.00
2,785.7	11.11	199.36	2,773.0	-134.4	-47.2	53.7	2.00	-2.00	0.00
PIERRE									
2,800.0	10.82	199.36	2,787.0	-136.9	-48.1	54.7	2.00	-2.00	0.00
2,850.0	9.82	199.36	2,836.2	-145.4	-51.1	58.1	2.00	-2.00	0.00
2,900.0	8.82	199.36	2,885.5	-153.0	-53.8	61.1	2.00	-2.00	0.00
2,950.0	7.82	199.36	2,935.0	-159.8	-56.2	63.9	2.00	-2.00	0.00
3,000.0	6.82	199.36	2,984.6	-165.9	-58.3	66.3	2.00	-2.00	0.00
3,050.0	5.82	199.36	3,034.3	-171.0	-60.1	68.4	2.00	-2.00	0.00
3,100.0	4.82	199.36	3,084.1	-175.4	-61.6	70.1	2.00	-2.00	0.00
3,150.0	3.82	199.36	3,133.9	-179.0	-62.9	71.5	2.00	-2.00	0.00
3,200.0	2.82	199.36	3,183.9	-181.7	-63.8	72.6	2.00	-2.00	0.00
3,250.0	1.82	199.36	3,233.8	-183.6	-64.5	73.4	2.00	-2.00	0.00
3,300.0	0.82	199.36	3,283.8	-184.7	-64.9	73.8	2.00	-2.00	0.00
3,341.2	0.00	0.00	3,325.0	-185.0	-65.0	73.9	2.00	-2.00	0.00
3,350.0	0.00	0.00	3,333.8	-185.0	-65.0	73.9	0.00	0.00	0.00
3,400.0	0.00	0.00	3,383.8	-185.0	-65.0	73.9	0.00	0.00	0.00
3,450.0	0.00	0.00	3,433.8	-185.0	-65.0	73.9	0.00	0.00	0.00
3,497.2	0.00	0.00	3,481.0	-185.0	-65.0	73.9	0.00	0.00	0.00
PARKMAN									
3,500.0	0.00	0.00	3,483.8	-185.0	-65.0	73.9	0.00	0.00	0.00
3,550.0	0.00	0.00	3,533.8	-185.0	-65.0	73.9	0.00	0.00	0.00
3,600.0	0.00	0.00	3,583.8	-185.0	-65.0	73.9	0.00	0.00	0.00
3,650.0	0.00	0.00	3,633.8	-185.0	-65.0	73.9	0.00	0.00	0.00
3,700.0	0.00	0.00	3,683.8	-185.0	-65.0	73.9	0.00	0.00	0.00
3,750.0	0.00	0.00	3,733.8	-185.0	-65.0	73.9	0.00	0.00	0.00
3,800.0	0.00	0.00	3,783.8	-185.0	-65.0	73.9	0.00	0.00	0.00
3,850.0	0.00	0.00	3,833.8	-185.0	-65.0	73.9	0.00	0.00	0.00
3,900.0	0.00	0.00	3,883.8	-185.0	-65.0	73.9	0.00	0.00	0.00
3,950.0	0.00	0.00	3,933.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,000.0	0.00	0.00	3,983.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,050.0	0.00	0.00	4,033.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,100.0	0.00	0.00	4,083.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,150.0	0.00	0.00	4,133.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,200.0	0.00	0.00	4,183.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,250.0	0.00	0.00	4,233.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,300.0	0.00	0.00	4,283.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,320.2	0.00	0.00	4,304.0	-185.0	-65.0	73.9	0.00	0.00	0.00
SUSSEX									
4,350.0	0.00	0.00	4,333.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,400.0	0.00	0.00	4,383.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,450.0	0.00	0.00	4,433.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,500.0	0.00	0.00	4,483.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,550.0	0.00	0.00	4,533.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,600.0	0.00	0.00	4,583.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,650.0	0.00	0.00	4,633.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,700.0	0.00	0.00	4,683.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,750.0	0.00	0.00	4,733.8	-185.0	-65.0	73.9	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-62-1AHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-62-1AHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	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	4,783.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,841.2	0.00	0.00	4,825.0	-185.0	-65.0	73.9	0.00	0.00	0.00
<b>SHANNON</b>									
4,850.0	0.00	0.00	4,833.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,900.0	0.00	0.00	4,883.8	-185.0	-65.0	73.9	0.00	0.00	0.00
4,950.0	0.00	0.00	4,933.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,000.0	0.00	0.00	4,983.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,050.0	0.00	0.00	5,033.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,100.0	0.00	0.00	5,083.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,150.0	0.00	0.00	5,133.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,200.0	0.00	0.00	5,183.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,250.0	0.00	0.00	5,233.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,300.0	0.00	0.00	5,283.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,350.0	0.00	0.00	5,333.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,400.0	0.00	0.00	5,383.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,450.0	0.00	0.00	5,433.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,500.0	0.00	0.00	5,483.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,550.0	0.00	0.00	5,533.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,600.0	0.00	0.00	5,583.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,650.0	0.00	0.00	5,633.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,700.0	0.00	0.00	5,683.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,750.0	0.00	0.00	5,733.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,800.0	0.00	0.00	5,783.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,812.2	0.00	0.00	5,796.0	-185.0	-65.0	73.9	0.00	0.00	0.00
<b>TEEPEE BUTTES</b>									
5,850.0	0.00	0.00	5,833.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,900.0	0.00	0.00	5,883.8	-185.0	-65.0	73.9	0.00	0.00	0.00
5,910.0	0.00	0.00	5,893.8	-185.0	-65.0	73.9	0.00	0.00	0.00
<b>KOP #2 - Start Build 8.00</b>									
5,950.0	3.20	269.36	5,933.8	-185.0	-66.1	75.1	8.00	8.00	0.00
6,000.0	7.20	269.36	5,983.6	-185.1	-70.6	79.6	8.00	8.00	0.00
6,050.0	11.20	269.36	6,032.9	-185.2	-78.6	87.6	8.00	8.00	0.00
6,100.0	15.20	269.36	6,081.6	-185.3	-90.1	99.0	8.00	8.00	0.00
6,150.0	19.20	269.36	6,129.3	-185.4	-104.8	113.7	8.00	8.00	0.00
6,200.0	23.20	269.36	6,175.9	-185.6	-122.9	131.8	8.00	8.00	0.00
6,250.0	27.20	269.36	6,221.2	-185.9	-144.2	153.1	8.00	8.00	0.00
6,300.0	31.20	269.36	6,264.8	-186.2	-168.6	177.5	8.00	8.00	0.00
6,350.0	35.20	269.36	6,306.6	-186.5	-196.0	204.8	8.00	8.00	0.00
6,400.0	39.20	269.36	6,346.5	-186.8	-226.2	235.0	8.00	8.00	0.00
6,450.0	43.20	269.36	6,384.1	-187.2	-259.1	267.9	8.00	8.00	0.00
6,463.7	44.30	269.36	6,394.0	-187.3	-268.6	277.4	8.00	8.00	0.00
<b>SHARON SPRINGS</b>									
6,500.0	47.20	269.36	6,419.3	-187.6	-294.6	303.4	8.00	8.00	0.00
6,512.9	48.24	269.36	6,428.0	-187.7	-304.1	312.9	8.00	8.00	0.00
<b>NIO A CHALK - NIOBRARA</b>									
6,550.0	51.20	269.36	6,452.0	-188.0	-332.4	341.2	8.00	8.00	0.00
6,554.9	51.59	269.36	6,455.0	-188.0	-336.2	345.0	8.00	8.00	0.00
<b>NIO A MARL</b>									
6,600.0	55.20	269.36	6,481.9	-188.4	-372.4	381.2	8.00	8.00	0.00
6,650.0	59.20	269.36	6,509.0	-188.9	-414.5	423.2	8.00	8.00	0.00
<b>NIO B CHALK</b>									
6,700.0	63.20	269.36	6,533.1	-189.4	-458.3	466.9	8.00	8.00	0.00
6,718.0	64.64	269.36	6,541.0	-189.6	-474.5	483.1	8.00	8.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-62-1AHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-62-1AHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	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)
<b>NIO B MARL</b>									
6,750.0	67.20	269.36	6,554.0	-189.9	-503.6	512.3	8.00	8.00	0.00
6,800.0	71.20	269.36	6,571.8	-190.4	-550.4	559.0	8.00	8.00	0.00
6,845.2	74.82	269.36	6,585.0	-190.9	-593.6	602.2	8.00	8.00	0.00
<b>NIO C CHALK</b>									
6,850.0	75.20	269.36	6,586.2	-191.0	-598.2	606.8	8.00	8.00	0.00
6,900.0	79.20	269.36	6,597.3	-191.5	-647.0	655.5	8.00	8.00	0.00
6,950.0	83.20	269.36	6,605.0	-192.1	-696.4	704.9	8.00	8.00	0.00
6,972.5	85.00	269.36	6,607.3	-192.3	-718.7	727.3	8.00	8.00	0.00
<b>Start 75.0 hold at 6972.5 MD - 7" Casing @ 6972.5' MD</b>									
7,000.0	85.00	269.36	6,609.7	-192.6	-746.1	754.6	0.00	0.00	0.00
7,047.5	85.00	269.36	6,613.8	-193.2	-793.5	801.9	0.00	0.00	0.00
<b>Start Build 8.00</b>									
7,050.0	85.20	269.36	6,614.0	-193.2	-795.9	804.4	8.02	8.02	0.00
7,100.0	89.20	269.36	6,616.5	-193.7	-845.9	854.3	8.00	8.00	0.00
7,108.7	89.90	269.36	6,616.5	-193.8	-854.6	863.0	8.00	8.00	0.00
7,150.0	89.90	269.36	6,616.6	-194.3	-895.9	904.3	0.00	0.00	0.00
7,200.0	89.90	269.36	6,616.7	-194.9	-945.9	954.2	0.00	0.00	0.00
7,250.0	89.90	269.36	6,616.8	-195.4	-995.9	1,004.2	0.00	0.00	0.00
7,300.0	89.90	269.36	6,616.9	-196.0	-1,045.9	1,054.2	0.00	0.00	0.00
7,350.0	89.90	269.36	6,617.0	-196.5	-1,095.9	1,104.1	0.00	0.00	0.00
7,400.0	89.90	269.36	6,617.0	-197.1	-1,145.8	1,154.1	0.00	0.00	0.00
7,450.0	89.90	269.36	6,617.1	-197.7	-1,195.8	1,204.1	0.00	0.00	0.00
7,500.0	89.90	269.36	6,617.2	-198.2	-1,245.8	1,254.0	0.00	0.00	0.00
7,550.0	89.90	269.36	6,617.3	-198.8	-1,295.8	1,304.0	0.00	0.00	0.00
7,600.0	89.90	269.36	6,617.4	-199.3	-1,345.8	1,353.9	0.00	0.00	0.00
7,650.0	89.90	269.36	6,617.5	-199.9	-1,395.8	1,403.9	0.00	0.00	0.00
7,700.0	89.90	269.36	6,617.6	-200.5	-1,445.8	1,453.9	0.00	0.00	0.00
7,750.0	89.90	269.36	6,617.6	-201.0	-1,495.8	1,503.8	0.00	0.00	0.00
7,800.0	89.90	269.36	6,617.7	-201.6	-1,545.8	1,553.8	0.00	0.00	0.00
7,850.0	89.90	269.36	6,617.8	-202.1	-1,595.8	1,603.8	0.00	0.00	0.00
7,900.0	89.90	269.36	6,617.9	-202.7	-1,645.8	1,653.7	0.00	0.00	0.00
7,950.0	89.90	269.36	6,618.0	-203.3	-1,695.8	1,703.7	0.00	0.00	0.00
8,000.0	89.90	269.36	6,618.1	-203.8	-1,745.8	1,753.7	0.00	0.00	0.00
8,050.0	89.90	269.36	6,618.2	-204.4	-1,795.8	1,803.6	0.00	0.00	0.00
8,100.0	89.90	269.36	6,618.3	-204.9	-1,845.8	1,853.6	0.00	0.00	0.00
8,150.0	89.90	269.36	6,618.3	-205.5	-1,895.8	1,903.6	0.00	0.00	0.00
8,200.0	89.90	269.36	6,618.4	-206.1	-1,945.8	1,953.5	0.00	0.00	0.00
8,250.0	89.90	269.36	6,618.5	-206.6	-1,995.8	2,003.5	0.00	0.00	0.00
8,300.0	89.90	269.36	6,618.6	-207.2	-2,045.8	2,053.5	0.00	0.00	0.00
8,350.0	89.90	269.36	6,618.7	-207.7	-2,095.8	2,103.4	0.00	0.00	0.00
8,400.0	89.90	269.36	6,618.8	-208.3	-2,145.8	2,153.4	0.00	0.00	0.00
8,450.0	89.90	269.36	6,618.9	-208.9	-2,195.8	2,203.3	0.00	0.00	0.00
8,500.0	89.90	269.36	6,619.0	-209.4	-2,245.8	2,253.3	0.00	0.00	0.00
8,550.0	89.90	269.36	6,619.0	-210.0	-2,295.8	2,303.3	0.00	0.00	0.00
8,600.0	89.90	269.36	6,619.1	-210.5	-2,345.8	2,353.2	0.00	0.00	0.00
8,650.0	89.90	269.36	6,619.2	-211.1	-2,395.8	2,403.2	0.00	0.00	0.00
8,700.0	89.90	269.36	6,619.3	-211.7	-2,445.8	2,453.2	0.00	0.00	0.00
8,750.0	89.90	269.36	6,619.4	-212.2	-2,495.8	2,503.1	0.00	0.00	0.00
8,800.0	89.90	269.36	6,619.5	-212.8	-2,545.8	2,553.1	0.00	0.00	0.00
8,850.0	89.90	269.36	6,619.6	-213.3	-2,595.8	2,603.1	0.00	0.00	0.00
8,900.0	89.90	269.36	6,619.7	-213.9	-2,645.8	2,653.0	0.00	0.00	0.00
8,950.0	89.90	269.36	6,619.7	-214.5	-2,695.7	2,703.0	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-62-1AHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-62-1AHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	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)	
9,000.0	89.90	269.36	6,619.8	-215.0	-2,745.7	2,753.0	0.00	0.00	0.00	
9,050.0	89.90	269.36	6,619.9	-215.6	-2,795.7	2,802.9	0.00	0.00	0.00	
9,100.0	89.90	269.36	6,620.0	-216.1	-2,845.7	2,852.9	0.00	0.00	0.00	
9,150.0	89.90	269.36	6,620.1	-216.7	-2,895.7	2,902.9	0.00	0.00	0.00	
9,200.0	89.90	269.36	6,620.2	-217.3	-2,945.7	2,952.8	0.00	0.00	0.00	
9,250.0	89.90	269.36	6,620.3	-217.8	-2,995.7	3,002.8	0.00	0.00	0.00	
9,300.0	89.90	269.36	6,620.4	-218.4	-3,045.7	3,052.7	0.00	0.00	0.00	
9,350.0	89.90	269.36	6,620.4	-218.9	-3,095.7	3,102.7	0.00	0.00	0.00	
9,400.0	89.90	269.36	6,620.5	-219.5	-3,145.7	3,152.7	0.00	0.00	0.00	
9,450.0	89.90	269.36	6,620.6	-220.1	-3,195.7	3,202.6	0.00	0.00	0.00	
9,500.0	89.90	269.36	6,620.7	-220.6	-3,245.7	3,252.6	0.00	0.00	0.00	
9,550.0	89.90	269.36	6,620.8	-221.2	-3,295.7	3,302.6	0.00	0.00	0.00	
9,600.0	89.90	269.36	6,620.9	-221.7	-3,345.7	3,352.5	0.00	0.00	0.00	
9,650.0	89.90	269.36	6,621.0	-222.3	-3,395.7	3,402.5	0.00	0.00	0.00	
9,700.0	89.90	269.36	6,621.1	-222.9	-3,445.7	3,452.5	0.00	0.00	0.00	
9,709.8	89.90	269.36	6,621.1	-223.0	-3,455.5	3,462.2	0.00	0.00	0.00	
Wells Ranch USX AA35-14										
9,750.0	89.90	269.36	6,621.1	-223.4	-3,495.7	3,502.4	0.00	0.00	0.00	
9,800.0	89.90	269.36	6,621.2	-224.0	-3,545.7	3,552.4	0.00	0.00	0.00	
9,850.0	89.90	269.36	6,621.3	-224.5	-3,595.7	3,602.4	0.00	0.00	0.00	
9,900.0	89.90	269.36	6,621.4	-225.1	-3,645.7	3,652.3	0.00	0.00	0.00	
9,950.0	89.90	269.36	6,621.5	-225.7	-3,695.7	3,702.3	0.00	0.00	0.00	
10,000.0	89.90	269.36	6,621.6	-226.2	-3,745.7	3,752.3	0.00	0.00	0.00	
10,050.0	89.90	269.36	6,621.7	-226.8	-3,795.7	3,802.2	0.00	0.00	0.00	
10,100.0	89.90	269.36	6,621.8	-227.3	-3,845.7	3,852.2	0.00	0.00	0.00	
10,150.0	89.90	269.36	6,621.8	-227.9	-3,895.7	3,902.1	0.00	0.00	0.00	
10,200.0	89.90	269.36	6,621.9	-228.5	-3,945.7	3,952.1	0.00	0.00	0.00	
10,242.7	89.90	269.36	6,622.0	-228.9	-3,988.4	3,994.8	0.00	0.00	0.00	
NIO C MARL										
10,250.0	89.90	269.36	6,622.0	-229.0	-3,995.7	4,002.1	0.00	0.00	0.00	
10,300.0	89.90	269.36	6,622.1	-229.6	-4,045.7	4,052.0	0.00	0.00	0.00	
10,350.0	89.90	269.36	6,622.2	-230.1	-4,095.7	4,102.0	0.00	0.00	0.00	
10,400.0	89.90	269.36	6,622.3	-230.7	-4,145.7	4,152.0	0.00	0.00	0.00	
10,450.0	89.90	269.36	6,622.4	-231.3	-4,195.7	4,201.9	0.00	0.00	0.00	
10,500.0	89.90	269.36	6,622.4	-231.8	-4,245.6	4,251.9	0.00	0.00	0.00	
10,550.0	89.90	269.36	6,622.5	-232.4	-4,295.6	4,301.9	0.00	0.00	0.00	
10,600.0	89.90	269.36	6,622.6	-232.9	-4,345.6	4,351.8	0.00	0.00	0.00	
10,650.0	89.90	269.36	6,622.7	-233.5	-4,395.6	4,401.8	0.00	0.00	0.00	
10,700.0	89.90	269.36	6,622.8	-234.1	-4,445.6	4,451.8	0.00	0.00	0.00	
10,750.0	89.90	269.36	6,622.9	-234.6	-4,495.6	4,501.7	0.00	0.00	0.00	
10,800.0	89.90	269.36	6,623.0	-235.2	-4,545.6	4,551.7	0.00	0.00	0.00	
10,850.0	89.90	269.36	6,623.1	-235.7	-4,595.6	4,601.7	0.00	0.00	0.00	
10,900.0	89.90	269.36	6,623.1	-236.3	-4,645.6	4,651.6	0.00	0.00	0.00	
10,950.0	89.90	269.36	6,623.2	-236.9	-4,695.6	4,701.6	0.00	0.00	0.00	
11,000.0	89.90	269.36	6,623.3	-237.4	-4,745.6	4,751.5	0.00	0.00	0.00	
11,019.0	89.90	269.36	6,623.4	-237.6	-4,764.6	4,770.5	0.00	0.00	0.00	
Wells Ranch 14-35										
11,050.0	89.90	269.36	6,623.4	-238.0	-4,795.6	4,801.5	0.00	0.00	0.00	
11,100.0	89.90	269.36	6,623.5	-238.5	-4,845.6	4,851.5	0.00	0.00	0.00	
11,150.0	89.90	269.36	6,623.6	-239.1	-4,895.6	4,901.4	0.00	0.00	0.00	
11,159.4	89.90	269.36	6,623.6	-239.2	-4,905.0	4,910.8	0.00	0.00	0.00	
TD at 11159.4 - Wells Ranch AA35-62-1AHNC BHL 495'FSL, 535'FWL										



# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-62-1AHNC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA35-62-1AHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 0		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
Wells Ranch AA35-62-1/ - plan hits target center - Point	0.00	0.00	6,623.6	-239.2	-4,905.0	1,403,898.24	3,302,918.66	40.437000	-104.411740
Wells Ranch USX AA35- - plan misses target center by 308.6usft at 9709.8usft MD (6621.1 TVD, -223.0 N, -3455.5 E) - Circle (radius 150.0)	0.00	0.00	6,913.0	-123.0	-3,456.1	1,404,014.43	3,304,367.58	40.437270	-104.406530
Wells Ranch 14-35 - plan misses target center by 783.4usft at 11019.0usft MD (6623.4 TVD, -237.6 N, -4764.6 E) - Circle (radius 150.0)	0.00	0.00	7,395.0	-102.7	-4,764.7	1,404,034.76	3,303,058.96	40.437370	-104.411230

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
6,972.5	6,607.3	7" Casing @ 6972.5' MD	7	8-3/4

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,785.7	2,773.0	PIERRE		0.00	
3,497.2	3,481.0	PARKMAN		0.00	
4,320.2	4,304.0	SUSSEX		0.00	
4,841.2	4,825.0	SHANNON		0.00	
5,812.2	5,796.0	TEEPEE BUTTES		0.00	
6,463.7	6,394.0	SHARON SPRINGS		0.00	
6,512.9	6,428.0	NIO A CHALK		0.00	
6,512.9	6,428.0	NIOBRARA		0.00	
6,554.9	6,455.0	NIO A MARL		0.00	
6,650.0	6,509.0	NIO B CHALK		0.00	
6,718.0	6,541.0	NIO B MARL		0.00	
6,845.2	6,585.0	NIO C CHALK		0.00	
10,242.7	6,622.0	NIO C 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
2,741.7	2,729.9	-59.0	-20.7	Start Drop -2.00
5,910.0	5,893.8	-126.0	-44.3	KOP #2 - Start Build 8.00
6,972.5	6,607.3	-185.0	-65.0	Start 75.0 hold at 6972.5 MD
7,047.5	6,613.8	-185.0	-65.0	Start Build 8.00
11,159.4	6,623.6	-192.3	-718.7	TD at 11159.4

# **Northern Region Drilling - Working**

**Wattenberg Field**

**AA (06N-63W)**

**Wells Ranch AA35-62-1AHNC**

**Original Drilling**

**APD - Rev 0**

## **Anticollision Summary Report**

**11 September, 2013**

**Noble Energy Inc**  
Anticollision Summary Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-62-1AHNC
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Reference Site:</b>	AA (06N-63W)	<b>MD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wells Ranch AA35-62-1AHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDM Production
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

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

<b>Survey Tool Program</b>	<b>Date</b>	9/11/2013		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,159.4	APD - Rev 0 (Original Drilling)	MWD	MWD - Standard

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)						
Wells Ranch 14-35 - Wellbore #1 - Wellbore #1 - As Drill	11,017.6	6,620.4	134.9	-3.5	0.974	Level 1, CC, ES, SF
Wells Ranch AA35-62-1BHNC - Original Drilling - APD -	1,200.0	1,200.0	72.9	67.7	14.243	CC
Wells Ranch AA35-62-1BHNC - Original Drilling - APD -	11,159.4	11,191.5	327.9	58.0	1.215	Level 2, ES, SF
Wells Ranch AA35-62-1HNA - Original Drilling - APD - Re	1,500.0	1,500.0	36.4	30.0	5.636	CC, ES
Wells Ranch AA35-62-1HNA - Original Drilling - APD - Re	11,159.4	11,061.2	238.5	45.8	1.238	Level 2, SF
Wells Ranch AA35-63-1BHNA - Original Drilling - APD - R	1,466.3	1,467.3	36.5	30.2	5.786	CC
Wells Ranch AA35-63-1BHNA - Original Drilling - APD - R	1,500.0	1,501.0	36.5	30.1	5.650	ES
Wells Ranch AA35-63-1BHNA - Original Drilling - APD - R	11,159.4	11,035.3	352.2	96.8	1.379	Level 2, SF
Wells Ranch USX AA35-14 - Wellbore #1 - Wellbore #1 -	9,709.2	6,615.1	100.0	-2.1	0.979	Level 1, CC, ES, SF
Wells Ranch USX AA35-15 - Wellbore #1 - Wellbore #1 -	8,285.4	6,571.3	227.0	160.1	3.395	CC, ES
Wells Ranch USX AA35-15 - Wellbore #1 - Wellbore #1 -	8,300.0	6,571.3	227.5	160.2	3.382	SF
Wells Ranch USX AA35-16 - Wellbore #1 - Wellbore #1 -	6,947.0	6,567.8	148.2	114.9	4.461	CC
Wells Ranch USX AA35-16 - Wellbore #1 - Wellbore #1 -	6,950.0	6,568.2	148.2	114.9	4.453	ES, SF

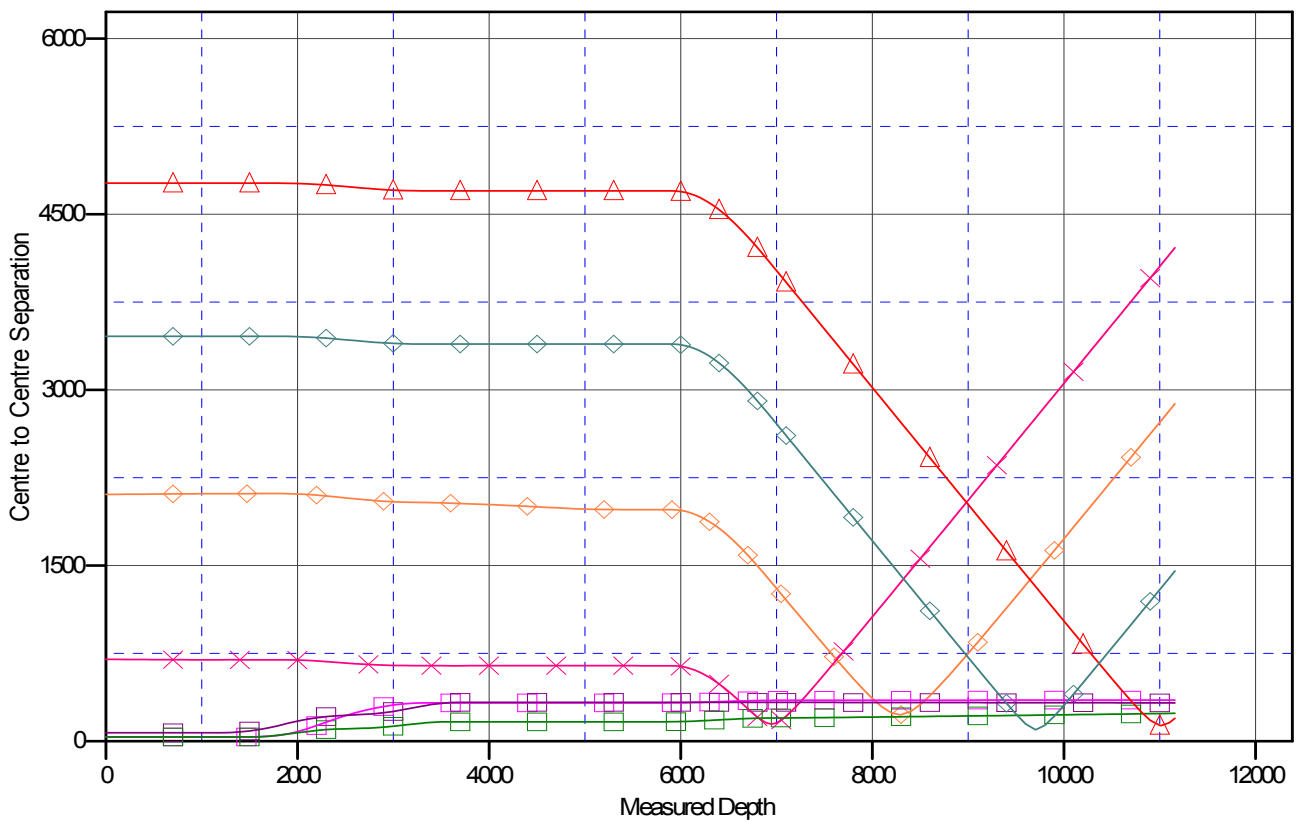
**Noble Energy Inc**  
Anticollision Summary Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-62-1AHNC
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Reference Site:</b>	AA (06N-63W)	<b>MD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wells Ranch AA35-62-1AHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDM Production
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4764.0usft (Original Well Ele  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

Coordinates are relative to: Wells Ranch AA35-62-1AHNC  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.71°

## Ladder Plot



### LEGEND

- |   |   |   |
|---|---|---|
| 15 Wellbore #1, Wellbore #1 - As Drilled V0 | Wells Ranch AA35-62-1BHNC, Original Drilling, APD - Rev0 V0 | Wells Ranch USX AA35-14, Wellbore #1, Wellbore #1 - As Drilled V0 |
| 16 Wellbore #1, Wellbore #1 - As Drilled V0 | Wells Ranch AA35-62-1AHNA, Original Drilling, APD - Rev0 V0 |   |
| 1AHNA, Original Drilling, APD - Rev0 V0     | Wells Ranch 14-35, Wellbore #1, Wellbore #1 - As Drilled V0 |   |

**Noble Energy Inc**  
Anticollision Summary Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA35-62-1AHNC
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Reference Site:</b>	AA (06N-63W)	<b>MD Reference:</b>	WELL @ 4764.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wells Ranch AA35-62-1AHNC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 usft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Original Drilling	<b>Database:</b>	EDM Production
<b>Reference Design:</b>	APD - Rev 0	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4764.0usft (Original Well Ele  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

Coordinates are relative to: Wells Ranch AA35-62-1AHNC  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.71°

