

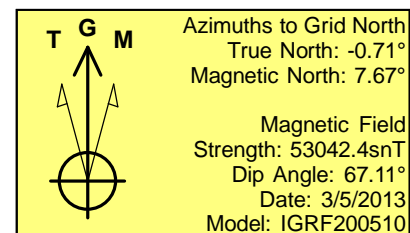
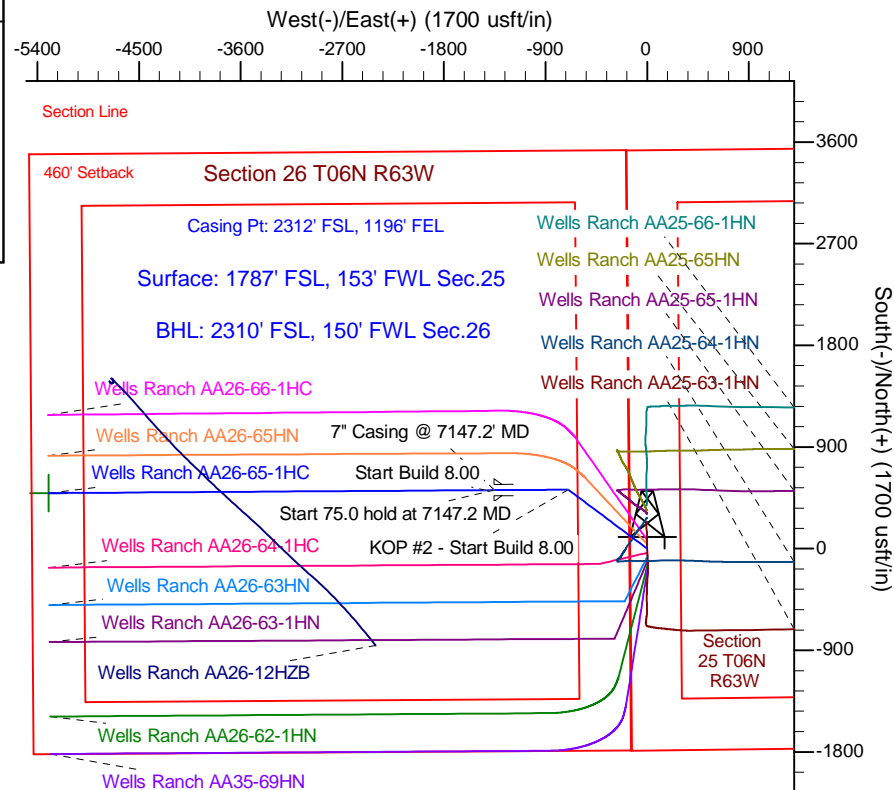
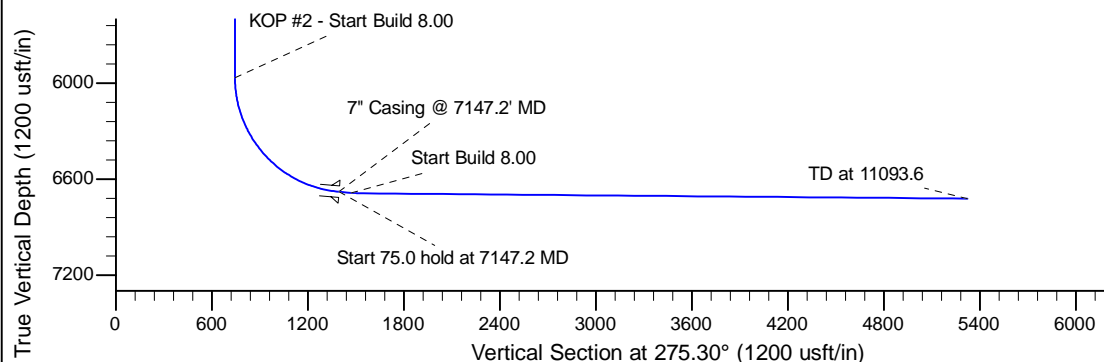
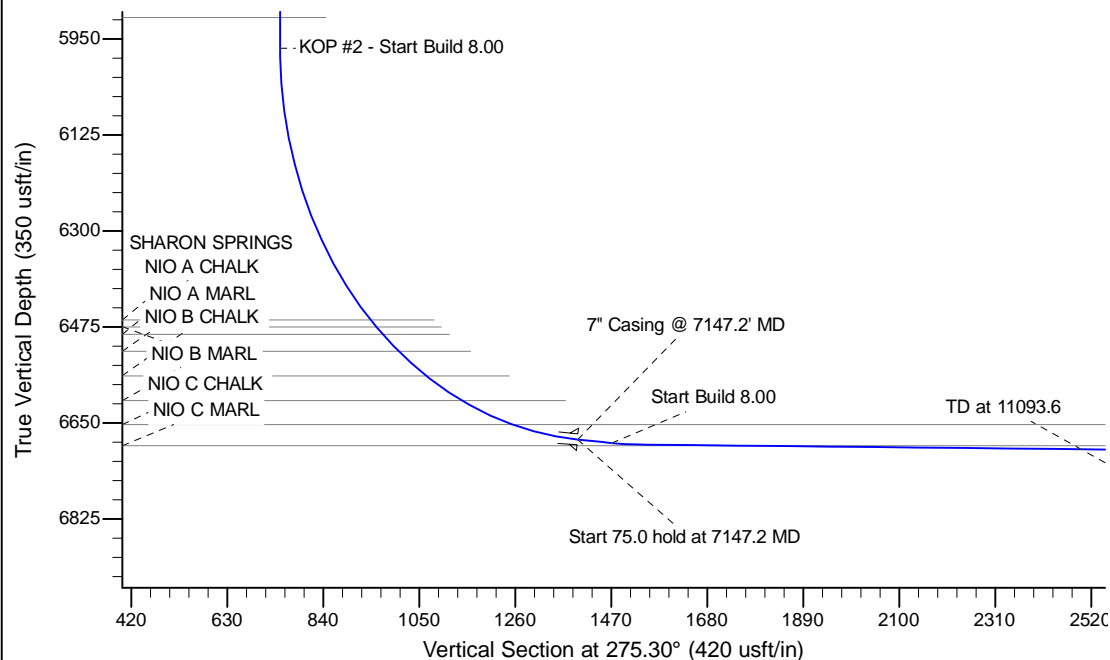
Project: Wattenberg Field  
Site: AA (Sec.25-T06N-R63W) Weld County, CO  
Well: Wells Ranch AA26-65-1HC  
Wellbore: Original Drilling  
Design: APD - Rev 1

# 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	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
3	2351.7	17.03	306.76	2339.2	75.2	-100.7	2.00	306.76	107.2	
4	4476.5	17.03	306.76	4370.8	447.8	-599.3	0.00	0.00	638.1	
5	5328.2	0.00	0.00	5210.0	523.0	-700.0	2.00	180.00	745.3	
6	6084.7	0.00	0.00	5966.5	523.0	-700.0	0.00	0.00	745.3	
7	7147.2	85.00	269.61	6680.0	518.6	-1353.8	8.00	269.61	1395.9	
8	7222.2	85.00	269.61	6686.5	518.1	-1428.5	0.00	0.00	1470.2	
9	7278.4	89.50	269.61	6689.2	517.7	-1484.6	8.00	0.00	1526.1	
10	11093.6	89.50	269.61	6722.5	491.9	-5299.6	0.00	0.00	5322.4	Wells Ranch AA26-65-1HC BHL 2310'FSL, 150'FWL



WELL DETAILS: Wells Ranch AA26-65-1HC				
Ground Level: 4791.0				
0.0	0.0	Northing 1410534.09	Easting 3307746.52	Latitude 40.455050
		Longitude -104.394100		
Plan: APD - Rev 1 (Wells Ranch AA26-65-1HC/Original Drilling)				
Created By: Shailey Jewell		Date: 10:49, July 09 2013		
Checked: _____		Date: _____		
Reviewed: _____		Date: _____		
Approved: _____		Date: _____		

# **Northern Region Drilling - Working**

**Wattenberg Field**

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

**Wells Ranch AA26-65-1HC**

**Original Drilling**

**Plan: APD - Rev 1**

## **Standard Planning Report**

**09 July, 2013**

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA26-65-1HC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA26-65-1HC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 1		

<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

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

<b>Well</b>	Wells Ranch AA26-65-1HC		
<b>Well Position</b>	<b>+N/-S</b>	-17,311.4 usft	<b>Northing:</b> 1,410,534.09 usft
	<b>+E/-W</b>	5,188.7 usft	<b>Easting:</b> 3,307,746.52 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	<b>Latitude:</b> 40.455050
			<b>Longitude:</b> -104.394100
			<b>Ground Level:</b> 4,791.0 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	3/5/2013	8.39	67.11	53,042

<b>Design</b>	APD - Rev 1			
<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	275.30

<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	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,351.7	17.03	306.76	2,339.2	75.2	-100.7	2.00	2.00	0.00	306.76	
4,476.5	17.03	306.76	4,370.8	447.8	-599.3	0.00	0.00	0.00	0.00	
5,328.2	0.00	0.00	5,210.0	523.0	-700.0	2.00	-2.00	0.00	180.00	
6,084.7	0.00	0.00	5,966.5	523.0	-700.0	0.00	0.00	0.00	0.00	
7,147.2	85.00	269.61	6,680.0	518.6	-1,353.8	8.00	8.00	0.00	269.61	
7,222.2	85.00	269.61	6,686.5	518.1	-1,428.5	0.00	0.00	0.00	0.00	
7,278.4	89.50	269.61	6,689.2	517.7	-1,484.6	8.00	8.00	0.00	0.00	
11,093.6	89.50	269.61	6,722.5	491.9	-5,299.6	0.00	0.00	0.00	0.00	Wells Ranch AA26-65

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA26-65-1HC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA26-65-1HC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 1		

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
<b>KOP - Start Build 2.00</b>									
1,550.0	1.00	306.76	1,550.0	0.3	-0.3	0.4	2.00	2.00	0.00
1,600.0	2.00	306.76	1,600.0	1.0	-1.4	1.5	2.00	2.00	0.00
1,650.0	3.00	306.76	1,649.9	2.3	-3.1	3.3	2.00	2.00	0.00
1,700.0	4.00	306.76	1,699.8	4.2	-5.6	6.0	2.00	2.00	0.00
1,750.0	5.00	306.76	1,749.7	6.5	-8.7	9.3	2.00	2.00	0.00
1,800.0	6.00	306.76	1,799.5	9.4	-12.6	13.4	2.00	2.00	0.00
1,850.0	7.00	306.76	1,849.1	12.8	-17.1	18.2	2.00	2.00	0.00
1,900.0	8.00	306.76	1,898.7	16.7	-22.3	23.8	2.00	2.00	0.00
1,950.0	9.00	306.76	1,948.2	21.1	-28.3	30.1	2.00	2.00	0.00
2,000.0	10.00	306.76	1,997.5	26.0	-34.9	37.1	2.00	2.00	0.00
2,050.0	11.00	306.76	2,046.6	31.5	-42.2	44.9	2.00	2.00	0.00
2,100.0	12.00	306.76	2,095.6	37.5	-50.2	53.4	2.00	2.00	0.00
2,150.0	13.00	306.76	2,144.4	43.9	-58.8	62.6	2.00	2.00	0.00
2,200.0	14.00	306.76	2,193.1	50.9	-68.2	72.6	2.00	2.00	0.00
2,250.0	15.00	306.76	2,241.5	58.4	-78.2	83.3	2.00	2.00	0.00
2,300.0	16.00	306.76	2,289.6	66.4	-88.9	94.7	2.00	2.00	0.00
2,350.0	17.00	306.76	2,337.6	74.9	-100.3	106.8	2.00	2.00	0.00
2,351.7	17.03	306.76	2,339.2	75.2	-100.7	107.2	2.00	2.00	0.00
2,400.0	17.03	306.76	2,385.4	83.7	-112.0	119.3	0.00	0.00	0.00
2,450.0	17.03	306.76	2,433.2	92.5	-123.7	131.8	0.00	0.00	0.00
2,500.0	17.03	306.76	2,481.0	101.2	-135.5	144.3	0.00	0.00	0.00
2,550.0	17.03	306.76	2,528.8	110.0	-147.2	156.8	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 AA26-65-1HC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA26-65-1HC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 1		

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	17.03	306.76	2,576.6	118.8	-158.9	169.2	0.00	0.00	0.00
2,650.0	17.03	306.76	2,624.4	127.5	-170.7	181.7	0.00	0.00	0.00
2,700.0	17.03	306.76	2,672.2	136.3	-182.4	194.2	0.00	0.00	0.00
2,750.0	17.03	306.76	2,720.0	145.1	-194.2	206.7	0.00	0.00	0.00
2,800.0	17.03	306.76	2,767.8	153.8	-205.9	219.2	0.00	0.00	0.00
2,848.3	17.03	306.76	2,814.0	162.3	-217.2	231.3	0.00	0.00	0.00
PIERRE									
2,850.0	17.03	306.76	2,815.6	162.6	-217.6	231.7	0.00	0.00	0.00
2,900.0	17.03	306.76	2,863.5	171.4	-229.4	244.2	0.00	0.00	0.00
2,950.0	17.03	306.76	2,911.3	180.1	-241.1	256.7	0.00	0.00	0.00
3,000.0	17.03	306.76	2,959.1	188.9	-252.8	269.2	0.00	0.00	0.00
3,050.0	17.03	306.76	3,006.9	197.7	-264.6	281.7	0.00	0.00	0.00
3,100.0	17.03	306.76	3,054.7	206.4	-276.3	294.2	0.00	0.00	0.00
3,150.0	17.03	306.76	3,102.5	215.2	-288.0	306.7	0.00	0.00	0.00
3,200.0	17.03	306.76	3,150.3	224.0	-299.8	319.2	0.00	0.00	0.00
3,250.0	17.03	306.76	3,198.1	232.7	-311.5	331.7	0.00	0.00	0.00
3,300.0	17.03	306.76	3,245.9	241.5	-323.2	344.2	0.00	0.00	0.00
3,350.0	17.03	306.76	3,293.7	250.3	-335.0	356.7	0.00	0.00	0.00
3,400.0	17.03	306.76	3,341.5	259.0	-346.7	369.1	0.00	0.00	0.00
3,450.0	17.03	306.76	3,389.3	267.8	-358.4	381.6	0.00	0.00	0.00
3,500.0	17.03	306.76	3,437.1	276.6	-370.2	394.1	0.00	0.00	0.00
3,550.0	17.03	306.76	3,484.9	285.3	-381.9	406.6	0.00	0.00	0.00
3,587.7	17.03	306.76	3,521.0	291.9	-390.7	416.1	0.00	0.00	0.00
PARKMAN									
3,600.0	17.03	306.76	3,532.7	294.1	-393.6	419.1	0.00	0.00	0.00
3,650.0	17.03	306.76	3,580.6	302.9	-405.4	431.6	0.00	0.00	0.00
3,700.0	17.03	306.76	3,628.4	311.6	-417.1	444.1	0.00	0.00	0.00
3,750.0	17.03	306.76	3,676.2	320.4	-428.8	456.6	0.00	0.00	0.00
3,800.0	17.03	306.76	3,724.0	329.2	-440.6	469.1	0.00	0.00	0.00
3,850.0	17.03	306.76	3,771.8	337.9	-452.3	481.6	0.00	0.00	0.00
3,900.0	17.03	306.76	3,819.6	346.7	-464.0	494.1	0.00	0.00	0.00
3,950.0	17.03	306.76	3,867.4	355.5	-475.8	506.6	0.00	0.00	0.00
4,000.0	17.03	306.76	3,915.2	364.2	-487.5	519.1	0.00	0.00	0.00
4,050.0	17.03	306.76	3,963.0	373.0	-499.2	531.6	0.00	0.00	0.00
4,100.0	17.03	306.76	4,010.8	381.8	-511.0	544.1	0.00	0.00	0.00
4,150.0	17.03	306.76	4,058.6	390.5	-522.7	556.6	0.00	0.00	0.00
4,200.0	17.03	306.76	4,106.4	399.3	-534.4	569.1	0.00	0.00	0.00
4,250.0	17.03	306.76	4,154.2	408.1	-546.2	581.5	0.00	0.00	0.00
4,300.0	17.03	306.76	4,202.0	416.8	-557.9	594.0	0.00	0.00	0.00
4,350.0	17.03	306.76	4,249.8	425.6	-569.6	606.5	0.00	0.00	0.00
4,400.0	17.03	306.76	4,297.6	434.4	-581.4	619.0	0.00	0.00	0.00
4,450.0	17.03	306.76	4,345.5	443.1	-593.1	631.5	0.00	0.00	0.00
4,462.1	17.03	306.76	4,357.0	445.3	-595.9	634.5	0.00	0.00	0.00
SUSSEX									
4,476.5	17.03	306.76	4,370.8	447.8	-599.3	638.1	0.00	0.00	0.00
Start Drop -2.00									
4,500.0	16.56	306.76	4,393.3	451.8	-604.8	643.9	2.00	-2.00	0.00
4,550.0	15.56	306.76	4,441.3	460.1	-615.8	655.7	2.00	-2.00	0.00
4,600.0	14.56	306.76	4,489.6	467.9	-626.3	666.8	2.00	-2.00	0.00
4,650.0	13.56	306.76	4,538.1	475.2	-636.0	677.2	2.00	-2.00	0.00
4,700.0	12.56	306.76	4,586.8	481.9	-645.0	686.8	2.00	-2.00	0.00
4,750.0	11.56	306.76	4,635.7	488.2	-653.4	695.7	2.00	-2.00	0.00
4,800.0	10.56	306.76	4,684.8	493.9	-661.1	703.9	2.00	-2.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA26-65-1HC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA26-65-1HC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 1		

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)
4,850.0	9.56	306.76	4,734.0	499.2	-668.1	711.4	2.00	-2.00	0.00
4,900.0	8.56	306.76	4,783.4	503.9	-674.4	718.1	2.00	-2.00	0.00
4,950.0	7.56	306.76	4,832.9	508.1	-680.0	724.1	2.00	-2.00	0.00
5,000.0	6.56	306.76	4,882.5	511.8	-685.0	729.3	2.00	-2.00	0.00
5,050.0	5.56	306.76	4,932.2	514.9	-689.2	733.8	2.00	-2.00	0.00
5,056.8	5.43	306.76	4,939.0	515.3	-689.7	734.4	2.00	-2.00	0.00
SHANNON									
5,100.0	4.56	306.76	4,982.0	517.6	-692.7	737.6	2.00	-2.00	0.00
5,150.0	3.56	306.76	5,031.9	519.7	-695.6	740.6	2.00	-2.00	0.00
5,200.0	2.56	306.76	5,081.8	521.3	-697.7	742.9	2.00	-2.00	0.00
5,250.0	1.56	306.76	5,131.8	522.4	-699.1	744.4	2.00	-2.00	0.00
5,300.0	0.56	306.76	5,181.8	522.9	-699.9	745.2	2.00	-2.00	0.00
5,328.2	0.00	0.00	5,210.0	523.0	-700.0	745.3	2.00	-2.00	0.00
5,350.0	0.00	0.00	5,231.8	523.0	-700.0	745.3	0.00	0.00	0.00
5,400.0	0.00	0.00	5,281.8	523.0	-700.0	745.3	0.00	0.00	0.00
5,450.0	0.00	0.00	5,331.8	523.0	-700.0	745.3	0.00	0.00	0.00
5,500.0	0.00	0.00	5,381.8	523.0	-700.0	745.3	0.00	0.00	0.00
5,550.0	0.00	0.00	5,431.8	523.0	-700.0	745.3	0.00	0.00	0.00
5,600.0	0.00	0.00	5,481.8	523.0	-700.0	745.3	0.00	0.00	0.00
5,650.0	0.00	0.00	5,531.8	523.0	-700.0	745.3	0.00	0.00	0.00
5,700.0	0.00	0.00	5,581.8	523.0	-700.0	745.3	0.00	0.00	0.00
5,750.0	0.00	0.00	5,631.8	523.0	-700.0	745.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,681.8	523.0	-700.0	745.3	0.00	0.00	0.00
5,850.0	0.00	0.00	5,731.8	523.0	-700.0	745.3	0.00	0.00	0.00
5,900.0	0.00	0.00	5,781.8	523.0	-700.0	745.3	0.00	0.00	0.00
5,950.0	0.00	0.00	5,831.8	523.0	-700.0	745.3	0.00	0.00	0.00
6,000.0	0.00	0.00	5,881.8	523.0	-700.0	745.3	0.00	0.00	0.00
6,029.2	0.00	0.00	5,911.0	523.0	-700.0	745.3	0.00	0.00	0.00
TEEPEE BUTTES									
6,050.0	0.00	0.00	5,931.8	523.0	-700.0	745.3	0.00	0.00	0.00
6,084.7	0.00	0.00	5,966.5	523.0	-700.0	745.3	0.00	0.00	0.00
KOP #2 - Start Build 8.00									
6,100.0	1.22	269.61	5,981.8	523.0	-700.2	745.5	8.00	8.00	0.00
6,150.0	5.22	269.61	6,031.7	523.0	-703.0	748.3	8.00	8.00	0.00
6,200.0	9.22	269.61	6,081.3	522.9	-709.3	754.6	8.00	8.00	0.00
6,250.0	13.22	269.61	6,130.3	522.9	-719.0	764.2	8.00	8.00	0.00
6,300.0	17.22	269.61	6,178.6	522.8	-732.1	777.3	8.00	8.00	0.00
6,350.0	21.22	269.61	6,225.8	522.7	-748.6	793.7	8.00	8.00	0.00
6,400.0	25.22	269.61	6,271.7	522.5	-768.3	813.3	8.00	8.00	0.00
6,450.0	29.22	269.61	6,316.2	522.4	-791.2	836.1	8.00	8.00	0.00
6,500.0	33.22	269.61	6,358.9	522.2	-817.1	861.8	8.00	8.00	0.00
6,550.0	37.22	269.61	6,399.8	522.0	-845.9	890.5	8.00	8.00	0.00
6,600.0	41.22	269.61	6,438.5	521.8	-877.5	922.0	8.00	8.00	0.00
6,631.9	43.78	269.61	6,462.0	521.7	-899.1	943.4	8.00	8.00	0.00
SHARON SPRINGS									
6,650.0	45.22	269.61	6,474.9	521.6	-911.7	956.1	8.00	8.00	0.00
6,650.1	45.22	269.61	6,475.0	521.6	-911.8	956.1	0.00	0.00	0.00
NIOBRARA									
6,668.8	46.73	269.61	6,488.0	521.5	-925.3	969.5	8.06	8.06	0.00
NIO A CHALK									
6,700.0	49.22	269.61	6,508.9	521.3	-948.4	992.6	8.00	8.00	0.00
6,715.7	50.48	269.61	6,519.0	521.2	-960.5	1,004.5	8.00	8.00	0.00
NIO A MARL									

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA26-65-1HC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA26-65-1HC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 1		

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)
6,750.0	53.22	269.61	6,540.2	521.1	-987.4	1,031.3	8.00	8.00	0.00
6,791.4	56.54	269.61	6,564.0	520.8	-1,021.3	1,065.1	8.00	8.00	0.00
<b>NIO B CHALK</b>									
6,800.0	57.22	269.61	6,568.7	520.8	-1,028.5	1,072.2	8.00	8.00	0.00
6,850.0	61.22	269.61	6,594.3	520.5	-1,071.4	1,114.9	8.00	8.00	0.00
6,881.9	63.78	269.61	6,609.0	520.3	-1,099.8	1,143.1	8.00	8.00	0.00
<b>NIO B MARL</b>									
6,900.0	65.22	269.61	6,616.8	520.2	-1,116.1	1,159.4	8.00	8.00	0.00
6,950.0	69.22	269.61	6,636.1	519.9	-1,162.1	1,205.2	8.00	8.00	0.00
7,000.0	73.22	269.61	6,652.2	519.6	-1,209.5	1,252.3	8.00	8.00	0.00
7,002.7	73.44	269.61	6,653.0	519.5	-1,212.1	1,254.9	8.00	8.00	0.00
<b>NIO C CHALK</b>									
7,050.0	77.22	269.61	6,665.0	519.2	-1,257.8	1,300.4	8.00	8.00	0.00
7,100.0	81.22	269.61	6,674.3	518.9	-1,306.9	1,349.3	8.00	8.00	0.00
7,147.2	85.00	269.61	6,680.0	518.6	-1,353.8	1,395.9	8.00	8.00	0.00
<b>Start 75.0 hold at 7147.2 MD - 7" Casing @ 7147.2' MD</b>									
7,150.0	85.00	269.61	6,680.2	518.6	-1,356.6	1,398.7	0.00	0.00	0.00
7,200.0	85.00	269.61	6,684.6	518.2	-1,406.4	1,448.2	0.00	0.00	0.00
7,222.2	85.00	269.61	6,686.5	518.1	-1,428.5	1,470.2	0.00	0.00	0.00
<b>Start Build 8.00</b>									
7,250.0	87.22	269.61	6,688.4	517.9	-1,456.2	1,497.8	8.00	8.00	0.00
7,278.4	89.50	269.61	6,689.2	517.7	-1,484.6	1,526.1	8.00	8.00	0.00
7,300.0	89.50	269.61	6,689.4	517.6	-1,506.2	1,547.6	0.00	0.00	0.00
7,350.0	89.50	269.61	6,689.8	517.2	-1,556.2	1,597.3	0.00	0.00	0.00
7,400.0	89.50	269.61	6,690.3	516.9	-1,606.2	1,647.1	0.00	0.00	0.00
7,450.0	89.50	269.61	6,690.7	516.5	-1,656.2	1,696.8	0.00	0.00	0.00
7,483.9	89.50	269.61	6,691.0	516.3	-1,690.1	1,730.6	0.00	0.00	0.00
<b>NIO C MARL</b>									
7,500.0	89.50	269.61	6,691.1	516.2	-1,706.2	1,746.6	0.00	0.00	0.00
7,550.0	89.50	269.61	6,691.6	515.9	-1,756.2	1,796.3	0.00	0.00	0.00
7,600.0	89.50	269.61	6,692.0	515.5	-1,806.2	1,846.1	0.00	0.00	0.00
7,650.0	89.50	269.61	6,692.4	515.2	-1,856.2	1,895.8	0.00	0.00	0.00
7,700.0	89.50	269.61	6,692.9	514.9	-1,906.2	1,945.6	0.00	0.00	0.00
7,750.0	89.50	269.61	6,693.3	514.5	-1,956.2	1,995.3	0.00	0.00	0.00
7,800.0	89.50	269.61	6,693.8	514.2	-2,006.2	2,045.1	0.00	0.00	0.00
7,850.0	89.50	269.61	6,694.2	513.8	-2,056.2	2,094.9	0.00	0.00	0.00
7,900.0	89.50	269.61	6,694.6	513.5	-2,106.2	2,144.6	0.00	0.00	0.00
7,950.0	89.50	269.61	6,695.1	513.2	-2,156.2	2,194.4	0.00	0.00	0.00
8,000.0	89.50	269.61	6,695.5	512.8	-2,206.2	2,244.1	0.00	0.00	0.00
8,050.0	89.50	269.61	6,695.9	512.5	-2,256.1	2,293.9	0.00	0.00	0.00
8,100.0	89.50	269.61	6,696.4	512.1	-2,306.1	2,343.6	0.00	0.00	0.00
8,150.0	89.50	269.61	6,696.8	511.8	-2,356.1	2,393.4	0.00	0.00	0.00
8,200.0	89.50	269.61	6,697.2	511.5	-2,406.1	2,443.1	0.00	0.00	0.00
8,250.0	89.50	269.61	6,697.7	511.1	-2,456.1	2,492.9	0.00	0.00	0.00
8,300.0	89.50	269.61	6,698.1	510.8	-2,506.1	2,542.6	0.00	0.00	0.00
8,350.0	89.50	269.61	6,698.6	510.5	-2,556.1	2,592.4	0.00	0.00	0.00
8,400.0	89.50	269.61	6,699.0	510.1	-2,606.1	2,642.1	0.00	0.00	0.00
8,450.0	89.50	269.61	6,699.4	509.8	-2,656.1	2,691.9	0.00	0.00	0.00
8,500.0	89.50	269.61	6,699.9	509.4	-2,706.1	2,741.6	0.00	0.00	0.00
8,550.0	89.50	269.61	6,700.3	509.1	-2,756.1	2,791.4	0.00	0.00	0.00
8,600.0	89.50	269.61	6,700.7	508.8	-2,806.1	2,841.1	0.00	0.00	0.00
8,650.0	89.50	269.61	6,701.2	508.4	-2,856.1	2,890.9	0.00	0.00	0.00
8,700.0	89.50	269.61	6,701.6	508.1	-2,906.1	2,940.6	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 AA26-65-1HC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA26-65-1HC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 1		

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)
8,750.0	89.50	269.61	6,702.0	507.8	-2,956.1	2,990.4	0.00	0.00	0.00
8,800.0	89.50	269.61	6,702.5	507.4	-3,006.1	3,040.1	0.00	0.00	0.00
8,850.0	89.50	269.61	6,702.9	507.1	-3,056.1	3,089.9	0.00	0.00	0.00
8,900.0	89.50	269.61	6,703.4	506.7	-3,106.1	3,139.6	0.00	0.00	0.00
8,950.0	89.50	269.61	6,703.8	506.4	-3,156.1	3,189.4	0.00	0.00	0.00
9,000.0	89.50	269.61	6,704.2	506.1	-3,206.1	3,239.1	0.00	0.00	0.00
9,050.0	89.50	269.61	6,704.7	505.7	-3,256.1	3,288.9	0.00	0.00	0.00
9,100.0	89.50	269.61	6,705.1	505.4	-3,306.1	3,338.6	0.00	0.00	0.00
9,150.0	89.50	269.61	6,705.5	505.1	-3,356.1	3,388.4	0.00	0.00	0.00
9,200.0	89.50	269.61	6,706.0	504.7	-3,406.1	3,438.1	0.00	0.00	0.00
9,250.0	89.50	269.61	6,706.4	504.4	-3,456.1	3,487.9	0.00	0.00	0.00
9,300.0	89.50	269.61	6,706.8	504.0	-3,506.1	3,537.7	0.00	0.00	0.00
9,350.0	89.50	269.61	6,707.3	503.7	-3,556.1	3,587.4	0.00	0.00	0.00
9,400.0	89.50	269.61	6,707.7	503.4	-3,606.1	3,637.2	0.00	0.00	0.00
9,450.0	89.50	269.61	6,708.2	503.0	-3,656.1	3,686.9	0.00	0.00	0.00
9,500.0	89.50	269.61	6,708.6	502.7	-3,706.1	3,736.7	0.00	0.00	0.00
9,550.0	89.50	269.61	6,709.0	502.4	-3,756.1	3,786.4	0.00	0.00	0.00
9,600.0	89.50	269.61	6,709.5	502.0	-3,806.1	3,836.2	0.00	0.00	0.00
9,650.0	89.50	269.61	6,709.9	501.7	-3,856.1	3,885.9	0.00	0.00	0.00
9,700.0	89.50	269.61	6,710.3	501.3	-3,906.0	3,935.7	0.00	0.00	0.00
9,750.0	89.50	269.61	6,710.8	501.0	-3,956.0	3,985.4	0.00	0.00	0.00
9,800.0	89.50	269.61	6,711.2	500.7	-4,006.0	4,035.2	0.00	0.00	0.00
9,850.0	89.50	269.61	6,711.6	500.3	-4,056.0	4,084.9	0.00	0.00	0.00
9,900.0	89.50	269.61	6,712.1	500.0	-4,106.0	4,134.7	0.00	0.00	0.00
9,950.0	89.50	269.61	6,712.5	499.7	-4,156.0	4,184.4	0.00	0.00	0.00
10,000.0	89.50	269.61	6,713.0	499.3	-4,206.0	4,234.2	0.00	0.00	0.00
10,050.0	89.50	269.61	6,713.4	499.0	-4,256.0	4,283.9	0.00	0.00	0.00
10,100.0	89.50	269.61	6,713.8	498.6	-4,306.0	4,333.7	0.00	0.00	0.00
10,150.0	89.50	269.61	6,714.3	498.3	-4,356.0	4,383.4	0.00	0.00	0.00
10,200.0	89.50	269.61	6,714.7	498.0	-4,406.0	4,433.2	0.00	0.00	0.00
10,250.0	89.50	269.61	6,715.1	497.6	-4,456.0	4,482.9	0.00	0.00	0.00
10,300.0	89.50	269.61	6,715.6	497.3	-4,506.0	4,532.7	0.00	0.00	0.00
10,350.0	89.50	269.61	6,716.0	496.9	-4,556.0	4,582.4	0.00	0.00	0.00
10,400.0	89.50	269.61	6,716.4	496.6	-4,606.0	4,632.2	0.00	0.00	0.00
10,450.0	89.50	269.61	6,716.9	496.3	-4,656.0	4,681.9	0.00	0.00	0.00
10,500.0	89.50	269.61	6,717.3	495.9	-4,706.0	4,731.7	0.00	0.00	0.00
10,550.0	89.50	269.61	6,717.8	495.6	-4,756.0	4,781.4	0.00	0.00	0.00
10,600.0	89.50	269.61	6,718.2	495.3	-4,806.0	4,831.2	0.00	0.00	0.00
10,650.0	89.50	269.61	6,718.6	494.9	-4,856.0	4,880.9	0.00	0.00	0.00
10,700.0	89.50	269.61	6,719.1	494.6	-4,906.0	4,930.7	0.00	0.00	0.00
10,750.0	89.50	269.61	6,719.5	494.2	-4,956.0	4,980.5	0.00	0.00	0.00
10,800.0	89.50	269.61	6,719.9	493.9	-5,006.0	5,030.2	0.00	0.00	0.00
10,850.0	89.50	269.61	6,720.4	493.6	-5,056.0	5,080.0	0.00	0.00	0.00
10,900.0	89.50	269.61	6,720.8	493.2	-5,106.0	5,129.7	0.00	0.00	0.00
10,950.0	89.50	269.61	6,721.2	492.9	-5,156.0	5,179.5	0.00	0.00	0.00
11,000.0	89.50	269.61	6,721.7	492.6	-5,206.0	5,229.2	0.00	0.00	0.00
11,050.0	89.50	269.61	6,722.1	492.2	-5,256.0	5,279.0	0.00	0.00	0.00
11,093.6	89.50	269.61	6,722.5	491.9	-5,299.6	5,322.3	0.00	0.00	0.00
TD at 11093.6 - Wells Ranch AA26-65-1HC BHL 2310'FSL, 150'FWL									



# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA26-65-1HC
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Site:</b>	AA (06N-63W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Wells Ranch AA26-65-1HC	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 1		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Wells Ranch AA26-65-1I	0.00	0.00	6,722.5	491.9	-5,299.6	1,411,026.00	3,302,447.13	40.456580	-104.413120
- plan hits target center									
- Point									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
7,147.2	6,680.0	7" Casing @ 7147.2' MD	7	8-3/4

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,848.3	2,814.0	PIERRE		0.00		
3,587.7	3,521.0	PARKMAN		0.00		
4,462.1	4,357.0	SUSSEX		0.00		
5,056.8	4,939.0	SHANNON		0.00		
6,029.2	5,911.0	TEEPEE BUTTES		0.00		
6,631.9	6,462.0	SHARON SPRINGS		0.00		
6,650.1	6,475.0	NIOBRARA		0.00		
6,668.8	6,488.0	NIO A CHALK		0.00		
6,715.7	6,519.0	NIO A MARL		0.00		
6,791.4	6,564.0	NIO B CHALK		0.00		
6,881.9	6,609.0	NIO B MARL		0.00		
7,002.7	6,653.0	NIO C CHALK		0.00		
7,483.9	6,691.0	NIO C MARL		0.00		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,500.0	1,500.0	0.0	0.0	KOP - Start Build 2.00
4,476.5	4,370.8	75.2	-100.7	Start Drop -2.00
6,084.7	5,966.5	447.8	-599.3	KOP #2 - Start Build 8.00
7,147.2	6,680.0	523.0	-700.0	Start 75.0 hold at 7147.2 MD
7,222.2	6,686.5	523.0	-700.0	Start Build 8.00
11,093.6	6,722.5	518.6	-1,353.8	TD at 11093.6

# **Northern Region Drilling - Working**

**Wattenberg Field**

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

**Wells Ranch AA26-65-1HC**

**Original Drilling**

**APD - Rev 1**

## **Anticollision Summary Report**

**09 July, 2013**

**Noble Energy Inc**  
Anticollision Summary Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA26-65-1HC
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Reference Site:</b>	AA (06N-63W)	<b>MD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wells Ranch AA26-65-1HC	<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 1	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	APD - Rev 1		
<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>	7/9/2013		
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,093.6	APD - Rev 1 (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 AA25-63-1HN - Original Drilling - Original D	2,235.2	2,246.5	81.2	69.8	7.165	CC, ES, SF
Wells Ranch AA25-64-1HN - Original Drilling - Original D	2,723.9	2,722.5	132.5	120.5	11.053	CC, ES
Wells Ranch AA25-64-1HN - Original Drilling - Original D	2,800.0	2,795.2	134.7	122.4	10.996	SF
Wells Ranch AA25-65-1HN - Original Drilling - Original D	2,493.8	2,466.7	247.9	241.6	39.485	CC
Wells Ranch AA25-65-1HN - Original Drilling - Original D	2,500.0	2,472.2	247.9	241.6	39.300	ES
Wells Ranch AA25-65-1HN - Original Drilling - Original D	4,200.0	4,159.3	316.4	302.4	22.565	SF
Wells Ranch AA25-65HN - Original Drilling - Original Dril	1,861.7	1,835.3	330.6	323.5	46.509	CC
Wells Ranch AA25-65HN - Original Drilling - Original Dril	1,900.0	1,869.2	330.8	323.5	45.505	ES
Wells Ranch AA25-65HN - Original Drilling - Original Dril	6,100.0	5,995.0	567.3	531.3	15.782	SF
Wells Ranch AA25-66-1HN - Original Drilling - Original D	700.0	698.0	382.5	380.3	174.499	CC, ES
Wells Ranch AA25-66-1HN - Original Drilling - Original D	6,100.0	6,016.7	1,024.9	1,004.0	49.022	SF
Wells Ranch AA26-12HZB - Original Drilling - Original Dr	9,500.0	7,779.4	106.9	53.5	2.003	ES
Wells Ranch AA26-12HZB - Original Drilling - Original Dr	9,564.5	7,730.1	98.1	62.6	2.760	CC
Wells Ranch AA26-12HZB - Original Drilling - Original Dr	9,700.0	7,630.0	134.1	56.5	1.729	Level 3, SF
Wells Ranch AA26-62-1HN - Original Drilling - APD - Rev	1,266.0	1,268.0	149.4	144.0	27.575	CC
Wells Ranch AA26-62-1HN - Original Drilling - APD - Rev	1,300.0	1,300.0	149.4	143.8	26.842	ES
Wells Ranch AA26-62-1HN - Original Drilling - APD - Rev	11,093.6	11,623.1	1,978.3	1,697.2	7.039	SF
Wells Ranch AA26-63-1HN - Original Drilling - APD - Rev	1,500.0	1,501.0	112.9	106.5	17.465	CC, ES
Wells Ranch AA26-63-1HN - Original Drilling - APD - Rev	11,093.6	11,482.4	1,318.9	1,037.9	4.694	SF
Wells Ranch AA26-63HN - Original Drilling - APD - Rev 0	1,500.0	1,501.0	72.9	66.4	11.268	CC, ES
Wells Ranch AA26-63HN - Original Drilling - APD - Rev 0	11,093.6	11,525.5	991.0	708.6	3.510	SF
Wells Ranch AA26-64-1HC - Original Drilling - APD - Rev	1,200.0	1,199.0	36.4	31.3	7.124	CC
Wells Ranch AA26-64-1HC - Original Drilling - APD - Rev	1,300.0	1,298.7	36.8	31.3	6.641	ES
Wells Ranch AA26-64-1HC - Original Drilling - APD - Rev	11,093.6	11,364.9	664.6	386.6	2.391	SF
Wells Ranch AA26-65HN - Original Drilling - APD - Rev 0	1,200.0	1,200.0	40.1	35.0	7.834	CC, ES
Wells Ranch AA26-65HN - Original Drilling - APD - Rev 0	11,093.6	11,221.3	331.5	53.4	1.192	Level 2, SF
Wells Ranch AA26-66-1HC - Original Drilling - APD - Rev	1,000.0	1,000.0	76.5	72.3	18.144	CC, ES
Wells Ranch AA26-66-1HC - Original Drilling - APD - Rev	11,093.6	11,283.6	697.3	422.2	2.535	SF
Wells Ranch AA35-69HN - Original Drilling - APD - Rev 0	965.6	968.6	185.8	181.7	45.665	CC
Wells Ranch AA35-69HN - Original Drilling - APD - Rev 0	1,000.0	1,000.0	185.8	181.6	44.071	ES
Wells Ranch AA35-69HN - Original Drilling - APD - Rev 0	11,093.6	11,661.2	2,311.0	2,029.2	8.203	SF

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

# Noble Energy Inc

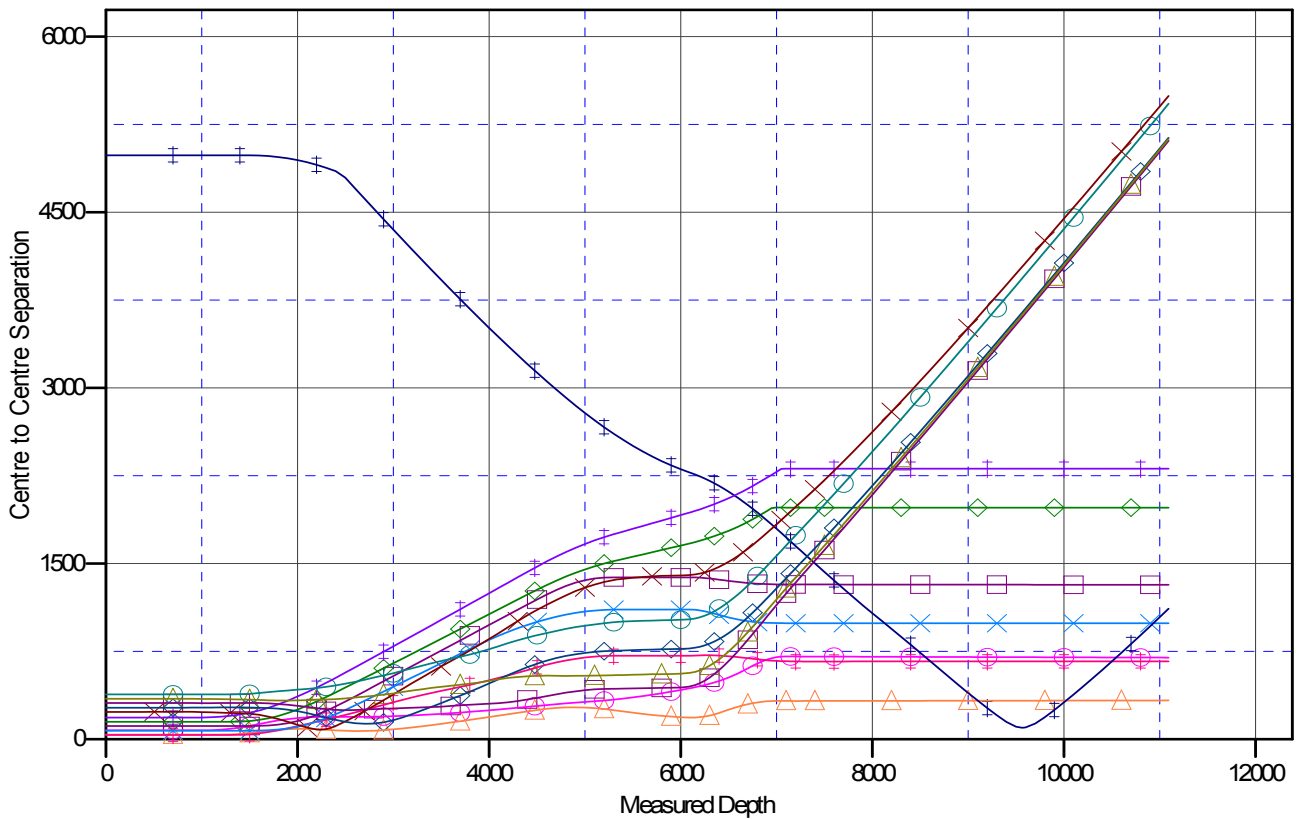
## Anticollision Summary Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA26-65-1HC
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Reference Site:</b>	AA (06N-63W)	<b>MD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Wells Ranch AA26-65-1HC	<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 1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4815.0usft (Original Well Ele  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

Coordinates are relative to: Wells Ranch AA26-65-1HC  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.71°

### Ladder Plot



### LEGEND

6-65HN, Original Drilling, APD - Rev0 V0	Wells Ranch AA26-62-1HN, Original Drilling, APD - Rev0 V0	Wells Ranch AA25-65-1HN, Original Drilling, APD - Rev0 V0
6-66-1HC, Original Drilling, APD - Rev0 V0	Wells Ranch AA26-12HZB, Original Drilling, Original Drilling V0	Wells Ranch AA25-65HN, Original Drilling, APD - Rev0 V0
6-64-1HC, Original Drilling, APD - Rev0 V0	Wells Ranch AA35-69HN, Original Drilling, APD - Rev0 V0	Wells Ranch AA25-66-1HN, Original Drilling, APD - Rev0 V0
6-63HN, Original Drilling, APD - Rev0 V0	Wells Ranch AA25-63-1HN, Original Drilling, Original Drilling V0	
6-63-1HN, Original Drilling, APD - Rev0 V0	Wells Ranch AA25-64-1HN, Original Drilling, Original Drilling V0	

# Noble Energy Inc

## Anticollision Summary Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Wells Ranch AA26-65-1HC
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4815.0usft (Original Well Elev)
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<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 1	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4815.0usft (Original Well Ele  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

Coordinates are relative to: Wells Ranch AA26-65-1HC  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.71°

