

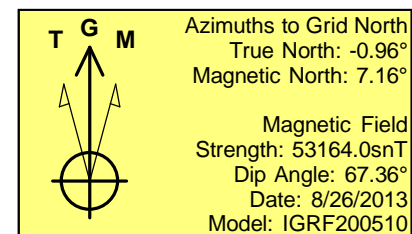
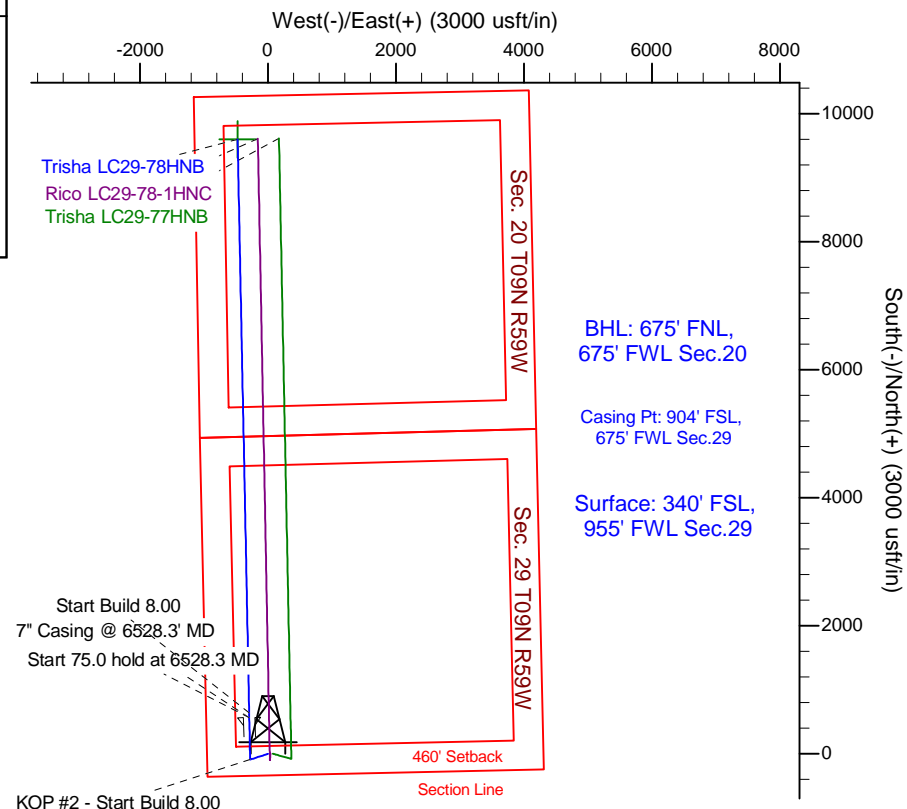
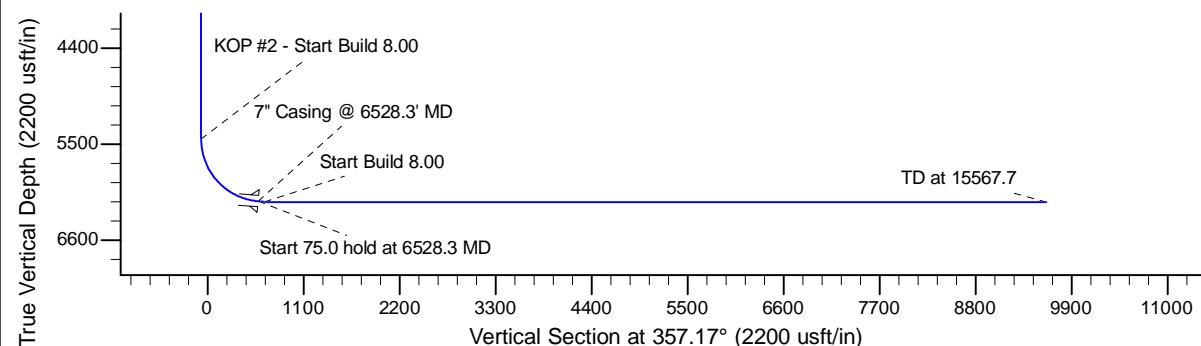
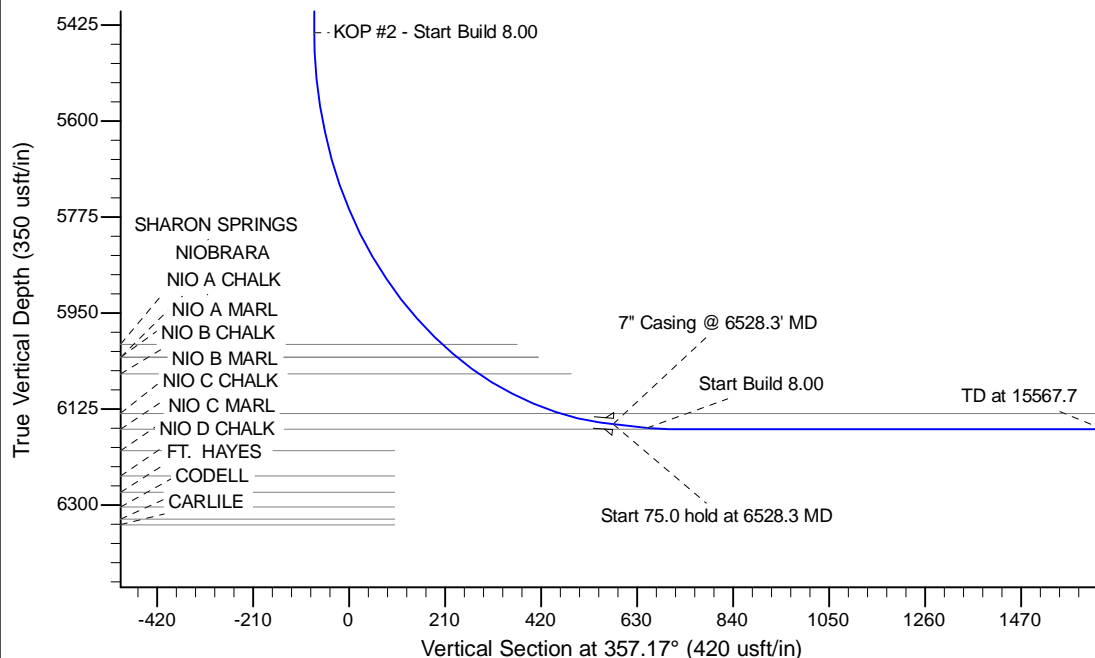
Project: Wattenberg Field  
 Site: LC (Sec.29-T09N-R59W) Weld County, CO  
 Well: Trisha LC29-78HNB  
 Wellbore: Original Drilling  
 Design: APD - Rev 0

# 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	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	1800.6	12.01	252.18	1796.3	-19.2	-59.7	2.00	252.18	-16.2	
4	2610.9	12.01	252.18	2588.7	-70.8	-220.3	0.00	0.00	-59.8	
5	3211.5	0.00	0.00	3185.0	-90.0	-280.0	2.00	180.00	-76.1	
6	5465.8	0.00	0.00	5439.3	-90.0	-280.0	0.00	0.00	-76.1	
7	6528.3	85.00	358.85	6152.7	563.6	-293.1	8.00	358.85	577.4	
8	6603.3	85.00	358.85	6159.3	638.3	-294.6	0.00	0.00	652.1	
9	6665.8	90.00	358.85	6162.0	700.8	-295.9	8.00	0.00	714.5	
10	15567.7	90.00	358.85	6162.0	9600.8	-474.7	0.00	0.00	9612.6	Trisha LC29-78HNB BHL 675'FNL, 675'FWL



WELL DETAILS: Trisha LC29-78HNB					
		Ground Level: 4882.0			
0.0	0.0	Northing	Easting	Latitude	Longitude
		1506761.88	3413609.86	40.714900	-104.007920
Plan: APD - Rev 0 (Trisha LC29-78HNB/Original Drilling)					
Created By: Shailey Jewell		Date: 11:55, August 28 2013			
Checked: _____		Date: _____			
Reviewed: _____		Date: _____			
Approved: _____		Date: _____			

# **Northern Region Drilling - Working**

**Wattenberg Field**

**LC (09N-59W)**

**Trisha LC29-78HNB**

**Original Drilling**

**Plan: APD - Rev 0**

## **Standard Planning Report**

**28 August, 2013**

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Trisha LC29-78HNB
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Site:</b>	LC (09N-59W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Trisha LC29-78HNB	<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		LC (09N-59W)			
Site Position:		Northing:	1,527,709.69 usft	Latitude:	40.771436
From:	Lat/Long	Easting:	3,433,728.00 usft	Longitude:	-103.934025
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.01 °

Well		Trisha LC29-78HNB				
Well Position	+N/-S	-20,947.8 usft	Northing:	1,506,761.88 usft	Latitude:	40.714900
	+E/-W	-20,118.2 usft	Easting:	3,413,609.86 usft	Longitude:	-104.007920
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	4,882.0 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	8/26/2013	8.12	67.36	53,164

<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	357.17

<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	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,800.6	12.01	252.18	1,796.3	-19.2	-59.7	2.00	2.00	0.00	252.18	
2,610.9	12.01	252.18	2,588.7	-70.8	-220.3	0.00	0.00	0.00	0.00	
3,211.5	0.00	0.00	3,185.0	-90.0	-280.0	2.00	-2.00	0.00	180.00	
5,465.8	0.00	0.00	5,439.3	-90.0	-280.0	0.00	0.00	0.00	0.00	
6,528.3	85.00	358.85	6,152.7	563.6	-293.1	8.00	8.00	0.00	358.85	
6,603.3	85.00	358.85	6,159.3	638.3	-294.6	0.00	0.00	0.00	0.00	
6,665.8	90.00	358.85	6,162.0	700.8	-295.9	8.00	8.00	0.00	0.00	
15,567.7	90.00	358.85	6,162.0	9,600.8	-474.7	0.00	0.00	0.00	0.00	Trisha LC29-78HNB E

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Trisha LC29-78HNB
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Site:</b>	LC (09N-59W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Trisha LC29-78HNB	<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
KOP - Start Build 2.00									
1,250.0	1.00	252.18	1,250.0	-0.1	-0.4	-0.1	2.00	2.00	0.00
1,300.0	2.00	252.18	1,300.0	-0.5	-1.7	-0.5	2.00	2.00	0.00
1,350.0	3.00	252.18	1,349.9	-1.2	-3.7	-1.0	2.00	2.00	0.00
1,375.1	3.50	252.18	1,375.0	-1.6	-5.1	-1.4	2.00	2.00	0.00
PIERRE									
1,400.0	4.00	252.18	1,399.8	-2.1	-6.6	-1.8	2.00	2.00	0.00
1,450.0	5.00	252.18	1,449.7	-3.3	-10.4	-2.8	2.00	2.00	0.00
1,500.0	6.00	252.18	1,499.5	-4.8	-14.9	-4.1	2.00	2.00	0.00
1,550.0	7.00	252.18	1,549.1	-6.5	-20.3	-5.5	2.00	2.00	0.00
1,600.0	8.00	252.18	1,598.7	-8.5	-26.5	-7.2	2.00	2.00	0.00
1,650.0	9.00	252.18	1,648.2	-10.8	-33.6	-9.1	2.00	2.00	0.00
1,700.0	10.00	252.18	1,697.5	-13.3	-41.4	-11.3	2.00	2.00	0.00
1,750.0	11.00	252.18	1,746.6	-16.1	-50.1	-13.6	2.00	2.00	0.00
1,800.0	12.00	252.18	1,795.6	-19.2	-59.6	-16.2	2.00	2.00	0.00
1,800.6	12.01	252.18	1,796.3	-19.2	-59.7	-16.2	2.00	2.00	0.00
1,850.0	12.01	252.18	1,844.5	-22.3	-69.5	-18.9	0.00	0.00	0.00
1,900.0	12.01	252.18	1,893.4	-25.5	-79.4	-21.6	0.00	0.00	0.00
1,950.0	12.01	252.18	1,942.3	-28.7	-89.3	-24.3	0.00	0.00	0.00
2,000.0	12.01	252.18	1,991.2	-31.9	-99.2	-27.0	0.00	0.00	0.00
2,050.0	12.01	252.18	2,040.1	-35.1	-109.1	-29.6	0.00	0.00	0.00
2,100.0	12.01	252.18	2,089.1	-38.3	-119.0	-32.3	0.00	0.00	0.00
2,150.0	12.01	252.18	2,138.0	-41.4	-129.0	-35.0	0.00	0.00	0.00
2,200.0	12.01	252.18	2,186.9	-44.6	-138.9	-37.7	0.00	0.00	0.00
2,250.0	12.01	252.18	2,235.8	-47.8	-148.8	-40.4	0.00	0.00	0.00
2,300.0	12.01	252.18	2,284.7	-51.0	-158.7	-43.1	0.00	0.00	0.00
2,350.0	12.01	252.18	2,333.6	-54.2	-168.6	-45.8	0.00	0.00	0.00
2,400.0	12.01	252.18	2,382.5	-57.4	-178.5	-48.5	0.00	0.00	0.00
2,450.0	12.01	252.18	2,431.4	-60.6	-188.4	-51.2	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Trisha LC29-78HNB
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Site:</b>	LC (09N-59W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Trisha LC29-78HNB	<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)
2,500.0	12.01	252.18	2,480.3	-63.7	-198.3	-53.9	0.00	0.00	0.00
2,550.0	12.01	252.18	2,529.2	-66.9	-208.2	-56.6	0.00	0.00	0.00
2,600.0	12.01	252.18	2,578.1	-70.1	-218.1	-59.3	0.00	0.00	0.00
2,610.9	12.01	252.18	2,588.8	-70.8	-220.3	-59.8	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
2,650.0	11.23	252.18	2,627.1	-73.2	-227.8	-61.9	2.00	-2.00	0.00
2,700.0	10.23	252.18	2,676.2	-76.1	-236.6	-64.3	2.00	-2.00	0.00
2,750.0	9.23	252.18	2,725.5	-78.6	-244.7	-66.5	2.00	-2.00	0.00
2,800.0	8.23	252.18	2,774.9	-81.0	-251.9	-68.4	2.00	-2.00	0.00
2,850.0	7.23	252.18	2,824.4	-83.0	-258.3	-70.2	2.00	-2.00	0.00
2,900.0	6.23	252.18	2,874.1	-84.8	-263.9	-71.7	2.00	-2.00	0.00
2,950.0	5.23	252.18	2,923.8	-86.3	-268.6	-73.0	2.00	-2.00	0.00
3,000.0	4.23	252.18	2,973.7	-87.6	-272.6	-74.0	2.00	-2.00	0.00
3,050.0	3.23	252.18	3,023.6	-88.6	-275.7	-74.9	2.00	-2.00	0.00
3,100.0	2.23	252.18	3,073.5	-89.3	-277.9	-75.5	2.00	-2.00	0.00
3,150.0	1.23	252.18	3,123.5	-89.8	-279.4	-75.9	2.00	-2.00	0.00
3,200.0	0.23	252.18	3,173.5	-90.0	-280.0	-76.1	2.00	-2.00	0.00
3,211.5	0.00	0.00	3,185.0	-90.0	-280.0	-76.1	2.00	-2.00	0.00
3,250.0	0.00	0.00	3,223.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,300.0	0.00	0.00	3,273.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,350.0	0.00	0.00	3,323.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,400.0	0.00	0.00	3,373.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,450.0	0.00	0.00	3,423.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,499.5	0.00	0.00	3,473.0	-90.0	-280.0	-76.1	0.00	0.00	0.00
<b>PARKMAN</b>									
3,500.0	0.00	0.00	3,473.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,550.0	0.00	0.00	3,523.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,600.0	0.00	0.00	3,573.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,650.0	0.00	0.00	3,623.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,700.0	0.00	0.00	3,673.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,750.0	0.00	0.00	3,723.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,800.0	0.00	0.00	3,773.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,850.0	0.00	0.00	3,823.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,900.0	0.00	0.00	3,873.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
3,950.0	0.00	0.00	3,923.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,000.0	0.00	0.00	3,973.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,050.0	0.00	0.00	4,023.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,100.0	0.00	0.00	4,073.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,150.0	0.00	0.00	4,123.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,200.0	0.00	0.00	4,173.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,212.5	0.00	0.00	4,186.0	-90.0	-280.0	-76.1	0.00	0.00	0.00
<b>SUSSEX</b>									
4,250.0	0.00	0.00	4,223.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,300.0	0.00	0.00	4,273.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,350.0	0.00	0.00	4,323.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,400.0	0.00	0.00	4,373.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,450.0	0.00	0.00	4,423.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,500.0	0.00	0.00	4,473.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,550.0	0.00	0.00	4,523.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,600.0	0.00	0.00	4,573.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,617.5	0.00	0.00	4,591.0	-90.0	-280.0	-76.1	0.00	0.00	0.00
<b>SHANNON</b>									
4,650.0	0.00	0.00	4,623.5	-90.0	-280.0	-76.1	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Trisha LC29-78HNB
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Site:</b>	LC (09N-59W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Trisha LC29-78HNB	<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)
4,700.0	0.00	0.00	4,673.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,750.0	0.00	0.00	4,723.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,800.0	0.00	0.00	4,773.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,850.0	0.00	0.00	4,823.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,900.0	0.00	0.00	4,873.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
4,950.0	0.00	0.00	4,923.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
5,000.0	0.00	0.00	4,973.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
5,050.0	0.00	0.00	5,023.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
5,100.0	0.00	0.00	5,073.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
5,150.0	0.00	0.00	5,123.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
5,200.0	0.00	0.00	5,173.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
5,250.0	0.00	0.00	5,223.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
5,300.0	0.00	0.00	5,273.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
5,350.0	0.00	0.00	5,323.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
5,397.5	0.00	0.00	5,371.0	-90.0	-280.0	-76.1	0.00	0.00	0.00
TEEPEE BUTTES									
5,400.0	0.00	0.00	5,373.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
5,450.0	0.00	0.00	5,423.5	-90.0	-280.0	-76.1	0.00	0.00	0.00
5,465.8	0.00	0.00	5,439.3	-90.0	-280.0	-76.1	0.00	0.00	0.00
KOP #2 - Start Build 8.00									
5,500.0	2.74	358.85	5,473.5	-89.2	-280.0	-75.2	8.00	8.00	0.00
5,550.0	6.74	358.85	5,523.3	-85.1	-280.1	-71.1	8.00	8.00	0.00
5,600.0	10.74	358.85	5,572.7	-77.5	-280.3	-63.5	8.00	8.00	0.00
5,650.0	14.74	358.85	5,621.5	-66.4	-280.5	-52.5	8.00	8.00	0.00
5,700.0	18.74	358.85	5,669.3	-52.1	-280.8	-38.1	8.00	8.00	0.00
5,750.0	22.74	358.85	5,716.1	-34.4	-281.1	-20.4	8.00	8.00	0.00
5,800.0	26.74	358.85	5,761.5	-13.4	-281.5	0.5	8.00	8.00	0.00
5,850.0	30.74	358.85	5,805.3	10.6	-282.0	24.5	8.00	8.00	0.00
5,900.0	34.74	358.85	5,847.4	37.6	-282.6	51.5	8.00	8.00	0.00
5,950.0	38.74	358.85	5,887.4	67.5	-283.2	81.4	8.00	8.00	0.00
6,000.0	42.74	358.85	5,925.3	100.1	-283.8	114.0	8.00	8.00	0.00
6,050.0	46.74	358.85	5,960.8	135.3	-284.5	149.2	8.00	8.00	0.00
6,100.0	50.74	358.85	5,993.8	172.9	-285.3	186.8	8.00	8.00	0.00
6,121.3	52.44	358.85	6,007.0	189.5	-285.6	203.4	8.00	8.00	0.00
SHARON SPRINGS									
6,150.0	54.74	358.85	6,024.0	212.7	-286.1	226.5	8.00	8.00	0.00
6,162.2	55.71	358.85	6,031.0	222.7	-286.3	236.5	8.00	8.00	0.00
NIOBRARA - NIO A CHALK									
6,200.0	58.74	358.85	6,051.5	254.4	-286.9	268.3	8.00	8.00	0.00
6,218.8	60.24	358.85	6,061.0	270.6	-287.2	284.5	8.00	8.00	0.00
NIO A MARL									
6,250.0	62.74	358.85	6,075.9	298.0	-287.8	311.9	8.00	8.00	0.00
6,300.0	66.74	358.85	6,097.2	343.2	-288.7	357.1	8.00	8.00	0.00
6,350.0	70.74	358.85	6,115.4	389.8	-289.6	403.6	8.00	8.00	0.00
6,400.0	74.74	358.85	6,130.2	437.5	-290.6	451.4	8.00	8.00	0.00
6,410.9	75.61	358.85	6,133.0	448.1	-290.8	461.9	8.00	8.00	0.00
NIO B CHALK									
6,450.0	78.74	358.85	6,141.7	486.2	-291.6	500.0	8.00	8.00	0.00
6,500.0	82.74	358.85	6,149.7	535.5	-292.6	549.3	8.00	8.00	0.00
6,528.3	85.00	358.85	6,152.7	563.7	-293.1	577.4	8.00	8.00	0.00
Start 75.0 hold at 6528.3 MD - 7" Casing @ 6528.3' MD									
6,550.0	85.00	358.85	6,154.6	585.3	-293.6	599.1	0.00	0.00	0.00
6,600.0	85.00	358.85	6,159.0	635.1	-294.6	648.8	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Trisha LC29-78HNB
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Site:</b>	LC (09N-59W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Trisha LC29-78HNB	<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)
6,603.3	85.00	358.85	6,159.3	638.4	-294.6	652.1	0.00	0.00	0.00
<b>Start Build 8.00</b>									
6,650.0	88.74	358.85	6,161.8	685.0	-295.6	698.7	8.00	8.00	0.00
6,665.8	90.00	358.85	6,162.0	700.8	-295.9	714.5	8.00	8.00	0.00
<b>NIO B MARL</b>									
6,700.0	90.00	358.85	6,162.0	735.0	-296.6	748.7	0.00	0.00	0.00
6,750.0	90.00	358.85	6,162.0	784.9	-297.6	798.7	0.00	0.00	0.00
6,800.0	90.00	358.85	6,162.0	834.9	-298.6	848.7	0.00	0.00	0.00
6,850.0	90.00	358.85	6,162.0	884.9	-299.6	898.6	0.00	0.00	0.00
6,900.0	90.00	358.85	6,162.0	934.9	-300.6	948.6	0.00	0.00	0.00
6,950.0	90.00	358.85	6,162.0	984.9	-301.6	998.6	0.00	0.00	0.00
7,000.0	90.00	358.85	6,162.0	1,034.9	-302.6	1,048.6	0.00	0.00	0.00
7,050.0	90.00	358.85	6,162.0	1,084.9	-303.6	1,098.6	0.00	0.00	0.00
7,100.0	90.00	358.85	6,162.0	1,134.9	-304.6	1,148.5	0.00	0.00	0.00
7,150.0	90.00	358.85	6,162.0	1,184.9	-305.6	1,198.5	0.00	0.00	0.00
7,200.0	90.00	358.85	6,162.0	1,234.9	-306.6	1,248.5	0.00	0.00	0.00
7,250.0	90.00	358.85	6,162.0	1,284.8	-307.6	1,298.5	0.00	0.00	0.00
7,300.0	90.00	358.85	6,162.0	1,334.8	-308.6	1,348.4	0.00	0.00	0.00
7,350.0	90.00	358.85	6,162.0	1,384.8	-309.6	1,398.4	0.00	0.00	0.00
7,400.0	90.00	358.85	6,162.0	1,434.8	-310.6	1,448.4	0.00	0.00	0.00
7,450.0	90.00	358.85	6,162.0	1,484.8	-311.6	1,498.4	0.00	0.00	0.00
7,500.0	90.00	358.85	6,162.0	1,534.8	-312.7	1,548.4	0.00	0.00	0.00
7,550.0	90.00	358.85	6,162.0	1,584.8	-313.7	1,598.3	0.00	0.00	0.00
7,600.0	90.00	358.85	6,162.0	1,634.8	-314.7	1,648.3	0.00	0.00	0.00
7,650.0	90.00	358.85	6,162.0	1,684.8	-315.7	1,698.3	0.00	0.00	0.00
7,700.0	90.00	358.85	6,162.0	1,734.8	-316.7	1,748.3	0.00	0.00	0.00
7,750.0	90.00	358.85	6,162.0	1,784.7	-317.7	1,798.3	0.00	0.00	0.00
7,800.0	90.00	358.85	6,162.0	1,834.7	-318.7	1,848.2	0.00	0.00	0.00
7,850.0	90.00	358.85	6,162.0	1,884.7	-319.7	1,898.2	0.00	0.00	0.00
7,900.0	90.00	358.85	6,162.0	1,934.7	-320.7	1,948.2	0.00	0.00	0.00
7,950.0	90.00	358.85	6,162.0	1,984.7	-321.7	1,998.2	0.00	0.00	0.00
8,000.0	90.00	358.85	6,162.0	2,034.7	-322.7	2,048.1	0.00	0.00	0.00
8,050.0	90.00	358.85	6,162.0	2,084.7	-323.7	2,098.1	0.00	0.00	0.00
8,100.0	90.00	358.85	6,162.0	2,134.7	-324.7	2,148.1	0.00	0.00	0.00
8,150.0	90.00	358.85	6,162.0	2,184.7	-325.7	2,198.1	0.00	0.00	0.00
8,200.0	90.00	358.85	6,162.0	2,234.7	-326.7	2,248.1	0.00	0.00	0.00
8,250.0	90.00	358.85	6,162.0	2,284.6	-327.7	2,298.0	0.00	0.00	0.00
8,300.0	90.00	358.85	6,162.0	2,334.6	-328.7	2,348.0	0.00	0.00	0.00
8,350.0	90.00	358.85	6,162.0	2,384.6	-329.7	2,398.0	0.00	0.00	0.00
8,400.0	90.00	358.85	6,162.0	2,434.6	-330.7	2,448.0	0.00	0.00	0.00
8,450.0	90.00	358.85	6,162.0	2,484.6	-331.7	2,498.0	0.00	0.00	0.00
8,500.0	90.00	358.85	6,162.0	2,534.6	-332.7	2,547.9	0.00	0.00	0.00
8,550.0	90.00	358.85	6,162.0	2,584.6	-333.7	2,597.9	0.00	0.00	0.00
8,600.0	90.00	358.85	6,162.0	2,634.6	-334.8	2,647.9	0.00	0.00	0.00
8,650.0	90.00	358.85	6,162.0	2,684.6	-335.8	2,697.9	0.00	0.00	0.00
8,700.0	90.00	358.85	6,162.0	2,734.6	-336.8	2,747.8	0.00	0.00	0.00
8,750.0	90.00	358.85	6,162.0	2,784.5	-337.8	2,797.8	0.00	0.00	0.00
8,800.0	90.00	358.85	6,162.0	2,834.5	-338.8	2,847.8	0.00	0.00	0.00
8,850.0	90.00	358.85	6,162.0	2,884.5	-339.8	2,897.8	0.00	0.00	0.00
8,900.0	90.00	358.85	6,162.0	2,934.5	-340.8	2,947.8	0.00	0.00	0.00
8,950.0	90.00	358.85	6,162.0	2,984.5	-341.8	2,997.7	0.00	0.00	0.00
9,000.0	90.00	358.85	6,162.0	3,034.5	-342.8	3,047.7	0.00	0.00	0.00
9,050.0	90.00	358.85	6,162.0	3,084.5	-343.8	3,097.7	0.00	0.00	0.00
9,100.0	90.00	358.85	6,162.0	3,134.5	-344.8	3,147.7	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Trisha LC29-78HNB
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Site:</b>	LC (09N-59W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Trisha LC29-78HNB	<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)
9,150.0	90.00	358.85	6,162.0	3,184.5	-345.8	3,197.7	0.00	0.00	0.00
9,200.0	90.00	358.85	6,162.0	3,234.4	-346.8	3,247.6	0.00	0.00	0.00
9,250.0	90.00	358.85	6,162.0	3,284.4	-347.8	3,297.6	0.00	0.00	0.00
9,300.0	90.00	358.85	6,162.0	3,334.4	-348.8	3,347.6	0.00	0.00	0.00
9,350.0	90.00	358.85	6,162.0	3,384.4	-349.8	3,397.6	0.00	0.00	0.00
9,400.0	90.00	358.85	6,162.0	3,434.4	-350.8	3,447.5	0.00	0.00	0.00
9,450.0	90.00	358.85	6,162.0	3,484.4	-351.8	3,497.5	0.00	0.00	0.00
9,500.0	90.00	358.85	6,162.0	3,534.4	-352.8	3,547.5	0.00	0.00	0.00
9,550.0	90.00	358.85	6,162.0	3,584.4	-353.8	3,597.5	0.00	0.00	0.00
9,600.0	90.00	358.85	6,162.0	3,634.4	-354.8	3,647.5	0.00	0.00	0.00
9,650.0	90.00	358.85	6,162.0	3,684.4	-355.8	3,697.4	0.00	0.00	0.00
9,700.0	90.00	358.85	6,162.0	3,734.3	-356.9	3,747.4	0.00	0.00	0.00
9,750.0	90.00	358.85	6,162.0	3,784.3	-357.9	3,797.4	0.00	0.00	0.00
9,800.0	90.00	358.85	6,162.0	3,834.3	-358.9	3,847.4	0.00	0.00	0.00
9,850.0	90.00	358.85	6,162.0	3,884.3	-359.9	3,897.4	0.00	0.00	0.00
9,900.0	90.00	358.85	6,162.0	3,934.3	-360.9	3,947.3	0.00	0.00	0.00
9,950.0	90.00	358.85	6,162.0	3,984.3	-361.9	3,997.3	0.00	0.00	0.00
10,000.0	90.00	358.85	6,162.0	4,034.3	-362.9	4,047.3	0.00	0.00	0.00
10,050.0	90.00	358.85	6,162.0	4,084.3	-363.9	4,097.3	0.00	0.00	0.00
10,100.0	90.00	358.85	6,162.0	4,134.3	-364.9	4,147.2	0.00	0.00	0.00
10,150.0	90.00	358.85	6,162.0	4,184.3	-365.9	4,197.2	0.00	0.00	0.00
10,200.0	90.00	358.85	6,162.0	4,234.2	-366.9	4,247.2	0.00	0.00	0.00
10,250.0	90.00	358.85	6,162.0	4,284.2	-367.9	4,297.2	0.00	0.00	0.00
10,300.0	90.00	358.85	6,162.0	4,334.2	-368.9	4,347.2	0.00	0.00	0.00
10,350.0	90.00	358.85	6,162.0	4,384.2	-369.9	4,397.1	0.00	0.00	0.00
10,400.0	90.00	358.85	6,162.0	4,434.2	-370.9	4,447.1	0.00	0.00	0.00
10,450.0	90.00	358.85	6,162.0	4,484.2	-371.9	4,497.1	0.00	0.00	0.00
10,500.0	90.00	358.85	6,162.0	4,534.2	-372.9	4,547.1	0.00	0.00	0.00
10,550.0	90.00	358.85	6,162.0	4,584.2	-373.9	4,597.0	0.00	0.00	0.00
10,600.0	90.00	358.85	6,162.0	4,634.2	-374.9	4,647.0	0.00	0.00	0.00
10,650.0	90.00	358.85	6,162.0	4,684.2	-375.9	4,697.0	0.00	0.00	0.00
10,700.0	90.00	358.85	6,162.0	4,734.1	-376.9	4,747.0	0.00	0.00	0.00
10,750.0	90.00	358.85	6,162.0	4,784.1	-377.9	4,797.0	0.00	0.00	0.00
10,800.0	90.00	358.85	6,162.0	4,834.1	-379.0	4,846.9	0.00	0.00	0.00
10,850.0	90.00	358.85	6,162.0	4,884.1	-380.0	4,896.9	0.00	0.00	0.00
10,900.0	90.00	358.85	6,162.0	4,934.1	-381.0	4,946.9	0.00	0.00	0.00
10,950.0	90.00	358.85	6,162.0	4,984.1	-382.0	4,996.9	0.00	0.00	0.00
11,000.0	90.00	358.85	6,162.0	5,034.1	-383.0	5,046.9	0.00	0.00	0.00
11,050.0	90.00	358.85	6,162.0	5,084.1	-384.0	5,096.8	0.00	0.00	0.00
11,100.0	90.00	358.85	6,162.0	5,134.1	-385.0	5,146.8	0.00	0.00	0.00
11,150.0	90.00	358.85	6,162.0	5,184.1	-386.0	5,196.8	0.00	0.00	0.00
11,200.0	90.00	358.85	6,162.0	5,234.0	-387.0	5,246.8	0.00	0.00	0.00
11,250.0	90.00	358.85	6,162.0	5,284.0	-388.0	5,296.7	0.00	0.00	0.00
11,300.0	90.00	358.85	6,162.0	5,334.0	-389.0	5,346.7	0.00	0.00	0.00
11,350.0	90.00	358.85	6,162.0	5,384.0	-390.0	5,396.7	0.00	0.00	0.00
11,400.0	90.00	358.85	6,162.0	5,434.0	-391.0	5,446.7	0.00	0.00	0.00
11,450.0	90.00	358.85	6,162.0	5,484.0	-392.0	5,496.7	0.00	0.00	0.00
11,500.0	90.00	358.85	6,162.0	5,534.0	-393.0	5,546.6	0.00	0.00	0.00
11,550.0	90.00	358.85	6,162.0	5,584.0	-394.0	5,596.6	0.00	0.00	0.00
11,600.0	90.00	358.85	6,162.0	5,634.0	-395.0	5,646.6	0.00	0.00	0.00
11,650.0	90.00	358.85	6,162.0	5,684.0	-396.0	5,696.6	0.00	0.00	0.00
11,700.0	90.00	358.85	6,162.0	5,733.9	-397.0	5,746.6	0.00	0.00	0.00
11,750.0	90.00	358.85	6,162.0	5,783.9	-398.0	5,796.5	0.00	0.00	0.00
11,800.0	90.00	358.85	6,162.0	5,833.9	-399.0	5,846.5	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Trisha LC29-78HNB
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Site:</b>	LC (09N-59W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Trisha LC29-78HNB	<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)
11,850.0	90.00	358.85	6,162.0	5,883.9	-400.0	5,896.5	0.00	0.00	0.00
11,900.0	90.00	358.85	6,162.0	5,933.9	-401.1	5,946.5	0.00	0.00	0.00
11,950.0	90.00	358.85	6,162.0	5,983.9	-402.1	5,996.4	0.00	0.00	0.00
12,000.0	90.00	358.85	6,162.0	6,033.9	-403.1	6,046.4	0.00	0.00	0.00
12,050.0	90.00	358.85	6,162.0	6,083.9	-404.1	6,096.4	0.00	0.00	0.00
12,100.0	90.00	358.85	6,162.0	6,133.9	-405.1	6,146.4	0.00	0.00	0.00
12,150.0	90.00	358.85	6,162.0	6,183.9	-406.1	6,196.4	0.00	0.00	0.00
12,200.0	90.00	358.85	6,162.0	6,233.8	-407.1	6,246.3	0.00	0.00	0.00
12,250.0	90.00	358.85	6,162.0	6,283.8	-408.1	6,296.3	0.00	0.00	0.00
12,300.0	90.00	358.85	6,162.0	6,333.8	-409.1	6,346.3	0.00	0.00	0.00
12,350.0	90.00	358.85	6,162.0	6,383.8	-410.1	6,396.3	0.00	0.00	0.00
12,400.0	90.00	358.85	6,162.0	6,433.8	-411.1	6,446.3	0.00	0.00	0.00
12,450.0	90.00	358.85	6,162.0	6,483.8	-412.1	6,496.2	0.00	0.00	0.00
12,500.0	90.00	358.85	6,162.0	6,533.8	-413.1	6,546.2	0.00	0.00	0.00
12,550.0	90.00	358.85	6,162.0	6,583.8	-414.1	6,596.2	0.00	0.00	0.00
12,600.0	90.00	358.85	6,162.0	6,633.8	-415.1	6,646.2	0.00	0.00	0.00
12,650.0	90.00	358.85	6,162.0	6,683.8	-416.1	6,696.1	0.00	0.00	0.00
12,700.0	90.00	358.85	6,162.0	6,733.7	-417.1	6,746.1	0.00	0.00	0.00
12,750.0	90.00	358.85	6,162.0	6,783.7	-418.1	6,796.1	0.00	0.00	0.00
12,800.0	90.00	358.85	6,162.0	6,833.7	-419.1	6,846.1	0.00	0.00	0.00
12,850.0	90.00	358.85	6,162.0	6,883.7	-420.1	6,896.1	0.00	0.00	0.00
12,900.0	90.00	358.85	6,162.0	6,933.7	-421.1	6,946.0	0.00	0.00	0.00
12,950.0	90.00	358.85	6,162.0	6,983.7	-422.1	6,996.0	0.00	0.00	0.00
13,000.0	90.00	358.85	6,162.0	7,033.7	-423.2	7,046.0	0.00	0.00	0.00
13,050.0	90.00	358.85	6,162.0	7,083.7	-424.2	7,096.0	0.00	0.00	0.00
13,100.0	90.00	358.85	6,162.0	7,133.7	-425.2	7,146.0	0.00	0.00	0.00
13,150.0	90.00	358.85	6,162.0	7,183.7	-426.2	7,195.9	0.00	0.00	0.00
13,200.0	90.00	358.85	6,162.0	7,233.6	-427.2	7,245.9	0.00	0.00	0.00
13,250.0	90.00	358.85	6,162.0	7,283.6	-428.2	7,295.9	0.00	0.00	0.00
13,300.0	90.00	358.85	6,162.0	7,333.6	-429.2	7,345.9	0.00	0.00	0.00
13,350.0	90.00	358.85	6,162.0	7,383.6	-430.2	7,395.8	0.00	0.00	0.00
13,400.0	90.00	358.85	6,162.0	7,433.6	-431.2	7,445.8	0.00	0.00	0.00
13,450.0	90.00	358.85	6,162.0	7,483.6	-432.2	7,495.8	0.00	0.00	0.00
13,500.0	90.00	358.85	6,162.0	7,533.6	-433.2	7,545.8	0.00	0.00	0.00
13,550.0	90.00	358.85	6,162.0	7,583.6	-434.2	7,595.8	0.00	0.00	0.00
13,600.0	90.00	358.85	6,162.0	7,633.6	-435.2	7,645.7	0.00	0.00	0.00
13,650.0	90.00	358.85	6,162.0	7,683.6	-436.2	7,695.7	0.00	0.00	0.00
13,700.0	90.00	358.85	6,162.0	7,733.5	-437.2	7,745.7	0.00	0.00	0.00
13,750.0	90.00	358.85	6,162.0	7,783.5	-438.2	7,795.7	0.00	0.00	0.00
13,800.0	90.00	358.85	6,162.0	7,833.5	-439.2	7,845.7	0.00	0.00	0.00
13,850.0	90.00	358.85	6,162.0	7,883.5	-440.2	7,895.6	0.00	0.00	0.00
13,900.0	90.00	358.85	6,162.0	7,933.5	-441.2	7,945.6	0.00	0.00	0.00
13,950.0	90.00	358.85	6,162.0	7,983.5	-442.2	7,995.6	0.00	0.00	0.00
14,000.0	90.00	358.85	6,162.0	8,033.5	-443.2	8,045.6	0.00	0.00	0.00
14,050.0	90.00	358.85	6,162.0	8,083.5	-444.3	8,095.5	0.00	0.00	0.00
14,100.0	90.00	358.85	6,162.0	8,133.5	-445.3	8,145.5	0.00	0.00	0.00
14,150.0	90.00	358.85	6,162.0	8,183.4	-446.3	8,195.5	0.00	0.00	0.00
14,200.0	90.00	358.85	6,162.0	8,233.4	-447.3	8,245.5	0.00	0.00	0.00
14,250.0	90.00	358.85	6,162.0	8,283.4	-448.3	8,295.5	0.00	0.00	0.00
14,300.0	90.00	358.85	6,162.0	8,333.4	-449.3	8,345.4	0.00	0.00	0.00
14,350.0	90.00	358.85	6,162.0	8,383.4	-450.3	8,395.4	0.00	0.00	0.00
14,400.0	90.00	358.85	6,162.0	8,433.4	-451.3	8,445.4	0.00	0.00	0.00
14,450.0	90.00	358.85	6,162.0	8,483.4	-452.3	8,495.4	0.00	0.00	0.00
14,500.0	90.00	358.85	6,162.0	8,533.4	-453.3	8,545.4	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Trisha LC29-78HNB
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Site:</b>	LC (09N-59W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Trisha LC29-78HNB	<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)	
14,550.0	90.00	358.85	6,162.0	8,583.4	-454.3	8,595.3	0.00	0.00	0.00	
14,600.0	90.00	358.85	6,162.0	8,633.4	-455.3	8,645.3	0.00	0.00	0.00	
14,650.0	90.00	358.85	6,162.0	8,683.3	-456.3	8,695.3	0.00	0.00	0.00	
14,700.0	90.00	358.85	6,162.0	8,733.3	-457.3	8,745.3	0.00	0.00	0.00	
14,750.0	90.00	358.85	6,162.0	8,783.3	-458.3	8,795.2	0.00	0.00	0.00	
14,800.0	90.00	358.85	6,162.0	8,833.3	-459.3	8,845.2	0.00	0.00	0.00	
14,850.0	90.00	358.85	6,162.0	8,883.3	-460.3	8,895.2	0.00	0.00	0.00	
14,900.0	90.00	358.85	6,162.0	8,933.3	-461.3	8,945.2	0.00	0.00	0.00	
14,950.0	90.00	358.85	6,162.0	8,983.3	-462.3	8,995.2	0.00	0.00	0.00	
15,000.0	90.00	358.85	6,162.0	9,033.3	-463.3	9,045.1	0.00	0.00	0.00	
15,050.0	90.00	358.85	6,162.0	9,083.3	-464.3	9,095.1	0.00	0.00	0.00	
15,100.0	90.00	358.85	6,162.0	9,133.3	-465.3	9,145.1	0.00	0.00	0.00	
15,150.0	90.00	358.85	6,162.0	9,183.2	-466.4	9,195.1	0.00	0.00	0.00	
15,200.0	90.00	358.85	6,162.0	9,233.2	-467.4	9,245.1	0.00	0.00	0.00	
15,250.0	90.00	358.85	6,162.0	9,283.2	-468.4	9,295.0	0.00	0.00	0.00	
15,300.0	90.00	358.85	6,162.0	9,333.2	-469.4	9,345.0	0.00	0.00	0.00	
15,350.0	90.00	358.85	6,162.0	9,383.2	-470.4	9,395.0	0.00	0.00	0.00	
15,400.0	90.00	358.85	6,162.0	9,433.2	-471.4	9,445.0	0.00	0.00	0.00	
15,450.0	90.00	358.85	6,162.0	9,483.2	-472.4	9,494.9	0.00	0.00	0.00	
15,500.0	90.00	358.85	6,162.0	9,533.2	-473.4	9,544.9	0.00	0.00	0.00	
15,550.0	90.00	358.85	6,162.0	9,583.2	-474.4	9,594.9	0.00	0.00	0.00	
15,567.7	90.00	358.85	6,162.0	9,600.8	-474.7	9,612.6	0.00	0.00	0.00	
TD at 15567.7 - Trisha LC29-78HNB BHL 675'FNL, 675'FWL										

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										
Trisha LC29-78HNB BHL	0.00	0.00	6,162.0	9,600.8	-474.7	1,516,362.62	3,413,135.12	40.741270	-104.009050	
- plan hits target center										
- Point										

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
6,528.3	6,152.7	7" Casing @ 6528.3' MD	7	8-3/4	

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Trisha LC29-78HNB
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Site:</b>	LC (09N-59W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Trisha LC29-78HNB	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 0		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,375.1	1,375.0	PIERRE		0.00		
3,499.5	3,473.0	PARKMAN		0.00		
4,212.5	4,186.0	SUSSEX		0.00		
4,617.5	4,591.0	SHANNON		0.00		
5,397.5	5,371.0	TEEPEE BUTTES		0.00		
6,121.3	6,007.0	SHARON SPRINGS		0.00		
6,162.2	6,031.0	NIOBRARA		0.00		
6,162.2	6,031.0	NIO A CHALK		0.00		
6,218.8	6,061.0	NIO A MARL		0.00		
6,410.9	6,133.0	NIO B CHALK		0.00		
6,665.8	6,162.0	NIO B MARL		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
1,200.0	1,200.0	0.0	0.0	KOP - Start Build 2.00	
2,610.9	2,588.8	-70.8	-220.3	Start Drop -2.00	
5,465.8	5,439.3	-90.0	-280.0	KOP #2 - Start Build 8.00	
6,528.3	6,152.7	563.7	-293.1	Start 75.0 hold at 6528.3 MD	
6,603.3	6,159.3	638.4	-294.6	Start Build 8.00	
15,567.7	6,162.0	9,600.8	-474.7	TD at 15567.7	

# **Northern Region Drilling - Working**

**Wattenberg Field**

**LC (09N-59W)**

**Trisha LC29-78HNB**

**Original Drilling**

**APD - Rev 0**

## **Anticollision Summary Report**

**28 August, 2013**

**Noble Energy Inc**  
Anticollision Summary Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Trisha LC29-78HNB
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Reference Site:</b>	LC (09N-59W)	<b>MD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Trisha LC29-78HNB	<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>	8/28/2013			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
0.0	15,567.7	APD - Rev 0 (Original Drilling)	MWD+IFR1+MS_WY	Fixed:v2:Rockies, crustal dec + 3-axis correction	

<b>Summary</b>						
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						
LC (09N-59W)						
Rico LC29-78-1HNC - Original Drilling - APD - Rev 0	1,200.0	1,200.0	38.8	33.7	7.607	CC, ES
Rico LC29-78-1HNC - Original Drilling - APD - Rev 0	15,567.7	15,631.7	323.4	135.4	1.721	Level 3, SF
Trisha LC29-77HNB - Original Drilling - APD - Rev 0	1,200.0	1,200.0	74.8	69.7	14.670	CC, ES
Trisha LC29-77HNB - Original Drilling - APD - Rev 0	15,567.7	15,568.1	645.7	455.9	3.403	SF

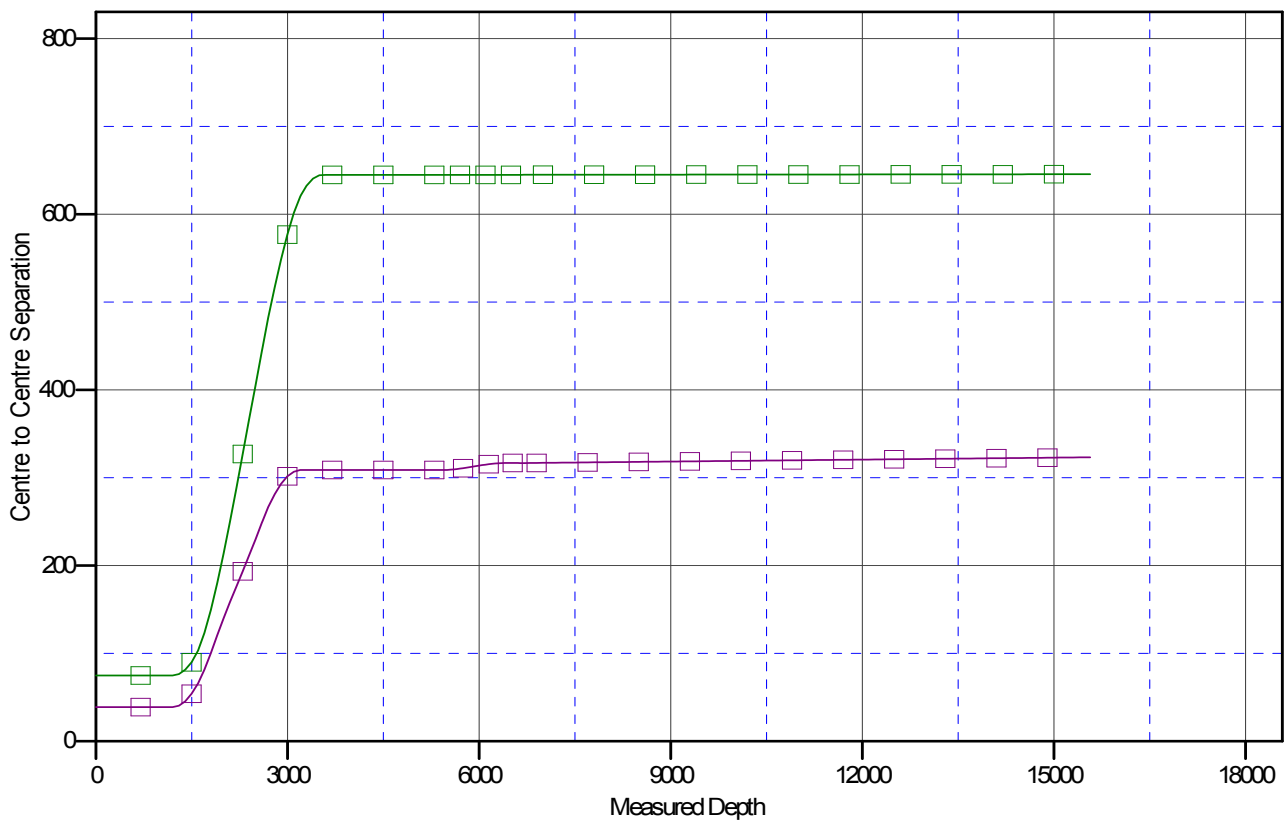
**Noble Energy Inc**  
Anticollision Summary Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Trisha LC29-78HNB
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Reference Site:</b>	LC (09N-59W)	<b>MD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Trisha LC29-78HNB	<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 @ 4912.0usft (Original Well Ele  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

Coordinates are relative to: Trisha LC29-78HNB  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.96°

## Ladder Plot



### LEGEND

Trisha LC29-77HNB, Original Drilling, APD - Rev0 V0    Rico LC29-78-1HNC, Original Drilling, APD - Rev0 V0

**Noble Energy Inc**  
Anticollision Summary Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Trisha LC29-78HNB
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Reference Site:</b>	LC (09N-59W)	<b>MD Reference:</b>	WELL @ 4912.0usft (Original Well Elev)
<b>Site Error:</b>	0.0 usft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Trisha LC29-78HNB	<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 @ 4912.0usft (Original Well Ele  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

Coordinates are relative to: Trisha LC29-78HNB  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.96°

