

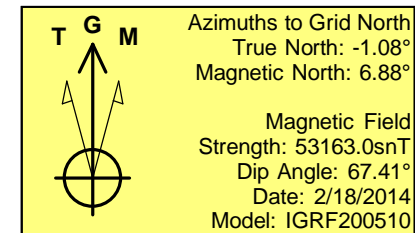
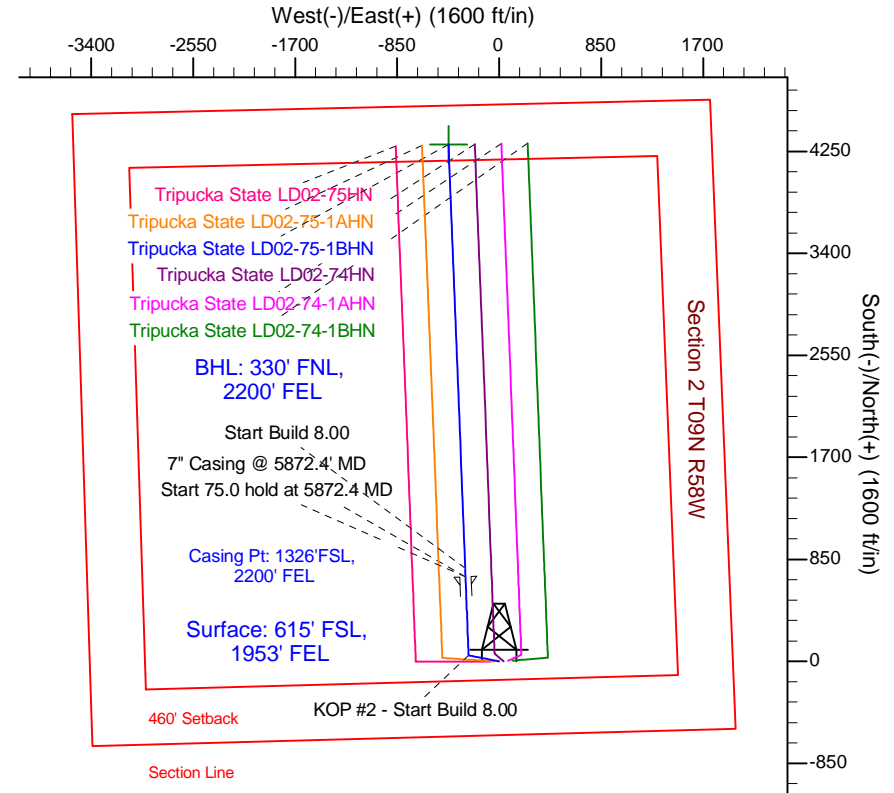
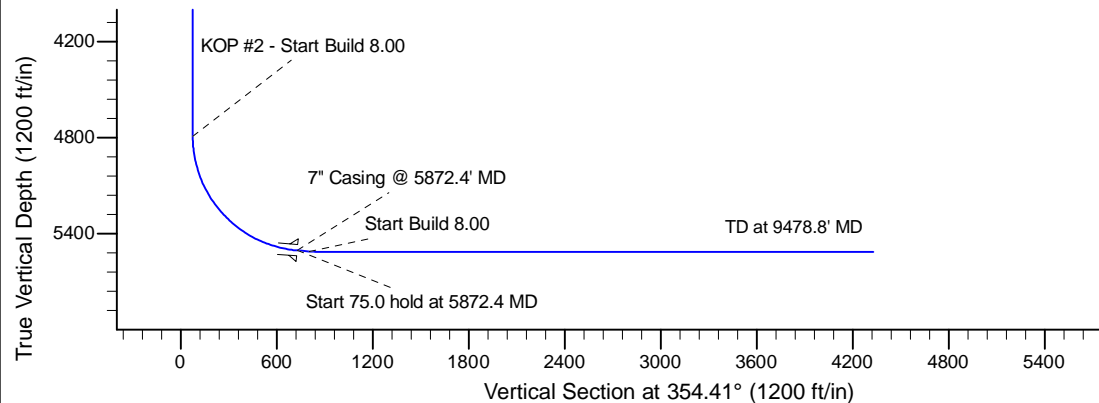
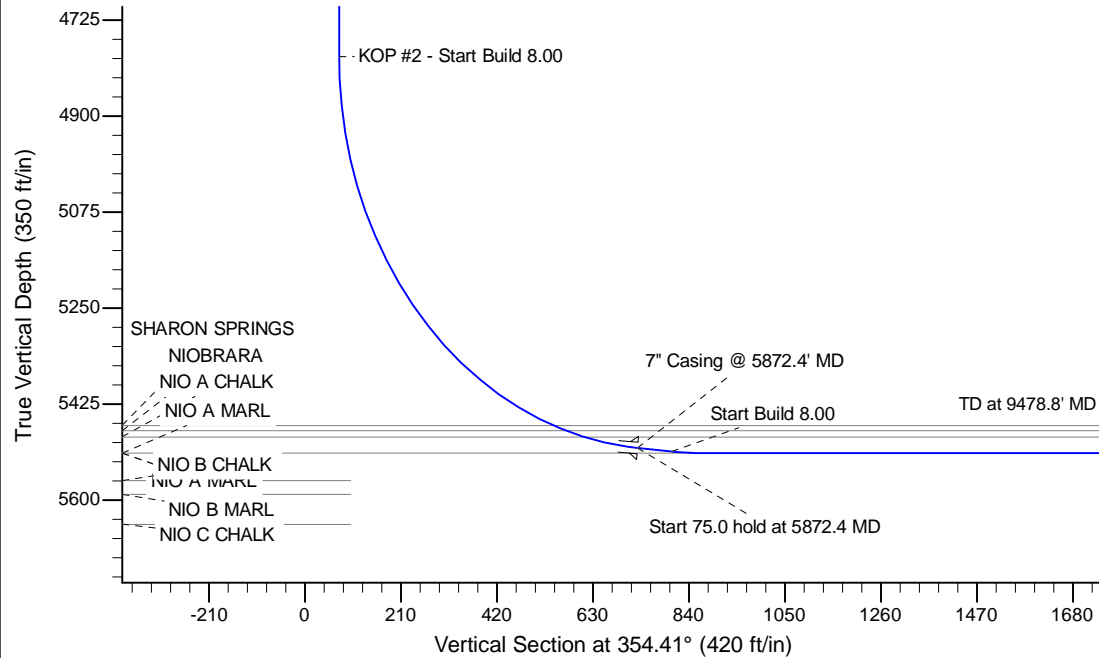
Project: Wattenberg Field  
Site: LD (Sec.2-T09N-R58W) Weld County, CO  
Well: Tripucka State LD02-75-1BHN  
Wellbore: Original Drilling  
Design: APD - Rev 0

# 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	2250.6	9.01	281.09	2248.7	6.8	-34.7	2.00	281.09	10.2	
4	3458.0	9.01	281.09	3441.3	43.2	-220.3	0.00	0.00	64.5	
5	3908.6	0.00	0.00	3890.0	50.0	-255.0	2.00	180.00	74.6	
6	4809.9	0.00	0.00	4791.3	50.0	-255.0	0.00	0.00	74.6	
7	5872.4	85.00	357.76	5504.7	703.3	-280.6	8.00	357.76	727.3	
8	5947.4	85.00	357.76	5511.3	777.9	-283.5	0.00	0.00	801.9	
9	6009.9	90.00	357.76	5514.0	840.3	-286.0	8.00	0.00	864.2	
10	9478.8	90.00	357.76	5514.0	4306.6	-421.9	0.00	0.00	4327.2	Tripucka State LD02-75-1BHN BHL 330'FNL, 2200'FEL



## WELL DETAILS: Tripucka State LD02-75-1BHN

Ground Level: 4675.0			
0.0	0.0	Northing	Easting
1529543.96	3462866.44	Latitude	Longitude
40.775010	-103.828720		

Plan: APD - Rev 0 (Tripucka State LD02-75-1BHN/Original Drilling)

Created By: Shailey Jewell Date: 12:04, March 07 2014

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

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

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

# **Northern Region Drilling - Working**

**Wattenberg Field**

**LD (09N-58W)**

**Tripucka State LD02-75-1BHN**

**Original Drilling**

**Plan: APD - Rev 0**

## **Standard Planning Report**

**07 March, 2014**

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site:</b>	LD (09N-58W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Tripucka State LD02-75-1BHN	<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		LD (09N-58W)			
Site Position:		Northing:	1,523,557.18 usft	Latitude:	40.759270
From:	Lat/Long	Easting:	3,449,341.23 usft	Longitude:	-103.877940
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	1.05 °

Well	Tripucka State LD02-75-1BHN					
Well Position	+N/-S	5,986.8 ft	Northing:	1,529,543.97 usft	Latitude:	40.775010
	+E/-W	13,525.3 ft	Easting:	3,462,866.44 usft	Longitude:	-103.828720
Position Uncertainty		0.0 ft	Wellhead Elevation:		Ground Level:	4,675.0 ft

<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	2/18/2014	7.96	67.41	53,163

<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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	354.41

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	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	
2,250.6	9.01	281.09	2,248.7	6.8	-34.7	2.00	2.00	0.00	281.09	
3,458.0	9.01	281.09	3,441.3	43.2	-220.3	0.00	0.00	0.00	0.00	
3,908.6	0.00	0.00	3,890.0	50.0	-255.0	2.00	-2.00	0.00	180.00	
4,809.9	0.00	0.00	4,791.3	50.0	-255.0	0.00	0.00	0.00	0.00	
5,872.4	85.00	357.76	5,504.7	703.3	-280.6	8.00	8.00	0.00	357.76	
5,947.4	85.00	357.76	5,511.3	777.9	-283.5	0.00	0.00	0.00	0.00	
6,009.9	90.00	357.76	5,514.0	840.3	-286.0	8.00	8.00	0.00	0.00	
9,478.8	90.00	357.76	5,514.0	4,306.6	-421.9	0.00	0.00	0.00	0.00	Tripucka State LD02-75-1BHN

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site:</b>	LD (09N-58W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
<b>KOP - Start Build 2.00</b>									
1,850.0	1.00	281.09	1,850.0	0.1	-0.4	0.1	2.00	2.00	0.00
1,900.0	2.00	281.09	1,900.0	0.3	-1.7	0.5	2.00	2.00	0.00
1,950.0	3.00	281.09	1,949.9	0.8	-3.9	1.1	2.00	2.00	0.00
2,000.0	4.00	281.09	1,999.8	1.3	-6.8	2.0	2.00	2.00	0.00
2,050.0	5.00	281.09	2,049.7	2.1	-10.7	3.1	2.00	2.00	0.00
2,100.0	6.00	281.09	2,099.5	3.0	-15.4	4.5	2.00	2.00	0.00
2,150.0	7.00	281.09	2,149.1	4.1	-21.0	6.1	2.00	2.00	0.00
2,200.0	8.00	281.09	2,198.7	5.4	-27.4	8.0	2.00	2.00	0.00
2,250.0	9.00	281.09	2,248.2	6.8	-34.6	10.1	2.00	2.00	0.00
2,250.6	9.01	281.09	2,248.7	6.8	-34.7	10.2	2.00	2.00	0.00
2,300.0	9.01	281.09	2,297.5	8.3	-42.3	12.4	0.00	0.00	0.00
2,342.0	9.01	281.09	2,339.0	9.6	-48.8	14.3	0.00	0.00	0.00
<b>PIERRE</b>									
2,350.0	9.01	281.09	2,346.9	9.8	-50.0	14.6	0.00	0.00	0.00
2,400.0	9.01	281.09	2,396.3	11.3	-57.7	16.9	0.00	0.00	0.00
2,450.0	9.01	281.09	2,445.7	12.8	-65.4	19.1	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site:</b>	LD (09N-58W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,500.0	9.01	281.09	2,495.1	14.3	-73.0	21.4	0.00	0.00	0.00
2,550.0	9.01	281.09	2,544.5	15.8	-80.7	23.6	0.00	0.00	0.00
2,600.0	9.01	281.09	2,593.8	17.3	-88.4	25.9	0.00	0.00	0.00
2,650.0	9.01	281.09	2,643.2	18.8	-96.1	28.1	0.00	0.00	0.00
2,700.0	9.01	281.09	2,692.6	20.3	-103.8	30.4	0.00	0.00	0.00
2,750.0	9.01	281.09	2,742.0	21.9	-111.5	32.6	0.00	0.00	0.00
2,800.0	9.01	281.09	2,791.4	23.4	-119.2	34.9	0.00	0.00	0.00
2,850.0	9.01	281.09	2,840.8	24.9	-126.8	37.1	0.00	0.00	0.00
2,900.0	9.01	281.09	2,890.1	26.4	-134.5	39.4	0.00	0.00	0.00
2,950.0	9.01	281.09	2,939.5	27.9	-142.2	41.6	0.00	0.00	0.00
3,000.0	9.01	281.09	2,988.9	29.4	-149.9	43.9	0.00	0.00	0.00
3,050.0	9.01	281.09	3,038.3	30.9	-157.6	46.1	0.00	0.00	0.00
3,100.0	9.01	281.09	3,087.7	32.4	-165.3	48.4	0.00	0.00	0.00
3,150.0	9.01	281.09	3,137.0	33.9	-173.0	50.6	0.00	0.00	0.00
3,200.0	9.01	281.09	3,186.4	35.4	-180.6	52.9	0.00	0.00	0.00
3,228.9	9.01	281.09	3,215.0	36.3	-185.1	54.2	0.00	0.00	0.00
<b>PARKMAN</b>									
3,250.0	9.01	281.09	3,235.8	36.9	-188.3	55.1	0.00	0.00	0.00
3,300.0	9.01	281.09	3,285.2	38.4	-196.0	57.4	0.00	0.00	0.00
3,350.0	9.01	281.09	3,334.6	39.9	-203.7	59.6	0.00	0.00	0.00
3,400.0	9.01	281.09	3,384.0	41.4	-211.4	61.9	0.00	0.00	0.00
3,450.0	9.01	281.09	3,433.3	43.0	-219.1	64.1	0.00	0.00	0.00
3,458.0	9.01	281.09	3,441.2	43.2	-220.3	64.5	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
3,500.0	8.17	281.09	3,482.8	44.4	-226.5	66.3	2.00	-2.00	0.00
3,550.0	7.17	281.09	3,532.3	45.7	-233.0	68.2	2.00	-2.00	0.00
3,600.0	6.17	281.09	3,582.0	46.8	-238.7	69.9	2.00	-2.00	0.00
3,650.0	5.17	281.09	3,631.7	47.8	-243.6	71.3	2.00	-2.00	0.00
3,700.0	4.17	281.09	3,681.6	48.5	-247.6	72.4	2.00	-2.00	0.00
3,750.0	3.17	281.09	3,731.5	49.2	-250.7	73.4	2.00	-2.00	0.00
3,800.0	2.17	281.09	3,781.4	49.6	-253.0	74.0	2.00	-2.00	0.00
3,821.6	1.74	281.09	3,803.0	49.7	-253.7	74.2	2.00	-2.00	0.00
<b>SUSSEX</b>									
3,850.0	1.17	281.09	3,831.4	49.9	-254.4	74.4	2.00	-2.00	0.00
3,900.0	0.17	281.09	3,881.4	50.0	-255.0	74.6	2.00	-2.00	0.00
3,908.6	0.00	0.00	3,890.0	50.0	-255.0	74.6	2.00	-2.00	0.00
3,950.0	0.00	0.00	3,931.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,000.0	0.00	0.00	3,981.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,050.0	0.00	0.00	4,031.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,100.0	0.00	0.00	4,081.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,150.0	0.00	0.00	4,131.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,200.0	0.00	0.00	4,181.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,250.0	0.00	0.00	4,231.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,251.6	0.00	0.00	4,233.0	50.0	-255.0	74.6	0.00	0.00	0.00
<b>SHANNON</b>									
4,300.0	0.00	0.00	4,281.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,350.0	0.00	0.00	4,331.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,400.0	0.00	0.00	4,381.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,450.0	0.00	0.00	4,431.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,500.0	0.00	0.00	4,481.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,550.0	0.00	0.00	4,531.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,563.6	0.00	0.00	4,545.0	50.0	-255.0	74.6	0.00	0.00	0.00
<b>TEEPEE BUTTES</b>									

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site:</b>	LD (09N-58W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.0	0.00	0.00	4,581.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,650.0	0.00	0.00	4,631.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,700.0	0.00	0.00	4,681.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,750.0	0.00	0.00	4,731.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,800.0	0.00	0.00	4,781.4	50.0	-255.0	74.6	0.00	0.00	0.00
4,809.9	0.00	0.00	4,791.3	50.0	-255.0	74.6	0.00	0.00	0.00
<b>KOP #2 - Start Build 8.00</b>									
4,850.0	3.21	357.76	4,831.4	51.1	-255.0	75.7	8.00	8.00	0.00
4,900.0	7.21	357.76	4,881.2	55.7	-255.2	80.3	8.00	8.00	0.00
4,950.0	11.21	357.76	4,930.5	63.7	-255.5	88.3	8.00	8.00	0.00
5,000.0	15.21	357.76	4,979.2	75.1	-256.0	99.7	8.00	8.00	0.00
5,050.0	19.21	357.76	5,026.9	89.8	-256.6	114.4	8.00	8.00	0.00
5,100.0	23.21	357.76	5,073.5	107.9	-257.3	132.5	8.00	8.00	0.00
5,150.0	27.21	357.76	5,118.8	129.2	-258.1	153.7	8.00	8.00	0.00
5,200.0	31.21	357.76	5,162.4	153.6	-259.1	178.1	8.00	8.00	0.00
5,250.0	35.21	357.76	5,204.2	180.9	-260.1	205.4	8.00	8.00	0.00
5,300.0	39.21	357.76	5,244.0	211.1	-261.3	235.6	8.00	8.00	0.00
5,350.0	43.21	357.76	5,281.6	244.0	-262.6	268.5	8.00	8.00	0.00
5,400.0	47.21	357.76	5,316.9	279.5	-264.0	303.9	8.00	8.00	0.00
5,450.0	51.21	357.76	5,349.5	317.3	-265.5	341.7	8.00	8.00	0.00
5,500.0	55.21	357.76	5,379.4	357.3	-267.0	381.6	8.00	8.00	0.00
5,550.0	59.21	357.76	5,406.5	399.3	-268.7	423.6	8.00	8.00	0.00
5,600.0	63.21	357.76	5,430.6	443.1	-270.4	467.3	8.00	8.00	0.00
5,650.0	67.21	357.76	5,451.6	488.4	-272.2	512.6	8.00	8.00	0.00
5,684.1	69.94	357.76	5,464.0	520.1	-273.4	544.3	8.00	8.00	0.00
<b>SHARON SPRINGS</b>									
5,700.0	71.21	357.76	5,469.3	535.1	-274.0	559.3	7.99	7.99	0.00
5,711.8	72.15	357.76	5,473.0	546.3	-274.5	570.5	8.01	8.01	0.00
<b>NIOBRARA</b>									
5,750.0	75.21	357.76	5,483.7	583.0	-275.9	607.1	8.00	8.00	0.00
5,755.0	75.61	357.76	5,485.0	587.8	-276.1	611.9	8.02	8.02	0.00
<b>NIO A CHALK</b>									
5,800.0	79.21	357.76	5,494.8	631.7	-277.8	655.7	8.00	8.00	0.00
5,850.0	83.21	357.76	5,502.5	681.0	-279.7	705.1	8.00	8.00	0.00
5,872.4	85.00	357.76	5,504.7	703.3	-280.6	727.3	8.00	8.00	0.00
<b>Start 75.0 hold at 5872.4 MD - 7" Casing @ 5872.4' MD</b>									
5,900.0	85.00	357.76	5,507.2	730.8	-281.7	754.7	0.00	0.00	0.00
5,947.4	85.00	357.76	5,511.3	777.9	-283.5	801.9	0.00	0.00	0.00
<b>Start Build 8.00</b>									
5,950.0	85.21	357.76	5,511.5	780.5	-283.6	804.5	7.98	7.98	0.00
6,000.0	89.21	357.76	5,513.9	830.4	-285.6	854.3	8.00	8.00	0.00
6,009.9	90.00	357.76	5,514.0	840.3	-286.0	864.2	8.01	8.01	0.00
<b>NIO A MARL</b>									
6,050.0	90.00	357.76	5,514.0	880.4	-287.6	904.2	0.00	0.00	0.00
6,100.0	90.00	357.76	5,514.0	930.4	-289.5	954.1	0.00	0.00	0.00
6,150.0	90.00	357.76	5,514.0	980.3	-291.5	1,004.1	0.00	0.00	0.00
6,200.0	90.00	357.76	5,514.0	1,030.3	-293.4	1,054.0	0.00	0.00	0.00
6,250.0	90.00	357.76	5,514.0	1,080.2	-295.4	1,103.9	0.00	0.00	0.00
6,300.0	90.00	357.76	5,514.0	1,130.2	-297.3	1,153.8	0.00	0.00	0.00
6,350.0	90.00	357.76	5,514.0	1,180.2	-299.3	1,203.7	0.00	0.00	0.00
6,400.0	90.00	357.76	5,514.0	1,230.1	-301.3	1,253.6	0.00	0.00	0.00
6,450.0	90.00	357.76	5,514.0	1,280.1	-303.2	1,303.5	0.00	0.00	0.00
6,500.0	90.00	357.76	5,514.0	1,330.0	-305.2	1,353.5	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site:</b>	LD (09N-58W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,550.0	90.00	357.76	5,514.0	1,380.0	-307.1	1,403.4	0.00	0.00	0.00
6,600.0	90.00	357.76	5,514.0	1,430.0	-309.1	1,453.3	0.00	0.00	0.00
6,650.0	90.00	357.76	5,514.0	1,479.9	-311.1	1,503.2	0.00	0.00	0.00
6,700.0	90.00	357.76	5,514.0	1,529.9	-313.0	1,553.1	0.00	0.00	0.00
6,750.0	90.00	357.76	5,514.0	1,579.9	-315.0	1,603.0	0.00	0.00	0.00
6,800.0	90.00	357.76	5,514.0	1,629.8	-316.9	1,653.0	0.00	0.00	0.00
6,850.0	90.00	357.76	5,514.0	1,679.8	-318.9	1,702.9	0.00	0.00	0.00
6,900.0	90.00	357.76	5,514.0	1,729.7	-320.8	1,752.8	0.00	0.00	0.00
6,950.0	90.00	357.76	5,514.0	1,779.7	-322.8	1,802.7	0.00	0.00	0.00
7,000.0	90.00	357.76	5,514.0	1,829.7	-324.8	1,852.6	0.00	0.00	0.00
7,050.0	90.00	357.76	5,514.0	1,879.6	-326.7	1,902.5	0.00	0.00	0.00
7,100.0	90.00	357.76	5,514.0	1,929.6	-328.7	1,952.4	0.00	0.00	0.00
7,150.0	90.00	357.76	5,514.0	1,979.6	-330.6	2,002.4	0.00	0.00	0.00
7,200.0	90.00	357.76	5,514.0	2,029.5	-332.6	2,052.3	0.00	0.00	0.00
7,250.0	90.00	357.76	5,514.0	2,079.5	-334.6	2,102.2	0.00	0.00	0.00
7,300.0	90.00	357.76	5,514.0	2,129.4	-336.5	2,152.1	0.00	0.00	0.00
7,350.0	90.00	357.76	5,514.0	2,179.4	-338.5	2,202.0	0.00	0.00	0.00
7,400.0	90.00	357.76	5,514.0	2,229.4	-340.4	2,251.9	0.00	0.00	0.00
7,450.0	90.00	357.76	5,514.0	2,279.3	-342.4	2,301.8	0.00	0.00	0.00
7,500.0	90.00	357.76	5,514.0	2,329.3	-344.3	2,351.8	0.00	0.00	0.00
7,550.0	90.00	357.76	5,514.0	2,379.2	-346.3	2,401.7	0.00	0.00	0.00
7,600.0	90.00	357.76	5,514.0	2,429.2	-348.3	2,451.6	0.00	0.00	0.00
7,650.0	90.00	357.76	5,514.0	2,479.2	-350.2	2,501.5	0.00	0.00	0.00
7,700.0	90.00	357.76	5,514.0	2,529.1	-352.2	2,551.4	0.00	0.00	0.00
7,750.0	90.00	357.76	5,514.0	2,579.1	-354.1	2,601.3	0.00	0.00	0.00
7,800.0	90.00	357.76	5,514.0	2,629.1	-356.1	2,651.2	0.00	0.00	0.00
7,850.0	90.00	357.76	5,514.0	2,679.0	-358.1	2,701.2	0.00	0.00	0.00
7,900.0	90.00	357.76	5,514.0	2,729.0	-360.0	2,751.1	0.00	0.00	0.00
7,950.0	90.00	357.76	5,514.0	2,778.9	-362.0	2,801.0	0.00	0.00	0.00
8,000.0	90.00	357.76	5,514.0	2,828.9	-363.9	2,850.9	0.00	0.00	0.00
8,050.0	90.00	357.76	5,514.0	2,878.9	-365.9	2,900.8	0.00	0.00	0.00
8,100.0	90.00	357.76	5,514.0	2,928.8	-367.8	2,950.7	0.00	0.00	0.00
8,150.0	90.00	357.76	5,514.0	2,978.8	-369.8	3,000.6	0.00	0.00	0.00
8,200.0	90.00	357.76	5,514.0	3,028.7	-371.8	3,050.6	0.00	0.00	0.00
8,250.0	90.00	357.76	5,514.0	3,078.7	-373.7	3,100.5	0.00	0.00	0.00
8,300.0	90.00	357.76	5,514.0	3,128.7	-375.7	3,150.4	0.00	0.00	0.00
8,350.0	90.00	357.76	5,514.0	3,178.6	-377.6	3,200.3	0.00	0.00	0.00
8,400.0	90.00	357.76	5,514.0	3,228.6	-379.6	3,250.2	0.00	0.00	0.00
8,450.0	90.00	357.76	5,514.0	3,278.6	-381.6	3,300.1	0.00	0.00	0.00
8,500.0	90.00	357.76	5,514.0	3,328.5	-383.5	3,350.1	0.00	0.00	0.00
8,550.0	90.00	357.76	5,514.0	3,378.5	-385.5	3,400.0	0.00	0.00	0.00
8,600.0	90.00	357.76	5,514.0	3,428.4	-387.4	3,449.9	0.00	0.00	0.00
8,650.0	90.00	357.76	5,514.0	3,478.4	-389.4	3,499.8	0.00	0.00	0.00
8,700.0	90.00	357.76	5,514.0	3,528.4	-391.3	3,549.7	0.00	0.00	0.00
8,750.0	90.00	357.76	5,514.0	3,578.3	-393.3	3,599.6	0.00	0.00	0.00
8,800.0	90.00	357.76	5,514.0	3,628.3	-395.3	3,649.5	0.00	0.00	0.00
8,850.0	90.00	357.76	5,514.0	3,678.3	-397.2	3,699.5	0.00	0.00	0.00
8,900.0	90.00	357.76	5,514.0	3,728.2	-399.2	3,749.4	0.00	0.00	0.00
8,950.0	90.00	357.76	5,514.0	3,778.2	-401.1	3,799.3	0.00	0.00	0.00
9,000.0	90.00	357.76	5,514.0	3,828.1	-403.1	3,849.2	0.00	0.00	0.00
9,050.0	90.00	357.76	5,514.0	3,878.1	-405.1	3,899.1	0.00	0.00	0.00
9,100.0	90.00	357.76	5,514.0	3,928.1	-407.0	3,949.0	0.00	0.00	0.00
9,150.0	90.00	357.76	5,514.0	3,978.0	-409.0	3,998.9	0.00	0.00	0.00
9,200.0	90.00	357.76	5,514.0	4,028.0	-410.9	4,048.9	0.00	0.00	0.00

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site:</b>	LD (09N-58W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,250.0	90.00	357.76	5,514.0	4,077.9	-412.9	4,098.8	0.00	0.00	0.00	
9,300.0	90.00	357.76	5,514.0	4,127.9	-414.8	4,148.7	0.00	0.00	0.00	
9,350.0	90.00	357.76	5,514.0	4,177.9	-416.8	4,198.6	0.00	0.00	0.00	
9,400.0	90.00	357.76	5,514.0	4,227.8	-418.8	4,248.5	0.00	0.00	0.00	
9,450.0	90.00	357.76	5,514.0	4,277.8	-420.7	4,298.4	0.00	0.00	0.00	
9,478.8	90.00	357.76	5,514.0	4,306.6	-421.9	4,327.2	0.00	0.00	0.00	
TD at 9478.8 - Tripucka State LD02-75-1BHN BHL 330'FNL, 2200'FEL										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Tripucka State LD02-75- - plan hits target center - Point	0.00	0.00	5,514.0	4,306.6	-421.9	1,533,850.52	3,462,444.59	40.786850	-103.829950	

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
5,872.4	5,504.7	7" Casing @ 5872.4' MD	7	8-3/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,342.0	2,339.0	PIERRE		0.00		
3,228.9	3,215.0	PARKMAN		0.00		
3,821.6	3,803.0	SUSSEX		0.00		
4,251.6	4,233.0	SHANNON		0.00		
4,563.6	4,545.0	TEEPEE BUTTES		0.00		
5,684.1	5,464.0	SHARON SPRINGS		0.00		
5,711.8	5,473.0	NIOBRARA		0.00		
5,755.0	5,485.0	NIO A CHALK		0.00		
6,009.9	5,514.0	NIO A MARL		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,800.0	1,800.0	0.0	0.0	KOP - Start Build 2.00	
3,458.0	3,441.2	43.2	-220.3	Start Drop -2.00	
4,809.9	4,791.3	50.0	-255.0	KOP #2 - Start Build 8.00	
5,872.4	5,504.7	703.3	-280.6	Start 75.0 hold at 5872.4 MD	
5,947.4	5,511.3	777.9	-283.5	Start Build 8.00	
9,478.8	5,514.0	4,306.6	-421.9	TD at 9478.8	



# **Northern Region Drilling - Working**

**Wattenberg Field**

**LD (09N-58W)**

**Tripucka State LD02-75-1BHN**

**Original Drilling**

**APD - Rev 0**

## **Anticollision Report**

**07 March, 2014**

**Noble Energy Inc**  
Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<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>	MD Interval 100.0ft	<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 ft	<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> 2/26/2014			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	9,478.5	APD - Rev 0 (Original Drilling)	MWD	MWD - Standard

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Offset Well - Wellbore - Design</b>						
LD (09N-58W)						
Tripucka State LD02-74-1AHN - Original Drilling - APD -	1,800.0	1,799.0	74.9	67.1	9.586	CC, ES
Tripucka State LD02-74-1AHN - Original Drilling - APD -	9,479.5	9,469.0	440.3	272.8	2.629	SF
Tripucka State LD02-74-1BHN - Original Drilling - APD -	1,500.0	1,498.0	110.8	104.4	17.160	CC, ES
Tripucka State LD02-74-1BHN - Original Drilling - APD -	9,479.5	9,583.8	663.7	497.2	3.985	SF
Tripucka State LD02-74HN - Original Drilling - APD - Rev	1,800.0	1,799.0	36.0	28.2	4.610	CC, ES
Tripucka State LD02-74HN - Original Drilling - APD - Rev	9,479.5	9,522.2	229.7	68.7	1.427	Level 2, SF
Tripucka State LD02-75-1AHN - Original Drilling - APD -	1,466.3	1,467.3	38.8	32.5	6.140	CC
Tripucka State LD02-75-1AHN - Original Drilling - APD -	1,500.0	1,501.0	38.8	32.3	5.997	ES
Tripucka State LD02-75-1AHN - Original Drilling - APD -	9,479.5	9,586.8	234.8	75.7	1.475	Level 2, SF
Tripucka State LD02-75HN - Original Drilling - APD - Rev	1,166.0	1,168.0	74.8	69.8	15.055	CC
Tripucka State LD02-75HN - Original Drilling - APD - Rev	1,200.0	1,201.9	74.8	69.7	14.607	ES
Tripucka State LD02-75HN - Original Drilling - APD - Rev	9,479.5	9,598.8	441.5	274.1	2.638	SF

Offset Design		LD (09N-58W) - Tripucka State LD02-74-1AHN - Original Drilling - APD - Rev 0											Offset Site Error:		0.0 ft
Survey Program:		0-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
							+N/-S (ft)	+E/-W (ft)							
0.0	0.0	0.0	0.0	0.0	0.0	86.13	5.1	74.7	74.9						
100.0	100.0	99.0	99.0	0.1	0.1	86.13	5.1	74.7	74.9	74.7	0.17	440.499			
200.0	200.0	199.0	199.0	0.3	0.3	86.13	5.1	74.7	74.9	74.3	0.62	121.129			
300.0	300.0	299.0	299.0	0.5	0.5	86.13	5.1	74.7	74.9	73.8	1.07	70.127			
400.0	400.0	399.0	399.0	0.8	0.8	86.13	5.1	74.7	74.9	73.4	1.52	49.349			
500.0	500.0	499.0	499.0	1.0	1.0	86.13	5.1	74.7	74.9	72.9	1.97	38.069			
600.0	600.0	599.0	599.0	1.2	1.2	86.13	5.1	74.7	74.9	72.5	2.42	30.987			
700.0	700.0	699.0	699.0	1.4	1.4	86.13	5.1	74.7	74.9	72.0	2.87	26.126			
800.0	800.0	799.0	799.0	1.7	1.7	86.13	5.1	74.7	74.9	71.6	3.32	22.583			
900.0	900.0	899.0	899.0	1.9	1.9	86.13	5.1	74.7	74.9	71.1	3.76	19.887			
1,000.0	1,000.0	999.0	999.0	2.1	2.1	86.13	5.1	74.7	74.9	70.7	4.21	17.766			
1,100.0	1,100.0	1,099.0	1,099.0	2.3	2.3	86.13	5.1	74.7	74.9	70.2	4.66	16.053			
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	86.13	5.1	74.7	74.9	69.8	5.11	14.642			
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	86.13	5.1	74.7	74.9	69.3	5.56	13.459			
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	86.13	5.1	74.7	74.9	68.9	6.01	12.453			
1,500.0	1,500.0	1,499.0	1,499.0	3.2	3.2	86.13	5.1	74.7	74.9	68.4	6.46	11.586			

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

# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<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

Offset Design LD (09N-58W) - Tripucka State LD02-74-1AHN - Original Drilling - APD - Rev 0													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
1,600.0	1,600.0	1,599.0	1,599.0	3.5	3.5	86.13	5.1	74.7	74.9	68.0	6.91	10.833		
1,700.0	1,700.0	1,699.0	1,699.0	3.7	3.7	86.13	5.1	74.7	74.9	67.5	7.36	10.171		
1,800.0	1,800.0	1,799.0	1,799.0	3.9	3.9	86.13	5.1	74.7	74.9	67.1	7.81	9.586 CC, ES		
1,900.0	1,900.0	1,896.5	1,896.5	4.1	4.1	164.92	5.7	76.2	78.1	69.9	8.23	9.489		
2,000.0	1,999.8	1,993.4	1,993.3	4.3	4.3	164.61	7.8	80.6	87.9	79.3	8.63	10.184		
2,100.0	2,099.5	2,089.1	2,088.6	4.5	4.5	164.21	11.1	88.0	104.1	95.1	9.02	11.541		
2,200.0	2,198.7	2,184.2	2,183.1	4.8	4.8	163.82	15.6	98.0	126.6	117.2	9.41	13.448		
2,300.0	2,297.5	2,280.8	2,278.9	5.0	5.0	163.79	20.5	108.7	152.6	142.8	9.81	15.549		
2,400.0	2,396.3	2,377.2	2,374.6	5.3	5.2	163.87	25.4	119.5	179.0	168.7	10.23	17.489		
2,500.0	2,495.1	2,473.7	2,470.4	5.6	5.5	163.93	30.3	130.3	205.3	194.7	10.66	19.266		
2,600.0	2,593.8	2,570.1	2,566.1	5.9	5.7	163.97	35.2	141.1	231.7	220.6	11.09	20.892		
2,700.0	2,692.6	2,666.6	2,661.8	6.2	6.0	164.01	40.1	151.9	258.1	246.6	11.53	22.390		
2,800.0	2,791.4	2,763.0	2,757.5	6.5	6.3	164.04	45.0	162.6	284.5	272.5	11.97	23.769		
2,900.0	2,890.1	2,868.0	2,861.9	6.8	6.5	164.14	49.8	173.3	309.9	297.5	12.41	24.976		
3,000.0	2,988.9	2,977.0	2,970.6	7.1	6.7	164.48	53.2	180.7	331.9	319.0	12.84	25.845		
3,100.0	3,087.7	3,087.6	3,081.1	7.4	6.9	165.01	54.9	184.3	350.4	337.1	13.28	26.388		
3,200.0	3,186.4	3,192.0	3,185.4	7.8	7.1	165.66	55.1	184.7	365.9	352.2	13.71	26.691		
3,300.0	3,285.2	3,290.7	3,284.2	8.1	7.3	166.24	55.1	184.7	381.1	366.9	14.16	26.919		
3,400.0	3,384.0	3,389.5	3,383.0	8.4	7.6	166.78	55.1	184.7	396.3	381.7	14.61	27.131		
3,500.0	3,482.8	3,488.3	3,481.8	8.8	7.8	167.30	55.1	184.7	411.3	396.2	15.08	27.280		
3,600.0	3,582.0	3,587.5	3,581.0	9.0	8.0	167.72	55.1	184.7	423.5	407.9	15.54	27.248		
3,700.0	3,681.6	3,687.1	3,680.6	9.2	8.2	168.01	55.1	184.7	432.3	416.3	15.99	27.036		
3,800.0	3,781.4	3,787.0	3,780.4	9.4	8.4	168.18	55.1	184.7	437.7	421.3	16.42	26.658		
3,900.0	3,881.4	3,886.9	3,880.4	9.6	8.6	168.25	55.1	184.7	439.7	422.9	16.83	26.132		
4,000.0	3,981.4	3,986.9	3,980.4	9.8	8.8	89.34	55.1	184.7	439.7	422.5	17.24	25.513		
4,100.0	4,081.4	4,086.9	4,080.4	10.0	9.1	89.34	55.1	184.7	439.7	422.1	17.67	24.886		
4,200.0	4,181.4	4,186.9	4,180.4	10.2	9.3	89.34	55.1	184.7	439.7	421.6	18.11	24.287		
4,300.0	4,281.4	4,286.9	4,280.4	10.4	9.5	89.34	55.1	184.7	439.7	421.2	18.54	23.716		
4,400.0	4,381.4	4,386.9	4,380.4	10.6	9.7	89.34	55.1	184.7	439.7	420.8	18.98	23.170		
4,500.0	4,481.4	4,486.9	4,480.4	10.8	9.9	89.34	55.1	184.7	439.7	420.3	19.42	22.648		
4,600.0	4,581.4	4,586.9	4,580.4	11.0	10.1	89.34	55.1	184.7	439.7	419.9	19.85	22.149		
4,700.0	4,681.4	4,686.9	4,680.4	11.2	10.4	89.34	55.1	184.7	439.7	419.4	20.29	21.670		
4,800.0	4,781.4	4,786.9	4,780.4	11.4	10.6	89.34	55.1	184.7	439.7	419.0	20.73	21.212		
4,900.0	4,881.1	4,888.5	4,881.7	11.6	10.8	91.57	60.9	184.5	439.7	418.5	21.19	20.748		
5,000.0	4,979.2	4,990.2	4,981.3	11.8	11.1	91.53	81.0	183.7	439.7	418.0	21.69	20.273		
5,100.0	5,073.5	5,091.8	5,077.0	12.1	11.3	91.46	114.9	182.4	439.7	417.4	22.27	19.748		
5,200.0	5,162.4	5,193.3	5,166.8	12.4	11.7	91.35	161.9	180.5	439.7	416.7	22.99	19.128		
5,300.0	5,244.0	5,294.7	5,249.0	12.8	12.1	91.22	221.1	178.2	439.7	415.8	23.93	18.372		
5,400.0	5,316.8	5,395.9	5,321.9	13.4	12.7	91.07	291.2	175.5	439.7	414.5	25.18	17.464		
5,500.0	5,379.4	5,497.0	5,384.1	14.1	13.5	90.90	370.6	172.4	439.7	412.9	26.77	16.425		
5,600.0	5,430.6	5,597.8	5,434.4	15.0	14.5	90.70	457.9	169.0	439.7	410.9	28.73	15.305		
5,689.9	5,466.0	5,688.3	5,468.7	16.0	15.5	90.52	541.5	165.7	439.7	408.9	30.80	14.275		
5,700.0	5,469.3	5,698.5	5,471.9	16.1	15.6	90.50	551.1	165.3	439.7	408.6	31.04	14.166		
5,800.0	5,494.8	5,798.9	5,495.9	17.3	16.9	90.28	648.4	161.5	439.7	406.0	33.64	13.068		
5,900.0	5,507.2	5,899.0	5,507.2	18.7	18.3	90.14	747.8	157.7	439.7	403.2	36.48	12.051		
6,000.0	5,513.9	5,999.0	5,513.0	20.2	19.8	90.01	847.6	153.8	439.7	400.2	39.49	11.134		
6,100.0	5,514.0	6,099.0	5,513.0	21.7	21.4	90.00	947.5	149.9	439.7	397.1	42.63	10.315		
6,200.0	5,514.0	6,199.0	5,513.0	23.3	23.0	90.00	1,047.4	146.0	439.7	393.8	45.88	9.585		
6,300.0	5,514.0	6,299.0	5,513.0	25.0	24.6	90.00	1,147.3	142.1	439.7	390.5	49.21	8.935		
6,400.0	5,514.0	6,399.0	5,513.0	26.7	26.3	90.00	1,247.3	138.2	439.7	387.1	52.62	8.356		
6,500.0	5,514.0	6,499.0	5,513.0	28.4	28.1	90.00	1,347.2	134.2	439.8	383.7	56.09	7.840		
6,600.0	5,514.0	6,599.0	5,513.0	30.1	29.8	90.00	1,447.1	130.3	439.8	380.2	59.61	7.377		

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

# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<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

Offset Design LD (09N-58W) - Tripucka State LD02-74-1AHN - Original Drilling - APD - Rev 0												Offset Site Error: 0.0 ft	
Survey Program: 0-MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre +N/-S	Offset Wellbore Centre +E/-W	Between Centres	Between Ellipses	Minimum Separation		Separation Factor
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
6,700.0	5,514.0	6,699.0	5,513.0	31.9	31.6	90.00	1,547.0	126.4	439.8	376.6	63.17	6.962	
6,800.0	5,514.0	6,799.0	5,513.0	33.7	33.4	90.00	1,647.0	122.5	439.8	373.0	66.77	6.587	
6,900.0	5,514.0	6,899.0	5,513.0	35.5	35.2	90.00	1,746.9	118.6	439.8	369.4	70.39	6.248	
7,000.0	5,514.0	6,999.0	5,513.0	37.3	37.0	90.00	1,846.8	114.7	439.8	365.8	74.04	5.941	
7,100.0	5,514.0	7,099.0	5,513.0	39.1	38.9	90.00	1,946.7	110.8	439.9	362.1	77.71	5.660	
7,200.0	5,514.0	7,199.0	5,513.0	40.9	40.7	90.00	2,046.7	106.9	439.9	358.5	81.40	5.404	
7,300.0	5,514.0	7,299.0	5,513.0	42.8	42.6	90.00	2,146.6	103.0	439.9	354.8	85.10	5.169	
7,400.0	5,514.0	7,399.0	5,513.0	44.6	44.4	90.00	2,246.5	99.1	439.9	351.1	88.82	4.953	
7,500.0	5,514.0	7,499.0	5,513.0	46.5	46.3	90.00	2,346.4	95.2	439.9	347.4	92.55	4.753	
7,600.0	5,514.0	7,599.0	5,513.0	48.4	48.1	90.00	2,446.4	91.3	439.9	343.6	96.29	4.569	
7,700.0	5,514.0	7,699.0	5,513.0	50.2	50.0	90.00	2,546.3	87.4	439.9	339.9	100.04	4.398	
7,800.0	5,514.0	7,799.0	5,513.0	52.1	51.9	90.00	2,646.2	83.5	440.0	336.2	103.80	4.239	
7,900.0	5,514.0	7,899.0	5,513.0	54.0	53.8	90.00	2,746.1	79.6	440.0	332.4	107.56	4.090	
8,000.0	5,514.0	7,999.0	5,513.0	55.9	55.7	90.00	2,846.1	75.7	440.0	328.7	111.34	3.952	
8,100.0	5,514.0	8,099.0	5,513.0	57.7	57.6	90.00	2,946.0	71.8	440.0	324.9	115.12	3.822	
8,200.0	5,514.0	8,199.0	5,513.0	59.6	59.4	90.00	3,045.9	67.9	440.0	321.1	118.90	3.701	
8,300.0	5,514.0	8,299.0	5,513.0	61.5	61.3	90.00	3,145.8	64.0	440.0	317.3	122.69	3.586	
8,400.0	5,514.0	8,399.0	5,513.0	63.4	63.2	90.00	3,245.7	60.1	440.1	313.6	126.49	3.479	
8,500.0	5,514.0	8,499.0	5,513.0	65.3	65.1	90.00	3,345.7	56.2	440.1	309.8	130.29	3.378	
8,600.0	5,514.0	8,599.0	5,513.0	67.2	67.0	90.00	3,445.6	52.3	440.1	306.0	134.09	3.282	
8,700.0	5,514.0	8,699.0	5,513.0	69.1	68.9	90.00	3,545.5	48.4	440.1	302.2	137.90	3.191	
8,800.0	5,514.0	8,799.0	5,513.0	71.0	70.8	90.00	3,645.4	44.5	440.1	298.4	141.71	3.106	
8,900.0	5,514.0	8,899.0	5,513.0	72.9	72.7	90.00	3,745.4	40.6	440.1	294.6	145.52	3.024	
9,000.0	5,514.0	8,999.0	5,513.0	74.8	74.7	90.00	3,845.3	36.7	440.1	290.8	149.34	2.947	
9,100.0	5,514.0	9,099.0	5,513.0	76.7	76.6	90.00	3,945.2	32.8	440.2	287.0	153.16	2.874	
9,200.0	5,514.0	9,199.0	5,513.0	78.6	78.5	90.00	4,045.1	28.9	440.2	283.2	156.98	2.804	
9,300.0	5,514.0	9,299.0	5,513.0	80.5	80.4	90.00	4,145.1	25.0	440.2	279.4	160.80	2.737	
9,400.0	5,514.0	9,399.0	5,513.0	82.5	82.3	90.00	4,245.0	21.1	440.2	275.6	164.63	2.674	
9,443.5	5,514.0	9,442.5	5,513.0	83.3	83.1	90.00	4,288.4	19.4	440.2	273.9	166.29	2.647	
9,479.5	5,514.0	9,469.0	5,513.0	84.0	83.6	90.00	4,314.9	18.4	440.3	272.8	167.49	2.629 SF	

# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<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

Offset Design LD (09N-58W) - Tripucka State LD02-74-1BHN - Original Drilling - APD - Rev 0													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	87.04	5.7	110.7	110.9					
100.0	100.0	98.0	98.0	0.1	0.1	87.04	5.7	110.7	110.8	110.7	0.17	655.463		
200.0	200.0	198.0	198.0	0.3	0.3	87.04	5.7	110.7	110.8	110.2	0.62	179.989		
300.0	300.0	298.0	298.0	0.5	0.5	87.04	5.7	110.7	110.8	109.8	1.07	104.044		
400.0	400.0	398.0	398.0	0.8	0.8	87.04	5.7	110.7	110.8	109.3	1.51	73.171		
500.0	500.0	498.0	498.0	1.0	1.0	87.04	5.7	110.7	110.8	108.9	1.96	56.427		
600.0	600.0	598.0	598.0	1.2	1.2	87.04	5.7	110.7	110.8	108.4	2.41	45.919		
700.0	700.0	698.0	698.0	1.4	1.4	87.04	5.7	110.7	110.8	108.0	2.86	38.710		
800.0	800.0	798.0	798.0	1.7	1.7	87.04	5.7	110.7	110.8	107.5	3.31	33.458		
900.0	900.0	898.0	898.0	1.9	1.9	87.04	5.7	110.7	110.8	107.1	3.76	29.461		
1,000.0	1,000.0	998.0	998.0	2.1	2.1	87.04	5.7	110.7	110.8	106.6	4.21	26.316		
1,100.0	1,100.0	1,098.0	1,098.0	2.3	2.3	87.04	5.7	110.7	110.8	106.2	4.66	23.779		
1,200.0	1,200.0	1,198.0	1,198.0	2.6	2.6	87.04	5.7	110.7	110.8	105.7	5.11	21.687		
1,300.0	1,300.0	1,298.0	1,298.0	2.8	2.8	87.04	5.7	110.7	110.8	105.3	5.56	19.934		
1,400.0	1,400.0	1,398.0	1,398.0	3.0	3.0	87.04	5.7	110.7	110.8	104.8	6.01	18.443		
1,500.0	1,500.0	1,498.0	1,498.0	3.2	3.2	87.04	5.7	110.7	110.8	104.4	6.46	17.160 CC, ES		
1,600.0	1,600.0	1,594.3	1,594.3	3.5	3.4	87.01	5.9	112.2	112.5	105.6	6.89	16.323		
1,700.0	1,700.0	1,690.3	1,690.2	3.7	3.6	86.94	6.3	117.0	117.4	110.1	7.31	16.058		
1,800.0	1,800.0	1,786.0	1,785.5	3.9	3.8	86.82	6.9	124.9	125.7	118.0	7.74	16.238		
1,900.0	1,900.0	1,880.7	1,879.6	4.1	4.1	165.70	7.9	135.9	139.0	130.9	8.14	17.068		
2,000.0	1,999.8	1,975.2	1,973.0	4.3	4.3	165.91	9.0	149.8	158.8	150.2	8.54	18.581		
2,100.0	2,099.5	2,072.2	2,068.9	4.5	4.6	166.29	10.3	164.9	182.7	173.8	8.94	20.444		
2,200.0	2,198.7	2,168.4	2,163.9	4.8	4.8	166.77	11.6	179.9	209.9	200.6	9.32	22.527		
2,300.0	2,297.5	2,263.8	2,258.1	5.0	5.1	167.34	12.9	194.8	240.0	230.3	9.71	24.713		
2,400.0	2,396.3	2,359.0	2,352.1	5.3	5.4	167.86	14.1	209.6	270.6	260.5	10.13	26.710		
2,500.0	2,495.1	2,454.2	2,446.1	5.6	5.7	168.28	15.4	224.4	301.2	290.6	10.55	28.537		
2,600.0	2,593.8	2,549.3	2,540.1	5.9	6.0	168.61	16.6	239.3	331.7	320.8	10.98	30.210		
2,700.0	2,692.6	2,644.5	2,634.1	6.2	6.3	168.89	17.9	254.1	362.3	350.9	11.41	31.745		
2,800.0	2,791.4	2,739.7	2,728.2	6.5	6.6	169.13	19.1	269.0	392.9	381.1	11.85	33.159		
2,900.0	2,890.1	2,834.9	2,822.2	6.8	6.9	169.33	20.4	283.8	423.5	411.2	12.29	34.462		
3,000.0	2,988.9	2,930.1	2,916.2	7.1	7.3	169.51	21.7	298.6	454.1	441.4	12.73	35.667		
3,100.0	3,087.7	3,025.3	3,010.2	7.4	7.6	169.66	22.9	313.5	484.7	471.6	13.18	36.783		
3,200.0	3,186.4	3,120.5	3,104.2	7.8	7.9	169.80	24.2	328.3	515.4	501.7	13.63	37.819		
3,300.0	3,285.2	3,215.7	3,198.3	8.1	8.2	169.92	25.4	343.2	546.0	531.9	14.08	38.783		
3,400.0	3,384.0	3,310.9	3,292.3	8.4	8.6	170.03	26.7	358.0	576.6	562.1	14.53	39.682		
3,500.0	3,482.8	3,410.1	3,390.3	8.8	8.9	170.17	28.0	373.4	606.9	591.9	15.01	40.433		
3,600.0	3,582.0	3,533.5	3,512.6	9.0	9.2	170.33	29.3	389.2	631.8	616.3	15.51	40.740		
3,700.0	3,681.6	3,660.1	3,638.8	9.2	9.5	170.46	30.2	400.0	649.1	633.1	15.99	40.588		
3,800.0	3,781.4	3,788.8	3,767.4	9.4	9.7	170.54	30.7	405.2	658.6	642.1	16.46	40.016		
3,900.0	3,881.4	3,900.8	3,879.4	9.6	9.9	170.58	30.7	405.7	661.0	644.1	16.87	39.174		
4,000.0	3,981.4	4,000.8	3,979.4	9.8	10.1	91.67	30.7	405.7	661.0	643.7	17.28	38.247		
4,100.0	4,081.4	4,100.8	4,079.4	10.0	10.3	91.67	30.7	405.7	661.0	643.3	17.71	37.330		
4,200.0	4,181.4	4,200.8	4,179.4	10.2	10.5	91.67	30.7	405.7	661.0	642.8	18.13	36.454		
4,300.0	4,281.4	4,300.8	4,279.4	10.4	10.7	91.67	30.7	405.7	661.0	642.4	18.56	35.615		
4,400.0	4,381.4	4,400.8	4,379.4	10.6	10.9	91.67	30.7	405.7	661.0	642.0	18.99	34.813		
4,500.0	4,481.4	4,500.8	4,479.4	10.8	11.1	91.67	30.7	405.7	661.0	641.6	19.42	34.044		
4,600.0	4,581.4	4,600.8	4,579.4	11.0	11.2	91.67	30.7	405.7	661.0	641.1	19.85	33.306		
4,700.0	4,681.4	4,700.8	4,679.4	11.2	11.4	91.67	30.7	405.7	661.0	640.7	20.28	32.599		
4,800.0	4,781.4	4,800.8	4,779.4	11.4	11.6	91.67	30.7	405.7	661.0	640.3	20.71	31.920		
4,900.0	4,881.1	4,901.9	4,880.5	11.6	11.8	94.36	31.0	405.7	661.4	640.2	21.14	31.279		
5,000.0	4,979.2	5,009.8	4,987.7	11.8	12.1	95.18	41.9	405.3	662.2	640.5	21.62	30.632		
5,100.0	5,073.5	5,119.3	5,093.6	12.1	12.3	95.89	69.3	404.2	662.9	640.8	22.15	29.935		

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

# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<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

Offset Design LD (09N-58W) - Tripucka State LD02-74-1BHN - Original Drilling - APD - Rev 0													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.0	5,162.4	5,230.2	5,195.3	12.4	12.6	96.47	113.1	402.5	663.7	640.9	22.80	29.111		
5,300.0	5,244.0	5,342.2	5,290.0	12.8	12.9	96.92	172.8	400.1	664.3	640.6	23.66	28.076		
5,400.0	5,316.8	5,455.1	5,374.8	13.4	13.3	97.22	247.1	397.2	664.7	639.9	24.83	26.769		
5,500.0	5,379.4	5,568.5	5,447.1	14.1	14.0	97.36	334.2	393.8	664.9	638.5	26.39	25.195		
5,600.0	5,430.6	5,682.0	5,504.9	15.0	14.9	97.34	431.6	389.9	664.8	636.5	28.37	23.437		
5,700.0	5,469.3	5,795.3	5,546.5	16.1	16.1	97.15	536.8	385.8	664.6	633.8	30.75	21.610		
5,800.0	5,494.8	5,907.9	5,570.9	17.3	17.4	96.81	646.6	381.5	664.1	630.6	33.49	19.827		
5,900.0	5,507.2	6,012.0	5,580.9	18.7	18.9	96.58	750.0	377.4	663.7	627.4	36.37	18.249		
6,000.0	5,513.9	6,118.3	5,584.5	20.2	20.4	96.28	856.2	373.2	663.3	623.8	39.48	16.803		
6,039.2	5,514.4	6,157.5	5,584.5	20.8	21.0	96.25	895.4	371.7	663.3	622.6	40.70	16.298		
6,100.0	5,514.0	6,218.3	5,584.6	21.7	21.9	96.29	956.1	369.3	663.3	620.7	42.60	15.573		
6,200.0	5,514.0	6,318.3	5,584.8	23.3	23.5	96.30	1,056.0	365.4	663.3	617.5	45.83	14.475		
6,300.0	5,514.0	6,418.3	5,585.0	25.0	25.2	96.32	1,156.0	361.5	663.3	614.2	49.15	13.497		
6,400.0	5,514.0	6,518.3	5,585.2	26.7	26.9	96.33	1,255.9	357.5	663.3	610.8	52.54	12.626		
6,500.0	5,514.0	6,618.3	5,585.3	28.4	28.6	96.35	1,355.8	353.6	663.3	607.4	55.99	11.848		
6,600.0	5,514.0	6,718.3	5,585.5	30.1	30.3	96.36	1,455.7	349.7	663.4	603.9	59.48	11.152		
6,700.0	5,514.0	6,818.3	5,585.7	31.9	32.1	96.38	1,555.7	345.7	663.4	600.3	63.02	10.526		
6,800.0	5,514.0	6,918.3	5,585.9	33.7	33.9	96.39	1,655.6	341.8	663.4	596.8	66.60	9.961		
6,900.0	5,514.0	7,018.3	5,586.0	35.5	35.7	96.41	1,755.5	337.9	663.4	593.2	70.20	9.450		
7,000.0	5,514.0	7,118.3	5,586.2	37.3	37.5	96.42	1,855.4	334.0	663.4	589.6	73.82	8.986		
7,100.0	5,514.0	7,218.3	5,586.4	39.1	39.3	96.44	1,955.3	330.0	663.4	585.9	77.47	8.563		
7,200.0	5,514.0	7,318.3	5,586.6	40.9	41.1	96.45	2,055.3	326.1	663.4	582.3	81.13	8.177		
7,300.0	5,514.0	7,418.3	5,586.7	42.8	43.0	96.47	2,155.2	322.2	663.4	578.6	84.81	7.822		
7,400.0	5,514.0	7,518.3	5,586.9	44.6	44.8	96.48	2,255.1	318.2	663.4	574.9	88.51	7.496		
7,500.0	5,514.0	7,618.3	5,587.1	46.5	46.7	96.50	2,355.0	314.3	663.4	571.2	92.21	7.194		
7,600.0	5,514.0	7,718.3	5,587.3	48.4	48.5	96.51	2,455.0	310.4	663.4	567.5	95.93	6.916		
7,700.0	5,514.0	7,818.3	5,587.4	50.2	50.4	96.53	2,554.9	306.5	663.4	563.8	99.66	6.657		
7,800.0	5,514.0	7,918.3	5,587.6	52.1	52.3	96.54	2,654.8	302.5	663.5	560.1	103.39	6.417		
7,900.0	5,514.0	8,018.3	5,587.8	54.0	54.1	96.56	2,754.7	298.6	663.5	556.3	107.14	6.193		
8,000.0	5,514.0	8,118.3	5,588.0	55.9	56.0	96.57	2,854.6	294.7	663.5	552.6	110.88	5.983		
8,100.0	5,514.0	8,218.3	5,588.1	57.7	57.9	96.59	2,954.6	290.7	663.5	548.8	114.64	5.788		
8,200.0	5,514.0	8,318.3	5,588.3	59.6	59.8	96.60	3,054.5	286.8	663.5	545.1	118.40	5.604		
8,300.0	5,514.0	8,418.3	5,588.5	61.5	61.7	96.62	3,154.4	282.9	663.5	541.3	122.16	5.431		
8,400.0	5,514.0	8,518.3	5,588.7	63.4	63.6	96.63	3,254.3	279.0	663.5	537.6	125.93	5.269		
8,500.0	5,514.0	8,618.3	5,588.8	65.3	65.5	96.65	3,354.3	275.0	663.5	533.8	129.71	5.115		
8,600.0	5,514.0	8,718.3	5,589.0	67.2	67.4	96.66	3,454.2	271.1	663.5	530.0	133.49	4.971		
8,700.0	5,514.0	8,818.3	5,589.2	69.1	69.3	96.68	3,554.1	267.2	663.5	526.3	137.27	4.834		
8,800.0	5,514.0	8,918.3	5,589.3	71.0	71.2	96.69	3,654.0	263.2	663.5	522.5	141.05	4.704		
8,900.0	5,514.0	9,018.3	5,589.5	72.9	73.1	96.71	3,753.9	259.3	663.5	518.7	144.84	4.581		
9,000.0	5,514.0	9,118.3	5,589.7	74.8	75.0	96.72	3,853.9	255.4	663.6	514.9	148.63	4.465		
9,100.0	5,514.0	9,218.3	5,589.9	76.7	76.9	96.74	3,953.8	251.5	663.6	511.1	152.42	4.354		
9,200.0	5,514.0	9,318.3	5,590.0	78.6	78.8	96.75	4,053.7	247.5	663.6	507.4	156.21	4.248		
9,300.0	5,514.0	9,418.3	5,590.2	80.5	80.7	96.77	4,153.6	243.6	663.6	503.6	160.01	4.147		
9,400.0	5,514.0	9,518.3	5,590.4	82.5	82.6	96.78	4,253.6	239.7	663.6	499.8	163.81	4.051		
9,441.5	5,514.0	9,559.8	5,590.5	83.2	83.4	96.79	4,295.1	238.0	663.6	498.2	165.38	4.012		
9,479.5	5,514.0	9,583.8	5,590.5	84.0	83.9	96.79	4,319.0	237.1	663.7	497.2	166.56	3.985 SF		

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

# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<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

Offset Design LD (09N-58W) - Tripucka State LD02-74HN - Original Drilling - APD - Rev 0													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	88.92	0.7	36.0	36.0					
100.0	100.0	99.0	99.0	0.1	0.1	88.92	0.7	36.0	36.0	35.8	0.17	211.851		
200.0	200.0	199.0	199.0	0.3	0.3	88.92	0.7	36.0	36.0	35.4	0.62	58.254		
300.0	300.0	299.0	299.0	0.5	0.5	88.92	0.7	36.0	36.0	34.9	1.07	33.726		
400.0	400.0	399.0	399.0	0.8	0.8	88.92	0.7	36.0	36.0	34.5	1.52	23.733		
500.0	500.0	499.0	499.0	1.0	1.0	88.92	0.7	36.0	36.0	34.0	1.97	18.308		
600.0	600.0	599.0	599.0	1.2	1.2	88.92	0.7	36.0	36.0	33.6	2.42	14.902		
700.0	700.0	699.0	699.0	1.4	1.4	88.92	0.7	36.0	36.0	33.1	2.87	12.564		
800.0	800.0	799.0	799.0	1.7	1.7	88.92	0.7	36.0	36.0	32.7	3.32	10.861		
900.0	900.0	899.0	899.0	1.9	1.9	88.92	0.7	36.0	36.0	32.2	3.76	9.564		
1,000.0	1,000.0	999.0	999.0	2.1	2.1	88.92	0.7	36.0	36.0	31.8	4.21	8.544		
1,100.0	1,100.0	1,099.0	1,099.0	2.3	2.3	88.92	0.7	36.0	36.0	31.3	4.66	7.720		
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	88.92	0.7	36.0	36.0	30.9	5.11	7.042		
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	88.92	0.7	36.0	36.0	30.4	5.56	6.473		
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	88.92	0.7	36.0	36.0	30.0	6.01	5.989		
1,500.0	1,500.0	1,499.0	1,499.0	3.2	3.2	88.92	0.7	36.0	36.0	29.5	6.46	5.572		
1,600.0	1,600.0	1,599.0	1,599.0	3.5	3.5	88.92	0.7	36.0	36.0	29.1	6.91	5.210		
1,700.0	1,700.0	1,699.0	1,699.0	3.7	3.7	88.92	0.7	36.0	36.0	28.6	7.36	4.891		
1,800.0	1,800.0	1,799.0	1,799.0	3.9	3.9	88.92	0.7	36.0	36.0	28.2	7.81	4.610 CC, ES		
1,900.0	1,900.0	1,899.0	1,899.0	4.1	4.1	168.38	0.7	36.0	37.7	29.5	8.25	4.574		
2,000.0	1,999.8	1,998.8	1,998.8	4.3	4.4	169.77	0.7	36.0	42.9	34.2	8.66	4.948		
2,100.0	2,099.5	2,098.4	2,098.4	4.5	4.6	171.47	0.7	36.0	51.5	42.4	9.07	5.673		
2,200.0	2,198.7	2,197.7	2,197.7	4.8	4.8	173.07	0.7	36.0	63.5	54.1	9.47	6.709		
2,300.0	2,297.5	2,298.7	2,298.7	5.0	5.0	173.68	1.8	34.7	77.3	67.4	9.88	7.827		
2,400.0	2,396.3	2,400.4	2,400.2	5.3	5.2	172.77	5.3	30.7	88.7	78.4	10.31	8.610		
2,500.0	2,495.1	2,502.6	2,502.0	5.6	5.5	170.75	11.2	24.0	97.4	86.7	10.75	9.066		
2,600.0	2,593.8	2,602.2	2,601.1	5.9	5.7	168.45	18.2	16.1	104.8	93.6	11.19	9.368		
2,700.0	2,692.6	2,701.9	2,700.2	6.2	5.9	166.47	25.1	8.2	112.4	100.7	11.64	9.652		
2,800.0	2,791.4	2,801.5	2,799.3	6.5	6.2	164.73	32.1	0.3	120.1	108.0	12.11	9.916		
2,900.0	2,890.1	2,901.2	2,898.4	6.8	6.4	163.20	39.0	-7.7	127.8	115.2	12.58	10.162		
3,000.0	2,988.9	3,000.8	2,997.5	7.1	6.7	161.85	46.0	-15.6	135.7	122.6	13.06	10.390		
3,100.0	3,087.7	3,100.5	3,096.5	7.4	6.9	160.65	52.9	-23.5	143.6	130.0	13.55	10.601		
3,200.0	3,186.4	3,197.8	3,193.5	7.8	7.2	159.82	59.2	-30.6	152.1	138.1	14.02	10.850		
3,300.0	3,285.2	3,293.9	3,289.3	8.1	7.3	159.94	63.4	-35.4	162.6	148.2	14.44	11.259		
3,400.0	3,384.0	3,389.4	3,384.8	8.4	7.5	160.85	65.4	-37.7	175.3	160.5	14.85	11.802		
3,500.0	3,482.8	3,486.4	3,481.8	8.8	7.7	162.30	65.7	-38.0	189.6	174.4	15.27	12.418		
3,600.0	3,582.0	3,585.6	3,581.0	9.0	7.9	163.44	65.7	-38.0	201.6	185.9	15.71	12.832		
3,700.0	3,681.6	3,685.2	3,680.6	9.2	8.1	164.19	65.7	-38.0	210.2	194.1	16.14	13.028		
3,800.0	3,781.4	3,785.1	3,780.4	9.4	8.4	164.62	65.7	-38.0	215.6	199.0	16.55	13.024		
3,900.0	3,881.4	3,885.0	3,880.4	9.6	8.6	164.77	65.7	-38.0	217.6	200.6	16.95	12.837		
4,000.0	3,981.4	3,985.0	3,980.4	9.8	8.8	85.87	65.7	-38.0	217.6	200.2	17.33	12.551		
4,100.0	4,081.4	4,085.0	4,080.4	10.0	9.0	85.87	65.7	-38.0	217.6	199.8	17.77	12.244		
4,200.0	4,181.4	4,185.0	4,180.4	10.2	9.2	85.87	65.7	-38.0	217.6	199.4	18.20	11.952		
4,300.0	4,281.4	4,285.0	4,280.4	10.4	9.5	85.87	65.7	-38.0	217.6	198.9	18.64	11.672		
4,400.0	4,381.4	4,385.0	4,380.4	10.6	9.7	85.87	65.7	-38.0	217.6	198.5	19.08	11.405		
4,500.0	4,481.4	4,485.0	4,480.4	10.8	9.9	85.87	65.7	-38.0	217.6	198.1	19.51	11.150		
4,600.0	4,581.4	4,585.0	4,580.4	11.0	10.1	85.87	65.7	-38.0	217.6	197.6	19.95	10.905		
4,700.0	4,681.4	4,685.0	4,680.4	11.2	10.3	85.87	65.7	-38.0	217.6	197.2	20.39	10.671		
4,800.0	4,781.4	4,785.0	4,780.4	11.4	10.6	85.87	65.7	-38.0	217.6	196.7	20.83	10.446		
4,900.0	4,881.1	4,884.7	4,880.1	11.6	10.8	89.53	66.0	-38.0	217.5	196.2	21.28	10.218		
4,917.8	4,898.8	4,902.4	4,897.8	11.6	10.8	89.99	66.7	-38.0	217.4	196.1	21.36	10.179		
5,000.0	4,979.2	4,984.7	4,979.5	11.8	11.0	92.11	75.7	-38.4	217.6	195.9	21.74	10.007		

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

# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<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

Offset Design LD (09N-58W) - Tripucka State LD02-74HN - Original Drilling - APD - Rev 0													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,073.5	5,086.0	5,077.9	12.1	11.3	94.65	99.5	-39.3	218.2	195.9	22.27	9.797		
5,200.0	5,162.4	5,188.8	5,173.2	12.4	11.6	97.10	137.6	-40.8	219.2	196.3	22.90	9.572		
5,300.0	5,244.0	5,293.0	5,263.3	12.8	12.0	99.40	189.8	-42.8	220.5	196.8	23.68	9.309		
5,400.0	5,316.8	5,398.6	5,345.9	13.4	12.6	101.51	255.3	-45.4	222.0	197.3	24.71	8.985		
5,500.0	5,379.4	5,505.5	5,418.8	14.1	13.3	103.37	333.4	-48.4	223.6	197.6	26.05	8.583		
5,600.0	5,430.6	5,613.6	5,479.9	15.0	14.3	104.94	422.4	-51.9	225.2	197.4	27.78	8.107		
5,700.0	5,469.3	5,722.8	5,527.2	16.1	15.5	106.21	520.5	-55.7	226.6	196.7	29.91	7.578		
5,800.0	5,494.8	5,832.7	5,559.3	17.3	16.8	107.13	625.5	-59.8	227.7	195.3	32.43	7.023		
5,900.0	5,507.2	5,941.7	5,575.0	18.7	18.4	107.62	733.2	-64.0	228.4	193.1	35.25	6.479		
6,000.0	5,513.9	6,046.0	5,582.8	20.2	19.9	107.79	837.0	-68.0	228.6	190.4	38.22	5.982		
6,100.0	5,514.0	6,147.8	5,583.0	21.7	21.5	107.83	938.8	-72.0	228.7	187.4	41.26	5.543		
6,200.0	5,514.0	6,247.8	5,583.0	23.3	23.1	107.82	1,038.7	-75.8	228.7	184.4	44.36	5.156		
6,300.0	5,514.0	6,347.8	5,583.0	25.0	24.8	107.82	1,138.7	-79.7	228.7	181.2	47.55	4.810		
6,400.0	5,514.0	6,447.8	5,583.0	26.7	26.4	107.82	1,238.6	-83.6	228.8	178.0	50.82	4.502		
6,500.0	5,514.0	6,547.8	5,583.0	28.4	28.2	107.82	1,338.5	-87.5	228.8	174.7	54.14	4.226		
6,600.0	5,514.0	6,647.8	5,583.0	30.1	29.9	107.81	1,438.4	-91.4	228.8	171.3	57.50	3.979		
6,700.0	5,514.0	6,747.8	5,583.0	31.9	31.7	107.81	1,538.4	-95.3	228.9	168.0	60.91	3.757		
6,800.0	5,514.0	6,847.8	5,583.0	33.7	33.5	107.81	1,638.3	-99.2	228.9	164.5	64.35	3.557		
6,900.0	5,514.0	6,947.8	5,583.0	35.5	35.3	107.81	1,738.2	-103.1	228.9	161.1	67.82	3.375		
7,000.0	5,514.0	7,047.8	5,583.0	37.3	37.1	107.81	1,838.1	-106.9	228.9	157.6	71.31	3.210		
7,100.0	5,514.0	7,147.8	5,583.0	39.1	38.9	107.80	1,938.1	-110.8	229.0	154.1	74.83	3.060		
7,200.0	5,514.0	7,247.8	5,583.0	40.9	40.8	107.80	2,038.0	-114.7	229.0	150.6	78.36	2.922		
7,300.0	5,514.0	7,347.8	5,583.0	42.8	42.6	107.80	2,137.9	-118.6	229.0	147.1	81.91	2.796		
7,400.0	5,514.0	7,447.8	5,583.0	44.6	44.5	107.80	2,237.8	-122.5	229.1	143.6	85.47	2.680		
7,500.0	5,514.0	7,547.8	5,583.0	46.5	46.3	107.79	2,337.7	-126.4	229.1	140.0	89.05	2.573		
7,600.0	5,514.0	7,647.8	5,583.0	48.4	48.2	107.79	2,437.7	-130.3	229.1	136.5	92.63	2.473		
7,700.0	5,514.0	7,747.8	5,583.0	50.2	50.1	107.79	2,537.6	-134.2	229.1	132.9	96.23	2.381		
7,800.0	5,514.0	7,847.8	5,583.0	52.1	52.0	107.79	2,637.5	-138.0	229.2	129.3	99.83	2.296		
7,900.0	5,514.0	7,947.8	5,583.0	54.0	53.8	107.79	2,737.4	-141.9	229.2	125.8	103.44	2.216		
8,000.0	5,514.0	8,047.8	5,583.0	55.9	55.7	107.78	2,837.4	-145.8	229.2	122.2	107.06	2.141		
8,100.0	5,514.0	8,147.8	5,583.0	57.7	57.6	107.78	2,937.3	-149.7	229.3	118.6	110.68	2.071		
8,200.0	5,514.0	8,247.8	5,583.0	59.6	59.5	107.78	3,037.2	-153.6	229.3	115.0	114.31	2.006		
8,300.0	5,514.0	8,347.8	5,583.0	61.5	61.4	107.78	3,137.1	-157.5	229.3	111.4	117.95	1.944 Level 3		
8,400.0	5,514.0	8,447.8	5,583.0	63.4	63.3	107.77	3,237.1	-161.4	229.3	107.8	121.59	1.886 Level 3		
8,500.0	5,514.0	8,547.8	5,583.0	65.3	65.2	107.77	3,337.0	-165.2	229.4	104.1	125.23	1.832 Level 3		
8,600.0	5,514.0	8,647.8	5,583.0	67.2	67.1	107.77	3,436.9	-169.1	229.4	100.5	128.88	1.780 Level 3		
8,700.0	5,514.0	8,747.8	5,583.0	69.1	69.0	107.77	3,536.8	-173.0	229.4	96.9	132.53	1.731 Level 3		
8,800.0	5,514.0	8,847.8	5,583.0	71.0	70.9	107.76	3,636.8	-176.9	229.5	93.3	136.18	1.685 Level 3		
8,900.0	5,514.0	8,947.8	5,583.0	72.9	72.8	107.76	3,736.7	-180.8	229.5	89.7	139.84	1.641 Level 3		
9,000.0	5,514.0	9,047.8	5,583.0	74.8	74.7	107.76	3,836.6	-184.7	229.5	86.0	143.50	1.599 Level 3		
9,100.0	5,514.0	9,147.8	5,583.0	76.7	76.6	107.76	3,936.5	-188.6	229.5	82.4	147.16	1.560 Level 3		
9,200.0	5,514.0	9,247.8	5,583.0	78.6	78.5	107.76	4,036.5	-192.5	229.6	78.7	150.83	1.522 Level 3		
9,300.0	5,514.0	9,347.8	5,583.0	80.5	80.4	107.75	4,136.4	-196.3	229.6	75.1	154.50	1.486 Level 2		
9,400.0	5,514.0	9,447.8	5,583.0	82.5	82.3	107.75	4,236.3	-200.2	229.6	71.5	158.17	1.452 Level 2		
9,445.1	5,514.0	9,492.9	5,583.0	83.3	83.2	107.75	4,281.3	-202.0	229.6	69.8	159.82	1.437 Level 2		
9,479.5	5,514.0	9,522.2	5,583.0	84.0	83.8	107.75	4,310.7	-203.1	229.7	68.7	160.99	1.427 Level 2, SF		

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



# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<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

Offset Design LD (09N-58W) - Tripucka State LD02-75-1AHN - Original Drilling - APD - Rev 0													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	1.0	1.0	0.0	0.0	-91.08	-0.7	-38.8	38.8					
100.0	100.0	101.0	101.0	0.1	0.1	-91.08	-0.7	-38.8	38.8	38.6	0.17	224.047		
200.0	200.0	201.0	201.0	0.3	0.3	-91.08	-0.7	-38.8	38.8	38.2	0.62	62.280		
300.0	300.0	301.0	301.0	0.5	0.5	-91.08	-0.7	-38.8	38.8	37.7	1.07	36.167		
400.0	400.0	401.0	401.0	0.8	0.8	-91.08	-0.7	-38.8	38.8	37.3	1.52	25.483		
500.0	500.0	501.0	501.0	1.0	1.0	-91.08	-0.7	-38.8	38.8	36.8	1.97	19.671		
600.0	600.0	601.0	601.0	1.2	1.2	-91.08	-0.7	-38.8	38.8	36.4	2.42	16.018		
700.0	700.0	701.0	701.0	1.4	1.4	-91.08	-0.7	-38.8	38.8	35.9	2.87	13.510		
800.0	800.0	801.0	801.0	1.7	1.7	-91.08	-0.7	-38.8	38.8	35.5	3.32	11.680		
900.0	900.0	901.0	901.0	1.9	1.9	-91.08	-0.7	-38.8	38.8	35.0	3.77	10.287		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-91.08	-0.7	-38.8	38.8	34.6	4.22	9.191		
1,100.0	1,100.0	1,101.0	1,101.0	2.3	2.3	-91.08	-0.7	-38.8	38.8	34.1	4.67	8.306		
1,200.0	1,200.0	1,201.0	1,201.0	2.6	2.6	-91.08	-0.7	-38.8	38.8	33.7	5.12	7.576		
1,300.0	1,300.0	1,301.0	1,301.0	2.8	2.8	-91.08	-0.7	-38.8	38.8	33.2	5.57	6.965		
1,400.0	1,400.0	1,401.0	1,401.0	3.0	3.0	-91.08	-0.7	-38.8	38.8	32.8	6.02	6.444		
1,466.3	1,466.3	1,467.3	1,467.3	3.2	3.2	-91.08	-0.7	-38.8	38.8	32.5	6.32	6.140 CC		
1,500.0	1,500.0	1,501.0	1,501.0	3.2	3.2	-91.08	-0.7	-38.8	38.8	32.3	6.47	5.997 ES		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.4	-90.86	-0.6	-40.5	40.5	33.6	6.90	5.872		
1,700.0	1,700.0	1,698.0	1,697.9	3.7	3.6	-90.33	-0.3	-45.6	45.7	38.4	7.33	6.237		
1,800.0	1,800.0	1,795.9	1,795.4	3.9	3.9	-89.66	0.3	-54.0	54.3	46.5	7.76	6.993		
1,900.0	1,900.0	1,893.4	1,892.2	4.1	4.1	-10.34	1.1	-65.7	64.6	56.4	8.16	7.910		
2,000.0	1,999.8	1,990.5	1,988.1	4.3	4.3	-10.37	2.2	-80.6	74.8	66.2	8.56	8.739		
2,100.0	2,099.5	2,087.3	2,083.2	4.5	4.6	-10.66	3.4	-98.6	85.0	76.0	8.95	9.491		
2,200.0	2,198.7	2,186.5	2,180.2	4.8	4.9	-11.21	4.8	-119.2	93.9	84.5	9.35	10.038		
2,300.0	2,297.5	2,286.3	2,277.8	5.0	5.3	-12.04	6.2	-139.9	99.8	90.1	9.77	10.216		
2,400.0	2,396.3	2,386.1	2,375.4	5.3	5.6	-12.84	7.7	-160.7	105.4	95.2	10.22	10.311		
2,500.0	2,495.1	2,485.9	2,473.1	5.6	6.0	-13.56	9.1	-181.5	111.0	100.3	10.68	10.390		
2,600.0	2,593.8	2,585.8	2,570.7	5.9	6.4	-14.21	10.5	-202.2	116.5	105.4	11.14	10.457		
2,700.0	2,692.6	2,685.6	2,668.4	6.2	6.8	-14.80	12.0	-223.0	122.1	110.5	11.62	10.514		
2,800.0	2,791.4	2,785.5	2,766.0	6.5	7.2	-15.34	13.4	-243.7	127.7	115.6	12.09	10.561		
2,900.0	2,890.1	2,885.3	2,863.7	6.8	7.6	-15.84	14.8	-264.5	133.3	120.8	12.58	10.601		
3,000.0	2,988.9	2,985.1	2,961.3	7.1	8.0	-16.29	16.3	-285.2	139.0	125.9	13.07	10.634		
3,100.0	3,087.7	3,085.0	3,059.0	7.4	8.5	-16.71	17.7	-306.0	144.6	131.0	13.56	10.662		
3,200.0	3,186.4	3,184.8	3,156.6	7.8	8.9	-17.10	19.1	-326.8	150.2	136.2	14.06	10.684		
3,300.0	3,285.2	3,284.6	3,254.2	8.1	9.3	-17.46	20.6	-347.5	155.9	141.3	14.56	10.703		
3,400.0	3,384.0	3,384.5	3,351.9	8.4	9.7	-17.79	22.0	-368.3	161.5	146.4	15.07	10.717		
3,500.0	3,482.8	3,484.3	3,449.5	8.8	10.2	-18.09	23.4	-389.0	167.5	151.9	15.58	10.745		
3,600.0	3,582.0	3,583.9	3,546.9	9.0	10.6	-18.11	24.9	-409.7	176.2	160.1	16.07	10.964		
3,700.0	3,681.6	3,689.6	3,650.6	9.2	11.0	-17.88	26.3	-430.0	186.6	170.1	16.50	11.306		
3,800.0	3,781.4	3,796.0	3,755.8	9.4	11.3	-17.56	27.4	-446.6	196.7	179.8	16.90	11.636		
3,900.0	3,881.4	3,903.0	3,861.9	9.6	11.5	-17.16	28.3	-459.3	206.5	189.2	17.26	11.959		
4,000.0	3,981.4	4,010.4	3,969.0	9.8	11.8	-95.66	28.9	-468.1	214.5	196.9	17.60	12.188		
4,100.0	4,081.4	4,118.4	4,076.9	10.0	12.0	-95.45	29.2	-472.8	218.9	200.9	18.01	12.151		
4,200.0	4,181.4	4,223.9	4,182.4	10.2	12.1	-95.41	29.3	-473.8	219.7	201.3	18.43	11.925		
4,300.0	4,281.4	4,323.9	4,282.4	10.4	12.3	-95.41	29.3	-473.8	219.7	200.9	18.84	11.661		
4,400.0	4,381.4	4,423.9	4,382.4	10.6	12.5	-95.41	29.3	-473.8	219.7	200.5	19.26	11.408		
4,500.0	4,481.4	4,523.9	4,482.4	10.8	12.6	-95.41	29.3	-473.8	219.7	200.1	19.68	11.164		
4,600.0	4,581.4	4,623.9	4,582.4	11.0	12.8	-95.41	29.3	-473.8	219.7	199.6	20.11	10.930		
4,700.0	4,681.4	4,723.9	4,682.4	11.2	13.0	-95.41	29.3	-473.8	219.7	199.2	20.53	10.705		
4,800.0	4,781.4	4,823.9	4,782.4	11.4	13.1	-95.41	29.3	-473.8	219.7	198.8	20.95	10.488		
4,900.0	4,881.1	4,924.1	4,882.6	11.6	13.3	-94.55	29.5	-473.8	220.1	198.7	21.46	10.259		
5,000.0	4,979.2	5,026.8	4,984.8	11.8	13.5	-97.07	39.5	-474.2	221.1	199.1	21.98	10.058		

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

# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<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

Offset Design LD (09N-58W) - Tripucka State LD02-75-1AHN - Original Drilling - APD - Rev 0													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,073.5	5,131.1	5,085.8	12.1	13.7	-99.43	64.5	-475.2	222.5	199.9	22.58	9.850		
5,200.0	5,162.4	5,236.7	5,183.5	12.4	14.0	-101.60	104.5	-476.8	224.1	200.8	23.30	9.618		
5,300.0	5,244.0	5,343.7	5,275.4	12.8	14.3	-103.52	159.2	-478.9	225.8	201.6	24.16	9.345		
5,400.0	5,316.8	5,452.0	5,359.0	13.4	14.7	-105.15	227.9	-481.7	227.4	202.2	25.22	9.018		
5,500.0	5,379.4	5,561.4	5,431.9	14.1	15.3	-106.46	309.1	-484.9	229.0	202.4	26.53	8.630		
5,600.0	5,430.6	5,671.6	5,492.0	15.0	16.1	-107.43	401.3	-488.5	230.2	202.1	28.11	8.187		
5,700.0	5,469.3	5,782.5	5,537.5	16.1	17.1	-108.03	502.2	-492.5	231.0	201.0	30.00	7.701		
5,800.0	5,494.8	5,893.7	5,567.0	17.3	18.4	-108.27	609.2	-496.8	231.4	199.2	32.18	7.190		
5,895.2	5,508.1	5,996.3	5,579.8	18.6	19.7	-107.89	710.9	-500.8	230.9	196.3	34.64	6.667		
5,900.0	5,507.2	6,001.2	5,580.2	18.7	19.7	-108.21	715.7	-501.0	231.3	196.7	34.69	6.668		
6,000.0	5,513.9	6,107.3	5,586.5	20.2	21.2	-108.04	821.6	-505.2	231.2	193.7	37.47	6.170		
6,030.2	5,514.3	6,137.5	5,586.6	20.6	21.6	-107.97	851.8	-506.4	231.1	192.7	38.37	6.023		
6,100.0	5,514.0	6,207.3	5,586.7	21.7	22.7	-108.06	921.5	-509.2	231.3	190.8	40.41	5.723		
6,200.0	5,514.0	6,307.3	5,586.9	23.3	24.2	-108.10	1,021.4	-513.2	231.4	187.9	43.50	5.319		
6,300.0	5,514.0	6,407.3	5,587.1	25.0	25.8	-108.14	1,121.3	-517.1	231.5	184.8	46.68	4.959		
6,400.0	5,514.0	6,507.3	5,587.2	26.7	27.4	-108.17	1,221.3	-521.1	231.6	181.6	49.93	4.638		
6,500.0	5,514.0	6,607.3	5,587.4	28.4	29.1	-108.21	1,321.2	-525.1	231.7	178.4	53.23	4.352		
6,600.0	5,514.0	6,707.3	5,587.6	30.1	30.8	-108.25	1,421.1	-529.0	231.8	175.2	56.58	4.096		
6,700.0	5,514.0	6,807.3	5,587.8	31.9	32.6	-108.28	1,521.0	-533.0	231.9	171.9	59.97	3.866		
6,800.0	5,514.0	6,907.3	5,587.9	33.7	34.3	-108.32	1,620.9	-537.0	232.0	168.6	63.40	3.659		
6,900.0	5,514.0	7,007.3	5,588.1	35.5	36.1	-108.36	1,720.9	-540.9	232.1	165.2	66.85	3.472		
7,000.0	5,514.0	7,107.3	5,588.3	37.3	37.9	-108.40	1,820.8	-544.9	232.2	161.9	70.32	3.302		
7,100.0	5,514.0	7,207.3	5,588.5	39.1	39.7	-108.43	1,920.7	-548.9	232.3	158.5	73.81	3.147		
7,200.0	5,514.0	7,307.3	5,588.6	40.9	41.5	-108.47	2,020.6	-552.8	232.4	155.1	77.32	3.005		
7,300.0	5,514.0	7,407.3	5,588.8	42.8	43.3	-108.51	2,120.5	-556.8	232.5	151.6	80.85	2.876		
7,400.0	5,514.0	7,507.3	5,589.0	44.6	45.1	-108.54	2,220.5	-560.8	232.6	148.2	84.38	2.756		
7,500.0	5,514.0	7,607.3	5,589.2	46.5	47.0	-108.58	2,320.4	-564.7	232.7	144.8	87.93	2.646		
7,600.0	5,514.0	7,707.3	5,589.3	48.4	48.8	-108.62	2,420.3	-568.7	232.8	141.3	91.48	2.545		
7,700.0	5,514.0	7,807.3	5,589.5	50.2	50.7	-108.65	2,520.2	-572.7	232.9	137.9	95.05	2.450		
7,800.0	5,514.0	7,907.3	5,589.7	52.1	52.5	-108.69	2,620.2	-576.6	233.0	134.4	98.62	2.363		
7,900.0	5,514.0	8,007.3	5,589.9	54.0	54.4	-108.73	2,720.1	-580.6	233.1	130.9	102.20	2.281		
8,000.0	5,514.0	8,107.3	5,590.0	55.9	56.3	-108.76	2,820.0	-584.6	233.2	127.4	105.78	2.205		
8,100.0	5,514.0	8,207.3	5,590.2	57.7	58.1	-108.80	2,919.9	-588.5	233.3	124.0	109.37	2.133		
8,200.0	5,514.0	8,307.3	5,590.4	59.6	60.0	-108.84	3,019.8	-592.5	233.4	120.5	112.96	2.066		
8,300.0	5,514.0	8,407.3	5,590.6	61.5	61.9	-108.87	3,119.8	-596.5	233.5	117.0	116.55	2.004		
8,400.0	5,514.0	8,507.3	5,590.7	63.4	63.8	-108.91	3,219.7	-600.4	233.6	113.5	120.15	1.944 Level 3		
8,500.0	5,514.0	8,607.3	5,590.9	65.3	65.7	-108.95	3,319.6	-604.4	233.7	110.0	123.75	1.889 Level 3		
8,600.0	5,514.0	8,707.3	5,591.1	67.2	67.6	-108.98	3,419.5	-608.4	233.8	106.5	127.36	1.836 Level 3		
8,700.0	5,514.0	8,807.3	5,591.2	69.1	69.5	-109.02	3,519.4	-612.3	233.9	103.0	130.96	1.786 Level 3		
8,800.0	5,514.0	8,907.3	5,591.4	71.0	71.4	-109.06	3,619.4	-616.3	234.0	99.5	134.57	1.739 Level 3		
8,900.0	5,514.0	9,007.3	5,591.6	72.9	73.2	-109.09	3,719.3	-620.3	234.2	96.0	138.18	1.695 Level 3		
9,000.0	5,514.0	9,107.3	5,591.8	74.8	75.1	-109.13	3,819.2	-624.2	234.3	92.5	141.79	1.652 Level 3		
9,100.0	5,514.0	9,207.3	5,591.9	76.7	77.0	-109.16	3,919.1	-628.2	234.4	89.0	145.40	1.612 Level 3		
9,200.0	5,514.0	9,307.3	5,592.1	78.6	79.0	-109.20	4,019.0	-632.2	234.5	85.5	149.01	1.573 Level 3		
9,300.0	5,514.0	9,407.3	5,592.3	80.5	80.9	-109.24	4,119.0	-636.1	234.6	81.9	152.62	1.537 Level 3		
9,400.0	5,514.0	9,507.3	5,592.5	82.5	82.8	-109.27	4,218.9	-640.1	234.7	78.4	156.24	1.502 Level 3		
9,479.5	5,514.0	9,586.8	5,592.6	84.0	84.3	-109.30	4,298.3	-643.3	234.8	75.7	159.11	1.475 Level 2, SF		

# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<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

Offset Design LD (09N-58W) - Tripucka State LD02-75HN - Original Drilling - APD - Rev 0													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	2.0	2.0	0.0	0.0	-91.08	-1.4	-74.8	74.8					
100.0	100.0	102.0	102.0	0.1	0.1	-91.08	-1.4	-74.8	74.8	74.6	0.18	426.552		
200.0	200.0	202.0	202.0	0.3	0.3	-91.08	-1.4	-74.8	74.8	74.2	0.62	119.680		
300.0	300.0	302.0	302.0	0.5	0.5	-91.08	-1.4	-74.8	74.8	73.7	1.07	69.605		
400.0	400.0	402.0	402.0	0.8	0.8	-91.08	-1.4	-74.8	74.8	73.3	1.52	49.072		
500.0	500.0	502.0	502.0	1.0	1.0	-91.08	-1.4	-74.8	74.8	72.8	1.97	37.894		
600.0	600.0	602.0	602.0	1.2	1.2	-91.08	-1.4	-74.8	74.8	72.4	2.42	30.864		
700.0	700.0	702.0	702.0	1.4	1.4	-91.08	-1.4	-74.8	74.8	71.9	2.87	26.034		
800.0	800.0	802.0	802.0	1.7	1.7	-91.08	-1.4	-74.8	74.8	71.5	3.32	22.511		
900.0	900.0	902.0	902.0	1.9	1.9	-91.08	-1.4	-74.8	74.8	71.0	3.77	19.828		
1,000.0	1,000.0	1,002.0	1,002.0	2.1	2.1	-91.08	-1.4	-74.8	74.8	70.6	4.22	17.716		
1,100.0	1,100.0	1,102.0	1,102.0	2.3	2.3	-91.08	-1.4	-74.8	74.8	70.1	4.67	16.011		
1,166.0	1,166.0	1,168.0	1,168.0	2.5	2.5	-91.08	-1.4	-74.8	74.8	69.8	4.97	15.055 CC		
1,200.0	1,200.0	1,201.9	1,201.9	2.6	2.6	-91.08	-1.4	-74.8	74.8	69.7	5.12	14.607 ES		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-91.06	-1.4	-76.5	76.6	71.0	5.55	13.788		
1,400.0	1,400.0	1,396.6	1,396.4	3.0	3.0	-90.99	-1.4	-81.5	81.7	75.7	5.97	13.676		
1,500.0	1,500.0	1,493.3	1,492.8	3.2	3.2	-90.90	-1.4	-89.8	90.3	83.8	6.41	14.080		
1,600.0	1,600.0	1,589.4	1,588.2	3.5	3.4	-90.80	-1.4	-101.2	102.1	95.3	6.86	14.886		
1,700.0	1,700.0	1,684.6	1,682.3	3.7	3.7	-90.70	-1.4	-115.7	117.3	110.0	7.34	15.993		
1,800.0	1,800.0	1,778.7	1,774.8	3.9	3.9	-90.61	-1.4	-133.0	135.8	127.9	7.84	17.318		
1,900.0	1,900.0	1,871.9	1,865.8	4.1	4.3	-11.66	-1.4	-153.2	155.8	147.7	8.11	19.206		
2,000.0	1,999.8	1,968.5	1,959.5	4.3	4.6	-11.85	-1.4	-176.4	174.8	166.3	8.52	20.508		
2,100.0	2,099.5	2,067.3	2,055.3	4.5	5.0	-12.21	-1.4	-200.3	190.6	181.7	8.94	21.321		
2,200.0	2,198.7	2,166.4	2,151.6	4.8	5.5	-12.74	-1.4	-224.3	203.1	193.8	9.36	21.699		
2,300.0	2,297.5	2,266.0	2,248.1	5.0	5.9	-13.43	-1.4	-248.4	212.6	202.8	9.80	21.692		
2,400.0	2,396.3	2,365.5	2,344.7	5.3	6.4	-14.10	-1.4	-272.5	221.8	211.5	10.27	21.593		
2,500.0	2,495.1	2,465.1	2,441.3	5.6	6.8	-14.73	-1.4	-296.6	230.9	220.2	10.75	21.490		
2,600.0	2,593.8	2,564.6	2,537.9	5.9	7.3	-15.30	-1.4	-320.7	240.1	228.9	11.23	21.385		
2,700.0	2,692.6	2,664.2	2,634.5	6.2	7.8	-15.83	-1.4	-344.7	249.3	237.6	11.72	21.277		
2,800.0	2,791.4	2,763.7	2,731.1	6.5	8.3	-16.32	-1.4	-368.8	258.5	246.3	12.21	21.170		
2,900.0	2,890.1	2,863.3	2,827.7	6.8	8.8	-16.78	-1.4	-392.9	267.8	255.0	12.71	21.063		
3,000.0	2,988.9	2,962.8	2,924.3	7.1	9.3	-17.21	-1.4	-417.0	277.0	263.8	13.22	20.957		
3,100.0	3,087.7	3,062.4	3,020.9	7.4	9.8	-17.61	-1.4	-441.1	286.3	272.5	13.73	20.853		
3,200.0	3,186.4	3,161.9	3,117.5	7.8	10.3	-17.99	-1.4	-465.2	295.6	281.3	14.24	20.750		
3,300.0	3,285.2	3,261.5	3,214.1	8.1	10.8	-18.34	-1.4	-489.3	304.9	290.1	14.76	20.650		
3,400.0	3,384.0	3,361.0	3,310.7	8.4	11.3	-18.68	-1.4	-513.4	314.2	298.9	15.29	20.552		
3,500.0	3,482.8	3,460.5	3,407.2	8.8	11.8	-19.00	-1.4	-537.4	323.8	307.9	15.81	20.476		
3,600.0	3,582.0	3,559.8	3,503.5	9.0	12.3	-19.19	-1.4	-561.4	336.1	319.8	16.30	20.615		
3,700.0	3,681.6	3,658.5	3,599.3	9.2	12.8	-19.21	-1.4	-585.3	351.7	334.9	16.77	20.977		
3,800.0	3,781.4	3,756.7	3,694.6	9.4	13.3	-19.08	-1.4	-609.1	370.5	353.3	17.20	21.546		
3,900.0	3,881.4	3,869.1	3,804.2	9.6	13.8	-18.80	-1.4	-634.2	390.8	373.2	17.60	22.210		
4,000.0	3,981.4	3,983.2	3,916.3	9.8	14.1	-97.32	-1.4	-655.3	409.2	391.2	17.96	22.786		
4,100.0	4,081.4	4,098.8	4,030.6	10.0	14.5	-97.03	-1.4	-672.1	423.6	405.2	18.41	23.014		
4,200.0	4,181.4	4,215.6	4,146.8	10.2	14.7	-96.83	-1.4	-684.4	434.0	415.2	18.85	23.029		
4,300.0	4,281.4	4,333.3	4,264.2	10.4	14.9	-96.71	-1.4	-692.0	440.4	421.2	19.28	22.843		
4,400.0	4,381.4	4,451.3	4,382.2	10.6	15.1	-96.67	-1.4	-694.8	442.8	423.0	19.71	22.466		
4,500.0	4,481.4	4,552.5	4,483.4	10.8	15.3	-96.67	-1.4	-694.8	442.8	422.7	20.11	22.015		
4,600.0	4,581.4	4,652.5	4,583.4	11.0	15.4	-96.67	-1.4	-694.8	442.8	422.2	20.52	21.577		
4,700.0	4,681.4	4,752.5	4,683.4	11.2	15.5	-96.67	-1.4	-694.8	442.8	421.8	20.93	21.155		
4,800.0	4,781.4	4,852.5	4,783.4	11.4	15.7	-96.67	-1.4	-694.8	442.8	421.4	21.34	20.747		
4,900.0	4,881.1	4,955.5	4,886.3	11.6	15.8	-94.84	1.1	-694.9	443.0	421.2	21.82	20.300		
5,000.0	4,979.2	5,061.3	4,990.6	11.8	16.0	-95.32	17.8	-695.5	443.4	421.1	22.30	19.880		

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

# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<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

Offset Design LD (09N-58W) - Tripucka State LD02-75HN - Original Drilling - APD - Rev 0													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	5,073.5	5,167.6	5,091.9	12.1	16.2	-95.69	49.8	-696.8	443.6	420.8	22.86	19.404		
5,200.0	5,162.4	5,274.3	5,187.7	12.4	16.4	-95.95	96.6	-698.6	443.8	420.2	23.57	18.833		
5,300.0	5,244.0	5,381.3	5,275.6	12.8	16.7	-96.08	157.3	-700.9	443.9	419.4	24.48	18.133		
5,400.0	5,316.8	5,488.3	5,353.6	13.4	17.1	-96.09	230.4	-703.8	443.9	418.2	25.68	17.288		
5,500.0	5,379.4	5,595.3	5,419.8	14.1	17.6	-95.97	314.3	-707.1	443.8	416.6	27.21	16.312		
5,600.0	5,430.6	5,702.1	5,472.6	15.0	18.2	-95.73	406.9	-710.7	443.6	414.5	29.09	15.245		
5,700.0	5,469.3	5,808.4	5,511.0	16.1	19.1	-95.37	505.9	-714.5	443.3	411.9	31.34	14.144		
5,800.0	5,494.8	5,914.2	5,534.3	17.3	20.1	-94.90	608.9	-718.5	442.9	409.0	33.89	13.067		
5,900.0	5,507.2	6,016.4	5,544.5	18.7	21.3	-94.59	710.5	-722.5	442.7	406.0	36.67	12.072		
6,000.0	5,513.9	6,119.4	5,548.6	20.2	22.6	-94.23	813.3	-726.5	442.4	402.8	39.67	11.153		
6,100.0	5,514.0	6,219.4	5,548.6	21.7	24.0	-94.23	913.2	-730.4	442.4	399.6	42.77	10.343		
6,200.0	5,514.0	6,319.4	5,548.6	23.3	25.5	-94.23	1,013.1	-734.3	442.4	396.4	46.00	9.616		
6,300.0	5,514.0	6,419.4	5,548.6	25.0	27.0	-94.23	1,113.0	-738.2	442.3	393.0	49.32	8.969		
6,400.0	5,514.0	6,519.4	5,548.6	26.7	28.6	-94.23	1,213.0	-742.0	442.3	389.6	52.71	8.391		
6,500.0	5,514.0	6,619.4	5,548.6	28.4	30.2	-94.23	1,312.9	-745.9	442.3	386.1	56.17	7.875		
6,600.0	5,514.0	6,719.4	5,548.6	30.1	31.8	-94.23	1,412.8	-749.8	442.3	382.6	59.67	7.412		
6,700.0	5,514.0	6,819.4	5,548.6	31.9	33.5	-94.23	1,512.7	-753.7	442.2	379.0	63.21	6.996		
6,800.0	5,514.0	6,919.4	5,548.6	33.7	35.2	-94.23	1,612.7	-757.6	442.2	375.4	66.79	6.621		
6,900.0	5,514.0	7,019.4	5,548.6	35.5	36.9	-94.23	1,712.6	-761.5	442.2	371.8	70.40	6.281		
7,000.0	5,514.0	7,119.4	5,548.6	37.3	38.7	-94.23	1,812.5	-765.4	442.2	368.1	74.03	5.972		
7,100.0	5,514.0	7,219.4	5,548.6	39.1	40.5	-94.23	1,912.4	-769.3	442.1	364.4	77.69	5.691		
7,200.0	5,514.0	7,319.4	5,548.6	40.9	42.2	-94.23	2,012.3	-773.2	442.1	360.7	81.36	5.434		
7,300.0	5,514.0	7,419.4	5,548.6	42.8	44.0	-94.23	2,112.3	-777.1	442.1	357.0	85.05	5.198		
7,400.0	5,514.0	7,519.4	5,548.6	44.6	45.8	-94.23	2,212.2	-780.9	442.1	353.3	88.76	4.980		
7,500.0	5,514.0	7,619.4	5,548.6	46.5	47.7	-94.23	2,312.1	-784.8	442.0	349.5	92.48	4.780		
7,600.0	5,514.0	7,719.4	5,548.6	48.4	49.5	-94.23	2,412.0	-788.7	442.0	345.8	96.21	4.594		
7,700.0	5,514.0	7,819.4	5,548.6	50.2	51.3	-94.23	2,512.0	-792.6	442.0	342.0	99.94	4.422		
7,800.0	5,514.0	7,919.4	5,548.6	52.1	53.2	-94.23	2,611.9	-796.5	441.9	338.3	103.69	4.262		
7,900.0	5,514.0	8,019.4	5,548.6	54.0	55.0	-94.23	2,711.8	-800.4	441.9	334.5	107.45	4.113		
8,000.0	5,514.0	8,119.4	5,548.6	55.9	56.9	-94.23	2,811.7	-804.3	441.9	330.7	111.21	3.974		
8,100.0	5,514.0	8,219.4	5,548.6	57.7	58.7	-94.23	2,911.7	-808.2	441.9	326.9	114.98	3.843		
8,200.0	5,514.0	8,319.4	5,548.6	59.6	60.6	-94.23	3,011.6	-812.1	441.8	323.1	118.75	3.721		
8,300.0	5,514.0	8,419.4	5,548.6	61.5	62.5	-94.23	3,111.5	-816.0	441.8	319.3	122.53	3.606		
8,400.0	5,514.0	8,519.4	5,548.6	63.4	64.3	-94.23	3,211.4	-819.8	441.8	315.5	126.32	3.497		
8,500.0	5,514.0	8,619.4	5,548.6	65.3	66.2	-94.23	3,311.4	-823.7	441.8	311.7	130.11	3.395		
8,600.0	5,514.0	8,719.4	5,548.6	67.2	68.1	-94.23	3,411.3	-827.6	441.7	307.8	133.90	3.299		
8,700.0	5,514.0	8,819.4	5,548.6	69.1	70.0	-94.23	3,511.2	-831.5	441.7	304.0	137.69	3.208		
8,800.0	5,514.0	8,919.4	5,548.6	71.0	71.8	-94.23	3,611.1	-835.4	441.7	300.2	141.49	3.122		
8,900.0	5,514.0	9,019.4	5,548.6	72.9	73.7	-94.23	3,711.1	-839.3	441.7	296.4	145.30	3.040		
9,000.0	5,514.0	9,119.4	5,548.6	74.8	75.6	-94.23	3,811.0	-843.2	441.6	292.5	149.10	2.962		
9,100.0	5,514.0	9,219.4	5,548.6	76.7	77.5	-94.23	3,910.9	-847.1	441.6	288.7	152.91	2.888		
9,200.0	5,514.0	9,319.4	5,548.6	78.6	79.4	-94.23	4,010.8	-851.0	441.6	284.8	156.72	2.818		
9,300.0	5,514.0	9,419.4	5,548.6	80.5	81.3	-94.23	4,110.8	-854.9	441.5	281.0	160.54	2.750		
9,400.0	5,514.0	9,519.4	5,548.6	82.5	83.2	-94.23	4,210.7	-858.7	441.5	277.2	164.35	2.686		
9,479.5	5,514.0	9,598.8	5,548.6	84.0	84.7	-94.23	4,290.1	-861.8	441.5	274.1	167.38	2.638 SF		

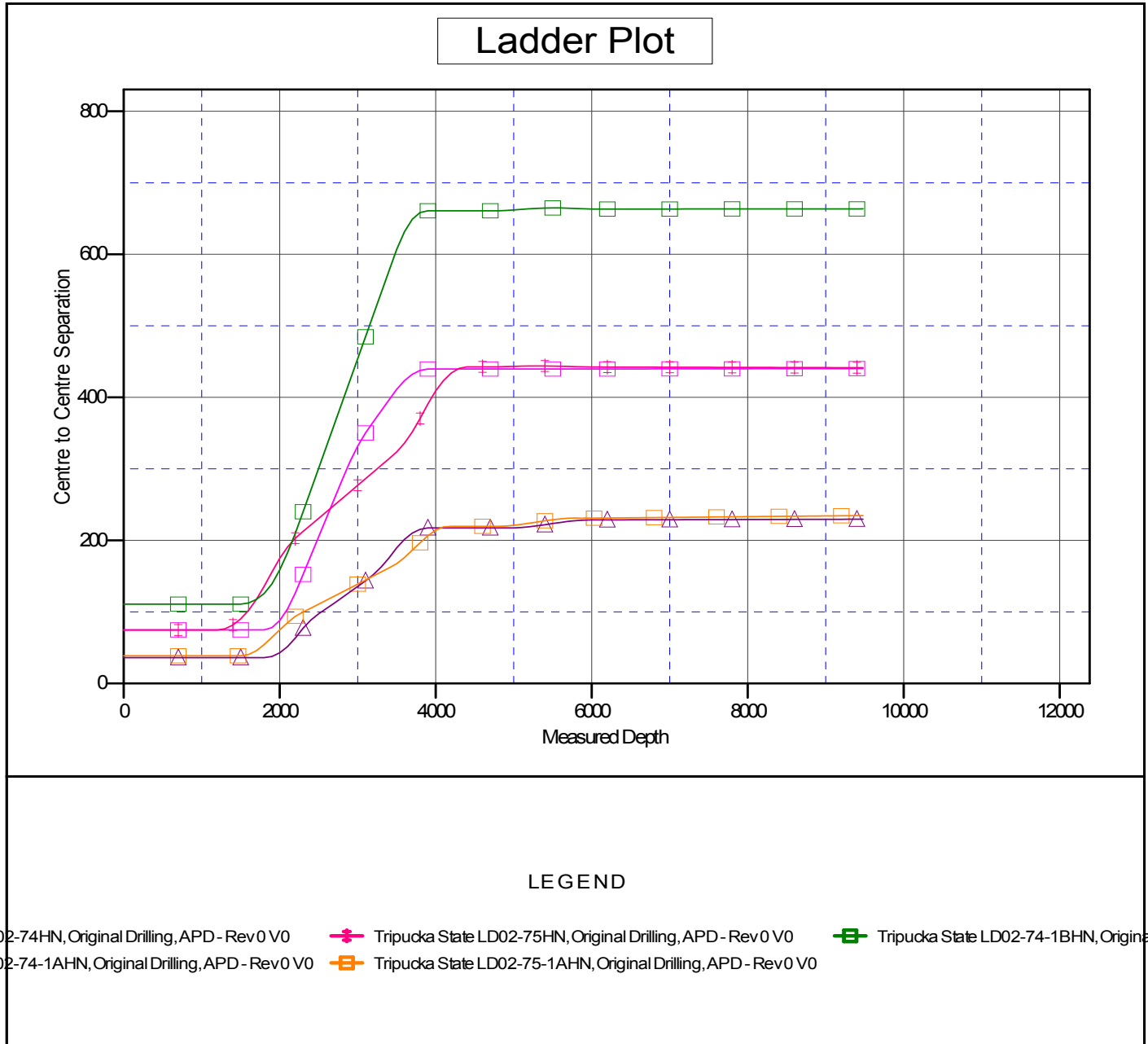
# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<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 @ 4699.0ft (H&P 315 RKB - 24'  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

Coordinates are relative to: Tripucka State LD02-75-1BHN  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 1.08°



# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1BHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4699.0ft (H&P 315 RKB - 24')
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<b>Reference Well:</b>	Tripucka State LD02-75-1BHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<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 @ 4699.0ft (H&P 315 RKB - 24'  
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Coordinates are relative to: Tripucka State LD02-75-1BHN  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 1.08°

