

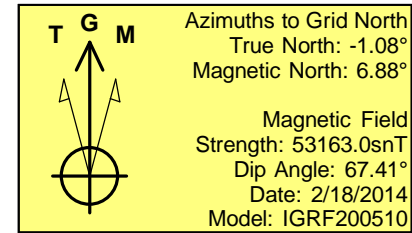
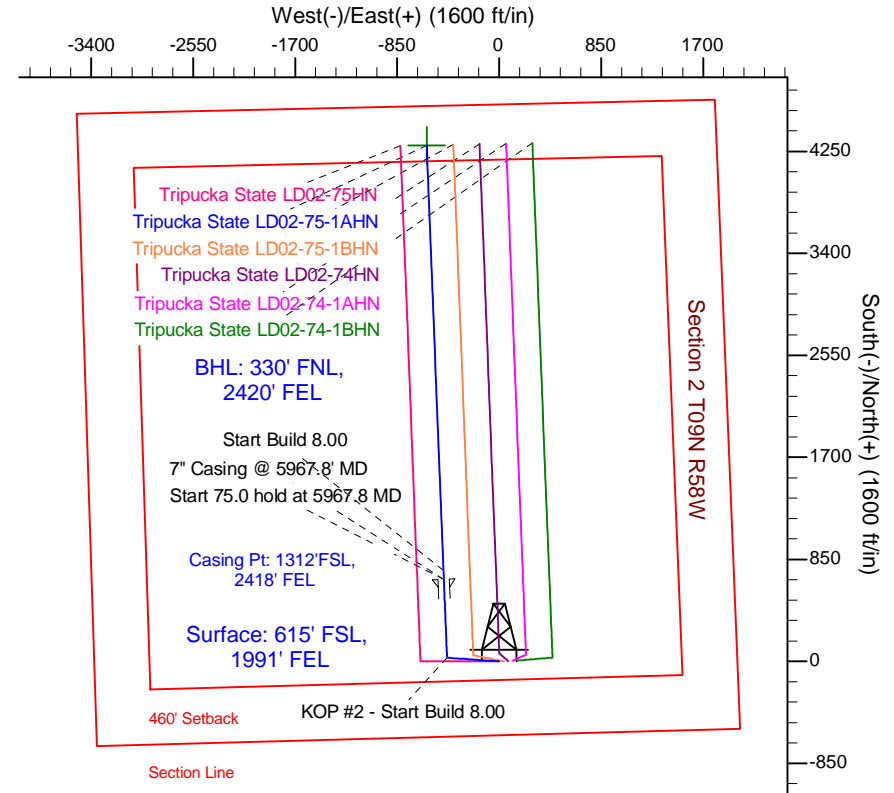
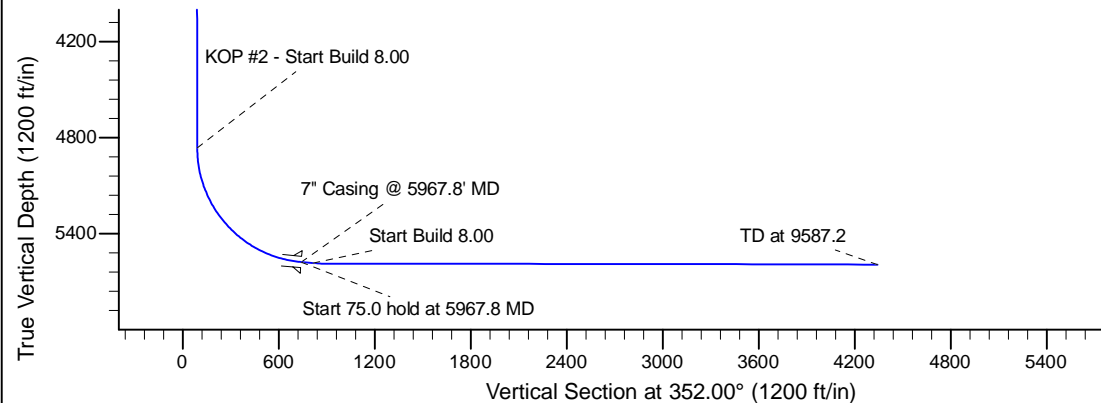
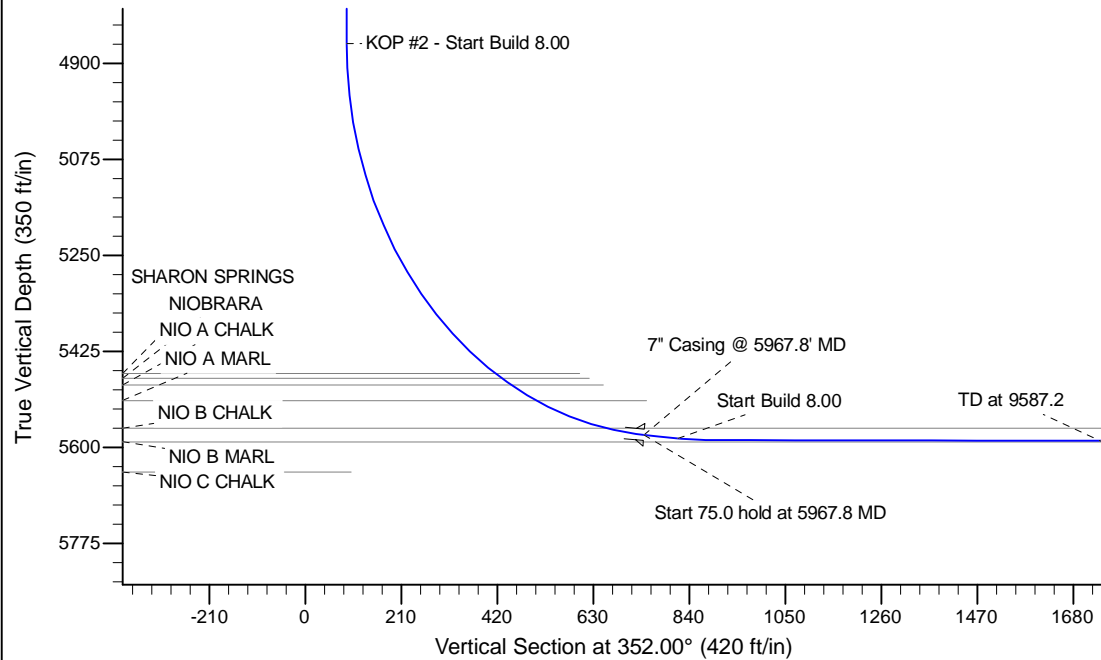
Project: Wattenberg Field  
Site: LD (Sec.2-T09N-R58W) Weld County, CO  
Well: Tripucka State LD02-75-1AHN  
Wellbore: Original Drilling  
Design: APD - Rev 0

# Northern Region Drilling - Working

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

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
3	2101.4	12.03	273.95	2097.0	4.3	-62.8	2.00	273.95	13.0	
4	3590.1	12.03	273.95	3553.0	25.7	-372.2	0.00	0.00	77.3	
5	4191.5	0.00	0.00	4150.0	30.0	-435.0	2.00	180.00	90.3	
6	4905.3	0.00	0.00	4863.8	30.0	-435.0	0.00	0.00	90.3	
7	5967.8	85.00	357.73	5577.3	683.3	-460.9	8.00	357.73	740.8	
8	6042.8	85.00	357.73	5583.8	757.9	-463.9	0.00	0.00	815.1	
9	6104.1	89.90	357.73	5586.5	819.0	-466.3	8.00	0.00	876.0	
10	9587.2	89.90	357.73	5592.6	4299.5	-604.5	0.00	0.00	4341.8	Tripucka State LD02-75-1AHN BHL 330'FNL, 2420'FEL



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

		Ground Level: 4676.0			
		Northing	Easting	Latitude	Longitude
0.0	0.0	1529543.23	3462827.67	40.775010	-103.828860

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

Created By: Shailey Jewell Date: 11:59, March 07 2014

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

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

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

# **Northern Region Drilling - Working**

**Wattenberg Field**

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

**Tripucka State LD02-75-1AHN**

**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 LD02-75-1AHN
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site:</b>	LD (09N-58W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Tripucka State LD02-75-1AHN	<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 LD02-75-1AHN					
Well Position	+N/-S	5,986.1 ft	Northing:	1,529,543.24 usft	Latitude:	40.775010
	+E/-W	13,486.5 ft	Easting:	3,462,827.67 usft	Longitude:	-103.828860
Position Uncertainty		0.0 ft	Wellhead Elevation:		Ground Level:	4,676.0 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	352.00

<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	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,101.4	12.03	273.95	2,097.0	4.3	-62.8	2.00	2.00	0.00	273.95	
3,590.1	12.03	273.95	3,553.0	25.7	-372.2	0.00	0.00	0.00	0.00	
4,191.5	0.00	0.00	4,150.0	30.0	-435.0	2.00	-2.00	0.00	180.00	
4,905.3	0.00	0.00	4,863.8	30.0	-435.0	0.00	0.00	0.00	0.00	
5,967.8	85.00	357.73	5,577.3	683.3	-460.9	8.00	8.00	0.00	357.73	
6,042.8	85.00	357.73	5,583.8	757.9	-463.9	0.00	0.00	0.00	0.00	
6,104.1	89.90	357.73	5,586.5	819.0	-466.3	8.00	8.00	0.00	0.00	
9,587.2	89.90	357.73	5,592.6	4,299.5	-604.5	0.00	0.00	0.00	0.00	Tripucka State LD02-75-1AHN

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1AHN
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site:</b>	LD (09N-58W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Tripucka State LD02-75-1AHN	<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
<b>KOP - Start Build 2.00</b>									
1,550.0	1.00	273.95	1,550.0	0.0	-0.4	0.1	2.00	2.00	0.00
1,600.0	2.00	273.95	1,600.0	0.1	-1.7	0.4	2.00	2.00	0.00
1,650.0	3.00	273.95	1,649.9	0.3	-3.9	0.8	2.00	2.00	0.00
1,700.0	4.00	273.95	1,699.8	0.5	-7.0	1.4	2.00	2.00	0.00
1,750.0	5.00	273.95	1,749.7	0.8	-10.9	2.3	2.00	2.00	0.00
1,800.0	6.00	273.95	1,799.5	1.1	-15.7	3.2	2.00	2.00	0.00
1,850.0	7.00	273.95	1,849.1	1.5	-21.3	4.4	2.00	2.00	0.00
1,900.0	8.00	273.95	1,898.7	1.9	-27.8	5.8	2.00	2.00	0.00
1,950.0	9.00	273.95	1,948.2	2.4	-35.2	7.3	2.00	2.00	0.00
2,000.0	10.00	273.95	1,997.5	3.0	-43.4	9.0	2.00	2.00	0.00
2,050.0	11.00	273.95	2,046.6	3.6	-52.5	10.9	2.00	2.00	0.00
2,100.0	12.00	273.95	2,095.6	4.3	-62.5	13.0	2.00	2.00	0.00
2,101.4	12.03	273.95	2,097.0	4.3	-62.8	13.0	2.00	2.00	0.00
2,150.0	12.03	273.95	2,144.5	5.0	-72.8	15.1	0.00	0.00	0.00
2,200.0	12.03	273.95	2,193.4	5.7	-83.2	17.3	0.00	0.00	0.00
2,250.0	12.03	273.95	2,242.3	6.5	-93.6	19.4	0.00	0.00	0.00
2,300.0	12.03	273.95	2,291.2	7.2	-104.0	21.6	0.00	0.00	0.00
2,349.9	12.03	273.95	2,340.0	7.9	-114.4	23.7	0.00	0.00	0.00
<b>PIERRE</b>									
2,350.0	12.03	273.95	2,340.1	7.9	-114.4	23.7	0.00	0.00	0.00
2,400.0	12.03	273.95	2,389.0	8.6	-124.8	25.9	0.00	0.00	0.00
2,450.0	12.03	273.95	2,437.9	9.3	-135.2	28.1	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 LD02-75-1AHN
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site:</b>	LD (09N-58W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Tripucka State LD02-75-1AHN	<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	12.03	273.95	2,486.8	10.0	-145.6	30.2	0.00	0.00	0.00	
2,550.0	12.03	273.95	2,535.7	10.8	-156.0	32.4	0.00	0.00	0.00	
2,600.0	12.03	273.95	2,584.7	11.5	-166.4	34.5	0.00	0.00	0.00	
2,650.0	12.03	273.95	2,633.6	12.2	-176.8	36.7	0.00	0.00	0.00	
2,700.0	12.03	273.95	2,682.5	12.9	-187.2	38.8	0.00	0.00	0.00	
2,750.0	12.03	273.95	2,731.4	13.6	-197.6	41.0	0.00	0.00	0.00	
2,800.0	12.03	273.95	2,780.3	14.3	-208.0	43.2	0.00	0.00	0.00	
2,850.0	12.03	273.95	2,829.2	15.1	-218.4	45.3	0.00	0.00	0.00	
2,900.0	12.03	273.95	2,878.1	15.8	-228.8	47.5	0.00	0.00	0.00	
2,950.0	12.03	273.95	2,927.0	16.5	-239.2	49.6	0.00	0.00	0.00	
3,000.0	12.03	273.95	2,975.9	17.2	-249.6	51.8	0.00	0.00	0.00	
3,050.0	12.03	273.95	3,024.8	17.9	-260.0	53.9	0.00	0.00	0.00	
3,100.0	12.03	273.95	3,073.7	18.6	-270.4	56.1	0.00	0.00	0.00	
3,150.0	12.03	273.95	3,122.6	19.4	-280.8	58.3	0.00	0.00	0.00	
3,200.0	12.03	273.95	3,171.5	20.1	-291.2	60.4	0.00	0.00	0.00	
3,245.5	12.03	273.95	3,216.0	20.7	-300.6	62.4	0.00	0.00	0.00	
PARKMAN										
3,250.0	12.03	273.95	3,220.4	20.8	-301.5	62.6	0.00	0.00	0.00	
3,300.0	12.03	273.95	3,269.3	21.5	-311.9	64.7	0.00	0.00	0.00	
3,350.0	12.03	273.95	3,318.2	22.2	-322.3	66.9	0.00	0.00	0.00	
3,400.0	12.03	273.95	3,367.1	22.9	-332.7	69.1	0.00	0.00	0.00	
3,450.0	12.03	273.95	3,416.0	23.7	-343.1	71.2	0.00	0.00	0.00	
3,500.0	12.03	273.95	3,464.9	24.4	-353.5	73.4	0.00	0.00	0.00	
3,550.0	12.03	273.95	3,513.8	25.1	-363.9	75.5	0.00	0.00	0.00	
3,590.1	12.03	273.95	3,553.0	25.7	-372.3	77.3	0.00	0.00	0.00	
Start Drop -2.00										
3,600.0	11.83	273.95	3,562.7	25.8	-374.3	77.7	2.00	-2.00	0.00	
3,650.0	10.83	273.95	3,611.7	26.5	-384.1	79.7	2.00	-2.00	0.00	
3,700.0	9.83	273.95	3,660.9	27.1	-393.0	81.6	2.00	-2.00	0.00	
3,750.0	8.83	273.95	3,710.3	27.7	-401.1	83.2	2.00	-2.00	0.00	
3,800.0	7.83	273.95	3,759.7	28.2	-408.4	84.7	2.00	-2.00	0.00	
3,844.7	6.94	273.95	3,804.0	28.6	-414.1	85.9	2.00	-2.00	0.00	
SUSSEX										
3,850.0	6.83	273.95	3,809.3	28.6	-414.7	86.1	2.00	-2.00	0.00	
3,900.0	5.83	273.95	3,859.0	29.0	-420.2	87.2	2.00	-2.00	0.00	
3,950.0	4.83	273.95	3,908.8	29.3	-424.9	88.2	2.00	-2.00	0.00	
4,000.0	3.83	273.95	3,958.6	29.6	-428.6	88.9	2.00	-2.00	0.00	
4,050.0	2.83	273.95	4,008.6	29.8	-431.5	89.6	2.00	-2.00	0.00	
4,100.0	1.83	273.95	4,058.5	29.9	-433.5	90.0	2.00	-2.00	0.00	
4,150.0	0.83	273.95	4,108.5	30.0	-434.7	90.2	2.00	-2.00	0.00	
4,191.5	0.00	0.00	4,150.0	30.0	-435.0	90.3	2.00	-2.00	0.00	
4,200.0	0.00	0.00	4,158.5	30.0	-435.0	90.3	0.00	0.00	0.00	
4,250.0	0.00	0.00	4,208.5	30.0	-435.0	90.3	0.00	0.00	0.00	
4,275.5	0.00	0.00	4,234.0	30.0	-435.0	90.3	0.00	0.00	0.00	
SHANNON										
4,300.0	0.00	0.00	4,258.5	30.0	-435.0	90.3	0.00	0.00	0.00	
4,350.0	0.00	0.00	4,308.5	30.0	-435.0	90.3	0.00	0.00	0.00	
4,400.0	0.00	0.00	4,358.5	30.0	-435.0	90.3	0.00	0.00	0.00	
4,450.0	0.00	0.00	4,408.5	30.0	-435.0	90.3	0.00	0.00	0.00	
4,500.0	0.00	0.00	4,458.5	30.0	-435.0	90.3	0.00	0.00	0.00	
4,550.0	0.00	0.00	4,508.5	30.0	-435.0	90.3	0.00	0.00	0.00	
4,587.5	0.00	0.00	4,546.0	30.0	-435.0	90.3	0.00	0.00	0.00	
TEEPEE BUTTES										

# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1AHN
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site:</b>	LD (09N-58W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Tripucka State LD02-75-1AHN	<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	4,558.5	30.0	-435.0	90.3	0.00	0.00	0.00
4,650.0	0.00	0.00	4,608.5	30.0	-435.0	90.3	0.00	0.00	0.00
4,700.0	0.00	0.00	4,658.5	30.0	-435.0	90.3	0.00	0.00	0.00
4,750.0	0.00	0.00	4,708.5	30.0	-435.0	90.3	0.00	0.00	0.00
4,800.0	0.00	0.00	4,758.5	30.0	-435.0	90.3	0.00	0.00	0.00
4,850.0	0.00	0.00	4,808.5	30.0	-435.0	90.3	0.00	0.00	0.00
4,900.0	0.00	0.00	4,858.5	30.0	-435.0	90.3	0.00	0.00	0.00
4,905.3	0.00	0.00	4,863.8	30.0	-435.0	90.3	0.00	0.00	0.00
<b>KOP #2 - Start Build 8.00</b>									
4,950.0	3.58	357.73	4,908.5	31.4	-435.1	91.7	8.00	8.00	0.00
5,000.0	7.58	357.73	4,958.2	36.2	-435.2	96.5	8.00	8.00	0.00
5,050.0	11.58	357.73	5,007.5	44.6	-435.6	104.8	8.00	8.00	0.00
5,100.0	15.58	357.73	5,056.1	56.3	-436.0	116.4	8.00	8.00	0.00
5,150.0	19.58	357.73	5,103.8	71.4	-436.6	131.5	8.00	8.00	0.00
5,200.0	23.58	357.73	5,150.3	89.7	-437.4	149.8	8.00	8.00	0.00
5,250.0	27.58	357.73	5,195.4	111.3	-438.2	171.2	8.00	8.00	0.00
5,300.0	31.58	357.73	5,238.8	136.0	-439.2	195.8	8.00	8.00	0.00
5,350.0	35.58	357.73	5,280.5	163.6	-440.3	223.3	8.00	8.00	0.00
5,400.0	39.58	357.73	5,320.1	194.0	-441.5	253.6	8.00	8.00	0.00
5,450.0	43.58	357.73	5,357.5	227.2	-442.8	286.6	8.00	8.00	0.00
5,500.0	47.58	357.73	5,392.5	262.9	-444.2	322.2	8.00	8.00	0.00
5,550.0	51.58	357.73	5,424.9	300.9	-445.8	360.0	8.00	8.00	0.00
5,600.0	55.58	357.73	5,454.6	341.1	-447.4	400.0	8.00	8.00	0.00
5,618.8	57.08	357.73	5,465.0	356.7	-448.0	415.6	8.00	8.00	0.00
<b>SHARON SPRINGS</b>									
5,635.7	58.43	357.73	5,474.0	371.0	-448.5	429.8	8.00	8.00	0.00
<b>NIOBRARA</b>									
5,650.0	59.58	357.73	5,481.4	383.3	-449.0	442.0	7.99	7.99	0.00
5,659.3	60.32	357.73	5,486.0	391.2	-449.3	450.0	8.01	8.01	0.00
<b>NIO A CHALK</b>									
5,700.0	63.58	357.73	5,505.2	427.2	-450.8	485.8	8.00	8.00	0.00
5,722.8	65.40	357.73	5,515.0	447.8	-451.6	506.3	8.00	8.00	0.00
<b>NIO A MARL</b>									
5,750.0	67.58	357.73	5,525.8	472.7	-452.6	531.1	8.00	8.00	0.00
5,800.0	71.58	357.73	5,543.3	519.5	-454.4	577.7	8.00	8.00	0.00
5,850.0	75.58	357.73	5,557.4	567.4	-456.3	625.4	8.00	8.00	0.00
5,883.5	78.26	357.73	5,565.0	600.0	-457.6	657.9	8.00	8.00	0.00
<b>NIO B CHALK</b>									
5,900.0	79.58	357.73	5,568.2	616.2	-458.3	674.0	7.99	7.99	0.00
5,950.0	83.58	357.73	5,575.5	665.6	-460.2	723.2	8.00	8.00	0.00
5,967.8	85.00	357.73	5,577.3	683.3	-460.9	740.8	8.01	8.01	0.00
<b>Start 75.0 hold at 5967.8 MD - 7" Casing @ 5967.8' MD</b>									
6,000.0	85.00	357.73	5,580.1	715.3	-462.2	772.7	0.00	0.00	0.00
6,042.8	85.00	357.73	5,583.8	757.9	-463.9	815.1	0.00	0.00	0.00
<b>Start Build 8.00</b>									
6,050.0	85.58	357.73	5,584.4	765.1	-464.2	822.3	7.98	7.98	0.00
6,100.0	89.58	357.73	5,586.5	815.0	-466.2	872.0	8.00	8.00	0.00
6,104.1	89.90	357.73	5,586.5	819.0	-466.3	876.0	8.00	8.00	0.00
6,150.0	89.90	357.73	5,586.6	865.0	-468.2	921.7	0.00	0.00	0.00
6,200.0	89.90	357.73	5,586.7	914.9	-470.1	971.5	0.00	0.00	0.00
6,250.0	89.90	357.73	5,586.8	964.9	-472.1	1,021.2	0.00	0.00	0.00
6,300.0	89.90	357.73	5,586.9	1,014.8	-474.1	1,071.0	0.00	0.00	0.00
6,350.0	89.90	357.73	5,587.0	1,064.8	-476.1	1,120.7	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 LD02-75-1AHN
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site:</b>	LD (09N-58W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Tripucka State LD02-75-1AHN	<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)
6,400.0	89.90	357.73	5,587.0	1,114.8	-478.1	1,170.5	0.00	0.00	0.00
6,450.0	89.90	357.73	5,587.1	1,164.7	-480.1	1,220.2	0.00	0.00	0.00
6,500.0	89.90	357.73	5,587.2	1,214.7	-482.0	1,270.0	0.00	0.00	0.00
6,550.0	89.90	357.73	5,587.3	1,264.7	-484.0	1,319.7	0.00	0.00	0.00
6,600.0	89.90	357.73	5,587.4	1,314.6	-486.0	1,369.5	0.00	0.00	0.00
6,650.0	89.90	357.73	5,587.5	1,364.6	-488.0	1,419.2	0.00	0.00	0.00
6,700.0	89.90	357.73	5,587.6	1,414.5	-490.0	1,469.0	0.00	0.00	0.00
6,750.0	89.90	357.73	5,587.7	1,464.5	-492.0	1,518.7	0.00	0.00	0.00
6,800.0	89.90	357.73	5,587.7	1,514.5	-493.9	1,568.5	0.00	0.00	0.00
6,850.0	89.90	357.73	5,587.8	1,564.4	-495.9	1,618.2	0.00	0.00	0.00
6,900.0	89.90	357.73	5,587.9	1,614.4	-497.9	1,668.0	0.00	0.00	0.00
6,950.0	89.90	357.73	5,588.0	1,664.3	-499.9	1,717.7	0.00	0.00	0.00
7,000.0	89.90	357.73	5,588.1	1,714.3	-501.9	1,767.5	0.00	0.00	0.00
7,050.0	89.90	357.73	5,588.2	1,764.3	-503.9	1,817.2	0.00	0.00	0.00
7,100.0	89.90	357.73	5,588.3	1,814.2	-505.8	1,867.0	0.00	0.00	0.00
7,150.0	89.90	357.73	5,588.4	1,864.2	-507.8	1,916.7	0.00	0.00	0.00
7,200.0	89.90	357.73	5,588.4	1,914.1	-509.8	1,966.5	0.00	0.00	0.00
7,250.0	89.90	357.73	5,588.5	1,964.1	-511.8	2,016.2	0.00	0.00	0.00
7,300.0	89.90	357.73	5,588.6	2,014.1	-513.8	2,066.0	0.00	0.00	0.00
7,350.0	89.90	357.73	5,588.7	2,064.0	-515.8	2,115.7	0.00	0.00	0.00
7,400.0	89.90	357.73	5,588.8	2,114.0	-517.7	2,165.5	0.00	0.00	0.00
7,450.0	89.90	357.73	5,588.9	2,163.9	-519.7	2,215.2	0.00	0.00	0.00
7,500.0	89.90	357.73	5,589.0	2,213.9	-521.7	2,265.0	0.00	0.00	0.00
7,550.0	89.90	357.73	5,589.1	2,263.9	-523.7	2,314.7	0.00	0.00	0.00
7,600.0	89.90	357.73	5,589.1	2,313.8	-525.7	2,364.5	0.00	0.00	0.00
7,650.0	89.90	357.73	5,589.2	2,363.8	-527.7	2,414.2	0.00	0.00	0.00
7,700.0	89.90	357.73	5,589.3	2,413.7	-529.6	2,464.0	0.00	0.00	0.00
7,750.0	89.90	357.73	5,589.4	2,463.7	-531.6	2,513.7	0.00	0.00	0.00
7,800.0	89.90	357.73	5,589.5	2,513.7	-533.6	2,563.5	0.00	0.00	0.00
7,850.0	89.90	357.73	5,589.6	2,563.6	-535.6	2,613.2	0.00	0.00	0.00
7,900.0	89.90	357.73	5,589.7	2,613.6	-537.6	2,663.0	0.00	0.00	0.00
7,950.0	89.90	357.73	5,589.8	2,663.6	-539.6	2,712.7	0.00	0.00	0.00
8,000.0	89.90	357.73	5,589.8	2,713.5	-541.5	2,762.5	0.00	0.00	0.00
8,050.0	89.90	357.73	5,589.9	2,763.5	-543.5	2,812.2	0.00	0.00	0.00
8,097.5	89.90	357.73	5,590.0	2,811.0	-545.4	2,859.5	0.00	0.00	0.00
NIO B MARL									
8,100.0	89.90	357.73	5,590.0	2,813.4	-545.5	2,862.0	0.00	0.00	0.00
8,150.0	89.90	357.73	5,590.1	2,863.4	-547.5	2,911.7	0.00	0.00	0.00
8,200.0	89.90	357.73	5,590.2	2,913.4	-549.5	2,961.5	0.00	0.00	0.00
8,250.0	89.90	357.73	5,590.3	2,963.3	-551.5	3,011.2	0.00	0.00	0.00
8,300.0	89.90	357.73	5,590.4	3,013.3	-553.4	3,061.0	0.00	0.00	0.00
8,350.0	89.90	357.73	5,590.5	3,063.2	-555.4	3,110.7	0.00	0.00	0.00
8,400.0	89.90	357.73	5,590.5	3,113.2	-557.4	3,160.5	0.00	0.00	0.00
8,450.0	89.90	357.73	5,590.6	3,163.2	-559.4	3,210.2	0.00	0.00	0.00
8,500.0	89.90	357.73	5,590.7	3,213.1	-561.4	3,260.0	0.00	0.00	0.00
8,550.0	89.90	357.73	5,590.8	3,263.1	-563.4	3,309.7	0.00	0.00	0.00
8,600.0	89.90	357.73	5,590.9	3,313.0	-565.3	3,359.5	0.00	0.00	0.00
8,650.0	89.90	357.73	5,591.0	3,363.0	-567.3	3,409.2	0.00	0.00	0.00
8,700.0	89.90	357.73	5,591.1	3,413.0	-569.3	3,459.0	0.00	0.00	0.00
8,750.0	89.90	357.73	5,591.1	3,462.9	-571.3	3,508.7	0.00	0.00	0.00
8,800.0	89.90	357.73	5,591.2	3,512.9	-573.3	3,558.5	0.00	0.00	0.00
8,850.0	89.90	357.73	5,591.3	3,562.8	-575.3	3,608.2	0.00	0.00	0.00
8,900.0	89.90	357.73	5,591.4	3,612.8	-577.2	3,658.0	0.00	0.00	0.00
8,950.0	89.90	357.73	5,591.5	3,662.8	-579.2	3,707.7	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 LD02-75-1AHN
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site:</b>	LD (09N-58W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Tripucka State LD02-75-1AHN	<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)	
9,000.0	89.90	357.73	5,591.6	3,712.7	-581.2	3,757.5	0.00	0.00	0.00	
9,050.0	89.90	357.73	5,591.7	3,762.7	-583.2	3,807.2	0.00	0.00	0.00	
9,100.0	89.90	357.73	5,591.8	3,812.6	-585.2	3,857.0	0.00	0.00	0.00	
9,150.0	89.90	357.73	5,591.8	3,862.6	-587.2	3,906.7	0.00	0.00	0.00	
9,200.0	89.90	357.73	5,591.9	3,912.6	-589.2	3,956.5	0.00	0.00	0.00	
9,250.0	89.90	357.73	5,592.0	3,962.5	-591.1	4,006.2	0.00	0.00	0.00	
9,300.0	89.90	357.73	5,592.1	4,012.5	-593.1	4,056.0	0.00	0.00	0.00	
9,350.0	89.90	357.73	5,592.2	4,062.4	-595.1	4,105.7	0.00	0.00	0.00	
9,400.0	89.90	357.73	5,592.3	4,112.4	-597.1	4,155.5	0.00	0.00	0.00	
9,450.0	89.90	357.73	5,592.4	4,162.4	-599.1	4,205.2	0.00	0.00	0.00	
9,500.0	89.90	357.73	5,592.5	4,212.3	-601.1	4,255.0	0.00	0.00	0.00	
9,550.0	89.90	357.73	5,592.5	4,262.3	-603.0	4,304.7	0.00	0.00	0.00	
9,587.2	89.90	357.73	5,592.6	4,299.4	-604.5	4,341.7	0.00	0.00	0.00	
TD at 9587.2 - Tripucka State LD02-75-1AHN BHL 330'FNL, 2420'FEL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
Tripucka State LD02-75-	0.00	0.00	5,592.6	4,299.5	-604.5	1,533,842.71	3,462,223.16	40.786840	-103.830750	
- plan hits target center										
- Point										

Casing Points									
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")					
5,967.8	5,577.3	7" Casing @ 5967.8' MD	7	8-3/4					

Formations								
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)			
2,349.9	2,340.0	PIERRE		0.00				
3,245.5	3,216.0	PARKMAN		0.00				
3,844.7	3,804.0	SUSSEX		0.00				
4,275.5	4,234.0	SHANNON		0.00				
4,587.5	4,546.0	TEEPEE BUTTES		0.00				
5,618.8	5,465.0	SHARON SPRINGS		0.00				
5,635.7	5,474.0	NIOBRARA		0.00				
5,659.3	5,486.0	NIO A CHALK		0.00				
5,722.8	5,515.0	NIO A MARL		0.00				
5,883.5	5,565.0	NIO B CHALK		0.00				
8,097.5	5,590.0	NIO B MARL		0.00				



# Noble Energy Inc

## Planning Report

<b>Database:</b>	EDM Production	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1AHN
<b>Company:</b>	Northern Region Drilling - Working	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Project:</b>	Wattenberg Field	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site:</b>	LD (09N-58W)	<b>North Reference:</b>	Grid
<b>Well:</b>	Tripucka State LD02-75-1AHN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Original Drilling		
<b>Design:</b>	APD - Rev 0		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,500.0	1,500.0	0.0	0.0	KOP - Start Build 2.00
3,590.1	3,553.0	4.3	-62.8	Start Drop -2.00
4,905.3	4,863.8	25.7	-372.2	KOP #2 - Start Build 8.00
5,967.8	5,577.3	30.0	-435.0	Start 75.0 hold at 5967.8 MD
6,042.8	5,583.8	30.0	-435.0	Start Build 8.00
9,587.2	5,592.6	683.3	-460.9	TD at 9587.2

# **Northern Region Drilling - Working**

**Wattenberg Field**

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

**Tripucka State LD02-75-1AHN**

**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 LD02-75-1AHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1AHN	<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> 3/7/2014			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	9,587.2	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 -	1,500.0	1,498.0	113.6	107.2	17.588	CC, ES
Tripucka State LD02-74-1AHN - Original Drilling - APD -	9,587.2	9,469.0	666.4	499.9	4.002	SF
Tripucka State LD02-74-1BHN - Original Drilling - APD -	1,500.0	1,497.0	149.6	143.2	23.168	CC, ES
Tripucka State LD02-74-1BHN - Original Drilling - APD -	9,587.2	9,583.8	880.6	712.9	5.251	SF
Tripucka State LD02-74HN - Original Drilling - APD - Rev	1,500.0	1,498.0	74.8	68.3	11.577	CC, ES
Tripucka State LD02-74HN - Original Drilling - APD - Rev	9,587.2	9,522.2	440.4	272.7	2.626	SF
Tripucka State LD02-75-1BHN - Original Drilling - APD -	1,500.0	1,499.0	38.8	32.3	6.001	CC, ES
Tripucka State LD02-75-1BHN - Original Drilling - APD -	9,587.2	9,479.5	234.8	75.6	1.475	Level 2, SF
Tripucka State LD02-75HN - Original Drilling - APD - Rev	1,166.3	1,167.3	36.0	31.0	7.250	CC
Tripucka State LD02-75HN - Original Drilling - APD - Rev	1,200.0	1,201.0	36.0	30.9	7.036	ES
Tripucka State LD02-75HN - Original Drilling - APD - Rev	9,587.2	9,599.0	223.3	57.6	1.348	Level 2, SF

<b>Offset Design</b>	LD (09N-58W) - Tripucka State LD02-74-1AHN - Original Drilling - APD - Rev 0											<b>Offset Site Error:</b>	0.0 ft
<b>Survey Program:</b>	0-MWD											<b>Offset Well Error:</b>	0.0 ft
<b>Reference</b>	<b>Offset</b>	<b>Semi Major Axis</b>		<b>Distance</b>									
<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Reference (ft)</b>	<b>Offset (ft)</b>	<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre +N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Between Centres (ft)</b>	<b>Between Ellipses (ft)</b>	<b>Minimum Separation (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
0.0	0.0	0.0	0.0	0.0	0.0	87.08	5.8	113.5	113.6				
100.0	100.0	98.0	98.0	0.1	0.1	87.08	5.8	113.5	113.6	113.4	0.17	671.833	
200.0	200.0	198.0	198.0	0.3	0.3	87.08	5.8	113.5	113.6	113.0	0.62	184.484	
300.0	300.0	298.0	298.0	0.5	0.5	87.08	5.8	113.5	113.6	112.6	1.07	106.643	
400.0	400.0	398.0	398.0	0.8	0.8	87.08	5.8	113.5	113.6	112.1	1.51	74.998	
500.0	500.0	498.0	498.0	1.0	1.0	87.08	5.8	113.5	113.6	111.7	1.96	57.836	
600.0	600.0	598.0	598.0	1.2	1.2	87.08	5.8	113.5	113.6	111.2	2.41	47.066	
700.0	700.0	698.0	698.0	1.4	1.4	87.08	5.8	113.5	113.6	110.8	2.86	39.677	
800.0	800.0	798.0	798.0	1.7	1.7	87.08	5.8	113.5	113.6	110.3	3.31	34.294	
900.0	900.0	898.0	898.0	1.9	1.9	87.08	5.8	113.5	113.6	109.9	3.76	30.196	
1,000.0	1,000.0	998.0	998.0	2.1	2.1	87.08	5.8	113.5	113.6	109.4	4.21	26.974	
1,100.0	1,100.0	1,098.0	1,098.0	2.3	2.3	87.08	5.8	113.5	113.6	109.0	4.66	24.373	
1,200.0	1,200.0	1,198.0	1,198.0	2.6	2.6	87.08	5.8	113.5	113.6	108.5	5.11	22.229	
1,300.0	1,300.0	1,298.0	1,298.0	2.8	2.8	87.08	5.8	113.5	113.6	108.1	5.56	20.432	
1,400.0	1,400.0	1,398.0	1,398.0	3.0	3.0	87.08	5.8	113.5	113.6	107.6	6.01	18.904	
1,500.0	1,500.0	1,498.0	1,498.0	3.2	3.2	87.08	5.8	113.5	113.6	107.2	6.46	17.588	CC, ES

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 LD02-75-1AHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1AHN	<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	1,598.0	1,598.0	3.4	3.5	173.24	5.8	113.5	115.3	108.5	6.89	16.733		
1,700.0	1,699.8	1,697.8	1,697.8	3.7	3.7	173.52	5.8	113.5	120.5	113.2	7.31	16.492		
1,800.0	1,799.5	1,797.5	1,797.5	3.9	3.9	173.94	5.8	113.5	129.2	121.5	7.72	16.737		
1,900.0	1,898.7	1,892.5	1,892.4	4.1	4.1	174.17	6.4	114.8	142.8	134.7	8.11	17.605		
2,000.0	1,997.5	1,985.9	1,985.7	4.4	4.3	174.04	8.3	119.0	162.8	154.3	8.49	19.174		
2,100.0	2,095.6	2,077.2	2,076.7	4.7	4.5	173.66	11.3	125.7	189.0	180.1	8.86	21.335		
2,200.0	2,193.4	2,167.4	2,166.4	5.0	4.7	173.18	15.5	134.8	219.7	210.5	9.28	23.691		
2,300.0	2,291.2	2,262.2	2,260.5	5.3	4.9	172.71	20.3	145.4	251.5	241.8	9.70	25.927		
2,400.0	2,389.0	2,357.0	2,354.6	5.7	5.2	172.34	25.1	156.0	283.2	273.1	10.13	27.964		
2,500.0	2,486.8	2,451.8	2,448.7	6.1	5.4	172.04	29.9	166.6	315.0	304.4	10.56	29.820		
2,600.0	2,584.6	2,546.6	2,542.8	6.5	5.7	171.80	34.8	177.2	346.7	335.7	11.01	31.506		
2,700.0	2,682.4	2,641.4	2,636.9	6.9	5.9	171.60	39.6	187.8	378.5	367.0	11.45	33.054		
2,800.0	2,780.3	2,736.3	2,731.0	7.3	6.2	171.43	44.4	198.4	410.2	398.3	11.90	34.473		
2,900.0	2,878.1	2,839.0	2,833.0	7.7	6.4	171.30	49.4	209.4	441.6	429.2	12.35	35.743		
3,000.0	2,975.9	2,951.8	2,945.4	8.1	6.7	171.34	53.3	218.0	469.9	457.1	12.81	36.686		
3,100.0	3,073.7	3,066.9	3,060.4	8.5	6.9	171.57	55.4	222.7	494.6	481.3	13.26	37.284		
3,200.0	3,171.5	3,176.0	3,169.5	8.9	7.1	171.91	55.8	223.5	515.9	502.1	13.71	37.615		
3,300.0	3,269.3	3,273.8	3,267.3	9.4	7.3	172.22	55.8	223.5	536.5	522.3	14.17	37.857		
3,400.0	3,367.1	3,371.6	3,365.1	9.8	7.5	172.51	55.8	223.5	557.2	542.5	14.64	38.068		
3,500.0	3,464.9	3,469.4	3,462.9	10.2	7.7	172.78	55.8	223.5	577.8	562.7	15.10	38.263		
3,600.0	3,562.7	3,567.2	3,560.7	10.7	7.9	173.04	55.8	223.5	598.5	582.9	15.57	38.430		
3,700.0	3,660.9	3,665.5	3,658.9	11.0	8.1	173.29	55.8	223.5	617.2	601.1	16.07	38.396		
3,800.0	3,759.7	3,764.3	3,757.7	11.3	8.4	173.49	55.8	223.5	632.4	615.9	16.55	38.202		
3,900.0	3,859.0	3,863.6	3,857.0	11.5	8.6	173.64	55.8	223.5	644.2	627.2	17.01	37.864		
4,000.0	3,958.6	3,963.2	3,956.6	11.8	8.8	173.74	55.8	223.5	652.6	635.2	17.45	37.394		
4,100.0	4,058.5	4,063.1	4,056.5	11.9	9.0	173.80	55.8	223.5	657.5	639.7	17.87	36.803		
4,200.0	4,158.5	4,163.1	4,156.5	12.1	9.2	87.76	55.8	223.5	659.0	640.7	18.24	36.118		
4,300.0	4,258.5	4,263.1	4,256.5	12.3	9.4	87.76	55.8	223.5	659.0	640.3	18.67	35.296		
4,400.0	4,358.5	4,363.1	4,356.5	12.4	9.7	87.76	55.8	223.5	659.0	639.9	19.10	34.508		
4,500.0	4,458.5	4,463.1	4,456.5	12.6	9.9	87.76	55.8	223.5	659.0	639.4	19.52	33.752		
4,600.0	4,558.5	4,563.1	4,556.5	12.8	10.1	87.76	55.8	223.5	659.0	639.0	19.95	33.028		
4,700.0	4,658.5	4,663.1	4,656.5	12.9	10.3	87.76	55.8	223.5	659.0	638.6	20.38	32.332		
4,800.0	4,758.5	4,763.1	4,756.5	13.1	10.5	87.76	55.8	223.5	659.0	638.2	20.81	31.664		
4,844.0	4,802.5	4,807.0	4,800.5	13.2	10.6	87.75	55.9	223.5	659.0	638.0	21.00	31.378		
4,900.0	4,858.5	4,862.9	4,856.2	13.3	10.8	87.49	58.8	223.4	659.0	637.7	21.25	31.017		
5,000.0	4,958.2	4,961.3	4,953.3	13.5	11.0	88.92	74.6	222.7	659.1	637.4	21.71	30.355		
5,100.0	5,056.1	5,058.4	5,046.1	13.7	11.2	88.09	103.0	221.6	659.4	637.2	22.21	29.683		
5,200.0	5,150.3	5,154.4	5,133.1	13.9	11.5	87.30	143.1	220.1	659.8	637.0	22.81	28.930		
5,300.0	5,238.8	5,250.0	5,213.8	14.2	11.9	86.57	194.3	218.1	660.3	636.7	23.55	28.033		
5,400.0	5,320.1	5,343.2	5,285.2	14.5	12.4	85.91	254.1	215.7	660.8	636.3	24.51	26.959		
5,500.0	5,392.5	5,436.4	5,348.1	15.0	13.0	85.32	322.6	213.0	661.4	635.6	25.74	25.691		
5,600.0	5,454.6	5,528.8	5,401.3	15.6	13.8	84.82	398.1	210.1	661.9	634.6	27.28	24.267		
5,700.0	5,505.2	5,620.7	5,444.1	16.3	14.7	84.41	479.3	206.9	662.4	633.3	29.12	22.746		
5,800.0	5,543.3	5,712.1	5,476.0	17.3	15.8	84.11	564.9	203.6	662.8	631.6	31.26	21.202		
5,900.0	5,568.2	5,803.2	5,496.7	18.4	17.0	83.91	653.5	200.1	663.1	629.5	33.66	19.701		
6,000.0	5,580.1	5,897.7	5,507.1	19.7	18.3	83.84	747.2	196.5	663.3	626.9	36.34	18.252		
6,100.0	5,586.5	5,991.9	5,513.0	21.1	19.7	83.81	841.2	192.8	663.4	624.2	39.19	16.928		
6,200.0	5,586.7	6,091.5	5,513.0	22.6	21.2	83.80	940.6	188.9	663.4	621.2	42.28	15.693		
6,300.0	5,586.9	6,191.5	5,513.0	24.1	22.9	83.78	1,040.6	185.0	663.5	618.0	45.49	14.586		
6,400.0	5,587.0	6,291.5	5,513.0	25.7	24.5	83.77	1,140.5	181.1	663.6	614.8	48.79	13.600		
6,500.0	5,587.2	6,391.5	5,513.0	27.3	26.2	83.75	1,240.4	177.2	663.7	611.5	52.17	12.721		
6,600.0	5,587.4	6,491.5	5,513.0	29.0	27.9	83.74	1,340.3	173.3	663.8	608.2	55.61	11.936		

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 LD02-75-1AHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1AHN	<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		
6,700.0	5,587.6	6,591.5	5,513.0	30.7	29.7	83.73	1,440.3	169.4	663.9	604.8	59.10	11.232		
6,800.0	5,587.7	6,691.5	5,513.0	32.4	31.5	83.71	1,540.2	165.5	663.9	601.3	62.63	10.600		
6,900.0	5,587.9	6,791.5	5,513.0	34.2	33.3	83.70	1,640.1	161.6	664.0	597.8	66.20	10.031		
7,000.0	5,588.1	6,891.5	5,513.0	35.9	35.1	83.68	1,740.0	157.7	664.1	594.3	69.80	9.515		
7,100.0	5,588.3	6,991.5	5,513.0	37.7	36.9	83.67	1,840.0	153.8	664.2	590.8	73.42	9.047		
7,200.0	5,588.4	7,091.5	5,513.0	39.5	38.7	83.65	1,939.9	149.9	664.3	587.2	77.06	8.620		
7,300.0	5,588.6	7,191.5	5,513.0	41.3	40.6	83.64	2,039.8	146.0	664.4	583.6	80.72	8.230		
7,400.0	5,588.8	7,291.5	5,513.0	43.2	42.4	83.62	2,139.7	142.1	664.5	580.1	84.40	7.873		
7,500.0	5,589.0	7,391.5	5,513.0	45.0	44.3	83.61	2,239.7	138.2	664.5	576.4	88.09	7.544		
7,600.0	5,589.1	7,491.5	5,513.0	46.8	46.1	83.60	2,339.6	134.3	664.6	572.8	91.80	7.240		
7,700.0	5,589.3	7,591.5	5,513.0	48.7	48.0	83.58	2,439.5	130.4	664.7	569.2	95.51	6.959		
7,800.0	5,589.5	7,691.5	5,513.0	50.5	49.9	83.57	2,539.4	126.5	664.8	565.6	99.24	6.699		
7,900.0	5,589.7	7,791.5	5,513.0	52.4	51.8	83.55	2,639.3	122.6	664.9	561.9	102.97	6.457		
8,000.0	5,589.8	7,891.5	5,513.0	54.3	53.6	83.54	2,739.3	118.7	665.0	558.3	106.71	6.231		
8,100.0	5,590.0	7,991.5	5,513.0	56.1	55.5	83.52	2,839.2	114.8	665.0	554.6	110.46	6.021		
8,200.0	5,590.2	8,091.5	5,513.0	58.0	57.4	83.51	2,939.1	110.9	665.1	550.9	114.22	5.823		
8,300.0	5,590.4	8,191.5	5,513.0	59.9	59.3	83.50	3,039.0	107.0	665.2	547.2	117.98	5.639		
8,400.0	5,590.5	8,291.5	5,513.0	61.8	61.2	83.48	3,139.0	103.1	665.3	543.6	121.74	5.465		
8,500.0	5,590.7	8,391.5	5,513.0	63.7	63.1	83.47	3,238.9	99.2	665.4	539.9	125.51	5.301		
8,600.0	5,590.9	8,491.5	5,513.0	65.5	65.0	83.45	3,338.8	95.3	665.5	536.2	129.28	5.147		
8,700.0	5,591.1	8,591.5	5,513.0	67.4	66.9	83.44	3,438.7	91.4	665.6	532.5	133.06	5.002		
8,800.0	5,591.2	8,691.5	5,513.0	69.3	68.8	83.42	3,538.7	87.5	665.6	528.8	136.84	4.864		
8,900.0	5,591.4	8,791.5	5,513.0	71.2	70.7	83.41	3,638.6	83.6	665.7	525.1	140.63	4.734		
9,000.0	5,591.6	8,891.5	5,513.0	73.1	72.6	83.40	3,738.5	79.7	665.8	521.4	144.41	4.610		
9,100.0	5,591.8	8,991.5	5,513.0	75.0	74.5	83.38	3,838.4	75.8	665.9	517.7	148.20	4.493		
9,200.0	5,591.9	9,091.5	5,513.0	76.9	76.4	83.37	3,938.4	71.9	666.0	514.0	152.00	4.382		
9,300.0	5,592.1	9,191.4	5,513.0	78.8	78.3	83.35	4,038.3	68.0	666.1	510.3	155.79	4.275		
9,400.0	5,592.3	9,291.4	5,513.0	80.7	80.2	83.34	4,138.2	64.1	666.2	506.6	159.59	4.174		
9,500.0	5,592.5	9,391.4	5,513.0	82.6	82.2	83.32	4,238.1	60.2	666.2	502.9	163.39	4.078		
9,545.7	5,592.5	9,437.1	5,513.0	83.5	83.0	83.32	4,283.8	58.4	666.3	501.2	165.12	4.035		
9,587.2	5,592.6	9,469.0	5,513.0	84.3	83.6	83.31	4,315.6	57.1	666.4	499.9	166.52	4.002 SF		

# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1AHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1AHN	<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	87.53	6.5	149.5	149.6					
100.0	100.0	97.0	97.0	0.1	0.1	87.53	6.5	149.5	149.6	149.4	0.17	889.150		
200.0	200.0	197.0	197.0	0.3	0.3	87.53	6.5	149.5	149.6	149.0	0.61	243.816		
300.0	300.0	297.0	297.0	0.5	0.5	87.53	6.5	149.5	149.6	148.5	1.06	140.723		
400.0	400.0	397.0	397.0	0.8	0.8	87.53	6.5	149.5	149.6	148.1	1.51	98.903		
500.0	500.0	497.0	497.0	1.0	1.0	87.53	6.5	149.5	149.6	147.6	1.96	76.245		
600.0	600.0	597.0	597.0	1.2	1.2	87.53	6.5	149.5	149.6	147.2	2.41	62.033		
700.0	700.0	697.0	697.0	1.4	1.4	87.53	6.5	149.5	149.6	146.7	2.86	52.287		
800.0	800.0	797.0	797.0	1.7	1.7	87.53	6.5	149.5	149.6	146.3	3.31	45.188		
900.0	900.0	897.0	897.0	1.9	1.9	87.53	6.5	149.5	149.6	145.8	3.76	39.786		
1,000.0	1,000.0	997.0	997.0	2.1	2.1	87.53	6.5	149.5	149.6	145.4	4.21	35.538		
1,100.0	1,100.0	1,097.0	1,097.0	2.3	2.3	87.53	6.5	149.5	149.6	144.9	4.66	32.109		
1,200.0	1,200.0	1,197.0	1,197.0	2.6	2.6	87.53	6.5	149.5	149.6	144.5	5.11	29.284		
1,300.0	1,300.0	1,297.0	1,297.0	2.8	2.8	87.53	6.5	149.5	149.6	144.0	5.56	26.915		
1,400.0	1,400.0	1,397.0	1,397.0	3.0	3.0	87.53	6.5	149.5	149.6	143.6	6.01	24.902		
1,500.0	1,500.0	1,497.0	1,497.0	3.2	3.2	87.53	6.5	149.5	149.6	143.2	6.46	23.168 CC, ES		
1,600.0	1,600.0	1,592.1	1,592.1	3.4	3.4	173.62	6.6	150.9	152.9	146.0	6.87	22.259		
1,700.0	1,699.8	1,686.4	1,686.3	3.7	3.6	173.72	7.0	155.5	162.9	155.7	7.26	22.455		
1,800.0	1,799.5	1,779.4	1,779.0	3.9	3.8	173.87	7.6	163.0	179.7	172.0	7.64	23.515		
1,900.0	1,898.7	1,870.6	1,869.6	4.1	4.0	174.02	8.5	173.3	202.9	194.9	8.02	25.305		
2,000.0	1,997.5	1,960.1	1,958.1	4.4	4.3	174.17	9.6	186.2	232.6	224.2	8.39	27.704		
2,100.0	2,095.6	2,054.1	2,051.0	4.7	4.5	174.33	10.8	200.8	266.6	257.9	8.76	30.428		
2,200.0	2,193.4	2,147.5	2,143.2	5.0	4.8	174.55	12.0	215.4	302.4	293.2	9.17	32.971		
2,300.0	2,291.2	2,240.9	2,235.4	5.3	5.0	174.72	13.3	230.0	338.2	328.6	9.59	35.269		
2,400.0	2,389.0	2,334.2	2,327.7	5.7	5.3	174.86	14.5	244.5	374.0	364.0	10.02	37.341		
2,500.0	2,486.8	2,427.6	2,419.9	6.1	5.6	174.97	15.7	259.1	409.7	399.3	10.44	39.230		
2,600.0	2,584.6	2,521.0	2,512.1	6.5	5.9	175.07	17.0	273.6	445.5	434.6	10.88	40.950		
2,700.0	2,682.4	2,614.4	2,604.3	6.9	6.2	175.15	18.2	288.2	481.3	470.0	11.32	42.520		
2,800.0	2,780.3	2,707.8	2,696.6	7.3	6.5	175.22	19.4	302.7	517.1	505.3	11.76	43.957		
2,900.0	2,878.1	2,801.1	2,788.8	7.7	6.8	175.28	20.7	317.3	552.9	540.7	12.21	45.276		
3,000.0	2,975.9	2,894.5	2,881.0	8.1	7.1	175.34	21.9	331.9	588.7	576.0	12.66	46.490		
3,100.0	3,073.7	2,987.9	2,973.3	8.5	7.5	175.38	23.1	346.4	624.4	611.3	13.12	47.610		
3,200.0	3,171.5	3,081.3	3,065.5	8.9	7.8	175.43	24.4	361.0	660.2	646.6	13.57	48.646		
3,300.0	3,269.3	3,174.6	3,157.7	9.4	8.1	175.46	25.6	375.5	696.0	682.0	14.03	49.606		
3,400.0	3,367.1	3,268.0	3,249.9	9.8	8.4	175.50	26.8	390.1	731.8	717.3	14.49	50.497		
3,500.0	3,464.9	3,361.4	3,342.2	10.2	8.7	175.53	28.1	404.6	767.6	752.6	14.95	51.327		
3,600.0	3,562.7	3,479.3	3,458.9	10.7	9.1	175.58	29.5	421.7	802.4	786.9	15.45	51.929		
3,700.0	3,660.9	3,613.2	3,592.0	11.0	9.4	175.69	30.7	435.4	831.1	815.1	16.00	51.949		
3,800.0	3,759.7	3,751.5	3,730.1	11.3	9.7	175.78	31.3	443.1	851.8	835.3	16.53	51.528		
3,900.0	3,859.0	3,877.4	3,856.0	11.5	9.9	175.87	31.5	444.5	864.7	847.7	17.02	50.798		
4,000.0	3,958.6	3,977.1	3,955.6	11.8	10.1	175.92	31.5	444.5	873.1	855.6	17.46	50.005		
4,100.0	4,058.5	4,077.0	4,055.5	11.9	10.3	175.95	31.5	444.5	878.0	860.1	17.88	49.113		
4,200.0	4,158.5	4,176.9	4,155.5	12.1	10.4	89.91	31.5	444.5	879.5	861.2	18.27	48.134		
4,300.0	4,258.5	4,276.9	4,255.5	12.3	10.6	89.91	31.5	444.5	879.5	860.8	18.69	47.063		
4,400.0	4,358.5	4,376.9	4,355.5	12.4	10.8	89.91	31.5	444.5	879.5	860.4	19.10	46.034		
4,500.0	4,458.5	4,476.9	4,455.5	12.6	11.0	89.91	31.5	444.5	879.5	859.9	19.52	45.047		
4,600.0	4,558.5	4,576.9	4,555.5	12.8	11.2	89.91	31.5	444.5	879.5	859.5	19.94	44.098		
4,700.0	4,658.5	4,676.9	4,655.5	12.9	11.4	89.91	31.5	444.5	879.5	859.1	20.37	43.185		
4,800.0	4,758.5	4,776.9	4,755.5	13.1	11.6	89.91	31.5	444.5	879.5	858.7	20.79	42.307		
4,900.0	4,858.5	4,876.9	4,855.5	13.3	11.8	89.91	31.5	444.5	879.5	858.3	21.21	41.462		
5,000.0	4,958.2	4,981.5	4,959.7	13.5	12.0	92.17	38.2	444.2	879.5	857.8	21.65	40.615		
5,100.0	5,056.1	5,086.2	5,062.1	13.7	12.2	92.11	60.0	443.3	879.4	857.3	22.12	39.754		

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 LD02-75-1AHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1AHN	<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		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
5,200.0	5,150.3	5,190.8	5,160.0	13.9	12.5	92.01	96.5	441.9	879.4	856.7	22.66	38.806		
5,300.0	5,238.8	5,295.1	5,251.3	14.2	12.7	91.87	146.6	439.9	879.3	856.0	23.34	37.670		
5,400.0	5,320.1	5,399.0	5,334.1	14.5	13.1	91.70	209.2	437.5	879.3	855.0	24.25	36.256		
5,500.0	5,392.5	5,502.4	5,406.6	15.0	13.6	91.48	282.8	434.6	879.2	853.8	25.47	34.523		
5,600.0	5,454.6	5,605.4	5,467.6	15.6	14.2	91.24	365.5	431.3	879.2	852.1	27.04	32.512		
5,700.0	5,505.2	5,707.7	5,515.8	16.3	15.1	90.98	455.6	427.8	879.1	850.1	28.99	30.325		
5,800.0	5,543.3	5,809.4	5,550.5	17.3	16.2	90.70	551.1	424.0	879.1	847.8	31.29	28.096		
5,872.8	5,562.8	5,883.1	5,567.0	18.1	17.1	90.48	622.8	421.2	879.1	845.9	33.17	26.504		
5,900.0	5,568.2	5,910.5	5,571.2	18.4	17.5	90.40	649.9	420.2	879.1	845.2	33.89	25.943		
6,000.0	5,580.1	6,010.7	5,580.8	19.7	18.8	90.25	749.5	416.2	879.1	842.4	36.70	23.954		
6,100.0	5,586.5	6,110.9	5,584.4	21.1	20.3	90.06	849.5	412.3	879.2	839.5	39.69	22.150		
6,200.0	5,586.7	6,210.9	5,584.6	22.6	21.8	90.06	949.5	408.4	879.2	836.4	42.81	20.538		
6,300.0	5,586.9	6,310.9	5,584.8	24.1	23.4	90.06	1,049.4	404.4	879.2	833.2	46.04	19.097		
6,400.0	5,587.0	6,410.9	5,585.0	25.7	25.1	90.06	1,149.3	400.5	879.3	829.9	49.36	17.812		
6,500.0	5,587.2	6,510.9	5,585.1	27.3	26.7	90.06	1,249.2	396.6	879.3	826.5	52.76	16.665		
6,600.0	5,587.4	6,610.9	5,585.3	29.0	28.4	90.06	1,349.1	392.7	879.3	823.1	56.22	15.641		
6,700.0	5,587.6	6,710.9	5,585.5	30.7	30.2	90.06	1,449.1	388.7	879.4	819.7	59.73	14.722		
6,800.0	5,587.7	6,810.9	5,585.7	32.4	31.9	90.06	1,549.0	384.8	879.4	816.1	63.28	13.897		
6,900.0	5,587.9	6,910.9	5,585.8	34.2	33.7	90.06	1,648.9	380.9	879.5	812.6	66.87	13.152		
7,000.0	5,588.1	7,010.9	5,586.0	35.9	35.5	90.06	1,748.8	376.9	879.5	809.0	70.48	12.478		
7,100.0	5,588.3	7,110.9	5,586.2	37.7	37.3	90.06	1,848.8	373.0	879.5	805.4	74.13	11.866		
7,200.0	5,588.4	7,210.9	5,586.4	39.5	39.2	90.06	1,948.7	369.1	879.6	801.8	77.79	11.307		
7,300.0	5,588.6	7,310.9	5,586.5	41.3	41.0	90.06	2,048.6	365.2	879.6	798.1	81.47	10.797		
7,400.0	5,588.8	7,410.9	5,586.7	43.2	42.8	90.06	2,148.5	361.2	879.7	794.5	85.17	10.328		
7,500.0	5,589.0	7,510.9	5,586.9	45.0	44.7	90.06	2,248.4	357.3	879.7	790.8	88.88	9.897		
7,600.0	5,589.1	7,610.9	5,587.1	46.8	46.5	90.06	2,348.4	353.4	879.7	787.1	92.61	9.499		
7,700.0	5,589.3	7,710.9	5,587.2	48.7	48.4	90.06	2,448.3	349.5	879.8	783.4	96.35	9.131		
7,800.0	5,589.5	7,810.9	5,587.4	50.5	50.3	90.06	2,548.2	345.5	879.8	779.7	100.09	8.790		
7,900.0	5,589.7	7,910.9	5,587.6	52.4	52.1	90.06	2,648.1	341.6	879.8	776.0	103.85	8.472		
8,000.0	5,589.8	8,010.9	5,587.8	54.3	54.0	90.06	2,748.1	337.7	879.9	772.3	107.61	8.176		
8,100.0	5,590.0	8,110.9	5,587.9	56.1	55.9	90.06	2,848.0	333.7	879.9	768.5	111.38	7.900		
8,200.0	5,590.2	8,210.9	5,588.1	58.0	57.8	90.06	2,947.9	329.8	880.0	764.8	115.16	7.641		
8,300.0	5,590.4	8,310.9	5,588.3	59.9	59.7	90.06	3,047.8	325.9	880.0	761.1	118.94	7.398		
8,400.0	5,590.5	8,410.9	5,588.5	61.8	61.5	90.06	3,147.8	322.0	880.0	757.3	122.73	7.170		
8,500.0	5,590.7	8,510.9	5,588.6	63.7	63.4	90.06	3,247.7	318.0	880.1	753.6	126.53	6.956		
8,600.0	5,590.9	8,610.9	5,588.8	65.5	65.3	90.06	3,347.6	314.1	880.1	749.8	130.32	6.753		
8,700.0	5,591.1	8,710.9	5,589.0	67.4	67.2	90.06	3,447.5	310.2	880.2	746.0	134.13	6.562		
8,800.0	5,591.2	8,810.9	5,589.2	69.3	69.1	90.06	3,547.4	306.2	880.2	742.3	137.93	6.381		
8,900.0	5,591.4	8,910.9	5,589.3	71.2	71.0	90.06	3,647.4	302.3	880.2	738.5	141.74	6.210		
9,000.0	5,591.6	9,010.9	5,589.5	73.1	72.9	90.06	3,747.3	298.4	880.3	734.7	145.55	6.048		
9,100.0	5,591.8	9,110.9	5,589.7	75.0	74.8	90.06	3,847.2	294.5	880.3	730.9	149.37	5.894		
9,200.0	5,591.9	9,210.9	5,589.9	76.9	76.7	90.06	3,947.1	290.5	880.4	727.2	153.18	5.747		
9,300.0	5,592.1	9,310.9	5,590.0	78.8	78.6	90.06	4,047.1	286.6	880.4	723.4	157.00	5.607		
9,400.0	5,592.3	9,410.9	5,590.2	80.7	80.6	90.06	4,147.0	282.7	880.4	719.6	160.83	5.474		
9,500.0	5,592.5	9,510.9	5,590.4	82.6	82.5	90.06	4,246.9	278.7	880.5	715.8	164.65	5.348		
9,545.5	5,592.5	9,556.4	5,590.5	83.5	83.3	90.06	4,292.3	277.0	880.5	714.1	166.39	5.292		
9,587.2	5,592.6	9,583.8	5,590.5	84.3	83.9	90.06	4,319.7	275.9	880.6	712.9	167.71	5.251 SF		

# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1AHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1AHN	<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	1.4	74.8	74.8					
100.0	100.0	98.0	98.0	0.1	0.1	88.92	1.4	74.8	74.8	74.6	0.17	442.220		
200.0	200.0	198.0	198.0	0.3	0.3	88.92	1.4	74.8	74.8	74.2	0.62	121.431		
300.0	300.0	298.0	298.0	0.5	0.5	88.92	1.4	74.8	74.8	73.7	1.07	70.194		
400.0	400.0	398.0	398.0	0.8	0.8	88.92	1.4	74.8	74.8	73.3	1.51	49.364		
500.0	500.0	498.0	498.0	1.0	1.0	88.92	1.4	74.8	74.8	72.8	1.96	38.068		
600.0	600.0	598.0	598.0	1.2	1.2	88.92	1.4	74.8	74.8	72.4	2.41	30.979		
700.0	700.0	698.0	698.0	1.4	1.4	88.92	1.4	74.8	74.8	71.9	2.86	26.116		
800.0	800.0	798.0	798.0	1.7	1.7	88.92	1.4	74.8	74.8	71.5	3.31	22.572		
900.0	900.0	898.0	898.0	1.9	1.9	88.92	1.4	74.8	74.8	71.0	3.76	19.875		
1,000.0	1,000.0	998.0	998.0	2.1	2.1	88.92	1.4	74.8	74.8	70.6	4.21	17.754		
1,100.0	1,100.0	1,098.0	1,098.0	2.3	2.3	88.92	1.4	74.8	74.8	70.1	4.66	16.042		
1,200.0	1,200.0	1,198.0	1,198.0	2.6	2.6	88.92	1.4	74.8	74.8	69.7	5.11	14.631		
1,300.0	1,300.0	1,298.0	1,298.0	2.8	2.8	88.92	1.4	74.8	74.8	69.2	5.56	13.448		
1,400.0	1,400.0	1,398.0	1,398.0	3.0	3.0	88.92	1.4	74.8	74.8	68.8	6.01	12.442		
1,500.0	1,500.0	1,498.0	1,498.0	3.2	3.2	88.92	1.4	74.8	74.8	68.3	6.46	11.577 CC, ES		
1,600.0	1,600.0	1,598.0	1,598.0	3.4	3.5	175.09	1.4	74.8	76.5	69.6	6.89	11.101		
1,700.0	1,699.8	1,697.8	1,697.8	3.7	3.7	175.39	1.4	74.8	81.7	74.4	7.31	11.182		
1,800.0	1,799.5	1,797.4	1,797.4	3.9	3.9	175.82	1.4	74.8	90.4	82.7	7.72	11.713		
1,900.0	1,898.7	1,896.7	1,896.7	4.1	4.1	176.30	1.4	74.8	102.6	94.5	8.12	12.627		
2,000.0	1,997.5	1,995.5	1,995.5	4.4	4.3	176.77	1.4	74.8	118.2	109.7	8.52	13.870		
2,100.0	2,095.6	2,093.6	2,093.6	4.7	4.6	177.20	1.4	74.8	137.3	128.3	8.91	15.401		
2,200.0	2,193.4	2,191.4	2,191.4	5.0	4.8	177.57	1.4	74.8	158.1	148.7	9.35	16.910		
2,300.0	2,291.2	2,293.7	2,293.7	5.3	5.0	177.55	2.4	73.6	177.8	168.0	9.79	18.154		
2,400.0	2,389.0	2,397.4	2,397.2	5.7	5.2	176.82	5.9	69.7	194.8	184.5	10.24	19.024		
2,500.0	2,486.8	2,501.8	2,501.3	6.1	5.5	175.52	11.9	62.8	209.1	198.4	10.69	19.553		
2,600.0	2,584.6	2,600.9	2,599.8	6.5	5.7	174.12	18.8	55.0	222.2	211.0	11.15	19.923		
2,700.0	2,682.4	2,699.9	2,698.3	6.9	5.9	172.88	25.7	47.1	235.3	223.7	11.62	20.256		
2,800.0	2,780.3	2,798.9	2,796.7	7.3	6.2	171.77	32.6	39.2	248.6	236.5	12.09	20.557		
2,900.0	2,878.1	2,897.9	2,895.2	7.7	6.4	170.78	39.5	31.4	261.9	249.3	12.57	20.829		
3,000.0	2,975.9	2,997.0	2,993.6	8.1	6.7	169.88	46.4	23.5	275.3	262.3	13.07	21.074		
3,100.0	3,073.7	3,096.0	3,092.1	8.5	6.9	169.06	53.4	15.6	288.8	275.3	13.56	21.296		
3,200.0	3,171.5	3,190.8	3,186.5	8.9	7.1	168.44	59.6	8.6	302.8	288.7	14.04	21.565		
3,300.0	3,269.3	3,282.9	3,278.4	9.4	7.3	168.27	63.8	3.8	318.7	304.3	14.48	22.012		
3,400.0	3,367.1	3,374.4	3,369.8	9.8	7.5	168.50	66.0	1.2	336.8	321.9	14.91	22.592		
3,500.0	3,464.9	3,467.5	3,462.9	10.2	7.7	169.05	66.4	0.8	356.8	341.4	15.33	23.272		
3,600.0	3,562.7	3,565.3	3,560.7	10.7	7.9	169.66	66.4	0.8	377.3	361.5	15.79	23.896		
3,700.0	3,660.9	3,663.6	3,658.9	11.0	8.1	170.21	66.4	0.8	395.8	379.5	16.27	24.326		
3,800.0	3,759.7	3,762.4	3,757.7	11.3	8.3	170.63	66.4	0.8	410.9	394.2	16.73	24.555		
3,900.0	3,859.0	3,861.6	3,857.0	11.5	8.5	170.93	66.4	0.8	422.6	405.5	17.18	24.603		
4,000.0	3,958.6	3,961.3	3,956.6	11.8	8.7	171.13	66.4	0.8	431.0	413.4	17.60	24.483		
4,100.0	4,058.5	4,061.2	4,056.5	11.9	9.0	171.25	66.4	0.8	435.8	417.8	18.00	24.208		
4,200.0	4,158.5	4,161.1	4,156.5	12.1	9.2	85.22	66.4	0.8	437.3	418.9	18.35	23.834		
4,300.0	4,258.5	4,261.1	4,256.5	12.3	9.4	85.22	66.4	0.8	437.3	418.5	18.77	23.294		
4,400.0	4,358.5	4,361.1	4,356.5	12.4	9.6	85.22	66.4	0.8	437.3	418.1	19.20	22.777		
4,500.0	4,458.5	4,461.1	4,456.5	12.6	9.8	85.22	66.4	0.8	437.3	417.7	19.63	22.282		
4,600.0	4,558.5	4,561.1	4,556.5	12.8	10.1	85.22	66.4	0.8	437.3	417.2	20.05	21.806		
4,700.0	4,658.5	4,661.1	4,656.5	12.9	10.3	85.22	66.4	0.8	437.3	416.8	20.48	21.350		
4,800.0	4,758.5	4,761.1	4,756.5	13.1	10.5	85.22	66.4	0.8	437.3	416.4	20.91	20.911		
4,900.0	4,858.5	4,861.1	4,856.5	13.3	10.7	85.22	66.4	0.8	437.3	415.9	21.34	20.489		
5,000.0	4,958.2	4,958.6	4,953.7	13.5	11.0	87.49	72.5	0.5	437.3	415.5	21.81	20.047		
5,100.0	5,056.1	5,056.0	5,049.1	13.7	11.2	87.54	91.7	-0.2	437.3	415.0	22.30	19.611		

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 LD02-75-1AHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1AHN	<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		
5,200.0	5,150.3	5,153.4	5,141.0	13.9	11.5	87.62	123.7	-1.5	437.3	414.4	22.87	19.123		
5,300.0	5,238.8	5,250.9	5,227.9	14.2	11.8	87.76	167.9	-3.2	437.3	413.7	23.58	18.547		
5,400.0	5,320.1	5,348.7	5,308.1	14.5	12.3	87.93	223.5	-5.3	437.3	412.8	24.50	17.851		
5,500.0	5,392.5	5,446.6	5,380.0	15.0	12.9	88.15	289.7	-7.9	437.3	411.6	25.69	17.018		
5,509.4	5,398.7	5,455.7	5,386.3	15.0	13.0	88.17	296.4	-8.2	437.3	411.4	25.83	16.928		
5,600.0	5,454.6	5,544.7	5,442.5	15.6	13.6	88.40	365.3	-10.9	437.3	410.1	27.22	16.064		
5,700.0	5,505.2	5,643.1	5,494.1	16.3	14.6	88.68	448.9	-14.1	437.3	408.2	29.10	15.026		
5,800.0	5,543.3	5,741.9	5,533.9	17.3	15.7	88.99	539.1	-17.6	437.3	406.0	31.33	13.958		
5,900.0	5,568.2	5,840.9	5,561.0	18.4	16.9	89.32	634.2	-21.3	437.4	403.5	33.87	12.913		
6,000.0	5,580.1	5,940.4	5,574.9	19.7	18.3	89.58	732.6	-25.1	437.4	400.8	36.66	11.932		
6,100.0	5,586.5	6,040.2	5,582.6	21.1	19.8	89.75	832.1	-29.0	437.5	397.9	39.63	11.039		
6,200.0	5,586.7	6,140.2	5,583.0	22.6	21.4	89.78	931.9	-32.9	437.6	394.8	42.74	10.237		
6,300.0	5,586.9	6,240.2	5,583.0	24.1	23.0	89.76	1,031.8	-36.8	437.7	391.7	45.97	9.521		
6,400.0	5,587.0	6,340.2	5,583.0	25.7	24.6	89.73	1,131.8	-40.7	437.7	388.5	49.28	8.882		
6,500.0	5,587.2	6,440.2	5,583.0	27.3	26.3	89.71	1,231.7	-44.6	437.8	385.1	52.67	8.312		
6,600.0	5,587.4	6,540.2	5,583.0	29.0	28.0	89.69	1,331.6	-48.4	437.9	381.8	56.12	7.803		
6,700.0	5,587.6	6,640.2	5,583.0	30.7	29.8	89.67	1,431.5	-52.3	438.0	378.4	59.62	7.346		
6,800.0	5,587.7	6,740.2	5,583.0	32.4	31.6	89.64	1,531.5	-56.2	438.1	374.9	63.17	6.935		
6,900.0	5,587.9	6,840.2	5,583.0	34.2	33.3	89.62	1,631.4	-60.1	438.1	371.4	66.75	6.564		
7,000.0	5,588.1	6,940.2	5,583.0	35.9	35.2	89.60	1,731.3	-64.0	438.2	367.9	70.36	6.228		
7,100.0	5,588.3	7,040.2	5,583.0	37.7	37.0	89.58	1,831.2	-67.9	438.3	364.3	74.00	5.923		
7,200.0	5,588.4	7,140.2	5,583.0	39.5	38.8	89.55	1,931.2	-71.8	438.4	360.7	77.66	5.645		
7,300.0	5,588.6	7,240.2	5,583.0	41.3	40.6	89.53	2,031.1	-75.7	438.5	357.1	81.34	5.391		
7,400.0	5,588.8	7,340.2	5,583.0	43.2	42.5	89.51	2,131.0	-79.5	438.5	353.5	85.03	5.157		
7,500.0	5,589.0	7,440.2	5,583.0	45.0	44.3	89.48	2,230.9	-83.4	438.6	349.9	88.74	4.943		
7,600.0	5,589.1	7,540.2	5,583.0	46.8	46.2	89.46	2,330.9	-87.3	438.7	346.2	92.47	4.745		
7,700.0	5,589.3	7,640.2	5,583.0	48.7	48.1	89.44	2,430.8	-91.2	438.8	342.6	96.20	4.561		
7,800.0	5,589.5	7,740.2	5,583.0	50.5	49.9	89.42	2,530.7	-95.1	438.9	338.9	99.94	4.391		
7,900.0	5,589.7	7,840.2	5,583.0	52.4	51.8	89.39	2,630.6	-99.0	439.0	335.3	103.70	4.233		
8,000.0	5,589.8	7,940.2	5,583.0	54.3	53.7	89.37	2,730.6	-102.9	439.0	331.6	107.46	4.086		
8,100.0	5,590.0	8,040.2	5,583.0	56.1	55.6	89.35	2,830.5	-106.7	439.1	327.9	111.23	3.948		
8,200.0	5,590.2	8,140.2	5,583.0	58.0	57.5	89.33	2,930.4	-110.6	439.2	324.2	115.00	3.819		
8,300.0	5,590.4	8,240.2	5,583.0	59.9	59.4	89.30	3,030.3	-114.5	439.3	320.5	118.78	3.698		
8,400.0	5,590.5	8,340.2	5,583.0	61.8	61.2	89.28	3,130.3	-118.4	439.4	316.8	122.57	3.585		
8,500.0	5,590.7	8,440.2	5,583.0	63.7	63.1	89.26	3,230.2	-122.3	439.5	313.1	126.36	3.478		
8,600.0	5,590.9	8,540.2	5,583.0	65.5	65.0	89.24	3,330.1	-126.2	439.5	309.4	130.16	3.377		
8,700.0	5,591.1	8,640.2	5,583.0	67.4	66.9	89.21	3,430.0	-130.1	439.6	305.7	133.95	3.282		
8,800.0	5,591.2	8,740.2	5,583.0	69.3	68.8	89.19	3,530.0	-134.0	439.7	301.9	137.76	3.192		
8,900.0	5,591.4	8,840.2	5,583.0	71.2	70.7	89.17	3,629.9	-137.8	439.8	298.2	141.56	3.107		
9,000.0	5,591.6	8,940.2	5,583.0	73.1	72.7	89.14	3,729.8	-141.7	439.9	294.5	145.37	3.026		
9,100.0	5,591.8	9,040.2	5,583.0	75.0	74.6	89.12	3,829.7	-145.6	440.0	290.8	149.19	2.949		
9,200.0	5,591.9	9,140.2	5,583.0	76.9	76.5	89.10	3,929.6	-149.5	440.0	287.0	153.00	2.876		
9,300.0	5,592.1	9,240.2	5,583.0	78.8	78.4	89.08	4,029.6	-153.4	440.1	283.3	156.82	2.807		
9,400.0	5,592.3	9,340.2	5,583.0	80.7	80.3	89.05	4,129.5	-157.3	440.2	279.6	160.64	2.740		
9,500.0	5,592.5	9,440.2	5,583.0	82.6	82.2	89.03	4,229.4	-161.2	440.3	275.8	164.46	2.677		
9,547.1	5,592.5	9,487.3	5,583.0	83.5	83.1	89.02	4,276.5	-163.0	440.3	274.1	166.26	2.648		
9,587.2	5,592.6	9,522.2	5,583.0	84.3	83.8	89.01	4,311.4	-164.4	440.4	272.7	167.70	2.626 SF		

# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1AHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1AHN	<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 LD02-75-1BHN - 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	88.92	0.7	38.8	38.8					
100.0	100.0	99.0	99.0	0.1	0.1	88.92	0.7	38.8	38.8	38.6	0.17	228.136		
200.0	200.0	199.0	199.0	0.3	0.3	88.92	0.7	38.8	38.8	38.2	0.62	62.733		
300.0	300.0	299.0	299.0	0.5	0.5	88.92	0.7	38.8	38.8	37.7	1.07	36.319		
400.0	400.0	399.0	399.0	0.8	0.8	88.92	0.7	38.8	38.8	37.3	1.52	25.558		
500.0	500.0	499.0	499.0	1.0	1.0	88.92	0.7	38.8	38.8	36.8	1.97	19.716		
600.0	600.0	599.0	599.0	1.2	1.2	88.92	0.7	38.8	38.8	36.4	2.42	16.048		
700.0	700.0	699.0	699.0	1.4	1.4	88.92	0.7	38.8	38.8	35.9	2.87	13.531		
800.0	800.0	799.0	799.0	1.7	1.7	88.92	0.7	38.8	38.8	35.5	3.32	11.696		
900.0	900.0	899.0	899.0	1.9	1.9	88.92	0.7	38.8	38.8	35.0	3.76	10.300		
1,000.0	1,000.0	999.0	999.0	2.1	2.1	88.92	0.7	38.8	38.8	34.6	4.21	9.201		
1,100.0	1,100.0	1,099.0	1,099.0	2.3	2.3	88.92	0.7	38.8	38.8	34.1	4.66	8.314		
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	88.92	0.7	38.8	38.8	33.7	5.11	7.583		
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	88.92	0.7	38.8	38.8	33.2	5.56	6.970		
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	88.92	0.7	38.8	38.8	32.8	6.01	6.449		
1,500.0	1,500.0	1,499.0	1,499.0	3.2	3.2	88.92	0.7	38.8	38.8	32.3	6.46	6.001 CC, ES		
1,600.0	1,600.0	1,599.0	1,599.0	3.4	3.5	175.19	0.7	38.8	40.5	33.6	6.90	5.875		
1,700.0	1,699.8	1,698.8	1,698.8	3.7	3.7	175.73	0.7	38.8	45.7	38.4	7.31	6.255		
1,800.0	1,799.5	1,798.5	1,798.5	3.9	3.9	176.40	0.7	38.8	54.4	46.7	7.72	7.048		
1,900.0	1,898.7	1,899.9	1,899.9	4.1	4.1	176.79	1.1	37.1	64.9	56.8	8.12	7.997		
2,000.0	1,997.5	2,001.9	2,001.7	4.4	4.3	176.73	2.1	31.8	75.4	66.9	8.50	8.875		
2,100.0	2,095.6	2,104.1	2,103.6	4.7	4.6	176.37	3.8	22.9	85.9	77.0	8.87	9.677		
2,200.0	2,193.4	2,206.9	2,205.6	5.0	4.8	175.75	6.3	10.5	94.6	85.3	9.31	10.168		
2,300.0	2,291.2	2,308.2	2,305.6	5.3	5.1	174.90	9.3	-4.8	100.5	90.7	9.75	10.306		
2,400.0	2,389.0	2,408.0	2,404.2	5.7	5.3	174.11	12.3	-20.1	106.0	95.8	10.20	10.395		
2,500.0	2,486.8	2,507.9	2,502.8	6.1	5.6	173.40	15.3	-35.5	111.6	100.9	10.66	10.470		
2,600.0	2,584.6	2,607.7	2,601.4	6.5	5.9	172.75	18.3	-50.8	117.1	106.0	11.12	10.534		
2,700.0	2,682.4	2,707.5	2,700.0	6.9	6.2	172.17	21.3	-66.2	122.7	111.1	11.59	10.586		
2,800.0	2,780.3	2,807.4	2,798.6	7.3	6.5	171.63	24.3	-81.5	128.3	116.3	12.07	10.630		
2,900.0	2,878.1	2,907.2	2,897.2	7.7	6.8	171.14	27.3	-96.9	134.0	121.4	12.56	10.667		
3,000.0	2,975.9	3,007.0	2,995.8	8.1	7.1	170.69	30.3	-112.2	139.6	126.5	13.05	10.697		
3,100.0	3,073.7	3,106.9	3,094.4	8.5	7.5	170.28	33.3	-127.6	145.2	131.7	13.54	10.721		
3,200.0	3,171.5	3,206.7	3,193.0	8.9	7.8	169.89	36.4	-142.9	150.8	136.8	14.04	10.741		
3,300.0	3,269.3	3,306.5	3,291.7	9.4	8.1	169.53	39.4	-158.2	156.5	141.9	14.55	10.757		
3,400.0	3,367.1	3,406.4	3,390.3	9.8	8.5	169.20	42.4	-173.6	162.1	147.1	15.06	10.769		
3,500.0	3,464.9	3,503.7	3,486.4	10.2	8.8	168.94	45.2	-188.2	168.2	152.6	15.55	10.813		
3,600.0	3,562.7	3,600.0	3,582.0	10.7	9.0	168.98	47.5	-199.9	176.9	160.9	16.02	11.044		
3,700.0	3,660.9	3,691.8	3,673.3	11.0	9.2	169.23	49.2	-208.2	186.7	170.2	16.47	11.335		
3,800.0	3,759.7	3,785.3	3,766.8	11.3	9.4	169.55	50.2	-213.6	196.1	179.2	16.89	11.613		
3,900.0	3,859.0	3,878.7	3,860.1	11.5	9.6	169.94	50.7	-216.1	205.3	188.0	17.28	11.884		
4,000.0	3,958.6	3,976.3	3,957.6	11.8	9.7	170.34	50.7	-216.2	213.4	195.8	17.65	12.093		
4,100.0	4,058.5	4,076.1	4,057.5	11.9	9.9	170.57	50.7	-216.2	218.3	200.3	18.02	12.113		
4,200.0	4,158.5	4,176.1	4,157.5	12.1	10.1	84.59	50.7	-216.2	219.7	201.4	18.33	11.991		
4,300.0	4,258.5	4,276.1	4,257.5	12.3	10.3	84.59	50.7	-216.2	219.7	201.0	18.74	11.724		
4,400.0	4,358.5	4,376.1	4,357.5	12.4	10.5	84.59	50.7	-216.2	219.7	200.6	19.16	11.468		
4,500.0	4,458.5	4,476.1	4,457.5	12.6	10.7	84.59	50.7	-216.2	219.7	200.2	19.58	11.222		
4,600.0	4,558.5	4,576.1	4,557.5	12.8	10.9	84.59	50.7	-216.2	219.7	199.7	20.00	10.985		
4,700.0	4,658.5	4,676.1	4,657.5	12.9	11.1	84.59	50.7	-216.2	219.7	199.3	20.43	10.758		
4,800.0	4,758.5	4,776.1	4,757.5	13.1	11.3	84.59	50.7	-216.2	219.7	198.9	20.85	10.540		
4,817.1	4,775.6	4,793.2	4,774.6	13.1	11.3	84.59	50.7	-216.2	219.7	198.8	20.92	10.503		
4,900.0	4,858.5	4,874.8	4,856.1	13.3	11.5	83.82	53.7	-216.3	219.9	198.6	21.29	10.330		
5,000.0	4,958.2	4,971.7	4,951.7	13.5	11.7	83.63	68.9	-216.9	220.8	198.9	21.86	10.103		

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 LD02-75-1AHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1AHN	<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 LD02-75-1BHN - 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		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
5,100.0	5,056.1	5,067.3	5,043.2	13.7	12.0	81.31	96.5	-218.0	222.0	199.6	22.43	9.900		
5,200.0	5,150.3	5,162.0	5,129.3	13.9	12.3	79.18	135.5	-219.6	223.5	200.4	23.08	9.681		
5,300.0	5,238.8	5,255.7	5,208.8	14.2	12.6	77.28	184.9	-221.5	225.0	201.2	23.85	9.434		
5,400.0	5,320.1	5,350.0	5,281.6	14.5	13.1	75.62	244.8	-223.8	226.6	201.9	24.78	9.147		
5,500.0	5,392.5	5,440.8	5,343.7	15.0	13.6	74.27	310.9	-226.4	228.1	202.3	25.85	8.823		
5,600.0	5,454.6	5,532.4	5,397.3	15.6	14.4	73.19	385.1	-229.3	229.4	202.3	27.13	8.454		
5,700.0	5,505.2	5,623.7	5,440.9	16.3	15.2	72.40	465.1	-232.5	230.4	201.8	28.63	8.048		
5,800.0	5,543.3	5,714.7	5,473.9	17.3	16.3	71.92	549.8	-235.8	231.1	200.7	30.36	7.612		
5,900.0	5,568.2	5,805.5	5,495.8	18.4	17.4	71.73	637.8	-239.2	231.4	199.1	32.32	7.159		
5,989.5	5,580.6	5,888.2	5,506.1	19.6	18.5	71.44	719.8	-242.5	231.8	197.5	34.34	6.750		
6,000.0	5,580.1	5,898.7	5,507.0	19.7	18.7	71.79	730.2	-242.9	231.3	196.7	34.66	6.674		
6,100.0	5,586.5	5,994.0	5,513.8	21.1	20.1	71.94	825.2	-246.6	231.2	194.0	37.25	6.206		
6,124.9	5,586.7	6,017.4	5,514.0	21.5	20.4	71.94	848.5	-247.5	231.2	193.2	37.97	6.090		
6,200.0	5,586.7	6,092.4	5,514.0	22.6	21.6	71.94	923.5	-250.4	231.3	191.1	40.19	5.753		
6,300.0	5,586.9	6,192.4	5,514.0	24.1	23.2	71.90	1,023.4	-254.4	231.4	188.1	43.28	5.346		
6,400.0	5,587.0	6,292.4	5,514.0	25.7	24.8	71.87	1,123.4	-258.3	231.5	185.0	46.45	4.983		
6,500.0	5,587.2	6,392.4	5,514.0	27.3	26.5	71.83	1,223.3	-262.2	231.6	181.9	49.69	4.660		
6,600.0	5,587.4	6,492.4	5,514.0	29.0	28.2	71.79	1,323.2	-266.1	231.7	178.7	52.99	4.371		
6,700.0	5,587.6	6,592.4	5,514.0	30.7	30.0	71.75	1,423.1	-270.0	231.8	175.4	56.34	4.113		
6,800.0	5,587.7	6,692.4	5,514.0	32.4	31.7	71.72	1,523.1	-273.9	231.9	172.1	59.73	3.882		
6,900.0	5,587.9	6,792.4	5,514.0	34.2	33.5	71.68	1,623.0	-277.9	232.0	168.8	63.15	3.673		
7,000.0	5,588.1	6,892.4	5,514.0	35.9	35.3	71.64	1,722.9	-281.8	232.1	165.5	66.60	3.484		
7,100.0	5,588.3	6,992.4	5,514.0	37.7	37.1	71.61	1,822.8	-285.7	232.2	162.1	70.07	3.313		
7,200.0	5,588.4	7,092.4	5,514.0	39.5	39.0	71.57	1,922.8	-289.6	232.3	158.7	73.56	3.157		
7,300.0	5,588.6	7,192.4	5,514.0	41.3	40.8	71.53	2,022.7	-293.5	232.4	155.3	77.07	3.015		
7,400.0	5,588.8	7,292.4	5,514.0	43.2	42.6	71.50	2,122.6	-297.4	232.5	151.9	80.60	2.885		
7,500.0	5,589.0	7,392.4	5,514.0	45.0	44.5	71.46	2,222.5	-301.4	232.6	148.5	84.13	2.765		
7,600.0	5,589.1	7,492.4	5,514.0	46.8	46.3	71.42	2,322.4	-305.3	232.7	145.0	87.68	2.654		
7,700.0	5,589.3	7,592.4	5,514.0	48.7	48.2	71.39	2,422.4	-309.2	232.8	141.6	91.23	2.552		
7,800.0	5,589.5	7,692.4	5,514.0	50.5	50.1	71.35	2,522.3	-313.1	232.9	138.1	94.80	2.457		
7,900.0	5,589.7	7,792.4	5,514.0	52.4	52.0	71.31	2,622.2	-317.0	233.0	134.6	98.37	2.369		
8,000.0	5,589.8	7,892.4	5,514.0	54.3	53.8	71.28	2,722.1	-320.9	233.1	131.2	101.94	2.287		
8,100.0	5,590.0	7,992.4	5,514.0	56.1	55.7	71.24	2,822.1	-324.9	233.2	127.7	105.53	2.210		
8,200.0	5,590.2	8,092.4	5,514.0	58.0	57.6	71.20	2,922.0	-328.8	233.3	124.2	109.11	2.138		
8,300.0	5,590.4	8,192.4	5,514.0	59.9	59.5	71.17	3,021.9	-332.7	233.4	120.7	112.70	2.071		
8,400.0	5,590.5	8,292.4	5,514.0	61.8	61.4	71.13	3,121.8	-336.6	233.5	117.2	116.30	2.008		
8,500.0	5,590.7	8,392.4	5,514.0	63.7	63.3	71.09	3,221.8	-340.5	233.6	113.7	119.90	1.949 Level 3		
8,600.0	5,590.9	8,492.4	5,514.0	65.5	65.2	71.06	3,321.7	-344.4	233.7	110.2	123.50	1.893 Level 3		
8,700.0	5,591.1	8,592.4	5,514.0	67.4	67.1	71.02	3,421.6	-348.4	233.8	106.7	127.10	1.840 Level 3		
8,800.0	5,591.2	8,692.4	5,514.0	69.3	69.0	70.98	3,521.5	-352.3	233.9	103.2	130.71	1.790 Level 3		
8,900.0	5,591.4	8,792.4	5,514.0	71.2	70.9	70.95	3,621.4	-356.2	234.0	99.7	134.31	1.743 Level 3		
9,000.0	5,591.6	8,892.4	5,514.0	73.1	72.8	70.91	3,721.4	-360.1	234.1	96.2	137.92	1.698 Level 3		
9,100.0	5,591.8	8,992.4	5,514.0	75.0	74.7	70.87	3,821.3	-364.0	234.3	92.7	141.53	1.655 Level 3		
9,200.0	5,591.9	9,092.4	5,514.0	76.9	76.6	70.84	3,921.2	-367.9	234.4	89.2	145.14	1.615 Level 3		
9,300.0	5,592.1	9,192.4	5,514.0	78.8	78.5	70.80	4,021.1	-371.9	234.5	85.7	148.76	1.576 Level 3		
9,400.0	5,592.3	9,292.4	5,514.0	80.7	80.4	70.77	4,121.1	-375.8	234.6	82.2	152.37	1.539 Level 3		
9,500.0	5,592.5	9,392.4	5,514.0	82.6	82.3	70.73	4,221.0	-379.7	234.7	78.7	155.98	1.504 Level 3		
9,587.2	5,592.6	9,479.5	5,514.0	84.3	84.0	70.70	4,307.9	-383.1	234.8	75.6	159.13	1.475 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 LD02-75-1AHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1AHN	<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	1.0	1.0	0.0	0.0	-91.08	-0.7	-36.0	36.0					
100.0	100.0	101.0	101.0	0.1	0.1	-91.08	-0.7	-36.0	36.0	35.8	0.17	208.044		
200.0	200.0	201.0	201.0	0.3	0.3	-91.08	-0.7	-36.0	36.0	35.4	0.62	57.832		
300.0	300.0	301.0	301.0	0.5	0.5	-91.08	-0.7	-36.0	36.0	34.9	1.07	33.584		
400.0	400.0	401.0	401.0	0.8	0.8	-91.08	-0.7	-36.0	36.0	34.5	1.52	23.662		
500.0	500.0	501.0	501.0	1.0	1.0	-91.08	-0.7	-36.0	36.0	34.0	1.97	18.266		
600.0	600.0	601.0	601.0	1.2	1.2	-91.08	-0.7	-36.0	36.0	33.6	2.42	14.874		
700.0	700.0	701.0	701.0	1.4	1.4	-91.08	-0.7	-36.0	36.0	33.1	2.87	12.545		
800.0	800.0	801.0	801.0	1.7	1.7	-91.08	-0.7	-36.0	36.0	32.7	3.32	10.846		
900.0	900.0	901.0	901.0	1.9	1.9	-91.08	-0.7	-36.0	36.0	32.2	3.77	9.552		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-91.08	-0.7	-36.0	36.0	31.8	4.22	8.535		
1,100.0	1,100.0	1,101.0	1,101.0	2.3	2.3	-91.08	-0.7	-36.0	36.0	31.3	4.67	7.713		
1,166.3	1,166.3	1,167.3	1,167.3	2.5	2.5	-91.08	-0.7	-36.0	36.0	31.0	4.97	7.250 CC		
1,200.0	1,200.0	1,201.0	1,201.0	2.6	2.6	-91.08	-0.7	-36.0	36.0	30.9	5.12	7.036 ES		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-91.03	-0.7	-37.7	37.8	32.2	5.55	6.802		
1,400.0	1,400.0	1,398.2	1,398.0	3.0	3.0	-90.91	-0.7	-42.9	43.0	37.0	5.98	7.186		
1,500.0	1,500.0	1,496.2	1,495.7	3.2	3.2	-90.76	-0.7	-51.3	51.6	45.2	6.42	8.038		
1,600.0	1,600.0	1,593.7	1,592.5	3.4	3.4	-4.67	-0.7	-63.0	61.9	55.0	6.81	9.078		
1,700.0	1,699.8	1,690.9	1,688.5	3.7	3.7	-4.83	-0.7	-78.0	72.1	64.9	7.21	9.992		
1,800.0	1,799.5	1,787.8	1,783.7	3.9	4.0	-5.11	-0.7	-96.1	82.2	74.6	7.61	10.797		
1,900.0	1,898.7	1,884.4	1,877.9	4.1	4.3	-5.47	-0.7	-117.4	92.2	84.2	8.01	11.507		
2,000.0	1,997.5	1,983.5	1,974.1	4.4	4.7	-5.93	-0.7	-141.3	100.9	92.5	8.42	11.986		
2,100.0	2,095.6	2,083.3	2,070.9	4.7	5.1	-6.52	-0.7	-165.5	106.3	97.4	8.84	12.028		
2,200.0	2,193.4	2,183.3	2,167.9	5.0	5.5	-7.18	-0.7	-189.6	109.8	100.5	9.30	11.807		
2,300.0	2,291.2	2,283.2	2,264.9	5.3	6.0	-7.80	-0.7	-213.8	113.4	103.6	9.78	11.594		
2,400.0	2,389.0	2,383.1	2,361.8	5.7	6.5	-8.39	-0.7	-238.0	117.0	106.7	10.27	11.393		
2,500.0	2,486.8	2,483.0	2,458.8	6.1	6.9	-8.93	-0.7	-262.2	120.6	109.8	10.77	11.202		
2,600.0	2,584.6	2,583.0	2,555.7	6.5	7.4	-9.45	-0.7	-286.3	124.2	112.9	11.27	11.021		
2,700.0	2,682.4	2,682.9	2,652.7	6.9	7.9	-9.94	-0.7	-310.5	127.8	116.0	11.78	10.850		
2,800.0	2,780.3	2,782.8	2,749.7	7.3	8.4	-10.40	-0.7	-334.7	131.4	119.1	12.30	10.689		
2,900.0	2,878.1	2,882.8	2,846.6	7.7	8.9	-10.83	-0.7	-358.9	135.1	122.3	12.82	10.536		
3,000.0	2,975.9	2,982.7	2,943.6	8.1	9.4	-11.24	-0.7	-383.0	138.7	125.4	13.35	10.392		
3,100.0	3,073.7	3,082.6	3,040.5	8.5	9.9	-11.64	-0.7	-407.2	142.4	128.5	13.88	10.255		
3,200.0	3,171.5	3,182.5	3,137.5	8.9	10.4	-12.01	-0.7	-431.4	146.0	131.6	14.42	10.126		
3,300.0	3,269.3	3,282.5	3,234.5	9.4	10.9	-12.36	-0.7	-455.6	149.7	134.7	14.97	10.003		
3,400.0	3,367.1	3,382.4	3,331.4	9.8	11.4	-12.70	-0.7	-479.8	153.4	137.8	15.51	9.886		
3,500.0	3,464.9	3,482.3	3,428.4	10.2	11.9	-13.02	-0.7	-503.9	157.0	141.0	16.06	9.775		
3,600.0	3,562.7	3,582.3	3,525.3	10.7	12.4	-13.32	-0.7	-528.1	160.7	144.1	16.62	9.670		
3,700.0	3,660.9	3,682.1	3,622.2	11.0	12.9	-13.47	-0.7	-552.3	166.4	149.3	17.16	9.700		
3,800.0	3,759.7	3,783.1	3,720.3	11.3	13.4	-13.36	-0.7	-576.6	175.4	157.8	17.66	9.935		
3,900.0	3,859.0	3,889.2	3,823.9	11.5	13.8	-13.14	-0.7	-599.5	185.3	167.2	18.10	10.235		
4,000.0	3,958.6	3,995.7	3,928.6	11.8	14.2	-12.88	-0.7	-618.6	194.9	176.4	18.50	10.532		
4,100.0	4,058.5	4,102.7	4,034.5	11.9	14.5	-12.58	-0.7	-633.9	204.2	185.3	18.86	10.826		
4,200.0	4,158.5	4,210.0	4,141.2	12.1	14.7	-98.30	-0.7	-645.2	213.2	194.1	19.08	11.172		
4,300.0	4,258.5	4,317.8	4,248.8	12.3	14.9	-98.03	-0.7	-652.5	219.9	200.5	19.48	11.289		
4,400.0	4,358.5	4,426.1	4,357.0	12.4	15.1	-97.91	-0.7	-655.8	222.9	203.1	19.88	11.216		
4,500.0	4,458.5	4,528.6	4,459.5	12.6	15.2	-97.90	-0.7	-656.0	223.1	202.8	20.27	11.008		
4,600.0	4,558.5	4,628.6	4,559.5	12.8	15.4	-97.90	-0.7	-656.0	223.1	202.5	20.67	10.796		
4,700.0	4,658.5	4,728.6	4,659.5	12.9	15.5	-97.90	-0.7	-656.0	223.1	202.1	21.07	10.591		
4,800.0	4,758.5	4,828.6	4,759.5	13.1	15.6	-97.90	-0.7	-656.0	223.1	201.7	21.47	10.393		
4,900.0	4,858.5	4,929.7	4,860.5	13.3	15.8	-97.69	0.2	-656.0	223.0	201.2	21.87	10.199		
5,000.0	4,958.2	5,032.1	4,962.2	13.5	15.9	-93.94	12.4	-656.5	222.6	200.3	22.31	9.977		

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 LD02-75-1AHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1AHN	<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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
5,100.0	5,056.1	5,133.7	5,060.2	13.7	16.1	-92.39	38.7	-657.5	222.2	199.5	22.73	9.775	
5,200.0	5,150.3	5,234.4	5,152.7	13.9	16.3	-90.80	78.2	-659.1	222.0	198.8	23.25	9.550	
5,273.9	5,216.3	5,308.2	5,216.6	14.1	16.5	-89.61	115.2	-660.5	222.0	198.2	23.72	9.358	
5,300.0	5,238.8	5,334.3	5,238.1	14.2	16.5	-89.19	129.8	-661.1	222.0	198.1	23.90	9.288	
5,400.0	5,320.1	5,433.2	5,314.9	14.5	16.8	-87.61	192.1	-663.5	222.1	197.3	24.75	8.972	
5,500.0	5,392.5	5,531.4	5,381.8	15.0	17.2	-86.09	263.7	-666.3	222.4	196.5	25.89	8.590	
5,600.0	5,454.6	5,628.8	5,437.9	15.6	17.7	-84.64	343.2	-669.4	222.8	195.4	27.36	8.141	
5,700.0	5,505.2	5,725.5	5,482.4	16.3	18.4	-83.31	428.9	-672.7	223.2	194.0	29.22	7.640	
5,800.0	5,543.3	5,821.6	5,514.8	17.3	19.2	-82.11	519.2	-676.2	223.8	192.3	31.46	7.112	
5,900.0	5,568.2	5,917.1	5,534.7	18.4	20.2	-81.06	612.5	-679.9	224.3	190.2	34.06	6.585	
6,000.0	5,580.1	6,015.1	5,544.4	19.7	21.3	-80.55	709.9	-683.7	224.5	187.6	36.93	6.080	
6,009.4	5,580.9	6,024.4	5,545.2	19.8	21.4	-80.56	719.2	-684.0	224.5	187.3	37.21	6.033	
6,100.0	5,586.5	6,111.8	5,548.6	21.1	22.5	-80.04	806.4	-687.4	224.8	184.9	39.95	5.627	
6,200.0	5,586.7	6,211.8	5,548.6	22.6	23.9	-79.98	906.3	-691.3	224.8	181.7	43.03	5.224	
6,300.0	5,586.9	6,311.8	5,548.6	24.1	25.4	-79.94	1,006.2	-695.2	224.7	178.5	46.20	4.864	
6,400.0	5,587.0	6,411.8	5,548.6	25.7	26.9	-79.89	1,106.2	-699.1	224.7	175.2	49.47	4.542	
6,500.0	5,587.2	6,511.8	5,548.6	27.3	28.4	-79.84	1,206.1	-703.0	224.6	171.8	52.81	4.254	
6,600.0	5,587.4	6,611.8	5,548.6	29.0	30.0	-79.80	1,306.0	-706.9	224.6	168.4	56.20	3.996	
6,700.0	5,587.6	6,711.8	5,548.6	30.7	31.7	-79.75	1,405.9	-710.8	224.5	164.9	59.65	3.764	
6,800.0	5,587.7	6,811.8	5,548.6	32.4	33.4	-79.70	1,505.8	-714.6	224.5	161.4	63.14	3.556	
6,900.0	5,587.9	6,911.8	5,548.6	34.2	35.1	-79.65	1,605.8	-718.5	224.5	157.8	66.66	3.367	
7,000.0	5,588.1	7,011.8	5,548.6	35.9	36.8	-79.61	1,705.7	-722.4	224.4	154.2	70.21	3.196	
7,100.0	5,588.3	7,111.8	5,548.6	37.7	38.6	-79.56	1,805.6	-726.3	224.4	150.6	73.79	3.041	
7,200.0	5,588.4	7,211.8	5,548.6	39.5	40.3	-79.51	1,905.5	-730.2	224.3	146.9	77.38	2.899	
7,300.0	5,588.6	7,311.8	5,548.6	41.3	42.1	-79.46	2,005.5	-734.1	224.3	143.3	81.00	2.769	
7,400.0	5,588.8	7,411.8	5,548.6	43.2	43.9	-79.42	2,105.4	-738.0	224.2	139.6	84.63	2.650	
7,500.0	5,589.0	7,511.8	5,548.6	45.0	45.7	-79.37	2,205.3	-741.9	224.2	135.9	88.27	2.540	
7,600.0	5,589.1	7,611.8	5,548.6	46.8	47.5	-79.32	2,305.2	-745.8	224.1	132.2	91.93	2.438	
7,700.0	5,589.3	7,711.8	5,548.6	48.7	49.3	-79.27	2,405.2	-749.7	224.1	128.5	95.59	2.344	
7,800.0	5,589.5	7,811.8	5,548.6	50.5	51.2	-79.23	2,505.1	-753.5	224.1	124.8	99.27	2.257	
7,900.0	5,589.7	7,911.8	5,548.6	52.4	53.0	-79.18	2,605.0	-757.4	224.0	121.1	102.95	2.176	
8,000.0	5,589.8	8,011.8	5,548.6	54.3	54.9	-79.13	2,704.9	-761.3	224.0	117.3	106.64	2.100	
8,100.0	5,590.0	8,111.8	5,548.6	56.1	56.7	-79.08	2,804.9	-765.2	223.9	113.6	110.34	2.029	
8,200.0	5,590.2	8,211.8	5,548.6	58.0	58.6	-79.04	2,904.8	-769.1	223.9	109.8	114.04	1.963 Level 3	
8,300.0	5,590.4	8,311.8	5,548.6	59.9	60.4	-78.99	3,004.7	-773.0	223.8	106.1	117.75	1.901 Level 3	
8,400.0	5,590.5	8,411.8	5,548.6	61.8	62.3	-78.94	3,104.6	-776.9	223.8	102.3	121.46	1.843 Level 3	
8,500.0	5,590.7	8,511.8	5,548.6	63.7	64.2	-78.89	3,204.6	-780.8	223.8	98.6	125.17	1.788 Level 3	
8,600.0	5,590.9	8,611.8	5,548.6	65.5	66.1	-78.85	3,304.5	-784.7	223.7	94.8	128.89	1.736 Level 3	
8,700.0	5,591.1	8,711.8	5,548.6	67.4	67.9	-78.80	3,404.4	-788.6	223.7	91.1	132.61	1.687 Level 3	
8,800.0	5,591.2	8,811.8	5,548.6	69.3	69.8	-78.75	3,504.3	-792.4	223.6	87.3	136.33	1.640 Level 3	
8,900.0	5,591.4	8,911.8	5,548.6	71.2	71.7	-78.70	3,604.3	-796.3	223.6	83.5	140.06	1.596 Level 3	
9,000.0	5,591.6	9,011.8	5,548.6	73.1	73.6	-78.65	3,704.2	-800.2	223.5	79.8	143.79	1.555 Level 3	
9,100.0	5,591.8	9,111.8	5,548.6	75.0	75.5	-78.61	3,804.1	-804.1	223.5	76.0	147.52	1.515 Level 3	
9,200.0	5,591.9	9,211.8	5,548.6	76.9	77.4	-78.56	3,904.0	-808.0	223.5	72.2	151.25	1.477 Level 2	
9,300.0	5,592.1	9,311.8	5,548.6	78.8	79.3	-78.51	4,004.0	-811.9	223.4	68.4	154.98	1.442 Level 2	
9,400.0	5,592.3	9,411.8	5,548.6	80.7	81.1	-78.46	4,103.9	-815.8	223.4	64.7	158.71	1.407 Level 2	
9,500.0	5,592.5	9,511.8	5,548.6	82.6	83.0	-78.42	4,203.8	-819.7	223.3	60.9	162.45	1.375 Level 2	
9,587.2	5,592.6	9,599.0	5,548.6	84.3	84.7	-78.37	4,291.0	-823.1	223.3	57.6	165.71	1.348 Level 2, SF	

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

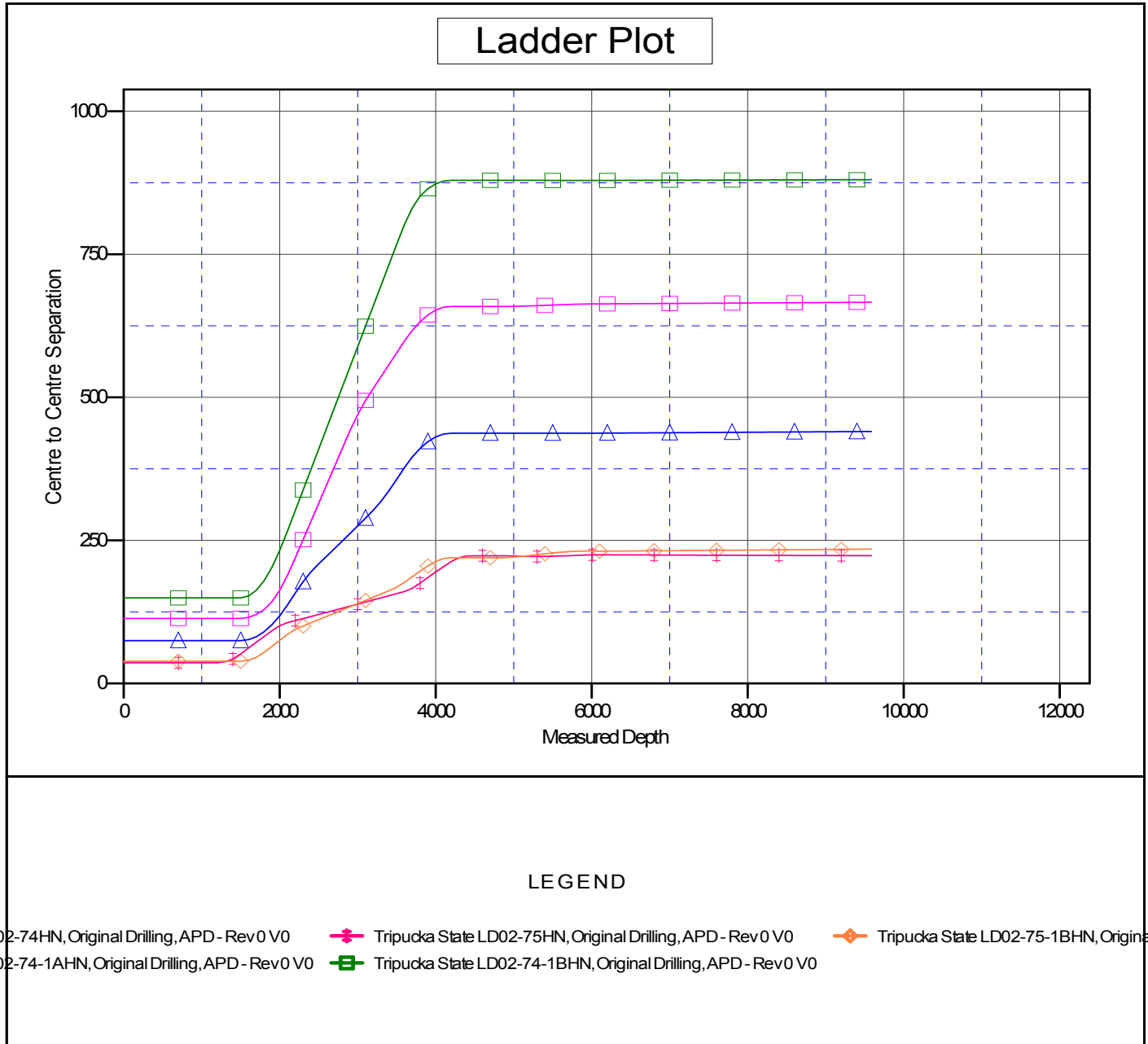
# Noble Energy Inc

## Anticollision Report

<b>Company:</b>	Northern Region Drilling - Working	<b>Local Co-ordinate Reference:</b>	Well Tripucka State LD02-75-1AHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1AHN	<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 @ 4700.0ft (H&P 315 RKB - 24'  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

Coordinates are relative to: Tripucka State LD02-75-1AHN  
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 LD02-75-1AHN
<b>Project:</b>	Wattenberg Field	<b>TVD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Reference Site:</b>	LD (09N-58W)	<b>MD Reference:</b>	WELL @ 4700.0ft (H&P 315 RKB - 24')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	Grid
<b>Reference Well:</b>	Tripucka State LD02-75-1AHN	<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 @ 4700.0ft (H&P 315 RKB - 24'  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000

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

