

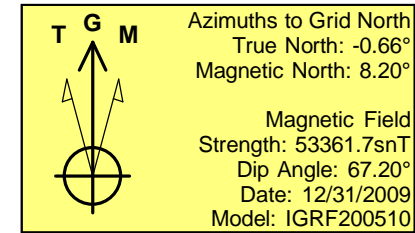
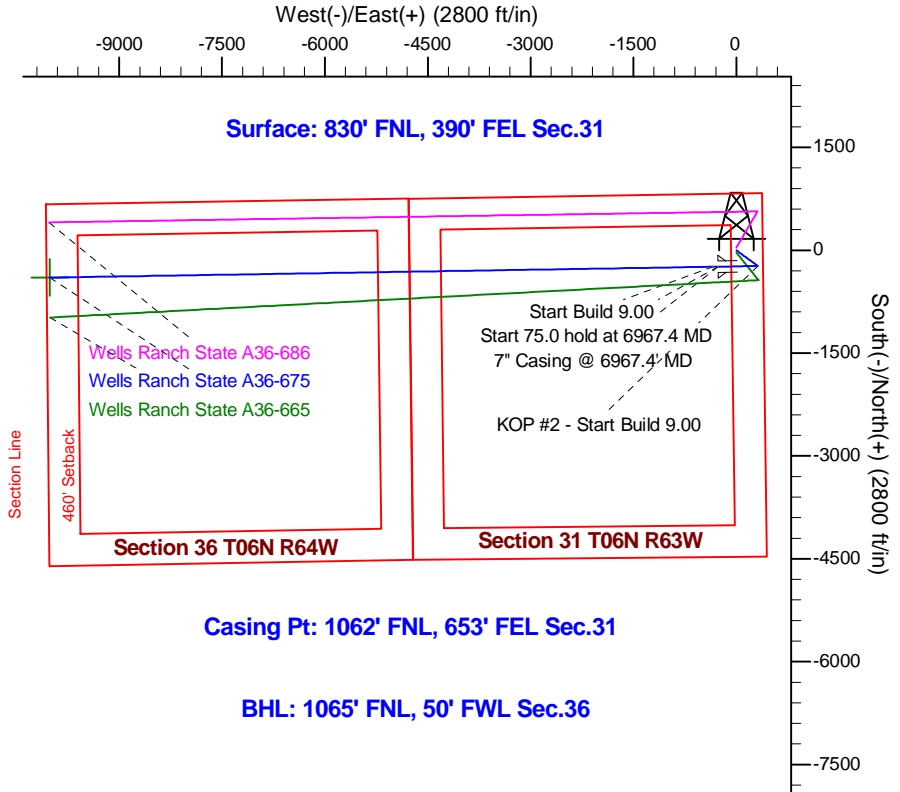
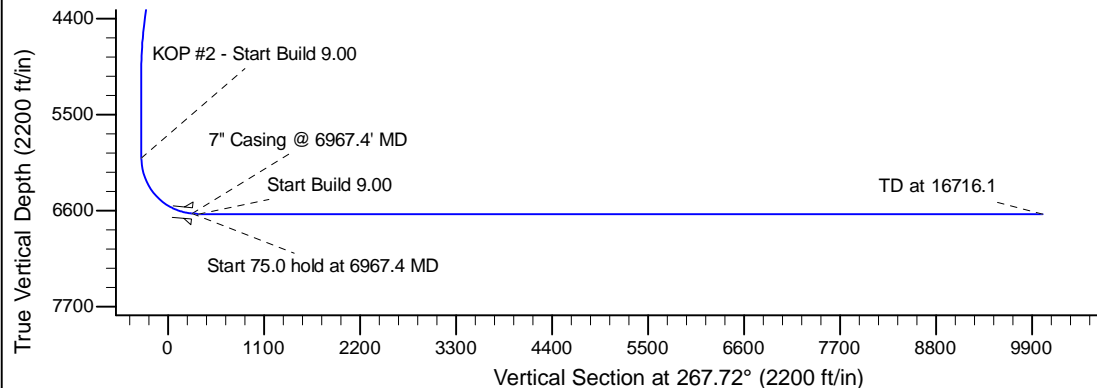
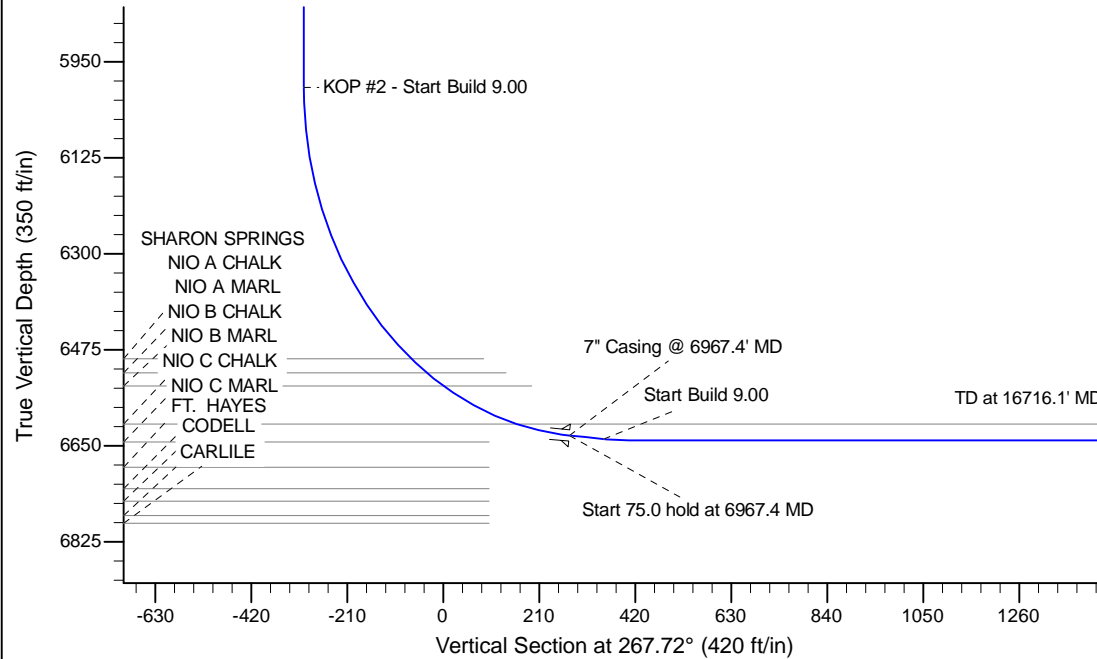
Project: Wattenberg Field
Site: A (Sec.31-T06N-R63W) Weld County, CO
Well: Wells Ranch State A36-675
Wellbore: Original Drilling
Design: APD - Rev 0

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	1800.0	0.00	0.00	1800.0	0.0	0.0	0.00	0.00	0.0	
3	2202.7	8.05	126.14	2201.3	-16.7	22.8	2.00	126.14	-22.1	
4	4583.5	8.05	126.14	4558.7	-213.3	292.2	0.00	0.00	-283.5	
5	4986.1	0.00	0.00	4960.0	-230.0	315.0	2.00	180.00	-305.6	
6	6023.0	0.00	0.00	5996.8	-230.0	315.0	0.00	0.00	-305.6	
7	6967.4	85.00	269.07	6631.0	-239.5	-266.1	9.00	269.07	275.4	
8	7042.4	85.00	269.07	6637.6	-240.7	-340.8	0.00	0.00	350.1	
9	7098.0	90.00	269.07	6640.0	-241.6	-396.2	9.00	0.00	405.5	
10	16716.1	90.00	269.07	6640.0	-398.3	-10013.1	0.00	0.00	10021.0	Wells Ranch State A36-675 BHL 1065'FNL, 50'FWL



WELL DETAILS: Wells Ranch State A36-675				
Ground Level: 4655.0				
0.0	0.0	Northing	Easting	Latitude
		1407702.63	3286199.75	40.447990
				Longitude
				-104.471640
Plan: APD - Rev 0 (Wells Ranch State A36-675/Original Drilling)				
Created By: Shailey Jewell		Date: 10:28, January 23 2015		
Checked: _____		Date: _____		
Reviewed: _____		Date: _____		
Approved: _____		Date: _____		

Northern Region Drilling - Working

Wattenberg Field

A (06N-64W)

Wells Ranch State A36-675

Original Drilling

Plan: APD - Rev 0

Standard Planning Report

23 January, 2015

Noble Energy Inc

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Wells Ranch State A36-675
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Project:	Wattenberg Field	MD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Site:	A (06N-64W)	North Reference:	Grid
Well:	Wells Ranch State A36-675	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 0		

Project	Wattenberg Field, Weld County CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site		A (06N-64W)			
Site Position:		Northing:	1,408,077.93 usft	Latitude:	40.449320
From:	Lat/Long	Easting:	3,276,618.19 usft	Longitude:	-104.506050
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.64 °

Well	Wells Ranch State A36-675					
Well Position	+N/-S	-375.3 ft	Northing:	1,407,702.63 usft	Latitude:	40.447990
	+E/-W	9,581.9 ft	Easting:	3,286,199.75 usft	Longitude:	-104.471640
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,655.0 ft

Wellbore	Original Drilling				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	8.87	67.20	53,362

Design	APD - Rev 0			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	267.72

Plan Sections										
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	
2,202.7	8.05	126.14	2,201.3	-16.7	22.8	2.00	2.00	0.00	126.14	
4,583.5	8.05	126.14	4,558.7	-213.3	292.2	0.00	0.00	0.00	0.00	
4,986.1	0.00	0.00	4,960.0	-230.0	315.0	2.00	-2.00	0.00	180.00	
6,023.0	0.00	0.00	5,996.8	-230.0	315.0	0.00	0.00	0.00	0.00	
6,967.4	85.00	269.07	6,631.0	-239.5	-266.1	9.00	9.00	0.00	269.07	
7,042.4	85.00	269.07	6,637.6	-240.7	-340.8	0.00	0.00	0.00	0.00	
7,098.0	90.00	269.07	6,640.0	-241.6	-396.2	9.00	9.00	0.00	0.00	
16,716.1	90.00	269.07	6,640.0	-398.3	-10,013.1	0.00	0.00	0.00	0.00	Wells Ranch State A3

Noble Energy Inc

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Wells Ranch State A36-675
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Project:	Wattenberg Field	MD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Site:	A (06N-64W)	North Reference:	Grid
Well:	Wells Ranch State A36-675	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	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
KOP - Start Build 2.00									
1,850.0	1.00	126.14	1,850.0	-0.3	0.4	-0.3	2.00	2.00	0.00
1,900.0	2.00	126.14	1,900.0	-1.0	1.4	-1.4	2.00	2.00	0.00
1,950.0	3.00	126.14	1,949.9	-2.3	3.2	-3.1	2.00	2.00	0.00
2,000.0	4.00	126.14	1,999.8	-4.1	5.6	-5.5	2.00	2.00	0.00
2,050.0	5.00	126.14	2,049.7	-6.4	8.8	-8.5	2.00	2.00	0.00
2,100.0	6.00	126.14	2,099.5	-9.3	12.7	-12.3	2.00	2.00	0.00
2,150.0	7.00	126.14	2,149.1	-12.6	17.2	-16.7	2.00	2.00	0.00
2,200.0	8.00	126.14	2,198.7	-16.4	22.5	-21.8	2.00	2.00	0.00
2,202.7	8.05	126.14	2,201.3	-16.7	22.8	-22.1	2.00	2.00	0.00
2,250.0	8.05	126.14	2,248.2	-20.6	28.2	-27.3	0.00	0.00	0.00
2,300.0	8.05	126.14	2,297.7	-24.7	33.8	-32.8	0.00	0.00	0.00
2,350.0	8.05	126.14	2,347.2	-28.8	39.5	-38.3	0.00	0.00	0.00
2,373.0	8.05	126.14	2,370.0	-30.7	42.1	-40.8	0.00	0.00	0.00
PIERRE									
2,400.0	8.05	126.14	2,396.7	-33.0	45.1	-43.8	0.00	0.00	0.00
2,450.0	8.05	126.14	2,446.2	-37.1	50.8	-49.3	0.00	0.00	0.00

Noble Energy Inc

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Wells Ranch State A36-675
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Project:	Wattenberg Field	MD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Site:	A (06N-64W)	North Reference:	Grid
Well:	Wells Ranch State A36-675	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	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	8.05	126.14	2,495.7	-41.2	56.5	-54.8	0.00	0.00	0.00
2,550.0	8.05	126.14	2,545.3	-45.4	62.1	-60.3	0.00	0.00	0.00
2,600.0	8.05	126.14	2,594.8	-49.5	67.8	-65.8	0.00	0.00	0.00
2,650.0	8.05	126.14	2,644.3	-53.6	73.4	-71.2	0.00	0.00	0.00
2,700.0	8.05	126.14	2,693.8	-57.7	79.1	-76.7	0.00	0.00	0.00
2,750.0	8.05	126.14	2,743.3	-61.9	84.7	-82.2	0.00	0.00	0.00
2,800.0	8.05	126.14	2,792.8	-66.0	90.4	-87.7	0.00	0.00	0.00
2,850.0	8.05	126.14	2,842.3	-70.1	96.1	-93.2	0.00	0.00	0.00
2,900.0	8.05	126.14	2,891.8	-74.3	101.7	-98.7	0.00	0.00	0.00
2,950.0	8.05	126.14	2,941.3	-78.4	107.4	-104.2	0.00	0.00	0.00
3,000.0	8.05	126.14	2,990.8	-82.5	113.0	-109.7	0.00	0.00	0.00
3,050.0	8.05	126.14	3,040.3	-86.7	118.7	-115.1	0.00	0.00	0.00
3,100.0	8.05	126.14	3,089.8	-90.8	124.3	-120.6	0.00	0.00	0.00
3,150.0	8.05	126.14	3,139.3	-94.9	130.0	-126.1	0.00	0.00	0.00
3,200.0	8.05	126.14	3,188.8	-99.1	135.7	-131.6	0.00	0.00	0.00
3,250.0	8.05	126.14	3,238.4	-103.2	141.3	-137.1	0.00	0.00	0.00
3,300.0	8.05	126.14	3,287.9	-107.3	147.0	-142.6	0.00	0.00	0.00
3,350.0	8.05	126.14	3,337.4	-111.4	152.6	-148.1	0.00	0.00	0.00
3,400.0	8.05	126.14	3,386.9	-115.6	158.3	-153.6	0.00	0.00	0.00
3,450.0	8.05	126.14	3,436.4	-119.7	163.9	-159.1	0.00	0.00	0.00
3,500.0	8.05	126.14	3,485.9	-123.8	169.6	-164.5	0.00	0.00	0.00
3,525.4	8.05	126.14	3,511.0	-125.9	172.5	-167.3	0.00	0.00	0.00
PARKMAN									
3,550.0	8.05	126.14	3,535.4	-128.0	175.3	-170.0	0.00	0.00	0.00
3,600.0	8.05	126.14	3,584.9	-132.1	180.9	-175.5	0.00	0.00	0.00
3,650.0	8.05	126.14	3,634.4	-136.2	186.6	-181.0	0.00	0.00	0.00
3,700.0	8.05	126.14	3,683.9	-140.4	192.2	-186.5	0.00	0.00	0.00
3,750.0	8.05	126.14	3,733.4	-144.5	197.9	-192.0	0.00	0.00	0.00
3,800.0	8.05	126.14	3,782.9	-148.6	203.5	-197.5	0.00	0.00	0.00
3,850.0	8.05	126.14	3,832.4	-152.7	209.2	-203.0	0.00	0.00	0.00
3,900.0	8.05	126.14	3,881.9	-156.9	214.9	-208.5	0.00	0.00	0.00
3,950.0	8.05	126.14	3,931.5	-161.0	220.5	-213.9	0.00	0.00	0.00
4,000.0	8.05	126.14	3,981.0	-165.1	226.2	-219.4	0.00	0.00	0.00
4,050.0	8.05	126.14	4,030.5	-169.3	231.8	-224.9	0.00	0.00	0.00
4,100.0	8.05	126.14	4,080.0	-173.4	237.5	-230.4	0.00	0.00	0.00
4,150.0	8.05	126.14	4,129.5	-177.5	243.1	-235.9	0.00	0.00	0.00
4,200.0	8.05	126.14	4,179.0	-181.7	248.8	-241.4	0.00	0.00	0.00
4,250.0	8.05	126.14	4,228.5	-185.8	254.5	-246.9	0.00	0.00	0.00
4,300.0	8.05	126.14	4,278.0	-189.9	260.1	-252.4	0.00	0.00	0.00
4,302.0	8.05	126.14	4,280.0	-190.1	260.3	-252.6	0.00	0.00	0.00
SUSSEX									
4,350.0	8.05	126.14	4,327.5	-194.1	265.8	-257.8	0.00	0.00	0.00
4,400.0	8.05	126.14	4,377.0	-198.2	271.4	-263.3	0.00	0.00	0.00
4,450.0	8.05	126.14	4,426.5	-202.3	277.1	-268.8	0.00	0.00	0.00
4,500.0	8.05	126.14	4,476.0	-206.4	282.7	-274.3	0.00	0.00	0.00
4,550.0	8.05	126.14	4,525.5	-210.6	288.4	-279.8	0.00	0.00	0.00
4,583.5	8.05	126.14	4,558.7	-213.3	292.2	-283.5	0.00	0.00	0.00
Start Drop -2.00									
4,600.0	7.72	126.14	4,575.1	-214.7	294.0	-285.3	2.00	-2.00	0.00
4,650.0	6.72	126.14	4,624.7	-218.4	299.1	-290.2	2.00	-2.00	0.00
4,700.0	5.72	126.14	4,674.4	-221.6	303.5	-294.4	2.00	-2.00	0.00
4,750.0	4.72	126.14	4,724.1	-224.3	307.1	-298.0	2.00	-2.00	0.00
4,800.0	3.72	126.14	4,774.0	-226.4	310.1	-300.9	2.00	-2.00	0.00

Noble Energy Inc

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Wells Ranch State A36-675
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Project:	Wattenberg Field	MD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Site:	A (06N-64W)	North Reference:	Grid
Well:	Wells Ranch State A36-675	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	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)
4,850.0	2.72	126.14	4,823.9	-228.1	312.4	-303.1	2.00	-2.00	0.00
4,877.1	2.18	126.14	4,851.0	-228.8	313.3	-304.0	2.00	-2.00	0.00
SHANNON									
4,900.0	1.72	126.14	4,873.9	-229.2	314.0	-304.6	2.00	-2.00	0.00
4,950.0	0.72	126.14	4,923.9	-229.9	314.8	-305.4	2.00	-2.00	0.00
4,986.1	0.00	0.00	4,960.0	-230.0	315.0	-305.6	2.00	-2.00	0.00
5,000.0	0.00	0.00	4,973.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,050.0	0.00	0.00	5,023.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,100.0	0.00	0.00	5,073.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,150.0	0.00	0.00	5,123.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,200.0	0.00	0.00	5,173.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,250.0	0.00	0.00	5,223.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,300.0	0.00	0.00	5,273.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,350.0	0.00	0.00	5,323.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,400.0	0.00	0.00	5,373.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,450.0	0.00	0.00	5,423.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,500.0	0.00	0.00	5,473.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,550.0	0.00	0.00	5,523.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,600.0	0.00	0.00	5,573.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,650.0	0.00	0.00	5,623.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,700.0	0.00	0.00	5,673.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,750.0	0.00	0.00	5,723.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,800.0	0.00	0.00	5,773.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,844.1	0.00	0.00	5,818.0	-230.0	315.0	-305.6	0.00	0.00	0.00
TEEPEE BUTTES									
5,850.0	0.00	0.00	5,823.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,900.0	0.00	0.00	5,873.9	-230.0	315.0	-305.6	0.00	0.00	0.00
5,950.0	0.00	0.00	5,923.9	-230.0	315.0	-305.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,973.9	-230.0	315.0	-305.6	0.00	0.00	0.00
6,023.0	0.00	0.00	5,996.9	-230.0	315.0	-305.6	0.00	0.00	0.00
KOP #2 - Start Build 9.00									
6,050.0	2.43	269.07	6,023.9	-230.0	314.4	-305.0	9.01	9.01	0.00
6,100.0	6.93	269.07	6,073.7	-230.1	310.3	-301.0	9.00	9.00	0.00
6,150.0	11.43	269.07	6,123.0	-230.2	302.4	-293.0	9.00	9.00	0.00
6,200.0	15.93	269.07	6,171.6	-230.4	290.5	-281.2	9.00	9.00	0.00
6,250.0	20.43	269.07	6,219.1	-230.7	274.9	-265.6	9.00	9.00	0.00
6,300.0	24.93	269.07	6,265.2	-231.0	255.7	-246.3	9.00	9.00	0.00
6,350.0	29.43	269.07	6,309.7	-231.3	232.8	-223.5	9.00	9.00	0.00
6,400.0	33.93	269.07	6,352.2	-231.8	206.6	-197.2	9.00	9.00	0.00
6,450.0	38.43	269.07	6,392.6	-232.2	177.1	-167.7	9.00	9.00	0.00
6,500.0	42.93	269.07	6,430.5	-232.8	144.5	-135.1	9.00	9.00	0.00
6,550.0	47.43	269.07	6,465.7	-233.4	109.0	-99.7	9.00	9.00	0.00
6,588.7	50.92	269.07	6,491.0	-233.8	79.8	-70.4	9.00	9.00	0.00
SHARON SPRINGS									
6,600.0	51.93	269.07	6,498.1	-234.0	70.9	-61.6	8.99	8.99	0.00
6,631.8	54.79	269.07	6,517.0	-234.4	45.5	-36.1	9.00	9.00	0.00
NIO A CHALK									
6,650.0	56.43	269.07	6,527.3	-234.6	30.4	-21.1	8.99	8.99	0.00
6,675.6	58.73	269.07	6,541.0	-235.0	8.8	0.5	9.00	9.00	0.00
NIO A MARL									
6,700.0	60.93	269.07	6,553.3	-235.3	-12.3	21.6	9.00	9.00	0.00
6,750.0	65.43	269.07	6,575.8	-236.1	-56.9	66.2	9.00	9.00	0.00
6,800.0	69.93	269.07	6,594.8	-236.8	-103.1	112.5	9.00	9.00	0.00

Noble Energy Inc

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Wells Ranch State A36-675
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Project:	Wattenberg Field	MD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Site:	A (06N-64W)	North Reference:	Grid
Well:	Wells Ranch State A36-675	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	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)
6,849.6	74.40	269.07	6,610.0	-237.6	-150.3	159.6	9.00	9.00	0.00
NIO B CHALK									
6,850.0	74.43	269.07	6,610.1	-237.6	-150.7	160.0	8.71	8.71	0.00
6,900.0	78.93	269.07	6,621.6	-238.4	-199.4	208.7	9.00	9.00	0.00
6,950.0	83.43	269.07	6,629.3	-239.2	-248.7	258.1	9.00	9.00	0.00
6,967.4	85.00	269.07	6,631.0	-239.5	-266.0	275.4	9.01	9.01	0.00
Start 75.0 hold at 6967.4 MD - 7" Casing @ 6967.4' MD									
7,000.0	85.00	269.07	6,633.9	-240.0	-298.5	307.8	0.00	0.00	0.00
7,042.4	85.00	269.07	6,637.6	-240.7	-340.7	350.0	0.00	0.00	0.00
Start Build 9.00									
7,050.0	85.68	269.07	6,638.2	-240.8	-348.3	357.6	8.96	8.96	0.00
7,098.0	90.00	269.07	6,640.0	-241.6	-396.2	405.5	9.00	9.00	0.00
7,100.0	90.00	269.07	6,640.0	-241.6	-398.3	407.6	0.00	0.00	0.00
7,150.0	90.00	269.07	6,640.0	-242.4	-448.3	457.6	0.00	0.00	0.00
7,200.0	90.00	269.07	6,640.0	-243.3	-498.3	507.5	0.00	0.00	0.00
7,250.0	90.00	269.07	6,640.0	-244.1	-548.3	557.5	0.00	0.00	0.00
7,300.0	90.00	269.07	6,640.0	-244.9	-598.3	607.5	0.00	0.00	0.00
7,350.0	90.00	269.07	6,640.0	-245.7	-648.3	657.5	0.00	0.00	0.00
7,400.0	90.00	269.07	6,640.0	-246.5	-698.2	707.5	0.00	0.00	0.00
7,450.0	90.00	269.07	6,640.0	-247.3	-748.2	757.5	0.00	0.00	0.00
7,500.0	90.00	269.07	6,640.0	-248.1	-798.2	807.5	0.00	0.00	0.00
7,550.0	90.00	269.07	6,640.0	-249.0	-848.2	857.4	0.00	0.00	0.00
7,600.0	90.00	269.07	6,640.0	-249.8	-898.2	907.4	0.00	0.00	0.00
7,650.0	90.00	269.07	6,640.0	-250.6	-948.2	957.4	0.00	0.00	0.00
7,700.0	90.00	269.07	6,640.0	-251.4	-998.2	1,007.4	0.00	0.00	0.00
7,750.0	90.00	269.07	6,640.0	-252.2	-1,048.2	1,057.4	0.00	0.00	0.00
7,800.0	90.00	269.07	6,640.0	-253.0	-1,098.2	1,107.4	0.00	0.00	0.00
7,850.0	90.00	269.07	6,640.0	-253.8	-1,148.2	1,157.4	0.00	0.00	0.00
7,900.0	90.00	269.07	6,640.0	-254.7	-1,198.2	1,207.4	0.00	0.00	0.00
7,950.0	90.00	269.07	6,640.0	-255.5	-1,248.2	1,257.3	0.00	0.00	0.00
8,000.0	90.00	269.07	6,640.0	-256.3	-1,298.2	1,307.3	0.00	0.00	0.00
8,050.0	90.00	269.07	6,640.0	-257.1	-1,348.2	1,357.3	0.00	0.00	0.00
8,100.0	90.00	269.07	6,640.0	-257.9	-1,398.2	1,407.3	0.00	0.00	0.00
8,150.0	90.00	269.07	6,640.0	-258.7	-1,448.1	1,457.3	0.00	0.00	0.00
8,200.0	90.00	269.07	6,640.0	-259.5	-1,498.1	1,507.3	0.00	0.00	0.00
8,250.0	90.00	269.07	6,640.0	-260.4	-1,548.1	1,557.3	0.00	0.00	0.00
8,300.0	90.00	269.07	6,640.0	-261.2	-1,598.1	1,607.2	0.00	0.00	0.00
8,350.0	90.00	269.07	6,640.0	-262.0	-1,648.1	1,657.2	0.00	0.00	0.00
8,400.0	90.00	269.07	6,640.0	-262.8	-1,698.1	1,707.2	0.00	0.00	0.00
8,450.0	90.00	269.07	6,640.0	-263.6	-1,748.1	1,757.2	0.00	0.00	0.00
8,500.0	90.00	269.07	6,640.0	-264.4	-1,798.1	1,807.2	0.00	0.00	0.00
8,550.0	90.00	269.07	6,640.0	-265.2	-1,848.1	1,857.2	0.00	0.00	0.00
8,600.0	90.00	269.07	6,640.0	-266.1	-1,898.1	1,907.2	0.00	0.00	0.00
8,650.0	90.00	269.07	6,640.0	-266.9	-1,948.1	1,957.1	0.00	0.00	0.00
8,700.0	90.00	269.07	6,640.0	-267.7	-1,998.1	2,007.1	0.00	0.00	0.00
8,750.0	90.00	269.07	6,640.0	-268.5	-2,048.1	2,057.1	0.00	0.00	0.00
8,800.0	90.00	269.07	6,640.0	-269.3	-2,098.1	2,107.1	0.00	0.00	0.00
8,850.0	90.00	269.07	6,640.0	-270.1	-2,148.1	2,157.1	0.00	0.00	0.00
8,900.0	90.00	269.07	6,640.0	-270.9	-2,198.0	2,207.1	0.00	0.00	0.00
8,950.0	90.00	269.07	6,640.0	-271.8	-2,248.0	2,257.1	0.00	0.00	0.00
9,000.0	90.00	269.07	6,640.0	-272.6	-2,298.0	2,307.1	0.00	0.00	0.00
9,050.0	90.00	269.07	6,640.0	-273.4	-2,348.0	2,357.0	0.00	0.00	0.00
9,100.0	90.00	269.07	6,640.0	-274.2	-2,398.0	2,407.0	0.00	0.00	0.00

Noble Energy Inc

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Wells Ranch State A36-675
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Project:	Wattenberg Field	MD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Site:	A (06N-64W)	North Reference:	Grid
Well:	Wells Ranch State A36-675	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	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)	
9,150.0	90.00	269.07	6,640.0	-275.0	-2,448.0	2,457.0	0.00	0.00	0.00	
9,200.0	90.00	269.07	6,640.0	-275.8	-2,498.0	2,507.0	0.00	0.00	0.00	
9,250.0	90.00	269.07	6,640.0	-276.6	-2,548.0	2,557.0	0.00	0.00	0.00	
9,300.0	90.00	269.07	6,640.0	-277.5	-2,598.0	2,607.0	0.00	0.00	0.00	
9,350.0	90.00	269.07	6,640.0	-278.3	-2,648.0	2,657.0	0.00	0.00	0.00	
9,400.0	90.00	269.07	6,640.0	-279.1	-2,698.0	2,706.9	0.00	0.00	0.00	
9,450.0	90.00	269.07	6,640.0	-279.9	-2,748.0	2,756.9	0.00	0.00	0.00	
9,500.0	90.00	269.07	6,640.0	-280.7	-2,798.0	2,806.9	0.00	0.00	0.00	
9,550.0	90.00	269.07	6,640.0	-281.5	-2,848.0	2,856.9	0.00	0.00	0.00	
9,600.0	90.00	269.07	6,640.0	-282.3	-2,898.0	2,906.9	0.00	0.00	0.00	
9,650.0	90.00	269.07	6,640.0	-283.2	-2,948.0	2,956.9	0.00	0.00	0.00	
9,700.0	90.00	269.07	6,640.0	-284.0	-2,997.9	3,006.9	0.00	0.00	0.00	
9,750.0	90.00	269.07	6,640.0	-284.8	-3,047.9	3,056.8	0.00	0.00	0.00	
9,800.0	90.00	269.07	6,640.0	-285.6	-3,097.9	3,106.8	0.00	0.00	0.00	
9,850.0	90.00	269.07	6,640.0	-286.4	-3,147.9	3,156.8	0.00	0.00	0.00	
9,900.0	90.00	269.07	6,640.0	-287.2	-3,197.9	3,206.8	0.00	0.00	0.00	
9,950.0	90.00	269.07	6,640.0	-288.1	-3,247.9	3,256.8	0.00	0.00	0.00	
10,000.0	90.00	269.07	6,640.0	-288.9	-3,297.9	3,306.8	0.00	0.00	0.00	
10,050.0	90.00	269.07	6,640.0	-289.7	-3,347.9	3,356.8	0.00	0.00	0.00	
10,100.0	90.00	269.07	6,640.0	-290.5	-3,397.9	3,406.8	0.00	0.00	0.00	
10,150.0	90.00	269.07	6,640.0	-291.3	-3,447.9	3,456.7	0.00	0.00	0.00	
10,200.0	90.00	269.07	6,640.0	-292.1	-3,497.9	3,506.7	0.00	0.00	0.00	
10,250.0	90.00	269.07	6,640.0	-292.9	-3,547.9	3,556.7	0.00	0.00	0.00	
10,300.0	90.00	269.07	6,640.0	-293.8	-3,597.9	3,606.7	0.00	0.00	0.00	
10,350.0	90.00	269.07	6,640.0	-294.6	-3,647.9	3,656.7	0.00	0.00	0.00	
10,400.0	90.00	269.07	6,640.0	-295.4	-3,697.9	3,706.7	0.00	0.00	0.00	
10,450.0	90.00	269.07	6,640.0	-296.2	-3,747.8	3,756.7	0.00	0.00	0.00	
10,500.0	90.00	269.07	6,640.0	-297.0	-3,797.8	3,806.6	0.00	0.00	0.00	
10,550.0	90.00	269.07	6,640.0	-297.8	-3,847.8	3,856.6	0.00	0.00	0.00	
10,600.0	90.00	269.07	6,640.0	-298.6	-3,897.8	3,906.6	0.00	0.00	0.00	
10,650.0	90.00	269.07	6,640.0	-299.5	-3,947.8	3,956.6	0.00	0.00	0.00	
10,700.0	90.00	269.07	6,640.0	-300.3	-3,997.8	4,006.6	0.00	0.00	0.00	
10,750.0	90.00	269.07	6,640.0	-301.1	-4,047.8	4,056.6	0.00	0.00	0.00	
10,800.0	90.00	269.07	6,640.0	-301.9	-4,097.8	4,106.6	0.00	0.00	0.00	
10,850.0	90.00	269.07	6,640.0	-302.7	-4,147.8	4,156.5	0.00	0.00	0.00	
10,900.0	90.00	269.07	6,640.0	-303.5	-4,197.8	4,206.5	0.00	0.00	0.00	
10,950.0	90.00	269.07	6,640.0	-304.3	-4,247.8	4,256.5	0.00	0.00	0.00	
11,000.0	90.00	269.07	6,640.0	-305.2	-4,297.8	4,306.5	0.00	0.00	0.00	
11,050.0	90.00	269.07	6,640.0	-306.0	-4,347.8	4,356.5	0.00	0.00	0.00	
11,100.0	90.00	269.07	6,640.0	-306.8	-4,397.8	4,406.5	0.00	0.00	0.00	
11,150.0	90.00	269.07	6,640.0	-307.6	-4,447.8	4,456.5	0.00	0.00	0.00	
11,200.0	90.00	269.07	6,640.0	-308.4	-4,497.7	4,506.5	0.00	0.00	0.00	
11,250.0	90.00	269.07	6,640.0	-309.2	-4,547.7	4,556.4	0.00	0.00	0.00	
11,300.0	90.00	269.07	6,640.0	-310.0	-4,597.7	4,606.4	0.00	0.00	0.00	
11,350.0	90.00	269.07	6,640.0	-310.9	-4,647.7	4,656.4	0.00	0.00	0.00	
11,400.0	90.00	269.07	6,640.0	-311.7	-4,697.7	4,706.4	0.00	0.00	0.00	
11,450.0	90.00	269.07	6,640.0	-312.5	-4,747.7	4,756.4	0.00	0.00	0.00	
11,500.0	90.00	269.07	6,640.0	-313.3	-4,797.7	4,806.4	0.00	0.00	0.00	
11,550.0	90.00	269.07	6,640.0	-314.1	-4,847.7	4,856.4	0.00	0.00	0.00	
11,600.0	90.00	269.07	6,640.0	-314.9	-4,897.7	4,906.3	0.00	0.00	0.00	
11,650.0	90.00	269.07	6,640.0	-315.7	-4,947.7	4,956.3	0.00	0.00	0.00	
11,700.0	90.00	269.07	6,640.0	-316.6	-4,997.7	5,006.3	0.00	0.00	0.00	
11,750.0	90.00	269.07	6,640.0	-317.4	-5,047.7	5,056.3	0.00	0.00	0.00	
11,800.0	90.00	269.07	6,640.0	-318.2	-5,097.7	5,106.3	0.00	0.00	0.00	

Noble Energy Inc

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Wells Ranch State A36-675
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Project:	Wattenberg Field	MD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Site:	A (06N-64W)	North Reference:	Grid
Well:	Wells Ranch State A36-675	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	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)
11,850.0	90.00	269.07	6,640.0	-319.0	-5,147.7	5,156.3	0.00	0.00	0.00
11,900.0	90.00	269.07	6,640.0	-319.8	-5,197.7	5,206.3	0.00	0.00	0.00
11,950.0	90.00	269.07	6,640.0	-320.6	-5,247.6	5,256.2	0.00	0.00	0.00
12,000.0	90.00	269.07	6,640.0	-321.4	-5,297.6	5,306.2	0.00	0.00	0.00
12,050.0	90.00	269.07	6,640.0	-322.3	-5,347.6	5,356.2	0.00	0.00	0.00
12,100.0	90.00	269.07	6,640.0	-323.1	-5,397.6	5,406.2	0.00	0.00	0.00
12,150.0	90.00	269.07	6,640.0	-323.9	-5,447.6	5,456.2	0.00	0.00	0.00
12,200.0	90.00	269.07	6,640.0	-324.7	-5,497.6	5,506.2	0.00	0.00	0.00
12,250.0	90.00	269.07	6,640.0	-325.5	-5,547.6	5,556.2	0.00	0.00	0.00
12,300.0	90.00	269.07	6,640.0	-326.3	-5,597.6	5,606.2	0.00	0.00	0.00
12,350.0	90.00	269.07	6,640.0	-327.1	-5,647.6	5,656.1	0.00	0.00	0.00
12,400.0	90.00	269.07	6,640.0	-328.0	-5,697.6	5,706.1	0.00	0.00	0.00
12,450.0	90.00	269.07	6,640.0	-328.8	-5,747.6	5,756.1	0.00	0.00	0.00
12,500.0	90.00	269.07	6,640.0	-329.6	-5,797.6	5,806.1	0.00	0.00	0.00
12,550.0	90.00	269.07	6,640.0	-330.4	-5,847.6	5,856.1	0.00	0.00	0.00
12,600.0	90.00	269.07	6,640.0	-331.2	-5,897.6	5,906.1	0.00	0.00	0.00
12,650.0	90.00	269.07	6,640.0	-332.0	-5,947.6	5,956.1	0.00	0.00	0.00
12,700.0	90.00	269.07	6,640.0	-332.8	-5,997.6	6,006.0	0.00	0.00	0.00
12,750.0	90.00	269.07	6,640.0	-333.7	-6,047.5	6,056.0	0.00	0.00	0.00
12,800.0	90.00	269.07	6,640.0	-334.5	-6,097.5	6,106.0	0.00	0.00	0.00
12,850.0	90.00	269.07	6,640.0	-335.3	-6,147.5	6,156.0	0.00	0.00	0.00
12,900.0	90.00	269.07	6,640.0	-336.1	-6,197.5	6,206.0	0.00	0.00	0.00
12,950.0	90.00	269.07	6,640.0	-336.9	-6,247.5	6,256.0	0.00	0.00	0.00
13,000.0	90.00	269.07	6,640.0	-337.7	-6,297.5	6,306.0	0.00	0.00	0.00
13,050.0	90.00	269.07	6,640.0	-338.6	-6,347.5	6,355.9	0.00	0.00	0.00
13,100.0	90.00	269.07	6,640.0	-339.4	-6,397.5	6,405.9	0.00	0.00	0.00
13,150.0	90.00	269.07	6,640.0	-340.2	-6,447.5	6,455.9	0.00	0.00	0.00
13,200.0	90.00	269.07	6,640.0	-341.0	-6,497.5	6,505.9	0.00	0.00	0.00
13,250.0	90.00	269.07	6,640.0	-341.8	-6,547.5	6,555.9	0.00	0.00	0.00
13,300.0	90.00	269.07	6,640.0	-342.6	-6,597.5	6,605.9	0.00	0.00	0.00
13,350.0	90.00	269.07	6,640.0	-343.4	-6,647.5	6,655.9	0.00	0.00	0.00
13,400.0	90.00	269.07	6,640.0	-344.3	-6,697.5	6,705.9	0.00	0.00	0.00
13,450.0	90.00	269.07	6,640.0	-345.1	-6,747.5	6,755.8	0.00	0.00	0.00
13,500.0	90.00	269.07	6,640.0	-345.9	-6,797.4	6,805.8	0.00	0.00	0.00
13,550.0	90.00	269.07	6,640.0	-346.7	-6,847.4	6,855.8	0.00	0.00	0.00
13,600.0	90.00	269.07	6,640.0	-347.5	-6,897.4	6,905.8	0.00	0.00	0.00
13,650.0	90.00	269.07	6,640.0	-348.3	-6,947.4	6,955.8	0.00	0.00	0.00
13,700.0	90.00	269.07	6,640.0	-349.1	-6,997.4	7,005.8	0.00	0.00	0.00
13,750.0	90.00	269.07	6,640.0	-350.0	-7,047.4	7,055.8	0.00	0.00	0.00
13,800.0	90.00	269.07	6,640.0	-350.8	-7,097.4	7,105.7	0.00	0.00	0.00
13,850.0	90.00	269.07	6,640.0	-351.6	-7,147.4	7,155.7	0.00	0.00	0.00
13,900.0	90.00	269.07	6,640.0	-352.4	-7,197.4	7,205.7	0.00	0.00	0.00
13,950.0	90.00	269.07	6,640.0	-353.2	-7,247.4	7,255.7	0.00	0.00	0.00
14,000.0	90.00	269.07	6,640.0	-354.0	-7,297.4	7,305.7	0.00	0.00	0.00
14,050.0	90.00	269.07	6,640.0	-354.8	-7,347.4	7,355.7	0.00	0.00	0.00
14,100.0	90.00	269.07	6,640.0	-355.7	-7,397.4	7,405.7	0.00	0.00	0.00
14,150.0	90.00	269.07	6,640.0	-356.5	-7,447.4	7,455.6	0.00	0.00	0.00
14,200.0	90.00	269.07	6,640.0	-357.3	-7,497.4	7,505.6	0.00	0.00	0.00
14,250.0	90.00	269.07	6,640.0	-358.1	-7,547.3	7,555.6	0.00	0.00	0.00
14,300.0	90.00	269.07	6,640.0	-358.9	-7,597.3	7,605.6	0.00	0.00	0.00
14,350.0	90.00	269.07	6,640.0	-359.7	-7,647.3	7,655.6	0.00	0.00	0.00
14,400.0	90.00	269.07	6,640.0	-360.5	-7,697.3	7,705.6	0.00	0.00	0.00
14,450.0	90.00	269.07	6,640.0	-361.4	-7,747.3	7,755.6	0.00	0.00	0.00
14,500.0	90.00	269.07	6,640.0	-362.2	-7,797.3	7,805.6	0.00	0.00	0.00

Noble Energy Inc

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Wells Ranch State A36-675
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Project:	Wattenberg Field	MD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Site:	A (06N-64W)	North Reference:	Grid
Well:	Wells Ranch State A36-675	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	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)	
14,550.0	90.00	269.07	6,640.0	-363.0	-7,847.3	7,855.5	0.00	0.00	0.00	
14,600.0	90.00	269.07	6,640.0	-363.8	-7,897.3	7,905.5	0.00	0.00	0.00	
14,650.0	90.00	269.07	6,640.0	-364.6	-7,947.3	7,955.5	0.00	0.00	0.00	
14,700.0	90.00	269.07	6,640.0	-365.4	-7,997.3	8,005.5	0.00	0.00	0.00	
14,750.0	90.00	269.07	6,640.0	-366.2	-8,047.3	8,055.5	0.00	0.00	0.00	
14,800.0	90.00	269.07	6,640.0	-367.1	-8,097.3	8,105.5	0.00	0.00	0.00	
14,850.0	90.00	269.07	6,640.0	-367.9	-8,147.3	8,155.5	0.00	0.00	0.00	
14,900.0	90.00	269.07	6,640.0	-368.7	-8,197.3	8,205.4	0.00	0.00	0.00	
14,950.0	90.00	269.07	6,640.0	-369.5	-8,247.3	8,255.4	0.00	0.00	0.00	
15,000.0	90.00	269.07	6,640.0	-370.3	-8,297.3	8,305.4	0.00	0.00	0.00	
15,050.0	90.00	269.07	6,640.0	-371.1	-8,347.2	8,355.4	0.00	0.00	0.00	
15,100.0	90.00	269.07	6,640.0	-371.9	-8,397.2	8,405.4	0.00	0.00	0.00	
15,150.0	90.00	269.07	6,640.0	-372.8	-8,447.2	8,455.4	0.00	0.00	0.00	
15,200.0	90.00	269.07	6,640.0	-373.6	-8,497.2	8,505.4	0.00	0.00	0.00	
15,250.0	90.00	269.07	6,640.0	-374.4	-8,547.2	8,555.3	0.00	0.00	0.00	
15,300.0	90.00	269.07	6,640.0	-375.2	-8,597.2	8,605.3	0.00	0.00	0.00	
15,350.0	90.00	269.07	6,640.0	-376.0	-8,647.2	8,655.3	0.00	0.00	0.00	
15,400.0	90.00	269.07	6,640.0	-376.8	-8,697.2	8,705.3	0.00	0.00	0.00	
15,450.0	90.00	269.07	6,640.0	-377.6	-8,747.2	8,755.3	0.00	0.00	0.00	
15,500.0	90.00	269.07	6,640.0	-378.5	-8,797.2	8,805.3	0.00	0.00	0.00	
15,550.0	90.00	269.07	6,640.0	-379.3	-8,847.2	8,855.3	0.00	0.00	0.00	
15,600.0	90.00	269.07	6,640.0	-380.1	-8,897.2	8,905.2	0.00	0.00	0.00	
15,650.0	90.00	269.07	6,640.0	-380.9	-8,947.2	8,955.2	0.00	0.00	0.00	
15,700.0	90.00	269.07	6,640.0	-381.7	-8,997.2	9,005.2	0.00	0.00	0.00	
15,750.0	90.00	269.07	6,640.0	-382.5	-9,047.2	9,055.2	0.00	0.00	0.00	
15,800.0	90.00	269.07	6,640.0	-383.4	-9,097.1	9,105.2	0.00	0.00	0.00	
15,850.0	90.00	269.07	6,640.0	-384.2	-9,147.1	9,155.2	0.00	0.00	0.00	
15,900.0	90.00	269.07	6,640.0	-385.0	-9,197.1	9,205.2	0.00	0.00	0.00	
15,950.0	90.00	269.07	6,640.0	-385.8	-9,247.1	9,255.2	0.00	0.00	0.00	
16,000.0	90.00	269.07	6,640.0	-386.6	-9,297.1	9,305.1	0.00	0.00	0.00	
16,050.0	90.00	269.07	6,640.0	-387.4	-9,347.1	9,355.1	0.00	0.00	0.00	
16,100.0	90.00	269.07	6,640.0	-388.2	-9,397.1	9,405.1	0.00	0.00	0.00	
16,150.0	90.00	269.07	6,640.0	-389.1	-9,447.1	9,455.1	0.00	0.00	0.00	
16,200.0	90.00	269.07	6,640.0	-389.9	-9,497.1	9,505.1	0.00	0.00	0.00	
16,250.0	90.00	269.07	6,640.0	-390.7	-9,547.1	9,555.1	0.00	0.00	0.00	
16,300.0	90.00	269.07	6,640.0	-391.5	-9,597.1	9,605.1	0.00	0.00	0.00	
16,350.0	90.00	269.07	6,640.0	-392.3	-9,647.1	9,655.0	0.00	0.00	0.00	
16,400.0	90.00	269.07	6,640.0	-393.1	-9,697.1	9,705.0	0.00	0.00	0.00	
16,450.0	90.00	269.07	6,640.0	-393.9	-9,747.1	9,755.0	0.00	0.00	0.00	
16,500.0	90.00	269.07	6,640.0	-394.8	-9,797.1	9,805.0	0.00	0.00	0.00	
16,550.0	90.00	269.07	6,640.0	-395.6	-9,847.0	9,855.0	0.00	0.00	0.00	
16,600.0	90.00	269.07	6,640.0	-396.4	-9,897.0	9,905.0	0.00	0.00	0.00	
16,650.0	90.00	269.07	6,640.0	-397.2	-9,947.0	9,955.0	0.00	0.00	0.00	
16,700.0	90.00	269.07	6,640.0	-398.0	-9,997.0	10,004.9	0.00	0.00	0.00	
16,716.1	90.00	269.07	6,640.0	-398.3	-10,013.1	10,021.0	0.00	0.00	0.00	
TD at 16716.1 - Wells Ranch State A36-675 BHL 1065'FNL, 50'FWL										

Noble Energy Inc

Planning Report

Database:	EDM01P	Local Co-ordinate Reference:	Well Wells Ranch State A36-675
Company:	Northern Region Drilling - Working	TVD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Project:	Wattenberg Field	MD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Site:	A (06N-64W)	North Reference:	Grid
Well:	Wells Ranch State A36-675	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Drilling		
Design:	APD - Rev 0		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
Wells Ranch State A36-675	0.00	0.00	6,640.0	-398.3	-10,013.1	1,407,304.38	3,276,187.09	40.447210	-104.507630
- plan hits target center									
- Point									

Casing Points				
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter
(ft)	(ft)		(")	(")
6,967.4	6,631.0	7" Casing @ 6967.4' MD	7	8-3/4

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
2,373.0	2,370.0	PIERRE		0.00	
3,525.4	3,511.0	PARKMAN		0.00	
4,302.0	4,280.0	SUSSEX		0.00	
4,877.1	4,851.0	SHANNON		0.00	
5,844.1	5,818.0	TEEPEE BUTTES		0.00	
6,588.7	6,491.0	SHARON SPRINGS		0.00	
6,631.8	6,517.0	NIO A CHALK		0.00	
6,675.6	6,541.0	NIO A MARL		0.00	
6,849.6	6,610.0	NIO B CHALK		0.00	

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
1,800.0	1,800.0	0.0	0.0	KOP - Start Build 2.00
4,583.5	4,558.7	-213.3	292.2	Start Drop -2.00
6,023.0	5,996.9	-230.0	315.0	KOP #2 - Start Build 9.00
6,967.4	6,631.0	-239.5	-266.0	Start 75.0 hold at 6967.4 MD
7,042.4	6,637.6	-240.7	-340.7	Start Build 9.00
16,716.1	6,640.0	-398.3	-10,013.1	TD at 16716.1

Northern Region Drilling - Working

Wattenberg Field

A (06N-64W)

Wells Ranch State A36-675

Original Drilling

APD - Rev 0

Anticollision Summary Report

23 January, 2015

Noble Energy Inc
Anticollision Summary Report

Company:	Northern Region Drilling - Working	Local Co-ordinate Reference:	Well Wells Ranch State A36-675
Project:	Wattenberg Field	TVD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Reference Site:	A (06N-64W)	MD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Wells Ranch State A36-675	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM01P
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

Reference	APD - Rev 0		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	1/23/2015		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	16,716.1	APD - Rev 0 (Original Drilling)	MWD	MWD - Standard

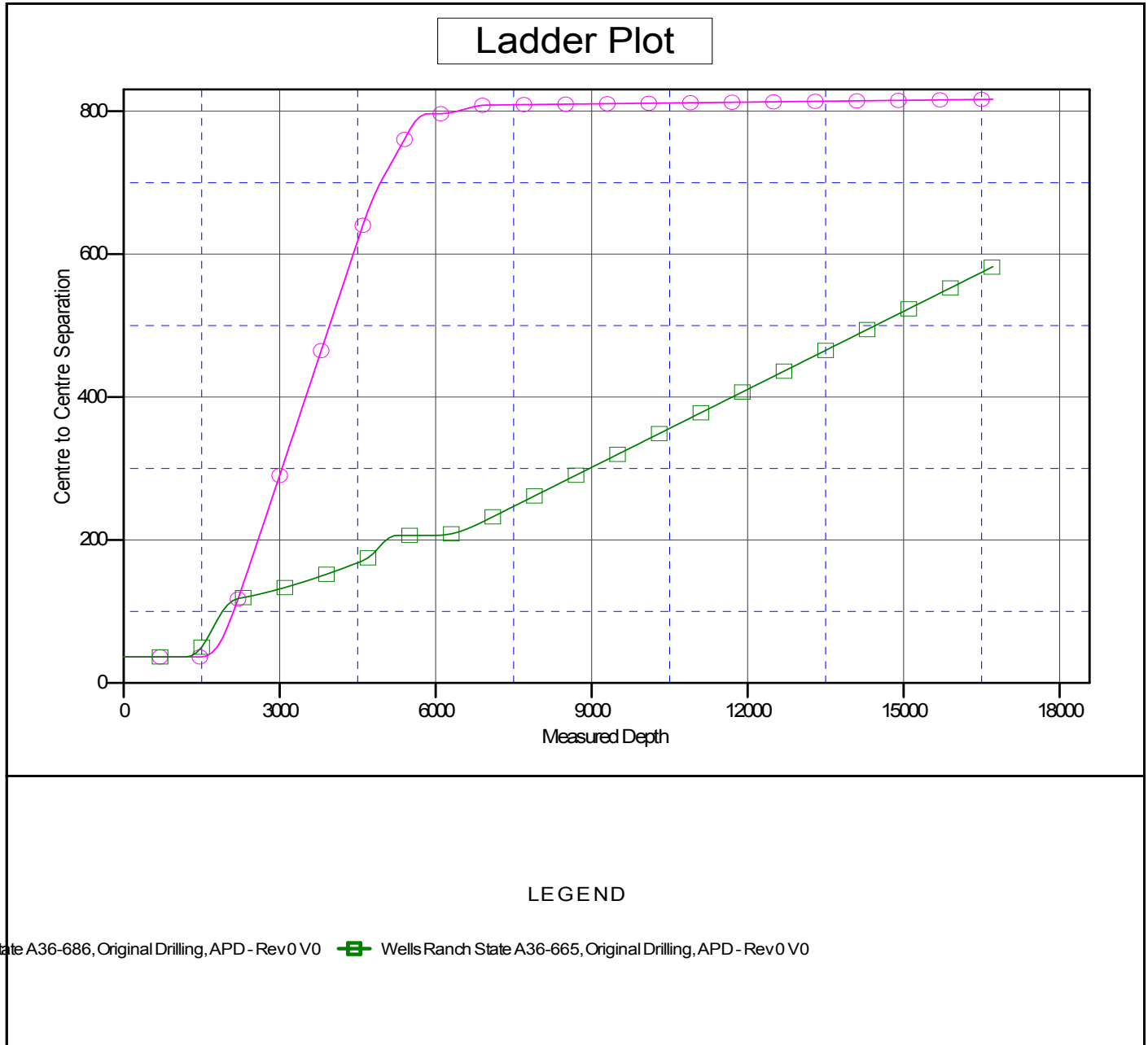
Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
A (06N-64W)						
Wells Ranch State A36-665 - Original Drilling - APD - Re	1,200.0	1,199.0	36.5	31.4	7.145	CC
Wells Ranch State A36-665 - Original Drilling - APD - Re	16,716.1	16,715.1	582.4	14.0	1.025	Level 2, ES, SF
Wells Ranch State A36-686 - Original Drilling - APD - Re	1,466.3	1,467.3	36.4	30.1	5.768	CC
Wells Ranch State A36-686 - Original Drilling - APD - Re	1,500.0	1,501.0	36.4	30.0	5.633	ES
Wells Ranch State A36-686 - Original Drilling - APD - Re	16,716.1	16,875.2	816.7	254.6	1.453	Level 2, SF

Noble Energy Inc
Anticollision Summary Report

Company:	Northern Region Drilling - Working	Local Co-ordinate Reference:	Well Wells Ranch State A36-675
Project:	Wattenberg Field	TVD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Reference Site:	A (06N-64W)	MD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Wells Ranch State A36-675	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM01P
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4679.0ft (H&P 343 RKB - 24'
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Wells Ranch State A36-675
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.66°



Noble Energy Inc
Anticollision Summary Report

Company:	Northern Region Drilling - Working	Local Co-ordinate Reference:	Well Wells Ranch State A36-675
Project:	Wattenberg Field	TVD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Reference Site:	A (06N-64W)	MD Reference:	WELL @ 4679.0ft (H&P 343 RKB - 24')
Site Error:	0.0 ft	North Reference:	Grid
Reference Well:	Wells Ranch State A36-675	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Drilling	Database:	EDM01P
Reference Design:	APD - Rev 0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4679.0ft (H&P 343 RKB - 24'
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Wells Ranch State A36-675
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.66°

