

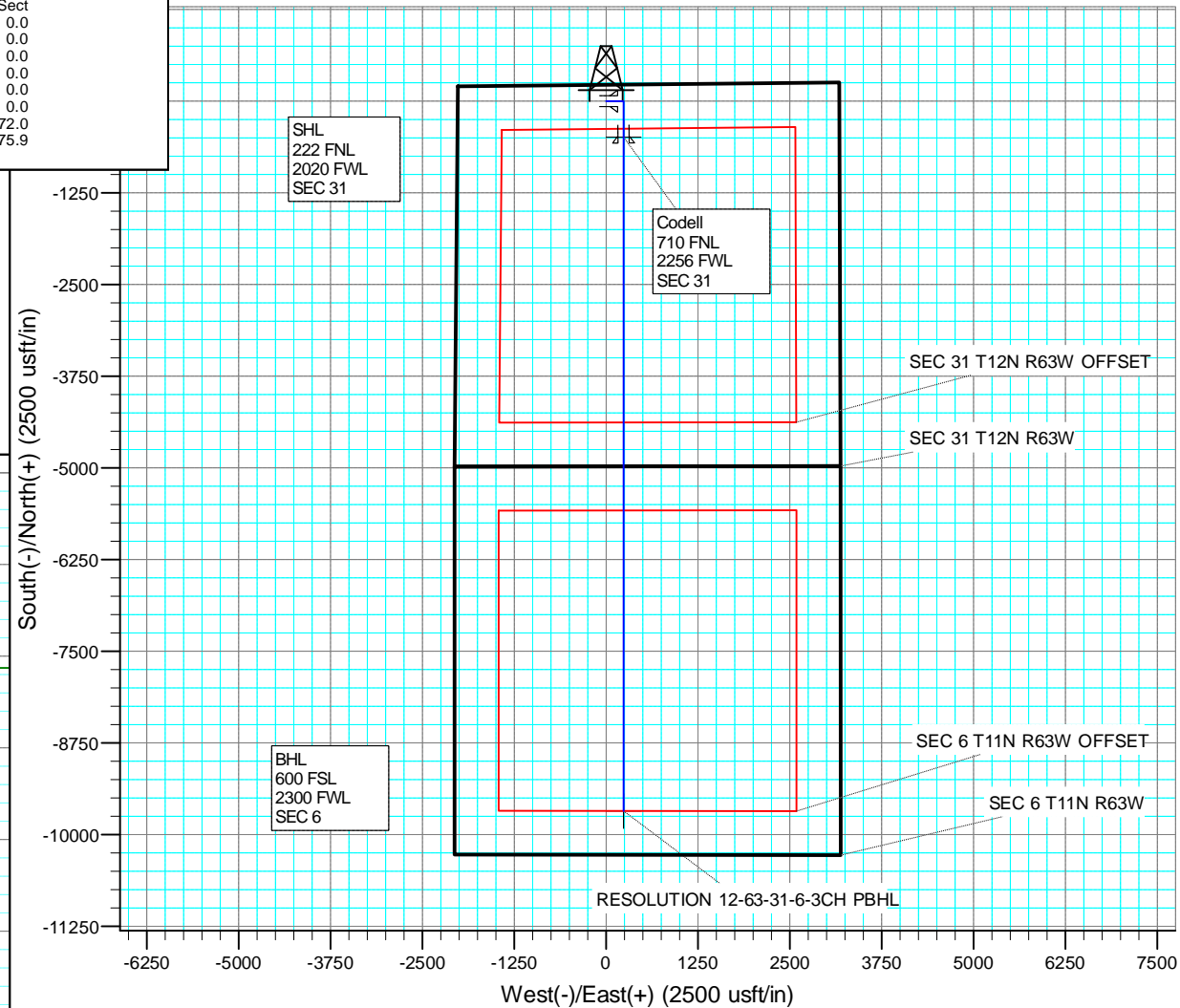
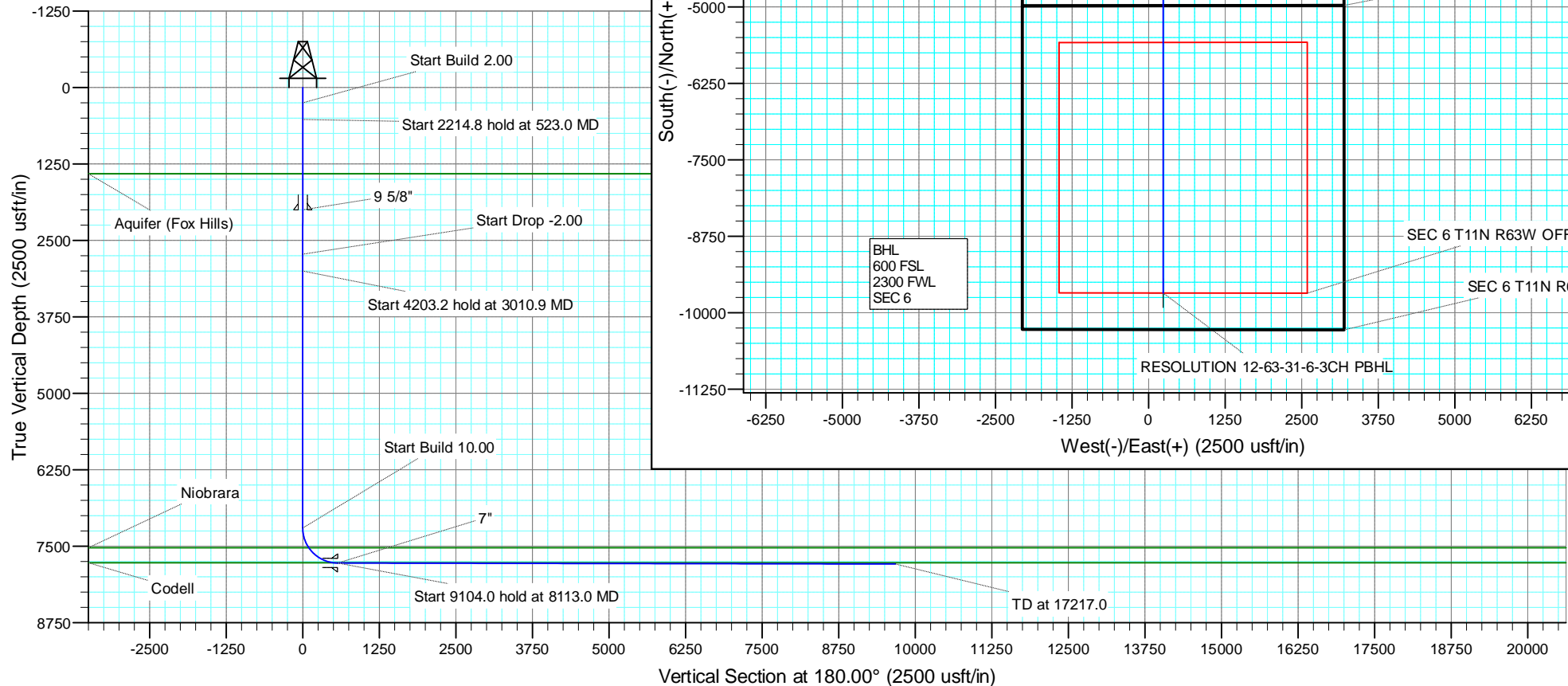
+N/-S    +E/-W    Northing    Easting    Latitude    Longitude  
 0.0    0.0    1598687.86    3282258.96    40.972292    -104.477889

#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.0
523.0	5.46	90.00	522.6	0.0	13.0	2.00	90.00	0.0
2737.9	5.46	90.00	2727.4	0.0	223.8	0.00	0.00	0.0
3010.9	0.00	0.00	3000.0	0.0	236.8	2.00	180.00	0.0
7214.0	0.00	0.00	7203.2	0.0	236.8	0.00	0.00	0.0
8113.0	89.90	180.00	7776.1	-572.0	236.8	10.00	180.00	572.0
17217.0	89.90	180.00	7792.0	-9675.9	236.8	0.00	0.00	9675.9

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1412.0	1416.5	Aquifer (Fox Hills)
7527.0	7558.2	Niobrara
7770.0	8030.3	Codell



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**RESOLUTION FED 12-63-30-19-2CH PAD**

**RESOLUTION 12-63-31-6-3CH**

**Wellbore #1**

**Plan: PLAN #1**

## **Standard Planning Report**

**25 February, 2015**

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 12-63-31-6-3CH
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5452.0usft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5452.0usft (Original Well Elev)
<b>Site:</b>	RESOLUTION FED 12-63-30-19-2CH PAD	<b>North Reference:</b>	True
<b>Well:</b>	RESOLUTION 12-63-31-6-3CH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

<b>Project</b>	COLORADO NORTHERN ZONE - 83		
<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		

<b>Site</b>	RESOLUTION FED 12-63-30-19-2CH PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,598,678.49 usft	<b>Latitude:</b> 40.972271
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,282,109.39 usft	<b>Longitude:</b> -104.478431
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> 0.66 °

Well		RESOLUTION 12-63-31-6-3CH				
Well Position	+N/-S	7.6 usft	Northing:	1,598,687.86 usft	Latitude:	40.972292
	+E/-W	149.7 usft	Easting:	3,282,258.97 usft	Longitude:	-104.477889
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	5,426.0 usft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF200510	12/31/2009	8.92	67.62	53,627

<b>Design</b>	PLAN #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	180.00

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
250.0	0.00	0.00	250.0	0.0	0.0	0.00	0.00	0.00	0.00	
523.0	5.46	90.00	522.6	0.0	13.0	2.00	2.00	0.00	90.00	
2,737.9	5.46	90.00	2,727.4	0.0	223.8	0.00	0.00	0.00	0.00	
3,010.9	0.00	0.00	3,000.0	0.0	236.8	2.00	-2.00	0.00	180.00	
7,214.0	0.00	0.00	7,203.2	0.0	236.8	0.00	0.00	0.00	0.00	
8,113.0	89.90	180.00	7,776.1	-572.0	236.8	10.00	10.00	0.00	180.00	
17,217.0	89.90	180.00	7,792.0	-9,675.9	236.8	0.00	0.00	0.00	0.00	RESOLUTION 12-63-

**Anadarko**  
Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 12-63-31-6-3CH
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5452.0usft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5452.0usft (Original Well Elev)
<b>Site:</b>	RESOLUTION FED 12-63-30-19-2CH PAD	<b>North Reference:</b>	True
<b>Well:</b>	RESOLUTION 12-63-31-6-3CH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	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
Start Build 2.00									
300.0	1.00	90.00	300.0	0.0	0.4	0.0	2.00	2.00	0.00
400.0	3.00	90.00	399.9	0.0	3.9	0.0	2.00	2.00	0.00
500.0	5.00	90.00	499.7	0.0	10.9	0.0	2.00	2.00	0.00
523.0	5.46	90.00	522.6	0.0	13.0	0.0	2.00	2.00	0.00
Start 2214.8 hold at 523.0 MD									
600.0	5.46	90.00	599.2	0.0	20.3	0.0	0.00	0.00	0.00
700.0	5.46	90.00	698.8	0.0	29.8	0.0	0.00	0.00	0.00
800.0	5.46	90.00	798.3	0.0	39.4	0.0	0.00	0.00	0.00
900.0	5.46	90.00	897.9	0.0	48.9	0.0	0.00	0.00	0.00
1,000.0	5.46	90.00	997.4	0.0	58.4	0.0	0.00	0.00	0.00
1,100.0	5.46	90.00	1,097.0	0.0	67.9	0.0	0.00	0.00	0.00
1,200.0	5.46	90.00	1,196.5	0.0	77.4	0.0	0.00	0.00	0.00
1,300.0	5.46	90.00	1,296.1	0.0	86.9	0.0	0.00	0.00	0.00
1,400.0	5.46	90.00	1,395.6	0.0	96.5	0.0	0.00	0.00	0.00
1,416.5	5.46	90.00	1,412.0	0.0	98.0	0.0	0.00	0.00	0.00
Aquifer (Fox Hills)									
1,500.0	5.46	90.00	1,495.2	0.0	106.0	0.0	0.00	0.00	0.00
1,600.0	5.46	90.00	1,594.7	0.0	115.5	0.0	0.00	0.00	0.00
1,700.0	5.46	90.00	1,694.2	0.0	125.0	0.0	0.00	0.00	0.00
1,800.0	5.46	90.00	1,793.8	0.0	134.5	0.0	0.00	0.00	0.00
1,900.0	5.46	90.00	1,893.3	0.0	144.0	0.0	0.00	0.00	0.00
2,000.0	5.46	90.00	1,992.9	0.0	153.5	0.0	0.00	0.00	0.00
2,007.1	5.46	90.00	2,000.0	0.0	154.2	0.0	0.00	0.00	0.00
9 5/8"									
2,100.0	5.46	90.00	2,092.4	0.0	163.1	0.0	0.00	0.00	0.00
2,200.0	5.46	90.00	2,192.0	0.0	172.6	0.0	0.00	0.00	0.00
2,300.0	5.46	90.00	2,291.5	0.0	182.1	0.0	0.00	0.00	0.00
2,400.0	5.46	90.00	2,391.1	0.0	191.6	0.0	0.00	0.00	0.00
2,500.0	5.46	90.00	2,490.6	0.0	201.1	0.0	0.00	0.00	0.00
2,600.0	5.46	90.00	2,590.2	0.0	210.6	0.0	0.00	0.00	0.00
2,700.0	5.46	90.00	2,689.7	0.0	220.2	0.0	0.00	0.00	0.00
2,737.9	5.46	90.00	2,727.4	0.0	223.8	0.0	0.00	0.00	0.00
Start Drop -2.00									
2,800.0	4.22	90.00	2,789.3	0.0	229.0	0.0	2.00	-2.00	0.00
2,900.0	2.22	90.00	2,889.2	0.0	234.6	0.0	2.00	-2.00	0.00
3,000.0	0.22	90.00	2,989.1	0.0	236.7	0.0	2.00	-2.00	0.00
3,010.9	0.00	0.00	3,000.0	0.0	236.8	0.0	2.00	-2.00	0.00
Start 4203.2 hold at 3010.9 MD									
3,100.0	0.00	0.00	3,089.1	0.0	236.8	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,189.1	0.0	236.8	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,289.1	0.0	236.8	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,389.1	0.0	236.8	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,489.1	0.0	236.8	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,589.1	0.0	236.8	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,689.1	0.0	236.8	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,789.1	0.0	236.8	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,889.1	0.0	236.8	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	3,989.1	0.0	236.8	0.0	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 12-63-31-6-3CH
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5452.0usft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5452.0usft (Original Well Elev)
<b>Site:</b>	RESOLUTION FED 12-63-30-19-2CH PAD	<b>North Reference:</b>	True
<b>Well:</b>	RESOLUTION 12-63-31-6-3CH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,100.0	0.00	0.00	4,089.1	0.0	236.8	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,189.1	0.0	236.8	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,289.1	0.0	236.8	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,389.1	0.0	236.8	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,489.1	0.0	236.8	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,589.1	0.0	236.8	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,689.1	0.0	236.8	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,789.1	0.0	236.8	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,889.1	0.0	236.8	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	4,989.1	0.0	236.8	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,089.1	0.0	236.8	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,189.1	0.0	236.8	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,289.1	0.0	236.8	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,389.1	0.0	236.8	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,489.1	0.0	236.8	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,589.1	0.0	236.8	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,689.1	0.0	236.8	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,789.1	0.0	236.8	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,889.1	0.0	236.8	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,989.1	0.0	236.8	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,089.1	0.0	236.8	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,189.1	0.0	236.8	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,289.1	0.0	236.8	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,389.1	0.0	236.8	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,489.1	0.0	236.8	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,589.1	0.0	236.8	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,689.1	0.0	236.8	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,789.1	0.0	236.8	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,889.1	0.0	236.8	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,989.1	0.0	236.8	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,089.1	0.0	236.8	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,189.1	0.0	236.8	0.0	0.00	0.00	0.00
7,214.0	0.00	0.00	7,203.2	0.0	236.8	0.0	0.00	0.00	0.00
Start Build 10.00									
7,300.0	8.60	180.00	7,288.8	-6.4	236.8	6.4	10.00	10.00	0.00
7,400.0	18.60	180.00	7,385.9	-29.9	236.8	29.9	10.00	10.00	0.00
7,500.0	28.60	180.00	7,477.4	-69.9	236.8	69.9	10.00	10.00	0.00
7,558.2	34.42	180.00	7,527.0	-100.3	236.8	100.3	10.00	10.00	0.00
Niobrara									
7,600.0	38.60	180.00	7,560.6	-125.2	236.8	125.2	10.00	10.00	0.00
7,700.0	48.60	180.00	7,632.9	-194.0	236.8	194.0	10.00	10.00	0.00
7,800.0	58.60	180.00	7,692.2	-274.4	236.8	274.4	10.00	10.00	0.00
7,900.0	68.60	180.00	7,736.6	-363.9	236.8	363.9	10.00	10.00	0.00
8,000.0	78.60	180.00	7,764.8	-459.7	236.8	459.7	10.00	10.00	0.00
8,030.3	81.62	180.00	7,770.0	-489.5	236.8	489.5	10.00	10.00	0.00
Codell									
8,100.0	88.60	180.00	7,775.9	-558.9	236.8	558.9	10.00	10.00	0.00
8,113.0	89.90	180.00	7,776.1	-571.9	236.8	571.9	10.00	10.00	0.00
Start 9104.0 hold at 8113.0 MD - 7"									
8,200.0	89.90	180.00	7,776.3	-658.9	236.8	658.9	0.00	0.00	0.00
8,300.0	89.90	180.00	7,776.4	-758.9	236.8	758.9	0.00	0.00	0.00
8,400.0	89.90	180.00	7,776.6	-858.9	236.8	858.9	0.00	0.00	0.00
8,500.0	89.90	180.00	7,776.8	-958.9	236.8	958.9	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 12-63-31-6-3CH
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5452.0usft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5452.0usft (Original Well Elev)
<b>Site:</b>	RESOLUTION FED 12-63-30-19-2CH PAD	<b>North Reference:</b>	True
<b>Well:</b>	RESOLUTION 12-63-31-6-3CH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,600.0	89.90	180.00	7,777.0	-1,058.9	236.8	1,058.9	0.00	0.00	0.00
8,700.0	89.90	180.00	7,777.1	-1,158.9	236.8	1,158.9	0.00	0.00	0.00
8,800.0	89.90	180.00	7,777.3	-1,258.9	236.8	1,258.9	0.00	0.00	0.00
8,900.0	89.90	180.00	7,777.5	-1,358.9	236.8	1,358.9	0.00	0.00	0.00
9,000.0	89.90	180.00	7,777.7	-1,458.9	236.8	1,458.9	0.00	0.00	0.00
9,100.0	89.90	180.00	7,777.8	-1,558.9	236.8	1,558.9	0.00	0.00	0.00
9,200.0	89.90	180.00	7,778.0	-1,658.9	236.8	1,658.9	0.00	0.00	0.00
9,300.0	89.90	180.00	7,778.2	-1,758.9	236.8	1,758.9	0.00	0.00	0.00
9,400.0	89.90	180.00	7,778.4	-1,858.9	236.8	1,858.9	0.00	0.00	0.00
9,500.0	89.90	180.00	7,778.5	-1,958.9	236.8	1,958.9	0.00	0.00	0.00
9,600.0	89.90	180.00	7,778.7	-2,058.9	236.8	2,058.9	0.00	0.00	0.00
9,700.0	89.90	180.00	7,778.9	-2,158.9	236.8	2,158.9	0.00	0.00	0.00
9,800.0	89.90	180.00	7,779.1	-2,258.9	236.8	2,258.9	0.00	0.00	0.00
9,900.0	89.90	180.00	7,779.2	-2,358.9	236.8	2,358.9	0.00	0.00	0.00
10,000.0	89.90	180.00	7,779.4	-2,458.9	236.8	2,458.9	0.00	0.00	0.00
10,100.0	89.90	180.00	7,779.6	-2,558.9	236.8	2,558.9	0.00	0.00	0.00
10,200.0	89.90	180.00	7,779.8	-2,658.9	236.8	2,658.9	0.00	0.00	0.00
10,300.0	89.90	180.00	7,779.9	-2,758.9	236.8	2,758.9	0.00	0.00	0.00
10,400.0	89.90	180.00	7,780.1	-2,858.9	236.8	2,858.9	0.00	0.00	0.00
10,500.0	89.90	180.00	7,780.3	-2,958.9	236.8	2,958.9	0.00	0.00	0.00
10,600.0	89.90	180.00	7,780.5	-3,058.9	236.8	3,058.9	0.00	0.00	0.00
10,700.0	89.90	180.00	7,780.6	-3,158.9	236.8	3,158.9	0.00	0.00	0.00
10,800.0	89.90	180.00	7,780.8	-3,258.9	236.8	3,258.9	0.00	0.00	0.00
10,900.0	89.90	180.00	7,781.0	-3,358.9	236.8	3,358.9	0.00	0.00	0.00
11,000.0	89.90	180.00	7,781.1	-3,458.9	236.8	3,458.9	0.00	0.00	0.00
11,100.0	89.90	180.00	7,781.3	-3,558.9	236.8	3,558.9	0.00	0.00	0.00
11,200.0	89.90	180.00	7,781.5	-3,658.9	236.8	3,658.9	0.00	0.00	0.00
11,300.0	89.90	180.00	7,781.7	-3,758.9	236.8	3,758.9	0.00	0.00	0.00
11,400.0	89.90	180.00	7,781.8	-3,858.9	236.8	3,858.9	0.00	0.00	0.00
11,500.0	89.90	180.00	7,782.0	-3,958.9	236.8	3,958.9	0.00	0.00	0.00
11,600.0	89.90	180.00	7,782.2	-4,058.9	236.8	4,058.9	0.00	0.00	0.00
11,700.0	89.90	180.00	7,782.4	-4,158.9	236.8	4,158.9	0.00	0.00	0.00
11,800.0	89.90	180.00	7,782.5	-4,258.9	236.8	4,258.9	0.00	0.00	0.00
11,900.0	89.90	180.00	7,782.7	-4,358.9	236.8	4,358.9	0.00	0.00	0.00
12,000.0	89.90	180.00	7,782.9	-4,458.9	236.8	4,458.9	0.00	0.00	0.00
12,100.0	89.90	180.00	7,783.1	-4,558.9	236.8	4,558.9	0.00	0.00	0.00
12,200.0	89.90	180.00	7,783.2	-4,658.9	236.8	4,658.9	0.00	0.00	0.00
12,300.0	89.90	180.00	7,783.4	-4,758.9	236.8	4,758.9	0.00	0.00	0.00
12,400.0	89.90	180.00	7,783.6	-4,858.9	236.8	4,858.9	0.00	0.00	0.00
12,500.0	89.90	180.00	7,783.8	-4,958.9	236.8	4,958.9	0.00	0.00	0.00
12,600.0	89.90	180.00	7,783.9	-5,058.9	236.8	5,058.9	0.00	0.00	0.00
12,700.0	89.90	180.00	7,784.1	-5,158.9	236.8	5,158.9	0.00	0.00	0.00
12,800.0	89.90	180.00	7,784.3	-5,258.9	236.8	5,258.9	0.00	0.00	0.00
12,900.0	89.90	180.00	7,784.5	-5,358.9	236.8	5,358.9	0.00	0.00	0.00
13,000.0	89.90	180.00	7,784.6	-5,458.9	236.8	5,458.9	0.00	0.00	0.00
13,100.0	89.90	180.00	7,784.8	-5,558.9	236.8	5,558.9	0.00	0.00	0.00
13,200.0	89.90	180.00	7,785.0	-5,658.9	236.8	5,658.9	0.00	0.00	0.00
13,300.0	89.90	180.00	7,785.2	-5,758.9	236.8	5,758.9	0.00	0.00	0.00
13,400.0	89.90	180.00	7,785.3	-5,858.9	236.8	5,858.9	0.00	0.00	0.00
13,500.0	89.90	180.00	7,785.5	-5,958.9	236.8	5,958.9	0.00	0.00	0.00
13,600.0	89.90	180.00	7,785.7	-6,058.9	236.8	6,058.9	0.00	0.00	0.00
13,700.0	89.90	180.00	7,785.9	-6,158.9	236.8	6,158.9	0.00	0.00	0.00
13,800.0	89.90	180.00	7,786.0	-6,258.9	236.8	6,258.9	0.00	0.00	0.00
13,900.0	89.90	180.00	7,786.2	-6,358.9	236.8	6,358.9	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 12-63-31-6-3CH
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5452.0usft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5452.0usft (Original Well Elev)
<b>Site:</b>	RESOLUTION FED 12-63-30-19-2CH PAD	<b>North Reference:</b>	True
<b>Well:</b>	RESOLUTION 12-63-31-6-3CH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
14,000.0	89.90	180.00	7,786.4	-6,458.9	236.8	6,458.9	0.00	0.00	0.00	
14,100.0	89.90	180.00	7,786.6	-6,558.9	236.8	6,558.9	0.00	0.00	0.00	
14,200.0	89.90	180.00	7,786.7	-6,658.9	236.8	6,658.9	0.00	0.00	0.00	
14,300.0	89.90	180.00	7,786.9	-6,758.9	236.8	6,758.9	0.00	0.00	0.00	
14,400.0	89.90	180.00	7,787.1	-6,858.9	236.8	6,858.9	0.00	0.00	0.00	
14,500.0	89.90	180.00	7,787.3	-6,958.9	236.8	6,958.9	0.00	0.00	0.00	
14,600.0	89.90	180.00	7,787.4	-7,058.9	236.8	7,058.9	0.00	0.00	0.00	
14,700.0	89.90	180.00	7,787.6	-7,158.9	236.8	7,158.9	0.00	0.00	0.00	
14,800.0	89.90	180.00	7,787.8	-7,258.9	236.8	7,258.9	0.00	0.00	0.00	
14,900.0	89.90	180.00	7,788.0	-7,358.9	236.8	7,358.9	0.00	0.00	0.00	
15,000.0	89.90	180.00	7,788.1	-7,458.9	236.8	7,458.9	0.00	0.00	0.00	
15,100.0	89.90	180.00	7,788.3	-7,558.9	236.8	7,558.9	0.00	0.00	0.00	
15,200.0	89.90	180.00	7,788.5	-7,658.9	236.8	7,658.9	0.00	0.00	0.00	
15,300.0	89.90	180.00	7,788.7	-7,758.9	236.8	7,758.9	0.00	0.00	0.00	
15,400.0	89.90	180.00	7,788.8	-7,858.9	236.8	7,858.9	0.00	0.00	0.00	
15,500.0	89.90	180.00	7,789.0	-7,958.9	236.8	7,958.9	0.00	0.00	0.00	
15,600.0	89.90	180.00	7,789.2	-8,058.9	236.8	8,058.9	0.00	0.00	0.00	
15,700.0	89.90	180.00	7,789.4	-8,158.9	236.8	8,158.9	0.00	0.00	0.00	
15,800.0	89.90	180.00	7,789.5	-8,258.9	236.8	8,258.9	0.00	0.00	0.00	
15,900.0	89.90	180.00	7,789.7	-8,358.9	236.8	8,358.9	0.00	0.00	0.00	
16,000.0	89.90	180.00	7,789.9	-8,458.9	236.8	8,458.9	0.00	0.00	0.00	
16,100.0	89.90	180.00	7,790.1	-8,558.9	236.8	8,558.9	0.00	0.00	0.00	
16,200.0	89.90	180.00	7,790.2	-8,658.9	236.8	8,658.9	0.00	0.00	0.00	
16,300.0	89.90	180.00	7,790.4	-8,758.9	236.8	8,758.9	0.00	0.00	0.00	
16,400.0	89.90	180.00	7,790.6	-8,858.9	236.8	8,858.9	0.00	0.00	0.00	
16,500.0	89.90	180.00	7,790.7	-8,958.9	236.8	8,958.9	0.00	0.00	0.00	
16,600.0	89.90	180.00	7,790.9	-9,058.9	236.8	9,058.9	0.00	0.00	0.00	
16,700.0	89.90	180.00	7,791.1	-9,158.9	236.8	9,158.9	0.00	0.00	0.00	
16,800.0	89.90	180.00	7,791.3	-9,258.9	236.8	9,258.9	0.00	0.00	0.00	
16,900.0	89.90	180.00	7,791.4	-9,358.9	236.8	9,358.9	0.00	0.00	0.00	
17,000.0	89.90	180.00	7,791.6	-9,458.9	236.8	9,458.9	0.00	0.00	0.00	
17,100.0	89.90	180.00	7,791.8	-9,558.9	236.8	9,558.9	0.00	0.00	0.00	
17,200.0	89.90	180.00	7,792.0	-9,658.9	236.8	9,658.9	0.00	0.00	0.00	
17,217.0	89.90	180.00	7,792.0	-9,675.9	236.8	9,675.9	0.00	0.00	0.00	
TD at 17217.0										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Interp @ 7770.0 (RESOI	0.00	0.00	7,770.0	-489.5	236.8	1,598,201.12	3,282,501.36	40.970949	-104.477032
- plan hits target center									
- Point									
RESOLUTION 12-63-31	0.00	0.00	7,792.0	-9,675.9	236.8	1,589,015.32	3,282,607.24	40.945736	-104.477032
- plan hits target center									
- Point									

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 12-63-31-6-3CH
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5452.0usft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5452.0usft (Original Well Elev)
<b>Site:</b>	RESOLUTION FED 12-63-30-19-2CH PAD	<b>North Reference:</b>	True
<b>Well:</b>	RESOLUTION 12-63-31-6-3CH	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	PLAN #1		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,007.1	2,000.0	9 5/8"	9.625	12.250	
8,113.0	7,776.1	7"	7.000	7.500	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,416.5	1,412.0	Aquifer (Fox Hills)			
7,558.2	7,527.0	Niobrara			
8,030.3	7,770.0	Codell			

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
250.0	250.0	0.0	0.0	Start Build 2.00	
523.0	522.6	0.0	13.0	Start 2214.8 hold at 523.0 MD	
2,737.9	2,727.4	0.0	223.8	Start Drop -2.00	
3,010.9	3,000.0	0.0	236.8	Start 4203.2 hold at 3010.9 MD	
7,214.0	7,203.2	0.0	236.8	Start Build 10.00	
8,113.0	7,776.1	-572.0	236.8	Start 9104.0 hold at 8113.0 MD	
17,217.0	7,792.0	-9,675.9	236.8	TD at 17217.0	