

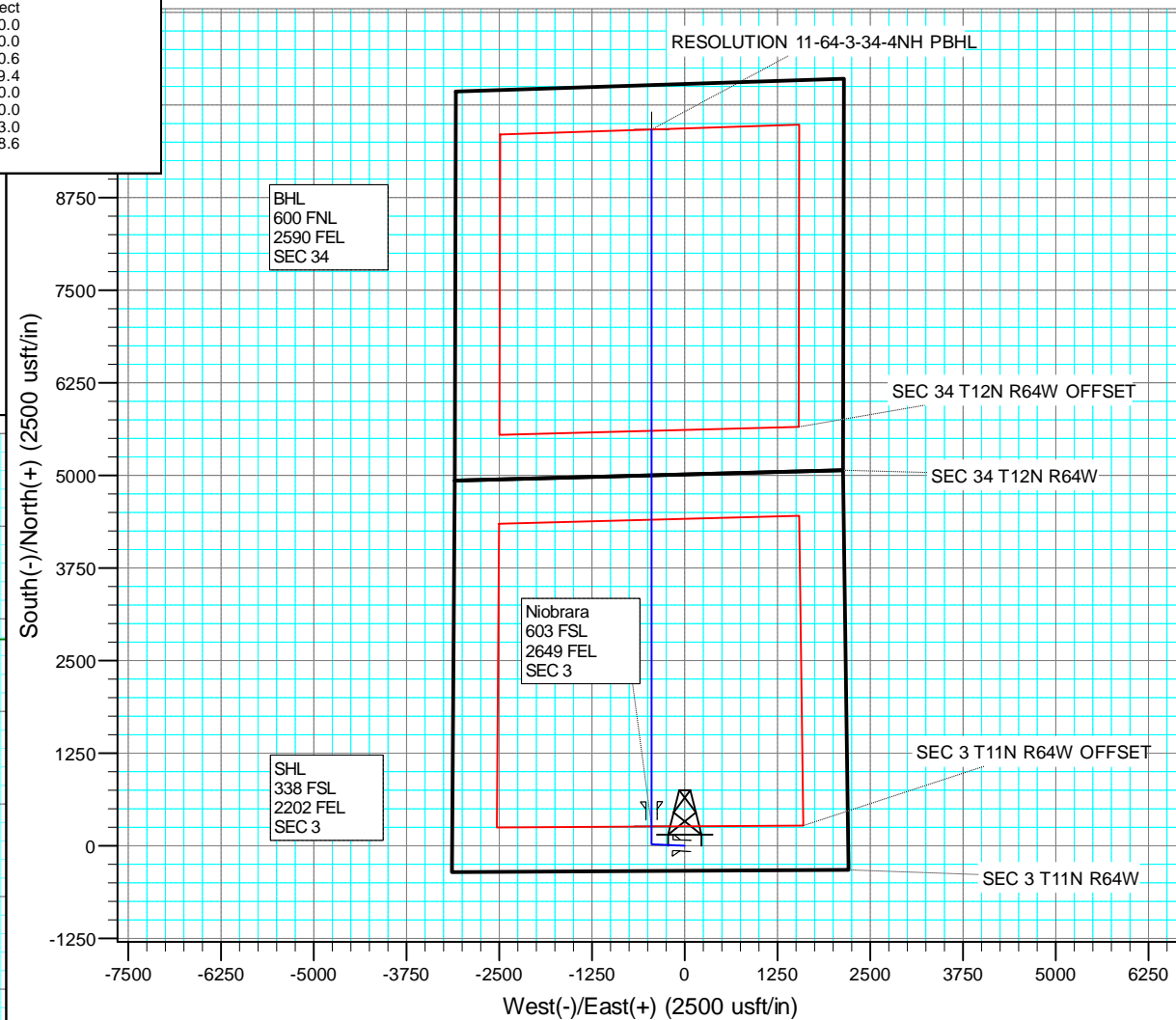
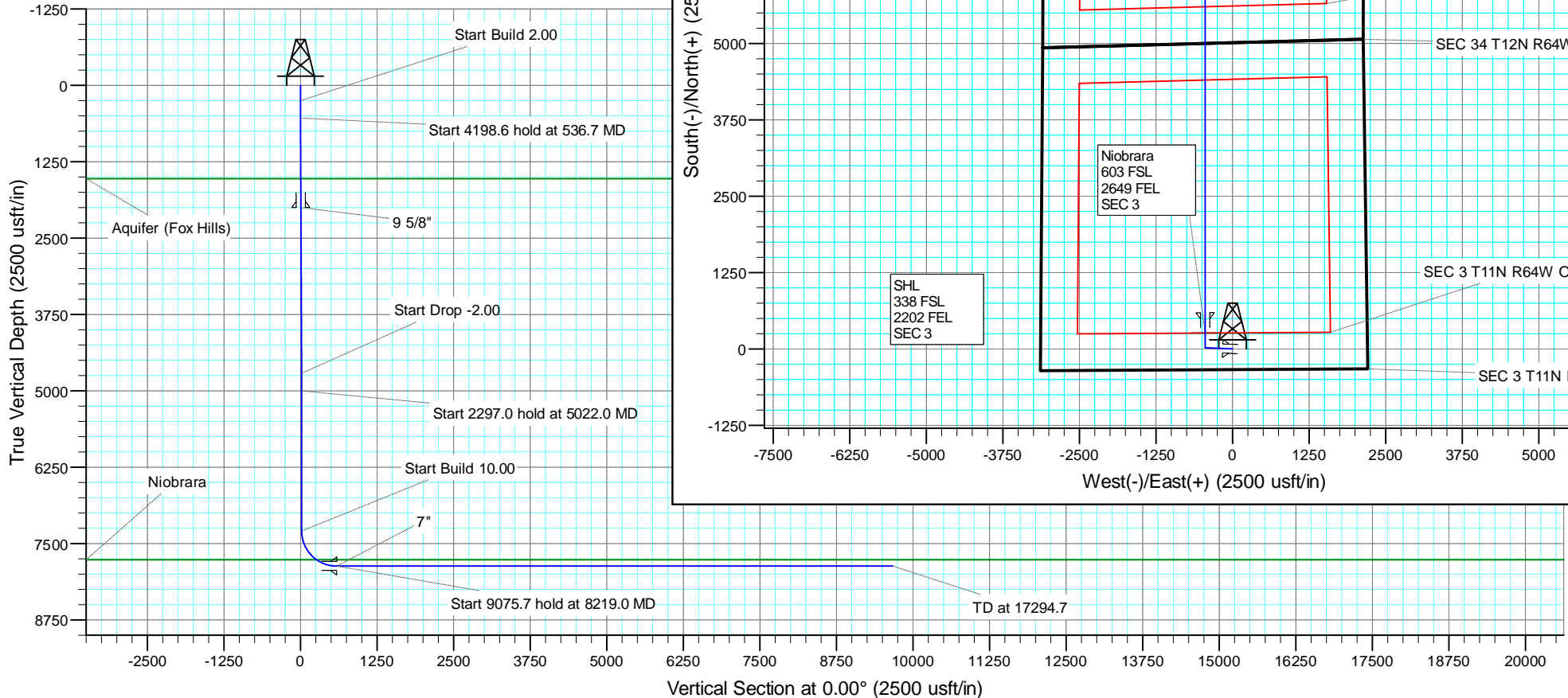
+N/-S +E/-W Northing Easting Latitude Longitude  
 0.0 0.0 1588239.88 3267512.88 40.944073 -104.531696

#### 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
536.7	5.73	272.56	536.2	0.6	-14.3	2.00	272.56	0.6
4735.3	5.73	272.56	4713.8	19.4	-433.3	0.00	0.00	19.4
5022.0	0.00	0.00	5000.0	20.0	-447.7	2.00	180.00	20.0
7319.0	0.00	0.00	7297.0	20.0	-447.7	0.00	0.00	20.0
8219.0	90.00	360.00	7870.0	593.0	-447.7	10.00	360.00	593.0
17294.7	90.00	360.00	7870.0	9668.6	-447.7	0.00	0.00	9668.6

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1528.0	1533.5	Aquifer (Fox Hills)
7767.0	7870.1	Niobrara



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**RESOLUTION 11-64-3-34-5CH PAD**

**RESOLUTION 11-64-3-34-4NH**

**Wellbore #1**

**Plan: PLAN #1**

## **Standard Planning Report**

**11 February, 2015**

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 11-64-3-34-4NH
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5466.0usft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5466.0usft (Original Well Elev)
<b>Site:</b>	RESOLUTION 11-64-3-34-5CH PAD	<b>North Reference:</b>	True
<b>Well:</b>	RESOLUTION 11-64-3-34-4NH	<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 11-64-3-34-5CH PAD			
<b>Site Position:</b>		<b>Northing:</b>	1,588,239.87 usft	<b>Latitude:</b> 40.944073
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,267,512.88 usft	<b>Longitude:</b> -104.531696
<b>Position Uncertainty:</b>	0.0 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> 0.63 °

<b>Well</b>	RESOLUTION 11-64-3-34-4NH			
<b>Well Position</b>	<b>+N/-S</b>	0.0 usft	<b>Northing:</b>	1,588,239.87 usft
	<b>+E/-W</b>	0.0 usft	<b>Easting:</b>	3,267,512.88 usft
<b>Position Uncertainty</b>	0.0 usft	<b>Wellhead Elevation:</b>	0.0 usft	<b>Ground Level:</b> 5,440.0 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	8.94	67.59	53,606

<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	0.00

<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	
536.7	5.73	272.56	536.2	0.6	-14.3	2.00	2.00	0.00	272.56	
4,735.3	5.73	272.56	4,713.8	19.4	-433.3	0.00	0.00	0.00	0.00	
5,022.0	0.00	0.00	5,000.0	20.0	-447.7	2.00	-2.00	0.00	180.00	
7,319.0	0.00	0.00	7,297.0	20.0	-447.7	0.00	0.00	0.00	0.00	
8,219.0	90.00	360.00	7,870.0	593.0	-447.7	10.00	10.00	0.00	360.00	
17,294.7	90.00	360.00	7,870.0	9,668.6	-447.7	0.00	0.00	0.00	0.00	RESOLUTION 11-64-

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 11-64-3-34-4NH
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5466.0usft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5466.0usft (Original Well Elev)
<b>Site:</b>	RESOLUTION 11-64-3-34-5CH PAD	<b>North Reference:</b>	True
<b>Well:</b>	RESOLUTION 11-64-3-34-4NH	<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
<b>Start Build 2.00</b>									
300.0	1.00	272.56	300.0	0.0	-0.4	0.0	2.00	2.00	0.00
400.0	3.00	272.56	399.9	0.2	-3.9	0.2	2.00	2.00	0.00
500.0	5.00	272.56	499.7	0.5	-10.9	0.5	2.00	2.00	0.00
536.7	5.73	272.56	536.2	0.6	-14.3	0.6	2.00	2.00	0.00
<b>Start 4198.6 hold at 536.7 MD</b>									
600.0	5.73	272.56	599.2	0.9	-20.6	0.9	0.00	0.00	0.00
700.0	5.73	272.56	698.7	1.4	-30.6	1.4	0.00	0.00	0.00
800.0	5.73	272.56	798.2	1.8	-40.6	1.8	0.00	0.00	0.00
900.0	5.73	272.56	897.7	2.3	-50.6	2.3	0.00	0.00	0.00
1,000.0	5.73	272.56	997.2	2.7	-60.6	2.7	0.00	0.00	0.00
1,100.0	5.73	272.56	1,096.7	3.2	-70.5	3.2	0.00	0.00	0.00
1,200.0	5.73	272.56	1,196.2	3.6	-80.5	3.6	0.00	0.00	0.00
1,300.0	5.73	272.56	1,295.7	4.0	-90.5	4.0	0.00	0.00	0.00
1,400.0	5.73	272.56	1,395.2	4.5	-100.5	4.5	0.00	0.00	0.00
1,500.0	5.73	272.56	1,494.7	4.9	-110.5	4.9	0.00	0.00	0.00
1,533.5	5.73	272.56	1,528.0	5.1	-113.8	5.1	0.00	0.00	0.00
<b>Aquifer (Fox Hills)</b>									
1,600.0	5.73	272.56	1,594.2	5.4	-120.4	5.4	0.00	0.00	0.00
1,700.0	5.73	272.56	1,693.7	5.8	-130.4	5.8	0.00	0.00	0.00
1,800.0	5.73	272.56	1,793.2	6.3	-140.4	6.3	0.00	0.00	0.00
1,900.0	5.73	272.56	1,892.7	6.7	-150.4	6.7	0.00	0.00	0.00
2,000.0	5.73	272.56	1,992.2	7.2	-160.4	7.2	0.00	0.00	0.00
2,007.8	5.73	272.56	2,000.0	7.2	-161.1	7.2	0.00	0.00	0.00
<b>9 5/8"</b>									
2,100.0	5.73	272.56	2,091.7	7.6	-170.3	7.6	0.00	0.00	0.00
2,200.0	5.73	272.56	2,191.2	8.1	-180.3	8.1	0.00	0.00	0.00
2,300.0	5.73	272.56	2,290.7	8.5	-190.3	8.5	0.00	0.00	0.00
2,400.0	5.73	272.56	2,390.2	8.9	-200.3	8.9	0.00	0.00	0.00
2,500.0	5.73	272.56	2,489.7	9.4	-210.3	9.4	0.00	0.00	0.00
2,600.0	5.73	272.56	2,589.2	9.8	-220.2	9.8	0.00	0.00	0.00
2,700.0	5.73	272.56	2,688.7	10.3	-230.2	10.3	0.00	0.00	0.00
2,800.0	5.73	272.56	2,788.2	10.7	-240.2	10.7	0.00	0.00	0.00
2,900.0	5.73	272.56	2,887.7	11.2	-250.2	11.2	0.00	0.00	0.00
3,000.0	5.73	272.56	2,987.2	11.6	-260.2	11.6	0.00	0.00	0.00
3,100.0	5.73	272.56	3,086.7	12.1	-270.1	12.1	0.00	0.00	0.00
3,200.0	5.73	272.56	3,186.2	12.5	-280.1	12.5	0.00	0.00	0.00
3,300.0	5.73	272.56	3,285.7	13.0	-290.1	13.0	0.00	0.00	0.00
3,400.0	5.73	272.56	3,385.2	13.4	-300.1	13.4	0.00	0.00	0.00
3,500.0	5.73	272.56	3,484.7	13.9	-310.1	13.9	0.00	0.00	0.00
3,600.0	5.73	272.56	3,584.2	14.3	-320.0	14.3	0.00	0.00	0.00
3,700.0	5.73	272.56	3,683.7	14.7	-330.0	14.7	0.00	0.00	0.00
3,800.0	5.73	272.56	3,783.2	15.2	-340.0	15.2	0.00	0.00	0.00
3,900.0	5.73	272.56	3,882.7	15.6	-350.0	15.6	0.00	0.00	0.00
4,000.0	5.73	272.56	3,982.2	16.1	-360.0	16.1	0.00	0.00	0.00
4,100.0	5.73	272.56	4,081.7	16.5	-369.9	16.5	0.00	0.00	0.00
4,200.0	5.73	272.56	4,181.2	17.0	-379.9	17.0	0.00	0.00	0.00
4,300.0	5.73	272.56	4,280.7	17.4	-389.9	17.4	0.00	0.00	0.00
4,400.0	5.73	272.56	4,380.2	17.9	-399.9	17.9	0.00	0.00	0.00
4,500.0	5.73	272.56	4,479.7	18.3	-409.9	18.3	0.00	0.00	0.00

**Anadarko**  
Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 11-64-3-34-4NH
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5466.0usft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5466.0usft (Original Well Elev)
<b>Site:</b>	RESOLUTION 11-64-3-34-5CH PAD	<b>North Reference:</b>	True
<b>Well:</b>	RESOLUTION 11-64-3-34-4NH	<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)
4,600.0	5.73	272.56	4,579.2	18.8	-419.8	18.8	0.00	0.00	0.00
4,700.0	5.73	272.56	4,678.7	19.2	-429.8	19.2	0.00	0.00	0.00
4,735.3	5.73	272.56	4,713.8	19.4	-433.3	19.4	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
4,800.0	4.44	272.56	4,778.3	19.6	-439.1	19.6	2.00	-2.00	0.00
4,900.0	2.44	272.56	4,878.1	19.9	-445.1	19.9	2.00	-2.00	0.00
5,000.0	0.44	272.56	4,978.0	20.0	-447.6	20.0	2.00	-2.00	0.00
5,022.0	0.00	0.00	5,000.0	20.0	-447.7	20.0	2.00	-2.00	398.17
<b>Start 2297.0 hold at 5022.0 MD</b>									
5,100.0	0.00	0.00	5,078.0	20.0	-447.7	20.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,178.0	20.0	-447.7	20.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,278.0	20.0	-447.7	20.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,378.0	20.0	-447.7	20.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,478.0	20.0	-447.7	20.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,578.0	20.0	-447.7	20.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,678.0	20.0	-447.7	20.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,778.0	20.0	-447.7	20.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,878.0	20.0	-447.7	20.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,978.0	20.0	-447.7	20.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,078.0	20.0	-447.7	20.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,178.0	20.0	-447.7	20.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,278.0	20.0	-447.7	20.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,378.0	20.0	-447.7	20.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,478.0	20.0	-447.7	20.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,578.0	20.0	-447.7	20.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,678.0	20.0	-447.7	20.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,778.0	20.0	-447.7	20.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,878.0	20.0	-447.7	20.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,978.0	20.0	-447.7	20.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,078.0	20.0	-447.7	20.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,178.0	20.0	-447.7	20.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,278.0	20.0	-447.7	20.0	0.00	0.00	0.00
7,319.0	0.00	0.00	7,297.0	20.0	-447.7	20.0	0.00	0.00	0.00
<b>Start Build 10.00</b>									
7,400.0	8.10	360.00	7,377.8	25.7	-447.7	25.7	10.00	10.00	0.00
7,500.0	18.10	360.00	7,475.0	48.4	-447.7	48.4	10.00	10.00	0.00
7,600.0	28.10	360.00	7,566.9	87.5	-447.7	87.5	10.00	10.00	0.00
7,700.0	38.10	360.00	7,650.6	142.1	-447.7	142.1	10.00	10.00	0.00
7,800.0	48.10	360.00	7,723.5	210.3	-447.7	210.3	10.00	10.00	0.00
7,870.1	55.11	360.00	7,767.0	265.2	-447.7	265.2	10.00	10.00	0.00
<b>Niobrara</b>									
7,900.0	58.10	360.00	7,783.5	290.2	-447.7	290.2	10.00	10.00	0.00
8,000.0	68.10	360.00	7,828.7	379.2	-447.7	379.2	10.00	10.00	0.00
8,100.0	78.10	360.00	7,857.7	474.8	-447.7	474.8	10.00	10.00	0.00
8,200.0	88.10	360.00	7,869.7	574.0	-447.7	574.0	10.00	10.00	0.00
8,219.0	90.00	360.00	7,870.0	593.0	-447.7	593.0	10.00	10.00	0.00
<b>Start 9075.7 hold at 8219.0 MD - 7"</b>									
8,300.0	90.00	360.00	7,870.0	674.0	-447.7	674.0	0.00	0.00	0.00
8,400.0	90.00	360.00	7,870.0	774.0	-447.7	774.0	0.00	0.00	0.00
8,500.0	90.00	360.00	7,870.0	874.0	-447.7	874.0	0.00	0.00	0.00
8,600.0	90.00	360.00	7,870.0	974.0	-447.7	974.0	0.00	0.00	0.00
8,700.0	90.00	360.00	7,870.0	1,074.0	-447.7	1,074.0	0.00	0.00	0.00
8,800.0	90.00	360.00	7,870.0	1,174.0	-447.7	1,174.0	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 11-64-3-34-4NH
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5466.0usft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5466.0usft (Original Well Elev)
<b>Site:</b>	RESOLUTION 11-64-3-34-5CH PAD	<b>North Reference:</b>	True
<b>Well:</b>	RESOLUTION 11-64-3-34-4NH	<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)
8,900.0	90.00	360.00	7,870.0	1,274.0	-447.7	1,274.0	0.00	0.00	0.00
9,000.0	90.00	360.00	7,870.0	1,374.0	-447.7	1,374.0	0.00	0.00	0.00
9,100.0	90.00	360.00	7,870.0	1,474.0	-447.7	1,474.0	0.00	0.00	0.00
9,200.0	90.00	360.00	7,870.0	1,574.0	-447.7	1,574.0	0.00	0.00	0.00
9,300.0	90.00	360.00	7,870.0	1,674.0	-447.7	1,674.0	0.00	0.00	0.00
9,400.0	90.00	360.00	7,870.0	1,774.0	-447.7	1,774.0	0.00	0.00	0.00
9,500.0	90.00	360.00	7,870.0	1,874.0	-447.7	1,874.0	0.00	0.00	0.00
9,600.0	90.00	360.00	7,870.0	1,974.0	-447.7	1,974.0	0.00	0.00	0.00
9,700.0	90.00	360.00	7,870.0	2,074.0	-447.7	2,074.0	0.00	0.00	0.00
9,800.0	90.00	360.00	7,870.0	2,174.0	-447.7	2,174.0	0.00	0.00	0.00
9,900.0	90.00	360.00	7,870.0	2,274.0	-447.7	2,274.0	0.00	0.00	0.00
10,000.0	90.00	360.00	7,870.0	2,374.0	-447.7	2,374.0	0.00	0.00	0.00
10,100.0	90.00	360.00	7,870.0	2,474.0	-447.7	2,474.0	0.00	0.00	0.00
10,200.0	90.00	360.00	7,870.0	2,574.0	-447.7	2,574.0	0.00	0.00	0.00
10,300.0	90.00	360.00	7,870.0	2,674.0	-447.7	2,674.0	0.00	0.00	0.00
10,400.0	90.00	360.00	7,870.0	2,774.0	-447.7	2,774.0	0.00	0.00	0.00
10,500.0	90.00	360.00	7,870.0	2,874.0	-447.7	2,874.0	0.00	0.00	0.00
10,600.0	90.00	360.00	7,870.0	2,974.0	-447.7	2,974.0	0.00	0.00	0.00
10,700.0	90.00	360.00	7,870.0	3,074.0	-447.7	3,074.0	0.00	0.00	0.00
10,800.0	90.00	360.00	7,870.0	3,174.0	-447.7	3,174.0	0.00	0.00	0.00
10,900.0	90.00	360.00	7,870.0	3,274.0	-447.7	3,274.0	0.00	0.00	0.00
11,000.0	90.00	360.00	7,870.0	3,374.0	-447.7	3,374.0	0.00	0.00	0.00
11,100.0	90.00	360.00	7,870.0	3,474.0	-447.7	3,474.0	0.00	0.00	0.00
11,200.0	90.00	360.00	7,870.0	3,574.0	-447.7	3,574.0	0.00	0.00	0.00
11,300.0	90.00	360.00	7,870.0	3,674.0	-447.7	3,674.0	0.00	0.00	0.00
11,400.0	90.00	360.00	7,870.0	3,774.0	-447.7	3,774.0	0.00	0.00	0.00
11,500.0	90.00	360.00	7,870.0	3,874.0	-447.7	3,874.0	0.00	0.00	0.00
11,600.0	90.00	360.00	7,870.0	3,974.0	-447.7	3,974.0	0.00	0.00	0.00
11,700.0	90.00	360.00	7,870.0	4,074.0	-447.7	4,074.0	0.00	0.00	0.00
11,800.0	90.00	360.00	7,870.0	4,174.0	-447.7	4,174.0	0.00	0.00	0.00
11,900.0	90.00	360.00	7,870.0	4,274.0	-447.7	4,274.0	0.00	0.00	0.00
12,000.0	90.00	360.00	7,870.0	4,374.0	-447.7	4,374.0	0.00	0.00	0.00
12,100.0	90.00	360.00	7,870.0	4,474.0	-447.7	4,474.0	0.00	0.00	0.00
12,200.0	90.00	360.00	7,870.0	4,574.0	-447.7	4,574.0	0.00	0.00	0.00
12,300.0	90.00	360.00	7,870.0	4,674.0	-447.7	4,674.0	0.00	0.00	0.00
12,400.0	90.00	360.00	7,870.0	4,774.0	-447.7	4,774.0	0.00	0.00	0.00
12,500.0	90.00	360.00	7,870.0	4,874.0	-447.7	4,874.0	0.00	0.00	0.00
12,600.0	90.00	360.00	7,870.0	4,974.0	-447.7	4,974.0	0.00	0.00	0.00
12,700.0	90.00	360.00	7,870.0	5,074.0	-447.7	5,074.0	0.00	0.00	0.00
12,800.0	90.00	360.00	7,870.0	5,174.0	-447.7	5,174.0	0.00	0.00	0.00
12,900.0	90.00	360.00	7,870.0	5,274.0	-447.7	5,274.0	0.00	0.00	0.00
13,000.0	90.00	360.00	7,870.0	5,374.0	-447.7	5,374.0	0.00	0.00	0.00
13,100.0	90.00	360.00	7,870.0	5,474.0	-447.7	5,474.0	0.00	0.00	0.00
13,200.0	90.00	360.00	7,870.0	5,574.0	-447.7	5,574.0	0.00	0.00	0.00
13,300.0	90.00	360.00	7,870.0	5,674.0	-447.7	5,674.0	0.00	0.00	0.00
13,400.0	90.00	360.00	7,870.0	5,774.0	-447.7	5,774.0	0.00	0.00	0.00
13,500.0	90.00	360.00	7,870.0	5,874.0	-447.7	5,874.0	0.00	0.00	0.00
13,600.0	90.00	360.00	7,870.0	5,974.0	-447.7	5,974.0	0.00	0.00	0.00
13,700.0	90.00	360.00	7,870.0	6,074.0	-447.7	6,074.0	0.00	0.00	0.00
13,800.0	90.00	360.00	7,870.0	6,174.0	-447.7	6,174.0	0.00	0.00	0.00
13,900.0	90.00	360.00	7,870.0	6,274.0	-447.7	6,274.0	0.00	0.00	0.00
14,000.0	90.00	360.00	7,870.0	6,374.0	-447.7	6,374.0	0.00	0.00	0.00
14,100.0	90.00	360.00	7,870.0	6,474.0	-447.7	6,474.0	0.00	0.00	0.00
14,200.0	90.00	360.00	7,870.0	6,574.0	-447.7	6,574.0	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 11-64-3-34-4NH
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5466.0usft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5466.0usft (Original Well Elev)
<b>Site:</b>	RESOLUTION 11-64-3-34-5CH PAD	<b>North Reference:</b>	True
<b>Well:</b>	RESOLUTION 11-64-3-34-4NH	<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)	
14,300.0	90.00	360.00	7,870.0	6,674.0	-447.7	6,674.0	0.00	0.00	0.00	
14,400.0	90.00	360.00	7,870.0	6,774.0	-447.7	6,774.0	0.00	0.00	0.00	
14,500.0	90.00	360.00	7,870.0	6,874.0	-447.7	6,874.0	0.00	0.00	0.00	
14,600.0	90.00	360.00	7,870.0	6,974.0	-447.7	6,974.0	0.00	0.00	0.00	
14,700.0	90.00	360.00	7,870.0	7,074.0	-447.7	7,074.0	0.00	0.00	0.00	
14,800.0	90.00	360.00	7,870.0	7,174.0	-447.7	7,174.0	0.00	0.00	0.00	
14,900.0	90.00	360.00	7,870.0	7,274.0	-447.7	7,274.0	0.00	0.00	0.00	
15,000.0	90.00	360.00	7,870.0	7,374.0	-447.7	7,374.0	0.00	0.00	0.00	
15,100.0	90.00	360.00	7,870.0	7,474.0	-447.7	7,474.0	0.00	0.00	0.00	
15,200.0	90.00	360.00	7,870.0	7,574.0	-447.7	7,574.0	0.00	0.00	0.00	
15,300.0	90.00	360.00	7,870.0	7,674.0	-447.7	7,674.0	0.00	0.00	0.00	
15,400.0	90.00	360.00	7,870.0	7,774.0	-447.7	7,774.0	0.00	0.00	0.00	
15,500.0	90.00	360.00	7,870.0	7,874.0	-447.7	7,874.0	0.00	0.00	0.00	
15,600.0	90.00	360.00	7,870.0	7,974.0	-447.7	7,974.0	0.00	0.00	0.00	
15,700.0	90.00	360.00	7,870.0	8,074.0	-447.7	8,074.0	0.00	0.00	0.00	
15,800.0	90.00	360.00	7,870.0	8,174.0	-447.7	8,174.0	0.00	0.00	0.00	
15,900.0	90.00	360.00	7,870.0	8,274.0	-447.7	8,274.0	0.00	0.00	0.00	
16,000.0	90.00	360.00	7,870.0	8,374.0	-447.7	8,374.0	0.00	0.00	0.00	
16,100.0	90.00	360.00	7,870.0	8,474.0	-447.7	8,474.0	0.00	0.00	0.00	
16,200.0	90.00	360.00	7,870.0	8,574.0	-447.7	8,574.0	0.00	0.00	0.00	
16,300.0	90.00	360.00	7,870.0	8,674.0	-447.7	8,674.0	0.00	0.00	0.00	
16,400.0	90.00	360.00	7,870.0	8,774.0	-447.7	8,774.0	0.00	0.00	0.00	
16,500.0	90.00	360.00	7,870.0	8,874.0	-447.7	8,874.0	0.00	0.00	0.00	
16,600.0	90.00	360.00	7,870.0	8,974.0	-447.7	8,974.0	0.00	0.00	0.00	
16,700.0	90.00	360.00	7,870.0	9,074.0	-447.7	9,074.0	0.00	0.00	0.00	
16,800.0	90.00	360.00	7,870.0	9,174.0	-447.7	9,174.0	0.00	0.00	0.00	
16,900.0	90.00	360.00	7,870.0	9,274.0	-447.7	9,274.0	0.00	0.00	0.00	
17,000.0	90.00	360.00	7,870.0	9,374.0	-447.7	9,374.0	0.00	0.00	0.00	
17,100.0	90.00	360.00	7,870.0	9,474.0	-447.7	9,474.0	0.00	0.00	0.00	
17,200.0	90.00	360.00	7,870.0	9,574.0	-447.7	9,574.0	0.00	0.00	0.00	
17,294.7	90.00	360.00	7,870.0	9,668.6	-447.7	9,668.6	0.00	0.00	0.00	
TD at 17294.7										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude		
- hit/miss target										
- Shape								Longitude		
Interp @ 7767.0 (RESOI	0.00	0.00	7,767.0	265.2	-447.7	1,588,500.18	3,267,062.35	40.944801		
- plan hits target center										
- Point										
RESOLUTION 11-64-3-34	0.00	0.00	7,870.0	9,668.6	-447.7	1,597,903.03	3,266,959.67	40.970609		
- plan hits target center										
- Point										

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 11-64-3-34-4NH
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	WELL @ 5466.0usft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	WELL @ 5466.0usft (Original Well Elev)
<b>Site:</b>	RESOLUTION 11-64-3-34-5CH PAD	<b>North Reference:</b>	True
<b>Well:</b>	RESOLUTION 11-64-3-34-4NH	<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)	
2,007.8	2,000.0	9 5/8"	9.625	12.250	
8,219.0	7,870.0	7"	7.000	7.500	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,533.5	1,528.0	Aquifer (Fox Hills)			
7,870.1	7,767.0	Niobrara			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.0	250.0	0.0	0.0	Start Build 2.00
536.7	536.2	0.6	-14.3	Start 4198.6 hold at 536.7 MD
4,735.3	4,713.8	19.4	-433.3	Start Drop -2.00
5,022.0	5,000.0	20.0	-447.7	Start 2297.0 hold at 5022.0 MD
7,319.0	7,297.0	20.0	-447.7	Start Build 10.00
8,219.0	7,870.0	593.0	-447.7	Start 9075.7 hold at 8219.0 MD
17,294.7	7,870.0	9,668.6	-447.7	TD at 17294.7