


Well Name: RESOLUTION 11-64-3-34-4CH  
 Surface Location: RESOLUTION 11-64-3-34-5CH PAD  
 North American Datum 1983  
 US State Plane 1983 Colorado Northern Zone  
 Ground Elevation: 5440.0  
 WELL @ 5466.0usft (Original Well Elev)

**T M**



Azimuths to True North  
 Magnetic North: 8.94°

Magnetic Field  
 Strength: 53606.4snT  
 Dip Angle: 67.59°  
 Date: 12/31/2009  
 Model: IGRF200510

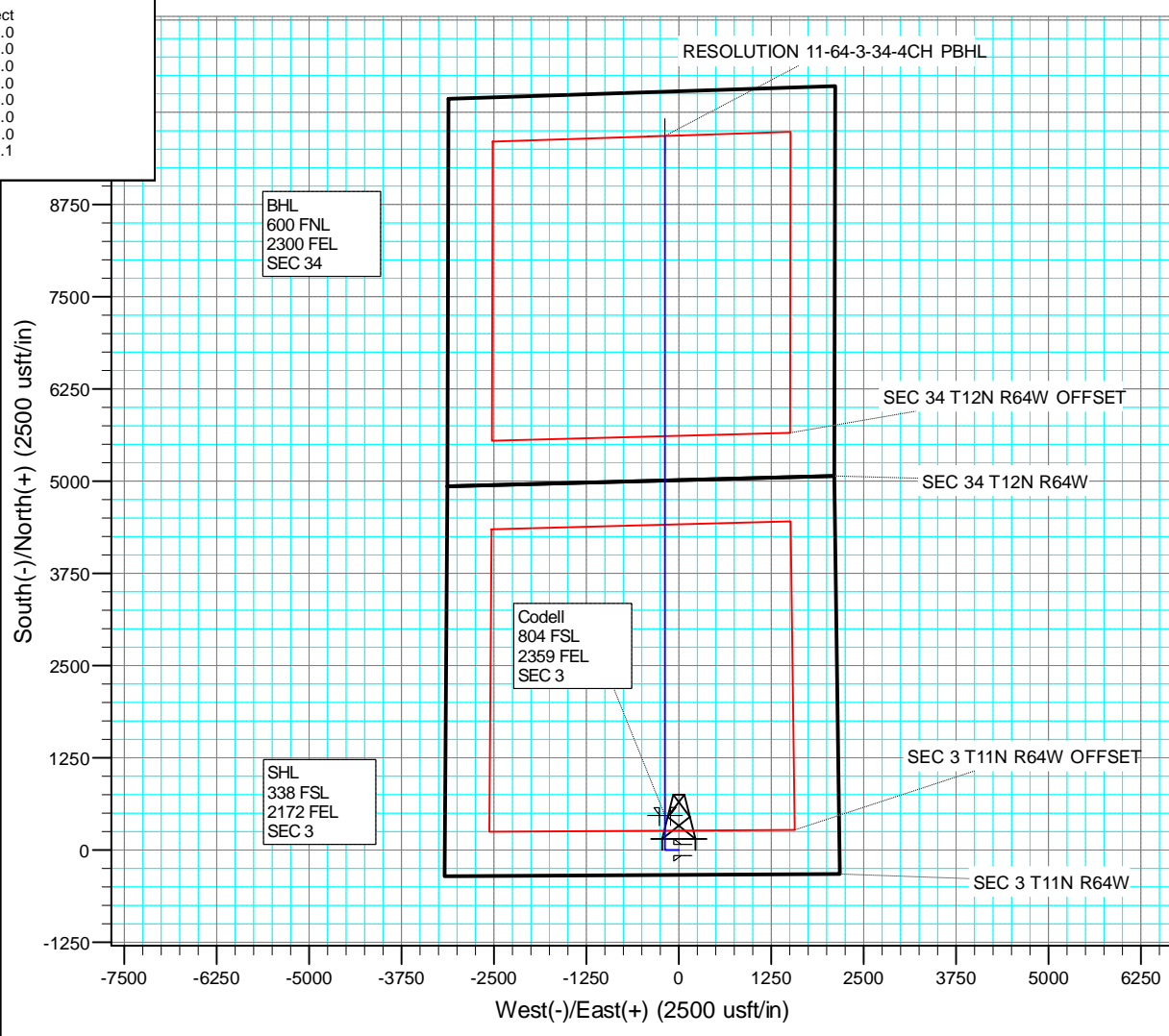
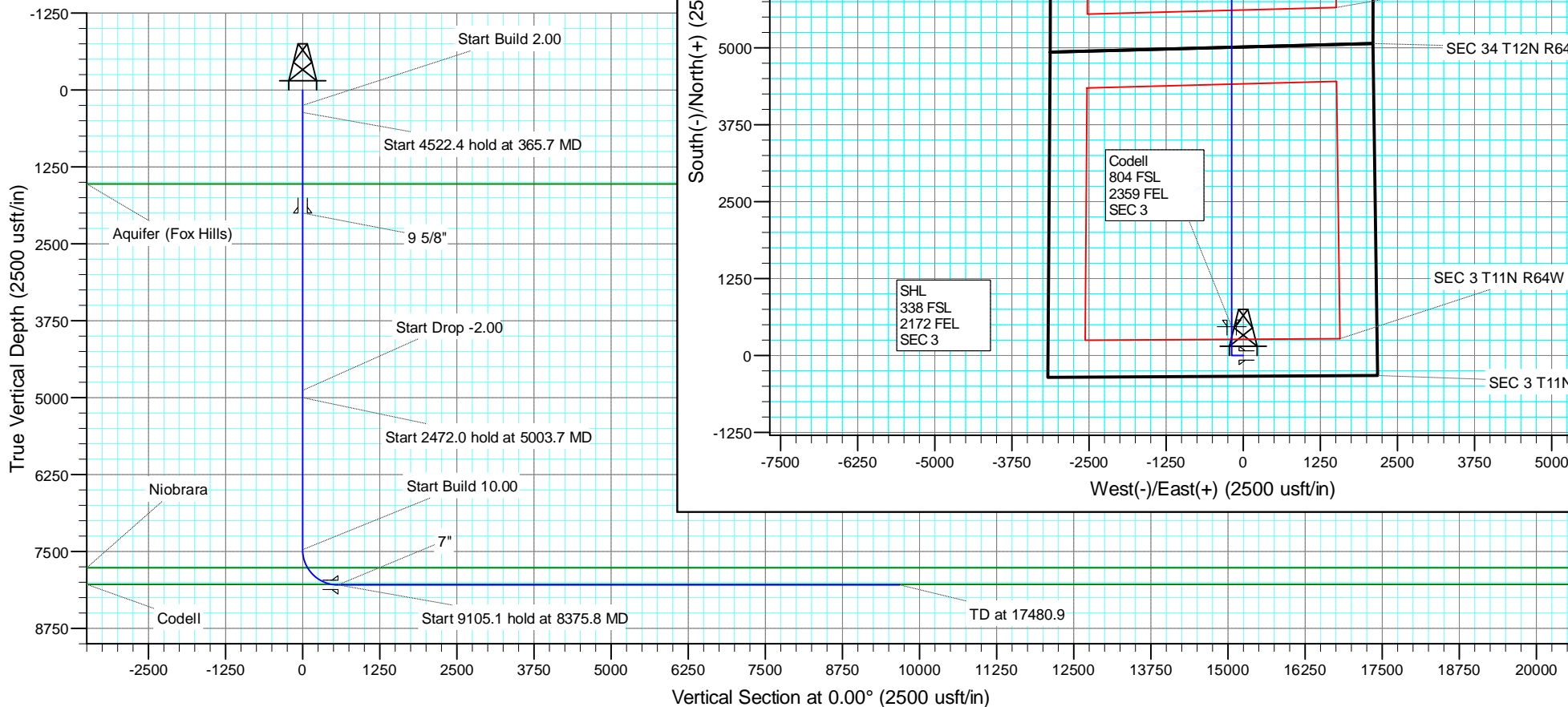
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	1588240.56	3267542.71	40.944074	-104.531588

#### 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
365.7	2.31	270.00	365.7	0.0	-2.3	2.00	270.00	0.0
4888.1	2.31	270.00	4884.3	0.0	-184.9	0.00	0.00	0.0
5003.7	0.00	0.00	5000.0	0.0	-187.2	2.00	180.00	0.0
7475.8	0.00	0.00	7472.0	0.0	-187.2	0.00	0.00	0.0
8375.8	90.00	360.00	8045.0	573.0	-187.2	10.00	360.00	573.0
17480.9	90.00	360.00	8045.0	9678.1	-187.2	0.00	0.00	9678.1

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1528.0	1529.0	Aquifer (Fox Hills)
7767.0	7785.6	Niobrara
8035.0	8268.6	Codell



# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

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

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

**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 11-64-3-34-4CH
<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 11-64-3-34-4CH	<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 11-64-3-34-4CH			
<b>Well Position</b>	<b>+N/-S</b>	0.4 usft	<b>Northing:</b>	1,588,240.56 usft
	<b>+E/-W</b>	29.8 usft	<b>Easting:</b>	3,267,542.72 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	
365.7	2.31	270.00	365.7	0.0	-2.3	2.00	2.00	0.00	270.00	
4,888.1	2.31	270.00	4,884.3	0.0	-184.9	0.00	0.00	0.00	0.00	
5,003.7	0.00	0.00	5,000.0	0.0	-187.2	2.00	-2.00	0.00	180.00	
7,475.8	0.00	0.00	7,472.0	0.0	-187.2	0.00	0.00	0.00	0.00	
8,375.8	90.00	360.00	8,045.0	573.0	-187.2	10.00	10.00	0.00	360.00	
17,480.9	90.00	360.00	8,045.0	9,678.1	-187.2	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 11-64-3-34-4CH
<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 11-64-3-34-4CH	<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	270.00	300.0	0.0	-0.4	0.0	2.00	2.00	0.00
365.7	2.31	270.00	365.7	0.0	-2.3	0.0	2.00	2.00	0.00
Start 4522.4 hold at 365.7 MD									
400.0	2.31	270.00	399.9	0.0	-3.7	0.0	0.00	0.00	0.00
500.0	2.31	270.00	499.9	0.0	-7.8	0.0	0.00	0.00	0.00
600.0	2.31	270.00	599.8	0.0	-11.8	0.0	0.00	0.00	0.00
700.0	2.31	270.00	699.7	0.0	-15.8	0.0	0.00	0.00	0.00
800.0	2.31	270.00	799.6	0.0	-19.9	0.0	0.00	0.00	0.00
900.0	2.31	270.00	899.5	0.0	-23.9	0.0	0.00	0.00	0.00
1,000.0	2.31	270.00	999.5	0.0	-27.9	0.0	0.00	0.00	0.00
1,100.0	2.31	270.00	1,099.4	0.0	-32.0	0.0	0.00	0.00	0.00
1,200.0	2.31	270.00	1,199.3	0.0	-36.0	0.0	0.00	0.00	0.00
1,300.0	2.31	270.00	1,299.2	0.0	-40.1	0.0	0.00	0.00	0.00
1,400.0	2.31	270.00	1,399.1	0.0	-44.1	0.0	0.00	0.00	0.00
1,500.0	2.31	270.00	1,499.0	0.0	-48.1	0.0	0.00	0.00	0.00
1,529.0	2.31	270.00	1,528.0	0.0	-49.3	0.0	0.00	0.00	0.00
Aquifer (Fox Hills)									
1,600.0	2.31	270.00	1,599.0	0.0	-52.2	0.0	0.00	0.00	0.00
1,700.0	2.31	270.00	1,698.9	0.0	-56.2	0.0	0.00	0.00	0.00
1,800.0	2.31	270.00	1,798.8	0.0	-60.2	0.0	0.00	0.00	0.00
1,900.0	2.31	270.00	1,898.7	0.0	-64.3	0.0	0.00	0.00	0.00
2,000.0	2.31	270.00	1,998.6	0.0	-68.3	0.0	0.00	0.00	0.00
2,001.4	2.31	270.00	2,000.0	0.0	-68.4	0.0	0.00	0.00	0.00
9 5/8"									
2,100.0	2.31	270.00	2,098.6	0.0	-72.4	0.0	0.00	0.00	0.00
2,200.0	2.31	270.00	2,198.5	0.0	-76.4	0.0	0.00	0.00	0.00
2,300.0	2.31	270.00	2,298.4	0.0	-80.4	0.0	0.00	0.00	0.00
2,400.0	2.31	270.00	2,398.3	0.0	-84.5	0.0	0.00	0.00	0.00
2,500.0	2.31	270.00	2,498.2	0.0	-88.5	0.0	0.00	0.00	0.00
2,600.0	2.31	270.00	2,598.1	0.0	-92.5	0.0	0.00	0.00	0.00
2,700.0	2.31	270.00	2,698.1	0.0	-96.6	0.0	0.00	0.00	0.00
2,800.0	2.31	270.00	2,798.0	0.0	-100.6	0.0	0.00	0.00	0.00
2,900.0	2.31	270.00	2,897.9	0.0	-104.6	0.0	0.00	0.00	0.00
3,000.0	2.31	270.00	2,997.8	0.0	-108.7	0.0	0.00	0.00	0.00
3,100.0	2.31	270.00	3,097.7	0.0	-112.7	0.0	0.00	0.00	0.00
3,200.0	2.31	270.00	3,197.7	0.0	-116.8	0.0	0.00	0.00	0.00
3,300.0	2.31	270.00	3,297.6	0.0	-120.8	0.0	0.00	0.00	0.00
3,400.0	2.31	270.00	3,397.5	0.0	-124.8	0.0	0.00	0.00	0.00
3,500.0	2.31	270.00	3,497.4	0.0	-128.9	0.0	0.00	0.00	0.00
3,600.0	2.31	270.00	3,597.3	0.0	-132.9	0.0	0.00	0.00	0.00
3,700.0	2.31	270.00	3,697.3	0.0	-136.9	0.0	0.00	0.00	0.00
3,800.0	2.31	270.00	3,797.2	0.0	-141.0	0.0	0.00	0.00	0.00
3,900.0	2.31	270.00	3,897.1	0.0	-145.0	0.0	0.00	0.00	0.00
4,000.0	2.31	270.00	3,997.0	0.0	-149.1	0.0	0.00	0.00	0.00
4,100.0	2.31	270.00	4,096.9	0.0	-153.1	0.0	0.00	0.00	0.00
4,200.0	2.31	270.00	4,196.8	0.0	-157.1	0.0	0.00	0.00	0.00
4,300.0	2.31	270.00	4,296.8	0.0	-161.2	0.0	0.00	0.00	0.00
4,400.0	2.31	270.00	4,396.7	0.0	-165.2	0.0	0.00	0.00	0.00
4,500.0	2.31	270.00	4,496.6	0.0	-169.2	0.0	0.00	0.00	0.00

**Anadarko**  
Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 11-64-3-34-4CH
<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 11-64-3-34-4CH	<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	2.31	270.00	4,596.5	0.0	-173.3	0.0	0.00	0.00	0.00
4,700.0	2.31	270.00	4,696.4	0.0	-177.3	0.0	0.00	0.00	0.00
4,800.0	2.31	270.00	4,796.4	0.0	-181.3	0.0	0.00	0.00	0.00
4,888.1	2.31	270.00	4,884.3	0.0	-184.9	0.0	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
4,900.0	2.07	270.00	4,896.3	0.0	-185.4	0.0	2.00	-2.00	0.00
5,000.0	0.07	270.00	4,996.3	0.0	-187.2	0.0	2.00	-2.00	0.00
5,003.7	0.00	0.00	5,000.0	0.0	-187.2	0.0	2.00	-2.00	0.00
<b>Start 2472.0 hold at 5003.7 MD</b>									
5,100.0	0.00	0.00	5,096.3	0.0	-187.2	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,196.3	0.0	-187.2	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,296.3	0.0	-187.2	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,396.3	0.0	-187.2	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,496.3	0.0	-187.2	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,596.3	0.0	-187.2	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,696.3	0.0	-187.2	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,796.3	0.0	-187.2	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,896.3	0.0	-187.2	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,996.3	0.0	-187.2	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,096.3	0.0	-187.2	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,196.3	0.0	-187.2	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,296.3	0.0	-187.2	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,396.3	0.0	-187.2	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,496.3	0.0	-187.2	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,596.3	0.0	-187.2	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,696.3	0.0	-187.2	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,796.3	0.0	-187.2	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,896.3	0.0	-187.2	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,996.3	0.0	-187.2	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,096.3	0.0	-187.2	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,196.3	0.0	-187.2	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,296.3	0.0	-187.2	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,396.3	0.0	-187.2	0.0	0.00	0.00	0.00
7,475.8	0.00	0.00	7,472.0	0.0	-187.2	0.0	0.00	0.00	0.00
<b>Start Build 10.00</b>									
7,500.0	2.42	360.00	7,496.2	0.5	-187.2	0.5	10.00	10.00	0.00
7,600.0	12.42	360.00	7,595.3	13.4	-187.2	13.4	10.00	10.00	0.00
7,700.0	22.42	360.00	7,690.6	43.3	-187.2	43.3	10.00	10.00	0.00
7,785.6	30.98	360.00	7,767.0	81.8	-187.2	81.8	10.00	10.00	0.00
<b>Niobrara</b>									
7,800.0	32.42	360.00	7,779.2	89.3	-187.2	89.3	10.00	10.00	0.00
7,900.0	42.42	360.00	7,858.5	150.0	-187.2	150.0	10.00	10.00	0.00
8,000.0	52.42	360.00	7,926.1	223.5	-187.2	223.5	10.00	10.00	0.00
8,100.0	62.42	360.00	7,979.9	307.7	-187.2	307.7	10.00	10.00	0.00
8,200.0	72.42	360.00	8,018.2	399.9	-187.2	399.9	10.00	10.00	0.00
8,268.6	79.28	360.00	8,035.0	466.4	-187.2	466.4	10.00	10.00	0.00
<b>Codell</b>									
8,300.0	82.42	360.00	8,040.0	497.4	-187.2	497.4	10.00	10.00	0.00
8,375.8	90.00	360.00	8,045.0	573.0	-187.2	573.0	10.00	10.00	0.00
<b>Start 9105.1 hold at 8375.8 MD - 7"</b>									
8,400.0	90.00	360.00	8,045.0	597.2	-187.2	597.2	0.00	0.00	0.00
8,500.0	90.00	360.00	8,045.0	697.2	-187.2	697.2	0.00	0.00	0.00
8,600.0	90.00	360.00	8,045.0	797.2	-187.2	797.2	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 11-64-3-34-4CH
<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 11-64-3-34-4CH	<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)
8,700.0	90.00	360.00	8,045.0	897.2	-187.2	897.2	0.00	0.00	0.00
8,800.0	90.00	360.00	8,045.0	997.2	-187.2	997.2	0.00	0.00	0.00
8,900.0	90.00	360.00	8,045.0	1,097.2	-187.2	1,097.2	0.00	0.00	0.00
9,000.0	90.00	360.00	8,045.0	1,197.2	-187.2	1,197.2	0.00	0.00	0.00
9,100.0	90.00	360.00	8,045.0	1,297.2	-187.2	1,297.2	0.00	0.00	0.00
9,200.0	90.00	360.00	8,045.0	1,397.2	-187.2	1,397.2	0.00	0.00	0.00
9,300.0	90.00	360.00	8,045.0	1,497.2	-187.2	1,497.2	0.00	0.00	0.00
9,400.0	90.00	360.00	8,045.0	1,597.2	-187.2	1,597.2	0.00	0.00	0.00
9,500.0	90.00	360.00	8,045.0	1,697.2	-187.2	1,697.2	0.00	0.00	0.00
9,600.0	90.00	360.00	8,045.0	1,797.2	-187.2	1,797.2	0.00	0.00	0.00
9,700.0	90.00	360.00	8,045.0	1,897.2	-187.2	1,897.2	0.00	0.00	0.00
9,800.0	90.00	360.00	8,045.0	1,997.2	-187.2	1,997.2	0.00	0.00	0.00
9,900.0	90.00	360.00	8,045.0	2,097.2	-187.2	2,097.2	0.00	0.00	0.00
10,000.0	90.00	360.00	8,045.0	2,197.2	-187.2	2,197.2	0.00	0.00	0.00
10,100.0	90.00	360.00	8,045.0	2,297.2	-187.2	2,297.2	0.00	0.00	0.00
10,200.0	90.00	360.00	8,045.0	2,397.2	-187.2	2,397.2	0.00	0.00	0.00
10,300.0	90.00	360.00	8,045.0	2,497.2	-187.2	2,497.2	0.00	0.00	0.00
10,400.0	90.00	360.00	8,045.0	2,597.2	-187.2	2,597.2	0.00	0.00	0.00
10,500.0	90.00	360.00	8,045.0	2,697.2	-187.2	2,697.2	0.00	0.00	0.00
10,600.0	90.00	360.00	8,045.0	2,797.2	-187.2	2,797.2	0.00	0.00	0.00
10,700.0	90.00	360.00	8,045.0	2,897.2	-187.2	2,897.2	0.00	0.00	0.00
10,800.0	90.00	360.00	8,045.0	2,997.2	-187.2	2,997.2	0.00	0.00	0.00
10,900.0	90.00	360.00	8,045.0	3,097.2	-187.2	3,097.2	0.00	0.00	0.00
11,000.0	90.00	360.00	8,045.0	3,197.2	-187.2	3,197.2	0.00	0.00	0.00
11,100.0	90.00	360.00	8,045.0	3,297.2	-187.2	3,297.2	0.00	0.00	0.00
11,200.0	90.00	360.00	8,045.0	3,397.2	-187.2	3,397.2	0.00	0.00	0.00
11,300.0	90.00	360.00	8,045.0	3,497.2	-187.2	3,497.2	0.00	0.00	0.00
11,400.0	90.00	360.00	8,045.0	3,597.2	-187.2	3,597.2	0.00	0.00	0.00
11,500.0	90.00	360.00	8,045.0	3,697.2	-187.2	3,697.2	0.00	0.00	0.00
11,600.0	90.00	360.00	8,045.0	3,797.2	-187.2	3,797.2	0.00	0.00	0.00
11,700.0	90.00	360.00	8,045.0	3,897.2	-187.2	3,897.2	0.00	0.00	0.00
11,800.0	90.00	360.00	8,045.0	3,997.2	-187.2	3,997.2	0.00	0.00	0.00
11,900.0	90.00	360.00	8,045.0	4,097.2	-187.2	4,097.2	0.00	0.00	0.00
12,000.0	90.00	360.00	8,045.0	4,197.2	-187.2	4,197.2	0.00	0.00	0.00
12,100.0	90.00	360.00	8,045.0	4,297.2	-187.2	4,297.2	0.00	0.00	0.00
12,200.0	90.00	360.00	8,045.0	4,397.2	-187.2	4,397.2	0.00	0.00	0.00
12,300.0	90.00	360.00	8,045.0	4,497.2	-187.2	4,497.2	0.00	0.00	0.00
12,400.0	90.00	360.00	8,045.0	4,597.2	-187.2	4,597.2	0.00	0.00	0.00
12,500.0	90.00	360.00	8,045.0	4,697.2	-187.2	4,697.2	0.00	0.00	0.00
12,600.0	90.00	360.00	8,045.0	4,797.2	-187.2	4,797.2	0.00	0.00	0.00
12,700.0	90.00	360.00	8,045.0	4,897.2	-187.2	4,897.2	0.00	0.00	0.00
12,800.0	90.00	360.00	8,045.0	4,997.2	-187.2	4,997.2	0.00	0.00	0.00
12,900.0	90.00	360.00	8,045.0	5,097.2	-187.2	5,097.2	0.00	0.00	0.00
13,000.0	90.00	360.00	8,045.0	5,197.2	-187.2	5,197.2	0.00	0.00	0.00
13,100.0	90.00	360.00	8,045.0	5,297.2	-187.2	5,297.2	0.00	0.00	0.00
13,200.0	90.00	360.00	8,045.0	5,397.2	-187.2	5,397.2	0.00	0.00	0.00
13,300.0	90.00	360.00	8,045.0	5,497.2	-187.2	5,497.2	0.00	0.00	0.00
13,400.0	90.00	360.00	8,045.0	5,597.2	-187.2	5,597.2	0.00	0.00	0.00
13,500.0	90.00	360.00	8,045.0	5,697.2	-187.2	5,697.2	0.00	0.00	0.00
13,600.0	90.00	360.00	8,045.0	5,797.2	-187.2	5,797.2	0.00	0.00	0.00
13,700.0	90.00	360.00	8,045.0	5,897.2	-187.2	5,897.2	0.00	0.00	0.00
13,800.0	90.00	360.00	8,045.0	5,997.2	-187.2	5,997.2	0.00	0.00	0.00
13,900.0	90.00	360.00	8,045.0	6,097.2	-187.2	6,097.2	0.00	0.00	0.00
14,000.0	90.00	360.00	8,045.0	6,197.2	-187.2	6,197.2	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 11-64-3-34-4CH
<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 11-64-3-34-4CH	<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)
14,100.0	90.00	360.00	8,045.0	6,297.2	-187.2	6,297.2	0.00	0.00	0.00
14,200.0	90.00	360.00	8,045.0	6,397.2	-187.2	6,397.2	0.00	0.00	0.00
14,300.0	90.00	360.00	8,045.0	6,497.2	-187.2	6,497.2	0.00	0.00	0.00
14,400.0	90.00	360.00	8,045.0	6,597.2	-187.2	6,597.2	0.00	0.00	0.00
14,500.0	90.00	360.00	8,045.0	6,697.2	-187.2	6,697.2	0.00	0.00	0.00
14,600.0	90.00	360.00	8,045.0	6,797.2	-187.2	6,797.2	0.00	0.00	0.00
14,700.0	90.00	360.00	8,045.0	6,897.2	-187.2	6,897.2	0.00	0.00	0.00
14,800.0	90.00	360.00	8,045.0	6,997.2	-187.2	6,997.2	0.00	0.00	0.00
14,900.0	90.00	360.00	8,045.0	7,097.2	-187.2	7,097.2	0.00	0.00	0.00
15,000.0	90.00	360.00	8,045.0	7,197.2	-187.2	7,197.2	0.00	0.00	0.00
15,100.0	90.00	360.00	8,045.0	7,297.2	-187.2	7,297.2	0.00	0.00	0.00
15,200.0	90.00	360.00	8,045.0	7,397.2	-187.2	7,397.2	0.00	0.00	0.00
15,300.0	90.00	360.00	8,045.0	7,497.2	-187.2	7,497.2	0.00	0.00	0.00
15,400.0	90.00	360.00	8,045.0	7,597.2	-187.2	7,597.2	0.00	0.00	0.00
15,500.0	90.00	360.00	8,045.0	7,697.2	-187.2	7,697.2	0.00	0.00	0.00
15,600.0	90.00	360.00	8,045.0	7,797.2	-187.2	7,797.2	0.00	0.00	0.00
15,700.0	90.00	360.00	8,045.0	7,897.2	-187.2	7,897.2	0.00	0.00	0.00
15,800.0	90.00	360.00	8,045.0	7,997.2	-187.2	7,997.2	0.00	0.00	0.00
15,900.0	90.00	360.00	8,045.0	8,097.2	-187.2	8,097.2	0.00	0.00	0.00
16,000.0	90.00	360.00	8,045.0	8,197.2	-187.2	8,197.2	0.00	0.00	0.00
16,100.0	90.00	360.00	8,045.0	8,297.2	-187.2	8,297.2	0.00	0.00	0.00
16,200.0	90.00	360.00	8,045.0	8,397.2	-187.2	8,397.2	0.00	0.00	0.00
16,300.0	90.00	360.00	8,045.0	8,497.2	-187.2	8,497.2	0.00	0.00	0.00
16,400.0	90.00	360.00	8,045.0	8,597.2	-187.2	8,597.2	0.00	0.00	0.00
16,500.0	90.00	360.00	8,045.0	8,697.2	-187.2	8,697.2	0.00	0.00	0.00
16,600.0	90.00	360.00	8,045.0	8,797.2	-187.2	8,797.2	0.00	0.00	0.00
16,700.0	90.00	360.00	8,045.0	8,897.2	-187.2	8,897.2	0.00	0.00	0.00
16,800.0	90.00	360.00	8,045.0	8,997.2	-187.2	8,997.2	0.00	0.00	0.00
16,900.0	90.00	360.00	8,045.0	9,097.2	-187.2	9,097.2	0.00	0.00	0.00
17,000.0	90.00	360.00	8,045.0	9,197.2	-187.2	9,197.2	0.00	0.00	0.00
17,100.0	90.00	360.00	8,045.0	9,297.2	-187.2	9,297.2	0.00	0.00	0.00
17,200.0	90.00	360.00	8,045.0	9,397.2	-187.2	9,397.2	0.00	0.00	0.00
17,300.0	90.00	360.00	8,045.0	9,497.2	-187.2	9,497.2	0.00	0.00	0.00
17,400.0	90.00	360.00	8,045.0	9,597.2	-187.2	9,597.2	0.00	0.00	0.00
17,480.9	90.00	360.00	8,045.0	9,678.1	-187.2	9,678.1	0.00	0.00	0.00
TD at 17480.9									

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 @ 8035.0 (RESOI	0.00	0.00	8,035.0	466.4	-187.2	1,588,704.86	3,267,350.39	40.945354	-104.532266
- plan hits target center									
- Point									
RESOLUTION 11-64-3-3	0.00	0.00	8,045.0	9,678.1	-187.2	1,597,916.04	3,267,249.80	40.970636	-104.532266
- plan hits target center									
- Point									

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well RESOLUTION 11-64-3-34-4CH
<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 11-64-3-34-4CH	<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)	
2,001.4	2,000.0	9 5/8"	9.625	12.250	
8,375.8	8,045.0	7"	7.000	7.500	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,529.0	1,528.0	Aquifer (Fox Hills)			
7,785.6	7,767.0	Niobrara			
8,268.6	8,035.0	Codell			

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
365.7	365.7	0.0	-2.3	Start 4522.4 hold at 365.7 MD
4,888.1	4,884.3	0.0	-184.9	Start Drop -2.00
5,003.7	5,000.0	0.0	-187.2	Start 2472.0 hold at 5003.7 MD
7,475.8	7,472.0	0.0	-187.2	Start Build 10.00
8,375.8	8,045.0	573.0	-187.2	Start 9105.1 hold at 8375.8 MD
17,480.9	8,045.0	9,678.1	-187.2	TD at 17480.9