

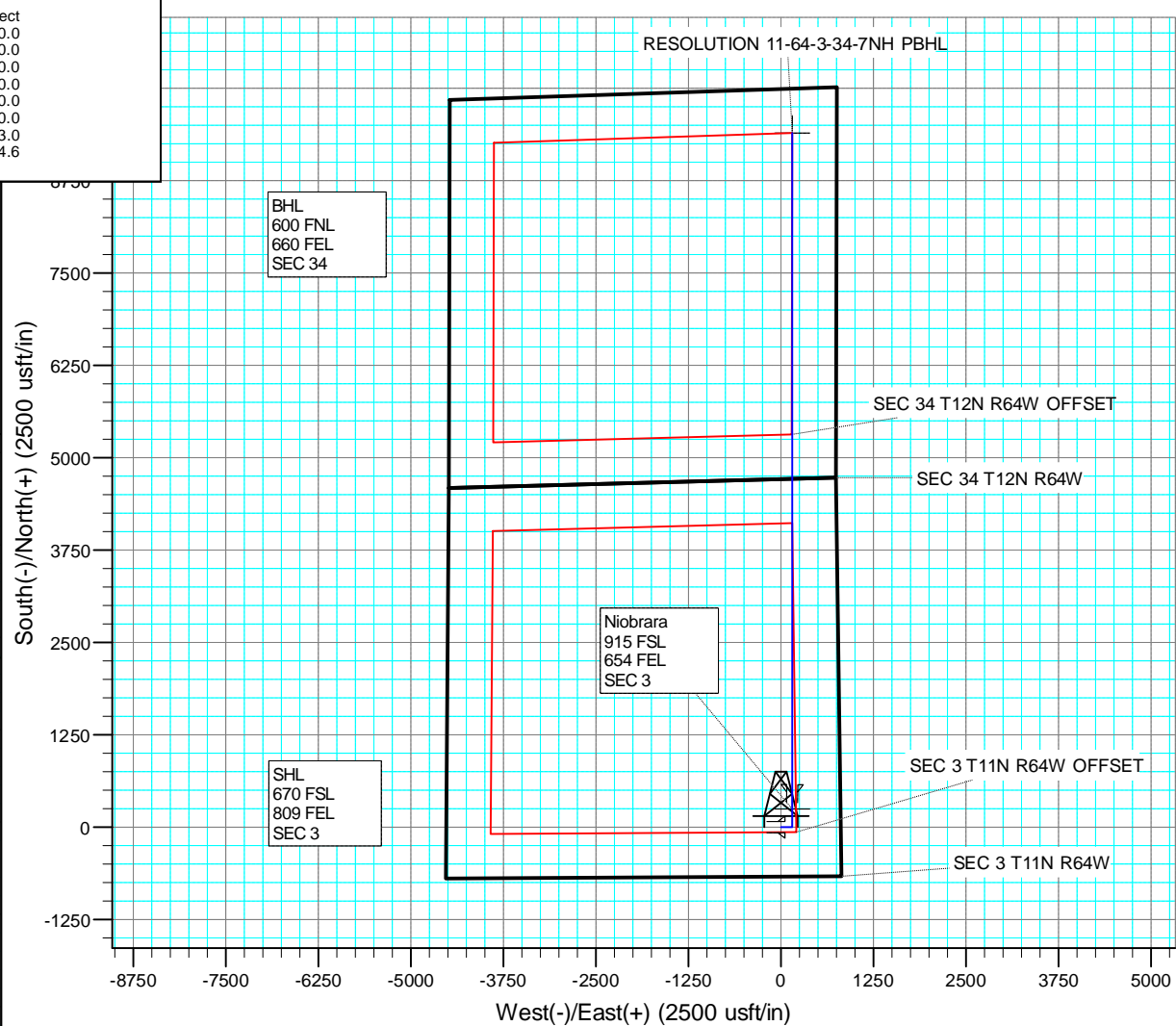
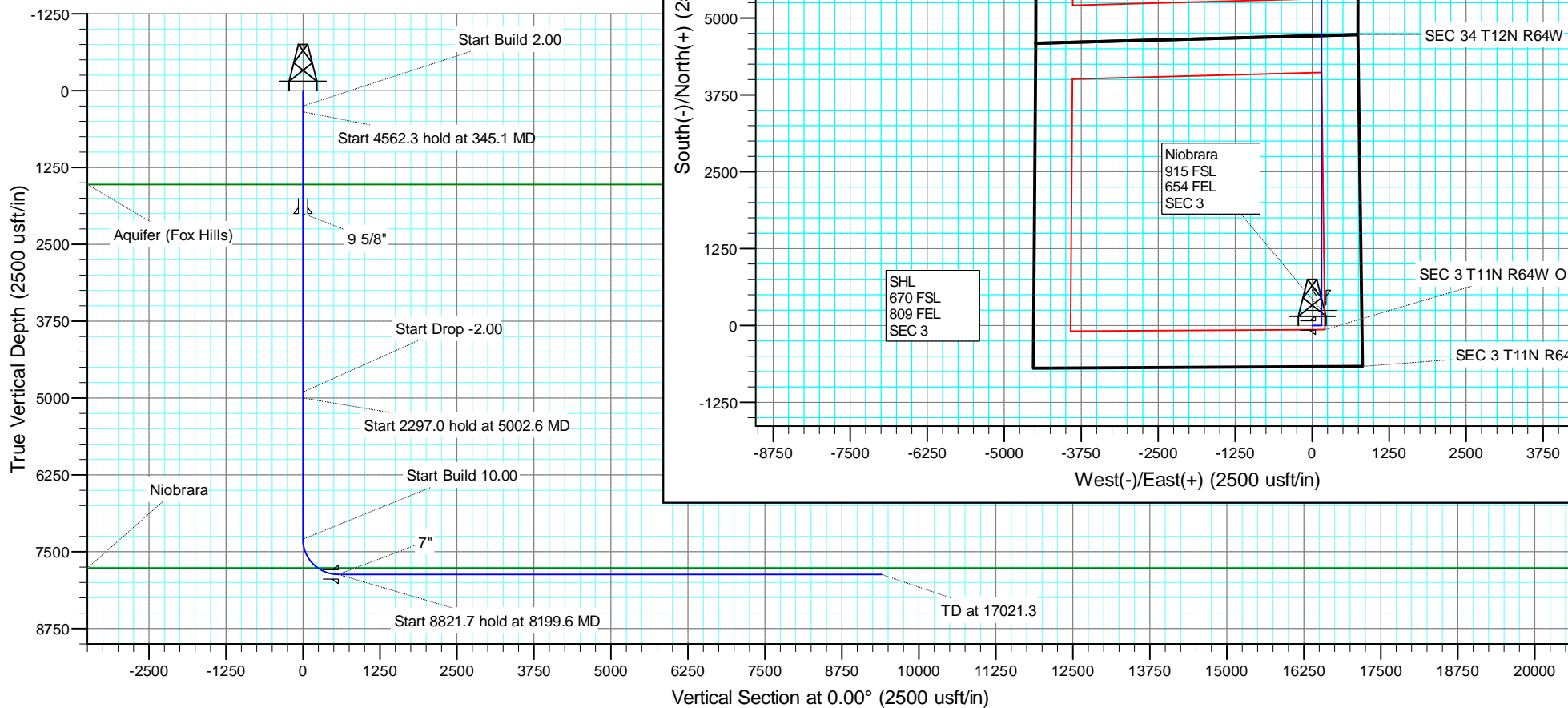
+N/-S +E/-W Northing Easting Latitude Longitude
 0.0 0.0 1588595.36 3268897.62 40.945007 -104.526670

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
345.1	1.90	90.00	345.1	0.0	1.6	2.00	90.00	0.0
4907.4	1.90	90.00	4904.9	0.0	153.1	0.00	0.00	0.0
5002.6	0.00	0.00	5000.0	0.0	154.7	2.00	180.00	0.0
7299.6	0.00	0.00	7297.0	0.0	154.7	0.00	0.00	0.0
8199.6	90.00	0.00	7870.0	573.0	154.7	10.00	0.00	573.0
17021.3	90.00	0.00	7870.0	9394.6	154.7	0.00	0.00	9394.6

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1528.0	1528.7	Aquifer (Fox Hills)
7767.0	7850.7	Niobrara



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

RESOLUTION 11-64-3-34CH PAD

RESOLUTION 11-64-3-34-7NH

Wellbore #1

Plan: PLAN #1

Standard Planning Report

11 February, 2015

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well RESOLUTION 11-64-3-34-7NH
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5466.0usft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5466.0usft (Original Well Elev)
Site:	RESOLUTION 11-64-3-34CH PAD	North Reference:	True
Well:	RESOLUTION 11-64-3-34-7NH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN #1		

Project	COLORADO NORTHERN ZONE - 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	RESOLUTION 11-64-3-34CH PAD			
Site Position:		Northing:	1,588,594.34 usft	Latitude: 40.945006
From:	Lat/Long	Easting:	3,268,837.68 usft	Longitude: -104.526887
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence: 0.63 °

Well	RESOLUTION 11-64-3-34-7NH			
Well Position	+N/-S	0.4 usft	Northing:	1,588,595.36 usft
	+E/-W	60.0 usft	Easting:	3,268,897.62 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level: 5,440.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	8.94	67.59	53,607

Design	PLAN #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	0.00

Plan Sections										
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	
345.1	1.90	90.00	345.1	0.0	1.6	2.00	2.00	0.00	90.00	
4,907.4	1.90	90.00	4,904.9	0.0	153.1	0.00	0.00	0.00	0.00	
5,002.6	0.00	0.00	5,000.0	0.0	154.7	2.00	-2.00	0.00	180.00	
7,299.6	0.00	0.00	7,297.0	0.0	154.7	0.00	0.00	0.00	0.00	
8,199.6	90.00	0.00	7,870.0	573.0	154.7	10.00	10.00	0.00	0.00	
17,021.3	90.00	0.00	7,870.0	9,394.6	154.7	0.00	0.00	0.00	0.00	RESOLUTION 11-64-

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Planning Report

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5466.0usft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5466.0usft (Original Well Elev)
Site:	RESOLUTION 11-64-3-34CH PAD	North Reference:	True
Well:	RESOLUTION 11-64-3-34-7NH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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
345.1	1.90	90.00	345.1	0.0	1.6	0.0	2.00	2.00	0.00
Start 4562.3 hold at 345.1 MD									
400.0	1.90	90.00	400.0	0.0	3.4	0.0	0.00	0.00	0.00
500.0	1.90	90.00	499.9	0.0	6.7	0.0	0.00	0.00	0.00
600.0	1.90	90.00	599.8	0.0	10.0	0.0	0.00	0.00	0.00
700.0	1.90	90.00	699.8	0.0	13.4	0.0	0.00	0.00	0.00
800.0	1.90	90.00	799.7	0.0	16.7	0.0	0.00	0.00	0.00
900.0	1.90	90.00	899.7	0.0	20.0	0.0	0.00	0.00	0.00
1,000.0	1.90	90.00	999.6	0.0	23.3	0.0	0.00	0.00	0.00
1,100.0	1.90	90.00	1,099.6	0.0	26.6	0.0	0.00	0.00	0.00
1,200.0	1.90	90.00	1,199.5	0.0	30.0	0.0	0.00	0.00	0.00
1,300.0	1.90	90.00	1,299.5	0.0	33.3	0.0	0.00	0.00	0.00
1,400.0	1.90	90.00	1,399.4	0.0	36.6	0.0	0.00	0.00	0.00
1,500.0	1.90	90.00	1,499.3	0.0	39.9	0.0	0.00	0.00	0.00
1,528.7	1.90	90.00	1,528.0	0.0	40.9	0.0	0.00	0.00	0.00
Aquifer (Fox Hills)									
1,600.0	1.90	90.00	1,599.3	0.0	43.2	0.0	0.00	0.00	0.00
1,700.0	1.90	90.00	1,699.2	0.0	46.6	0.0	0.00	0.00	0.00
1,800.0	1.90	90.00	1,799.2	0.0	49.9	0.0	0.00	0.00	0.00
1,900.0	1.90	90.00	1,899.1	0.0	53.2	0.0	0.00	0.00	0.00
2,000.0	1.90	90.00	1,999.1	0.0	56.5	0.0	0.00	0.00	0.00
2,000.9	1.90	90.00	2,000.0	0.0	56.6	0.0	0.00	0.00	0.00
9 5/8"									
2,100.0	1.90	90.00	2,099.0	0.0	59.9	0.0	0.00	0.00	0.00
2,200.0	1.90	90.00	2,199.0	0.0	63.2	0.0	0.00	0.00	0.00
2,300.0	1.90	90.00	2,298.9	0.0	66.5	0.0	0.00	0.00	0.00
2,400.0	1.90	90.00	2,398.8	0.0	69.8	0.0	0.00	0.00	0.00
2,500.0	1.90	90.00	2,498.8	0.0	73.1	0.0	0.00	0.00	0.00
2,600.0	1.90	90.00	2,598.7	0.0	76.5	0.0	0.00	0.00	0.00
2,700.0	1.90	90.00	2,698.7	0.0	79.8	0.0	0.00	0.00	0.00
2,800.0	1.90	90.00	2,798.6	0.0	83.1	0.0	0.00	0.00	0.00
2,900.0	1.90	90.00	2,898.6	0.0	86.4	0.0	0.00	0.00	0.00
3,000.0	1.90	90.00	2,998.5	0.0	89.7	0.0	0.00	0.00	0.00
3,100.0	1.90	90.00	3,098.5	0.0	93.1	0.0	0.00	0.00	0.00
3,200.0	1.90	90.00	3,198.4	0.0	96.4	0.0	0.00	0.00	0.00
3,300.0	1.90	90.00	3,298.4	0.0	99.7	0.0	0.00	0.00	0.00
3,400.0	1.90	90.00	3,398.3	0.0	103.0	0.0	0.00	0.00	0.00
3,500.0	1.90	90.00	3,498.2	0.0	106.3	0.0	0.00	0.00	0.00
3,600.0	1.90	90.00	3,598.2	0.0	109.7	0.0	0.00	0.00	0.00
3,700.0	1.90	90.00	3,698.1	0.0	113.0	0.0	0.00	0.00	0.00
3,800.0	1.90	90.00	3,798.1	0.0	116.3	0.0	0.00	0.00	0.00
3,900.0	1.90	90.00	3,898.0	0.0	119.6	0.0	0.00	0.00	0.00
4,000.0	1.90	90.00	3,998.0	0.0	122.9	0.0	0.00	0.00	0.00
4,100.0	1.90	90.00	4,097.9	0.0	126.3	0.0	0.00	0.00	0.00
4,200.0	1.90	90.00	4,197.9	0.0	129.6	0.0	0.00	0.00	0.00
4,300.0	1.90	90.00	4,297.8	0.0	132.9	0.0	0.00	0.00	0.00
4,400.0	1.90	90.00	4,397.7	0.0	136.2	0.0	0.00	0.00	0.00
4,500.0	1.90	90.00	4,497.7	0.0	139.5	0.0	0.00	0.00	0.00

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well RESOLUTION 11-64-3-34-7NH
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5466.0usft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5466.0usft (Original Well Elev)
Site:	RESOLUTION 11-64-3-34CH PAD	North Reference:	True
Well:	RESOLUTION 11-64-3-34-7NH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	1.90	90.00	4,597.6	0.0	142.9	0.0	0.00	0.00	0.00
4,700.0	1.90	90.00	4,697.6	0.0	146.2	0.0	0.00	0.00	0.00
4,800.0	1.90	90.00	4,797.5	0.0	149.5	0.0	0.00	0.00	0.00
4,900.0	1.90	90.00	4,897.5	0.0	152.8	0.0	0.00	0.00	0.00
4,907.4	1.90	90.00	4,904.9	0.0	153.1	0.0	0.00	0.00	0.00
Start Drop -2.00									
5,000.0	0.05	90.00	4,997.4	0.0	154.7	0.0	2.00	-2.00	0.00
5,002.6	0.00	0.00	5,000.0	0.0	154.7	0.0	2.00	-2.00	0.00
Start 2297.0 hold at 5002.6 MD									
5,100.0	0.00	0.00	5,097.4	0.0	154.7	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,197.4	0.0	154.7	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,297.4	0.0	154.7	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,397.4	0.0	154.7	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,497.4	0.0	154.7	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,597.4	0.0	154.7	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,697.4	0.0	154.7	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,797.4	0.0	154.7	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,897.4	0.0	154.7	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,997.4	0.0	154.7	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,097.4	0.0	154.7	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,197.4	0.0	154.7	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,297.4	0.0	154.7	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,397.4	0.0	154.7	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,497.4	0.0	154.7	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,597.4	0.0	154.7	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,697.4	0.0	154.7	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,797.4	0.0	154.7	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,897.4	0.0	154.7	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,997.4	0.0	154.7	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,097.4	0.0	154.7	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,197.4	0.0	154.7	0.0	0.00	0.00	0.00
7,299.6	0.00	0.00	7,297.0	0.0	154.7	0.0	0.00	0.00	0.00
Start Build 10.00									
7,300.0	0.04	0.00	7,297.4	0.0	154.7	0.0	10.00	10.00	0.00
7,400.0	10.04	0.00	7,396.9	8.8	154.7	8.8	10.00	10.00	0.00
7,500.0	20.04	0.00	7,493.4	34.7	154.7	34.7	10.00	10.00	0.00
7,600.0	30.04	0.00	7,583.9	77.0	154.7	77.0	10.00	10.00	0.00
7,700.0	40.04	0.00	7,665.6	134.3	154.7	134.3	10.00	10.00	0.00
7,800.0	50.04	0.00	7,736.2	205.0	154.7	205.0	10.00	10.00	0.00
7,850.7	55.11	0.00	7,767.0	245.2	154.7	245.2	10.00	10.00	0.00
Niobrara									
7,900.0	60.04	0.00	7,793.4	286.8	154.7	286.8	10.00	10.00	0.00
8,000.0	70.04	0.00	7,835.6	377.4	154.7	377.4	10.00	10.00	0.00
8,100.0	80.04	0.00	7,861.4	473.9	154.7	473.9	10.00	10.00	0.00
8,199.6	90.00	0.00	7,870.0	573.0	154.7	573.0	10.00	10.00	0.00
Start 8821.7 hold at 8199.6 MD - 7"									
8,200.0	90.00	0.00	7,870.0	573.4	154.7	573.4	0.00	0.00	0.00
8,300.0	90.00	0.00	7,870.0	673.4	154.7	673.4	0.00	0.00	0.00
8,400.0	90.00	0.00	7,870.0	773.4	154.7	773.4	0.00	0.00	0.00
8,500.0	90.00	0.00	7,870.0	873.4	154.7	873.4	0.00	0.00	0.00
8,600.0	90.00	0.00	7,870.0	973.4	154.7	973.4	0.00	0.00	0.00
8,700.0	90.00	0.00	7,870.0	1,073.4	154.7	1,073.4	0.00	0.00	0.00
8,800.0	90.00	0.00	7,870.0	1,173.4	154.7	1,173.4	0.00	0.00	0.00

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well RESOLUTION 11-64-3-34-7NH
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5466.0usft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5466.0usft (Original Well Elev)
Site:	RESOLUTION 11-64-3-34CH PAD	North Reference:	True
Well:	RESOLUTION 11-64-3-34-7NH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	0.00	7,870.0	1,273.4	154.7	1,273.4	0.00	0.00	0.00
9,000.0	90.00	0.00	7,870.0	1,373.4	154.7	1,373.4	0.00	0.00	0.00
9,100.0	90.00	0.00	7,870.0	1,473.4	154.7	1,473.4	0.00	0.00	0.00
9,200.0	90.00	0.00	7,870.0	1,573.4	154.7	1,573.4	0.00	0.00	0.00
9,300.0	90.00	0.00	7,870.0	1,673.4	154.7	1,673.4	0.00	0.00	0.00
9,400.0	90.00	0.00	7,870.0	1,773.4	154.7	1,773.4	0.00	0.00	0.00
9,500.0	90.00	0.00	7,870.0	1,873.4	154.7	1,873.4	0.00	0.00	0.00
9,600.0	90.00	0.00	7,870.0	1,973.4	154.7	1,973.4	0.00	0.00	0.00
9,700.0	90.00	0.00	7,870.0	2,073.4	154.7	2,073.4	0.00	0.00	0.00
9,800.0	90.00	0.00	7,870.0	2,173.4	154.7	2,173.4	0.00	0.00	0.00
9,900.0	90.00	0.00	7,870.0	2,273.4	154.7	2,273.4	0.00	0.00	0.00
10,000.0	90.00	0.00	7,870.0	2,373.4	154.7	2,373.4	0.00	0.00	0.00
10,100.0	90.00	0.00	7,870.0	2,473.4	154.7	2,473.4	0.00	0.00	0.00
10,200.0	90.00	0.00	7,870.0	2,573.4	154.7	2,573.4	0.00	0.00	0.00
10,300.0	90.00	0.00	7,870.0	2,673.4	154.7	2,673.4	0.00	0.00	0.00
10,400.0	90.00	0.00	7,870.0	2,773.4	154.7	2,773.4	0.00	0.00	0.00
10,500.0	90.00	0.00	7,870.0	2,873.4	154.7	2,873.4	0.00	0.00	0.00
10,600.0	90.00	0.00	7,870.0	2,973.4	154.7	2,973.4	0.00	0.00	0.00
10,700.0	90.00	0.00	7,870.0	3,073.4	154.7	3,073.4	0.00	0.00	0.00
10,800.0	90.00	0.00	7,870.0	3,173.4	154.7	3,173.4	0.00	0.00	0.00
10,900.0	90.00	0.00	7,870.0	3,273.4	154.7	3,273.4	0.00	0.00	0.00
11,000.0	90.00	0.00	7,870.0	3,373.4	154.7	3,373.4	0.00	0.00	0.00
11,100.0	90.00	0.00	7,870.0	3,473.4	154.7	3,473.4	0.00	0.00	0.00
11,200.0	90.00	0.00	7,870.0	3,573.4	154.7	3,573.4	0.00	0.00	0.00
11,300.0	90.00	0.00	7,870.0	3,673.4	154.7	3,673.4	0.00	0.00	0.00
11,400.0	90.00	0.00	7,870.0	3,773.4	154.7	3,773.4	0.00	0.00	0.00
11,500.0	90.00	0.00	7,870.0	3,873.4	154.7	3,873.4	0.00	0.00	0.00
11,600.0	90.00	0.00	7,870.0	3,973.4	154.7	3,973.4	0.00	0.00	0.00
11,700.0	90.00	0.00	7,870.0	4,073.4	154.7	4,073.4	0.00	0.00	0.00
11,800.0	90.00	0.00	7,870.0	4,173.4	154.7	4,173.4	0.00	0.00	0.00
11,900.0	90.00	0.00	7,870.0	4,273.4	154.7	4,273.4	0.00	0.00	0.00
12,000.0	90.00	0.00	7,870.0	4,373.4	154.7	4,373.4	0.00	0.00	0.00
12,100.0	90.00	0.00	7,870.0	4,473.4	154.7	4,473.4	0.00	0.00	0.00
12,200.0	90.00	0.00	7,870.0	4,573.4	154.7	4,573.4	0.00	0.00	0.00
12,300.0	90.00	0.00	7,870.0	4,673.4	154.7	4,673.4	0.00	0.00	0.00
12,400.0	90.00	0.00	7,870.0	4,773.4	154.7	4,773.4	0.00	0.00	0.00
12,500.0	90.00	0.00	7,870.0	4,873.4	154.7	4,873.4	0.00	0.00	0.00
12,600.0	90.00	0.00	7,870.0	4,973.4	154.7	4,973.4	0.00	0.00	0.00
12,700.0	90.00	0.00	7,870.0	5,073.4	154.7	5,073.4	0.00	0.00	0.00
12,800.0	90.00	0.00	7,870.0	5,173.4	154.7	5,173.4	0.00	0.00	0.00
12,900.0	90.00	0.00	7,870.0	5,273.4	154.7	5,273.4	0.00	0.00	0.00
13,000.0	90.00	0.00	7,870.0	5,373.4	154.7	5,373.4	0.00	0.00	0.00
13,100.0	90.00	0.00	7,870.0	5,473.4	154.7	5,473.4	0.00	0.00	0.00
13,200.0	90.00	0.00	7,870.0	5,573.4	154.7	5,573.4	0.00	0.00	0.00
13,300.0	90.00	0.00	7,870.0	5,673.4	154.7	5,673.4	0.00	0.00	0.00
13,400.0	90.00	0.00	7,870.0	5,773.4	154.7	5,773.4	0.00	0.00	0.00
13,500.0	90.00	0.00	7,870.0	5,873.4	154.7	5,873.4	0.00	0.00	0.00
13,600.0	90.00	0.00	7,870.0	5,973.4	154.7	5,973.4	0.00	0.00	0.00
13,700.0	90.00	0.00	7,870.0	6,073.4	154.7	6,073.4	0.00	0.00	0.00
13,800.0	90.00	0.00	7,870.0	6,173.4	154.7	6,173.4	0.00	0.00	0.00
13,900.0	90.00	0.00	7,870.0	6,273.4	154.7	6,273.4	0.00	0.00	0.00
14,000.0	90.00	0.00	7,870.0	6,373.4	154.7	6,373.4	0.00	0.00	0.00
14,100.0	90.00	0.00	7,870.0	6,473.4	154.7	6,473.4	0.00	0.00	0.00
14,200.0	90.00	0.00	7,870.0	6,573.4	154.7	6,573.4	0.00	0.00	0.00

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well RESOLUTION 11-64-3-34-7NH
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5466.0usft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5466.0usft (Original Well Elev)
Site:	RESOLUTION 11-64-3-34CH PAD	North Reference:	True
Well:	RESOLUTION 11-64-3-34-7NH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	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	0.00	7,870.0	6,673.4	154.7	6,673.4	0.00	0.00	0.00
14,400.0	90.00	0.00	7,870.0	6,773.4	154.7	6,773.4	0.00	0.00	0.00
14,500.0	90.00	0.00	7,870.0	6,873.4	154.7	6,873.4	0.00	0.00	0.00
14,600.0	90.00	0.00	7,870.0	6,973.4	154.7	6,973.4	0.00	0.00	0.00
14,700.0	90.00	0.00	7,870.0	7,073.4	154.7	7,073.4	0.00	0.00	0.00
14,800.0	90.00	0.00	7,870.0	7,173.4	154.7	7,173.4	0.00	0.00	0.00
14,900.0	90.00	0.00	7,870.0	7,273.4	154.7	7,273.4	0.00	0.00	0.00
15,000.0	90.00	0.00	7,870.0	7,373.4	154.7	7,373.4	0.00	0.00	0.00
15,100.0	90.00	0.00	7,870.0	7,473.4	154.7	7,473.4	0.00	0.00	0.00
15,200.0	90.00	0.00	7,870.0	7,573.4	154.7	7,573.4	0.00	0.00	0.00
15,300.0	90.00	0.00	7,870.0	7,673.4	154.7	7,673.4	0.00	0.00	0.00
15,400.0	90.00	0.00	7,870.0	7,773.4	154.7	7,773.4	0.00	0.00	0.00
15,500.0	90.00	0.00	7,870.0	7,873.4	154.7	7,873.4	0.00	0.00	0.00
15,600.0	90.00	0.00	7,870.0	7,973.4	154.7	7,973.4	0.00	0.00	0.00
15,700.0	90.00	0.00	7,870.0	8,073.4	154.7	8,073.4	0.00	0.00	0.00
15,800.0	90.00	0.00	7,870.0	8,173.4	154.7	8,173.4	0.00	0.00	0.00
15,900.0	90.00	0.00	7,870.0	8,273.4	154.7	8,273.4	0.00	0.00	0.00
16,000.0	90.00	0.00	7,870.0	8,373.4	154.7	8,373.4	0.00	0.00	0.00
16,100.0	90.00	0.00	7,870.0	8,473.4	154.7	8,473.4	0.00	0.00	0.00
16,200.0	90.00	0.00	7,870.0	8,573.4	154.7	8,573.4	0.00	0.00	0.00
16,300.0	90.00	0.00	7,870.0	8,673.4	154.7	8,673.4	0.00	0.00	0.00
16,400.0	90.00	0.00	7,870.0	8,773.4	154.7	8,773.4	0.00	0.00	0.00
16,500.0	90.00	0.00	7,870.0	8,873.4	154.7	8,873.4	0.00	0.00	0.00
16,600.0	90.00	0.00	7,870.0	8,973.4	154.7	8,973.4	0.00	0.00	0.00
16,700.0	90.00	0.00	7,870.0	9,073.4	154.7	9,073.4	0.00	0.00	0.00
16,800.0	90.00	0.00	7,870.0	9,173.4	154.7	9,173.4	0.00	0.00	0.00
16,900.0	90.00	0.00	7,870.0	9,273.4	154.7	9,273.4	0.00	0.00	0.00
17,000.0	90.00	0.00	7,870.0	9,373.4	154.7	9,373.4	0.00	0.00	0.00
17,021.3	90.00	0.00	7,870.0	9,394.6	154.7	9,394.6	0.00	0.00	0.00
TD at 17021.3									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Interp @ 7767.0 (RESOI - hit/miss target - Shape - Point	0.00	0.00	7,767.0	245.2	154.7	1,588,842.25	3,269,049.58	40.945680	-104.526110
RESOLUTION 11-64-3-34 - plan hits target center - Point	0.00	0.00	7,870.0	9,394.6	154.7	1,597,991.12	3,268,949.15	40.970791	-104.526110

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,000.9	2,000.0	9 5/8"	9.625	12.250	
8,199.6	7,870.0	7"	7.000	7.500	

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well RESOLUTION 11-64-3-34-7NH
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5466.0usft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5466.0usft (Original Well Elev)
Site:	RESOLUTION 11-64-3-34CH PAD	North Reference:	True
Well:	RESOLUTION 11-64-3-34-7NH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN #1		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,528.7	1,528.0	Aquifer (Fox Hills)			
7,850.7	7,767.0	Niobrara			

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	
345.1	345.1	0.0	1.6	Start 4562.3 hold at 345.1 MD	
4,907.4	4,904.9	0.0	153.1	Start Drop -2.00	
5,002.6	5,000.0	0.0	154.7	Start 2297.0 hold at 5002.6 MD	
7,299.6	7,297.0	0.0	154.7	Start Build 10.00	
8,199.6	7,870.0	573.0	154.7	Start 8821.7 hold at 8199.6 MD	
17,021.3	7,870.0	9,394.6	154.7	TD at 17021.3	