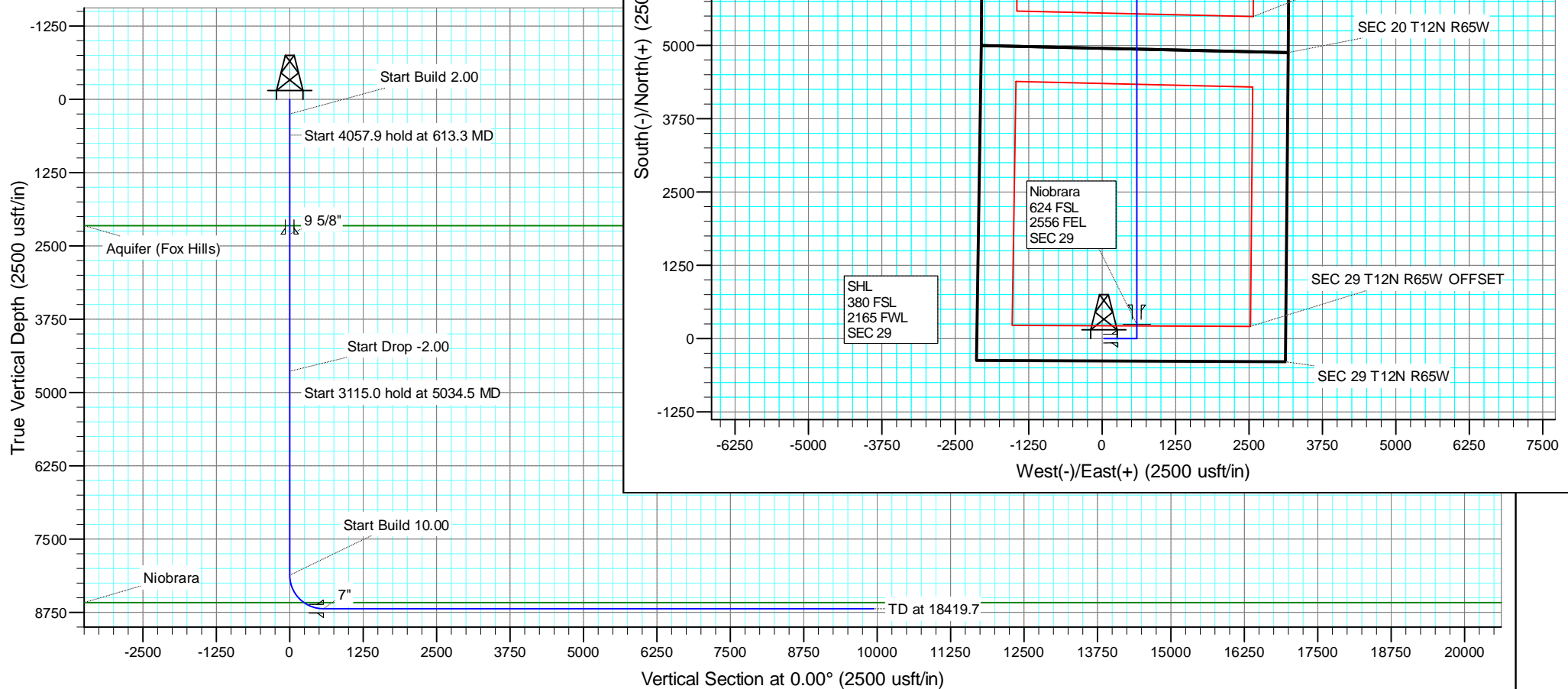


SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
0.0	0.00	0.00	0.0	-0.4	29.8	0.00	0.00	0.0
250.0	0.00	0.00	250.0	-0.4	29.8	0.00	0.00	0.0
613.3	7.27	89.96	612.3	-0.4	52.8	2.00	89.96	0.0
4671.2	7.27	89.96	4637.7	0.0	566.1	0.00	0.00	0.4
5034.5	0.00	0.00	5000.0	0.0	589.1	2.00	180.00	0.4
8149.6	0.00	0.00	8115.0	0.0	589.1	0.00	0.00	0.4
9049.6	90.00	0.00	8688.0	573.0	589.1	10.00	0.00	573.3
18419.7	90.00	0.00	8688.0	9943.1	589.1	0.00	0.00	9943.5

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
2155.0	2168.5	Aquifer (Fox Hills)
8584.0	8698.9	Niobrara



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

RESOLUTION FED 12-65-29-20-4NH

RESOLUTION FED 12-65-29-20-4NH

Wellbore #1

Plan: PLAN #1

Standard Planning Report

08 February, 2015

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Site RESOLUTION FED 12-65-29-20-4NH
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5980.0usft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5980.0usft (Original Well Elev)
Site:	RESOLUTION FED 12-65-29-20-4NH	North Reference:	True
Well:	RESOLUTION FED 12-65-29-20-4NH	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 FED 12-65-29-20-4NH			
Site Position:		Northing:	1,597,941.36 usft	Latitude: 40.971887
From:	Lat/Long	Easting:	3,224,361.44 usft	Longitude: -104.687558
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence: 0.52 °

Well	RESOLUTION FED 12-65-29-20-4NH			
Well Position	+N/-S	-0.4 usft	Northing:	1,597,941.26 usft
	+E/-W	29.8 usft	Easting:	3,224,391.26 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level: 5,954.0 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.03	67.58	53,600

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	-0.4	29.8	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	-0.4	29.8	0.00	0.00	0.00	0.00	
250.0	0.00	0.00	250.0	-0.4	29.8	0.00	0.00	0.00	0.00	
613.3	7.27	89.96	612.3	-0.4	52.8	2.00	2.00	0.00	89.96	
4,671.2	7.27	89.96	4,637.7	0.0	566.1	0.00	0.00	0.00	0.00	
5,034.5	0.00	0.00	5,000.0	0.0	589.1	2.00	-2.00	0.00	180.00	
8,149.6	0.00	0.00	8,115.0	0.0	589.1	0.00	0.00	0.00	0.00	
9,049.6	90.00	0.00	8,688.0	573.0	589.1	10.00	10.00	0.00	0.00	
18,419.7	90.00	0.00	8,688.0	9,943.1	589.1	0.00	0.00	0.00	0.00	RESOLUTION 12-65-

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Site RESOLUTION FED 12-65-29-20-4NH
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5980.0usft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5980.0usft (Original Well Elev)
Site:	RESOLUTION FED 12-65-29-20-4NH	North Reference:	True
Well:	RESOLUTION FED 12-65-29-20-4NH	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	-0.4	29.8	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	-0.4	29.8	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	-0.4	29.8	0.0	0.00	0.00	0.00
250.0	0.00	0.00	250.0	-0.4	29.8	0.0	0.00	0.00	0.00
Start Build 2.00									
300.0	1.00	89.96	300.0	-0.4	30.3	0.0	2.00	2.00	0.00
400.0	3.00	89.96	399.9	-0.4	33.8	0.0	2.00	2.00	0.00
500.0	5.00	89.96	499.7	-0.4	40.7	0.0	2.00	2.00	0.00
600.0	7.00	89.96	599.1	-0.4	51.2	0.0	2.00	2.00	0.00
613.3	7.27	89.96	612.3	-0.4	52.8	0.0	2.00	2.00	0.00
Start 4057.9 hold at 613.3 MD									
700.0	7.27	89.96	698.3	-0.3	63.8	0.0	0.00	0.00	0.00
800.0	7.27	89.96	797.5	-0.3	76.4	0.0	0.00	0.00	0.00
900.0	7.27	89.96	896.7	-0.3	89.1	0.0	0.00	0.00	0.00
1,000.0	7.27	89.96	995.9	-0.3	101.7	0.0	0.00	0.00	0.00
1,100.0	7.27	89.96	1,095.1	-0.3	114.4	0.1	0.00	0.00	0.00
1,200.0	7.27	89.96	1,194.3	-0.3	127.0	0.1	0.00	0.00	0.00
1,300.0	7.27	89.96	1,293.5	-0.3	139.7	0.1	0.00	0.00	0.00
1,400.0	7.27	89.96	1,392.7	-0.3	152.3	0.1	0.00	0.00	0.00
1,500.0	7.27	89.96	1,491.9	-0.3	165.0	0.1	0.00	0.00	0.00
1,600.0	7.27	89.96	1,591.1	-0.3	177.6	0.1	0.00	0.00	0.00
1,700.0	7.27	89.96	1,690.3	-0.3	190.3	0.1	0.00	0.00	0.00
1,800.0	7.27	89.96	1,789.5	-0.3	202.9	0.1	0.00	0.00	0.00
1,900.0	7.27	89.96	1,888.7	-0.2	215.6	0.1	0.00	0.00	0.00
2,000.0	7.27	89.96	1,987.9	-0.2	228.2	0.1	0.00	0.00	0.00
2,100.0	7.27	89.96	2,087.1	-0.2	240.9	0.1	0.00	0.00	0.00
2,168.5	7.27	89.96	2,155.0	-0.2	249.5	0.1	0.00	0.00	0.00
Aquifer (Fox Hills)									
2,200.0	7.27	89.96	2,186.3	-0.2	253.5	0.1	0.00	0.00	0.00
2,300.0	7.27	89.96	2,285.5	-0.2	266.2	0.2	0.00	0.00	0.00
2,314.6	7.27	89.96	2,300.0	-0.2	268.0	0.2	0.00	0.00	0.00
9 5/8"									
2,400.0	7.27	89.96	2,384.7	-0.2	278.8	0.2	0.00	0.00	0.00
2,500.0	7.27	89.96	2,483.9	-0.2	291.5	0.2	0.00	0.00	0.00
2,600.0	7.27	89.96	2,583.1	-0.2	304.1	0.2	0.00	0.00	0.00
2,700.0	7.27	89.96	2,682.3	-0.2	316.8	0.2	0.00	0.00	0.00
2,800.0	7.27	89.96	2,781.5	-0.2	329.4	0.2	0.00	0.00	0.00
2,900.0	7.27	89.96	2,880.7	-0.2	342.1	0.2	0.00	0.00	0.00
3,000.0	7.27	89.96	2,979.9	-0.2	354.7	0.2	0.00	0.00	0.00
3,100.0	7.27	89.96	3,079.1	-0.1	367.4	0.2	0.00	0.00	0.00
3,200.0	7.27	89.96	3,178.3	-0.1	380.0	0.2	0.00	0.00	0.00
3,300.0	7.27	89.96	3,277.5	-0.1	392.6	0.2	0.00	0.00	0.00
3,400.0	7.27	89.96	3,376.6	-0.1	405.3	0.2	0.00	0.00	0.00
3,500.0	7.27	89.96	3,475.8	-0.1	417.9	0.3	0.00	0.00	0.00
3,600.0	7.27	89.96	3,575.0	-0.1	430.6	0.3	0.00	0.00	0.00
3,700.0	7.27	89.96	3,674.2	-0.1	443.2	0.3	0.00	0.00	0.00
3,800.0	7.27	89.96	3,773.4	-0.1	455.9	0.3	0.00	0.00	0.00
3,900.0	7.27	89.96	3,872.6	-0.1	468.5	0.3	0.00	0.00	0.00
4,000.0	7.27	89.96	3,971.8	-0.1	481.2	0.3	0.00	0.00	0.00
4,100.0	7.27	89.96	4,071.0	-0.1	493.8	0.3	0.00	0.00	0.00
4,200.0	7.27	89.96	4,170.2	-0.1	506.5	0.3	0.00	0.00	0.00
4,300.0	7.27	89.96	4,269.4	0.0	519.1	0.3	0.00	0.00	0.00
4,400.0	7.27	89.96	4,368.6	0.0	531.8	0.3	0.00	0.00	0.00
4,500.0	7.27	89.96	4,467.8	0.0	544.4	0.3	0.00	0.00	0.00

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Site RESOLUTION FED 12-65-29-20-4NH
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5980.0usft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5980.0usft (Original Well Elev)
Site:	RESOLUTION FED 12-65-29-20-4NH	North Reference:	True
Well:	RESOLUTION FED 12-65-29-20-4NH	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	7.27	89.96	4,567.0	0.0	557.1	0.4	0.00	0.00	0.00
4,671.2	7.27	89.96	4,637.7	0.0	566.1	0.4	0.00	0.00	0.00
Start Drop -2.00									
4,700.0	6.69	89.96	4,666.2	0.0	569.6	0.4	2.00	-2.00	0.00
4,800.0	4.69	89.96	4,765.7	0.0	579.5	0.4	2.00	-2.00	0.00
4,900.0	2.69	89.96	4,865.5	0.0	585.9	0.4	2.00	-2.00	0.00
5,000.0	0.69	89.96	4,965.5	0.0	588.9	0.4	2.00	-2.00	0.00
5,034.5	0.00	0.00	5,000.0	0.0	589.1	0.4	2.00	-2.00	0.00
Start 3115.0 hold at 5034.5 MD									
5,100.0	0.00	0.00	5,065.5	0.0	589.1	0.4	0.00	0.00	0.00
5,200.0	0.00	0.00	5,165.5	0.0	589.1	0.4	0.00	0.00	0.00
5,300.0	0.00	0.00	5,265.5	0.0	589.1	0.4	0.00	0.00	0.00
5,400.0	0.00	0.00	5,365.5	0.0	589.1	0.4	0.00	0.00	0.00
5,500.0	0.00	0.00	5,465.5	0.0	589.1	0.4	0.00	0.00	0.00
5,600.0	0.00	0.00	5,565.5	0.0	589.1	0.4	0.00	0.00	0.00
5,700.0	0.00	0.00	5,665.5	0.0	589.1	0.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,765.5	0.0	589.1	0.4	0.00	0.00	0.00
5,900.0	0.00	0.00	5,865.5	0.0	589.1	0.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,965.5	0.0	589.1	0.4	0.00	0.00	0.00
6,100.0	0.00	0.00	6,065.5	0.0	589.1	0.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,165.5	0.0	589.1	0.4	0.00	0.00	0.00
6,300.0	0.00	0.00	6,265.5	0.0	589.1	0.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,365.5	0.0	589.1	0.4	0.00	0.00	0.00
6,500.0	0.00	0.00	6,465.5	0.0	589.1	0.4	0.00	0.00	0.00
6,600.0	0.00	0.00	6,565.5	0.0	589.1	0.4	0.00	0.00	0.00
6,700.0	0.00	0.00	6,665.5	0.0	589.1	0.4	0.00	0.00	0.00
6,800.0	0.00	0.00	6,765.5	0.0	589.1	0.4	0.00	0.00	0.00
6,900.0	0.00	0.00	6,865.5	0.0	589.1	0.4	0.00	0.00	0.00
7,000.0	0.00	0.00	6,965.5	0.0	589.1	0.4	0.00	0.00	0.00
7,100.0	0.00	0.00	7,065.5	0.0	589.1	0.4	0.00	0.00	0.00
7,200.0	0.00	0.00	7,165.5	0.0	589.1	0.4	0.00	0.00	0.00
7,300.0	0.00	0.00	7,265.5	0.0	589.1	0.4	0.00	0.00	0.00
7,400.0	0.00	0.00	7,365.5	0.0	589.1	0.4	0.00	0.00	0.00
7,500.0	0.00	0.00	7,465.5	0.0	589.1	0.4	0.00	0.00	0.00
7,600.0	0.00	0.00	7,565.5	0.0	589.1	0.4	0.00	0.00	0.00
7,700.0	0.00	0.00	7,665.5	0.0	589.1	0.4	0.00	0.00	0.00
7,800.0	0.00	0.00	7,765.5	0.0	589.1	0.4	0.00	0.00	0.00
7,900.0	0.00	0.00	7,865.5	0.0	589.1	0.4	0.00	0.00	0.00
8,000.0	0.00	0.00	7,965.5	0.0	589.1	0.4	0.00	0.00	0.00
8,100.0	0.00	0.00	8,065.5	0.0	589.1	0.4	0.00	0.00	0.00
8,149.6	0.00	0.00	8,115.0	0.0	589.1	0.4	0.00	0.00	0.00
Start Build 10.00									
8,200.0	5.04	0.00	8,165.4	2.2	589.1	2.6	10.00	10.00	0.00
8,300.0	15.04	0.00	8,263.7	19.6	589.1	20.0	10.00	10.00	0.00
8,400.0	25.04	0.00	8,357.6	53.9	589.1	54.2	10.00	10.00	0.00
8,500.0	35.04	0.00	8,444.0	103.9	589.1	104.2	10.00	10.00	0.00
8,600.0	45.04	0.00	8,520.5	168.1	589.1	168.5	10.00	10.00	0.00
8,698.9	54.93	0.00	8,584.0	243.8	589.1	244.2	10.00	10.00	0.00
Niobrara									
8,700.0	55.04	0.00	8,584.6	244.7	589.1	245.0	10.00	10.00	0.00
8,800.0	65.04	0.00	8,634.5	331.2	589.1	331.6	10.00	10.00	0.00
8,900.0	75.04	0.00	8,668.6	425.1	589.1	425.4	10.00	10.00	0.00
9,000.0	85.04	0.00	8,685.9	523.4	589.1	523.8	10.00	10.00	0.00

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Site RESOLUTION FED 12-65-29-20-4NH
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5980.0usft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5980.0usft (Original Well Elev)
Site:	RESOLUTION FED 12-65-29-20-4NH	North Reference:	True
Well:	RESOLUTION FED 12-65-29-20-4NH	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)
9,049.6	90.00	0.00	8,688.0	573.0	589.1	573.4	10.00	10.00	0.00
Start 9370.1 hold at 9049.6 MD - 7"									
9,100.0	90.00	0.00	8,688.0	623.4	589.1	623.8	0.00	0.00	0.00
9,200.0	90.00	0.00	8,688.0	723.4	589.1	723.8	0.00	0.00	0.00
9,300.0	90.00	0.00	8,688.0	823.4	589.1	823.8	0.00	0.00	0.00
9,400.0	90.00	0.00	8,688.0	923.4	589.1	923.8	0.00	0.00	0.00
9,500.0	90.00	0.00	8,688.0	1,023.4	589.1	1,023.8	0.00	0.00	0.00
9,600.0	90.00	0.00	8,688.0	1,123.4	589.1	1,123.8	0.00	0.00	0.00
9,700.0	90.00	0.00	8,688.0	1,223.4	589.1	1,223.8	0.00	0.00	0.00
9,800.0	90.00	0.00	8,688.0	1,323.4	589.1	1,323.8	0.00	0.00	0.00
9,900.0	90.00	0.00	8,688.0	1,423.4	589.1	1,423.8	0.00	0.00	0.00
10,000.0	90.00	0.00	8,688.0	1,523.4	589.1	1,523.8	0.00	0.00	0.00
10,100.0	90.00	0.00	8,688.0	1,623.4	589.1	1,623.8	0.00	0.00	0.00
10,200.0	90.00	0.00	8,688.0	1,723.4	589.1	1,723.8	0.00	0.00	0.00
10,300.0	90.00	0.00	8,688.0	1,823.4	589.1	1,823.8	0.00	0.00	0.00
10,400.0	90.00	0.00	8,688.0	1,923.4	589.1	1,923.8	0.00	0.00	0.00
10,500.0	90.00	0.00	8,688.0	2,023.4	589.1	2,023.8	0.00	0.00	0.00
10,600.0	90.00	0.00	8,688.0	2,123.4	589.1	2,123.8	0.00	0.00	0.00
10,700.0	90.00	0.00	8,688.0	2,223.4	589.1	2,223.8	0.00	0.00	0.00
10,800.0	90.00	0.00	8,688.0	2,323.4	589.1	2,323.8	0.00	0.00	0.00
10,900.0	90.00	0.00	8,688.0	2,423.4	589.1	2,423.8	0.00	0.00	0.00
11,000.0	90.00	0.00	8,688.0	2,523.4	589.1	2,523.8	0.00	0.00	0.00
11,100.0	90.00	0.00	8,688.0	2,623.4	589.1	2,623.8	0.00	0.00	0.00
11,200.0	90.00	0.00	8,688.0	2,723.4	589.1	2,723.8	0.00	0.00	0.00
11,300.0	90.00	0.00	8,688.0	2,823.4	589.1	2,823.8	0.00	0.00	0.00
11,400.0	90.00	0.00	8,688.0	2,923.4	589.1	2,923.8	0.00	0.00	0.00
11,500.0	90.00	0.00	8,688.0	3,023.4	589.1	3,023.8	0.00	0.00	0.00
11,600.0	90.00	0.00	8,688.0	3,123.4	589.1	3,123.8	0.00	0.00	0.00
11,700.0	90.00	0.00	8,688.0	3,223.4	589.1	3,223.8	0.00	0.00	0.00
11,800.0	90.00	0.00	8,688.0	3,323.4	589.1	3,323.8	0.00	0.00	0.00
11,900.0	90.00	0.00	8,688.0	3,423.4	589.1	3,423.8	0.00	0.00	0.00
12,000.0	90.00	0.00	8,688.0	3,523.4	589.1	3,523.8	0.00	0.00	0.00
12,100.0	90.00	0.00	8,688.0	3,623.4	589.1	3,623.8	0.00	0.00	0.00
12,200.0	90.00	0.00	8,688.0	3,723.4	589.1	3,723.8	0.00	0.00	0.00
12,300.0	90.00	0.00	8,688.0	3,823.4	589.1	3,823.8	0.00	0.00	0.00
12,400.0	90.00	0.00	8,688.0	3,923.4	589.1	3,923.8	0.00	0.00	0.00
12,500.0	90.00	0.00	8,688.0	4,023.4	589.1	4,023.8	0.00	0.00	0.00
12,600.0	90.00	0.00	8,688.0	4,123.4	589.1	4,123.8	0.00	0.00	0.00
12,700.0	90.00	0.00	8,688.0	4,223.4	589.1	4,223.8	0.00	0.00	0.00
12,800.0	90.00	0.00	8,688.0	4,323.4	589.1	4,323.8	0.00	0.00	0.00
12,900.0	90.00	0.00	8,688.0	4,423.4	589.1	4,423.8	0.00	0.00	0.00
13,000.0	90.00	0.00	8,688.0	4,523.4	589.1	4,523.8	0.00	0.00	0.00
13,100.0	90.00	0.00	8,688.0	4,623.4	589.1	4,623.8	0.00	0.00	0.00
13,200.0	90.00	0.00	8,688.0	4,723.4	589.1	4,723.8	0.00	0.00	0.00
13,300.0	90.00	0.00	8,688.0	4,823.4	589.1	4,823.8	0.00	0.00	0.00
13,400.0	90.00	0.00	8,688.0	4,923.4	589.1	4,923.8	0.00	0.00	0.00
13,500.0	90.00	0.00	8,688.0	5,023.4	589.1	5,023.8	0.00	0.00	0.00
13,600.0	90.00	0.00	8,688.0	5,123.4	589.1	5,123.8	0.00	0.00	0.00
13,700.0	90.00	0.00	8,688.0	5,223.4	589.1	5,223.8	0.00	0.00	0.00
13,800.0	90.00	0.00	8,688.0	5,323.4	589.1	5,323.8	0.00	0.00	0.00
13,900.0	90.00	0.00	8,688.0	5,423.4	589.1	5,423.8	0.00	0.00	0.00
14,000.0	90.00	0.00	8,688.0	5,523.4	589.1	5,523.8	0.00	0.00	0.00
14,100.0	90.00	0.00	8,688.0	5,623.4	589.1	5,623.8	0.00	0.00	0.00

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Site RESOLUTION FED 12-65-29-20-4NH
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5980.0usft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5980.0usft (Original Well Elev)
Site:	RESOLUTION FED 12-65-29-20-4NH	North Reference:	True
Well:	RESOLUTION FED 12-65-29-20-4NH	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)
14,200.0	90.00	0.00	8,688.0	5,723.4	589.1	5,723.8	0.00	0.00	0.00
14,300.0	90.00	0.00	8,688.0	5,823.4	589.1	5,823.8	0.00	0.00	0.00
14,400.0	90.00	0.00	8,688.0	5,923.4	589.1	5,923.8	0.00	0.00	0.00
14,500.0	90.00	0.00	8,688.0	6,023.4	589.1	6,023.8	0.00	0.00	0.00
14,600.0	90.00	0.00	8,688.0	6,123.4	589.1	6,123.8	0.00	0.00	0.00
14,700.0	90.00	0.00	8,688.0	6,223.4	589.1	6,223.8	0.00	0.00	0.00
14,800.0	90.00	0.00	8,688.0	6,323.4	589.1	6,323.8	0.00	0.00	0.00
14,900.0	90.00	0.00	8,688.0	6,423.4	589.1	6,423.8	0.00	0.00	0.00
15,000.0	90.00	0.00	8,688.0	6,523.4	589.1	6,523.8	0.00	0.00	0.00
15,100.0	90.00	0.00	8,688.0	6,623.4	589.1	6,623.8	0.00	0.00	0.00
15,200.0	90.00	0.00	8,688.0	6,723.4	589.1	6,723.8	0.00	0.00	0.00
15,300.0	90.00	0.00	8,688.0	6,823.4	589.1	6,823.8	0.00	0.00	0.00
15,400.0	90.00	0.00	8,688.0	6,923.4	589.1	6,923.8	0.00	0.00	0.00
15,500.0	90.00	0.00	8,688.0	7,023.4	589.1	7,023.8	0.00	0.00	0.00
15,600.0	90.00	0.00	8,688.0	7,123.4	589.1	7,123.8	0.00	0.00	0.00
15,700.0	90.00	0.00	8,688.0	7,223.4	589.1	7,223.8	0.00	0.00	0.00
15,800.0	90.00	0.00	8,688.0	7,323.4	589.1	7,323.8	0.00	0.00	0.00
15,900.0	90.00	0.00	8,688.0	7,423.4	589.1	7,423.8	0.00	0.00	0.00
16,000.0	90.00	0.00	8,688.0	7,523.4	589.1	7,523.8	0.00	0.00	0.00
16,100.0	90.00	0.00	8,688.0	7,623.4	589.1	7,623.8	0.00	0.00	0.00
16,200.0	90.00	0.00	8,688.0	7,723.4	589.1	7,723.8	0.00	0.00	0.00
16,300.0	90.00	0.00	8,688.0	7,823.4	589.1	7,823.8	0.00	0.00	0.00
16,400.0	90.00	0.00	8,688.0	7,923.4	589.1	7,923.8	0.00	0.00	0.00
16,500.0	90.00	0.00	8,688.0	8,023.4	589.1	8,023.8	0.00	0.00	0.00
16,600.0	90.00	0.00	8,688.0	8,123.4	589.1	8,123.8	0.00	0.00	0.00
16,700.0	90.00	0.00	8,688.0	8,223.4	589.1	8,223.8	0.00	0.00	0.00
16,800.0	90.00	0.00	8,688.0	8,323.4	589.1	8,323.8	0.00	0.00	0.00
16,900.0	90.00	0.00	8,688.0	8,423.4	589.1	8,423.8	0.00	0.00	0.00
17,000.0	90.00	0.00	8,688.0	8,523.4	589.1	8,523.8	0.00	0.00	0.00
17,100.0	90.00	0.00	8,688.0	8,623.4	589.1	8,623.8	0.00	0.00	0.00
17,200.0	90.00	0.00	8,688.0	8,723.4	589.1	8,723.8	0.00	0.00	0.00
17,300.0	90.00	0.00	8,688.0	8,823.4	589.1	8,823.8	0.00	0.00	0.00
17,400.0	90.00	0.00	8,688.0	8,923.4	589.1	8,923.8	0.00	0.00	0.00
17,500.0	90.00	0.00	8,688.0	9,023.4	589.1	9,023.8	0.00	0.00	0.00
17,600.0	90.00	0.00	8,688.0	9,123.4	589.1	9,123.8	0.00	0.00	0.00
17,700.0	90.00	0.00	8,688.0	9,223.4	589.1	9,223.8	0.00	0.00	0.00
17,800.0	90.00	0.00	8,688.0	9,323.4	589.1	9,323.8	0.00	0.00	0.00
17,900.0	90.00	0.00	8,688.0	9,423.4	589.1	9,423.8	0.00	0.00	0.00
18,000.0	90.00	0.00	8,688.0	9,523.4	589.1	9,523.8	0.00	0.00	0.00
18,100.0	90.00	0.00	8,688.0	9,623.4	589.1	9,623.8	0.00	0.00	0.00
18,200.0	90.00	0.00	8,688.0	9,723.4	589.1	9,723.8	0.00	0.00	0.00
18,300.0	90.00	0.00	8,688.0	9,823.4	589.1	9,823.8	0.00	0.00	0.00
18,400.0	90.00	0.00	8,688.0	9,923.4	589.1	9,923.8	0.00	0.00	0.00
18,419.7	90.00	0.00	8,688.0	9,943.1	589.1	9,943.5	0.00	0.00	0.00
TD at 18419.7									

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Site RESOLUTION FED 12-65-29-20-4NH
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 5980.0usft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 5980.0usft (Original Well Elev)
Site:	RESOLUTION FED 12-65-29-20-4NH	North Reference:	True
Well:	RESOLUTION FED 12-65-29-20-4NH	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	PLAN #1		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Interp @ 8584.0 (RESOL - hit/miss target - Shape	0.00	0.00	8,584.0	243.8	589.1	1,598,190.53	3,224,948.26	40.972556	-104.685425
RESOLUTION 12-65-29 - plan hits target center - Point	0.00	0.00	8,688.0	9,943.1	589.1	1,607,889.44	3,224,859.40	40.999176	-104.685424

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,314.6	2,300.0	9 5/8"	9.625	12.250
9,049.6	8,688.0	7"	7.000	7.500

Formations				
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)
2,168.5	2,155.0	Aquifer (Fox Hills)		
8,698.9	8,584.0	Niobrara		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.0	250.0	-0.4	29.8	Start Build 2.00
613.3	612.3	-0.4	52.8	Start 4057.9 hold at 613.3 MD
4,671.2	4,637.7	0.0	566.1	Start Drop -2.00
5,034.5	5,000.0	0.0	589.1	Start 3115.0 hold at 5034.5 MD
8,149.6	8,115.0	0.0	589.1	Start Build 10.00
9,049.6	8,688.0	573.0	589.1	Start 9370.1 hold at 9049.6 MD
18,419.7	8,688.0	9,943.1	589.1	TD at 18419.7