

# **US ROCKIES REGION PLANNING**

**COLORADO CENTRAL ZONE - 83**

**ARAPAHOE\_BOMHOFF 2 PAD**

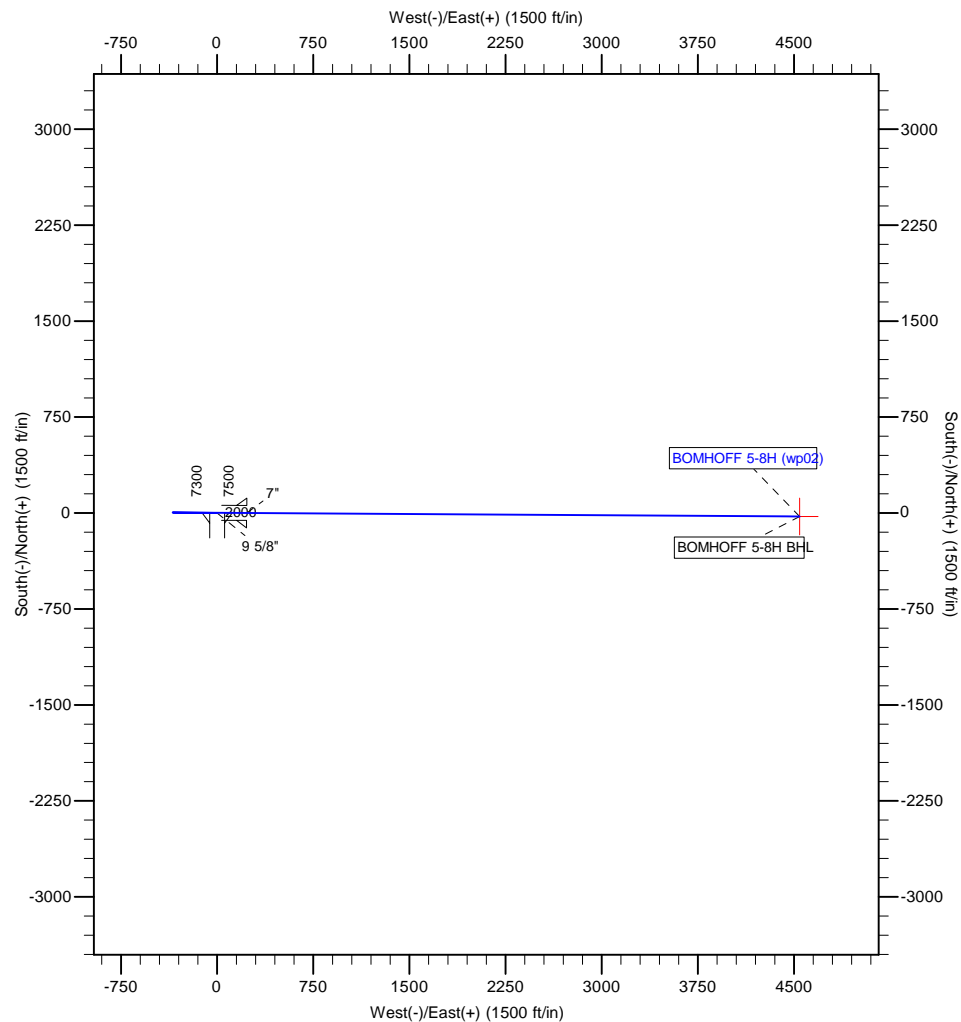
**BOMHOFF 5-8H**

**BOMHOFF 5-8H**

**Plan: BOMHOFF 5-8H (wp02)**

## **Standard Planning Report**

**20 January, 2012**



**Azimuths to True North**  
Magnetic North: 8.65°  
Magnetic Field  
Strength: 52746.8nT  
Dip Angle: 66.52°  
Date: 10/31/2011  
Model: IGRF2010



**Project:** COLORADO CENTRAL ZONE - 83  
**Site:** ARAPAHOE\_BOMHOFF 2 PAD  
**Well:** BOMHOFF 5-8H  
**Wellbore:** BOMHOFF 5-8H  
**Section:**  
**SHL:**  
**Design:** BOMHOFF 5-8H (wp02)  
**Latitude:** 39.719116  
**Longitude:** -104.563674  
**GL:** 5609.00  
**KB:** rkb+gl @ 5634.00ft

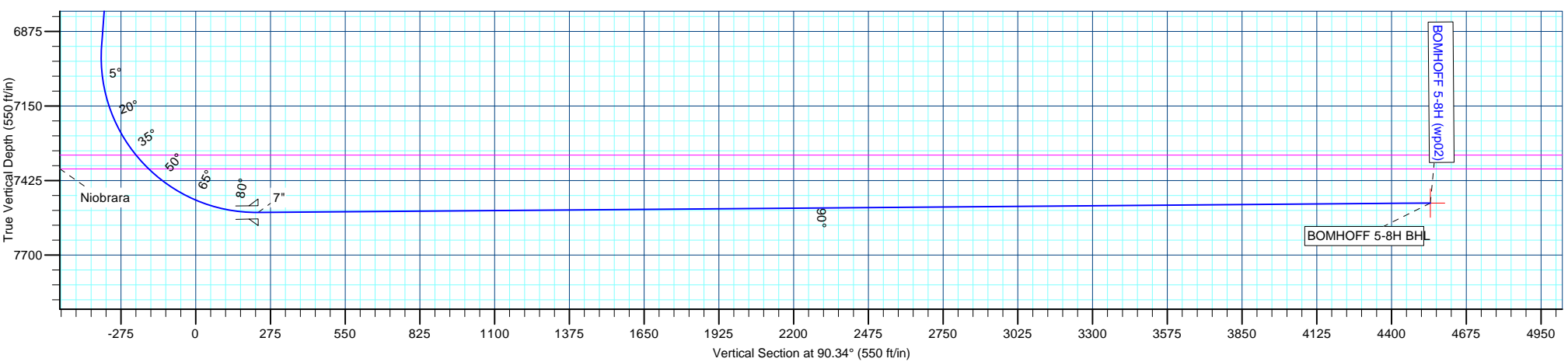
WELL DETAILS: BOMHOFF 5-8H						
+N/-S	+E/-W	Northing	Ground Level: Easting	5609.00 Latitude	39.719116 Longitude	Slot
0.00	0.00	1688174.74	3263389.34			

SECTION DETAILS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00
2205.10	4.10	270.65	2204.92	0.08	-7.34	2.00	270.65	-7.34
6941.38	4.10	270.65	6929.08	3.94	-346.11	0.00	0.00	-346.12
7887.03	90.46	90.41	7543.00	0.00	230.00	10.00	179.76	230.00
7892.30	90.46	90.36	7542.96	-0.04	235.27	1.00	-87.65	235.27
7200.64	90.46	90.36	7508.00	-26.90	4543.39	0.00	0.00	4543.46

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
BOMHOFF 5-8H BHL	7508.00	-26.90	4543.39	39.719041	-104.547523	Point

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1739.00	1739.00	Fox Hills
4709.00	4715.61	Parkman
5094.00	5101.59	Sussex
5439.00	5447.48	Shannon
7331.00	7372.87	Sharon Springs
7382.00	7442.10	Niobrara

CASING DETAILS			
TVD	MD	Name	Size
1885.00	1885.00	9 5/8"	9-5/8
7543.00	7887.03	7"	7



# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well BOMHOFF 5-8H
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	rkb+gl @ 5634.00ft
<b>Project:</b>	COLORADO CENTRAL ZONE - 83	<b>MD Reference:</b>	rkb+gl @ 5634.00ft
<b>Site:</b>	ARAPAHOE_BOMHOFF 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	BOMHOFF 5-8H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BOMHOFF 5-8H		
<b>Design:</b>	BOMHOFF 5-8H (wp02)		

<b>Project</b>	COLORADO CENTRAL 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 Central Zone		

Site		ARAPAHOE_BOMHOFF 2 PAD			
Site Position:		Northing:	1,688,211.63 usft	Latitude:	39.719213
From:	Lat/Long	Easting:	3,263,539.47 usft	Longitude:	-104.563139
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.59 °

Well	BOMHOFF 5-8H					
Well Position	+N/-S	-35.35 ft	Northing:	1,688,174.74 usft	Latitude:	39.719116
	+E/-W	-150.50 ft	Easting:	3,263,389.35 usft	Longitude:	-104.563674
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,609.00 ft

<b>Wellbore</b>	BOMHOFF 5-8H				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	10/31/2011	8.65	66.52	52,747

<b>Design</b>	BOMHOFF 5-8H (wp02)				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00	
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	90.34	

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,205.10	4.10	270.65	2,204.92	0.08	-7.34	2.00	2.00	0.00	270.65	
6,941.38	4.10	270.65	6,929.08	3.94	-346.11	0.00	0.00	0.00	0.00	
7,887.03	90.46	90.41	7,543.00	0.00	230.00	10.00	9.13	19.01	179.76	
7,892.30	90.46	90.36	7,542.96	-0.04	235.27	1.00	0.04	-1.00	-87.65	
12,200.64	90.46	90.36	7,508.00	-26.90	4,543.39	0.00	0.00	0.00	0.00	BOMHOFF 5-8H BHL

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## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well BOMHOFF 5-8H
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	rkb+gl @ 5634.00ft
<b>Project:</b>	COLORADO CENTRAL ZONE - 83	<b>MD Reference:</b>	rkb+gl @ 5634.00ft
<b>Site:</b>	ARAPAHOE_BOMHOFF 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	BOMHOFF 5-8H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BOMHOFF 5-8H		
<b>Design:</b>	BOMHOFF 5-8H (wp02)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,739.00	0.00	0.00	1,739.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills</b>									
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,885.00	0.00	0.00	1,885.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>									
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	2.00	270.65	2,099.98	0.02	-1.75	-1.75	2.00	2.00	0.00
2,200.00	4.00	270.65	2,199.84	0.08	-6.98	-6.98	2.00	2.00	0.00
2,205.10	4.10	270.65	2,204.92	0.08	-7.34	-7.34	2.00	2.00	0.00
2,300.00	4.10	270.65	2,299.58	0.16	-14.13	-14.13	0.00	0.00	0.00
2,400.00	4.10	270.65	2,399.33	0.24	-21.28	-21.28	0.00	0.00	0.00
2,500.00	4.10	270.65	2,499.07	0.32	-28.43	-28.43	0.00	0.00	0.00
2,600.00	4.10	270.65	2,598.81	0.40	-35.58	-35.59	0.00	0.00	0.00
2,700.00	4.10	270.65	2,698.56	0.49	-42.74	-42.74	0.00	0.00	0.00
2,800.00	4.10	270.65	2,798.30	0.57	-49.89	-49.89	0.00	0.00	0.00
2,900.00	4.10	270.65	2,898.04	0.65	-57.04	-57.04	0.00	0.00	0.00
3,000.00	4.10	270.65	2,997.79	0.73	-64.19	-64.20	0.00	0.00	0.00
3,100.00	4.10	270.65	3,097.53	0.81	-71.35	-71.35	0.00	0.00	0.00
3,200.00	4.10	270.65	3,197.28	0.89	-78.50	-78.50	0.00	0.00	0.00
3,300.00	4.10	270.65	3,297.02	0.97	-85.65	-85.66	0.00	0.00	0.00
3,400.00	4.10	270.65	3,396.76	1.06	-92.80	-92.81	0.00	0.00	0.00
3,500.00	4.10	270.65	3,496.51	1.14	-99.96	-99.96	0.00	0.00	0.00
3,600.00	4.10	270.65	3,596.25	1.22	-107.11	-107.12	0.00	0.00	0.00
3,700.00	4.10	270.65	3,696.00	1.30	-114.26	-114.27	0.00	0.00	0.00
3,800.00	4.10	270.65	3,795.74	1.38	-121.41	-121.42	0.00	0.00	0.00
3,900.00	4.10	270.65	3,895.48	1.46	-128.57	-128.57	0.00	0.00	0.00
4,000.00	4.10	270.65	3,995.23	1.54	-135.72	-135.73	0.00	0.00	0.00
4,100.00	4.10	270.65	4,094.97	1.62	-142.87	-142.88	0.00	0.00	0.00
4,200.00	4.10	270.65	4,194.71	1.71	-150.03	-150.03	0.00	0.00	0.00
4,300.00	4.10	270.65	4,294.46	1.79	-157.18	-157.19	0.00	0.00	0.00
4,400.00	4.10	270.65	4,394.20	1.87	-164.33	-164.34	0.00	0.00	0.00
4,500.00	4.10	270.65	4,493.95	1.95	-171.48	-171.49	0.00	0.00	0.00
4,600.00	4.10	270.65	4,593.69	2.03	-178.64	-178.64	0.00	0.00	0.00
4,700.00	4.10	270.65	4,693.43	2.11	-185.79	-185.80	0.00	0.00	0.00
4,715.61	4.10	270.65	4,709.00	2.13	-186.90	-186.91	0.00	0.00	0.00

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## Planning Report

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<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	rkb+gl @ 5634.00ft
<b>Project:</b>	COLORADO CENTRAL ZONE - 83	<b>MD Reference:</b>	rkb+gl @ 5634.00ft
<b>Site:</b>	ARAPAHOE_BOMHOFF 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	BOMHOFF 5-8H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BOMHOFF 5-8H		
<b>Design:</b>	BOMHOFF 5-8H (wp02)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
<b>Parkman</b>										
4,800.00	4.10	270.65	4,793.18	2.19	-192.94	-192.95	0.00	0.00	0.00	
4,900.00	4.10	270.65	4,892.92	2.28	-200.09	-200.10	0.00	0.00	0.00	
5,000.00	4.10	270.65	4,992.67	2.36	-207.25	-207.26	0.00	0.00	0.00	
5,100.00	4.10	270.65	5,092.41	2.44	-214.40	-214.41	0.00	0.00	0.00	
5,101.59	4.10	270.65	5,094.00	2.44	-214.51	-214.52	0.00	0.00	0.00	
<b>Sussex</b>										
5,200.00	4.10	270.65	5,192.15	2.52	-221.55	-221.56	0.00	0.00	0.00	
5,300.00	4.10	270.65	5,291.90	2.60	-228.70	-228.72	0.00	0.00	0.00	
5,400.00	4.10	270.65	5,391.64	2.68	-235.86	-235.87	0.00	0.00	0.00	
5,447.48	4.10	270.65	5,439.00	2.72	-239.25	-239.26	0.00	0.00	0.00	
<b>Shannon</b>										
5,500.00	4.10	270.65	5,491.38	2.76	-243.01	-243.02	0.00	0.00	0.00	
5,600.00	4.10	270.65	5,591.13	2.84	-250.16	-250.17	0.00	0.00	0.00	
5,700.00	4.10	270.65	5,690.87	2.93	-257.31	-257.33	0.00	0.00	0.00	
5,800.00	4.10	270.65	5,790.62	3.01	-264.47	-264.48	0.00	0.00	0.00	
5,900.00	4.10	270.65	5,890.36	3.09	-271.62	-271.63	0.00	0.00	0.00	
6,000.00	4.10	270.65	5,990.10	3.17	-278.77	-278.79	0.00	0.00	0.00	
6,100.00	4.10	270.65	6,089.85	3.25	-285.92	-285.94	0.00	0.00	0.00	
6,200.00	4.10	270.65	6,189.59	3.33	-293.08	-293.09	0.00	0.00	0.00	
6,300.00	4.10	270.65	6,289.34	3.41	-300.23	-300.24	0.00	0.00	0.00	
6,400.00	4.10	270.65	6,389.08	3.50	-307.38	-307.40	0.00	0.00	0.00	
6,500.00	4.10	270.65	6,488.82	3.58	-314.53	-314.55	0.00	0.00	0.00	
6,600.00	4.10	270.65	6,588.57	3.66	-321.69	-321.70	0.00	0.00	0.00	
6,700.00	4.10	270.65	6,688.31	3.74	-328.84	-328.86	0.00	0.00	0.00	
6,800.00	4.10	270.65	6,788.05	3.82	-335.99	-336.01	0.00	0.00	0.00	
6,900.00	4.10	270.65	6,887.80	3.90	-343.15	-343.16	0.00	0.00	0.00	
6,941.38	4.10	270.65	6,929.08	3.94	-346.11	-346.12	0.00	0.00	0.00	
7,000.00	1.76	89.85	6,987.65	3.96	-347.30	-347.32	10.00	-4.00	305.71	
7,100.00	11.76	90.33	7,086.83	3.91	-335.55	-335.56	10.00	10.00	0.48	
7,200.00	21.76	90.37	7,182.46	3.73	-306.75	-306.76	10.00	10.00	0.04	
7,300.00	31.76	90.38	7,271.64	3.44	-261.78	-261.80	10.00	10.00	0.02	
7,372.87	39.05	90.39	7,331.00	3.15	-219.59	-219.61	10.00	10.00	0.01	
<b>Sharon Springs</b>										
7,400.00	41.76	90.39	7,351.65	3.03	-202.01	-202.03	10.00	10.00	0.01	
7,442.10	45.97	90.39	7,382.00	2.83	-172.85	-172.86	10.00	10.00	0.01	
<b>Niobrara</b>										
7,500.00	51.76	90.40	7,420.07	2.53	-129.26	-129.27	10.00	10.00	0.01	
7,600.00	61.76	90.40	7,474.82	1.95	-45.73	-45.74	10.00	10.00	0.00	
7,700.00	71.76	90.40	7,514.23	1.31	46.04	46.03	10.00	10.00	0.00	
7,800.00	81.76	90.41	7,537.10	0.62	143.25	143.25	10.00	10.00	0.00	
7,866.96	88.46	90.41	7,542.81	0.14	209.93	209.93	10.00	10.00	0.00	
<b>BOMHOFF 5-8H heel</b>										
7,887.03	90.46	90.41	7,543.00	0.00	230.00	229.99	10.00	10.00	0.00	
<b>7"</b>										
7,892.30	90.46	90.36	7,542.96	-0.04	235.27	235.27	1.00	0.04	-1.00	
7,900.00	90.46	90.36	7,542.90	-0.08	242.97	242.96	0.00	0.00	0.00	
8,000.00	90.46	90.36	7,542.08	-0.71	342.96	342.96	0.00	0.00	0.00	
8,100.00	90.46	90.36	7,541.27	-1.33	442.96	442.96	0.00	0.00	0.00	
8,200.00	90.46	90.36	7,540.46	-1.95	542.95	542.95	0.00	0.00	0.00	
8,300.00	90.46	90.36	7,539.65	-2.58	642.95	642.95	0.00	0.00	0.00	
8,400.00	90.46	90.36	7,538.84	-3.20	742.94	742.95	0.00	0.00	0.00	
8,500.00	90.46	90.36	7,538.03	-3.83	842.94	842.94	0.00	0.00	0.00	

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well BOMHOFF 5-8H
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	rkb+gl @ 5634.00ft
<b>Project:</b>	COLORADO CENTRAL ZONE - 83	<b>MD Reference:</b>	rkb+gl @ 5634.00ft
<b>Site:</b>	ARAPAHOE_BOMHOFF 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	BOMHOFF 5-8H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BOMHOFF 5-8H		
<b>Design:</b>	BOMHOFF 5-8H (wp02)		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,600.00	90.46	90.36	7,537.22	-4.45	942.93	942.94	0.00	0.00	0.00	
8,700.00	90.46	90.36	7,536.40	-5.07	1,042.93	1,042.94	0.00	0.00	0.00	
8,800.00	90.46	90.36	7,535.59	-5.70	1,142.92	1,142.93	0.00	0.00	0.00	
8,900.00	90.46	90.36	7,534.78	-6.32	1,242.92	1,242.93	0.00	0.00	0.00	
9,000.00	90.46	90.36	7,533.97	-6.94	1,342.91	1,342.93	0.00	0.00	0.00	
9,100.00	90.46	90.36	7,533.16	-7.57	1,442.90	1,442.92	0.00	0.00	0.00	
9,200.00	90.46	90.36	7,532.35	-8.19	1,542.90	1,542.92	0.00	0.00	0.00	
9,300.00	90.46	90.36	7,531.54	-8.81	1,642.89	1,642.92	0.00	0.00	0.00	
9,400.00	90.46	90.36	7,530.72	-9.44	1,742.89	1,742.91	0.00	0.00	0.00	
9,500.00	90.46	90.36	7,529.91	-10.06	1,842.88	1,842.91	0.00	0.00	0.00	
9,600.00	90.46	90.36	7,529.10	-10.68	1,942.88	1,942.91	0.00	0.00	0.00	
9,700.00	90.46	90.36	7,528.29	-11.31	2,042.87	2,042.90	0.00	0.00	0.00	
9,800.00	90.46	90.36	7,527.48	-11.93	2,142.87	2,142.90	0.00	0.00	0.00	
9,900.00	90.46	90.36	7,526.67	-12.56	2,242.86	2,242.90	0.00	0.00	0.00	
10,000.00	90.46	90.36	7,525.86	-13.18	2,342.86	2,342.89	0.00	0.00	0.00	
10,100.00	90.46	90.36	7,525.04	-13.80	2,442.85	2,442.89	0.00	0.00	0.00	
10,200.00	90.46	90.36	7,524.23	-14.43	2,542.85	2,542.89	0.00	0.00	0.00	
10,300.00	90.46	90.36	7,523.42	-15.05	2,642.84	2,642.88	0.00	0.00	0.00	
10,400.00	90.46	90.36	7,522.61	-15.67	2,742.84	2,742.88	0.00	0.00	0.00	
10,500.00	90.46	90.36	7,521.80	-16.30	2,842.83	2,842.88	0.00	0.00	0.00	
10,600.00	90.46	90.36	7,520.99	-16.92	2,942.83	2,942.87	0.00	0.00	0.00	
10,700.00	90.46	90.36	7,520.18	-17.54	3,042.82	3,042.87	0.00	0.00	0.00	
10,800.00	90.46	90.36	7,519.36	-18.17	3,142.82	3,142.87	0.00	0.00	0.00	
10,900.00	90.46	90.36	7,518.55	-18.79	3,242.81	3,242.87	0.00	0.00	0.00	
11,000.00	90.46	90.36	7,517.74	-19.42	3,342.81	3,342.86	0.00	0.00	0.00	
11,100.00	90.46	90.36	7,516.93	-20.04	3,442.80	3,442.86	0.00	0.00	0.00	
11,200.00	90.46	90.36	7,516.12	-20.66	3,542.79	3,542.86	0.00	0.00	0.00	
11,300.00	90.46	90.36	7,515.31	-21.29	3,642.79	3,642.85	0.00	0.00	0.00	
11,400.00	90.46	90.36	7,514.50	-21.91	3,742.78	3,742.85	0.00	0.00	0.00	
11,500.00	90.46	90.36	7,513.69	-22.53	3,842.78	3,842.85	0.00	0.00	0.00	
11,600.00	90.46	90.36	7,512.87	-23.16	3,942.77	3,942.84	0.00	0.00	0.00	
11,700.00	90.46	90.36	7,512.06	-23.78	4,042.77	4,042.84	0.00	0.00	0.00	
11,800.00	90.46	90.36	7,511.25	-24.40	4,142.76	4,142.84	0.00	0.00	0.00	
11,900.00	90.46	90.36	7,510.44	-25.03	4,242.76	4,242.83	0.00	0.00	0.00	
12,000.00	90.46	90.36	7,509.63	-25.65	4,342.75	4,342.83	0.00	0.00	0.00	
12,100.00	90.46	90.36	7,508.82	-26.28	4,442.75	4,442.83	0.00	0.00	0.00	
12,200.00	90.46	90.36	7,508.01	-26.90	4,542.74	4,542.82	0.00	0.00	0.00	
12,200.64	90.46	90.36	7,508.00	-26.90	4,543.39	4,543.46	0.00	0.00	0.00	
BOMHOFF 5-8H BHL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
- hit/miss target										
- Shape										
BOMHOFF 5-8H BHL	0.00	0.00	7,508.00	-26.90	4,543.39	1,688,194.66	3,267,932.76	39.719041	-104.547523	
- plan hits target center										
- Point										

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well BOMHOFF 5-8H
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	rkb+gl @ 5634.00ft
<b>Project:</b>	COLORADO CENTRAL ZONE - 83	<b>MD Reference:</b>	rkb+gl @ 5634.00ft
<b>Site:</b>	ARAPAHOE_BOMHOFF 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	BOMHOFF 5-8H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	BOMHOFF 5-8H		
<b>Design:</b>	BOMHOFF 5-8H (wp02)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,885.00	1,885.00	9 5/8"	9-5/8	12-1/4	
7,887.03	7,543.00	7"	7	8-3/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,739.00	1,739.00	Fox Hills				
4,715.61	4,709.00	Parkman				
5,101.59	5,094.00	Sussex				
5,447.48	5,439.00	Shannon				
7,372.87	7,331.00	Sharon Springs				
7,442.10	7,382.00	Niobrara				