

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_Buffalo & Badger 4C-15HZ Pad

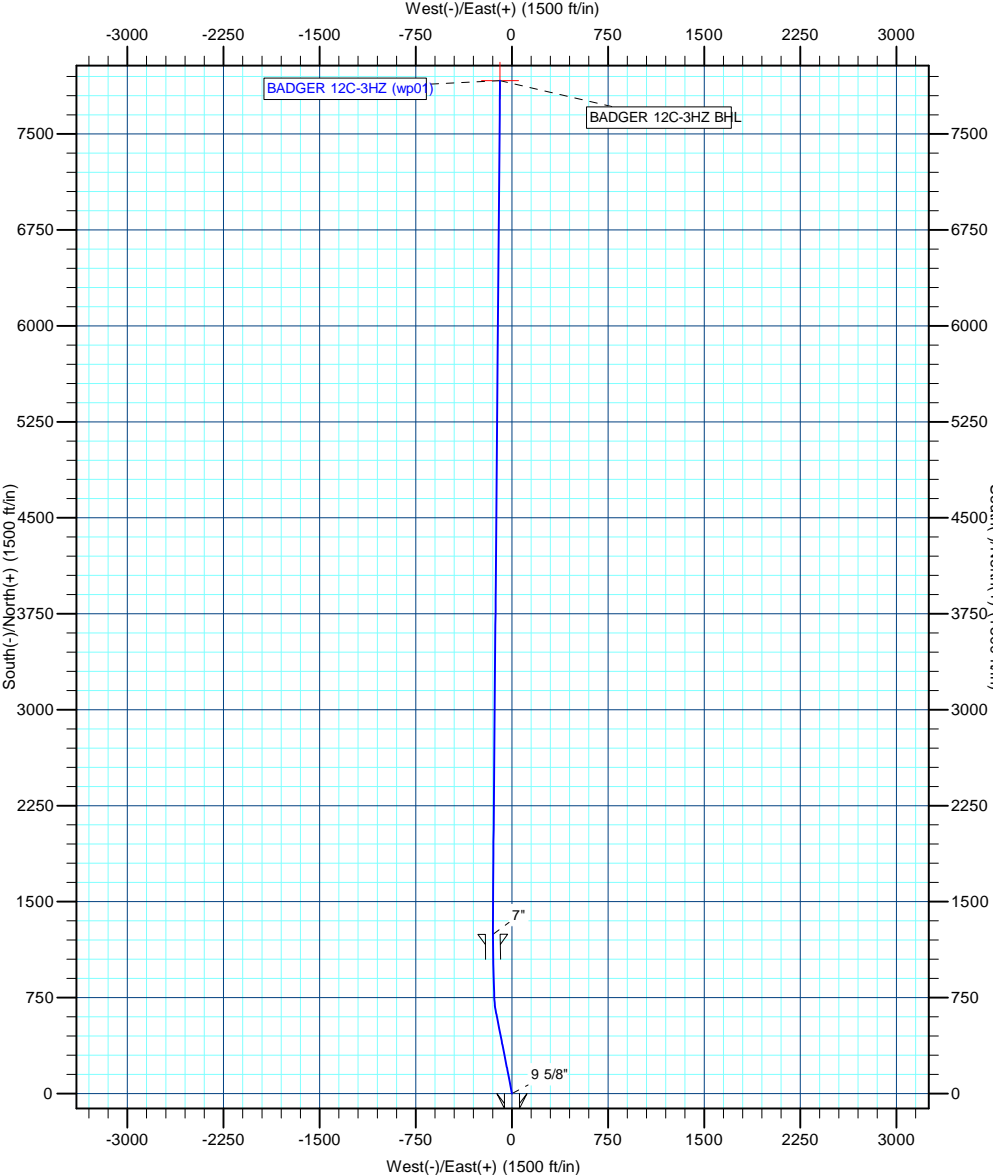
BADGER 12C-3HZ

BADGER 12C-3HZ

Plan: BADGER 12C-3HZ (wp01)

Standard Planning Report

12 July, 2012



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Azimuths to True North

Magnetic North: 8.81°

Magnetic Field

Strength: 52810.0snT

Dip Angle: 66.70°

Date: 7/12/2012

Model: IGRF2010



Project: COLORADO NORTHERN ZONE - 83

Site: WELD_Buffalo & Badger 4C-15HZ Pad

Well: BADGER 12C-3HZ

Wellbore: BADGER 12C-3HZ

Section:

SHL:

Design: BADGER 12C-3HZ (wp01)

Latitude: 40.057342

Longitude: -104.995597

GL: 5138.00

KB: gl + rkb @ 5155.00ft

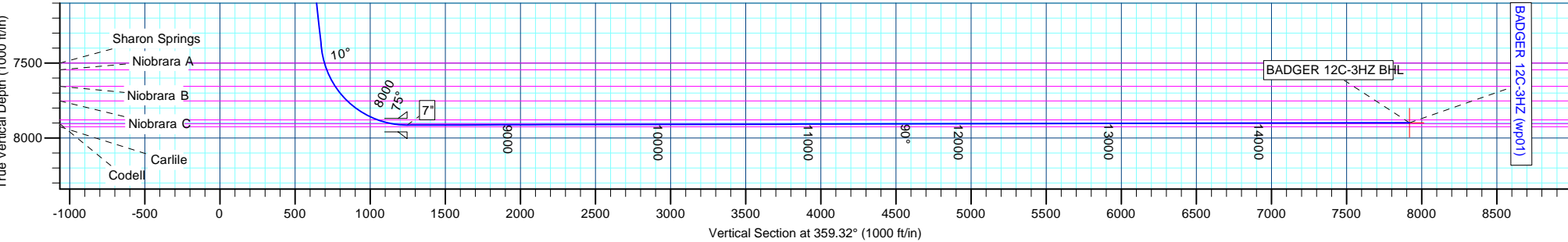
WELL DETAILS: BADGER 12C-3HZ						
+N/-S	+E/-W	Northing	Ground Level: Easting	5138.00 Latitude	Longitude	Slot
0.00	0.00	1264136.64	3141190.73	40.057342	-104.995597	

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
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00
1314.01	6.28	348.92	1313.38	16.87	-3.30	2.00	348.92	16.91
7440.18	6.28	348.92	7402.79	674.53	-132.12	0.00	0.00	676.04
8278.42	90.00	359.32	7914.00	1244.00	-149.00	10.00	10.47	1245.67
8395.58	90.14	0.49	7913.86	1361.16	-149.19	1.00	83.21	1362.83
14951.52	90.14	0.49	7898.00	7916.85	-93.46	0.00	0.00	7917.40

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
BADGER 12C-3HZ BHL	7898.00	7916.85	-93.46	40.079075	-104.995931	Point

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4317.00	4335.76	Parkman
4763.00	4784.46	Sussex
5233.00	5257.29	Shannon
7500.00	7539.40	Sharon Springs
7545.00	7586.87	Niobrara A
7655.00	7710.63	Niobrara B
7752.00	7836.66	Niobrara C
7879.00	8077.10	Fort Hays
7905.00	8176.72	Codell

CASING DETAILS			
TVD	MD	Name	Size
1000.00	1000.00	9 5/8"	9-5/8
7914.00	8278.42	7"	7



Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well BADGER 12C-3HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	gl + rkb @ 5155.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	gl + rkb @ 5155.00ft
Site:	WELD_Buffalo & Badger 4C-15HZ Pad	North Reference:	True
Well:	BADGER 12C-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BADGER 12C-3HZ		
Design:	BADGER 12C-3HZ (wp01)		

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	WELD_Buffalo & Badger 4C-15HZ Pad			
Site Position:		Northing:	1,264,133.85 usft	Latitude: 40.057339
From:	Lat/Long	Easting:	3,140,890.95 usft	Longitude: -104.996668
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence: 0.33 °

Well	BADGER 12C-3HZ			
Well Position	+N/-S	1.09 ft	Northing:	1,264,136.64 usft
	+E/-W	299.79 ft	Easting:	3,141,190.73 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	Ground Level: 5,138.00 ft

Wellbore	BADGER 12C-3HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/12/2012	8.81	66.70	52,810

Design	BADGER 12C-3HZ (wp01)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	359.32

Plan Sections										
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	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,314.01	6.28	348.92	1,313.38	16.87	-3.30	2.00	2.00	0.00	348.92	
7,440.18	6.28	348.92	7,402.79	674.53	-132.12	0.00	0.00	0.00	0.00	
8,278.42	90.00	359.32	7,914.00	1,244.00	-149.00	10.00	9.99	1.24	10.47	
8,395.58	90.14	0.49	7,913.86	1,361.16	-149.19	1.00	0.12	0.99	83.21	
14,951.52	90.14	0.49	7,898.00	7,916.85	-93.46	0.00	0.00	0.00	0.00	BADGER 12C-3HZ B

Anadarko Petroleum Corp

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	gl + rkb @ 5155.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	gl + rkb @ 5155.00ft
Site:	WELD_Buffalo & Badger 4C-15HZ Pad	North Reference:	True
Well:	BADGER 12C-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BADGER 12C-3HZ		
Design:	BADGER 12C-3HZ (wp01)		

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
9 5/8"									
1,100.00	2.00	348.92	1,099.98	1.71	-0.34	1.72	2.00	2.00	0.00
1,200.00	4.00	348.92	1,199.84	6.85	-1.34	6.86	2.00	2.00	0.00
1,300.00	6.00	348.92	1,299.45	15.40	-3.02	15.44	2.00	2.00	0.00
1,314.01	6.28	348.92	1,313.38	16.87	-3.30	16.91	2.00	2.00	0.00
1,400.00	6.28	348.92	1,398.86	26.10	-5.11	26.16	0.00	0.00	0.00
1,500.00	6.28	348.92	1,498.26	36.84	-7.22	36.92	0.00	0.00	0.00
1,600.00	6.28	348.92	1,597.66	47.57	-9.32	47.68	0.00	0.00	0.00
1,700.00	6.28	348.92	1,697.06	58.31	-11.42	58.44	0.00	0.00	0.00
1,800.00	6.28	348.92	1,796.46	69.04	-13.52	69.20	0.00	0.00	0.00
1,900.00	6.28	348.92	1,895.85	79.78	-15.63	79.96	0.00	0.00	0.00
2,000.00	6.28	348.92	1,995.25	90.51	-17.73	90.72	0.00	0.00	0.00
2,100.00	6.28	348.92	2,094.65	101.25	-19.83	101.48	0.00	0.00	0.00
2,200.00	6.28	348.92	2,194.05	111.98	-21.93	112.24	0.00	0.00	0.00
2,300.00	6.28	348.92	2,293.45	122.72	-24.04	122.99	0.00	0.00	0.00
2,400.00	6.28	348.92	2,392.85	133.45	-26.14	133.75	0.00	0.00	0.00
2,500.00	6.28	348.92	2,492.25	144.19	-28.24	144.51	0.00	0.00	0.00
2,600.00	6.28	348.92	2,591.65	154.92	-30.34	155.27	0.00	0.00	0.00
2,700.00	6.28	348.92	2,691.05	165.66	-32.45	166.03	0.00	0.00	0.00
2,800.00	6.28	348.92	2,790.45	176.40	-34.55	176.79	0.00	0.00	0.00
2,900.00	6.28	348.92	2,889.85	187.13	-36.65	187.55	0.00	0.00	0.00
3,000.00	6.28	348.92	2,989.25	197.87	-38.75	198.31	0.00	0.00	0.00
3,100.00	6.28	348.92	3,088.65	208.60	-40.86	209.07	0.00	0.00	0.00
3,200.00	6.28	348.92	3,188.05	219.34	-42.96	219.83	0.00	0.00	0.00
3,300.00	6.28	348.92	3,287.45	230.07	-45.06	230.59	0.00	0.00	0.00
3,400.00	6.28	348.92	3,386.85	240.81	-47.17	241.35	0.00	0.00	0.00
3,500.00	6.28	348.92	3,486.25	251.54	-49.27	252.11	0.00	0.00	0.00
3,600.00	6.28	348.92	3,585.65	262.28	-51.37	262.86	0.00	0.00	0.00
3,700.00	6.28	348.92	3,685.05	273.01	-53.47	273.62	0.00	0.00	0.00
3,800.00	6.28	348.92	3,784.45	283.75	-55.58	284.38	0.00	0.00	0.00
3,900.00	6.28	348.92	3,883.85	294.48	-57.68	295.14	0.00	0.00	0.00
4,000.00	6.28	348.92	3,983.25	305.22	-59.78	305.90	0.00	0.00	0.00
4,100.00	6.28	348.92	4,082.65	315.95	-61.88	316.66	0.00	0.00	0.00
4,200.00	6.28	348.92	4,182.05	326.69	-63.99	327.42	0.00	0.00	0.00
4,300.00	6.28	348.92	4,281.45	337.42	-66.09	338.18	0.00	0.00	0.00
4,335.76	6.28	348.92	4,317.00	341.26	-66.84	342.03	0.00	0.00	0.00
Parkman									
4,400.00	6.28	348.92	4,380.85	348.16	-68.19	348.94	0.00	0.00	0.00
4,500.00	6.28	348.92	4,480.25	358.89	-70.29	359.70	0.00	0.00	0.00
4,600.00	6.28	348.92	4,579.65	369.63	-72.40	370.46	0.00	0.00	0.00
4,700.00	6.28	348.92	4,679.05	380.36	-74.50	381.22	0.00	0.00	0.00
4,784.46	6.28	348.92	4,763.00	389.43	-76.28	390.30	0.00	0.00	0.00

Anadarko Petroleum Corp

Planning Report

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	gl + rkb @ 5155.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	gl + rkb @ 5155.00ft
Site:	WELD_Buffalo & Badger 4C-15HZ Pad	North Reference:	True
Well:	BADGER 12C-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BADGER 12C-3HZ		
Design:	BADGER 12C-3HZ (wp01)		

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)
Sussex									
4,800.00	6.28	348.92	4,778.45	391.10	-76.60	391.98	0.00	0.00	0.00
4,900.00	6.28	348.92	4,877.85	401.83	-78.70	402.73	0.00	0.00	0.00
5,000.00	6.28	348.92	4,977.25	412.57	-80.81	413.49	0.00	0.00	0.00
5,100.00	6.28	348.92	5,076.65	423.30	-82.91	424.25	0.00	0.00	0.00
5,200.00	6.28	348.92	5,176.05	434.04	-85.01	435.01	0.00	0.00	0.00
5,257.29	6.28	348.92	5,233.00	440.19	-86.22	441.18	0.00	0.00	0.00
Shannon									
5,300.00	6.28	348.92	5,275.45	444.77	-87.12	445.77	0.00	0.00	0.00
5,400.00	6.28	348.92	5,374.85	455.51	-89.22	456.53	0.00	0.00	0.00
5,500.00	6.28	348.92	5,474.25	466.24	-91.32	467.29	0.00	0.00	0.00
5,600.00	6.28	348.92	5,573.65	476.98	-93.42	478.05	0.00	0.00	0.00
5,700.00	6.28	348.92	5,673.05	487.72	-95.53	488.81	0.00	0.00	0.00
5,800.00	6.28	348.92	5,772.45	498.45	-97.63	499.57	0.00	0.00	0.00
5,900.00	6.28	348.92	5,871.85	509.19	-99.73	510.33	0.00	0.00	0.00
6,000.00	6.28	348.92	5,971.25	519.92	-101.83	521.09	0.00	0.00	0.00
6,100.00	6.28	348.92	6,070.65	530.66	-103.94	531.85	0.00	0.00	0.00
6,200.00	6.28	348.92	6,170.05	541.39	-106.04	542.61	0.00	0.00	0.00
6,300.00	6.28	348.92	6,269.45	552.13	-108.14	553.36	0.00	0.00	0.00
6,400.00	6.28	348.92	6,368.85	562.86	-110.24	564.12	0.00	0.00	0.00
6,500.00	6.28	348.92	6,468.25	573.60	-112.35	574.88	0.00	0.00	0.00
6,600.00	6.28	348.92	6,567.65	584.33	-114.45	585.64	0.00	0.00	0.00
6,700.00	6.28	348.92	6,667.05	595.07	-116.55	596.40	0.00	0.00	0.00
6,800.00	6.28	348.92	6,766.45	605.80	-118.65	607.16	0.00	0.00	0.00
6,900.00	6.28	348.92	6,865.85	616.54	-120.76	617.92	0.00	0.00	0.00
7,000.00	6.28	348.92	6,965.25	627.27	-122.86	628.68	0.00	0.00	0.00
7,100.00	6.28	348.92	7,064.65	638.01	-124.96	639.44	0.00	0.00	0.00
7,200.00	6.28	348.92	7,164.05	648.74	-127.06	650.20	0.00	0.00	0.00
7,300.00	6.28	348.92	7,263.45	659.48	-129.17	660.96	0.00	0.00	0.00
7,400.00	6.28	348.92	7,362.85	670.21	-131.27	671.72	0.00	0.00	0.00
7,440.18	6.28	348.92	7,402.79	674.53	-132.12	676.04	0.00	0.00	0.00
7,500.00	12.21	354.05	7,461.80	684.04	-133.40	685.57	10.00	9.91	8.58
7,539.40	16.14	355.38	7,500.00	693.64	-134.27	695.18	10.00	9.97	3.38
Sharon Springs									
7,586.87	20.88	356.34	7,545.00	708.67	-135.35	710.22	10.00	9.98	2.00
Niobrara A									
7,600.00	22.19	356.53	7,557.21	713.48	-135.64	715.03	10.00	9.99	1.48
7,700.00	32.18	357.51	7,646.06	759.04	-137.95	760.62	10.00	9.99	0.98
7,710.63	33.24	357.59	7,655.00	764.78	-138.19	766.36	10.00	9.99	0.68
Niobrara B									
7,800.00	42.17	358.07	7,725.64	819.34	-140.24	820.94	10.00	9.99	0.54
7,836.66	45.83	358.22	7,752.00	844.79	-141.07	846.40	10.00	10.00	0.41
Niobrara C									
7,900.00	52.17	358.44	7,793.54	892.55	-142.46	894.17	10.00	10.00	0.35
8,000.00	62.16	358.72	7,847.69	976.45	-144.52	978.08	10.00	10.00	0.28
8,077.10	69.87	358.91	7,879.00	1,046.82	-145.98	1,048.47	10.00	10.00	0.24
Fort Hays									
8,100.00	72.16	358.96	7,886.45	1,068.47	-146.38	1,070.12	10.00	10.00	0.22
8,176.72	79.83	359.12	7,905.00	1,142.84	-147.63	1,144.51	10.00	10.00	0.21
Codell									
8,200.00	82.16	359.17	7,908.64	1,165.83	-147.97	1,167.50	10.00	10.00	0.20
8,278.42	90.00	359.32	7,914.00	1,244.00	-149.00	1,245.67	10.00	10.00	0.20
7"									

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	gl + rkb @ 5155.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	gl + rkb @ 5155.00ft
Site:	WELD_Buffalo & Badger 4C-15HZ Pad	North Reference:	True
Well:	BADGER 12C-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BADGER 12C-3HZ		
Design:	BADGER 12C-3HZ (wp01)		

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)
8,300.00	90.03	359.54	7,914.00	1,265.58	-149.21	1,267.25	1.00	0.12	0.99
8,395.58	90.14	0.49	7,913.86	1,361.16	-149.19	1,362.83	1.00	0.12	0.99
8,400.00	90.14	0.49	7,913.85	1,365.58	-149.16	1,367.25	0.00	0.00	0.00
8,500.00	90.14	0.49	7,913.61	1,465.58	-148.31	1,467.22	0.00	0.00	0.00
8,600.00	90.14	0.49	7,913.36	1,565.57	-147.46	1,567.20	0.00	0.00	0.00
8,700.00	90.14	0.49	7,913.12	1,665.57	-146.61	1,667.18	0.00	0.00	0.00
8,800.00	90.14	0.49	7,912.88	1,765.56	-145.76	1,767.16	0.00	0.00	0.00
8,900.00	90.14	0.49	7,912.64	1,865.56	-144.91	1,867.14	0.00	0.00	0.00
9,000.00	90.14	0.49	7,912.40	1,965.56	-144.06	1,967.12	0.00	0.00	0.00
9,100.00	90.14	0.49	7,912.15	2,065.55	-143.21	2,067.10	0.00	0.00	0.00
9,200.00	90.14	0.49	7,911.91	2,165.55	-142.36	2,167.08	0.00	0.00	0.00
9,300.00	90.14	0.49	7,911.67	2,265.55	-141.51	2,267.06	0.00	0.00	0.00
9,400.00	90.14	0.49	7,911.43	2,365.54	-140.66	2,367.04	0.00	0.00	0.00
9,500.00	90.14	0.49	7,911.19	2,465.54	-139.81	2,467.02	0.00	0.00	0.00
9,600.00	90.14	0.49	7,910.95	2,565.53	-138.96	2,566.99	0.00	0.00	0.00
9,700.00	90.14	0.49	7,910.70	2,665.53	-138.11	2,666.97	0.00	0.00	0.00
9,800.00	90.14	0.49	7,910.46	2,765.53	-137.25	2,766.95	0.00	0.00	0.00
9,900.00	90.14	0.49	7,910.22	2,865.52	-136.40	2,866.93	0.00	0.00	0.00
10,000.00	90.14	0.49	7,909.98	2,965.52	-135.55	2,966.91	0.00	0.00	0.00
10,100.00	90.14	0.49	7,909.74	3,065.51	-134.70	3,066.89	0.00	0.00	0.00
10,200.00	90.14	0.49	7,909.49	3,165.51	-133.85	3,166.87	0.00	0.00	0.00
10,300.00	90.14	0.49	7,909.25	3,265.51	-133.00	3,266.85	0.00	0.00	0.00
10,400.00	90.14	0.49	7,909.01	3,365.50	-132.15	3,366.83	0.00	0.00	0.00
10,500.00	90.14	0.49	7,908.77	3,465.50	-131.30	3,466.81	0.00	0.00	0.00
10,600.00	90.14	0.49	7,908.53	3,565.49	-130.45	3,566.79	0.00	0.00	0.00
10,700.00	90.14	0.49	7,908.28	3,665.49	-129.60	3,666.77	0.00	0.00	0.00
10,800.00	90.14	0.49	7,908.04	3,765.49	-128.75	3,766.74	0.00	0.00	0.00
10,900.00	90.14	0.49	7,907.80	3,865.48	-127.90	3,866.72	0.00	0.00	0.00
11,000.00	90.14	0.49	7,907.56	3,965.48	-127.05	3,966.70	0.00	0.00	0.00
11,100.00	90.14	0.49	7,907.32	4,065.47	-126.20	4,066.68	0.00	0.00	0.00
11,200.00	90.14	0.49	7,907.07	4,165.47	-125.35	4,166.66	0.00	0.00	0.00
11,300.00	90.14	0.49	7,906.83	4,265.47	-124.50	4,266.64	0.00	0.00	0.00
11,400.00	90.14	0.49	7,906.59	4,365.46	-123.65	4,366.62	0.00	0.00	0.00
11,500.00	90.14	0.49	7,906.35	4,465.46	-122.80	4,466.60	0.00	0.00	0.00
11,600.00	90.14	0.49	7,906.11	4,565.46	-121.95	4,566.58	0.00	0.00	0.00
11,700.00	90.14	0.49	7,905.87	4,665.45	-121.10	4,666.56	0.00	0.00	0.00
11,800.00	90.14	0.49	7,905.62	4,765.45	-120.25	4,766.54	0.00	0.00	0.00
11,900.00	90.14	0.49	7,905.38	4,865.44	-119.40	4,866.51	0.00	0.00	0.00
12,000.00	90.14	0.49	7,905.14	4,965.44	-118.55	4,966.49	0.00	0.00	0.00
12,100.00	90.14	0.49	7,904.90	5,065.44	-117.70	5,066.47	0.00	0.00	0.00
12,200.00	90.14	0.49	7,904.66	5,165.43	-116.85	5,166.45	0.00	0.00	0.00
12,300.00	90.14	0.49	7,904.41	5,265.43	-116.00	5,266.43	0.00	0.00	0.00
12,400.00	90.14	0.49	7,904.17	5,365.42	-115.15	5,366.41	0.00	0.00	0.00
12,500.00	90.14	0.49	7,903.93	5,465.42	-114.30	5,466.39	0.00	0.00	0.00
12,600.00	90.14	0.49	7,903.69	5,565.42	-113.45	5,566.37	0.00	0.00	0.00
12,700.00	90.14	0.49	7,903.45	5,665.41	-112.60	5,666.35	0.00	0.00	0.00
12,800.00	90.14	0.49	7,903.20	5,765.41	-111.75	5,766.33	0.00	0.00	0.00
12,900.00	90.14	0.49	7,902.96	5,865.40	-110.90	5,866.31	0.00	0.00	0.00
13,000.00	90.14	0.49	7,902.72	5,965.40	-110.05	5,966.28	0.00	0.00	0.00
13,100.00	90.14	0.49	7,902.48	6,065.40	-109.20	6,066.26	0.00	0.00	0.00
13,200.00	90.14	0.49	7,902.24	6,165.39	-108.35	6,166.24	0.00	0.00	0.00
13,300.00	90.14	0.49	7,902.00	6,265.39	-107.50	6,266.22	0.00	0.00	0.00
13,400.00	90.14	0.49	7,901.75	6,365.39	-106.65	6,366.20	0.00	0.00	0.00
13,500.00	90.14	0.49	7,901.51	6,465.38	-105.80	6,466.18	0.00	0.00	0.00

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well BADGER 12C-3HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	gl + rkb @ 5155.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	gl + rkb @ 5155.00ft
Site:	WELD_Buffalo & Badger 4C-15HZ Pad	North Reference:	True
Well:	BADGER 12C-3HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BADGER 12C-3HZ		
Design:	BADGER 12C-3HZ (wp01)		

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)	
13,600.00	90.14	0.49	7,901.27	6,565.38	-104.95	6,566.16	0.00	0.00	0.00	
13,700.00	90.14	0.49	7,901.03	6,665.37	-104.10	6,666.14	0.00	0.00	0.00	
13,800.00	90.14	0.49	7,900.79	6,765.37	-103.25	6,766.12	0.00	0.00	0.00	
13,900.00	90.14	0.49	7,900.54	6,865.37	-102.40	6,866.10	0.00	0.00	0.00	
14,000.00	90.14	0.49	7,900.30	6,965.36	-101.55	6,966.08	0.00	0.00	0.00	
14,100.00	90.14	0.49	7,900.06	7,065.36	-100.70	7,066.05	0.00	0.00	0.00	
14,200.00	90.14	0.49	7,899.82	7,165.35	-99.85	7,166.03	0.00	0.00	0.00	
14,300.00	90.14	0.49	7,899.58	7,265.35	-99.00	7,266.01	0.00	0.00	0.00	
14,400.00	90.14	0.49	7,899.33	7,365.35	-98.15	7,365.99	0.00	0.00	0.00	
14,500.00	90.14	0.49	7,899.09	7,465.34	-97.30	7,465.97	0.00	0.00	0.00	
14,600.00	90.14	0.49	7,898.85	7,565.34	-96.45	7,565.95	0.00	0.00	0.00	
14,700.00	90.14	0.49	7,898.61	7,665.33	-95.60	7,665.93	0.00	0.00	0.00	
14,800.00	90.14	0.49	7,898.37	7,765.33	-94.75	7,765.91	0.00	0.00	0.00	
14,900.00	90.14	0.49	7,898.12	7,865.33	-93.90	7,865.89	0.00	0.00	0.00	
14,951.52	90.14	0.49	7,898.00	7,916.85	-93.46	7,917.40	0.00	0.00	0.00	
BADGER 12C-3HZ 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									
BADGER 12C-3HZ BHL	0.00	0.00	7,898.00	7,916.85	-93.46	1,272,052.81	3,141,052.24	40.079075	-104.995931
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
1,000.00	1,000.00	9 5/8"	9-5/8	12-1/4	
8,278.42	7,914.00	7"	7	8-3/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,335.76	4,317.00	Parkman				
4,784.46	4,763.00	Sussex				
5,257.29	5,233.00	Shannon				
7,539.40	7,500.00	Sharon Springs				
7,586.87	7,545.00	Niobrara A				
7,710.63	7,655.00	Niobrara B				
7,836.66	7,752.00	Niobrara C				
8,077.10	7,879.00	Fort Hays				
8,176.72	7,905.00	Codell				

Anadarko Petroleum Corp

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