

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_CAMP 5 PAD

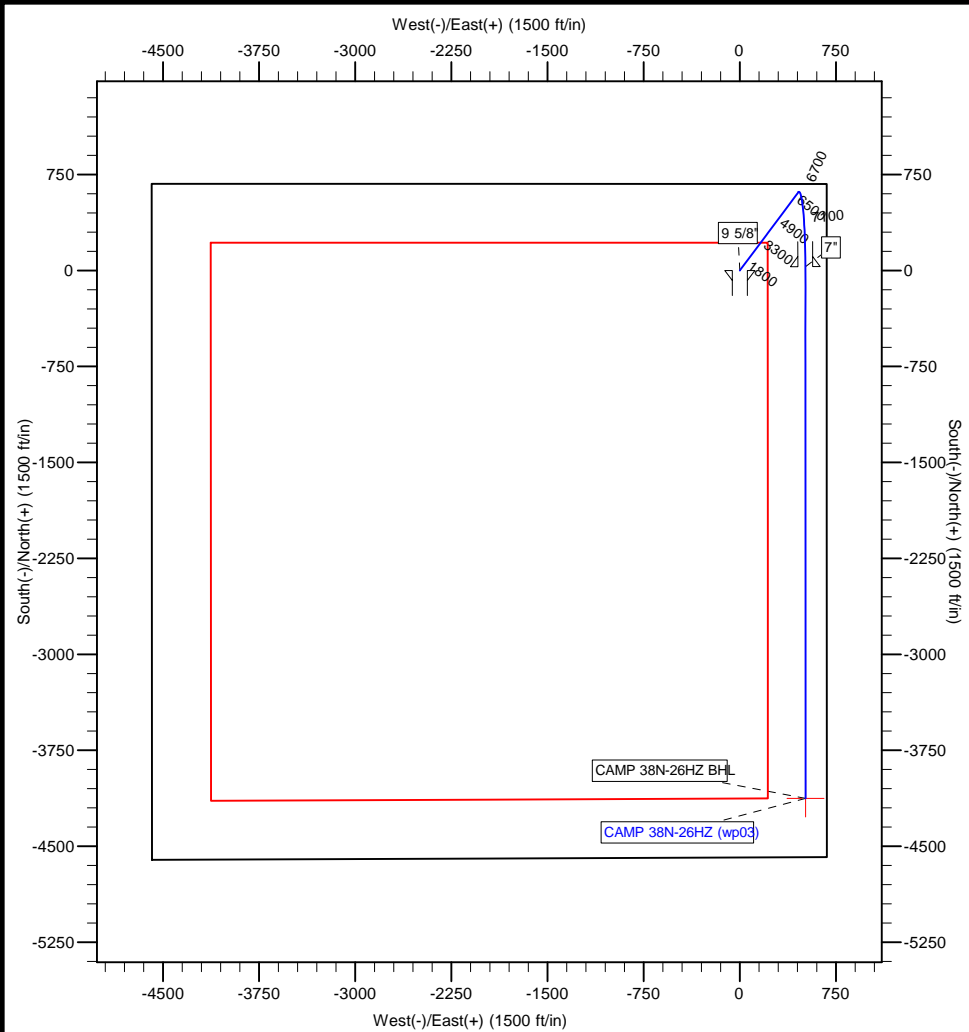
CAMP 38N-26HZ

CAMP 38N-26HZ

Plan: CAMP 38N-26HZ (wp03)

Standard Planning Report

06 December, 2011



Project: COLORADO NORTHERN ZONE - 83
 Site: WELD_CAMP 5 PAD
 Well: CAMP 38N-26HZ
 Wellbore: CAMP 38N-26HZ
 Section:
 SHL:
 Design: CAMP 38N-26HZ (wp03)
 Latitude: 40.201602
 Longitude: -104.737354
 GL: 5014.00
 KB: GL + RKB @ 5031.00ft

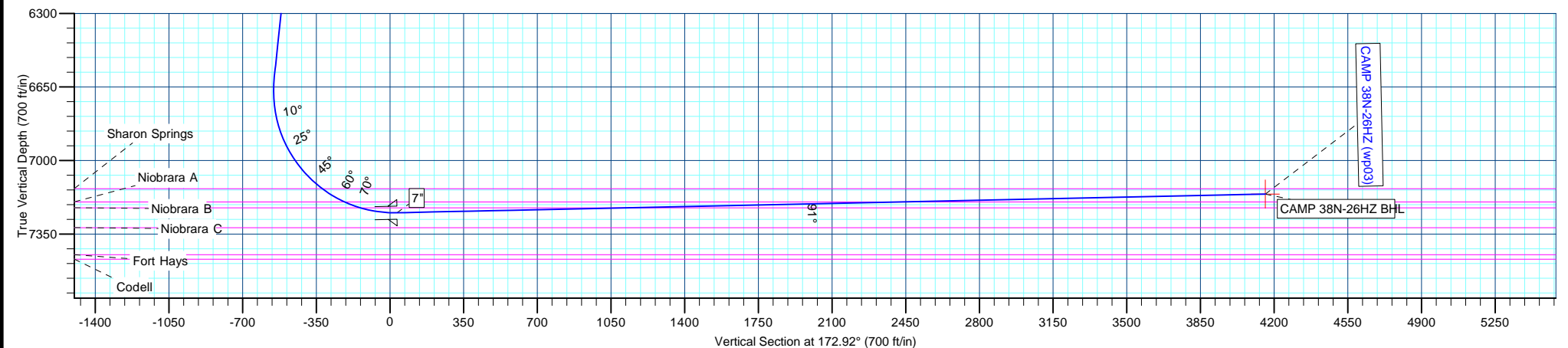
WELL DETAILS: CAMP 38N-26HZ						
+N/-S	+E/-W	Northing	Ground Level: Easting	5014.00 Latitude	40.201602 Longitude	Slot
0.00	0.00	1317202.09	3213023.78	40.201602	-104.737354	

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
1400.92	8.02	36.73	1399.61	22.45	16.75	2.00	36.73	-20.21
6667.27	8.02	36.73	6614.48	611.22	456.06	0.00	0.00	-550.36
7643.32	91.19	179.97	7249.00	30.00	511.00	10.00	142.87	33.20
7646.94	91.23	179.98	7248.92	26.38	511.00	1.00	17.91	36.79
11800.14	91.23	179.98	7160.00	-4125.86	512.37	0.00	0.00	4157.55

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)							
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape	Point
CAMP 38N-26HZ BHL	7160.00	-4125.86	512.37	40.190276	-104.735520	Point	

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4098.00	4125.95	Parkman
4683.00	4716.72	Sussex
7135.00	7262.76	Sharon Springs
7198.00	7387.04	Niobrara A
7226.00	7467.73	Niobrara B

CASING DETAILS			
TVD	MD	Name	Size
900.00	900.00	9 5/8"	9-5/8
7249.00	7643.32	7"	7



Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well CAMP 38N-26HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 5031.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 5031.00ft
Site:	WELD_CAMP 5 PAD	North Reference:	True
Well:	CAMP 38N-26HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CAMP 38N-26HZ		
Design:	CAMP 38N-26HZ (wp03)		

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_CAMP 5 PAD			
Site Position:		Northing:	1,317,276.21 usft	Latitude:	40.201805
From:	Lat/Long	Easting:	3,213,042.14 usft	Longitude:	-104.737286
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.49 °

Well	CAMP 38N-26HZ					
Well Position	+N/-S	-73.96 ft	Northing:	1,317,202.09 usft	Latitude:	40.201602
	+E/-W	-18.99 ft	Easting:	3,213,023.78 usft	Longitude:	-104.737354
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,014.00 ft

Wellbore	CAMP 38N-26HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/7/2011	8.79	66.88	52,996

Design	CAMP 38N-26HZ (wp03)			
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	172.92

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	
1,400.92	8.02	36.73	1,399.61	22.45	16.75	2.00	2.00	0.00	36.73	
6,667.27	8.02	36.73	6,614.48	611.22	456.06	0.00	0.00	0.00	0.00	
7,643.32	91.19	179.97	7,249.00	30.00	511.00	10.00	8.52	14.68	142.87	
7,646.94	91.23	179.98	7,248.92	26.38	511.00	1.00	0.95	0.31	17.91	
11,800.14	91.23	179.98	7,160.00	-4,125.86	512.37	0.00	0.00	0.00	0.00	CAMP 38N-26HZ BHI

Anadarko Petroleum Corp

Planning Report

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 5031.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 5031.00ft
Site:	WELD_CAMP 5 PAD	North Reference:	True
Well:	CAMP 38N-26HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CAMP 38N-26HZ		
Design:	CAMP 38N-26HZ (wp03)		

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
9 5/8"									
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	2.00	36.73	1,099.98	1.40	1.04	-1.26	2.00	2.00	0.00
1,200.00	4.00	36.73	1,199.84	5.59	4.17	-5.04	2.00	2.00	0.00
1,300.00	6.00	36.73	1,299.45	12.58	9.39	-11.33	2.00	2.00	0.00
1,400.00	8.00	36.73	1,398.70	22.35	16.67	-20.12	2.00	2.00	0.00
1,400.92	8.02	36.73	1,399.61	22.45	16.75	-20.21	2.00	2.00	0.00
1,500.00	8.02	36.73	1,497.73	33.53	25.01	-30.19	0.00	0.00	0.00
1,600.00	8.02	36.73	1,596.75	44.71	33.36	-40.25	0.00	0.00	0.00
1,700.00	8.02	36.73	1,695.77	55.89	41.70	-50.32	0.00	0.00	0.00
1,800.00	8.02	36.73	1,794.79	67.07	50.04	-60.39	0.00	0.00	0.00
1,900.00	8.02	36.73	1,893.82	78.25	58.38	-70.45	0.00	0.00	0.00
2,000.00	8.02	36.73	1,992.84	89.42	66.72	-80.52	0.00	0.00	0.00
2,100.00	8.02	36.73	2,091.86	100.60	75.07	-90.59	0.00	0.00	0.00
2,200.00	8.02	36.73	2,190.88	111.78	83.41	-100.65	0.00	0.00	0.00
2,300.00	8.02	36.73	2,289.91	122.96	91.75	-110.72	0.00	0.00	0.00
2,400.00	8.02	36.73	2,388.93	134.14	100.09	-120.79	0.00	0.00	0.00
2,500.01	8.02	36.73	2,487.95	145.32	108.43	-130.85	0.00	0.00	0.00
2,600.01	8.02	36.73	2,586.97	156.50	116.77	-140.92	0.00	0.00	0.00
2,700.01	8.02	36.73	2,686.00	167.68	125.12	-150.99	0.00	0.00	0.00
2,800.01	8.02	36.73	2,785.02	178.86	133.46	-161.05	0.00	0.00	0.00
2,900.01	8.02	36.73	2,884.04	190.04	141.80	-171.12	0.00	0.00	0.00
3,000.01	8.02	36.73	2,983.07	201.22	150.14	-181.19	0.00	0.00	0.00
3,100.01	8.02	36.73	3,082.09	212.40	158.48	-191.25	0.00	0.00	0.00
3,200.01	8.02	36.73	3,181.11	223.58	166.83	-201.32	0.00	0.00	0.00
3,300.01	8.02	36.73	3,280.13	234.76	175.17	-211.39	0.00	0.00	0.00
3,400.01	8.02	36.73	3,379.16	245.94	183.51	-221.45	0.00	0.00	0.00
3,500.01	8.02	36.73	3,478.18	257.12	191.85	-231.52	0.00	0.00	0.00
3,600.01	8.02	36.73	3,577.20	268.30	200.19	-241.59	0.00	0.00	0.00
3,700.01	8.02	36.73	3,676.22	279.48	208.53	-251.65	0.00	0.00	0.00
3,800.01	8.02	36.73	3,775.25	290.66	216.88	-261.72	0.00	0.00	0.00
3,900.01	8.02	36.73	3,874.27	301.84	225.22	-271.79	0.00	0.00	0.00
4,000.01	8.02	36.73	3,973.29	313.02	233.56	-281.85	0.00	0.00	0.00
4,100.01	8.02	36.73	4,072.31	324.20	241.90	-291.92	0.00	0.00	0.00
4,125.95	8.02	36.73	4,098.00	327.10	244.07	-294.53	0.00	0.00	0.00
Parkman									
4,200.01	8.02	36.73	4,171.34	335.38	250.24	-301.99	0.00	0.00	0.00
4,300.01	8.02	36.73	4,270.36	346.56	258.58	-312.05	0.00	0.00	0.00
4,400.01	8.02	36.73	4,369.38	357.74	266.93	-322.12	0.00	0.00	0.00
4,500.01	8.02	36.73	4,468.40	368.92	275.27	-332.19	0.00	0.00	0.00
4,600.01	8.02	36.73	4,567.43	380.10	283.61	-342.25	0.00	0.00	0.00
4,700.01	8.02	36.73	4,666.45	391.28	291.95	-352.32	0.00	0.00	0.00
4,716.72	8.02	36.73	4,683.00	393.15	293.35	-354.00	0.00	0.00	0.00

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Planning Report

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 5031.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 5031.00ft
Site:	WELD_CAMP 5 PAD	North Reference:	True
Well:	CAMP 38N-26HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CAMP 38N-26HZ		
Design:	CAMP 38N-26HZ (wp03)		

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									
4,800.01	8.02	36.73	4,765.47	402.46	300.29	-362.39	0.00	0.00	0.00
4,900.01	8.02	36.73	4,864.49	413.64	308.64	-372.45	0.00	0.00	0.00
5,000.01	8.02	36.73	4,963.52	424.82	316.98	-382.52	0.00	0.00	0.00
5,100.01	8.02	36.73	5,062.54	436.00	325.32	-392.59	0.00	0.00	0.00
5,200.01	8.02	36.73	5,161.56	447.18	333.66	-402.65	0.00	0.00	0.00
5,300.01	8.02	36.73	5,260.58	458.36	342.00	-412.72	0.00	0.00	0.00
5,400.01	8.02	36.73	5,359.61	469.54	350.34	-422.79	0.00	0.00	0.00
5,500.01	8.02	36.73	5,458.63	480.72	358.69	-432.85	0.00	0.00	0.00
5,600.01	8.02	36.73	5,557.65	491.90	367.03	-442.92	0.00	0.00	0.00
5,700.01	8.02	36.73	5,656.67	503.08	375.37	-452.99	0.00	0.00	0.00
5,800.01	8.02	36.73	5,755.70	514.26	383.71	-463.05	0.00	0.00	0.00
5,900.01	8.02	36.73	5,854.72	525.44	392.05	-473.12	0.00	0.00	0.00
6,000.01	8.02	36.73	5,953.74	536.62	400.40	-483.19	0.00	0.00	0.00
6,100.01	8.02	36.73	6,052.76	547.80	408.74	-493.25	0.00	0.00	0.00
6,200.01	8.02	36.73	6,151.79	558.98	417.08	-503.32	0.00	0.00	0.00
6,300.01	8.02	36.73	6,250.81	570.16	425.42	-513.39	0.00	0.00	0.00
6,400.01	8.02	36.73	6,349.83	581.34	433.76	-523.45	0.00	0.00	0.00
6,500.01	8.02	36.73	6,448.85	592.52	442.10	-533.52	0.00	0.00	0.00
6,600.01	8.02	36.73	6,547.88	603.70	450.45	-543.59	0.00	0.00	0.00
6,667.27	8.02	36.73	6,614.48	611.22	456.06	-550.36	0.00	0.00	0.00
6,700.01	5.76	56.82	6,646.99	613.95	458.80	-552.73	10.00	-6.91	61.37
6,800.01	8.39	144.90	6,746.45	610.72	467.21	-548.48	10.00	2.63	88.08
6,900.01	17.52	164.35	6,843.84	590.20	475.49	-527.10	10.00	9.14	19.45
7,000.01	27.26	170.43	6,936.20	553.02	483.38	-489.24	10.00	9.74	6.09
7,100.01	37.13	173.46	7,020.72	500.31	490.64	-436.03	10.00	9.87	3.03
7,200.01	47.05	175.36	7,094.84	433.67	497.05	-369.11	10.00	9.92	1.90
7,262.76	53.29	176.26	7,135.00	385.64	500.56	-321.01	10.00	9.94	1.43
Sharon Springs									
7,300.01	57.00	176.72	7,156.29	355.13	502.42	-290.50	10.00	9.94	1.25
7,387.04	65.66	177.68	7,198.00	278.94	506.12	-214.44	10.00	9.96	1.10
Niobrara A									
7,400.01	66.95	177.81	7,203.22	267.06	506.59	-202.60	9.99	9.95	1.00
7,467.73	73.70	178.45	7,226.00	203.38	508.66	-139.14	10.00	9.96	0.95
Niobrara B									
7,500.02	76.91	178.74	7,234.19	172.16	509.42	-108.06	10.00	9.96	0.90
7,600.02	86.88	179.60	7,248.27	73.29	510.84	-9.78	10.00	9.96	0.86
7,643.32	91.19	179.97	7,249.00	30.00	511.00	33.20	10.00	9.97	0.84
7"									
7,646.94	91.23	179.98	7,248.92	26.38	511.00	36.79	1.01	0.96	0.31
7,700.02	91.23	179.98	7,247.79	-26.68	511.02	89.45	0.00	0.00	0.00
7,800.02	91.23	179.98	7,245.65	-126.66	511.05	188.67	0.00	0.00	0.00
7,900.02	91.23	179.98	7,243.51	-226.63	511.08	287.89	0.00	0.00	0.00
8,000.02	91.23	179.98	7,241.36	-326.61	511.12	387.11	0.00	0.00	0.00
8,100.02	91.23	179.98	7,239.22	-426.59	511.15	486.33	0.00	0.00	0.00
8,200.02	91.23	179.98	7,237.08	-526.57	511.18	585.55	0.00	0.00	0.00
8,300.02	91.23	179.98	7,234.94	-626.54	511.22	684.77	0.00	0.00	0.00
8,400.02	91.23	179.98	7,232.80	-726.52	511.25	783.99	0.00	0.00	0.00
8,500.02	91.23	179.98	7,230.66	-826.50	511.28	883.21	0.00	0.00	0.00
8,600.02	91.23	179.98	7,228.52	-926.47	511.32	982.43	0.00	0.00	0.00
8,700.02	91.23	179.98	7,226.38	-1,026.45	511.35	1,081.64	0.00	0.00	0.00
8,800.02	91.23	179.98	7,224.24	-1,126.43	511.38	1,180.86	0.00	0.00	0.00
8,900.02	91.23	179.98	7,222.09	-1,226.41	511.41	1,280.08	0.00	0.00	0.00
9,000.02	91.23	179.98	7,219.95	-1,326.38	511.45	1,379.30	0.00	0.00	0.00

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 5031.00ft
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Well:	CAMP 38N-26HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CAMP 38N-26HZ		
Design:	CAMP 38N-26HZ (wp03)		

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)
9,100.02	91.23	179.98	7,217.81	-1,426.36	511.48	1,478.52	0.00	0.00	0.00
9,200.02	91.23	179.98	7,215.67	-1,526.34	511.51	1,577.74	0.00	0.00	0.00
9,300.02	91.23	179.98	7,213.53	-1,626.32	511.55	1,676.96	0.00	0.00	0.00
9,400.02	91.23	179.98	7,211.39	-1,726.29	511.58	1,776.18	0.00	0.00	0.00
9,500.02	91.23	179.98	7,209.25	-1,826.27	511.61	1,875.40	0.00	0.00	0.00
9,600.02	91.23	179.98	7,207.11	-1,926.25	511.64	1,974.62	0.00	0.00	0.00
9,700.02	91.23	179.98	7,204.97	-2,026.22	511.68	2,073.84	0.00	0.00	0.00
9,800.02	91.23	179.98	7,202.82	-2,126.20	511.71	2,173.06	0.00	0.00	0.00
9,900.02	91.23	179.98	7,200.68	-2,226.18	511.74	2,272.28	0.00	0.00	0.00
10,000.02	91.23	179.98	7,198.54	-2,326.16	511.78	2,371.49	0.00	0.00	0.00
10,100.02	91.23	179.98	7,196.40	-2,426.13	511.81	2,470.71	0.00	0.00	0.00
10,200.02	91.23	179.98	7,194.26	-2,526.11	511.84	2,569.93	0.00	0.00	0.00
10,300.02	91.23	179.98	7,192.12	-2,626.09	511.88	2,669.15	0.00	0.00	0.00
10,400.02	91.23	179.98	7,189.98	-2,726.07	511.91	2,768.37	0.00	0.00	0.00
10,500.02	91.23	179.98	7,187.84	-2,826.04	511.94	2,867.59	0.00	0.00	0.00
10,600.02	91.23	179.98	7,185.70	-2,926.02	511.97	2,966.81	0.00	0.00	0.00
10,700.02	91.23	179.98	7,183.55	-3,026.00	512.01	3,066.03	0.00	0.00	0.00
10,800.02	91.23	179.98	7,181.41	-3,125.97	512.04	3,165.25	0.00	0.00	0.00
10,900.02	91.23	179.98	7,179.27	-3,225.95	512.07	3,264.47	0.00	0.00	0.00
11,000.02	91.23	179.98	7,177.13	-3,325.93	512.11	3,363.69	0.00	0.00	0.00
11,100.02	91.23	179.98	7,174.99	-3,425.91	512.14	3,462.91	0.00	0.00	0.00
11,200.02	91.23	179.98	7,172.85	-3,525.88	512.17	3,562.13	0.00	0.00	0.00
11,300.02	91.23	179.98	7,170.71	-3,625.86	512.20	3,661.34	0.00	0.00	0.00
11,400.02	91.23	179.98	7,168.57	-3,725.84	512.24	3,760.56	0.00	0.00	0.00
11,500.02	91.23	179.98	7,166.43	-3,825.82	512.27	3,859.78	0.00	0.00	0.00
11,600.02	91.23	179.98	7,164.28	-3,925.79	512.30	3,959.00	0.00	0.00	0.00
11,700.02	91.23	179.98	7,162.14	-4,025.77	512.34	4,058.22	0.00	0.00	0.00
11,800.02	91.23	179.98	7,160.00	-4,125.75	512.37	4,157.44	0.00	0.00	0.00
11,800.14	91.23	179.98	7,160.00	-4,125.86	512.37	4,157.55	0.00	0.00	0.00
CAMP 38N-26HZ 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									
CAMP 38N-26HZ BHL	0.00	0.00	7,160.00	-4,125.86	512.37	1,313,080.80	3,213,571.61	40.190276	-104.735520
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
900.00	900.00	9 5/8"	9-5/8	12-1/4	
7,643.32	7,249.00	7"	7	8-3/4	

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well CAMP 38N-26HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 5031.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 5031.00ft
Site:	WELD_CAMP 5 PAD	North Reference:	True
Well:	CAMP 38N-26HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CAMP 38N-26HZ		
Design:	CAMP 38N-26HZ (wp03)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,125.95	4,098.00	Parkman				
4,716.72	4,683.00	Sussex				
7,262.76	7,135.00	Sharon Springs				
7,387.04	7,198.00	Niobrara A				
7,467.73	7,226.00	Niobrara B				