

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

Cream 27-28HZ Pad

CREAM 37N-28HZ

Plan A

Plan: Rev A0 Permit

Standard Planning Report

14 October, 2014

Project: WELD-NAD83-UTMFT13N
Site: Cream 27-28HZ Pad
Well: CREAM 37N-28HZ
Wellbore: Plan A
Design: Rev A0 Permit

US ROCKIES WATTENBERG PLANNING

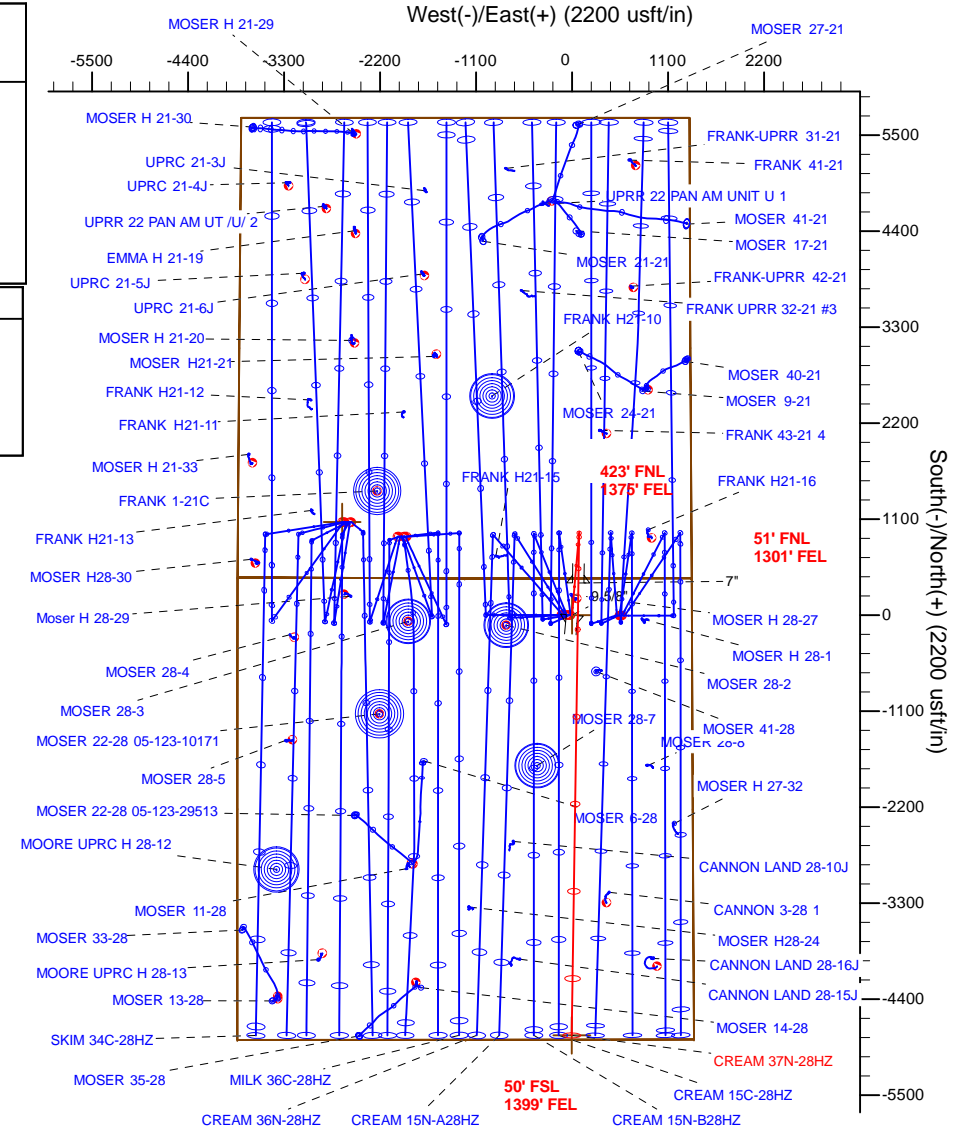
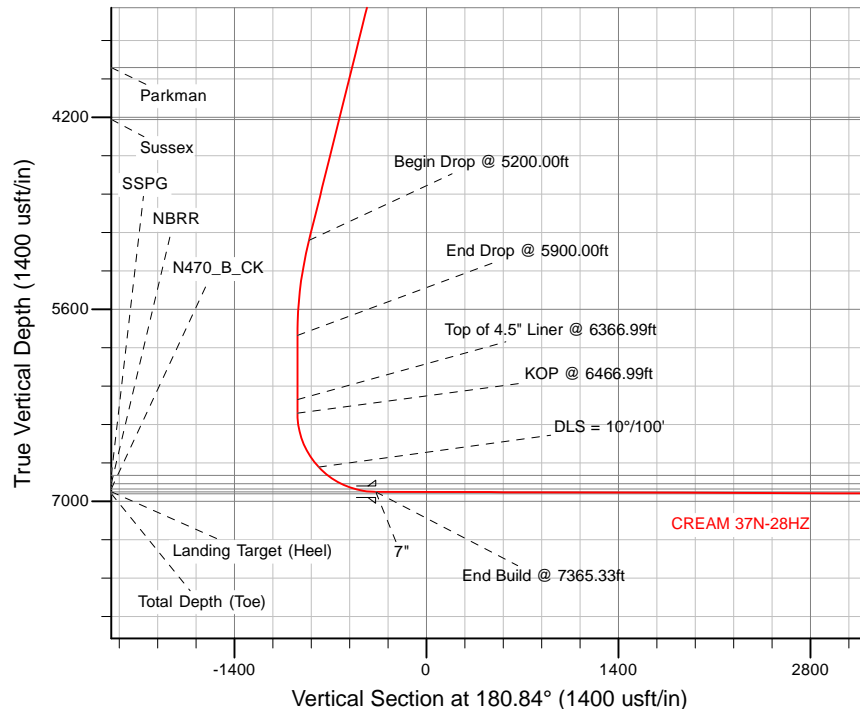
HALLIBURTON
Sperry Drilling

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	0.00	
3	2000.00	14.00	5.00	1993.06	84.77	7.42	2.00	5.00	-84.87	
4	5200.00	14.00	5.00	5098.00	855.98	74.89	0.00	0.00	-856.98	
5	5900.00	0.00	0.00	5791.06	940.75	82.30	2.00	180.00	-941.86	
6	6466.99	0.00	0.00	6358.05	940.75	82.30	0.00	0.00	-941.86	
7	7365.33	89.83	180.84	6931.00	369.51	73.89	10.00	180.84	-370.55	
8	12550.30	89.83	180.84	6946.00	-4814.88	-2.52	0.00	0.00	4814.40	CREAM 37N-28HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Polygon
Sec. 28 and 21-T3N-R65W	-23.00	1065.30	-2631.86	40.205452	-104.673609	
CREAM 37N-28HZ_SHL	0.00	0.00	0.00	40.202527	-104.664183	
CREAM 37N-28HZ_BHL	6946.00	-4814.88	-2.52	40.189305	-104.664192	



TVD MD

6258.05 6366.99 Top of 4.5" Liner @ 6366.99ft

6358.056466.99 KOP @ 6466.99ft

WELL DETAILS: CREAM 37N-28HZ

Ground Level: 4824.00

RKB = 17' @ 4841.00usft (D Rig)

Plan: Rev A0 Permit (CREAM 37N-28HZ/Plan A)

Created By: Clint Eshelman

Reviewed:

Date: 10/14/2014

Date:

Anadarko Petroleum Corp

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CREAM 37N-28HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4841.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4841.00usft (D Rig)
Site:	Cream 27-28HZ Pad	North Reference:	True
Well:	CREAM 37N-28HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Rev A0 Permit		

Project	WELD-NAD83-UTMFT13N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Zone 13N (108 W to 102 W)		

Site		Cream 27-28HZ Pad			
Site Position:		Northing:	14,600,661.04 usft	Latitude:	40.202530
From:	Lat/Long	Easting:	1,734,064.40 usft	Longitude:	-104.664612
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.22 °

Well	CREAM 37N-28HZ					
Well Position	+N/-S	-1.09 usft	Northing:	14,600,660.41 usft	Latitude:	40.202527
	+E/-W	119.79 usft	Easting:	1,734,184.19 usft	Longitude:	-104.664183
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	4,824.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/14/2014	8.35	66.79	52,687

Design	Rev A0 Permit			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	180.84

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
0.00	0.00	0.00	0.00	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	
2,000.00	14.00	5.00	1,993.06	84.77	7.42	2.00	2.00	0.00	5.00	
5,200.00	14.00	5.00	5,098.00	855.98	74.89	0.00	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,791.06	940.75	82.30	2.00	-2.00	0.00	180.00	
6,466.99	0.00	0.00	6,358.05	940.75	82.30	0.00	0.00	0.00	0.00	
7,365.33	89.83	180.84	6,931.00	369.51	73.89	10.00	10.00	-19.94	180.84	
12,550.30	89.83	180.84	6,946.00	-4,814.88	-2.52	0.00	0.00	0.00	0.00	CREAM 37N-28HZ_B

Anadarko Petroleum Corp

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CREAM 37N-28HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4841.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4841.00usft (D Rig)
Site:	Cream 27-28HZ Pad	North Reference:	True
Well:	CREAM 37N-28HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Rev A0 Permit		

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CREAM 37N-28HZ_SHL - Sec. 28 and 21-T3N-R65W									
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
Base Fox Hills									
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
1,113.00	0.00	0.00	1,113.00	0.00	0.00	0.00	0.00	0.00	0.00
Surface Csg Setting Depth - 9 5/8"									
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
Begin Nudge @ 1300.00ft									
1,400.00	2.00	5.00	1,399.98	1.74	0.15	-1.74	2.00	2.00	0.00
1,500.00	4.00	5.00	1,499.84	6.95	0.61	-6.96	2.00	2.00	0.00
1,600.00	6.00	5.00	1,599.45	15.63	1.37	-15.65	2.00	2.00	0.00
1,700.00	8.00	5.00	1,698.70	27.77	2.43	-27.81	2.00	2.00	0.00
1,800.00	10.00	5.00	1,797.47	43.36	3.79	-43.41	2.00	2.00	0.00
1,900.00	12.00	5.00	1,895.62	62.36	5.46	-62.44	2.00	2.00	0.00
2,000.00	14.00	5.00	1,993.06	84.77	7.42	-84.87	2.00	2.00	0.00
End Nudge @ 2000.00ft									
2,100.00	14.00	5.00	2,090.08	108.87	9.53	-109.00	0.00	0.00	0.00
2,200.00	14.00	5.00	2,187.11	132.97	11.63	-133.13	0.00	0.00	0.00
2,300.00	14.00	5.00	2,284.14	157.07	13.74	-157.26	0.00	0.00	0.00
2,400.00	14.00	5.00	2,381.17	181.17	15.85	-181.39	0.00	0.00	0.00
2,500.00	14.00	5.00	2,478.20	205.27	17.96	-205.51	0.00	0.00	0.00
2,600.00	14.00	5.00	2,575.23	229.37	20.07	-229.64	0.00	0.00	0.00
2,700.00	14.00	5.00	2,672.26	253.47	22.18	-253.77	0.00	0.00	0.00
2,800.00	14.00	5.00	2,769.29	277.57	24.28	-277.90	0.00	0.00	0.00
2,900.00	14.00	5.00	2,866.32	301.67	26.39	-302.03	0.00	0.00	0.00
3,000.00	14.00	5.00	2,963.35	325.77	28.50	-326.16	0.00	0.00	0.00
3,100.00	14.00	5.00	3,060.38	349.87	30.61	-350.29	0.00	0.00	0.00
3,200.00	14.00	5.00	3,157.41	373.97	32.72	-374.41	0.00	0.00	0.00
3,300.00	14.00	5.00	3,254.44	398.07	34.83	-398.54	0.00	0.00	0.00
3,400.00	14.00	5.00	3,351.47	422.17	36.94	-422.67	0.00	0.00	0.00
3,500.00	14.00	5.00	3,448.50	446.27	39.04	-446.80	0.00	0.00	0.00
3,600.00	14.00	5.00	3,545.53	470.37	41.15	-470.93	0.00	0.00	0.00
3,700.00	14.00	5.00	3,642.56	494.47	43.26	-495.06	0.00	0.00	0.00
3,800.00	14.00	5.00	3,739.59	518.58	45.37	-519.18	0.00	0.00	0.00
3,900.00	14.00	5.00	3,836.62	542.68	47.48	-543.31	0.00	0.00	0.00
3,900.39	14.00	5.00	3,837.00	542.77	47.49	-543.41	0.00	0.00	0.00
Parkman									
4,000.00	14.00	5.00	3,933.65	566.78	49.59	-567.44	0.00	0.00	0.00
4,100.00	14.00	5.00	4,030.68	590.88	51.69	-591.57	0.00	0.00	0.00
4,200.00	14.00	5.00	4,127.71	614.98	53.80	-615.70	0.00	0.00	0.00
4,292.03	14.00	5.00	4,217.00	637.15	55.74	-637.90	0.00	0.00	0.00
Sussex									

Anadarko Petroleum Corp

Planning Report

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Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4841.00usft (D Rig)
Site:	Cream 27-28HZ Pad	North Reference:	True
Well:	CREAM 37N-28HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Rev A0 Permit		

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)
4,300.00	14.00	5.00	4,224.74	639.08	55.91	-639.83	0.00	0.00	0.00
4,400.00	14.00	5.00	4,321.77	663.18	58.02	-663.96	0.00	0.00	0.00
4,500.00	14.00	5.00	4,418.79	687.28	60.13	-688.08	0.00	0.00	0.00
4,600.00	14.00	5.00	4,515.82	711.38	62.24	-712.21	0.00	0.00	0.00
4,700.00	14.00	5.00	4,612.85	735.48	64.35	-736.34	0.00	0.00	0.00
4,800.00	14.00	5.00	4,709.88	759.58	66.45	-760.47	0.00	0.00	0.00
4,900.00	14.00	5.00	4,806.91	783.68	68.56	-784.60	0.00	0.00	0.00
5,000.00	14.00	5.00	4,903.94	807.78	70.67	-808.73	0.00	0.00	0.00
5,100.00	14.00	5.00	5,000.97	831.88	72.78	-832.85	0.00	0.00	0.00
5,200.00	14.00	5.00	5,098.00	855.98	74.89	-856.98	0.00	0.00	0.00
Begin Drop @ 5200.00ft									
5,300.00	12.00	5.00	5,195.43	878.39	76.85	-879.42	2.00	-2.00	0.00
5,400.00	10.00	5.00	5,293.59	897.39	78.51	-898.45	2.00	-2.00	0.00
5,500.00	8.00	5.00	5,392.36	912.98	79.88	-914.05	2.00	-2.00	0.00
5,600.00	6.00	5.00	5,491.60	925.12	80.94	-926.20	2.00	-2.00	0.00
5,700.00	4.00	5.00	5,591.22	933.80	81.70	-934.89	2.00	-2.00	0.00
5,800.00	2.00	5.00	5,691.08	939.01	82.15	-940.11	2.00	-2.00	0.00
5,900.00	0.00	0.00	5,791.06	940.75	82.30	-941.86	2.00	-2.00	0.00
End Drop @ 5900.00ft									
6,000.00	0.00	0.00	5,891.06	940.75	82.30	-941.86	0.00	0.00	0.00
6,100.00	0.00	0.00	5,991.06	940.75	82.30	-941.86	0.00	0.00	0.00
6,200.00	0.00	0.00	6,091.06	940.75	82.30	-941.86	0.00	0.00	0.00
6,300.00	0.00	0.00	6,191.06	940.75	82.30	-941.86	0.00	0.00	0.00
6,366.99	0.00	0.00	6,258.05	940.75	82.30	-941.86	0.00	0.00	0.00
Top of 4.5" Liner @ 6366.99ft									
6,400.00	0.00	0.00	6,291.06	940.75	82.30	-941.86	0.00	0.00	0.00
6,466.99	0.00	0.00	6,358.05	940.75	82.30	-941.86	0.00	0.00	0.00
KOP @ 6466.99ft									
6,500.00	3.30	180.84	6,391.04	939.80	82.29	-940.90	10.00	10.00	0.00
6,600.00	13.30	180.84	6,489.87	925.38	82.08	-926.49	10.00	10.00	0.00
6,700.00	23.30	180.84	6,584.69	894.02	81.62	-895.12	10.00	10.00	0.00
6,800.00	33.30	180.84	6,672.62	846.68	80.92	-847.77	10.00	10.00	0.00
6,900.00	43.30	180.84	6,751.00	784.78	80.01	-785.87	10.00	10.00	0.00
DLS = 10°/100'									
6,989.36	52.24	180.84	6,811.00	718.69	79.03	-719.77	10.00	10.00	0.00
SSPG									
7,000.00	53.30	180.84	6,817.44	710.22	78.91	-711.30	10.00	10.00	0.00
7,100.00	63.30	180.84	6,869.92	625.26	77.66	-626.33	10.00	10.00	0.00
7,102.42	63.54	180.84	6,871.00	623.09	77.62	-624.16	10.00	10.00	0.00
NBRR									
7,200.00	73.30	180.84	6,906.84	532.47	76.29	-533.53	10.00	10.00	0.00
7,215.14	74.82	180.84	6,911.00	517.92	76.07	-518.97	10.00	10.00	0.00
N470_B_CK									
7,300.00	83.30	180.84	6,927.09	434.68	74.85	-435.73	10.00	10.00	0.00
7,365.33	89.83	180.84	6,931.00	369.51	73.89	-370.56	10.00	10.00	0.00
End Build @ 7365.33ft - Landing Target (Heel) - 7"									
7,400.00	89.83	180.84	6,931.10	334.85	73.38	-335.89	0.00	0.00	0.00
7,500.00	89.83	180.84	6,931.39	234.86	71.90	-235.89	0.00	0.00	0.00
7,600.00	89.83	180.84	6,931.68	134.87	70.43	-135.89	0.00	0.00	0.00
7,700.00	89.83	180.84	6,931.97	34.88	68.95	-35.89	0.00	0.00	0.00
7,800.00	89.83	180.84	6,932.26	-65.11	67.48	64.11	0.00	0.00	0.00
7,900.00	89.83	180.84	6,932.55	-165.10	66.01	164.11	0.00	0.00	0.00
8,000.00	89.83	180.84	6,932.84	-265.08	64.53	264.11	0.00	0.00	0.00

Anadarko Petroleum Corp

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Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4841.00usft (D Rig)
Site:	Cream 27-28HZ Pad	North Reference:	True
Well:	CREAM 37N-28HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Rev A0 Permit		

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)
8,100.00	89.83	180.84	6,933.13	-365.07	63.06	364.11	0.00	0.00	0.00
8,200.00	89.83	180.84	6,933.42	-465.06	61.59	464.11	0.00	0.00	0.00
8,300.00	89.83	180.84	6,933.71	-565.05	60.11	564.11	0.00	0.00	0.00
8,400.00	89.83	180.84	6,934.00	-665.04	58.64	664.11	0.00	0.00	0.00
8,500.00	89.83	180.84	6,934.28	-765.03	57.17	764.11	0.00	0.00	0.00
8,600.00	89.83	180.84	6,934.57	-865.02	55.69	864.11	0.00	0.00	0.00
8,700.00	89.83	180.84	6,934.86	-965.01	54.22	964.11	0.00	0.00	0.00
8,800.00	89.83	180.84	6,935.15	-1,064.99	52.75	1,064.11	0.00	0.00	0.00
8,900.00	89.83	180.84	6,935.44	-1,164.98	51.27	1,164.11	0.00	0.00	0.00
9,000.00	89.83	180.84	6,935.73	-1,264.97	49.80	1,264.11	0.00	0.00	0.00
9,100.00	89.83	180.84	6,936.02	-1,364.96	48.33	1,364.11	0.00	0.00	0.00
9,200.00	89.83	180.84	6,936.31	-1,464.95	46.85	1,464.11	0.00	0.00	0.00
9,300.00	89.83	180.84	6,936.60	-1,564.94	45.38	1,564.10	0.00	0.00	0.00
9,400.00	89.83	180.84	6,936.89	-1,664.93	43.90	1,664.10	0.00	0.00	0.00
9,500.00	89.83	180.84	6,937.18	-1,764.92	42.43	1,764.10	0.00	0.00	0.00
9,600.00	89.83	180.84	6,937.47	-1,864.90	40.96	1,864.10	0.00	0.00	0.00
9,700.00	89.83	180.84	6,937.76	-1,964.89	39.48	1,964.10	0.00	0.00	0.00
9,800.00	89.83	180.84	6,938.04	-2,064.88	38.01	2,064.10	0.00	0.00	0.00
9,900.00	89.83	180.84	6,938.33	-2,164.87	36.54	2,164.10	0.00	0.00	0.00
10,000.00	89.83	180.84	6,938.62	-2,264.86	35.06	2,264.10	0.00	0.00	0.00
10,100.00	89.83	180.84	6,938.91	-2,364.85	33.59	2,364.10	0.00	0.00	0.00
10,200.00	89.83	180.84	6,939.20	-2,464.84	32.12	2,464.10	0.00	0.00	0.00
10,300.00	89.83	180.84	6,939.49	-2,564.83	30.64	2,564.10	0.00	0.00	0.00
10,400.00	89.83	180.84	6,939.78	-2,664.81	29.17	2,664.10	0.00	0.00	0.00
10,500.00	89.83	180.84	6,940.07	-2,764.80	27.70	2,764.10	0.00	0.00	0.00
10,600.00	89.83	180.84	6,940.36	-2,864.79	26.22	2,864.10	0.00	0.00	0.00
10,700.00	89.83	180.84	6,940.65	-2,964.78	24.75	2,964.10	0.00	0.00	0.00
10,800.00	89.83	180.84	6,940.94	-3,064.77	23.27	3,064.10	0.00	0.00	0.00
10,900.00	89.83	180.84	6,941.23	-3,164.76	21.80	3,164.10	0.00	0.00	0.00
11,000.00	89.83	180.84	6,941.52	-3,264.75	20.33	3,264.10	0.00	0.00	0.00
11,100.00	89.83	180.84	6,941.81	-3,364.74	18.85	3,364.10	0.00	0.00	0.00
11,200.00	89.83	180.84	6,942.09	-3,464.72	17.38	3,464.10	0.00	0.00	0.00
11,300.00	89.83	180.84	6,942.38	-3,564.71	15.91	3,564.10	0.00	0.00	0.00
11,400.00	89.83	180.84	6,942.67	-3,664.70	14.43	3,664.10	0.00	0.00	0.00
11,500.00	89.83	180.84	6,942.96	-3,764.69	12.96	3,764.10	0.00	0.00	0.00
11,600.00	89.83	180.84	6,943.25	-3,864.68	11.49	3,864.10	0.00	0.00	0.00
11,700.00	89.83	180.84	6,943.54	-3,964.67	10.01	3,964.09	0.00	0.00	0.00
11,800.00	89.83	180.84	6,943.83	-4,064.66	8.54	4,064.09	0.00	0.00	0.00
11,900.00	89.83	180.84	6,944.12	-4,164.65	7.07	4,164.09	0.00	0.00	0.00
12,000.00	89.83	180.84	6,944.41	-4,264.63	5.59	4,264.09	0.00	0.00	0.00
12,100.00	89.83	180.84	6,944.70	-4,364.62	4.12	4,364.09	0.00	0.00	0.00
12,200.00	89.83	180.84	6,944.99	-4,464.61	2.64	4,464.09	0.00	0.00	0.00
12,300.00	89.83	180.84	6,945.28	-4,564.60	1.17	4,564.09	0.00	0.00	0.00
12,400.00	89.83	180.84	6,945.57	-4,664.59	-0.30	4,664.09	0.00	0.00	0.00
12,500.00	89.83	180.84	6,945.85	-4,764.58	-1.78	4,764.09	0.00	0.00	0.00
12,550.30	89.83	180.84	6,946.00	-4,814.87	-2.52	4,814.39	0.00	0.00	0.00
TD Well @ 12550.30ft - CREAM 37N-28HZ_BHL									

Anadarko Petroleum Corp

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CREAM 37N-28HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4841.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4841.00usft (D Rig)
Site:	Cream 27-28HZ Pad	North Reference:	True
Well:	CREAM 37N-28HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Rev A0 Permit		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
CREAM 37N-28HZ_SHL	0.00	0.00	0.00	0.00	0.00	14,600,660.41	1,734,184.19	40.202527	-104.664183
- plan hits target center									
- Point									
Sec. 28 and 21-T3N-R6E	0.00	0.00	-23.00	1,065.30	-2,631.86	14,601,715.74	1,731,548.32	40.205452	-104.673609
- plan misses target center by 2839.38usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			-23.00	4,631.20	-1,157.80	14,606,342.53	1,730,373.01		
Point 2			-23.00	4,631.80	1,410.20	14,606,352.84	1,732,940.99		
Point 3			-23.00	4,632.30	3,978.20	14,606,363.06	1,735,508.97		
Point 4			-23.00	1,999.70	3,987.10	14,603,730.51	1,735,527.83		
Point 5			-23.00	-640.90	4,004.20	14,601,089.99	1,735,554.92		
Point 6			-23.00	-644.40	1,401.70	14,601,076.65	1,732,952.45		
Point 7			-23.00	-633.90	-1,200.80	14,601,077.30	1,730,349.93		
Point 8			-23.00	-644.40	1,401.70	14,601,076.65	1,732,952.45		
Point 9			-23.00	-640.90	4,004.20	14,601,089.99	1,735,554.92		
Point 10			-23.00	-3,289.10	4,016.60	14,598,441.86	1,735,577.34		
Point 11			-23.00	-5,929.10	4,028.80	14,595,801.92	1,735,599.53		
Point 12			-23.00	-5,930.40	1,413.40	14,595,790.73	1,732,984.15		
Point 13			-23.00	-5,931.80	-1,202.00	14,595,779.43	1,730,368.78		
Point 14			-23.00	-3,282.80	-1,201.40	14,598,428.42	1,730,359.35		
Point 15			-23.00	-633.90	-1,200.80	14,601,077.30	1,730,349.93		
Point 16			-23.00	1,998.70	-1,179.30	14,603,709.96	1,730,361.47		
CREAM 37N-28HZ_BHL	0.00	0.00	6,946.00	-4,814.88	-2.52	14,595,845.55	1,734,199.89	40.189305	-104.664192
- plan hits target center									
- Point									

Casing Points					
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
	1,113.00	1,113.00	9 5/8"	9-5/8	13-1/2
	7,365.33	6,931.00	7"	7	8-3/4

Formations					
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)
	600.00	600.00	Base Fox Hills		0.00
	1,113.00	1,113.00	Surface Csg Setting Depth		0.00
	3,900.39	3,837.00	Parkman		0.00
	4,292.03	4,217.00	Sussex		0.00
	6,989.36	6,811.00	SSPG		0.00
	7,102.42	6,871.00	NBRR		0.00
	7,215.14	6,911.00	N470_B_CK		0.00
	7,365.33	6,931.00	Landing Target (Heel)		0.00
	12,550.30	6,946.00	Total Depth (Toe)		0.00

Anadarko Petroleum Corp

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CREAM 37N-28HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4841.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4841.00usft (D Rig)
Site:	Cream 27-28HZ Pad	North Reference:	True
Well:	CREAM 37N-28HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Rev A0 Permit		

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,300.00	1,300.00	0.00	0.00	Begin Nudge @ 1300.00ft
2,000.00	1,993.06	84.77	7.42	End Nudge @ 2000.00ft
5,200.00	5,098.00	855.98	74.89	Begin Drop @ 5200.00ft
5,900.00	5,791.06	940.75	82.30	End Drop @ 5900.00ft
6,366.99	6,258.05	940.75	82.30	Top of 4.5" Liner @ 6366.99ft
6,466.99	6,358.05	940.75	82.30	KOP @ 6466.99ft
6,900.00	6,751.00	784.78	80.01	DLS = 10°/100'
7,365.33	6,931.00	369.51	73.89	End Build @ 7365.33ft
12,550.30	6,946.00	-4,814.87	-2.52	TD Well @ 12550.30ft