

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_Thomason 13N-15HZ**

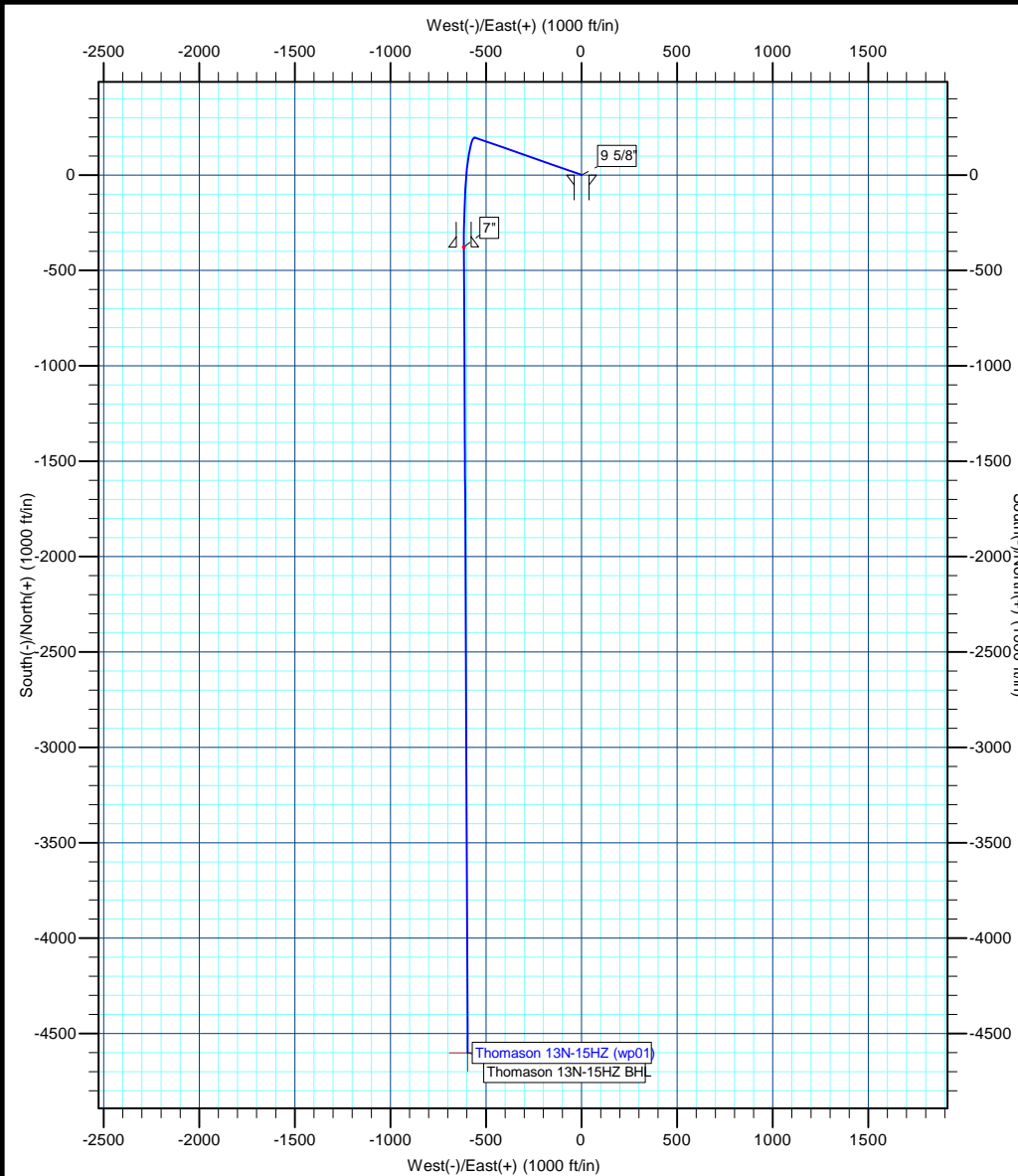
**Thomason 13N-15HZ**

**Thomason 13N-15HZ**

**Plan: Thomason 13N-15HZ (wp01)**

## **Standard Planning Report**

**02 April, 2012**



**Azimuths to True North**  
 Magnetic North: 8.68°

Magnetic Field  
 Strength: 52924.7snT  
 Dip Angle: 66.84°  
 Date: 4/2/2012  
 Model: IGRF2010

**Project: COLORADO NORTHERN ZONE - 83**  
**Site: WELD Thomason 13N-15HZ**  
**Well: Thomason 13N-15HZ**  
**Wellbore: Thomason 13N-15HZ**  
**Section:**  
**SHL:**  
**Design: Thomason 13N-15HZ (wp01)**  
**Latitude: 40.145292**  
**Longitude: -104.655318**  
**GL: 4863.00**  
**KB: GL + RKB @ 4880.00ft**



**WELL DETAILS: Thomason 13N-15HZ**

+N/-S	+E/-W	Northing	Ground Level: Easting	4863.00 Latitude	Longitude	Slot
0.00	0.00	1296898.00	3236132.97	40.145292	-104.655318	

**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
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00
1165.37	6.31	289.37	1164.73	5.75	-16.36	2.00	289.37	-3.60
6381.31	6.31	289.37	6349.10	195.83	-556.95	0.00	0.00	-122.66
7302.45	90.00	179.75	6940.00	-377.00	-616.00	10.00	-109.51	453.01
7304.66	90.00	179.73	6940.00	-379.21	-615.99	1.00	-90.00	455.20
11527.44	90.00	179.73	6940.00	-4601.95	-596.13	0.00	0.00	4640.40

**WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)**

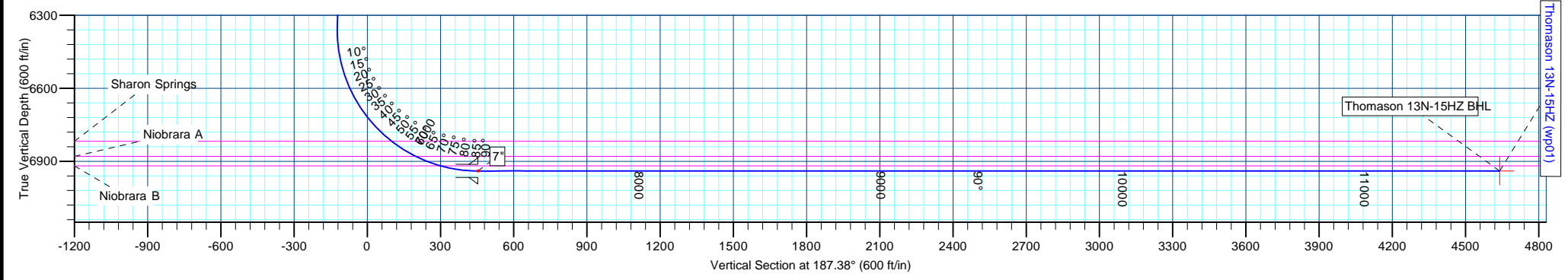
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Thomason 13N-15HZ BHL	6940.00	-4601.95	-596.13	40.132659	-104.657450	Point

**FORMATION TOP DETAILS**

TVDPath	MDPath	Formation
3881.00	3898.18	Parkman
4464.00	4484.73	Sussex
6818.00	6920.51	Sharon Springs
6880.00	7037.17	Niobrara A
6919.00	7146.42	Niobrara B

**CASING DETAILS**

TVD	MD	Name	Size
700.00	700.00	9 5/8"	9-5/8
6940.00	7302.45	7"	7



# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well Thomason 13N-15HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL + RKB @ 4880.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL + RKB @ 4880.00ft
<b>Site:</b>	WELD_Thomason 13N-15HZ	<b>North Reference:</b>	True
<b>Well:</b>	Thomason 13N-15HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Thomason 13N-15HZ		
<b>Design:</b>	Thomason 13N-15HZ (wp01)		

<b>Project</b>	COLORADO NORTHERN 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 Northern Zone		

<b>Site</b>	WELD_Thomason 13N-15HZ				
<b>Site Position:</b>	<b>Northing:</b>	1,296,898.00 usft	<b>Latitude:</b>	40.145292	
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,236,132.97 usft	<b>Longitude:</b>	-104.655318
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.55 °

<b>Well</b>	Thomason 13N-15HZ					
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,296,898.00 usft	<b>Latitude:</b>	40.145292
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	3,236,132.97 usft	<b>Longitude:</b>	-104.655318
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	4,863.00 ft

<b>Wellbore</b>	Thomason 13N-15HZ				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
	IGRF2010	4/2/2012	(°)	(°)	(nT)
			8.68	66.84	52,925

<b>Design</b>	Thomason 13N-15HZ (wp01)			
<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)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	187.38

<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	
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,165.37	6.31	289.37	1,164.73	5.75	-16.36	2.00	2.00	0.00	289.37	
6,381.31	6.31	289.37	6,349.10	195.83	-556.95	0.00	0.00	0.00	0.00	
7,302.45	90.00	179.75	6,940.00	-377.00	-616.00	10.00	9.09	-11.90	-109.51	
7,304.66	90.00	179.73	6,940.00	-379.21	-615.99	1.00	0.00	-1.00	-90.00	
11,527.44	90.00	179.73	6,940.00	-4,601.95	-596.13	0.00	0.00	0.00	0.00	Thomason 13N-15HZ

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well Thomason 13N-15HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL + RKB @ 4880.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL + RKB @ 4880.00ft
<b>Site:</b>	WELD_Thomason 13N-15HZ	<b>North Reference:</b>	True
<b>Well:</b>	Thomason 13N-15HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Thomason 13N-15HZ		
<b>Design:</b>	Thomason 13N-15HZ (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	
<b>9 5/8"</b>										
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Start Build 2.00</b>										
900.00	1.00	289.37	900.00	0.14	-0.41	-0.09	2.00	2.00	0.00	
1,000.00	3.00	289.37	999.93	1.30	-3.70	-0.82	2.00	2.00	0.00	
1,100.00	5.00	289.37	1,099.68	3.62	-10.28	-2.26	2.00	2.00	0.00	
1,165.37	6.31	289.37	1,164.73	5.75	-16.36	-3.60	2.00	2.00	0.00	
<b>Start 5215.94 hold at 1165.37 MD</b>										
1,200.00	6.31	289.37	1,199.15	7.01	-19.95	-4.39	0.00	0.00	0.00	
1,300.00	6.31	289.37	1,298.55	10.66	-30.31	-6.68	0.00	0.00	0.00	
1,400.00	6.31	289.37	1,397.94	14.30	-40.68	-8.96	0.00	0.00	0.00	
1,500.00	6.31	289.37	1,497.34	17.95	-51.04	-11.24	0.00	0.00	0.00	
1,600.00	6.31	289.37	1,596.73	21.59	-61.41	-13.52	0.00	0.00	0.00	
1,700.00	6.31	289.37	1,696.13	25.23	-71.77	-15.81	0.00	0.00	0.00	
1,800.00	6.31	289.37	1,795.52	28.88	-82.13	-18.09	0.00	0.00	0.00	
1,900.00	6.31	289.37	1,894.92	32.52	-92.50	-20.37	0.00	0.00	0.00	
2,000.00	6.31	289.37	1,994.31	36.17	-102.86	-22.65	0.00	0.00	0.00	
2,100.00	6.31	289.37	2,093.71	39.81	-113.23	-24.94	0.00	0.00	0.00	
2,200.00	6.31	289.37	2,193.10	43.46	-123.59	-27.22	0.00	0.00	0.00	
2,300.00	6.31	289.37	2,292.50	47.10	-133.96	-29.50	0.00	0.00	0.00	
2,400.00	6.31	289.37	2,391.89	50.74	-144.32	-31.78	0.00	0.00	0.00	
2,500.00	6.31	289.37	2,491.28	54.39	-154.68	-34.07	0.00	0.00	0.00	
2,600.00	6.31	289.37	2,590.68	58.03	-165.05	-36.35	0.00	0.00	0.00	
2,700.00	6.31	289.37	2,690.07	61.68	-175.41	-38.63	0.00	0.00	0.00	
2,800.00	6.31	289.37	2,789.47	65.32	-185.78	-40.91	0.00	0.00	0.00	
2,900.00	6.31	289.37	2,888.86	68.96	-196.14	-43.20	0.00	0.00	0.00	
3,000.00	6.31	289.37	2,988.26	72.61	-206.50	-45.48	0.00	0.00	0.00	
3,100.00	6.31	289.37	3,087.65	76.25	-216.87	-47.76	0.00	0.00	0.00	
3,200.00	6.31	289.37	3,187.05	79.90	-227.23	-50.04	0.00	0.00	0.00	
3,300.00	6.31	289.37	3,286.44	83.54	-237.60	-52.33	0.00	0.00	0.00	
3,400.00	6.31	289.37	3,385.84	87.19	-247.96	-54.61	0.00	0.00	0.00	
3,500.00	6.31	289.37	3,485.23	90.83	-258.33	-56.89	0.00	0.00	0.00	
3,600.00	6.31	289.37	3,584.63	94.47	-268.69	-59.17	0.00	0.00	0.00	
3,700.00	6.31	289.37	3,684.02	98.12	-279.05	-61.46	0.00	0.00	0.00	
3,800.00	6.31	289.37	3,783.42	101.76	-289.42	-63.74	0.00	0.00	0.00	
3,898.18	6.31	289.37	3,881.00	105.34	-299.59	-65.98	0.00	0.00	0.00	
<b>Parkman</b>										
3,900.00	6.31	289.37	3,882.81	105.41	-299.78	-66.02	0.00	0.00	0.00	
4,000.00	6.31	289.37	3,982.20	109.05	-310.15	-68.30	0.00	0.00	0.00	
4,100.00	6.31	289.37	4,081.60	112.69	-320.51	-70.59	0.00	0.00	0.00	
4,200.00	6.31	289.37	4,180.99	116.34	-330.88	-72.87	0.00	0.00	0.00	
4,300.00	6.31	289.37	4,280.39	119.98	-341.24	-75.15	0.00	0.00	0.00	
4,400.00	6.31	289.37	4,379.78	123.63	-351.60	-77.43	0.00	0.00	0.00	
4,484.73	6.31	289.37	4,464.00	126.71	-360.39	-79.37	0.00	0.00	0.00	
<b>Sussex</b>										

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well Thomason 13N-15HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL + RKB @ 4880.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL + RKB @ 4880.00ft
<b>Site:</b>	WELD_Thomason 13N-15HZ	<b>North Reference:</b>	True
<b>Well:</b>	Thomason 13N-15HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Thomason 13N-15HZ		
<b>Design:</b>	Thomason 13N-15HZ (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)
4,500.00	6.31	289.37	4,479.18	127.27	-361.97	-79.72	0.00	0.00	0.00
4,600.00	6.31	289.37	4,578.57	130.92	-372.33	-82.00	0.00	0.00	0.00
4,700.00	6.31	289.37	4,677.97	134.56	-382.70	-84.28	0.00	0.00	0.00
4,800.00	6.31	289.37	4,777.36	138.20	-393.06	-86.56	0.00	0.00	0.00
4,900.00	6.31	289.37	4,876.76	141.85	-403.43	-88.85	0.00	0.00	0.00
5,000.00	6.31	289.37	4,976.15	145.49	-413.79	-91.13	0.00	0.00	0.00
5,100.00	6.31	289.37	5,075.55	149.14	-424.15	-93.41	0.00	0.00	0.00
5,200.00	6.31	289.37	5,174.94	152.78	-434.52	-95.69	0.00	0.00	0.00
5,300.00	6.31	289.37	5,274.34	156.42	-444.88	-97.98	0.00	0.00	0.00
5,400.00	6.31	289.37	5,373.73	160.07	-455.25	-100.26	0.00	0.00	0.00
5,500.00	6.31	289.37	5,473.13	163.71	-465.61	-102.54	0.00	0.00	0.00
5,600.00	6.31	289.37	5,572.52	167.36	-475.98	-104.82	0.00	0.00	0.00
5,700.00	6.31	289.37	5,671.91	171.00	-486.34	-107.11	0.00	0.00	0.00
5,800.00	6.31	289.37	5,771.31	174.65	-496.70	-109.39	0.00	0.00	0.00
5,900.00	6.31	289.37	5,870.70	178.29	-507.07	-111.67	0.00	0.00	0.00
6,000.00	6.31	289.37	5,970.10	181.93	-517.43	-113.95	0.00	0.00	0.00
6,100.00	6.31	289.37	6,069.49	185.58	-527.80	-116.24	0.00	0.00	0.00
6,200.00	6.31	289.37	6,168.89	189.22	-538.16	-118.52	0.00	0.00	0.00
6,300.00	6.31	289.37	6,268.28	192.87	-548.52	-120.80	0.00	0.00	0.00
6,381.31	6.31	289.37	6,349.10	195.83	-556.95	-122.66	0.00	0.00	0.00
<b>Start DLS 10.00 TFO -109.51</b>									
6,400.00	5.95	272.12	6,367.69	196.21	-558.89	-122.78	10.00	-1.92	-92.32
6,500.00	11.41	210.81	6,466.68	187.88	-569.16	-113.21	10.00	5.46	-61.30
6,600.00	20.60	195.84	6,562.74	162.40	-579.05	-86.67	10.00	9.19	-14.98
6,700.00	30.29	190.02	6,652.95	120.54	-588.26	-43.97	10.00	9.69	-5.82
6,800.00	40.12	186.85	6,734.56	63.57	-596.51	13.59	10.00	9.83	-3.17
6,900.00	50.02	184.76	6,805.10	-6.78	-603.55	84.26	10.00	9.89	-2.09
6,920.51	52.05	184.41	6,818.00	-22.67	-604.83	100.18	10.00	9.91	-1.71
<b>Sharon Springs</b>									
7,000.00	59.93	183.21	6,862.43	-88.37	-609.17	165.89	10.00	9.92	-1.51
7,037.17	63.63	182.71	6,880.00	-121.07	-610.86	198.54	10.00	9.93	-1.33
<b>Niobrara A</b>									
7,100.00	69.87	181.94	6,904.79	-178.72	-613.19	256.01	10.00	9.94	-1.23
7,146.42	74.48	181.41	6,919.00	-222.89	-614.48	299.98	10.00	9.94	-1.14
<b>Niobrara B</b>									
7,200.00	79.81	180.82	6,930.91	-275.09	-615.49	351.88	10.00	9.94	-1.09
7,300.00	89.76	179.78	6,939.99	-374.55	-616.01	450.58	10.00	9.95	-1.05
7,302.45	90.00	179.75	6,940.00	-377.00	-616.00	453.01	10.00	9.95	-1.04
<b>Start DLS 1.00 TFO -90.00 - 7"</b>									
7,304.66	90.00	179.73	6,940.00	-379.21	-615.99	455.20	1.00	0.01	-1.00
<b>Start 4222.78 hold at 7304.66 MD</b>									
7,400.00	90.00	179.73	6,940.00	-474.55	-615.54	549.69	0.00	0.00	0.00
7,500.00	90.00	179.73	6,940.00	-574.55	-615.07	648.80	0.00	0.00	0.00
7,600.00	90.00	179.73	6,940.00	-674.55	-614.60	747.91	0.00	0.00	0.00
7,700.00	90.00	179.73	6,940.00	-774.54	-614.13	847.02	0.00	0.00	0.00
7,800.00	90.00	179.73	6,940.00	-874.54	-613.66	946.13	0.00	0.00	0.00
7,900.00	90.00	179.73	6,940.00	-974.54	-613.19	1,045.24	0.00	0.00	0.00
8,000.00	90.00	179.73	6,940.00	-1,074.54	-612.72	1,144.35	0.00	0.00	0.00
8,100.00	90.00	179.73	6,940.00	-1,174.54	-612.25	1,243.46	0.00	0.00	0.00
8,200.00	90.00	179.73	6,940.00	-1,274.54	-611.78	1,342.57	0.00	0.00	0.00
8,300.00	90.00	179.73	6,940.00	-1,374.54	-611.31	1,441.68	0.00	0.00	0.00
8,400.00	90.00	179.73	6,940.00	-1,474.54	-610.84	1,540.79	0.00	0.00	0.00
8,500.00	90.00	179.73	6,940.00	-1,574.54	-610.37	1,639.90	0.00	0.00	0.00

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well Thomason 13N-15HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL + RKB @ 4880.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL + RKB @ 4880.00ft
<b>Site:</b>	WELD_Thomason 13N-15HZ	<b>North Reference:</b>	True
<b>Well:</b>	Thomason 13N-15HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Thomason 13N-15HZ		
<b>Design:</b>	Thomason 13N-15HZ (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)	
8,600.00	90.00	179.73	6,940.00	-1,674.53	-609.90	1,739.01	0.00	0.00	0.00	
8,700.00	90.00	179.73	6,940.00	-1,774.53	-609.43	1,838.12	0.00	0.00	0.00	
8,800.00	90.00	179.73	6,940.00	-1,874.53	-608.96	1,937.23	0.00	0.00	0.00	
8,900.00	90.00	179.73	6,940.00	-1,974.53	-608.49	2,036.34	0.00	0.00	0.00	
9,000.00	90.00	179.73	6,940.00	-2,074.53	-608.02	2,135.45	0.00	0.00	0.00	
9,100.00	90.00	179.73	6,940.00	-2,174.53	-607.55	2,234.56	0.00	0.00	0.00	
9,200.00	90.00	179.73	6,940.00	-2,274.53	-607.07	2,333.67	0.00	0.00	0.00	
9,300.00	90.00	179.73	6,940.00	-2,374.53	-606.60	2,432.78	0.00	0.00	0.00	
9,400.00	90.00	179.73	6,940.00	-2,474.53	-606.13	2,531.89	0.00	0.00	0.00	
9,500.00	90.00	179.73	6,940.00	-2,574.52	-605.66	2,631.00	0.00	0.00	0.00	
9,600.00	90.00	179.73	6,940.00	-2,674.52	-605.19	2,730.11	0.00	0.00	0.00	
9,700.00	90.00	179.73	6,940.00	-2,774.52	-604.72	2,829.22	0.00	0.00	0.00	
9,800.00	90.00	179.73	6,940.00	-2,874.52	-604.25	2,928.33	0.00	0.00	0.00	
9,900.00	90.00	179.73	6,940.00	-2,974.52	-603.78	3,027.44	0.00	0.00	0.00	
10,000.00	90.00	179.73	6,940.00	-3,074.52	-603.31	3,126.55	0.00	0.00	0.00	
10,100.00	90.00	179.73	6,940.00	-3,174.52	-602.84	3,225.66	0.00	0.00	0.00	
10,200.00	90.00	179.73	6,940.00	-3,274.52	-602.37	3,324.77	0.00	0.00	0.00	
10,300.00	90.00	179.73	6,940.00	-3,374.52	-601.90	3,423.88	0.00	0.00	0.00	
10,400.00	90.00	179.73	6,940.00	-3,474.51	-601.43	3,522.99	0.00	0.00	0.00	
10,500.00	90.00	179.73	6,940.00	-3,574.51	-600.96	3,622.10	0.00	0.00	0.00	
10,600.00	90.00	179.73	6,940.00	-3,674.51	-600.49	3,721.21	0.00	0.00	0.00	
10,700.00	90.00	179.73	6,940.00	-3,774.51	-600.02	3,820.32	0.00	0.00	0.00	
10,800.00	90.00	179.73	6,940.00	-3,874.51	-599.55	3,919.43	0.00	0.00	0.00	
10,900.00	90.00	179.73	6,940.00	-3,974.51	-599.08	4,018.54	0.00	0.00	0.00	
11,000.00	90.00	179.73	6,940.00	-4,074.51	-598.61	4,117.65	0.00	0.00	0.00	
11,100.00	90.00	179.73	6,940.00	-4,174.51	-598.14	4,216.76	0.00	0.00	0.00	
11,200.00	90.00	179.73	6,940.00	-4,274.51	-597.67	4,315.87	0.00	0.00	0.00	
11,300.00	90.00	179.73	6,940.00	-4,374.50	-597.20	4,414.98	0.00	0.00	0.00	
11,400.00	90.00	179.73	6,940.00	-4,474.50	-596.73	4,514.09	0.00	0.00	0.00	
11,500.00	90.00	179.73	6,940.00	-4,574.50	-596.26	4,613.20	0.00	0.00	0.00	
11,527.44	90.00	179.73	6,940.00	-4,601.95	-596.13	4,640.40	0.00	0.00	0.00	
<b>TD at 11527.44 - Thomason 13N-15HZ BHL</b>										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Thomason 13N-15HZ BI - hit/miss target - Shape - Point	0.00	0.00	6,940.00	-4,601.95	-596.13	1,292,290.59	3,235,580.71	40.132659	-104.657450

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
700.00	700.00	9 5/8"	9-5/8	12-1/4	
7,302.45	6,940.00	7"	7	8-3/4	

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well Thomason 13N-15HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL + RKB @ 4880.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL + RKB @ 4880.00ft
<b>Site:</b>	WELD_Thomason 13N-15HZ	<b>North Reference:</b>	True
<b>Well:</b>	Thomason 13N-15HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Thomason 13N-15HZ		
<b>Design:</b>	Thomason 13N-15HZ (wp01)		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,898.18	3,881.00	Parkman			
4,484.73	4,464.00	Sussex			
6,920.51	6,818.00	Sharon Springs			
7,037.17	6,880.00	Niobrara A			
7,146.42	6,919.00	Niobrara B			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
850.00	850.00	0.00	0.00	Start Build 2.00	
1,165.37	1,164.73	5.75	-16.36	Start 5215.94 hold at 1165.37 MD	
6,381.31	6,349.10	195.83	-556.95	Start DLS 10.00 TFO -109.51	
7,302.45	6,940.00	-377.00	-616.00	Start DLS 1.00 TFO -90.00	
7,304.66	6,940.00	-379.21	-615.99	Start 4222.78 hold at 7304.66 MD	
11,527.44	6,940.00	-4,601.95	-596.13	TD at 11527.44	