

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_DOVE 1-12HZ PAD**

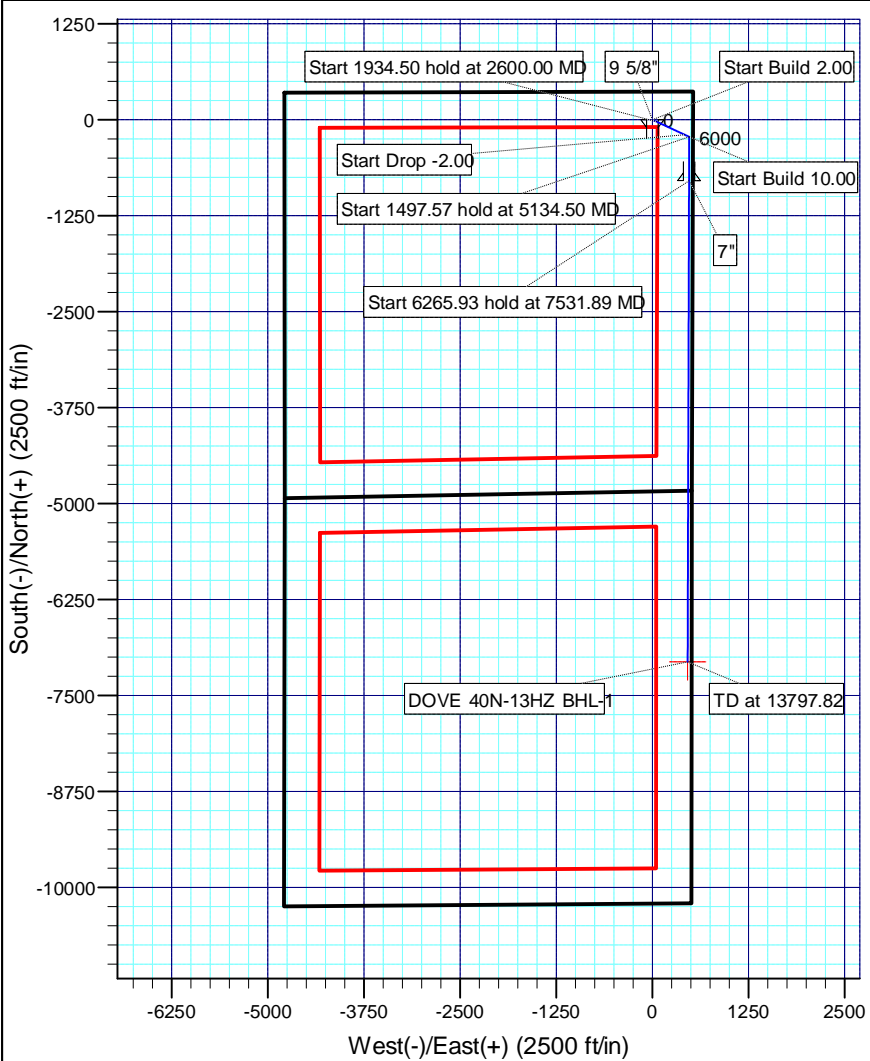
**DOVE 40N-13HZ**

**DOVE 40N-13HZ**

**Plan: DOVE 40N-13HZ (wp01)**

## **Standard Planning Report**

**15 February, 2012**



PROJECT DETAILS: COLORADO NORTHERN ZONE - 83	
Site:	WELD DOVE 1-12HZ PAD
Well:	DOVE 40N-13HZ
Wellbore:	DOVE 40N-13HZ
Design:	DOVE 40N-13HZ (wp01)
Latitude:	40.159168
Longitude:	-104.717740
GL:	4967.00
KB:	17' RKB + GL @ 4984.00ft (Original Well Elev)



WELL DETAILS: DOVE 40N-13HZ					
Ground Level: 4967.00					
+N-S	+E-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1301792.47	3218638.62	40.159168	-104.717740

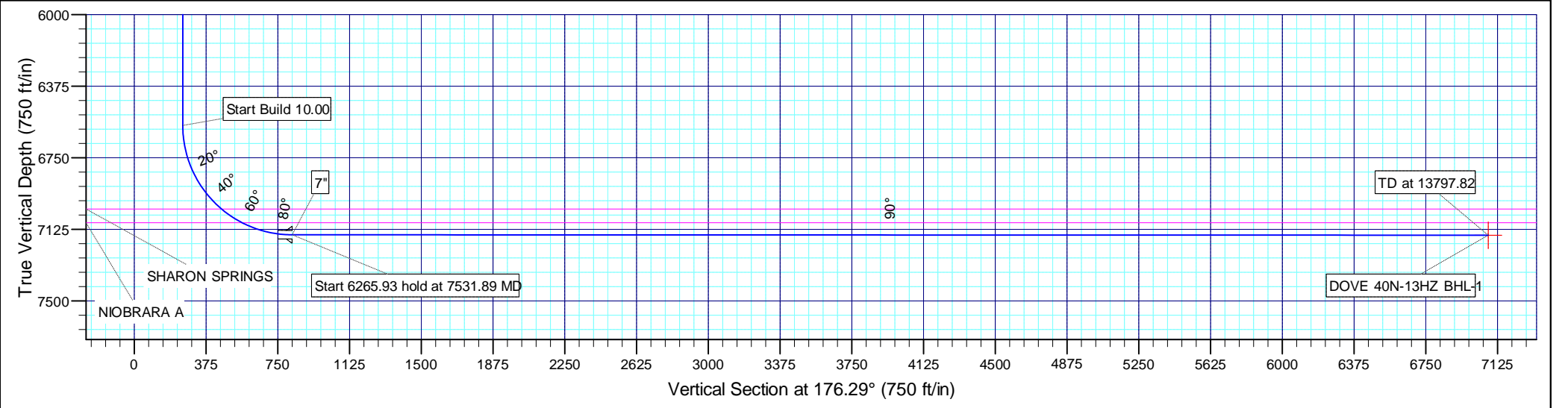
DESIGN TARGET DETAILS						
Name	TVD	+N-S	+E-W	Latitude	Longitude	Shape Point
DOVE 40N-13HZ BHL-1	7156.00	-7061.57	457.67	40.139783	-104.716103	

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	2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00	
3	2600.00	12.00	115.00	2595.62	-26.46	56.74	2.00	115.00	30.07	
4	4534.50	12.00	115.00	4487.85	-196.44	421.26	0.00	0.00	223.27	
5	5134.50	0.00	0.00	5083.47	-222.89	478.00	2.00	180.00	253.34	
6	6632.07	0.00	0.00	6581.04	-222.89	478.00	0.00	0.00	253.34	
7	7531.89	89.98	180.17	7154.00	-795.67	476.29	10.00	180.17	824.81	
8	13797.82	89.98	180.17	7156.00	-7061.57	457.67	0.00	0.00	7076.38	DOVE 40N-13HZ BHL-1

CASING DETAILS				
	TVD	MD	Name	Size
	1000.00	1000.00	9 5/8"	9-5/8
	7154.00	7531.89	7"	7

FORMATION TOP DETAILS		
TVDPATH	MDPATH	FORMATION
706.00	706.00	FOX HILLS
3317.00	3337.49	PARKMAN
4355.00	4398.68	SUSSEX
7019.00	7130.59	SHARON SPRINGS
7091.00	7260.86	NIORARA A

Azimuths to True North  
 Magnetic North: 8.73°  
 Magnetic Field  
 Strength: 52940.0snT  
 Dip Angle: 66.84°  
 Date: 2/8/2012  
 Model: IGRF2010



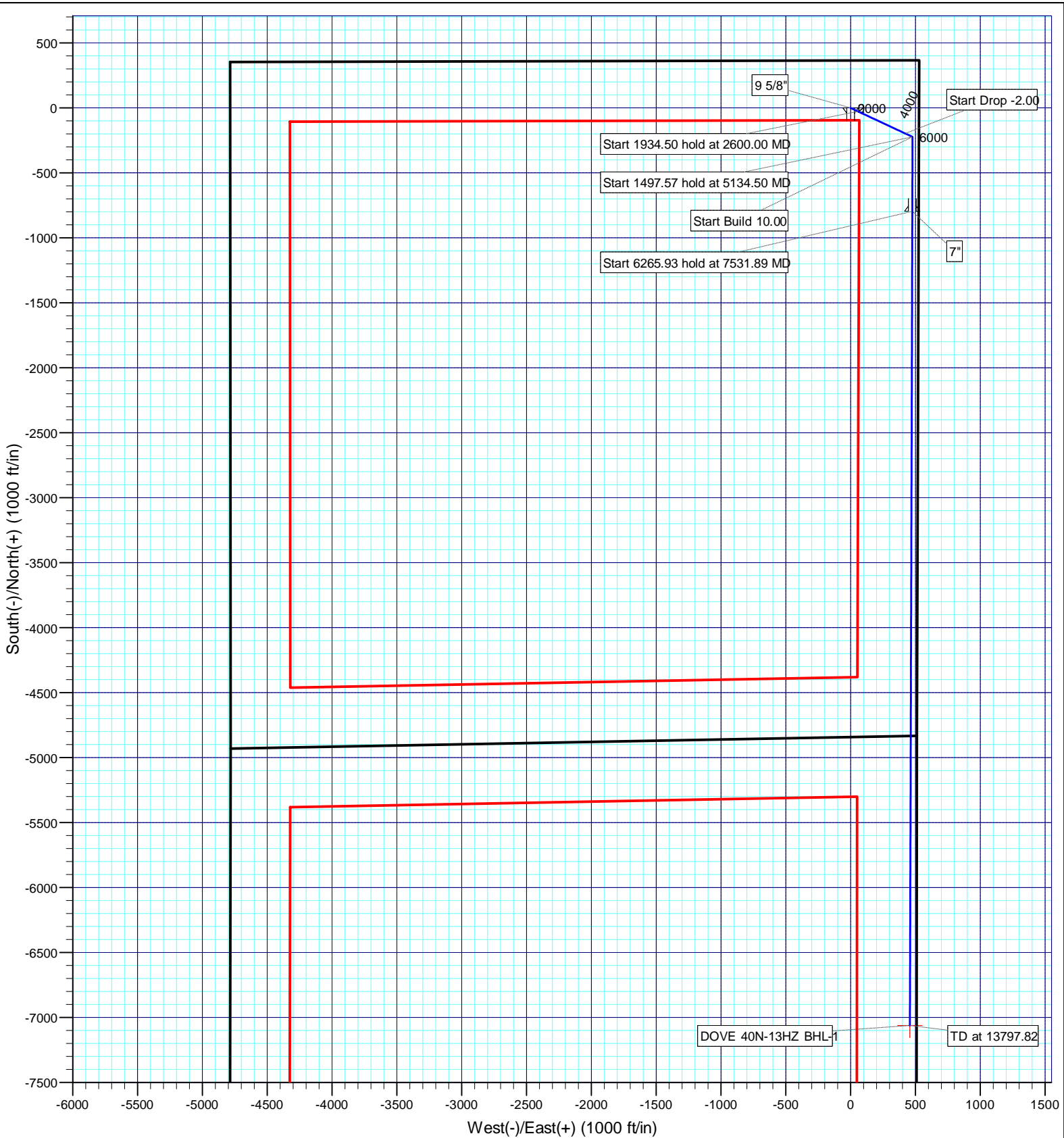
PROJECT DETAILS: COLORADO NORTHERN ZONE - 83

Site: WELD\_DOVE 1-12HZ PAD  
 Well: DOVE 40N-13HZ  
 Wellbore: DOVE 40N-13HZ  
 Design: DOVE 40N-13HZ (wp01)  
 Latitude: 40.159168  
 Longitude: -104.717740  
 GL: 4967.00  
 17' RKB ~~KBL~~ @ 4984.00ft (Original Well Elev)



WELL DETAILS: DOVE 40N-13HZ

		Ground Level: 4967.00			
+N-S	+E-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1301792.47	3218638.62	40.159168	-104.717740



# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well DOVE 40N-13HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17' RKB + GL @ 4984.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17' RKB + GL @ 4984.00ft (Original Well Elev)
<b>Site:</b>	WELD_DOVE 1-12HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	DOVE 40N-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DOVE 40N-13HZ		
<b>Design:</b>	DOVE 40N-13HZ (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_DOVE 1-12HZ PAD				
<b>Site Position:</b>		<b>Northing:</b>	1,301,792.75 usft	<b>Latitude:</b>	40.159168
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,218,668.53 usft	<b>Longitude:</b>	-104.717633
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.51 °

<b>Well</b>	DOVE 40N-13HZ					
<b>Well Position</b>	<b>+N/-S</b>	-0.02 ft	<b>Northing:</b>	1,301,792.46 usft	<b>Latitude:</b>	40.159168
	<b>+E/-W</b>	-29.91 ft	<b>Easting:</b>	3,218,638.62 usft	<b>Longitude:</b>	-104.717740
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	4,967.00 ft

<b>Wellbore</b>	DOVE 40N-13HZ				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	2/8/2012	8.73	66.84	52,940

<b>Design</b>	DOVE 40N-13HZ (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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	176.29

<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	
2,600.00	12.00	115.00	2,595.62	-26.46	56.74	2.00	2.00	0.00	115.00	
4,534.50	12.00	115.00	4,487.85	-196.44	421.26	0.00	0.00	0.00	0.00	
5,134.50	0.00	0.00	5,083.47	-222.89	478.00	2.00	-2.00	0.00	180.00	
6,632.07	0.00	0.00	6,581.04	-222.89	478.00	0.00	0.00	0.00	0.00	
7,531.89	89.98	180.17	7,154.00	-795.67	476.29	10.00	10.00	0.00	180.17	
13,797.82	89.98	180.17	7,156.00	-7,061.57	457.67	0.00	0.00	0.00	0.00	DOVE 40N-13HZ BHI

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well DOVE 40N-13HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17' RKB + GL @ 4984.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17' RKB + GL @ 4984.00ft (Original Well Elev)
<b>Site:</b>	WELD_DOVE 1-12HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	DOVE 40N-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DOVE 40N-13HZ		
<b>Design:</b>	DOVE 40N-13HZ (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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	0.00	0.00	500.00	0.00	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	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
706.00	0.00	0.00	706.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>FOX HILLS</b>										
800.00	0.00	0.00	800.00	0.00	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	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>										
1,100.00	0.00	0.00	1,100.00	0.00	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	0.00
1,300.00	0.00	0.00	1,300.00	0.00	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	0.00
1,500.00	0.00	0.00	1,500.00	0.00	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	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	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	0.00
<b>Start Build 2.00</b>										
2,100.00	2.00	115.00	2,099.98	-0.74	1.58	0.84	2.00	2.00	0.00	0.00
2,200.00	4.00	115.00	2,199.84	-2.95	6.32	3.35	2.00	2.00	0.00	0.00
2,300.00	6.00	115.00	2,299.45	-6.63	14.22	7.54	2.00	2.00	0.00	0.00
2,400.00	8.00	115.00	2,398.70	-11.78	25.27	13.39	2.00	2.00	0.00	0.00
2,500.00	10.00	115.00	2,497.47	-18.39	39.44	20.91	2.00	2.00	0.00	0.00
2,600.00	12.00	115.00	2,595.62	-26.46	56.74	30.07	2.00	2.00	0.00	0.00
<b>Start 1934.50 hold at 2600.00 MD</b>										
2,700.00	12.00	115.00	2,693.44	-35.24	75.58	40.06	0.00	0.00	0.00	0.00
2,800.00	12.00	115.00	2,791.25	-44.03	94.42	50.05	0.00	0.00	0.00	0.00
2,900.00	12.00	115.00	2,889.07	-52.82	113.27	60.03	0.00	0.00	0.00	0.00
3,000.00	12.00	115.00	2,986.88	-61.60	132.11	70.02	0.00	0.00	0.00	0.00
3,100.00	12.00	115.00	3,084.70	-70.39	150.95	80.01	0.00	0.00	0.00	0.00
3,200.00	12.00	115.00	3,182.51	-79.18	169.80	89.99	0.00	0.00	0.00	0.00
3,300.00	12.00	115.00	3,280.33	-87.96	188.64	99.98	0.00	0.00	0.00	0.00
3,337.49	12.00	115.00	3,317.00	-91.26	195.70	103.72	0.00	0.00	0.00	0.00
<b>PARKMAN</b>										
3,400.00	12.00	115.00	3,378.14	-96.75	207.48	109.97	0.00	0.00	0.00	0.00
3,500.00	12.00	115.00	3,475.96	-105.54	226.33	119.95	0.00	0.00	0.00	0.00
3,600.00	12.00	115.00	3,573.77	-114.32	245.17	129.94	0.00	0.00	0.00	0.00
3,700.00	12.00	115.00	3,671.59	-123.11	264.01	139.93	0.00	0.00	0.00	0.00
3,800.00	12.00	115.00	3,769.40	-131.90	282.86	149.92	0.00	0.00	0.00	0.00
3,900.00	12.00	115.00	3,867.22	-140.68	301.70	159.90	0.00	0.00	0.00	0.00
4,000.00	12.00	115.00	3,965.03	-149.47	320.54	169.89	0.00	0.00	0.00	0.00
4,100.00	12.00	115.00	4,062.84	-158.26	339.39	179.88	0.00	0.00	0.00	0.00
4,200.00	12.00	115.00	4,160.66	-167.04	358.23	189.86	0.00	0.00	0.00	0.00
4,300.00	12.00	115.00	4,258.47	-175.83	377.07	199.85	0.00	0.00	0.00	0.00

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well DOVE 40N-13HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17' RKB + GL @ 4984.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17' RKB + GL @ 4984.00ft (Original Well Elev)
<b>Site:</b>	WELD_DOVE 1-12HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	DOVE 40N-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DOVE 40N-13HZ		
<b>Design:</b>	DOVE 40N-13HZ (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)
4,398.68	12.00	115.00	4,355.00	-184.50	395.67	209.71	0.00	0.00	0.00
<b>SUSSEX</b>									
4,400.00	12.00	115.00	4,356.29	-184.62	395.91	209.84	0.00	0.00	0.00
4,500.00	12.00	115.00	4,454.10	-193.40	414.76	219.82	0.00	0.00	0.00
4,534.50	12.00	115.00	4,487.85	-196.44	421.26	223.27	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
4,600.00	10.69	115.00	4,552.07	-201.88	432.94	229.46	2.00	-2.00	0.00
4,700.00	8.69	115.00	4,650.64	-208.99	448.19	237.54	2.00	-2.00	0.00
4,800.00	6.69	115.00	4,749.73	-214.65	460.32	243.97	2.00	-2.00	0.00
4,900.00	4.69	115.00	4,849.23	-218.84	469.30	248.73	2.00	-2.00	0.00
5,000.00	2.69	115.00	4,949.02	-221.56	475.13	251.83	2.00	-2.00	0.00
5,100.00	0.69	115.00	5,048.97	-222.81	477.81	253.24	2.00	-2.00	0.00
5,134.50	0.00	0.00	5,083.47	-222.89	478.00	253.34	2.00	-2.00	0.00
<b>Start 1497.57 hold at 5134.50 MD</b>									
5,200.00	0.00	0.00	5,148.97	-222.89	478.00	253.34	0.00	0.00	0.00
5,300.00	0.00	0.00	5,248.97	-222.89	478.00	253.34	0.00	0.00	0.00
5,400.00	0.00	0.00	5,348.97	-222.89	478.00	253.34	0.00	0.00	0.00
5,500.00	0.00	0.00	5,448.97	-222.89	478.00	253.34	0.00	0.00	0.00
5,600.00	0.00	0.00	5,548.97	-222.89	478.00	253.34	0.00	0.00	0.00
5,700.00	0.00	0.00	5,648.97	-222.89	478.00	253.34	0.00	0.00	0.00
5,800.00	0.00	0.00	5,748.97	-222.89	478.00	253.34	0.00	0.00	0.00
5,900.00	0.00	0.00	5,848.97	-222.89	478.00	253.34	0.00	0.00	0.00
6,000.00	0.00	0.00	5,948.97	-222.89	478.00	253.34	0.00	0.00	0.00
6,100.00	0.00	0.00	6,048.97	-222.89	478.00	253.34	0.00	0.00	0.00
6,200.00	0.00	0.00	6,148.97	-222.89	478.00	253.34	0.00	0.00	0.00
6,300.00	0.00	0.00	6,248.97	-222.89	478.00	253.34	0.00	0.00	0.00
6,400.00	0.00	0.00	6,348.97	-222.89	478.00	253.34	0.00	0.00	0.00
6,500.00	0.00	0.00	6,448.97	-222.89	478.00	253.34	0.00	0.00	0.00
6,600.00	0.00	0.00	6,548.97	-222.89	478.00	253.34	0.00	0.00	0.00
6,632.07	0.00	0.00	6,581.04	-222.89	478.00	253.34	0.00	0.00	0.00
<b>Start Build 10.00</b>									
6,700.00	6.79	180.17	6,648.81	-226.92	477.98	257.35	10.00	10.00	0.00
6,800.00	16.79	180.17	6,746.58	-247.33	477.92	277.72	10.00	10.00	0.00
6,900.00	26.79	180.17	6,839.31	-284.41	477.81	314.71	10.00	10.00	0.00
7,000.00	36.79	180.17	6,924.20	-337.02	477.66	367.21	10.00	10.00	0.00
7,100.00	46.79	180.17	6,998.66	-403.58	477.46	433.62	10.00	10.00	0.00
7,130.59	49.85	180.17	7,019.00	-426.43	477.39	456.41	10.00	10.00	0.00
<b>SHARON SPRINGS</b>									
7,200.00	56.79	180.17	7,060.43	-482.06	477.23	511.92	10.00	10.00	0.00
7,260.86	62.88	180.17	7,091.00	-534.66	477.07	564.39	10.00	10.00	0.00
<b>NIORARA A</b>									
7,300.00	66.79	180.17	7,107.64	-570.08	476.96	599.73	10.00	10.00	0.00
7,400.00	76.79	180.17	7,138.85	-664.95	476.68	694.39	10.00	10.00	0.00
7,500.00	86.79	180.17	7,153.10	-763.80	476.39	793.01	10.00	10.00	0.00
7,531.89	89.98	180.17	7,154.00	-795.67	476.29	824.81	10.00	10.00	0.00
<b>Start 6265.93 hold at 7531.89 MD - 7"</b>									
7,600.00	89.98	180.17	7,154.02	-863.78	476.09	892.76	0.00	0.00	0.00
7,700.00	89.98	180.17	7,154.05	-963.78	475.79	992.53	0.00	0.00	0.00
7,800.00	89.98	180.17	7,154.08	-1,063.78	475.50	1,092.31	0.00	0.00	0.00
7,900.00	89.98	180.17	7,154.12	-1,163.78	475.20	1,192.08	0.00	0.00	0.00
8,000.00	89.98	180.17	7,154.15	-1,263.78	474.90	1,291.85	0.00	0.00	0.00

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well DOVE 40N-13HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17' RKB + GL @ 4984.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17' RKB + GL @ 4984.00ft (Original Well Elev)
<b>Site:</b>	WELD_DOVE 1-12HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	DOVE 40N-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DOVE 40N-13HZ		
<b>Design:</b>	DOVE 40N-13HZ (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)
8,100.00	89.98	180.17	7,154.18	-1,363.78	474.61	1,391.62	0.00	0.00	0.00
8,200.00	89.98	180.17	7,154.21	-1,463.78	474.31	1,491.39	0.00	0.00	0.00
8,300.00	89.98	180.17	7,154.24	-1,563.78	474.01	1,591.16	0.00	0.00	0.00
8,400.00	89.98	180.17	7,154.28	-1,663.78	473.71	1,690.93	0.00	0.00	0.00
8,500.00	89.98	180.17	7,154.31	-1,763.78	473.42	1,790.70	0.00	0.00	0.00
8,600.00	89.98	180.17	7,154.34	-1,863.78	473.12	1,890.47	0.00	0.00	0.00
8,700.00	89.98	180.17	7,154.37	-1,963.78	472.82	1,990.24	0.00	0.00	0.00
8,800.00	89.98	180.17	7,154.40	-2,063.78	472.53	2,090.02	0.00	0.00	0.00
8,900.00	89.98	180.17	7,154.44	-2,163.77	472.23	2,189.79	0.00	0.00	0.00
9,000.00	89.98	180.17	7,154.47	-2,263.77	471.93	2,289.56	0.00	0.00	0.00
9,100.00	89.98	180.17	7,154.50	-2,363.77	471.63	2,389.33	0.00	0.00	0.00
9,200.00	89.98	180.17	7,154.53	-2,463.77	471.34	2,489.10	0.00	0.00	0.00
9,300.00	89.98	180.17	7,154.56	-2,563.77	471.04	2,588.87	0.00	0.00	0.00
9,400.00	89.98	180.17	7,154.60	-2,663.77	470.74	2,688.64	0.00	0.00	0.00
9,500.00	89.98	180.17	7,154.63	-2,763.77	470.44	2,788.41	0.00	0.00	0.00
9,600.00	89.98	180.17	7,154.66	-2,863.77	470.15	2,888.18	0.00	0.00	0.00
9,700.00	89.98	180.17	7,154.69	-2,963.77	469.85	2,987.95	0.00	0.00	0.00
9,800.00	89.98	180.17	7,154.72	-3,063.77	469.55	3,087.72	0.00	0.00	0.00
9,900.00	89.98	180.17	7,154.76	-3,163.77	469.26	3,187.50	0.00	0.00	0.00
10,000.00	89.98	180.17	7,154.79	-3,263.77	468.96	3,287.27	0.00	0.00	0.00
10,100.00	89.98	180.17	7,154.82	-3,363.77	468.66	3,387.04	0.00	0.00	0.00
10,200.00	89.98	180.17	7,154.85	-3,463.77	468.36	3,486.81	0.00	0.00	0.00
10,300.00	89.98	180.17	7,154.88	-3,563.77	468.07	3,586.58	0.00	0.00	0.00
10,400.00	89.98	180.17	7,154.91	-3,663.77	467.77	3,686.35	0.00	0.00	0.00
10,500.00	89.98	180.17	7,154.95	-3,763.77	467.47	3,786.12	0.00	0.00	0.00
10,600.00	89.98	180.17	7,154.98	-3,863.77	467.18	3,885.89	0.00	0.00	0.00
10,700.00	89.98	180.17	7,155.01	-3,963.77	466.88	3,985.66	0.00	0.00	0.00
10,800.00	89.98	180.17	7,155.04	-4,063.77	466.58	4,085.43	0.00	0.00	0.00
10,900.00	89.98	180.17	7,155.07	-4,163.77	466.28	4,185.21	0.00	0.00	0.00
11,000.00	89.98	180.17	7,155.11	-4,263.77	465.99	4,284.98	0.00	0.00	0.00
11,100.00	89.98	180.17	7,155.14	-4,363.76	465.69	4,384.75	0.00	0.00	0.00
11,200.00	89.98	180.17	7,155.17	-4,463.76	465.39	4,484.52	0.00	0.00	0.00
11,300.00	89.98	180.17	7,155.20	-4,563.76	465.10	4,584.29	0.00	0.00	0.00
11,400.00	89.98	180.17	7,155.23	-4,663.76	464.80	4,684.06	0.00	0.00	0.00
11,500.00	89.98	180.17	7,155.27	-4,763.76	464.50	4,783.83	0.00	0.00	0.00
11,600.00	89.98	180.17	7,155.30	-4,863.76	464.20	4,883.60	0.00	0.00	0.00
11,700.00	89.98	180.17	7,155.33	-4,963.76	463.91	4,983.37	0.00	0.00	0.00
11,800.00	89.98	180.17	7,155.36	-5,063.76	463.61	5,083.14	0.00	0.00	0.00
11,900.00	89.98	180.17	7,155.39	-5,163.76	463.31	5,182.92	0.00	0.00	0.00
12,000.00	89.98	180.17	7,155.43	-5,263.76	463.02	5,282.69	0.00	0.00	0.00
12,100.00	89.98	180.17	7,155.46	-5,363.76	462.72	5,382.46	0.00	0.00	0.00
12,200.00	89.98	180.17	7,155.49	-5,463.76	462.42	5,482.23	0.00	0.00	0.00
12,300.00	89.98	180.17	7,155.52	-5,563.76	462.12	5,582.00	0.00	0.00	0.00
12,400.00	89.98	180.17	7,155.55	-5,663.76	461.83	5,681.77	0.00	0.00	0.00
12,500.00	89.98	180.17	7,155.59	-5,763.76	461.53	5,781.54	0.00	0.00	0.00
12,600.00	89.98	180.17	7,155.62	-5,863.76	461.23	5,881.31	0.00	0.00	0.00
12,700.00	89.98	180.17	7,155.65	-5,963.76	460.93	5,981.08	0.00	0.00	0.00
12,800.00	89.98	180.17	7,155.68	-6,063.76	460.64	6,080.85	0.00	0.00	0.00
12,900.00	89.98	180.17	7,155.71	-6,163.76	460.34	6,180.62	0.00	0.00	0.00
13,000.00	89.98	180.17	7,155.75	-6,263.76	460.04	6,280.40	0.00	0.00	0.00
13,100.00	89.98	180.17	7,155.78	-6,363.76	459.75	6,380.17	0.00	0.00	0.00
13,200.00	89.98	180.17	7,155.81	-6,463.76	459.45	6,479.94	0.00	0.00	0.00

# Anadarko Petroleum Corp

## Planning Report

<b>Database:</b>	edmp	<b>Local Co-ordinate Reference:</b>	Well DOVE 40N-13HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17' RKB + GL @ 4984.00ft (Original Well Elev)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17' RKB + GL @ 4984.00ft (Original Well Elev)
<b>Site:</b>	WELD_DOVE 1-12HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	DOVE 40N-13HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	DOVE 40N-13HZ		
<b>Design:</b>	DOVE 40N-13HZ (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)	
13,300.00	89.98	180.17	7,155.84	-6,563.76	459.15	6,579.71	0.00	0.00	0.00	
13,400.00	89.98	180.17	7,155.87	-6,663.75	458.85	6,679.48	0.00	0.00	0.00	
13,500.00	89.98	180.17	7,155.91	-6,763.75	458.56	6,779.25	0.00	0.00	0.00	
13,600.00	89.98	180.17	7,155.94	-6,863.75	458.26	6,879.02	0.00	0.00	0.00	
13,700.00	89.98	180.17	7,155.97	-6,963.75	457.96	6,978.79	0.00	0.00	0.00	
13,797.82	89.98	180.17	7,156.00	-7,061.57	457.67	7,076.38	0.00	0.00	0.00	
TD at 13797.82 - DOVE 40N-13HZ BHL-1										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
DOVE 40N-13HZ BHL-1	0.00	0.00	7,156.00	-7,061.57	457.67	1,294,735.22	3,219,158.57	40.139783	-104.716103	
- hit/miss target										
- Shape										
- 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	13-1/2		
7,531.89	7,154.00	7"	7	8-3/4		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
706.00	706.00	FOX HILLS		0.00		
3,337.49	3,317.00	PARKMAN		0.00		
4,398.68	4,355.00	SUSSEX		0.00		
7,130.59	7,019.00	SHARON SPRINGS		0.00		
7,260.86	7,091.00	NIOBRARA A		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment	
2,000.00	2,000.00	0.00	0.00	Start Build 2.00	
2,600.00	2,595.62	-26.46	56.74	Start 1934.50 hold at 2600.00 MD	
4,534.50	4,487.85	-196.44	421.26	Start Drop -2.00	
5,134.50	5,083.47	-222.89	478.00	Start 1497.57 hold at 5134.50 MD	
6,632.07	6,581.04	-222.89	478.00	Start Build 10.00	
7,531.89	7,154.00	-795.67	476.29	Start 6265.93 hold at 7531.89 MD	
13,797.82	7,156.00	-7,061.57	457.67	TD at 13797.82	