

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_DOVE 4-12HZ PAD

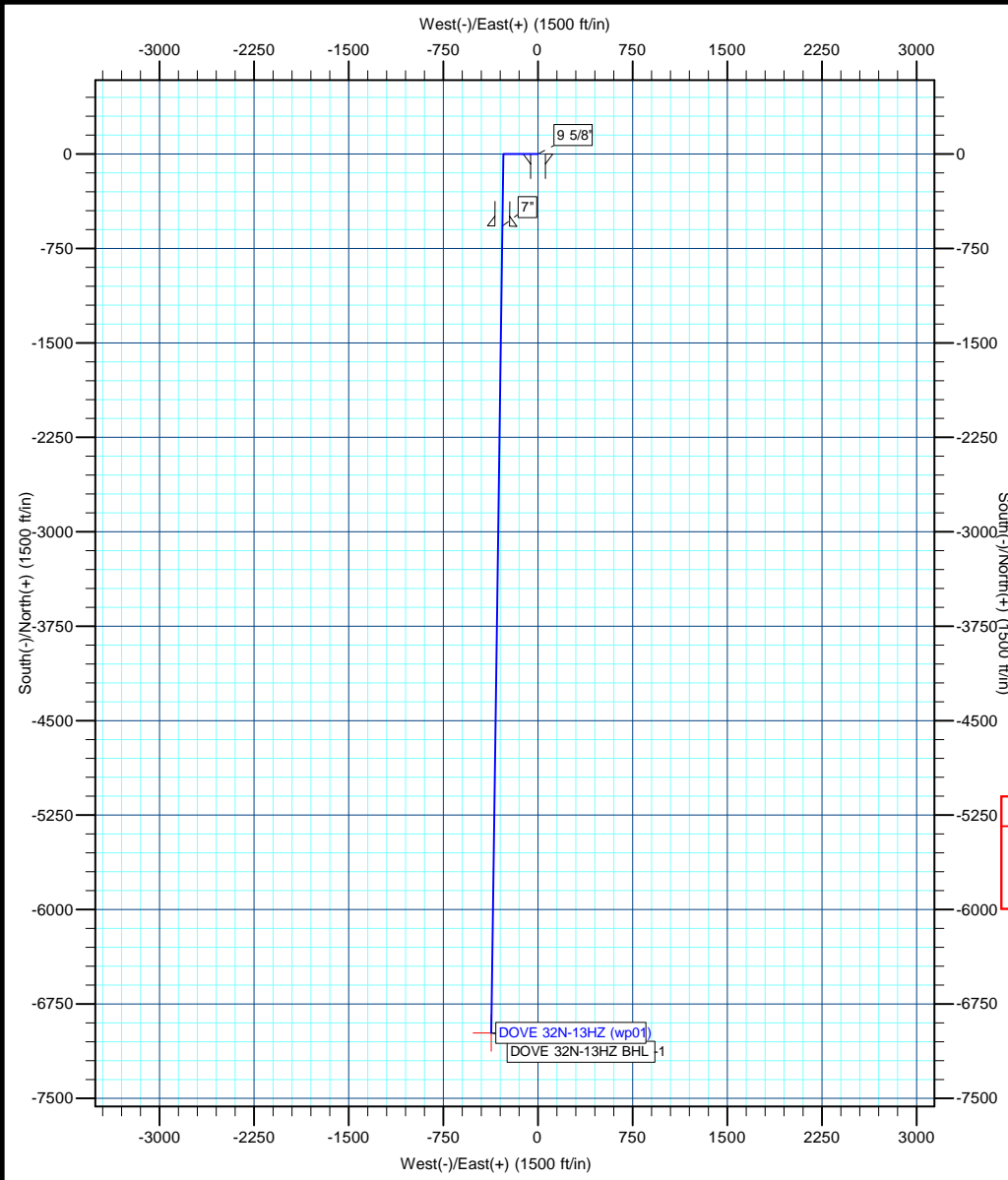
DOVE 32N-13HZ

DOVE 32N-13HZ

Plan: DOVE 32N-13HZ (wp01)

Standard Planning Report

06 June, 2012



Azimuths to True North
 Magnetic North: 8.74°
 Magnetic Field Strength: 52937.6snT
 Dip Angle: 66.84°
 Date: 2/9/2012
 Model: IGRF2010

Project: COLORADO NORTHERN ZONE - 83
Site: WELD_DOVE 4-12HZ PAD
Well: DOVE 32N-13HZ
Wellbore: DOVE 32N-13HZ
Section:
SHL:
Design: DOVE 32N-13HZ (wp01)
Latitude: 40.158768
Longitude: -104.732962
GL: 4999.00
KB: 17' RKB + GL @ 5016.00ft (Original Well Elev)



WELL DETAILS: DOVE 32N-13HZ

+N/-S	+E/-W	Northing	Ground Level: Easting	4999.00 Latitude	Longitude	Slot
0.00	0.00	1301609.56	3214385.50	40.158768	-104.732962	

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
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	0.00
2400.00	8.00	270.00	2398.70	0.00	-27.88	2.00	270.00	1.47
3973.50	8.00	270.00	3956.89	0.00	-246.87	0.00	0.00	13.05
4373.50	0.00	0.00	4355.59	0.00	-274.75	2.00	180.00	14.53
6668.95	0.00	0.00	6651.04	0.00	-274.75	0.00	0.00	14.53
7569.66	90.07	180.78	7224.00	-573.62	-282.54	10.00	180.78	587.76
13977.67	90.07	180.78	7216.00	-6981.03	-369.61	0.00	0.00	6990.81

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

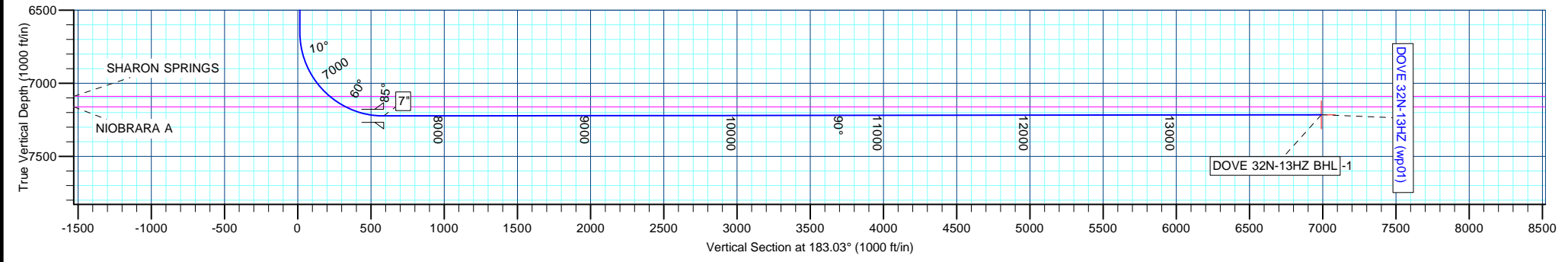
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
DOVE 32N-13HZ BHL -1	7216.00	-6981.03	-369.61	40.139604	-104.734284	Point

FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
706.00	706.00	FOX HILLS
3387.00	3398.01	PARKMAN
4425.00	4442.91	SUSSEX
7089.00	7167.47	SHARON SPRINGS
7161.00	7297.74	NIOBRARA A

CASING DETAILS

TVDPATH	MD	Name	Size
1000.00	1000.00	9 5/8"	9-5/8
7224.00	7569.66	7"	7



Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well DOVE 32N-13HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + GL @ 5016.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + GL @ 5016.00ft (Original Well Elev)
Site:	WELD_DOVE 4-12HZ PAD	North Reference:	True
Well:	DOVE 32N-13HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	DOVE 32N-13HZ		
Design:	DOVE 32N-13HZ (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_DOVE 4-12HZ PAD				
Site Position:		Northing:	1,301,610.75 usft	Latitude:	40.158769
From:	Lat/Long	Easting:	3,214,475.49 usft	Longitude:	-104.732640
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.50 °

Well	DOVE 32N-13HZ					
Well Position	+N/-S	-0.41 ft	Northing:	1,301,609.56 usft	Latitude:	40.158768
	+E/-W	-90.00 ft	Easting:	3,214,385.50 usft	Longitude:	-104.732962
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,999.00 ft

Wellbore	DOVE 32N-13HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/9/2012	8.74	66.84	52,938

Design	DOVE 32N-13HZ (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	183.03	

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	
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,400.00	8.00	270.00	2,398.70	0.00	-27.88	2.00	2.00	0.00	270.00	
3,973.50	8.00	270.00	3,956.89	0.00	-246.87	0.00	0.00	0.00	0.00	
4,373.50	0.00	0.00	4,355.59	0.00	-274.75	2.00	-2.00	0.00	180.00	
6,668.95	0.00	0.00	6,651.04	0.00	-274.75	0.00	0.00	0.00	0.00	
7,569.67	90.07	180.78	7,224.00	-573.62	-282.54	10.00	10.00	0.00	180.78	
13,977.67	90.07	180.78	7,216.00	-6,981.03	-369.61	0.00	0.00	0.00	0.00	DOVE 32N-13HZ BHI

Anadarko Petroleum Corp

Planning Report

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + GL @ 5016.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + GL @ 5016.00ft (Original Well Elev)
Site:	WELD_DOVE 4-12HZ PAD	North Reference:	True
Well:	DOVE 32N-13HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	DOVE 32N-13HZ		
Design:	DOVE 32N-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
FOX HILLS										
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
9 5/8"										
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
Start Build 2.00										
2,100.00	2.00	270.00	2,099.98	0.00	-1.75	0.09	2.00	2.00	0.00	0.00
2,200.00	4.00	270.00	2,199.84	0.00	-6.98	0.37	2.00	2.00	0.00	0.00
2,300.00	6.00	270.00	2,299.45	0.00	-15.69	0.83	2.00	2.00	0.00	0.00
2,400.00	8.00	270.00	2,398.70	0.00	-27.88	1.47	2.00	2.00	0.00	0.00
Start 1573.50 hold at 2400.00 MD										
2,500.00	8.00	270.00	2,497.73	0.00	-41.80	2.21	0.00	0.00	0.00	0.00
2,600.00	8.00	270.00	2,596.76	0.00	-55.71	2.95	0.00	0.00	0.00	0.00
2,700.00	8.00	270.00	2,695.78	0.00	-69.63	3.68	0.00	0.00	0.00	0.00
2,800.00	8.00	270.00	2,794.81	0.00	-83.55	4.42	0.00	0.00	0.00	0.00
2,900.00	8.00	270.00	2,893.84	0.00	-97.47	5.15	0.00	0.00	0.00	0.00
3,000.00	8.00	270.00	2,992.86	0.00	-111.38	5.89	0.00	0.00	0.00	0.00
3,100.00	8.00	270.00	3,091.89	0.00	-125.30	6.62	0.00	0.00	0.00	0.00
3,200.00	8.00	270.00	3,190.92	0.00	-139.22	7.36	0.00	0.00	0.00	0.00
3,300.00	8.00	270.00	3,289.94	0.00	-153.14	8.10	0.00	0.00	0.00	0.00
3,398.01	8.00	270.00	3,387.00	0.00	-166.78	8.82	0.00	0.00	0.00	0.00
PARKMAN										
3,400.00	8.00	270.00	3,388.97	0.00	-167.05	8.83	0.00	0.00	0.00	0.00
3,500.00	8.00	270.00	3,488.00	0.00	-180.97	9.57	0.00	0.00	0.00	0.00
3,600.00	8.00	270.00	3,587.02	0.00	-194.89	10.30	0.00	0.00	0.00	0.00
3,700.00	8.00	270.00	3,686.05	0.00	-208.80	11.04	0.00	0.00	0.00	0.00
3,800.00	8.00	270.00	3,785.08	0.00	-222.72	11.78	0.00	0.00	0.00	0.00
3,900.00	8.00	270.00	3,884.10	0.00	-236.64	12.51	0.00	0.00	0.00	0.00
3,973.50	8.00	270.00	3,956.89	0.00	-246.87	13.05	0.00	0.00	0.00	0.00
Start Drop -2.00										
4,000.00	7.47	270.00	3,983.15	0.00	-250.44	13.24	2.00	-2.00	0.00	0.00
4,100.00	5.47	270.00	4,082.51	0.00	-261.70	13.84	2.00	-2.00	0.00	0.00

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + GL @ 5016.00ft (Original Well Elev)
Site:	WELD_DOVE 4-12HZ PAD	North Reference:	True
Well:	DOVE 32N-13HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	DOVE 32N-13HZ		
Design:	DOVE 32N-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)	
4,200.00	3.47	270.00	4,182.20	0.00	-269.50	14.25	2.00	-2.00	0.00	
4,300.00	1.47	270.00	4,282.10	0.00	-273.81	14.48	2.00	-2.00	0.00	
4,373.50	0.00	0.00	4,355.59	0.00	-274.75	14.53	2.00	-2.00	122.45	
Start 2295.45 hold at 4373.50 MD										
4,400.00	0.00	0.00	4,382.09	0.00	-274.75	14.53	0.00	0.00	0.00	
4,442.91	0.00	0.00	4,425.00	0.00	-274.75	14.53	0.00	0.00	0.00	
SUSSEX										
4,500.00	0.00	0.00	4,482.09	0.00	-274.75	14.53	0.00	0.00	0.00	
4,600.00	0.00	0.00	4,582.09	0.00	-274.75	14.53	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,682.09	0.00	-274.75	14.53	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,782.09	0.00	-274.75	14.53	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,882.09	0.00	-274.75	14.53	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,982.09	0.00	-274.75	14.53	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,082.09	0.00	-274.75	14.53	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,182.09	0.00	-274.75	14.53	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,282.09	0.00	-274.75	14.53	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,382.09	0.00	-274.75	14.53	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,482.09	0.00	-274.75	14.53	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,582.09	0.00	-274.75	14.53	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,682.09	0.00	-274.75	14.53	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,782.09	0.00	-274.75	14.53	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,882.09	0.00	-274.75	14.53	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,982.09	0.00	-274.75	14.53	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,082.09	0.00	-274.75	14.53	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,182.09	0.00	-274.75	14.53	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,282.09	0.00	-274.75	14.53	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,382.09	0.00	-274.75	14.53	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,482.09	0.00	-274.75	14.53	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,582.09	0.00	-274.75	14.53	0.00	0.00	0.00	
6,668.95	0.00	0.00	6,651.04	0.00	-274.75	14.53	0.00	0.00	0.00	
Start Build 10.00										
6,700.00	3.11	180.78	6,682.07	-0.84	-274.76	15.37	10.00	10.00	-577.18	
6,800.00	13.11	180.78	6,780.95	-14.92	-274.95	29.44	10.00	10.00	0.00	
6,900.00	23.11	180.78	6,875.88	-45.95	-275.37	60.45	10.00	10.00	0.00	
7,000.00	33.11	180.78	6,963.98	-93.00	-276.01	107.46	10.00	10.00	0.00	
7,100.00	43.11	180.78	7,042.56	-154.63	-276.85	169.05	10.00	10.00	0.00	
7,167.47	49.85	180.78	7,089.00	-203.52	-277.51	217.91	10.00	10.00	0.00	
SHARON SPRINGS										
7,200.00	53.11	180.78	7,109.26	-228.96	-277.86	243.33	10.00	10.00	0.00	
7,297.74	62.88	180.78	7,161.00	-311.74	-278.98	326.05	10.00	10.00	0.00	
NIORARA A										
7,300.00	63.11	180.78	7,162.02	-313.75	-279.01	328.06	10.00	10.00	0.00	
7,400.00	73.11	180.78	7,199.27	-406.41	-280.27	420.66	10.00	10.00	0.00	
7,500.00	83.11	180.78	7,219.85	-504.13	-281.60	518.31	10.00	10.00	0.00	
7,569.66	90.07	180.78	7,224.00	-573.62	-282.54	587.75	10.00	10.00	0.00	
7"										
7,569.67	90.07	180.78	7,224.00	-573.62	-282.54	587.76	8.93	8.93	0.00	
Start 6408.48 hold at 7569.67 MD										
7,600.00	90.07	180.78	7,223.96	-603.95	-282.96	618.07	0.00	0.00	0.00	
7,700.00	90.07	180.78	7,223.83	-703.94	-284.31	717.99	0.00	0.00	0.00	
7,800.00	90.07	180.78	7,223.71	-803.93	-285.67	817.91	0.00	0.00	0.00	
7,900.00	90.07	180.78	7,223.58	-903.93	-287.03	917.84	0.00	0.00	0.00	

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well DOVE 32N-13HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + GL @ 5016.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + GL @ 5016.00ft (Original Well Elev)
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Well:	DOVE 32N-13HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	DOVE 32N-13HZ		
Design:	DOVE 32N-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)
8,000.00	90.07	180.78	7,223.46	-1,003.92	-288.39	1,017.76	0.00	0.00	0.00
8,100.00	90.07	180.78	7,223.33	-1,103.91	-289.75	1,117.68	0.00	0.00	0.00
8,200.00	90.07	180.78	7,223.21	-1,203.90	-291.11	1,217.60	0.00	0.00	0.00
8,300.00	90.07	180.78	7,223.09	-1,303.89	-292.47	1,317.53	0.00	0.00	0.00
8,400.00	90.07	180.78	7,222.96	-1,403.88	-293.82	1,417.45	0.00	0.00	0.00
8,500.00	90.07	180.78	7,222.84	-1,503.87	-295.18	1,517.37	0.00	0.00	0.00
8,600.00	90.07	180.78	7,222.71	-1,603.86	-296.54	1,617.30	0.00	0.00	0.00
8,700.00	90.07	180.78	7,222.59	-1,703.85	-297.90	1,717.22	0.00	0.00	0.00
8,800.00	90.07	180.78	7,222.46	-1,803.84	-299.26	1,817.14	0.00	0.00	0.00
8,900.00	90.07	180.78	7,222.34	-1,903.83	-300.62	1,917.06	0.00	0.00	0.00
9,000.00	90.07	180.78	7,222.21	-2,003.82	-301.98	2,016.99	0.00	0.00	0.00
9,100.00	90.07	180.78	7,222.09	-2,103.81	-303.34	2,116.91	0.00	0.00	0.00
9,200.00	90.07	180.78	7,221.96	-2,203.80	-304.69	2,216.83	0.00	0.00	0.00
9,300.00	90.07	180.78	7,221.84	-2,303.79	-306.05	2,316.75	0.00	0.00	0.00
9,400.00	90.07	180.78	7,221.71	-2,403.79	-307.41	2,416.68	0.00	0.00	0.00
9,500.00	90.07	180.78	7,221.59	-2,503.78	-308.77	2,516.60	0.00	0.00	0.00
9,600.00	90.07	180.78	7,221.46	-2,603.77	-310.13	2,616.52	0.00	0.00	0.00
9,700.00	90.07	180.78	7,221.34	-2,703.76	-311.49	2,716.44	0.00	0.00	0.00
9,800.00	90.07	180.78	7,221.21	-2,803.75	-312.85	2,816.37	0.00	0.00	0.00
9,900.00	90.07	180.78	7,221.09	-2,903.74	-314.20	2,916.29	0.00	0.00	0.00
10,000.00	90.07	180.78	7,220.96	-3,003.73	-315.56	3,016.21	0.00	0.00	0.00
10,100.00	90.07	180.78	7,220.84	-3,103.72	-316.92	3,116.14	0.00	0.00	0.00
10,200.00	90.07	180.78	7,220.71	-3,203.71	-318.28	3,216.06	0.00	0.00	0.00
10,300.00	90.07	180.78	7,220.59	-3,303.70	-319.64	3,315.98	0.00	0.00	0.00
10,400.00	90.07	180.78	7,220.46	-3,403.69	-321.00	3,415.90	0.00	0.00	0.00
10,500.00	90.07	180.78	7,220.34	-3,503.68	-322.36	3,515.83	0.00	0.00	0.00
10,600.00	90.07	180.78	7,220.22	-3,603.67	-323.71	3,615.75	0.00	0.00	0.00
10,700.00	90.07	180.78	7,220.09	-3,703.66	-325.07	3,715.67	0.00	0.00	0.00
10,800.00	90.07	180.78	7,219.97	-3,803.66	-326.43	3,815.59	0.00	0.00	0.00
10,900.00	90.07	180.78	7,219.84	-3,903.65	-327.79	3,915.52	0.00	0.00	0.00
11,000.00	90.07	180.78	7,219.72	-4,003.64	-329.15	4,015.44	0.00	0.00	0.00
11,100.00	90.07	180.78	7,219.59	-4,103.63	-330.51	4,115.36	0.00	0.00	0.00
11,200.00	90.07	180.78	7,219.47	-4,203.62	-331.87	4,215.28	0.00	0.00	0.00
11,300.00	90.07	180.78	7,219.34	-4,303.61	-333.23	4,315.21	0.00	0.00	0.00
11,400.00	90.07	180.78	7,219.22	-4,403.60	-334.58	4,415.13	0.00	0.00	0.00
11,500.00	90.07	180.78	7,219.09	-4,503.59	-335.94	4,515.05	0.00	0.00	0.00
11,600.00	90.07	180.78	7,218.97	-4,603.58	-337.30	4,614.98	0.00	0.00	0.00
11,700.00	90.07	180.78	7,218.84	-4,703.57	-338.66	4,714.90	0.00	0.00	0.00
11,800.00	90.07	180.78	7,218.72	-4,803.56	-340.02	4,814.82	0.00	0.00	0.00
11,900.00	90.07	180.78	7,218.59	-4,903.55	-341.38	4,914.74	0.00	0.00	0.00
12,000.00	90.07	180.78	7,218.47	-5,003.54	-342.74	5,014.67	0.00	0.00	0.00
12,100.00	90.07	180.78	7,218.34	-5,103.53	-344.09	5,114.59	0.00	0.00	0.00
12,200.00	90.07	180.78	7,218.22	-5,203.53	-345.45	5,214.51	0.00	0.00	0.00
12,300.00	90.07	180.78	7,218.09	-5,303.52	-346.81	5,314.43	0.00	0.00	0.00
12,400.00	90.07	180.78	7,217.97	-5,403.51	-348.17	5,414.36	0.00	0.00	0.00
12,500.00	90.07	180.78	7,217.84	-5,503.50	-349.53	5,514.28	0.00	0.00	0.00
12,600.00	90.07	180.78	7,217.72	-5,603.49	-350.89	5,614.20	0.00	0.00	0.00
12,700.00	90.07	180.78	7,217.59	-5,703.48	-352.25	5,714.13	0.00	0.00	0.00
12,800.00	90.07	180.78	7,217.47	-5,803.47	-353.61	5,814.05	0.00	0.00	0.00
12,900.00	90.07	180.78	7,217.34	-5,903.46	-354.96	5,913.97	0.00	0.00	0.00
13,000.00	90.07	180.78	7,217.22	-6,003.45	-356.32	6,013.89	0.00	0.00	0.00
13,100.00	90.07	180.78	7,217.10	-6,103.44	-357.68	6,113.82	0.00	0.00	0.00

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well DOVE 32N-13HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + GL @ 5016.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + GL @ 5016.00ft (Original Well Elev)
Site:	WELD_DOVE 4-12HZ PAD	North Reference:	True
Well:	DOVE 32N-13HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	DOVE 32N-13HZ		
Design:	DOVE 32N-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)	
13,200.00	90.07	180.78	7,216.97	-6,203.43	-359.04	6,213.74	0.00	0.00	0.00	
13,300.00	90.07	180.78	7,216.85	-6,303.42	-360.40	6,313.66	0.00	0.00	0.00	
13,400.00	90.07	180.78	7,216.72	-6,403.41	-361.76	6,413.58	0.00	0.00	0.00	
13,500.00	90.07	180.78	7,216.60	-6,503.40	-363.12	6,513.51	0.00	0.00	0.00	
13,600.00	90.07	180.78	7,216.47	-6,603.39	-364.47	6,613.43	0.00	0.00	0.00	
13,700.00	90.07	180.78	7,216.35	-6,703.39	-365.83	6,713.35	0.00	0.00	0.00	
13,800.00	90.07	180.78	7,216.22	-6,803.38	-367.19	6,813.27	0.00	0.00	0.00	
13,900.00	90.07	180.78	7,216.10	-6,903.37	-368.55	6,913.20	0.00	0.00	0.00	
13,977.67	90.07	180.78	7,216.00	-6,981.03	-369.61	6,990.81	0.00	0.00	0.00	
DOVE 32N-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 32N-13HZ BHL -1 - hit/miss target - Shape - plan hits target center - Point	0.00	0.00	7,216.00	-6,981.03	-369.61	1,294,625.61	3,214,076.30	40.139604	-104.734284	

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			
7,569.66	7,224.00	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		
3,398.01	3,387.00	PARKMAN		0.00		
4,442.91	4,425.00	SUSSEX		0.00		
7,167.47	7,089.00	SHARON SPRINGS		0.00		
7,297.74	7,161.00	NIOBRARA A		0.00		

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well DOVE 32N-13HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + GL @ 5016.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + GL @ 5016.00ft (Original Well Elev)
Site:	WELD_DOVE 4-12HZ PAD	North Reference:	True
Well:	DOVE 32N-13HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	DOVE 32N-13HZ		
Design:	DOVE 32N-13HZ (wp01)		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,000.00	2,000.00	0.00	0.00	Start Build 2.00
2,400.00	2,398.70	0.00	-27.88	Start 1573.50 hold at 2400.00 MD
3,973.50	3,956.89	0.00	-246.87	Start Drop -2.00
4,373.50	4,355.59	0.00	-274.75	Start 2295.45 hold at 4373.50 MD
6,668.95	6,651.04	0.00	-274.75	Start Build 10.00
7,569.67	7,224.00	-573.62	-282.54	Start 6408.48 hold at 7569.67 MD
13,978.15				TD at 13978.15