

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_HUDSON 3W-26HZ PAD

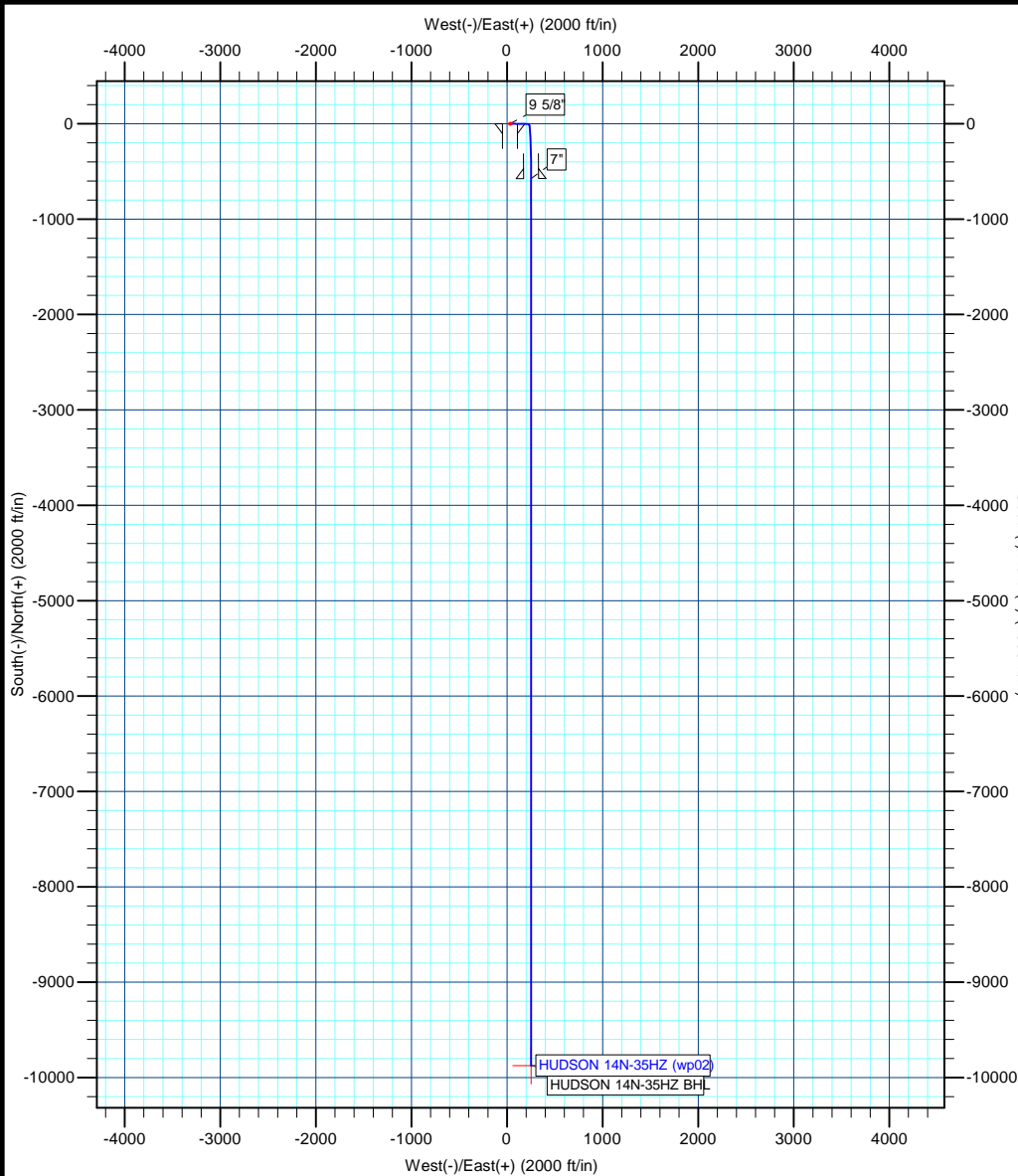
HUDSON 14N-35HZ

HUDSON 14N-35HZ

Plan: HUDSON 14N-35HZ (wp02)

Standard Planning Report

02 May, 2012



Azimuths to True North
 Magnetic North: 8.65°
 Magnetic Field Strength: 52904.4snT
 Dip Angle: 66.81°
 Date: 4/25/2012
 Model: IGRF2010

Project: COLORADO NORTHERN ZONE - 83
Site: WELD_HUDSON 3W-26HZ PAD
Well: HUDSON 14N-35HZ
Wellbore: HUDSON 14N-35HZ
Section:
SHL:
Design: HUDSON 14N-35HZ (wp02)
Latitude: 40.115863
Longitude: -104.634090
GL: 4910.00
KB: GL + RKB @ 4927.00ft



WELL DETAILS: HUDSON 14N-35HZ

+N/-S	+E/-W	Northing	Ground Level: Easting	4910.00 Latitude	Longitude	Slot
-0.01	29.93	1286235.36	3242171.80	40.115863	-104.634090	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	-0.01	29.93	0.00	0.00	0.00
1500.00	0.00	0.00	1500.00	-0.01	29.93	0.00	0.00	0.00
1990.05	2.45	90.95	1989.90	-0.19	40.40	0.50	90.95	0.41
6384.14	2.45	90.95	6379.97	-3.32	228.23	0.00	0.00	7.78
7282.46	89.87	180.00	6952.00	-575.00	252.65	10.00	89.05	579.86
7283.25	89.86	180.00	6952.00	-575.79	252.65	1.00	180.00	580.65
16580.53	89.86	180.00	6974.00	-9873.05	252.65	0.00	0.00	9875.55

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

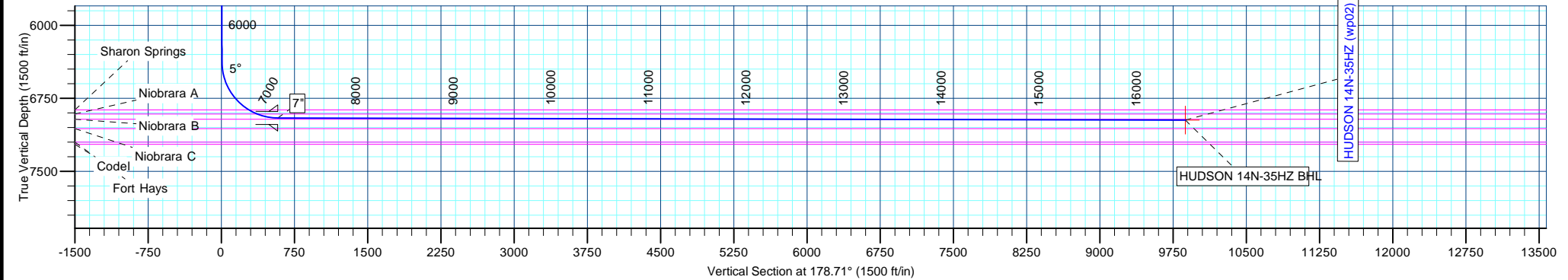
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
HUDSON 14N-35HZ BHL	6974.00	-9873.05	252.65	40.088760	-104.633294	Point

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
768.00	768.00	Fox Hills
2859.00	2859.94	Parkman
4553.00	4555.49	Sussex
6868.00	6969.41	Sharon Springs
6910.00	7062.88	Niobrara A
6964.00	12354.14	Niobrara B

CASING DETAILS

TVD	MD	Name	Size
1300.00	1300.00	9 5/8"	9-5/8
6952.00	7282.46	7"	7



Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Site WELD_HUDSON 3W-26HZ PAD
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4927.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4927.00ft
Site:	WELD_HUDSON 3W-26HZ PAD	North Reference:	True
Well:	HUDSON 14N-35HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	HUDSON 14N-35HZ		
Design:	HUDSON 14N-35HZ (wp02)		

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_HUDSON 3W-26HZ PAD				
Site Position:	Northing:	1,286,235.08 usft	Latitude:	40.115863	
From:	Lat/Long	Easting:	3,242,141.88 usft	Longitude:	-104.634197
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.56 °

Well	HUDSON 14N-35HZ					
Well Position	+N/-S	-0.01 ft	Northing:	1,286,235.36 usft	Latitude:	40.115863
	+E/-W	29.93 ft	Easting:	3,242,171.81 usft	Longitude:	-104.634090
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,910.00 ft

Wellbore	HUDSON 14N-35HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/25/2012	8.65	66.81	52,904

Design	HUDSON 14N-35HZ (wp02)			
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	-0.01	29.93	178.71

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	-0.01	29.93	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	-0.01	29.93	0.00	0.00	0.00	0.00	
1,990.05	2.45	90.95	1,989.90	-0.19	40.40	0.50	0.50	0.00	90.95	
6,384.14	2.45	90.95	6,379.97	-3.32	228.23	0.00	0.00	0.00	0.00	
7,282.46	89.87	180.00	6,952.00	-575.00	252.65	10.00	9.73	9.91	89.05	
7,283.25	89.86	180.00	6,952.00	-575.79	252.65	1.00	-1.00	0.00	180.00	
16,580.53	89.86	180.00	6,974.00	-9,873.05	252.65	0.00	0.00	0.00	0.00	HUDSON 14N-35HZ

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Site WELD_HUDSON 3W-26HZ PAD
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4927.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4927.00ft
Site:	WELD_HUDSON 3W-26HZ PAD	North Reference:	True
Well:	HUDSON 14N-35HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	HUDSON 14N-35HZ		
Design:	HUDSON 14N-35HZ (wp02)		

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	-0.01	29.93	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	-0.01	29.93	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	-0.01	29.93	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	-0.01	29.93	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	-0.01	29.93	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	-0.01	29.93	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	-0.01	29.93	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	-0.01	29.93	0.00	0.00	0.00	0.00
768.00	0.00	0.00	768.00	-0.01	29.93	0.00	0.00	0.00	0.00
Fox Hills									
800.00	0.00	0.00	800.00	-0.01	29.93	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	-0.01	29.93	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	-0.01	29.93	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	-0.01	29.93	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	-0.01	29.93	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	-0.01	29.93	0.00	0.00	0.00	0.00
9 5/8"									
1,400.00	0.00	0.00	1,400.00	-0.01	29.93	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	-0.01	29.93	0.00	0.00	0.00	0.00
Start Build 0.50									
1,600.00	0.50	90.95	1,600.00	-0.02	30.36	0.02	0.50	0.50	0.00
1,700.00	1.00	90.95	1,699.99	-0.04	31.67	0.07	0.50	0.50	0.00
1,800.00	1.50	90.95	1,799.97	-0.08	33.85	0.15	0.50	0.50	0.00
1,900.00	2.00	90.95	1,899.92	-0.13	36.91	0.27	0.50	0.50	0.00
1,990.05	2.45	90.95	1,989.90	-0.19	40.40	0.41	0.50	0.50	0.00
Start 4394.09 hold at 1990.05 MD									
2,000.00	2.45	90.95	1,999.84	-0.19	40.83	0.43	0.00	0.00	0.00
2,100.00	2.45	90.95	2,099.75	-0.27	45.10	0.60	0.00	0.00	0.00
2,200.00	2.45	90.95	2,199.66	-0.34	49.38	0.76	0.00	0.00	0.00
2,300.00	2.45	90.95	2,299.57	-0.41	53.65	0.93	0.00	0.00	0.00
2,400.00	2.45	90.95	2,399.48	-0.48	57.92	1.10	0.00	0.00	0.00
2,500.00	2.45	90.95	2,499.38	-0.55	62.20	1.27	0.00	0.00	0.00
2,600.00	2.45	90.95	2,599.29	-0.62	66.47	1.43	0.00	0.00	0.00
2,700.00	2.45	90.95	2,699.20	-0.69	70.75	1.60	0.00	0.00	0.00
2,800.00	2.45	90.95	2,799.11	-0.76	75.02	1.77	0.00	0.00	0.00
2,859.94	2.45	90.95	2,859.00	-0.81	77.59	1.87	0.00	0.00	0.00
Parkman									
2,900.00	2.45	90.95	2,899.02	-0.84	79.30	1.94	0.00	0.00	0.00
3,000.00	2.45	90.95	2,998.93	-0.91	83.57	2.10	0.00	0.00	0.00
3,100.00	2.45	90.95	3,098.84	-0.98	87.85	2.27	0.00	0.00	0.00
3,200.00	2.45	90.95	3,198.74	-1.05	92.12	2.44	0.00	0.00	0.00
3,300.00	2.45	90.95	3,298.65	-1.12	96.40	2.61	0.00	0.00	0.00
3,400.00	2.45	90.95	3,398.56	-1.19	100.67	2.77	0.00	0.00	0.00
3,500.00	2.45	90.95	3,498.47	-1.26	104.95	2.94	0.00	0.00	0.00
3,600.00	2.45	90.95	3,598.38	-1.33	109.22	3.11	0.00	0.00	0.00
3,700.00	2.45	90.95	3,698.29	-1.40	113.49	3.28	0.00	0.00	0.00
3,800.00	2.45	90.95	3,798.20	-1.48	117.77	3.44	0.00	0.00	0.00
3,900.00	2.45	90.95	3,898.10	-1.55	122.04	3.61	0.00	0.00	0.00
4,000.00	2.45	90.95	3,998.01	-1.62	126.32	3.78	0.00	0.00	0.00
4,100.00	2.45	90.95	4,097.92	-1.69	130.59	3.95	0.00	0.00	0.00
4,200.00	2.45	90.95	4,197.83	-1.76	134.87	4.11	0.00	0.00	0.00
4,300.00	2.45	90.95	4,297.74	-1.83	139.14	4.28	0.00	0.00	0.00
4,400.00	2.45	90.95	4,397.65	-1.90	143.42	4.45	0.00	0.00	0.00
4,500.00	2.45	90.95	4,497.56	-1.97	147.69	4.62	0.00	0.00	0.00

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Site WELD_HUDSON 3W-26HZ PAD
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4927.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4927.00ft
Site:	WELD_HUDSON 3W-26HZ PAD	North Reference:	True
Well:	HUDSON 14N-35HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	HUDSON 14N-35HZ		
Design:	HUDSON 14N-35HZ (wp02)		

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)	
4,555.49	2.45	90.95	4,553.00	-2.01	150.06	4.71	0.00	0.00	0.00	
Sussex										
4,600.00	2.45	90.95	4,597.46	-2.05	151.97	4.79	0.00	0.00	0.00	
4,700.00	2.45	90.95	4,697.37	-2.12	156.24	4.95	0.00	0.00	0.00	
4,800.00	2.45	90.95	4,797.28	-2.19	160.51	5.12	0.00	0.00	0.00	
4,900.00	2.45	90.95	4,897.19	-2.26	164.79	5.29	0.00	0.00	0.00	
5,000.00	2.45	90.95	4,997.10	-2.33	169.06	5.46	0.00	0.00	0.00	
5,100.00	2.45	90.95	5,097.01	-2.40	173.34	5.62	0.00	0.00	0.00	
5,200.00	2.45	90.95	5,196.92	-2.47	177.61	5.79	0.00	0.00	0.00	
5,300.00	2.45	90.95	5,296.82	-2.54	181.89	5.96	0.00	0.00	0.00	
5,400.00	2.45	90.95	5,396.73	-2.62	186.16	6.13	0.00	0.00	0.00	
5,500.00	2.45	90.95	5,496.64	-2.69	190.44	6.29	0.00	0.00	0.00	
5,600.00	2.45	90.95	5,596.55	-2.76	194.71	6.46	0.00	0.00	0.00	
5,700.00	2.45	90.95	5,696.46	-2.83	198.99	6.63	0.00	0.00	0.00	
5,800.00	2.45	90.95	5,796.37	-2.90	203.26	6.80	0.00	0.00	0.00	
5,900.00	2.45	90.95	5,896.28	-2.97	207.54	6.96	0.00	0.00	0.00	
6,000.00	2.45	90.95	5,996.18	-3.04	211.81	7.13	0.00	0.00	0.00	
6,100.00	2.45	90.95	6,096.09	-3.11	216.08	7.30	0.00	0.00	0.00	
6,200.00	2.45	90.95	6,196.00	-3.19	220.36	7.47	0.00	0.00	0.00	
6,300.00	2.45	90.95	6,295.91	-3.26	224.63	7.63	0.00	0.00	0.00	
6,384.14	2.45	90.95	6,379.97	-3.32	228.23	7.78	0.00	0.00	0.00	
Start DLS 10.00 TFO 89.05										
6,400.00	2.94	123.60	6,395.82	-3.55	228.91	8.02	10.00	3.09	205.84	
6,500.00	11.88	168.27	6,494.93	-15.07	233.15	19.64	10.00	8.94	44.66	
6,600.00	21.76	173.85	6,590.54	-43.65	237.24	48.30	10.00	9.88	5.58	
6,700.00	31.71	176.03	6,679.74	-88.41	241.05	93.14	10.00	9.95	2.18	
6,800.00	41.69	177.25	6,759.82	-148.00	244.47	152.79	10.00	9.97	1.22	
6,900.00	51.67	178.07	6,828.35	-220.59	247.39	225.43	10.00	9.98	0.82	
6,969.41	58.60	178.51	6,868.00	-277.48	249.08	282.34	10.00	9.99	0.64	
Sharon Springs										
7,000.00	61.65	178.68	6,883.23	-304.00	249.73	308.87	10.00	9.99	0.57	
7,062.88	67.94	179.01	6,910.00	-360.86	250.87	365.73	10.00	9.99	0.52	
Niobrara A										
7,100.00	71.64	179.19	6,922.82	-395.68	251.42	400.56	10.00	9.99	0.49	
7,200.00	81.63	179.64	6,945.90	-492.84	252.40	497.72	10.00	9.99	0.45	
7,282.46	89.87	180.00	6,952.00	-575.00	252.65	579.87	10.00	9.99	0.43	
Start DLS 1.00 TFO 180.00 - 7"										
7,283.25	89.86	180.00	6,952.00	-575.79	252.65	580.65	1.00	-1.00	0.00	
Start 9297.28 hold at 7283.25 MD										
7,300.00	89.86	180.00	6,952.04	-592.54	252.65	597.40	0.00	0.00	0.00	
7,400.00	89.86	180.00	6,952.28	-692.54	252.65	697.38	0.00	0.00	0.00	
7,500.00	89.86	180.00	6,952.51	-792.54	252.65	797.35	0.00	0.00	0.00	
7,600.00	89.86	180.00	6,952.75	-892.54	252.65	897.33	0.00	0.00	0.00	
7,700.00	89.86	180.00	6,952.99	-992.54	252.65	997.30	0.00	0.00	0.00	
7,800.00	89.86	180.00	6,953.22	-1,092.54	252.65	1,097.27	0.00	0.00	0.00	
7,900.00	89.86	180.00	6,953.46	-1,192.54	252.65	1,197.25	0.00	0.00	0.00	
8,000.00	89.86	180.00	6,953.70	-1,292.54	252.65	1,297.22	0.00	0.00	0.00	
8,100.00	89.86	180.00	6,953.93	-1,392.54	252.65	1,397.20	0.00	0.00	0.00	
8,200.00	89.86	180.00	6,954.17	-1,492.54	252.65	1,497.17	0.00	0.00	0.00	
8,300.00	89.86	180.00	6,954.41	-1,592.54	252.65	1,597.15	0.00	0.00	0.00	
8,400.00	89.86	180.00	6,954.64	-1,692.54	252.65	1,697.12	0.00	0.00	0.00	
8,500.00	89.86	180.00	6,954.88	-1,792.54	252.65	1,797.09	0.00	0.00	0.00	
8,600.00	89.86	180.00	6,955.12	-1,892.54	252.65	1,897.07	0.00	0.00	0.00	

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Site WELD_HUDSON 3W-26HZ PAD
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4927.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4927.00ft
Site:	WELD_HUDSON 3W-26HZ PAD	North Reference:	True
Well:	HUDSON 14N-35HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	HUDSON 14N-35HZ		
Design:	HUDSON 14N-35HZ (wp02)		

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)	
8,700.00	89.86	180.00	6,955.35	-1,992.54	252.65	1,997.04	0.00	0.00	0.00	
8,800.00	89.86	180.00	6,955.59	-2,092.54	252.65	2,097.02	0.00	0.00	0.00	
8,900.00	89.86	180.00	6,955.83	-2,192.54	252.65	2,196.99	0.00	0.00	0.00	
9,000.00	89.86	180.00	6,956.06	-2,292.54	252.65	2,296.97	0.00	0.00	0.00	
9,100.00	89.86	180.00	6,956.30	-2,392.54	252.65	2,396.94	0.00	0.00	0.00	
9,200.00	89.86	180.00	6,956.54	-2,492.54	252.65	2,496.91	0.00	0.00	0.00	
9,300.00	89.86	180.00	6,956.77	-2,592.54	252.65	2,596.89	0.00	0.00	0.00	
9,400.00	89.86	180.00	6,957.01	-2,692.54	252.65	2,696.86	0.00	0.00	0.00	
9,500.00	89.86	180.00	6,957.25	-2,792.54	252.65	2,796.84	0.00	0.00	0.00	
9,600.00	89.86	180.00	6,957.48	-2,892.54	252.65	2,896.81	0.00	0.00	0.00	
9,700.00	89.86	180.00	6,957.72	-2,992.54	252.65	2,996.79	0.00	0.00	0.00	
9,800.00	89.86	180.00	6,957.96	-3,092.54	252.65	3,096.76	0.00	0.00	0.00	
9,900.00	89.86	180.00	6,958.19	-3,192.54	252.65	3,196.73	0.00	0.00	0.00	
10,000.00	89.86	180.00	6,958.43	-3,292.54	252.65	3,296.71	0.00	0.00	0.00	
10,100.00	89.86	180.00	6,958.67	-3,392.54	252.65	3,396.68	0.00	0.00	0.00	
10,200.00	89.86	180.00	6,958.90	-3,492.54	252.65	3,496.66	0.00	0.00	0.00	
10,300.00	89.86	180.00	6,959.14	-3,592.54	252.65	3,596.63	0.00	0.00	0.00	
10,400.00	89.86	180.00	6,959.38	-3,692.53	252.65	3,696.61	0.00	0.00	0.00	
10,500.00	89.86	180.00	6,959.61	-3,792.53	252.65	3,796.58	0.00	0.00	0.00	
10,600.00	89.86	180.00	6,959.85	-3,892.53	252.65	3,896.55	0.00	0.00	0.00	
10,700.00	89.86	180.00	6,960.09	-3,992.53	252.65	3,996.53	0.00	0.00	0.00	
10,800.00	89.86	180.00	6,960.32	-4,092.53	252.65	4,096.50	0.00	0.00	0.00	
10,900.00	89.86	180.00	6,960.56	-4,192.53	252.65	4,196.48	0.00	0.00	0.00	
11,000.00	89.86	180.00	6,960.80	-4,292.53	252.65	4,296.45	0.00	0.00	0.00	
11,100.00	89.86	180.00	6,961.03	-4,392.53	252.65	4,396.43	0.00	0.00	0.00	
11,200.00	89.86	180.00	6,961.27	-4,492.53	252.65	4,496.40	0.00	0.00	0.00	
11,300.00	89.86	180.00	6,961.51	-4,592.53	252.65	4,596.37	0.00	0.00	0.00	
11,400.00	89.86	180.00	6,961.74	-4,692.53	252.65	4,696.35	0.00	0.00	0.00	
11,500.00	89.86	180.00	6,961.98	-4,792.53	252.65	4,796.32	0.00	0.00	0.00	
11,600.00	89.86	180.00	6,962.22	-4,892.53	252.65	4,896.30	0.00	0.00	0.00	
11,700.00	89.86	180.00	6,962.45	-4,992.53	252.65	4,996.27	0.00	0.00	0.00	
11,800.00	89.86	180.00	6,962.69	-5,092.53	252.65	5,096.25	0.00	0.00	0.00	
11,900.00	89.86	180.00	6,962.93	-5,192.53	252.65	5,196.22	0.00	0.00	0.00	
12,000.00	89.86	180.00	6,963.16	-5,292.53	252.65	5,296.19	0.00	0.00	0.00	
12,100.00	89.86	180.00	6,963.40	-5,392.53	252.65	5,396.17	0.00	0.00	0.00	
12,200.00	89.86	180.00	6,963.64	-5,492.53	252.65	5,496.14	0.00	0.00	0.00	
12,300.00	89.86	180.00	6,963.87	-5,592.53	252.65	5,596.12	0.00	0.00	0.00	
12,354.14	89.86	180.00	6,964.00	-5,646.67	252.65	5,650.25	0.00	0.00	0.00	
Niobrara B										
12,400.00	89.86	180.00	6,964.11	-5,692.53	252.65	5,696.09	0.00	0.00	0.00	
12,500.00	89.86	180.00	6,964.35	-5,792.53	252.65	5,796.07	0.00	0.00	0.00	
12,600.00	89.86	180.00	6,964.58	-5,892.53	252.65	5,896.04	0.00	0.00	0.00	
12,700.00	89.86	180.00	6,964.82	-5,992.53	252.65	5,996.01	0.00	0.00	0.00	
12,800.00	89.86	180.00	6,965.06	-6,092.53	252.65	6,095.99	0.00	0.00	0.00	
12,900.00	89.86	180.00	6,965.29	-6,192.53	252.65	6,195.96	0.00	0.00	0.00	
13,000.00	89.86	180.00	6,965.53	-6,292.53	252.65	6,295.94	0.00	0.00	0.00	
13,100.00	89.86	180.00	6,965.76	-6,392.53	252.65	6,395.91	0.00	0.00	0.00	
13,200.00	89.86	180.00	6,966.00	-6,492.53	252.65	6,495.89	0.00	0.00	0.00	
13,300.00	89.86	180.00	6,966.24	-6,592.53	252.65	6,595.86	0.00	0.00	0.00	
13,400.00	89.86	180.00	6,966.47	-6,692.53	252.65	6,695.83	0.00	0.00	0.00	
13,500.00	89.86	180.00	6,966.71	-6,792.53	252.65	6,795.81	0.00	0.00	0.00	
13,600.00	89.86	180.00	6,966.95	-6,892.53	252.65	6,895.78	0.00	0.00	0.00	
13,700.00	89.86	180.00	6,967.18	-6,992.53	252.65	6,995.76	0.00	0.00	0.00	
13,800.00	89.86	180.00	6,967.42	-7,092.53	252.65	7,095.73	0.00	0.00	0.00	

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Site WELD_HUDSON 3W-26HZ PAD
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4927.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4927.00ft
Site:	WELD_HUDSON 3W-26HZ PAD	North Reference:	True
Well:	HUDSON 14N-35HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	HUDSON 14N-35HZ		
Design:	HUDSON 14N-35HZ (wp02)		

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)
13,900.00	89.86	180.00	6,967.66	-7,192.53	252.65	7,195.71	0.00	0.00	0.00
14,000.00	89.86	180.00	6,967.89	-7,292.52	252.65	7,295.68	0.00	0.00	0.00
14,100.00	89.86	180.00	6,968.13	-7,392.52	252.65	7,395.65	0.00	0.00	0.00
14,200.00	89.86	180.00	6,968.37	-7,492.52	252.65	7,495.63	0.00	0.00	0.00
14,300.00	89.86	180.00	6,968.60	-7,592.52	252.65	7,595.60	0.00	0.00	0.00
14,400.00	89.86	180.00	6,968.84	-7,692.52	252.65	7,695.58	0.00	0.00	0.00
14,500.00	89.86	180.00	6,969.08	-7,792.52	252.65	7,795.55	0.00	0.00	0.00
14,600.00	89.86	180.00	6,969.31	-7,892.52	252.65	7,895.53	0.00	0.00	0.00
14,700.00	89.86	180.00	6,969.55	-7,992.52	252.65	7,995.50	0.00	0.00	0.00
14,800.00	89.86	180.00	6,969.79	-8,092.52	252.65	8,095.47	0.00	0.00	0.00
14,900.00	89.86	180.00	6,970.02	-8,192.52	252.65	8,195.45	0.00	0.00	0.00
15,000.00	89.86	180.00	6,970.26	-8,292.52	252.65	8,295.42	0.00	0.00	0.00
15,100.00	89.86	180.00	6,970.50	-8,392.52	252.65	8,395.40	0.00	0.00	0.00
15,200.00	89.86	180.00	6,970.73	-8,492.52	252.65	8,495.37	0.00	0.00	0.00
15,300.00	89.86	180.00	6,970.97	-8,592.52	252.65	8,595.35	0.00	0.00	0.00
15,400.00	89.86	180.00	6,971.21	-8,692.52	252.65	8,695.32	0.00	0.00	0.00
15,500.00	89.86	180.00	6,971.44	-8,792.52	252.65	8,795.29	0.00	0.00	0.00
15,600.00	89.86	180.00	6,971.68	-8,892.52	252.65	8,895.27	0.00	0.00	0.00
15,700.00	89.86	180.00	6,971.92	-8,992.52	252.65	8,995.24	0.00	0.00	0.00
15,800.00	89.86	180.00	6,972.15	-9,092.52	252.65	9,095.22	0.00	0.00	0.00
15,900.00	89.86	180.00	6,972.39	-9,192.52	252.65	9,195.19	0.00	0.00	0.00
16,000.00	89.86	180.00	6,972.63	-9,292.52	252.65	9,295.17	0.00	0.00	0.00
16,100.00	89.86	180.00	6,972.86	-9,392.52	252.65	9,395.14	0.00	0.00	0.00
16,200.00	89.86	180.00	6,973.10	-9,492.52	252.65	9,495.11	0.00	0.00	0.00
16,300.00	89.86	180.00	6,973.34	-9,592.52	252.65	9,595.09	0.00	0.00	0.00
16,400.00	89.86	180.00	6,973.57	-9,692.52	252.65	9,695.06	0.00	0.00	0.00
16,500.00	89.86	180.00	6,973.81	-9,792.52	252.65	9,795.04	0.00	0.00	0.00
16,580.53	89.86	180.00	6,974.00	-9,873.05	252.65	9,875.55	0.00	0.00	0.00
TD at 16580.53 - HUDSON 14N-35HZ BHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
HUDSON 14N-35HZ BH	0.00	0.00	6,974.00	-9,873.05	252.65	1,276,364.99	3,242,490.92	40.088760	-104.633294
- hit/miss target - Shape - Point									

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
1,300.00	1,300.00	9 5/8"	9-5/8	12-1/4
7,282.46	6,952.00	7"	7	8-3/4

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Site WELD_HUDSON 3W-26HZ PAD
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL + RKB @ 4927.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL + RKB @ 4927.00ft
Site:	WELD_HUDSON 3W-26HZ PAD	North Reference:	True
Well:	HUDSON 14N-35HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	HUDSON 14N-35HZ		
Design:	HUDSON 14N-35HZ (wp02)		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
768.00	768.00	Fox Hills			
2,859.94	2,859.00	Parkman			
4,555.49	4,553.00	Sussex			
6,969.41	6,868.00	Sharon Springs			
7,062.88	6,910.00	Niobrara A			
12,354.14	6,964.00	Niobrara B			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,500.00	1,500.00	-0.01	29.93	Start Build 0.50	
1,990.05	1,989.90	-0.19	40.40	Start 4394.09 hold at 1990.05 MD	
6,384.14	6,379.97	-3.32	228.23	Start DLS 10.00 TFO 89.05	
7,282.46	6,952.00	-575.00	252.65	Start DLS 1.00 TFO 180.00	
7,283.25	6,952.00	-575.79	252.65	Start 9297.28 hold at 7283.25 MD	
16,580.53	6,974.00	-9,873.05	252.65	TD at 16580.53	