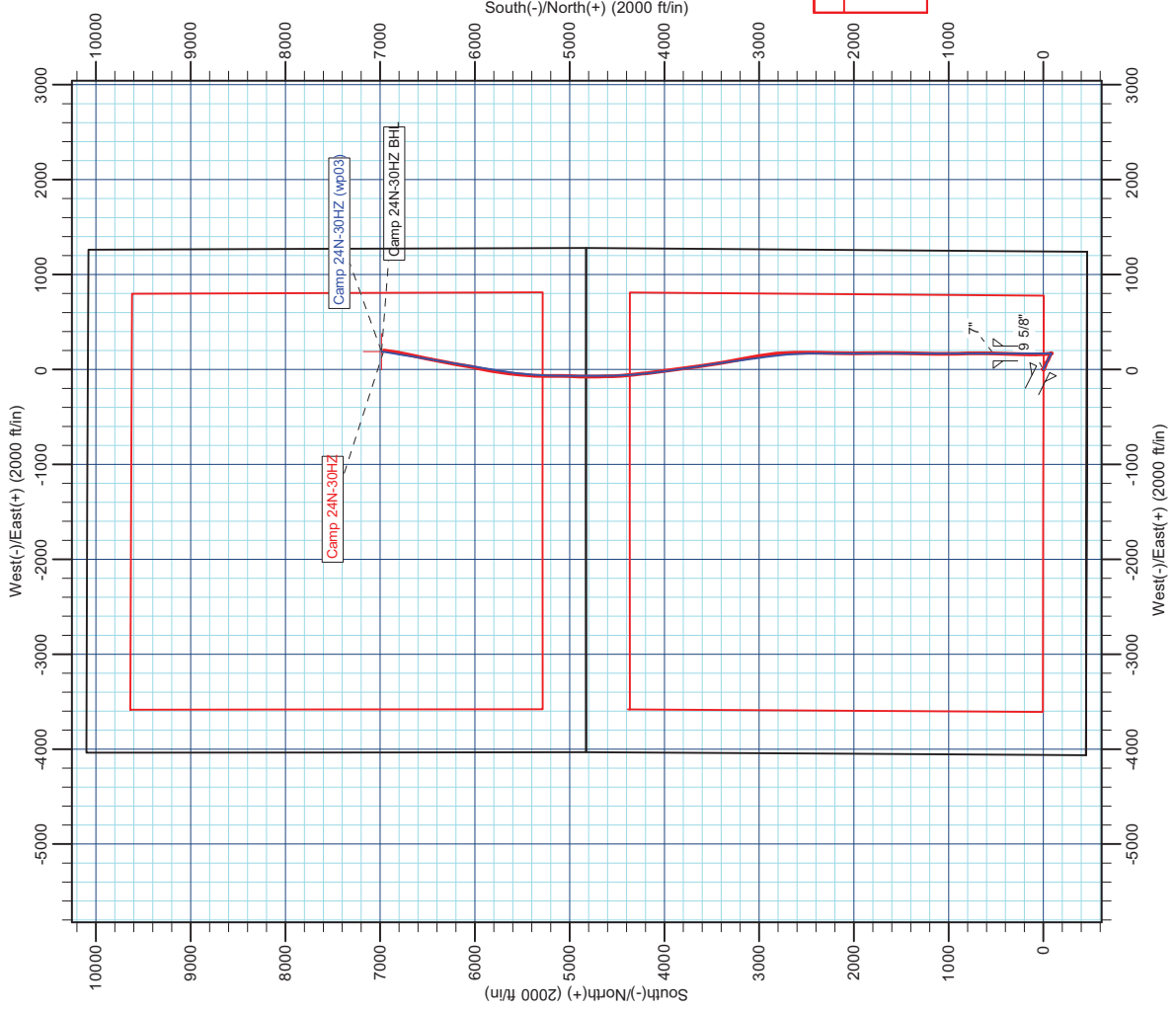


Azimuths to True North
Magnetic North: 8.68°
Magnetic Field
Strength: 52916.7nT
Dip Angle: 66.85°
Date: 6/5/2012
Model: IGRF2010

Project: COLORADO NORTHERN ZONE - 83
Site: WELD CAMP 37-31HZ PAD
Well: Camp 24N-30HZ
Wellbore: Camp 24N-30HZ
Section: SHL:
Design: Camp 24N-30HZ (wp03)
Latitude: 40.175944
Longitude: -104.701572
GL: 4949.00
KB: 25' RKB + 4949' GL @ 4974.00ft



WELL DETAILS: Camp 24N-30HZ				
	Ground Level:	4949.00	Latitude	40.175944
	Easting	3223102.37	Longitude	-104.701572
				Slot

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V/Sect
786.00	0.12	116.60	785.99	0.33	1.85	0.00	0.00	0.38
3500.00	0.00	0.00	3499.99	-0.94	4.39	0.00	180.00	-0.82
3782.68	5.65	117.05	3782.21	-7.28	16.80	2.00	117.05	-6.82
5376.00	5.65	117.05	5367.78	-78.66	156.59	0.00	0.00	-74.41
5658.68	0.00	0.27	5650.00	-85.00	169.00	2.00	180.00	-80.41
6506.68	0.00	0.27	6500.00	-85.00	169.00	0.00	0.00	-80.41
6585.23	0.00	0.27	6576.55	-85.00	169.00	0.00	0.27	-80.41
7060.26	47.50	0.00	6999.00	100.90	169.00	10.00	0.00	105.42
7168.09	52.89	0.00	7068.00	183.71	169.00	5.00	0.00	188.20
7539.47	90.03	0.00	7184.01	529.69	169.00	10.00	0.00	534.06
7555.07	90.03	0.00	7184.00	545.29	169.00	0.00	0.00	549.66
7612.70	90.90	0.00	7183.53	602.91	169.00	1.50	0.00	607.26
9410.00	90.90	0.00	7155.40	2400.00	169.00	0.00	0.00	2403.69
9940.78	90.92	352.04	7146.98	2929.01	132.18	1.50	-89.79	2931.51
11098.56	90.92	352.04	7128.43	4075.48	-28.18	0.00	0.00	4073.23
11629.34	90.90	0.00	7120.00	4604.48	-65.00	1.50	90.07	4601.05
12129.34	90.90	0.00	7112.15	5104.42	-65.00	0.00	0.00	5100.80
12739.23	91.02	9.15	7101.92	5711.63	-16.42	1.50	89.18	5709.11
14028.63	91.02	9.15	7079.00	6984.43	188.56	0.00	0.00	6986.97

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

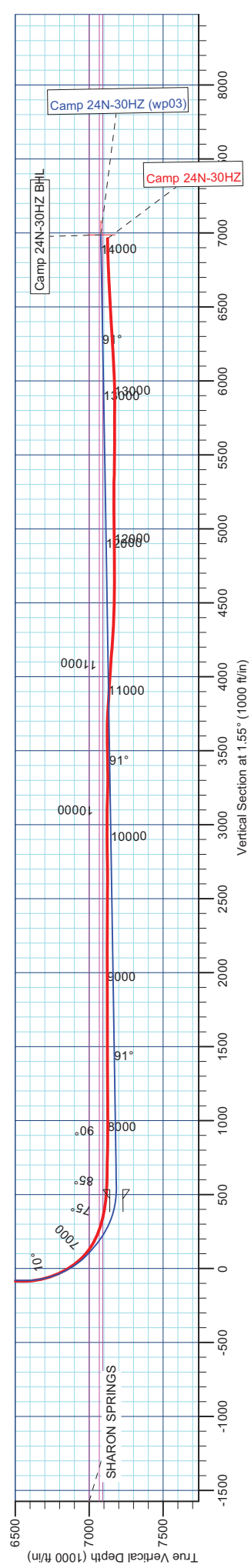
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Camp 24N-30HZ BHL	7079.00	6984.43	188.56	40.195117	-104.700897	Point

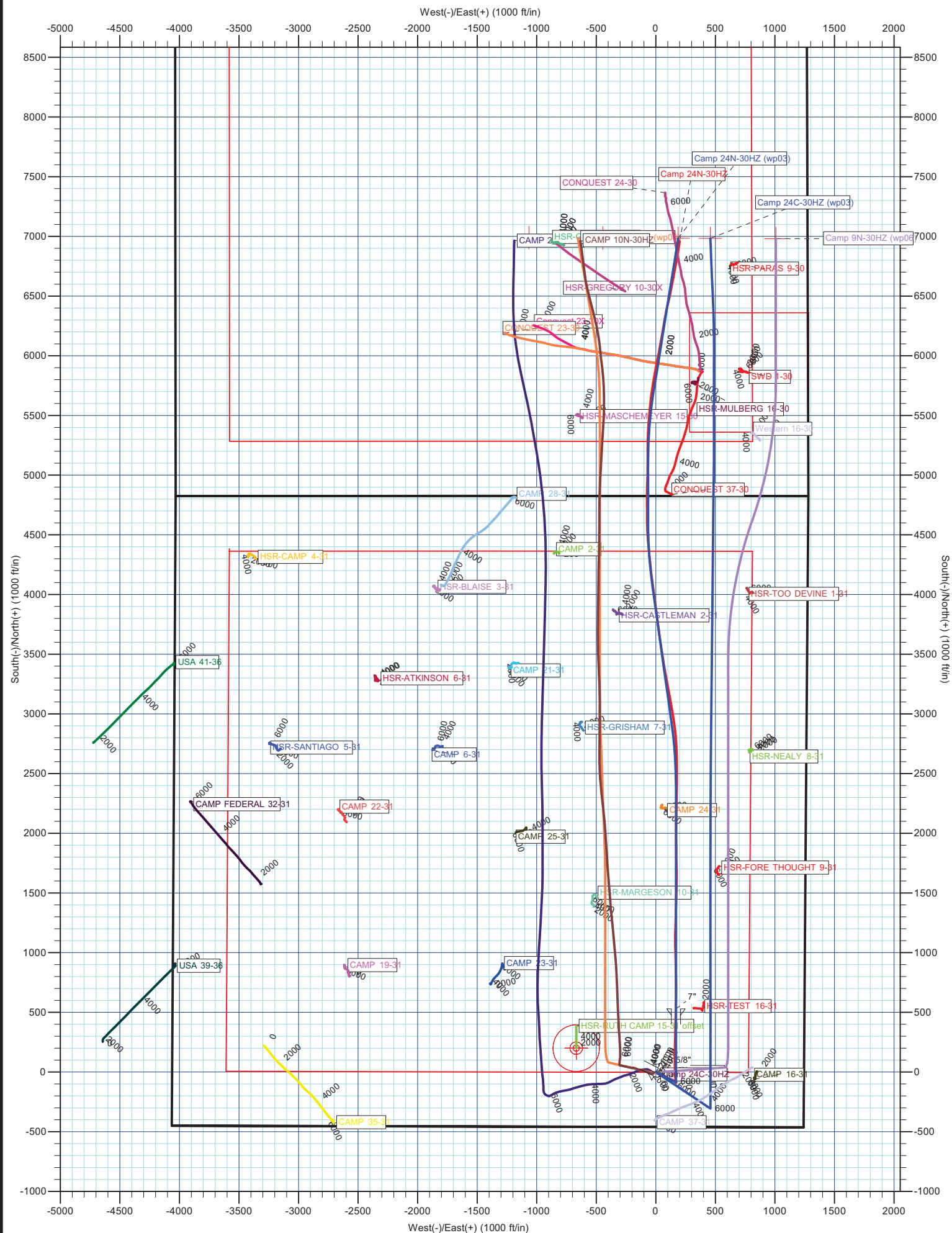
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3961.00	3962.34	PARKMAN
4359.00	4362.29	SUSSEX
7000.00	7061.74	SHARON SPRINGS
7066.00	7168.09	NIobrara A
7092.00	7209.93	NIobrara B

CASING DETAILS

TVD	MD	Name	Size
800.00	800.01	9 5/8"	9-5/8
7184.01	7539.47	7"	7"





Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 24N-30HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 4949' GL @ 4974.00ft
Site:	WELD_CAMP 37-31HZ PAD	MD Reference:	25' RKB + 4949' GL @ 4974.00ft
Well:	Camp 24N-30HZ	North Reference:	True
Wellbore:	Camp 24N-30HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 24N-30HZ	Database:	edmp

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_CAMP 37-31HZ PAD						
Site Position:		Northing:	1,307,943.36	usft	Latitude:	40.175944		
From:	Lat/Long	Easting:	3,223,064.93	usft	Longitude:	-104.701706		
Position Uncertainty:	0.00	ft	Slot Radius:	13-3/16	"	Grid Convergence:	0.52	°

Well	Camp 24N-30HZ					
Well Position	+N/-S	0.00 ft	Northing:	1,307,943.66 usft	Latitude:	40.175944
	+E/-W	0.00 ft	Easting:	3,223,102.37 usft	Longitude:	-104.701572
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,949.00 ft

Wellbore	Camp 24N-30HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/5/2012	8.68	66.85	52,917

Design	Camp 24N-30HZ				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	355.00	

Survey Program	Date	7/3/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
100.00	786.00	Survey #1 (Camp 24N-30HZ)	NS-GYRO-MS	NORTH SENSING GYROCOMPASSING M/S	
948.00	13,978.00	Survey #2 (Camp 24N-30HZ)	MWD	MWD - STANDARD	

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	0.51	62.41	100.00	0.21	0.39	0.17	0.51	0.51	0.00	
200.00	0.38	60.57	200.00	0.58	1.08	0.48	0.13	-0.13	-1.84	
300.00	0.26	81.84	299.99	0.77	1.59	0.63	0.17	-0.12	21.27	
400.00	0.29	135.71	399.99	0.62	1.99	0.45	0.25	0.03	53.87	
500.00	0.19	338.28	499.99	0.59	2.11	0.41	0.47	-0.10	-157.43	
600.00	0.19	223.63	599.99	0.63	1.93	0.46	0.32	0.00	-114.65	
700.00	0.09	201.21	699.99	0.44	1.79	0.28	0.11	-0.10	-22.42	
786.00	0.12	116.60	785.99	0.33	1.85	0.17	0.17	0.03	-98.38	
Tie On Point										

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 24N-30HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 4949' GL @ 4974.00ft
Site:	WELD_CAMP 37-31HZ PAD	MD Reference:	25' RKB + 4949' GL @ 4974.00ft
Well:	Camp 24N-30HZ	North Reference:	True
Wellbore:	Camp 24N-30HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 24N-30HZ	Database:	edmp

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)
952.00	0.35	87.16	951.99	0.28	2.51	0.06	0.15	0.14	-17.73
1,044.00	0.45	120.27	1,043.99	0.11	3.10	-0.16	0.27	0.11	35.99
1,134.00	0.45	140.25	1,133.99	-0.34	3.63	-0.65	0.17	0.00	22.20
1,226.00	0.51	175.34	1,225.98	-1.02	3.90	-1.36	0.32	0.07	38.14
1,316.00	0.16	161.80	1,315.98	-1.54	3.97	-1.88	0.40	-0.39	-15.04
1,407.00	0.10	121.35	1,406.98	-1.71	4.07	-2.05	0.12	-0.07	-44.45
1,499.00	0.14	43.59	1,498.98	-1.67	4.22	-2.03	0.17	0.04	-84.52
1,590.00	0.20	82.85	1,589.98	-1.57	4.45	-1.95	0.14	0.07	43.14
1,681.00	0.20	356.57	1,680.98	-1.39	4.60	-1.78	0.30	0.00	-94.81
1,772.00	0.25	318.95	1,771.98	-1.08	4.46	-1.46	0.17	0.05	-41.34
1,864.00	0.22	265.70	1,863.98	-0.94	4.16	-1.30	0.23	-0.03	-57.88
1,958.00	0.60	237.39	1,957.98	-1.22	3.56	-1.53	0.45	0.40	-30.12
2,053.00	0.69	226.71	2,052.97	-1.88	2.73	-2.11	0.16	0.09	-11.24
2,148.00	1.28	297.39	2,147.96	-1.78	1.37	-1.90	1.30	0.62	74.40
2,243.00	0.36	3.75	2,242.95	-1.00	0.44	-1.03	1.24	-0.97	69.85
2,338.00	0.22	331.63	2,337.95	-0.54	0.38	-0.57	0.22	-0.15	-33.81
2,433.00	1.04	239.34	2,432.94	-0.82	-0.45	-0.78	1.13	0.86	-97.15
2,528.00	0.35	96.46	2,527.94	-1.29	-0.90	-1.21	1.41	-0.73	-150.40
2,623.00	0.42	150.50	2,622.94	-1.63	-0.44	-1.58	0.37	0.07	56.88
2,717.00	0.98	171.73	2,716.93	-2.72	-0.16	-2.70	0.65	0.60	22.59
2,812.00	1.25	43.66	2,811.92	-2.78	0.67	-2.82	2.11	0.28	-134.81
2,908.00	1.13	48.39	2,907.90	-1.39	2.10	-1.57	0.16	-0.13	4.93
3,002.00	0.89	57.07	3,001.89	-0.38	3.41	-0.67	0.30	-0.26	9.23
3,097.00	0.53	67.82	3,096.88	0.19	4.44	-0.20	0.40	-0.38	11.32
3,192.00	0.28	102.96	3,191.88	0.30	5.07	-0.14	0.36	-0.26	36.99
3,287.00	0.07	338.84	3,286.88	0.30	5.27	-0.16	0.34	-0.22	-130.65
3,381.00	0.22	279.13	3,380.87	0.39	5.07	-0.06	0.21	0.16	-63.52
3,476.00	2.13	140.01	3,475.85	-0.94	6.03	-1.46	2.42	2.01	-146.44
3,571.00	3.36	137.89	3,570.74	-4.35	9.03	-5.13	1.30	1.29	-2.23
3,666.00	2.48	142.79	3,665.62	-8.06	12.14	-9.08	0.96	-0.93	5.16
3,761.00	2.68	119.00	3,760.53	-10.77	15.33	-12.07	1.14	0.21	-25.04
3,856.00	4.07	111.09	3,855.36	-13.06	20.41	-14.79	1.54	1.46	-8.33
3,951.00	6.35	110.45	3,949.96	-16.11	28.48	-18.53	2.40	2.40	-0.67
4,046.00	6.24	112.16	4,044.39	-19.89	38.19	-23.14	0.23	-0.12	1.80
4,140.00	6.03	112.68	4,137.85	-23.72	47.47	-27.77	0.23	-0.22	0.55
4,235.00	4.68	101.93	4,232.43	-26.45	55.87	-31.22	1.76	-1.42	-11.32
4,330.00	5.64	105.27	4,327.05	-28.48	64.17	-33.96	1.06	1.01	3.52
4,425.00	6.66	121.46	4,421.51	-32.58	73.37	-38.85	2.11	1.07	17.04
4,520.00	4.64	130.49	4,516.04	-37.96	80.99	-44.87	2.32	-2.13	9.51
4,615.00	5.36	125.41	4,610.68	-43.02	87.53	-50.48	0.89	0.76	-5.35
4,710.00	6.67	113.47	4,705.16	-47.79	96.21	-55.99	1.90	1.38	-12.57
4,805.00	6.21	113.84	4,799.56	-52.06	105.97	-61.10	0.49	-0.48	0.39
4,900.00	4.31	107.93	4,894.16	-55.24	114.07	-64.97	2.08	-2.00	-6.22

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 24N-30HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 4949' GL @ 4974.00ft
Site:	WELD_CAMP 37-31HZ PAD	MD Reference:	25' RKB + 4949' GL @ 4974.00ft
Well:	Camp 24N-30HZ	North Reference:	True
Wellbore:	Camp 24N-30HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 24N-30HZ	Database:	edmp

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)
4,994.00	5.68	111.79	4,987.80	-58.05	121.75	-68.44	1.50	1.46	4.11
5,090.00	6.34	115.52	5,083.27	-62.10	130.94	-73.27	0.80	0.69	3.89
5,184.00	5.68	115.56	5,176.75	-66.35	139.82	-78.27	0.70	-0.70	0.04
5,280.00	6.00	120.43	5,272.26	-70.94	148.43	-83.60	0.61	0.33	5.07
5,375.00	4.70	119.30	5,366.84	-75.36	156.11	-88.67	1.37	-1.37	-1.19
5,470.00	3.50	118.18	5,461.59	-78.63	162.06	-92.45	1.27	-1.26	-1.18
5,565.00	2.60	113.96	5,556.46	-80.87	166.59	-95.08	0.98	-0.95	-4.44
5,660.00	2.14	106.57	5,651.38	-82.26	170.25	-96.77	0.58	-0.48	-7.78
5,754.00	0.99	94.49	5,745.34	-82.82	172.75	-97.55	1.27	-1.22	-12.85
5,849.00	0.16	256.21	5,840.34	-82.92	173.44	-97.71	1.20	-0.87	170.23
5,943.00	0.56	235.28	5,934.34	-83.21	172.93	-97.96	0.44	0.43	-22.27
6,038.00	0.88	205.15	6,029.33	-84.13	172.24	-98.82	0.51	0.34	-31.72
6,133.00	0.99	186.12	6,124.32	-85.61	171.84	-100.25	0.34	0.12	-20.03
6,228.00	1.05	207.84	6,219.30	-87.20	171.35	-101.79	0.41	0.06	22.86
6,322.00	1.11	212.09	6,313.28	-88.73	170.46	-103.24	0.11	0.06	4.52
6,418.00	0.20	244.80	6,409.28	-89.59	169.82	-104.04	0.99	-0.95	34.07
6,525.00	0.55	170.57	6,516.28	-90.17	169.73	-104.62	0.50	0.33	-69.37
6,562.00	0.73	195.89	6,553.27	-90.58	169.70	-105.01	0.89	0.49	68.43
6,593.00	2.11	337.85	6,584.27	-90.24	169.43	-104.65	8.78	4.45	457.94
6,625.00	5.91	344.94	6,616.18	-88.10	168.78	-102.47	11.95	11.88	22.16
6,657.00	10.41	347.97	6,647.85	-83.68	167.74	-97.97	14.12	14.06	9.47
6,688.00	13.67	352.11	6,678.17	-77.31	166.66	-91.53	10.87	10.52	13.35
6,720.00	16.08	356.18	6,709.09	-69.14	165.84	-83.32	8.20	7.53	12.72
6,752.00	17.83	357.18	6,739.70	-59.82	165.31	-74.00	5.54	5.47	3.13
6,784.00	21.62	356.59	6,769.82	-49.04	164.72	-63.21	11.86	11.84	-1.84
6,815.00	25.44	356.02	6,798.23	-36.70	163.91	-50.83	12.34	12.32	-1.84
6,847.00	29.15	355.75	6,826.67	-22.06	162.86	-36.16	11.60	11.59	-0.84
6,878.00	30.46	357.03	6,853.56	-6.68	161.89	-20.76	4.70	4.23	4.13
6,910.00	33.45	357.57	6,880.71	10.23	161.10	-3.84	9.39	9.34	1.69
6,942.00	37.53	358.13	6,906.76	28.79	160.40	14.71	12.79	12.75	1.75
6,973.00	41.48	358.01	6,930.68	48.50	159.74	34.40	12.74	12.74	-0.39
7,005.00	45.59	358.67	6,953.87	70.52	159.11	56.40	12.92	12.84	2.06
7,037.00	48.96	0.53	6,975.58	94.03	158.95	79.82	11.36	10.53	5.81
7,068.00	53.43	1.08	6,995.00	118.18	159.30	103.85	14.49	14.42	1.77
7,100.00	56.91	1.69	7,013.28	144.43	159.93	129.95	10.99	10.88	1.91
7,131.00	60.78	1.51	7,029.31	170.94	160.67	156.30	12.49	12.48	-0.58
7,163.00	64.33	0.90	7,044.06	199.33	161.27	184.53	11.22	11.09	-1.91
7,194.00	67.07	0.55	7,056.81	227.58	161.62	212.64	8.90	8.84	-1.13
7,226.00	69.93	0.86	7,068.54	257.35	161.99	242.26	8.98	8.94	0.97
7,258.00	73.25	1.06	7,078.64	287.70	162.50	272.45	10.39	10.38	0.63
7,289.00	75.87	1.25	7,086.90	317.57	163.10	302.16	8.47	8.45	0.61
7,321.00	78.31	1.75	7,094.05	348.75	163.92	333.15	7.78	7.63	1.56
7,352.00	78.88	1.76	7,100.18	379.13	164.85	363.32	1.84	1.84	0.03

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 24N-30HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 4949' GL @ 4974.00ft
Site:	WELD_CAMP 37-31HZ PAD	MD Reference:	25' RKB + 4949' GL @ 4974.00ft
Well:	Camp 24N-30HZ	North Reference:	True
Wellbore:	Camp 24N-30HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 24N-30HZ	Database:	edmp

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)
7,384.00	80.58	1.66	7,105.88	410.60	165.79	394.60	5.32	5.31	-0.31
7,416.00	83.48	1.30	7,110.32	442.28	166.61	426.08	9.13	9.06	-1.13
7,447.00	84.61	1.88	7,113.53	473.10	167.46	456.71	4.09	3.65	1.87
7,479.00	84.68	1.24	7,116.52	504.94	168.33	488.36	2.00	0.22	-2.00
7,529.80	87.08	0.85	7,120.17	555.60	169.25	538.74	4.79	4.72	-0.77
7"									
7,580.00	89.45	0.46	7,121.69	605.77	169.83	588.67	4.79	4.72	-0.77
7,671.00	89.14	0.07	7,122.81	696.76	170.25	679.28	0.55	-0.34	-0.43
7,763.00	88.40	359.50	7,124.78	788.74	169.90	770.94	1.02	-0.80	-0.62
7,855.00	90.26	359.33	7,125.86	880.72	168.96	862.66	2.03	2.02	-0.18
7,945.00	89.51	357.98	7,126.04	970.70	166.85	952.47	1.72	-0.83	-1.50
8,037.00	90.68	358.28	7,125.89	1,062.65	163.85	1,044.33	1.31	1.27	0.33
8,127.00	90.62	1.79	7,124.87	1,152.63	163.90	1,133.97	3.90	-0.07	3.90
8,218.00	90.18	0.91	7,124.23	1,243.60	166.05	1,224.40	1.08	-0.48	-0.97
8,310.00	90.18	1.73	7,123.94	1,335.57	168.17	1,315.85	0.89	0.00	0.89
8,401.00	89.75	1.93	7,124.00	1,426.52	171.07	1,406.20	0.52	-0.47	0.22
8,492.00	90.00	1.27	7,124.20	1,517.49	173.61	1,496.60	0.78	0.27	-0.73
8,584.00	90.37	0.17	7,123.90	1,609.48	174.77	1,588.14	1.26	0.40	-1.20
8,675.00	90.68	359.56	7,123.07	1,700.47	174.55	1,678.80	0.75	0.34	-0.67
8,766.00	90.37	358.47	7,122.23	1,791.46	172.99	1,769.58	1.25	-0.34	-1.20
8,857.00	89.88	0.72	7,122.03	1,882.45	172.35	1,860.28	2.53	-0.54	2.47
8,948.00	89.88	359.41	7,122.22	1,973.45	172.45	1,950.92	1.44	0.00	-1.44
9,040.00	90.31	358.99	7,122.07	2,065.44	171.17	2,042.67	0.65	0.47	-0.46
9,132.00	89.82	1.91	7,121.97	2,157.42	171.89	2,134.25	3.22	-0.53	3.17
9,226.00	88.83	0.99	7,123.07	2,251.38	174.27	2,227.64	1.44	-1.05	-0.98
9,321.00	90.49	0.92	7,123.64	2,346.37	175.85	2,322.13	1.75	1.75	-0.07
9,416.00	90.06	0.63	7,123.18	2,441.36	177.13	2,416.64	0.55	-0.45	-0.31
9,511.00	89.88	359.32	7,123.23	2,536.35	177.09	2,511.28	1.39	-0.19	-1.38
9,606.00	89.01	359.81	7,124.15	2,631.34	176.37	2,605.98	1.05	-0.92	0.52
9,701.00	91.23	356.82	7,123.95	2,726.29	173.58	2,700.80	3.92	2.34	-3.15
9,796.00	90.49	354.72	7,122.53	2,821.01	166.57	2,795.78	2.34	-0.78	-2.21
9,891.00	90.86	351.90	7,121.41	2,915.35	155.51	2,890.72	2.99	0.39	-2.97
9,986.00	89.38	350.15	7,121.21	3,009.18	140.69	2,985.48	2.41	-1.56	-1.84
10,081.00	89.51	350.20	7,122.13	3,102.78	124.48	3,080.14	0.15	0.14	0.05
10,176.00	87.35	348.81	7,124.73	3,196.15	107.18	3,174.66	2.70	-2.27	-1.46
10,272.00	89.81	349.37	7,127.11	3,290.38	89.02	3,270.11	2.63	2.56	0.58
10,367.00	91.48	351.20	7,126.04	3,384.00	72.99	3,364.78	2.61	1.76	1.93
10,462.00	91.54	350.75	7,123.54	3,477.79	58.09	3,459.51	0.48	0.06	-0.47
10,557.00	89.75	350.76	7,122.47	3,571.55	42.83	3,554.24	1.88	-1.88	0.01
10,652.00	89.38	353.07	7,123.19	3,665.60	29.47	3,649.09	2.46	-0.39	2.43
10,747.00	86.79	352.46	7,126.36	3,759.78	17.52	3,743.96	2.80	-2.73	-0.64
10,842.00	86.36	352.32	7,132.04	3,853.77	4.96	3,838.69	0.48	-0.45	-0.15
10,938.00	86.98	352.31	7,137.62	3,948.75	-7.86	3,934.42	0.65	0.65	-0.01
11,033.00	86.30	352.43	7,143.18	4,042.75	-20.45	4,029.16	0.73	-0.72	0.13

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well Camp 24N-30HZ
Project:	COLORADO NORTHERN ZONE - 83	TVD Reference:	25' RKB + 4949' GL @ 4974.00ft
Site:	WELD_CAMP 37-31HZ PAD	MD Reference:	25' RKB + 4949' GL @ 4974.00ft
Well:	Camp 24N-30HZ	North Reference:	True
Wellbore:	Camp 24N-30HZ	Survey Calculation Method:	Minimum Curvature
Design:	Camp 24N-30HZ	Database:	edmp

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)
11,128.00	85.56	352.03	7,149.93	4,136.64	-33.26	4,123.81	0.88	-0.78	-0.42
11,223.00	86.48	355.11	7,156.52	4,230.80	-43.87	4,218.54	3.38	0.97	3.24
11,318.00	85.68	353.68	7,163.02	4,325.12	-53.13	4,313.31	1.72	-0.84	-1.51
11,413.00	88.21	354.78	7,168.08	4,419.49	-62.66	4,408.15	2.90	2.66	1.16
11,507.00	89.08	356.99	7,170.30	4,513.22	-69.40	4,502.11	2.53	0.93	2.35
11,602.00	90.25	359.86	7,170.86	4,608.17	-72.01	4,596.93	3.26	1.23	3.02
11,698.00	89.01	359.02	7,171.48	4,704.16	-72.95	4,692.63	1.56	-1.29	-0.88
11,793.00	90.62	359.86	7,171.78	4,799.15	-73.88	4,787.34	1.91	1.69	0.88
11,888.00	90.68	1.94	7,170.71	4,894.13	-72.39	4,881.83	2.19	0.06	2.19
11,983.00	90.86	1.17	7,169.43	4,989.08	-69.81	4,976.20	0.83	0.19	-0.81
12,079.00	90.31	0.67	7,168.45	5,085.07	-68.27	5,071.68	0.77	-0.57	-0.52
12,174.00	90.31	359.90	7,167.94	5,180.06	-67.80	5,166.28	0.81	0.00	-0.81
12,269.00	89.38	0.74	7,168.19	5,275.06	-67.27	5,260.87	1.32	-0.98	0.88
12,364.00	88.34	2.37	7,170.08	5,370.00	-64.69	5,355.22	2.03	-1.09	1.72
12,459.00	89.81	5.82	7,171.62	5,464.73	-57.91	5,449.00	3.95	1.55	3.63
12,555.00	89.38	4.20	7,172.30	5,560.36	-49.52	5,543.53	1.75	-0.45	-1.69
12,651.00	90.18	7.44	7,172.66	5,655.85	-39.79	5,637.81	3.48	0.83	3.38
12,746.00	90.12	10.36	7,172.42	5,749.69	-25.09	5,730.02	3.07	-0.06	3.07
12,842.00	89.14	8.63	7,173.03	5,844.37	-9.26	5,822.96	2.07	-1.02	-1.80
12,936.00	90.74	11.92	7,173.13	5,936.85	7.50	5,913.63	3.89	1.70	3.50
13,031.00	92.22	10.75	7,170.68	6,029.96	26.17	6,004.76	1.99	1.56	-1.23
13,126.00	93.95	10.72	7,165.57	6,123.16	43.84	6,096.06	1.82	1.82	-0.03
13,220.00	93.83	9.12	7,159.19	6,215.54	59.99	6,186.68	1.70	-0.13	-1.70
13,315.00	92.28	9.69	7,154.13	6,309.12	75.50	6,278.56	1.74	-1.63	0.60
13,410.00	93.51	12.90	7,149.33	6,402.15	94.08	6,369.62	3.61	1.29	3.38
13,504.00	93.02	12.33	7,143.97	6,493.73	114.57	6,459.07	0.80	-0.52	-0.61
13,600.00	93.52	11.49	7,138.50	6,587.51	134.35	6,550.77	1.02	0.52	-0.88
13,695.00	92.77	10.89	7,133.29	6,680.56	152.76	6,641.86	1.01	-0.79	-0.63
13,790.00	92.09	9.99	7,129.26	6,773.91	169.96	6,733.35	1.19	-0.72	-0.95
13,884.00	91.32	9.55	7,126.46	6,866.50	185.90	6,824.20	0.94	-0.82	-0.47
13,923.00	90.86	9.09	7,125.72	6,904.98	192.22	6,861.98	1.67	-1.18	-1.18
Final MWD Survey									
13,978.00	90.86	9.09	7,124.89	6,959.28	200.90	6,915.32	0.00	0.00	0.00
Projection to Bit @ TD									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,529.80	7,120.17	7"	7	8-3/4	