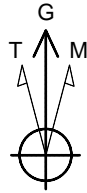


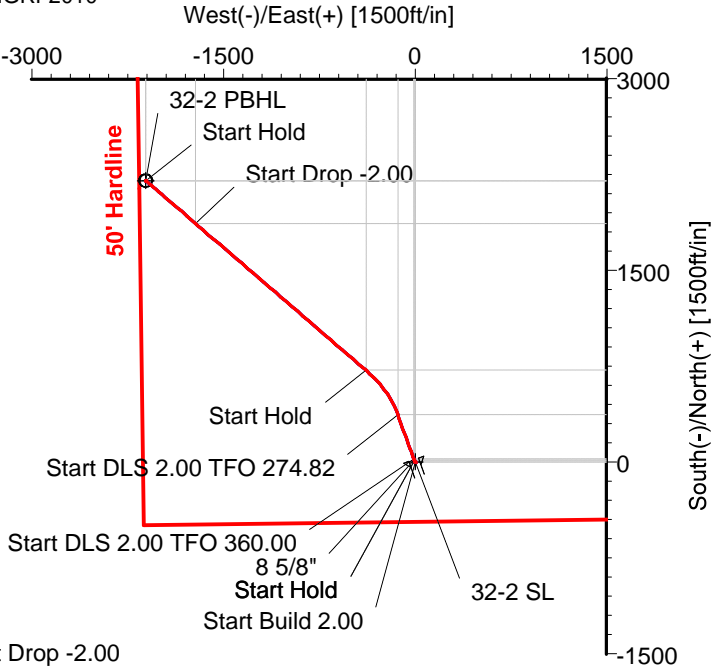
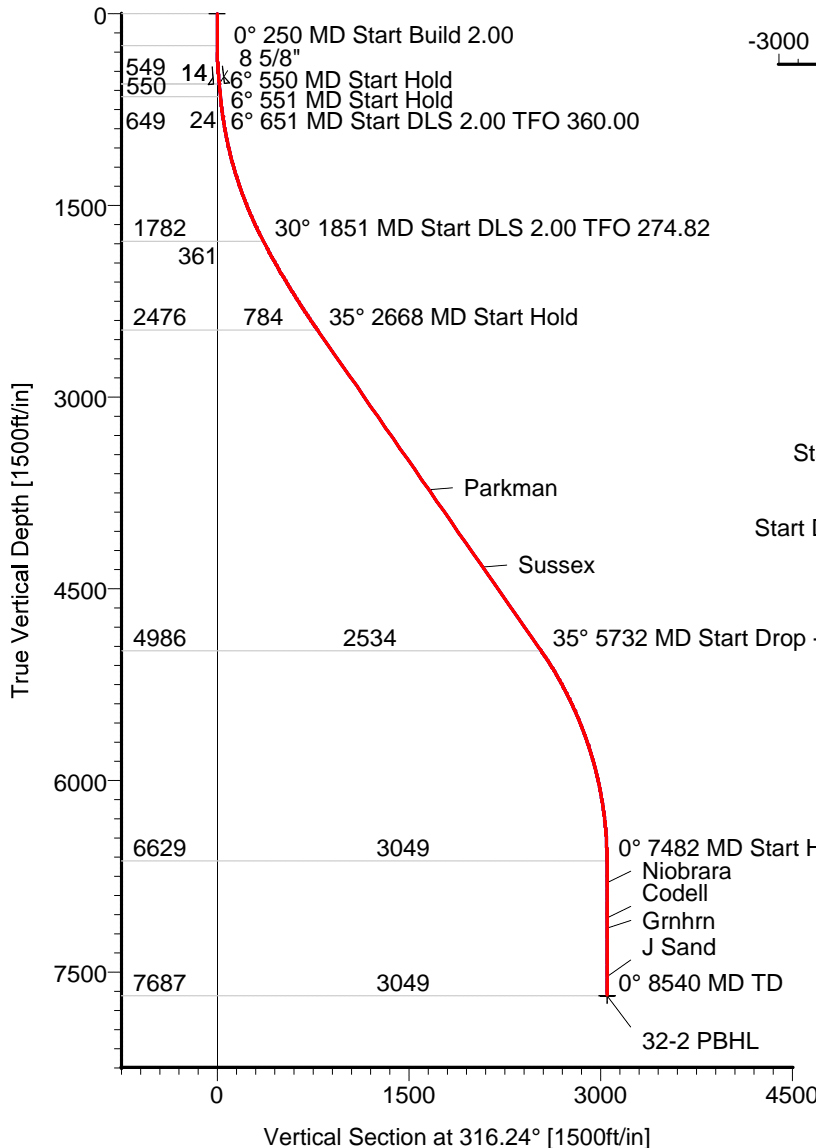
# ANADARKO PETROLEUM

Field: Weld County, CO  
Site: Jepsen 14-2 Pad  
Well: 32-2  
Wellpath: Original Hole  
Plan: Plan #1



Azimuths to Grid North  
True North: -0.56°  
Magnetic North: 8.20°

Magnetic Field  
Strength: 53088nT  
Dip Angle: 66.94°  
Date: 08/16/2011  
Model: IGRF2010



## CASING DETAILS

No.	TVD	MD	Name	Size
1	550.00	550.55	8 5/8"	8.625

## FORMATION TOP DETAILS

No.	TVDPath	MDPath	Formation
1	3725.00	4192.88	Parkman
2	4332.00	4933.89	Sussex
3	6802.00	7655.10	Niobrara
4	7077.00	7930.10	Codell
5	7155.00	8008.10	Grnhrn
6	7537.00	8390.10	J Sand

## TARGET DETAILS

Ground Elevation = 4773'

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
32-2 SL	0.00	0.00	0.00	40°14'54.240N	104°37'55.866W	Point
32-2 PBHL	7687.00	2202.31	-2108.99	40°15'16.206N	104°38'22.789W	Circle (Radius: 50)

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	340.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	340.00	250.00	0.00	0.00	0.00	340.00	0.00	
3	550.00	6.00	340.00	549.45	14.75	-5.37	2.00	340.00	14.36	
4	550.55	6.00	340.00	550.00	14.80	-5.39	0.00	0.00	14.42	
5	650.55	6.00	340.00	649.45	24.62	-8.96	0.00	0.00	23.98	
6	1850.55	30.00	340.00	1782.39	370.54	-134.87	2.00	360.00	360.90	
7	2668.22	35.00	310.72	2476.07	717.95	-384.21	2.00	274.82	784.27	
8	5732.26	35.00	310.72	4985.98	1864.35	-1716.29	0.00	0.00	2533.57	
9	7482.25	0.00	310.72	6629.15	2202.31	-2108.99	2.00	180.00	3049.26	
10	8540.10	0.00	310.72	7687.00	2202.31	-2108.99	0.00	0.00	3049.26	32-2 PBHL

Plan: Plan #1 (32-2/Original Hole)

Created By: Ivonne Gonzalez

Date: 05/13/2011

ALLIS CHALMERS DIRECTIONAL DRILLING SERVICES  
911 Regional Park Drive Houston, Texas 77060  
Phone: 713-934-9600 Fax: 713-934-9067



**DIRECTIONAL  
DRILLING SERVICES**

# Allis-Chalmers Energy, Inc.

## Planning Report

<b>Company:</b> ANADARKO PETROLEUM <b>Field:</b> Weld County, CO <b>Site:</b> Jepsen 14-2 Pad <b>Well:</b> 32-2 <b>Wellpath:</b> Original Hole	<b>Date:</b> 05/13/2011 <b>Co-ordinate(NE) Reference:</b> <b>Vertical (TVD) Reference:</b> <b>Section (VS) Reference:</b> <b>Plan:</b>	<b>Time:</b> 11:25:08 Well: 32-2, Grid North 4772'GL+15'KB 4787.0 Well (0.00N,0.00E,316.24Azi) Plan #1	<b>Page:</b> 1
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<b>Field:</b> Weld County, CO	
<b>Map System:</b> US State Plane Coordinate System 1983 <b>Geo Datum:</b> GRS 1980 <b>Sys Datum:</b> Mean Sea Level	<b>Map Zone:</b> Colorado, Northern Zone <b>Coordinate System:</b> Well Centre <b>Geomagnetic Model:</b> IGRF2010

<b>Site:</b> Jepsen 14-2 Pad	
<b>Site Position:</b> <b>From:</b> Geographic <b>Position Uncertainty:</b> 0.00 ft <b>Ground Level:</b> 4772.00 ft	<b>Northing:</b> 1334521.81 ft <b>Easting:</b> 3242238.56 ft <b>Latitude:</b> 40 14 54.240 N <b>Longitude:</b> 104 37 55.866 W <b>North Reference:</b> Grid <b>Grid Convergence:</b> 0.56 deg

<b>Well:</b> 32-2  <b>Well Position:</b> +N/-S    0.00 ft <b>Northing:</b> 1334521.81 ft +E/-W    0.00 ft <b>Easting :</b> 3242238.56 ft <b>Position Uncertainty:</b> 0.00 ft	<b>Slot Name:</b> 32-2  <b>Latitude:</b> 40 14 54.240 N <b>Longitude:</b> 104 37 55.866 W
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<b>Wellpath:</b> Original Hole  <b>Current Datum:</b> 4772'GL+15'KB <b>Magnetic Data:</b> 08/16/2011 <b>Field Strength:</b> 53088 nT <b>Vertical Section:</b> Depth From (TVD) ft	<b>Height</b> 4787.00 ft	<b>Drilled From:</b> Surface <b>Tie-on Depth:</b> 0.00 ft <b>Above System Datum:</b> Mean Sea Level <b>Declination:</b> 8.76 deg <b>Mag Dip Angle:</b> 66.94 deg <b>+E/-W</b> ft <b>Direction</b> deg
0.00	0.00	0.00    316.24

<b>Plan:</b> Plan #1  <b>Principal:</b> Yes	<b>Date Composed:</b> 05/06/2011 <b>Version:</b> 1 <b>Tied-to:</b> From Surface
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Plan Section Information										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	340.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
250.00	0.00	340.00	250.00	0.00	0.00	0.00	0.00	0.00	340.00	
550.00	6.00	340.00	549.45	14.75	-5.37	2.00	2.00	0.00	340.00	
550.55	6.00	340.00	550.00	14.80	-5.39	0.00	0.00	0.00	0.00	
650.55	6.00	340.00	649.45	24.62	-8.96	0.00	0.00	0.00	0.00	
1850.55	30.00	340.00	1782.39	370.54	-134.87	2.00	2.00	0.00	360.00	
2668.22	35.00	310.72	2476.07	717.95	-384.21	2.00	0.61	-3.58	274.82	
5732.26	35.00	310.72	4985.98	1864.35	-1716.29	0.00	0.00	0.00	0.00	
7482.25	0.00	310.72	6629.15	2202.31	-2108.99	2.00	-2.00	0.00	180.00	
8540.10	0.00	310.72	7687.00	2202.31	-2108.99	0.00	0.00	0.00	0.00	32-2 PBHL

Survey										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
250.00	0.00	340.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD
300.00	1.00	340.00	300.00	0.41	-0.15	0.40	2.00	2.00	0.00	MWD
400.00	3.00	340.00	399.93	3.69	-1.34	3.59	2.00	2.00	0.00	MWD
500.00	5.00	340.00	499.68	10.24	-3.73	9.98	2.00	2.00	0.00	MWD
550.00	6.00	340.00	549.45	14.75	-5.37	14.36	2.00	2.00	0.00	MWD
550.55	6.00	340.00	550.00	14.80	-5.39	14.42	0.00	0.00	0.00	8 5/8"
600.00	6.00	340.00	599.18	19.66	-7.16	19.15	0.00	0.00	0.00	MWD
650.55	6.00	340.00	649.45	24.62	-8.96	23.98	0.00	0.00	0.00	MWD
700.00	6.99	340.00	698.58	29.88	-10.88	29.10	2.00	2.00	0.00	MWD
800.00	8.99	340.00	797.61	42.94	-15.63	41.82	2.00	2.00	0.00	MWD
900.00	10.99	340.00	896.09	59.24	-21.56	57.70	2.00	2.00	0.00	MWD
1000.00	12.99	340.00	993.90	78.76	-28.67	76.71	2.00	2.00	0.00	MWD

# Allis-Chalmers Energy, Inc.

## Planning Report

**Company:** ANADARKO PETROLEUM  
**Field:** Weld County, CO  
**Site:** Jepsen 14-2 Pad  
**Well:** 32-2  
**Wellpath:** Original Hole

**Date:** 05/13/2011  
**Co-ordinate(NE) Reference:** Well: 32-2, Grid North  
**Vertical (TVD) Reference:** 4772'GL+15'KB 4787.0  
**Section (VS) Reference:** Well (0.00N,0.00E,316.24Azi)  
**Plan:** Plan #1

**Page:** 2

### Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1100.00	14.99	340.00	1090.93	101.47	-36.93	98.83	2.00	2.00	0.00	MWD
1200.00	16.99	340.00	1187.06	127.35	-46.35	124.04	2.00	2.00	0.00	MWD
1300.00	18.99	340.00	1282.16	156.37	-56.92	152.30	2.00	2.00	0.00	MWD
1400.00	20.99	340.00	1376.13	188.49	-68.61	183.59	2.00	2.00	0.00	MWD
1500.00	22.99	340.00	1468.86	223.68	-81.41	217.86	2.00	2.00	0.00	MWD
1600.00	24.99	340.00	1560.21	261.88	-95.32	255.06	2.00	2.00	0.00	MWD
1700.00	26.99	340.00	1650.10	303.05	-110.30	295.17	2.00	2.00	0.00	MWD
1800.00	28.99	340.00	1738.40	347.15	-126.35	338.12	2.00	2.00	0.00	MWD
1850.55	30.00	340.00	1782.39	370.54	-134.87	360.90	2.00	2.00	0.00	MWD
1900.00	30.10	338.03	1825.20	393.66	-143.73	383.72	2.00	0.20	-3.97	MWD
2000.00	30.38	334.10	1911.60	439.66	-164.16	431.08	2.00	0.29	-3.93	MWD
2100.00	30.79	330.25	1997.69	484.64	-187.90	479.99	2.00	0.40	-3.85	MWD
2200.00	31.30	326.50	2083.38	528.52	-214.94	530.38	2.00	0.51	-3.75	MWD
2300.00	31.92	322.87	2168.55	571.26	-245.23	582.20	2.00	0.62	-3.63	MWD
2400.00	32.63	319.38	2253.11	612.81	-278.75	635.39	2.00	0.72	-3.50	MWD
2500.00	33.44	316.02	2336.95	653.11	-315.44	689.87	2.00	0.81	-3.35	MWD
2600.00	34.34	312.82	2419.96	692.11	-355.27	745.59	2.00	0.90	-3.21	MWD
2668.22	35.00	310.72	2476.07	717.95	-384.21	784.27	2.00	0.96	-3.08	MWD
2700.00	35.00	310.72	2502.10	729.84	-398.03	802.42	0.00	0.00	0.00	MWD
2800.00	35.00	310.72	2584.02	767.26	-441.51	859.51	0.00	0.00	0.00	MWD
2900.00	35.00	310.72	2665.93	804.67	-484.98	916.60	0.00	0.00	0.00	MWD
3000.00	35.00	310.72	2747.85	842.09	-528.46	973.69	0.00	0.00	0.00	MWD
3100.00	35.00	310.72	2829.76	879.50	-571.93	1030.78	0.00	0.00	0.00	MWD
3200.00	35.00	310.72	2911.68	916.92	-615.40	1087.87	0.00	0.00	0.00	MWD
3300.00	35.00	310.72	2993.59	954.33	-658.88	1144.97	0.00	0.00	0.00	MWD
3400.00	35.00	310.72	3075.51	991.75	-702.35	1202.06	0.00	0.00	0.00	MWD
3500.00	35.00	310.72	3157.42	1029.16	-745.83	1259.15	0.00	0.00	0.00	MWD
3600.00	35.00	310.72	3239.34	1066.58	-789.30	1316.24	0.00	0.00	0.00	MWD
3700.00	35.00	310.72	3321.25	1103.99	-832.78	1373.33	0.00	0.00	0.00	MWD
3800.00	35.00	310.72	3403.17	1141.40	-876.25	1430.42	0.00	0.00	0.00	MWD
3900.00	35.00	310.72	3485.08	1178.82	-919.73	1487.51	0.00	0.00	0.00	MWD
4000.00	35.00	310.72	3567.00	1216.23	-963.20	1544.60	0.00	0.00	0.00	MWD
4100.00	35.00	310.72	3648.91	1253.65	-1006.68	1601.70	0.00	0.00	0.00	MWD
4192.88	35.00	310.72	3725.00	1288.40	-1047.06	1654.72	0.00	0.00	0.00	Parkman
4200.00	35.00	310.72	3730.83	1291.06	-1050.15	1658.79	0.00	0.00	0.00	MWD
4300.00	35.00	310.72	3812.74	1328.48	-1093.63	1715.88	0.00	0.00	0.00	MWD
4400.00	35.00	310.72	3894.66	1365.89	-1137.10	1772.97	0.00	0.00	0.00	MWD
4500.00	35.00	310.72	3976.58	1403.31	-1180.58	1830.06	0.00	0.00	0.00	MWD
4600.00	35.00	310.72	4058.49	1440.72	-1224.05	1887.15	0.00	0.00	0.00	MWD
4700.00	35.00	310.72	4140.41	1478.14	-1267.52	1944.24	0.00	0.00	0.00	MWD
4800.00	35.00	310.72	4222.32	1515.55	-1311.00	2001.33	0.00	0.00	0.00	MWD
4900.00	35.00	310.72	4304.24	1552.96	-1354.47	2058.43	0.00	0.00	0.00	MWD
4933.89	35.00	310.72	4332.00	1565.65	-1369.21	2077.78	0.00	0.00	0.00	Sussex
5000.00	35.00	310.72	4386.15	1590.38	-1397.95	2115.52	0.00	0.00	0.00	MWD
5100.00	35.00	310.72	4468.07	1627.79	-1441.42	2172.61	0.00	0.00	0.00	MWD
5200.00	35.00	310.72	4549.98	1665.21	-1484.90	2229.70	0.00	0.00	0.00	MWD
5300.00	35.00	310.72	4631.90	1702.62	-1528.37	2286.79	0.00	0.00	0.00	MWD
5400.00	35.00	310.72	4713.81	1740.04	-1571.85	2343.88	0.00	0.00	0.00	MWD
5500.00	35.00	310.72	4795.73	1777.45	-1615.32	2400.97	0.00	0.00	0.00	MWD
5600.00	35.00	310.72	4877.64	1814.87	-1658.80	2458.06	0.00	0.00	0.00	MWD
5700.00	35.00	310.72	4959.56	1852.28	-1702.27	2515.16	0.00	0.00	0.00	MWD
5732.26	35.00	310.72	4985.98	1864.35	-1716.29	2533.57	0.00	0.00	0.00	MWD
5800.00	33.65	310.72	5041.93	1889.27	-1745.24	2571.59	2.00	-2.00	0.00	MWD

# Allis-Chalmers Energy, Inc.

## Planning Report

<b>Company:</b> ANADARKO PETROLEUM <b>Field:</b> Weld County, CO <b>Site:</b> Jepsen 14-2 Pad <b>Well:</b> 32-2 <b>Wellpath:</b> Original Hole	<b>Date:</b> 05/13/2011 <b>Co-ordinate(NE) Reference:</b> <b>Vertical (TVD) Reference:</b> <b>Section (VS) Reference:</b> <b>Plan:</b>	<b>Time:</b> 11:25:08 Well: 32-2, Grid North 4772'GL+15'KB 4787.0 Well (0.00N,0.00E,316.24Azi) Plan #1	<b>Page:</b> 3
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### Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
5900.00	31.65	310.72	5126.13	1924.45	-1786.13	2625.28	2.00	-2.00	0.00	MWD
6000.00	29.65	310.72	5212.16	1957.70	-1824.76	2676.01	2.00	-2.00	0.00	MWD
6100.00	27.65	310.72	5299.91	1988.97	-1861.10	2723.73	2.00	-2.00	0.00	MWD
6200.00	25.65	310.72	5389.29	2018.22	-1895.09	2768.36	2.00	-2.00	0.00	MWD
6300.00	23.65	310.72	5480.17	2045.42	-1926.69	2809.87	2.00	-2.00	0.00	MWD
6400.00	21.65	310.72	5572.46	2070.53	-1955.87	2848.19	2.00	-2.00	0.00	MWD
6500.00	19.65	310.72	5666.03	2093.53	-1982.59	2883.28	2.00	-2.00	0.00	MWD
6600.00	17.65	310.72	5760.78	2114.39	-2006.83	2915.10	2.00	-2.00	0.00	MWD
6700.00	15.65	310.72	5856.58	2133.07	-2028.54	2943.61	2.00	-2.00	0.00	MWD
6800.00	13.65	310.72	5953.33	2149.56	-2047.70	2968.77	2.00	-2.00	0.00	MWD
6900.00	11.65	310.72	6050.90	2163.84	-2064.29	2990.56	2.00	-2.00	0.00	MWD
7000.00	9.65	310.72	6149.17	2175.89	-2078.29	3008.95	2.00	-2.00	0.00	MWD
7100.00	7.65	310.72	6248.03	2185.69	-2089.68	3023.91	2.00	-2.00	0.00	MWD
7200.00	5.65	310.72	6347.36	2193.24	-2098.45	3035.43	2.00	-2.00	0.00	MWD
7300.00	3.65	310.72	6447.02	2198.52	-2104.59	3043.49	2.00	-2.00	0.00	MWD
7400.00	1.65	310.72	6546.91	2201.53	-2108.09	3048.08	2.00	-2.00	0.00	MWD
7482.25	0.00	310.72	6629.15	2202.31	-2108.99	3049.26	2.00	-2.00	0.00	MWD
7500.00	0.00	310.72	6646.90	2202.31	-2108.99	3049.26	0.00	0.00	0.00	MWD
7600.00	0.00	310.72	6746.90	2202.31	-2108.99	3049.26	0.00	0.00	0.00	MWD
7655.10	0.00	310.72	6802.00	2202.31	-2108.99	3049.26	0.00	0.00	0.00	Niobrara
7700.00	0.00	310.72	6846.90	2202.31	-2108.99	3049.26	0.00	0.00	0.00	MWD
7800.00	0.00	310.72	6946.90	2202.31	-2108.99	3049.26	0.00	0.00	0.00	MWD
7900.00	0.00	310.72	7046.90	2202.31	-2108.99	3049.26	0.00	0.00	0.00	MWD
7930.10	0.00	310.72	7077.00	2202.31	-2108.99	3049.26	0.00	0.00	0.00	Codell
8000.00	0.00	310.72	7146.90	2202.31	-2108.99	3049.26	0.00	0.00	0.00	MWD
8008.10	0.00	310.72	7155.00	2202.31	-2108.99	3049.26	0.00	0.00	0.00	Grnhn
8100.00	0.00	310.72	7246.90	2202.31	-2108.99	3049.26	0.00	0.00	0.00	MWD
8200.00	0.00	310.72	7346.90	2202.31	-2108.99	3049.26	0.00	0.00	0.00	MWD
8300.00	0.00	310.72	7446.90	2202.31	-2108.99	3049.26	0.00	0.00	0.00	MWD
8390.10	0.00	310.72	7537.00	2202.31	-2108.99	3049.26	0.00	0.00	0.00	J Sand
8400.00	0.00	310.72	7546.90	2202.31	-2108.99	3049.26	0.00	0.00	0.00	MWD
8500.00	0.00	310.72	7646.90	2202.31	-2108.99	3049.26	0.00	0.00	0.00	MWD
8540.10	0.00	310.72	7687.00	2202.31	-2108.99	3049.26	0.00	0.00	0.00	32-2 PBHL

### Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<--- Latitude ---> Deg Min Sec			<--- Longitude ---> Deg Min Sec		
32-2 SL			0.00	0.00	0.00	1334521.81	3242238.56	40	14	54.240 N	104	37	55.866 W
32-2 PBHL			7687.00	2202.31	-2108.99	1336724.12	3240129.57	40	15	16.206 N	104	38	22.789 W
-Circle (Radius: 50)													
-Plan hit target													

### Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
550.55	550.00	8.625	9.875	8 5/8"

# Allis-Chalmers Energy, Inc.

## Planning Report

**Company:** ANADARKO PETROLEUM  
**Field:** Weld County, CO  
**Site:** Jepsen 14-2 Pad  
**Well:** 32-2  
**Wellpath:** Original Hole

**Date:** 05/13/2011  
**Co-ordinate(NE) Reference:** Well: 32-2, Grid North  
**Vertical (TVD) Reference:** 4772'GL+15'KB 4787.0  
**Section (VS) Reference:** Well (0.00N,0.00E,316.24Azi)  
**Plan:** Plan #1

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### Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
4192.88	3725.00	Parkman		0.00	0.00
4933.89	4332.00	Sussex		0.00	0.00
7655.10	6802.00	Niobrara		0.00	0.00
7930.10	7077.00	Codell		0.00	0.00
8008.10	7155.00	Grnhm		0.00	0.00
8390.10	7537.00	J Sand		0.00	0.00