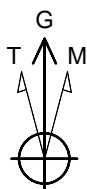


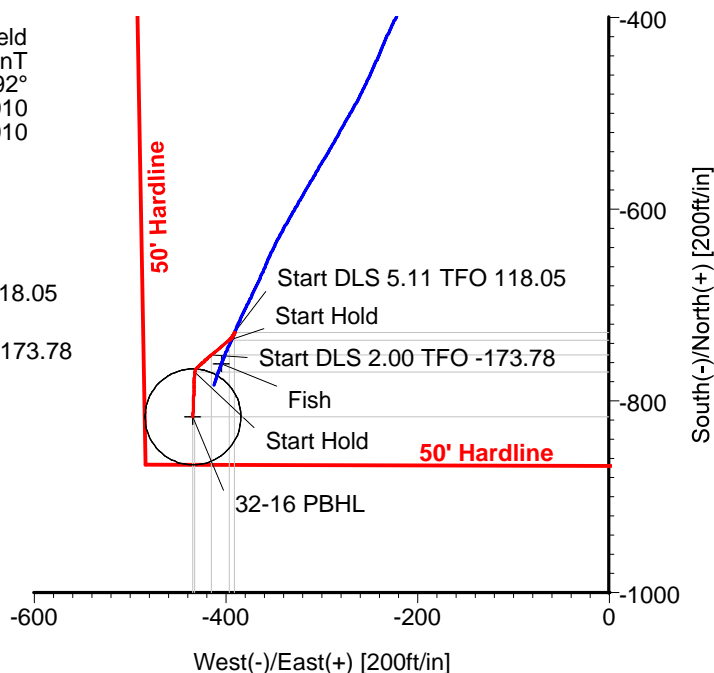
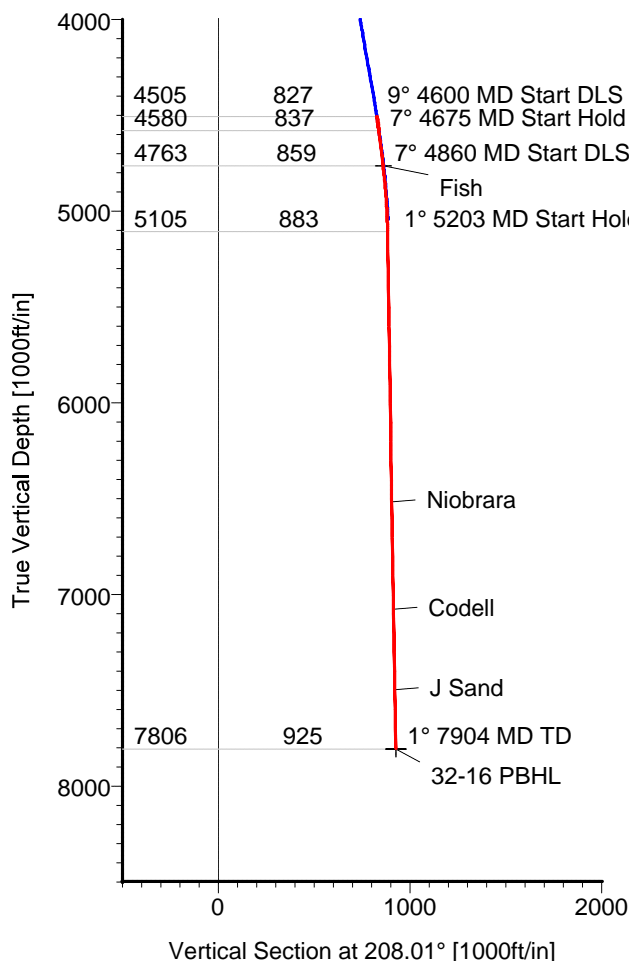
# ANADARKO PETROLEUM

Field: Weld County, CO  
Site: Houston State 5-16 Pad  
Well: 32-16X  
Wellpath: Sidetrack  
Plan: Plan #1



Azimuths to Grid North  
True North: -0.39°  
Magnetic North: 8.65°

Magnetic Field  
Strength: 53153nT  
Dip Angle: 66.92°  
Date: 08/15/2010  
Model: IGRF2010



## FORMATION TOP DETAILS

No.	TVDP	MD	Formation
1	6515.00	6613.22	Niobrara
2	7076.00	7174.31	Codell
3	7495.00	7593.37	J Sand

## CASING DETAILS

No.	TVD	MD	Name	Size
1	694.89	695.00	8 5/8"	8.625

## TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
32-16 SL	0.00	0.00	0.00	40°13'41.505N	104°54'10.366W	Point
Fish	4762.85	-761.64	-404.92	40°13'34.006N	104°54'15.653W	Point
32-16 PBHL	7806.00	-816.80	-434.48	40°13'33.462N	104°54'16.039W	Circle (Radius: 50)

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	4600.00	8.50	203.12	4505.37	-728.47	-391.02	0.00	0.00	826.78	
2	4675.00	7.50	230.00	4579.66	-736.72	-396.95	5.11	118.05	836.84	
3	4860.00	7.50	230.00	4763.08	-752.24	-415.45	0.00	0.00	859.23	
4	5203.45	1.00	182.11	5105.45	-769.67	-432.75	2.00	-173.78	882.74	
5	7904.42	1.00	182.11	7806.00	-816.80	-434.48	0.00	0.00	925.17	32-16 PBHL

# Allis-Chalmers Energy, Inc.

## Planning Report

<b>Company:</b> ANADARKO PETROLEUM <b>Field:</b> Weld County, CO <b>Site:</b> Houston State 5-16 Pad <b>Well:</b> 32-16X <b>Wellpath:</b> Sidetrack	<b>Date:</b> 08/15/2010 <b>Time:</b> 20:17:36 <b>Page:</b> 1 <b>Co-ordinate(NE) Reference:</b> Well: 32-16X, Grid North <b>Vertical (TVD) Reference:</b> #773'GL+13'KB 4786.0 <b>Section (VS) Reference:</b> Well (0.00N,0.00E,208.01Azi) <b>Plan:</b> Plan #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
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<b>Site:</b> Houston State 5-16 Pad  Centered on 31-16 <b>Site Position:</b> <b>From:</b> Geographic <b>Position Uncertainty:</b> 0.00 ft <b>Ground Level:</b> 4773.00 ft	<b>Northing:</b> 1326553.84 ft <b>Latitude:</b> 40 13 41.664 N <b>Easting:</b> 3166730.52 ft <b>Longitude:</b> 104 54 10.368 W <b>North Reference:</b> Grid <b>Grid Convergence:</b> 0.39 deg
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<b>Well:</b> 32-16X  <b>Well Position:</b> +N/-S    -16.05 ft <b>Northing:</b> 1326537.79 ft +E/-W    0.26 ft <b>Easting :</b> 3166730.78 ft <b>Position Uncertainty:</b> 0.00 ft	<b>Slot Name:</b> 32-16  <b>Latitude:</b> 40 13 41.505 N <b>Longitude:</b> 104 54 10.366 W
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<b>Wellpath:</b> Sidetrack  <b>Current Datum:</b> 4773'GL+13'KB <b>Height:</b> 4786.00 ft <b>Magnetic Data:</b> 08/15/2010 <b>Field Strength:</b> 53153 nT <b>Vertical Section: Depth From (TVD)</b>	<b>Drilled From:</b> Original Hole <b>Tie-on Depth:</b> 5142.00 ft <b>Above System Datum:</b> Mean Sea Level <b>Declination:</b> 9.04 deg <b>Mag Dip Angle:</b> 66.92 deg <b>+E/-W</b> <b>Direction</b> deg 0.00                               0.00                               208.01
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<b>Plan:</b> Plan #1  <b>Principal:</b> No	<b>Date Composed:</b> 08/15/2010 <b>Version:</b> 1 <b>Tied-to:</b> From: Definitive Path
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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
4600.00	8.50	203.12	4505.37	-728.47	-391.02	0.00	0.00	0.00	0.00	
4675.00	7.50	230.00	4579.66	-736.72	-396.95	5.11	-1.34	35.83	118.05	
4860.00	7.50	230.00	4763.08	-752.24	-415.45	0.00	0.00	0.00	0.00	
5203.45	1.00	182.11	5105.45	-769.67	-432.75	2.00	-1.89	-13.94	-173.78	
7904.42	1.00	182.11	7806.00	-816.80	-434.48	0.00	0.00	0.00	0.00	32-16 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
4600.00	8.50	203.12	4505.37	-728.47	-391.02	826.78	0.00	0.00	0.00	
4675.00	7.50	230.00	4579.66	-736.72	-396.95	836.84	5.11	-1.34	35.83	
4700.00	7.50	230.00	4604.45	-738.82	-399.45	839.87	0.00	0.00	0.00	
4800.00	7.50	230.00	4703.59	-747.21	-409.45	851.97	0.00	0.00	0.00	
4859.77	7.50	230.00	4762.85	-752.22	-415.42	859.21	0.00	0.00	0.00	Fish
4860.00	7.50	230.00	4763.08	-752.24	-415.45	859.23	0.00	0.00	0.00	
4900.00	6.71	229.26	4802.77	-755.44	-419.22	863.83	2.00	-1.99	-1.86	
5000.00	4.73	226.32	4902.27	-762.10	-426.62	873.18	2.00	-1.98	-2.94	
5100.00	2.78	219.22	5002.05	-766.82	-431.13	879.47	2.00	-1.95	-7.10	
5203.45	1.00	182.11	5105.45	-769.67	-432.75	882.74	2.00	-1.72	-35.87	
5300.00	1.00	182.11	5201.98	-771.35	-432.81	884.26	0.00	0.00	0.00	
5400.00	1.00	182.11	5301.96	-773.10	-432.88	885.83	0.00	0.00	0.00	
5500.00	1.00	182.11	5401.95	-774.84	-432.94	887.40	0.00	0.00	0.00	
5600.00	1.00	182.11	5501.93	-776.59	-433.00	888.97	0.00	0.00	0.00	
5700.00	1.00	182.11	5601.92	-778.33	-433.07	890.54	0.00	0.00	0.00	
5800.00	1.00	182.11	5701.90	-780.08	-433.13	892.11	0.00	0.00	0.00	