

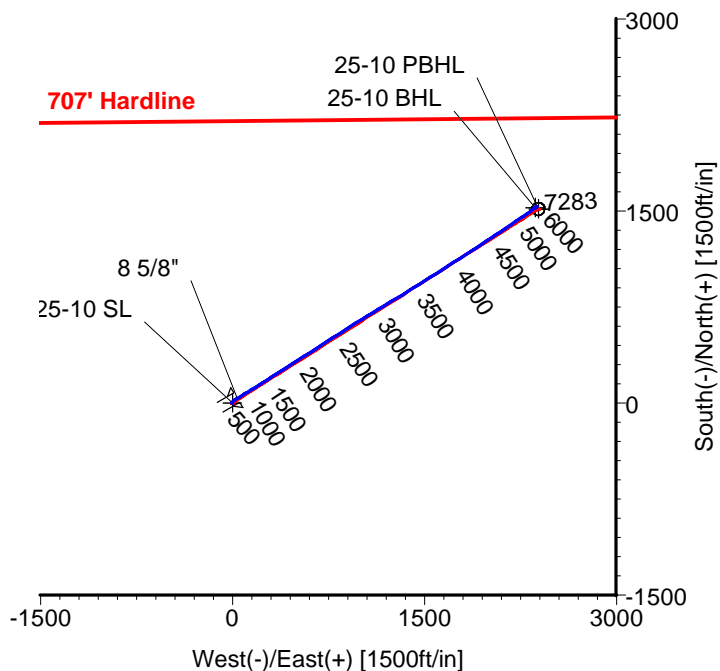
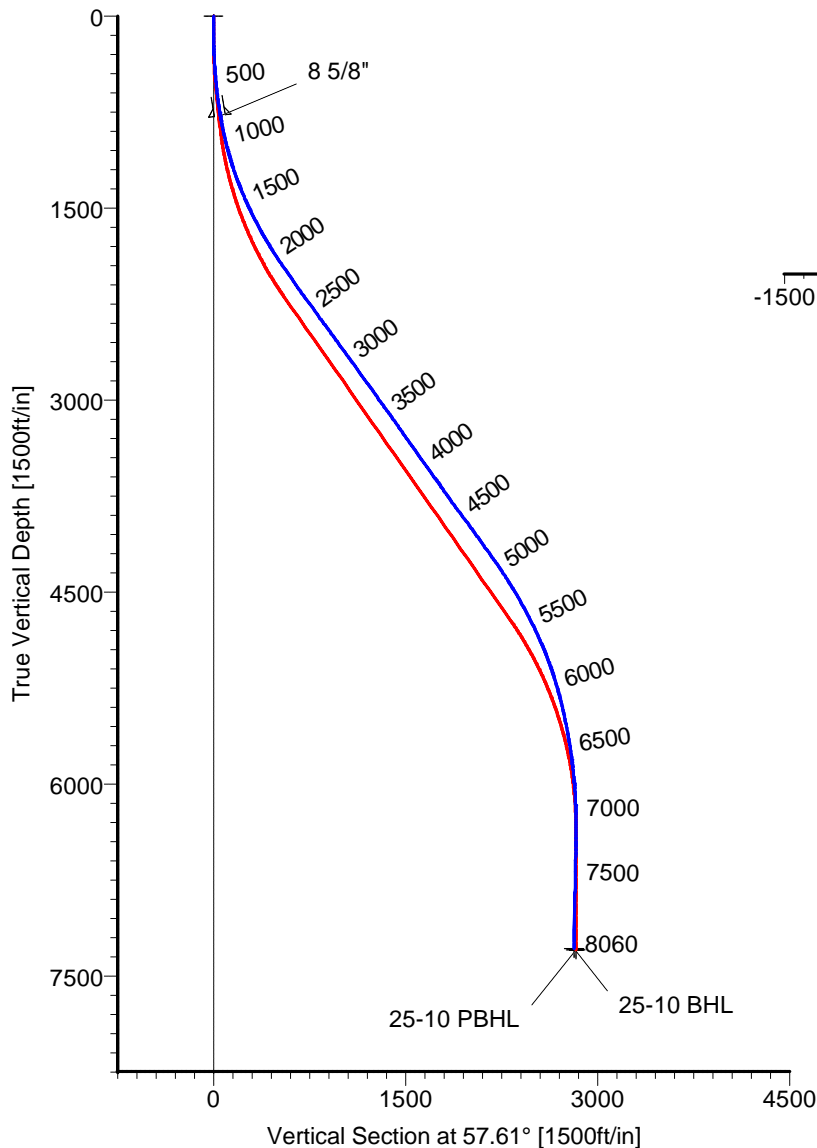
ANADARKO PETROLEUM

Field: Weld County, CO
Site: REI 13-10 Pad
Well: 25-10
Wellpath: Original Hole



Azimuths to Grid North
True North: -0.54°
Magnetic North: 8.25°

Magnetic Field
Strength: 53095nT
Dip Angle: 66.93°
Date: 06/16/2011
Model: IGRF2010



CASING DETAILS

No.	TVD	MD	Name	Size
1	781.95	785.00	8 5/8"	8.625

LEGEND

- 25-10, Original Hole, Plan #4
- Original Hole

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
25-10 SL	0.00	0.00	0.00	40°14'01.730N	104°39'27.733W	Point
25-10 BHL	7282.68	1523.25	2367.41	40°14'16.559N	104°38'57.020W	Circle (Radius: 50)
25-10 PBHL	7295.00	1516.47	2390.09	40°14'16.490N	104°38'56.728W	Circle (Radius: 50)

Wellpath: (25-10/Original Hole)

Created By: Ivonne Gonzalez

Date: 06/18/2011

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

Archer

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Survey Report

Company: ANADARKO PETROLEUM Field: Weld County, CO Site: REI 13-10 Pad Well: 25-10 Wellpath: Original Hole	Date: 06/18/2011 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Survey Calculation Method:	Time: 09:46:12 Well: 25-10, Grid North 4816'GL+15'KB 4831.0 Well (0.00N,0.00E,57.61Azi) Minimum Curvature	Page: 1 Db: Sybase
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Field: Weld County, CO Map System: US State Plane Coordinate System 1983 Geo Datum: GRS 1980 Sys Datum: Mean Sea Level	Map Zone: Colorado, Northern Zone Coordinate System: Well Centre Geomagnetic Model: IGRF2010
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Site: REI 13-10 Pad Centered on 38-9 Site Position: From: Geographic Position Uncertainty: 0.00 ft Ground Level: 4816.00 ft	Northing: 1329141.36 ft Easting: 3235134.29 ft Latitude: 40 14 1.748 N Longitude: 104 39 28.145 W North Reference: Grid Grid Convergence: 0.54 deg
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Well: 25-10 Well Position: +N/-S -1.54 ft +E/-W 31.99 ft Position Uncertainty: 0.00 ft	Slot Name: 25-10 Well Position: 40 14 1.730 N 104 39 27.733 W Latitude: Longitude:
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Wellpath: Original Hole Current Datum: 4816'GL+15'KB Magnetic Data: 06/16/2011 Field Strength: 53095 nT Vertical Section: Depth From (TVD) ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 8.79 deg Mag Dip Angle: 66.93 deg +N/-S ft +E/-W ft Direction deg
0.00	0.00

Survey Program for Definitive Wellpath			
Date: 06/18/2011	Validated: No	Version: 0	
Actual From ft	To ft	Survey	Toolcode Tool Name
49.00	8015.00	Survey #1 (49.00-8015.00)	MWD Std MWD
8060.00	8060.00	Survey #2 (8060.00-8060.00)	Project Projection

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
49.00	1.60	273.90	48.99	0.05	-0.68	-0.55	3.27	3.27	0.00	MWD
140.00	1.20	324.90	139.97	0.91	-2.50	-1.62	1.38	-0.44	56.04	MWD
229.00	1.90	13.40	228.94	3.11	-2.69	-0.61	1.60	0.79	54.49	MWD
319.00	3.70	41.10	318.83	6.75	-0.44	3.25	2.45	2.00	30.78	MWD
426.00	4.00	42.90	425.59	12.09	4.37	10.17	0.30	0.28	1.68	MWD
516.00	5.60	48.50	515.27	17.30	9.80	17.54	1.85	1.78	6.22	MWD
607.00	7.00	48.90	605.72	23.88	17.30	27.41	1.54	1.54	0.44	MWD
698.00	8.10	54.90	695.93	31.22	26.73	39.29	1.49	1.21	6.59	MWD
740.00	8.40	57.30	737.50	34.57	31.73	45.31	1.09	0.71	5.71	MWD
785.00	9.51	59.58	781.95	38.23	37.70	52.32	2.58	2.46	5.07	8 5/8"
833.00	10.70	61.50	829.20	42.36	45.04	60.72	2.58	2.49	3.99	MWD
924.00	12.30	59.80	918.37	51.27	60.84	78.84	1.80	1.76	-1.87	MWD
1015.00	13.90	59.80	1007.00	61.65	78.66	99.45	1.76	1.76	0.00	MWD
1105.00	16.00	59.10	1093.95	73.46	98.65	122.65	2.34	2.33	-0.78	MWD
1196.00	18.50	58.40	1180.85	87.46	121.71	149.63	2.76	2.75	-0.77	MWD
1286.00	19.90	59.10	1265.84	102.81	147.02	179.22	1.58	1.56	0.78	MWD
1377.00	22.20	59.10	1350.77	119.60	175.06	211.89	2.53	2.53	0.00	MWD
1468.00	23.60	58.40	1434.59	137.97	205.33	247.30	1.57	1.54	-0.77	MWD
1559.00	25.70	56.30	1517.30	158.47	237.27	285.24	2.50	2.31	-2.31	MWD
1649.00	27.30	57.00	1597.84	180.54	270.81	325.39	1.81	1.78	0.78	MWD
1740.00	28.90	58.00	1678.11	203.56	306.97	368.25	1.83	1.76	1.10	MWD

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Survey Report

Company: ANADARKO PETROLEUM Field: Weld County, CO Site: REI 13-10 Pad Well: 25-10 Wellpath: Original Hole	Date: 06/18/2011 Co-ordinate(NE) Reference: Well: 25-10, Grid North Vertical (TVD) Reference: 4816'GL+15'KB 4831.0 Section (VS) Reference: Well (0.00N,0.00E,57.61Azi) Survey Calculation Method: Minimum Curvature	Time: 09:46:12 Page: 2 Db: Sybase
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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
1831.00	31.00	57.00	1756.95	227.97	345.27	413.68	2.37	2.31	-1.10	MWD
1922.00	32.90	57.30	1834.16	254.09	385.73	461.83	2.10	2.09	0.33	MWD
2013.00	33.80	57.70	1910.18	280.97	427.92	511.86	1.02	0.99	0.44	MWD
2104.00	34.30	58.00	1985.58	308.08	471.06	562.81	0.58	0.55	0.33	MWD
2194.00	35.00	57.00	2059.61	335.58	514.21	613.98	1.00	0.78	-1.11	MWD
2285.00	35.00	58.40	2134.16	363.47	558.33	666.17	0.88	0.00	1.54	MWD
2376.00	36.10	57.30	2208.20	391.63	603.12	719.07	1.40	1.21	-1.21	MWD
2467.00	36.10	58.00	2281.72	420.32	648.41	772.69	0.45	0.00	0.77	MWD
2558.00	36.40	58.00	2355.11	448.83	694.05	826.50	0.33	0.33	0.00	MWD
2648.00	36.60	56.60	2427.46	477.75	739.09	880.03	0.95	0.22	-1.56	MWD
2739.00	35.50	55.60	2501.03	507.61	783.54	933.56	1.37	-1.21	-1.10	MWD
2830.00	36.20	56.30	2574.79	537.45	827.70	986.83	0.89	0.77	0.77	MWD
2921.00	36.10	56.60	2648.27	567.12	872.44	1040.50	0.22	-0.11	0.33	MWD
3012.00	35.90	58.70	2721.89	595.74	917.62	1093.98	1.37	-0.22	2.31	MWD
3102.00	35.90	57.70	2794.80	623.55	962.47	1146.75	0.65	0.00	-1.11	MWD
3193.00	35.90	58.00	2868.51	651.94	1007.65	1200.11	0.19	0.00	0.33	MWD
3284.00	35.20	58.00	2942.55	679.98	1052.52	1253.02	0.77	-0.77	0.00	MWD
3375.00	35.50	59.10	3016.77	707.45	1097.43	1305.66	0.77	0.33	1.21	MWD
3466.00	36.60	59.80	3090.35	734.66	1143.55	1359.18	1.29	1.21	0.77	MWD
3557.00	35.20	59.80	3164.06	761.50	1189.67	1412.50	1.54	-1.54	0.00	MWD
3647.00	34.70	59.40	3237.83	787.59	1234.14	1464.03	0.61	-0.56	-0.44	MWD
3738.00	35.20	59.10	3312.42	814.25	1278.94	1516.14	0.58	0.55	-0.33	MWD
3829.00	35.00	58.00	3386.87	841.55	1323.57	1568.45	0.73	-0.22	-1.21	MWD
3920.00	35.90	57.30	3461.00	869.79	1368.16	1621.23	1.08	0.99	-0.77	MWD
4011.00	35.90	57.70	3534.71	898.46	1413.16	1674.59	0.26	0.00	0.44	MWD
4101.00	36.10	57.70	3607.52	926.73	1457.88	1727.49	0.22	0.22	0.00	MWD
4192.00	34.30	57.30	3681.88	954.91	1502.12	1779.94	1.99	-1.98	-0.44	MWD
4283.00	35.40	57.00	3756.56	983.11	1545.80	1831.94	1.22	1.21	-0.33	MWD
4374.00	36.20	57.30	3830.37	1011.99	1590.52	1885.17	0.90	0.88	0.33	MWD
4465.00	37.10	57.70	3903.37	1041.17	1636.33	1939.49	1.02	0.99	0.44	MWD
4555.00	36.60	57.70	3975.39	1070.01	1681.96	1993.46	0.56	-0.56	0.00	MWD
4646.00	35.20	58.70	4049.11	1098.14	1727.30	2046.82	1.67	-1.54	1.10	MWD
4737.00	35.70	57.30	4123.24	1126.11	1772.05	2099.59	1.05	0.55	-1.54	MWD
4828.00	36.20	57.00	4196.90	1155.09	1816.94	2153.02	0.58	0.55	-0.33	MWD
4919.00	34.80	57.00	4270.99	1183.87	1861.25	2205.86	1.54	-1.54	0.00	MWD
5010.00	33.40	56.60	4346.34	1211.80	1903.94	2256.87	1.56	-1.54	-0.44	MWD
5101.00	32.20	56.60	4422.83	1238.94	1945.10	2306.15	1.32	-1.32	0.00	MWD
5191.00	30.60	57.00	4499.65	1264.61	1984.33	2353.04	1.79	-1.78	0.44	MWD
5282.00	29.70	57.00	4578.33	1289.51	2022.66	2398.74	0.99	-0.99	0.00	MWD
5372.00	28.20	56.60	4657.09	1313.36	2059.12	2442.30	1.68	-1.67	-0.44	MWD
5464.00	26.60	56.30	4738.76	1336.75	2094.40	2484.63	1.75	-1.74	-0.33	MWD
5554.00	25.00	55.20	4819.79	1358.79	2126.78	2523.78	1.86	-1.78	-1.22	MWD
5645.00	23.40	53.80	4902.79	1380.44	2157.16	2561.02	1.87	-1.76	-1.54	MWD
5736.00	21.30	56.40	4986.95	1400.26	2185.51	2595.58	2.55	-2.31	2.86	MWD
5826.00	19.70	54.50	5071.25	1418.11	2211.48	2627.07	1.93	-1.78	-2.11	MWD
5917.00	17.70	58.70	5157.44	1434.21	2235.79	2656.22	2.65	-2.20	4.62	MWD
6008.00	16.40	58.00	5244.44	1448.20	2258.50	2682.90	1.45	-1.43	-0.77	MWD
6099.00	14.30	58.00	5332.19	1460.97	2278.93	2706.99	2.31	-2.31	0.00	MWD
6190.00	13.00	56.60	5420.62	1472.56	2297.01	2728.46	1.47	-1.43	-1.54	MWD
6280.00	11.40	54.40	5508.59	1483.31	2312.69	2747.46	1.85	-1.78	-2.44	MWD
6371.00	10.60	51.30	5597.91	1493.78	2326.54	2764.76	1.09	-0.88	-3.41	MWD
6462.00	8.80	48.20	5687.61	1503.65	2338.26	2779.95	2.06	-1.98	-3.41	MWD
6552.00	8.40	48.90	5776.60	1512.56	2348.34	2793.24	0.46	-0.44	0.78	MWD

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Survey Report

Company: ANADARKO PETROLEUM Field: Weld County, CO Site: REI 13-10 Pad Well: 25-10 Wellpath: Original Hole	Date: 06/18/2011 Co-ordinate(NE) Reference: Well: 25-10, Grid North Vertical (TVD) Reference: 4816'GL+15'KB 4831.0 Section (VS) Reference: Well (0.00N,0.00E,57.61Azi) Survey Calculation Method: Minimum Curvature Db: Sybase
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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
6643.00	6.20	51.30	5866.85	1520.00	2357.19	2804.70	2.44	-2.42	2.64	MWD
6734.00	6.00	43.60	5957.34	1526.52	2364.30	2814.20	0.92	-0.22	-8.46	MWD
6825.00	3.90	54.50	6048.00	1531.76	2370.10	2821.90	2.52	-2.31	11.98	MWD
6916.00	2.30	48.90	6138.86	1534.76	2374.00	2826.80	1.79	-1.76	-6.15	MWD
7006.00	0.50	58.40	6228.83	1536.15	2375.69	2828.98	2.01	-2.00	10.56	MWD
7188.00	0.40	214.10	6410.83	1536.04	2376.01	2829.19	0.48	-0.05	85.55	MWD
7370.00	0.90	224.30	6592.82	1534.50	2374.66	2827.21	0.28	0.27	5.60	MWD
7551.00	1.40	222.20	6773.78	1531.84	2372.18	2823.70	0.28	0.28	-1.16	MWD
7733.00	1.10	220.80	6955.74	1528.87	2369.55	2819.88	0.17	-0.16	-0.77	MWD
7915.00	1.10	203.90	7137.70	1525.95	2367.70	2816.76	0.18	0.00	-9.29	MWD
8015.00	1.10	176.80	7237.69	1524.11	2367.36	2815.49	0.52	0.00	-27.10	MWD
8060.00	1.10	176.80	7282.68	1523.25	2367.41	2815.07	0.00	0.00	0.00	25-10 BHL

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		
25-10 SL			0.00	0.00	0.00	1329139.82	3235166.28	40	14	1.730 N	104	39	27.733 W
25-10 BHL			7282.68	1523.25	2367.41	1330663.07	3237533.69	40	14	16.559 N	104	38	57.020 W
25-10 PBHL			7295.00	1516.47	2390.09	1330656.30	3237556.37	40	14	16.490 N	104	38	56.728 W
-Circle (Radius: 50)													

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
785.00	781.95	8.625	9.875	8 5/8"