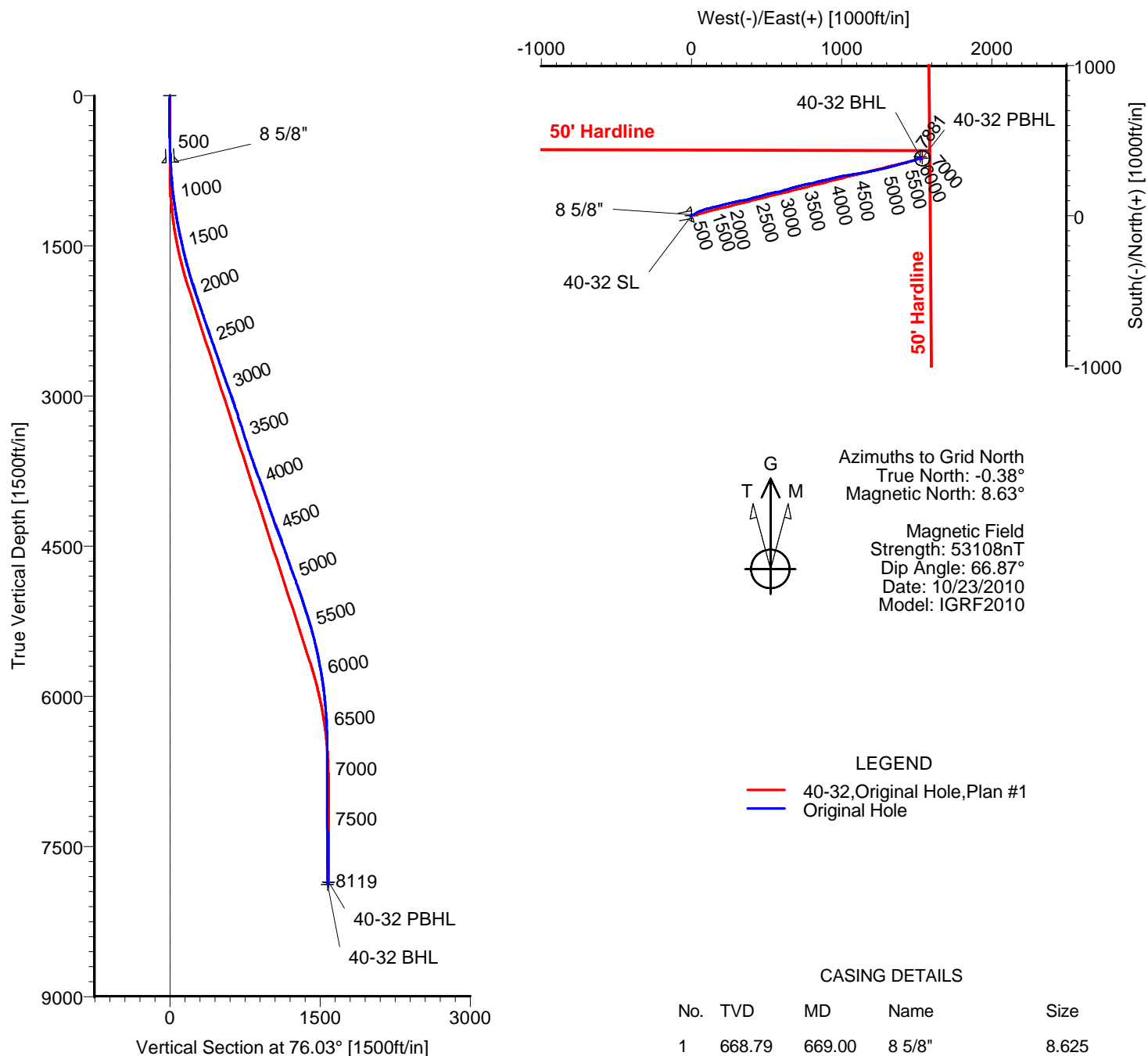


ANADARKO PETROLEUM

Field: Weld County, CO
Site: Everist 10-32 Pad
Well: 40-32
Wellpath: Original Hole



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
40-32 SL	0.00	0.00	0.00	40°10'52.289N	104°54'36.156W	Point
40-32 PBHL	7855.00	382.78	1538.68	40°10'55.971N	104°54'16.298W	Circle (Radius: 50)
40-32 BHL	7881.43	391.94	1526.03	40°10'56.062N	104°54'16.461W	Point

Wellpath: (40-32/Original Hole)

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



Allis-Chalmers Energy, Inc.

Survey Report

Company: ANADARKO PETROLEUM Field: Weld County, CO Site: Everist 10-32 Pad Well: 40-32 Wellpath: Original Hole	Date: 10/24/2010 Co-ordinate(NE) Reference: Vertical (TVD) Reference: Section (VS) Reference: Survey Calculation Method:	Time: 09:45:08 Well: 40-32, Grid North 4803'GL+13'KB 4816.0 Well (0.00N,0.00E,76.03Azi) 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

Site: Everist 10-32 Pad Centered on 25-32 Site Position: From: Geographic Position Uncertainty: 0.00 ft Ground Level: 4803.00 ft	Northing: 1309402.05 ft Easting: 3164796.50 ft Latitude: 40 10 52.295 N Longitude: 104 54 36.774 W North Reference: Grid Grid Convergence: 0.38 deg
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Well: 40-32 Well Position: +N/-S -0.24 ft +E/-W 47.97 ft Position Uncertainty: 0.00 ft	Slot Name: 40-32 Latitude: 40 10 52.289 N Longitude: 104 54 36.156 W
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Wellpath: Original Hole Current Datum: 4803'GL+13'KB Magnetic Data: 10/23/2010 Field Strength: 53108 nT Vertical Section: Depth From (TVD) ft	Height 4816.00 ft	Drilled From: Surface Tie-on Depth: 0.00 ft Above System Datum: Mean Sea Level Declination: 9.01 deg Mag Dip Angle: 66.87 deg +N/-S ft +E/-W ft Direction deg
0.00	0.00	0.00 76.03

Survey Program for Definitive Wellpath					
Date: 10/24/2010	Validated: No	Version: 0			
Actual From ft	To ft	Survey	Toolcode	Tool Name	
47.00	8074.00	Survey #1 (47.00-8074.00)	MWD	Std MWD	
8119.00	8119.00	Survey #2 (8119.00-8119.00)	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
47.00	0.50	283.20	47.00	0.05	-0.20	-0.18	1.06	1.06	0.00	MWD
107.00	0.50	311.00	107.00	0.28	-0.65	-0.57	0.40	0.00	46.33	MWD
168.00	0.70	291.70	167.99	0.59	-1.20	-1.02	0.46	0.33	-31.64	MWD
228.00	0.90	287.80	227.99	0.87	-1.99	-1.72	0.35	0.33	-6.50	MWD
289.00	0.50	353.50	288.98	1.28	-2.47	-2.09	1.36	-0.66	107.70	MWD
350.00	1.20	44.50	349.98	2.00	-2.06	-1.51	1.58	1.15	83.61	MWD
430.00	1.40	65.30	429.96	3.01	-0.58	0.16	0.64	0.25	26.00	MWD
521.00	2.10	74.10	520.91	3.93	2.03	2.92	0.82	0.77	9.67	MWD
619.00	2.50	79.30	618.84	4.82	5.86	6.85	0.46	0.41	5.31	MWD
669.00	2.40	79.30	668.79	5.21	7.96	8.98	0.20	-0.20	0.00	8 5/8"
721.00	2.30	79.30	720.75	5.61	10.06	11.11	0.20	-0.20	0.00	MWD
811.00	3.90	66.30	810.61	7.18	14.63	15.93	1.93	1.78	-14.44	MWD
902.00	6.30	61.70	901.25	10.79	21.86	23.82	2.67	2.64	-5.05	MWD
993.00	7.70	59.30	991.57	16.27	31.50	34.50	1.57	1.54	-2.64	MWD
1084.00	8.60	61.40	1081.65	22.64	42.72	46.92	1.04	0.99	2.31	MWD
1175.00	9.00	67.00	1171.58	28.68	55.24	60.53	1.04	0.44	6.15	MWD
1265.00	10.70	69.50	1260.25	34.35	69.55	75.79	1.95	1.89	2.78	MWD
1356.00	11.60	74.80	1349.53	39.71	86.29	93.33	1.50	0.99	5.82	MWD
1447.00	12.70	70.50	1438.49	45.45	104.55	112.43	1.56	1.21	-4.73	MWD
1538.00	12.50	73.00	1527.30	51.67	123.40	132.22	0.64	-0.22	2.75	MWD
1629.00	13.70	77.90	1615.93	56.80	143.36	152.83	1.80	1.32	5.38	MWD

Allis-Chalmers Energy, Inc.

Survey Report

Company: ANADARKO PETROLEUM Field: Weld County, CO Site: Everist 10-32 Pad Well: 40-32 Wellpath: Original Hole	Date: 10/24/2010 Co-ordinate(NE) Reference: Well: 40-32, Grid North Vertical (TVD) Reference: 4803'GL+13'KB 4816.0 Section (VS) Reference: Well (0.00N,0.00E,76.03Azi) Survey Calculation Method: Minimum Curvature	Time: 09:45:08 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
1720.00	15.80	77.90	1703.93	61.66	166.01	175.98	2.31	2.31	0.00	MWD
1811.00	16.50	75.10	1791.34	67.58	190.61	201.29	1.15	0.77	-3.08	MWD
1902.00	17.10	74.40	1878.46	74.50	215.99	227.58	0.70	0.66	-0.77	MWD
1992.00	19.00	79.30	1964.03	80.78	243.13	255.44	2.70	2.11	5.44	MWD
2084.00	18.30	75.80	2051.20	87.10	271.85	284.84	1.43	-0.76	-3.80	MWD
2174.00	18.80	78.60	2136.52	93.44	299.76	313.45	1.13	0.56	3.11	MWD
2265.00	19.00	80.70	2222.62	98.73	328.76	342.87	0.78	0.22	2.31	MWD
2356.00	19.00	78.30	2308.66	104.13	357.88	372.43	0.86	0.00	-2.64	MWD
2446.00	19.50	72.30	2393.64	111.67	386.54	402.07	2.27	0.56	-6.67	MWD
2537.00	19.20	73.00	2479.50	120.66	415.32	432.16	0.42	-0.33	0.77	MWD
2628.00	18.80	77.20	2565.55	128.28	443.93	461.77	1.57	-0.44	4.62	MWD
2719.00	19.00	76.90	2651.64	134.89	472.66	491.24	0.24	0.22	-0.33	MWD
2810.00	18.70	74.80	2737.76	142.07	501.16	520.64	0.82	-0.33	-2.31	MWD
2901.00	19.40	78.30	2823.78	148.96	530.04	550.32	1.47	0.77	3.85	MWD
2991.00	20.40	78.30	2908.40	155.17	560.04	580.93	1.11	1.11	0.00	MWD
3082.00	19.50	77.90	2993.94	161.57	590.42	611.96	1.00	-0.99	-0.44	MWD
3172.00	18.30	72.60	3079.09	168.95	618.59	641.08	2.33	-1.33	-5.89	MWD
3264.00	18.80	73.70	3166.31	177.43	646.60	670.31	0.66	0.54	1.20	MWD
3355.00	18.30	73.40	3252.59	185.63	674.37	699.24	0.56	-0.55	-0.33	MWD
3445.00	17.60	74.40	3338.20	193.32	701.02	726.95	0.85	-0.78	1.11	MWD
3536.00	17.60	77.90	3424.95	199.91	727.72	754.46	1.16	0.00	3.85	MWD
3627.00	18.50	77.20	3511.47	205.99	755.25	782.64	1.02	0.99	-0.77	MWD
3718.00	18.80	77.90	3597.69	212.26	783.67	811.73	0.41	0.33	0.77	MWD
3808.00	19.00	78.60	3682.84	218.20	812.21	840.86	0.34	0.22	0.78	MWD
3899.00	20.40	75.80	3768.51	225.01	842.11	871.52	1.86	1.54	-3.08	MWD
3990.00	20.60	76.50	3853.75	232.64	873.05	903.39	0.35	0.22	0.77	MWD
4081.00	19.50	78.30	3939.23	239.46	903.49	934.58	1.39	-1.21	1.98	MWD
4172.00	18.30	75.10	4025.33	246.21	932.17	964.04	1.74	-1.32	-3.52	MWD
4262.00	18.70	77.20	4110.68	253.04	959.89	992.59	0.86	0.44	2.33	MWD
4353.00	19.70	77.20	4196.61	259.67	989.08	1022.51	1.10	1.10	0.00	MWD
4443.00	19.50	79.00	4281.40	265.90	1018.62	1052.68	0.71	-0.22	2.00	MWD
4534.00	22.20	81.40	4366.43	271.37	1050.53	1084.97	3.11	2.97	2.64	MWD
4625.00	19.90	80.70	4451.36	276.45	1082.82	1117.53	2.54	-2.53	-0.77	MWD
4716.00	19.50	81.10	4537.03	281.30	1113.10	1148.09	0.46	-0.44	0.44	MWD
4807.00	18.70	79.70	4623.02	286.26	1142.46	1177.78	1.01	-0.88	-1.54	MWD
4897.00	19.20	80.70	4708.14	291.23	1171.26	1206.93	0.66	0.56	1.11	MWD
4988.00	20.60	80.00	4793.71	296.43	1201.80	1237.81	1.56	1.54	-0.77	MWD
5079.00	20.10	78.60	4879.03	302.30	1232.89	1269.40	0.77	-0.55	-1.54	MWD
5170.00	19.00	76.50	4964.78	308.85	1262.62	1299.84	1.43	-1.21	-2.31	MWD
5261.00	17.40	76.20	5051.23	315.55	1290.24	1328.26	1.76	-1.76	-0.33	MWD
5351.00	18.70	73.00	5136.80	322.98	1317.11	1356.13	1.82	1.44	-3.56	MWD
5442.00	17.40	74.80	5223.32	330.81	1344.19	1384.30	1.55	-1.43	1.98	MWD
5533.00	15.80	74.40	5310.52	337.71	1369.26	1410.29	1.76	-1.76	-0.44	MWD
5624.00	14.60	76.90	5398.34	343.64	1392.36	1434.14	1.50	-1.32	2.75	MWD
5714.00	13.70	75.80	5485.61	348.83	1413.74	1456.14	1.04	-1.00	-1.22	MWD
5805.00	12.00	76.20	5574.32	353.73	1433.38	1476.38	1.87	-1.87	0.44	MWD
5896.00	10.70	73.40	5663.54	358.40	1450.66	1494.28	1.55	-1.43	-3.08	MWD
5987.00	10.20	74.80	5753.03	362.92	1466.53	1510.77	0.62	-0.55	1.54	MWD
6078.00	8.60	70.90	5842.81	367.26	1480.74	1525.60	1.89	-1.76	-4.29	MWD
6169.00	7.00	68.40	5932.96	371.53	1492.32	1537.88	1.80	-1.76	-2.75	MWD
6260.00	5.80	63.90	6023.40	375.60	1501.61	1547.87	1.43	-1.32	-4.95	MWD
6350.00	4.90	75.10	6113.01	378.58	1509.41	1556.16	1.53	-1.00	12.44	MWD
6441.00	4.10	81.10	6203.73	380.09	1516.38	1563.29	1.02	-0.88	6.59	MWD

Allis-Chalmers Energy, Inc.

Survey Report

Company: ANADARKO PETROLEUM Field: Weld County, CO Site: Everist 10-32 Pad Well: 40-32 Wellpath: Original Hole	Date: 10/24/2010 Co-ordinate(NE) Reference: Well: 40-32, Grid North Vertical (TVD) Reference: 4803'GL+13'KB 4816.0 Section (VS) Reference: Well (0.00N,0.00E,76.03Azi) Survey Calculation Method: Minimum Curvature	Page: 3 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
6532.00	2.30	89.20	6294.58	380.62	1521.42	1568.30	2.03	-1.98	8.90	MWD
6622.00	0.90	96.20	6384.54	380.56	1523.93	1570.73	1.57	-1.56	7.78	MWD
6713.00	0.30	76.50	6475.54	380.54	1524.87	1571.64	0.69	-0.66	-21.65	MWD
6895.00	0.30	106.40	6657.54	380.52	1525.79	1572.52	0.09	0.00	16.43	MWD
7076.00	0.30	110.30	6838.53	380.22	1526.69	1573.32	0.01	0.00	2.15	MWD
7258.00	0.20	40.30	7020.53	380.30	1527.34	1573.98	0.16	-0.05	-38.46	MWD
7440.00	0.70	353.50	7202.53	381.65	1527.42	1574.38	0.32	0.27	-25.71	MWD
7621.00	1.20	11.50	7383.50	384.60	1527.67	1575.34	0.32	0.28	9.94	MWD
7803.00	0.90	13.90	7565.47	387.86	1528.40	1576.82	0.17	-0.16	1.32	MWD
7984.00	0.90	321.90	7746.45	390.35	1527.86	1576.91	0.44	0.00	-28.73	MWD
8074.00	1.10	306.40	7836.44	391.42	1526.73	1576.07	0.37	0.22	-17.22	MWD
8092.57	1.10	306.40	7855.00	391.64	1526.44	1575.84	0.00	0.00	0.00	40-32 PBHL
8119.00	1.10	306.40	7881.43	391.94	1526.03	1575.52	0.00	0.00	0.00	40-32 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		
40-32 SL			0.00	0.00	0.00	1309401.81	3164844.47	40	10	52.289 N	104	54	36.156 W
40-32 PBHL			7855.00	382.78	1538.68	1309784.60	3166383.15	40	10	55.971 N	104	54	16.298 W
-Circle (Radius: 50)													
40-32 BHL			7881.43	391.94	1526.03	1309793.75	3166370.50	40	10	56.062 N	104	54	16.461 W

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
669.00	668.79	8.625	12.250	8 5/8"