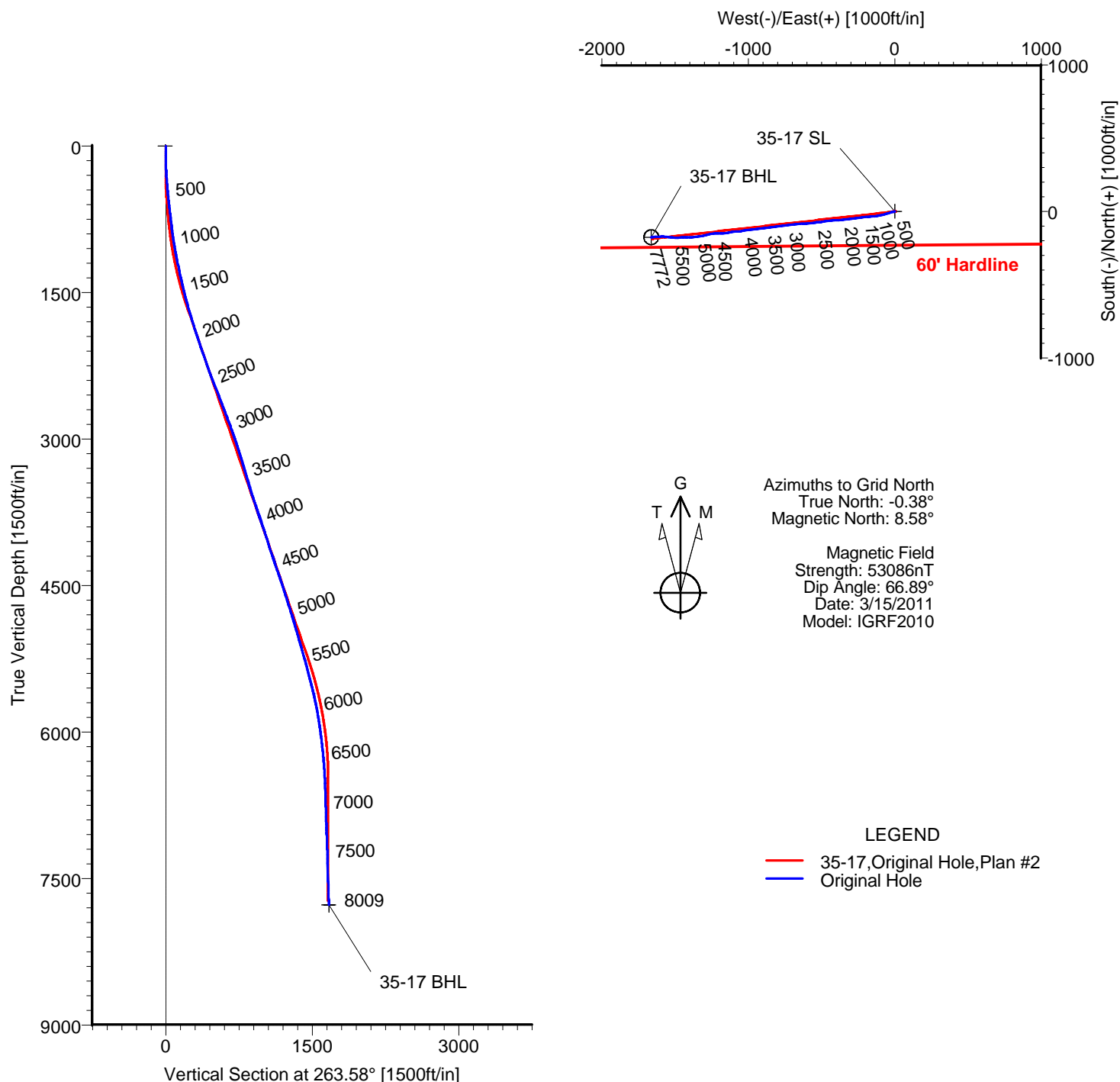


ANADARKO PETROLEUM

Field: Weld County, CO
Site: Sekich 15-17 Pad
Well: 35-17
Wellpath: Original Hole



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
35-17 SL	0.00	0.00	0.00	40°13'09.397N	104°54'45.968W	Point
35-17 BHL	7772.39	-175.64	-1662.25	40°13'07.770N	104°55'07.411W	Circle (Radius: 50)

Wellpath: (35-17/Original Hole)

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

Created By: Ashley Wischnewsky

Date: 3/14/2011



DIRECTIONAL
DRILLING SERVICES

Survey Report

Company: ANADARKO PETROLEUM				Date: 3/14/2011		Time: 08:16:59		Page: 1		
Field: Weld County, CO				Co-ordinate(NE) Reference: Well: 35-17, Grid North						
Site: Sekich 15-17 Pad				Vertical (TVD) Reference: 4865'GL+13'KB 4878.0						
Well: 35-17				Section (VS) Reference: Well (0.00N,0.00E,263.58Azi)						
Wellpath: Original Hole				Survey Calculation Method: Minimum Curvature				Db: Sybase		
Field: Weld County, CO										
Map System:US State Plane Coordinate System 1983				Map Zone: Colorado, Northern Zone						
Geo Datum:GRS 1980				Coordinate System: Well Centre						
Sys Datum:Mean Sea Level				Geomagnetic Model: IGRF2010						
Site: Sekich 15-17 Pad										
Centered on 19-17										
Site Position:		Northing: 1323289.54 ft		Latitude: 40 13 9.588 N						
From: Geographic		Easting: 3163967.97 ft		Longitude: 104 54 46.264 W						
Position Uncertainty: 0.00 ft				North Reference: Grid						
Ground Level: 4865.00 ft				Grid Convergence: 0.38 deg						
Well: 35-17										
Slot Name: 35-17										
Well Position: +N/-S -19.16 ft		Northing: 1323270.38 ft		Latitude: 40 13 9.397 N						
+E/-W 23.12 ft		Easting : 3163991.09 ft		Longitude: 104 54 45.968 W						
Position Uncertainty: 0.00 ft										
Wellpath: Original Hole				Drilled From: Surface						
Current Datum: 4865'GL+13'KB		Height:4878.00 ft		Tie-on Depth: 0.00 ft						
Magnetic Data: 3/15/2011				Above System Datum: Mean Sea Level						
Field Strength: 53086 nT				Declination: 8.96 deg						
Vertical Section: Depth From (TVD)		+N/-S		Mag Dip Angle: 66.89 deg						
ft		ft		+E/-W		Direction		deg		
0.00		0.00		0.00		263.58				
Survey Program for Definitive Wellpath										
Date: 3/14/2011		Validated: No		Version: 0						
Actual From To		Survey		Toolcode		Tool Name				
ft ft										
52.00 7964.00		Survey #1 (52.00-7964.00)		MWD		Std MWD				
8009.00 8009.00		Survey #2 (8009.00-8009.00)		Project		Projection				
Survey										
MD	Incl	Azim	TVD	+N/-S	+E/-W	VS	DLS	Build	Turn	Tool/Comment
ft	deg	deg	ft	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
52.00	0.70	185.10	52.00	-0.32	-0.03	0.06	1.35	1.35	0.00	MWD
142.00	1.40	253.30	141.99	-1.18	-1.13	1.26	1.46	0.78	75.78	MWD
232.00	2.60	254.40	231.93	-2.04	-4.15	4.35	1.33	1.33	1.22	MWD
322.00	4.00	260.00	321.78	-3.14	-9.21	9.50	1.59	1.56	6.22	MWD
428.00	4.60	257.50	427.48	-4.70	-17.00	17.42	0.59	0.57	-2.36	MWD
519.00	6.00	256.80	518.09	-6.58	-25.19	25.77	1.54	1.54	-0.77	MWD
610.00	6.70	254.40	608.53	-9.09	-34.93	35.73	0.82	0.77	-2.64	MWD
700.00	6.90	251.90	697.90	-12.18	-45.13	46.21	0.40	0.22	-2.78	MWD
740.00	6.90	250.10	737.61	-13.75	-49.67	50.90	0.54	0.00	-4.50	MWD
821.00	6.70	250.50	818.04	-16.98	-58.70	60.23	0.25	-0.25	0.49	MWD
911.00	8.10	255.40	907.29	-20.33	-69.79	71.62	1.70	1.56	5.44	MWD
1002.00	9.30	256.80	997.24	-23.63	-83.15	85.27	1.34	1.32	1.54	MWD
1093.00	10.40	259.60	1086.90	-26.79	-98.39	100.77	1.32	1.21	3.08	MWD
1184.00	11.80	261.70	1176.19	-29.61	-115.68	118.26	1.60	1.54	2.31	MWD
1274.00	12.10	261.70	1264.24	-32.30	-134.12	136.89	0.33	0.33	0.00	MWD
1365.00	12.30	262.40	1353.19	-34.96	-153.16	156.11	0.27	0.22	0.77	MWD
1456.00	13.50	267.40	1441.89	-36.73	-173.38	176.40	1.80	1.32	5.49	MWD
1548.00	14.10	264.90	1531.23	-38.21	-195.27	198.32	0.92	0.65	-2.72	MWD
1638.00	15.70	263.90	1618.21	-40.48	-218.30	221.46	1.80	1.78	-1.11	MWD
1729.00	16.20	264.20	1705.70	-43.07	-243.17	246.46	0.56	0.55	0.33	MWD
1819.00	17.20	263.90	1791.90	-45.75	-268.89	272.32	1.12	1.11	-0.33	MWD

Survey Report

Company: ANADARKO PETROLEUM

Field: Weld County, CO

Site: Sekich 15-17 Pad

Well: 35-17

Wellpath: Original Hole

Date: 3/14/2011

Time: 08:16:59

Page: 2

Co-ordinate(NE) Reference: Well: 35-17, Grid North

Vertical (TVD) Reference: 4865'GL+13'KB 4878.0

Section (VS) Reference: Well (0.00N,0.00E,263.58Azi)

Survey Calculation Method: Minimum Curvature

Db: Sybase

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
1910.00	17.60	262.40	1878.74	-49.00	-295.91	299.53	0.66	0.44	-1.65	MWD
2001.00	19.00	263.90	1965.14	-52.40	-324.28	328.10	1.62	1.54	1.65	MWD
2092.00	18.10	263.90	2051.41	-55.47	-353.06	357.05	0.99	-0.99	0.00	MWD
2183.00	19.00	264.60	2137.68	-58.37	-381.87	386.00	1.02	0.99	0.77	MWD
2273.00	19.00	264.60	2222.78	-61.13	-411.04	415.30	0.00	0.00	0.00	MWD
2364.00	20.20	264.60	2308.50	-64.00	-441.43	445.82	1.32	1.32	0.00	MWD
2455.00	21.50	261.70	2393.54	-67.88	-473.57	478.19	1.82	1.43	-3.19	MWD
2545.00	21.80	264.90	2477.20	-71.75	-506.54	511.39	1.35	0.33	3.56	MWD
2636.00	21.80	262.40	2561.69	-75.49	-540.12	545.17	1.02	0.00	-2.75	MWD
2727.00	21.10	265.60	2646.39	-78.98	-573.20	578.44	1.50	-0.77	3.52	MWD
2818.00	20.40	263.90	2731.49	-81.92	-605.30	610.67	1.01	-0.77	-1.87	MWD
2909.00	20.60	266.00	2816.73	-84.72	-637.05	642.52	0.84	0.22	2.31	MWD
2999.00	20.40	264.20	2901.03	-87.41	-668.45	674.03	0.73	-0.22	-2.00	MWD
3090.00	19.00	264.90	2986.70	-90.33	-698.98	704.70	1.56	-1.54	0.77	MWD
3181.00	17.60	266.30	3073.10	-92.54	-727.47	733.25	1.61	-1.54	1.54	MWD
3272.00	17.20	262.40	3159.93	-95.21	-754.53	760.45	1.35	-0.44	-4.29	MWD
3363.00	17.90	260.00	3246.70	-99.41	-781.64	787.86	1.11	0.77	-2.64	MWD
3453.00	16.40	261.40	3332.70	-103.72	-807.83	814.36	1.73	-1.67	1.56	MWD
3544.00	15.50	260.00	3420.19	-107.75	-832.50	839.33	1.08	-0.99	-1.54	MWD
3635.00	16.90	265.30	3507.58	-110.94	-857.66	864.69	2.24	1.54	5.82	MWD
3726.00	18.30	264.20	3594.32	-113.47	-885.06	892.20	1.58	1.54	-1.21	MWD
3817.00	19.20	263.90	3680.49	-116.51	-914.15	921.45	0.99	0.99	-0.33	MWD
3908.00	17.30	261.40	3766.91	-120.12	-942.41	949.94	2.26	-2.09	-2.75	MWD
3998.00	20.00	263.20	3852.18	-123.94	-970.93	978.70	3.07	3.00	2.00	MWD
4089.00	18.30	263.20	3938.14	-127.48	-1000.57	1008.55	1.87	-1.87	0.00	MWD
4180.00	17.80	261.40	4024.66	-131.25	-1028.51	1036.74	0.82	-0.55	-1.98	MWD
4271.00	17.90	262.80	4111.28	-135.08	-1056.14	1064.62	0.48	0.11	1.54	MWD
4362.00	17.90	265.60	4197.88	-137.91	-1083.96	1092.58	0.95	0.00	3.08	MWD
4452.00	19.20	260.30	4283.20	-141.46	-1112.34	1121.18	2.36	1.44	-5.89	MWD
4543.00	19.40	262.40	4369.09	-145.98	-1142.07	1151.23	0.79	0.22	2.31	MWD
4634.00	18.80	267.70	4455.09	-148.57	-1171.71	1180.97	2.02	-0.66	5.82	MWD
4724.00	17.80	269.10	4540.54	-149.37	-1199.95	1209.13	1.21	-1.11	1.56	MWD
4816.00	17.20	264.20	4628.28	-150.96	-1227.55	1236.73	1.73	-0.65	-5.33	MWD
4906.00	17.60	259.60	4714.17	-154.76	-1254.17	1263.61	1.59	0.44	-5.11	MWD
4997.00	17.80	258.60	4800.86	-160.00	-1281.34	1291.19	0.40	0.22	-1.10	MWD
5088.00	15.50	257.90	4888.04	-165.30	-1306.86	1317.15	2.54	-2.53	-0.77	MWD
5178.00	16.70	260.70	4974.51	-169.91	-1331.38	1342.03	1.59	1.33	3.11	MWD
5270.00	16.00	261.70	5062.79	-173.87	-1356.98	1367.91	0.82	-0.76	1.09	MWD
5360.00	16.40	267.40	5149.22	-176.24	-1381.94	1392.98	1.82	0.44	6.33	MWD
5450.00	16.40	270.50	5235.56	-176.71	-1407.34	1418.28	0.97	0.00	3.44	MWD
5541.00	14.80	268.40	5323.21	-176.92	-1431.81	1442.61	1.86	-1.76	-2.31	MWD
5632.00	13.70	266.30	5411.40	-177.94	-1454.18	1464.96	1.34	-1.21	-2.31	MWD
5723.00	15.00	268.40	5499.56	-178.96	-1476.71	1487.46	1.54	1.43	2.31	MWD
5813.00	13.70	271.60	5586.76	-178.99	-1499.00	1509.62	1.69	-1.44	3.56	MWD
5904.00	12.50	277.90	5675.39	-177.34	-1519.53	1529.83	2.05	-1.32	6.92	MWD
5994.00	10.90	276.50	5763.52	-175.03	-1537.64	1547.56	1.81	-1.78	-1.56	MWD
6085.00	9.70	276.90	5853.05	-173.14	-1553.80	1563.41	1.32	-1.32	0.44	MWD
6176.00	8.60	271.90	5942.89	-171.99	-1568.21	1577.60	1.49	-1.21	-5.49	MWD
6267.00	7.00	273.00	6033.05	-171.48	-1580.55	1589.81	1.77	-1.76	1.21	MWD
6358.00	6.50	267.70	6123.42	-171.39	-1591.23	1600.42	0.88	-0.55	-5.82	MWD
6448.00	6.20	264.60	6212.86	-172.05	-1601.16	1610.36	0.51	-0.33	-3.44	MWD
6539.00	4.80	258.20	6303.44	-173.30	-1609.78	1619.06	1.68	-1.54	-7.03	MWD
6630.00	3.70	260.00	6394.19	-174.58	-1616.40	1625.78	1.22	-1.21	1.98	MWD

Survey Report

Company: ANADARKO PETROLEUM

Field: Weld County, CO

Site: Sekich 15-17 Pad

Well: 35-17

Wellpath: Original Hole

Date: 3/14/2011

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Vertical (TVD) Reference: 4865'GL+13'KB 4878.0

Section (VS) Reference: Well (0.00N,0.00E,263.58Azi)

Survey Calculation Method: Minimum Curvature

Db: Sybase

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
6721.00	2.50	275.80	6485.06	-174.89	-1621.26	1630.65	1.61	-1.32	17.36	MWD
6811.00	1.80	270.20	6575.00	-174.69	-1624.63	1633.97	0.81	-0.78	-6.22	MWD
6902.00	1.90	269.10	6665.95	-174.71	-1627.57	1636.90	0.12	0.11	-1.21	MWD
6993.00	1.60	264.20	6756.91	-174.86	-1630.34	1639.67	0.37	-0.33	-5.38	MWD
7084.00	1.90	275.50	6847.86	-174.84	-1633.10	1642.41	0.50	0.33	12.42	MWD
7175.00	2.10	265.60	6938.81	-174.83	-1636.27	1645.56	0.44	0.22	-10.88	MWD
7311.00	2.30	276.50	7074.71	-174.71	-1641.46	1650.71	0.34	0.15	8.01	MWD
7447.00	1.60	257.20	7210.63	-174.82	-1646.03	1655.25	0.70	-0.51	-14.19	MWD
7583.00	1.80	275.10	7346.57	-175.05	-1650.01	1659.23	0.42	0.15	13.16	MWD
7765.00	1.80	270.50	7528.48	-174.77	-1655.71	1664.87	0.08	0.00	-2.53	MWD
7964.00	1.40	255.40	7727.40	-175.36	-1661.19	1670.38	0.29	-0.20	-7.59	MWD
8009.00	1.40	255.40	7772.39	-175.64	-1662.25	1671.47	0.00	0.00	0.00	PROJECTED to TD