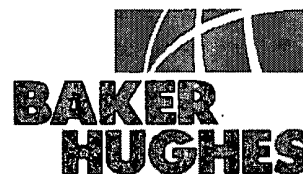




Planned Wellpath Report

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30-015-39480

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 346H SHL
Area	Eddy County, NM	Well	No. 346H
Field	Poker Lake Unit	Wellbore	No. 346H PWB
Facility	Poker Lake Unit No. 346H		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect@ 3.0.0
North Reference	Grid	User	Gentry
Scale	0.999934	Report Generated	5/22/2012 at 11:37:05 AM
Convergence at slot	0.25° East	Database/Source file	WA Midland/No. 346H_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	647672.62	427235.12	32°10'25.270"N	103°51'21.825"W
Facility Reference Pt			647672.62	427235.12	32°10'25.270"N	103°51'21.825"W
Field Reference Pt			630272.49	405347.85	32°06'49.387"N	103°54'45.266"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 346H SHL (KB) to Facility Vertical Datum	19.00ft
Horizontal Reference Pt	Slot	Rig on No. 346H SHL (KB) to Mean Sea Level	3392.00ft
Vertical Reference Pt	Rig on No. 346H SHL (KB)	Rig on No. 346H SHL (KB) to Mud Line at Slot (No. 346H SHL)	19.00ft
MD Reference Pt	Rig on No. 346H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	313.95°



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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 346H SHL
Area	Eddy County, NM	Well	No. 346H
Field	Poker Lake Unit	Wellbore	No. 346H PWB
Facility	Poker Lake Unit No. 346H		

WELLPATH DATA (143 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	313.590	0.00	0.00	0.00	0.00	647672.62	427235.12	32°10'25.270"N	103°51'21.825"W	0.00	
53.10	0.090	313.590	53.10	0.04	0.03	-0.03	647672.59	427235.15	32°10'25.270"N	103°51'21.825"W	0.17	
147.90	0.220	328.800	147.90	0.29	0.24	-0.18	647672.44	427235.35	32°10'25.272"N	103°51'21.827"W	0.14	
242.70	0.480	302.420	242.70	0.86	0.60	-0.61	647672.01	427235.72	32°10'25.276"N	103°51'21.832"W	0.32	
337.50	0.460	284.970	337.49	1.58	0.92	-1.31	647671.31	427236.03	32°10'25.279"N	103°51'21.840"W	0.15	
432.30	0.270	230.010	432.29	1.94	0.87	-1.85	647670.77	427235.99	32°10'25.278"N	103°51'21.846"W	0.40	
527.10	0.560	177.700	527.09	1.62	0.26	-2.00	647670.62	427235.38	32°10'25.272"N	103°51'21.848"W	0.47	
621.90	0.470	179.100	621.89	1.02	-0.59	-1.98	647670.64	427234.53	32°10'25.264"N	103°51'21.848"W	0.10	
716.70	0.300	298.170	716.69	0.98	-0.86	-2.19	647670.43	427234.26	32°10'25.261"N	103°51'21.850"W	0.71	
811.50	0.700	310.130	811.48	1.80	0.37	-2.85	647669.77	427234.75	32°10'25.266"N	103°51'21.858"W	0.43	
906.40	1.090	321.590	906.37	3.27	0.71	-3.86	647668.76	427235.83	32°10'25.277"N	103°51'21.870"W	0.45	
1001.20	1.320	331.950	1001.15	5.20	2.38	-4.93	647667.69	427237.50	32°10'25.293"N	103°51'21.882"W	0.33	
1096.00	1.270	338.690	1095.93	7.19	4.32	-5.82	647666.79	427239.44	32°10'25.313"N	103°51'21.892"W	0.17	
1190.80	1.220	340.400	1190.70	9.05	6.25	-6.54	647666.07	427241.37	32°10'25.332"N	103°51'21.901"W	0.07	
1285.60	1.200	342.790	1285.48	10.83	8.15	-7.18	647665.44	427243.27	32°10'25.351"N	103°51'21.908"W	0.06	
1380.40	1.310	346.840	1380.26	12.61	10.16	-7.72	647664.90	427245.27	32°10'25.370"N	103°51'21.914"W	0.15	
1475.20	1.400	4.580	1475.03	14.25	12.37	-7.87	647664.75	427247.48	32°10'25.392"N	103°51'21.916"W	0.45	
1570.00	1.410	23.540	1569.80	15.39	14.59	-7.31	647665.30	427249.71	32°10'25.414"N	103°51'21.909"W	0.49	
1664.80	1.270	22.930	1664.58	16.18	16.63	-6.44	647666.18	427251.74	32°10'25.434"N	103°51'21.899"W	0.15	
1759.60	1.050	26.580	1759.36	16.81	18.37	-5.64	647666.98	427253.49	32°10'25.452"N	103°51'21.889"W	0.24	
1854.50	0.950	32.880	1854.24	17.22	19.81	-4.82	647667.79	427254.92	32°10'25.466"N	103°51'21.880"W	0.16	
1949.30	0.760	33.280	1949.03	17.49	20.99	-4.05	647668.56	427256.11	32°10'25.477"N	103°51'21.871"W	0.20	
2044.10	0.740	35.620	2043.83	17.69	22.02	-3.35	647669.27	427257.13	32°10'25.488"N	103°51'21.863"W	0.04	
2138.90	0.640	36.250	2138.62	17.85	22.94	-2.68	647669.94	427258.06	32°10'25.497"N	103°51'21.855"W	0.11	
2233.70	0.500	30.960	2233.41	18.02	23.72	-2.16	647670.46	427258.84	32°10'25.504"N	103°51'21.849"W	0.16	
2328.50	0.280	30.140	2328.21	18.17	24.28	-1.83	647670.79	427259.39	32°10'25.510"N	103°51'21.845"W	0.23	
2423.30	0.090	37.080	2423.01	18.23	24.54	-1.67	647670.95	427259.65	32°10'25.512"N	103°51'21.843"W	0.20	
2518.10	0.150	244.730	2517.81	18.28	24.55	-1.73	647670.88	427259.66	32°10'25.512"N	103°51'21.844"W	0.25	
2612.90	0.260	240.710	2612.61	18.39	24.39	-2.03	647670.58	427259.50	32°10'25.511"N	103°51'21.847"W	0.12	
2707.70	0.340	230.860	2707.41	18.49	24.10	-2.44	647670.18	427259.22	32°10'25.508"N	103°51'21.852"W	0.10	
2802.60	0.550	242.300	2802.31	18.66	23.72	-3.06	647669.56	427258.83	32°10'25.504"N	103°51'21.859"W	0.24	
2897.40	0.580	258.960	2897.10	19.08	23.41	-3.93	647668.68	427258.53	32°10'25.501"N	103°51'21.869"W	0.18	
2992.20	0.650	251.100	2991.90	19.60	23.15	-4.91	647667.70	427258.26	32°10'25.499"N	103°51'21.881"W	0.12	
3087.00	0.720	253.390	3086.69	20.14	22.80	-5.99	647666.62	427257.92	32°10'25.495"N	103°51'21.893"W	0.08	
3181.80	0.520	272.610	3181.48	20.76	22.65	-6.99	647665.62	427257.77	32°10'25.494"N	103°51'21.905"W	0.30	
3276.60	0.190	249.910	3276.28	21.15	22.62	-7.57	647665.05	427257.73	32°10'25.494"N	103°51'21.912"W	0.37	
3371.40	0.200	163.280	3371.08	21.07	22.40	-7.67	647664.95	427257.52	32°10'25.492"N	103°51'21.913"W	0.28	
3466.20	0.480	144.070	3465.88	20.54	21.92	-7.39	647665.23	427257.04	32°10'25.487"N	103°51'21.910"W	0.31	
3561.00	0.800	137.860	3560.67	19.49	21.11	-6.71	647665.90	427256.23	32°10'25.479"N	103°51'21.902"W	0.34	
3655.80	0.940	140.980	3655.46	18.05	20.02	-5.78	647666.84	427255.13	32°10'25.468"N	103°51'21.891"W	0.16	
3750.70	1.300	149.980	3750.35	16.25	18.48	-4.75	647667.87	427253.60	32°10'25.453"N	103°51'21.879"W	0.42	
3845.50	1.280	145.210	3845.12	14.17	16.68	-3.61	647669.01	427251.79	32°10'25.435"N	103°51'21.866"W	0.12	
3940.30	0.750	142.430	3939.91	12.52	15.32	-2.63	647669.99	427250.43	32°10'25.421"N	103°51'21.855"W	0.56	
4035.10	0.510	163.500	4034.70	11.54	14.42	-2.13	647670.49	427249.54	32°10'25.412"N	103°51'21.849"W	0.35	
4129.90	0.670	150.610	4129.50	10.64	13.53	-1.74	647670.88	427248.65	32°10'25.404"N	103°51'21.844"W	0.22	



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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 346H SHL
Area	Eddy County, NM	Well	No. 346H
Field	Poker Lake Unit	Wellbore	No. 346H PWB
Facility	Poker Lake Unit No. 346H		

WELLPATH DATA (143 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [100ft]	Comments
4224.70	0.740	151.340	4224.29	9.53	12.51	-1.17	647671.45	427247.63	32°10'25.393"N	103°51'21.838"W	0.07	
4319.50	0.730	143.880	4319.08	8.35	11.49	-0.52	647672.10	427246.60	32°10'25.383"N	103°51'21.830"W	0.10	
4414.30	0.780	154.160	4413.87	7.15	10.42	0.12	647672.73	427245.54	32°10'25.373"N	103°51'21.823"W	0.15	
4509.10	0.800	149.380	4508.66	5.91	9.27	0.73	647673.35	427244.39	32°10'25.361"N	103°51'21.816"W	0.07	
4603.90	0.720	154.340	4603.46	4.71	8.16	1.33	647673.95	427243.28	32°10'25.350"N	103°51'21.809"W	0.11	
4698.80	0.670	148.260	4698.35	3.61	7.15	1.88	647674.50	427242.27	32°10'25.340"N	103°51'21.803"W	0.09	
4793.60	0.600	154.150	4793.14	2.61	6.24	2.39	647675.00	427241.35	32°10'25.331"N	103°51'21.797"W	0.10	
4888.40	0.600	164.220	4887.94	1.71	5.31	2.74	647675.36	427240.43	32°10'25.322"N	103°51'21.793"W	0.11	
4983.20	0.550	169.020	4982.73	0.91	4.39	2.96	647675.58	427239.50	32°10'25.313"N	103°51'21.790"W	0.07	
5078.00	0.490	175.130	5077.53	0.24	3.54	3.08	647675.70	427238.65	32°10'25.304"N	103°51'21.789"W	0.09	
5172.80	0.400	174.400	5172.33	0.32	2.80	3.15	647675.77	427237.92	32°10'25.297"N	103°51'21.788"W	0.10	
5267.60	0.410	170.480	5267.12	-0.85	2.14	3.24	647675.85	427237.26	32°10'25.291"N	103°51'21.787"W	0.03	
5362.40	0.440	170.310	5361.92	-1.41	1.45	3.35	647675.97	427236.56	32°10'25.284"N	103°51'21.786"W	0.03	
5457.20	0.480	166.290	5456.72	-2.04	0.70	3.51	647676.13	427235.82	32°10'25.276"N	103°51'21.784"W	0.05	
5552.00	0.640	181.630	5551.51	-2.73	-0.21	3.59	647676.21	427234.90	32°10'25.267"N	103°51'21.783"W	0.23	
5646.90	0.760	193.910	5646.41	-3.40	-1.35	3.42	647676.04	427233.76	32°10'25.256"N	103°51'21.785"W	0.20	
5741.70	0.780	194.780	5741.20	-4.03	-2.59	3.11	647675.72	427232.53	32°10'25.244"N	103°51'21.789"W	0.02	
5836.50	0.850	190.150	5835.99	-4.74	-3.90	2.82	647675.43	427231.21	32°10'25.231"N	103°51'21.792"W	0.10	
5931.30	0.970	187.350	5930.78	-5.61	-5.39	2.59	647675.21	427229.73	32°10'25.216"N	103°51'21.795"W	0.13	
6026.10	1.090	191.160	6025.56	-6.58	-7.07	2.31	647674.93	427228.04	32°10'25.199"N	103°51'21.798"W	0.15	
6120.90	1.250	189.570	6120.34	-7.65	-8.98	1.97	647674.58	427226.14	32°10'25.181"N	103°51'21.802"W	0.17	
6215.70	1.230	183.740	6215.12	-8.89	-11.01	1.73	647674.35	427224.11	32°10'25.160"N	103°51'21.805"W	0.13	
6310.50	0.990	193.330	6309.90	-9.96	-12.82	1.47	647674.09	427222.29	32°10'25.143"N	103°51'21.808"W	0.32	
6405.30	0.950	199.340	6404.69	-10.71	-14.36	1.03	647673.64	427220.76	32°10'25.127"N	103°51'21.814"W	0.12	
6500.10	0.890	200.670	6499.47	-11.33	-15.79	0.51	647673.12	427219.33	32°10'25.113"N	103°51'21.820"W	0.07	
6594.90	0.780	200.110	6594.26	-11.88	-17.09	0.02	647672.64	427218.03	32°10'25.100"N	103°51'21.825"W	0.12	
6689.80	0.910	202.160	6689.15	-12.42	-18.39	-0.48	647672.13	427216.73	32°10'25.088"N	103°51'21.831"W	0.14	
6784.60	0.960	203.880	6783.94	-12.97	-19.82	-1.09	647671.53	427215.30	32°10'25.073"N	103°51'21.838"W	0.06	
6879.40	1.040	198.350	6878.73	-13.61	-21.36	-1.68	647670.94	427213.76	32°10'25.058"N	103°51'21.845"W	0.13	
6974.20	1.040	195.220	6973.51	-14.40	-23.01	-2.18	647670.44	427212.11	32°10'25.042"N	103°51'21.851"W	0.06	
7069.00	1.050	190.530	7068.30	-15.29	-24.69	-2.56	647670.06	427210.43	32°10'25.025"N	103°51'21.856"W	0.00	Tie On
7169.00†	1.050	190.530	7168.28	-16.30	-26.49	-2.90	647669.72	427208.63	32°10'25.007"N	103°51'21.860"W	0.00	
7172.50	1.050	190.530	7171.78	-16.34	-26.55	-2.91	647669.71	427208.56	32°10'25.007"N	103°51'21.860"W	0.00	Est KOP
7269.00†	11.024	310.259	7267.71	-7.59	-21.44	-10.14	647662.48	427213.67	32°10'25.058"N	103°51'21.944"W	12.00	
7369.00†	23.005	312.676	7363.16	-21.60	-1.95	-31.88	647640.74	427233.17	32°10'25.252"N	103°51'22.196"W	12.00	
7469.00†	34.999	313.482	7450.46	69.99	31.15	-67.18	647605.44	427266.27	32°10'25.581"N	103°51'22.605"W	12.00	
7569.00†	46.996	313.912	7525.79	135.47	76.41	-114.51	647558.12	427311.53	32°10'26.031"N	103°51'23.153"W	12.00	
7669.00†	58.994	314.200	7585.87	215.18	131.85	-171.78	647500.85	427366.96	32°10'26.582"N	103°51'23.816"W	12.00	
7677.39	60.000	314.221	7590.13	222.41	136.89	-176.96	647495.67	427372.00	32°10'26.632"N	103°51'23.876"W	12.00	60° Curve
7769.00†	60.000	314.221	7635.94	301.75	192.23	-233.82	647438.81	427427.33	32°10'27.182"N	103°51'24.535"W	0.00	
7869.00†	60.000	314.221	7685.94	388.35	252.63	-295.88	647376.75	427487.73	32°10'27.782"N	103°51'25.254"W	0.00	
7877.39	60.000	314.221	7690.13	395.61	257.69	-301.09	647371.55	427492.79	32°10'27.833"N	103°51'25.314"W	0.00	200' Tangent / 7" Casing
7969.00†	71.010	314.221	7728.05	478.85	315.74	-360.74	647311.90	427550.84	32°10'28.410"N	103°51'26.005"W	12.02	
8069.00†	83.029	314.221	7750.48	576.11	383.58	-430.45	647242.20	427618.67	32°10'29.084"N	103°51'26.813"W	12.02	
8127.01	90.000	314.221	7754.00	633.98	423.94	-471.92	647200.73	427659.03	32°10'29.485"N	103°51'27.293"W	12.02	EOC



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REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No. 346H SHL
Area	Eddy County, NM	Well	No. 346H
Field	Poker Lake Unit	Wellbore	No. 346H PWB
Facility	Poker Lake Unit No. 346H		

WELLPATH DATA (143 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8169.00†	90.000	314.221	7754.00	675.97	453.22	-502.01	647170.64	427688.31	32°10'29.776"N	103°51'27.642"W	0.00	
8224.01	90.000	314.221	7754.00	730.98	491.59	-541.43	647131.22	427726.67	32°10'30.158"N	103°51'28.098"W	0.00	Target #1
8269.00†	90.900	314.224	7753.65	775.97	522.97	-573.67	647098.98	427758.05	32°10'30.470"N	103°51'28.472"W	2.00	
8282.27	91.165	314.226	7753.41	789.24	532.22	-583.19	647089.47	427767.30	32°10'30.562"N	103°51'28.582"W	2.00	TL
8369.00†	91.165	314.226	7751.64	875.95	592.70	-645.32	647027.34	427827.78	32°10'31.163"N	103°51'29.302"W	0.00	
8469.00†	91.165	314.226	7749.61	975.92	662.43	-716.97	646955.70	427897.51	32°10'31.856"N	103°51'30.132"W	0.00	
8569.00†	91.165	314.226	7747.58	1075.90	732.17	-788.61	646884.06	427967.24	32°10'32.549"N	103°51'30.962"W	0.00	
8669.00†	91.165	314.226	7745.54	1175.88	801.90	-860.26	646812.42	428036.97	32°10'33.242"N	103°51'31.792"W	0.00	
8769.00†	91.165	314.226	7743.51	1275.86	871.64	-931.90	646740.78	428106.69	32°10'33.936"N	103°51'32.622"W	0.00	
8869.00†	91.165	314.226	7741.48	1375.84	941.37	-1003.55	646669.14	428176.42	32°10'34.629"N	103°51'33.452"W	0.00	
8969.00†	91.165	314.226	7739.44	1475.82	1011.10	-1075.19	646597.50	428246.15	32°10'35.322"N	103°51'34.282"W	0.00	
9069.00†	91.165	314.226	7737.41	1575.79	1080.84	-1146.84	646525.86	428315.88	32°10'36.015"N	103°51'35.112"W	0.00	
9169.00†	91.165	314.226	7735.37	1675.77	1150.57	-1218.48	646454.22	428385.61	32°10'36.708"N	103°51'35.942"W	0.00	
9269.00†	91.165	314.226	7733.34	1775.75	1220.31	-1290.13	646382.58	428455.34	32°10'37.401"N	103°51'36.772"W	0.00	
9369.00†	91.165	314.226	7731.31	1875.73	1290.04	-1361.77	646310.94	428525.07	32°10'38.095"N	103°51'37.602"W	0.00	
9469.00†	91.165	314.226	7729.27	1975.71	1359.78	-1433.42	646239.30	428594.80	32°10'38.788"N	103°51'38.432"W	0.00	
9569.00†	91.165	314.226	7727.24	2075.68	1429.51	-1505.06	646167.66	428664.53	32°10'39.481"N	103°51'39.261"W	0.00	
9669.00†	91.165	314.226	7725.21	2175.66	1499.24	-1576.71	646096.02	428734.26	32°10'40.174"N	103°51'40.091"W	0.00	
9769.00†	91.165	314.226	7723.17	2275.64	1568.98	-1648.35	646024.38	428803.99	32°10'40.867"N	103°51'40.921"W	0.00	
9869.00†	91.165	314.226	7721.14	2375.62	1638.71	-1720.00	645952.74	428873.72	32°10'41.560"N	103°51'41.751"W	0.00	
9969.00†	91.165	314.226	7719.10	2475.60	1708.45	-1791.64	645881.10	428943.45	32°10'42.254"N	103°51'42.581"W	0.00	
10069.00†	91.165	314.226	7717.07	2575.58	1778.18	-1863.29	645809.46	429013.18	32°10'42.947"N	103°51'43.411"W	0.00	
10169.00†	91.165	314.226	7715.04	2675.55	1847.91	-1934.93	645737.82	429082.90	32°10'43.640"N	103°51'44.241"W	0.00	
10269.00†	91.165	314.226	7713.00	2775.53	1917.65	-2006.58	645666.17	429152.63	32°10'44.333"N	103°51'45.071"W	0.00	
10369.00†	91.165	314.226	7710.97	2875.51	1987.38	-2078.22	645594.53	429222.36	32°10'45.026"N	103°51'45.901"W	0.00	
10469.00†	91.165	314.226	7708.94	2975.49	2057.12	-2149.87	645522.89	429292.09	32°10'45.719"N	103°51'46.732"W	0.00	
10569.00†	91.165	314.226	7706.90	3075.47	2126.85	-2221.51	645451.25	429361.82	32°10'46.412"N	103°51'47.562"W	0.00	
10669.00†	91.165	314.226	7704.87	3175.45	2196.58	-2293.16	645379.61	429431.55	32°10'47.106"N	103°51'48.392"W	0.00	
10769.00†	91.165	314.226	7702.83	3275.42	2266.32	-2364.80	645307.97	429501.28	32°10'47.799"N	103°51'49.222"W	0.00	
10869.00†	91.165	314.226	7700.80	3375.40	2336.05	-2436.45	645236.33	429571.01	32°10'48.492"N	103°51'50.052"W	0.00	
10969.00†	91.165	314.226	7698.77	3475.38	2405.79	-2508.09	645164.69	429640.74	32°10'49.185"N	103°51'50.882"W	0.00	
11006.71	91.165	314.226	7698.00	3513.08	2432.08	-2535.11	645137.68	429667.03	32°10'49.446"N	103°51'51.195"W	0.00	Target #2
11040.81	90.483	314.220	7697.51	3547.17	2455.86	-2559.54	645113.25	429690.81	32°10'49.683"N	103°51'51.478"W	2.00	TL
11069.00†	90.483	314.220	7697.27	3575.37	2475.52	-2579.75	645093.04	429710.47	32°10'49.878"N	103°51'51.712"W	0.00	
11169.00†	90.483	314.220	7696.43	3675.36	2545.26	-2651.41	645021.38	429780.21	32°10'50.571"N	103°51'52.542"W	0.00	
11269.00†	90.483	314.220	7695.58	3775.36	2615.00	-2723.08	644949.72	429849.94	32°10'51.265"N	103°51'53.372"W	0.00	
11369.00†	90.483	314.220	7694.74	3875.35	2684.74	-2794.74	644878.07	429919.67	32°10'51.958"N	103°51'54.203"W	0.00	
11469.00†	90.483	314.220	7693.90	3975.35	2754.48	-2866.41	644806.41	429989.41	32°10'52.651"N	103°51'55.033"W	0.00	
11569.00†	90.483	314.220	7693.05	4075.34	2824.22	-2938.07	644734.75	430059.14	32°10'53.344"N	103°51'55.863"W	0.00	
11669.00†	90.483	314.220	7692.21	4175.34	2893.96	-3009.73	644663.09	430128.88	32°10'54.037"N	103°51'56.693"W	0.00	
11769.00†	90.483	314.220	7691.37	4275.33	2963.70	-3081.40	644591.43	430198.61	32°10'54.730"N	103°51'57.524"W	0.00	
11869.00†	90.483	314.220	7690.52	4375.33	3033.43	-3153.06	644519.77	430268.35	32°10'55.424"N	103°51'58.354"W	0.00	
11969.00†	90.483	314.220	7689.68	4475.32	3103.17	-3224.73	644448.11	430338.08	32°10'56.117"N	103°51'59.184"W	0.00	
12069.00†	90.483	314.220	7688.84	4575.32	3172.91	-3296.39	644376.45	430407.81	32°10'56.810"N	103°52'00.015"W	0.00	
12169.00†	90.483	314.220	7687.99	4675.31	3242.65	-3368.05	644304.79	430477.55	32°10'57.503"N	103°52'00.845"W	0.00	



Planned Wellpath Report

Rev-G.0
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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 346H SHL
Area	Eddy County, NM	Well	No. 346H
Field	Poker Lake Unit	Wellbore	No. 346H PWB
Facility	Poker Lake Unit No. 346H		

WELLPATH DATA (143 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12269.00†	90.483	314.220	7687.15	4775.31	3312.39	-3439.72	644233.13	430547.28	32°10'58.196"N	103°52'01.675"W	0.00	
12369.00†	90.483	314.220	7686.31	4875.31	3382.13	-3511.38	644161.47	430617.02	32°10'58.890"N	103°52'02.505"W	0.00	
12469.00†	90.483	314.220	7685.46	4975.30	3451.87	-3583.05	644089.81	430686.75	32°10'59.583"N	103°52'03.336"W	0.00	
12569.00†	90.483	314.220	7684.62	5075.30	3521.61	-3654.71	644018.15	430756.49	32°11'00.276"N	103°52'04.166"W	0.00	
12669.00†	90.483	314.220	7683.77	5175.29	3591.35	-3726.37	643946.50	430826.22	32°11'00.969"N	103°52'04.996"W	0.00	
12769.00†	90.483	314.220	7682.93	5275.29	3661.09	-3798.04	643874.84	430895.95	32°11'01.662"N	103°52'05.827"W	0.00	
12869.00†	90.483	314.220	7682.09	5375.28	3730.83	-3869.70	643803.18	430965.69	32°11'02.355"N	103°52'06.657"W	0.00	
12879.34	90.483	314.220	7682.00 ²	5385.63	3738.04	-3877.12	643795.76	430972.90	32°11'02.427"N	103°52'06.743"W	0.00	No.346H PBHL

HOLE & CASING SECTIONS - Ref Wellbore: No. 346H PWB Ref Wellpath: Rev-G.0

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
7in Casing	19.00	8215.27	8196.27	19.00	7754.00	0.00	0.00	485.49	-535.17

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
2) No. 346H PBHL (Rev-0)	12879.34	7682.00	3738.04	-3877.12	643795.77	430972.90	32°11'02.427"N	103°52'06.743"W	point
1) No.346H Target #2	11006.71	7698.00	2432.08	-2535.11	645137.68	429667.03	32°10'49.446"N	103°51'51.195"W	point
No. 346H Target #1	7754.00	507.37	-526.24	647146.41	427742.46	32°10'30.313"N	103°51'27.921"W	point	

SURVEY PROGRAM - Ref Wellbore: No. 346H PWB Ref Wellpath: Rev-G.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	7069.00	Generic gyro - northseeking (Standard)		No.346H AWB
7069.00	12879.34	NaviTrak (Standard)		No. 346H PWB



GE Oil & Gas

Compensated
Neutron Log
W/ Gamma Ray / CCLCompany Bopco, L.P.
Well Poker Lake Unit #346
Field Poker Lake, New Mexico (Delaware)
County Eddy Co.
State New Mexico

Company Bopco, L.P.

Well Poker Lake Unit #346

Field Poker Lake, New Mexico (Delaware)

County Eddy Co. State New Mexico

Location:

API #:

Other Services

2425' FSL & 1130' FWL
Section 35, T24S-230E

Gamma Ray

SEC

TWP

RGE

Elevation

Permanent Datum

Ground Level

Elevation

3391.5'

Log Measured From

Kelly Bushing APD 18'

K.B. 3373.5'

D.F. 3372.5'

G.L. 3391.5

Drilling Measured From

Kelly Bushing

Date	3-July-2012
Run Number	One
Depth Driller	12,921'
Depth Logger	7140'
Bottom Logged Interval	7130'
Top Log Interval	Surface
Open Hole Size	N/A
Type Fluid	Fresh Water
Density / Viscosity	N/A
Max. Recorded Temp.	N/A
Estimated Cement Top	N/A
Time Well Ready	8:00
Time Logger on Bottom	9:45
Equipment Number	84109
Location	Midland, Tx
Recorded By	J. Esquibel
Witnessed By	Jose Perez

Borehole Record

Tubing Record

Run Number	Bit	From	To	Size	Weight	From	To

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String				
Prot. String				
Production String				
Liner				
	DV Tool: 5027'-5030'			

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BOPCO, L.P.

Location: Eddy County, NM
Field: Poker Lake Unit
Facility: Poker Lake Unit No. 346H

Slot: No. 346H SHL
Well: No. 346H
Wellbore: No. 346H PWB



Well Profile Data

Design Comment	MD (ft)	Inc. (°)	Az. (°)	TVD (ft)	Local N. (ft)	Local E. (ft)	DLS (ft/100ft)	VS (ft)
Tie On	7069.00	1.05	190.530	7068.30	-24.89	-2.56	0.00	-15.29
Est KOP	7172.50	1.05	190.530	7171.78	-26.55	-2.51	0.00	-16.34
60° Curve	7677.39	60.00	314.221	7590.13	136.89	-79.96	12.00	222.41
200' Tangent / 7" Casing	7877.39	60.00	314.221	7630.13	257.69	-301.09	0.00	395.61
EOC	8127.01	90.00	314.221	7754.00	423.94	471.92	12.02	633.98
Target #1	8224.01	90.00	314.221	7754.00	491.59	-541.42	0.00	730.98
TL	8282.27	91.165	314.226	7753.41	532.22	-583.19	2.00	789.24
Target #2	11006.71	91.165	314.226	7698.00	2432.08	-2535.11	0.00	3513.08
TL	11040.81	90.483	314.220	7697.51	2455.86	-2559.54	2.00	3547.17
No. 346H PBHL	12879.34	90.483	314.220	7682.00	3738.04	-3877.12	0.00	5385.63

Plot reference wellpath is Rev-C.

True vertical depths are referenced to Rig on No. 346H SHL (KB).

Grid System: NAD27 / TM New Mexico SP, Eastern Zone (300°), US feet

Measured depths are referenced to Rig on No. 346H SHL (KB).

North Reference: Grid north

Rig on No. 346H SHL (KB) to Mean Sea Level: 3292 feet

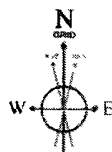
Scale: True distance

Mean Sea Level to Mud Line (At Slot, No. 346H SHL): 3379 feet

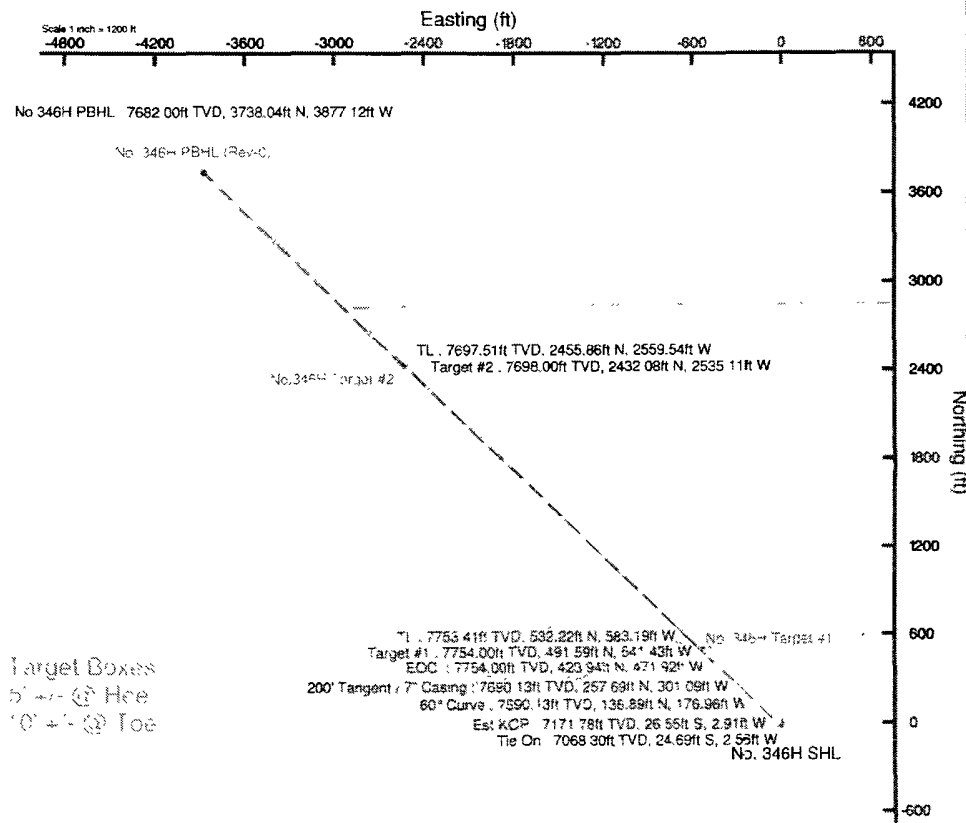
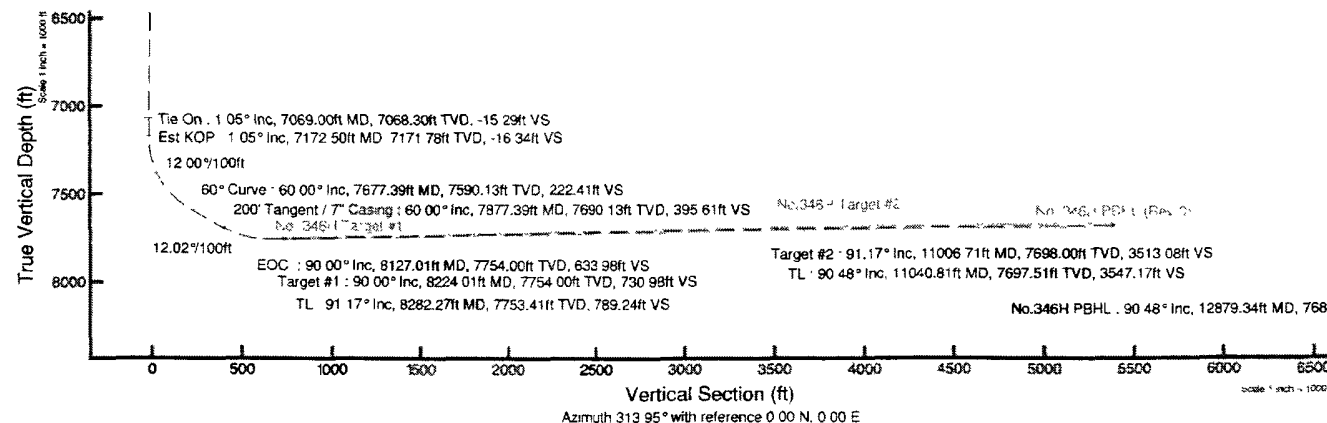
Depths are in feet

Coordinates are in feet referenced to Slot

Created by: gentry on 5/22/2014



BGGM (1945 to 2012) Dip: 60.03° Field: 48561.41°
Magnetic North is 7.80 degrees East of True North (at 4/21/2011)
Grid North is 0.25 degrees East of True North
To correct azimuth from True to Grid subtract 0.25 degrees
To correct azimuth from Magnetic to Grid add 7.55 degrees
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.55 = 97.55



Rev-G.0