



RECEIVED
JAN 08 2013
NMOCD ARTESIA

BOPCO, L.P.

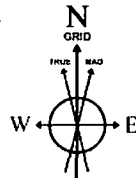
Location: Eddy County, NM
Field: Poker Lake Unit
Facility: Poker Lake Unit No. 420H

Slot: No.420H SHL
Well: No.420H
Wellbore: No.420H PWB



Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	8186.00	59.800	316.700	8009.81	278.45	-297.02	0.00	406.81
Proj to Bit	8240.00	59.800	316.700	8036.97	312.42	-329.02	0.00	453.47
EOC / Target #1	8601.27	90.000	315.539	8130.00	560.74	-568.18	8.37	798.21
TL	8635.41	90.683	315.539	8129.80	585.11	-592.10	2.00	832.36
Target #2	11303.25	90.683	315.539	8098.00	2489.09	-2460.58	0.00	3500.00
TL	11319.89	90.350	315.542	8097.85	2500.96	-2472.23	2.00	3516.63
No.420H PBHL	13749.74	90.350	315.542	8083.00	4235.27	-4174.03	0.00	5946.43

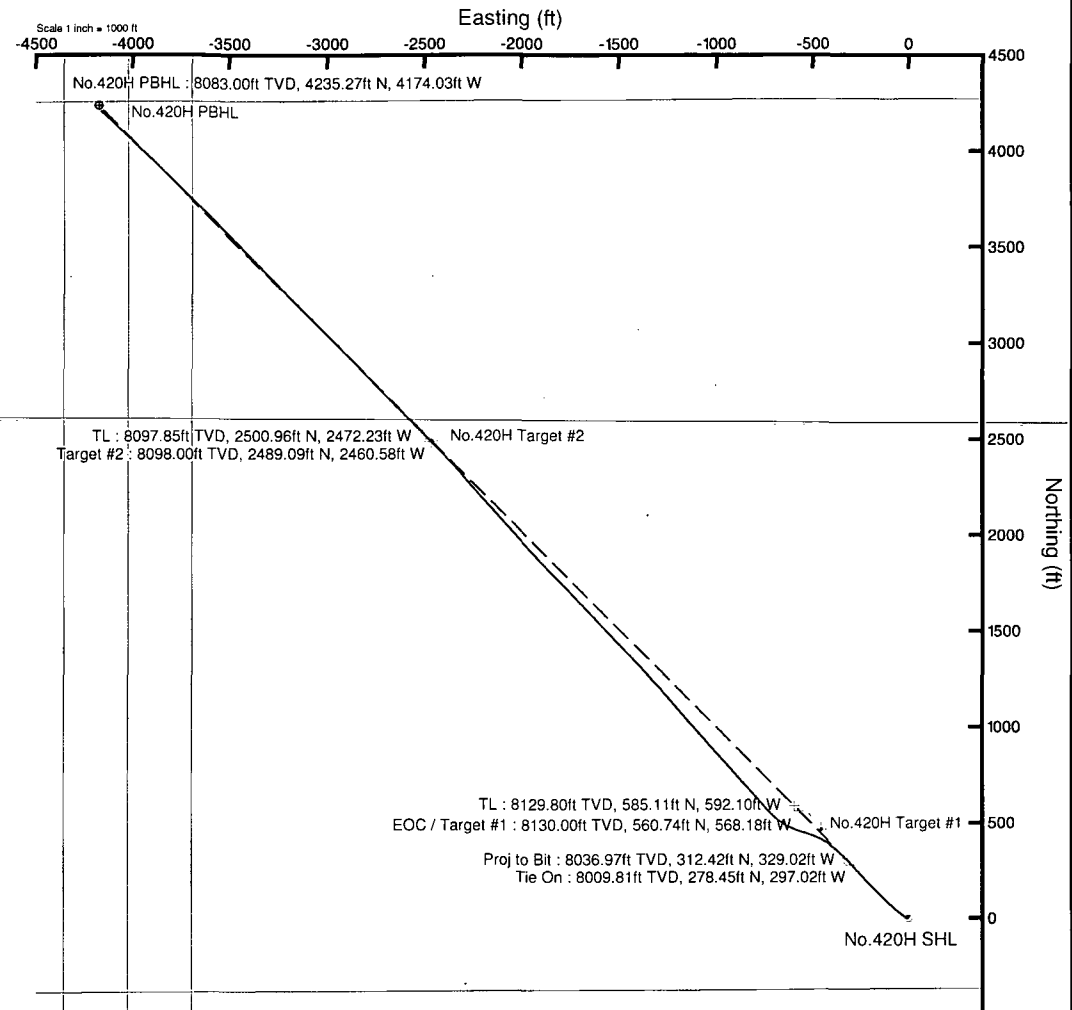
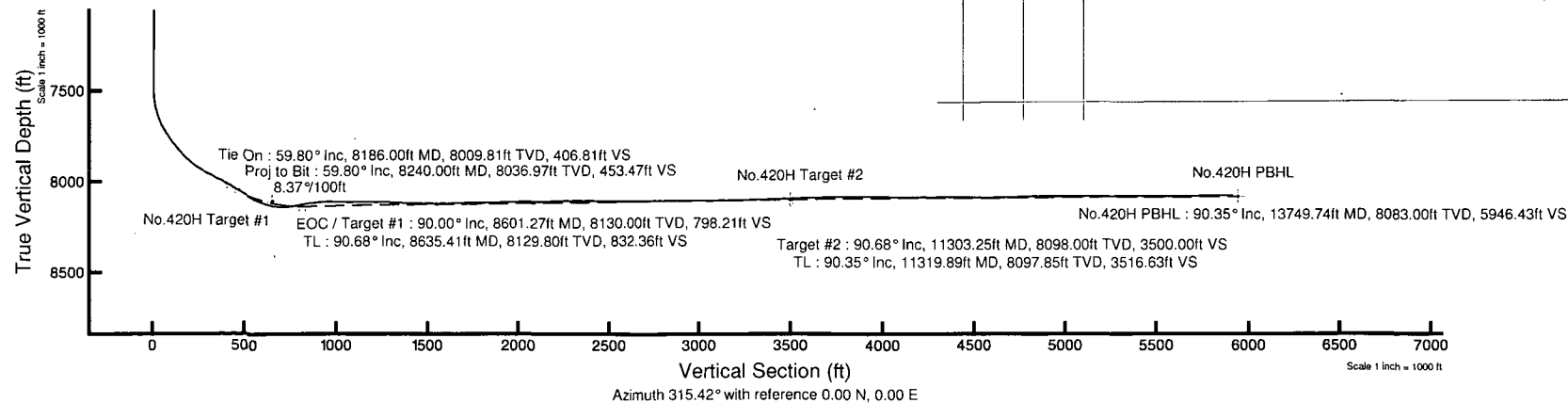
Plot reference wellpath is Rev-G.0	
True vertical depths are referenced to Rig on No.420H SHL (KB)	Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No.420H SHL (KB)	North Reference: Grid north
Rig on No.420H SHL (KB) to Mean Sea Level: 3358 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: No.420H SHL): -3339 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gentry on 08/23/2012



BGGM (1945.0 to 2014.0) Dip: 59.96° Field: 48393.5 nT
Magnetic North is 7.63 degrees East of True North (at 08/06/2012)
Grid North is 0.29 degrees East of True North

To correct azimuth from True to Grid subtract 0.29 degrees
To correct azimuth from Magnetic to Grid add 7.34 degrees

For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.34 = 97.34





Actual Wellpath Report

No.420H AWP

Page 1 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.420H SHL
Area	Eddy County, NM	Well	No.420H
Field	Poker Lake Unit	Wellbore	No.420H AWB
Facility	Poker Lake Unit No. 420H		

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	Gentbry
Scale	0.999943	Report Generated	09/06/2012 at 7:51:23 AM
Convergence at slot	0.29° East	Database/Source file	WA Midland/No.420H_AWB.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	671873.45	399009.99	32°05'44.803"N	103°46'41.950"W
Facility Reference Pt			671873.45	399009.99	32°05'44.803"N	103°46'41.950"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.420H SHL (KB) to Facility Vertical Datum	19.00ft
Horizontal Reference Pt	Slot	Rig on No.420H SHL (KB) to Mean Sea Level	3358.00ft
Vertical Reference Pt	Rig on No.420H SHL (KB)	Rig on No.420H SHL (KB) to Mud Line at Slot (No.420H SHL)	19.00ft
MD Reference Pt	Rig on No.420H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	315.42°



Actual Wellpath Report

No.420H AWP

Page 2 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.420H SHL
Area	Eddy County, NM	Well	No.420H
Field	Poker Lake Unit	Wellbore	No.420H AWB
Facility	Poker Lake Unit No. 420H		

WELLPATH DATA (182 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
0.00†	0.000	5.360	0.00	0.00	0.00	0.00	671873.45	399009.99	32°05'44.803"N	103°46'41.950"W	0.00	
19.00	0.000	5.360	19.00	0.00	0.00	0.00	671873.45	399009.99	32°05'44.803"N	103°46'41.950"W	0.00	
100.00	0.220	5.360	100.00	0.10	0.15	0.01	671873.46	399010.14	32°05'44.804"N	103°46'41.950"W	0.27	
200.00	0.250	347.770	200.00	0.41	0.56	-0.01	671873.44	399010.55	32°05'44.808"N	103°46'41.950"W	0.08	
300.00	0.320	359.690	300.00	0.79	1.05	-0.06	671873.39	399011.04	32°05'44.813"N	103°46'41.951"W	0.09	
400.00	0.270	8.090	400.00	1.14	1.56	-0.03	671873.42	399011.55	32°05'44.818"N	103°46'41.950"W	0.07	
500.00	0.330	3.230	500.00	1.47	2.08	0.02	671873.47	399012.07	32°05'44.823"N	103°46'41.950"W	0.07	
520.90	0.510	2.660	520.89	1.57	2.24	0.03	671873.48	399012.23	32°05'44.825"N	103°46'41.950"W	0.86	
615.30	0.520	355.640	615.29	2.19	3.08	0.01	671873.46	399013.07	32°05'44.833"N	103°46'41.950"W	0.07	
709.70	0.370	344.790	709.69	2.78	3.81	-0.10	671873.35	399013.80	32°05'44.840"N	103°46'41.951"W	0.18	
804.20	0.230	329.170	804.19	3.23	4.26	-0.28	671873.17	399014.25	32°05'44.845"N	103°46'41.953"W	0.17	
898.60	0.230	324.690	898.59	3.60	4.58	-0.48	671872.97	399014.57	32°05'44.848"N	103°46'41.955"W	0.02	
993.10	0.340	342.330	993.08	4.04	5.00	-0.68	671872.77	399014.99	32°05'44.852"N	103°46'41.958"W	0.15	
1087.50	0.230	40.380	1087.48	4.30	5.41	-0.64	671872.81	399015.40	32°05'44.856"N	103°46'41.957"W	0.31	
1181.90	0.530	104.830	1181.88	3.95	5.45	-0.09	671873.36	399015.44	32°05'44.857"N	103°46'41.951"W	0.51	
1276.40	0.390	126.900	1276.38	3.25	5.14	0.59	671874.04	399015.13	32°05'44.853"N	103°46'41.943"W	0.24	
1370.80	0.320	145.840	1370.78	2.67	4.73	0.99	671874.44	399014.72	32°05'44.849"N	103°46'41.938"W	0.14	
1465.30	0.240	162.300	1465.28	2.24	4.32	1.20	671874.65	399014.31	32°05'44.845"N	103°46'41.936"W	0.12	
1559.70	0.180	175.540	1559.68	1.95	3.99	1.27	671874.72	399013.98	32°05'44.842"N	103°46'41.935"W	0.08	
1654.10	0.090	202.540	1654.07	1.81	3.77	1.25	671874.70	399013.76	32°05'44.840"N	103°46'41.935"W	0.11	
1748.60	0.070	243.990	1748.57	1.80	3.68	1.17	671874.62	399013.67	32°05'44.839"N	103°46'41.936"W	0.06	
1843.00	0.050	290.580	1842.97	1.85	3.67	1.08	671874.53	399013.66	32°05'44.839"N	103°46'41.937"W	0.05	
1937.50	0.090	23.160	1937.47	1.92	3.75	1.07	671874.52	399013.74	32°05'44.840"N	103°46'41.937"W	0.11	
2031.90	0.140	36.020	2031.87	1.96	3.91	1.17	671874.62	399013.90	32°05'44.841"N	103°46'41.936"W	0.06	
2126.30	0.040	45.370	2126.27	1.98	4.03	1.26	671874.71	399014.02	32°05'44.842"N	103°46'41.935"W	0.11	
2220.80	0.020	216.730	2220.77	1.98	4.04	1.28	671874.73	399014.03	32°05'44.843"N	103°46'41.935"W	0.06	
2315.20	0.150	238.900	2315.17	2.01	3.96	1.16	671874.61	399013.95	32°05'44.842"N	103°46'41.936"W	0.14	
2409.70	0.220	295.680	2409.67	2.21	3.97	0.89	671874.34	399013.96	32°05'44.842"N	103°46'41.939"W	0.20	
2504.10	0.210	254.910	2504.07	2.46	4.01	0.56	671874.01	399014.00	32°05'44.842"N	103°46'41.943"W	0.16	
2598.50	0.180	303.380	2598.47	2.69	4.04	0.27	671873.72	399014.03	32°05'44.843"N	103°46'41.947"W	0.17	
2693.00	0.280	325.990	2692.97	3.06	4.32	0.02	671873.47	399014.31	32°05'44.845"N	103°46'41.950"W	0.14	
2787.40	0.320	329.770	2787.37	3.55	4.74	-0.25	671873.20	399014.73	32°05'44.850"N	103°46'41.953"W	0.05	
2881.90	0.340	343.090	2881.87	4.05	5.23	-0.46	671872.99	399015.22	32°05'44.854"N	103°46'41.955"W	0.08	
2976.30	0.330	350.740	2976.27	4.52	5.77	-0.59	671872.86	399015.76	32°05'44.860"N	103°46'41.956"W	0.05	
3070.70	0.370	346.180	3070.67	5.00	6.33	-0.70	671872.75	399016.32	32°05'44.865"N	103°46'41.958"W	0.05	
3165.20	0.380	8.330	3165.16	5.46	6.94	-0.73	671872.72	399016.93	32°05'44.871"N	103°46'41.958"W	0.15	
3259.60	0.430	14.680	3259.56	5.82	7.59	-0.59	671872.86	399017.58	32°05'44.878"N	103°46'41.956"W	0.07	
3354.10	0.420	21.250	3354.06	6.15	8.26	-0.38	671873.07	399018.25	32°05'44.884"N	103°46'41.954"W	0.05	
3448.50	0.400	23.330	3448.46	6.41	8.88	-0.12	671873.33	399018.87	32°05'44.891"N	103°46'41.951"W	0.03	
3542.90	0.360	36.480	3542.85	6.58	9.42	-0.18	671873.63	399019.41	32°05'44.896"N	103°46'41.947"W	0.10	
3637.40	0.340	57.860	3637.35	6.57	9.81	0.60	671874.05	399019.80	32°05'44.900"N	103°46'41.942"W	0.14	
3731.80	0.380	84.390	3731.75	6.31	9.99	1.15	671874.60	399019.98	32°05'44.901"N	103°46'41.936"W	0.18	
3826.30	0.470	94.410	3826.25	5.82	9.99	1.84	671875.29	399019.98	32°05'44.901"N	103°46'41.928"W	0.12	
3920.70	0.620	113.410	3920.64	5.06	9.76	2.70	671876.15	399019.75	32°05'44.899"N	103°46'41.918"W	0.25	
4015.10	0.680	106.210	4015.04	4.09	9.40	3.71	671877.16	399019.39	32°05'44.895"N	103°46'41.906"W	0.11	



Actual Wellpath Report

No.420H AWP

Page 3 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.420H SHL
Area	Eddy County, NM	Well	No.420H
Field	Poker Lake Unit	Wellbore	No.420H AWB
Facility	Poker Lake Unit No. 420H		

WELLPATH DATA (182 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
4109.60	0.690	120.730	4109.53	3.05	8.95	4.73	671878.18	399018.94	32°05'44.891"N	103°46'41.894"W	0.18	
4204.00	0.580	119.880	4203.93	2.04	8.42	5.64	671879.09	399018.41	32°05'44.886"N	103°46'41.884"W	0.12	
4298.50	0.410	134.130	4298.42	1.25	7.95	6.29	671879.74	399017.94	32°05'44.881"N	103°46'41.876"W	0.22	
4392.90	0.370	108.100	4392.82	0.64	7.62	6.83	671880.28	399017.61	32°05'44.878"N	103°46'41.870"W	0.19	
4487.30	0.180	89.040	4487.22	0.26	7.53	7.26	671880.71	399017.52	32°05'44.877"N	103°46'41.865"W	0.22	
4581.80	0.020	102.360	4581.72	0.15	7.53	7.43	671880.88	399017.52	32°05'44.877"N	103°46'41.863"W	0.17	
4676.20	0.060	228.240	4676.12	0.14	7.49	7.41	671880.86	399017.48	32°05'44.876"N	103°46'41.863"W	0.08	
4770.70	0.130	260.810	4770.62	0.20	7.44	7.26	671880.71	399017.43	32°05'44.876"N	103°46'41.865"W	0.09	
4865.10	0.070	276.570	4865.02	0.31	7.43	7.10	671880.55	399017.42	32°05'44.876"N	103°46'41.867"W	0.07	
4959.50	0.050	324.560	4959.42	0.39	7.47	7.02	671880.47	399017.46	32°05'44.876"N	103°46'41.868"W	0.06	
5054.00	0.100	319.650	5053.92	0.52	7.57	6.94	671880.39	399017.56	32°05'44.877"N	103°46'41.869"W	0.05	
5148.40	0.200	280.300	5148.32	0.73	7.66	6.73	671880.18	399017.65	32°05'44.878"N	103°46'41.871"W	0.15	
5242.90	0.360	262.980	5242.82	1.05	7.65	6.27	671879.72	399017.64	32°05'44.878"N	103°46'41.877"W	0.19	
5337.30	0.400	268.660	5337.21	1.46	7.61	5.65	671879.10	399017.60	32°05'44.878"N	103°46'41.884"W	0.06	
5431.70	0.480	272.190	5431.61	1.97	7.62	4.92	671878.37	399017.61	32°05'44.878"N	103°46'41.892"W	0.09	
5526.20	0.410	285.130	5526.11	2.55	7.72	4.20	671877.65	399017.71	32°05'44.879"N	103°46'41.901"W	0.13	
5620.60	0.430	274.160	5620.51	3.11	7.83	3.52	671876.97	399017.82	32°05'44.880"N	103°46'41.909"W	0.09	
5715.10	0.530	274.710	5715.00	3.71	7.90	2.73	671876.18	399017.88	32°05'44.881"N	103°46'41.918"W	0.11	
5809.50	0.650	272.310	5809.40	4.43	7.95	1.76	671875.21	399017.94	32°05'44.881"N	103°46'41.929"W	0.13	
5903.90	0.640	261.130	5903.79	5.13	7.89	0.71	671874.16	399017.88	32°05'44.881"N	103°46'41.941"W	0.13	
5998.40	0.610	262.390	5998.29	5.74	7.74	-0.31	671873.14	399017.73	32°05'44.879"N	103°46'41.953"W	0.03	
6092.80	0.530	265.510	6092.68	6.32	7.64	-1.25	671872.20	399017.63	32°05'44.878"N	103°46'41.964"W	0.09	
6187.30	0.480	262.060	6187.18	6.84	7.56	-2.08	671871.37	399017.54	32°05'44.878"N	103°46'41.974"W	0.06	
6281.70	0.340	246.020	6281.58	7.17	7.39	-2.72	671870.73	399017.38	32°05'44.876"N	103°46'41.981"W	0.19	
6376.10	0.380	237.300	6375.97	7.34	7.10	-3.24	671870.21	399017.09	32°05'44.873"N	103°46'41.987"W	0.07	
6470.60	0.400	227.720	6470.47	7.41	6.71	-3.75	671869.70	399016.70	32°05'44.869"N	103°46'41.993"W	0.07	
6565.00	0.340	172.550	6564.87	7.20	6.21	-3.96	671869.49	399016.20	32°05'44.864"N	103°46'41.996"W	0.37	
6659.50	0.540	169.810	6659.37	6.61	5.50	-3.84	671869.61	399015.49	32°05'44.857"N	103°46'41.994"W	0.21	
6753.90	0.540	205.910	6753.76	6.10	4.66	-3.96	671869.49	399014.65	32°05'44.849"N	103°46'41.996"W	0.35	
6848.30	0.500	223.110	6848.16	5.93	3.96	-4.43	671869.02	399013.95	32°05'44.842"N	103°46'42.001"W	0.17	
6942.80	0.580	226.740	6942.66	5.93	3.33	-5.06	671868.39	399013.32	32°05'44.836"N	103°46'42.009"W	0.09	
7037.20	0.740	226.870	7037.05	5.95	2.59	-5.86	671867.59	399012.58	32°05'44.829"N	103°46'42.018"W	0.17	
7131.70	0.640	214.190	7131.54	5.87	1.73	-6.60	671866.85	399011.72	32°05'44.820"N	103°46'42.027"W	0.19	
7226.10	0.500	190.350	7225.94	5.53	0.89	-6.97	671866.48	399010.88	32°05'44.812"N	103°46'42.031"W	0.29	
7320.50	0.640	176.860	7320.33	4.89	0.04	-7.01	671866.44	399009.95	32°05'44.803"N	103°46'42.032"W	0.20	
7384.40	0.740	176.500	7384.23	4.32	-0.81	-6.97	671866.48	399009.18	32°05'44.795"N	103°46'42.031"W	0.16	
7443.00	0.700	178.000	7442.82	3.77	-1.55	-6.93	671866.52	399008.44	32°05'44.788"N	103°46'42.031"W	0.08	
7474.00	0.700	248.400	7473.82	3.70	-1.80	-7.10	671866.35	399008.19	32°05'44.785"N	103°46'42.033"W	2.60	
7504.00	2.900	298.900	7503.81	4.50	-1.50	-7.94	671865.51	399008.49	32°05'44.788"N	103°46'42.042"W	8.38	
7535.00	5.900	305.900	7534.71	6.82	-0.19	-9.92	671863.53	399009.80	32°05'44.801"N	103°46'42.065"W	9.81	
7566.00	9.400	306.900	7565.43	10.90	2.26	-13.23	671860.22	399012.25	32°05'44.826"N	103°46'42.104"W	11.30	
7596.00	13.100	306.100	7594.85	16.68	5.74	-17.94	671855.51	399015.73	32°05'44.860"N	103°46'42.158"W	12.34	
7626.00	17.200	306.900	7623.80	24.42	10.41	-24.24	671849.22	399020.40	32°05'44.907"N	103°46'42.231"W	13.68	
7658.00	21.900	307.700	7653.95	35.02	16.90	-32.75	671840.71	399026.89	32°05'44.972"N	103°46'42.330"W	14.71	
7690.00	26.300	308.300	7683.15	47.98	24.95	-43.04	671830.42	399034.94	32°05'45.052"N	103°46'42.449"W	13.77	



Actual Wellpath Report

No.420H AWP

Page 4 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.420H SHL
Area	Eddy County, NM	Well	No.420H
Field	Poker Lake Unit	Wellbore	No.420H AWB
Facility	Poker Lake Unit No. 420H		

WELLPATH DATA (182 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
7720.00	30.000	309.200	7709.60	62.03	33.81	-54.07	671819.38	399043.80	32°05'45.140"N	103°46'42.576"W	12.41	
7752.00	32.600	310.600	7736.94	78.58	44.48	-66.82	671806.64	399054.47	32°05'45.246"N	103°46'42.724"W	8.44	
7783.00	34.800	312.400	7762.73	95.74	55.88	-79.69	671793.76	399065.87	32°05'45.360"N	103°46'42.873"W	7.79	
7815.00	36.900	313.500	7788.66	114.46	68.65	-93.40	671780.05	399078.64	32°05'45.487"N	103°46'43.032"W	6.86	
7846.00	38.500	314.200	7813.19	133.41	81.79	-107.07	671766.38	399091.77	32°05'45.617"N	103°46'43.190"W	5.34	
7878.00	41.100	314.800	7837.78	153.89	96.14	-121.68	671751.78	399106.13	32°05'45.760"N	103°46'43.359"W	8.21	
7908.00	44.500	314.700	7859.78	174.27	110.49	-136.15	671737.30	399120.47	32°05'45.903"N	103°46'43.526"W	11.34	
7940.00	48.900	314.100	7881.72	197.55	126.78	-152.79	671720.67	399136.76	32°05'46.065"N	103°46'43.718"W	13.82	
7971.00	52.400	314.700	7901.38	221.51	143.55	-169.91	671703.55	399153.53	32°05'46.232"N	103°46'43.916"W	11.39	
8002.00	55.800	315.900	7919.55	246.62	161.40	-187.57	671685.89	399171.38	32°05'46.409"N	103°46'44.121"W	11.41	
8033.00	58.900	316.700	7936.28	272.71	180.27	-205.60	671667.86	399190.25	32°05'46.597"N	103°46'44.329"W	10.23	
8064.00	61.400	317.100	7951.70	299.59	199.90	-223.97	671649.50	399209.88	32°05'46.792"N	103°46'44.541"W	8.14	
8095.00	62.000	317.100	7966.40	326.87	219.90	-242.55	671630.92	399229.87	32°05'46.991"N	103°46'44.756"W	1.94	
8122.00	62.000	317.300	7979.08	350.70	237.39	-258.74	671614.72	399247.36	32°05'47.165"N	103°46'44.943"W	0.65	
8157.00	61.600	317.000	7995.62	381.53	260.00	-279.72	671593.74	399269.98	32°05'47.390"N	103°46'45.186"W	1.37	
8186.00	59.800	316.700	8009.81	406.81	278.45	-297.02	671576.45	399288.43	32°05'47.573"N	103°46'45.386"W	6.27	
8266.00	58.500	314.400	8050.83	475.48	327.48	-345.10	671528.37	399337.45	32°05'48.061"N	103°46'45.942"W	2.95	
8298.00	58.900	313.000	8067.46	502.81	346.37	-364.87	671508.60	399356.34	32°05'48.249"N	103°46'46.171"W	3.94	
8329.00	60.800	310.000	8083.03	529.55	364.12	-384.95	671488.53	399374.09	32°05'48.425"N	103°46'46.403"W	10.37	
8361.00	65.300	305.900	8097.54	557.82	381.64	-407.44	671466.04	399391.61	32°05'48.600"N	103°46'46.663"W	18.11	
8393.00	69.100	300.700	8109.94	586.64	397.81	-432.09	671441.39	399407.78	32°05'48.761"N	103°46'46.949"W	19.11	
8425.00	73.600	297.100	8120.17	615.69	412.45	-458.63	671414.85	399422.41	32°05'48.907"N	103°46'47.256"W	17.64	
8457.00	78.600	292.500	8127.86	644.74	425.45	-486.81	671386.67	399435.42	32°05'49.037"N	103°46'47.583"W	20.95	
8488.00	83.600	289.300	8132.66	672.59	436.37	-515.41	671358.07	399446.33	32°05'49.147"N	103°46'47.915"W	19.08	
8520.00	89.400	286.700	8134.61	700.93	446.23	-545.78	671327.71	399456.20	32°05'49.246"N	103°46'48.267"W	19.86	
8552.00	94.200	289.700	8133.61	729.36	456.22	-576.15	671297.34	399466.18	32°05'49.346"N	103°46'48.620"W	17.68	
8584.00	98.500	293.800	8130.07	758.47	467.99	-605.68	671267.81	399477.96	32°05'49.464"N	103°46'48.962"W	18.51	
8614.00	101.400	299.500	8124.88	786.43	481.23	-632.07	671241.41	399491.20	32°05'49.597"N	103°46'49.269"W	21.06	
8646.00	99.500	304.100	8119.07	817.01	497.81	-658.81	671214.68	399507.77	32°05'49.762"N	103°46'49.578"W	15.33	
8678.00	97.500	309.400	8114.34	848.28	516.75	-684.15	671189.34	399526.70	32°05'49.951"N	103°46'49.872"W	17.53	
8698.00	96.800	313.500	8111.85	868.07	529.88	-699.02	671174.47	399539.84	32°05'50.082"N	103°46'50.044"W	20.64	
8729.00	96.100	317.800	8108.37	898.87	551.90	-720.55	671152.94	399561.86	32°05'50.301"N	103°46'50.293"W	13.97	
8761.00	92.400	318.800	8105.99	930.73	575.72	-741.78	671131.72	399585.68	32°05'50.537"N	103°46'50.538"W	11.97	
8793.00	88.900	318.900	8105.63	962.67	599.81	-762.83	671110.67	399609.77	32°05'50.777"N	103°46'50.781"W	10.94	
8825.00	87.400	318.300	8106.66	994.60	623.81	-783.98	671089.52	399633.76	32°05'51.015"N	103°46'51.026"W	5.05	
8857.00	87.200	318.600	8108.17	1026.52	647.73	-805.18	671068.32	399657.68	32°05'51.253"N	103°46'51.271"W	1.13	
8888.00	87.700	318.500	8109.55	1057.44	670.94	-825.68	671047.82	399680.89	32°05'51.484"N	103°46'51.508"W	1.64	
8920.00	89.100	318.100	8110.44	1089.39	694.82	-846.96	671026.54	399704.77	32°05'51.721"N	103°46'51.754"W	4.55	
8952.00	90.500	317.700	8110.56	1121.36	718.56	-868.41	671005.09	399728.51	32°05'51.957"N	103°46'52.002"W	4.55	
8983.00	90.700	317.900	8110.23	1152.33	741.53	-889.23	670984.27	399751.47	32°05'52.186"N	103°46'52.242"W	0.91	
9014.00	89.400	318.700	8110.20	1183.29	764.67	-909.86	670963.65	399774.62	32°05'52.416"N	103°46'52.481"W	4.92	
9046.00	89.000	318.000	8110.65	1215.25	788.58	-931.12	670942.38	399798.52	32°05'52.653"N	103°46'52.726"W	2.52	
9140.00	88.400	319.000	8112.78	1309.08	858.96	-993.39	670880.12	399868.90	32°05'53.353"N	103°46'53.446"W	1.24	
9236.00	88.500	319.500	8115.38	1404.83	931.66	-1056.03	670817.48	399941.60	32°05'54.076"N	103°46'54.170"W	0.53	
9330.00	89.400	318.600	8117.10	1498.63	1002.65	-1117.63	670755.89	400012.58	32°05'54.781"N	103°46'54.882"W	1.35	



Actual Wellpath Report

No.420H AWP

Page 5 of 6



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.420H SHL
Area	Eddy County, NM	Well	No.420H
Field	Poker Lake Unit	Wellbore	No.420H AWB
Facility	Poker Lake Unit No. 420H		

WELLPATH DATA (182 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
9425.00	90.800	319.300	8116.94	1593.44	1074.29	-1180.01	670693.51	400084.21	32°05'55.493"N	103°46'55.603"W	1.65	
9519.00	92.100	320.200	8114.56	1687.14	1146.01	-1240.73	670632.80	400155.93	32°05'56.206"N	103°46'56.304"W	1.68	
9615.00	90.000	318.200	8112.80	1782.91	1218.66	-1303.44	670570.09	400228.57	32°05'56.928"N	103°46'57.029"W	3.02	
9710.00	91.700	317.700	8111.39	1877.80	1289.19	-1367.06	670506.47	400299.10	32°05'57.629"N	103°46'57.764"W	1.87	
9807.00	90.500	316.800	8109.53	1974.73	1360.40	-1432.89	670440.65	400370.31	32°05'58.337"N	103°46'58.525"W	1.55	
9902.00	90.500	316.500	8108.70	2069.70	1429.48	-1498.10	670375.44	400439.39	32°05'59.024"N	103°46'59.279"W	0.32	
9998.00	92.100	317.600	8106.52	2165.64	1499.73	-1563.49	670310.05	400509.63	32°05'59.723"N	103°47'00.035"W	2.02	
10092.00	91.500	317.100	8103.57	2259.54	1568.83	-1627.14	670246.40	400578.73	32°06'00.410"N	103°47'00.771"W	0.83	
10188.00	89.200	316.300	8102.98	2355.50	1638.69	-1692.98	670180.57	400648.58	32°06'01.104"N	103°47'01.532"W	2.54	
10283.00	88.300	317.000	8105.05	2450.46	1707.75	-1758.17	670115.38	400717.64	32°06'01.791"N	103°47'02.286"W	1.20	
10379.00	88.900	315.400	8107.40	2546.41	1777.02	-1824.60	670048.96	400786.90	32°06'02.480"N	103°47'03.054"W	1.78	
10474.00	89.700	316.400	8108.56	2641.40	1845.23	-1890.70	669982.86	400855.12	32°06'03.158"N	103°47'03.818"W	1.35	
10570.00	91.200	317.900	8107.81	2737.35	1915.61	-1955.98	669917.58	400925.49	32°06'03.858"N	103°47'04.573"W	2.21	
10666.00	91.500	318.800	8105.54	2833.20	1987.32	-2019.77	669853.80	400997.19	32°06'04.571"N	103°47'05.310"W	0.99	
10759.00	90.400	318.600	8104.00	2926.03	2057.18	-2081.14	669792.44	401067.05	32°06'05.265"N	103°47'06.019"W	1.20	
10854.00	89.300	317.500	8104.25	3020.93	2127.83	-2144.64	669728.94	401137.69	32°06'05.967"N	103°47'06.754"W	1.64	
10950.00	91.400	319.500	8103.67	3116.78	2199.72	-2208.24	669665.34	401209.58	32°06'06.682"N	103°47'07.489"W	3.02	
11045.00	91.700	319.300	8101.10	3211.51	2271.83	-2270.04	669603.54	401281.68	32°06'07.398"N	103°47'08.203"W	0.38	
11141.00	92.000	319.100	8098.00	3307.25	2344.46	-2332.74	669540.85	401354.31	32°06'08.120"N	103°47'08.927"W	0.38	
11237.00	91.500	317.200	8095.06	3403.09	2415.93	-2396.76	669476.83	401425.78	32°06'08.831"N	103°47'09.667"W	2.05	
11332.00	91.400	315.800	8092.66	3498.04	2484.82	-2462.13	669411.47	401494.66	32°06'09.516"N	103°47'10.423"W	1.48	
11427.00	92.000	315.500	8089.84	3593.00	2552.72	-2528.51	669345.09	401562.56	32°06'10.191"N	103°47'11.191"W	0.71	
11523.00	91.000	315.600	8087.33	3688.97	2621.23	-2595.71	669277.89	401631.06	32°06'10.872"N	103°47'11.968"W	1.05	
11619.00	90.400	315.700	8086.16	3784.96	2689.87	-2662.81	669210.79	401699.70	32°06'11.555"N	103°47'12.744"W	0.63	
11714.00	89.100	316.500	8086.57	3879.95	2758.32	-2728.68	669144.93	401768.15	32°06'12.236"N	103°47'13.506"W	1.61	
11809.00	88.800	316.100	8088.31	3974.92	2826.99	-2794.31	669079.31	401836.81	32°06'12.918"N	103°47'14.265"W	0.53	
11904.00	89.200	315.100	8089.97	4069.90	2894.85	-2860.76	669012.86	401904.67	32°06'13.593"N	103°47'15.033"W	1.13	
11999.00	89.800	315.800	8090.80	4164.90	2962.55	-2927.41	668946.22	401972.37	32°06'14.267"N	103°47'15.804"W	0.97	
12094.00	91.200	316.700	8089.97	4259.88	3031.17	-2993.09	668880.53	402040.98	32°06'14.949"N	103°47'16.563"W	1.75	
12189.00	90.200	315.500	8088.81	4354.86	3099.62	-3058.96	668814.67	402109.42	32°06'15.629"N	103°47'17.325"W	1.64	
12285.00	89.500	315.800	8089.06	4450.86	3168.26	-3126.07	668747.57	402178.07	32°06'16.312"N	103°47'18.101"W	0.79	
12379.00	89.700	315.700	8089.72	4544.86	3235.59	-3191.66	668681.98	402245.39	32°06'16.982"N	103°47'18.860"W	0.24	
12475.00	91.700	316.700	8088.54	4640.84	3304.87	-3258.10	668615.55	402314.67	32°06'17.671"N	103°47'19.628"W	2.33	
12570.00	91.400	315.500	8085.97	4735.79	3373.30	-3323.94	668549.70	402383.09	32°06'18.351"N	103°47'20.389"W	1.30	
12665.00	90.800	316.300	8084.15	4830.77	3441.51	-3390.04	668483.61	402451.29	32°06'19.029"N	103°47'21.154"W	1.05	
12760.00	90.500	316.800	8083.07	4925.75	3510.47	-3455.37	668418.28	402520.25	32°06'19.715"N	103°47'21.909"W	0.61	
12856.00	89.600	314.900	8082.99	5021.74	3579.35	-3522.23	668351.42	402589.13	32°06'20.400"N	103°47'22.683"W	2.19	
12952.00	89.900	314.700	8083.41	5117.73	3646.99	-3590.35	668283.31	402656.77	32°06'21.073"N	103°47'23.470"W	0.38	
13048.00	90.300	314.200	8083.24	5213.72	3714.22	-3658.88	668214.78	402723.99	32°06'21.741"N	103°47'24.263"W	0.67	
13143.00	91.400	314.300	8081.83	5308.69	3780.50	-3726.92	668146.75	402790.27	32°06'22.401"N	103°47'25.050"W	1.16	
13238.00	89.000	315.300	8081.50	5403.67	3847.43	-3794.33	668079.35	402857.20	32°06'23.066"N	103°47'25.830"W	2.74	
13333.00	89.900	315.000	8082.41	5498.66	3914.78	-3861.32	668012.36	402924.54	32°06'23.736"N	103°47'26.605"W	1.00	
13428.00	90.300	313.800	8082.25	5593.65	3981.25	-3929.19	667944.49	402991.00	32°06'24.397"N	103°47'27.390"W	1.33	
13523.00	91.600	313.800	8080.67	5688.59	4046.99	-3997.75	667875.93	403056.74	32°06'25.051"N	103°47'28.183"W	1.37	
13619.00	91.300	314.600	8078.24	5784.54	4113.90	-4066.55	667807.14	403123.64	32°06'25.717"N	103°47'28.979"W	0.89	



Actual Wellpath Report

No.420H AWP

Page 6 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.420H SHL
Area	Eddy County, NM	Well	No.420H
Field	Poker Lake Unit	Wellbore	No.420H AWB
Facility	Poker Lake Unit No. 420H		

WELLPATH DATA (182 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
13699.00	90.700	312.900	8076.84	5864.49	4169.21	-4124.33	667749.36	403178.95	32°06'26.267"N	103°47'29.648"W	2.25	
13749.00	90.700	312.900	8076.23	5914.44	4203.24	-4160.95	667712.74	403212.98	32°06'26.605"N	103°47'30.071"W	0.00	Proj to Bit

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
No.420H PBHL		8083.00	4235.27	-4174.02	667699.67	403245.01	32°06'26.923"N	103°47'30.221"W	point
No.420H Target #2		8098.00	2489.09	-2460.58	669413.02	401498.93	32°06'09.558"N	103°47'10.405"W	point
No.420H Target #1		8103.00	462.95	-456.26	671417.22	399472.92	32°05'49.407"N	103°46'47.226"W	point

WELLPATH COMPOSITION - Ref Wellbore: No.420H AWB Ref Wellpath: No.420H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.00	7384.40	Generic gyro - northseeking (Standard)	GyroData Gyro <100-7384.4>	No.420H AWB
7384.40	13699.00	NaviTrak (Standard)	BHI MWD NaviTrak <7443-8095>	No.420H AWB
13699.00	13749.00	Blind Drilling (std)	Projection to bit	No.420H AWB