

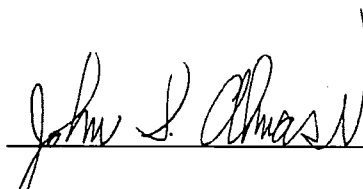
15-40685

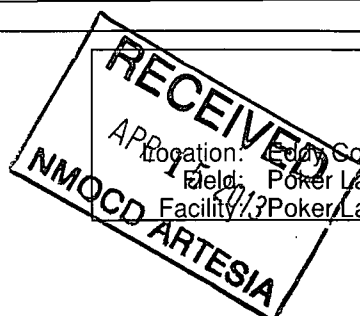
2105 MARKET STREET
MIDLAND, TX 79703
24 HR (432) 694-9517

STATE OF NEW MEXICO

COUNTY OF Eddy

I, Rex Long, Directional Driller certify that I am employed by Baker Hughes INTEQ; did conduct or supervise on the day(s) of Nov 26, 2012 through Dec 17, 2012 the taking of MWD surveys from a depth of 1,013 to a depth of 15,482 that the data is true, correct, complete and within the limitations of the tool as set forth by Baker Hughes INTEQ; that I am authorized and qualified to make this report; that this survey was conducted at the request of BOPCO, L.P. for the Poker Lake Unit No. 324H in Eddy County, NM; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by INTEQ.


Field Service Engineer: Rex Long



BOPCO, L.P.

Location: Eddy County, NM
Field: Poker Lake Unit
Facility: Poker Lake Unit No. 324H

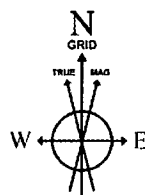
Slot: No. 324H SHL
Well: No. 324H
Wellbore: No. 324H PWB



Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	6834.00	1.100	188.700	6833.41	-44.98	35.44	0.00	-56.77
KOP	6901.00	1.100	314.000	6900.41	-45.17	34.88	2.92	-56.50
60° Inc.	7715.12	60.000	314.321	7571.05	231.35	-248.34	7.23	339.33
Casing Point	7915.12	60.000	314.321	7671.05	352.37	-372.26	0.00	512.53
EOC / Target #1	8290.12	90.000	314.321	7767.00	602.56	-628.45	8.00	870.63
TL	8333.83	90.874	314.321	7766.67	633.10	-659.73	2.00	914.34
Target #2	11392.15	90.874	314.321	7720.00	2769.64	-2847.49	0.00	3972.30
TL	11406.59	90.610	314.205	7719.81	2779.72	-2857.83	2.00	3986.74
No. 324H PBHL	15993.93	90.610	314.205	7671.00	5977.99	-6146.05	0.00	8573.82

Plot reference wellpath is Rev-D.0

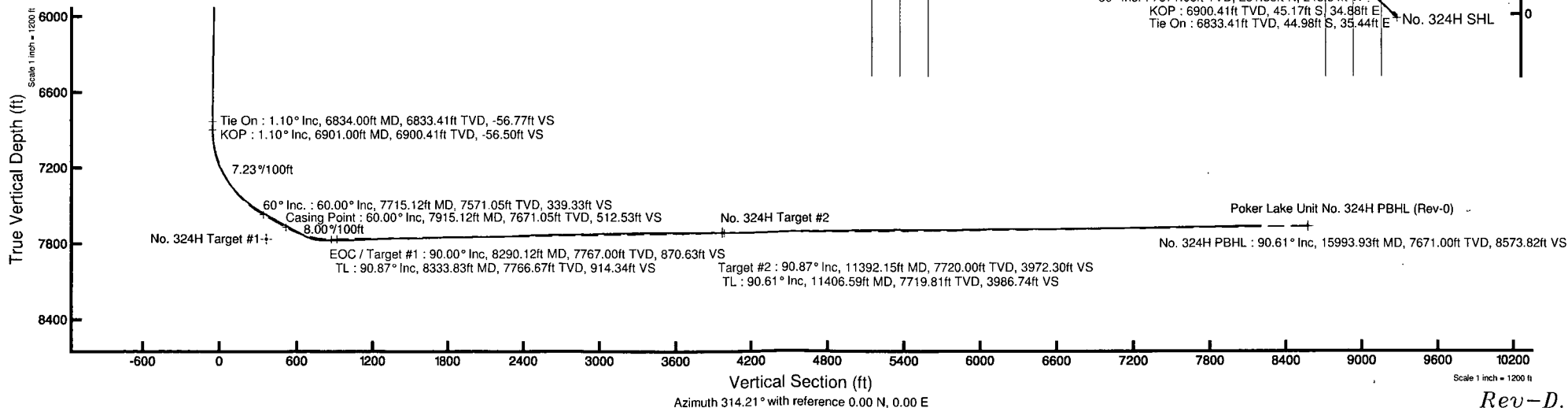
True vertical depths are referenced to Rig on No. 324H SHL (KB)	Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 324H SHL (KB)	North Reference: Grid north
Rig on No. 324H SHL (KB) to Mean Sea Level: 3456 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: No. 324H SHL): -3434 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: harkol on 12/1/2012



BGGM (1945.0 to 2013.0) Dip: 60.05° Field: 48476.9 nT
Magnetic North is 7.68 degrees East of True North (at 5/23/2012)
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 7.43 degrees

For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.43 = 97.43





Actual Wellpath Report

No.324H AWP

Page 1 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No. 324H SHL
Area	Eddy County, NM	Well	No. 324H
Field	Poker Lake Unit	Wellbore	No.324H AWB
Facility	Poker Lake Unit No. 324H		

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	Harrkol
Scale	0.999934	Report Generated	3/6/2013 at 3:36:14 PM
Convergence at slot	0.25° East	Database/Source file	WA Midland/No.324H_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	646945.12	438500.07	32°12'16.780"N	103°51'29.710"W
Facility Reference Pt			646945.12	438500.07	32°12'16.780"N	103°51'29.710"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. 324H SHL (KB) to Facility Vertical Datum	22.00ft
Horizontal Reference Pt	Slot	Rig on No. 324H SHL (KB) to Mean Sea Level	3456.00ft
Vertical Reference Pt	Rig on No. 324H SHL (KB)	Rig on No. 324H SHL (KB) to Mud Line at Slot (No. 324H SHL)	22.00ft
MD Reference Pt	Rig on No. 324H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	314.21°



Actual Wellpath Report

No.324H AWP

Page 2 of 8



**BAKER
HUGHES**

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No. 324H SHL
Area	Eddy County, NM	Well	No. 324H
Field	Poker Lake Unit	Wellbore	No.324H AWB
Facility	Poker Lake Unit No. 324H		

WELLPATH DATA (178 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	0.000	0.00	0.00	0.00	0.00	646945.12	438500.07	32°12'16.780"N	103°51'29.710"W	0.00	
245.00	0.140	0.000	245.00	0.21	0.30	0.00	646945.12	438500.37	32°12'16.783"N	103°51'29.710"W	0.06	
494.00	0.350	0.000	494.00	0.95	1.36	0.00	646945.12	438501.43	32°12'16.794"N	103°51'29.710"W	0.08	
733.00	0.480	0.000	732.99	2.16	3.10	0.00	646945.12	438503.16	32°12'16.811"N	103°51'29.710"W	0.05	
974.00	0.160	0.000	973.99	3.10	4.44	0.00	646945.12	438504.51	32°12'16.824"N	103°51'29.710"W	0.13	
1013.00	0.900	221.000	1012.99	3.12	4.26	-0.20	646944.92	438504.33	32°12'16.823"N	103°51'29.712"W	2.63	
1136.00	0.800	218.600	1135.97	2.98	2.86	-1.37	646943.75	438502.93	32°12'16.809"N	103°51'29.726"W	0.09	
1325.00	0.500	207.900	1324.96	2.62	1.10	-2.58	646942.54	438501.17	32°12'16.791"N	103°51'29.740"W	0.17	
1514.00	0.200	135.200	1513.96	2.06	0.14	-2.73	646942.39	438500.21	32°12'16.782"N	103°51'29.742"W	0.25	
1701.00	0.300	87.600	1700.95	1.40	-0.07	2.01	646943.14	438500.00	32°12'16.780"N	103°51'29.733"W	0.12	
1890.00	0.200	75.300	1889.95	0.88	0.03	-1.20	646943.92	438500.10	32°12'16.781"N	103°51'29.724"W	0.06	
2078.00	0.100	195.000	2077.95	0.64	-0.04	-0.93	646944.20	438500.03	32°12'16.780"N	103°51'29.721"W	0.14	
2267.00	0.100	140.800	2266.95	0.39	-0.33	-0.86	646944.26	438499.74	32°12'16.777"N	103°51'29.720"W	0.05	
2454.00	0.100	180.600	2453.95	0.12	-0.62	-0.76	646944.36	438499.45	32°12'16.774"N	103°51'29.719"W	0.04	
2644.00	0.200	191.600	2643.95	-0.18	1.11	-0.83	646944.29	438498.96	32°12'16.770"N	103°51'29.720"W	0.05	
2832.00	0.500	78.000	2831.95	-0.81	-1.26	-0.09	646945.03	438498.81	32°12'16.768"N	103°51'29.711"W	0.32	
3020.00	0.600	65.200	3019.94	-1.62	-0.68	1.60	646946.72	438499.39	32°12'16.774"N	103°51'29.691"W	0.08	
3211.00	0.600	47.000	3210.93	-2.03	0.43	3.24	646948.36	438500.50	32°12'16.785"N	103°51'29.672"W	0.10	
3399.00	0.800	83.100	3398.92	-2.90	1.26	5.26	646950.38	438501.33	32°12'16.793"N	103°51'29.649"W	0.25	
3587.00	0.800	110.300	3586.90	-4.92	0.96	7.80	646952.92	438501.03	32°12'16.790"N	103°51'29.619"W	0.20	
3776.00	1.100	138.500	3775.87	-7.94	-0.86	10.24	646955.36	438499.21	32°12'16.771"N	103°51'29.591"W	0.29	
3961.00	1.000	139.900	3960.84	-11.31	-3.42	12.45	646957.57	438496.65	32°12'16.746"N	103°51'29.565"W	0.06	
4082.00	1.000	138.200	4081.82	-13.42	-5.02	13.84	646958.96	438495.05	32°12'16.730"N	103°51'29.549"W	0.02	
4269.00	1.100	131.600	4268.79	-16.84	-7.43	16.27	646961.39	438492.64	32°12'16.706"N	103°51'29.521"W	0.08	
4456.00	1.100	133.800	4455.76	-20.43	-9.86	18.91	646964.02	438490.21	32°12'16.682"N	103°51'29.491"W	0.02	
4645.00	1.100	145.600	4644.72	-24.02	-12.61	21.24	646966.36	438487.46	32°12'16.655"N	103°51'29.463"W	0.12	
4831.00	1.000	148.100	4830.69	-27.35	-15.46	23.11	646968.23	438484.61	32°12'16.626"N	103°51'29.442"W	0.06	
5021.00	0.900	134.900	5020.67	-30.45	-17.93	25.04	646970.16	438482.15	32°12'16.602"N	103°51'29.420"W	0.13	
5211.00	1.200	141.200	5210.64	-33.91	-20.53	27.34	646972.46	438479.54	32°12'16.576"N	103°51'29.393"W	0.17	
5398.00	0.900	145.400	5397.60	-37.30	-23.26	29.40	646974.52	438476.81	32°12'16.549"N	103°51'29.369"W	0.17	



Actual Wellpath Report

No.324H AWP

Page 3 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 324H SHL
Area	Eddy County, NM	Well	No. 324H
Field	Poker Lake Unit	Wellbore	No.324H AWB
Facility	Poker Lake Unit No. 324H		

WELLPATH DATA (178 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
5586.00	1.000	147.900	5585.58	-40.34	-25.87	31.11	646976.23	438474.20	32°12'16.523"N	103°51'29.349"W	0.06	
5773.00	0.900	146.200	5772.55	-43.36	-28.47	32.80	646977.92	438471.60	32°12'16.497"N	103°51'29.330"W	0.06	
5961.00	1.000	164.500	5960.53	-46.22	-31.28	34.06	646979.18	438468.79	32°12'16.469"N	103°51'29.315"W	0.17	
6148.00	1.000	163.800	6147.50	-49.05	-34.42	34.95	646980.07	438465.65	32°12'16.438"N	103°51'29.305"W	0.01	
6334.00	0.800	160.800	6333.47	-51.62	-37.20	35.83	646980.95	438462.87	32°12'16.411"N	103°51'29.295"W	0.11	
6522.00	0.900	189.600	6521.46	-53.64	-39.90	36.01	646981.13	438460.17	32°12'16.384"N	103°51'29.293"W	0.23	
6709.00	0.900	183.400	6708.43	-55.43	-42.81	35.68	646980.80	438457.26	32°12'16.355"N	103°51'29.297"W	0.05	
6834.00	1.100	188.700	6833.41	-56.77	-44.98	35.44	646980.56	438455.09	32°12'16.334"N	103°51'29.300"W	0.18	
6897.00	0.800	269.000	6896.41	-56.81	-45.58	34.91	646980.03	438454.49	32°12'16.328"N	103°51'29.306"W	1.98	
6928.00	2.700	306.400	6927.39	-55.93	-45.16	34.11	646979.23	438454.92	32°12'16.332"N	103°51'29.315"W	6.84	
6960.00	4.600	313.900	6959.33	-53.90	-43.82	32.58	646977.69	438456.25	32°12'16.345"N	103°51'29.333"W	6.11	
6991.00	6.700	315.900	6990.17	-50.85	-41.66	30.42	646975.54	438458.42	32°12'16.367"N	103°51'29.358"W	6.80	
7023.00	8.700	316.500	7021.88	-46.57	-38.56	27.46	646972.57	438461.51	32°12'16.398"N	103°51'29.392"W	6.25	
7054.00	11.000	317.400	7052.42	-41.27	-34.68	23.84	646968.96	438465.39	32°12'16.436"N	103°51'29.434"W	7.44	
7085.00	13.100	316.400	7082.74	-34.81	-29.96	19.41	646964.53	438470.11	32°12'16.483"N	103°51'29.486"W	6.81	
7117.00	15.700	317.200	7113.73	-26.86	-24.16	13.97	646959.09	438475.91	32°12'16.541"N	103°51'29.549"W	8.15	
7149.00	18.400	317.300	7144.32	-17.49	-17.27	7.60	646952.72	438482.80	32°12'16.609"N	103°51'29.622"W	8.44	
7180.00	21.400	316.900	7173.47	-6.95	-9.54	0.42	646945.54	438490.53	32°12'16.686"N	103°51'29.706"W	9.69	
7212.00	24.600	315.200	7202.92	5.54	-0.55	-8.27	646936.86	438499.52	32°12'16.775"N	103°51'29.806"W	10.21	
7243.00	27.400	315.400	7230.78	19.13	9.11	-17.82	646927.30	438509.18	32°12'16.871"N	103°51'29.917"W	9.04	
7274.00	29.300	316.600	7258.06	33.84	19.70	-28.04	646917.08	438519.77	32°12'16.977"N	103°51'30.035"W	6.40	
7305.00	32.000	316.300	7284.73	49.63	31.15	-38.93	646906.19	438531.22	32°12'17.090"N	103°51'30.162"W	8.72	
7336.00	34.200	316.600	7310.70	66.54	43.42	-50.59	646894.53	438543.49	32°12'17.212"N	103°51'30.297"W	7.12	
7367.00	36.900	316.800	7335.91	84.55	56.54	-62.95	646882.17	438556.61	32°12'17.343"N	103°51'30.440"W	8.72	
7399.00	38.700	316.400	7361.20	104.14	70.79	-76.43	646868.70	438570.85	32°12'17.484"N	103°51'30.596"W	5.68	
7431.00	41.400	315.400	7385.69	124.72	85.57	-90.76	646854.37	438585.63	32°12'17.631"N	103°51'30.762"W	8.67	
7461.00	43.100	313.600	7407.90	144.89	99.70	-105.15	646839.98	438599.77	32°12'17.772"N	103°51'30.929"W	6.96	
7491.00	45.200	312.800	7429.42	165.78	114.00	-120.38	646824.75	438614.07	32°12'17.914"N	103°51'31.105"W	7.24	
7523.00	47.700	313.500	7451.47	188.97	129.87	-137.30	646807.83	438629.93	32°12'18.072"N	103°51'31.301"W	7.97	
7554.00	50.200	314.200	7471.83	212.35	146.06	-154.16	646790.98	438646.12	32°12'18.233"N	103°51'31.497"W	8.24	



Actual Wellpath Report

No.324H AWP

Page 4 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No. 324H SHL
Area	Eddy County, NM	Well	No. 324H
Field	Poker Lake Unit	Wellbore	No.324H AWB
Facility	Poker Lake Unit No. 324H		

WELLPATH DATA (178 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
7585.00	52.800	314.800	7491.12	236.60	163.07	-171.46	646773.68	438663.13	32°12'18.402"N	103°51'31.697"W	8.52	
7617.00	55.000	315.100	7509.98	262.46	181.33	-189.75	646755.38	438681.39	32°12'18.583"N	103°51'31.909"W	6.92	
7648.00	57.100	315.600	7527.29	288.16	199.63	-207.82	646737.31	438699.68	32°12'18.765"N	103°51'32.118"W	6.91	
7679.00	58.400	314.700	7543.83	314.38	218.21	-226.31	646718.82	438718.27	32°12'18.950"N	103°51'32.333"W	4.86	
7711.00	58.900	314.600	7560.48	341.70	237.42	-245.76	646699.38	438737.47	32°12'19.141"N	103°51'32.558"W	1.59	
7742.00	59.400	314.100	7576.37	368.32	256.02	-264.79	646680.35	438756.07	32°12'19.325"N	103°51'32.778"W	2.13	
7835.00	60.800	313.800	7622.73	448.94	311.97	-322.83	646622.31	438812.02	32°12'19.882"N	103°51'33.451"W	1.53	
7857.00	60.900	313.600	7633.45	468.15	325.25	-336.72	646608.42	438825.30	32°12'20.014"N	103°51'33.612"W	0.91	
7964.00	61.500	313.600	7685.00	561.91	389.91	-404.62	646540.53	438889.95	32°12'20.656"N	103°51'34.399"W	0.56	
7995.00	60.900	310.700	7699.93	589.05	408.14	-424.76	646520.39	438908.18	32°12'20.838"N	103°51'34.632"W	8.42	
8027.00	60.400	307.800	7715.62	616.84	425.78	-446.35	646498.80	438925.83	32°12'21.013"N	103°51'34.883"W	8.05	
8049.00	60.200	306.100	7726.52	635.79	437.27	-461.62	646483.53	438937.31	32°12'21.128"N	103°51'35.060"W	6.77	
8080.00	61.900	304.200	7741.53	662.58	452.88	-483.80	646461.35	438952.92	32°12'21.283"N	103°51'35.317"W	7.67	
8112.00	67.400	302.700	7755.22	690.97	468.81	-507.93	646437.23	438968.85	32°12'21.442"N	103°51'35.597"W	17.70	
8144.00	73.800	302.300	7765.85	720.51	485.02	-533.37	646411.79	438985.05	32°12'21.603"N	103°51'35.892"W	20.03	
8176.00	80.700	304.200	7772.91	751.14	502.12	-559.45	646385.71	439002.16	32°12'21.774"N	103°51'36.195"W	22.33	
8209.00	87.100	307.200	7776.41	783.57	521.26	-586.08	646359.08	439021.30	32°12'21.964"N	103°51'36.504"W	21.40	
8240.00	90.100	311.500	7777.17	814.44	540.91	-610.03	646335.13	439040.94	32°12'22.160"N	103°51'36.782"W	16.91	
8272.00	89.400	311.400	7777.31	846.40	562.09	-634.02	646311.15	439062.12	32°12'22.370"N	103°51'37.060"W	2.21	
8303.00	89.100	312.000	7777.71	877.37	582.71	-657.16	646288.00	439082.74	32°12'22.575"N	103°51'37.328"W	2.16	
8367.00	90.000	311.900	7778.22	941.32	625.49	-704.76	646240.41	439125.52	32°12'23.001"N	103°51'37.880"W	1.41	
8431.00	91.600	312.700	7777.32	1005.27	668.56	-752.09	646193.08	439168.58	32°12'23.429"N	103°51'38.428"W	2.80	
8494.00	92.300	313.500	7775.18	1068.22	711.58	-798.06	646147.11	439211.60	32°12'23.857"N	103°51'38.961"W	1.69	
8557.00	92.600	313.800	7772.49	1131.16	755.03	-843.61	646101.57	439255.04	32°12'24.288"N	103°51'39.489"W	0.67	
8621.00	92.400	314.500	7769.69	1195.10	799.56	-889.48	646055.70	439299.58	32°12'24.731"N	103°51'40.021"W	1.14	
8685.00	92.800	315.900	7766.79	1259.02	844.93	-934.53	646010.65	439344.94	32°12'25.182"N	103°51'40.543"W	2.27	
8748.00	92.500	316.700	7763.88	1321.91	890.42	-978.01	645967.18	439390.43	32°12'25.634"N	103°51'41.046"W	1.35	
8812.00	91.000	315.600	7761.92	1385.84	936.55	-1022.32	645922.87	439436.56	32°12'26.093"N	103°51'41.560"W	2.91	
8875.00	88.600	314.600	7762.14	1448.83	981.17	-1066.79	645878.40	439481.18	32°12'26.536"N	103°51'42.075"W	4.13	
8940.00	91.300	314.500	7762.20	1513.82	1026.77	-1113.11	645832.09	439526.77	32°12'26.989"N	103°51'42.612"W	4.16	



Actual Wellpath Report

No.324H AWP

Page 5 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No. 324H SHL
Area	Eddy County, NM	Well	No. 324H
Field	Poker Lake Unit	Wellbore	No.324H AWP
Facility	Poker Lake Unit No. 324H		

WELLPATH DATA (178 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
9003.00	90.700	315.300	7761.10	1576.81	1071.23	-1157.73	645787.47	439571.23	32°12'27.431"N	103°51'43.129"W	1.59	
9066.00	92.200	314.700	7759.51	1639.78	1115.76	-1202.26	645742.95	439615.76	32°12'27.874"N	103°51'43.645"W	2.56	
9129.00	92.300	315.900	7757.03	1702.72	1160.51	-1246.54	645698.67	439660.50	32°12'28.318"N	103°51'44.158"W	1.91	
9193.00	92.500	315.200	7754.35	1766.64	1206.16	-1291.32	645653.89	439706.14	32°12'28.772"N	103°51'44.677"W	1.14	
9256.00	90.100	314.600	7752.92	1829.62	1250.61	-1335.93	645609.29	439750.60	32°12'29.214"N	103°51'45.194"W	3.93	
9320.00	90.200	313.900	7752.76	1893.62	1295.27	-1381.77	645563.45	439795.25	32°12'29.658"N	103°51'45.725"W	1.10	
9384.00	89.900	313.700	7752.70	1957.62	1339.57	-1427.96	645517.26	439839.55	32°12'30.098"N	103°51'46.260"W	0.56	
9447.00	91.200	315.100	7752.10	2020.61	1383.64	-1472.97	645472.25	439883.62	32°12'30.536"N	103°51'46.782"W	3.03	
9512.00	91.100	314.700	7750.79	2085.59	1429.51	-1519.00	645426.22	439929.49	32°12'30.992"N	103°51'47.315"W	0.63	
9575.00	90.700	313.800	7749.80	2148.58	1473.47	-1564.12	645381.10	439973.44	32°12'31.429"N	103°51'47.838"W	1.56	
9638.00	91.700	313.700	7748.48	2211.57	1517.02	-1609.62	645335.61	440016.99	32°12'31.862"N	103°51'48.365"W	1.60	
9702.00	92.700	314.300	7746.03	2275.52	1561.45	-1655.62	645289.61	440061.41	32°12'32.304"N	103°51'48.899"W	1.82	
9766.00	92.000	315.100	7743.40	2339.46	1606.43	-1701.08	645244.16	440106.39	32°12'32.751"N	103°51'49.425"W	1.66	
9829.00	92.600	314.200	7740.87	2402.41	1650.67	-1745.86	645199.38	440150.62	32°12'33.190"N	103°51'49.944"W	1.72	
9893.00	92.100	315.600	7738.25	2466.35	1695.80	-1791.15	645154.09	440195.76	32°12'33.639"N	103°51'50.469"W	2.32	
9957.00	89.400	314.500	7737.41	2530.33	1741.09	-1836.36	645108.89	440241.04	32°12'34.089"N	103°51'50.993"W	4.56	
10020.00	91.700	316.000	7736.81	2593.31	1785.82	-1880.71	645064.54	440285.77	32°12'34.534"N	103°51'51.507"W	4.36	
10083.00	90.400	314.600	7735.65	2656.28	1830.59	-1925.01	645020.24	440330.54	32°12'34.979"N	103°51'52.020"W	3.03	
10146.00	91.900	315.500	7734.39	2719.26	1875.17	-1969.51	644975.75	440375.11	32°12'35.422"N	103°51'52.536"W	2.78	
10209.00	91.100	312.900	7732.74	2782.23	1919.07	-2014.65	644930.60	440419.01	32°12'35.858"N	103°51'53.059"W	4.32	
10272.00	92.200	314.100	7730.92	2845.20	1962.42	-2060.33	644884.93	440462.35	32°12'36.289"N	103°51'53.588"W	2.58	
10337.00	90.600	314.100	7729.34	2910.18	2007.64	-2107.00	644838.27	440507.57	32°12'36.738"N	103°51'54.129"W	2.46	
10400.00	91.800	313.400	7728.02	2973.16	2051.19	-2152.49	644792.77	440551.12	32°12'37.171"N	103°51'54.656"W	2.21	
10464.00	91.400	315.100	7726.23	3037.13	2095.83	-2198.32	644746.95	440595.76	32°12'37.615"N	103°51'55.187"W	2.73	
10528.00	90.100	314.100	7725.39	3101.13	2140.76	-2243.88	644701.39	440640.69	32°12'38.062"N	103°51'55.716"W	2.56	
10591.00	91.300	314.400	7724.62	3164.12	2184.72	-2289.00	644656.27	440684.64	32°12'38.498"N	103°51'56.238"W	1.96	
10655.00	91.500	313.800	7723.06	3228.10	2229.25	-2334.95	644610.33	440729.16	32°12'38.941"N	103°51'56.771"W	0.99	
10718.00	90.600	315.100	7721.90	3291.09	2273.36	-2379.91	644565.37	440773.27	32°12'39.379"N	103°51'57.292"W	2.51	
10781.00	90.300	313.000	7721.41	3354.08	2317.15	-2425.19	644520.10	440817.07	32°12'39.815"N	103°51'57.817"W	3.37	
10844.00	90.700	311.200	7720.86	3417.03	2359.39	-2471.93	644473.36	440859.30	32°12'40.235"N	103°51'58.359"W	2.93	



Actual Wellpath Report

No.324H AWP

Page 6 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No. 324H SHL
Area	Eddy County, NM	Well	No. 324H
Field	Poker Lake Unit	Wellbore	No.324H AWB
Facility	Poker Lake Unit No. 324H		

WELLPATH DATA (178 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
10907.00	90.300	309.900	7720.31	3479.90	2400.34	-2519.80	644425.49	440900.25	32°12'40.642"N	103°51'58.914"W	2.16	
10969.00	89.900	311.800	7720.20	3541.79	2440.89	-2566.69	644378.60	440940.80	32°12'41.045"N	103°51'59.457"W	3.13	
11032.00	90.500	311.500	7719.98	3604.73	2482.76	-2613.77	644331.53	440982.66	32°12'41.462"N	103°52'00.003"W	1.06	
11095.00	90.500	310.900	7719.43	3667.64	2524.26	-2661.17	644284.13	441024.15	32°12'41.874"N	103°52'00.553"W	0.95	
11159.00	89.500	312.300	7719.43	3731.57	2566.75	-2709.03	644236.28	441066.64	32°12'42.297"N	103°52'01.108"W	2.69	
11222.00	90.500	313.600	7719.43	3794.55	2609.67	-2755.14	644190.17	441109.56	32°12'42.724"N	103°52'01.642"W	2.60	
11286.00	89.100	313.900	7719.65	3858.55	2653.93	-2801.37	644143.94	441153.82	32°12'43.163"N	103°52'02.178"W	2.24	
11349.00	89.000	315.700	7720.70	3921.53	2698.31	-2846.06	644099.25	441198.20	32°12'43.605"N	103°52'02.696"W	2.86	
11412.00	90.100	315.700	7721.19	3984.51	2743.40	-2890.06	644055.26	441243.28	32°12'44.053"N	103°52'03.206"W	1.75	
11475.00	90.700	316.300	7720.75	4047.48	2788.71	-2933.82	644011.50	441288.59	32°12'44.503"N	103°52'03.713"W	1.35	
11539.00	89.800	314.700	7720.47	4111.46	2834.36	-2978.68	643966.65	441334.24	32°12'44.957"N	103°52'04.233"W	2.87	
11602.00	90.000	314.500	7720.58	4174.46	2878.59	-3023.54	643921.79	441378.47	32°12'45.396"N	103°52'04.752"W	0.45	
11665.00	90.500	312.400	7720.31	4237.45	2921.92	-3069.27	643876.06	441421.79	32°12'45.827"N	103°52'05.283"W	3.43	
11729.00	91.500	313.500	7719.19	4301.42	2965.52	-3116.11	643829.23	441465.39	32°12'46.260"N	103°52'05.825"W	2.32	
11792.00	91.200	313.100	7717.71	4364.39	3008.71	-3161.94	643783.39	441508.58	32°12'46.690"N	103°52'06.357"W	0.79	
11855.00	92.000	313.100	7715.95	4427.36	3051.74	-3207.92	643737.42	441551.60	32°12'47.117"N	103°52'06.890"W	1.27	
11919.00	90.200	314.000	7714.72	4491.34	3095.83	-3254.30	643691.04	441595.68	32°12'47.556"N	103°52'07.427"W	3.14	
11983.00	91.900	315.900	7713.55	4555.32	3141.03	-3299.58	643645.76	441640.89	32°12'48.005"N	103°52'07.952"W	3.98	
12046.00	90.800	316.200	7712.06	4618.27	3186.37	-3343.29	643602.06	441686.23	32°12'48.455"N	103°52'08.459"W	1.81	
12111.00	92.100	315.900	7710.42	4683.21	3233.15	-3388.39	643556.96	441733.00	32°12'48.920"N	103°52'08.981"W	2.05	
12173.00	90.500	316.500	7709.01	4745.15	3277.89	-3431.29	643514.07	441777.74	32°12'49.365"N	103°52'09.478"W	2.76	
12237.00	92.200	317.300	7707.50	4809.06	3324.60	-3475.00	643470.35	441824.45	32°12'49.829"N	103°52'09.985"W	2.94	
12249.00	92.400	318.200	7707.02	4821.03	3333.48	-3483.07	643462.29	441833.32	32°12'49.917"N	103°52'10.078"W	7.68	
12344.00	91.300	318.000	7703.96	4915.76	3404.15	-3546.48	643398.89	441903.99	32°12'50.619"N	103°52'10.812"W	1.18	
12440.00	90.900	320.100	7702.11	5011.39	3476.64	-3609.38	643335.99	441976.47	32°12'51.339"N	103°52'11.541"W	2.23	
12534.00	91.400	323.200	7700.23	5104.57	3550.33	-3667.68	643277.69	442050.16	32°12'52.071"N	103°52'12.216"W	3.34	
12629.00	90.000	323.700	7699.07	5198.33	3626.64	-3724.25	643221.12	442126.47	32°12'52.828"N	103°52'12.870"W	1.56	
12723.00	91.600	325.800	7697.75	5290.72	3703.39	-3778.50	643166.88	442203.21	32°12'53.590"N	103°52'13.498"W	2.81	
12819.00	89.700	324.500	7696.66	5384.96	3782.17	-3833.35	643112.04	442281.98	32°12'54.372"N	103°52'14.132"W	2.40	
12915.00	89.500	321.000	7697.33	5479.88	3858.57	-3891.44	643053.94	442358.38	32°12'55.130"N	103°52'14.805"W	3.65	



Actual Wellpath Report

No.324H AWP

Page 7 of 8



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 324H SHL
Area	Eddy County, NM	Well	No. 324H
Field	Poker Lake Unit	Wellbore	No.324H AWP
Facility	Poker Lake Unit No. 324H		

WELLPATH DATA (178 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
13011.00	90.000	319.500	7697.75	5575.34	3932.37	-3952.83	642992.56	442432.18	32°12'55.863"N	103°52'15.516"W	1.65	
13106.00	90.200	318.600	7697.59	5670.00	4004.13	-4015.09	642930.31	442503.92	32°12'56.576"N	103°52'16.237"W	0.97	
13202.00	90.100	316.800	7697.34	5765.82	4075.13	-4079.70	642865.70	442574.92	32°12'57.281"N	103°52'16.985"W	1.88	
13295.00	91.100	315.200	7696.36	5858.77	4142.02	-4144.29	642801.11	442641.81	32°12'57.946"N	103°52'17.734"W	2.03	
13391.00	90.700	315.000	7694.85	5954.74	4210.01	-4212.05	642733.36	442709.79	32°12'58.622"N	103°52'18.519"W	0.47	
13486.00	91.700	315.000	7692.86	6049.71	4277.17	-4279.21	642666.21	442776.95	32°12'59.289"N	103°52'19.297"W	1.05	
13581.00	90.200	312.700	7691.29	6144.69	4342.97	-4347.70	642597.72	442842.74	32°12'59.943"N	103°52'20.091"W	2.89	
13676.00	90.300	313.200	7690.88	6239.66	4407.70	-4417.24	642528.19	442907.47	32°13'00.587"N	103°52'20.897"W	0.54	
13771.00	90.100	311.500	7690.54	6334.61	4471.69	-4487.44	642457.99	442971.46	32°13'01.223"N	103°52'21.711"W	1.80	
13866.00	89.900	308.300	7690.54	6429.33	4532.62	-4560.31	642385.12	443032.38	32°13'01.829"N	103°52'22.556"W	3.37	
13962.00	90.100	309.900	7690.54	6524.94	4593.16	-4634.81	642310.63	443092.92	32°13'02.431"N	103°52'23.420"W	1.68	
14057.00	90.000	311.200	7690.46	6619.75	4654.92	-4706.99	642238.45	443154.68	32°13'03.045"N	103°52'24.257"W	1.37	
14152.00	90.600	312.000	7689.96	6714.65	4717.99	-4778.03	642167.41	443217.74	32°13'03.672"N	103°52'25.081"W	1.05	
14247.00	90.600	310.000	7688.97	6809.49	4780.31	-4849.72	642095.73	443280.06	32°13'04.292"N	103°52'25.913"W	2.11	
14342.00	90.600	307.900	7687.97	6904.08	4840.03	-4923.60	642021.86	443339.77	32°13'04.886"N	103°52'26.769"W	2.21	
14437.00	90.600	308.000	7686.98	6998.51	4898.45	-4998.50	641946.96	443398.18	32°13'05.467"N	103°52'27.638"W	0.11	
14532.00	90.200	308.500	7686.32	7092.99	4957.26	-5073.11	641872.36	443456.99	32°13'06.053"N	103°52'28.504"W	0.67	
14628.00	91.100	312.100	7685.23	7188.75	5019.34	-5146.30	641799.17	443519.06	32°13'06.670"N	103°52'29.353"W	3.87	
14723.00	90.700	312.400	7683.73	7283.68	5083.20	-5216.62	641728.86	443582.93	32°13'07.305"N	103°52'30.168"W	0.53	
14818.00	91.400	317.800	7681.99	7378.62	5150.46	-5283.64	641661.84	443650.18	32°13'07.973"N	103°52'30.945"W	5.73	
14913.00	90.500	314.500	7680.42	7473.53	5218.95	-5349.43	641596.05	443718.66	32°13'08.654"N	103°52'31.707"W	3.60	
15008.00	90.700	315.800	7679.42	7568.51	5286.29	-5416.43	641529.06	443786.00	32°13'09.323"N	103°52'32.484"W	1.38	
15102.00	90.700	313.700	7678.27	7662.50	5352.46	-5483.18	641462.32	443852.17	32°13'09.981"N	103°52'33.257"W	2.23	
15197.00	90.600	316.500	7677.19	7757.47	5419.74	-5550.22	641395.28	443919.44	32°13'10.649"N	103°52'34.034"W	2.95	
15292.00	90.600	315.700	7676.20	7852.41	5488.19	-5616.09	641329.41	443987.89	32°13'11.329"N	103°52'34.798"W	0.84	
15388.00	91.000	314.600	7674.86	7948.39	5556.24	-5683.79	641261.72	444055.93	32°13'12.005"N	103°52'35.582"W	1.22	
15482.00	90.500	316.400	7673.63	8042.35	5623.28	-5749.66	641195.85	444122.97	32°13'12.672"N	103°52'36.346"W	1.99	
15642.00	90.500	316.400	7672.23	8202.23	5739.14	-5860.00	641085.52	444238.82	32°13'13.823"N	103°52'37.624"W	0.00	Projection to bit



Actual Wellpath Report

No.324H AWP

Page 8 of 8



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No. 324H SHL
Area	Eddy County, NM	Well	No. 324H
Field	Poker Lake Unit	Wellbore	No.324H AWB
Facility	Poker Lake Unit No. 324H		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Poker Lake Unit No. 324H PBHL (Rev-0)		7671.00	5977.99	-6146.05	640799.49	444477.65	32°13'16.198"N	103°52'40.942"W	point
No. 324H Target #2		7720.00	2769.64	-2847.49	644097.82	441269.53	32°12'44.310"N	103°52'02.709"W	point
No. 324H Target #1		7767.00	253.28	-260.40	646684.74	438753.34	32°12'19.298"N	103°51'32.728"W	point

WELLPATH COMPOSITION - Ref Wellbore: No.324H AWB					Ref Wellpath: No.324H AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model		Log Name/Comment		Wellbore
0.00	974.00	Drift Indicator (Standard)		Rig Shots		No.324H AWB
974.00	15482.00	NaviTrak (Standard)		BHI MWD NaviTrak <1013-15482>		No.324H AWB
15482.00	15642.00	Blind Drilling (std)		Projection to bit		No.324H AWB