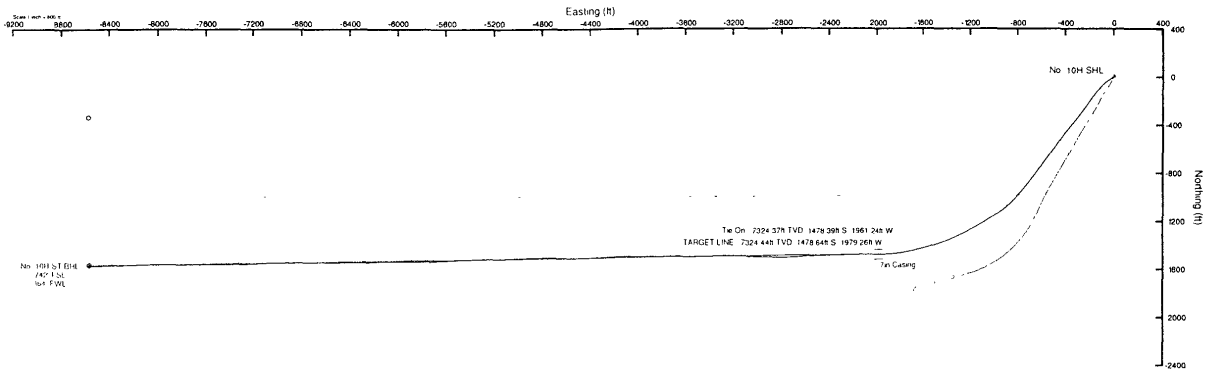




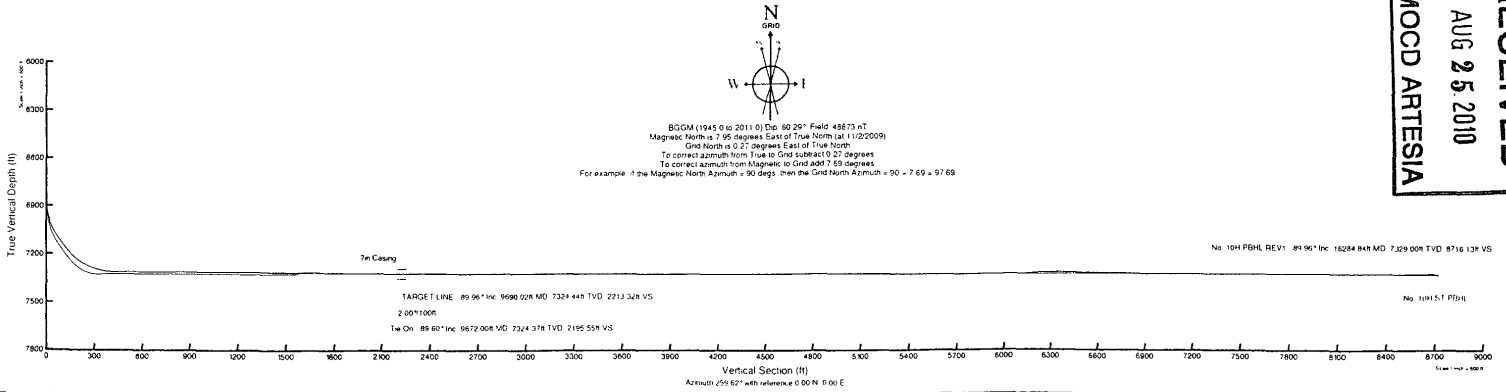
BOPCO, L.P.

Location Eddy County, NM
Field Quahada Ridge, SE (Delaware)
Facility Hudson 1 Fed No. 10H

Slot No 10H SHL
Well No 10H
Wellbore No 10H ST PWB



Plot reference wellpath is Plan #3 Projection vs Actual <FINAL>	
True vertical depths are referenced to Rig on No 10H SHL (KB)	Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No 10H SHL (KB)	North Reference: Gnd north
Rig on No 10H SHL (KB) to Mean Sea Level: 3309 feet	Scale: True distance
Mean Sea Level to Mud line (Facility, Hudson 1 Fed No. 10H): -3290 feet	Depths are in feet
Coordinates are in feet referenced to Facility Center	Created by: Victor Hernandez on 5/10/2010



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Actual Wellpath Report

No. 10H ST AWP

Page 1 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 10H SHL
Area	Eddy County, NM	Well	No. 10H
Field	Quahada Ridge, SE (Delaware)	Wellbore	No. 10H ST AWP
Facility	Hudson 1 Fed No. 10H	Sidetrack from	No. 10H AWP at 6810.00 MD

WELL SETUP INFORMATION

Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999937	Report Generated	5/10/2010 at 10:56:18 AM
Convergence at slot	0.27° East	Database/Source file	WA_Midland/No. 10H_ST_AWP.xml

WELL PATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	696370.91	485276.08	32°19'59.150"N	103°49'52.989"W
Facility Reference Pt			696370.91	485276.08	32°19'59.150"N	103°49'52.989"W
Field Reference Pt			696371.30	485350.50	32°19'59.887"N	103°49'52.981"W

WELL PATH DATUM

Calculation method	Minimum curvature	Rig on No. 10H SHL (KB) to GL	19.00ft
Horizontal Reference Pt	SL	Rig on No. 10H SHL (KB) to Mean Sea Level	3309.00ft
Vertical Reference Pt	Rig on No. 10H SHL (KB)	GL to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 10H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	259.61°



Actual Wellpath Report

No. 10H ST AWP

Page 3 of 9



WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 10H SHL
Area	Eddy County, NM	Well	No. 10H
Field	Quahada Ridge, SE (Delaware)	Wellbore	No. 10H ST AWP
Facility	Hudson 1 Fed No. 10H	Sidetrack from	No. 10H AWP at 6810.00 MD

WELLPATH DATA (189 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
3000.00	0.320	66.920	2999.97	-3.31	3.08	2.80	696373.71	485279.16	32°19'59.180"N	103°49'52.957"W	0.42
3100.00	0.400	83.910	3099.97	-3.93	3.23	3.41	696374.31	485279.31	32°19'59.182"N	103°49'52.949"W	0.13
3200.00	0.620	92.500	3199.97	-4.81	3.24	4.29	696375.20	485279.32	32°19'59.182"N	103°49'52.939"W	0.23
3300.00	0.630	97.930	3299.96	-5.86	3.14	5.38	696376.29	485279.22	32°19'59.181"N	103°49'52.926"W	0.06
3400.00	0.850	88.370	3399.95	-7.11	3.09	6.66	696377.57	485279.17	32°19'59.180"N	103°49'52.911"W	0.25
3500.00	0.820	100.020	3499.94	-8.52	2.98	8.11	696379.02	485279.06	32°19'59.179"N	103°49'52.895"W	0.17
3600.00	0.860	224.530	3599.94	-8.57	2.33	8.29	696379.20	485278.41	32°19'59.173"N	103°49'52.893"W	1.49
3700.00	1.070	126.540	3699.93	-8.60	1.23	8.51	696379.42	485277.31	32°19'59.162"N	103°49'52.890"W	1.46
3800.00	0.730	67.100	3799.92	-9.85	0.93	9.85	696380.76	485277.01	32°19'59.159"N	103°49'52.874"W	0.94
3900.00	1.230	351.280	3899.91	-10.51	2.24	10.27	696381.18	485278.32	32°19'59.172"N	103°49'52.869"W	1.27
4000.00	1.290	353.390	3999.88	-10.61	4.41	9.98	696380.89	485280.49	32°19'59.193"N	103°49'52.873"W	0.08
4100.00	1.130	346.530	4099.86	-10.63	6.49	9.62	696380.53	485282.57	32°19'59.214"N	103°49'52.877"W	0.22
4200.00	1.050	348.170	4199.84	-10.56	8.35	9.20	696380.11	485284.43	32°19'59.232"N	103°49'52.882"W	0.09
4300.00	0.950	349.570	4299.83	-10.54	10.06	8.87	696379.78	485286.14	32°19'59.249"N	103°49'52.885"W	0.10
4400.00	0.740	342.220	4399.82	-10.45	11.49	8.52	696379.43	485287.57	32°19'59.263"N	103°49'52.889"W	0.24
4500.00	0.610	342.180	4499.81	-10.30	12.61	8.16	696379.07	485288.69	32°19'59.275"N	103°49'52.894"W	0.13
4600.00	0.530	335.010	4599.80	-10.11	13.54	7.80	696378.71	485289.62	32°19'59.284"N	103°49'52.898"W	0.11
4700.00	0.370	323.260	4699.80	-9.85	14.22	7.41	696378.32	485290.29	32°19'59.290"N	103°49'52.902"W	0.18
4800.00	0.350	320.800	4799.80	-9.56	14.71	7.03	696377.94	485290.79	32°19'59.295"N	103°49'52.907"W	0.03
4900.00	0.290	319.730	4899.80	-9.29	15.14	6.67	696377.58	485291.22	32°19'59.300"N	103°49'52.911"W	0.06
5000.00	0.270	320.650	4999.80	-9.05	15.52	6.36	696377.27	485291.59	32°19'59.303"N	103°49'52.914"W	0.02
5100.00	0.270	326.360	5099.80	-8.84	15.89	6.08	696376.99	485291.97	32°19'59.307"N	103°49'52.918"W	0.03
5200.00	0.260	313.720	5199.79	-8.62	16.25	5.78	696376.69	485292.33	32°19'59.311"N	103°49'52.921"W	0.06
5300.00	0.180	328.260	5299.79	-8.43	16.54	5.54	696376.44	485292.62	32°19'59.313"N	103°49'52.924"W	0.10
5400.00	0.180	316.780	5399.79	-8.29	16.79	5.35	696376.25	485292.86	32°19'59.316"N	103°49'52.926"W	0.04
5500.00	0.170	330.220	5499.79	-8.15	17.03	5.16	696376.07	485293.11	32°19'59.318"N	103°49'52.928"W	0.04
5600.00	0.130	277.330	5599.79	-7.99	17.17	4.98	696375.89	485293.25	32°19'59.320"N	103°49'52.930"W	0.14
5700.00	0.180	262.010	5699.79	-7.73	17.16	4.71	696375.62	485293.24	32°19'59.320"N	103°49'52.933"W	0.06
5800.00	0.230	282.680	5799.79	-7.39	17.19	4.36	696375.27	485293.27	32°19'59.320"N	103°49'52.938"W	0.09
5900.00	0.370	210.480	5899.79	-6.99	16.95	4.00	696374.91	485293.03	32°19'59.318"N	103°49'52.942"W	0.37



Actual Wellpath Report

No. 10H ST AWP

Page 5 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 10H SHL
Area	Eddy County, NM	Well	No. 10H
Field	Quahada Ridge, SE (Delaware)	Wellbore	No. 10H ST AWP
Facility	Hudson 1 Fed No. 10H	Sidetrack from	No. 10H AWP at 6810.00 MD

WELLPATH DATA (189 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
7457.00	75.200	216.100	7283.85	278.46	-258.05	-235.78	696135.15	485018.05	32°19'56.608"N	103°49'55.751"W	9.99
7488.00	76.200	216.600	7291.51	300.34	-282.24	-253.58	696117.34	484993.86	32°19'56.369"N	103°49'55.960"W	3.58
7520.00	78.400	218.200	7298.54	323.46	-307.04	-272.54	696098.38	484969.06	32°19'56.125"N	103°49'56.182"W	8.43
7552.00	80.900	217.600	7304.29	346.96	-331.88	-291.88	696079.05	484944.23	32°19'55.880"N	103°49'56.409"W	8.03
7583.00	84.400	218.900	7308.26	370.03	-356.02	-310.91	696060.02	484920.09	32°19'55.642"N	103°49'56.632"W	12.03
7615.00	87.100	218.900	7310.63	394.22	-380.85	-330.95	696039.98	484895.26	32°19'55.397"N	103°49'56.867"W	8.44
7647.00	90.000	219.000	7311.44	418.49	-405.72	-351.06	696019.88	484870.38	32°19'55.152"N	103°49'57.103"W	9.07
7678.00	91.600	218.300	7311.00	441.90	-429.93	-370.41	696000.52	484846.18	32°19'54.913"N	103°49'57.330"W	5.63
7767.00	89.600	216.800	7310.07	507.97	-500.48	-424.65	695946.29	484775.63	32°19'54.218"N	103°49'57.966"W	2.81
7862.00	89.600	215.400	7310.73	576.87	-577.24	-480.62	695890.32	484698.88	32°19'53.461"N	103°49'58.622"W	1.47
7957.00	89.500	216.400	7311.48	645.54	-654.19	-536.32	695834.62	484621.93	32°19'52.702"N	103°49'59.275"W	1.06
8052.00	89.600	216.600	7312.23	714.89	-730.55	-592.83	695778.12	484545.58	32°19'51.949"N	103°49'59.938"W	0.24
8147.00	89.600	218.300	7312.89	785.31	-805.97	-650.59	695720.36	484470.17	32°19'51.205"N	103°50'00.615"W	1.79
8245.00	89.600	218.200	7313.57	858.87	-882.93	-711.26	695659.70	484393.21	32°19'50.447"N	103°50'01.327"W	0.10
8340.00	89.700	221.900	7314.16	932.10	-955.63	-772.38	695598.58	484320.51	32°19'49.730"N	103°50'02.043"W	3.90
8435.00	89.700	223.500	7314.65	1008.06	-1025.45	-836.80	695534.16	484250.70	32°19'49.042"N	103°50'02.797"W	1.68
8531.00	89.700	232.100	7315.16	1089.56	-1089.87	-907.85	695463.12	484186.28	32°19'48.408"N	103°50'03.629"W	8.96
8626.00	89.500	236.600	7315.82	1175.46	-1145.22	-985.02	695385.95	484130.93	32°19'47.864"N	103°50'04.531"W	4.74
8720.00	89.600	238.600	7316.56	1262.60	-1195.59	-1064.38	695306.60	484080.57	32°19'47.369"N	103°50'05.459"W	2.13
8815.00	89.500	240.700	7317.30	1351.89	-1243.59	-1146.36	695224.63	484032.58	32°19'46.898"N	103°50'06.417"W	2.21
8910.00	89.500	242.900	7318.13	1442.33	-1288.47	-1230.07	695140.92	483987.69	32°19'46.458"N	103°50'07.395"W	2.32
9006.00	89.500	245.400	7318.97	1534.85	-1330.33	-1316.46	695054.54	483945.84	32°19'46.047"N	103°50'08.404"W	2.60
9101.00	89.600	249.700	7319.72	1627.73	-1366.59	-1404.23	694966.77	483909.58	32°19'45.693"N	103°50'09.429"W	4.53
9196.00	89.500	252.400	7320.46	1721.66	-1397.44	-1494.07	694876.93	483878.73	32°19'45.392"N	103°50'10.478"W	2.84
9292.00	89.500	255.600	7321.30	1817.18	-1423.90	-1586.34	694784.67	483852.28	32°19'45.134"N	103°50'11.554"W	3.33
9386.00	89.500	257.500	7322.12	1911.04	-1445.76	-1677.75	694693.27	483830.41	32°19'44.922"N	103°50'12.621"W	2.02
9482.00	89.600	260.500	7322.88	2007.02	-1464.07	-1771.98	694599.05	483812.10	32°19'44.745"N	103°50'13.720"W	3.13
9577.00	89.500	266.500	7323.62	2101.75	-1474.82	-1866.32	694504.71	483801.35	32°19'44.643"N	103°50'14.820"W	6.32
9672.00	89.600	269.200	7324.37	2195.76	-1478.39	-1961.24	694409.80	483797.79	32°19'44.612"N	103°50'15.926"W	2.84
9765.00	89.200	269.600	7325.34	2287.40	-1479.36	-2054.23	694316.81	483796.82	32°19'44.607"N	103°50'17.010"W	0.61



Actual Wellpath Report

No. 10H ST AWP

Page 7 of 9



WELL IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 10H SHL
Area	Eddy County, NM	Well	No. 10H
Field	Quahada Ridge, SE (Delaware)	Wellbore	No. 10H ST AWP
Facility	Hudson 1 Fed No. 10H	Sidetrack from	No. 10H AWP at 6810.00 MD

WELLPATH DATA (189 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
12671.00	89.900	267.500	7330.06	5150.14	-1513.31	-4958.49	691412.75	483762.86	32°19'44.402"N	103°50'50.858"W	1.32
12766.00	89.700	267.900	7330.39	5244.19	-1517.13	-5053.41	691317.83	483759.05	32°19'44.369"N	103°50'51.964"W	0.47
12862.00	90.300	269.100	7330.39	5339.03	-1519.64	-5149.38	691221.87	483756.54	32°19'44.348"N	103°50'53.083"W	1.40
12957.00	90.300	268.600	7329.89	5432.80	-1521.55	-5244.35	691126.90	483754.63	32°19'44.334"N	103°50'54.190"W	0.53
13052.00	90.400	268.900	7329.31	5526.59	-1523.62	-5339.33	691031.93	483752.56	32°19'44.317"N	103°50'55.297"W	0.33
13148.00	90.300	269.000	7328.73	5621.31	-1525.38	-5435.31	690935.95	483750.80	32°19'44.304"N	103°50'56.416"W	0.15
13244.00	90.400	267.400	7328.14	5716.23	-1528.39	-5531.26	690840.01	483747.79	32°19'44.279"N	103°50'57.534"W	1.67
13340.00	90.300	265.800	7327.55	5811.51	-1534.09	-5627.09	690744.19	483742.09	32°19'44.227"N	103°50'58.651"W	1.67
13434.00	90.200	267.800	7327.14	5904.77	-1539.33	-5720.93	690650.35	483736.85	32°19'44.179"N	103°50'59.745"W	2.13
13529.00	90.400	270.700	7326.65	5998.41	-1540.58	-5815.91	690555.38	483735.60	32°19'44.171"N	103°51'00.852"W	3.06
13625.00	90.700	270.300	7325.72	6092.68	-1539.74	-5911.91	690459.39	483736.44	32°19'44.183"N	103°51'01.970"W	0.52
13722.00	95.400	271.400	7320.57	6187.65	-1538.30	-6008.73	690362.57	483737.88	32°19'44.202"N	103°51'03.099"W	4.98
13817.00	89.600	268.100	7316.42	6281.03	-1538.72	-6103.58	690267.72	483737.46	32°19'44.202"N	103°51'04.204"W	7.02
13912.00	89.200	268.000	7317.42	6374.99	-1541.96	-6198.52	690172.79	483734.22	32°19'44.174"N	103°51'05.311"W	0.43
14008.00	89.100	269.000	7318.84	6469.83	-1544.47	-6294.48	690076.84	483731.71	32°19'44.154"N	103°51'06.429"W	1.05
14103.00	89.200	269.400	7320.25	6563.49	-1545.80	-6389.46	689981.87	483730.39	32°19'44.145"N	103°51'07.536"W	0.43
14199.00	89.100	270.200	7321.67	6657.96	-1546.13	-6485.45	689885.89	483730.05	32°19'44.146"N	103°51'08.655"W	0.84
14294.00	89.100	270.200	7323.17	6751.33	-1545.80	-6580.44	689790.91	483730.38	32°19'44.153"N	103°51'09.762"W	0.00
14389.00	89.200	270.100	7324.58	6844.72	-1545.55	-6675.42	689695.92	483730.63	32°19'44.160"N	103°51'10.869"W	0.15
14485.00	89.300	269.900	7325.83	6939.14	-1545.55	-6771.42	689599.94	483730.63	32°19'44.164"N	103°51'11.987"W	0.23
14582.00	89.400	269.500	7326.93	7034.63	-1546.06	-6868.41	689502.95	483730.12	32°19'44.163"N	103°51'13.118"W	0.43
14676.00	89.900	269.200	7327.51	7127.27	-1547.12	-6962.40	689408.97	483729.06	32°19'44.157"N	103°51'14.213"W	0.62
14770.00	89.700	268.700	7327.84	7220.02	-1548.85	-7056.38	689314.99	483727.33	32°19'44.144"N	103°51'15.309"W	0.57
14866.00	89.600	267.100	7328.42	7315.01	-1552.37	-7152.31	689219.06	483723.82	32°19'44.114"N	103°51'16.427"W	1.67
14963.00	90.100	268.200	7328.68	7411.06	-1556.34	-7249.23	689122.15	483719.84	32°19'44.078"N	103°51'17.556"W	1.25
15059.00	90.000	269.300	7328.59	7505.84	-1558.44	-7345.21	689026.18	483717.75	32°19'44.062"N	103°51'18.675"W	1.15
15154.00	90.100	269.700	7328.51	7599.42	-1559.27	-7440.20	688931.19	483716.92	32°19'44.058"N	103°51'19.782"W	0.43
15249.00	90.100	269.700	7328.34	7692.95	-1559.76	-7535.20	688836.20	483716.42	32°19'44.057"N	103°51'20.889"W	0.00
15345.00	90.000	270.300	7328.26	7787.38	-1559.76	-7631.20	688740.21	483716.42	32°19'44.062"N	103°51'22.008"W	0.63
15441.00	90.100	269.900	7328.18	7881.77	-1559.60	-7727.20	688644.22	483716.59	32°19'44.067"N	103°51'23.127"W	0.43



Actual Wellpath Report

No. 10H ST AWP

Page 9 of 9



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No. 10H SHL
Area	Eddy County, NM	Well	No. 10H
Field	Quahada Ridge, SE (Delaware)	Wellbore	No. 10H ST AWB
Facility	Hudson 1 Fed No. 10H	Sidetrack from	No. 10H AWB at 6810.00 MD

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
No. 10H PBHL		7329.00	-1656.83	-8573.48	687797.99	483619.35	32°19'43.142"N	103°51'32.994"W	point
No. 10H ST PBHL		7329.00	-1489.42	-8574.02	687797.45	483786.75	32°19'44.799"N	103°51'32.992"W	point
No. 10H ST PBHL Rev2		7329.00	-1570.58	-8563.44	687808.03	483705.60	32°19'43.995"N	103°51'32.873"W	point

WELLPATH COMPOSITION

Ref Wellbore: No. 10H ST AWB

Ref Wellpath: No. 10H ST AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	6810.00	Generic gyro - continuous (Standard)	GYRO <100 - 6810>	No. 10H AWB
6810.00	16206.00	NaviTrak (Standard)	MWD <6824 - 16206>	No. 10H ST AWB
16206.00	16274.00	Blind Drilling (std)	Projection to bit	No. 10H ST AWB