

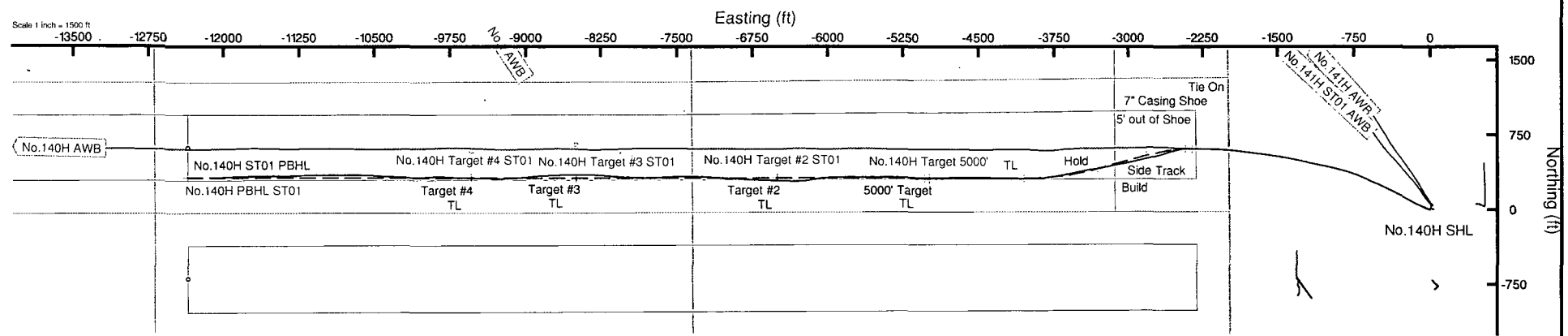
30-015-39809



BOPCO, L.P.

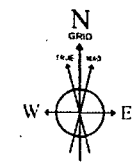
Location: Eddy County, NM
Field: JRU NAD27
Facility: (JRU) No.140H & No.141H

Slot: No.140H SHL
Well: No.140H ST01
Wellbore: No.140H PWB ST01

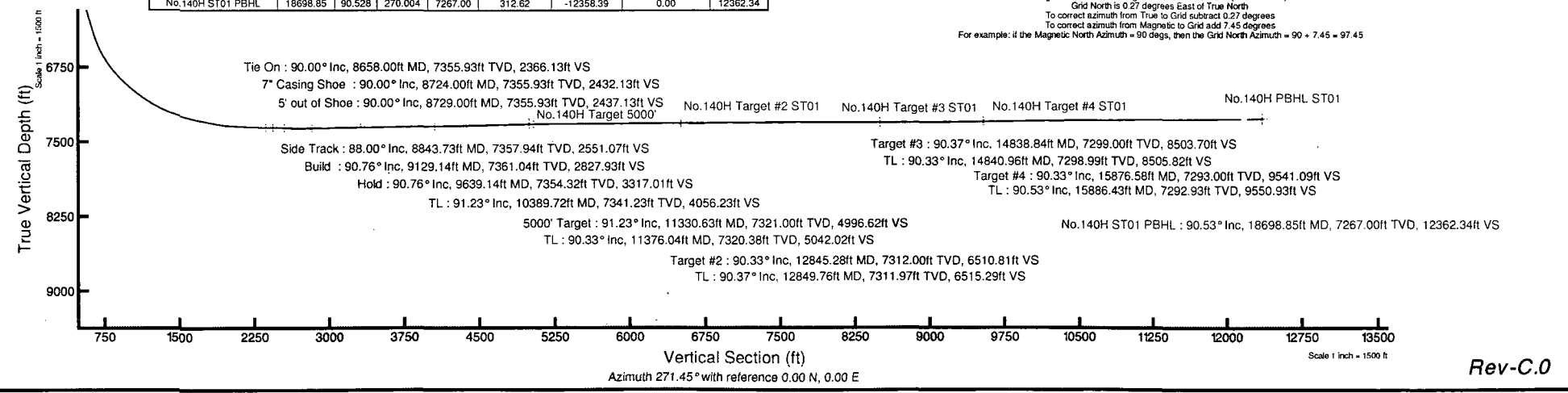


Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	8658.00	90.000	271.300	7355.93	608.38	-2351.50	2366.13
7" Casing Shoe	8724.00	90.000	271.300	7355.93	609.87	-2417.48	2432.13
5' out of Shoe	8729.00	90.000	271.300	7355.93	609.99	-2422.48	2437.13
Side Track	8843.73	88.000	260.000	7357.94	601.30	-2536.68	2551.07
Build	9129.14	90.755	255.000	7361.04	539.56	-2815.18	2827.93
Hold	9639.14	90.755	255.000	7354.32	407.57	-3307.76	3317.01
TL	10389.72	91.232	270.006	7341.23	309.93	-4049.69	4056.23
5000' Target	11330.63	91.232	270.006	7321.00	310.03	-4990.38	4996.62
TL	11376.04	90.327	270.081	7320.38	310.07	-5035.79	5042.02
Target #2	12845.28	90.327	270.081	7312.00	312.15	-6505.00	6510.81
TL	12849.76	90.374	270.005	7311.97	312.15	-6509.48	6515.29
Target #3	14838.84	90.374	270.005	7299.00	312.32	-8498.52	8503.70
TL	14940.96	90.331	270.004	7298.99	312.32	-8500.64	8505.82
Target #4	15876.58	90.331	270.004	7293.00	312.40	-9536.24	9541.09
TL	15886.43	90.528	270.004	7292.93	312.40	-9546.09	9550.93
No.140H ST01 PBHL	18698.85	90.528	270.004	7267.00	312.62	-12358.39	12362.34

Plot reference wellpath is Rev-C.0 ST01	
True vertical depths are referenced to Rig on No.140H SHL (KB)	Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No.140H SHL (KB)	North Reference: Grid north
Rig on No.140H SHL (KB) to Mean Sea Level: 3375 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: No.140H SHL): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gentility on 7/3/2012



BGGM (1945.0 to 2013.0) Dip: 60.22° Field: 48607.5 nT
Magnetic North is 7.71 degrees East of True North (at 2/23/2012)
Grid North is 0.27 degrees East of True North
To correct azimuth from True to Grid subtract 0.27 degrees
To correct azimuth from Magnetic to Grid add 7.45 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.45 = 97.45



Rev-C.0



Actual Wellpath Report

No.140H AWP ST01

Page 1 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.140H SHL
Area	Eddy County, NM	Well	No.140H ST01
Field	JRU NAD27	Wellbore	No.140H AWB ST01
Facility	(JRU) No.140H & No.141H	Sidetrack from	No.140H AWB at 8658.00 MD

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	0.999936	Report Generated	7/18/2012 at 7:04:49 AM
Convergence at slot	0.27° East	Database/Source file	WA Midland/No.140H_AWB_ST01.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	653555.00	496152.80	32°21'47.011"N	103°50'09.669"W
Facility Reference Pt			653555.00	496152.80	32°21'47.011"N	103°50'09.669"W
Field Reference Pt			652495.44	494904.92	32°21'34.711"N	103°50'22.090"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No.140H SHL (KB) to Facility Vertical Datum	3375.00ft
Horizontal Reference Pt	Slot	Rig on No.140H SHL (KB) to Mean Sea Level	3375.00ft
Vertical Reference Pt	Rig on No.140H SHL (KB)	Rig on No.140H SHL (KB) to Mud Line at Slot (No.140H SHL)	3375.00ft
MD Reference Pt	Rig on No.140H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	271.45°



Actual Wellpath Report

No.140H AWP ST01

Page 2 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.140H SHL
Area	Eddy County, NM	Well	No.140H ST01
Field	JRU NAD27	Wellbore	No.140H AWP ST01
Facility	(JRU) No.140H & No.141H	Sidetrack from	No.140H AWP at 8658.00 MD

WELLPATH DATA (174 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	64.670	0.00	0.00	0.00	0.00	653555.00	496152.80	32°21'47.011"N	103°50'09.669"W	0.00	
75.00	0.390	64.670	75.00	-0.23	0.11	0.23	653555.23	496152.91	32°21'47.012"N	103°50'09.667"W	0.52	
175.00	0.370	90.780	175.00	-0.85	0.25	0.86	653555.86	496153.05	32°21'47.014"N	103°50'09.659"W	0.17	
275.00	0.180	29.610	275.00	-1.25	0.38	1.26	653556.26	496153.18	32°21'47.015"N	103°50'09.655"W	0.32	
369.00	0.390	288.800	369.00	-1.02	0.61	1.03	653556.03	496153.41	32°21'47.017"N	103°50'09.657"W	0.49	
463.00	0.410	295.820	462.99	-0.40	0.86	0.43	653555.43	496153.66	32°21'47.020"N	103°50'09.664"W	0.06	
557.00	0.140	246.580	556.99	0.01	0.96	0.02	653555.02	496153.76	32°21'47.021"N	103°50'09.669"W	0.36	
650.00	0.530	326.750	649.99	0.35	1.28	-0.32	653554.68	496154.08	32°21'47.024"N	103°50'09.673"W	0.56	
681.00	0.380	317.760	680.99	0.51	1.48	-0.47	653554.53	496154.27	32°21'47.026"N	103°50'09.675"W	0.53	
760.00	0.300	327.800	759.99	0.80	1.84	-0.76	653554.24	496154.64	32°21'47.030"N	103°50'09.678"W	0.13	
885.00	0.500	344.400	884.99	1.14	2.65	-1.08	653553.92	496155.45	32°21'47.038"N	103°50'09.682"W	0.18	
978.00	0.400	318.400	977.98	1.48	3.28	-1.40	653553.60	496156.08	32°21'47.044"N	103°50'09.686"W	0.24	
1262.00	0.100	0.000	1261.98	2.17	4.27	-2.06	653552.94	496157.07	32°21'47.054"N	103°50'09.693"W	0.12	
1553.00	0.200	155.900	1552.98	1.95	4.06	-1.85	653553.15	496156.86	32°21'47.052"N	103°50'09.691"W	0.10	
1843.00	0.200	181.800	1842.98	1.24	3.67	-1.14	653553.86	496156.47	32°21'47.048"N	103°50'09.683"W	0.08	
2132.00	0.100	92.200	2131.98	0.49	3.73	-0.39	653554.61	496156.53	32°21'47.048"N	103°50'09.674"W	0.04	
2422.00	0.100	36.200	2421.98	0.09	3.93	0.01	653555.01	496156.73	32°21'47.050"N	103°50'09.669"W	0.03	
2712.00	0.100	337.700	2711.98	0.05	4.36	0.06	653555.06	496157.16	32°21'47.055"N	103°50'09.668"W	0.03	
3003.00	0.300	140.700	3002.97	-0.35	4.01	0.45	653555.45	496156.81	32°21'47.051"N	103°50'09.664"W	0.14	
3292.00	1.200	265.900	3291.96	-2.17	3.21	2.09	653552.91	496156.01	32°21'47.043"N	103°50'09.694"W	0.48	
3583.00	1.300	120.400	3582.93	2.32	1.32	-2.28	653552.72	496154.12	32°21'47.025"N	103°50'09.696"W	0.82	
3800.00	1.200	243.000	3799.90	2.16	-0.96	-2.18	653552.82	496151.84	32°21'47.002"N	103°50'09.695"W	1.01	
3924.00	1.100	261.100	3923.88	4.47	-1.73	-4.52	653550.48	496151.07	32°21'46.994"N	103°50'09.722"W	0.30	
4021.00	2.100	273.700	4020.84	7.16	-1.76	-7.21	653547.79	496151.04	32°21'46.994"N	103°50'09.754"W	1.09	
4117.00	4.500	289.000	4116.68	-12.51	-0.42	-12.53	653542.47	496152.38	32°21'47.008"N	103°50'09.816"W	2.64	
4214.00	6.500	290.500	4213.22	21.33	2.74	-21.27	653533.73	496155.54	32°21'47.039"N	103°50'09.917"W	2.07	
4311.00	8.700	295.900	4309.37	33.20	7.87	-33.01	653521.99	496160.67	32°21'47.091"N	103°50'10.054"W	2.38	
4408.00	9.400	297.500	4405.16	47.00	14.73	-46.64	653508.36	496167.53	32°21'47.159"N	103°50'10.212"W	0.77	
4504.00	9.400	297.700	4499.87	61.07	22.00	-60.53	653494.47	496174.79	32°21'47.232"N	103°50'10.374"W	0.03	
4601.00	10.800	293.800	4595.37	-76.58	-29.35	-75.86	653479.14	496182.14	32°21'47.305"N	103°50'10.552"W	1.61	
4698.00	13.300	292.500	4690.22	95.40	37.28	-94.49	653460.52	496190.08	32°21'47.385"N	103°50'10.769"W	2.59	
4795.00	14.200	293.700	4784.44	116.83	46.34	-115.69	653439.32	496199.13	32°21'47.475"N	103°50'11.016"W	0.97	
4892.00	17.200	295.500	4877.81	140.94	57.29	-139.54	653415.47	496210.09	32°21'47.585"N	103°50'11.293"W	3.13	
4988.00	18.900	298.800	4969.09	167.72	70.90	-165.98	653389.04	496223.69	32°21'47.721"N	103°50'11.601"W	2.07	
5085.00	19.900	301.800	5060.58	-195.92	-87.17	-193.77	653361.24	496239.96	32°21'47.883"N	103°50'11.924"W	1.46	
5182.00	22.200	298.800	5151.10	226.44	104.70	-223.87	653331.15	496257.49	32°21'48.058"N	103°50'12.274"W	2.62	
5279.00	22.800	298.900	5240.72	259.40	122.61	-256.38	653298.64	496275.40	32°21'48.236"N	103°50'12.652"W	0.62	
5374.00	22.400	297.600	5328.42	291.98	139.89	-288.54	653266.48	496292.68	32°21'48.409"N	103°50'13.026"W	0.67	
5471.00	19.800	296.100	5418.91	323.51	155.68	-319.67	653235.35	496308.47	32°21'48.567"N	103°50'13.388"W	2.74	
5567.00	19.200	296.000	5509.41	352.65	169.76	-348.46	653206.56	496322.54	32°21'48.707"N	103°50'13.723"W	0.63	
5664.00	19.100	295.900	5601.04	381.60	183.68	-377.08	653177.95	496336.47	32°21'48.846"N	103°50'14.056"W	0.11	
5761.00	19.600	296.700	5692.56	410.76	197.92	-405.89	653149.14	496350.71	32°21'48.988"N	103°50'14.391"W	0.58	
5857.00	20.600	296.900	5782.71	440.58	212.80	-435.33	653119.70	496365.58	32°21'49.137"N	103°50'14.733"W	1.04	
5954.00	21.000	296.600	5873.39	471.72	228.30	-466.09	653088.94	496381.09	32°21'49.292"N	103°50'15.091"W	0.43	
6050.00	20.200	295.100	5963.25	502.47	243.03	-496.48	653058.55	496395.82	32°21'49.439"N	103°50'15.444"W	1.00	



Actual Wellpath Report

No.140H AWP ST01

Page 3 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.140H SHL
Area	Eddy County, NM	Well	No.140H ST01
Field	JRU NAD27	Wellbore	No.140H AWP ST01
Facility	(JRU) No.140H & No.141H	Sidetrack from	No.140H AWP at 8658.00 MD

WELLPATH DATA (174 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
6146.00	18.300	292.100	6053.88	531.76	255.74	-525.46	653029.57	496408.52	32°21'49.566"N	103°50'15.781"W	2.23	
6243.00	17.800	291.800	6146.11	559.91	266.97	-553.34	653001.70	496419.75	32°21'49.679"N	103°50'16.106"W	0.52	
6340.00	18.200	296.600	6238.37	587.52	279.26	-580.65	652974.39	496432.04	32°21'49.801"N	103°50'16.424"W	1.58	
6436.00	17.900	297.800	6329.64	614.32	292.86	-607.10	652947.94	496445.64	32°21'49.937"N	103°50'16.731"W	0.50	
6533.00	20.300	294.400	6421.30	643.17	306.76	-635.62	652919.42	496459.54	32°21'50.076"N	103°50'17.063"W	2.73	
6630.00	22.500	293.200	6511.60	675.91	321.03	-668.01	652887.04	496473.80	32°21'50.219"N	103°50'17.440"W	2.31	
6727.00	29.400	292.500	6598.77	715.42	337.47	-707.11	652847.94	496490.25	32°21'50.383"N	103°50'17.895"W	7.12	
6823.00	34.000	290.200	6680.43	762.85	355.76	-754.10	652800.95	496508.54	32°21'50.566"N	103°50'18.442"W	4.95	
6920.00	38.000	287.400	6758.90	817.27	374.07	-808.07	652746.99	496526.84	32°21'50.750"N	103°50'19.070"W	4.46	
7018.00	42.900	285.500	6833.45	878.67	392.01	-869.04	652686.02	496544.79	32°21'50.930"N	103°50'19.780"W	5.16	
7115.00	47.600	284.800	6901.72	945.58	410.00	-935.52	652619.55	496562.77	32°21'51.111"N	103°50'20.554"W	4.87	
7212.00	50.400	282.300	6965.36	1017.15	427.11	-1006.67	652548.39	496579.88	32°21'51.284"N	103°50'21.382"W	3.48	
7308.00	52.800	280.900	7024.99	1091.20	442.22	-1080.37	652474.70	496594.99	32°21'51.437"N	103°50'22.241"W	2.75	
7405.00	56.600	283.300	7081.03	1168.98	458.85	-1157.74	652397.33	496611.62	32°21'51.605"N	103°50'23.142"W	4.41	
7501.00	61.300	283.900	7130.54	1249.35	478.19	-1237.66	652317.43	496630.96	32°21'51.800"N	103°50'24.072"W	4.92	
7598.00	65.300	282.000	7174.11	1334.25	497.58	-1322.09	652233.00	496650.35	32°21'51.996"N	103°50'25.056"W	4.48	
7695.00	69.700	280.900	7211.23	1422.48	515.36	-1409.90	652145.19	496668.12	32°21'52.175"N	103°50'26.079"W	4.66	
7792.00	73.900	279.100	7241.52	1513.59	531.34	-1500.63	652054.47	496684.10	32°21'52.338"N	103°50'27.135"W	4.67	
7888.00	75.000	278.400	7267.25	1605.32	545.40	-1592.04	651963.07	496698.17	32°21'52.481"N	103°50'28.200"W	1.34	
7985.00	79.500	277.600	7288.66	1699.29	558.56	-1685.70	651869.41	496711.32	32°21'52.616"N	103°50'29.292"W	4.71	
8082.00	79.500	277.500	7306.33	1794.12	571.09	-1780.25	651774.87	496723.85	32°21'52.744"N	103°50'30.393"W	0.10	
8178.00	79.700	277.100	7323.66	1888.05	583.09	-1873.91	651681.22	496735.85	32°21'52.867"N	103°50'31.484"W	0.46	
8275.00	84.500	274.100	7336.99	1983.84	592.45	-1969.49	651585.64	496745.21	32°21'52.964"N	103°50'32.598"W	5.82	
8372.00	86.200	273.400	7344.86	2080.44	598.77	-2065.96	651489.18	496751.53	32°21'53.031"N	103°50'33.723"W	1.89	
8469.00	86.900	272.300	7350.69	2177.23	603.58	-2162.66	651392.48	496756.34	32°21'53.083"N	103°50'34.850"W	1.34	
8565.00	88.400	271.100	7354.63	2273.15	606.43	-2258.53	651296.61	496759.19	32°21'53.115"N	103°50'35.967"W	2.00	
8658.00	90.000	271.300	7355.93	2366.13	608.38	-2351.50	651203.65	496761.14	32°21'53.139"N	103°50'37.051"W	1.73	
8853.00	86.300	253.500	7362.27	2557.80	582.74	-2543.88	651011.29	496735.50	32°21'52.894"N	103°50'39.295"W	9.32	
8923.00	88.200	252.100	7365.63	2624.05	562.06	-2610.67	650944.50	496714.83	32°21'52.692"N	103°50'40.075"W	3.37	
9018.00	90.800	255.600	7366.46	2714.58	535.65	-2701.89	650853.28	496688.41	32°21'52.435"N	103°50'41.140"W	4.59	
9113.00	90.100	256.600	7365.72	2806.18	512.83	-2794.11	650761.08	496665.59	32°21'52.213"N	103°50'42.216"W	1.28	
9209.00	91.000	257.500	7364.79	2899.16	491.31	-2887.66	650667.53	496644.08	32°21'52.005"N	103°50'43.308"W	1.33	
9304.00	91.000	257.700	7363.14	2991.39	470.92	-2980.43	650574.77	496623.69	32°21'51.807"N	103°50'44.391"W	0.21	
9399.00	91.100	259.500	7361.40	3083.99	452.14	-3073.54	650481.67	496604.91	32°21'51.625"N	103°50'45.477"W	1.90	
9494.00	91.000	258.400	7359.65	3176.72	433.94	-3166.76	650388.45	496586.71	32°21'51.449"N	103°50'46.565"W	1.16	
9589.00	91.000	260.300	7358.00	3269.59	416.39	-3260.10	650295.11	496569.16	32°21'51.280"N	103°50'47.654"W	2.00	
9685.00	91.100	260.600	7356.24	3363.81	400.46	-3354.76	650200.46	496553.23	32°21'51.127"N	103°50'48.758"W	0.33	
9780.00	91.000	259.700	7354.50	3456.95	384.21	-3448.34	650106.89	496536.99	32°21'50.970"N	103°50'49.850"W	0.95	
9875.00	91.000	258.100	7352.84	3549.67	365.93	-3541.54	650013.69	496518.70	32°21'50.793"N	103°50'50.938"W	1.68	
9971.00	91.000	259.000	7351.16	3643.23	346.87	-3635.62	649919.62	496499.65	32°21'50.609"N	103°50'52.035"W	0.94	
10066.00	91.000	260.800	7349.50	3736.29	330.22	-3729.13	649826.12	496482.99	32°21'50.448"N	103°50'53.126"W	1.89	
10161.00	91.000	263.500	7347.85	3830.02	317.24	-3823.22	649732.04	496470.02	32°21'50.324"N	103°50'54.224"W	2.84	
10256.00	91.000	266.900	7346.19	3924.42	309.30	-3917.85	649637.40	496462.08	32°21'50.250"N	103°50'55.328"W	3.58	
10351.00	91.000	269.500	7344.53	4019.25	306.31	-4012.78	649542.48	496459.09	32°21'50.224"N	103°50'56.435"W	2.74	
10447.00	91.000	269.200	7342.85	4115.17	303.22	-4108.76	649446.51	496458.00	32°21'50.218"N	103°50'57.554"W	10.31	



Actual Wellpath Report

No.140H AWP ST01

Page 4 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.140H SHL
Area	Eddy County, NM	Well	No.140H ST01
Field	JRU NAD27	Wellbore	No.140H AWP ST01
Facility	(JRU) No.140H & No.141H	Sidetrack from	No.140H AWP at 8658.00 MD

WELLPATH DATA (174 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
10542.00	91.000	271.800	7341.20	4210.13	306.05	-4203.74	649351.54	496458.83	32°21'50.230"N	103°50'58.661"W	2.74	
10637.00	91.100	273.000	7339.46	4305.10	310.03	-4298.64	649256.65	496462.81	32°21'50.274"N	103°50'59.767"W	1.27	
10732.00	91.000	272.100	7337.71	4400.07	314.26	-4393.53	649161.76	496467.04	32°21'50.320"N	103°51'00.873"W	0.95	
10827.00	91.400	269.000	7335.72	4495.02	315.17	-4488.49	649066.81	496467.95	32°21'50.333"N	103°51'01.980"W	3.29	
10922.00	91.600	269.900	7333.24	4589.93	314.26	-4583.45	648971.85	496467.04	32°21'50.329"N	103°51'03.087"W	0.97	
11018.00	91.500	270.400	7330.64	4685.87	314.51	-4679.41	648875.89	496467.29	32°21'50.335"N	103°51'04.206"W	0.53	
11113.00	91.500	268.700	7328.15	4780.78	313.76	-4774.38	648780.94	496466.54	32°21'50.332"N	103°51'05.313"W	1.79	
11208.00	91.400	267.600	7325.75	4875.59	310.70	-4869.29	648686.03	496463.48	32°21'50.306"N	103°51'06.420"W	1.16	
11303.00	91.500	270.500	7323.35	4970.47	309.12	-4964.24	648591.09	496461.90	32°21'50.295"N	103°51'07.527"W	3.05	
11398.00	90.600	271.800	7321.60	5065.45	311.03	-5059.20	648496.13	496463.81	32°21'50.318"N	103°51'08.634"W	1.66	
11494.00	90.500	271.700	7320.68	5161.44	313.96	-5155.15	648400.19	496466.74	32°21'50.351"N	103°51'09.752"W	0.15	
11589.00	90.400	272.000	7319.94	5256.44	317.03	-5250.10	648305.25	496469.81	32°21'50.386"N	103°51'10.859"W	0.33	
11684.00	90.600	270.300	7319.11	5351.43	318.93	-5345.07	648210.28	496471.71	32°21'50.409"N	103°51'11.966"W	1.80	
11779.00	90.600	271.300	7318.11	5446.42	320.26	-5440.06	648115.30	496473.04	32°21'50.426"N	103°51'13.073"W	1.05	
11874.00	90.600	267.900	7317.12	5541.35	319.60	-5535.04	648020.33	496472.37	32°21'50.424"N	103°51'14.181"W	3.58	
11969.00	90.600	271.000	7316.12	5636.27	318.68	-5630.02	647925.36	496471.46	32°21'50.419"N	103°51'15.288"W	3.26	
12064.00	90.600	271.300	7315.13	5731.27	320.59	-5724.99	647830.39	496473.37	32°21'50.442"N	103°51'16.395"W	0.32	
12158.00	90.600	268.900	7314.14	5825.23	320.75	-5818.98	647736.40	496473.53	32°21'50.448"N	103°51'17.491"W	2.55	
12253.00	90.400	267.800	7313.31	5920.09	318.02	-5913.93	647641.45	496470.80	32°21'50.425"N	103°51'18.598"W	1.18	
12348.00	90.400	266.300	7312.65	6014.80	313.13	-6008.80	647546.59	496465.91	32°21'50.381"N	103°51'19.704"W	1.58	
12443.00	89.700	261.600	7312.57	6108.96	303.12	-6103.25	647452.15	496455.90	32°21'50.286"N	103°51'20.806"W	5.00	
12538.00	90.400	260.400	7312.48	6202.38	288.26	-6197.08	647358.33	496441.04	32°21'50.143"N	103°51'21.901"W	1.46	
12633.00	90.500	267.800	7311.74	6296.53	278.50	-6291.50	647263.91	496431.28	32°21'50.051"N	103°51'23.002"W	7.79	
12727.00	90.000	273.000	7311.33	6390.49	279.16	-6385.47	647169.95	496431.94	32°21'50.061"N	103°51'24.097"W	5.56	
12822.00	90.500	271.600	7310.91	6485.47	282.97	-6480.39	647075.04	496435.75	32°21'50.103"N	103°51'25.204"W	1.56	
12917.00	90.500	272.200	7310.08	6580.46	286.12	-6575.33	646980.10	496438.90	32°21'50.138"N	103°51'26.310"W	0.63	
13012.00	90.600	272.600	7309.17	6675.45	290.10	-6670.24	646885.20	496442.88	32°21'50.182"N	103°51'27.417"W	0.43	
13107.00	90.600	272.800	7308.18	6770.42	294.57	-6765.13	646790.31	496447.35	32°21'50.230"N	103°51'28.523"W	0.21	
13202.00	90.400	272.800	7307.35	6865.39	299.21	-6860.02	646695.44	496451.99	32°21'50.281"N	103°51'29.629"W	0.21	
13297.00	90.500	273.000	7306.60	6960.36	304.02	-6954.89	646600.57	496456.80	32°21'50.332"N	103°51'30.735"W	0.24	
13392.00	90.600	273.300	7305.69	7055.31	309.24	-7049.74	646505.72	496462.02	32°21'50.388"N	103°51'31.840"W	0.33	
13487.00	90.600	274.000	7304.70	7150.23	315.29	-7144.54	646410.93	496468.07	32°21'50.452"N	103°51'32.945"W	0.74	
13581.00	90.500	273.200	7303.79	7244.16	321.19	-7238.35	646317.12	496473.97	32°21'50.515"N	103°51'34.038"W	0.86	
13676.00	90.500	271.700	7302.96	7339.14	325.25	-7333.26	646222.22	496478.03	32°21'50.559"N	103°51'35.145"W	1.58	
13771.00	90.500	270.300	7302.13	7434.13	326.91	-7428.24	646127.25	496479.69	32°21'50.579"N	103°51'36.252"W	1.47	
13866.00	90.400	266.800	7301.39	7528.99	324.50	-7523.19	646032.30	496477.28	32°21'50.560"N	103°51'37.359"W	3.69	
13961.00	90.400	267.000	7300.73	7623.69	319.37	-7618.05	645937.45	496472.15	32°21'50.513"N	103°51'38.465"W	0.21	
14056.00	90.100	268.000	7300.31	7718.46	315.22	-7712.96	645842.55	496468.00	32°21'50.476"N	103°51'39.572"W	1.10	
14150.00	89.700	269.700	7300.47	7812.36	313.34	-7806.94	645748.58	496466.12	32°21'50.462"N	103°51'40.667"W	1.86	
14245.00	90.000	272.900	7300.72	7907.35	315.49	-7901.90	645653.62	496468.27	32°21'50.487"N	103°51'41.774"W	3.38	
14340.00	90.000	272.300	7300.72	8002.33	319.80	-7996.80	645558.73	496472.58	32°21'50.534"N	103°51'42.881"W	0.63	
14435.00	89.900	273.000	7300.81	8097.31	324.19	-8091.70	645463.84	496476.97	32°21'50.582"N	103°51'43.987"W	0.74	
14526.00	89.900	275.700	7300.97	8188.18	331.09	-8182.43	645373.11	496483.87	32°21'50.654"N	103°51'45.044"W	2.97	
14620.00	90.100	274.200	7300.97	8282.01	339.21	-8276.07	645279.47	496491.98	32°21'50.738"N	103°51'46.135"W	1.61	
14715.00	89.900	272.700	7300.97	8376.94	344.92	-8370.90	645184.65	496497.70	32°21'50.799"N	103°51'47.241"W	1.59	



Actual Wellpath Report

No.140H AWP ST01

Page 5 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.140H SHL
Area	Eddy County, NM	Well	No.140H ST01
Field	JRU NAD27	Wellbore	No.140H AWP ST01
Facility	(JRU) No.140H & No.141H	Sidetrack from	No.140H AWP at 8658.00 MD

WELLPATH DATA (174 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
14810.00	89.900	269.300	7301.13	8471.93	346.58	-8465.87	645089.69	496499.36	32°21'50.819"N	103°51'48.348"W	3.58	
14911.00	89.800	268.300	7301.40	8572.82	344.46	-8566.85	644988.72	496497.24	32°21'50.803"N	103°51'49.525"W	1.00	
15006.00	90.300	267.600	7301.31	8667.64	341.07	-8661.79	644893.79	496493.84	32°21'50.773"N	103°51'50.632"W	0.91	
15101.00	90.300	267.800	7300.82	8762.44	337.25	-8756.71	644798.87	496490.03	32°21'50.740"N	103°51'51.739"W	0.21	
15195.00	90.200	267.500	7300.40	8856.23	333.40	-8850.63	644704.96	496486.18	32°21'50.706"N	103°51'52.834"W	0.34	
15290.00	90.300	263.100	7299.99	8950.66	325.62	-8945.28	644610.31	496478.40	32°21'50.633"N	103°51'53.938"W	4.63	
15385.00	90.300	264.700	7299.49	9044.83	315.52	-9039.74	644515.85	496468.30	32°21'50.537"N	103°51'55.040"W	1.68	
15480.00	90.700	267.700	7298.66	9139.42	309.23	-9134.52	644421.08	496462.01	32°21'50.479"N	103°51'56.145"W	3.19	
15575.00	90.900	267.500	7297.34	9234.19	305.25	-9229.43	644326.18	496458.03	32°21'50.443"N	103°51'57.251"W	0.30	
15670.00	90.800	272.200	7295.93	9329.12	305.00	-9324.39	644231.23	496457.78	32°21'50.445"N	103°51'58.359"W	4.95	
15764.00	90.800	271.900	7294.61	9423.10	308.36	-9418.32	644137.30	496461.14	32°21'50.482"N	103°51'59.453"W	0.32	
15860.00	90.700	270.400	7293.36	9519.09	310.29	-9514.29	644041.34	496463.07	32°21'50.506"N	103°52'00.572"W	1.57	
15955.00	90.700	270.700	7292.20	9614.07	311.20	-9609.28	643946.36	496463.98	32°21'50.519"N	103°52'01.680"W	0.32	
16049.00	90.800	273.300	7290.97	9708.05	314.48	-9703.20	643852.44	496467.26	32°21'50.555"N	103°52'02.774"W	2.77	
16144.00	90.800	273.800	7289.64	9802.98	320.36	-9798.01	643757.63	496473.14	32°21'50.618"N	103°52'03.879"W	0.53	
16239.00	90.700	268.300	7288.40	9897.93	322.10	-9892.95	643662.70	496474.88	32°21'50.639"N	103°52'04.986"W	5.79	
16334.00	90.700	265.800	7287.24	9992.64	317.22	-9987.81	643567.85	496469.99	32°21'50.595"N	103°52'06.092"W	2.63	
16429.00	90.800	269.800	7285.99	10087.42	313.57	-10082.71	643472.95	496466.35	32°21'50.563"N	103°52'07.199"W	4.21	
16524.00	90.700	272.900	7284.75	10182.40	315.81	-10177.67	643378.00	496468.59	32°21'50.589"N	103°52'08.306"W	3.26	
16619.00	90.800	271.900	7283.50	10277.38	319.78	-10272.57	643283.10	496472.56	32°21'50.632"N	103°52'09.412"W	1.06	
16714.00	90.300	272.600	7282.59	10372.36	323.51	-10367.50	643188.19	496476.29	32°21'50.673"N	103°52'10.518"W	0.91	
16809.00	90.300	273.600	7282.09	10467.32	328.65	-10462.35	643093.34	496481.43	32°21'50.728"N	103°52'11.624"W	1.05	
16904.00	90.300	272.700	7281.60	10562.27	333.87	-10557.21	642998.49	496486.65	32°21'50.784"N	103°52'12.730"W	0.95	
16999.00	90.200	270.200	7281.18	10657.27	336.28	-10652.17	642903.53	496489.05	32°21'50.812"N	103°52'13.837"W	2.63	
17093.00	90.200	269.900	7280.85	10751.24	336.36	-10746.17	642809.54	496489.14	32°21'50.816"N	103°52'14.932"W	0.32	
17188.00	90.300	271.100	7280.44	10846.22	337.19	-10841.16	642714.55	496489.96	32°21'50.829"N	103°52'16.040"W	1.27	
17283.00	90.200	269.500	7280.03	10941.20	337.68	-10936.16	642619.56	496490.46	32°21'50.838"N	103°52'17.147"W	1.69	
17378.00	90.200	270.000	7279.69	11036.16	337.27	-11031.16	642524.57	496490.05	32°21'50.838"N	103°52'18.255"W	0.53	
17473.00	90.200	268.200	7279.36	11131.07	335.78	-11126.14	642429.59	496488.56	32°21'50.827"N	103°52'19.362"W	1.89	
17567.00	90.300	267.900	7278.95	11224.91	332.58	-11220.08	642335.66	496485.36	32°21'50.799"N	103°52'20.458"W	0.34	
17662.00	90.200	268.100	7278.54	11319.73	329.26	-11315.02	642240.72	496482.04	32°21'50.771"N	103°52'21.565"W	0.24	
17757.00	90.300	270.300	7278.12	11414.65	327.94	-11410.01	642145.74	496480.72	32°21'50.761"N	103°52'22.672"W	2.32	
17852.00	90.300	269.500	7277.63	11509.62	327.77	-11505.01	642050.75	496480.55	32°21'50.764"N	103°52'23.780"W	0.84	
17946.00	90.700	269.300	7276.80	11603.55	326.79	-11599.00	641956.77	496479.57	32°21'50.758"N	103°52'24.875"W	0.48	
18041.00	90.700	268.500	7275.64	11698.45	324.96	-11693.97	641861.80	496477.74	32°21'50.744"N	103°52'25.983"W	0.84	
18136.00	90.700	268.500	7274.48	11793.32	322.48	-11788.93	641766.84	496475.26	32°21'50.724"N	103°52'27.090"W	0.00	
18231.00	90.800	268.100	7273.24	11888.17	319.66	-11883.88	641671.90	496472.44	32°21'50.700"N	103°52'28.197"W	0.43	
18283.00	90.700	268.200	7272.56	11940.07	317.98	-11935.85	641619.94	496470.76	32°21'50.685"N	103°52'28.803"W	0.27	
18350.00	90.700	268.200	7271.74	12006.96	315.88	-12002.81	641552.98	496468.66	32°21'50.667"N	103°52'29.584"W	0.00	Proj to Bit



Actual Wellpath Report

No.140H AWP ST01

Page 6 of 6



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.140H SHL
Area	Eddy County, NM	Well	No.140H ST01
Field	JRU NAD27	Wellbore	No.140H AWB ST01
Facility	(JRU) No.140H & No.141H	Sidetrack from	No.140H AWB at 8658.00 MD

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
No.140H PBHL ST01		7267.00	312.62	-12358.39	641197.42	496465.40	32°21'50.650"N	103°52'33.729"W	point
No.140H Target #4 ST01		7293.00	312.40	-9536.24	644019.39	496465.18	32°21'50.527"N	103°52'00.828"W	point
No.140H Target #3 ST01		7299.00	312.32	-8498.52	645057.04	496465.10	32°21'50.482"N	103°51'48.730"W	point
No.140H Target #2 ST01		7312.00	312.15	-6505.00	647050.43	496464.93	32°21'50.393"N	103°51'25.489"W	point
No.140H Target 5000'		7321.00	310.03	-4990.38	648564.95	496462.81	32°21'50.305"N	103°51'07.831"W	point

WELLPATH COMPOSITION - Ref Wellbore: No.140H AWB ST01 Ref Wellpath: No.140H AWP ST01

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	681.00	Generic gyro - northseeking (Standard)	Gyrodata Gyros <75-681>	No.140H AWB
681.00	3800.00	NaviTrak (Standard)	BHI MWD NaviTrak 12 1/4" Hole (681) <760-3800>	No.140H AWB
3800.00	8658.00	NaviTrak (Standard)	BHI MWD NaviTrak 8 3/4" Hole <3924-8658>	No.140H AWB
8658.00	18283.00	NaviTrak (Standard)	BHI MWD NaviTrak <8853-XXXX>	No.140H AWB ST01
18283.00	18350.00	Blind Drilling (std)	Projection to bit	No.140H AWB ST01