



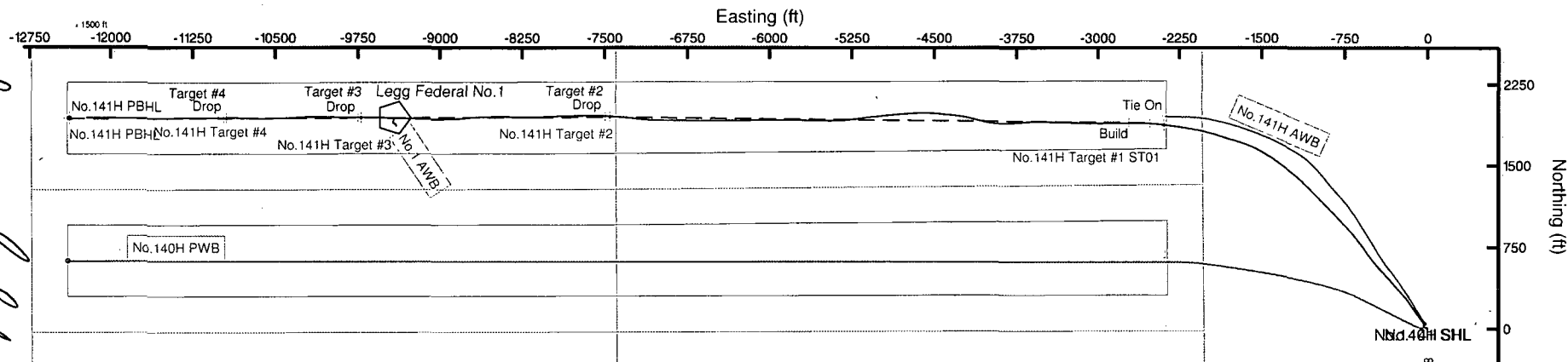
BOPCO, L.P.

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

Slot: No.141 SHL
Well: No.141H ST01
Wellbore: No.141H ST01 PWB



30-015-39972
Provide notarized
copy of survey

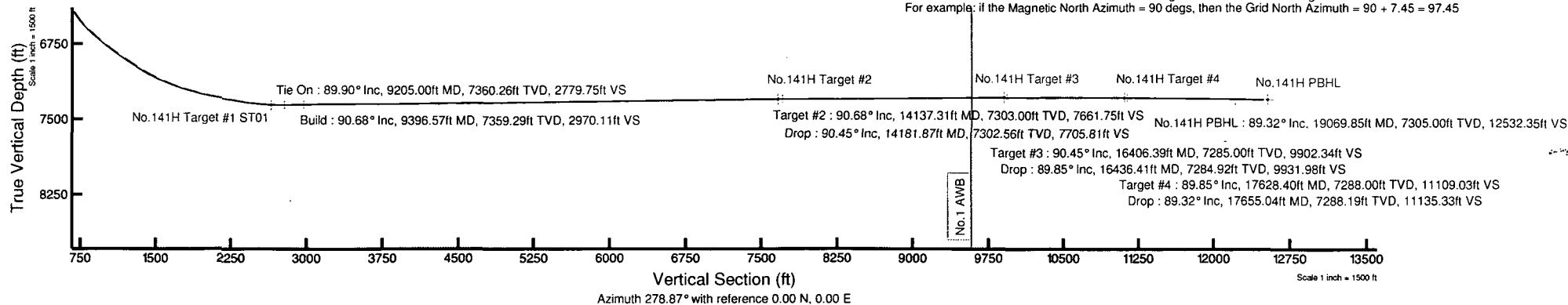
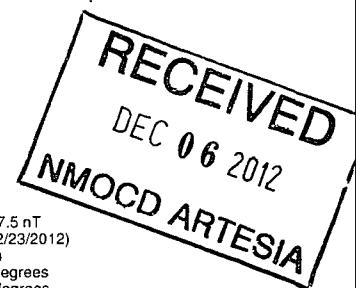
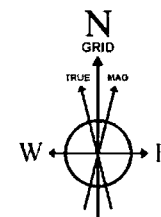


Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	9205.00	89.900	274.400	7360.26	1888.62	-2518.56	0.00	2779.75
Build	9396.57	90.680	270.649	7359.29	1897.06	-2709.91	2.00	2970.11
Target #2	14137.31	90.680	270.649	7303.00	1950.73	-7450.00	0.00	7661.75
Drop	14181.87	90.452	269.787	7302.56	1950.90	-7494.57	2.00	7705.81
Target #3	16406.39	90.452	269.787	7285.00	1942.63	-9719.00	0.00	9902.34
Drop	16436.41	89.852	269.795	7284.92	1942.52	-9749.02	2.00	9931.98
Target #4	17628.40	89.852	269.795	7288.00	1938.25	-10941.00	0.00	11109.03
Drop	17655.04	89.319	269.802	7288.19	1938.16	-10967.63	2.00	11135.33
No.141H PBHL	19069.85	89.319	269.802	7305.00	1933.26	-12382.34	0.00	12532.35

Plot reference wellpath is Rev-F.0 ST01

True vertical depths are referenced to Rig on No.141 SHL (KB)	Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No.141 SHL (KB)	North Reference: Grid north
Rig on No.141 SHL (KB) to Mean Sea Level: 3376 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: No.141 SHL): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gentrity on 5/1/2012





Actual Wellpath Report

No.141H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.141 SHL
Area	Eddy County, NM	Well	No.141H ST01
Field	JRU NAD27	Wellbore	No.141H ST01 AWB
Facility	(JRU) No.140H & No.141H	Sidetrack from	No.141H AWB at 4146.60 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	5/29/2012 at 8:09:00 AM
Convergence at slot	0.27° East	Database/Source file	WA Midland/No.141H_ST01_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-1.00	40.40	653595.40	496151.80	32°21'47.000"N	103°50'09.198"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.141 SHL (KB) to Facility Vertical Datum	3376.00ft
Horizontal Reference Pt	Slot	Rig on No.141 SHL (KB) to Mean Sea Level	3376.00ft
Vertical Reference Pt	Rig on No.141 SHL (KB)	Rig on No.141 SHL (KB) to Mud Line at Slot (No.141 SHL)	3376.00ft
MD Reference Pt	Rig on No.141 SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	278.08°





Actual Wellpath Report

No.141H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.141 SHL
Area	Eddy County, NM	Well	No.141H ST01
Field	JRU NAD27	Wellbore	No.141H ST01 AWB
Facility	(JRU) No.140H & No.141H	Sidetrack from	No.141H AWB at 4146.60 MD

WELLPATH DATA (199 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	285.940	0.00	0.00	0.00	0.00	653595.40	496151.80	32°21'47.000"N	103°50'09.198"W	0.00	
100.00	1.170	285.940	99.99	1.01	0.28	-0.98	653594.42	496152.08	32°21'47.002"N	103°50'09.210"W	1.17	
200.00	1.970	289.330	199.95	3.71	1.13	-3.59	653591.81	496152.93	32°21'47.011"N	103°50'09.240"W	0.81	
300.00	2.120	292.270	299.89	7.19	2.40	-6.92	653588.48	496154.20	32°21'47.024"N	103°50'09.279"W	0.18	
400.00	2.240	289.520	399.82	10.90	3.75	-10.47	653584.93	496155.55	32°21'47.037"N	103°50'09.320"W	0.16	
500.00	2.360	295.100	499.74	14.78	5.28	-14.18	653581.22	496157.08	32°21'47.053"N	103°50'09.364"W	0.25	
600.00	2.580	286.580	599.65	18.97	6.80	-18.20	653577.20	496158.60	32°21'47.068"N	103°50'09.410"W	0.43	
700.00	2.630	288.160	699.54	23.46	8.15	-22.54	653572.86	496159.95	32°21'47.081"N	103°50'09.461"W	0.09	
822.40	5.170	320.490	821.66	30.30	13.28	-28.72	653566.69	496165.08	32°21'47.132"N	103°50'09.533"W	2.67	
920.20	3.270	199.20	919.21	33.85	19.47	-31.43	653563.97	496171.27	32°21'47.194"N	103°50'09.564"W	3.55	
1018.00	3.360	0.950	1016.85	34.51	25.13	-31.29	653564.12	496176.93	32°21'47.250"N	103°50'09.562"W	0.11	
1115.70	3.180	336.390	1114.40	36.29	30.47	-32.32	653563.08	496182.27	32°21'47.303"N	103°50'09.574"W	1.43	
1213.50	2.340	350.320	1212.08	38.32	34.93	-33.75	653561.66	496186.72	32°21'47.347"N	103°50'09.590"W	1.09	
1311.30	2.590	6.720	1309.79	38.98	39.09	-33.82	653561.58	496190.89	32°21'47.388"N	103°50'09.591"W	0.76	
1409.10	1.590	13.510	1407.53	38.90	42.60	-33.25	653562.15	496194.40	32°21'47.423"N	103°50'09.584"W	1.05	
1506.80	0.630	38.730	1505.21	38.50	44.34	-32.60	653562.81	496196.14	32°21'47.440"N	103°50'09.576"W	1.08	
1604.60	0.650	43.410	1603.00	37.91	45.16	-31.88	653563.52	496196.96	32°21'47.448"N	103°50'09.568"W	0.06	
1702.40	0.450	40.370	1700.80	37.38	45.86	-31.25	653564.15	496197.66	32°21'47.455"N	103°50'09.560"W	0.21	
1800.10	0.250	61.140	1798.49	37.01	46.25	-30.81	653564.59	496198.05	32°21'47.459"N	103°50'09.555"W	0.24	
1897.90	0.280	100.970	1896.29	36.60	46.31	-30.39	653565.01	496198.11	32°21'47.459"N	103°50'09.550"W	0.19	
1995.70	0.300	87.520	1994.09	36.11	46.28	-29.90	653565.50	496198.07	32°21'47.459"N	103°50'09.545"W	0.07	
2093.40	0.170	52.800	2091.79	35.75	46.38	-29.53	653565.87	496198.17	32°21'47.460"N	103°50'09.540"W	0.19	
2191.20	0.110	329.110	2189.59	35.71	46.54	-29.46	653565.94	496198.34	32°21'47.462"N	103°50'09.539"W	0.20	
2289.00	0.110	234.380	2287.39	35.84	46.57	-29.59	653565.82	496198.37	32°21'47.462"N	103°50'09.541"W	0.17	
2386.80	0.090	185.830	2385.19	35.90	46.44	-29.67	653565.73	496198.24	32°21'47.461"N	103°50'09.542"W	0.09	
2484.50	0.130	52.930	2482.89	35.82	46.43	-29.59	653565.81	496198.23	32°21'47.460"N	103°50'09.541"W	0.21	
2582.30	0.150	345.640	2580.69	35.79	46.62	-29.53	653565.87	496198.42	32°21'47.462"N	103°50'09.540"W	0.16	
2680.10	0.200	317.810	2678.49	35.97	46.87	-29.68	653565.72	496198.67	32°21'47.465"N	103°50'09.542"W	0.10	
2777.80	0.310	297.570	2776.19	36.35	47.12	-30.03	653565.37	496198.92	32°21'47.467"N	103°50'09.546"W	0.14	
2875.60	0.260	316.390	2873.99	36.78	47.40	-30.42	653564.99	496199.20	32°21'47.470"N	103°50'09.551"W	0.11	
2973.40	0.330	125.900	2971.79	36.70	47.40	-30.34	653565.06	496199.19	32°21'47.470"N	103°50'09.550"W	0.60	
3071.10	0.930	126.300	3069.48	35.75	46.76	-29.47	653565.93	496198.56	32°21'47.464"N	103°50'09.540"W	0.61	
3168.90	1.180	129.080	3167.27	34.19	45.66	-28.05	653567.35	496197.46	32°21'47.453"N	103°50'09.523"W	0.26	
3266.70	0.920	142.230	3265.05	32.76	44.40	-26.79	653568.61	496196.20	32°21'47.440"N	103°50'09.508"W	0.36	
3364.40	0.870	167.190	3362.74	31.94	43.06	-26.15	653569.26	496194.86	32°21'47.427"N	103°50'09.501"W	0.40	
3462.20	0.770	152.870	3460.53	31.29	41.75	-25.68	653569.72	496193.55	32°21'47.414"N	103°50'09.496"W	0.23	
3560.00	0.910	139.000	3558.32	30.33	40.58	-24.87	653570.53	496192.38	32°21'47.402"N	103°50'09.486"W	0.25	
3657.80	0.750	129.420	3656.11	29.19	39.59	-23.87	653571.53	496191.38	32°21'47.392"N	103°50'09.475"W	0.22	
3755.50	0.610	130.900	3753.80	28.21	38.84	-22.98	653572.42	496190.64	32°21'47.385"N	103°50'09.464"W	0.14	
3853.30	0.520	126.700	3851.59	27.38	38.23	-22.23	653573.17	496190.03	32°21'47.379"N	103°50'09.456"W	0.10	
3951.10	0.600	119.290	3949.39	26.52	37.72	-21.43	653573.97	496189.52	32°21'47.374"N	103°50'09.446"W	0.11	
4048.80	0.610	111.490	4047.08	25.53	37.28	-20.50	653574.90	496189.08	32°21'47.369"N	103°50'09.435"W	0.08	
4146.60	0.540	100.850	4144.88	24.57	37.00	-19.56	653575.84	496188.80	32°21'47.367"N	103°50'09.425"W	0.13	
4192.00	1.000	295.000	4190.28	24.73	37.13	-19.71	653575.69	496188.93	32°21'47.368"N	103°50'09.426"W	3.37	
4289.00	6.300	316.100	4287.05	29.74	41.32	-24.17	653571.23	496193.12	32°21'47.410"N	103°50'09.478"W	5.55	



Actual Wellpath Report

No.141H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.141 SHL
Area	Eddy County, NM	Well	No.141H ST01
Field	JRU NAD27	Wellbore	No.141H ST01 AWB
Facility	(JRU) No.140H & No.141H	Sidetrack from	No.141H AWB at 4146.60 MD

WELLPATH DATA (199 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
4385.00	10.100	314.800	4382.05	40.64	51.05	-33.80	653561.60	496202.85	32°21'47.506"N	103°50'09.590"W	3.96	
4482.00	12.500	319.600	4477.16	55.32	65.04	-46.64	653548.76	496216.84	32°21'47.645"N	103°50'09.739"W	2.66	
4579.00	14.200	323.700	4571.54	71.50	82.63	-60.49	653534.91	496234.42	32°21'47.820"N	103°50'09.899"W	2.00	
4676.00	14.800	324.600	4665.45	88.35	102.32	-74.71	653520.70	496254.11	32°21'48.015"N	103°50'10.064"W	0.66	
4772.00	15.400	323.500	4758.14	105.73	122.56	-89.39	653506.01	496274.35	32°21'48.216"N	103°50'10.234"W	0.69	
4868.00	16.200	325.200	4850.51	123.79	143.80	-104.62	653490.79	496295.59	32°21'48.427"N	103°50'10.410"W	0.96	
4965.00	19.200	325.600	4942.91	143.77	168.08	-121.36	653474.05	496319.87	32°21'48.668"N	103°50'10.604"W	3.10	
5062.00	21.200	325.400	5033.94	166.44	195.68	-140.33	653455.08	496347.46	32°21'48.942"N	103°50'10.824"W	2.06	
5085.00	21.400	325.300	5055.37	172.10	202.55	-145.08	653450.33	496354.34	32°21'49.011"N	103°50'10.879"W	0.88	
5182.00	23.500	325.800	5145.01	197.14	233.10	-166.03	653429.38	496384.88	32°21'49.314"N	103°50'11.121"W	2.17	
5279.00	25.000	323.500	5233.45	224.54	265.57	-189.09	653406.32	496417.35	32°21'49.636"N	103°50'11.389"W	1.83	
5375.00	25.000	318.400	5320.47	254.24	297.05	-214.63	653380.79	496448.83	32°21'49.949"N	103°50'11.685"W	2.24	
5472.00	25.100	318.500	5408.34	285.53	327.79	-241.87	653353.55	496479.57	32°21'50.254"N	103°50'12.000"W	0.11	
5569.00	25.100	318.800	5496.18	316.79	358.68	-269.05	653326.36	496510.45	32°21'50.561"N	103°50'12.316"W	0.13	
5666.00	25.000	319.200	5584.06	347.82	389.67	-296.00	653299.42	496541.45	32°21'50.869"N	103°50'12.628"W	0.20	
5763.00	25.100	319.300	5671.93	378.74	420.79	-322.81	653272.61	496572.56	32°21'51.178"N	103°50'12.939"W	0.11	
5859.00	25.100	319.100	5758.87	409.41	451.61	-349.42	653246.01	496603.38	32°21'51.484"N	103°50'13.248"W	0.09	
5956.00	25.100	318.800	5846.71	440.53	482.65	-376.44	653218.99	496634.41	32°21'51.793"N	103°50'13.561"W	0.13	
6053.00	25.000	318.000	5934.59	471.84	513.36	-403.71	653191.72	496665.12	32°21'52.098"N	103°50'13.877"W	0.36	
6149.00	25.500	317.500	6021.41	503.36	543.67	-431.24	653164.19	496695.43	32°21'52.399"N	103°50'14.197"W	0.57	
6246.00	27.700	319.300	6108.14	536.45	576.16	-460.05	653135.38	496727.92	32°21'52.722"N	103°50'14.531"W	2.42	
6343.00	29.700	322.600	6193.23	570.55	612.35	-489.35	653106.08	496764.11	32°21'53.081"N	103°50'14.870"W	2.63	
6440.00	31.800	323.700	6276.58	605.56	652.04	-519.08	653076.35	496803.80	32°21'53.475"N	103°50'15.215"W	2.24	
6537.00	35.800	325.500	6357.18	642.65	696.04	-550.30	653045.14	496847.79	32°21'53.912"N	103°50'15.576"W	4.25	
6633.00	40.400	325.500	6432.70	682.72	744.84	-583.84	653011.60	496896.59	32°21'54.397"N	103°50'15.965"W	4.79	
6730.00	45.900	323.000	6503.45	728.68	798.61	-622.64	652972.81	496950.35	32°21'54.931"N	103°50'16.414"W	5.94	
6827.00	51.300	320.700	6567.58	781.24	855.76	-667.61	652927.84	497007.50	32°21'55.498"N	103°50'16.935"W	5.84	
6924.00	53.900	318.000	6626.49	839.16	914.19	-717.82	652877.63	497065.93	32°21'56.079"N	103°50'17.518"W	3.47	
7019.00	55.500	317.300	6681.39	898.93	971.48	-770.05	652825.40	497123.22	32°21'56.648"N	103°50'18.123"W	1.79	
7116.00	57.100	317.300	6735.21	961.44	1030.79	-824.77	652770.68	497182.52	32°21'57.237"N	103°50'18.758"W	1.65	
7212.00	58.400	316.900	6786.43	1024.52	1090.26	-880.04	652715.42	497241.99	32°21'57.828"N	103°50'19.399"W	1.40	
7309.00	60.300	316.300	6835.88	1089.81	1150.89	-937.38	652658.08	497302.61	32°21'58.431"N	103°50'20.065"W	2.03	
7406.00	62.100	316.200	6882.61	1156.63	1212.29	-996.16	652599.31	497364.01	32°21'59.041"N	103°50'20.746"W	1.86	
7502.00	62.200	316.000	6927.46	1223.50	1273.45	-1055.01	652540.46	497425.16	32°21'59.649"N	103°50'21.429"W	0.21	
7598.00	62.400	316.000	6972.08	1290.55	1334.59	-1114.06	652481.42	497486.30	32°22'00.257"N	103°50'22.114"W	0.21	
7695.00	63.200	312.100	7016.43	1360.36	1394.55	-1176.06	652419.42	497546.26	32°22'00.853"N	103°50'22.834"W	3.67	
7792.00	65.900	308.500	7058.12	1434.45	1451.16	-1242.85	652352.63	497602.86	32°22'01.416"N	103°50'23.610"W	4.36	
7888.00	68.000	307.100	7095.71	1511.16	1505.29	-1312.65	652282.83	497656.99	32°22'01.955"N	103°50'24.421"W	2.57	
7985.00	69.800	305.600	7130.63	1590.86	1558.92	-1385.54	652209.95	497710.61	32°22'02.489"N	103°50'25.267"W	2.35	
8082.00	72.000	302.200	7162.38	1673.36	1610.01	-1461.61	652133.89	497761.71	32°22'02.998"N	103°50'26.152"W	4.01	
8178.00	73.500	296.500	7190.86	1758.75	1654.91	-1541.49	652054.01	497806.60	32°22'03.446"N	103°50'27.081"W	5.88	
8275.00	73.800	292.100	7218.18	1848.10	1693.20	-1626.30	651969.21	497844.89	32°22'03.828"N	103°50'28.067"W	4.36	
8372.00	75.600	286.600	7243.80	1939.82	1724.17	-1714.54	651880.97	497875.85	32°22'04.139"N	103°50'29.094"W	5.77	
8468.00	78.100	287.600	7265.63	2032.14	1751.66	-1803.88	651791.64	497903.34	32°22'04.415"N	103°50'30.134"W	2.79	
8565.00	80.000	287.700	7284.06	2126.04	1780.53	-1894.63	651700.90	497932.21	32°22'04.705"N	103°50'31.191"W	1.96	



Actual Wellpath Report

No.141H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.141 SHL
Area	Eddy County, NM	Well	No.141H ST01
Field	JRU NAD27	Wellbore	No.141H ST01 AWB
Facility	(JRU) No.140H & No.141H	Sidetrack from	No.141H AWB at 4146.60 MD

WELLPATH DATA (199 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
8662.00	79.700	284.200	7301.16	2220.61	1806.77	-1986.42	651609.11	497958.45	32°22'04.969"N	103°50'32.260"W	3.57	
8759.00	79.800	280.700	7318.42	2315.76	1827.34	-2079.61	651515.93	497979.02	32°22'05.176"N	103°50'33.345"W	3.55	
8855.00	81.700	279.800	7333.85	2410.44	1844.20	-2172.84	651422.70	497995.88	32°22'05.347"N	103°50'34.431"W	2.18	
8952.00	83.900	278.400	7346.01	2506.65	1859.41	-2267.86	651327.69	498011.09	32°22'05.502"N	103°50'35.538"W	2.68	
9049.00	85.700	277.700	7354.80	2603.25	1872.94	-2363.50	651232.05	498024.62	32°22'05.641"N	103°50'36.652"W	1.99	
9146.00	88.700	275.100	7359.54	2700.07	1883.73	-2459.77	651135.80	498035.41	32°22'05.752"N	103°50'37.774"W	4.09	
9205.00	89.900	274.400	7360.26	2758.97	1888.62	-2518.56	651077.01	498040.30	32°22'05.803"N	103°50'38.459"W	2.35	
9337.00	91.000	268.100	7359.22	2889.96	1891.50	-2650.45	650945.12	498043.17	32°22'05.837"N	103°50'39.997"W	4.84	
9432.00	90.900	269.900	7357.65	2983.75	1889.84	-2745.42	650850.16	498041.52	32°22'05.825"N	103°50'41.104"W	1.90	
9527.00	91.000	268.600	7356.07	3077.61	1888.60	-2840.40	650755.19	498040.27	32°22'05.817"N	103°50'42.212"W	1.37	
9622.00	90.300	270.200	7355.00	3171.51	1887.60	-2935.38	650660.21	498039.28	32°22'05.811"N	103°50'43.319"W	1.84	
9718.00	90.400	270.200	7354.41	3266.61	1887.94	-3031.38	650564.22	498039.61	32°22'05.819"N	103°50'44.438"W	0.10	
9813.00	90.500	272.200	7353.66	3360.92	1889.93	-3126.35	650469.25	498041.60	32°22'05.843"N	103°50'45.545"W	2.11	
9908.00	90.500	272.000	7352.84	3455.40	1893.41	-3221.28	650374.33	498045.08	32°22'05.882"N	103°50'46.652"W	0.21	
10003.00	90.400	271.700	7352.09	3549.83	1896.48	-3316.23	650279.39	498048.15	32°22'05.916"N	103°50'47.759"W	0.33	
10098.00	90.500	271.700	7351.34	3644.24	1899.29	-3411.19	650184.44	498050.97	32°22'05.949"N	103°50'48.866"W	0.11	
10193.00	90.400	272.200	7350.60	3738.69	1902.53	-3506.13	650089.50	498054.20	32°22'05.985"N	103°50'49.972"W	0.54	
10289.00	90.900	268.400	7349.51	3833.79	1903.03	-3602.10	649993.53	498054.70	32°22'05.994"N	103°50'51.091"W	3.99	
10384.00	91.000	264.100	7347.93	3926.74	1896.82	-3696.87	649898.78	498048.49	32°22'05.937"N	103°50'52.197"W	4.53	
10479.00	90.900	268.200	7346.36	4019.65	1890.44	-3791.62	649804.03	498042.12	32°22'05.878"N	103°50'53.302"W	4.32	
10575.00	91.000	269.100	7344.76	4114.34	1888.18	-3887.58	649708.08	498039.86	32°22'05.860"N	103°50'54.420"W	0.94	
10670.00	90.900	278.300	7343.19	4208.95	1894.30	-3982.26	649613.40	498045.98	32°22'05.925"N	103°50'55.524"W	9.68	
10765.00	90.800	285.700	7341.77	4303.65	1914.04	-4075.11	649520.56	498065.71	32°22'06.124"N	103°50'56.606"W	7.79	
10860.00	91.000	284.700	7340.28	4397.90	1938.94	-4166.78	649428.90	498090.62	32°22'06.375"N	103°50'57.673"W	1.07	
10956.00	91.000	277.300	7338.60	4493.70	1957.25	-4260.93	649334.75	498108.92	32°22'06.560"N	103°50'58.770"W	7.71	
11051.00	90.800	276.700	7337.11	4588.67	1968.82	-4355.21	649240.47	498120.49	32°22'06.679"N	103°50'59.868"W	0.67	
11146.00	91.000	275.200	7335.62	4683.59	1978.67	-4449.69	649146.01	498130.34	32°22'06.781"N	103°51'00.969"W	1.59	
11242.00	90.400	272.800	7334.45	4779.33	1985.36	-4545.44	649050.26	498137.03	32°22'06.851"N	103°51'02.085"W	2.58	
11337.00	90.400	267.200	7333.78	4873.35	1985.36	-4640.40	648955.31	498137.03	32°22'06.855"N	103°51'03.192"W	5.89	
11432.00	90.400	266.500	7333.12	4966.53	1980.14	-4735.25	648860.46	498131.81	32°22'06.808"N	103°51'04.298"W	0.74	
11527.00	90.300	265.200	7332.54	5059.37	1973.27	-4830.00	648765.72	498124.94	32°22'06.744"N	103°51'05.403"W	1.37	
11622.00	90.400	264.500	7331.96	5151.85	1964.74	-4924.61	648671.11	498116.41	32°22'06.664"N	103°51'06.507"W	0.74	
11717.00	90.400	263.400	7331.30	5243.97	1954.73	-5019.08	648576.65	498106.40	32°22'06.569"N	103°51'07.609"W	1.16	
11813.00	90.400	263.300	7330.63	5336.81	1943.61	-5114.43	648481.30	498095.28	32°22'06.463"N	103°51'08.721"W	0.10	
11908.00	90.400	262.000	7329.96	5428.38	1931.46	-5208.65	648387.10	498083.13	32°22'06.347"N	103°51'09.820"W	1.37	
12003.00	90.500	264.400	7329.22	5520.19	1920.21	-5302.97	648292.78	498071.89	32°22'06.240"N	103°51'10.921"W	2.53	
12098.00	90.600	269.600	7328.30	5613.38	1915.24	-5397.80	648197.95	498066.92	32°22'06.195"N	103°51'12.026"W	5.47	
12193.00	90.400	270.200	7327.47	5707.41	1915.08	-5492.80	648102.96	498066.75	32°22'06.198"N	103°51'13.134"W	0.67	
12289.00	90.600	271.800	7326.64	5802.67	1916.75	-5588.78	648006.99	498068.43	32°22'06.219"N	103°51'14.253"W	1.68	
12384.00	91.100	272.800	7325.23	5897.18	1920.56	-5683.69	647912.09	498072.24	32°22'06.260"N	103°51'15.359"W	1.18	
12479.00	90.800	270.700	7323.65	5991.58	1923.46	-5778.62	647817.16	498075.14	32°22'06.293"N	103°51'16.466"W	2.23	
12574.00	90.900	269.300	7322.24	6085.63	1923.46	-5873.61	647722.17	498075.14	32°22'06.298"N	103°51'17.573"W	1.48	
12669.00	90.800	270.400	7320.83	6179.64	1923.22	-5968.60	647627.19	498074.89	32°22'06.299"N	103°51'18.681"W	1.16	
12765.00	90.900	269.400	7319.41	6274.65	1923.05	-6064.59	647531.21	498074.72	32°22'06.302"N	103°51'19.800"W	1.05	
12860.00	91.100	267.200	7317.75	6368.25	1920.23	-6159.53	647436.28	498071.90	32°22'06.278"N	103°51'20.907"W	2.32	



Actual Wellpath Report

No.141H AWP

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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.141 SHL
Area	Eddy County, NM	Well	No.141H ST01
Field	JRU NAD27	Wellbore	No.141H ST01 AWB
Facility	(JRU) No.140H & No.141H	Sidetrack from	No.141H AWB at 4146.60 MD

WELLPATH DATA (199 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
12955.00	91.000	270.400	7316.01	6461.98	1918.24	-6254.48	647341.34	498069.92	32°22'06.263"N	103°51'22.014"W	3.37	
13050.00	91.200	270.600	7314.19	6556.13	1919.07	-6349.46	647246.36	498070.74	32°22'06.275"N	103°51'23.121"W	0.30	
13145.00	90.900	269.700	7312.45	6650.21	1919.32	-6444.44	647151.39	498070.99	32°22'06.282"N	103°51'24.229"W	1.00	
13241.00	91.100	268.800	7310.77	6745.05	1918.06	-6540.41	647055.42	498069.74	32°22'06.274"N	103°51'25.348"W	0.96	
13336.00	90.500	270.000	7309.44	6838.95	1917.07	-6635.40	646960.44	498068.74	32°22'06.268"N	103°51'26.455"W	1.41	
13431.00	90.400	272.600	7308.70	6933.28	1919.22	-6730.36	646865.48	498070.90	32°22'06.293"N	103°51'27.562"W	2.74	
13526.00	90.500	270.400	7307.95	7027.64	1921.71	-6825.32	646770.53	498073.38	32°22'06.322"N	103°51'28.669"W	2.32	
13621.00	90.500	269.800	7307.12	7121.72	1921.88	-6920.32	646675.54	498073.55	32°22'06.328"N	103°51'29.777"W	0.63	
13716.00	90.500	269.600	7306.29	7215.70	1921.38	-7015.31	646580.55	498073.05	32°22'06.327"N	103°51'30.884"W	0.21	
13812.00	90.400	275.000	7305.54	7311.18	1925.23	-7111.20	646484.67	498076.90	32°22'06.370"N	103°51'32.002"W	5.63	
13907.00	90.300	276.100	7304.96	7406.08	1934.42	-7205.75	646390.13	498086.09	32°22'06.465"N	103°51'33.104"W	1.16	
14002.00	90.500	275.300	7304.29	7501.00	1943.85	-7300.27	646295.61	498095.52	32°22'06.562"N	103°51'34.205"W	0.87	
14097.00	90.500	274.000	7303.47	7595.82	1951.55	-7394.96	646200.93	498103.22	32°22'06.642"N	103°51'35.309"W	1.37	
14192.00	90.500	274.500	7302.64	7690.60	1958.59	-7489.69	646106.20	498110.26	32°22'06.716"N	103°51'36.413"W	0.53	
14287.00	90.400	271.000	7301.89	7785.18	1963.15	-7584.56	646011.34	498114.82	32°22'06.766"N	103°51'37.519"W	3.69	
14383.00	90.500	268.000	7301.14	7880.09	1962.31	-7680.55	645915.36	498113.98	32°22'06.761"N	103°51'38.638"W	3.13	
14478.00	90.400	269.900	7300.39	7973.88	1960.57	-7775.52	645820.39	498112.24	32°22'06.748"N	103°51'39.745"W	2.00	
14573.00	90.400	268.200	7299.73	8067.70	1959.00	-7870.50	645725.41	498110.67	32°22'06.737"N	103°51'40.853"W	1.79	
14668.00	90.400	268.000	7299.06	8161.26	1955.85	-7965.45	645630.48	498107.52	32°22'06.710"N	103°51'41.960"W	0.21	
14763.00	90.400	266.600	7298.40	8254.58	1951.37	-8060.34	645535.59	498103.04	32°22'06.670"N	103°51'43.067"W	1.47	
14858.00	90.400	269.000	7297.74	8348.04	1947.73	-8155.26	645440.68	498099.40	32°22'06.638"N	103°51'44.173"W	2.53	
14953.00	90.400	272.100	7297.07	8442.21	1948.64	-8250.24	645345.70	498100.31	32°22'06.651"N	103°51'45.281"W	3.26	
15048.00	90.600	271.800	7296.24	8536.66	1951.87	-8345.18	645250.77	498103.54	32°22'06.687"N	103°51'46.387"W	0.38	
15144.00	90.400	270.200	7295.41	8631.92	1953.55	-8441.16	645154.79	498105.22	32°22'06.708"N	103°51'47.506"W	1.68	
15239.00	90.300	267.400	7294.83	8725.67	1951.56	-8536.13	645059.83	498103.23	32°22'06.692"N	103°51'48.614"W	2.95	
15334.00	90.500	268.400	7294.16	8819.17	1948.07	-8631.06	644964.91	498099.75	32°22'06.662"N	103°51'49.721"W	1.07	
15429.00	90.500	263.500	7293.33	8912.02	1941.37	-8725.79	644870.18	498093.04	32°22'06.600"N	103°51'50.825"W	5.16	
15524.00	90.400	267.000	7292.59	9004.63	1933.50	-8820.45	644775.53	498085.17	32°22'06.526"N	103°51'51.929"W	3.69	
15619.00	90.400	269.100	7291.92	9098.17	1930.27	-8915.39	644680.60	498081.94	32°22'06.498"N	103°51'53.036"W	2.21	
15715.00	90.500	269.400	7291.17	9193.03	1929.01	-9011.37	644584.62	498080.69	32°22'06.490"N	103°51'54.156"W	0.33	
15810.00	90.400	272.100	7290.42	9287.24	1930.26	-9106.35	644489.65	498081.93	32°22'06.506"N	103°51'55.263"W	2.84	
15905.00	90.400	272.200	7289.76	9381.73	1933.82	-9201.29	644394.72	498085.49	32°22'06.546"N	103°51'56.369"W	0.11	
16000.00	90.400	270.500	7289.10	9476.07	1936.06	-9296.25	644299.76	498087.73	32°22'06.572"N	103°51'57.477"W	1.79	
16095.00	90.400	270.000	7288.43	9570.19	1936.47	-9391.25	644204.77	498088.15	32°22'06.580"N	103°51'58.584"W	0.53	
16190.00	90.500	274.600	7287.69	9664.67	1940.28	-9486.14	644109.88	498091.96	32°22'06.622"N	103°51'59.690"W	4.84	
16285.00	90.400	270.700	7286.94	9759.23	1944.68	-9581.02	644015.01	498096.35	32°22'06.669"N	103°52'00.796"W	4.11	
16380.00	90.400	269.800	7286.28	9853.34	1945.09	-9676.02	643920.02	498096.76	32°22'06.678"N	103°52'01.904"W	0.95	
16476.00	90.600	269.800	7285.44	9948.33	1944.76	-9772.01	643824.03	498096.43	32°22'06.678"N	103°52'03.023"W	0.21	
16571.00	90.400	270.400	7284.61	10042.41	1944.92	-9867.01	643729.04	498096.59	32°22'06.684"N	103°52'04.130"W	0.67	
16666.00	90.400	272.400	7283.95	10136.76	1947.24	-9961.97	643634.08	498098.91	32°22'06.711"N	103°52'05.238"W	2.11	
16761.00	90.500	271.500	7283.20	10231.21	1950.47	-10056.91	643539.15	498102.15	32°22'06.747"N	103°52'06.344"W	0.95	
16856.00	90.300	269.600	7282.54	10325.39	1951.39	-10151.90	643444.17	498103.06	32°22'06.760"N	103°52'07.452"W	2.01	
16951.00	89.400	267.000	7282.79	10419.00	1948.57	-10246.85	643349.22	498100.24	32°22'06.737"N	103°52'08.559"W	2.90	
17046.00	89.400	266.700	7283.78	10512.17	1943.35	-10341.70	643254.38	498095.02	32°22'06.689"N	103°52'09.665"W	0.32	
17142.00	89.500	268.900	7284.70	10606.62	1939.66	-10437.62	643158.47	498091.34	32°22'06.657"N	103°52'10.783"W	2.29	



Actual Wellpath Report

No.141H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.141 SHL
Area	Eddy County, NM	Well	No.141H ST01
Field	JRU NAD27	Wellbore	No.141H ST01 AWB
Facility	(JRU) No.140H & No.141H	Sidetrack from	No.141H AWB at 4146.60 MD

WELLPATH DATA (199 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
17237.00	89.500	269.000	7285.53	10700.42	1937.92	-10532.60	643063.49	498089.59	32°22'06.643"N	103°52'11.891"W	0.11	
17332.00	89.400	268.400	7286.44	10794.14	1935.77	-10627.57	642968.53	498087.44	32°22'06.626"N	103°52'12.998"W	0.64	
17427.00	89.600	272.800	7287.27	10888.31	1936.76	-10722.54	642873.57	498088.43	32°22'06.640"N	103°52'14.105"W	4.64	
17522.00	89.500	272.700	7288.02	10982.89	1941.32	-10817.43	642778.68	498092.99	32°22'06.689"N	103°52'15.211"W	0.15	
17618.00	89.500	269.200	7288.86	11078.13	1942.91	-10913.40	642682.72	498094.58	32°22'06.709"N	103°52'16.330"W	3.65	
17713.00	89.400	267.700	7289.77	11171.79	1940.34	-11008.36	642587.77	498092.01	32°22'06.688"N	103°52'17.437"W	1.58	
17809.00	89.400	269.000	7290.78	11266.40	1937.58	-11104.31	642491.82	498089.25	32°22'06.665"N	103°52'18.556"W	1.35	
17908.00	89.500	270.100	7291.73	11364.30	1936.80	-11203.30	642392.84	498088.47	32°22'06.661"N	103°52'19.710"W	1.12	
18003.00	89.400	270.600	7292.64	11458.43	1937.38	-11298.29	642297.85	498089.05	32°22'06.671"N	103°52'20.818"W	0.54	
18098.00	89.300	267.900	7293.72	11552.29	1936.14	-11393.27	642202.88	498087.81	32°22'06.663"N	103°52'21.925"W	2.84	
18193.00	89.500	270.000	7294.71	11646.08	1934.40	-11488.24	642107.91	498086.07	32°22'06.649"N	103°52'23.033"W	2.22	
18288.00	89.400	269.400	7295.62	11740.06	1933.90	-11583.24	642012.93	498085.57	32°22'06.649"N	103°52'24.140"W	0.64	
18384.00	89.400	270.400	7296.63	11835.08	1933.73	-11679.23	641916.94	498085.40	32°22'06.651"N	103°52'25.259"W	1.04	
18479.00	89.400	271.100	7297.62	11929.30	1934.98	-11774.22	641821.96	498086.65	32°22'06.667"N	103°52'26.367"W	0.74	
18574.00	89.500	270.500	7298.53	12023.53	1936.30	-11869.20	641726.98	498087.97	32°22'06.684"N	103°52'27.474"W	0.64	
18669.00	89.500	270.800	7299.36	12117.72	1937.38	-11964.19	641632.00	498089.05	32°22'06.699"N	103°52'28.582"W	0.32	
18764.00	88.900	269.700	7300.69	12211.83	1937.79	-12059.18	641537.01	498089.47	32°22'06.707"N	103°52'29.689"W	1.32	
18859.00	88.600	270.400	7302.76	12305.87	1937.88	-12154.16	641442.04	498089.55	32°22'06.712"N	103°52'30.796"W	0.80	
18932.00	88.600	270.400	7304.55	12378.20	1938.39	-12227.13	641369.07	498090.06	32°22'06.720"N	103°52'31.647"W	0.00	Proj to Bit



Actual Wellpath Report

No.141H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.141 SHL
Area	Eddy County, NM	Well	No.141H ST01
Field	JRU NAD27	Wellbore	No.141H ST01 AWB
Facility	(JRU) No.140H & No.141H	Sidetrack from	No.141H AWB at 4146.60 MD

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
No.141H Target #3		7285.00	1942.63	-9719.00	643877.04	498094.30	32°22'06.655"N	103°52'02.405"W	point
No.141H Target #4		7288.00	1938.25	-10941.00	642655.12	498089.92	32°22'06.664"N	103°52'16.652"W	point
No.141H Target #2		7303.00	1950.73	-7450.00	646145.89	498102.40	32°22'06.637"N	103°51'35.951"W	point
No.141H PBHL (Rev-0)		7305.00	1933.26	-12382.34	641213.88	498084.94	32°22'06.676"N	103°52'33.457"W	point
No.141H PBHL (Rev-1)		7325.00	1933.18	-13620.12	639976.18	498084.85	32°22'06.727"N	103°52'47.888"W	point
No.141H Target #1 ST01		7360.00	1875.00	-2386.00	651209.56	498026.68	32°22'05.662"N	103°50'36.915"W	point

WELLPATH COMPOSITION - Ref Wellbore: No.141H ST01 AWB Ref Wellpath: No.141H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	4146.60	Generic gyro - northseeking (Standard)	GyroData Gyro <100-6688.6>	No.141H AWB
4146.60	18859.00	NaviTrak (Standard)	BHI MWD NaviTrak <4192-XXXX>	No.141H ST01 AWB
18859.00	18932.00	Blind Drilling (std)	Projection to bit	No.141H ST01 AWB