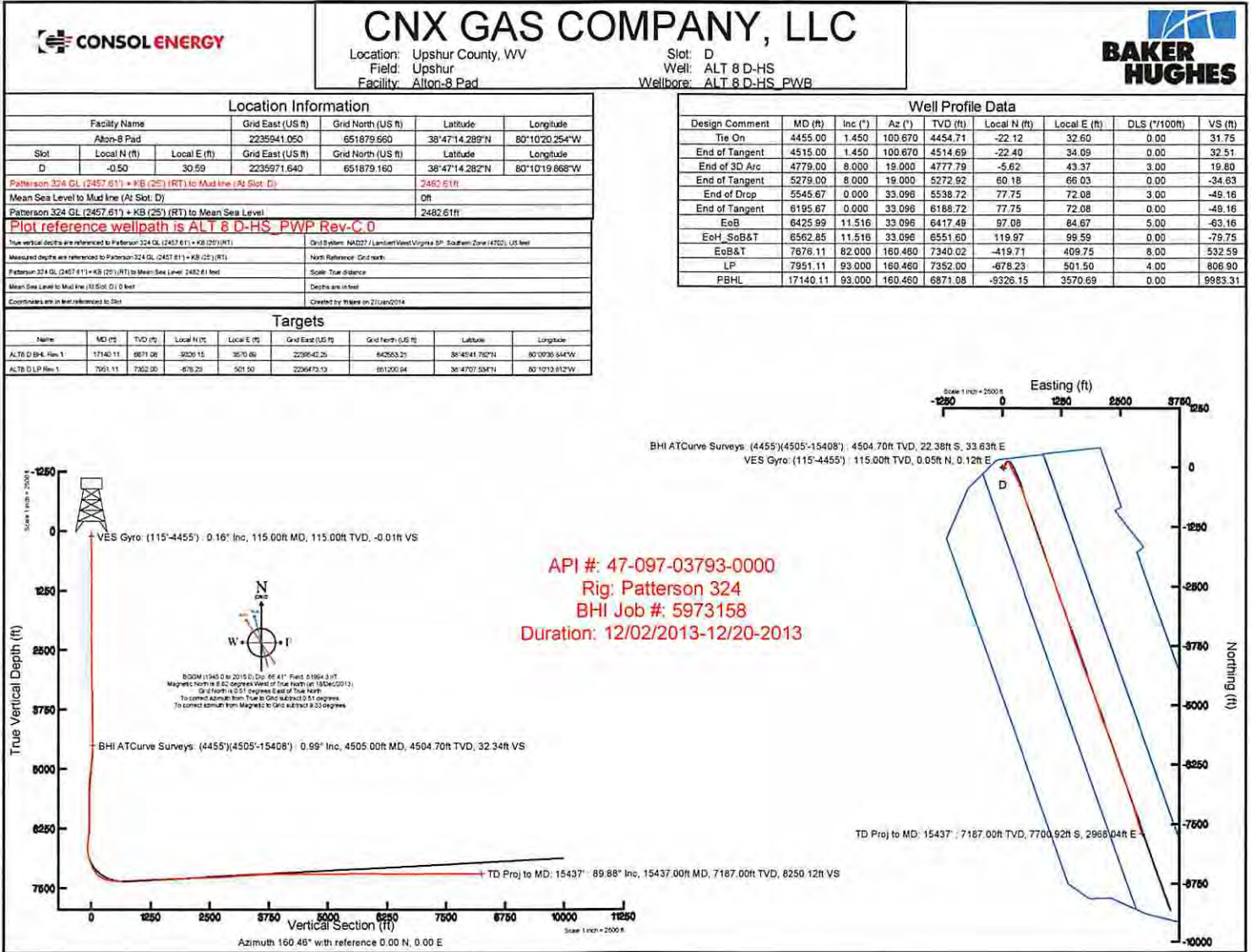


47-097-03793WH6A



47-097-03793 WH6A

DEVIATION SURVEY

ALTBDS Rework
Drilling Deeper

ACTUAL WELLPATH REPORT (CSV version)
Prepared by Baker Hughes
Software System: WellArchitect® 4.0.1

REFERENCE WELLPATH IDENTIFICATION

Operator CNX GAS COMPANY, LLC
Area Upshur County, WV
Field Upshur
Facility Alton-8 Pad
Slot D
Well ALT 8 D-HS
Wellbore ALT 8 D-HS_AWB
Wellpath ALT 8 D-HS (AWP) Proj:15437
Sidetrack (none)

REPORT SETUP INFORMATION

Projection NAD27 / Lambert West Virginia SP, Southern Zone (4702), US feet
North Refe Grid
Scale 0.999981
Convergen 0.51° East
Software S WellArchitect® 4.0.1
User Stewdenk
Report Ger 1/28/2014 at 4:33:16 PM
DataBase:/ WA_PA/ev23.xml

WELLPATH	Local North [ft]	Local East [ft]	Easting [US ft]	Northing [US ft]	Latitude	Longitude
Slot Locatic	-0.5	30.59	2235972	651879.2	38°47'14.2	80°10'19.868"W
Facility Ref			2235941	651879.7	38°47'14.2	80°10'20.254"W
Field Refer			609601.2		0 36°54'07.2	85°45'22.181"W

WELLPATH DATUM

Calculation Minimum curvature
Horizontal Slot
Vertical Re Patterson 324 GL (2457.61') + KB (25') (RT)
MD Refere Patterson 324 GL (2457.61') + KB (25') (RT)
Field Vertic Mean Sea Level
Patterson : 2482.61ft
Patterson : 2482.61ft
Patterson : 2482.61ft
Section Ori N 0.00, E 0.00 ft
Section Azi 160.46°

WELLPATH DATA † = Interpolated/extrapolated station

†	MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dis [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
†	0	0	66.36	0	0	0	0	0 2235972	651879.2	38°47'14.2	80°10'19.8	0	0	0	0	0
	25	0	66.36	25	0	0	0	0 2235972	651879.2	38°47'14.2	80°10'19.8	0	0	0	0	0
	115	0.16	66.36	115	-0.01	0.05	0.12	2235972	651879.2	38°47'14.2	80°10'19.8	0.13	66.36	0.18	0.18	0
	215	0.12	227.32	215	0.02	0.04	0.17	2235972	651879.2	38°47'14.2	80°10'19.8	0.17	77.969	0.28	-0.04	160.96
	315	0.38	137.62	315	0.37	-0.28	0.31	2235972	651878.9	38°47'14.2	80°10'19.8	0.42	131.91	0.4	0.26	-89.7
	415	0.12	192.31	415	0.76	-0.63	0.51	2235972	651878.5	38°47'14.2	80°10'19.8	0.81	140.705	0.33	-0.26	54.69
	515	0.1	87.39	515	0.88	-0.73	0.58	2235972	651878.4	38°47'14.2	80°10'19.8	0.93	141.452	0.17	-0.02	-104.92
	615	0.33	133.83	615	1.16	-0.92	0.87	2235973	651878.2	38°47'14.2	80°10'19.8	1.27	136.534	0.27	0.23	46.44
	715	0.3	103.61	715	1.56	-1.18	1.34	2235973	651878	38°47'14.2	80°10'19.8	1.78	131.522	0.17	-0.03	-30.22
	815	0.42	67.59	814.99	1.69	-1.1	1.93	2235974	651878.1	38°47'14.2	80°10'19.8	2.22	119.795	0.25	0.12	-36.02
	915	0.45	113.04	914.99	1.93	-1.12	2.63	2235974	651878	38°47'14.2	80°10'19.8	2.86	113.045	0.34	0.03	45.45
	1015	0.2	50.05	1014.99	2.14	-1.16	3.12	2235975	651878	38°47'14.2	80°10'19.8	3.33	110.37	0.4	-0.25	-62.99
	1115	0.29	62.11	1114.99	2.04	-0.93	3.48	2235975	651878.2	38°47'14.2	80°10'19.8	3.6	104.949	0.1	0.09	12.06
	1215	0.42	131.4	1214.99	2.32	-1.05	3.98	2235976	651878.1	38°47'14.2	80°10'19.8	4.12	104.827	0.42	0.13	69.29
	1315	0.19	62.62	1314.99	2.62	-1.22	4.4	2235976	651877.9	38°47'14.2	80°10'19.8	4.57	105.486	0.39	-0.23	-68.78
	1415	0.1	14.28	1414.99	2.53	-1.06	4.57	2235976	651878.1	38°47'14.2	80°10'19.8	4.69	103.043	0.14	-0.09	-48.34
	1515	0.51	140.72	1514.98	2.87	-1.32	4.87	2235977	651877.8	38°47'14.2	80°10'19.8	5.05	105.14	0.58	0.41	126.44
	1615	0.2	98.36	1614.98	3.37	-1.69	5.33	2235977	651877.5	38°47'14.2	80°10'19.8	5.59	107.583	0.39	-0.31	-42.36
	1715	0.16	84.47	1714.98	3.49	-1.7	5.64	2235977	651877.5	38°47'14.2	80°10'19.7	5.89	106.778	0.06	-0.04	-13.89
	1815	0.55	148.81	1814.98	3.99	-2.1	6.03	2235978	651877.1	38°47'14.2	80°10'19.7	6.38	109.188	0.5	0.39	64.34
	1915	0.38	161.39	1914.98	4.79	-2.82	6.38	2235978	651876.3	38°47'14.2	80°10'19.7	6.98	113.857	0.2	-0.17	12.58
	2015	0.4	135.64	2014.97	5.44	-3.39	6.73	2235978	651875.8	38°47'14.2	80°10'19.7	7.54	116.703	0.17	0.02	-25.75
	2115	0.67	96.46	2114.97	6.02	-3.7	7.56	2235979	651875.5	38°47'14.2	80°10'19.7	8.42	116.097	0.44	0.27	-39.18
	2215	0.24	264.31	2214.97	6.22	-3.79	7.93	2235980	651875.4	38°47'14.2	80°10'19.7	8.79	115.535	0.91	-0.43	167.85
	2315	0.52	157.95	2314.97	6.63	-4.23	7.89	2235980	651874.9	38°47'14.2	80°10'19.7	8.95	118.189	0.63	0.28	-106.36
	2415	0.78	154.8	2414.96	7.76	-5.27	8.35	2235980	651873.9	38°47'14.2	80°10'19.7	9.87	122.232	0.26	0.26	-3.15
	2515	0.37	190.52	2514.96	8.71	-6.2	8.58	2235980	651873	38°47'14.2	80°10'19.7	10.59	125.84	0.53	-0.41	35.72
	2615	0.43	126.33	2614.95	9.3	-6.74	8.83	2235980	651872.4	38°47'14.2	80°10'19.7	11.11	127.363	0.43	0.06	-64.19
	2715	0.82	134.14	2714.95	10.26	-7.46	9.64	2235981	651871.7	38°47'14.2	80°10'19.7	12.19	127.728	0.4	0.39	7.81
	2815	0.54	141.43	2814.94	11.34	-8.33	10.45	2235982	651870.8	38°47'14.1	80°10'19.7	13.36	128.549	0.29	-0.28	7.29
	2915	0.76	110.64	2914.93	12.22	-8.93	11.36	2235983	651870.2	38°47'14.1	80°10'19.7	14.45	128.157	0.41	0.22	-30.79
	3015	0.93	122.33	3014.92	13.28	-9.6	12.67	2235984	651869.6	38°47'14.1	80°10'19.7	15.89	127.141	0.24	0.17	11.69
	3115	0.76	167.09	3114.91	14.58	-10.68	13.5	2235985	651868.5	38°47'14.1	80°10'19.6	17.22	128.332	0.66	-0.17	44.76
	3215	0.69	125.94	3214.91	15.73	-11.68	14.14	2235986	651867.5	38°47'14.1	80°10'19.6	18.34	129.55	0.51	-0.07	-41.15

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DEVIATION SURVEY

ALTBDS REWORK DRIVING DEEPER

Table with 14 columns of numerical data representing survey points and measurements.

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DEVIATION SURVEY

ALTBHS REWORK DRIVING DEEPER

9173	92.25	162.62	7286.11	1993.49	-1793.61	906.44	2236878	650085.6	38°46'56.4	80°10'08.6	2009.65	153.189	1.45	-0.28	1.42
9267	92.09	163.68	7282.55	2087.31	-1883.51	933.66	2236905	649995.7	38°46'55.5	80°10'08.2	2102.22	153.632	1.14	-0.17	1.13
9361	91.51	162.91	7279.6	2181.15	-1973.5	960.67	2236932	649905.7	38°46'54.6	80°10'07.9	2194.9	154.044	1.03	-0.62	-0.82
9454	90.28	161.72	7278.14	2274.09	-2062.09	988.92	2236961	649817.1	38°46'53.8	80°10'07.6	2286.96	154.379	1.84	-1.32	-1.28
9549	90.49	159.26	7277.51	2369.08	-2151.63	1020.64	2236992	649727.6	38°46'52.9	80°10'07.2	2381.43	154.622	2.6	0.22	-2.59
9644	90.37	159.1	7276.79	2464.05	-2240.42	1054.41	2237026	649638.8	38°46'52.0	80°10'06.8	2476.14	154.797	0.21	-0.13	-0.17
9738	91.23	158.18	7275.48	2557.99	-2327.95	1088.64	2237060	649551.3	38°46'51.1	80°10'06.3	2569.92	154.937	1.34	0.91	-0.98
9833	92.09	161.18	7272.73	2652.93	-2416.99	1121.61	2237093	649462.2	38°46'50.2	80°10'05.9	2664.56	155.106	3.28	0.91	3.16
9927	93.33	162.46	7268.28	2746.8	-2506.2	1150.91	2237123	649373	38°46'49.4	80°10'05.6	2757.83	155.334	1.89	1.32	1.36
10022	93.7	161.33	7262.46	2841.59	-2596.32	1180.37	2237152	649282.9	38°46'48.5	80°10'05.2	2852.05	155.552	1.25	0.39	-1.19
10117	94.25	161.12	7255.87	2936.35	-2686.05	1210.88	2237182	649193.2	38°46'47.6	80°10'04.8	2946.37	155.734	0.62	0.58	-0.22
10211	94.25	159.13	7248.91	3030.09	-2774.2	1242.74	2237214	649105	38°46'46.7	80°10'04.4	3039.84	155.869	2.11	0	-2.12
10306	94.37	159.07	7241.77	3124.79	-2862.7	1276.54	2237248	649016.5	38°46'45.8	80°10'04.0	3134.42	155.967	0.14	0.13	-0.06
10400	93.88	158.71	7235	3218.51	-2950.17	1310.3	2237282	648929.1	38°46'45.0	80°10'03.6	3228.06	156.052	0.65	-0.52	-0.38
10495	93.29	159.6	7229.06	3313.3	-3038.77	1344.04	2237316	648840.5	38°46'44.1	80°10'03.2	3322.74	156.14	1.12	-0.62	0.94
10588	93.39	162.4	7223.65	3406.13	-3126.55	1374.27	2237346	648752.7	38°46'43.2	80°10'02.8	3415.25	156.272	3.01	0.11	3.01
10684	92.65	162.39	7218.59	3501.94	-3217.92	1403.26	2237375	648661.3	38°46'42.3	80°10'02.5	3510.58	156.439	0.77	-0.77	-0.01
10778	92.68	163.38	7214.22	3595.75	-3307.66	1430.89	2237403	648571.6	38°46'41.4	80°10'02.1	3603.9	156.607	1.05	0.03	1.05
10873	92.56	164.84	7209.87	3690.46	-3398.94	1456.88	2237428	648480.3	38°46'40.5	80°10'01.8	3698.01	156.799	1.54	-0.13	1.54
10969	92.34	162.76	7205.77	3786.2	-3491.03	1483.63	2237455	648388.2	38°46'39.6	80°10'01.5	3793.22	156.975	2.18	-0.23	-2.17
11062	91.97	161.29	7202.27	3879.1	-3579.43	1512.31	2237484	648299.8	38°46'38.7	80°10'01.1	3885.8	157.096	1.63	-0.4	-1.58
11156	91.32	160.1	7199.57	3973.06	-3668.11	1543.38	2237515	648211.1	38°46'37.8	80°10'00.7	3979.57	157.181	1.44	-0.69	-1.27
11252	90.83	156.43	7197.77	4068.95	-3757.25	1578.91	2237551	648122	38°46'37.0	80°10'00.3	4075.52	157.206	3.86	-0.51	-3.82
11346	90.34	159.24	7196.81	4162.84	-3844.29	1614.37	2237586	648035	38°46'36.1	80°09'59.9	4169.5	157.221	3.03	-0.52	2.99
11440	89.54	162.62	7196.91	4256.82	-3933.12	1645.08	2237617	647946.1	38°46'35.2	80°09'59.5	4263.3	157.302	3.7	-0.85	3.6
11534	89.63	161.3	7197.59	4350.79	-4022.49	1674.19	2237646	647856.8	38°46'34.3	80°09'59.1	4356.99	157.403	1.41	0.1	-1.4
11630	90.18	160.77	7197.75	4446.78	-4113.28	1705.39	2237677	647766	38°46'33.4	80°09'58.7	4452.8	157.481	0.8	0.57	-0.55
11724	90.28	158.41	7197.37	4540.76	-4201.37	1738.16	2237710	647677.9	38°46'32.6	80°09'58.3	4546.73	157.524	2.51	0.11	-2.21
11818	89.57	157.43	7197.5	4634.67	-4288.48	1773.5	2237745	647590.8	38°46'31.7	80°09'57.9	4640.72	157.532	1.29	-0.76	-1.04
11914	90.49	158.98	7197.45	4730.59	-4377.61	1809.14	2237781	647501.6	38°46'30.8	80°09'57.5	4736.71	157.546	1.88	0.96	1.61
12006	90.77	158.16	7196.43	4822.53	-4463.24	1842.75	2237814	647416	38°46'30.0	80°09'57.1	4828.69	157.566	0.94	0.3	-0.29
12101	90.71	158.36	7195.21	4917.45	-4551.48	1877.94	2237850	647327.8	38°46'29.1	80°09'56.6	4923.68	157.579	0.22	-0.06	0.21
12197	90.12	161.27	7194.51	5013.44	-4641.57	1911.06	2237883	647237.7	38°46'28.2	80°09'56.2	5019.59	157.622	3.09	-0.61	3.03
12291	89.94	160.03	7194.46	5107.43	-4730.26	1942.2	2237914	647149	38°46'27.3	80°09'55.8	5113.46	157.677	1.33	-0.19	-1.32
12386	89.88	160.23	7194.61	5202.43	-4819.6	1974.49	2237946	647059.7	38°46'26.4	80°09'55.4	5208.38	157.722	0.22	-0.06	0.22
12480	90.28	162.55	7194.48	5296.41	-4908.68	2004.49	2237976	646970.6	38°46'25.5	80°09'55.1	5302.18	157.787	2.5	0.43	2.47
12573	90.52	163.41	7193.83	5389.32	-4997.61	2031.71	2238003	646881.7	38°46'24.7	80°09'54.7	5394.8	157.876	0.96	0.26	0.92
12669	90.58	163.17	7192.91	5485.2	-5089.55	2059.31	2238031	646789.7	38°46'23.7	80°09'54.4	5490.38	157.971	0.26	0.06	-0.25
12764	91.02	162.05	7192.58	5580.12	-5180.19	2087.7	2238059	646699.1	38°46'22.8	80°09'54.0	5585.06	158.05	1.27	0.46	-1.18
12857	90.95	160.41	7189.98	5673.09	-5268.23	2117.62	2238089	646611	38°46'22.0	80°09'53.7	5677.9	158.102	1.76	-0.08	-1.76
12954	90.06	158.27	7189.13	5770.07	-5358.98	2151.84	2238123	646520.3	38°46'21.1	80°09'53.3	5774.87	158.123	2.39	-0.92	-2.21
13046	89.54	156.91	7189.45	5861.95	-5444.03	2186.91	2238159	646435.2	38°46'20.2	80°09'52.8	5866.86	158.114	1.58	-0.57	-1.48
13142	89.02	158.53	7190.66	5957.83	-5532.86	2223.3	2238195	646346.4	38°46'19.3	80°09'52.4	5962.85	158.108	1.77	-0.54	1.69
13236	88.95	158.36	7192.32	6051.75	-5620.27	2257.83	2238229	646259	38°46'18.5	80°09'51.9	6056.83	158.113	0.2	-0.07	-0.18
13330	88.92	158.8	7194.07	6145.69	-5707.76	2292.16	2238264	646171.5	38°46'17.6	80°09'51.5	6150.81	158.112	0.47	-0.03	0.47
13425	89.08	158.37	7195.73	6240.62	-5796.19	2326.84	2238298	646083.1	38°46'16.7	80°09'51.1	6245.8	158.127	0.48	0.17	-0.45
13519	89.01	160.79	7197.29	6334.59	-5884.26	2359.63	2238331	645995	38°46'15.9	80°09'50.7	6339.75	158.149	2.58	-0.07	2.57
13611	89.05	162.46	7198.85	6426.55	-5971.56	2388.62	2238360	645907.7	38°46'15.0	80°09'50.3	6431.56	158.199	1.82	0.04	1.82
13707	89.94	165.12	7199.7	6522.38	-6063.73	2415.42	2238387	645815.6	38°46'14.1	80°09'50.0	6527.1	158.281	2.92	0.93	2.77
13802	90.65	163.76	7199.21	6617.15	-6155.24	2440.9	2238412	645724.1	38°46'13.2	80°09'49.7	6621.56	158.369	1.61	0.75	-1.43
13896	89.29	157.86	7199.26	6711.1	-6243.98	2471.78	2238443	645635.3	38°46'12.3	80°09'49.3	6715.43	158.403	6.44	-1.45	-6.28
13990	91.02	157.54	7199	6804.99	-6330.94	2507.45	2238479	645548.4	38°46'11.4	80°09'48.9	6809.42	158.393	1.87	1.84	-0.34
14084	91.11	160.57	7197.26	6898.93	-6418.71	2541.04	2238513	645460.6	38°46'10.6	80°09'48.5	6903.38	158.402	3.22	0.1	3.22
14179	91.72	160.66	7194.91	6993.9	-6508.29	2572.57	2238544	645371	38°46'09.7	80°09'48.1	6998.28	158.432	0.65	0.64	0.09
14273	91.51	159.47	7192.26	7087.86	-6596.62	2604.6	2238576	645282.7	38°46'08.8	80°09'47.7	7092.21	158.454	1.29	-0.22	-1.27
14368	90.4	159.83	7190.68	7182.84	-6685.68	2637.63	2238609	645193.6	38°46'07.9	80°09'47.3	7187.17	158.47	1.23	-1.17	0.38
14463	90.34	159.47	7190.06	7277.82	-6774.75	2670.67	2238642	645104.6	38°46'07.0	80°09'46.9	7282.15	158.485	0.38	-0.06	-0.38
14557	90	159.23	7189.79	7371.81	-6862.71	2703.82	2238675	645016.6	38°46'06.2	80°09'46.5	7376.14	158.496	0.44	-0.36	-0.26
14652	90.37	160.62	7189.48	7466.8	-6951.93	2736.43	2238708	644927.4	38°46'05.3	80°09'46.1	7471.11	158.514	1.51	0.39	1.46
14746	90.52	161.23	7188.75	7560.79	-7040.77	2767.15	2238739	644838.5	38°46'04.4	80°09'45.7	7565.02	158.544	0.67	0.16	0.65
14841	90.52	163.74	7187.89	7655.72	-7131.35	2795.73	2238767	644748	38°46'03.5	80°09'45.3	7659.79	158.593	2.64	0	2.64
14936	90.62	165.81	7186.94	7750.44	-7223.01	2820.68	2238792	644656.3	38°46'02.6	80°09'45.0	7754.23	158.669	2.18	0.11	2.18
15031	89.85	166.56	7186.55	7844.97	-7315.26	2843.36	2238815	644564.1	38°46'01.7	80°09'44.7	7848.42	158.759	1.13	-0.81	0.79
15125	90.09	165.9	7186.6	7938.49	-7406.56	2865.74	2238837	644472.8	38°46'00.8	80°09'44.5	7941.63	158.848	0.75	0.26	-0.7
15219	89.78	162.81	7186.71	8032.26	-7497.06	2891.08	2238863	644382.3	38°45'59.9	80°09'44.2	8035.19	158.912			

47-097-03793WH6A

DEVIATION
SURVEY

ALTBODAS REWORK
DRILLING DEEPER

COMMENTS

Wellpath general comments
API #: 47-097-03793-0000
Rig: Patterson 324
BHI Job #: 5973158
Duration: 12/02/2013-12/20/2013
VES Gyro: (115'-4455')
BHI ATCurve Surveys: (4455')(4505'-15408')
TD Proj to MD: 15437'

10/03/2014

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