



5-17-12

To: Tal Oden

Please find these copies of the surveys attached:

Operating Company: **Chesapeake AEC Acquisition, L.L.C.**

Rig: **NOMAC 39**

Well Name: **ALLISON HNK 3H M**

API Number: **47-029-00141**

Location: **HANCOCK COUNTY, WV**

A handwritten signature in black ink, appearing to read "S B Hohle", is written over a horizontal line.

Steven B. Hohle
MWD Coordinator / Appalachian Region
Crescent Directional Drilling, L.P.
100 Imperial Industrial Park
Oakdale, PA 15071
shohle@crescentdirectional.com
(724) 695-1408 office
(724) 695-1413 fax
(607) 228-0420 cell

Crescent Directional Drilling L.P.
100 Imperial Industrial Drive, Oakdale, PA 15071
Phone 724-695-1408 Fax 724-695-1413



Minimum Curvature Calculation

CLIENT:	CHESAPEAKE AEC ACQUISTION, L.L.C.	MWD OPERATORS:	G. PEERY / D.DUBIENCZUK
WELL:	ALLISON HNK 3H M	DIRECTIONAL DRILLERS:	R.HALL / M.GRUETZNER
COUNTY/STATE:	HANCOCK, WV	TOOL AZIMUTH TO GRID NORTH:	-8.18
RIG:	NOMAC 39	SURVEY TOOL:	PILOT
SURF LOCATION:	LAT: 40.501514 N LONG: -80.547351 W	JOB#:	PA-12249
API NUMBER:	47-029-00141	RKB:	1293'
FINAL SVY DATE:	5/13/2012	GL:	1275'
VS DIRECTION:	327.29		

TOOL	Meas. Depth	Inc.	Azm.	T.V.D.	Ver.Sect.	+N/-S	+E/-W	DLS
TIE IN	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GYRO	100	0.76	113.42	100.00	-0.55	-0.26	0.61	0.76
GYRO	200	0.45	176.93	199.99	-1.44	-0.92	1.24	0.69
GYRO	300	0.14	174.87	299.99	-1.89	-1.43	1.27	0.31
GYRO	400	0.21	241.75	399.99	-1.99	-1.64	1.12	0.20
GYRO	500	0.17	255.68	499.99	-1.93	-1.77	0.81	0.06
GYRO	600	0.24	251.49	599.99	-1.83	-1.87	0.47	0.07
GYRO	700	0.27	244.93	699.99	-1.74	-2.03	0.06	0.04
GYRO	800	0.29	214.89	799.99	-1.81	-2.34	-0.30	0.15
GYRO	900	0.44	266.59	899.99	-1.72	-2.57	-0.83	0.35
GYRO	1000	0.46	288.96	999.98	-1.22	-2.46	-1.59	0.18
GYRO	1100	0.59	287.57	1099.98	-0.50	-2.18	-2.46	0.13
GYRO	1200	0.69	288.92	1199.97	0.36	-1.83	-3.52	0.10
GYRO	1300	0.52	281.83	1299.97	1.15	-1.54	-4.53	0.19
GYRO	1400	0.50	318.19	1399.96	1.90	-1.12	-5.27	0.32
GYRO	1500	0.97	327.16	1499.95	3.18	-0.09	-6.02	0.48
GYRO	1600	1.25	320.90	1599.94	5.11	1.47	-7.17	0.30
GYRO	1700	1.51	304.71	1699.91	7.41	3.07	-8.94	0.47
GYRO	1800	1.43	299.79	1799.87	9.73	4.44	-11.10	0.15
GYRO	1900	1.49	302.35	1899.84	12.02	5.75	-13.28	0.09
GYRO	2000	1.29	301.44	1999.81	14.21	7.04	-15.34	0.20
GYRO	2100	1.08	303.63	2099.79	16.09	8.15	-17.09	0.21
GYRO	2200	1.05	309.21	2199.77	17.82	9.25	-18.58	0.11
GYRO	2300	1.12	316.13	2299.76	19.65	10.53	-19.97	0.15
GYRO	2400	1.45	318.65	2399.73	21.86	12.19	-21.48	0.33
GYRO	2500	1.48	300.68	2499.70	24.27	13.79	-23.43	0.46
GYRO	2600	1.19	295.39	2599.67	26.30	14.90	-25.48	0.31
GYRO	2700	1.12	321.23	2699.65	28.16	16.11	-27.03	0.52
GYRO	2800	1.48	316.10	2799.63	30.40	17.80	-28.54	0.38
GYRO	2900	1.09	300.00	2899.60	32.51	19.20	-30.25	0.53
GYRO	3000	0.93	321.28	2999.58	34.16	20.31	-31.59	0.40
GYRO	3100	1.31	321.83	3099.57	36.11	21.85	-32.80	0.38
GYRO	3200	0.98	298.84	3199.55	38.00	23.16	-34.26	0.56
GYRO	3300	1.15	327.26	3299.53	39.75	24.41	-35.55	0.55
GYRO	3400	1.33	304.79	3399.51	41.83	25.92	-37.04	0.51
GYRO	3500	1.08	320.55	3499.48	43.83	27.31	-38.60	0.41
GYRO	3600	1.35	321.90	3599.46	45.94	28.96	-39.92	0.27
GYRO	3700	1.46	302.57	3699.43	48.27	30.58	-41.72	0.48
GYRO	3800	0.90	310.95	3799.41	50.18	31.78	-43.39	0.58
GYRO	3900	0.93	310.47	3899.40	51.71	32.82	-44.60	0.03
GYRO	4000	1.24	292.64	3999.38	53.38	33.76	-46.21	0.45
MWD	4033	3.10	358.10	4032.36	54.44	34.79	-46.57	8.55
MWD	4065	7.80	14.80	4064.21	56.65	37.76	-46.05	15.35
MWD	4097	12.00	9.60	4095.72	60.58	43.14	-44.94	13.41



Minimum Curvature Calculation

CLIENT:	CHESAPEAKE AEC ACQUISITION, L.L.C.	MWD OPERATORS:	G. PEERY / D.DUBIENCZUK
WELL:	ALLISON HNK 3H M	DIRECTIONAL DRILLERS:	R.HALL / M.GRUETZNER
COUNTY/STATE:	HANCOCK, WV	TOOL AZIMUTH TO GRID NORTH:	-8.18
RIG:	NOMAC 39	SURVEY TOOL:	PILOT
SURF LOCATION:	LAT: 40.501514 N LONG: -80.547351 W	JOB#:	PA-12249
API NUMBER:	47-029-00141	RKB:	1293'
FINAL SVY DATE:	5/13/2012	GL:	1275'
VS DIRECTION:	327.29		

TOOL	Meas. Depth	Inc.	Azm.	T.V.D.	Ver.Sect.	+N / -S	+E / -W	DLS
MWD	4129	16.60	6.10	4126.72	66.61	50.97	-43.90	14.62
MWD	4160	21.10	4.30	4156.05	74.52	60.94	-43.01	14.64
MWD	4192	25.40	0.30	4185.45	84.88	73.55	-42.54	14.31
MWD	4224	27.50	350.80	4214.11	97.41	87.72	-43.69	14.74
MWD	4256	29.30	344.10	4242.27	111.69	102.55	-47.01	11.43
MWD	4287	30.30	337.40	4269.18	126.65	117.07	-52.10	11.21
MWD	4319	31.20	328.80	4296.69	142.90	131.62	-59.50	14.02
MWD	4351	31.80	325.50	4323.98	159.61	145.66	-68.57	5.70
MWD	4382	33.80	327.40	4350.03	176.40	159.65	-77.84	7.26
MWD	4414	35.90	329.00	4376.29	194.68	175.20	-87.47	7.16
MWD	4446	37.60	329.30	4401.93	213.81	191.63	-97.29	5.34
MWD	4478	38.40	329.00	4427.15	233.51	208.55	-107.39	2.57
MWD	4509	40.80	326.70	4451.03	253.26	225.27	-117.91	9.07
MWD	4541	43.10	326.00	4474.83	274.65	243.07	-129.76	7.33
MWD	4573	45.90	324.90	4497.65	297.06	261.54	-142.49	9.08
MWD	4604	47.90	326.20	4518.83	319.68	280.20	-155.29	7.14
MWD	4636	50.80	327.40	4539.68	343.96	300.52	-168.57	9.50
MWD	4668	53.40	327.40	4559.33	369.21	321.79	-182.18	8.13
MWD	4699	56.90	328.10	4577.05	394.64	343.30	-195.75	11.44
MWD	4731	59.70	327.70	4593.86	421.86	366.36	-210.22	8.81
MWD	4763	63.20	328.10	4609.15	449.97	390.17	-225.15	10.99
MWD	4795	65.90	328.40	4622.90	478.85	414.74	-240.35	8.48
MWD	4826	69.20	327.70	4634.74	507.50	439.05	-255.51	10.85
MWD	4858	71.30	327.70	4645.55	537.61	464.50	-271.61	6.56
MWD	4890	74.50	327.60	4654.96	568.19	490.34	-287.97	10.00
MWD	4921	77.40	327.40	4662.48	598.26	515.70	-304.13	9.38
MWD	4953	80.90	327.90	4668.51	629.69	542.25	-320.94	11.04
MWD	4985	83.50	327.40	4672.85	661.39	569.03	-337.90	8.27
MWD	5016	87.50	325.80	4675.28	692.28	594.82	-354.91	13.89
MWD	5048	89.40	326.00	4676.15	724.26	621.31	-372.84	5.97
MWD	5111	90.30	325.80	4676.31	787.24	673.47	-408.16	1.46
MWD	5175	91.30	325.80	4675.42	851.21	726.40	-444.13	1.56
MWD	5238	91.00	325.80	4674.15	914.18	778.50	-479.54	0.48
MWD	5301	90.20	325.30	4673.49	977.14	830.44	-515.17	1.50
MWD	5365	90.20	325.50	4673.27	1041.11	883.12	-551.52	0.31
MWD	5428	89.30	326.00	4673.54	1104.08	935.20	-586.97	1.63
MWD	5492	90.20	325.80	4673.82	1168.06	988.19	-622.85	1.44
MWD	5556	91.20	326.30	4673.04	1232.04	1041.28	-658.59	1.75
MWD	5619	91.30	327.20	4671.67	1295.02	1093.95	-693.12	1.44
MWD	5683	90.60	327.40	4670.61	1359.01	1147.80	-727.69	1.14
MWD	5746	91.70	328.80	4669.34	1421.99	1201.27	-760.98	2.83
MWD	5810	91.50	327.40	4667.56	1485.96	1255.58	-794.78	2.21
MWD	5874	90.70	326.70	4666.33	1549.95	1309.28	-829.59	1.66
MWD	5937	91.80	326.50	4664.95	1612.93	1361.86	-864.26	1.77
MWD	6001	91.20	326.50	4663.28	1676.90	1415.21	-899.57	0.94
MWD	6064	90.50	326.20	4662.34	1739.88	1467.65	-934.48	1.21



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COUNTY/STATE:	HANCOCK, WV	TOOL AZIMUTH TO GRID NORTH:	-8.18
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SURF LOCATION:	LAT: 40.501514 N LONG: -80.547351 W	JOB#:	PA-12249
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TOOL	Meas. Depth	Inc.	Azm.	T.V.D.	Ver.Sect.	+N / -S	+E / -W	DLS
MWD	6128	91.60	325.80	4661.17	1803.85	1520.70	-970.26	1.83
MWD	6191	91.30	327.00	4659.58	1866.83	1573.15	-1005.11	1.96
MWD	6255	90.20	327.60	4658.74	1930.82	1627.00	-1039.68	1.96
MWD	6318	91.20	327.60	4657.97	1993.81	1680.19	-1073.44	1.59
MWD	6382	92.30	327.90	4656.01	2057.78	1734.29	-1107.57	1.78
MWD	6446	91.90	327.20	4653.67	2121.74	1788.26	-1141.89	1.26
MWD	6509	90.50	326.00	4652.35	2184.71	1840.84	-1176.56	2.93
MWD	6573	91.40	326.50	4651.29	2248.69	1894.05	-1212.11	1.61
MWD	6637	91.30	325.80	4649.78	2312.66	1947.19	-1247.75	1.10
MWD	6700	90.30	325.80	4648.90	2375.63	1999.29	-1283.16	1.59
MWD	6764	91.50	325.80	4647.90	2439.60	2052.21	-1319.12	1.88
MWD	6825	91.30	326.30	4646.40	2500.57	2102.80	-1353.18	0.88
MWD	6888	90.20	327.00	4645.58	2563.56	2155.42	-1387.81	2.07
MWD	6952	91.20	327.60	4644.80	2627.55	2209.27	-1422.38	1.82
MWD	7016	92.40	328.10	4642.79	2691.52	2263.43	-1456.42	2.03
MWD	7079	92.10	327.60	4640.31	2754.47	2316.73	-1489.92	0.93
MWD	7142	90.80	327.70	4638.72	2817.44	2369.93	-1523.62	2.07
MWD	7206	92.00	327.90	4637.16	2881.42	2424.07	-1557.71	1.90
MWD	7269	91.50	327.60	4635.23	2944.39	2477.33	-1591.32	0.93
MWD	7333	90.30	326.90	4634.23	3008.38	2531.14	-1625.93	2.17
MWD	7396	91.50	326.90	4633.24	3071.37	2583.91	-1660.33	1.90
MWD	7459	92.20	325.80	4631.20	3134.33	2636.33	-1695.22	2.07
MWD	7523	91.80	326.20	4628.97	3198.27	2689.35	-1730.99	0.88
MWD	7586	91.00	326.20	4627.43	3261.24	2741.69	-1766.03	1.27
MWD	7650	90.20	326.50	4626.76	3325.23	2794.96	-1801.49	1.33
MWD	7713	90.60	327.20	4626.32	3388.22	2847.71	-1835.94	1.28
MWD	7777	89.50	327.70	4626.27	3452.22	2901.65	-1870.37	1.89
MWD	7840	91.00	327.60	4625.99	3515.22	2954.87	-1904.08	2.39
MWD	7903	90.60	327.40	4625.11	3578.21	3008.00	-1937.93	0.71
MWD	7967	90.20	328.10	4624.66	3642.21	3062.13	-1972.08	1.26
MWD	8030	91.20	328.30	4623.89	3705.19	3115.67	-2005.27	1.62
MWD	8094	91.50	328.10	4622.39	3769.17	3170.04	-2038.99	0.56
MWD	8156	91.00	326.50	4621.03	3831.15	3222.20	-2072.47	2.70
MWD	8219	92.20	326.90	4619.28	3894.12	3274.84	-2107.05	2.01
MWD	8254	91.20	326.00	4618.24	3929.10	3303.99	-2126.38	3.84
PTB	8309	91.20	326.00	4617.08	3984.08	3349.58	-2157.13	0.00



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COUNTY/STATE:	HANCOCK, WV	TOOL AZIMUTH TO GRID NORTH:	-8.18
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TIE IN	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GYRO	100	0.76	113.42	100.00	-0.55	-0.26	0.61	0.76
GYRO	200	0.45	176.93	199.99	-1.44	-0.92	1.24	0.69
GYRO	300	0.14	174.87	299.99	-1.89	-1.43	1.27	0.31
GYRO	400	0.21	241.75	399.99	-1.99	-1.64	1.12	0.20
GYRO	500	0.17	255.68	499.99	-1.93	-1.77	0.81	0.06
GYRO	600	0.24	251.49	599.99	-1.83	-1.87	0.47	0.07
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GYRO	800	0.29	214.89	799.99	-1.81	-2.34	-0.30	0.15
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GYRO	1000	0.46	288.96	999.98	-1.22	-2.46	-1.59	0.18
GYRO	1100	0.59	287.57	1099.98	-0.50	-2.18	-2.46	0.13
GYRO	1200	0.69	288.92	1199.97	0.36	-1.83	-3.52	0.10
GYRO	1300	0.52	281.83	1299.97	1.15	-1.54	-4.53	0.19
GYRO	1400	0.50	318.19	1399.96	1.90	-1.12	-5.27	0.32
GYRO	1500	0.97	327.16	1499.95	3.18	-0.09	-6.02	0.48
GYRO	1600	1.25	320.90	1599.94	5.11	1.47	-7.17	0.30
GYRO	1700	1.51	304.71	1699.91	7.41	3.07	-8.94	0.47
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GYRO	2900	1.09	300.00	2899.60	32.51	19.20	-30.25	0.53
GYRO	3000	0.93	321.28	2999.58	34.16	20.31	-31.59	0.40
GYRO	3100	1.31	321.83	3099.57	36.11	21.85	-32.80	0.38
GYRO	3200	0.98	298.84	3199.55	38.00	23.16	-34.26	0.56
GYRO	3300	1.15	327.26	3299.53	39.75	24.41	-35.55	0.55
GYRO	3400	1.33	304.79	3399.51	41.83	25.92	-37.04	0.51
GYRO	3500	1.08	320.55	3499.48	43.83	27.31	-38.60	0.41
GYRO	3600	1.35	321.90	3599.46	45.94	28.96	-39.92	0.27
GYRO	3700	1.46	302.57	3699.43	48.27	30.58	-41.72	0.48
GYRO	3800	0.90	310.95	3799.41	50.18	31.78	-43.39	0.58
GYRO	3900	0.93	310.47	3899.40	51.71	32.82	-44.60	0.03
GYRO	4000	1.24	292.64	3999.38	53.38	33.76	-46.21	0.45
MWD	4033	3.10	358.10	4032.36	54.44	34.79	-46.57	8.55
MWD	4065	7.80	14.80	4064.21	56.65	37.76	-46.05	15.35
MWD	4097	12.00	9.60	4095.72	60.58	43.14	-44.94	13.41



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MWD	4192	25.40	0.30	4185.45	84.88	73.55	-42.54	14.31
MWD	4224	27.50	350.80	4214.11	97.41	87.72	-43.69	14.74
MWD	4256	29.30	344.10	4242.27	111.69	102.55	-47.01	11.43
MWD	4287	30.30	337.40	4269.18	126.65	117.07	-52.10	11.21
MWD	4319	31.20	328.80	4296.69	142.90	131.62	-59.50	14.02
MWD	4351	31.80	325.50	4323.98	159.61	145.66	-68.57	5.70
MWD	4382	33.80	327.40	4350.03	176.40	159.65	-77.84	7.26
MWD	4414	35.90	329.00	4376.29	194.68	175.20	-87.47	7.16
MWD	4446	37.60	329.30	4401.93	213.81	191.63	-97.29	5.34
MWD	4478	38.40	329.00	4427.15	233.51	208.55	-107.39	2.57
MWD	4509	40.80	326.70	4451.03	253.26	225.27	-117.91	9.07
MWD	4541	43.10	326.00	4474.83	274.65	243.07	-129.76	7.33
MWD	4573	45.90	324.90	4497.65	297.06	261.54	-142.49	9.08
MWD	4604	47.90	326.20	4518.83	319.68	280.20	-155.29	7.14
MWD	4636	50.80	327.40	4539.68	343.96	300.52	-168.57	9.50
MWD	4668	53.40	327.40	4559.33	369.21	321.79	-182.18	8.13
MWD	4699	56.90	328.10	4577.05	394.64	343.30	-195.75	11.44
MWD	4731	59.70	327.70	4593.86	421.86	366.36	-210.22	8.81
MWD	4763	63.20	328.10	4609.15	449.97	390.17	-225.15	10.99
MWD	4795	65.90	328.40	4622.90	478.85	414.74	-240.35	8.48
MWD	4826	69.20	327.70	4634.74	507.50	439.05	-255.51	10.85
MWD	4858	71.30	327.70	4645.55	537.61	464.50	-271.61	6.56
MWD	4890	74.50	327.60	4654.96	568.19	490.34	-287.97	10.00
MWD	4921	77.40	327.40	4662.48	598.26	515.70	-304.13	9.38
MWD	4953	80.90	327.90	4668.51	629.69	542.25	-320.94	11.04
MWD	4985	83.50	327.40	4672.85	661.39	569.03	-337.90	8.27
MWD	5016	87.50	325.80	4675.28	692.28	594.82	-354.91	13.89
MWD	5048	89.40	326.00	4676.15	724.26	621.31	-372.84	5.97
MWD	5111	90.30	325.80	4676.31	787.24	673.47	-408.16	1.46
MWD	5175	91.30	325.80	4675.42	851.21	726.40	-444.13	1.56
MWD	5238	91.00	325.80	4674.15	914.18	778.50	-479.54	0.48
MWD	5301	90.20	325.30	4673.49	977.14	830.44	-515.17	1.50
MWD	5365	90.20	325.50	4673.27	1041.11	883.12	-551.52	0.31
MWD	5428	89.30	326.00	4673.54	1104.08	935.20	-586.97	1.63
MWD	5492	90.20	325.80	4673.82	1168.06	988.19	-622.85	1.44
MWD	5556	91.20	326.30	4673.04	1232.04	1041.28	-658.59	1.75
MWD	5619	91.30	327.20	4671.67	1295.02	1093.95	-693.12	1.44
MWD	5683	90.60	327.40	4670.61	1359.01	1147.80	-727.69	1.14
MWD	5746	91.70	328.80	4669.34	1421.99	1201.27	-760.98	2.83
MWD	5810	91.50	327.40	4667.56	1485.96	1255.58	-794.78	2.21
MWD	5874	90.70	326.70	4666.33	1549.95	1309.28	-829.59	1.66
MWD	5937	91.80	326.50	4664.95	1612.93	1361.86	-864.26	1.77
MWD	6001	91.20	326.50	4663.28	1676.90	1415.21	-899.57	0.94
MWD	6064	90.50	326.20	4662.34	1739.88	1467.65	-934.48	1.21



Minimum Curvature Calculation

CLIENT:	CHESAPEAKE AEC ACQUISTION, L.L.C.	MWD OPERATORS:	G. PEERY / D.DUBIENCZUK
WELL:	ALLISON HNK 3H M	DIRECTIONAL DRILLERS:	R.HALL / M.GRUETZNER
COUNTY/STATE:	HANCOCK, WV	TOOL AZIMUTH TO GRID NORTH:	-8.18
RIG:	NOMAC 39	SURVEY TOOL:	PILOT
SURF LOCATION:	LAT: 40.501514 N LONG: -80.547351 W	JOB#:	PA-12249
API NUMBER:	47-029-00141	RKB:	1293'
FINAL SVY DATE:	5/13/2012	GL:	1275'
VS DIRECTION:	327.29		

TOOL	Meas. Depth	Inc.	Azm.	T.V.D.	Ver.Sect.	+N / -S	+E / -W	DLS
MWD	6128	91.60	325.80	4661.17	1803.85	1520.70	-970.26	1.83
MWD	6191	91.30	327.00	4659.58	1866.83	1573.15	-1005.11	1.96
MWD	6255	90.20	327.60	4658.74	1930.82	1627.00	-1039.68	1.96
MWD	6318	91.20	327.60	4657.97	1993.81	1680.19	-1073.44	1.59
MWD	6382	92.30	327.90	4656.01	2057.78	1734.29	-1107.57	1.78
MWD	6446	91.90	327.20	4653.67	2121.74	1788.26	-1141.89	1.26
MWD	6509	90.50	326.00	4652.35	2184.71	1840.84	-1176.56	2.93
MWD	6573	91.40	326.50	4651.29	2248.69	1894.05	-1212.11	1.61
MWD	6637	91.30	325.80	4649.78	2312.66	1947.19	-1247.75	1.10
MWD	6700	90.30	325.80	4648.90	2375.63	1999.29	-1283.16	1.59
MWD	6764	91.50	325.80	4647.90	2439.60	2052.21	-1319.12	1.88
MWD	6825	91.30	326.30	4646.40	2500.57	2102.80	-1353.18	0.88
MWD	6888	90.20	327.00	4645.58	2563.56	2155.42	-1387.81	2.07
MWD	6952	91.20	327.60	4644.80	2627.55	2209.27	-1422.38	1.82
MWD	7016	92.40	328.10	4642.79	2691.52	2263.43	-1456.42	2.03
MWD	7079	92.10	327.60	4640.31	2754.47	2316.73	-1489.92	0.93
MWD	7142	90.80	327.70	4638.72	2817.44	2369.93	-1523.62	2.07
MWD	7206	92.00	327.90	4637.16	2881.42	2424.07	-1557.71	1.90
MWD	7269	91.50	327.60	4635.23	2944.39	2477.33	-1591.32	0.93
MWD	7333	90.30	326.90	4634.23	3008.38	2531.14	-1625.93	2.17
MWD	7396	91.50	326.90	4633.24	3071.37	2583.91	-1660.33	1.90
MWD	7459	92.20	325.80	4631.20	3134.33	2636.33	-1695.22	2.07
MWD	7523	91.80	326.20	4628.97	3198.27	2689.35	-1730.99	0.88
MWD	7586	91.00	326.20	4627.43	3261.24	2741.69	-1766.03	1.27
MWD	7650	90.20	326.50	4626.76	3325.23	2794.96	-1801.49	1.33
MWD	7713	90.60	327.20	4626.32	3388.22	2847.71	-1835.94	1.28
MWD	7777	89.50	327.70	4626.27	3452.22	2901.65	-1870.37	1.89
MWD	7840	91.00	327.60	4625.99	3515.22	2954.87	-1904.08	2.39
MWD	7903	90.60	327.40	4625.11	3578.21	3008.00	-1937.93	0.71
MWD	7967	90.20	328.10	4624.66	3642.21	3062.13	-1972.08	1.26
MWD	8030	91.20	328.30	4623.89	3705.19	3115.67	-2005.27	1.62
MWD	8094	91.50	328.10	4622.39	3769.17	3170.04	-2038.99	0.56
MWD	8156	91.00	326.50	4621.03	3831.15	3222.20	-2072.47	2.70
MWD	8219	92.20	326.90	4619.28	3894.12	3274.84	-2107.05	2.01
MWD	8254	91.20	326.00	4618.24	3929.10	3303.99	-2126.38	3.84
PTB	8309	91.20	326.00	4617.08	3984.08	3349.58	-2157.13	0.00