

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No: 15-07370
Exam Date: 5/18/2017

1. Current Owner:
2M BRAND LLC PO BOX 269 ROCKLAND ID 83271

2. Accompanied by: Josh, Cody, and Scott
Phone No: 208 766 3152 (Josh)

3. **SOURCE:**
GROUND WATER

TRIBUTARY:

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 15-7347. This right was split from 15-7347 as part of a 2013 assignment of permit (ownership change) and then reassigned to the owner of 15-7347 in 2015. The 2015 Assignment of Permit made whole the development of original permit 15-7347 under two separate licenses owned by a single entity.

Various statutory claims from numerous springs cover land in Sections 23 and 24.

Samaria Irrigation Company shares can be used by both pivots.

2. Other water rights with the same point-of-diversion: 15-7347

C. DIVERSION AND DELIVERY SYSTEM**1. LOCATION OF POINT(S) OF DIVERSION:**

GROUND WATER SE¼SE¼ Sec. 23, Twp 15S, Rge 35E, B.M. ONEIDA County

Method of Determination: GPS and ArcMap.

2.

PLACE OF USE: IRRIGATION

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
15S	35E	23				0.6									26.0		5.5	30.0	62.1
15S	35E	24							0.5		1.5	37.0	25.0	0.6					64.6
15S	35E	26	39.0	25.0	3.5	8.5													76.0

Acre Limit: 101.4

Total Acres: 202.7

Method of Determination: Aerial photography and ArcMap. Land tilled in 2015 aerial photography was the basis of the shape for the SW pivot, checked against 8/27/2016 and 9/28/2016 Landsat imagery to confirm irrigation.

3.

Delivery System Diagram Attached (required). Indicate all major components and distances between components.

X Indicate weir size/pipe as applicable.

Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be

X 1:24,000 or greater.

X Aerial Photo Attached (required for irrigation of 10+ acres).

X Photo of Diversion and System Attached

4. PUMP INFORMATION

75 HP turbine pump

D. FLOW MEASUREMENTS

A measurement at the pump outlet was not possible due to internal corrosion of the pipe. Instead, a measurement was taken at each pivot.

SW Pivot: 1.43 cfs

NE Pivot: 2.08 cfs

E. FLOW

_____ Additional Computation Sheets Attached

CALCULATIONS

2.08 cfs NE Pivot + 1.43 cfs SW Pivot = 3.51 cfs/system

However, the licensed rate will be limited to 1.67 cfs based on permit.

15-7370 and 15-7347 will be limited to a combined 3.34 cfs based on original permit 15-7347.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

$$V_{IR} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) = 101.4 \text{ acres} \times 3.5 \text{ AFA} = 354.9 \text{ AFA}$$

$$V_{DR} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 = 1.67 \text{ cfs} \times 214 \text{ days} \times 1.9835 = 708.9 \text{ AFA}$$

$$V = \text{Smaller of } V_{IR} \text{ and } V_{DR} = 354.9$$

2. Volume Calculations for Other Uses: N/A

G. NARRATIVE/REMARKS/COMMENTS

Pump feeds into a main line that splits immediately into two lines. One line goes to the pivot on the south side of the highway, and the other line goes to the pivot on the north side of the highway. A single power meter supplies power to the pump, and the two pivots are operated hydraulically. Both pivots have an end gun on them. Scott Hendrickson said that they manually come out and turn off the end guns where it would spray onto the road or onto other properties not owned by them. The end gun will be manually turned off when the south pivot approaches the Holgates property, as well as S Samaria Rd. The end gun on the north pivot will be manually turned off when the pivot approaches Michael Hughes place, as well as James Carters place.

Surface water system is pumped out of a storage pond that is filled through surface water shares from Samaria Water and Irrigation Co. This is a separate pump from the groundwater well. The same piping system is used to deliver the surface water to the pivots from this storage pond.

A third pivot, north of the highway and SE of the NW pivot, is also connected to the system. It is not covered by this groundwater right and should only be irrigated using the surface water associated with the property.

A review of the 2013 ownership split of permit 15-7347 found two errors that were corrected at licensing. The first error was the place of use described on each split permit. They covered the same 101.4 acres in Sections 23 and 26. However, the entire 202.7 acres covered by the original permit were conveyed a single owner (2M Brand) with *only 50% of the permit*. Because no amendment was filed for the remaining 50% of the permit (at that time owned by Peoa River Valley Ranch), each split permit should have listed the entire 202.7 acres listed on the original permit. Second, each split permit should have listed an acre limit. One permit's acre limit should have been 101.4 acres and the other's should have been 101.3 acres. 15-7347 was chosen to cover 101.3 acres. Both licenses have the same priority date, are owned by the same owner and combine to completely cover the same land, and sum to the entirety of the original permit's 202.7 acres.

Have conditions of permit approval been met? X Yes No

H. RECOMMENDATIONS**1. Recommended Amounts**

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
IRRIGATION	04/01 to 10/31	1.67 CFS	354.9 AF
	<u>Totals:</u>	1.670 CFS	354.90 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None

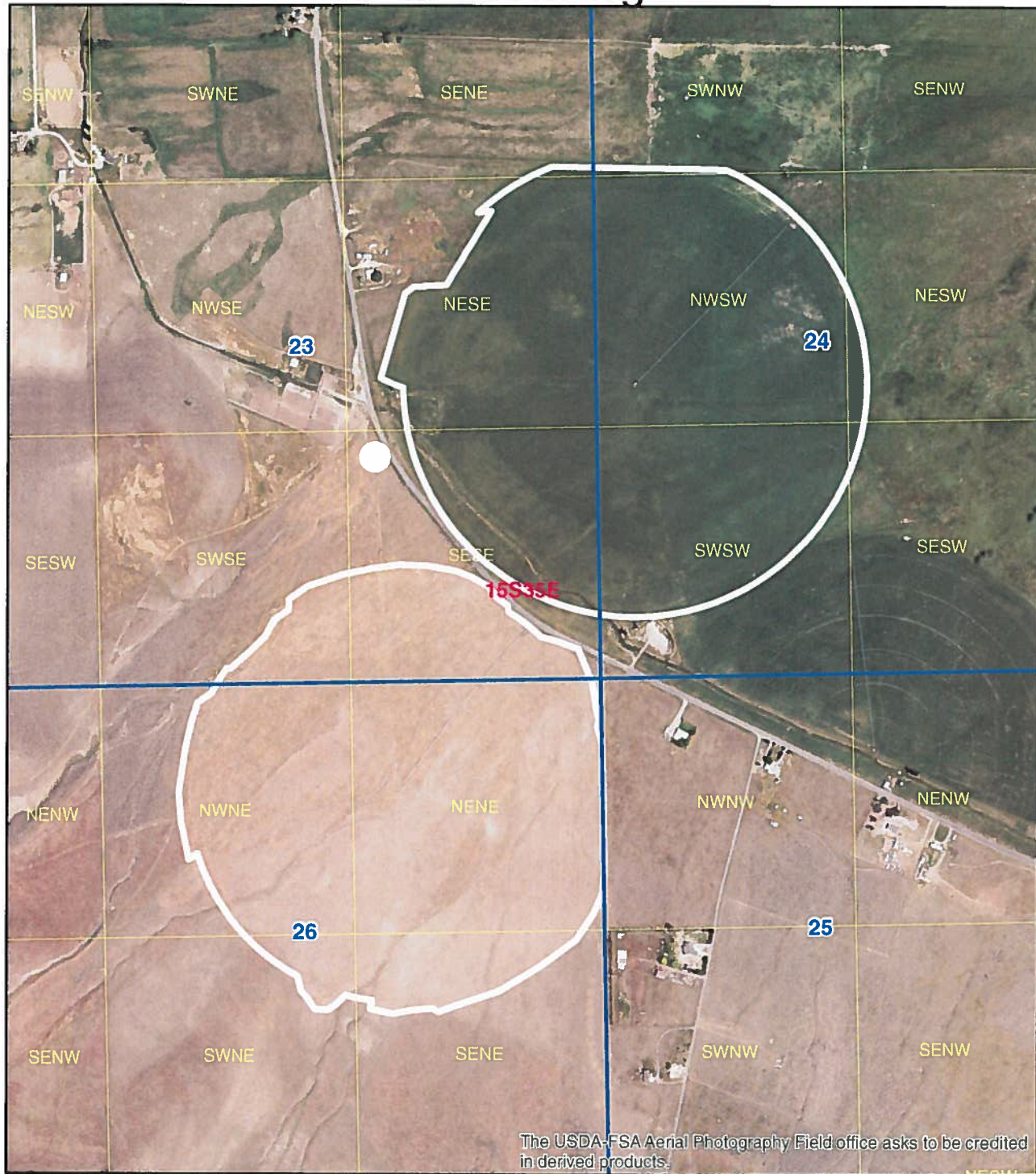
☒ Change P.U. as reflected above ☒ Add P.U. as reflected above ☐ None

I. AUTHENTICATION

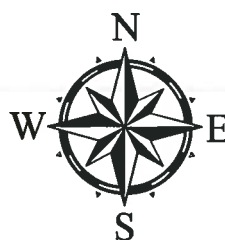
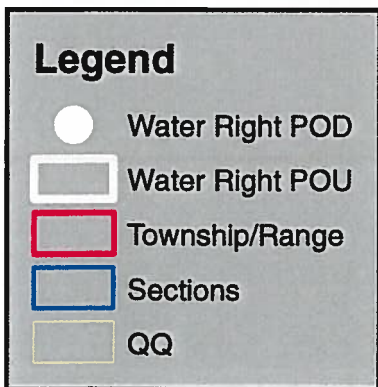
Field Examiner's Name Cooper Fritz Date 10/24/2017

Reviewer James Cefalo Date 10/27/17

15-7347 and 15-7370 Place of Use and Point of Diversion at Licensing



2015 Imagery





Looking at pipe that is running out to North Pivot



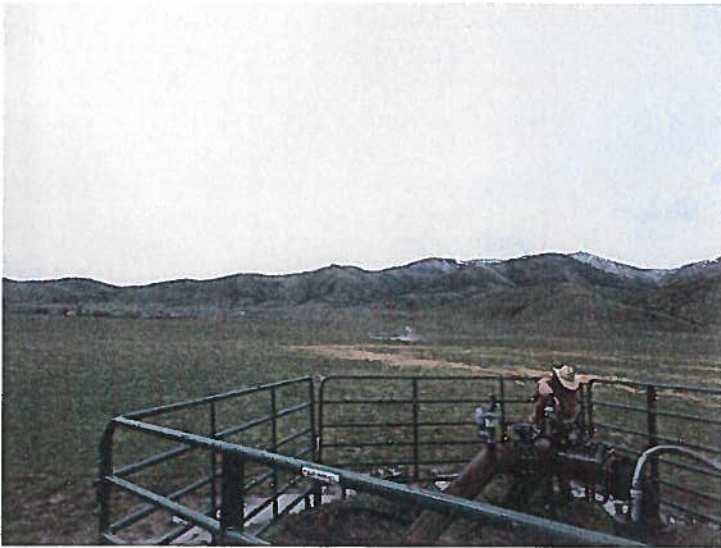
Complete system



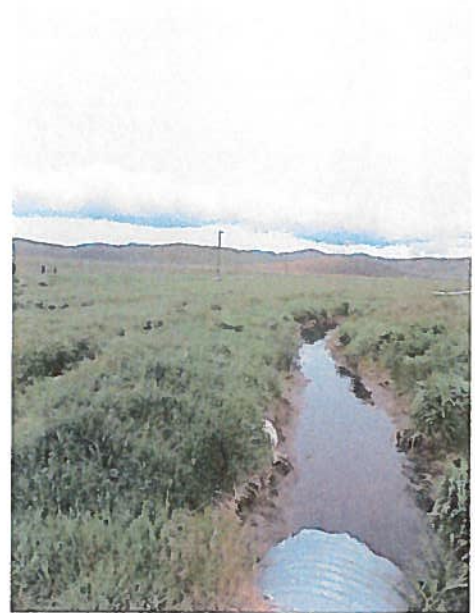
Electrical works



Looking at north pivot in the distance



Looking at system with south pivot in the distance



Surface water canal that delivers canal shares



South side of irrigation pond



North side of irrigation pond



Pump inside irrigation pond



Pump that pumps surface water out of irrigation pond

Southwest	Pivot					
Date/Time	Delila Ch 1 Velocity ft/s	Error	Delila Ch 1 Volume gal/h	Error	cfs	
8/14/2017 14:07	3.690382819	0	36982.23514	0	1.373277849	
8/14/2017 14:07	3.680130303	0	36879.49216	0	1.369462648	
8/14/2017 14:07	3.663284264	0	36710.67385	0	1.363193842	
8/14/2017 14:08	3.665302836	0	36730.90246	0	1.363945	
8/14/2017 14:08	3.670548627	Amplitude	36783.47182	Amplitude	1.365897082	
8/14/2017 14:08	3.682568343	0	36903.92436	0	1.3703699	
8/14/2017 14:08	3.682568343	Velocity/Range	36903.92436	Velocity/Range	1.3703699	
8/14/2017 14:08	3.682568343	0	36903.92436	0	1.3703699	
8/14/2017 14:08	3.675017001	0	36828.25049	0	1.367559868	
8/14/2017 14:09	3.650954473	0	36587.11397	0	1.358605638	
8/14/2017 14:09	3.663595436	0	36713.79218	0	1.363309637	
8/14/2017 14:09	3.65435122	0	36621.15362	0	1.359869647	
8/14/2017 14:09	3.656625024	0	36643.93997	0	1.360715783	
8/14/2017 14:09	3.640472196	0	36482.0685	0	1.354704937	
8/14/2017 14:09	3.664577404	0	36723.63273	0	1.36367505	
8/14/2017 14:10	3.653679124	0	36614.41837	0	1.359619544	
8/14/2017 14:10	3.662924179	0	36707.06535	0	1.363059846	
8/14/2017 14:10	3.678078069	0	36858.92621	0	1.368698963	
8/14/2017 14:10	3.690820578	0	36986.62204	0	1.373440749	
8/14/2017 14:10	3.690820578	Velocity/Range	36986.62204	Velocity/Range	1.373440749	
8/14/2017 14:10	3.690820578	Velocity/Range	36986.62204	Velocity/Range	1.373440749	
8/14/2017 14:11	3.683588584	0	36914.14844	0	1.370749555	
8/14/2017 14:11	3.670153677	0	36779.51393	0	1.365750111	
8/14/2017 14:11	3.662439944	Velocity/Range	36702.21271	Velocity/Range	1.362879651	
8/14/2017 14:11	3.662439944	0	36702.21271	0	1.362879651	
8/14/2017 14:11	3.62749056	0	36351.97632	0	1.349874167	
8/14/2017 14:11	3.62749056	0	36351.97632	0	1.349874167	
8/14/2017 14:12	3.626852891	Velocity/Range	36345.58608	Velocity/Range	1.349636875	
8/14/2017 14:12	3.626852891	0	36345.58608	0	1.349636875	
8/14/2017 14:12	3.625453281	0	36331.56025	0	1.349116048	
8/14/2017 14:12	3.625453281	0	36331.56025	0	1.349116048	
8/14/2017 14:12	3.647356378	0	36551.05658	0	1.357266703	

8/14/2017 14:12	3.653755257 Low Signal		36615.18132 Low Signal		1.359647875
8/14/2017 14:13	3.626336679	0	36340.413	0	1.349444781
8/14/2017 14:13	3.626336679 Velocity/Range		36340.413 Velocity/Range		1.349444781
8/14/2017 14:13	3.624333513	0	36320.33878	0	1.348699356
8/14/2017 14:13	3.59523056	0	36028.69092	0	1.337869466
8/14/2017 14:13	3.593207954	0	36008.42189	0	1.337116807
8/14/2017 14:13	3.577655152	0	35852.56343	0	1.331329245
8/14/2017 14:14	3.572680409	0	35802.71031	0	1.329478027
8/14/2017 14:14	3.626962646	0	36346.68597	0	1.349677718
8/14/2017 14:14	3.587057536	0	35946.78704	0	1.334828092
8/14/2017 14:14	3.60690334	0	36145.66673	0	1.34221318
8/14/2017 14:14	3.609894117	0	36175.63804	0	1.343326118
8/14/2017 14:14	3.61911838	0	36268.07665	0	1.346758683
8/14/2017 14:15	3.60720523	0	36148.69203	0	1.342325521
8/14/2017 14:15	3.607366502	0	36150.30818	0	1.342385534
8/14/2017 14:15	3.595968205	0	36036.08304	0	1.338143961
8/14/2017 14:15	3.612348414	0	36200.23316	0	1.34423942
8/14/2017 14:15	3.617190639	0	36248.75828	0	1.346041325
8/14/2017 14:15	3.624834297 Velocity/Range		36325.35726 Velocity/Range		1.348885709
8/14/2017 14:16	3.627328252	0	36350.3498	0	1.349813768
8/14/2017 14:16	3.627328252	0	36350.3498	0	1.349813768
8/14/2017 14:16	3.627328252 Low Signal		36350.3498 Low Signal		1.349813768
8/14/2017 14:16	0 Velocity/Range		0 Velocity/Range		0
8/14/2017 14:16	3.620936179 Amplitude		36286.29326 Amplitude		1.347435128
8/14/2017 14:16	1.159338221 Velocity/Range		11618.01385 Velocity/Range		0.431416895
8/14/2017 14:17	1.159338221	0	11618.01385	0	0.431416895
8/14/2017 14:17	1.457486704 Velocity/Range		14605.83323 Velocity/Range		0.542364926
8/14/2017 14:17	1.457486704 Velocity/Range		14605.83323 Velocity/Range		0.542364926
8/14/2017 14:17	3.842674566 Velocity/Range		38508.38825 Velocity/Range		1.429949174
8/14/2017 14:17	3.842674566	0	38508.38825	0	1.429949174
8/14/2017 14:17	3.723064061	0	37309.74192	0	1.385439304
8/14/2017 14:18	3.710692342	0	37185.76188	0	1.380835498
8/14/2017 14:18	3.7073665	0	37152.43279	0	1.379597874
8/14/2017 14:18	3.691028244	0	36988.70311	0	1.373518027

Northeast		Pivot				
Date/Time	Delila Ch 1 Velocity ft/s	Error	Delila Ch 1 Volume gal/m	Error	cfs	
8/16/2017 12:15	5.490078263	0	900.0247948	0	2.005268798	
8/16/2017 12:15	5.490320262	0	900.0644673	0	2.005357189	
8/16/2017 12:15	5.478613821	0	898.1453531	0	2.001081374	
8/16/2017 12:15	5.485123465	0	899.2125221	0	2.003459043	
8/16/2017 12:15	5.526455934	0	905.9884268	0	2.01855586	
8/16/2017 12:16	5.690883006	0	932.9440428	0	2.078613379	
8/16/2017 12:16	5.635205224	0	923.8164163	0	2.058276889	
8/16/2017 12:16	5.532667628	0	907.0067507	0	2.020824701	
8/16/2017 12:16	5.539719546	0	908.1628183	0	2.023400437	
8/16/2017 12:16	5.521701769	0	905.209045	0	2.016819386	
8/16/2017 12:16	5.51097788	0	903.4510071	0	2.012902451	
8/16/2017 12:17	5.49717864	0	901.1888065	0	2.007862234	
8/16/2017 12:17	5.517295958	0	904.4867714	0	2.015210149	
8/16/2017 12:17	5.525190417	0	905.7809621	0	2.018093626	
8/16/2017 12:17	5.534975028	0	907.3850181	0	2.021667487	
8/16/2017 12:17	5.509791466	0	903.2565104	0	2.01246911	
8/16/2017 12:17	5.487146023	0	899.5440933	0	2.004197788	
8/16/2017 12:18	5.468794863	0	896.5356665	0	1.997494968	
8/16/2017 12:18	5.450997152	0	893.6179701	0	1.990994297	
8/16/2017 12:18	5.467717605	0	896.3590645	0	1.997101496	
8/16/2017 12:18	5.458200839	0	894.7989181	0	1.993625466	
8/16/2017 12:18	5.494329322	0	900.721699	0	2.006821511	
8/16/2017 12:18	5.491006792	0	900.1770146	0	2.005607947	
8/16/2017 12:19	5.495634821	0	900.9357181	0	2.007298349	
8/16/2017 12:19	5.495484568	0	900.9110861	0	2.007243469	
8/16/2017 12:19	5.501223889	0	901.851971	0	2.009339775	
8/16/2017 12:19	5.496163059	0	901.0223155	0	2.00749129	
8/16/2017 12:19	5.495033307	0	900.8371079	0	2.007078644	
8/16/2017 12:19	5.510519931	0	903.3759324	0	2.012735184	
8/16/2017 12:20	5.490659766	0	900.1201244	0	2.005481194	
8/16/2017 12:20	5.508049929	0	902.9710087	0	2.011833007	
8/16/2017 12:20	5.515902739	0	904.2583718	0	2.014701272	

8/16/2017 12:20	5.518973566	0	904.7617927	0	2.015822901
8/16/2017 12:20	5.537490777	0	907.7974414	0	2.022586372
8/16/2017 12:20	5.536122941	0	907.573203	0	2.022086766
8/16/2017 12:21	5.562220336	0	911.8515214	0	2.031618923
8/16/2017 12:21	5.549576476	0	909.77873	0	2.027000713
8/16/2017 12:21	5.376388105	0	881.3868163	0	1.963743102
8/16/2017 12:21	5.382060409	0	882.3167145	0	1.965814929
8/16/2017 12:21	5.375866875	0	881.3013676	0	1.963552721
8/16/2017 12:21	5.390602721	0	883.7171121	0	1.968935036
8/16/2017 12:22	5.43919421	0	891.6830359	0	1.986683234
8/16/2017 12:22	5.578741171	0	914.559891	0	2.037653212
8/16/2017 12:22	5.564114823	0	912.1620972	0	2.032310891
8/16/2017 12:22	5.545882656	0	909.1731776	0	2.025651533
8/16/2017 12:22	5.528997337	0	906.4050558	0	2.019484116
8/16/2017 12:22	5.512248576	0	903.6593207	0	2.013366577
8/16/2017 12:23	5.483086681	0	898.8786185	0	2.0027151
8/16/2017 12:23	5.499873142	0	901.6305341	0	2.00884641
8/16/2017 12:23	5.454470426	0	894.187367	0	1.992262921
8/16/2017 12:23	5.425036835	0	889.362124	0	1.981512207
8/16/2017 12:23	5.436831962	0	891.295777	0	1.985820415
8/16/2017 12:23	5.439617462	0	891.7524224	0	1.986837828
8/16/2017 12:24	5.473509291	0	897.3085338	0	1.999216928
8/16/2017 12:24	5.62761916	0	922.5727826	0	2.055506055
8/16/2017 12:24	5.60506244	0	918.8749104	0	2.04726714
8/16/2017 12:24	5.583532476	0	915.3453613	0	2.039403251
8/16/2017 12:24	5.592194463	0	916.7653781	0	2.04256707
8/16/2017 12:24	5.556191838	0	910.8632299	0	2.029416995
8/16/2017 12:25	5.238676135	0	858.8107833	0	1.91344336
8/16/2017 12:25	5.299062743	0	868.7103588	0	1.935499763
8/16/2017 12:25	5.493190889	0	900.5350681	0	2.006405695
8/16/2017 12:25	5.503172789	0	902.171467	0	2.010051616
8/16/2017 12:25	5.508104136	0	902.9798953	0	2.011852807
8/16/2017 12:25	5.514126177	0	903.9671282	0	2.014052377
8/16/2017 12:26	5.531453689	0	906.8077417	0	2.020381306