

Gas Quality Reports

LS260 - Grabham to Saginaw at Saginaw
9/6/2019 - 12/6/2019

Gas Day	Gross Heating Value (HHV) (Btu/scf)	Net Heating Value (LHV) (Btu/scf)	Specific Gravity	Wobbe Index	Hydrocarbon Dewpoint (HCDP) (deg F)	N2 (mol%)	CO2 (mol%)	Methane (mol%)	Ethane (mol%)	Propane (mol%)	Isobutane (mol%)	N-Butane (mol%)	Isopentane (mol%)	N-Pentane (mol%)	C6 Plus (mol%)
09/06/2019	1,042.1	1,024.0	0.599	1,346.27	-138.98	1.744	0.515	91.443	6.010	0.269	0.006	0.009	0.001	0.001	0.003
09/07/2019	1,038.1	1,020.0	0.597	1,343.55	-141.84	1.747	0.533	91.888	5.575	0.240	0.005	0.007	0.001	0	0.003
09/08/2019	1,039.7	1,021.7	0.598	1,344.23	-140.46	1.741	0.553	91.650	5.790	0.245	0.006	0.009	0.001	0.001	0.003
09/09/2019	1,043.5	1,025.4	0.601	1,346.43	-137.63	1.699	0.581	91.234	6.190	0.265	0.008	0.014	0.002	0.002	0.004
09/10/2019	1,041.8	1,023.7	0.599	1,345.95	-139.06	1.671	0.570	91.553	5.899	0.284	0.007	0.010	0.001	0.001	0.004
09/11/2019	1,039.6	1,021.5	0.598	1,344.59	-140.55	1.697	0.559	91.773	5.693	0.255	0.006	0.009	0.001	0.001	0.005
09/12/2019	1,039.2	1,021.1	0.597	1,344.46	-140.88	1.713	0.543	91.831	5.634	0.255	0.007	0.011	0.002	0.002	0.004
09/13/2019	1,038.1	1,020.1	0.597	1,343.40	-141.71	1.757	0.537	91.840	5.618	0.232	0.005	0.007	0.001	0.001	0.003
09/14/2019	1,041.5	1,023.4	0.602	1,341.87	-137.36	2.019	0.559	90.818	6.292	0.283	0.009	0.013	0.002	0.002	0.004
09/15/2019	1,041.7	1,023.6	0.601	1,344.28	-138.63	1.869	0.531	91.128	6.219	0.237	0.005	0.007	0.001	0.001	0.003
09/16/2019	1,041.6	1,023.5	0.600	1,344.38	-138.97	1.864	0.523	91.143	6.246	0.212	0.004	0.005	0	0	0.002
09/17/2019	1,044.2	1,026.0	0.605	1,342.22	-135.54	2.131	0.552	90.141	6.935	0.225	0.004	0.007	0.001	0.001	0.003
09/18/2019	1,042.6	1,024.5	0.601	1,344.54	-137.92	1.923	0.509	90.929	6.402	0.222	0.004	0.007	0.001	0.001	0.003
09/19/2019	1,041.2	1,023.1	0.606	1,337.49	-136.19	2.376	0.559	89.949	6.863	0.241	0.004	0.006	0	0	0.002
09/20/2019	1,040.4	1,022.3	0.605	1,337.05	-136.59	2.376	0.557	90.084	6.713	0.253	0.005	0.008	0.001	0.001	0.003
09/21/2019	1,039.1	1,021.0	0.601	1,340.19	-139.25	2.063	0.544	91.004	6.129	0.239	0.006	0.010	0.001	0.001	0.003
09/22/2019	1,036.8	1,018.8	0.598	1,341.11	-142.05	1.891	0.535	91.662	5.702	0.198	0.004	0.005	0	0	0.003
09/23/2019	1,039.6	1,021.5	0.602	1,339.54	-138.67	2.135	0.549	90.727	6.357	0.218	0.004	0.006	0	0.001	0.003
09/24/2019	1,039.7	1,021.6	0.600	1,342.04	-139.84	1.926	0.551	91.166	6.148	0.197	0.003	0.005	0	0	0.002
09/25/2019	1,039.5	1,021.4	0.604	1,337.69	-137.91	2.253	0.571	90.437	6.480	0.247	0.004	0.005	0	0	0.002
09/26/2019	1,040.3	1,022.2	0.601	1,341.59	-138.54	1.949	0.580	91.116	6.004	0.335	0.005	0.008	0.001	0	0.002
09/27/2019	1,039.8	1,021.7	0.600	1,342.13	-139.39	1.901	0.566	91.279	5.942	0.299	0.005	0.006	0	0	0.002
09/28/2019	1,040.9	1,022.8	0.604	1,338.86	-136.79	2.184	0.598	90.442	6.429	0.332	0.005	0.007	0	0	0.003
09/29/2019	1,039.3	1,021.2	0.599	1,342.36	-140.39	1.843	0.575	91.373	5.988	0.210	0.003	0.005	0	0	0.002
09/30/2019	1,038.9	1,020.8	0.600	1,341.74	-140.33	1.886	0.569	91.343	5.967	0.221	0.004	0.006	0	0.001	0.003
10/01/2019	1,040.0	1,021.9	0.601	1,341.75	-139.23	1.922	0.580	91.111	6.137	0.236	0.004	0.006	0.001	0.001	0.003
10/02/2019	1,038.1	1,020.1	0.598	1,342.65	-141.53	1.745	0.587	91.737	5.693	0.223	0.004	0.006	0.001	0.001	0.003
10/03/2019	1,038.1	1,020.0	0.598	1,342.67	-141.48	1.756	0.577	91.764	5.649	0.238	0.005	0.008	0.001	0.001	0.003
10/04/2019	1,038.7	1,020.7	0.599	1,342.69	-140.89	1.747	0.603	91.631	5.774	0.226	0.005	0.008	0.001	0.001	0.003
10/05/2019	1,034.8	1,016.8	0.595	1,341.47	-143.65	1.729	0.555	92.350	5.101	0.224	0.010	0.017	0.004	0.004	0.006
10/06/2019	1,039.8	1,021.7	0.599	1,343.99	-139.83	1.731	0.573	91.701	5.681	0.277	0.009	0.015	0.003	0.003	0.006
10/07/2019	1,036.7	1,018.7	0.596	1,342.54	-142.24	1.735	0.555	92.079	5.364	0.233	0.008	0.013	0.003	0.003	0.006
10/08/2019	1,037.0	1,018.9	0.597	1,342.22	-142.25	1.778	0.551	91.917	5.508	0.225	0.005	0.008	0.002	0.002	0.004
10/09/2019	1,036.3	1,018.3	0.596	1,341.84	-142.84	1.733	0.580	92.031	5.422	0.213	0.005	0.009	0.002	0.002	0.004
10/10/2019	1,036.3	1,018.2	0.595	1,343.11	-143.58	1.651	0.563	92.245	5.319	0.207	0.004	0.006	0.001	0.001	0.003
10/11/2019	1,034.2	1,016.2	0.594	1,341.33	-144.93	1.769	0.519	92.335	5.164	0.195	0.005	0.008	0.001	0.001	0.003
10/12/2019	1,033.8	1,015.8	0.596	1,339.60	-144.51	1.880	0.528	92.099	5.283	0.193	0.004	0.007	0.001	0.001	0.003
10/13/2019	1,034.5	1,016.5	0.596	1,339.65	-143.55	1.909	0.528	91.965	5.373	0.207	0.005	0.007	0.001	0.001	0.004
10/14/2019	1,040.0	1,021.9	0.600	1,342.12	-139.21	1.958	0.535	91.164	6.076	0.250	0.005	0.008	0.001	0.001	0.004
10/15/2019	1,036.8	1,018.7	0.597	1,341.91	-142.35	1.793	0.553	91.891	5.522	0.224	0.004	0.007	0.001	0.001	0.003
10/16/2019	1,039.0	1,020.9	0.593	1,349.64	-143.93	1.379	0.470	92.721	5.234	0.171	0.006	0.009	0.002	0.002	0.004
10/17/2019	1,043.5	1,025.4	0.597	1,350.55	-68.33	1.481	0.494	92.239	5.303	0.377	0.026	0.048	0.010	0.010	0.012
10/18/2019	1,037.5	1,019.5	0.601	1,338.74	-138.77	2.073	0.566	91.390	5.529	0.362	0.026	0.036	0.006	0.005	0.007

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10/19/2019	1,037.2	1,019.2	0.599	1,340.49	-141.02	1.893	0.579	91.598	5.642	0.256	0.010	0.014	0.002	0.002	0.004
10/20/2019	1,037.2	1,019.2	0.600	1,338.84	-140.59	2.009	0.595	91.242	5.894	0.247	0.004	0.006	0	0	0.002
10/21/2019	1,041.9	1,023.8	0.603	1,341.29	-137.08	1.997	0.619	90.647	6.434	0.288	0.005	0.007	0.001	0.001	0.003
10/22/2019	1,038.8	1,020.7	0.599	1,342.19	-138.93	1.863	0.554	91.703	5.486	0.315	0.016	0.035	0.008	0.009	0.010
10/23/2019	1,038.8	1,020.7	0.599	1,342.19	-138.93	1.863	0.554	91.703	5.486	0.315	0.016	0.035	0.008	0.009	0.010
10/24/2019	1,038.8	1,020.7	0.599	1,342.19	-138.93	1.863	0.554	91.703	5.486	0.315	0.016	0.035	0.008	0.009	0.010
10/25/2019	1,038.8	1,020.7	0.599	1,342.19	-138.93	1.863	0.554	91.703	5.486	0.315	0.016	0.035	0.008	0.009	0.010
10/26/2019	1,038.8	1,020.7	0.599	1,342.19	-138.93	1.863	0.554	91.703	5.486	0.315	0.016	0.035	0.008	0.009	0.010
10/27/2019	1,038.8	1,020.7	0.599	1,342.19	-138.93	1.863	0.554	91.703	5.486	0.315	0.016	0.035	0.008	0.009	0.010
10/28/2019	1,038.8	1,020.7	0.599	1,342.19	-138.93	1.863	0.554	91.703	5.486	0.315	0.016	0.035	0.008	0.009	0.010
10/29/2019	1,025.1	1,007.3	0.609	1,313.84	-18.45	3.707	0.486	89.612	5.731	0.330	0.028	0.027	0.009	0.005	0.065
10/30/2019	1,023.8	1,006.0	0.610	1,310.68	-16.80	3.928	0.478	89.316	5.786	0.359	0.018	0.035	0.006	0.006	0.067
10/31/2019	1,024.4	1,006.6	0.607	1,314.53	-18.07	3.630	0.474	89.817	5.690	0.283	0.012	0.021	0.003	0.003	0.067
11/01/2019	1,020.7	1,002.9	0.611	1,306.10	-18.15	4.087	0.532	89.083	5.915	0.283	0.010	0.018	0.002	0.002	0.067
11/02/2019	1,040.0	1,021.9	0.598	1,345.26	-16.78	1.696	0.533	92.130	5.269	0.259	0.012	0.022	0.003	0.003	0.071
11/03/2019	1,040.0	1,021.9	0.598	1,345.26	-16.78	1.696	0.533	92.130	5.269	0.259	0.012	0.022	0.003	0.003	0.071
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12/01/2019	1,040.0	1,021.9	0.598	1,345.26	-16.78	1.696	0.533	92.130	5.269	0.259	0.012	0.022	0.003	0.003	0.071
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NOTES:

Wobbe Index: Interchangeability constant calculated using the Gross (or Higher) Heating Value (HHV) divided by the square root of the Specific Gravity

Hydrocarbon Dewpoint (HCDP): Theoretically determined value using the Redlich-Kwong equation of state (EOS)

Selection: Business Unit ID = 70; Analysis_Key = 53875