Gas Quality Reports

LS117-Blackwell to Grabham at Grabham
5/13/2020 - 8/13/2020

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%)
05/13/2020	1,021.2	1,003.4	0.584	1,336.51	-156.17	1.823	0.330	94.395	3.220	0.189	0.010	0.020	0.004	0.004	0.005
05/14/2020	1,024.2	1,006.4	0.586	1,338.48	-152.84	1.849	0.303	94.046	3.531	0.216	0.013	0.026	0.005	0.005	0.006
05/15/2020	1,021.8	1,004.0	0.586	1,335.02	-154.18	2.014	0.305	93.976	3.442	0.209	0.013	0.025	0.005	0.005	0.006
05/16/2020	1,019.1	1,001.3	0.584	1,334.09	-157.19	1.963	0.304	94.404	3.094	0.192	0.011	0.020	0.004	0.004	0.005
05/17/2020	1,021.1	1,003.3	0.584	1,335.84	-155.62	1.909	0.308	94.282	3.246	0.210	0.011	0.021	0.004	0.004	0.005
05/18/2020	1,023.8	1,006.0	0.586	1,337.80	-153.07	1.825	0.343	94.076	3.464	0.246	0.012	0.022	0.004	0.004	0.005
05/19/2020	1,018.3	1,000.6	0.582	1,334.61	-158.91	1.837	0.334	94.677	2.957	0.163	0.007	0.015	0.003	0.003	0.005
05/20/2020	1,021.5	1,003.8	0.583	1,337.65	-156.34	1.701	0.360	94.569	3.130	0.194	0.010	0.020	0.004	0.004	0.006
05/21/2020	1,020.0	1,002.2	0.585	1,333.54	-155.48	1.949	0.371	94.232	3.162	0.227	0.014	0.027	0.006	0.005	0.007
05/22/2020	1,020.8	1,003.0	0.586	1,333.27	-154.16	1.998	0.378	94.040	3.273	0.247	0.015	0.029	0.007	0.006	0.008
05/23/2020	1,019.7	1,001.9	0.585	1,333.05	-155.98	1.917	0.410	94.234	3.159	0.236	0.011	0.021	0.004	0.004	0.005
05/24/2020	1,018.6	1,000.8	0.585	1,332.14	-157.11	1.959	0.397	94.268	3.126	0.216	0.009	0.017	0.003	0.003	0.004
05/25/2020	1,017.3	999.6	0.584	1,331.46	-158.41	1.969	0.388	94.394	3.022	0.196	0.008	0.015	0.003	0.002	0.003
05/26/2020	1,017.1	999.4	0.583	1,332.00	-159.01	1.950	0.364	94.512	2.953	0.193	0.008	0.014	0.002	0.002	0.003
05/27/2020	1,015.0	997.4	0.582	1,330.06	-160.70	1.979	0.384	94.647	2.795	0.167	0.007	0.013	0.002	0.002	0.003
05/28/2020	1,015.5	997.8	0.583	1,330.05	-159.84	1.999	0.386	94.567	2.828	0.184	0.008	0.016	0.003	0.003	0.004
05/29/2020	1,015.8	998.1	0.584	1,328.83	-158.37	2.149	0.364	94.267	2.977	0.201	0.011	0.019	0.004	0.004	0.005
05/30/2020	1,024.1	1,006.2	0.586	1,337.46	-64.91	1.823	0.368	94.304	3.037	0.327	0.028	0.067	0.014	0.016	0.015
05/31/2020	1,013.6	996.0	0.580	1,331.50	-163.41	1.853	0.345	95.186	2.449	0.136	0.007	0.014	0.003	0.003	0.004
06/01/2020	1,015.5	997.9	0.580	1,333.55	-162.26	1.774	0.346	95.109	2.609	0.136	0.006	0.012	0.002	0.002	0.004
06/02/2020	1,023.5	1,005.7	0.584	1,339.02	-155.37	1.646	0.385	94.320	3.440	0.184	0.007	0.012	0.001	0.001	0.003
06/03/2020	1,027.5	1,009.6	0.587	1,341.49	-150.20	1.621	0.390	94.069	3.581	0.254	0.018	0.040	0.008	0.009	0.009
06/04/2020	1,021.3	1,003.5	0.583	1,337.14	-157.20	1.704	0.378	94.451	3.304	0.140	0.005	0.011	0.002	0.002	0.004
06/05/2020	1,021.6	1,003.8	0.585	1,336.06	-156.09	1.793	0.389	94.209	3.415	0.167	0.007	0.014	0.002	0.002	0.003
06/06/2020	1,022.6	1,004.8	0.585	1,337.41	-155.05	1.758	0.371	94.253	3.388	0.190	0.010	0.017	0.004	0.003	0.006
06/07/2020	1,023.5	1,005.7	0.586	1,337.37	-153.28	1.798	0.373	94.115	3.438	0.219	0.013	0.027	0.005	0.005	0.006
06/08/2020	1,021.6	1,003.8	0.585	1,336.09	-155.86	1.793	0.386	94.251	3.355	0.180	0.008	0.016	0.003	0.003	0.004
06/09/2020	1,023.8	1,006.0	0.585	1,338.74	-154.37	1.707	0.370	94.233	3.442	0.208	0.010	0.018	0.003	0.003	0.005
06/10/2020	1,023.8	1,006.0	0.584	1,339.17	-154.83	1.703	0.349	94.246	3.490	0.180	0.008	0.015	0.003	0.002	0.004
06/11/2020	1,022.5	1,004.7	0.584	1,337.61	-156.00	1.729	0.374	94.256	3.460	0.161	0.005	0.010	0.001	0.001	0.003
06/12/2020	1,024.4	1,006.6	0.586	1,338.21	-153.50	1.754	0.386	93.963	3.680	0.189	0.007	0.014	0.002	0.002	0.003
06/13/2020	1,023.3	1,005.5	0.585	1,338.03	-155.07	1.670	0.416	94.219	3.492	0.173	0.007	0.013	0.002	0.002	0.005
06/14/2020	1,020.5	1,002.8	0.583	1,336.20	-157.74	1.743	0.380	94.436	3.289	0.133	0.005	0.009	0.001	0.001	0.003
06/15/2020	1,020.8	1,003.1	0.583	1,336.84	-157.47	1.741	0.357	94.470	3.268	0.139	0.006	0.012	0.002	0.002	0.003
06/16/2020	1,021.9	1,004.1	0.584	1,337.72	-156.70	1.704	0.365	94.419	3.333	0.152	0.006	0.013	0.002	0.002	0.003
06/17/2020	1,022.6	1,004.8	0.584	1,338.08	-156.05	1.755	0.335	94.258	3.484	0.147	0.005	0.011	0.001	0.001	0.003
06/18/2020	1,027.2	1,009.4	0.587	1,340.91	-151.31	1.715	0.354	93.836	3.802	0.262	0.010	0.016	0.001	0.001	0.002
06/19/2020	1,022.2	1,004.4	0.583	1,338.62	-156.30	1.682	0.343	94.524	3.249	0.162	0.009	0.019	0.004	0.004	0.005
06/20/2020	1,020.3	1,002.6	0.582	1,337.40	-158.61	1.663	0.362	94.676	3.158	0.120	0.005	0.010	0.001	0.002	0.003
06/21/2020	1,021.4	1,003.6	0.583	1,338.13	-157.59	1.657	0.359	94.578	3.250	0.130	0.006	0.012	0.002	0.002	0.003
06/22/2020	1,024.3	1,006.5	0.585	1,339.51	-154.11	1.725	0.330	94.233	3.459	0.210	0.011	0.020	0.004	0.003	0.004
06/23/2020	1,021.5	1,003.7	0.583	1,337.36	-157.19	1.765	0.333	94.349	3.406	0.132	0.004	0.008	0	0	0.002
06/24/2020	1,020.6	1,002.9	0.583	1,336.99	-158.22	1.742	0.342	94.471	3.323	0.111	0.003	0.007	0	0	0.002

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06/25/2020	1,020.1	1,002.3	0.582	1,336.76	-158.89	1.720	0.351	94.559	3.255	0.102	0.003	0.007	0	0	0.001
06/26/2020	1,020.3	1,002.5	0.583	1,336.63	-158.55	1.747	0.346	94.490	3.297	0.108	0.003	0.007	0	0.001	0.001
06/27/2020	1,022.2	1,004.4	0.583	1,338.96	-157.08	1.608	0.372	94.564	3.298	0.132	0.006	0.012	0.002	0.002	0.004
06/28/2020	1,021.9	1,004.1	0.582	1,339.90	-158.48	1.484	0.393	94.796	3.201	0.109	0.004	0.008	0.001	0.001	0.003
06/29/2020	1,023.0	1,005.2	0.584	1,339.06	-156.49	1.612	0.390	94.387	3.458	0.140	0.004	0.008	0	0	0.002
06/30/2020	1,022.4	1,004.6	0.583	1,338.71	-157.10	1.625	0.382	94.432	3.426	0.122	0.004	0.008	0	0	0.002
07/01/2020	1,020.6	1,002.9	0.584	1,335.65	-156.72	1.822	0.361	94.343	3.282	0.156	0.008	0.017	0.003	0.003	0.005
07/02/2020	1,019.8	1,002.1	0.582	1,336.53	-158.10	1.767	0.324	94.664	3.054	0.155	0.008	0.016	0.003	0.003	0.005
07/03/2020	1,018.0	1,000.3	0.582	1,334.80	-159.51	1.815	0.328	94.763	2.922	0.136	0.008	0.016	0.003	0.003	0.005
07/04/2020	1,017.1	999.4	0.580	1,335.13	-161.21	1.731	0.340	94.991	2.800	0.114	0.005	0.012	0.002	0.002	0.004
07/05/2020	1,019.3	1,001.6	0.582	1,336.55	-158.24	1.723	0.336	94.854	2.866	0.168	0.012	0.023	0.005	0.005	0.007
07/06/2020	1,020.4	1,002.6	0.583	1,336.22	-156.81	1.778	0.352	94.580	3.030	0.214	0.011	0.022	0.004	0.004	0.005
07/07/2020	1,019.9	1,002.2	0.582	1,336.57	-158.17	1.729	0.351	94.681	3.027	0.186	0.007	0.013	0.002	0.002	0.003
07/08/2020	1,022.5	1,004.7	0.583	1,338.58	-155.74	1.696	0.344	94.511	3.180	0.230	0.011	0.020	0.003	0.002	0.004
07/09/2020	1,026.9	1,009.0	0.586	1,341.01	-150.50	1.668	0.367	94.137	3.420	0.333	0.019	0.037	0.006	0.006	0.007
07/10/2020	1,021.0	1,003.2	0.585	1,334.59	-155.34	1.900	0.378	94.175	3.262	0.246	0.011	0.020	0.003	0.002	0.004
07/11/2020	1,021.7	1,003.9	0.584	1,336.89	-155.82	1.742	0.381	94.419	3.189	0.232	0.010	0.018	0.003	0.002	0.004
07/12/2020	1,021.5	1,003.7	0.584	1,337.02	-156.71	1.742	0.366	94.406	3.274	0.190	0.006	0.011	0.001	0.001	0.003
07/13/2020	1,023.9	1,006.1	0.585	1,338.67	-154.28	1.706	0.378	94.210	3.435	0.240	0.009	0.015	0.002	0.001	0.004
07/14/2020	1,020.4	1,002.6	0.582	1,338.10	-158.85	1.595	0.371	94.848	2.997	0.171	0.005	0.009	0	0	0.003
07/15/2020	1,022.7	1,004.9	0.583	1,339.50	-156.43	1.577	0.378	94.644	3.149	0.224	0.008	0.015	0.001	0.001	0.003
07/16/2020	1,021.1	1,003.3	0.585	1,334.93	-155.71	1.880	0.377	94.149	3.344	0.222	0.007	0.014	0.002	0.001	0.003
07/17/2020	1,021.5	1,003.7	0.584	1,336.32	-155.95	1.779	0.378	94.366	3.201	0.244	0.009	0.016	0.002	0.002	0.003
07/18/2020	1,021.3	1,003.5	0.585	1,335.42	-156.04	1.791	0.415	94.231	3.314	0.229	0.006	0.011	0	0	0.002
07/19/2020	1,021.9	1,004.1	0.585	1,336.34	-155.63	1.764	0.401	94.283	3.274	0.253	0.008	0.013	0.001	0.001	0.002
07/20/2020	1,021.2	1,003.4	0.587	1,333.26	-154.77	1.977	0.407	93.877	3.442	0.277	0.007	0.011	0.001	0	0.001
07/21/2020	1,020.1	1,002.4	0.584	1,334.62	-156.75	1.818	0.404	94.370	3.153	0.224	0.008	0.016	0.002	0.002	0.003
07/22/2020	1,016.5	998.8	0.584	1,330.61	-159.40	2.008	0.382	94.362	3.064	0.166	0.005	0.010	0.001	0.001	0.002
07/23/2020	1,013.8	996.2	0.587	1,323.07	-157.76	2.486	0.395	93.634	3.254	0.201	0.008	0.014	0.002	0.002	0.003
07/24/2020	1,022.2	1,004.4	0.588	1,333.16	-151.38	2.108	0.357	93.778	3.326	0.351	0.020	0.039	0.007	0.006	0.007
07/25/2020	1,025.6	1,007.7	0.587	1,339.14	-151.08	1.746	0.376	94.095	3.377	0.340	0.017	0.031	0.005	0.005	0.008
07/26/2020	1,023.5	1,005.7	0.586	1,336.46	-152.31	1.868	0.375	94.061	3.298	0.341	0.016	0.028	0.004	0.004	0.005
07/27/2020	1,024.8	1,006.9	0.588	1,336.19	-150.21	1.945	0.381	93.787	3.420	0.397	0.020	0.035	0.005	0.005	0.006
07/28/2020	1,025.8	1,007.9	0.586	1,339.76	-151.10	1.723	0.364	94.196	3.259	0.392	0.019	0.034	0.005	0.004	0.005
07/29/2020	1,026.0	1,008.1	0.587	1,338.53	-150.35	1.797	0.388	93.935	3.424	0.394	0.018	0.031	0.004	0.004	0.005
07/30/2020	1,024.9	1,007.1	0.585	1,339.65	-152.82	1.646	0.394	94.269	3.357	0.285	0.013	0.023	0.004	0.003	0.005
07/31/2020	1,025.7	1,007.9	0.584	1,341.95	-152.99	1.500	0.390	94.544	3.214	0.295	0.015	0.028	0.004	0.004	0.005
08/01/2020	1,022.5	1,004.7	0.585	1,337.17	-154.90	1.697	0.419	94.387	3.191	0.258	0.013	0.025	0.003	0.003	0.005
08/02/2020	1,020.8	1,003.0	0.583	1,337.23	-157.56	1.628	0.407	94.694	3.049	0.187	0.008	0.017	0.003	0.002	0.004
08/03/2020	1,020.1	1,002.3	0.584	1,334.33	-156.81	1.859	0.392	94.266	3.271	0.183	0.008	0.015	0.002	0.001	0.003
08/04/2020	1,016.8	999.1	0.585	1,329.13	-157.90	2.099	0.411	94.092	3.199	0.164	0.008	0.016	0.003	0.003	0.004
08/05/2020	1,014.3	996.7	0.584	1,327.06	-160.09	2.163	0.405	94.210	3.069	0.130	0.005	0.011	0.002	0.001	0.003
08/06/2020	1,016.5	998.8	0.581	1,333.36	-161.12	1.816	0.360	94.818	2.869	0.117	0.005	0.009	0.001	0.001	0.003

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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%)
08/07/2020	1,020.5	1,002.7	0.582	1,337.38	-157.68	1.714	0.333	94.691	3.065	0.154	0.009	0.019	0.004	0.004	0.006
08/08/2020	1,020.8	1,003.0	0.583	1,337.30	-157.39	1.754	0.321	94.572	3.168	0.149	0.008	0.016	0.004	0.003	0.005
08/09/2020	1,020.6	1,002.9	0.582	1,337.51	-157.89	1.739	0.314	94.618	3.156	0.143	0.007	0.013	0.003	0.002	0.004
08/10/2020	1,021.7	1,003.9	0.582	1,338.95	-157.41	1.651	0.329	94.649	3.200	0.141	0.007	0.014	0.003	0.003	0.004
08/11/2020	1,018.3	1,000.5	0.585	1,331.11	-157.36	2.033	0.395	94.062	3.327	0.158	0.006	0.013	0.002	0.002	0.003

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 = 66331