

# Gas Quality Reports

LS315 - Straight Blackwell at Blackwell  
5/17/2019 - 8/17/2019

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%)
05/17/2019	1,021.2	1,003.5	0.581	1,339.47	-101.64	1.526	0.371	94.770	3.265	0.057	0.002	0.005	0.001	0.001	0
05/18/2019	1,022.6	1,004.8	0.582	1,340.24	-97.63	1.542	0.361	94.636	3.352	0.085	0.005	0.012	0.002	0.003	0.001
05/19/2019	1,021.9	1,004.1	0.582	1,339.70	-102.90	1.545	0.367	94.619	3.417	0.050	0	0.001	0	0	0
05/21/2019	1,024.8	1,007.0	0.583	1,341.68	-101.01	1.506	0.375	94.322	3.740	0.056	0	0.001	0	0	0
05/22/2019	1,025.2	1,007.4	0.583	1,342.77	-101.23	1.434	0.378	94.424	3.707	0.056	0	0	0	0	0
05/23/2019	1,022.9	1,005.1	0.582	1,340.77	-102.53	1.499	0.370	94.598	3.482	0.050	0	0.001	0	0	0
05/24/2019	1,022.7	1,004.9	0.582	1,340.65	-102.31	1.498	0.372	94.614	3.461	0.052	0	0.001	0	0	0
05/25/2019	1,024.5	1,006.6	0.582	1,342.32	-101.82	1.437	0.376	94.521	3.614	0.051	0	0	0	0	0
05/26/2019	1,024.0	1,006.2	0.582	1,341.97	-101.98	1.441	0.378	94.570	3.555	0.055	0	0.001	0	0	0
05/27/2019	1,023.4	1,005.6	0.582	1,341.81	-102.58	1.429	0.376	94.683	3.452	0.060	0	0	0	0	0
05/28/2019	1,024.1	1,006.3	0.582	1,342.31	-101.62	1.432	0.369	94.608	3.528	0.060	0.001	0.002	0	0	0
05/29/2019	1,024.3	1,006.5	0.583	1,341.70	-101.55	1.491	0.369	94.437	3.643	0.059	0	0	0	0	0
05/30/2019	1,022.7	1,004.9	0.582	1,340.84	-102.82	1.482	0.372	94.657	3.438	0.052	0	0	0	0	0
05/31/2019	1,021.5	1,003.8	0.581	1,339.63	-103.03	1.552	0.355	94.694	3.340	0.057	0.001	0.001	0	0	0
06/01/2019	1,021.9	1,004.1	0.582	1,339.83	-103.03	1.538	0.364	94.644	3.402	0.050	0	0	0	0	0
06/02/2019	1,024.0	1,006.2	0.583	1,340.77	-100.69	1.569	0.359	94.337	3.665	0.066	0.001	0.002	0	0	0
06/03/2019	1,021.7	1,003.9	0.581	1,339.93	-97.96	1.519	0.363	94.788	3.235	0.078	0.004	0.009	0.001	0.002	0.001
06/04/2019	1,026.3	1,008.4	0.582	1,345.08	-97.97	1.297	0.377	94.677	3.541	0.095	0.003	0.007	0.001	0.001	0.001
06/05/2019	1,025.7	1,007.8	0.582	1,344.50	-98.67	1.301	0.386	94.706	3.516	0.082	0.002	0.005	0.001	0.001	0
06/06/2019	1,031.4	1,013.4	0.585	1,348.26	-81.33	1.252	0.392	94.254	3.884	0.162	0.012	0.027	0.006	0.007	0.004
06/07/2019	1,029.6	1,011.7	0.584	1,346.98	-96.41	1.265	0.398	94.240	4.009	0.081	0.002	0.004	0	0	0
06/08/2019	1,025.3	1,007.4	0.583	1,342.85	-100.43	1.432	0.376	94.452	3.669	0.068	0.001	0.002	0	0	0
06/09/2019	1,022.0	1,004.3	0.582	1,340.02	-102.91	1.516	0.373	94.663	3.394	0.053	0	0.001	0	0	0
06/10/2019	1,024.1	1,006.3	0.582	1,341.94	-100.30	1.457	0.374	94.561	3.528	0.070	0.002	0.005	0.001	0.001	0
06/11/2019	1,025.1	1,007.3	0.583	1,342.17	-100.63	1.475	0.379	94.367	3.709	0.066	0.001	0.002	0	0	0
06/12/2019	1,022.2	1,004.4	0.582	1,339.89	-102.75	1.539	0.368	94.603	3.436	0.053	0	0	0	0	0
06/13/2019	1,021.7	1,004.0	0.582	1,339.28	-102.27	1.577	0.363	94.593	3.404	0.058	0.001	0.002	0	0	0
06/14/2019	1,023.5	1,005.7	0.583	1,340.87	-101.87	1.531	0.363	94.462	3.584	0.059	0	0.001	0	0	0
06/15/2019	1,023.1	1,005.3	0.583	1,340.44	-102.00	1.539	0.369	94.486	3.542	0.062	0	0.001	0	0	0
06/16/2019	1,022.8	1,005.1	0.582	1,340.55	-102.29	1.513	0.371	94.574	3.483	0.058	0	0.001	0	0	0
06/17/2019	1,023.5	1,005.7	0.583	1,340.75	-101.84	1.526	0.372	94.461	3.581	0.059	0	0.001	0	0	0
06/18/2019	1,024.9	1,007.1	0.584	1,340.87	-100.43	1.569	0.381	94.179	3.787	0.082	0.001	0.002	0	0	0
06/19/2019	1,023.8	1,006.0	0.583	1,340.59	-101.36	1.531	0.388	94.369	3.650	0.061	0.001	0.001	0	0	0
06/20/2019	1,021.8	1,004.1	0.583	1,338.39	-100.69	1.655	0.363	94.414	3.496	0.065	0.001	0.004	0.001	0.001	0
06/21/2019	1,025.6	1,007.8	0.586	1,339.39	-91.44	1.749	0.364	93.953	3.696	0.171	0.013	0.032	0.007	0.008	0.005
06/22/2019	1,020.8	1,003.0	0.582	1,337.72	-101.84	1.651	0.369	94.551	3.354	0.068	0.002	0.004	0.001	0.001	0
06/23/2019	1,023.7	1,005.9	0.583	1,340.57	-101.43	1.534	0.383	94.401	3.613	0.066	0.001	0.002	0	0	0
06/24/2019	1,025.5	1,007.7	0.584	1,341.49	-99.84	1.552	0.379	94.152	3.822	0.091	0.001	0.003	0	0	0
06/25/2019	1,024.7	1,006.9	0.584	1,341.13	-100.47	1.555	0.372	94.271	3.704	0.095	0.001	0.002	0	0	0
06/26/2019	1,040.7	1,022.6	0.594	1,350.76	-60.10	1.501	0.379	93.017	4.499	0.437	0.037	0.081	0.016	0.018	0.013
06/27/2019	1,041.9	1,023.7	0.595	1,350.66	-24.14	1.576	0.370	93.283	3.857	0.570	0.069	0.160	0.037	0.042	0.030
06/28/2019	1,035.7	1,017.6	0.591	1,347.36	-34.32	1.556	0.370	93.736	3.693	0.397	0.049	0.114	0.028	0.031	0.022
06/29/2019	1,037.6	1,019.5	0.591	1,349.25	-34.88	1.481	0.376	93.642	3.854	0.402	0.049	0.113	0.027	0.030	0.022

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06/30/2019	1,039.1	1,021.0	0.593	1,349.72	-27.97	1.520	0.371	93.540	3.825	0.452	0.057	0.134	0.032	0.036	0.027
07/01/2019	1,036.3	1,018.3	0.591	1,347.80	-34.50	1.550	0.370	93.689	3.731	0.405	0.050	0.116	0.029	0.032	0.023
07/02/2019	1,036.5	1,018.4	0.591	1,347.84	-37.61	1.554	0.370	93.610	3.829	0.399	0.047	0.110	0.026	0.029	0.021
07/03/2019	1,026.8	1,008.9	0.585	1,342.32	-98.48	1.543	0.380	94.028	3.935	0.106	0.002	0.004	0	0	0
07/04/2019	1,025.5	1,007.7	0.585	1,340.77	-99.29	1.614	0.376	94.037	3.865	0.104	0.002	0.003	0	0	0
07/05/2019	1,028.9	1,011.0	0.588	1,342.27	-83.82	1.654	0.374	93.812	3.858	0.211	0.017	0.042	0.010	0.012	0.008
07/06/2019	1,023.2	1,005.4	0.584	1,338.99	-99.83	1.653	0.376	94.229	3.649	0.087	0.002	0.004	0	0	0
07/07/2019	1,023.3	1,005.5	0.584	1,339.35	-99.98	1.629	0.375	94.268	3.640	0.083	0.002	0.003	0	0	0
07/08/2019	1,021.0	1,003.3	0.583	1,337.42	-101.44	1.692	0.366	94.475	3.345	0.111	0.004	0.006	0	0	0
07/09/2019	1,023.3	1,005.5	0.584	1,339.21	-94.86	1.646	0.371	94.310	3.530	0.119	0.006	0.012	0.002	0.002	0.001
07/10/2019	1,053.0	1,034.7	0.602	1,357.70	-44.01	1.500	0.383	92.137	4.903	0.726	0.070	0.171	0.034	0.039	0.028
07/11/2019	1,070.6	1,052.0	0.612	1,368.57	-4.14	1.422	0.383	91.049	5.426	1.101	0.117	0.295	0.066	0.079	0.050
07/12/2019	1,038.1	1,020.0	0.594	1,347.18	-83.44	1.676	0.380	92.628	4.892	0.359	0.019	0.036	0.004	0.004	0.002
07/13/2019	1,032.7	1,014.8	0.590	1,344.57	-94.64	1.638	0.381	93.029	4.833	0.115	0.001	0.002	0	0	0
07/14/2019	1,033.7	1,015.7	0.590	1,345.61	-94.17	1.601	0.380	92.999	4.895	0.123	0.001	0.002	0	0	0
07/15/2019	1,035.4	1,017.4	0.591	1,346.83	-93.18	1.573	0.385	92.844	5.058	0.136	0.001	0.002	0	0	0
07/16/2019	1,036.6	1,018.6	0.592	1,347.19	-91.51	1.587	0.394	92.676	5.169	0.169	0.003	0.004	0	0	0
07/17/2019	1,038.4	1,020.3	0.592	1,349.89	-91.39	1.441	0.397	92.801	5.162	0.192	0.003	0.004	0	0	0
07/18/2019	1,039.5	1,021.4	0.593	1,349.84	-90.25	1.495	0.400	92.549	5.327	0.222	0.003	0.004	0	0	0
07/19/2019	1,036.8	1,018.8	0.591	1,348.71	-91.92	1.469	0.396	92.953	4.971	0.203	0.003	0.005	0	0	0
07/20/2019	1,037.1	1,019.1	0.591	1,348.78	-91.76	1.477	0.394	92.896	5.030	0.193	0.004	0.005	0	0	0
07/21/2019	1,037.1	1,019.0	0.591	1,349.14	-90.49	1.448	0.393	92.947	5.025	0.177	0.003	0.005	0	0	0
07/22/2019	1,034.9	1,016.9	0.590	1,347.31	-93.64	1.503	0.389	93.079	4.880	0.142	0.002	0.004	0	0	0
07/23/2019	1,035.2	1,017.1	0.591	1,346.50	-86.88	1.586	0.385	92.864	5.016	0.139	0.003	0.005	0	0.001	0
07/24/2019	1,035.2	1,017.1	0.591	1,346.50	-86.88	1.586	0.385	92.864	5.016	0.139	0.003	0.005	0	0.001	0
07/25/2019	1,035.2	1,017.1	0.591	1,346.50	-86.88	1.586	0.385	92.864	5.016	0.139	0.003	0.005	0	0.001	0
07/26/2019	1,038.6	1,020.6	0.591	1,350.66	-67.96	1.378	0.404	92.976	4.984	0.235	0.007	0.012	0.002	0.002	0.001
07/27/2019	1,035.7	1,017.6	0.591	1,347.29	-69.53	1.522	0.401	92.928	4.985	0.155	0.003	0.005	0.001	0.001	0
07/28/2019	1,034.1	1,016.1	0.592	1,343.95	-80.43	1.746	0.386	92.596	5.150	0.118	0.001	0.002	0	0	0
07/29/2019	1,035.5	1,017.4	0.593	1,345.11	-74.67	1.712	0.389	92.496	5.277	0.121	0.002	0.003	0	0	0
07/30/2019	1,035.5	1,017.4	0.593	1,345.11	-74.67	1.712	0.389	92.496	5.277	0.121	0.002	0.003	0	0	0
07/31/2019	1,035.5	1,017.4	0.593	1,345.11	-74.67	1.712	0.389	92.496	5.277	0.121	0.002	0.003	0	0	0
08/01/2019	1,038.9	1,020.8	0.595	1,346.64	-88.95	1.777	0.370	92.048	5.591	0.194	0.006	0.011	0.001	0.001	0
08/02/2019	1,050.8	1,032.6	0.599	1,357.87	-84.32	1.379	0.392	91.402	6.555	0.266	0.003	0.003	0	0	0
08/03/2019	1,052.8	1,034.5	0.600	1,358.95	-83.40	1.379	0.394	91.109	6.884	0.229	0.002	0.002	0	0	0
08/04/2019	1,055.2	1,036.9	0.602	1,359.91	-81.93	1.421	0.391	90.683	7.285	0.217	0.002	0.002	0	0	0
08/05/2019	1,055.3	1,036.9	0.602	1,359.63	-81.67	1.445	0.392	90.638	7.283	0.239	0.002	0.002	0	0	0
08/06/2019	1,056.1	1,037.8	0.603	1,360.14	-81.08	1.439	0.395	90.557	7.346	0.259	0.002	0.002	0	0	0
08/07/2019	1,058.5	1,040.1	0.604	1,361.80	-71.93	1.417	0.392	90.489	7.310	0.342	0.012	0.024	0.005	0.006	0.003
08/08/2019	1,053.4	1,035.0	0.601	1,358.39	-82.55	1.462	0.389	90.865	7.035	0.244	0.002	0.003	0	0	0
08/09/2019	1,051.0	1,032.8	0.600	1,356.87	-83.88	1.449	0.408	91.147	6.753	0.239	0.002	0.002	0	0	0
08/10/2019	1,050.8	1,032.5	0.600	1,356.28	-81.41	1.490	0.405	91.141	6.681	0.276	0.003	0.004	0	0	0
08/11/2019	1,053.7	1,035.4	0.602	1,358.12	-77.08	1.481	0.402	90.758	7.098	0.257	0.002	0.003	0	0	0

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08/12/2019	1,044.4	1,026.2	0.603	1,344.59	-73.30	2.168	0.403	90.336	6.875	0.212	0.003	0.003	0	0	0
08/13/2019	1,070.8	1,052.1	0.612	1,368.23	-35.77	1.441	0.401	89.743	7.411	0.722	0.058	0.141	0.029	0.036	0.017
08/14/2019	1,052.4	1,034.1	0.601	1,357.49	-82.98	1.470	0.402	90.938	6.943	0.241	0.002	0.003	0	0	0
08/15/2019	1,052.9	1,034.6	0.601	1,358.16	-76.42	1.430	0.408	91.059	6.779	0.291	0.008	0.016	0.003	0.004	0.002

**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 = 66321