

Gas Quality Reports

LS130 - Kansas Hugoton at Hesston

Page 1 of 3

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	1,047.8	1,029.5	0.594	1,360.05	-71.41	1.276	0.244	92.769	5.176	0.443	0.028	0.037	0.009	0.006	0.011
05/14/2020	1,053.6	1,035.3	0.605	1,355.11	-66.25	1.733	0.396	90.829	6.264	0.674	0.032	0.049	0.008	0.006	0.008
05/15/2020	1,055.4	1,037.1	0.609	1,352.71	-67.66	1.858	0.505	90.078	6.733	0.733	0.030	0.046	0.006	0.005	0.005
05/16/2020	1,057.5	1,039.1	0.608	1,356.48	-69.31	1.706	0.460	90.216	6.835	0.703	0.026	0.039	0.005	0.004	0.005
05/17/2020	1,052.2	1,033.9	0.605	1,353.27	-71.65	1.756	0.438	90.776	6.313	0.634	0.026	0.040	0.006	0.005	0.006
05/18/2020	1,055.6	1,037.2	0.605	1,357.17	-72.25	1.604	0.429	90.677	6.596	0.622	0.024	0.033	0.005	0.003	0.006
05/19/2020	1,051.4	1,033.1	0.605	1,351.73	-131.21	1.974	0.354	90.444	6.603	0.579	0.016	0.021	0.003	0.002	0.004
05/20/2020	1,048.8	1,030.5	0.603	1,350.26	-132.85	2.047	0.305	90.688	6.367	0.546	0.016	0.021	0.003	0.002	0.004
05/21/2020	1,050.2	1,032.0	0.604	1,351.73	-132.14	2.089	0.243	90.541	6.538	0.547	0.014	0.019	0.003	0.002	0.004
05/22/2020	1,051.5	1,033.2	0.603	1,354.14	-131.80	1.964	0.232	90.736	6.445	0.571	0.018	0.023	0.004	0.003	0.005
05/23/2020	1,050.7	1,032.4	0.602	1,354.25	-132.80	1.907	0.239	90.870	6.450	0.484	0.016	0.022	0.004	0.003	0.006
05/24/2020	1,049.5	1,031.2	0.599	1,355.66	-134.56	1.638	0.299	91.539	5.974	0.495	0.019	0.023	0.004	0.003	0.007
05/25/2020	1,055.3	1,036.9	0.606	1,356.00	-69.31	1.826	0.339	90.404	6.758	0.593	0.024	0.036	0.006	0.006	0.007
05/26/2020	1,053.0	1,034.7	0.604	1,355.45	-131.15	1.823	0.300	90.695	6.582	0.544	0.017	0.025	0.004	0.003	0.006
05/27/2020	1,045.6	1,027.4	0.595	1,356.03	-138.04	1.486	0.257	92.475	5.269	0.449	0.020	0.026	0.006	0.004	0.009
05/28/2020	1,048.5	1,030.2	0.599	1,354.16	-134.79	1.796	0.246	91.415	6.010	0.479	0.018	0.022	0.005	0.003	0.007
05/29/2020	1,046.0	1,027.8	0.597	1,353.99	-136.91	1.773	0.192	91.879	5.652	0.453	0.016	0.020	0.004	0.003	0.007
05/30/2020	1,051.2	1,032.9	0.603	1,353.98	-132.02	1.969	0.228	90.746	6.468	0.533	0.018	0.025	0.004	0.003	0.006
05/31/2020	1,051.9	1,033.6	0.602	1,355.29	-131.79	1.898	0.225	90.863	6.387	0.569	0.019	0.025	0.004	0.003	0.006
06/01/2020	1,047.3	1,029.1	0.592	1,360.67	-67.11	1.354	0.144	93.029	4.807	0.557	0.033	0.048	0.009	0.006	0.012
06/02/2020	1,047.7	1,029.5	0.595	1,357.80	-70.40	1.685	0.095	92.255	5.340	0.537	0.027	0.038	0.007	0.006	0.011
06/03/2020	1,037.7	1,019.7	0.591	1,350.41	-68.10	1.786	0.120	93.206	4.348	0.436	0.031	0.042	0.010	0.007	0.014
06/04/2020	1,035.9	1,017.9	0.595	1,342.41	-72.13	2.314	0.152	92.090	4.934	0.425	0.023	0.036	0.008	0.006	0.012
06/05/2020	1,034.2	1,016.2	0.597	1,338.57	-141.08	2.396	0.258	91.802	5.071	0.405	0.020	0.031	0.006	0.005	0.007
06/06/2020	1,029.0	1,011.1	0.596	1,333.21	-144.65	2.587	0.260	91.924	4.839	0.346	0.014	0.021	0.003	0.003	0.004
06/07/2020	1,030.9	1,012.9	0.596	1,335.51	-143.57	2.462	0.276	91.959	4.874	0.389	0.014	0.018	0.003	0.002	0.004
06/08/2020	1,032.4	1,014.4	0.598	1,334.74	-141.86	2.625	0.260	91.416	5.260	0.404	0.013	0.018	0.002	0.001	0.001
06/09/2020	1,028.2	1,010.3	0.597	1,331.22	-144.68	2.797	0.206	91.641	4.965	0.360	0.011	0.016	0.002	0.001	0.001
06/10/2020	1,029.9	1,011.9	0.596	1,333.77	-143.59	2.752	0.149	91.702	4.967	0.392	0.014	0.019	0.002	0.001	0.002
06/11/2020	1,029.7	1,011.8	0.597	1,332.87	-143.30	2.716	0.216	91.700	4.900	0.422	0.016	0.023	0.002	0.002	0.002
06/12/2020	1,026.1	1,008.2	0.594	1,331.31	-146.85	2.753	0.161	92.080	4.658	0.315	0.011	0.015	0.002	0.002	0.002
06/13/2020	1,039.7	1,021.6	0.600	1,342.34	-138.23	2.326	0.270	91.177	5.750	0.438	0.014	0.019	0.002	0.001	0.002
06/14/2020	1,040.4	1,022.3	0.602	1,341.28	-137.24	2.246	0.405	90.974	5.893	0.436	0.015	0.023	0.003	0.002	0.002
06/15/2020	1,041.3	1,023.2	0.602	1,341.77	-136.32	2.269	0.393	90.884	5.927	0.473	0.018	0.028	0.004	0.003	0.003
06/16/2020	1,046.2	1,028.0	0.605	1,345.29	-132.93	2.068	0.485	90.601	6.260	0.505	0.022	0.040	0.007	0.006	0.006
06/17/2020	1,044.5	1,026.3	0.595	1,354.58	-61.02	1.419	0.343	92.860	4.669	0.579	0.036	0.058	0.012	0.010	0.014
06/18/2020	1,042.7	1,024.6	0.589	1,358.24	-60.65	1.178	0.249	93.876	3.985	0.580	0.040	0.055	0.013	0.010	0.015
06/19/2020	1,036.5	1,018.4	0.591	1,348.47	-47.41	1.811	0.167	93.551	3.678	0.622	0.045	0.071	0.017	0.015	0.023
06/20/2020	1,042.6	1,024.4	0.590	1,357.40	-56.71	1.217	0.264	93.809	3.968	0.606	0.041	0.056	0.013	0.010	0.018
06/21/2020	1,036.7	1,018.7	0.586	1,353.75	-68.06	1.390	0.168	94.253	3.551	0.521	0.035	0.049	0.011	0.009	0.013
06/22/2020	1,037.7	1,019.7	0.585	1,356.56	-66.94	1.128	0.219	94.637	3.352	0.553	0.034	0.045	0.010	0.007	0.015
06/23/2020	1,032.6	1,014.6	0.583	1,352.81	-71.88	1.217	0.205	94.983	3.073	0.422	0.031	0.039	0.010	0.006	0.014
06/24/2020	1,029.7	1,011.8	0.594	1,335.68	-144.30	2.622	0.124	92.154	4.632	0.407	0.019	0.030	0.004	0.004	0.004

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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%)
06/25/2020	1,041.3	1,023.2	0.603	1,340.50	-134.82	2.411	0.369	90.814	5.710	0.607	0.028	0.047	0.006	0.005	0.004
06/26/2020	1,036.7	1,018.7	0.600	1,337.89	-137.85	2.636	0.217	91.190	5.303	0.575	0.025	0.041	0.005	0.004	0.003
06/27/2020	1,020.1	1,002.4	0.592	1,325.62	-149.71	3.106	0.051	92.338	4.120	0.341	0.014	0.022	0.003	0.002	0.002
06/28/2020	1,024.7	1,006.9	0.594	1,329.70	-146.49	3.016	0.033	92.084	4.394	0.426	0.015	0.024	0.003	0.002	0.002
06/29/2020	1,021.0	1,003.2	0.593	1,326.19	-148.74	3.133	0.031	92.268	4.112	0.416	0.014	0.022	0.002	0.001	0.001
06/30/2020	1,020.8	1,003.0	0.593	1,326.16	-148.80	3.124	0.032	92.326	4.067	0.400	0.016	0.027	0.003	0.003	0.002
07/01/2020	1,030.7	1,012.8	0.597	1,334.19	-142.03	2.828	0.102	91.723	4.734	0.558	0.019	0.029	0.003	0.002	0.002
07/02/2020	1,042.4	1,024.3	0.603	1,342.19	-134.26	2.445	0.287	90.885	5.572	0.730	0.028	0.043	0.004	0.003	0.002
07/03/2020	1,045.5	1,027.3	0.605	1,344.64	-132.39	2.303	0.343	90.713	5.798	0.757	0.030	0.045	0.004	0.003	0.003
07/04/2020	1,030.8	1,012.9	0.597	1,334.30	-142.06	2.765	0.140	91.757	4.744	0.531	0.022	0.033	0.003	0.002	0.002
07/05/2020	1,034.6	1,016.6	0.599	1,337.14	-139.75	2.643	0.186	91.430	5.169	0.503	0.021	0.035	0.005	0.004	0.004
07/06/2020	1,032.7	1,014.8	0.597	1,336.12	-141.03	2.622	0.197	91.695	4.925	0.489	0.022	0.038	0.005	0.004	0.004
07/07/2020	1,027.9	1,010.0	0.595	1,333.01	-145.06	2.693	0.166	92.130	4.536	0.418	0.017	0.030	0.004	0.003	0.003
07/08/2020	1,022.5	1,004.7	0.591	1,329.74	-149.64	2.751	0.134	92.639	4.112	0.323	0.013	0.022	0.003	0.002	0.002
07/09/2020	1,025.3	1,007.5	0.593	1,332.03	-147.64	2.593	0.203	92.536	4.256	0.363	0.015	0.026	0.003	0.003	0.003
07/10/2020	1,028.2	1,010.4	0.595	1,333.13	-145.14	2.633	0.210	92.075	4.634	0.403	0.015	0.024	0.003	0.002	0.002
07/11/2020	1,022.0	1,004.2	0.592	1,328.34	-148.90	2.984	0.043	92.407	4.170	0.348	0.014	0.024	0.003	0.003	0.002
07/12/2020	1,025.6	1,007.7	0.593	1,331.24	-146.36	2.793	0.122	92.307	4.299	0.420	0.018	0.030	0.004	0.004	0.004
07/13/2020	1,027.1	1,009.3	0.596	1,330.91	-144.58	2.820	0.174	91.952	4.548	0.441	0.019	0.033	0.005	0.004	0.003
07/14/2020	1,027.6	1,009.7	0.595	1,331.62	-144.51	2.839	0.136	91.939	4.563	0.469	0.018	0.029	0.003	0.003	0.002
07/15/2020	1,023.5	1,005.7	0.596	1,326.18	-145.99	3.037	0.177	91.884	4.412	0.437	0.017	0.026	0.003	0.002	0.005
07/16/2020	1,041.9	1,023.8	0.602	1,342.34	-135.11	2.337	0.333	90.971	5.683	0.592	0.024	0.043	0.006	0.006	0.004
07/17/2020	1,038.0	1,019.9	0.601	1,338.86	-137.27	2.480	0.307	91.186	5.356	0.601	0.022	0.037	0.005	0.004	0.003
07/18/2020	1,032.7	1,014.7	0.598	1,335.14	-140.74	2.636	0.240	91.585	4.945	0.531	0.019	0.032	0.004	0.004	0.003
07/19/2020	1,030.6	1,012.7	0.597	1,334.19	-142.43	2.729	0.165	91.744	4.838	0.467	0.018	0.030	0.004	0.004	0.003
07/20/2020	1,030.4	1,012.5	0.597	1,334.09	-142.39	2.788	0.126	91.757	4.759	0.514	0.018	0.030	0.003	0.003	0.002
07/21/2020	1,030.8	1,012.9	0.596	1,335.06	-142.49	2.719	0.130	91.847	4.737	0.513	0.018	0.028	0.003	0.002	0.002
07/22/2020	1,033.6	1,015.7	0.598	1,336.25	-140.53	2.613	0.224	91.525	5.056	0.533	0.017	0.026	0.003	0.002	0.002
07/23/2020	1,034.7	1,016.7	0.599	1,336.95	-139.74	2.570	0.246	91.478	5.088	0.561	0.019	0.029	0.003	0.002	0.003
07/24/2020	1,036.2	1,018.2	0.601	1,336.79	-137.51	2.607	0.281	91.291	5.048	0.692	0.028	0.044	0.004	0.003	0.003
07/25/2020	1,041.3	1,023.2	0.603	1,341.25	-135.16	2.391	0.339	90.956	5.575	0.664	0.025	0.040	0.004	0.003	0.003
07/26/2020	1,038.7	1,020.6	0.602	1,338.79	-136.57	2.457	0.347	91.105	5.373	0.645	0.024	0.038	0.004	0.003	0.003
07/27/2020	1,039.7	1,021.6	0.603	1,338.64	-135.29	2.546	0.332	90.853	5.500	0.690	0.027	0.042	0.004	0.003	0.003
07/28/2020	1,041.7	1,023.5	0.604	1,340.72	-134.66	2.379	0.389	90.807	5.709	0.637	0.025	0.041	0.005	0.004	0.004
07/29/2020	1,032.2	1,014.2	0.599	1,333.67	-140.45	2.680	0.275	91.507	4.913	0.555	0.022	0.036	0.005	0.004	0.004
07/30/2020	1,029.6	1,011.7	0.601	1,328.59	-141.00	2.767	0.419	91.296	4.889	0.565	0.022	0.034	0.003	0.003	0.002
07/31/2020	1,028.5	1,010.6	0.599	1,328.99	-141.99	2.819	0.325	91.582	4.607	0.605	0.023	0.033	0.003	0.002	0.002
08/01/2020	1,025.9	1,008.1	0.595	1,329.75	-144.90	2.915	0.135	92.065	4.282	0.538	0.023	0.034	0.003	0.002	0.002
08/02/2020	1,024.7	1,006.9	0.595	1,328.37	-145.60	2.997	0.118	92.045	4.257	0.527	0.020	0.030	0.003	0.002	0.001
08/03/2020	1,048.3	1,030.1	0.608	1,344.16	-130.27	2.905	0.068	89.381	6.962	0.638	0.017	0.025	0.002	0.001	0.001
08/04/2020	1,049.9	1,031.7	0.609	1,345.66	-129.85	2.892	0.044	89.166	7.304	0.557	0.013	0.020	0.002	0.001	0.001
08/05/2020	1,053.6	1,035.3	0.611	1,348.39	-127.33	2.830	0.051	89.005	7.338	0.727	0.019	0.026	0.002	0.001	0.001
08/06/2020	1,059.4	1,041.0	0.613	1,353.35	-68.31	2.605	0.106	88.836	7.505	0.880	0.027	0.034	0.003	0.002	0.002

TSP Name: Southern Star Central Gas Pipeline, Inc.

CSI048

TSP: 007906233

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Gas Quality Reports

LS130 - Kansas Hugoton at Hesston

Page 3 of 3

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%)
08/07/2020	1,052.4	1,034.1	0.610	1,347.97	-128.25	2.778	0.069	89.209	7.203	0.692	0.020	0.024	0.002	0.001	0.002
08/08/2020	1,051.3	1,033.0	0.609	1,347.38	-129.11	2.789	0.061	89.258	7.232	0.614	0.017	0.023	0.003	0.002	0.002
08/09/2020	1,050.2	1,031.9	0.608	1,346.80	-129.90	2.807	0.044	89.377	7.139	0.587	0.016	0.024	0.002	0.002	0.002
08/10/2020	1,053.5	1,035.2	0.610	1,348.70	-71.33	2.807	0.045	89.151	7.193	0.722	0.029	0.044	0.005	0.003	0.002
08/11/2020	1,052.8	1,034.5	0.610	1,347.95	-72.83	2.834	0.046	89.125	7.230	0.694	0.024	0.036	0.004	0.003	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 = 52783