

Gas Quality Reports

LS130 - Kansas Hugoton at Hugoton

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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	1,040.9	1,022.8	0.605	1,338.07	-135.28	3.087	0.050	89.678	6.748	0.431	0.003	0.004	0	0	0
09/07/2019	1,040.9	1,022.8	0.605	1,337.84	-135.16	3.104	0.051	89.649	6.749	0.441	0.003	0.004	0	0	0
09/08/2019	1,040.8	1,022.7	0.605	1,337.77	-135.26	3.107	0.050	89.647	6.760	0.430	0.003	0.004	0	0	0
09/09/2019	1,039.1	1,021.0	0.604	1,336.71	-136.44	3.110	0.051	89.836	6.596	0.402	0.003	0.004	0	0	0
09/10/2019	1,037.5	1,019.5	0.603	1,335.63	-137.50	3.124	0.050	89.988	6.455	0.377	0.002	0.004	0	0	0
09/11/2019	1,037.9	1,019.9	0.604	1,335.83	-137.15	3.128	0.051	89.929	6.500	0.386	0.002	0.004	0	0	0
09/12/2019	1,035.4	1,017.4	0.602	1,334.65	-139.19	3.105	0.050	90.237	6.289	0.314	0.002	0.003	0	0	0
09/13/2019	1,039.5	1,021.4	0.605	1,337.02	-136.19	3.106	0.050	89.785	6.653	0.399	0.002	0.004	0	0	0
09/14/2019	1,040.3	1,022.2	0.605	1,337.31	-135.53	3.119	0.051	89.689	6.704	0.432	0.003	0.004	0	0	0
09/15/2019	1,040.4	1,022.3	0.605	1,337.36	-135.45	3.121	0.050	89.671	6.721	0.431	0.003	0.004	0	0	0
09/16/2019	1,040.4	1,022.3	0.605	1,337.36	-135.45	3.121	0.050	89.671	6.721	0.431	0.003	0.004	0	0	0
09/17/2019	1,040.4	1,022.3	0.605	1,337.36	-135.45	3.121	0.050	89.671	6.721	0.431	0.003	0.004	0	0	0
09/18/2019	1,040.4	1,022.3	0.605	1,337.36	-135.45	3.121	0.050	89.671	6.721	0.431	0.003	0.004	0	0	0
09/19/2019	1,040.4	1,022.3	0.605	1,337.36	-135.45	3.121	0.050	89.671	6.721	0.431	0.003	0.004	0	0	0
09/20/2019	1,036.8	1,018.8	0.603	1,335.66	-138.22	3.089	0.050	90.131	6.374	0.351	0.002	0.003	0	0	0
09/21/2019	1,039.2	1,021.1	0.604	1,337.01	-136.47	3.092	0.050	89.865	6.585	0.402	0.002	0.004	0	0	0
09/22/2019	1,039.3	1,021.3	0.604	1,337.17	-136.48	3.084	0.050	89.843	6.633	0.383	0.002	0.004	0	0	0
09/23/2019	1,040.0	1,021.9	0.605	1,337.29	-135.82	3.110	0.049	89.728	6.694	0.413	0.002	0.004	0	0	0
09/24/2019	1,039.5	1,021.5	0.605	1,336.82	-136.07	3.125	0.049	89.752	6.659	0.408	0.003	0.004	0	0	0
09/25/2019	1,038.7	1,020.6	0.604	1,336.51	-136.76	3.108	0.050	89.880	6.568	0.388	0.002	0.004	0	0	0
09/26/2019	1,036.1	1,018.1	0.602	1,335.03	-138.66	3.107	0.050	90.167	6.335	0.335	0.002	0.003	0	0	0
09/27/2019	1,034.9	1,016.9	0.601	1,334.47	-139.63	3.093	0.050	90.332	6.207	0.311	0.002	0.003	0	0	0
09/28/2019	1,037.8	1,019.8	0.603	1,336.14	-137.45	3.095	0.052	89.994	6.488	0.366	0.002	0.004	0	0	0
09/29/2019	1,039.6	1,021.6	0.605	1,336.77	-135.86	3.135	0.049	89.737	6.642	0.431	0.003	0.004	0	0	0
09/30/2019	1,039.5	1,021.4	0.605	1,336.66	-135.96	3.137	0.050	89.745	6.636	0.426	0.003	0.004	0	0	0
10/01/2019	1,035.0	1,017.0	0.603	1,332.63	-138.65	3.259	0.049	89.944	6.424	0.318	0.002	0.004	0	0	0
10/02/2019	1,032.4	1,014.5	0.603	1,329.21	-139.57	3.425	0.047	89.888	6.329	0.307	0.002	0.003	0	0	0
10/03/2019	1,026.5	1,008.7	0.600	1,325.06	-143.66	3.481	0.048	90.435	5.813	0.219	0.002	0.003	0	0	0
10/04/2019	1,025.6	1,007.7	0.600	1,324.47	-144.57	3.485	0.047	90.544	5.708	0.211	0.002	0.003	0	0	0
10/05/2019	1,024.7	1,006.9	0.600	1,323.40	-144.93	3.536	0.047	90.516	5.702	0.194	0.002	0.003	0	0	0
10/06/2019	1,030.0	1,012.0	0.604	1,325.69	-140.38	3.600	0.048	89.772	6.294	0.281	0.002	0.003	0	0	0
10/07/2019	1,031.6	1,013.6	0.604	1,327.51	-139.55	3.529	0.047	89.754	6.354	0.310	0.002	0.003	0	0	0
10/08/2019	1,032.5	1,014.6	0.604	1,328.17	-138.91	3.520	0.046	89.673	6.426	0.329	0.002	0.003	0	0	0
10/09/2019	1,032.1	1,014.1	0.605	1,326.77	-138.67	3.614	0.048	89.525	6.467	0.341	0.002	0.003	0	0	0
10/10/2019	1,024.0	1,006.2	0.600	1,321.93	-145.10	3.620	0.050	90.382	5.779	0.165	0.002	0.003	0	0	0
10/11/2019	1,022.2	1,004.4	0.599	1,320.92	-146.53	3.616	0.050	90.604	5.584	0.143	0.002	0.003	0	0	0
10/12/2019	1,027.3	1,009.4	0.602	1,324.02	-142.24	3.607	0.051	90.064	6.022	0.251	0.002	0.003	0	0	0
10/13/2019	1,035.3	1,017.2	0.604	1,331.80	-137.95	3.342	0.048	89.748	6.506	0.350	0.002	0.003	0	0	0
10/14/2019	1,037.9	1,019.9	0.604	1,335.00	-136.83	3.200	0.050	89.754	6.613	0.378	0.002	0.003	0	0	0
10/15/2019	1,034.5	1,016.5	0.603	1,332.35	-138.98	3.256	0.050	90.008	6.361	0.319	0.002	0.003	0	0	0
10/16/2019	1,031.6	1,013.6	0.602	1,329.59	-140.64	3.346	0.049	90.151	6.169	0.281	0.002	0.003	0	0	0
10/17/2019	1,033.0	1,015.1	0.602	1,330.99	-139.78	3.299	0.050	90.094	6.243	0.309	0.002	0.003	0	0	0
10/18/2019	1,035.9	1,017.9	0.604	1,332.80	-137.72	3.286	0.051	89.811	6.475	0.372	0.002	0.003	0	0	0

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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%)
10/19/2019	1,036.4	1,018.4	0.605	1,332.97	-137.36	3.299	0.049	89.704	6.582	0.360	0.002	0.003	0	0	0
10/20/2019	1,036.7	1,018.7	0.605	1,332.95	-137.06	3.315	0.050	89.635	6.628	0.367	0.002	0.003	0	0	0
10/21/2019	1,036.3	1,018.2	0.605	1,332.47	-137.29	3.332	0.050	89.648	6.603	0.361	0.002	0.003	0	0	0
10/22/2019	1,031.8	1,013.9	0.602	1,329.32	-140.27	3.379	0.051	90.042	6.238	0.285	0.002	0.003	0	0	0
10/23/2019	1,029.4	1,011.5	0.601	1,327.48	-141.85	3.414	0.052	90.234	6.047	0.248	0.002	0.003	0	0	0
10/24/2019	1,028.0	1,010.1	0.601	1,326.23	-142.77	3.451	0.051	90.300	5.978	0.215	0.002	0.003	0	0	0
10/25/2019	1,028.7	1,010.8	0.601	1,326.72	-142.26	3.446	0.051	90.236	6.035	0.228	0.002	0.003	0	0	0
10/26/2019	1,034.4	1,016.4	0.604	1,330.69	-138.29	3.391	0.051	89.724	6.494	0.334	0.002	0.003	0	0	0
10/27/2019	1,034.1	1,016.1	0.605	1,329.89	-138.21	3.446	0.051	89.628	6.541	0.329	0.002	0.003	0	0	0
10/28/2019	1,031.0	1,013.1	0.603	1,327.26	-140.10	3.517	0.051	89.811	6.342	0.274	0.002	0.003	0	0	0
10/29/2019	1,029.3	1,011.4	0.602	1,326.83	-141.70	3.468	0.050	90.108	6.138	0.232	0.002	0.003	0	0	0
10/30/2019	1,026.9	1,009.1	0.601	1,324.27	-142.96	3.569	0.049	90.152	6.029	0.197	0.002	0.003	0	0	0
10/31/2019	1,026.9	1,009.1	0.601	1,325.09	-143.34	3.492	0.054	90.320	5.932	0.198	0.002	0.003	0	0	0
11/01/2019	1,028.1	1,010.2	0.601	1,325.92	-142.49	3.480	0.052	90.232	6.003	0.228	0.002	0.003	0	0	0
11/02/2019	1,028.3	1,010.5	0.601	1,326.27	-142.40	3.467	0.050	90.232	6.019	0.227	0.002	0.003	0	0	0
11/03/2019	1,028.4	1,010.5	0.601	1,326.11	-142.29	3.481	0.050	90.200	6.033	0.231	0.002	0.003	0	0	0
11/04/2019	1,028.4	1,010.5	0.601	1,326.15	-142.27	3.479	0.050	90.203	6.029	0.233	0.002	0.003	0	0	0
11/05/2019	1,027.7	1,009.8	0.601	1,325.74	-142.85	3.479	0.050	90.283	5.967	0.216	0.002	0.003	0	0	0
11/06/2019	1,028.5	1,010.6	0.601	1,326.54	-142.36	3.450	0.051	90.250	6.014	0.228	0.002	0.003	0	0	0
11/07/2019	1,027.8	1,009.9	0.601	1,325.64	-142.69	3.492	0.051	90.230	6.008	0.215	0.002	0.003	0	0	0
11/08/2019	1,028.9	1,011.0	0.602	1,326.41	-141.90	3.479	0.051	90.148	6.073	0.244	0.002	0.003	0	0	0
11/09/2019	1,029.9	1,012.0	0.602	1,327.13	-141.15	3.470	0.051	90.062	6.144	0.269	0.002	0.003	0	0	0
11/10/2019	1,028.5	1,010.6	0.601	1,326.21	-142.21	3.477	0.051	90.194	6.038	0.235	0.002	0.003	0	0	0
11/11/2019	1,026.2	1,008.3	0.601	1,323.83	-143.55	3.568	0.050	90.229	5.971	0.178	0.002	0.003	0	0	0
11/12/2019	1,028.1	1,010.2	0.601	1,326.02	-142.63	3.465	0.057	90.232	6.035	0.207	0.002	0.003	0	0	0
11/13/2019	1,029.4	1,011.5	0.602	1,326.83	-141.54	3.458	0.061	90.112	6.112	0.253	0.002	0.003	0	0	0
11/14/2019	1,029.7	1,011.8	0.602	1,327.29	-141.50	3.433	0.060	90.140	6.110	0.254	0.002	0.003	0	0	0
11/15/2019	1,030.5	1,012.5	0.602	1,327.71	-140.86	3.436	0.060	90.055	6.169	0.277	0.002	0.003	0	0	0
11/16/2019	1,030.9	1,013.0	0.602	1,328.31	-140.68	3.410	0.058	90.059	6.189	0.279	0.002	0.003	0	0	0
11/17/2019	1,030.9	1,013.0	0.603	1,328.05	-140.61	3.425	0.061	90.024	6.206	0.279	0.002	0.003	0	0	0
11/18/2019	1,031.9	1,013.9	0.603	1,328.89	-139.95	3.407	0.059	89.964	6.262	0.303	0.002	0.003	0	0	0
11/19/2019	1,031.8	1,013.8	0.603	1,329.07	-140.18	3.390	0.055	90.025	6.227	0.298	0.002	0.003	0	0	0
11/20/2019	1,031.6	1,013.6	0.603	1,328.80	-140.25	3.402	0.057	90.009	6.235	0.291	0.002	0.003	0	0	0
11/21/2019	1,030.0	1,012.1	0.602	1,327.52	-141.28	3.430	0.059	90.113	6.134	0.260	0.002	0.003	0	0	0
11/22/2019	1,029.6	1,011.7	0.602	1,326.79	-141.39	3.472	0.059	90.054	6.166	0.245	0.002	0.003	0	0	0
11/23/2019	1,030.9	1,013.0	0.602	1,328.25	-140.71	3.413	0.058	90.047	6.205	0.271	0.002	0.003	0	0	0
11/24/2019	1,030.9	1,012.9	0.602	1,328.24	-140.72	3.414	0.057	90.056	6.193	0.275	0.002	0.003	0	0	0
11/25/2019	1,030.1	1,012.2	0.602	1,327.83	-141.28	3.412	0.057	90.147	6.114	0.264	0.002	0.003	0	0	0
11/26/2019	1,028.5	1,010.7	0.601	1,326.31	-142.24	3.467	0.054	90.193	6.055	0.226	0.002	0.003	0	0	0
11/27/2019	1,026.5	1,008.6	0.601	1,324.12	-143.36	3.554	0.052	90.233	5.965	0.192	0.002	0.003	0	0	0
11/28/2019	1,027.8	1,009.9	0.602	1,324.55	-142.18	3.583	0.053	90.014	6.130	0.216	0.002	0.003	0	0	0
11/29/2019	1,032.9	1,014.9	0.605	1,328.39	-138.77	3.509	0.052	89.626	6.495	0.314	0.002	0.003	0	0	0
11/30/2019	1,029.5	1,011.5	0.603	1,326.17	-141.22	3.522	0.056	89.965	6.204	0.248	0.002	0.003	0	0	0

TSP Name: Southern Star Central Gas Pipeline, Inc.

CSI048

TSP: 007906233

12/6/2019 12:15:30 AM

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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%)
12/01/2019	1,026.9	1,009.1	0.601	1,324.37	-143.02	3.553	0.054	90.172	6.023	0.194	0.002	0.003	0	0	0
12/02/2019	1,024.3	1,006.5	0.599	1,323.36	-145.66	3.519	0.045	90.554	5.748	0.130	0.001	0.002	0	0	0
12/03/2019	1,025.4	1,007.6	0.599	1,324.66	-145.07	3.466	0.045	90.543	5.799	0.144	0.001	0.002	0	0	0
12/04/2019	1,024.2	1,006.4	0.599	1,323.30	-145.71	3.520	0.045	90.563	5.738	0.130	0.001	0.002	0	0	0

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 = 63331