

## Gas Quality Reports

Rawlins Hesston 18"  
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	1,063.9	1,045.4	0.599	1,374.99	-52.36	0.992	0.114	92.294	5.447	1.012	0.044	0.066	0.011	0.007	0.014
05/18/2019	1,063.1	1,044.6	0.598	1,374.83	-51.71	0.964	0.115	92.438	5.377	0.952	0.046	0.074	0.012	0.008	0.015
05/19/2019	1,064.3	1,045.8	0.599	1,375.46	-53.20	0.967	0.117	92.268	5.519	0.987	0.044	0.067	0.011	0.007	0.013
05/20/2019	1,068.2	1,049.6	0.602	1,376.48	-47.59	0.979	0.171	91.694	5.985	1.006	0.050	0.077	0.013	0.009	0.016
05/21/2019	1,065.9	1,047.4	0.600	1,375.84	-52.10	1.012	0.116	91.913	5.875	0.944	0.043	0.065	0.011	0.007	0.014
05/22/2019	1,064.9	1,046.3	0.599	1,375.81	-53.40	0.972	0.111	92.174	5.635	0.969	0.043	0.065	0.010	0.007	0.013
05/23/2019	1,069.4	1,050.8	0.604	1,376.21	-44.65	1.053	0.175	91.499	5.965	1.128	0.059	0.083	0.014	0.009	0.017
05/24/2019	1,074.3	1,055.6	0.607	1,378.78	-42.37	1.068	0.172	90.968	6.357	1.251	0.055	0.089	0.014	0.009	0.017
05/25/2019	1,074.3	1,055.6	0.609	1,377.01	-39.21	1.055	0.277	90.838	6.336	1.289	0.061	0.099	0.016	0.011	0.018
05/26/2019	1,075.1	1,056.4	0.609	1,378.19	-39.32	1.032	0.254	90.798	6.464	1.247	0.060	0.100	0.016	0.011	0.018
05/27/2019	1,073.1	1,054.5	0.608	1,375.75	-36.06	1.112	0.273	90.900	6.215	1.276	0.065	0.106	0.018	0.013	0.022
05/28/2019	1,079.7	1,060.9	0.611	1,381.75	-38.23	0.978	0.234	90.476	6.747	1.358	0.060	0.101	0.015	0.011	0.018
05/29/2019	1,065.7	1,047.2	0.600	1,376.16	-51.46	0.967	0.121	92.067	5.730	0.975	0.043	0.064	0.011	0.007	0.015
05/30/2019	1,069.9	1,051.3	0.602	1,378.48	-50.25	0.981	0.113	91.636	6.028	1.093	0.046	0.072	0.011	0.007	0.013
05/31/2019	1,050.2	1,031.9	0.599	1,357.46	-37.46	1.601	0.243	92.468	4.554	0.918	0.066	0.089	0.021	0.013	0.028
06/01/2019	1,067.8	1,049.2	0.613	1,364.30	-25.18	1.824	0.269	90.312	5.808	1.517	0.082	0.116	0.024	0.015	0.033
06/02/2019	1,124.7	1,105.2	0.646	1,399.81	-12.37	1.655	0.176	85.091	9.708	3.040	0.101	0.175	0.019	0.012	0.022
06/03/2019	1,080.2	1,061.4	0.609	1,383.82	-41.34	1.015	0.112	90.691	6.509	1.479	0.063	0.097	0.012	0.008	0.014
06/04/2019	1,086.7	1,067.8	0.616	1,384.21	-26.27	0.983	0.310	89.988	6.716	1.648	0.119	0.161	0.031	0.022	0.022
06/05/2019	1,074.4	1,055.7	0.609	1,376.32	-29.53	1.120	0.273	91.016	5.851	1.474	0.089	0.117	0.020	0.014	0.027
06/06/2019	1,072.1	1,053.4	0.607	1,376.55	-41.50	1.139	0.179	91.228	5.867	1.395	0.064	0.090	0.013	0.008	0.017
06/07/2019	1,064.7	1,046.1	0.603	1,370.94	-43.52	1.164	0.242	91.788	5.421	1.201	0.058	0.086	0.014	0.009	0.018
06/08/2019	1,070.8	1,052.2	0.606	1,375.10	-40.70	1.115	0.234	91.325	5.759	1.352	0.068	0.108	0.014	0.009	0.017
06/09/2019	1,078.1	1,059.3	0.613	1,376.97	-24.45	1.129	0.347	90.299	6.555	1.398	0.077	0.122	0.023	0.017	0.033
06/10/2019	1,081.9	1,063.1	0.617	1,376.88	-20.38	1.110	0.484	89.627	7.059	1.408	0.083	0.145	0.026	0.022	0.037
06/11/2019	1,083.7	1,064.9	0.621	1,375.76	-19.19	1.217	0.532	89.202	7.185	1.525	0.092	0.160	0.029	0.023	0.035
06/12/2019	1,083.9	1,065.0	0.617	1,379.45	-22.83	1.066	0.431	89.665	7.044	1.471	0.088	0.160	0.025	0.020	0.031
06/13/2019	1,080.0	1,061.2	0.619	1,372.24	-21.35	1.417	0.480	89.271	7.003	1.517	0.087	0.143	0.027	0.021	0.034
06/14/2019	1,098.9	1,079.8	0.630	1,384.36	-17.45	1.452	0.372	87.589	8.144	2.115	0.094	0.162	0.024	0.018	0.029
06/15/2019	1,105.1	1,085.9	0.632	1,390.05	-19.96	1.291	0.352	87.262	8.549	2.237	0.091	0.159	0.021	0.016	0.023
06/16/2019	1,088.7	1,069.7	0.624	1,378.00	-22.75	1.254	0.539	88.506	7.756	1.606	0.095	0.170	0.027	0.021	0.026
06/17/2019	1,098.2	1,079.1	0.632	1,381.13	-19.10	1.264	0.658	87.190	8.725	1.821	0.097	0.168	0.027	0.022	0.027
06/18/2019	1,086.9	1,068.0	0.620	1,380.33	-27.34	1.122	0.442	88.994	7.706	1.454	0.083	0.133	0.023	0.018	0.024
06/19/2019	1,071.9	1,053.3	0.610	1,372.12	-33.48	1.459	0.207	90.443	6.355	1.318	0.068	0.095	0.018	0.011	0.025
06/20/2019	1,098.5	1,079.4	0.624	1,390.61	-28.25	1.255	0.140	88.386	7.895	2.083	0.076	0.125	0.015	0.009	0.017
06/21/2019	1,081.3	1,062.5	0.616	1,378.08	-30.80	1.428	0.188	89.656	6.873	1.628	0.071	0.105	0.017	0.011	0.023
06/22/2019	1,079.0	1,060.2	0.612	1,379.64	-37.43	1.240	0.157	90.176	6.813	1.421	0.060	0.090	0.015	0.009	0.019
06/23/2019	1,077.1	1,058.3	0.608	1,381.84	-45.07	1.019	0.123	90.777	6.666	1.254	0.050	0.078	0.011	0.007	0.014
06/24/2019	1,077.5	1,058.7	0.608	1,381.90	-45.34	0.987	0.154	90.585	7.001	1.113	0.049	0.074	0.012	0.008	0.015
06/25/2019	1,079.6	1,060.8	0.609	1,383.75	-45.98	0.966	0.131	90.368	7.306	1.078	0.048	0.070	0.011	0.007	0.015
06/26/2019	1,077.3	1,058.6	0.614	1,375.41	-29.48	1.282	0.311	89.880	7.053	1.233	0.069	0.108	0.020	0.014	0.029
06/27/2019	1,100.5	1,081.4	0.627	1,389.58	-23.74	1.273	0.249	87.782	8.454	1.981	0.077	0.129	0.018	0.013	0.023
06/28/2019	1,075.9	1,057.2	0.613	1,373.62	-27.76	1.468	0.242	89.896	6.821	1.336	0.072	0.102	0.020	0.013	0.031

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06/29/2019	1,099.2	1,080.0	0.623	1,392.51	-28.70	1.123	0.143	88.434	8.142	1.918	0.077	0.119	0.015	0.010	0.018
06/30/2019	1,093.9	1,074.9	0.618	1,391.24	-33.40	1.011	0.127	89.024	8.060	1.557	0.073	0.104	0.016	0.010	0.018
07/01/2019	1,090.3	1,071.4	0.619	1,386.02	-32.49	1.222	0.167	88.831	8.068	1.511	0.063	0.092	0.015	0.010	0.021
07/02/2019	1,098.2	1,079.1	0.621	1,393.64	-33.03	1.003	0.132	88.530	8.490	1.628	0.071	0.105	0.015	0.010	0.016
07/03/2019	1,095.8	1,076.8	0.619	1,393.38	-34.79	0.939	0.116	88.825	8.476	1.434	0.072	0.096	0.016	0.010	0.017
07/04/2019	1,094.7	1,075.7	0.618	1,392.20	-34.83	0.963	0.131	88.879	8.386	1.429	0.072	0.097	0.016	0.010	0.017
07/05/2019	1,093.4	1,074.4	0.617	1,391.50	-36.36	0.961	0.132	88.962	8.382	1.360	0.068	0.092	0.016	0.010	0.017
07/06/2019	1,096.4	1,077.3	0.618	1,394.21	-35.48	0.902	0.112	88.872	8.443	1.456	0.075	0.099	0.015	0.010	0.016
07/07/2019	1,093.8	1,074.8	0.617	1,392.81	-37.10	0.887	0.119	89.110	8.329	1.347	0.072	0.094	0.016	0.010	0.016
07/08/2019	1,093.6	1,074.5	0.617	1,392.55	-37.09	0.902	0.117	89.096	8.340	1.341	0.070	0.092	0.016	0.010	0.016
07/09/2019	1,094.6	1,075.5	0.617	1,393.05	-36.27	0.904	0.118	89.018	8.364	1.383	0.073	0.098	0.016	0.010	0.016
07/10/2019	1,092.9	1,073.9	0.616	1,392.04	-37.11	0.909	0.119	89.164	8.269	1.330	0.071	0.095	0.016	0.010	0.016
07/11/2019	1,098.3	1,079.2	0.620	1,394.48	-32.08	0.957	0.116	88.693	8.392	1.595	0.083	0.117	0.017	0.011	0.017
07/12/2019	1,100.0	1,080.9	0.622	1,394.58	-30.34	1.020	0.122	88.432	8.462	1.715	0.082	0.120	0.017	0.011	0.017
07/13/2019	1,084.5	1,065.7	0.617	1,381.10	-30.33	1.331	0.186	89.350	7.422	1.457	0.082	0.115	0.021	0.013	0.023
07/14/2019	1,104.7	1,085.5	0.630	1,392.33	-17.34	1.349	0.173	87.741	8.145	2.183	0.116	0.225	0.025	0.019	0.024
07/15/2019	1,118.8	1,099.3	0.634	1,404.58	-11.27	1.045	0.120	87.339	8.498	2.398	0.155	0.362	0.034	0.029	0.020
07/16/2019	1,105.2	1,086.0	0.625	1,398.18	-22.71	0.964	0.117	88.428	8.189	1.868	0.118	0.255	0.025	0.019	0.017
07/17/2019	1,088.7	1,069.8	0.620	1,382.18	-26.60	1.233	0.321	88.866	7.783	1.498	0.087	0.150	0.023	0.017	0.024
07/18/2019	1,092.8	1,073.8	0.621	1,386.51	-29.80	1.154	0.261	88.562	8.223	1.571	0.068	0.109	0.017	0.012	0.022
07/19/2019	1,091.9	1,072.9	0.624	1,382.61	-23.75	1.411	0.280	88.373	7.864	1.798	0.082	0.130	0.021	0.014	0.026
07/20/2019	1,109.2	1,089.9	0.631	1,396.22	-23.27	1.180	0.209	87.201	8.914	2.230	0.081	0.138	0.017	0.012	0.019
07/21/2019	1,091.9	1,072.9	0.617	1,389.68	-37.21	1.055	0.124	88.984	8.215	1.441	0.056	0.087	0.012	0.008	0.016
07/22/2019	1,083.6	1,064.7	0.615	1,381.81	-35.20	1.207	0.200	89.441	7.675	1.278	0.061	0.090	0.016	0.011	0.021
07/23/2019	1,096.4	1,077.4	0.626	1,385.97	-24.13	1.403	0.238	87.975	8.209	1.915	0.079	0.125	0.019	0.013	0.024
07/24/2019	1,092.5	1,073.5	0.621	1,385.76	-29.45	1.298	0.196	88.514	8.098	1.670	0.069	0.105	0.017	0.011	0.022
07/25/2019	1,085.1	1,066.3	0.619	1,379.18	-28.06	1.496	0.204	88.986	7.452	1.623	0.075	0.108	0.019	0.012	0.025
07/26/2019	1,084.0	1,065.1	0.619	1,378.06	-27.23	1.527	0.210	89.000	7.456	1.567	0.075	0.105	0.020	0.012	0.027
07/27/2019	1,091.2	1,072.2	0.626	1,378.84	-17.79	1.752	0.243	88.102	7.538	2.048	0.097	0.148	0.024	0.015	0.033
07/28/2019	1,114.3	1,094.9	0.642	1,391.04	-10.19	1.836	0.225	85.911	8.716	2.954	0.109	0.180	0.023	0.015	0.030
07/29/2019	1,116.1	1,096.7	0.642	1,392.47	-9.41	1.814	0.215	85.933	8.551	3.113	0.114	0.191	0.024	0.015	0.028
07/30/2019	1,102.4	1,083.3	0.631	1,388.08	-19.21	1.568	0.198	87.362	8.265	2.320	0.089	0.140	0.020	0.013	0.026
07/31/2019	1,098.3	1,079.2	0.628	1,385.46	-20.41	1.587	0.202	87.672	8.115	2.141	0.087	0.136	0.021	0.013	0.027
08/01/2019	1,103.0	1,083.8	0.630	1,389.29	-21.24	1.513	0.184	87.260	8.607	2.164	0.084	0.133	0.018	0.012	0.024
08/02/2019	1,096.3	1,077.2	0.629	1,382.55	-18.22	1.699	0.228	87.750	7.798	2.213	0.095	0.151	0.023	0.015	0.029
08/03/2019	1,088.0	1,069.1	0.620	1,381.77	-28.92	1.418	0.202	88.690	7.903	1.576	0.065	0.095	0.017	0.010	0.025
08/04/2019	1,119.2	1,099.7	0.643	1,395.37	-12.87	1.719	0.212	85.496	9.301	2.940	0.104	0.172	0.020	0.013	0.023
08/05/2019	1,072.1	1,053.4	0.618	1,363.33	-17.41	2.037	0.319	89.495	6.080	1.742	0.099	0.142	0.029	0.018	0.040
08/06/2019	1,084.7	1,065.8	0.625	1,372.32	-20.44	1.891	0.313	88.235	7.389	1.896	0.086	0.121	0.023	0.014	0.032
08/07/2019	1,103.1	1,083.9	0.637	1,382.50	-12.39	1.967	0.271	86.639	8.125	2.662	0.103	0.162	0.024	0.015	0.032
08/08/2019	1,110.4	1,091.1	0.641	1,386.64	-9.68	1.979	0.260	86.033	8.406	2.950	0.115	0.186	0.025	0.016	0.031
08/09/2019	1,117.4	1,098.0	0.644	1,392.47	-9.51	1.858	0.229	85.539	8.961	3.059	0.110	0.178	0.023	0.015	0.029
08/10/2019	1,131.7	1,112.0	0.651	1,403.00	-7.30	1.724	0.168	84.581	9.669	3.469	0.120	0.210	0.022	0.014	0.023

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08/11/2019	1,115.2	1,095.8	0.643	1,390.28	-7.33	1.942	0.227	85.823	8.466	3.138	0.123	0.207	0.026	0.017	0.031
08/12/2019	1,117.5	1,098.1	0.643	1,394.08	-13.18	1.780	0.192	85.552	9.265	2.884	0.103	0.167	0.020	0.013	0.024
08/13/2019	1,092.1	1,073.1	0.630	1,375.38	-13.57	2.042	0.274	87.642	7.331	2.345	0.111	0.176	0.027	0.017	0.034
08/14/2019	1,095.4	1,076.4	0.632	1,377.81	-13.84	2.013	0.262	87.328	7.633	2.418	0.107	0.165	0.025	0.016	0.033
08/15/2019	1,116.9	1,097.4	0.642	1,394.11	-13.39	1.758	0.185	85.715	9.109	2.913	0.099	0.164	0.020	0.013	0.024

**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 = 52812