

LS495 - Grabham to Welda at Grabham
7/12/2017 - 10/12/2017

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%)
07/12/2017	1,045.4	1,027.2	.607	1,341.46	-67.70	2.343	.489	90.360	5.975	.692	.031	.086	.009	.011	.004
07/13/2017	1,044.8	1,026.7	.606	1,341.87	-67.48	2.359	.440	90.472	5.933	.658	.030	.083	.009	.011	.005
07/14/2017	1,041.1	1,022.9	.603	1,340.39	-135.48	2.393	.378	90.734	5.937	.468	.019	.054	.006	.007	.003
07/15/2017	1,045.8	1,027.6	.608	1,341.62	-60.73	2.386	.464	90.472	5.687	.811	.039	.111	.011	.015	.005
07/16/2017	1,046.6	1,028.4	.608	1,342.52	-65.01	2.347	.469	90.286	6.025	.718	.033	.094	.009	.012	.004
07/17/2017	1,044.7	1,026.5	.605	1,343.01	-132.80	2.293	.415	90.528	6.105	.549	.024	.068	.007	.009	.002
07/18/2017	1,044.2	1,026.0	.604	1,343.52	-133.96	2.186	.442	90.700	6.076	.501	.021	.058	.006	.008	.002
07/19/2017	1,044.9	1,026.7	.605	1,343.57	-133.00	2.185	.462	90.621	6.090	.538	.023	.063	.006	.008	.003
07/20/2017	1,045.3	1,027.1	.605	1,343.60	-72.10	2.150	.495	90.682	5.948	.603	.027	.075	.007	.010	.003
07/21/2017	1,045.1	1,026.9	.603	1,345.33	-133.84	2.022	.476	90.923	5.960	.517	.022	.061	.007	.009	.003
07/22/2017	1,047.1	1,028.8	.606	1,344.73	-70.08	2.097	.524	90.563	6.036	.652	.028	.078	.008	.010	.003
07/23/2017	1,050.5	1,032.2	.609	1,346.40	-63.11	2.070	.557	90.257	6.210	.753	.034	.093	.009	.012	.004
07/24/2017	1,043.1	1,025.0	.602	1,344.34	-136.00	2.044	.456	90.970	6.083	.377	.016	.041	.005	.006	.003
07/25/2017	1,037.0	1,018.9	.599	1,339.85	-141.17	2.115	.461	91.323	5.866	.215	.005	.012	.001	.001	0
07/26/2017	1,034.0	1,016.0	.602	1,332.31	-139.35	2.599	.467	90.803	5.702	.369	.014	.036	.004	.004	.002
07/27/2017	1,041.3	1,023.2	.604	1,340.07	-134.90	2.344	.438	90.726	5.900	.488	.023	.063	.007	.009	.003
07/28/2017	1,047.1	1,028.8	.607	1,343.99	-68.50	2.233	.476	90.396	6.084	.678	.030	.081	.008	.010	.004
07/29/2017	1,048.2	1,029.9	.607	1,345.32	-67.19	2.140	.499	90.450	6.077	.693	.031	.086	.009	.012	.004
07/30/2017	1,048.1	1,029.9	.606	1,346.06	-68.71	2.115	.473	90.555	6.032	.692	.030	.082	.008	.011	.003
07/31/2017	1,045.9	1,027.7	.605	1,344.57	-71.57	2.164	.453	90.722	5.876	.662	.028	.076	.007	.009	.003
08/01/2017	1,044.6	1,026.4	.604	1,343.73	-133.13	2.224	.418	90.703	5.981	.567	.024	.065	.006	.008	.003
08/02/2017	1,042.2	1,024.1	.606	1,339.27	-74.67	2.461	.434	90.461	5.944	.587	.026	.070	.007	.009	.003
08/03/2017	1,040.2	1,022.1	.604	1,338.89	-135.72	2.451	.398	90.644	5.953	.471	.019	.051	.005	.006	.002
08/04/2017	1,042.3	1,024.1	.602	1,343.04	-136.04	2.231	.377	90.868	6.024	.433	.016	.041	.004	.005	.001
08/05/2017	1,044.0	1,025.9	.603	1,344.92	-135.25	2.165	.373	90.806	6.155	.433	.016	.043	.004	.005	.001
08/06/2017	1,047.5	1,029.2	.608	1,343.42	-55.58	2.282	.486	90.569	5.570	.894	.045	.118	.013	.017	.007
08/07/2017	1,036.9	1,018.8	.602	1,336.32	-59.18	2.385	.474	91.280	5.198	.509	.038	.076	.013	.014	.013
08/08/2017	1,042.1	1,024.0	.603	1,341.87	-135.21	2.300	.391	90.785	5.960	.478	.019	.052	.005	.007	.003
08/09/2017	1,041.2	1,023.1	.604	1,339.69	-73.45	2.393	.421	90.815	5.641	.612	.026	.071	.007	.009	.003
08/10/2017	1,042.1	1,024.0	.608	1,335.94	-60.60	2.680	.471	90.220	5.659	.799	.039	.102	.011	.014	.006
08/11/2017	1,045.8	1,027.6	.609	1,340.16	-57.45	2.563	.433	90.113	5.915	.797	.038	.107	.012	.016	.007
08/12/2017	1,044.7	1,026.6	.604	1,344.81	-133.52	2.186	.386	90.805	5.999	.522	.022	.060	.006	.009	.005
08/13/2017	1,043.1	1,024.9	.601	1,344.94	-135.79	2.135	.360	91.077	5.897	.451	.018	.048	.005	.006	.003
08/14/2017	1,044.1	1,026.0	.603	1,344.21	-134.42	2.196	.395	90.750	6.106	.464	.021	.052	.006	.008	.003
08/15/2017	1,042.1	1,023.9	.603	1,342.31	-135.38	2.259	.393	90.882	5.908	.469	.019	.053	.005	.008	.003
08/16/2017	1,042.1	1,023.9	.603	1,342.31	-135.38	2.259	.393	90.882	5.908	.469	.019	.053	.005	.008	.003
08/17/2017	1,042.1	1,023.9	.603	1,342.31	-135.38	2.259	.393	90.882	5.908	.469	.019	.053	.005	.008	.003
08/18/2017	1,046.6	1,028.4	.607	1,342.94	-68.52	2.311	.469	90.227	6.236	.631	.027	.076	.008	.010	.004

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08/19/2017	1,048.6	1,030.4	.610	1,342.70	-59.22	2.420	.475	89.949	6.198	.789	.036	.103	.010	.014	.006
08/20/2017	1,052.3	1,034.0	.614	1,343.39	-42.85	2.529	.485	89.557	6.217	.963	.053	.142	.018	.023	.014
08/21/2017	1,048.0	1,029.8	.608	1,343.98	-60.92	2.328	.444	90.191	6.192	.693	.032	.090	.010	.013	.007
08/22/2017	1,046.6	1,028.4	.608	1,341.84	-61.80	2.390	.478	90.170	6.094	.717	.032	.090	.010	.013	.006
08/23/2017	1,049.5	1,031.2	.608	1,345.49	-63.01	2.268	.447	90.105	6.350	.689	.031	.085	.009	.012	.006
08/24/2017	1,055.8	1,037.5	.615	1,346.19	-47.80	2.468	.480	89.419	6.219	1.170	.057	.148	.014	.018	.006
08/25/2017	1,051.3	1,033.1	.611	1,345.00	-55.48	2.419	.434	89.896	6.108	.956	.043	.115	.011	.014	.006
08/26/2017	1,049.5	1,031.3	.608	1,346.55	-62.27	2.241	.407	90.265	6.244	.701	.032	.085	.008	.011	.007
08/27/2017	1,050.9	1,032.6	.611	1,344.86	-53.06	2.309	.499	90.122	5.892	.966	.047	.129	.012	.016	.007
08/28/2017	1,049.9	1,031.6	.609	1,344.93	-57.14	2.264	.494	90.238	5.938	.874	.045	.117	.011	.015	.006
08/29/2017	1,045.6	1,027.4	.606	1,343.19	-71.12	2.248	.463	90.550	5.959	.649	.029	.082	.008	.010	.002
08/30/2017	1,052.5	1,034.2	.612	1,345.86	-44.22	2.382	.447	89.814	6.308	.803	.050	.136	.021	.027	.014
08/31/2017	1,073.9	1,055.3	.625	1,357.93	2.18	2.436	.421	88.441	6.739	1.325	.117	.316	.060	.078	.064
09/01/2017	1,069.7	1,051.1	.624	1,354.07	-10.53	2.533	.442	88.306	6.965	1.238	.103	.266	.047	.058	.042
09/02/2017	1,056.5	1,038.1	.615	1,347.38	-38.86	2.365	.503	89.328	6.629	.921	.052	.139	.019	.025	.018
09/03/2017	1,059.4	1,041.0	.616	1,350.21	-41.41	2.281	.494	89.165	6.876	.934	.052	.138	.020	.025	.014
09/04/2017	1,061.7	1,043.2	.617	1,351.34	-36.78	2.291	.495	88.959	6.991	.991	.058	.149	.021	.027	.017
09/05/2017	1,058.6	1,040.2	.615	1,349.95	-52.62	2.229	.516	89.122	7.073	.880	.042	.105	.012	.015	.007
09/06/2017	1,075.5	1,056.8	.626	1,359.59	-27.26	2.292	.476	87.968	7.371	1.473	.101	.238	.032	.036	.014
09/07/2017	1,092.4	1,073.4	.636	1,369.94	5.74	2.278	.439	87.173	7.461	1.873	.163	.398	.070	.089	.056
09/08/2017	1,095.3	1,076.2	.636	1,373.05	18.06	2.112	.462	87.228	7.613	1.770	.153	.391	.074	.096	.100
09/09/2017	1,080.4	1,061.6	.629	1,361.75	-2.70	2.259	.531	87.612	7.574	1.542	.101	.236	.037	.048	.060
09/10/2017	1,063.9	1,045.4	.621	1,349.88	-31.08	2.437	.556	88.500	6.948	1.268	.067	.164	.017	.022	.022
09/11/2017	1,060.9	1,042.4	.617	1,350.17	-22.38	2.248	.564	89.214	6.607	1.036	.064	.168	.028	.036	.035
09/12/2017	1,065.1	1,046.6	.619	1,353.81	5.26	2.192	.532	88.942	7.084	.897	.051	.138	.026	.037	.100
09/13/2017	1,051.7	1,033.4	.611	1,345.73	-47.96	2.296	.487	89.706	6.669	.689	.031	.082	.010	.012	.018
09/14/2017	1,050.3	1,032.0	.611	1,344.09	-45.27	2.373	.482	89.807	6.428	.747	.032	.089	.009	.012	.020
09/15/2017	1,049.5	1,031.2	.608	1,345.71	-60.33	2.233	.457	90.188	6.275	.697	.032	.088	.010	.013	.007
09/16/2017	1,050.4	1,032.2	.610	1,345.31	-63.23	2.288	.476	89.877	6.509	.711	.031	.085	.008	.011	.005
09/17/2017	1,054.8	1,036.4	.613	1,346.97	-56.82	2.204	.577	89.548	6.589	.896	.040	.115	.011	.014	.004
09/18/2017	1,053.5	1,035.2	.611	1,347.79	-60.05	2.128	.542	89.770	6.651	.758	.033	.092	.009	.012	.005
09/19/2017	1,051.3	1,033.0	.608	1,348.48	-65.23	2.032	.492	90.205	6.538	.605	.029	.072	.009	.010	.007
09/20/2017	1,052.5	1,034.2	.609	1,349.25	-62.44	2.017	.500	90.114	6.583	.655	.029	.076	.009	.011	.007
09/21/2017	1,056.8	1,038.5	.610	1,353.29	-54.47	1.665	.643	90.276	6.436	.810	.038	.097	.011	.013	.009
09/22/2017	1,062.1	1,043.7	.613	1,356.40	-52.02	1.645	.652	89.655	7.033	.834	.040	.105	.012	.014	.009
09/23/2017	1,056.9	1,038.5	.610	1,353.25	-58.73	1.650	.658	90.228	6.515	.788	.037	.097	.011	.013	.006
09/24/2017	1,056.6	1,038.3	.610	1,352.88	-63.39	1.695	.642	90.078	6.715	.732	.032	.084	.008	.010	.004
09/25/2017	1,056.5	1,038.1	.612	1,350.79	-48.65	1.949	.584	89.897	6.534	.834	.045	.111	.015	.017	.012

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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%)
09/26/2017	1,050.4	1,032.1	.610	1,344.74	-51.63	2.236	.539	90.010	6.272	.767	.038	.097	.013	.015	.012
09/27/2017	1,050.5	1,032.2	.609	1,346.21	-57.48	2.105	.547	90.094	6.460	.654	.030	.077	.010	.012	.011
09/28/2017	1,045.1	1,026.9	.604	1,345.03	-133.94	1.967	.531	90.884	6.026	.501	.023	.052	.006	.006	.004
09/29/2017	1,043.5	1,025.4	.603	1,344.09	-67.38	1.919	.563	91.166	5.756	.487	.025	.057	.008	.009	.010
09/30/2017	1,047.2	1,029.0	.605	1,346.06	-69.03	1.816	.639	90.746	6.200	.497	.022	.056	.007	.009	.008
10/01/2017	1,045.5	1,027.3	.604	1,344.88	-73.15	1.840	.633	90.917	6.011	.498	.023	.056	.007	.009	.006
10/02/2017	1,040.6	1,022.5	.603	1,339.79	-70.27	2.052	.620	91.229	5.386	.584	.029	.074	.009	.010	.006
10/03/2017	1,037.1	1,019.0	.602	1,337.13	-62.18	2.160	.583	91.645	4.829	.621	.037	.090	.013	.014	.009
10/04/2017	1,037.1	1,019.1	.603	1,335.99	-59.93	2.232	.599	91.429	4.966	.611	.037	.087	.014	.015	.011
10/05/2017	1,003.4	986.0	.581	1,315.89	-167.33	2.228	.622	95.256	1.565	.235	.021	.045	.009	.010	.009
10/06/2017	1,032.6	1,014.7	.598	1,335.81	-69.19	2.033	.596	92.392	4.267	.569	.033	.079	.011	.012	.008
10/07/2017	1,041.2	1,023.0	.604	1,339.87	-50.25	2.047	.635	91.430	4.985	.701	.046	.106	.017	.018	.015
10/08/2017	1,037.7	1,019.7	.602	1,338.00	-59.96	2.022	.645	91.763	4.767	.639	.037	.091	.013	.014	.011
10/09/2017	1,037.6	1,019.5	.602	1,337.17	-65.41	2.124	.620	91.591	4.861	.644	.037	.091	.012	.013	.007
10/10/2017	1,033.8	1,015.8	.595	1,340.42	-142.94	1.798	.533	92.609	4.611	.362	.020	.046	.007	.008	.006

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: BusinessUnitID = 70; Analysis_Key = 52312;