

400 North Fourth Street  
Bismarck, ND 58501  
701-222-7900

May 27, 2020

Executive Secretary  
North Dakota Public Service Commission  
State Capitol Building  
Bismarck, ND 58505-0480

Re: Case No. PU-20-002 (Therm Billing)  
Monthly Report – March 2020

Montana-Dakota Utilities Co., a Subsidiary of MDU Resources Group, Inc., herewith electronically submits the following information, pursuant to the Ordering paragraphs one and two of the Order issued in Case No. 11,006, dated October 20, 1987 and pursuant to the North Dakota Administrative Code 69-09-01-02, part 2.

1. Attachment A is a schedule showing the thermal billing factors by community that reflect the BTU values shown on Attachment B and were used for billing purposes in April 2020.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our suppliers for the month of March 2020.
3. Attachment C is a listing which states the type of measuring device in place at each zone.
4. Attachment D is a monthly list of the heating value data, by zone, for the most recent 12-month period and an average thereof. It is being provided pursuant to a Staff request.
5. Attachment E provides a brief explanation of the thermal variances, where applicable, for the month of March 2020.

Montana-Dakota respectfully request this electronic filing, in lieu of an original and one copy, be accepted as being in full compliance with the filing requirements of this Commission.

Sincerely,

*/s/ Travis R. Jacobson*

Travis R. Jacobson  
Director of Regulatory Affairs

**Montana-Dakota Utilities Co.**  
**Therm Billing Factors - North Dakota**  
**Apr-20**

<u>Town</u>	<u>Heat Zone</u>	<u>Therm Factor</u>
MDU-303-ALEXANDER	025	1.1372
MDU-308-ARNEGARD	025	1.1372
MDU-314-APPLE VALLEY	271	1.1241
MDU-318-BEACH	032	1.0129
MDU-319-BELFIELD	032	1.0203
MDU-323-BERTHOLD	262	1.1145
MDU-324-BEULAH	032	1.0203
MDU-327-BISMARCK	028	1.0864
MDU-330-BOWMAN	034	0.9843
MDU-337-BURLINGTON	262	1.1385
MDU-343-CARRINGTON	273	1.1241
MDU-344-CLEVELAND	272	1.1162
MDU-364-CAVALIER	273	1.1478
MDU-365-DAWSON	271	1.1162
MDU-368-DES LACS	262	1.1225
MDU-369-DICKINSON	031	1.0559
MDU-374-FT TOTTEN	273	1.1320
MDU-375-DEVILS LAKE	273	1.1320
MDU-379-BARLOW	273	1.1241
MDU-384-EPPING	264	1.1003
MDU-387-ELDRIDGE	272	1.1241
MDU-407-GLADSTONE	031	1.0559
MDU-411-GLEN ULLIN	031	1.0635
MDU-413-GOLVA	032	0.9980
MDU-416-GARRISON	262	1.1225
MDU-417-GRAFTON	273	1.1557
MDU-403-GWINNER	601	1.1448
MDU-429-HEBRON	031	1.0635
MDU-432-HETTINGER	903	2.4049
MDU-449-JAMESTOWN	272	1.1320
MDU-459-KILLDEER	033	1.1098
MDU-463-LANGDON	273	1.1241
MDU-469-LEFOR	031	1.0559
MDU-474-LIGNITE	263	1.0873
MDU-475-LINTON	802	1.0633
MDU-478-LINCOLN	028	1.0864
MDU-488-MCKENZIE	271	1.1241
MDU-494-MEDINA	271	1.1162
MDU-498-MANDAN	028	1.0864
MDU-500-MARMARTH	034	0.9916
MDU-505-MINOT	262	1.1385
MDU-510-MOTT	031	1.0559
MDU-512-MAX	262	1.1145
MDU-513-MILNOR	601	1.1448
MDU-522-NEW ENGLAND	031	1.0482
MDU-524-NEW SALEM	028	1.0635
MDU-532-NEW ROCKFORD	273	1.1241
MDU-539-PARK RIVER	273	1.1478
MDU-540-PALERMO	262	1.1145

MDU-558-RAY	264	1.1003
MDU-561-REGENT	031	1.0559
MDU-563-RHAME	034	0.9770
MDU-564-RICHARDTON	031	1.0482
MDU-568-ROSS	261	1.0999
MDU-572-RUTHVILLE	262	1.1385
MDU-574-SANBORN	272	1.1320
MDU-583-SENTINEL BUTTE	032	1.0129
MDU-588-SOUTH HEART	031	1.0482
MDU-717-SPIRITWOOD	272	1.1320
MDU-590-SPRINGBROOK	264	1.1003
MDU-591-STANLEY	261	1.1079
MDU-593-STEELE	271	1.1162
MDU-594-STERLING	028	1.0864
MDU-598-SHEYENNE	273	1.1320
MDU-605-SURREY	262	1.1385
MDU-610-TAPPEN	271	1.1162
MDU-611-TAYLOR	031	1.0482
MDU-616-TIOGA	260	1.0569
MDU-619-TURTLE LAKE	262	1.1225
MDU-620-TRENTON	024	1.1140
MDU-624-UNDERWOOD	262	1.1225
MDU-625-VALLEY CITY	272	1.1399
MDU-629-WALHALLA	273	1.1478
MDU-632-WATFORD CITY	610	1.1032
MDU-636-WHEELOCK	264	1.0924
MDU-637-WHITE EARTH	261	1.1079
MDU-642-WILLISTON	024	1.1140
MDU-646-WASHBURN	262	1.1305
MDU-647-WILTON	262	1.1145
MDU-664-RIVERDALE	262	1.1225
MDU-691-FAIRVIEW	241	1.1444
MDU-712-MINOT AFB	262	1.1385
MDU-718-FAIRMOUNT	600	1.1425
MDU-732-NEKOMA	273	1.1241
MDU-732-MSR SITE	273	1.1241

# Source Daily Summary

March 2020

Number: 251

Pressure Base: 14.730

Contract Day: 1

Name: SDNY BDR-MNDK JNCTN-SDNY PLT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7433	1195.5	1216.7	1213.2	1.362	3.556	66.521	24.728	3.396	0.149	0.265	0.012	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1407.75
2	0.7410	1196.2	1217.4	1213.9	1.210	3.522	66.999	24.263	3.600	0.139	0.244	0.012	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1410.86
3	0.7189	1189.7	1210.7	1207.5	0.274	3.275	69.644	23.480	3.177	0.056	0.090	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1424.59
4	0.7379	1192.2	1213.3	1209.9	1.176	3.530	67.360	24.165	3.359	0.140	0.248	0.012	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1409.10
5	0.7425	1193.7	1214.8	1211.4	1.372	3.571	66.761	24.440	3.386	0.159	0.286	0.014	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1406.43
6	0.7411	1190.7	1211.7	1208.3	1.375	3.618	67.139	23.938	3.443	0.164	0.296	0.015	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1404.17
7	0.7444	1196.5	1217.7	1214.2	1.366	3.588	66.464	24.626	3.483	0.160	0.287	0.014	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1407.91
8	0.7413	1192.7	1213.8	1210.4	1.346	3.560	66.922	24.356	3.359	0.155	0.277	0.013	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1406.37
9	0.7388	1189.7	1210.8	1207.4	1.323	3.537	67.405	23.933	3.348	0.152	0.277	0.014	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1405.29
10	0.7405	1190.1	1211.2	1207.7	1.370	3.609	67.134	24.022	3.420	0.151	0.269	0.013	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1404.02
11	0.7394	1187.8	1208.8	1205.4	1.378	3.633	67.180	24.120	3.256	0.147	0.262	0.013	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1402.38
12	0.7388	1186.5	1207.5	1204.1	1.385	3.643	67.277	24.026	3.242	0.146	0.259	0.012	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1401.45
13	0.7384	1186.4	1207.4	1204.0	1.382	3.617	67.651	23.398	3.518	0.149	0.263	0.012	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1401.64
14	0.7275	1192.1	1213.2	1210.0	0.617	3.409	68.625	23.706	3.410	0.084	0.139	0.006	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1419.09
15	0.7304	1188.9	1210.0	1206.7	0.873	3.482	68.266	23.827	3.246	0.107	0.185	0.008	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1412.59
16	0.7135	1184.2	1205.2	1202.1	0.142	3.298	70.461	22.868	3.128	0.041	0.060	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.45
17	0.7371	1190.8	1211.9	1208.6	1.124	3.611	67.512	23.918	3.445	0.133	0.237	0.012	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1408.31
18	0.7395	1188.2	1209.2	1205.9	1.379	3.614	67.206	24.074	3.290	0.150	0.265	0.012	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1402.79
19	0.7399	1188.6	1209.6	1206.3	1.375	3.631	67.160	24.063	3.336	0.149	0.264	0.012	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1402.91
20	0.7397	1188.1	1209.1	1205.7	1.378	3.639	67.288	23.862	3.381	0.154	0.275	0.013	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1402.48
21	0.7411	1190.5	1211.6	1208.2	1.371	3.639	67.029	24.094	3.407	0.156	0.280	0.014	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1403.96
22	0.7419	1191.8	1212.9	1209.5	1.372	3.631	66.892	24.220	3.422	0.157	0.281	0.014	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1404.75
23	0.7350	1184.7	1205.7	1202.3	1.304	3.513	68.135	23.291	3.295	0.153	0.281	0.015	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1402.97
24	0.7345	1183.7	1204.7	1201.3	1.308	3.517	68.176	23.299	3.249	0.149	0.273	0.015	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1402.31
25	0.7435	1195.9	1217.0	1213.6	1.355	3.560	66.612	24.535	3.483	0.154	0.277	0.014	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1408.00
26	0.7384	1189.3	1210.3	1206.9	1.323	3.527	67.516	23.823	3.352	0.151	0.280	0.015	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1405.05
27	0.7389	1188.3	1209.3	1205.8	1.361	3.586	67.290	24.040	3.304	0.142	0.254	0.013	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1403.36
28	0.7404	1190.0	1211.0	1207.6	1.376	3.595	67.013	24.303	3.276	0.148	0.265	0.013	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1404.01
29	0.7407	1190.1	1211.2	1207.7	1.379	3.606	66.999	24.266	3.305	0.150	0.269	0.014	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1403.96
30	0.7389	1189.2	1210.2	1206.7	1.340	3.558	67.482	23.727	3.445	0.150	0.272	0.014	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1404.48
31	0.7401	1190.8	1211.8	1208.4	1.353	3.552	67.145	24.144	3.384	0.143	0.256	0.013	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1405.24
Avg	0.7377	1190.0	1211.2	1207.8	1.227	3.556	67.460	23.986	3.360	0.140	0.250	0.012	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1406.83

# Source Daily Summary

March 2020

Number: 571

Pressure Base: 14.730

Contract Day: 1

Name: WILLISTON BDR-CHARBN STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7032	1159.6	1180.1	1176.8	0.994	2.529	73.514	20.128	2.434	0.111	0.245	0.020	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1403.89
2	0.7012	1157.2	1177.6	1174.4	0.987	2.499	73.816	19.962	2.341	0.109	0.241	0.020	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1402.96
3	0.6986	1151.6	1172.0	1168.8	0.953	2.640	74.281	19.413	2.314	0.109	0.243	0.021	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1398.86
4	0.6973	1149.5	1169.8	1166.6	0.933	2.679	74.455	19.272	2.274	0.105	0.235	0.021	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1397.57
5	0.6952	1147.0	1167.3	1164.1	0.903	2.686	74.693	19.163	2.203	0.098	0.213	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1396.58
6	0.6955	1145.9	1166.2	1162.9	0.902	2.776	74.612	19.179	2.180	0.096	0.214	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1395.05
7	0.6955	1143.6	1163.9	1160.6	0.881	2.946	74.463	19.251	2.133	0.087	0.197	0.018	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1392.28
8	0.6963	1145.0	1165.3	1162.1	0.897	2.919	74.281	19.445	2.154	0.084	0.187	0.015	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1393.13
9	0.6956	1145.6	1165.9	1162.7	0.893	2.817	74.483	19.322	2.171	0.087	0.190	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1394.57
10	0.6944	1142.1	1162.4	1159.1	0.868	2.955	74.692	18.976	2.206	0.085	0.184	0.015	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1391.55
11	0.6913	1138.3	1158.4	1155.2	0.836	2.945	75.257	18.522	2.118	0.088	0.195	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1389.95
12	0.7010	1153.9	1174.3	1171.1	0.935	2.755	73.693	19.915	2.351	0.097	0.214	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1399.23
13	0.7026	1156.7	1177.2	1173.9	0.965	2.689	73.479	20.105	2.394	0.101	0.224	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1401.04
14	0.7014	1155.3	1175.8	1172.5	0.952	2.684	73.651	19.990	2.370	0.099	0.215	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1400.53
15	0.7019	1155.6	1176.1	1172.8	0.959	2.700	73.613	19.974	2.389	0.101	0.222	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1400.38
16	0.7017	1155.1	1175.6	1172.3	0.955	2.718	73.595	20.012	2.357	0.099	0.220	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1399.99
17	0.7018	1156.1	1176.5	1173.3	0.960	2.661	73.657	19.960	2.380	0.103	0.233	0.021	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1401.08
18	0.7004	1153.6	1174.1	1170.9	0.956	2.680	73.822	19.862	2.331	0.097	0.211	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1399.57
19	0.7011	1155.6	1176.1	1172.9	0.966	2.611	73.753	19.944	2.365	0.100	0.219	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1401.27
20	0.7000	1154.1	1174.6	1171.3	0.958	2.612	73.932	19.810	2.330	0.099	0.217	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1400.50
21	0.6907	1138.7	1158.8	1155.7	0.865	2.819	75.434	18.430	2.127	0.090	0.197	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1391.07
22	0.6890	1137.0	1157.2	1154.0	0.846	2.792	75.531	18.591	1.938	0.083	0.183	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1390.77
23	0.6859	1131.7	1151.7	1148.5	0.818	2.871	76.231	17.749	2.015	0.087	0.192	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1387.30
24	0.6862	1134.1	1154.2	1151.0	0.828	2.729	76.095	18.106	1.945	0.083	0.180	0.015	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1390.08
25	0.6952	1148.0	1168.3	1165.1	0.920	2.596	74.534	19.551	2.085	0.088	0.191	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1397.86
26	0.6967	1148.2	1168.5	1165.3	0.934	2.698	74.658	18.951	2.386	0.103	0.227	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1396.62
27	0.6980	1151.2	1171.6	1168.3	0.937	2.642	74.158	19.700	2.222	0.094	0.207	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1398.90
28	0.6972	1149.9	1170.2	1166.9	0.925	2.664	74.179	19.771	2.142	0.090	0.194	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1398.12
29	0.6985	1151.0	1171.4	1168.0	0.951	2.671	73.936	19.987	2.150	0.087	0.185	0.015	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1398.28
30	0.6998	1153.1	1173.5	1170.0	0.953	2.670	73.701	20.194	2.169	0.088	0.189	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1399.39
31	0.6953	1146.2	1166.5	1163.3	0.904	2.733	74.476	19.498	2.071	0.089	0.194	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1395.69
Avg	0.6970	1149.0	1169.1	1165.8	0.921	2.722	74.344	19.443	2.227	0.095	0.208	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1396.92

# Gas Composition and Properties

Effective March 1, 2020

Attachment B  
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Source #: 0602160  
Name: FAIRVIEW BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.1990		2.5215
Nitrogen, N2	3.3230		4.4483
Methane, C1	69.8109		53.5169
Ethane, C2	22.1735	5.9347	31.8601
Propane, C3	3.0865	0.8510	6.5036
iso-Butane, iC4	0.1289	0.0422	0.3580
n-Butane, nC4	0.2510	0.0792	0.6971
iso-Pentane, iC5	0.0139	0.0051	0.0479
n-Pentane, nC5	0.0121	0.0044	0.0417
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0012	0.0005	0.0049
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
<b>Totals</b>	<b>100.0000</b>	<b>6.9160</b>	<b>100.0000</b>

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-28.673	
Cricondentherm	0.745	
HV, Dry @ Base P, T	1195.37	
HV, Sat @ Base P, T	1174.57	
HV, Sat @ Sample P, T	1195.37	
Relative Density	0.7247	

C6+: 100

## Sample

Date: 03/01/2020      Pressure: 280.0  
 Type:                      Temperature:  
 Tech: Kevin Moos      H2O: lbs/mm  
                                  H2S: ppm

Remarks:

## Analysis

Date: 03/01/2020      Instrument:  
                                  Cylinder: 370  
 Tech: Kevin Moos

Remarks:

# Gas Composition and Properties

Effective March 1, 2020

Attachment B  
Page 4 of 24

Source #: 0602225  
Name: WATFORD CITY WEST BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.1747		2.4382
Nitrogen, N2	3.8767		5.1218
Methane, C1	69.3436		52.4651
Ethane, C2	20.9437	5.6059	29.7006
Propane, C3	3.8856	1.0714	8.0806
iso-Butane, iC4	0.2090	0.0685	0.5729
n-Butane, nC4	0.4741	0.1496	1.2996
iso-Pentane, iC5	0.0414	0.0152	0.1409
n-Pentane, nC5	0.0421	0.0153	0.1433
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0091	0.0037	0.0370
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
<b>Totals</b>	<b>100.0000</b>	<b>6.9290</b>	<b>100.0000</b>

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	0.610	
Cricondentherm	12.182	
HV, Dry @ Base P, T	1201.66	
HV, Sat @ Base P, T	1180.75	
HV, Sat @ Sample P, T	1201.66	
Relative Density	0.7343	
C6+: 100		

## Sample

Date: 03/01/2020      Pressure: 450.0  
 Type:                      Temperature:  
 Tech: Kevin Moos      H2O: lbs/mm  
                                  H2S: ppm

Remarks:

## Analysis

Date: 03/01/2020      Instrument:  
                                  Cylinder: 317  
 Tech: Kevin Moos

Remarks:

# Source Daily Summary

March 2020

**Number:** 164

**Pressure Base:** 14.730

**Contract Day:** 1

**Name:** N TIOGA TRANSFER-NESSON PLT

**Temperature Base:**

**Contract Hour:** 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6779	1106.8	1126.4		0.705	3.807	77.085	16.510	1.629	0.067	0.162	0.014	0.017	0.003					1364.97	
2	0.6797	1109.5	1129.2		0.711	3.801	76.992	16.425	1.738	0.079	0.200	0.020	0.026	0.008					1366.50	
3	0.6697	1096.1	1115.5		0.584	3.875	78.541	15.224	1.493	0.068	0.171	0.017	0.022	0.005					1359.98	
4	0.6737	1104.5	1124.1		0.581	3.746	77.718	16.154	1.551	0.062	0.150	0.015	0.019	0.005					1366.35	
5	0.6702	1100.1	1119.6		0.528	3.764	78.277	15.680	1.541	0.055	0.126	0.011	0.014	0.003					1364.44	
6	0.6779	1111.5	1131.2		0.594	3.689	77.157	16.513	1.779	0.068	0.158	0.016	0.020	0.006					1370.75	
7	0.6840	1121.4	1141.3		0.650	3.579	76.147	17.409	1.937	0.072	0.165	0.016	0.020	0.005					1376.73	
8	0.6814	1116.9	1136.7		0.644	3.620	76.412	17.292	1.809	0.062	0.136	0.011	0.013	0.000					1373.80	
9	0.6753	1108.4	1128.0		0.572	3.672	77.355	16.569	1.644	0.053	0.112	0.009	0.011	0.002					1369.50	
10	0.6769	1111.0	1130.7		0.599	3.624	77.230	16.558	1.778	0.059	0.128	0.011	0.013	0.001					1371.11	
11	0.6700	1101.4	1120.9		0.503	3.707	78.517	15.342	1.690	0.064	0.143	0.013	0.017	0.003					1366.21	
12	0.6937	1135.1	1155.2		0.781	3.449	74.695	18.499	2.283	0.081	0.178	0.015	0.018	0.001					1383.85	
13	0.6877	1125.0	1145.0		0.745	3.558	75.688	17.611	2.103	0.078	0.178	0.016	0.019	0.003					1377.48	
14	0.6883	1125.5	1145.4		0.752	3.577	75.588	17.655	2.144	0.077	0.171	0.015	0.018	0.003					1377.45	
15	0.6893	1127.5	1147.4		0.751	3.554	75.448	17.765	2.187	0.080	0.177	0.016	0.019	0.003					1378.82	
16	0.6909	1129.8	1149.8		0.781	3.511	75.170	18.049	2.200	0.079	0.174	0.015	0.019	0.003					1380.16	
17	0.6878	1126.1	1146.1		0.725	3.537	75.670	17.638	2.143	0.077	0.174	0.016	0.019	0.002					1378.66	
18	0.6893	1127.7	1147.6		0.765	3.516	75.445	17.803	2.192	0.076	0.169	0.015	0.018	0.002					1379.13	
19	0.6771	1109.2	1128.9		0.642	3.685	77.468	16.020	1.930	0.069	0.154	0.013	0.016	0.002					1368.70	
20	0.6814	1115.1	1134.9		0.705	3.629	76.709	16.734	1.970	0.069	0.155	0.013	0.016	0.001					1371.69	
21	0.6625	1088.7	1108.0		0.477	3.814	79.584	14.555	1.384	0.049	0.113	0.010	0.012	0.001					1358.13	
22	0.6615	1087.2	1106.4		0.471	3.822	79.856	14.228	1.422	0.052	0.120	0.012	0.015	0.003					1357.23	
23	0.6657	1094.2	1113.6		0.515	3.720	79.251	14.721	1.572	0.058	0.132	0.013	0.016	0.003					1361.70	
24	0.6535	1077.6	1096.7		0.458	3.668	81.314	13.081	1.320	0.044	0.096	0.008	0.010	0.000					1353.54	
25	0.6757	1108.3	1127.9		0.668	3.569	77.710	15.947	1.863	0.066	0.148	0.013	0.015	0.001					1368.96	
26	0.6828	1118.5	1138.3		0.725	3.524	76.700	16.642	2.114	0.077	0.177	0.016	0.021	0.004					1374.41	
27	0.6816	1116.3	1136.1		0.665	3.634	76.652	16.812	1.981	0.069	0.153	0.014	0.017	0.003					1372.97	
28	0.6825	1118.6	1138.4		0.645	3.615	76.358	17.187	1.976	0.063	0.131	0.010	0.013	0.002					1374.80	
29	0.6907	1130.3	1150.4		0.757	3.507	74.827	18.642	2.076	0.058	0.117	0.008	0.008	0.000					1380.93	
30	0.6926	1133.1	1153.1		0.767	3.500	74.633	18.708	2.160	0.066	0.138	0.010	0.013	0.004					1382.39	
31	0.6766	1109.8	1129.5		0.601	3.668	77.172	16.682	1.666	0.057	0.130	0.011	0.013	0.000					1369.92	
Avg	0.6790	1113.0	1132.3		0.647	3.643	77.012	16.602	1.848	0.066	0.150	0.013	0.016	0.003					1371.01	

# Source Daily Summary

March 2020

Number: 601

Pressure Base: 14.730

Contract Day: 1

Name: TIOGA STN-ROBINSON LAKE PLNT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7156	1158.6	1179.1	1175.7	1.168	3.495	71.215	21.133	2.562	0.107	0.260	0.025	0.033	0.000	0.000	0.000	0.000	0.000	0.000	1390.33
2	0.7155	1158.7	1179.2	1176.0	1.159	3.494	71.094	21.341	2.510	0.104	0.249	0.022	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1390.65
3	0.7180	1162.4	1183.0	1179.6	1.168	3.483	70.942	21.274	2.652	0.119	0.296	0.028	0.037	0.000	0.000	0.000	0.000	0.000	0.000	1392.62
4	0.7187	1163.3	1183.9	1180.4	1.162	3.505	70.895	21.225	2.715	0.123	0.306	0.030	0.039	0.000	0.000	0.000	0.000	0.000	0.000	1392.97
5	0.7124	1157.1	1177.6	1174.2	1.073	3.426	71.850	20.598	2.630	0.108	0.257	0.025	0.033	0.000	0.000	0.000	0.000	0.000	0.000	1391.70
6	0.7072	1153.8	1174.3	1171.0	0.933	3.345	72.438	20.458	2.500	0.089	0.198	0.018	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1393.03
7	0.7095	1156.5	1177.0	1173.6	0.962	3.357	72.301	20.321	2.670	0.102	0.234	0.023	0.030	0.000	0.000	0.000	0.000	0.000	0.000	1393.87
8	0.7084	1156.5	1177.0	1173.7	0.920	3.313	72.493	20.211	2.681	0.101	0.231	0.022	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1395.02
9	0.7076	1155.3	1175.8	1172.6	0.921	3.314	72.526	20.255	2.626	0.097	0.218	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1394.38
10	0.7027	1148.1	1168.4	1165.3	0.885	3.350	73.061	20.029	2.410	0.077	0.158	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1390.52
11	0.7055	1152.9	1173.3	1170.1	0.903	3.293	72.654	20.370	2.489	0.083	0.175	0.014	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1393.55
12	0.7100	1159.3	1179.8	1176.5	0.911	3.309	72.298	20.284	2.807	0.105	0.234	0.022	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1396.75
13	0.7089	1157.3	1177.8	1174.6	0.935	3.290	72.384	20.299	2.738	0.099	0.215	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1395.52
14	0.7061	1151.3	1171.7	1168.5	0.954	3.360	72.826	19.919	2.584	0.096	0.218	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1391.09
15	0.7033	1146.8	1167.1	1164.0	0.933	3.405	73.236	19.568	2.536	0.090	0.196	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1388.41
16	0.7039	1147.6	1167.9	1164.7	0.942	3.406	73.260	19.439	2.601	0.096	0.213	0.019	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1388.62
17	0.7035	1147.3	1167.7	1164.5	0.943	3.377	73.238	19.568	2.547	0.091	0.198	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1388.83
18	0.7058	1151.2	1171.6	1168.4	0.943	3.356	72.909	19.808	2.634	0.096	0.213	0.018	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1391.22
19	0.7036	1148.1	1168.4	1165.2	0.933	3.364	73.203	19.617	2.557	0.090	0.197	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1389.52
20	0.7055	1151.1	1171.5	1168.4	0.924	3.365	72.932	19.788	2.652	0.095	0.205	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1391.41
21	0.7043	1149.1	1169.4	1166.3	0.944	3.349	73.084	19.741	2.550	0.091	0.203	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1390.10
22	0.7044	1149.2	1169.5	1166.4	0.939	3.362	72.981	19.893	2.504	0.088	0.196	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1390.11
23	0.7068	1153.4	1173.8	1170.4	0.940	3.323	72.754	19.999	2.615	0.097	0.223	0.021	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1392.79
24	0.7072	1154.7	1175.1	1171.8	0.922	3.314	72.654	20.106	2.642	0.097	0.217	0.021	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1393.92
25	0.7050	1151.3	1171.7	1168.5	0.919	3.322	72.829	20.103	2.523	0.086	0.185	0.015	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1392.06
26	0.7034	1148.1	1168.4	1165.2	0.941	3.326	73.160	19.778	2.486	0.086	0.187	0.015	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1389.83
27	0.7051	1150.6	1171.0	1167.7	0.937	3.335	73.074	19.678	2.611	0.097	0.222	0.020	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1391.16
28	0.7038	1148.4	1168.7	1165.4	0.901	3.405	73.140	19.690	2.528	0.090	0.203	0.018	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1389.76
29	0.7045	1150.4	1170.8	1167.5	0.869	3.400	72.909	19.962	2.567	0.085	0.179	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1391.49
30	0.7078	1154.9	1175.4	1172.1	0.943	3.326	72.102	20.900	2.492	0.072	0.143	0.009	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1393.72
31	0.7080	1155.2	1175.7	1172.4	0.939	3.330	72.156	20.783	2.537	0.076	0.154	0.011	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1393.87
Avg	0.7075	1153.0	1173.6	1170.3	0.963	3.368	72.535	20.198	2.586	0.095	0.212	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1391.90

Zone 261

# Source Daily Summary

March 2020

Number: 091

Pressure Base: 14.730

Contract Day: 1

Name: MNT BRD-PLRMO BRD-BIS STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7367	1156.3	1176.8	1173.7	0.971	5.908	68.349	19.774	4.500	0.145	0.315	0.018	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1367.76
2	0.7513	1184.6	1205.6	1202.4	0.976	5.531	66.703	20.789	5.280	0.197	0.461	0.030	0.033	0.000	0.000	0.000	0.000	0.000	0.000	1387.59
3	0.7403	1161.5	1182.1	1178.9	0.969	5.928	67.951	19.882	4.720	0.156	0.348	0.021	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1370.56
4	0.7388	1160.0	1180.5	1177.4	0.974	5.875	68.113	19.895	4.611	0.153	0.336	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1370.15
5	0.7363	1161.2	1181.7	1178.6	0.951	5.601	68.555	19.836	4.530	0.152	0.332	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1373.89
6	0.7401	1165.0	1185.6	1182.5	0.917	5.772	68.052	19.890	4.817	0.162	0.348	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1374.95
7	0.7438	1161.8	1182.3	1179.2	0.915	6.317	67.526	19.575	5.099	0.170	0.360	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1367.73
8	0.7418	1154.4	1174.9	1171.8	0.909	6.588	67.737	19.198	5.035	0.163	0.336	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1360.92
9	0.7402	1157.5	1178.0	1174.9	0.913	6.249	68.067	19.275	4.944	0.168	0.348	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1365.94
10	0.7423	1159.6	1180.1	1177.0	0.911	6.317	67.783	19.349	5.083	0.168	0.354	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1366.53
11	0.7441	1161.5	1182.1	1179.1	0.907	6.372	67.567	19.382	5.184	0.177	0.372	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1367.20
12	0.7392	1154.8	1175.2	1172.2	0.912	6.313	68.020	19.453	4.808	0.149	0.311	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1363.81
13	0.7406	1158.6	1179.2	1176.1	0.916	6.212	67.869	19.589	4.902	0.155	0.322	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1366.97
14	0.7371	1154.2	1174.6	1171.5	0.920	6.145	68.438	19.262	4.723	0.155	0.322	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1364.95
15	0.7373	1155.1	1175.5	1172.5	0.919	6.114	68.438	19.254	4.754	0.158	0.329	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1365.81
16	0.7385	1155.5	1175.9	1172.9	0.920	6.195	68.224	19.365	4.769	0.159	0.332	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1365.23
17	0.7394	1156.3	1176.8	1173.7	0.912	6.248	68.018	19.496	4.813	0.154	0.325	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1365.32
18	0.7362	1152.4	1172.8	1169.7	0.918	6.167	68.768	18.822	4.757	0.168	0.361	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1363.73
19	0.7359	1154.8	1175.3	1172.2	0.919	5.993	68.704	19.166	4.683	0.159	0.339	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1366.86
20	0.7335	1155.6	1176.1	1173.0	0.924	5.709	68.889	19.568	4.433	0.143	0.300	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1370.06
21	0.7348	1156.5	1176.9	1173.9	0.926	5.786	68.713	19.558	4.528	0.146	0.308	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1369.75
22	0.7364	1159.9	1180.4	1177.4	0.922	5.731	68.473	19.794	4.581	0.148	0.316	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1372.35
23	0.7349	1155.8	1176.3	1173.2	0.922	5.843	68.739	19.443	4.546	0.150	0.321	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1368.85
24	0.7380	1162.4	1183.0	1179.9	0.927	5.716	68.327	19.818	4.683	0.153	0.335	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1373.87
25	0.7375	1165.6	1186.3	1183.1	0.925	5.477	68.508	19.875	4.651	0.161	0.357	0.022	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1378.03
26	0.7371	1160.6	1181.2	1178.0	0.933	5.733	68.418	19.781	4.627	0.149	0.321	0.018	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1372.56
27	0.7387	1160.3	1180.9	1177.8	0.931	5.906	68.184	19.721	4.739	0.152	0.329	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1370.72
28	0.7463	1164.5	1185.1	1182.0	0.925	6.371	67.104	19.836	5.203	0.166	0.357	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1368.62
29	0.7404	1162.7	1183.3	1180.2	0.924	5.927	67.973	19.794	4.847	0.157	0.340	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1372.01
30	0.7401	1162.2	1182.8	1179.7	0.933	5.916	67.932	19.927	4.780	0.151	0.325	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1371.68
31	0.7391	1160.1	1180.6	1177.5	0.926	5.970	68.028	19.844	4.736	0.147	0.315	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1370.03
Avg	0.7393	1160.0	1180.3	1177.2	0.928	5.998	68.134	19.620	4.786	0.158	0.338	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1369.50

# Gas Composition and Properties

Effective March 1, 2020

Attachment B  
Page 8 of 24

Source #: 2501030  
Name: LIGNITE PLANT

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.6539		1.4418
Nitrogen, N2	3.0918		4.3393
Methane, C1	75.3485		60.5607
Ethane, C2	18.1065	4.8447	27.2771
Propane, C3	2.5650	0.7070	5.6667
iso-Butane, iC4	0.0655	0.0214	0.1907
n-Butane, nC4	0.1312	0.0414	0.3821
iso-Pentane, iC5	0.0129	0.0047	0.0466
n-Pentane, nC5	0.0166	0.0060	0.0600
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0081	0.0033	0.0350
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
<b>Totals</b>	<b>100.0000</b>	<b>5.6280</b>	<b>100.0000</b>

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-23.329	
Cricondentherm	-13.683	
HV, Dry @ Base P, T	1160.15	
HV, Sat @ Base P, T	1139.96	
HV, Sat @ Sample P, T	1160.15	
Relative Density	0.6910	
C6+: 100		

**Sample**

Date: 03/01/2020      Pressure: 450.0  
 Type:                      Temperature:  
 Tech: Kevin Moos      H2O: lbs/mm  
    H2S: ppm

Remarks:

**Analysis**

Date: 03/01/2020      Instrument:  
    Cylinder: 377  
 Tech: Kevin Moos

Remarks:

# Gas Composition and Properties

Effective March 1, 2020 09:00 - January 18, 2038 21:14

Attachment B  
Page 9 of 24

Source #: 3002013  
Name: EPPING BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.8883		1.9706
Nitrogen, N2	2.5423		3.5899
Methane, C1	75.7291		61.2382
Ethane, C2	18.8432	5.0417	28.5602
Propane, C3	1.7410	0.4799	3.8697
iso-Butane, iC4	0.0711	0.0233	0.2083
n-Butane, nC4	0.1578	0.0498	0.4623
iso-Pentane, iC5	0.0118	0.0043	0.0429
n-Pentane, nC5	0.0128	0.0046	0.0466
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0026	0.0011	0.0113
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
<b>Totals</b>	<b>100.0000</b>	<b>5.6050</b>	<b>100.0000</b>

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-24.763	
Cricondentherm	-18.836	
HV, Dry @ Base P, T	1156.85	
HV, Sat @ Base P, T	1136.72	
HV, Sat @ Sample P, T	1156.85	
Relative Density	0.6868	
C6+: 100		

## Sample

Date: 03/01/2020      Pressure: 550.0  
 Type:                      Temperature:  
 Tech: Kevin Moos      H2O: lbs/mm  
    H2S: ppm

Remarks:

## Analysis

Date: 03/01/2020      Instrument:  
    Cylinder: 133  
 Tech: Kevin Moos

Remarks:

\*\*\* End of Report \*\*\*

# Source Daily Summary

March 2020

Number: 603

Pressure Base: 14.730

Contract Day: 1

Name: TIOGA STN-COUNTY LINE PLANT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7156	1158.9	1179.4	1176.1	1.163	3.481	71.165	21.221	2.559	0.105	0.253	0.023	0.030	0.000	0.000	0.000	0.000	0.000	0.000	1390.81
2	0.7155	1158.3	1178.8	1175.4	1.167	3.502	71.174	21.213	2.526	0.106	0.256	0.024	0.032	0.000	0.000	0.000	0.000	0.000	0.000	1390.16
3	0.7178	1162.3	1182.9	1179.5	1.160	3.487	70.909	21.340	2.636	0.117	0.289	0.027	0.035	0.000	0.000	0.000	0.000	0.000	0.000	1392.71
4	0.7196	1164.9	1185.5	1182.0	1.167	3.487	70.768	21.327	2.740	0.127	0.313	0.032	0.040	0.000	0.000	0.000	0.000	0.000	0.000	1393.97
5	0.7171	1162.1	1182.7	1179.2	1.132	3.462	71.221	20.959	2.733	0.121	0.301	0.030	0.040	0.000	0.000	0.000	0.000	0.000	0.000	1393.20
6	0.7070	1153.2	1173.6	1170.4	0.938	3.355	72.486	20.388	2.505	0.089	0.198	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1392.48
7	0.7096	1156.6	1177.1	1173.8	0.970	3.348	72.223	20.453	2.629	0.099	0.228	0.022	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1393.93
8	0.7079	1155.8	1176.2	1172.9	0.917	3.322	72.575	20.129	2.677	0.100	0.228	0.022	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1394.51
9	0.7062	1152.5	1172.9	1169.6	0.923	3.353	72.665	20.202	2.520	0.091	0.204	0.018	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1392.31
10	0.7049	1151.2	1171.6	1168.5	0.901	3.340	72.732	20.269	2.472	0.083	0.174	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1392.19
11	0.7049	1151.5	1171.9	1168.7	0.908	3.312	72.727	20.320	2.452	0.081	0.168	0.014	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1392.47
12	0.7088	1157.4	1177.9	1174.6	0.912	3.310	72.351	20.383	2.679	0.098	0.219	0.020	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1395.71
13	0.7112	1161.3	1181.8	1178.6	0.928	3.278	72.093	20.447	2.873	0.107	0.231	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1397.99
14	0.7071	1152.9	1173.3	1170.1	0.960	3.351	72.663	20.059	2.606	0.097	0.221	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1391.98
15	0.7040	1148.2	1168.5	1165.4	0.936	3.388	73.100	19.703	2.547	0.091	0.199	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1389.36
16	0.7049	1149.0	1169.4	1166.1	0.946	3.401	73.113	19.553	2.624	0.098	0.219	0.020	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1389.43
17	0.7039	1148.0	1168.3	1165.2	0.941	3.379	73.174	19.610	2.568	0.092	0.200	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1389.23
18	0.7058	1151.0	1171.3	1168.1	0.953	3.358	72.919	19.795	2.619	0.097	0.215	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1390.89
19	0.7050	1150.5	1170.8	1167.6	0.926	3.353	73.048	19.697	2.629	0.095	0.210	0.018	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1391.10
20	0.7044	1149.2	1169.6	1166.4	0.929	3.374	73.064	19.716	2.593	0.091	0.198	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1390.17
21	0.7066	1152.7	1173.1	1169.9	0.947	3.343	72.774	19.926	2.652	0.098	0.218	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1392.16
22	0.7039	1148.0	1168.4	1165.2	0.945	3.371	73.057	19.827	2.488	0.087	0.191	0.015	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1389.29
23	0.7070	1153.7	1174.2	1170.8	0.942	3.320	72.687	20.077	2.608	0.096	0.221	0.021	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1393.03
24	0.7066	1153.6	1174.0	1170.7	0.921	3.323	72.791	19.955	2.637	0.098	0.223	0.022	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1393.23
25	0.7074	1155.1	1175.5	1172.2	0.920	3.309	72.554	20.240	2.637	0.094	0.205	0.018	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1394.23
26	0.7036	1148.5	1168.9	1165.7	0.938	3.326	73.002	20.015	2.436	0.081	0.172	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1390.14
27	0.7053	1151.1	1171.5	1168.1	0.938	3.330	73.041	19.697	2.625	0.098	0.224	0.020	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1391.47
28	0.7046	1149.9	1170.3	1166.9	0.918	3.360	73.048	19.784	2.546	0.092	0.209	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1390.81
29	0.6983	1141.3	1161.6	1158.4	0.785	3.493	73.816	19.262	2.389	0.076	0.153	0.011	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1386.71
30	0.7088	1156.2	1176.7	1173.4	0.953	3.324	72.006	20.925	2.536	0.076	0.155	0.011	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1394.28
31	0.7078	1155.4	1175.8	1172.6	0.930	3.319	72.126	20.864	2.519	0.073	0.146	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1394.27
Avg	0.7078	1154.0	1174.0	1170.7	0.965	3.370	72.486	20.237	2.589	0.095	0.214	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1392.07

# Source Daily Summary

March 2020

Number: 043

Pressure Base: 14.730

Contract Day: 1

Name: BISMARCK STN-CLEVELAND STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7223	1148.7	1169.0	1165.3	0.836	5.225	70.527	19.082	3.911	0.125	0.263	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1372.20
2	0.7223	1155.3	1175.8	1172.0	0.850	4.799	70.835	19.051	3.971	0.141	0.310	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1380.02
3	0.7297	1162.0	1182.5	1178.6	0.871	5.058	69.822	19.332	4.358	0.158	0.353	0.024	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1380.87
4	0.7278	1152.4	1172.8	1169.0	0.888	5.435	69.841	19.153	4.203	0.140	0.303	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1371.40
5	0.7336	1160.5	1181.1	1177.2	0.925	5.428	68.976	19.755	4.395	0.150	0.330	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1375.59
6	0.7285	1156.9	1177.4	1173.6	0.861	5.262	69.701	19.483	4.216	0.142	0.300	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1376.19
7	0.7141	1144.4	1164.7	1160.9	0.750	4.842	71.972	18.297	3.735	0.123	0.251	0.015	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1374.95
8	0.7087	1140.2	1160.4	1156.7	0.715	4.649	72.682	18.152	3.439	0.113	0.223	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1375.06
9	0.7100	1138.1	1158.2	1154.5	0.796	4.774	72.622	17.886	3.545	0.118	0.232	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1371.28
10	0.7171	1145.8	1166.1	1162.4	0.819	4.936	71.574	18.379	3.873	0.129	0.261	0.015	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1373.73
11	0.7372	1158.5	1179.0	1175.2	0.865	5.975	68.654	19.053	4.894	0.170	0.353	0.018	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1369.94
12	0.7148	1144.5	1164.7	1161.0	0.757	4.895	71.693	18.621	3.655	0.117	0.234	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1374.36
13	0.7085	1135.8	1155.9	1152.2	0.780	4.800	72.852	17.684	3.523	0.113	0.221	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1369.90
14	0.7072	1134.7	1154.8	1151.1	0.778	4.744	73.111	17.513	3.484	0.114	0.226	0.015	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1369.89
15	0.7101	1134.7	1154.8	1151.1	0.789	4.998	72.725	17.429	3.657	0.124	0.248	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1367.11
16	0.7117	1138.1	1158.2	1154.5	0.773	4.974	72.441	17.696	3.709	0.125	0.251	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1369.53
17	0.7142	1137.5	1157.7	1153.9	0.781	5.225	72.025	17.729	3.834	0.125	0.252	0.015	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1366.57
18	0.6931	1123.6	1143.5	1139.8	0.665	4.273	75.259	16.580	2.908	0.097	0.191	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1370.19
19	0.7066	1134.3	1154.4	1150.8	0.753	4.751	73.273	17.327	3.498	0.121	0.247	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1370.00
20	0.7072	1135.9	1156.1	1152.3	0.811	4.619	73.125	17.651	3.412	0.117	0.234	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1371.34
21	0.7168	1144.1	1164.4	1160.6	0.841	4.978	71.566	18.421	3.778	0.127	0.258	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1371.95
22	0.7258	1154.3	1174.7	1170.9	0.860	5.177	70.198	19.119	4.186	0.138	0.289	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1375.51
23	0.7321	1154.8	1175.2	1171.4	0.895	5.681	69.166	19.354	4.412	0.146	0.311	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1370.21
24	0.7294	1157.7	1178.2	1174.4	0.855	5.312	69.570	19.500	4.288	0.140	0.300	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1376.22
25	0.7220	1156.6	1177.1	1173.3	0.806	4.759	70.592	19.583	3.812	0.131	0.280	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1381.92
26	0.7331	1162.4	1182.9	1179.1	0.885	5.325	69.016	19.872	4.401	0.146	0.317	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1378.30
27	0.7291	1157.5	1178.0	1174.1	0.856	5.294	69.521	19.664	4.204	0.137	0.292	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1376.30
28	0.7356	1161.7	1182.3	1178.4	0.854	5.648	68.584	19.839	4.576	0.148	0.316	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1375.28
29	0.7422	1166.3	1187.0	1183.1	0.906	5.904	67.754	19.919	4.959	0.163	0.356	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1374.53
30	0.7385	1163.3	1183.9	1180.0	0.893	5.767	68.187	19.918	4.720	0.153	0.328	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1374.33
31	0.7308	1158.3	1178.8	1175.1	0.809	5.476	69.103	19.912	4.262	0.132	0.279	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1375.68
Avg	0.7213	1149.0	1169.3	1165.6	0.823	5.128	70.870	18.740	3.994	0.133	0.278	0.017	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1373.56

# Source Daily Summary

March 2020

Number: 063

Pressure Base: 14.730

Contract Day: 1

Name: CLEVELAND STN-MAPLETON

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7303	1153.8	1174.3	1170.4	0.906	5.551	69.439	19.332	4.298	0.142	0.298	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1370.74
2	0.7227	1148.7	1169.1	1165.2	0.843	5.248	70.481	19.080	3.929	0.125	0.262	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1371.81
3	0.7226	1155.2	1175.7	1171.7	0.856	4.824	70.785	19.069	3.976	0.140	0.306	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1379.55
4	0.7297	1161.4	1182.0	1178.0	0.877	5.077	69.831	19.308	4.354	0.156	0.348	0.024	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1380.22
5	0.7285	1152.4	1172.8	1168.9	0.899	5.485	69.734	19.177	4.228	0.140	0.300	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1370.69
6	0.7333	1159.6	1180.2	1176.2	0.929	5.443	69.054	19.661	4.397	0.149	0.325	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1374.80
7	0.7287	1156.9	1177.4	1173.5	0.867	5.281	69.649	19.519	4.212	0.141	0.296	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1375.85
8	0.7141	1144.4	1164.7	1160.8	0.751	4.848	71.960	18.316	3.727	0.122	0.247	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1374.78
9	0.7084	1139.7	1159.9	1156.1	0.722	4.644	72.736	18.121	3.418	0.113	0.220	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1374.63
10	0.7099	1137.2	1157.4	1153.7	0.804	4.803	72.655	17.821	3.544	0.118	0.228	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1370.28
11	0.7172	1145.7	1166.0	1162.1	0.826	4.940	71.575	18.366	3.876	0.128	0.259	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1373.46
12	0.7369	1158.2	1178.7	1174.8	0.870	5.960	68.681	19.082	4.859	0.167	0.345	0.018	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1369.76
13	0.7145	1144.0	1164.3	1160.4	0.763	4.889	71.745	18.596	3.635	0.116	0.229	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1373.98
14	0.7087	1135.6	1155.7	1151.9	0.790	4.815	72.850	17.646	3.539	0.113	0.221	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1369.44
15	0.7071	1134.0	1154.0	1150.2	0.785	4.771	73.155	17.431	3.490	0.114	0.225	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1368.99
16	0.7102	1134.3	1154.4	1150.6	0.796	5.021	72.720	17.410	3.654	0.123	0.245	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1366.46
17	0.7118	1137.7	1157.8	1153.9	0.780	4.994	72.449	17.659	3.713	0.124	0.249	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1368.92
18	0.7143	1137.5	1157.6	1153.7	0.786	5.235	72.007	17.739	3.830	0.124	0.249	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1366.30
19	0.6926	1123.1	1142.9	1139.2	0.666	4.257	75.342	16.557	2.870	0.096	0.186	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1369.91
20	0.7060	1133.1	1153.2	1149.4	0.759	4.756	73.401	17.211	3.476	0.121	0.244	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1369.04
21	0.7074	1135.7	1155.8	1152.0	0.819	4.641	73.099	17.647	3.416	0.116	0.230	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1370.79
22	0.7169	1144.0	1164.2	1160.4	0.846	4.989	71.551	18.422	3.780	0.126	0.254	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1371.62
23	0.7259	1153.7	1174.2	1170.2	0.869	5.203	70.192	19.102	4.179	0.137	0.283	0.018	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1374.72
24	0.7323	1154.7	1175.2	1171.2	0.902	5.698	69.123	19.369	4.418	0.145	0.307	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1369.87
25	0.7299	1158.2	1178.7	1174.8	0.860	5.318	69.499	19.557	4.292	0.140	0.298	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1376.31
26	0.7213	1154.3	1174.8	1171.2	0.817	4.812	70.684	19.489	3.763	0.129	0.270	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1379.85
27	0.7340	1163.1	1183.7	1179.8	0.891	5.357	68.885	19.919	4.444	0.147	0.317	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1378.29
28	0.7292	1157.7	1178.2	1174.4	0.860	5.284	69.491	19.720	4.188	0.136	0.287	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1376.42
29	0.7359	1162.4	1183.0	1179.1	0.860	5.628	68.546	19.891	4.577	0.148	0.314	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1375.71
30	0.7426	1166.5	1187.1	1183.1	0.914	5.926	67.696	19.931	4.978	0.163	0.353	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1374.21
31	0.7390	1163.7	1184.3	1180.4	0.897	5.784	68.121	19.935	4.748	0.154	0.327	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1374.30
Avg	0.7214	1149.0	1168.9	1165.1	0.833	5.144	70.875	18.712	3.994	0.133	0.275	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1372.96

# Source Daily Summary

March 2020

Number: 061

Pressure Base: 14.730

Contract Day: 1

Name: CLEVELAND STN-GRAFTON BDR

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7301	1153.5	1173.9	1170.6	0.906	5.561	69.459	19.304	4.294	0.142	0.298	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1370.42
2	0.7221	1148.0	1168.3	1165.0	0.842	5.246	70.562	19.033	3.902	0.124	0.260	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1371.41
3	0.7228	1155.4	1175.8	1172.4	0.858	4.830	70.771	19.059	3.988	0.141	0.309	0.022	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1379.53
4	0.7296	1161.0	1181.6	1178.2	0.878	5.093	69.841	19.283	4.352	0.156	0.348	0.024	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1379.81
5	0.7284	1152.2	1172.6	1169.2	0.900	5.490	69.750	19.158	4.223	0.140	0.301	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1370.46
6	0.7336	1159.6	1180.1	1176.8	0.934	5.469	69.010	19.655	4.412	0.150	0.327	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1374.46
7	0.7291	1156.9	1177.4	1174.2	0.870	5.309	69.586	19.536	4.225	0.141	0.297	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1375.53
8	0.7145	1144.4	1164.7	1161.4	0.755	4.874	71.910	18.317	3.743	0.122	0.249	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1374.46
9	0.7085	1139.6	1159.8	1156.5	0.719	4.662	72.719	18.120	3.421	0.113	0.220	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1374.42
10	0.7094	1137.0	1157.1	1153.8	0.800	4.784	72.719	17.804	3.524	0.117	0.227	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1370.41
11	0.7173	1145.3	1165.6	1162.4	0.826	4.971	71.558	18.350	3.879	0.128	0.258	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1372.91
12	0.7368	1157.5	1178.0	1174.7	0.872	5.997	68.683	19.044	4.856	0.167	0.345	0.018	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1368.93
13	0.7147	1143.9	1164.1	1160.9	0.764	4.909	71.712	18.604	3.639	0.116	0.229	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1373.70
14	0.7087	1135.5	1155.6	1152.3	0.787	4.828	72.842	17.645	3.537	0.113	0.220	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1369.24
15	0.7070	1133.6	1153.7	1150.4	0.784	4.780	73.172	17.413	3.482	0.114	0.224	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1368.70
16	0.7102	1134.2	1154.2	1151.0	0.796	5.030	72.724	17.397	3.654	0.123	0.245	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1366.26
17	0.7119	1137.5	1157.7	1154.4	0.780	5.006	72.440	17.654	3.715	0.124	0.249	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1368.71
18	0.7148	1137.7	1157.8	1154.5	0.788	5.268	71.926	17.761	3.851	0.125	0.251	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1366.02
19	0.6929	1123.0	1142.9	1139.6	0.666	4.280	75.300	16.567	2.878	0.096	0.186	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1369.66
20	0.7063	1133.3	1153.4	1150.1	0.760	4.775	73.343	17.237	3.488	0.121	0.245	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1368.96
21	0.7074	1135.4	1155.6	1152.2	0.819	4.652	73.104	17.630	3.416	0.116	0.230	0.016	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1370.51
22	0.7169	1143.8	1164.1	1160.7	0.848	4.999	71.548	18.413	3.779	0.126	0.255	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1371.41
23	0.7260	1153.6	1174.1	1170.7	0.869	5.215	70.181	19.092	4.187	0.138	0.284	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1374.56
24	0.7324	1154.3	1174.8	1171.5	0.904	5.723	69.115	19.348	4.420	0.146	0.308	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1369.36
25	0.7299	1157.9	1178.4	1175.1	0.862	5.339	69.495	19.535	4.296	0.140	0.298	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1375.88
26	0.7192	1152.0	1172.4	1169.1	0.801	4.788	70.946	19.386	3.667	0.123	0.255	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1379.02
27	0.7336	1162.6	1183.1	1179.9	0.892	5.355	68.940	19.888	4.424	0.147	0.316	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1377.96
28	0.7300	1157.5	1178.0	1174.8	0.870	5.357	69.395	19.671	4.244	0.138	0.292	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1375.41
29	0.7346	1160.9	1181.5	1178.2	0.856	5.601	68.713	19.841	4.502	0.146	0.307	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1375.22
30	0.7426	1166.0	1186.6	1183.3	0.916	5.952	67.697	19.904	4.976	0.163	0.353	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1373.66
31	0.7389	1163.1	1183.7	1180.4	0.901	5.807	68.136	19.898	4.744	0.153	0.326	0.018	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1373.64
Avg	0.7213	1148.0	1168.6	1165.3	0.833	5.160	70.880	18.695	3.991	0.133	0.275	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1372.60

# Source Daily Summary

March 2020

Number: 041

Pressure Base: 14.730

Contract Day: 1

Name: BISMARCK STN-GLEN ULLIN STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6738	1119.5	1139.3	1135.9	0.482	2.994	77.792	16.801	1.772	0.054	0.086	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1384.48	
2	0.6705	1113.9	1133.7	1130.2	0.573	2.879	78.650	15.930	1.783	0.062	0.100	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1381.00	
3	0.6667	1110.0	1129.6	1126.2	0.588	2.736	79.374	15.439	1.681	0.060	0.096	0.014	0.012	0.000	0.000	0.000	0.000	0.000	1380.02	
4	0.6603	1097.7	1117.2	1113.8	0.512	2.998	80.407	14.340	1.583	0.054	0.084	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1371.39	
5	0.6593	1097.2	1116.7	1113.3	0.489	2.972	80.514	14.350	1.524	0.051	0.078	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1371.79	
6	0.6800	1127.6	1147.6	1144.2	0.478	3.086	76.660	17.680	1.934	0.057	0.090	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1388.24	
7	0.6704	1113.0	1132.7	1129.0	0.523	3.009	78.491	16.070	1.747	0.054	0.086	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1379.88	
8	0.6759	1118.9	1138.8	1135.5	0.553	3.114	77.466	16.875	1.830	0.056	0.090	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1381.74	
9	0.6741	1117.2	1137.0	1133.6	0.676	2.862	78.112	16.276	1.890	0.062	0.101	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1381.37	
10	0.6742	1118.6	1138.4	1135.1	0.683	2.772	78.095	16.398	1.869	0.062	0.101	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1383.06	
11	0.6761	1121.3	1141.2	1137.8	0.618	2.884	77.662	16.732	1.931	0.059	0.095	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1384.48	
12	0.6763	1120.9	1140.7	1137.4	0.548	3.043	77.396	17.011	1.845	0.054	0.086	0.010	0.008	0.000	0.000	0.000	0.000	0.000	1383.68	
13	0.6697	1110.4	1130.1	1126.7	0.645	2.909	78.882	15.589	1.796	0.061	0.097	0.011	0.010	0.000	0.000	0.000	0.000	0.000	1377.46	
14	0.6620	1100.3	1119.8	1116.4	0.592	2.877	80.219	14.518	1.629	0.055	0.087	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1372.88	
15	0.6580	1094.8	1114.1	1110.7	0.563	2.884	80.938	13.899	1.552	0.055	0.085	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1370.06	
16	0.6601	1098.5	1118.0	1114.6	0.519	2.924	80.484	14.300	1.619	0.052	0.080	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1372.57	
17	0.6569	1092.8	1112.2	1108.7	0.519	2.970	81.063	13.755	1.536	0.053	0.082	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1368.75	
18	0.6621	1100.8	1120.3	1116.9	0.483	3.031	80.042	14.650	1.639	0.052	0.082	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1373.30	
19	0.6648	1103.7	1123.2	1119.9	0.560	2.989	79.648	14.952	1.682	0.057	0.090	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1374.13	
20	0.6668	1106.4	1126.0	1122.6	0.649	2.877	79.575	14.866	1.827	0.070	0.109	0.015	0.012	0.000	0.000	0.000	0.000	0.000	1375.38	
21	0.6670	1107.2	1126.8	1123.3	0.656	2.834	79.437	15.162	1.705	0.068	0.110	0.015	0.012	0.000	0.000	0.000	0.000	0.000	1376.16	
22	0.6660	1108.7	1128.4	1124.7	0.600	2.731	79.655	15.049	1.771	0.065	0.101	0.015	0.013	0.000	0.000	0.000	0.000	0.000	1379.08	
23	0.6721	1114.8	1134.5	1130.7	0.435	3.190	78.086	16.338	1.803	0.051	0.079	0.010	0.008	0.000	0.000	0.000	0.000	0.000	1380.34	
24	0.6821	1129.6	1149.6	1145.9	0.584	2.993	76.497	17.748	1.976	0.068	0.112	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1388.57	
25	0.6892	1139.5	1159.6	1156.3	0.574	3.081	75.047	19.076	2.022	0.068	0.114	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1393.45	
26	0.6960	1146.1	1166.4	1163.0	0.616	3.254	74.063	19.477	2.348	0.082	0.141	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1394.70	
27	0.6926	1139.9	1160.1	1156.3	0.612	3.319	74.484	19.233	2.125	0.076	0.132	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1390.58	
28	0.7015	1147.8	1168.1	1164.4	0.579	3.723	73.056	19.824	2.573	0.080	0.147	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1391.46	
29	0.7029	1153.2	1173.6	1169.5	0.507	3.635	72.457	20.811	2.369	0.073	0.134	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1396.56	
30	0.6914	1140.4	1160.6	1156.5	0.445	3.432	74.299	19.626	2.045	0.053	0.090	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1392.44	
31	0.6881	1139.3	1159.5	1155.7	0.308	3.393	74.421	20.061	1.712	0.038	0.062	0.003	0.002	0.000	0.000	0.000	0.000	0.000	1394.55	
Avg	0.6744	1118.0	1137.5	1134.0	0.554	3.045	77.838	16.543	1.842	0.060	0.098	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1381.73	

Zone 28

# Source Daily Summary

March 2020

Number: 271

Pressure Base: 14.730

Contract Day: 1

Name: DCKSN BRD-BLFD TSF-G.U. STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6726	1117.8	1137.6	1134.7	0.518	2.925	78.140	16.401	1.846	0.058	0.092	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1383.82	
2	0.6674	1111.2	1130.9	1127.9	0.588	2.737	79.213	15.545	1.736	0.061	0.097	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1380.92	
3	0.6609	1100.7	1120.2	1117.3	0.507	2.885	80.263	14.580	1.611	0.052	0.081	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1374.63	
4	0.6582	1096.3	1115.7	1112.8	0.480	2.937	80.675	14.248	1.516	0.049	0.075	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1371.98	
5	0.6785	1126.1	1146.1	1143.2	0.479	3.036	76.926	17.474	1.926	0.055	0.089	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1388.05	
6	0.6698	1112.9	1132.6	1129.7	0.510	2.979	78.571	16.022	1.765	0.053	0.084	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1380.55	
7	0.6730	1115.8	1135.6	1132.7	0.547	3.044	77.933	16.559	1.763	0.053	0.086	0.008	0.006	0.000	0.000	0.000	0.000	0.000	1380.97	
8	0.6740	1117.1	1136.9	1134.0	0.584	2.995	77.905	16.492	1.859	0.055	0.093	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1381.62	
9	0.6732	1117.9	1137.7	1134.8	0.663	2.753	78.253	16.255	1.899	0.058	0.100	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1383.37	
10	0.6738	1119.0	1138.8	1135.9	0.593	2.853	77.986	16.527	1.883	0.052	0.089	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1384.07	
11	0.6764	1122.5	1142.4	1139.5	0.523	2.986	77.368	17.082	1.886	0.053	0.086	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1385.80	
12	0.6716	1113.8	1133.5	1130.7	0.567	2.995	78.322	16.158	1.794	0.056	0.090	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1379.99	
13	0.6636	1102.5	1122.0	1119.2	0.620	2.856	79.946	14.705	1.703	0.057	0.092	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1374.10	
14	0.6584	1096.9	1116.3	1113.4	0.551	2.815	80.790	14.120	1.568	0.052	0.083	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1372.48	
15	0.6587	1097.7	1117.2	1114.3	0.490	2.885	80.700	14.150	1.627	0.049	0.079	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1373.21	
16	0.6574	1095.3	1114.7	1111.8	0.495	2.898	80.924	13.964	1.571	0.049	0.079	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1371.58	
17	0.6578	1094.8	1114.2	1111.3	0.493	2.977	80.800	14.026	1.552	0.050	0.080	0.012	0.009	0.000	0.000	0.000	0.000	0.000	1370.44	
18	0.6648	1105.0	1124.6	1121.7	0.500	2.994	79.554	15.083	1.715	0.052	0.083	0.011	0.008	0.000	0.000	0.000	0.000	0.000	1376.05	
19	0.6649	1104.1	1123.7	1120.7	0.598	2.915	79.706	14.864	1.740	0.059	0.095	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1374.72	
20	0.6662	1106.1	1125.7	1122.8	0.658	2.824	79.577	14.994	1.746	0.067	0.109	0.014	0.012	0.000	0.000	0.000	0.000	0.000	1375.87	
21	0.6652	1108.1	1127.7	1124.8	0.577	2.726	79.659	15.140	1.715	0.060	0.094	0.014	0.012	0.000	0.000	0.000	0.000	0.000	1379.42	
22	0.6793	1125.9	1145.9	1143.0	0.522	3.055	76.894	17.375	1.975	0.061	0.100	0.010	0.008	0.000	0.000	0.000	0.000	0.000	1387.01	
23	0.6830	1132.7	1152.8	1149.9	0.459	3.088	75.834	18.655	1.816	0.051	0.082	0.008	0.006	0.000	0.000	0.000	0.000	0.000	1391.62	
24	0.6884	1138.1	1158.3	1155.4	0.594	3.058	75.254	18.809	2.077	0.070	0.119	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1392.77	
25	0.6943	1143.9	1164.2	1161.3	0.636	3.196	74.364	19.249	2.314	0.081	0.141	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1393.91	
26	0.6928	1143.2	1163.4	1160.6	0.555	3.223	74.327	19.563	2.131	0.069	0.118	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1394.54	
27	0.6948	1147.9	1168.3	1165.4	0.448	3.284	73.672	20.364	2.065	0.059	0.099	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1398.34	
28	0.6880	1137.4	1157.5	1154.6	0.379	3.402	74.689	19.522	1.884	0.046	0.074	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1392.22	
29	0.6855	1136.6	1156.8	1153.9	0.289	3.344	74.798	19.858	1.620	0.034	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1393.92	
30	0.6884	1139.5	1159.7	1156.8	0.309	3.411	74.507	19.789	1.872	0.041	0.070	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1394.48	
31	0.6892	1137.4	1157.5	1154.6	0.400	3.482	74.520	19.528	1.939	0.047	0.081	0.003	0.001	0.000	0.000	0.000	0.000	0.000	1391.01	
Avg	0.6739	1118.0	1138.0	1135.1	0.520	3.018	77.809	16.681	1.810	0.055	0.090	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1383.01	

# Source Daily Summary

March 2020

Number: 051

Pressure Base: 14.730

Contract Day: 1

Name: CABIN CRK STN-BELFIELD TRSFR

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6392	1072.8	1091.8	1087.3	1.099	1.636	85.709	9.901	1.344	0.096	0.158	0.030	0.026	0.000	0.000	0.000	0.000	0.000	1361.73	
2	0.6375	1070.8	1089.7	1085.3	1.102	1.599	86.026	9.629	1.347	0.094	0.150	0.029	0.025	0.000	0.000	0.000	0.000	0.000	1360.95	
3	0.6373	1069.5	1088.4	1084.0	1.086	1.681	86.010	9.607	1.324	0.091	0.148	0.028	0.024	0.000	0.000	0.000	0.000	0.000	1359.53	
4	0.6367	1069.1	1088.0	1083.5	1.108	1.619	86.165	9.500	1.311	0.093	0.151	0.029	0.025	0.000	0.000	0.000	0.000	0.000	1359.60	
5	0.6375	1070.0	1089.0	1084.5	1.099	1.642	86.019	9.607	1.335	0.094	0.151	0.029	0.025	0.000	0.000	0.000	0.000	0.000	1360.10	
6	0.6248	1049.0	1067.6	1063.3	1.186	1.598	88.271	7.659	1.052	0.073	0.118	0.023	0.020	0.000	0.000	0.000	0.000	0.000	1346.92	
7	0.6285	1056.0	1074.7	1070.4	1.161	1.561	87.638	8.236	1.147	0.081	0.129	0.025	0.021	0.000	0.000	0.000	0.000	0.000	1351.82	
8	0.6286	1057.1	1075.8	1071.5	1.332	1.242	87.810	8.257	1.095	0.081	0.132	0.027	0.023	0.000	0.000	0.000	0.000	0.000	1353.10	
9	0.6281	1056.0	1074.7	1070.3	1.352	1.237	87.898	8.171	1.083	0.080	0.130	0.026	0.022	0.000	0.000	0.000	0.000	0.000	1352.18	
10	0.6319	1061.9	1080.7	1076.2	1.286	1.324	87.263	8.638	1.192	0.091	0.150	0.030	0.026	0.000	0.000	0.000	0.000	0.000	1355.72	
11	0.6321	1062.4	1081.2	1076.6	1.279	1.332	87.170	8.763	1.166	0.089	0.146	0.030	0.026	0.000	0.000	0.000	0.000	0.000	1355.98	
12	0.6311	1061.0	1079.8	1075.3	1.281	1.317	87.343	8.636	1.143	0.087	0.141	0.029	0.025	0.000	0.000	0.000	0.000	0.000	1355.34	
13	0.6310	1061.4	1080.2	1075.7	1.279	1.285	87.421	8.551	1.166	0.090	0.150	0.031	0.027	0.000	0.000	0.000	0.000	0.000	1355.97	
14	0.6325	1063.5	1082.4	1077.8	1.254	1.334	87.164	8.726	1.213	0.094	0.156	0.032	0.027	0.000	0.000	0.000	0.000	0.000	1357.04	
15	0.6317	1062.1	1080.9	1076.4	1.244	1.359	87.283	8.620	1.196	0.091	0.149	0.031	0.027	0.000	0.000	0.000	0.000	0.000	1356.08	
16	0.6326	1063.5	1082.4	1077.9	1.243	1.363	87.159	8.681	1.234	0.097	0.162	0.033	0.028	0.000	0.000	0.000	0.000	0.000	1356.92	
17	0.6350	1065.7	1084.6	1080.1	1.215	1.498	86.609	9.131	1.232	0.095	0.160	0.032	0.028	0.000	0.000	0.000	0.000	0.000	1357.16	
18	0.6336	1064.1	1082.9	1078.4	1.260	1.393	86.926	8.913	1.197	0.094	0.157	0.032	0.028	0.000	0.000	0.000	0.000	0.000	1356.60	
19	0.6365	1068.3	1087.3	1082.7	1.102	1.652	86.218	9.422	1.297	0.096	0.155	0.031	0.026	0.000	0.000	0.000	0.000	0.000	1358.85	
20	0.6369	1068.9	1087.9	1083.2	1.115	1.628	86.193	9.451	1.297	0.097	0.158	0.032	0.027	0.000	0.000	0.000	0.000	0.000	1359.18	
21	0.6407	1073.6	1092.6	1088.0	1.023	1.847	85.350	10.081	1.400	0.094	0.150	0.030	0.025	0.000	0.000	0.000	0.000	0.000	1361.00	
22	0.6434	1077.4	1096.5	1091.9	1.147	1.674	85.025	10.399	1.438	0.097	0.162	0.031	0.027	0.000	0.000	0.000	0.000	0.000	1363.07	
23	0.6440	1077.4	1096.5	1092.2	1.090	1.819	84.808	10.523	1.455	0.095	0.156	0.029	0.025	0.000	0.000	0.000	0.000	0.000	1362.44	
24	0.6951	1142.2	1162.5	1159.1	0.740	3.208	74.729	18.419	2.622	0.095	0.166	0.011	0.011	0.000	0.000	0.000	0.000	0.000	1391.02	
25	0.6977	1146.4	1166.7	1163.2	0.898	2.963	74.468	18.729	2.614	0.109	0.193	0.014	0.013	0.000	0.000	0.000	0.000	0.000	1393.46	
26	0.7007	1150.5	1170.9	1167.3	0.744	3.225	73.615	19.464	2.676	0.093	0.163	0.010	0.010	0.000	0.000	0.000	0.000	0.000	1395.53	
27	0.6845	1128.2	1148.2	1144.6	0.655	3.199	76.079	17.776	2.109	0.062	0.107	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1384.59	
28	0.6862	1130.7	1150.8	1147.2	0.584	3.314	75.715	18.013	2.199	0.061	0.104	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1385.97	
29	0.6884	1133.3	1153.4	1149.8	0.674	3.229	75.448	18.211	2.238	0.069	0.118	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1386.88	
30	0.6871	1129.9	1149.9	1146.3	0.639	3.373	75.571	18.038	2.197	0.063	0.108	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1383.95	
31	0.6879	1132.1	1152.2	1148.6	0.645	3.299	75.490	18.132	2.248	0.063	0.110	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1385.91	
Avg	0.6490	1084.0	1102.9	1098.7	1.062	1.950	83.697	11.480	1.534	0.087	0.145	0.024	0.021	0.000	0.000	0.000	0.000	0.000	1365.31	

Zone 32

# Source Daily Summary

March 2020

Number: 111

Pressure Base: 14.730

Contract Day: 1

Name: LITTLE KNIFE PLANT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6859	1150.9	1171.3	1167.1	0.000	2.960	73.303	23.140	0.581	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.03	-26.90
2	0.6865	1152.4	1172.8	1168.4	0.000	2.922	73.227	23.215	0.620	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.30	-26.37
3	0.6870	1152.6	1173.0	1168.3	0.000	2.964	73.124	23.264	0.632	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.91	-26.15
4	0.6870	1152.0	1172.4	1168.1	0.000	2.994	73.111	23.261	0.619	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.30	-26.28
5	0.6878	1153.1	1173.5	1168.7	0.000	3.006	73.049	23.234	0.688	0.009	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.66	-25.58
6	0.6882	1153.4	1173.8	1169.2	0.000	3.028	72.905	23.377	0.674	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.69	-25.51
7	0.6877	1153.5	1173.9	1169.6	0.000	2.972	73.012	23.336	0.665	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.35	-25.69
8	0.6867	1151.7	1172.1	1167.9	0.000	2.982	73.159	23.247	0.597	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.24	-26.51
9	0.6873	1152.9	1173.3	1168.8	0.000	2.977	73.064	23.305	0.639	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.94	-25.99
10	0.6874	1153.4	1173.8	1169.1	0.000	2.952	73.059	23.330	0.644	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.49	-25.88
11	0.6878	1153.3	1173.7	1169.2	0.000	2.998	72.982	23.345	0.659	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.92	-25.71
12	0.6868	1152.2	1172.6	1168.0	0.000	2.969	73.145	23.258	0.613	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.64	-26.34
13	0.6872	1152.8	1173.2	1168.7	0.000	2.972	73.059	23.335	0.619	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.96	-26.09
14	0.6868	1151.6	1172.0	1167.7	0.000	3.002	73.146	23.227	0.610	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1410.95	-26.43
15	0.6868	1152.2	1172.6	1168.1	0.000	2.968	73.150	23.238	0.628	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.70	-26.25
16	0.6868	1151.8	1172.1	1167.7	0.000	2.997	73.133	23.241	0.613	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.11	-26.37
17	0.6868	1152.2	1172.6	1167.7	0.000	2.974	73.161	23.213	0.635	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.56	-26.24
18	0.6865	1152.1	1172.5	1168.1	0.000	2.944	73.216	23.209	0.614	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.87	-26.43
19	0.6867	1152.0	1172.4	1167.7	0.000	2.976	73.153	23.246	0.609	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.45	-26.38
20	0.6872	1152.6	1173.1	1168.4	0.000	2.975	73.077	23.317	0.616	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.84	-26.14
21	0.6878	1153.0	1173.5	1168.8	0.000	3.008	72.966	23.374	0.636	0.006	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.69	-25.83
22	0.6883	1153.4	1173.9	1169.3	0.000	3.033	72.864	23.441	0.645	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.64	-25.58
23	0.6887	1154.0	1174.4	1169.7	0.000	3.043	72.791	23.485	0.663	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.82	-25.31
24	0.6882	1153.2	1173.6	1169.4	0.000	3.039	72.868	23.450	0.626	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.43	-25.72
25	0.6889	1154.2	1174.7	1170.3	0.000	3.042	72.732	23.571	0.638	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.99	-25.32
26	0.6870	1152.8	1173.2	1168.7	0.000	2.949	73.120	23.293	0.622	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.21	-26.14
27	0.6874	1153.6	1174.0	1169.6	0.000	2.943	73.048	23.359	0.634	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.69	-25.88
28	0.6878	1153.4	1173.9	1169.4	0.000	2.983	72.973	23.387	0.640	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.20	-25.75
29	0.6879	1153.8	1174.2	1169.8	0.000	2.972	72.964	23.394	0.653	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.51	-25.62
30	0.6882	1154.3	1174.7	1170.5	0.000	2.973	72.905	23.451	0.655	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.77	-25.46
31	0.6879	1153.3	1173.7	1169.5	0.000	3.006	72.926	23.429	0.622	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.84	-25.80
Avg	0.6874	1153.0	1173.2	1168.8	0.000	2.985	73.045	23.322	0.633	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.83	-25.99

# Source Daily Summary

March 2020

Number: 351

Pressure Base: 14.730

Contract Day: 1

Name: BADLANDS PLANT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6417	1060.8	1079.6	1076.4	0.392	3.684	83.638	10.852	1.293	0.049	0.074	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1344.38	
2	0.6351	1050.1	1068.6	1065.7	0.324	3.822	84.698	9.880	1.157	0.042	0.062	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1337.72	
3	0.6356	1050.9	1069.5	1066.5	0.327	3.820	84.602	9.964	1.169	0.043	0.063	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1338.21	
4	0.6340	1051.7	1070.3	1067.2	0.417	3.473	85.159	9.631	1.184	0.048	0.071	0.010	0.008	0.000	0.000	0.000	0.000	0.000	1340.91	
5	0.6231	1033.5	1051.8	1048.8	0.343	3.669	86.982	7.954	0.941	0.040	0.057	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1329.26	
6	0.6330	1046.9	1065.4	1062.3	0.409	3.688	85.219	9.441	1.118	0.044	0.065	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1335.88	
7	0.6171	1027.7	1045.9	1042.7	0.438	3.320	88.289	6.981	0.856	0.041	0.059	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1327.94	
8	0.5720	963.7	980.8	978.2	0.112	3.471	96.082	0.310	0.016	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1293.77	
9	0.5720	963.7	980.8	978.2	0.113	3.468	96.085	0.310	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1293.82	
10	0.5719	963.7	980.8	978.2	0.113	3.465	96.089	0.310	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1293.87	
11	0.5719	963.7	980.8	978.2	0.113	3.464	96.089	0.311	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1293.89	
12	0.5720	963.5	980.5	978.0	0.112	3.488	96.065	0.310	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1293.46	
13	0.5720	963.6	980.6	978.1	0.112	3.480	96.075	0.309	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1293.60	
14	0.5719	963.8	980.8	978.3	0.114	3.459	96.093	0.311	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1293.96	
15	0.5720	963.7	980.8	978.3	0.113	3.466	96.086	0.311	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1293.84	
16	0.5724	962.4	979.4	976.9	0.109	3.596	95.968	0.305	0.014	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1291.56	
17	0.5767	969.1	986.2	983.6	0.129	3.564	95.213	0.978	0.099	0.011	0.005	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1295.60	
18	0.6463	1054.8	1073.5	1070.3	0.477	4.354	83.088	10.324	1.535	0.066	0.126	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1332.00	
19	0.6424	1051.0	1069.7	1066.7	0.366	4.389	83.476	10.228	1.374	0.054	0.094	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1331.31	
20	0.6108	1012.5	1030.4	1027.6	0.252	3.935	89.132	5.838	0.751	0.033	0.049	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1315.22	
21	0.5720	963.5	980.6	978.0	0.113	3.486	96.068	0.309	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1293.46	
22	0.5723	962.7	979.7	977.2	0.111	3.568	95.993	0.307	0.014	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1292.04	
23	0.6322	1045.9	1064.4	1061.4	0.421	3.657	85.576	8.932	1.269	0.051	0.080	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1335.06	
24	0.6536	1077.0	1096.0	1092.9	0.536	3.600	81.894	12.038	1.729	0.069	0.115	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1352.35	
25	0.6320	1044.0	1062.5	1059.6	0.422	3.751	85.546	8.911	1.224	0.052	0.080	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1333.25	
26	0.6434	1062.7	1081.5	1078.5	0.493	3.572	83.640	10.646	1.469	0.063	0.101	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1344.92	
27	0.5720	963.8	980.9	978.2	0.114	3.459	96.091	0.311	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1293.94	
28	0.5719	963.8	980.8	978.2	0.114	3.459	96.092	0.311	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1293.93	
29	0.6018	1003.1	1020.9	1018.1	0.299	3.585	90.912	4.500	0.618	0.033	0.046	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1312.80	
30	0.6427	1066.4	1085.3	1082.1	0.729	2.926	84.313	10.252	1.529	0.084	0.143	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1350.42	
31	0.5760	969.6	986.8	984.1	0.150	3.429	95.421	0.876	0.102	0.013	0.009	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1297.17	
Avg	0.6037	1007.0	1024.4	1021.6	0.271	3.599	90.506	4.911	0.633	0.030	0.042	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1315.15	

# Source Daily Summary

March 2020

Number: 471

Pressure Base: 14.730

Contract Day:

Name: SPRING CREEK I - SAX VALVE I

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6828	1129.3	1149.3	1146.4	1.065	2.369	74.768	21.488	0.308	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.67	-31.51
2	0.6826	1128.7	1148.7	1145.8	1.061	2.391	74.758	21.533	0.255	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.15	-31.88
3	0.6849	1130.9	1150.9	1148.1	1.074	2.452	74.322	21.865	0.284	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.56	-30.69
4	0.6831	1129.5	1149.5	1146.6	1.070	2.378	74.709	21.535	0.307	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.60	-31.41
5	0.6843	1131.4	1151.5	1148.6	1.068	2.374	74.509	21.698	0.351	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.79	-30.59
6	0.6850	1132.4	1152.5	1149.5	1.067	2.379	74.456	21.687	0.395	0.004	0.010	0.001	0.002	0.000	0.000	0.000	0.000	0.000	1389.28	-29.79
7	0.6839	1130.8	1150.8	1147.9	1.070	2.374	74.565	21.667	0.324	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.38	-30.91
8	0.6839	1130.8	1150.9	1148.0	1.069	2.370	74.558	21.688	0.314	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.47	-30.93
9	0.6833	1130.2	1150.2	1147.3	1.065	2.362	74.646	21.631	0.296	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.27	-31.27
10	0.6836	1130.5	1150.5	1147.6	1.066	2.364	74.612	21.654	0.305	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.41	-31.13
11	0.6837	1129.8	1149.8	1146.9	1.065	2.426	74.599	21.575	0.329	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.32	-31.02
12	0.6830	1129.4	1149.4	1146.5	1.069	2.375	74.701	21.573	0.282	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.62	-31.54
13	0.6841	1130.3	1150.3	1147.5	1.068	2.420	74.467	21.778	0.268	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.67	-31.14
14	0.6842	1130.7	1150.7	1147.9	1.065	2.417	74.459	21.761	0.294	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.96	-30.88
15	0.6849	1131.0	1151.0	1148.1	1.072	2.460	74.292	21.902	0.271	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.53	-30.70
16	0.6841	1130.1	1150.1	1147.2	1.067	2.434	74.424	21.844	0.230	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.40	-31.30
17	0.6841	1129.7	1149.7	1146.8	1.071	2.453	74.428	21.814	0.233	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.90	-31.35
18	0.6843	1130.2	1150.2	1147.3	1.072	2.448	74.378	21.869	0.233	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.21	-31.19
19	0.6839	1129.8	1149.8	1146.9	1.072	2.431	74.493	21.743	0.260	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.19	-31.26
20	0.6837	1129.8	1149.8	1146.9	1.071	2.416	74.514	21.761	0.238	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.34	-31.43
21	0.6837	1129.4	1149.4	1146.5	1.072	2.434	74.503	21.763	0.228	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.94	-31.52
22	0.6841	1130.1	1150.2	1147.3	1.075	2.423	74.425	21.850	0.227	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.41	-31.29
23	0.6836	1129.3	1149.3	1146.4	1.069	2.436	74.642	21.523	0.318	0.004	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.86	-31.10
24	0.6836	1128.5	1148.5	1145.6	1.072	2.477	74.674	21.432	0.321	0.006	0.014	0.001	0.002	0.000	0.000	0.000	0.000	0.000	1385.91	-30.97
25	0.6839	1129.0	1149.0	1146.0	1.075	2.476	74.587	21.542	0.291	0.007	0.017	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1386.14	-30.81
26	0.6866	1133.9	1154.0	1151.0	1.064	2.450	74.008	22.152	0.311	0.005	0.009	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1389.42	-29.44
27	0.6870	1134.5	1154.6	1151.7	1.069	2.438	73.950	22.202	0.333	0.003	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1389.82	-29.29
28	0.6875	1135.8	1155.9	1153.0	1.063	2.412	73.955	22.141	0.406	0.007	0.014	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1390.95	-28.42
29	0.6889	1137.9	1158.1	1155.1	1.062	2.420	73.811	22.119	0.569	0.006	0.011	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1392.05	-27.20
30	0.6926	1143.7	1164.0	1161.0	1.056	2.418	73.507	21.981	1.020	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1395.43	-23.72
31	0.6915	1141.9	1162.1	1159.2	1.060	2.422	73.592	22.017	0.894	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1394.33	-24.77
Avg	0.6848	1132.0	1151.6	1148.7	1.068	2.416	74.397	21.767	0.345	0.002	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.42	-30.34

March-20

ZONE 550

**MANDAN BORDER**

			NBPL - St Anthony			WBI - Mandan Border			Weighted	
Start Date	End Date	MCF	DK	BTU	MCF	DK	BTU Zone 28	AVG BTU		
3/1/2020	3/2/2020	1851	2032	1.0979	3510	4002	1.1393	1.125	3/1/2020	
3/2/2020	3/3/2020	1850	2029	1.0965	2540	2881	1.1337	1.118	3/2/2020	
3/3/2020	3/4/2020	1857	2047	1.1025	2120	2392	1.1296	1.117	3/3/2020	
3/4/2020	3/5/2020	1870	2054	1.0985	2079	2318	1.1172	1.108	3/4/2020	
3/5/2020	3/6/2020	2758	3033	1.0995	2628	2937	1.1167	1.108	3/5/2020	
3/6/2020	3/7/2020	1835	2016	1.0987	1883	2158	1.1476	1.123	3/6/2020	
3/7/2020	3/8/2020	1806	1986	1.0997	925	1043	1.1327	1.111	3/7/2020	
3/8/2020	3/9/2020	1882	2074	1.1019	3291	3747	1.1388	1.125	3/8/2020	
3/9/2020	3/10/2020	1857	2048	1.1025	2850	3241	1.1370	1.123	3/9/2020	
3/10/2020	3/11/2020	1850	2031	1.0973	2297	2616	1.1384	1.120	3/10/2020	
3/11/2020	3/12/2020	1861	2039	1.0956	1616	1842	1.1412	1.117	3/11/2020	
3/12/2020	3/13/2020	1843	2018	1.0947	3020	3443	1.1407	1.123	3/12/2020	
3/13/2020	3/14/2020	1853	2035	1.0983	3249	3672	1.1301	1.119	3/13/2020	
3/14/2020	3/15/2020	1857	2049	1.1033	3766	4219	1.1198	1.114	3/14/2020	
3/15/2020	3/16/2020	1867	2061	1.1041	3219	3590	1.1141	1.110	3/15/2020	
3/16/2020	3/17/2020	1861	2054	1.1041	3976	4445	1.1180	1.114	3/16/2020	
3/17/2020	3/18/2020	1844	2033	1.1025	2193	2439	1.1122	1.108	3/17/2020	
3/18/2020	3/19/2020	1842	2022	1.0976	3052	3424	1.1203	1.112	3/18/2020	
3/19/2020	3/20/2020	1839	2027	1.1022	4665	5241	1.1232	1.117	3/19/2020	
3/20/2020	3/21/2020	1844	2033	1.1022	3512	3954	1.1260	1.118	3/20/2020	
3/21/2020	3/22/2020	1855	2043	1.1015	2663	3001	1.1268	1.116	3/21/2020	
3/22/2020	3/23/2020	1847	2034	1.1011	1855	2094	1.1284	1.115	3/22/2020	
3/23/2020	3/24/2020	1836	2020	1.1002	1005	1143	1.1345	1.112	3/23/2020	
3/24/2020	3/25/2020	1837	2018	1.0986	1243	1425	1.1496	1.119	3/24/2020	
3/25/2020	3/26/2020	1841	2026	1.1008	2388	2771	1.1596	1.134	3/25/2020	
3/26/2020	3/27/2020	1863	2065	1.1085	1505	1756	1.1664	1.134	3/26/2020	
3/27/2020	3/28/2020	1816	2014	1.1090	800	931	1.1601	1.125	3/27/2020	
3/28/2020	3/29/2020	1808	2008	1.1107	747	872	1.1681	1.127	3/28/2020	
3/29/2020	3/30/2020	1745	1943	1.1135	613	721	1.1736	1.129	3/29/2020	
3/30/2020	3/31/2020	1740	1935	1.1119	364	421	1.1606	1.120	3/30/2020	
3/31/2020	4/1/2020	1693	1888	1.1155	568	661	1.1595	1.127	3/31/2020	
		57,808	63,715	1.1023	70,142	79,400	1.1375	1.1190		



# Alliance Pipeline

DAILY ANALYSIS --- USA  
 ND07MD1 --- Hankinson Sales  
 March 2020

DAY	Heating Value (BTU/ft3)	Relative Density	C1 Mol%	C2 Mol%	C3 Mol%	IC4 Mol%	NC4 Mol%	IC5 Mol%	NC5 Mol%	C6+ Mol%	N2 Mol%	CO2 Mol%	Hel Mol%
1	1,164.321	0.6686	83.4377	9.8241	4.0195	0.3784	0.7304	0.0507	0.0355	0.0176	1.1019	0.3946	0.0096
2	1,159.805	0.6658	83.7920	9.6333	3.8923	0.3663	0.7045	0.0472	0.0331	0.0179	1.1118	0.3919	0.0097
3	1,159.307	0.6653	83.7121	9.8593	3.8297	0.3531	0.6531	0.0479	0.0332	0.0171	1.0877	0.3969	0.0098
4	1,155.982	0.6621	84.1847	9.6162	3.7379	0.3424	0.6251	0.0445	0.0318	0.0174	1.0065	0.3839	0.0095
5	1,159.177	0.6653	83.7661	9.7237	3.8995	0.3514	0.6557	0.0454	0.0324	0.0186	1.1045	0.3931	0.0094
6	1,163.036	0.6679	83.3741	9.9832	3.9909	0.3613	0.6732	0.0462	0.0320	0.0181	1.1172	0.3942	0.0097
7	1,161.191	0.6670	83.5403	9.8513	3.9429	0.3624	0.6727	0.0473	0.0332	0.0165	1.1155	0.4087	0.0093
8	1,160.672	0.6664	83.5927	9.8878	3.8917	0.3609	0.6643	0.0454	0.0333	0.0164	1.0873	0.4115	0.0087
9	1,161.466	0.6669	83.5728	9.8586	3.9030	0.3691	0.6859	0.0492	0.0354	0.0166	1.0853	0.4152	0.0089
10	1,166.690	0.6703	83.3747	9.7797	4.0014	0.4156	0.7778	0.0680	0.0496	0.0218	1.0913	0.4113	0.0088
11	1,165.355	0.6692	83.5498	9.6752	3.9549	0.4134	0.7659	0.0705	0.0532	0.0250	1.0718	0.4113	0.0091
12	1,164.001	0.6679	83.6577	9.7096	3.9354	0.4020	0.7049	0.0672	0.0523	0.0246	1.0271	0.4101	0.0090
13	1,167.938	0.6716	83.2253	9.7558	4.1265	0.4173	0.7701	0.0671	0.0525	0.0246	1.1499	0.4024	0.0085
14	1,171.516	0.6740	82.9903	9.8174	4.2158	0.4309	0.8174	0.0768	0.0572	0.0247	1.1536	0.4075	0.0084
15	1,166.558	0.6705	83.3392	9.7514	4.0366	0.4100	0.7707	0.0720	0.0526	0.0212	1.1331	0.4046	0.0085
16	1,165.795	0.6697	83.4961	9.6352	4.0374	0.4099	0.7641	0.0710	0.0513	0.0216	1.1047	0.4004	0.0084
17	1,165.974	0.6692	83.5011	9.7796	3.9661	0.4094	0.7505	0.0673	0.0508	0.0214	1.0422	0.4025	0.0091
18	1,166.062	0.6694	83.4743	9.7528	4.0089	0.4082	0.7486	0.0666	0.0482	0.0211	1.0504	0.4117	0.0091
19	1,163.651	0.6679	83.6712	9.6457	3.9435	0.4013	0.7320	0.0639	0.0483	0.0220	1.0474	0.4153	0.0094
20	1,165.851	0.6698	83.4942	9.6421	4.0340	0.4108	0.7701	0.0678	0.0491	0.0221	1.0776	0.4233	0.0089
21	1,162.079	0.6676	83.7479	9.4635	3.9823	0.3943	0.7371	0.0639	0.0483	0.0216	1.1263	0.4060	0.0088
22	1,162.546	0.6676	83.6784	9.6124	3.9650	0.3902	0.7149	0.0608	0.0468	0.0217	1.0982	0.4026	0.0089
23	1,170.149	0.6723	83.0630	9.9453	4.2159	0.4044	0.7407	0.0649	0.0480	0.0218	1.0874	0.3996	0.0090
24	1,166.687	0.6694	83.4939	9.7613	4.0202	0.4061	0.7450	0.0680	0.0499	0.0222	1.0138	0.4111	0.0086
25	1,163.797	0.6678	83.7136	9.6356	3.9114	0.3987	0.7444	0.0695	0.0509	0.0231	1.0269	0.4171	0.0087
26	1,163.661	0.6684	83.6762	9.5183	3.9822	0.4036	0.7605	0.0678	0.0491	0.0230	1.1004	0.4104	0.0086
27	1,161.565	0.6657	84.0394	9.4592	3.8525	0.3959	0.7240	0.0665	0.0503	0.0234	0.9708	0.4089	0.0090
28	1,166.183	0.6694	83.5686	9.6219	4.0169	0.4141	0.7690	0.0695	0.0522	0.0243	1.0481	0.4065	0.0089
29	1,166.796	0.6709	83.3121	9.7372	4.0661	0.4132	0.7684	0.0687	0.0523	0.0241	1.1286	0.4205	0.0090
30	1,172.042	0.6746	82.8594	9.9665	4.1936	0.4324	0.8147	0.0745	0.0554	0.0239	1.1337	0.4371	0.0088
31	1,168.510	0.6713	83.3250	9.7773	4.0461	0.4241	0.7844	0.0742	0.0571	0.0255	1.0538	0.4239	0.0085
<b>Volume</b>	<b>1,164.445</b>	<b>0.6687</b>	<b>83.5226</b>	<b>9.7320</b>	<b>3.9879</b>	<b>0.3949</b>	<b>0.7336</b>	<b>0.0621</b>	<b>0.0458</b>	<b>0.0213</b>	<b>1.0832</b>	<b>0.4075</b>	<b>0.0090</b>
<b>Weight Avg Energy</b>	<b>1,164.456</b>	<b>0.6687</b>	<b>83.5220</b>	<b>9.7320</b>	<b>3.9882</b>	<b>0.3950</b>	<b>0.7337</b>	<b>0.0622</b>	<b>0.0459</b>	<b>0.0213</b>	<b>1.0833</b>	<b>0.4075</b>	<b>0.0090</b>



# Alliance Pipeline

DAILY ANALYSIS --- USA  
 ND14MD1 --- Milnor Sales  
 March 2020

DAY	Heating Value (BTU/ft3)	Relative Density	C1 Mol%	C2 Mol%	C3 Mol%	IC4 Mol%	NC4 Mol%	IC5 Mol%	NC5 Mol%	C6+ Mol%	N2 Mol%	CO2 Mol%	Hel Mol%
1	1,163.990	0.6684	83.4890	9.7772	4.0207	0.3781	0.7314	0.0500	0.0349	0.0173	1.0996	0.3922	0.0096
2	1,158.109	0.6647	83.8885	9.6395	3.8119	0.3613	0.6873	0.0465	0.0331	0.0182	1.1125	0.3914	0.0097
3	1,160.352	0.6659	83.6600	9.8664	3.8787	0.3546	0.6581	0.0479	0.0330	0.0171	1.0796	0.3949	0.0098
4	1,155.958	0.6621	84.1896	9.5978	3.7461	0.3431	0.6264	0.0442	0.0316	0.0175	1.0115	0.3826	0.0096
5	1,160.058	0.6660	83.6778	9.7728	3.9277	0.3538	0.6589	0.0455	0.0324	0.0186	1.1100	0.3930	0.0095
6	1,163.277	0.6680	83.3603	10.0052	3.9889	0.3617	0.6735	0.0459	0.0318	0.0187	1.1128	0.3915	0.0096
7	1,160.775	0.6669	83.5522	9.8507	3.9287	0.3611	0.6698	0.0469	0.0332	0.0163	1.1163	0.4156	0.0092
8	1,160.952	0.6665	83.5769	9.9104	3.8884	0.3614	0.6667	0.0457	0.0334	0.0166	1.0843	0.4074	0.0087
9	1,161.658	0.6671	83.5767	9.8373	3.9027	0.3730	0.6941	0.0510	0.0367	0.0169	1.0859	0.4167	0.0089
10	1,166.405	0.6701	83.4125	9.7582	3.9892	0.4164	0.7763	0.0685	0.0501	0.0220	1.0887	0.4093	0.0088
11	1,164.847	0.6690	83.5651	9.6669	3.9566	0.4092	0.7544	0.0697	0.0529	0.0250	1.0812	0.4099	0.0091
12	1,162.625	0.6672	83.7439	9.6527	3.9035	0.3972	0.6981	0.0668	0.0517	0.0247	1.0446	0.4078	0.0091
13	1,168.432	0.6721	83.1787	9.7614	4.1427	0.4207	0.7803	0.0671	0.0527	0.0246	1.1612	0.4022	0.0085
14	1,171.033	0.6737	83.0316	9.7974	4.2021	0.4292	0.8156	0.0764	0.0560	0.0243	1.1513	0.4075	0.0085
15	1,166.390	0.6704	83.3626	9.7361	4.0379	0.4084	0.7676	0.0718	0.0525	0.0213	1.1299	0.4034	0.0085
16	1,165.705	0.6696	83.5261	9.6150	4.0360	0.4105	0.7639	0.0708	0.0511	0.0216	1.0958	0.4006	0.0085
17	1,165.597	0.6690	83.5264	9.7698	3.9489	0.4093	0.7498	0.0678	0.0506	0.0213	1.0427	0.4043	0.0091
18	1,165.778	0.6693	83.4949	9.7477	3.9978	0.4072	0.7470	0.0659	0.0480	0.0213	1.0496	0.4115	0.0093
19	1,163.669	0.6680	83.6878	9.6222	3.9490	0.4019	0.7353	0.0640	0.0483	0.0219	1.0459	0.4143	0.0093
20	1,166.081	0.6702	83.4464	9.6512	4.0495	0.4113	0.7740	0.0683	0.0491	0.0220	1.0951	0.4241	0.0089
21	1,161.590	0.6674	83.7834	9.4416	3.9766	0.3923	0.7317	0.0628	0.0479	0.0215	1.1294	0.4041	0.0087
22	1,165.188	0.6689	83.4900	9.7662	4.0204	0.3945	0.7193	0.0623	0.0476	0.0222	1.0725	0.3960	0.0089
23	1,170.294	0.6726	83.0228	9.9613	4.2299	0.4040	0.7401	0.0644	0.0478	0.0213	1.0937	0.4058	0.0090
24	1,165.466	0.6687	83.6097	9.7045	3.9740	0.4038	0.7417	0.0676	0.0498	0.0220	1.0061	0.4120	0.0087
25	1,163.053	0.6674	83.7925	9.5820	3.8961	0.3972	0.7406	0.0691	0.0507	0.0232	1.0219	0.4178	0.0088
26	1,163.446	0.6681	83.7268	9.5024	3.9732	0.4030	0.7560	0.0668	0.0488	0.0231	1.0835	0.4079	0.0085
27	1,161.485	0.6655	84.0986	9.4024	3.8613	0.3976	0.7261	0.0664	0.0502	0.0233	0.9570	0.4082	0.0089
28	1,166.200	0.6697	83.5227	9.6461	4.0283	0.4117	0.7663	0.0690	0.0518	0.0236	1.0663	0.4053	0.0089
29	1,167.787	0.6717	83.2066	9.7966	4.0883	0.4169	0.7753	0.0696	0.0530	0.0246	1.1359	0.4241	0.0091
30	1,172.077	0.6747	82.8593	9.9676	4.1924	0.4337	0.8155	0.0742	0.0554	0.0236	1.1308	0.4384	0.0089
31	1,167.449	0.6706	83.3964	9.7618	4.0106	0.4194	0.7739	0.0727	0.0556	0.0258	1.0501	0.4251	0.0085
<b>Volume</b>	<b>1,164.391</b>	<b>0.6687</b>	<b>83.5309</b>	<b>9.7322</b>	<b>3.9857</b>	<b>0.3946</b>	<b>0.7314</b>	<b>0.0620</b>	<b>0.0458</b>	<b>0.0213</b>	<b>1.0803</b>	<b>0.4068</b>	<b>0.0090</b>
<b>Weight Avg Energy</b>	<b>1,164.400</b>	<b>0.6687</b>	<b>83.5303</b>	<b>9.7323</b>	<b>3.9860</b>	<b>0.3947</b>	<b>0.7315</b>	<b>0.0621</b>	<b>0.0458</b>	<b>0.0213</b>	<b>1.0802</b>	<b>0.4068</b>	<b>0.0090</b>

March-20

ZONE 610

Watford City

Watford City West Border

Watford City East Border

Weighted

Start Date	End Date	BTU			BTU			AVG BTU	
		MCF	DK	Zone 25	MCF	DK	Zone 43		
3/1/2020	3/2/2020	434	521	1.2017	849	975	1.1493	1.167	3/1/2020
3/2/2020	3/3/2020	336	404	1.2017	674	774	1.1487	1.166	3/2/2020
3/3/2020	3/4/2020	289	347	1.2017	591	680	1.1509	1.168	3/3/2020
3/4/2020	3/5/2020	329	395	1.2017	632	727	1.1495	1.167	3/4/2020
3/5/2020	3/6/2020	291	350	1.2017	527	607	1.1515	1.169	3/5/2020
3/6/2020	3/7/2020	201	241	1.2017	352	405	1.1525	1.170	3/6/2020
3/7/2020	3/8/2020	179	215	1.2017	333	383	1.1508	1.169	3/7/2020
3/8/2020	3/9/2020	411	494	1.2017	828	953	1.1509	1.168	3/8/2020
3/9/2020	3/10/2020	352	423	1.2017	709	816	1.1502	1.167	3/9/2020
3/10/2020	3/11/2020	285	342	1.2017	621	715	1.1505	1.167	3/10/2020
3/11/2020	3/12/2020	276	332	1.2017	537	618	1.1498	1.167	3/11/2020
3/12/2020	3/13/2020	401	481	1.2017	768	882	1.1494	1.167	3/12/2020
3/13/2020	3/14/2020	435	522	1.2017	808	930	1.1503	1.168	3/13/2020
3/14/2020	3/15/2020	463	557	1.2017	867	998	1.1507	1.168	3/14/2020
3/15/2020	3/16/2020	398	478	1.2017	759	873	1.1510	1.168	3/15/2020
3/16/2020	3/17/2020	462	555	1.2017	880	1012	1.1501	1.168	3/16/2020
3/17/2020	3/18/2020	330	397	1.2017	639	735	1.1497	1.167	3/17/2020
3/18/2020	3/19/2020	429	515	1.2017	818	940	1.1502	1.168	3/18/2020
3/19/2020	3/20/2020	473	569	1.2017	912	1049	1.1498	1.168	3/19/2020
3/20/2020	3/21/2020	423	508	1.2017	817	940	1.1498	1.168	3/20/2020
3/21/2020	3/22/2020	332	398	1.2017	603	693	1.1494	1.168	3/21/2020
3/22/2020	3/23/2020	305	366	1.2017	546	628	1.1502	1.169	3/22/2020
3/23/2020	3/24/2020	215	258	1.2017	356	410	1.1493	1.169	3/23/2020
3/24/2020	3/25/2020	268	322	1.2017	476	546	1.1485	1.168	3/24/2020
3/25/2020	3/26/2020	319	383	1.2017	627	720	1.1490	1.167	3/25/2020
3/26/2020	3/27/2020	246	296	1.2017	441	508	1.1540	1.171	3/26/2020
3/27/2020	3/28/2020	198	238	1.2017	336	388	1.1546	1.172	3/27/2020
3/28/2020	3/29/2020	197	237	1.2017	327	378	1.1559	1.173	3/28/2020
3/29/2020	3/30/2020	152	182	1.2017	258	299	1.1581	1.174	3/29/2020
3/30/2020	3/31/2020	126	151	1.2017	210	244	1.1640	1.178	3/30/2020
3/31/2020	4/1/2020	236	284	1.2017	476	553	1.1621	1.175	3/31/2020
		9,791	11,761	1.2017	18,577	21,379	1.1516	1.1690	

ROW ID	LOCATION DESCRIPTION	GROSS HEATING VALUE (BTU/CF)	SPECIFIC GRAVITY	WOBBE (calc)	CRICONDENTHERM (deg F)	NITROGEN (mole percent)	CARBON DIOXIDE (mole percent)	METHANE (mole percent)	ETHANE (mole percent)	PROPANE (mole percent)	NORMAL BUTANE (mole percent)	ISO BUTANE (mole percent)	PENTANE (mole percent)	ISO PENTANE (mole percent)	NEO PENTANE (mole percent)	HEXANES PLUS (mole percent)	HYDROGEN (mole percent)	HELIUM (mole percent)	PRODUCTION DATE	POSTING DATE	Changestamp	NOTES
11587	GLEN ULLIN	1097.6	0.6454	1366.3	-47.6	2.1812	0.9042	82.5868	13.2527	0.8309	0.037	0.02	0.0031	0.0031	0	0.0011	0.1574	0.0227	2/28/2020	3/1/2020	3/1/2020 4:11:26 PM	
11587	GLEN ULLIN	1097.6	0.6454	1366.3	-47.6	2.1812	0.9042	82.5868	13.2527	0.8309	0.037	0.02	0.0031	0.0031	0	0.0011	0.1574	0.0227	2/28/2020	3/2/2020	3/2/2020 4:13:21 PM	
11587	GLEN ULLIN	1096.5	0.6451	1365.2	-49.7	2.1795	0.9292	82.5584	13.395	0.7367	0.0227	0.0135	0.0001	0.0004	0	0	0.142	0.0225	3/2/2020	3/3/2020	3/3/2020 4:14:50 PM	
11587	GLEN ULLIN	1102.8	0.6493	1368.6	-46.6	2.1938	0.931	81.8002	14.0443	0.8317	0.0236	0.0142	0.0003	0.0006	0	0	0.138	0.0225	3/3/2020	3/4/2020	3/4/2020 4:10:39 PM	
11587	GLEN ULLIN	1098.2	0.6461	1366.2	-49	2.1645	0.9388	82.4107	13.5231	0.7764	0.0211	0.013	0.0001	0.0002	0	0	0.13	0.0223	3/4/2020	3/5/2020	3/5/2020 4:13:28 PM	
11587	GLEN ULLIN	1099.3	0.6471	1366.6	-48.4	2.1936	0.9328	82.1744	13.7206	0.7748	0.0212	0.0129	0.0001	0.0002	0	0	0.1473	0.0224	3/5/2020	3/6/2020	3/6/2020 4:11:05 PM	
11587	GLEN ULLIN	1098.1	0.6463	1365.9	-48.3	2.2143	0.9173	82.3525	13.5243	0.7829	0.026	0.0148	0.0012	0.0011	0	0.0005	0.1427	0.0226	3/6/2020	3/7/2020	3/7/2020 4:09:43 PM	
11587	GLEN ULLIN	1099.8	0.6479	1366.4	-48	2.2433	0.9285	81.9392	13.8876	0.7703	0.0209	0.0126	0.0001	0.0001	0	0	0.1747	0.0228	3/7/2020	3/8/2020	3/8/2020 4:10:28 PM	
11587	GLEN ULLIN	1101.9	0.6499	1366.8	-47	2.3029	0.935	81.5887	14.1975	0.7788	0.0196	0.012	0	0	0	0	0.1424	0.0232	3/8/2020	3/9/2020	3/9/2020 4:11:45 PM	
11587	GLEN ULLIN	1102.5	0.6498	1367.7	-47	2.2963	0.9083	81.6285	14.2058	0.7859	0.0195	0.0121	0	0	0	0	0.1204	0.0233	3/9/2020	3/10/2020	3/10/2020 4:14:22 PM	
11587	GLEN ULLIN	1097.1	0.6458	1365.2	-49.4	2.242	0.9072	82.4026	13.4893	0.7672	0.0184	0.0112	0	0	0	0	0.1391	0.0232	3/10/2020	3/11/2020	3/11/2020 4:11:49 PM	
11587	GLEN ULLIN	1095.5	0.6441	1365	-49.9	2.2034	0.8941	82.7996	13.1193	0.79	0.0245	0.0143	0.0008	0.0007	0	0.0001	0.1305	0.0229	3/11/2020	3/12/2020	3/12/2020 4:09:56 PM	
11587	GLEN ULLIN	1094.5	0.6433	1364.6	-50.8	2.2134	0.8752	82.8542	13.1027	0.7487	0.0209	0.0126	0.0001	0.0002	0	0	0.1493	0.0229	3/12/2020	3/13/2020	3/13/2020 4:09:57 PM	
11587	GLEN ULLIN	1098.3	0.6464	1366.1	-48.8	2.231	0.9056	82.2367	13.6187	0.7832	0.0197	0.0121	0	0	0	0	0.1701	0.023	3/13/2020	3/14/2020	3/14/2020 4:08:59 PM	
11587	GLEN ULLIN	1103.2	0.6501	1368.2	-46.4	2.277	0.9122	81.4879	14.2643	0.8153	0.0213	0.0128	0.0001	0.0002	0	0	0.1859	0.023	3/14/2020	3/15/2020	3/15/2020 4:07:04 PM	
11587	GLEN ULLIN	1104.3	0.651	1368.6	-45.8	2.3041	0.9075	81.283	14.4274	0.8225	0.0222	0.0135	0	0.0001	0	0	0.1967	0.0231	3/15/2020	3/16/2020	3/16/2020 4:09:36 PM	
11587	GLEN ULLIN	1104.2	0.6506	1368.9	-45.9	2.2716	0.9081	81.3799	14.351	0.8299	0.0233	0.0141	0.0001	0.0002	0	0	0.199	0.023	3/16/2020	3/17/2020	3/17/2020 4:07:42 PM	
11587	GLEN ULLIN	1102.3	0.6493	1368	-46.5	2.2516	0.9145	81.6959	14.0392	0.851	0.0237	0.0142	0.0002	0.0003	0	0	0.1871	0.0223	3/17/2020	3/18/2020	3/18/2020 4:09:13 PM	
11587	GLEN ULLIN	1097.6	0.6454	1366.2	-49.2	2.156	0.9216	82.4734	13.4543	0.7682	0.0228	0.0137	0.0001	0.0002	0	0	0.168	0.0218	3/18/2020	3/19/2020	3/19/2020 4:09:52 PM	
11587	GLEN ULLIN	1102.2	0.6492	1368	-46.4	2.2464	0.9161	81.7583	13.9765	0.8615	0.0269	0.0158	0.0004	0.0005	0	0.0001	0.1754	0.0224	3/19/2020	3/20/2020	3/20/2020 4:07:58 PM	
11587	GLEN ULLIN	1102.3	0.649	1368.2	-46.8	2.2202	0.9205	81.7086	14.0914	0.8043	0.0251	0.0147	0.0001	0.0001	0	0	0.1929	0.0222	3/20/2020	3/21/2020	3/21/2020 4:06:00 PM	
11587	GLEN ULLIN	1101.7	0.6483	1368.3	-47.3	2.1853	0.9184	81.8582	14.0053	0.7842	0.0246	0.0145	0.0001	0.0001	0	0	0.1874	0.0219	3/21/2020	3/22/2020	3/22/2020 4:08:55 PM	
11587	GLEN ULLIN	1101.1	0.6477	1368.2	-47.7	2.1692	0.9168	81.9013	13.9781	0.7634	0.0227	0.0136	0	0	0	0	0.2136	0.0214	3/22/2020	3/23/2020	3/23/2020 4:14:08 PM	
11587	GLEN ULLIN	1100.1	0.6468	1367.9	-47.7	2.1413	0.9219	82.1656	13.6975	0.8033	0.0273	0.0156	0.0013	0.0012	0	0.0001	0.2036	0.0215	3/23/2020	3/24/2020	3/24/2020 4:08:46 PM	
11587	GLEN ULLIN	1098.2	0.6453	1367.2	-46.8	2.1376	0.904	82.4922	13.3383	0.8101	0.0428	0.021	0.0048	0.0041	0	0.0016	0.222	0.0217	3/24/2020	3/25/2020	3/25/2020 4:15:13 PM	
11587	GLEN ULLIN	1100.9	0.6478	1367.9	-45.8	2.1904	0.915	82.0763	13.6668	0.863	0.04	0.0199	0.0038	0.0034	0	0.0011	0.1984	0.022	3/25/2020	3/26/2020	3/26/2020 4:00:27 PM	
11587	GLEN ULLIN	1108.2	0.6526	1371.8	-42.3	2.1857	0.9302	81.1494	14.3865	1.0067	0.0399	0.0208	0.0034	0.0031	0	0.0008	0.2522	0.0218	3/26/2020	3/27/2020	3/27/2020 4:02:22 PM	
11587	GLEN ULLIN	1109	0.6532	1372.2	-42.9	2.1868	0.9319	81.0947	14.5274	0.9951	0.0311	0.0181	0.001	0.0011	0	0.0002	0.1911	0.0218	3/27/2020	3/28/2020	3/28/2020 3:59:54 PM	
11587	GLEN ULLIN	1110.6	0.6548	1372.5	-41.4	2.2696	0.9155	80.7518	14.7367	1.0199	0.0409	0.0224	0.0027	0.0026	0	0.0004	0.2155	0.0222	3/28/2020	3/29/2020	3/29/2020 4:00:39 PM	
11587	GLEN ULLIN	1113.6	0.6575	1373.3	-39.9	2.3598	0.9082	80.1389	15.2088	1.0492	0.0398	0.0217	0.0024	0.0023	0	0.0004	0.2459	0.0228	3/29/2020	3/30/2020	3/30/2020 4:05:33 PM	
11587	GLEN ULLIN	1111.7	0.6559	1372.7	-41	2.3321	0.9	80.4202	14.992	1.0292	0.034	0.0192	0.0018	0.0017	0	0.0003	0.2469	0.0229	3/30/2020	3/31/2020	3/31/2020 4:06:18 PM	
11587	GLEN ULLIN	1115.7	0.6591	1374.3	-39.9	2.3671	0.914	79.9071	15.5497	1.0127	0.0325	0.0186	0.0014	0.0013	0	0.0001	0.1725	0.0232	3/31/2020	4/1/2020	4/1/2020 4:02:18 PM	

32 record(s) retrieved

<b>NORTH DAKOTA HEATING VALUE ZONES</b>		
<b>ZONES</b>	<b>MEASURING DEVICE</b>	<b>LOCATION</b>
211	Chromatograph	Sidney Border
24	Chromatograph	Williston Border
241	Accumulated Sample	Fairview Border
25	Accumulated Sample	Watford City West Border
260	Chromatograph	North Tioga Transfer
261	Chromatograph	Tioga Comp Station – Robinson Lake Plant
262	Chromatograph	Minot Border
263	Accumulated Sample	Lignite Plant
264	Accumulated Sample	Epping Border
265	Chromatograph	Tioga Comp Station – County Line Plant
271	Chromatograph	Bismarck – Cleveland
272	Chromatograph	Cleveland – Mapleton
273	Chromatograph	Cleveland – Grafton
28	Chromatograph	Bismarck Station
31	Chromatograph	Dickinson Border
32	Chromatograph	Cabin Creek Station
33	Chromatograph	Little Knife Plant
34	Chromatograph	Bowman Border
43	Chromatograph	Spring Creek
550	Accumulated Sample & Chromatograph	Mandan Border
600	Chromatograph	Hankinson Area
601	Chromatograph	Milnor Area
610	Accumulated Sample & Chromatograph	Watford City
802	Chromatograph	Linton

MONTANA DAKOTA UTILITIES CO  
NORTH DAKOTA  
HEATING VALUE DATA

STATE	ZONE	ZONE BOUNDARY	12 MONTH AVERAGE	MAR 20	FEB 20	JAN 20	DEC 19	NOV 19	OCT 19	SEPT 19	AUG 19	JULY 19	JUNE 19	MAY 19	APR 19	ZONE
MT/ND	211	Sidney Border - MonDak Trf - Sidney Plt	1207	1211	1215	1207	1209	1198	1210	1218	1200	1199	1208	1207	1202	211
ND	24	Williston Border - Charbonneau Station	1166	1169	1171	1172	1173	1177	1160	1164	1165	1165	1152	1158	1164	24
ND	25	Watford City West Border	1197	1202	1204	1196	1192	1194	1199	1195	1197	1195	1199	1188	1202	25
ND	28	Bismarck Station - Glen Ullin Station	1157	1138	1126	1123	1128	1125	1137	1189	1196	1186	1205	1178	1147	28
ND	31	Dickinson Brd - Belfield Trf - G Ullin Stn	1139	1138	1126	1122	1128	1125	1137	1163	1114	1128	1168	1165	1152	31
ND/MT	32	Cabin Creek Station - Belfield Transfer	1120	1103	1096	1093	1074	1122	1134	1130	1137	1133	1147	1138	1131	32
ND	33	Little Knife Plant	1174	1173	1175	1174	1173	1172	1173	1174	1175	1175	1174	1173	1173	33
ND	34	Badlands Plant/Bowman Border	1032	1024	1073	1082	1110	1102	1054	1001	1013	989	978	979	979	34
ND	43	Spring Creek I - Sax Valve I	1147	1152	1151	1154	1144	1151	1143	1144	1150	1140	1149	1148	1136	43
ND/MT	241	Fairview Border	1201	1195	1203	1209	1206	1202	1208	1210	1194	1191	1200	1202	1196	241
ND	260	North Tioga Transfer - Nesson Plant	1122	1132	1111	1089	1106	1146	1126	1136	1135	1132	1115	1118	1121	260
ND	261	Tioga Comp Station - Robinson Lake Plant	1175	1174	1173	1168	1166	1178	1174	1189	1189	1179	1175	1164	1170	261
ND	262	Minot Bdr - Palermo Bdr - Bismarck Stn	1189	1180	1180	1176	1184	1193	1195	1193	1197	1198	1205	1185	1183	262
ND	263	Lignite Plant	1152	1160	1143	1145	1149	1149	1146	1146	1163	1164	1160	1152	1148	263
ND	264	Epping Border	1155	1157	1165	1163	1162	1164	1144	1148	1156	1154	1150	1143	1151	264
ND	265	Tioga Comp Station - County Line Plant	1173	1174	1174	1168	1167	1168	1169	1176	1177	1175	1175	1177	1171	265
ND	266	County Line Plant	1168	1164	1161	1162	1165	1170	1170	1172	1170	1166	1170	1171	1174	266
ND	271	Bismarck Station - Cleveland Station	1182	1169	1165	1159	1168	1174	1189	1191	1197	1196	1206	1186	1183	271
ND	272	Cleveland Station - Mapleton	1182	1169	1165	1159	1168	1174	1188	1191	1196	1195	1206	1185	1183	272
ND	273	Cleveland Station - Grafton Border	1181	1169	1165	1159	1168	1173	1188	1190	1195	1194	1204	1185	1180	273
ND	550	Mandan Border / NBPL-St Anthony	1153	1119	1117	1115	1121	1125	1137	1189	1196	1186	1202	1176	1147	550
ND	610	MDU-Watford City BTU	1174	1169	1168	1168	1161	1172	1174	1178	1181	1180	1187	1176	1175	610
ND	802	NBPL - Linton	1099	1102	1102	1102	1102	1107	1098	1094	1094	1091	1098	1101	1101	802
ND	903	Hettinger Propane	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	903
ND	600	Alliance Pipeline - Hankinson	1163	1164	1162	1160	1159	1166	1170	1167	1162	1161	1158	1169	1163	600
ND	601	Alliance Pipeline - Milnor	1163	1164	1162	1160	1159	1166	1170	1167	1162	1160	1156	1169	1162	602

<b>THERMAL ZONE VARIANCE DOCUMENTATION</b>		
<b>March 2020</b>		
<b><i>ZONE</i></b>	<b><i>BTU VARIANCE</i></b>	<b><i>REASON</i></b>
34	-49	Operational and Blend of Gas
260	21	Operational