

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

October 25, 2022

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

Re: Case No. PU-22-002 (Therm Billing)
Monthly Report – August 2022

Montana-Dakota Utilities Co. 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 September 2022.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our suppliers for the month of August 2022.
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 August 2022.

Montana-Dakota respectfully requests 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
Sep-22

<u>Town</u>	<u>Heat Zone</u>	<u>Therm Factor</u>
MDU-303-ALEXANDER	025	1.1343
MDU-308-ARNEGARD	025	1.1343
MDU-314-APPLE VALLEY	271	1.1598
MDU-318-BEACH	032	1.0304
MDU-319-BELFIELD	032	1.0380
MDU-323-BERTHOLD	262	1.1362
MDU-327-BISMARCK	028	1.1598
MDU-330-BOWMAN	034	0.9476
MDU-337-BURLINGTON	262	1.1607
MDU-343-CARRINGTON	273	1.1578
MDU-344-CLEVELAND	272	1.1516
MDU-364-CAVALIER	273	1.1823
MDU-365-DAWSON	271	1.1516
MDU-368-DES LACS	262	1.1463
MDU-369-DICKINSON	031	1.0259
MDU-374-FT TOTTEN	273	1.1660
MDU-375-DEVILS LAKE	273	1.1660
MDU-379-BARLOW	273	1.1578
MDU-384-EPPING	264	1.1221
MDU-387-ELDRIDGE	272	1.1598
MDU-407-GLADSTONE	031	1.0259
MDU-411-GLEN ULLIN	031	1.0333
MDU-413-GOLVA	032	1.0153
MDU-416-GARRISON	262	1.1444
MDU-417-GRAFTON	273	1.1904
MDU-403-GWINNER	601	1.1360
MDU-429-HEBRON	031	1.0333
MDU-432-HETTINGER	903	2.4049
MDU-449-JAMESTOWN	272	1.1679
MDU-459-KILLDEER	033	1.1117
MDU-463-LANGDON	273	1.1578
MDU-469-LEFOR	031	1.0259
MDU-474-LIGNITE	263	1.0750
MDU-475-LINTON	802	1.0478
MDU-478-LINCOLN	028	1.1598
MDU-488-MCKENZIE	271	1.1598
MDU-494-MEDINA	271	1.1516
MDU-498-MANDAN	028	1.1598
MDU-500-MARMARTH	034	0.9546
MDU-505-MINOT	262	1.1607
MDU-510-MOTT	031	1.0259
MDU-512-MAX	262	1.1607
MDU-513-MILNOR	601	1.1360
MDU-522-NEW ENGLAND	031	1.0184
MDU-524-NEW SALEM	028	1.1353
MDU-532-NEW ROCKFORD	273	1.1578
MDU-539-PARK RIVER	273	1.1823
MDU-540-PALERMO	262	1.1362
MDU-558-RAY	264	1.1221

MDU-561-REGENT	031	1.0259
MDU-563-RHAME	034	0.9406
MDU-564-RICHARDTON	031	1.0259
MDU-568-ROSS	261	1.1262
MDU-572-RUTHVILLE	262	1.1607
MDU-574-SANBORN	272	1.1679
MDU-583-SENTINEL BUTTE	032	1.0304
MDU-588-SOUTH HEART	031	1.0259
MDU-717-SPIRITWOOD	272	1.1679
MDU-590-SPRINGBROOK	264	1.1221
MDU-591-STANLEY	261	1.1343
MDU-593-STEELE	271	1.1516
MDU-594-STERLING	028	1.1598
MDU-598-SHEYENNE	273	1.1660
MDU-605-SURREY	262	1.1607
MDU-610-TAPPEN	271	1.1516
MDU-611-TAYLOR	031	1.0184
MDU-616-TIOGA	260	1.1103
MDU-619-TURTLE LAKE	262	1.1444
MDU-620-TRENTON	024	1.1368
MDU-624-UNDERWOOD	262	1.1444
MDU-625-VALLEY CITY	272	1.1761
MDU-629-WALHALLA	273	1.1823
MDU-632-WATFORD CITY	610	1.0059
MDU-636-WHEELOCK	264	1.1140
MDU-637-WHITE EARTH	261	1.1343
MDU-642-WILLISTON	024	1.1368
MDU-646-WASHBURN	262	1.1526
MDU-647-WILTON	262	1.1362
MDU-664-RIVERDALE	262	1.1444
MDU-691-FAIRVIEW	241	1.1406
MDU-712-MINOT AFB	262	1.1607
MDU-718-FAIRMOUNT	600	1.1336
MDU-732-NEKOMA	273	1.1578
MDU-732-MSR SITE	273	1.1578

Source Daily Summary

August 2022

Source #: 251
Name: SDNY BDR-MNDK JNCTN-SDNY PLT

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.7365	1193.4	1214.5	1213.3	1.233	3.234	67.787	24.005	3.300	0.139	0.271	0.016	0.014	0.000	0.000	0.000	0.000	0.000	1415.22	
2	0.7245	1185.2	1206.2	1205.0	0.921	3.077	69.688	22.845	3.025	0.132	0.274	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1417.11	
3	0.7255	1183.8	1204.7	1203.7	1.054	3.061	69.639	22.731	3.077	0.132	0.269	0.019	0.018	0.000	0.000	0.000	0.000	0.000	1414.40	
4	0.7288	1182.9	1203.8	1202.5	1.212	3.178	69.876	21.602	3.561	0.170	0.352	0.025	0.024	0.000	0.000	0.000	0.000	0.000	1410.11	
5	0.7245	1177.5	1198.4	1197.3	1.183	3.139	70.601	21.086	3.423	0.166	0.350	0.025	0.025	0.000	0.000	0.000	0.000	0.000	1407.95	
6	0.7263	1182.1	1203.1	1202.2	1.185	3.033	69.896	22.161	3.228	0.146	0.308	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1411.66	
7	0.7297	1187.0	1208.0	1207.1	1.190	3.053	69.242	22.756	3.254	0.147	0.311	0.023	0.023	0.000	0.000	0.000	0.000	0.000	1414.11	
8	0.7386	1195.6	1216.8	1215.5	1.276	3.230	67.896	23.465	3.595	0.163	0.331	0.023	0.021	0.000	0.000	0.000	0.000	0.000	1415.80	
9	0.7367	1193.5	1214.7	1213.5	1.202	3.290	67.872	23.771	3.387	0.145	0.293	0.020	0.018	0.000	0.000	0.000	0.000	0.000	1415.19	
10	0.7434	1199.8	1221.0	1219.7	1.334	3.344	66.710	24.657	3.475	0.148	0.296	0.019	0.017	0.000	0.000	0.000	0.000	0.000	1416.13	
11	0.7393	1193.7	1214.8	1213.7	1.318	3.354	67.461	23.971	3.420	0.145	0.292	0.019	0.017	0.000	0.000	0.000	0.000	0.000	1412.82	
12	0.7416	1197.2	1218.4	1217.1	1.331	3.338	67.092	24.257	3.505	0.149	0.293	0.019	0.016	0.000	0.000	0.000	0.000	0.000	1414.77	
13	0.7419	1196.6	1217.8	1216.4	1.345	3.374	67.053	24.249	3.501	0.150	0.294	0.018	0.015	0.000	0.000	0.000	0.000	0.000	1413.86	
14	0.7397	1192.9	1214.1	1212.7	1.341	3.394	67.609	23.562	3.612	0.153	0.295	0.018	0.015	0.000	0.000	0.000	0.000	0.000	1411.64	
15	0.7218	1178.7	1199.5	1198.2	0.876	3.300	69.568	23.210	2.740	0.097	0.187	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1412.05	
16	0.7069	1165.4	1186.0	1184.7	0.500	3.275	71.441	22.417	2.174	0.063	0.117	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1410.89	
17	0.7416	1195.8	1217.0	1215.9	1.356	3.377	67.153	24.114	3.513	0.151	0.300	0.019	0.016	0.000	0.000	0.000	0.000	0.000	1413.23	
18	0.7342	1182.0	1202.9	1201.8	1.333	3.561	68.789	22.178	3.604	0.166	0.329	0.021	0.018	0.000	0.000	0.000	0.000	0.000	1403.85	
19	0.7325	1179.0	1199.8	1198.8	1.325	3.592	69.120	21.840	3.585	0.165	0.331	0.022	0.018	0.000	0.000	0.000	0.000	0.000	1401.92	
20	0.7278	1179.3	1200.2	1199.0	1.099	3.473	69.501	22.106	3.353	0.144	0.287	0.019	0.016	0.000	0.000	0.000	0.000	0.000	1406.99	
21	0.7339	1181.9	1202.8	1201.6	1.322	3.553	69.205	21.486	3.832	0.187	0.370	0.024	0.020	0.000	0.000	0.000	0.000	0.000	1403.99	
22	0.7308	1180.6	1201.5	1200.4	1.265	3.420	69.508	21.663	3.571	0.172	0.355	0.024	0.023	0.000	0.000	0.000	0.000	0.000	1405.56	
23	0.7255	1177.7	1198.6	1197.4	1.197	3.209	70.354	21.268	3.419	0.162	0.342	0.025	0.024	0.000	0.000	0.000	0.000	0.000	1407.12	
24	0.7310	1179.0	1199.8	1198.8	1.290	3.508	69.295	21.892	3.481	0.162	0.329	0.022	0.020	0.000	0.000	0.000	0.000	0.000	1403.34	
25	0.7301	1181.4	1202.3	1201.2	1.217	3.386	69.421	21.964	3.488	0.157	0.324	0.022	0.021	0.000	0.000	0.000	0.000	0.000	1407.09	
26	0.7255	1178.1	1198.9	1197.8	1.171	3.226	70.217	21.490	3.373	0.153	0.322	0.023	0.023	0.000	0.000	0.000	0.000	0.000	1407.56	
27	0.7264	1178.8	1199.7	1198.5	1.204	3.211	70.240	21.318	3.475	0.162	0.341	0.025	0.024	0.000	0.000	0.000	0.000	0.000	1407.61	
28	0.7223	1175.6	1196.4	1195.5	1.171	3.079	70.666	21.383	3.202	0.146	0.309	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1407.71	
29	0.7210	1173.0	1193.8	1192.8	1.145	3.152	70.828	21.227	3.158	0.144	0.303	0.022	0.021	0.000	0.000	0.000	0.000	0.000	1405.92	
30	0.7227	1174.7	1195.5	1194.4	1.167	3.168	70.643	21.247	3.281	0.146	0.304	0.022	0.021	0.000	0.000	0.000	0.000	0.000	1406.36	
31	0.7265	1176.2	1197.0	1195.8	1.249	3.316	70.119	21.361	3.440	0.156	0.317	0.022	0.020	0.000	0.000	0.000	0.000	0.000	1404.36	
Avg	0.7302	1184.0	1204.8	1203.6	1.194	3.287	69.177	22.493	3.357	0.149	0.303	0.021	0.019	0.000	0.000	0.000	0.000	0.000	1409.88	

Source Daily Summary

August 2022

Source #: 571
Name: WILLISTON BDR-CHARBN STN

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.7094	1168.4	1189.1	1188.3	1.037	2.504	72.544	20.854	2.633	0.119	0.264	0.021	0.026	0.000	0.000	0.000	0.000	0.000	1411.80	
2	0.7094	1168.9	1189.6	1188.7	1.037	2.474	73.009	20.033	2.946	0.138	0.307	0.025	0.030	0.000	0.000	0.000	0.000	0.000	1412.34	
3	0.7092	1168.9	1189.6	1188.9	1.026	2.467	72.838	20.385	2.821	0.129	0.285	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1412.65	
4	0.7130	1174.3	1195.1	1194.1	1.035	2.481	72.447	20.473	3.027	0.144	0.330	0.028	0.034	0.000	0.000	0.000	0.000	0.000	1415.34	
5	0.7107	1171.9	1192.6	1191.9	1.036	2.416	72.765	20.308	2.981	0.138	0.304	0.024	0.028	0.000	0.000	0.000	0.000	0.000	1414.68	
6	0.7112	1171.8	1192.5	1192.0	1.038	2.467	72.540	20.580	2.901	0.132	0.291	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1414.03	
7	0.7120	1171.9	1192.6	1192.0	1.041	2.527	72.334	20.760	2.870	0.129	0.288	0.023	0.028	0.000	0.000	0.000	0.000	0.000	1413.42	
8	0.7128	1171.4	1192.2	1191.1	1.051	2.619	72.079	20.977	2.821	0.124	0.280	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1412.05	
9	0.7184	1174.7	1195.5	1194.5	1.073	2.914	71.069	21.576	2.875	0.127	0.305	0.026	0.033	0.000	0.000	0.000	0.000	0.000	1410.45	
10	0.7167	1170.3	1191.0	1190.0	1.084	3.003	71.031	21.812	2.654	0.108	0.259	0.022	0.027	0.000	0.000	0.000	0.000	0.000	1406.91	
11	0.7145	1170.5	1191.3	1190.4	1.065	2.817	71.555	21.419	2.714	0.115	0.266	0.022	0.027	0.000	0.000	0.000	0.000	0.000	1409.28	
12	0.7127	1170.7	1191.4	1190.4	1.051	2.649	72.144	20.855	2.838	0.126	0.285	0.024	0.028	0.000	0.000	0.000	0.000	0.000	1411.32	
13	0.7164	1170.0	1190.7	1189.6	1.079	3.008	71.076	21.767	2.647	0.110	0.262	0.023	0.028	0.000	0.000	0.000	0.000	0.000	1406.74	
14	0.7174	1170.6	1191.3	1190.1	1.076	3.061	70.931	21.818	2.682	0.112	0.268	0.023	0.029	0.000	0.000	0.000	0.000	0.000	1406.58	
15	0.7185	1171.0	1191.8	1190.6	1.084	3.133	70.838	21.715	2.769	0.122	0.285	0.025	0.030	0.000	0.000	0.000	0.000	0.000	1405.97	
16	0.7299	1184.2	1205.2	1204.1	0.889	3.685	70.045	20.784	3.780	0.222	0.493	0.048	0.053	0.000	0.000	0.000	0.000	0.000	1410.67	
17	0.7171	1174.9	1195.8	1195.1	1.050	2.803	71.589	20.974	3.057	0.139	0.326	0.028	0.034	0.000	0.000	0.000	0.000	0.000	1412.12	
18	0.7106	1169.5	1190.2	1189.4	1.036	2.556	72.487	20.672	2.796	0.125	0.279	0.022	0.026	0.000	0.000	0.000	0.000	0.000	1411.87	
19	0.7111	1169.2	1189.9	1189.1	1.038	2.617	72.283	20.904	2.714	0.121	0.273	0.022	0.027	0.000	0.000	0.000	0.000	0.000	1411.04	
20	0.7109	1169.9	1190.7	1189.6	1.042	2.542	72.552	20.525	2.872	0.129	0.287	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1412.17	
21	0.7175	1174.1	1194.9	1193.9	1.059	2.882	71.320	21.311	2.924	0.132	0.312	0.027	0.033	0.000	0.000	0.000	0.000	0.000	1410.67	
22	0.7143	1172.9	1193.7	1192.9	1.048	2.671	72.068	20.707	2.998	0.137	0.313	0.026	0.032	0.000	0.000	0.000	0.000	0.000	1412.36	
23	0.7130	1172.4	1193.1	1192.4	1.038	2.597	72.292	20.595	2.977	0.136	0.309	0.025	0.031	0.000	0.000	0.000	0.000	0.000	1413.00	
24	0.7110	1169.4	1190.1	1189.2	1.036	2.594	72.492	20.561	2.856	0.127	0.284	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1411.40	
25	0.7130	1171.9	1192.7	1191.8	1.043	2.620	72.285	20.571	2.982	0.136	0.307	0.025	0.030	0.000	0.000	0.000	0.000	0.000	1412.45	
26	0.7128	1173.2	1194.0	1193.1	1.037	2.524	72.465	20.407	3.048	0.142	0.320	0.026	0.032	0.000	0.000	0.000	0.000	0.000	1414.24	
27	0.7139	1174.7	1195.5	1194.6	1.035	2.540	72.298	20.508	3.089	0.144	0.326	0.027	0.033	0.000	0.000	0.000	0.000	0.000	1414.96	
28	0.7078	1167.7	1188.4	1187.7	1.022	2.422	72.749	20.816	2.592	0.111	0.245	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1412.52	
29	0.7075	1166.7	1187.4	1186.7	1.016	2.457	72.946	20.488	2.670	0.118	0.260	0.021	0.024	0.000	0.000	0.000	0.000	0.000	1411.68	
30	0.7100	1171.4	1192.1	1191.3	1.012	2.417	72.403	21.076	2.698	0.109	0.243	0.020	0.023	0.000	0.000	0.000	0.000	0.000	1414.80	
31	0.7118	1173.1	1193.9	1193.0	1.023	2.467	72.312	20.893	2.853	0.123	0.278	0.023	0.028	0.000	0.000	0.000	0.000	0.000	1415.05	
Avg	0.7134	1172.0	1192.4	1191.5	1.040	2.675	72.058	20.875	2.874	0.130	0.295	0.025	0.029	0.000	0.000	0.000	0.000	0.000	1411.76	

Gas Composition and Properties

Effective August 1, 2022

Source #: 0602160
Name: FAIRVIEW BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.0541		2.2310
Nitrogen, N2	3.0041		4.0471
Methane, C1	70.8950		54.6957
Ethane, C2	21.4396	5.7382	31.0028
Propane, C3	3.1096	0.8574	6.5942
iso-Butane, iC4	0.1459	0.0478	0.4078
n-Butane, nC4	0.2996	0.0945	0.8374
iso-Pentane, iC5	0.0232	0.0085	0.0805
n-Pentane, nC5	0.0241	0.0087	0.0836
Neo-Pentane, neo			
Hexanes Plus, C6+	0.0048	0.0020	0.0199
Argon, Ar			
Carbon Monoxide, CO			
Hydrogen, H2			
Oxygen, O2			
Helium, He			
Water, H2O			
Hydrogen Sulfide, H2S			
Totals	100.0000	6.7570	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-8.781	
Cricondentherm	1.970	
HV, Dry @ Base P, T	1197.06	
HV, Sat @ Base P, T	1176.23	
HV, Sat @ Sample P, T	1197.06	
Relative Density	0.7201	
C6+: 100		

Sample

Date: 08/01/2022 Type:

Tech: Tipton, Joshua

Pressure: 475 psi Temp.: °F

Gauge: Gauge H2O:

Atm. Pressure: H2S:

Remarks:

Analysis

Date: 08/01/2022 Instrument:

Tech: Tipton, Joshua Cylinder: 453

Remarks:

Source Daily Summary

August 2022

Source #: 602
Name: TIOGA STN-N TIOGA TRANSFER

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.6970	1159.7	1180.2	1179.8	0.691	2.409	72.790	22.708	1.225	0.049	0.109	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1413.71	-17.32
2	0.6958	1165.2	1185.8	1185.3	0.411	2.388	72.972	22.643	1.388	0.056	0.122	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1421.57	-16.16
3	0.7004	1159.2	1179.7	1179.2	0.909	2.430	72.340	22.867	1.292	0.046	0.100	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1409.59	-16.42
4	0.7026	1161.7	1182.3	1181.9	0.943	2.429	72.613	21.940	1.853	0.063	0.137	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1410.48	-12.50
5	0.7049	1164.7	1185.3	1184.8	0.955	2.445	72.075	22.524	1.781	0.063	0.136	0.010	0.011	0.000	0.000	0.000	0.000	0.000	1411.75	-11.94
6	0.7047	1165.1	1185.7	1185.3	0.960	2.386	72.254	22.313	1.846	0.069	0.148	0.011	0.012	0.000	0.000	0.000	0.000	0.000	1412.53	-11.39
7	0.7056	1166.6	1187.2	1186.8	0.974	2.365	72.385	21.926	2.069	0.080	0.174	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1413.33	-9.55
8	0.7068	1169.8	1190.5	1190.0	0.985	2.258	72.913	20.882	2.577	0.110	0.237	0.018	0.021	0.000	0.000	0.000	0.000	0.000	1416.03	-5.45
9	0.7091	1170.4	1191.2	1190.7	0.996	2.417	72.501	21.068	2.617	0.112	0.247	0.020	0.023	0.000	0.000	0.000	0.000	0.000	1414.52	-4.45
10	0.7083	1171.4	1192.2	1191.7	0.978	2.311	72.675	21.000	2.633	0.114	0.247	0.019	0.022	0.000	0.000	0.000	0.000	0.000	1416.53	-4.48
11	0.7065	1169.2	1189.9	1189.4	0.969	2.292	72.564	21.538	2.305	0.094	0.204	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1415.61	-7.41
12	0.7056	1167.0	1187.7	1187.2	0.968	2.337	72.519	21.722	2.158	0.084	0.182	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1413.97	-8.95
13	0.7046	1166.8	1187.5	1187.0	0.984	2.233	72.987	21.150	2.312	0.095	0.204	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1414.69	-8.01
14	0.7045	1167.6	1188.3	1187.8	0.989	2.166	73.183	20.884	2.419	0.102	0.219	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1415.77	-7.14
15	0.7079	1169.6	1190.3	1189.8	1.005	2.335	72.772	20.879	2.603	0.113	0.248	0.020	0.024	0.000	0.000	0.000	0.000	0.000	1414.79	-4.74
16	0.7099	1170.9	1191.7	1191.2	1.017	2.433	72.424	21.080	2.618	0.116	0.263	0.022	0.027	0.000	0.000	0.000	0.000	0.000	1414.31	-3.69
17	0.7022	1161.8	1182.3	1181.9	0.978	2.333	72.478	22.422	1.561	0.064	0.141	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1410.96	-13.57
18	0.6988	1156.6	1177.1	1176.6	0.971	2.338	73.513	21.080	1.822	0.078	0.169	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1408.08	-13.18
19	0.7002	1159.5	1180.0	1179.5	0.967	2.301	72.632	22.520	1.383	0.056	0.121	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1410.18	-15.48
20	0.7043	1165.7	1186.3	1185.8	0.995	2.261	72.919	21.318	2.170	0.095	0.206	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1413.56	-8.64
21	0.7033	1162.4	1183.0	1182.4	0.988	2.382	73.092	21.018	2.191	0.092	0.201	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1410.53	-9.27
22	0.6981	1155.0	1175.5	1175.0	0.960	2.389	73.305	21.501	1.636	0.059	0.128	0.010	0.011	0.000	0.000	0.000	0.000	0.000	1406.82	-15.45
23	0.6994	1156.7	1177.2	1176.7	0.972	2.399	72.979	21.832	1.627	0.055	0.119	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1407.57	-15.18
24	0.7012	1158.2	1178.7	1178.2	0.963	2.479	72.958	21.483	1.885	0.066	0.143	0.011	0.012	0.000	0.000	0.000	0.000	0.000	1407.61	-13.01
25	0.7028	1161.0	1181.6	1181.1	0.961	2.457	72.558	21.959	1.866	0.056	0.123	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1409.46	-12.89
26	0.7013	1158.1	1178.6	1178.1	0.958	2.505	72.556	22.144	1.684	0.043	0.095	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1407.38	-15.02
27	0.7023	1159.5	1180.0	1179.5	0.956	2.509	72.341	22.375	1.680	0.039	0.086	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1408.14	-14.84
28	0.7020	1157.6	1178.1	1177.6	0.955	2.604	72.458	22.092	1.737	0.044	0.096	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1406.11	-14.73
29	0.7111	1161.1	1181.6	1181.1	0.984	3.196	71.312	21.966	2.285	0.071	0.161	0.011	0.012	0.000	0.000	0.000	0.000	0.000	1401.36	-8.84
30	0.7058	1165.3	1185.9	1185.4	0.957	2.488	72.189	22.018	2.164	0.052	0.114	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1411.59	-10.90
31	0.7065	1166.1	1186.8	1186.2	0.948	2.517	72.214	21.849	2.245	0.062	0.142	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1411.89	-9.56
Avg	0.7037	1164.0	1184.1	1183.6	0.943	2.413	72.628	21.765	1.988	0.074	0.162	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1411.63	-10.97

*** End of Report ***

Source Daily Summary

August 2022

Source #: 601
Name: TIOGA STN-ROBINSON LAKE PLNT

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.7530	1200.0	1221.3	1220.5	0.068	6.131	66.222	20.814	5.962	0.229	0.508	0.031	0.035	0.000	0.000	0.000	0.000	0.000	1407.39	
2	0.7546	1202.5	1223.7	1222.9	0.026	6.194	66.038	20.818	6.097	0.235	0.521	0.033	0.037	0.000	0.000	0.000	0.000	0.000	1408.74	
3	0.7521	1183.2	1204.1	1203.5	0.805	5.957	66.650	20.273	5.569	0.213	0.470	0.029	0.034	0.000	0.000	0.000	0.000	0.000	1388.42	
4	0.7499	1180.1	1201.0	1200.0	0.892	5.804	67.059	20.076	5.435	0.209	0.461	0.030	0.034	0.000	0.000	0.000	0.000	0.000	1386.92	
5	0.7529	1181.9	1202.8	1202.1	0.910	5.948	66.675	20.122	5.557	0.222	0.499	0.031	0.035	0.000	0.000	0.000	0.000	0.000	1386.21	
6	0.7576	1187.1	1208.1	1207.6	0.906	6.075	65.949	20.446	5.856	0.217	0.486	0.030	0.034	0.000	0.000	0.000	0.000	0.000	1388.03	
7	0.7572	1185.6	1206.6	1206.1	0.900	6.140	65.932	20.431	5.866	0.206	0.465	0.028	0.031	0.000	0.000	0.000	0.000	0.000	1386.65	
8	0.7531	1178.6	1199.4	1198.5	0.905	6.178	66.425	20.182	5.632	0.193	0.432	0.025	0.028	0.000	0.000	0.000	0.000	0.000	1382.08	
9	0.7506	1174.7	1195.5	1194.8	0.910	6.173	66.768	19.990	5.492	0.193	0.425	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1379.84	
10	0.7506	1180.8	1201.8	1201.1	0.920	5.782	66.811	20.380	5.432	0.195	0.426	0.026	0.030	0.000	0.000	0.000	0.000	0.000	1387.18	
11	0.7579	1186.8	1207.8	1207.2	0.898	6.136	65.791	20.570	5.889	0.207	0.450	0.028	0.031	0.000	0.000	0.000	0.000	0.000	1387.37	
12	0.7547	1180.6	1201.5	1200.7	0.900	6.211	66.170	20.320	5.725	0.197	0.424	0.025	0.028	0.000	0.000	0.000	0.000	0.000	1383.07	
13	0.7267	1171.7	1192.4	1191.6	0.981	4.008	70.036	20.673	3.800	0.142	0.314	0.022	0.025	0.000	0.000	0.000	0.000	0.000	1399.16	
14	0.7064	1162.5	1183.1	1182.0	1.032	2.597	72.736	20.879	2.406	0.098	0.216	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1407.59	
15	0.7080	1165.8	1186.4	1185.5	1.033	2.539	72.766	20.624	2.637	0.112	0.247	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1410.01	
16	0.7101	1166.4	1187.1	1186.1	1.050	2.677	72.323	20.934	2.604	0.112	0.255	0.020	0.025	0.000	0.000	0.000	0.000	0.000	1408.66	
17	0.6929	1139.2	1159.4	1158.7	0.912	2.926	75.044	18.649	2.126	0.092	0.212	0.017	0.022	0.000	0.000	0.000	0.000	0.000	1392.73	
18	0.6933	1140.9	1161.1	1160.3	0.935	2.837	74.492	19.672	1.793	0.076	0.170	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1394.34	
19	0.6950	1142.4	1162.6	1161.9	0.955	2.871	74.182	19.928	1.778	0.077	0.177	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1394.49	
20	0.7047	1159.2	1179.7	1178.9	1.026	2.648	72.521	21.557	1.940	0.084	0.190	0.015	0.019	0.000	0.000	0.000	0.000	0.000	1405.34	
21	0.7078	1163.7	1184.3	1183.4	1.042	2.636	72.557	20.961	2.413	0.106	0.241	0.020	0.024	0.000	0.000	0.000	0.000	0.000	1407.71	
22	0.7078	1162.2	1182.8	1181.9	1.034	2.745	72.464	20.982	2.413	0.100	0.223	0.018	0.021	0.000	0.000	0.000	0.000	0.000	1405.82	
23	0.7532	1179.7	1200.5	1199.7	0.894	6.124	66.479	20.195	5.584	0.205	0.460	0.028	0.030	0.000	0.000	0.000	0.000	0.000	1383.33	
24	0.7541	1177.5	1198.3	1197.8	0.880	6.370	66.768	19.287	5.836	0.234	0.548	0.036	0.040	0.000	0.000	0.000	0.000	0.000	1379.96	
25	0.7524	1174.5	1195.3	1194.7	0.884	6.389	66.625	19.718	5.686	0.190	0.450	0.028	0.031	0.000	0.000	0.000	0.000	0.000	1378.05	
26	0.7564	1181.3	1202.3	1201.6	0.885	6.351	66.177	19.923	5.879	0.213	0.504	0.032	0.036	0.000	0.000	0.000	0.000	0.000	1382.33	
27	0.7584	1184.8	1205.8	1204.9	0.885	6.329	65.660	20.504	5.900	0.197	0.463	0.030	0.033	0.000	0.000	0.000	0.000	0.000	1384.56	
28	0.7602	1184.8	1205.8	1205.2	0.879	6.501	65.452	20.376	6.051	0.206	0.476	0.029	0.031	0.000	0.000	0.000	0.000	0.000	1382.96	
29	0.7578	1182.9	1203.8	1203.2	0.880	6.395	65.631	20.547	5.881	0.185	0.427	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1382.88	
30	0.7590	1184.4	1205.4	1204.7	0.881	6.410	65.497	20.568	5.959	0.189	0.439	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1383.62	
31	0.7598	1185.7	1206.7	1205.8	0.882	6.411	65.448	20.542	5.997	0.195	0.463	0.029	0.032	0.000	0.000	0.000	0.000	0.000	1384.29	
Avg	0.7390	1175.0	1196.0	1195.3	0.871	5.113	68.366	20.353	4.684	0.172	0.388	0.025	0.028	0.000	0.000	0.000	0.000	0.000	1391.60	

Source Daily Summary

August 2022

Source #: 091
Name: MNT BRD-PLRMO BRD-BIS STN

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.7622	1191.9	1213.0	1212.3	0.904	6.222	65.272	20.743	6.027	0.239	0.523	0.033	0.037	0.000	0.000	0.000	0.000	0.000	1389.36	
2	0.7616	1190.7	1211.7	1211.1	0.905	6.240	65.416	20.575	6.011	0.244	0.536	0.034	0.038	0.000	0.000	0.000	0.000	0.000	1388.47	
3	0.7579	1186.2	1207.2	1206.6	0.909	6.159	65.919	20.376	5.826	0.233	0.511	0.032	0.036	0.000	0.000	0.000	0.000	0.000	1386.63	
4	0.7594	1188.1	1209.2	1208.5	0.912	6.175	65.720	20.475	5.889	0.236	0.521	0.033	0.038	0.000	0.000	0.000	0.000	0.000	1387.55	
5	0.7601	1188.8	1209.8	1209.2	0.916	6.197	65.782	20.252	5.956	0.251	0.569	0.036	0.041	0.000	0.000	0.000	0.000	0.000	1387.62	
6	0.7578	1184.6	1205.6	1205.0	0.912	6.245	65.882	20.345	5.825	0.223	0.501	0.031	0.035	0.000	0.000	0.000	0.000	0.000	1384.84	
7	0.7574	1183.5	1204.5	1203.9	0.908	6.271	65.873	20.367	5.841	0.212	0.469	0.028	0.031	0.000	0.000	0.000	0.000	0.000	1384.05	
8	0.7536	1177.0	1197.8	1197.2	0.915	6.303	66.352	20.088	5.649	0.200	0.439	0.025	0.028	0.000	0.000	0.000	0.000	0.000	1379.85	
9	0.7539	1177.1	1198.0	1197.4	0.922	6.312	66.348	20.050	5.650	0.209	0.455	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1379.73	
10	0.7583	1185.2	1206.2	1205.6	0.905	6.261	65.744	20.442	5.911	0.215	0.462	0.028	0.031	0.000	0.000	0.000	0.000	0.000	1385.15	
11	0.7579	1184.5	1205.4	1204.9	0.898	6.284	65.750	20.472	5.866	0.214	0.458	0.028	0.032	0.000	0.000	0.000	0.000	0.000	1384.61	
12	0.7570	1182.8	1203.8	1203.1	0.899	6.293	65.882	20.364	5.851	0.208	0.447	0.027	0.030	0.000	0.000	0.000	0.000	0.000	1383.56	
13	0.7572	1182.3	1203.2	1202.5	0.904	6.335	66.116	19.941	5.880	0.229	0.524	0.033	0.037	0.000	0.000	0.000	0.000	0.000	1382.72	
14	0.7273	1174.7	1195.5	1194.7	1.000	3.850	70.102	20.677	3.810	0.152	0.352	0.026	0.031	0.000	0.000	0.000	0.000	0.000	1402.18	
15	0.7070	1165.4	1186.0	1185.3	1.048	2.451	72.931	20.575	2.601	0.111	0.241	0.019	0.022	0.000	0.000	0.000	0.000	0.000	1410.48	
16	0.7087	1165.0	1185.6	1185.0	1.060	2.611	72.557	20.807	2.567	0.110	0.244	0.020	0.023	0.000	0.000	0.000	0.000	0.000	1408.40	
17	0.7082	1163.0	1183.5	1182.9	1.043	2.712	72.752	20.450	2.620	0.115	0.260	0.022	0.027	0.000	0.000	0.000	0.000	0.000	1406.42	
18	0.6849	1126.9	1146.8	1146.2	0.871	2.992	75.885	18.408	1.595	0.068	0.154	0.012	0.015	0.000	0.000	0.000	0.000	0.000	1385.74	
19	0.6963	1144.2	1164.5	1163.9	0.985	2.836	74.052	19.962	1.865	0.082	0.185	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1395.43	
20	0.7049	1158.9	1179.4	1178.8	1.044	2.660	72.224	22.041	1.759	0.074	0.168	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1404.78	
21	0.7210	1166.7	1187.4	1186.7	1.007	3.737	70.896	20.483	3.335	0.147	0.339	0.026	0.030	0.000	0.000	0.000	0.000	0.000	1398.42	
22	0.7439	1161.1	1181.7	1181.1	0.902	6.385	67.552	19.501	5.023	0.186	0.402	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1370.11	
23	0.7591	1184.5	1205.5	1204.9	0.888	6.398	65.687	20.291	5.946	0.224	0.502	0.030	0.033	0.000	0.000	0.000	0.000	0.000	1383.67	
24	0.7557	1177.4	1198.2	1197.7	0.888	6.514	66.497	19.333	5.901	0.240	0.553	0.035	0.039	0.000	0.000	0.000	0.000	0.000	1378.37	
25	0.7516	1170.1	1190.8	1190.3	0.886	6.587	66.771	19.375	5.645	0.201	0.470	0.030	0.034	0.000	0.000	0.000	0.000	0.000	1373.51	
26	0.7568	1179.3	1200.1	1199.6	0.887	6.511	66.151	19.717	5.931	0.220	0.513	0.033	0.036	0.000	0.000	0.000	0.000	0.000	1379.53	
27	0.7590	1183.2	1204.2	1203.6	0.883	6.481	65.635	20.286	5.962	0.208	0.480	0.030	0.034	0.000	0.000	0.000	0.000	0.000	1382.18	
28	0.7588	1179.7	1200.6	1200.1	0.887	6.673	65.588	20.171	5.938	0.207	0.474	0.029	0.032	0.000	0.000	0.000	0.000	0.000	1378.26	
29	0.7580	1180.4	1201.3	1200.8	0.889	6.552	65.598	20.406	5.866	0.192	0.440	0.027	0.030	0.000	0.000	0.000	0.000	0.000	1379.80	
30	0.7587	1181.6	1202.5	1202.0	0.891	6.543	65.486	20.491	5.896	0.192	0.445	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1380.57	
31	0.7571	1178.8	1199.6	1199.1	0.887	6.575	65.730	20.275	5.847	0.191	0.439	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1378.67	
Avg	0.7442	1176.0	1196.4	1195.8	0.927	5.496	67.682	20.250	4.977	0.188	0.422	0.027	0.031	0.000	0.000	0.000	0.000	0.000	1387.12	

Gas Composition and Properties

Effective October 1, 2021

Attachment B
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Source #: 2501030
Name: LIGNITE PLANT

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.2283		0.5237
Nitrogen, N2	2.9631		4.3268
Methane, C1	79.4957		66.4767
Ethane, C2	15.2390	4.0765	23.8852
Propane, C3	2.0456	0.5637	4.7019
iso-Butane, iC4	0.0244	0.0080	0.0739
n-Butane, nC4	0.0039	0.0012	0.0118
iso-Pentane, iC5			
n-Pentane, nC5			
Neo-Pentane, neo			
Hexanes Plus, C6+			
Argon, Ar			
Carbon Monoxide, CO			
Hydrogen, H2			
Oxygen, O2			
Helium, He			
Water, H2O			
Hydrogen Sulfide, H2S			
Totals	100.0000	4.6490	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure		
Cricondentherm	-32.804	
HV, Dry @ Base P, T	1130.73	
HV, Sat @ Base P, T	1111.05	
HV, Sat @ Sample P, T	1130.73	
Relative Density	0.6640	
C6+: 100		

Sample

Date: 10/01/2021 Type:

Tech: Wayne Sampson

Pressure: Temp.:

Gauge: H2O:

Atm. Pressure: H2S:

Remarks:

Analysis

Date: Instrument:

Tech: Cylinder:

Remarks:

Source Daily Summary

August 2022

Source #: 603
Name: TIOGA STN-COUNTY LINE PLANT

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.7119	1161.4	1181.9	1181.5	0.905	3.373	71.747	20.877	2.721	0.101	0.239	0.017	0.021	0.000	0.000	0.000	0.000	0.000	1400.84	
2	0.7107	1166.8	1187.5	1187.0	0.633	3.344	71.769	21.111	2.763	0.102	0.239	0.017	0.021	0.000	0.000	0.000	0.000	0.000	1408.57	
3	0.7159	1161.6	1182.2	1181.8	1.165	3.335	71.226	21.133	2.769	0.100	0.234	0.017	0.021	0.000	0.000	0.000	0.000	0.000	1397.24	
4	0.7139	1156.3	1176.8	1176.3	1.173	3.459	71.615	20.633	2.744	0.101	0.236	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1392.77	
5	0.7144	1157.6	1178.1	1177.7	1.174	3.429	71.527	20.742	2.745	0.104	0.240	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1393.82	
6	0.7136	1157.5	1178.0	1177.6	1.177	3.356	71.706	20.648	2.719	0.106	0.246	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1394.45	
7	0.7139	1158.9	1179.4	1179.0	1.175	3.297	71.699	20.661	2.781	0.104	0.244	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1395.92	
8	0.7143	1158.4	1178.9	1178.5	1.183	3.356	71.659	20.590	2.822	0.104	0.244	0.018	0.023	0.000	0.000	0.000	0.000	0.000	1394.87	
9	0.7134	1157.4	1177.8	1177.4	1.166	3.359	71.718	20.654	2.720	0.103	0.242	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1394.54	
10	0.7108	1151.8	1172.2	1171.7	1.169	3.454	72.102	20.310	2.569	0.106	0.249	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1390.30	
11	0.7094	1149.6	1169.9	1169.5	1.180	3.439	72.277	20.259	2.459	0.104	0.243	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1389.01	
12	0.7114	1153.4	1173.8	1173.4	1.190	3.380	71.790	20.877	2.383	0.102	0.239	0.017	0.021	0.000	0.000	0.000	0.000	0.000	1391.71	
13	0.7118	1154.0	1174.5	1174.0	1.186	3.386	71.813	20.751	2.479	0.103	0.242	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1392.05	
14	0.7103	1151.4	1171.8	1171.3	1.194	3.392	72.156	20.369	2.498	0.105	0.246	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1390.35	
15	0.7117	1153.5	1173.9	1173.5	1.186	3.402	72.014	20.362	2.643	0.105	0.247	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1391.56	
16	0.7130	1155.4	1175.9	1175.4	1.180	3.424	71.685	20.745	2.558	0.107	0.256	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1392.51	
17	0.7123	1155.1	1175.6	1175.1	1.155	3.407	71.987	20.352	2.672	0.109	0.266	0.022	0.029	0.000	0.000	0.000	0.000	0.000	1392.86	
18	0.7130	1156.4	1176.8	1176.4	1.171	3.381	71.481	21.177	2.405	0.103	0.242	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1393.68	
19	0.7150	1157.8	1178.3	1177.9	1.174	3.471	71.264	21.163	2.502	0.110	0.267	0.022	0.027	0.000	0.000	0.000	0.000	0.000	1393.53	
20	0.7155	1158.2	1178.7	1178.2	1.180	3.488	71.277	21.050	2.553	0.114	0.282	0.025	0.032	0.000	0.000	0.000	0.000	0.000	1393.47	
21	0.7145	1156.6	1177.1	1176.6	1.166	3.505	71.603	20.622	2.634	0.118	0.292	0.026	0.033	0.000	0.000	0.000	0.000	0.000	1392.57	
22	0.7130	1155.5	1175.9	1175.5	1.176	3.427	71.712	20.676	2.619	0.104	0.245	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1392.59	
23	0.7117	1152.3	1172.7	1172.3	1.177	3.494	71.880	20.486	2.596	0.100	0.231	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1390.09	
24	0.7179	1161.9	1182.5	1182.0	1.151	3.530	70.720	21.529	2.690	0.102	0.239	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1395.60	
25	0.7151	1155.3	1175.8	1175.3	1.169	3.643	71.328	20.781	2.685	0.103	0.247	0.020	0.026	0.000	0.000	0.000	0.000	0.000	1390.38	
26	0.7164	1158.7	1179.2	1178.8	1.147	3.593	70.848	21.467	2.588	0.095	0.226	0.016	0.020	0.000	0.000	0.000	0.000	0.000	1393.22	
27	0.7190	1161.7	1182.2	1181.7	1.167	3.625	70.456	21.688	2.703	0.096	0.229	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1394.24	
28	0.7185	1162.3	1182.9	1182.5	1.153	3.557	70.432	21.931	2.561	0.097	0.230	0.017	0.021	0.000	0.000	0.000	0.000	0.000	1395.56	
29	0.7197	1163.7	1184.3	1183.9	1.133	3.616	70.217	22.048	2.621	0.098	0.231	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1396.06	
30	0.7198	1164.4	1185.0	1184.5	1.150	3.556	70.238	22.054	2.642	0.097	0.228	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1396.78	
31	0.7196	1164.1	1184.7	1184.2	1.147	3.566	70.160	22.236	2.521	0.098	0.233	0.017	0.021	0.000	0.000	0.000	0.000	0.000	1396.57	
Avg	0.7142	1158.0	1178.2	1177.7	1.144	3.453	71.423	20.967	2.625	0.103	0.244	0.018	0.023	0.000	0.000	0.000	0.000	0.000	1394.12	

Source Daily Summary

August 2022

Source #: 043
Name: BISMARCK STN-CLEVELAND STN

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.7630	1195.1	1216.3	1214.9	0.886	6.130	65.300	20.649	6.188	0.244	0.533	0.034	0.036	0.000	0.000	0.000	0.000	0.000	1392.37	
2	0.7616	1192.2	1213.3	1212.2	0.885	6.176	65.526	20.448	6.102	0.249	0.544	0.034	0.037	0.000	0.000	0.000	0.000	0.000	1390.30	
3	0.7584	1188.8	1209.9	1208.8	0.889	6.072	65.939	20.348	5.936	0.235	0.515	0.032	0.034	0.000	0.000	0.000	0.000	0.000	1389.31	
4	0.7598	1190.9	1211.9	1210.6	0.891	6.081	65.772	20.412	6.003	0.241	0.530	0.033	0.036	0.000	0.000	0.000	0.000	0.000	1390.35	
5	0.7602	1190.5	1211.6	1210.4	0.893	6.131	65.955	20.017	6.077	0.260	0.591	0.037	0.040	0.000	0.000	0.000	0.000	0.000	1389.59	
6	0.7589	1188.5	1209.5	1208.5	0.890	6.138	65.805	20.414	5.961	0.225	0.503	0.030	0.033	0.000	0.000	0.000	0.000	0.000	1388.47	
7	0.7578	1186.5	1207.5	1206.5	0.886	6.165	65.860	20.425	5.921	0.214	0.473	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1387.15	
8	0.7528	1178.0	1198.8	1197.7	0.891	6.206	66.541	19.983	5.687	0.201	0.440	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1381.74	
9	0.7535	1178.5	1199.4	1198.4	0.895	6.230	66.545	19.857	5.737	0.215	0.467	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1381.77	
10	0.7585	1187.4	1208.4	1207.3	0.886	6.176	65.857	20.304	6.024	0.221	0.473	0.029	0.031	0.000	0.000	0.000	0.000	0.000	1387.51	
11	0.7580	1186.3	1207.3	1206.3	0.883	6.201	65.829	20.401	5.954	0.216	0.459	0.028	0.030	0.000	0.000	0.000	0.000	0.000	1386.72	
12	0.7567	1183.8	1204.8	1203.7	0.884	6.229	66.025	20.214	5.935	0.209	0.448	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1384.98	
13	0.7559	1181.4	1202.3	1201.3	0.886	6.295	66.306	19.843	5.879	0.222	0.504	0.032	0.034	0.000	0.000	0.000	0.000	0.000	1382.92	
14	0.7285	1175.3	1196.1	1195.1	0.983	3.953	69.931	20.665	3.901	0.156	0.356	0.025	0.029	0.000	0.000	0.000	0.000	0.000	1401.74	
15	0.7059	1164.3	1184.9	1183.6	1.029	2.444	73.089	20.499	2.553	0.110	0.239	0.018	0.020	0.000	0.000	0.000	0.000	0.000	1410.27	
16	0.7086	1165.7	1186.4	1185.0	1.034	2.604	72.569	20.820	2.569	0.112	0.250	0.019	0.022	0.000	0.000	0.000	0.000	0.000	1409.32	
17	0.7111	1168.2	1188.9	1187.5	1.047	2.665	72.256	20.930	2.660	0.119	0.274	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1409.85	
18	0.6817	1122.2	1142.0	1140.9	0.828	3.048	76.429	17.899	1.553	0.066	0.152	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1383.11	
19	0.6967	1145.6	1165.9	1164.6	0.967	2.811	74.131	19.802	1.971	0.088	0.198	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1396.79	
20	0.7041	1158.4	1178.9	1177.5	1.022	2.651	72.342	21.985	1.732	0.074	0.167	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1404.95	
21	0.7168	1165.4	1186.1	1184.7	0.995	3.444	71.320	20.787	2.964	0.132	0.308	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1400.99	
22	0.7280	1171.3	1192.0	1191.0	0.980	4.157	70.053	20.377	3.805	0.169	0.395	0.030	0.035	0.000	0.000	0.000	0.000	0.000	1397.10	
23	0.7281	1171.4	1192.2	1191.2	0.980	4.162	70.026	20.394	3.811	0.168	0.395	0.030	0.034	0.000	0.000	0.000	0.000	0.000	1397.14	
24	0.7599	1187.8	1208.8	1208.0	0.870	6.306	65.800	20.063	6.127	0.231	0.532	0.034	0.036	0.000	0.000	0.000	0.000	0.000	1386.68	
25	0.7532	1174.1	1194.9	1194.1	0.863	6.521	67.036	18.806	5.868	0.249	0.576	0.038	0.041	0.000	0.000	0.000	0.000	0.000	1376.79	
26	0.7521	1173.2	1194.0	1192.9	0.868	6.469	66.717	19.492	5.742	0.199	0.457	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1376.76	
27	0.7558	1179.5	1200.4	1199.3	0.869	6.427	66.365	19.585	5.969	0.217	0.503	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1380.76	
28	0.7613	1188.7	1209.7	1208.7	0.866	6.388	65.421	20.389	6.159	0.214	0.499	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1386.49	
29	0.7598	1183.8	1204.7	1203.6	0.864	6.557	65.518	20.249	6.063	0.212	0.480	0.028	0.029	0.000	0.000	0.000	0.000	0.000	1382.06	
30	0.7596	1186.0	1207.0	1205.8	0.866	6.401	65.482	20.500	6.046	0.197	0.452	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1384.82	
31	0.7569	1180.9	1201.8	1200.6	0.867	6.457	65.801	20.292	5.922	0.185	0.426	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1381.33	
Avg	0.7427	1177.0	1197.9	1196.8	0.914	5.280	67.985	20.221	4.930	0.189	0.424	0.027	0.030	0.000	0.000	0.000	0.000	0.000	1390.33	

Source Daily Summary

August 2022

Source #: 063
Name: CLEVELAND STN-MAPLETON

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.7610	1191.2	1212.3	1212.0	0.895	6.168	65.483	20.600	6.040	0.238	0.511	0.032	0.034	0.000	0.000	0.000	0.000	0.000	1389.64	
2	0.7627	1193.3	1214.4	1213.5	0.893	6.199	65.342	20.546	6.167	0.246	0.535	0.034	0.037	0.000	0.000	0.000	0.000	0.000	1390.57	
3	0.7604	1190.8	1211.9	1210.9	0.895	6.135	65.649	20.446	6.048	0.240	0.519	0.032	0.035	0.000	0.000	0.000	0.000	0.000	1389.74	
4	0.7604	1191.5	1212.6	1211.5	0.898	6.091	65.648	20.508	6.021	0.240	0.523	0.034	0.036	0.000	0.000	0.000	0.000	0.000	1390.49	
5	0.7595	1188.6	1209.6	1208.6	0.900	6.170	65.984	20.014	6.035	0.253	0.567	0.036	0.040	0.000	0.000	0.000	0.000	0.000	1388.03	
6	0.7606	1190.8	1211.9	1211.0	0.902	6.135	65.630	20.466	6.041	0.236	0.524	0.032	0.035	0.000	0.000	0.000	0.000	0.000	1389.66	
7	0.7593	1188.3	1209.3	1208.4	0.895	6.179	65.742	20.394	6.016	0.221	0.491	0.030	0.032	0.000	0.000	0.000	0.000	0.000	1387.89	
8	0.7563	1183.4	1204.3	1203.3	0.896	6.207	66.049	20.263	5.870	0.207	0.454	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1384.77	
9	0.7521	1175.6	1196.4	1195.3	0.902	6.279	66.622	19.851	5.655	0.203	0.438	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1379.46	
10	0.7570	1184.1	1205.1	1204.1	0.899	6.214	66.045	20.184	5.900	0.222	0.477	0.029	0.031	0.000	0.000	0.000	0.000	0.000	1385.09	
11	0.7593	1188.0	1209.1	1208.1	0.893	6.207	65.637	20.497	6.039	0.214	0.456	0.028	0.030	0.000	0.000	0.000	0.000	0.000	1387.49	
12	0.7575	1184.5	1205.4	1204.5	0.890	6.253	65.852	20.375	5.916	0.213	0.447	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1385.04	
13	0.7579	1184.3	1205.2	1204.3	0.892	6.302	65.975	20.048	6.013	0.222	0.484	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1384.40	
14	0.7527	1183.5	1204.5	1203.5	0.921	5.818	66.714	20.198	5.585	0.210	0.484	0.033	0.036	0.000	0.000	0.000	0.000	0.000	1388.35	
15	0.7067	1164.0	1184.6	1184.2	1.032	2.533	72.718	20.917	2.444	0.101	0.218	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1409.15	
16	0.7075	1165.4	1186.0	1185.7	1.036	2.511	72.839	20.608	2.600	0.115	0.249	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1410.08	
17	0.7093	1165.4	1186.0	1185.6	1.052	2.662	72.382	20.961	2.548	0.110	0.243	0.020	0.023	0.000	0.000	0.000	0.000	0.000	1408.23	
18	0.6957	1143.3	1163.6	1163.3	0.929	2.917	74.648	18.906	2.227	0.100	0.229	0.020	0.024	0.000	0.000	0.000	0.000	0.000	1394.83	
19	0.6889	1133.8	1153.8	1153.5	0.895	2.909	75.142	19.157	1.651	0.069	0.153	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1390.17	
20	0.6946	1141.2	1161.4	1161.1	0.954	2.902	74.337	19.680	1.826	0.082	0.186	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1393.48	
21	0.7044	1157.9	1178.4	1178.1	1.026	2.702	72.313	21.915	1.770	0.075	0.170	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1404.09	
22	0.7264	1167.1	1187.8	1187.1	0.978	4.268	70.367	19.922	3.837	0.171	0.395	0.030	0.034	0.000	0.000	0.000	0.000	0.000	1393.66	
23	0.7285	1168.8	1189.5	1186.1	0.880	3.262	71.866	19.876	3.546	0.154	0.359	0.027	0.030	0.000	0.000	0.000	0.000	0.000	1393.65	
24	0.7599	1187.8	1208.8	1208.4	0.870	6.306	65.800	20.063	6.127	0.231	0.532	0.034	0.036	0.000	0.000	0.000	0.000	0.000	1386.68	
25	0.7532	1174.1	1194.9	1194.4	0.863	6.521	67.037	18.806	5.868	0.249	0.576	0.038	0.041	0.000	0.000	0.000	0.000	0.000	1376.78	
26	0.7521	1173.2	1194.0	1193.5	0.868	6.470	66.720	19.489	5.741	0.199	0.457	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1376.73	
27	0.7558	1179.5	1200.4	1199.8	0.869	6.427	66.365	19.585	5.969	0.217	0.503	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1380.76	
28	0.7613	1188.7	1209.7	1209.3	0.866	6.388	65.421	20.389	6.159	0.214	0.499	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1386.49	
29	0.7598	1183.8	1204.7	1204.3	0.864	6.557	65.518	20.249	6.063	0.212	0.480	0.028	0.029	0.000	0.000	0.000	0.000	0.000	1382.05	
30	0.7596	1186.0	1207.0	1206.5	0.866	6.401	65.482	20.500	6.046	0.197	0.452	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1384.82	
31	0.7569	1180.9	1201.8	1201.3	0.867	6.457	65.800	20.293	5.922	0.185	0.426	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1381.34	
Avg	0.7431	1177.0	1197.6	1196.8	0.912	5.308	67.972	20.184	4.958	0.189	0.421	0.027	0.030	0.000	0.000	0.000	0.000	0.000	1389.47	

Source Daily Summary

August 2022

Source #: 061
Name: CLEVELAND STN-GRAFTON BDR

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.7615	1191.4	1212.5	1212.3	0.896	6.192	65.465	20.536	6.084	0.241	0.519	0.032	0.035	0.000	0.000	0.000	0.000	0.000	1389.54	
2	0.7629	1193.7	1214.8	1214.2	0.893	6.196	65.319	20.555	6.180	0.247	0.537	0.034	0.037	0.000	0.000	0.000	0.000	0.000	1390.82	
3	0.7600	1189.9	1211.0	1210.4	0.895	6.146	65.701	20.416	6.021	0.238	0.515	0.032	0.035	0.000	0.000	0.000	0.000	0.000	1389.13	
4	0.7597	1190.1	1211.1	1210.4	0.899	6.105	65.735	20.459	5.979	0.237	0.516	0.033	0.036	0.000	0.000	0.000	0.000	0.000	1389.55	
5	0.7590	1187.8	1208.9	1208.0	0.899	6.177	66.009	20.027	6.005	0.250	0.557	0.036	0.039	0.000	0.000	0.000	0.000	0.000	1387.53	
6	0.7605	1190.7	1211.8	1211.2	0.902	6.138	65.637	20.458	6.038	0.236	0.525	0.032	0.035	0.000	0.000	0.000	0.000	0.000	1389.57	
7	0.7592	1188.1	1209.2	1208.6	0.895	6.181	65.754	20.386	6.011	0.221	0.490	0.030	0.032	0.000	0.000	0.000	0.000	0.000	1387.76	
8	0.7561	1182.8	1203.8	1203.1	0.896	6.212	66.082	20.244	5.854	0.206	0.452	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1384.42	
9	0.7489	1169.9	1190.6	1189.7	0.900	6.326	66.967	19.719	5.443	0.191	0.408	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1375.78	
10	0.7561	1182.6	1203.5	1202.9	0.899	6.228	66.136	20.147	5.842	0.219	0.470	0.028	0.030	0.000	0.000	0.000	0.000	0.000	1384.07	
11	0.7591	1187.6	1208.6	1208.0	0.892	6.210	65.670	20.479	6.022	0.214	0.454	0.028	0.030	0.000	0.000	0.000	0.000	0.000	1387.22	
12	0.7571	1183.8	1204.8	1204.2	0.890	6.261	65.894	20.347	5.896	0.212	0.445	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1384.60	
13	0.7578	1184.0	1205.0	1204.4	0.893	6.303	65.990	20.045	6.001	0.221	0.483	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1384.24	
14	0.7522	1182.6	1203.5	1202.9	0.922	5.826	66.792	20.139	5.559	0.209	0.483	0.033	0.036	0.000	0.000	0.000	0.000	0.000	1387.72	
15	0.7080	1166.0	1186.7	1186.2	1.033	2.530	72.468	21.164	2.445	0.102	0.221	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1410.31	
16	0.7074	1165.2	1185.9	1185.6	1.037	2.511	72.853	20.598	2.597	0.114	0.248	0.020	0.023	0.000	0.000	0.000	0.000	0.000	1409.97	
17	0.7100	1166.4	1187.1	1186.3	1.051	2.665	72.262	21.065	2.563	0.110	0.243	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1408.79	
18	0.7012	1152.1	1172.5	1172.3	0.973	2.827	73.691	19.824	2.299	0.104	0.238	0.020	0.024	0.000	0.000	0.000	0.000	0.000	1400.15	
19	0.6890	1134.0	1154.1	1153.8	0.897	2.908	75.096	19.217	1.638	0.068	0.152	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1390.28	
20	0.7003	1151.0	1171.4	1170.8	0.996	2.774	73.744	19.898	2.243	0.096	0.212	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1399.80	
21	0.7045	1158.4	1178.9	1178.6	1.022	2.687	72.236	22.061	1.724	0.074	0.167	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1404.60	
22	0.7264	1167.7	1188.4	1187.7	0.977	4.232	70.265	20.150	3.764	0.167	0.384	0.029	0.032	0.000	0.000	0.000	0.000	0.000	1394.40	
23	0.7452	1162.3	1182.9	1178.6	0.893	6.447	67.290	19.695	5.038	0.187	0.402	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1370.34	
24	0.7519	1171.5	1192.3	1191.7	0.881	6.538	66.483	19.897	5.491	0.207	0.448	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1374.94	
25	0.7584	1184.3	1205.3	1204.7	0.877	6.371	65.760	20.276	5.959	0.216	0.480	0.030	0.031	0.000	0.000	0.000	0.000	0.000	1383.99	
26	0.7609	1188.1	1209.1	1208.6	0.881	6.367	65.907	19.692	6.227	0.255	0.589	0.040	0.043	0.000	0.000	0.000	0.000	0.000	1386.09	
27	0.7535	1174.7	1195.5	1194.6	0.876	6.495	66.665	19.371	5.811	0.220	0.498	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1377.23	
28	0.7585	1183.4	1204.4	1203.7	0.876	6.429	65.993	19.806	6.087	0.223	0.518	0.033	0.035	0.000	0.000	0.000	0.000	0.000	1382.91	
29	0.7613	1188.0	1209.0	1208.6	0.875	6.418	65.341	20.481	6.136	0.207	0.477	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1385.64	
30	0.7616	1185.9	1206.9	1206.4	0.877	6.577	65.357	20.213	6.194	0.220	0.501	0.030	0.032	0.000	0.000	0.000	0.000	0.000	1382.90	
31	0.7605	1185.1	1206.0	1205.5	0.872	6.529	65.400	20.358	6.104	0.209	0.470	0.029	0.030	0.000	0.000	0.000	0.000	0.000	1382.96	
Avg	0.7441	1177.0	1197.9	1197.2	0.918	5.413	67.741	20.249	5.008	0.191	0.423	0.027	0.030	0.000	0.000	0.000	0.000	0.000	1388.94	

Source Daily Summary

August 2022

Source #: 041
Name: BISMARCK STN-GLEN ULLIN STN

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.7628	1194.8	1216.0	1214.9	0.886	6.125	65.330	20.641	6.174	0.243	0.532	0.033	0.036	0.000	0.000	0.000	0.000	0.000	1392.27	
2	0.7615	1191.9	1213.0	1211.8	0.884	6.184	65.547	20.428	6.095	0.248	0.544	0.034	0.037	0.000	0.000	0.000	0.000	0.000	1390.03	
3	0.7580	1188.2	1209.3	1208.1	0.889	6.075	65.980	20.328	5.917	0.234	0.511	0.031	0.034	0.000	0.000	0.000	0.000	0.000	1388.94	
4	0.7592	1189.7	1210.8	1209.4	0.891	6.091	65.845	20.374	5.968	0.238	0.524	0.033	0.036	0.000	0.000	0.000	0.000	0.000	1389.61	
5	0.7600	1190.1	1211.2	1209.9	0.893	6.131	65.988	19.996	6.066	0.259	0.590	0.037	0.040	0.000	0.000	0.000	0.000	0.000	1389.39	
6	0.7586	1188.1	1209.2	1208.2	0.890	6.137	65.837	20.398	5.946	0.225	0.502	0.030	0.033	0.000	0.000	0.000	0.000	0.000	1388.25	
7	0.7579	1186.7	1207.7	1206.7	0.886	6.162	65.855	20.425	5.927	0.214	0.474	0.028	0.029	0.000	0.000	0.000	0.000	0.000	1387.28	
8	0.7528	1177.9	1198.8	1197.5	0.891	6.210	66.540	19.981	5.688	0.201	0.439	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1381.68	
9	0.7536	1178.9	1199.7	1198.5	0.895	6.223	66.530	19.868	5.745	0.215	0.469	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1382.02	
10	0.7582	1186.8	1207.8	1206.6	0.886	6.180	65.893	20.287	6.004	0.220	0.471	0.028	0.031	0.000	0.000	0.000	0.000	0.000	1387.14	
11	0.7586	1187.4	1208.4	1207.3	0.883	6.188	65.765	20.435	5.989	0.217	0.464	0.028	0.030	0.000	0.000	0.000	0.000	0.000	1387.46	
12	0.7566	1183.7	1204.6	1203.5	0.884	6.228	66.037	20.214	5.925	0.209	0.448	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1384.91	
13	0.7562	1181.9	1202.9	1201.7	0.886	6.289	66.285	19.845	5.897	0.224	0.508	0.032	0.034	0.000	0.000	0.000	0.000	0.000	1383.26	
14	0.7310	1176.8	1197.7	1196.4	0.978	4.106	69.564	20.724	4.048	0.159	0.365	0.026	0.030	0.000	0.000	0.000	0.000	0.000	1401.11	
15	0.7059	1164.3	1184.9	1183.6	1.026	2.447	73.093	20.492	2.554	0.110	0.238	0.018	0.021	0.000	0.000	0.000	0.000	0.000	1410.27	
16	0.7089	1166.3	1186.9	1185.7	1.035	2.595	72.537	20.843	2.585	0.113	0.250	0.020	0.023	0.000	0.000	0.000	0.000	0.000	1409.70	
17	0.7107	1167.7	1188.3	1187.1	1.046	2.659	72.324	20.886	2.648	0.118	0.269	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1409.62	
18	0.6826	1123.4	1143.3	1142.2	0.832	3.043	76.357	17.897	1.615	0.070	0.160	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1383.82	
19	0.6978	1147.5	1167.8	1166.7	0.976	2.791	73.939	19.984	1.989	0.089	0.200	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1397.92	
20	0.7038	1157.9	1178.4	1177.2	1.020	2.657	72.377	21.970	1.710	0.073	0.166	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1404.65	
21	0.7154	1164.7	1185.4	1184.0	0.998	3.350	71.455	20.892	2.836	0.126	0.294	0.023	0.026	0.000	0.000	0.000	0.000	0.000	1401.54	
22	0.7275	1170.4	1191.1	1189.7	0.981	4.164	70.194	20.204	3.813	0.172	0.404	0.031	0.036	0.000	0.000	0.000	0.000	0.000	1396.49	
23	0.7276	1170.6	1191.3	1190.0	0.981	4.160	70.172	20.230	3.815	0.172	0.403	0.031	0.036	0.000	0.000	0.000	0.000	0.000	1396.67	
24	0.7586	1186.7	1207.8	1206.7	0.874	6.240	65.957	20.080	6.032	0.227	0.523	0.033	0.035	0.000	0.000	0.000	0.000	0.000	1386.71	
25	0.7537	1175.2	1196.0	1194.9	0.864	6.502	66.959	18.874	5.894	0.250	0.577	0.038	0.041	0.000	0.000	0.000	0.000	0.000	1377.59	
26	0.7519	1172.6	1193.4	1192.3	0.867	6.487	66.784	19.400	5.736	0.202	0.465	0.028	0.030	0.000	0.000	0.000	0.000	0.000	1376.23	
27	0.7557	1179.4	1200.3	1199.0	0.869	6.424	66.369	19.590	5.965	0.216	0.502	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1380.75	
28	0.7612	1188.6	1209.7	1208.6	0.866	6.381	65.432	20.393	6.153	0.213	0.498	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1386.54	
29	0.7599	1183.7	1204.6	1203.5	0.864	6.566	65.515	20.239	6.063	0.213	0.482	0.028	0.029	0.000	0.000	0.000	0.000	0.000	1381.91	
30	0.7597	1186.0	1207.0	1205.8	0.866	6.401	65.479	20.497	6.050	0.198	0.453	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1384.88	
31	0.7567	1180.4	1201.3	1200.0	0.866	6.462	65.831	20.278	5.906	0.184	0.423	0.025	0.025	0.000	0.000	0.000	0.000	0.000	1381.02	
Avg	0.7427	1177.0	1197.9	1196.7	0.915	5.279	67.993	20.216	4.927	0.189	0.424	0.027	0.030	0.000	0.000	0.000	0.000	0.000	1390.31	

Source Daily Summary

August 2022

Source #: 271
Name: DCKSN BRD-BLFD TSF-G.U. STN

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.6540	1079.9	1099.0	1098.4	0.945	2.839	81.878	12.768	1.425	0.046	0.091	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1358.95	
2	0.6446	1069.0	1087.9	1087.3	0.954	2.603	83.259	12.140	0.968	0.026	0.048	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1355.07	
3	0.6395	1064.4	1083.2	1082.6	0.952	2.414	84.050	11.779	0.755	0.019	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1354.52	
4	0.6417	1067.3	1086.2	1085.5	0.938	2.460	83.741	11.911	0.885	0.024	0.040	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1355.96	
5	0.6430	1070.2	1089.2	1088.6	0.935	2.410	83.615	11.987	0.958	0.034	0.057	0.002	0.001	0.000	0.000	0.000	0.000	0.000	1358.25	
6	0.6439	1070.8	1089.8	1089.4	0.948	2.437	83.262	12.443	0.849	0.022	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1358.10	
7	0.6446	1070.7	1089.7	1089.2	0.948	2.512	83.136	12.472	0.869	0.024	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1357.21	
8	0.6455	1073.2	1092.2	1091.6	0.938	2.456	83.009	12.612	0.918	0.025	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1359.46	
9	0.6459	1074.3	1093.3	1092.8	0.949	2.410	82.897	12.799	0.885	0.022	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1360.43	
10	0.6482	1076.6	1095.7	1095.1	0.967	2.454	82.504	13.076	0.932	0.024	0.042	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1361.00	
11	0.6483	1075.7	1094.8	1094.1	0.972	2.518	82.451	13.066	0.932	0.022	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1359.67	
12	0.6489	1074.6	1093.6	1092.9	0.980	2.628	82.260	13.205	0.875	0.019	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1357.65	
13	0.6464	1072.6	1091.6	1090.8	0.966	2.533	82.738	12.866	0.847	0.018	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1357.79	
14	0.6462	1072.2	1091.2	1090.1	0.960	2.554	82.730	12.891	0.818	0.017	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1357.41	
15	0.6470	1074.3	1093.4	1092.8	0.959	2.496	82.666	12.927	0.902	0.019	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1359.33	
16	0.6451	1070.8	1089.7	1089.2	0.961	2.533	83.022	12.564	0.866	0.020	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1356.80	
17	0.6440	1068.5	1087.4	1086.8	0.987	2.528	83.202	12.441	0.787	0.020	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1355.05	
18	0.6430	1068.5	1087.4	1086.8	0.978	2.453	83.366	12.387	0.768	0.018	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1356.06	
19	0.6431	1068.2	1087.1	1086.6	0.970	2.483	83.347	12.383	0.765	0.019	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1355.70	
20	0.6438	1069.1	1088.0	1087.4	0.975	2.494	83.211	12.489	0.780	0.019	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1356.01	
21	0.6403	1064.7	1083.5	1082.8	0.941	2.486	83.926	11.791	0.797	0.022	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1354.06	
22	0.6395	1066.2	1085.0	1084.5	0.916	2.354	84.179	11.627	0.849	0.027	0.048	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1356.86	
23	0.6376	1065.4	1084.2	1083.6	0.895	2.251	84.695	11.151	0.894	0.034	0.073	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1357.90	
24	0.6366	1063.3	1082.1	1081.5	0.890	2.296	84.703	11.239	0.800	0.024	0.046	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1356.24	
25	0.6353	1060.7	1079.5	1078.9	0.898	2.317	84.918	11.038	0.773	0.020	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1354.38	
26	0.6366	1059.6	1078.4	1077.8	0.939	2.452	84.580	11.265	0.714	0.018	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1351.52	
27	0.6394	1062.6	1081.4	1080.8	0.952	2.503	84.163	11.498	0.820	0.022	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1352.48	
28	0.6397	1062.4	1081.2	1080.7	0.965	2.530	84.078	11.571	0.796	0.021	0.038	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1351.81	
29	0.6389	1060.1	1078.9	1078.4	0.982	2.565	84.213	11.424	0.757	0.020	0.037	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1349.81	
30	0.6361	1056.4	1075.1	1074.5	0.974	2.551	84.653	11.104	0.669	0.017	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1347.89	
31	0.6369	1059.6	1078.4	1077.8	0.915	2.514	84.539	11.227	0.747	0.020	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1351.22	
Avg	0.6427	1068.0	1087.0	1086.4	0.950	2.485	83.516	12.134	0.852	0.023	0.040	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1355.95	

Source Daily Summary

August 2022

Source #: 051
Name: CABIN CRK STN-BELFIELD TRSFR

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.6750	1111.6	1131.2	1130.5	0.572	3.447	77.523	16.552	1.719	0.060	0.114	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1376.95	
2	0.6795	1120.0	1139.9	1139.1	0.606	3.299	76.902	17.117	1.831	0.072	0.149	0.011	0.012	0.000	0.000	0.000	0.000	0.000	1382.84	
3	0.6750	1116.2	1135.9	1135.2	0.565	3.176	77.412	17.076	1.595	0.055	0.107	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1382.66	
4	0.6785	1118.8	1138.6	1137.9	0.571	3.343	76.838	17.309	1.753	0.060	0.113	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1382.24	
5	0.6716	1109.0	1128.6	1127.9	0.622	3.208	78.157	16.251	1.578	0.057	0.111	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1377.21	
6	0.6711	1108.9	1128.5	1127.8	0.634	3.152	78.161	16.384	1.501	0.053	0.101	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1377.59	
7	0.6758	1115.6	1135.4	1134.6	0.644	3.169	77.476	16.821	1.680	0.063	0.129	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1381.08	
8	0.6772	1117.4	1137.2	1136.5	0.599	3.252	77.308	16.775	1.859	0.066	0.125	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1381.97	
9	0.6761	1116.1	1135.9	1135.1	0.585	3.262	77.278	16.979	1.736	0.053	0.096	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1381.34	
10	0.6718	1109.6	1129.2	1128.5	0.564	3.280	77.812	16.750	1.470	0.041	0.075	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1377.79	
11	0.6743	1112.3	1132.0	1131.2	0.594	3.314	77.345	17.123	1.493	0.043	0.079	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1378.46	
12	0.6729	1109.9	1129.6	1128.8	0.552	3.389	77.536	16.930	1.472	0.040	0.072	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1376.97	
13	0.6699	1105.8	1125.4	1124.7	0.513	3.407	78.012	16.568	1.394	0.036	0.063	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1375.07	
14	0.6701	1105.8	1125.4	1124.7	0.508	3.434	77.992	16.537	1.422	0.037	0.064	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1374.85	
15	0.6607	1094.2	1113.6	1112.8	0.379	3.460	79.410	15.539	1.151	0.022	0.035	0.002	0.001	0.000	0.000	0.000	0.000	0.000	1369.99	
16	0.6556	1088.4	1107.7	1106.9	0.292	3.472	80.149	15.052	1.002	0.014	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1367.95	
17	0.6685	1105.3	1124.9	1124.1	0.510	3.322	78.191	16.570	1.312	0.033	0.057	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1375.73	
18	0.6658	1099.9	1119.4	1118.7	0.510	3.392	78.733	15.972	1.291	0.035	0.061	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1371.85	
19	0.6659	1100.8	1120.3	1119.6	0.486	3.382	78.745	15.939	1.342	0.036	0.063	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1372.88	
20	0.6642	1098.7	1118.2	1117.4	0.435	3.427	78.945	15.830	1.266	0.033	0.058	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1372.03	
21	0.6663	1104.7	1124.2	1123.5	0.312	3.452	78.395	16.454	1.301	0.031	0.051	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1377.25	
22	0.6754	1114.4	1134.1	1133.4	0.548	3.346	77.304	17.002	1.631	0.055	0.102	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1380.08	
23	0.6748	1114.5	1134.3	1133.5	0.596	3.214	77.645	16.622	1.726	0.061	0.120	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1380.77	
24	0.6730	1113.4	1133.1	1132.3	0.478	3.297	77.575	16.985	1.508	0.050	0.095	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1381.16	
25	0.6749	1115.2	1134.9	1134.1	0.508	3.315	77.315	17.098	1.609	0.051	0.094	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1381.53	
26	0.6763	1116.5	1136.3	1135.5	0.563	3.285	77.255	16.994	1.718	0.058	0.112	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1381.71	
27	0.6750	1113.5	1133.2	1132.4	0.590	3.303	77.592	16.585	1.735	0.061	0.119	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1379.31	
28	0.6725	1110.2	1129.8	1129.1	0.645	3.186	78.064	16.278	1.640	0.058	0.115	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1377.76	
29	0.6711	1107.2	1126.8	1126.0	0.647	3.235	78.258	16.099	1.587	0.055	0.106	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1375.48	
30	0.6743	1111.6	1131.3	1130.5	0.600	3.342	77.717	16.404	1.762	0.056	0.106	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1377.62	
31	0.6724	1108.5	1128.1	1127.3	0.601	3.348	77.927	16.359	1.601	0.052	0.099	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1375.73	
Avg	0.6718	1109.0	1129.1	1128.4	0.543	3.320	77.902	16.547	1.538	0.048	0.091	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1377.61	

Source Daily Summary

August 2022

Source #: 111
Name: LITTLE KNIFE PLANT

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.6864	1155.5	1175.9	1174.1	0.000	2.729	73.162	23.599	0.485	0.008	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.37	-26.29
2	0.6874	1156.1	1176.5	1175.0	0.000	2.784	72.917	23.818	0.464	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.10	-26.13
3	0.6860	1154.1	1174.6	1173.0	0.000	2.777	73.171	23.587	0.448	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.11	-26.85
4	0.6857	1153.4	1173.8	1172.1	0.000	2.792	73.240	23.503	0.449	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.50	-27.07
5	0.6861	1154.9	1175.3	1173.8	0.000	2.742	73.154	23.639	0.448	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.90	-26.72
6	0.6865	1155.3	1175.7	1174.3	0.000	2.757	73.059	23.729	0.439	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.94	-26.58
7	0.6865	1154.8	1175.3	1173.5	0.000	2.776	73.087	23.669	0.452	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.49	-26.62
8	0.6868	1155.4	1175.8	1174.1	0.000	2.772	73.042	23.700	0.469	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.84	-26.39
9	0.6872	1156.1	1176.6	1175.1	0.000	2.772	72.940	23.807	0.463	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.25	-26.16
10	0.6873	1155.8	1176.3	1174.6	0.000	2.797	72.928	23.795	0.463	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.81	-26.19
11	0.6862	1154.1	1174.6	1173.0	0.000	2.792	73.141	23.599	0.451	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.93	-26.80
12	0.6861	1154.5	1174.9	1173.2	0.000	2.765	73.177	23.573	0.468	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.44	-26.71
13	0.6856	1153.7	1174.1	1172.6	0.000	2.762	73.275	23.491	0.455	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.00	-27.04
14	0.6856	1153.8	1174.2	1172.7	0.000	2.761	73.264	23.503	0.456	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.07	-27.00
15	0.6856	1153.5	1173.9	1172.4	0.000	2.773	73.274	23.481	0.456	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.78	-27.06
16	0.6852	1153.1	1173.5	1172.0	0.000	2.765	73.337	23.428	0.453	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.65	-27.22
17	0.6852	1153.0	1173.4	1171.7	0.000	2.768	73.352	23.408	0.455	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.55	-27.26
18	0.6852	1153.4	1173.8	1172.3	0.000	2.748	73.344	23.440	0.452	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.99	-27.20
19	0.6855	1153.9	1174.4	1172.6	0.000	2.744	73.294	23.483	0.462	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.35	-26.96
20	0.6854	1153.5	1173.9	1172.0	0.000	2.759	73.310	23.456	0.459	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.94	-27.10
21	0.6855	1153.3	1173.8	1172.0	0.000	2.778	73.281	23.466	0.459	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.65	-27.09
22	0.6857	1154.1	1174.6	1173.0	0.000	2.749	73.251	23.519	0.464	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.41	-26.89
23	0.6851	1153.2	1173.6	1171.8	0.000	2.746	73.370	23.414	0.454	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.92	-27.25
24	0.6852	1153.4	1173.8	1172.3	0.000	2.743	73.347	23.446	0.449	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.07	-27.22
25	0.6847	1152.5	1172.9	1171.3	0.000	2.752	73.446	23.338	0.448	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.46	-27.49
26	0.6850	1153.2	1173.6	1171.9	0.000	2.740	73.390	23.393	0.460	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.99	-27.24
27	0.6848	1152.5	1172.9	1171.4	0.000	2.757	73.431	23.346	0.450	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.43	-27.46
28	0.6847	1152.3	1172.7	1171.0	0.000	2.767	73.426	23.357	0.434	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.16	-27.58
29	0.6856	1153.9	1174.3	1172.7	0.000	2.750	73.277	23.497	0.457	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.26	-26.96
30	0.6856	1153.6	1174.0	1172.4	0.000	2.767	73.279	23.480	0.457	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.89	-27.05
31	0.6856	1153.7	1174.1	1172.4	0.000	2.764	73.266	23.495	0.458	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.01	-27.00
Avg	0.6858	1154.0	1174.4	1172.8	0.000	2.763	73.233	23.531	0.456	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.17	-26.92

Source Daily Summary

August 2022

Source #: 351
Name: BADLANDS PLANT

Pressure Base:	14.730	Contract Day:	1
Temperature Base:	60	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	0.6280	1043.2	1061.7	1060.0	0.729	2.954	86.440	8.823	0.938	0.039	0.066	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1339.74	
2	0.6145	1024.2	1042.3	1041.0	0.579	3.073	88.759	6.782	0.719	0.031	0.049	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1329.57	
3	0.6242	1037.3	1055.6	1054.2	0.683	3.036	87.089	8.190	0.894	0.037	0.062	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1336.04	
4	0.5767	968.8	985.9	984.3	0.155	3.538	95.241	0.960	0.089	0.010	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1298.30	
5	0.5752	966.6	983.7	982.4	0.139	3.555	95.494	0.735	0.063	0.010	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1297.07	
6	0.6072	1012.9	1030.9	1030.0	0.499	3.196	90.017	5.605	0.608	0.027	0.041	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1322.76	
7	0.6212	1031.5	1049.8	1048.7	0.653	3.149	87.561	7.718	0.822	0.033	0.055	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1331.82	
8	0.6207	1032.2	1050.5	1049.1	0.644	3.072	87.675	7.684	0.826	0.034	0.055	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1333.32	
9	0.6265	1040.6	1059.0	1057.5	0.699	3.021	86.730	8.473	0.958	0.040	0.067	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1337.91	
10	0.5898	987.9	1005.4	1004.1	0.295	3.391	93.061	2.848	0.348	0.023	0.028	0.003	0.002	0.000	0.000	0.000	0.000	0.000	1309.08	
11	0.5723	962.5	979.5	978.3	0.106	3.582	95.994	0.294	0.016	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1294.84	
12	0.5744	965.7	982.8	981.5	0.131	3.545	95.646	0.610	0.055	0.010	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1296.80	
13	0.5729	963.6	980.7	979.2	0.115	3.555	95.905	0.388	0.028	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.68	
14	0.5893	987.5	1005.0	1003.6	0.190	3.523	93.268	2.635	0.286	0.029	0.025	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1309.19	
15	0.5819	976.8	994.1	992.9	0.160	3.530	94.443	1.638	0.172	0.020	0.014	0.011	0.010	0.000	0.000	0.000	0.000	0.000	1303.20	
16	0.6061	1011.1	1029.0	1027.7	0.425	3.315	90.292	5.268	0.596	0.034	0.045	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1321.65	
17	0.6223	1031.7	1050.0	1048.7	0.643	3.253	87.256	7.981	0.782	0.030	0.048	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1330.87	
18	0.6348	1052.6	1071.3	1069.9	0.774	2.952	85.262	9.800	1.085	0.043	0.073	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1344.56	
19	0.6392	1059.6	1078.4	1077.1	0.844	2.837	84.423	10.691	1.088	0.039	0.067	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1348.80	
20	0.6355	1053.8	1072.5	1071.0	0.810	2.896	85.019	10.196	0.968	0.037	0.062	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1345.29	
21	0.6312	1047.4	1066.0	1064.4	0.771	2.935	85.746	9.573	0.876	0.033	0.055	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1341.75	
22	0.6263	1040.8	1059.2	1057.6	0.720	2.959	86.637	8.750	0.841	0.032	0.052	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1338.40	
23	0.6258	1039.8	1058.2	1056.8	0.712	2.989	86.695	8.685	0.826	0.032	0.052	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1337.64	
24	0.5781	970.6	987.8	986.7	0.173	3.530	94.983	1.195	0.102	0.011	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1299.23	
25	0.5737	964.0	981.1	980.0	0.119	3.600	95.742	0.494	0.035	0.008	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.31	
26	0.5751	966.3	983.4	982.2	0.137	3.572	95.490	0.732	0.057	0.009	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1296.73	
27	0.6009	1001.8	1019.5	1018.2	0.425	3.391	90.991	4.706	0.435	0.020	0.027	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1315.14	
28	0.6224	1034.4	1052.7	1051.6	0.666	3.065	87.363	7.973	0.832	0.034	0.058	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1334.29	
29	0.6261	1041.2	1059.6	1058.5	0.708	2.932	86.768	8.573	0.911	0.036	0.061	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1339.15	
30	0.6294	1045.1	1063.6	1062.2	0.755	2.934	86.168	9.098	0.936	0.036	0.063	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1340.64	
31	0.6314	1048.0	1066.6	1065.1	0.775	2.911	85.800	9.450	0.955	0.036	0.063	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1342.29	
Avg	0.6075	1013.0	1031.2	1029.8	0.491	3.219	89.934	5.695	0.585	0.027	0.039	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1322.81	

August-22

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	
8/1/2022	8/2/2022	0	0	0	869	1,057	1216	1216.000	8/1/2022
8/2/2022	8/3/2022	0	0	0	786	953	1213	1213.000	8/2/2022
8/3/2022	8/4/2022	0	0	0	835	1,010	1209.3	1209.300	8/3/2022
8/4/2022	8/5/2022	0	0	0	998	1,209	1210.8	1210.800	8/4/2022
8/5/2022	8/6/2022	0	0	0	798	967	1211.2	1211.200	8/5/2022
8/6/2022	8/7/2022	0	0	0	787	951	1209.2	1209.200	8/6/2022
8/7/2022	8/8/2022	0	0	0	849	1,025	1207.7	1207.700	8/7/2022
8/8/2022	8/9/2022	0	0	0	835	1,001	1198.8	1198.800	8/8/2022
8/9/2022	8/10/2022	0	0	0	1,073	1,286	1199.7	1199.700	8/9/2022
8/10/2022	8/11/2022	464	506	1091	922	1,114	1207.8	1168.698	8/10/2022
8/11/2022	8/12/2022	0	0	0	1,045	1,262	1208.4	1208.400	8/11/2022
8/12/2022	8/13/2022	0	0	0	880	1,059	1204.6	1204.600	8/12/2022
8/13/2022	8/14/2022	0	0	0	835	1,005	1202.9	1202.900	8/13/2022
8/14/2022	8/15/2022	0	0	0	850	1,019	1197.7	1197.700	8/14/2022
8/15/2022	8/16/2022	0	0	0	984	1,166	1184.9	1184.900	8/15/2022
8/16/2022	8/17/2022	0	0	0	894	1,062	1186.9	1186.900	8/16/2022
8/17/2022	8/18/2022	0	0	0	867	1,031	1188.3	1188.300	8/17/2022
8/18/2022	8/19/2022	0	0	0	857	980	1143.3	1143.300	8/18/2022
8/19/2022	8/20/2022	0	0	0	1,017	1,190	1167.8	1167.800	8/19/2022
8/20/2022	8/21/2022	0	0	0	822	968	1178.4	1178.400	8/20/2022
8/21/2022	8/22/2022	0	0	0	802	950	1185.4	1185.400	8/21/2022
8/22/2022	8/23/2022	0	0	0	868	1,034	1191.1	1191.100	8/22/2022
8/23/2022	8/24/2022	1	1	1078.9	901	1,073	1191.3	1191.175	8/23/2022
8/24/2022	8/25/2022	2,542	2,736	1076.6	987	1,192	1207.8	1113.294	8/24/2022
8/25/2022	8/26/2022	0	0	0	1,060	1,269	1196	1196.000	8/25/2022
8/26/2022	8/27/2022	0	0	0	904	1,078	1193.4	1193.400	8/26/2022
8/27/2022	8/28/2022	0	0	0	953	1,144	1200.3	1200.300	8/27/2022
8/28/2022	8/29/2022	0	0	0	899	1,087	1209.7	1209.700	8/28/2022
8/29/2022	8/30/2022	0	0	0	972	1,170	1204.6	1204.600	8/29/2022
8/30/2022	8/31/2022	0	0	0	892	1,076	1207	1207.000	8/30/2022
8/31/2022	9/1/2022	0	0	0	891	1,070	1201.3	1201.300	8/31/2022
		3,007	3,243	104.7258	27,932	33,458	1197.8903	1193.5764	



Alliance Pipeline

DAILY ANALYSIS --- USA
 ND07MD1 --- Hankinson Sales
 August 2022

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	1,161.367	0.6636	84.2512	9.6006	3.6893	0.3890	0.6782	0.0751	0.0616	0.0284	0.8713	0.3458	0.0095
2	1,160.078	0.6624	84.3727	9.5941	3.6223	0.3867	0.6661	0.0740	0.0588	0.0269	0.8447	0.3444	0.0092
3	1,160.784	0.6629	84.2355	9.7228	3.6450	0.3803	0.6621	0.0686	0.0565	0.0242	0.8518	0.3435	0.0093
4	1,161.535	0.6636	84.1785	9.6927	3.6934	0.3832	0.6740	0.0707	0.0579	0.0246	0.8840	0.3316	0.0094
5	1,158.460	0.6621	84.3050	9.6836	3.5861	0.3711	0.6467	0.0690	0.0560	0.0240	0.8933	0.3557	0.0095
6	1,159.248	0.6621	84.3385	9.6474	3.5999	0.3749	0.6572	0.0714	0.0585	0.0255	0.8834	0.3337	0.0096
7	1,158.331	0.6613	84.4159	9.6365	3.5893	0.3656	0.6468	0.0661	0.0529	0.0225	0.8670	0.3277	0.0098
8	1,160.774	0.6630	84.2442	9.6669	3.6599	0.3743	0.6739	0.0729	0.0592	0.0253	0.8847	0.3289	0.0098
9	1,161.991	0.6640	84.1304	9.7292	3.6812	0.3770	0.6868	0.0733	0.0608	0.0279	0.8832	0.3408	0.0093
10	1,162.189	0.6638	84.1041	9.8083	3.6780	0.3722	0.6807	0.0678	0.0564	0.0257	0.8651	0.3323	0.0094
11	1,159.860	0.6626	84.2633	9.7168	3.6090	0.3669	0.6680	0.0685	0.0564	0.0258	0.8722	0.3436	0.0094
12	1,157.416	0.6611	84.5154	9.4886	3.5616	0.3653	0.6726	0.0693	0.0571	0.0282	0.9000	0.3329	0.0089
13	1,152.763	0.6575	84.9587	9.3291	3.4027	0.3478	0.6214	0.0691	0.0565	0.0287	0.8458	0.3312	0.0090
14	1,152.242	0.6568	85.1876	9.1027	3.3977	0.3587	0.6512	0.0674	0.0565	0.0297	0.8014	0.3380	0.0090
15	1,152.292	0.6563	85.1646	9.2347	3.3427	0.3518	0.6402	0.0659	0.0569	0.0288	0.7958	0.3093	0.0093
16	1,150.547	0.6552	85.3894	9.0587	3.3181	0.3526	0.6289	0.0678	0.0580	0.0282	0.7617	0.3274	0.0093
17	1,153.570	0.6570	85.1825	9.1409	3.4150	0.3656	0.6643	0.0664	0.0530	0.0252	0.7484	0.3297	0.0091
18	1,154.323	0.6575	85.1525	9.1516	3.4201	0.3703	0.6719	0.0692	0.0563	0.0270	0.7318	0.3407	0.0087
19	1,151.915	0.6560	85.3482	9.0160	3.3689	0.3654	0.6664	0.0649	0.0532	0.0263	0.7534	0.3288	0.0086
20	1,151.147	0.6553	85.4045	9.0323	3.3432	0.3610	0.6409	0.0675	0.0525	0.0248	0.7327	0.3313	0.0093
21	1,156.061	0.6594	84.9600	9.1089	3.5308	0.3878	0.7046	0.0730	0.0544	0.0253	0.8077	0.3382	0.0094
22	1,159.621	0.6626	84.4808	9.3696	3.6217	0.3949	0.7209	0.0759	0.0595	0.0329	0.9006	0.3342	0.0090
23	1,154.928	0.6594	84.7167	9.4188	3.4906	0.3627	0.6282	0.0690	0.0568	0.0302	0.8782	0.3397	0.0092
24	1,154.158	0.6581	84.9618	9.2936	3.4272	0.3668	0.6443	0.0676	0.0568	0.0295	0.8009	0.3418	0.0096
25	1,156.548	0.6609	84.6105	9.4234	3.4984	0.3776	0.6646	0.0731	0.0614	0.0379	0.8783	0.3655	0.0093
26	1,157.236	0.6613	84.5273	9.4326	3.5678	0.3786	0.6778	0.0674	0.0567	0.0288	0.9067	0.3471	0.0092
27	1,158.092	0.6616	84.4539	9.5383	3.5476	0.3759	0.6756	0.0734	0.0596	0.0295	0.9123	0.3249	0.0091
28	1,158.218	0.6620	84.3857	9.5219	3.5878	0.3809	0.6876	0.0669	0.0563	0.0279	0.9516	0.3244	0.0091
29	1,157.499	0.6614	84.5341	9.4259	3.5528	0.3751	0.6828	0.0737	0.0623	0.0322	0.9167	0.3349	0.0095
30	1,158.656	0.6620	84.4665	9.4603	3.5955	0.3775	0.6884	0.0721	0.0607	0.0324	0.8928	0.3450	0.0089
31	1,155.685	0.6600	84.6854	9.3972	3.5072	0.3655	0.6516	0.0711	0.0593	0.0299	0.8721	0.3513	0.0095
Volume	1,157.009	0.6604	84.6437	9.4337	3.5336	0.3716	0.6652	0.0699	0.0574	0.0279	0.8510	0.3369	0.0093
Weight Avg Energy	1,157.018	0.6604	84.6427	9.4343	3.5339	0.3717	0.6652	0.0699	0.0574	0.0279	0.8511	0.3369	0.0093



Alliance Pipeline

DAILY ANALYSIS --- USA
 ND14MD1 --- Milnor Sales
 August 2022

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	1,160.821	0.6631	84.3242	9.5597	3.6716	0.3891	0.6754	0.0753	0.0616	0.0278	0.8627	0.3432	0.0093
2	1,160.257	0.6626	84.3274	9.6378	3.6268	0.3846	0.6637	0.0728	0.0579	0.0264	0.8490	0.3442	0.0093
3	1,161.074	0.6631	84.2240	9.7167	3.6540	0.3820	0.6668	0.0693	0.0574	0.0246	0.8546	0.3413	0.0093
4	1,161.140	0.6634	84.1844	9.6985	3.6819	0.3809	0.6698	0.0702	0.0573	0.0245	0.8890	0.3342	0.0094
5	1,158.562	0.6621	84.3109	9.6809	3.5872	0.3719	0.6474	0.0691	0.0563	0.0240	0.8909	0.3520	0.0095
6	1,159.167	0.6621	84.3278	9.6452	3.5993	0.3747	0.6612	0.0706	0.0583	0.0254	0.9012	0.3267	0.0095
7	1,159.496	0.6621	84.3454	9.6446	3.6257	0.3704	0.6599	0.0683	0.0553	0.0232	0.8660	0.3314	0.0098
8	1,160.945	0.6632	84.2197	9.6774	3.6675	0.3743	0.6746	0.0730	0.0592	0.0256	0.8894	0.3295	0.0097
9	1,161.919	0.6639	84.1280	9.7489	3.6750	0.3749	0.6851	0.0719	0.0596	0.0276	0.8793	0.3403	0.0094
10	1,161.853	0.6635	84.1411	9.8125	3.6532	0.3715	0.6741	0.0688	0.0573	0.0259	0.8521	0.3341	0.0094
11	1,160.512	0.6631	84.2172	9.7000	3.6412	0.3707	0.6814	0.0687	0.0568	0.0261	0.8819	0.3465	0.0095
12	1,156.720	0.6607	84.5749	9.4538	3.5399	0.3640	0.6690	0.0697	0.0573	0.0284	0.8990	0.3351	0.0089
13	1,152.556	0.6570	85.0577	9.2795	3.3893	0.3498	0.6146	0.0707	0.0580	0.0296	0.8110	0.3306	0.0091
14	1,153.478	0.6582	84.9560	9.2329	3.4348	0.3597	0.6656	0.0660	0.0553	0.0281	0.8580	0.3347	0.0090
15	1,152.031	0.6561	85.2023	9.2129	3.3354	0.3513	0.6378	0.0660	0.0572	0.0291	0.7896	0.3090	0.0093
16	1,151.062	0.6556	85.3387	9.0756	3.3363	0.3548	0.6357	0.0680	0.0574	0.0277	0.7665	0.3299	0.0092
17	1,153.668	0.6571	85.1760	9.1385	3.4216	0.3659	0.6659	0.0661	0.0529	0.0249	0.7486	0.3303	0.0091
18	1,154.249	0.6574	85.1617	9.1611	3.4089	0.3700	0.6695	0.0693	0.0565	0.0274	0.7298	0.3371	0.0087
19	1,151.610	0.6558	85.3645	9.0067	3.3626	0.3643	0.6644	0.0645	0.0529	0.0260	0.7536	0.3320	0.0086
20	1,151.025	0.6553	85.4213	9.0110	3.3378	0.3614	0.6443	0.0678	0.0532	0.0260	0.7370	0.3311	0.0091
21	1,158.587	0.6614	84.7194	9.1837	3.6203	0.3985	0.7319	0.0754	0.0559	0.0241	0.8424	0.3390	0.0094
22	1,159.350	0.6624	84.4537	9.4392	3.5978	0.3903	0.7086	0.0748	0.0588	0.0328	0.9012	0.3338	0.0089
23	1,154.704	0.6592	84.7697	9.3574	3.4932	0.3642	0.6329	0.0694	0.0574	0.0305	0.8746	0.3414	0.0093
24	1,154.439	0.6584	84.9065	9.3364	3.4344	0.3658	0.6447	0.0669	0.0560	0.0291	0.8089	0.3417	0.0096
25	1,155.892	0.6605	84.6557	9.3942	3.4856	0.3758	0.6573	0.0729	0.0616	0.0386	0.8838	0.3654	0.0092
26	1,157.697	0.6615	84.4926	9.4599	3.5731	0.3795	0.6819	0.0676	0.0570	0.0289	0.9057	0.3445	0.0093
27	1,159.250	0.6623	84.3781	9.5552	3.5713	0.3815	0.6938	0.0755	0.0613	0.0312	0.9267	0.3164	0.0091
28	1,158.430	0.6621	84.4153	9.4757	3.5942	0.3823	0.6986	0.0690	0.0582	0.0279	0.9445	0.3251	0.0092
29	1,157.376	0.6613	84.5465	9.4124	3.5545	0.3746	0.6829	0.0733	0.0619	0.0320	0.9147	0.3375	0.0096
30	1,158.614	0.6620	84.4583	9.4746	3.5935	0.3764	0.6850	0.0717	0.0605	0.0325	0.8927	0.3458	0.0089
31	1,156.038	0.6602	84.6499	9.4193	3.5174	0.3658	0.6531	0.0711	0.0593	0.0299	0.8747	0.3501	0.0095
Volume	1,157.384	0.6607	84.6094	9.4480	3.5441	0.3732	0.6685	0.0701	0.0578	0.0281	0.8536	0.3378	0.0093
Weight Avg Energy	1,157.381	0.6607	84.6100	9.4473	3.5441	0.3732	0.6686	0.0701	0.0578	0.0281	0.8537	0.3377	0.0093

August-22

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		
8/1/2022	8/2/2022	0	0	1209.9	124	131	1056.6	1056.600	8/1/2022
8/2/2022	8/3/2022	1	2	1209.9	112	119	1056.6	1057.957	8/2/2022
8/3/2022	8/4/2022	11	13	1209.9	121	128	1056.6	1069.375	8/3/2022
8/4/2022	8/5/2022	5	6	1209.9	94	99	1056.6	1064.342	8/4/2022
8/5/2022	8/6/2022	9	11	1209.9	118	124	1056.6	1067.464	8/5/2022
8/6/2022	8/7/2022	2	2	1209.9	107	113	1056.6	1059.413	8/6/2022
8/7/2022	8/8/2022	1	2	1209.9	110	117	1056.6	1057.981	8/7/2022
8/8/2022	8/9/2022	11	13	1209.9	111	117	1056.6	1070.422	8/8/2022
8/9/2022	8/10/2022	24	29	1209.9	121	128	1056.6	1081.974	8/9/2022
8/10/2022	8/11/2022	30	37	1209.9	105	111	1056.6	1090.667	8/10/2022
8/11/2022	8/12/2022	31	37	1209.9	124	131	1056.6	1087.260	8/11/2022
8/12/2022	8/13/2022	9	11	1209.9	117	123	1056.6	1067.550	8/12/2022
8/13/2022	8/14/2022	8	10	1209.9	122	129	1056.6	1066.034	8/13/2022
8/14/2022	8/15/2022	5	6	1209.9	108	114	1056.6	1063.383	8/14/2022
8/15/2022	8/16/2022	12	15	1209.9	116	122	1056.6	1070.972	8/15/2022
8/16/2022	8/17/2022	11	14	1209.9	105	111	1056.6	1071.137	8/16/2022
8/17/2022	8/18/2022	0	0	1209.9	112	119	1056.6	1056.600	8/17/2022
8/18/2022	8/19/2022	8	9	1209.9	134	142	1056.6	1065.237	8/18/2022
8/19/2022	8/20/2022	3	3	1209.9	109	115	1056.6	1060.706	8/19/2022
8/20/2022	8/21/2022	3	4	1209.9	109	115	1056.6	1060.706	8/20/2022
8/21/2022	8/22/2022	2	3	1209.9	114	120	1056.6	1059.243	8/21/2022
8/22/2022	8/23/2022	1	1	1209.9	103	109	1056.6	1058.074	8/22/2022
8/23/2022	8/24/2022	6	7	1209.9	136	144	1056.6	1063.077	8/23/2022
8/24/2022	8/25/2022	44	53	1209.9	155	163	1056.6	1090.495	8/24/2022
8/25/2022	8/26/2022	25	30	1209.9	142	150	1056.6	1079.549	8/25/2022
8/26/2022	8/27/2022	5	6	1209.9	128	135	1056.6	1062.363	8/26/2022
8/27/2022	8/28/2022	7	9	1209.9	103	109	1056.6	1066.355	8/27/2022
8/28/2022	8/29/2022	16	19	1209.9	117	124	1056.6	1075.042	8/28/2022
8/29/2022	8/30/2022	11	13	1209.9	119	126	1056.6	1069.572	8/29/2022
8/30/2022	8/31/2022	18	22	1209.9	128	136	1056.6	1075.500	8/30/2022
8/31/2022	9/1/2022	16	20	1209.9	110	117	1056.6	1076.067	8/31/2022
		335	407	1209.9000	3,634	3,841	1056.6000	1068.4231	

Tsp	EffDate	EndDate	Device	GasDay	EndDt	BTU	SpecGrav	CriconTherm	WobbeIndex	CO2	N2	Methane	Ethane	Propane	iButane	nButane	iPentane	nPentane	NeoPentane	CGPlus	Hydrogen	Helium	WaterVapor	TotalSulfur	HydrogenSulfur	Oxygen
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/1/2022	8/2/2022	1080	0.6387	-54	1351.373186	0.9763	2.439	83.9863	11.5815	0.8076	0.0179	0.0308	0.0007	0.0004	N/A	0	0.136	0.0236	0.4386	0.0279	0.0294	0.0013
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/2/2022	8/3/2022	1079	0.6382	-54.7	1350.65069	0.979	2.4658	84.0157	11.5647	0.7597	0.0166	0.0295	0.0011	0.0011	N/A	0.0001	0.1429	0.0239	0.4324	0.0246	0.0235	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/3/2022	8/4/2022	1082	0.6403	-52.5	1352.183119	0.9763	2.4785	83.6789	11.7844	0.8495	0.0207	0.0357	0.0013	0.0011	N/A	0	0.15	0.0237	0.435	0.0246	0.0221	0.0014
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/4/2022	8/5/2022	1085	0.6418	-50.8	1354.346787	0.9698	2.4893	83.5399	11.846	0.9386	0.0247	0.0432	0.0016	0.0016	N/A	0.0001	0.1211	0.0241	0.4471	0.0151	0.0052	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/5/2022	8/6/2022	1086	0.6423	-49.3	1355.067297	0.9761	2.4465	83.4528	11.9148	0.9485	0.0321	0.0533	0.0031	0.0023	N/A	0.0006	0.1468	0.0233	0.4292	0.0136	0.003	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/6/2022	8/7/2022	1086	0.6429	-51	1354.434827	0.9869	2.5015	83.1275	12.2875	0.8536	0.0208	0.0358	0.0007	0.0003	N/A	0.0001	0.1616	0.0238	0.4097	0.013	0.0029	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/7/2022	8/8/2022	1087	0.6438	-49.8	1354.734085	0.985	2.533	83.0275	12.2838	0.9164	0.0242	0.0411	0.0017	0.0013	N/A	0.0001	0.162	0.024	0.4304	0.0129	0.0027	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/8/2022	8/9/2022	1089	0.6448	-49.1	1356.173848	0.9796	2.4829	82.8763	12.5197	0.9191	0.0225	0.039	0.0016	0.0012	N/A	0.0002	0.1341	0.0239	0.4203	0.0128	0.0028	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/9/2022	8/10/2022	1091	0.6454	-48.5	1358.032833	0.978	2.4464	82.6857	12.7202	0.9193	0.0217	0.0381	0.0017	0.0014	N/A	0.0002	0.1637	0.0237	0.4285	0.0129	0.0028	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/10/2022	8/11/2022	1092	0.6469	-47.3	1357.700765	0.9811	2.5027	82.4382	12.878	0.9523	0.0227	0.0414	0.0023	0.0022	N/A	0.0003	0.1552	0.0238	0.4237	0.0126	0.0028	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/11/2022	8/12/2022	1091	0.6476	-47.7	1355.724144	0.9981	2.6102	82.2538	12.9674	0.9286	0.0201	0.036	0.0017	0.0015	N/A	0.0003	0.1581	0.0244	0.4168	0.0125	0.0027	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/11/2022	8/13/2022	1091	0.6476	-47.7	1355.724144	0.9981	2.6102	82.2538	12.9674	0.9286	0.0201	0.036	0.0017	0.0015	N/A	0.0003	0.1581	0.0244	0.4168	0.0125	0.0027	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/11/2022	8/14/2022	1091	0.6476	-47.7	1355.724144	0.9981	2.6102	82.2538	12.9674	0.9286	0.0201	0.036	0.0017	0.0015	N/A	0.0003	0.1581	0.0244	0.4168	0.0125	0.0027	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/15/2022	8/16/2022	1089	0.6452	-49.6	1355.753394	0.9974	2.5319	82.7506	12.6091	0.9031	0.0182	0.0315	0.0011	0.0006	N/A	0.0001	0.1326	0.0239	0.4178	0.0125	0.0028	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/16/2022	8/17/2022	1085	0.6439	-50.6	1352.136466	1.0061	2.593	82.9778	12.3283	0.8713	0.0196	0.0338	0.0014	0.001	N/A	0	0.1433	0.0245	0.4259	0.0134	0.0029	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/17/2022	8/18/2022	1084	0.6427	-51.9	1352.150809	1.0183	2.5465	83.142	12.295	0.7799	0.0176	0.0315	0.0014	0.0012	N/A	0.0001	0.1426	0.0242	0.4243	0.0125	0.0026	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/18/2022	8/19/2022	1084	0.6421	-52.1	1352.782409	1.0131	2.4887	83.272	12.2181	0.7903	0.0173	0.0299	0.001	0.0009	N/A	0	0.1452	0.0236	0.4195	0.0128	0.0026	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/19/2022	8/20/2022	1084	0.6424	-51.8	1352.466498	1.0187	2.5169	83.1802	12.2597	0.7873	0.018	0.0319	0.0016	0.0014	N/A	0	0.1607	0.0237	0.4241	0.0124	0.0027	0.0011
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/20/2022	8/21/2022	1082	0.6413	-52.1	1351.128456	0.9968	2.5497	83.4265	11.9684	0.8139	0.0208	0.0353	0.0019	0.0017	N/A	0.0002	0.1607	0.0243	0.4301	0.0122	0.0027	0.0008
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/21/2022	8/22/2022	1080	0.6389	-53.1	1351.161654	0.977	2.4941	83.9442	11.5152	0.826	0.0233	0.0393	0.0022	0.0017	N/A	0.0004	0.1528	0.0239	0.457	0.012	0.0028	0.001
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/22/2022	8/23/2022	1082	0.638	-51.9	1354.618247	0.9313	2.3254	84.3581	11.2668	0.9048	0.0296	0.0596	0.003	0.0028	N/A	0.0002	0.0955	0.0232	0.4675	0.017	0.0499	0.001
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/23/2022	8/24/2022	1081	0.6375	-52.2	1353.896917	0.9277	2.3775	84.3429	11.1607	0.919	0.0286	0.0578	0.0032	0.003	N/A	0	0.1569	0.023	0.4686	0.0238	0.0571	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/24/2022	8/25/2022	1076	0.6339	-56.2	1351.455952	0.9149	2.3317	84.7879	10.9149	0.7743	0.0189	0.0359	0.0019	0.0019	N/A	0	0.1946	0.0232	0.47	0.0055	0.0132	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/25/2022	8/26/2022	1076	0.6354	-56	1349.898907	0.9433	2.4439	84.4766	11.1034	0.7625	0.0172	0.0325	0.0015	0.0012	N/A	0	0.1948	0.0232	0.4779	0.0395	0.0421	0.0013
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/26/2022	8/27/2022	1076	0.6362	-55.6	1349.010838	0.9662	2.5149	84.3413	11.1461	0.7625	0.0185	0.0354	0.0017	0.0015	N/A	0.0001	0.1879	0.0241	0.4743	0.0368	0.0496	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/27/2022	8/28/2022	1079	0.6389	-53.2	1349.910578	0.973	2.5817	83.8516	11.445	0.8539	0.0217	0.0405	0.0019	0.0017	N/A	0.0001	0.205	0.0239	0.4525	0.0341	0.0569	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/28/2022	8/29/2022	1077	0.6378	-54.6	1348.56985	0.9749	2.5711	83.9686	11.4008	0.7862	0.0189	0.034	0.0013	0.0009	N/A	0.0001	0.2195	0.0239	0.4481	0.0294	0.0616	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/29/2022	8/30/2022	1072	0.635	-56.6	1345.265246	0.9804	2.5925	84.4991	10.9179	0.7215	0.0192	0.0363	0.0018	0.0015	N/A	0.0003	0.2052	0.0244	0.4544	0.0323	0.0581	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/30/2022	8/31/2022	1075	0.6368	-55.9	1347.122025	0.9774	2.573	84.3294	11.1868	0.7387	0.0181	0.0338	0.0016	0.0014	N/A	0.0001	0.1152	0.0246	0.4579	0.0391	0.0532	0.0012
NBPL	7/31/2022 0:00	9/1/2022 0:00	GLNU1 - GLEN ULLIN	8/31/2022	9/1/2022	1074	0.6351	-56.5	1347.668958	0.9477	2.5531	84.6255	10.8946	0.7509	0.0196	0.037	0.0018	0.0016	N/A	0.0001	0.1436	0.0246	0.4691	0.0363	0.0515	0.0011

NORTH DAKOTA HEATING VALUE ZONES		
ZONES	MEASURING DEVICE	LOCATION
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	Accumulated Sample	Watford City East Border
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	AUG22	JUL22	JUN22	MAY22	APR22	MAR22	FEB22	JAN22	DEC21	NOV21	OCT21	SEP21	ZONE
MT/ND	211	Sidney Border - MonDak Tfr - Sidney Plt	1198	1205	1200	1198	1185	1191	1196	1196	1171	1215	1208	1201	1213	211
ND	24	Williston Border - Charbonneau Station	1176	1192	1195	1187	1185	1188	1189	1180	1155	1152	1161	1159	1167	24
ND	25	Watford City West Border	1202	1210	1201	1199	1195	1200	1197	1200	1198	1202	1208	1206	1205	25
ND	28	Bismarck Station - Glen Ullin Station	1161	1198	1202	1204	1196	1087	1131	1131	1126	1142	1135	1185	1196	28
ND	31	Dickinson Brd - Belfield Trf - G Ullin Stn	1120	1087	1094	1105	1100	1108	1130	1132	1132	1143	1141	1141	1130	31
ND/MT	32	Cabin Creek Station - Belfied Transfer	1125	1129	1115	1124	1138	1126	1095	1122	1127	1131	1129	1132	1136	32
ND	33	Little Knife Plant	1177	1174	1177	1175	1175	1176	1178	1176	1173	1176	1182	1177	1179	33
ND	34	Badlands Plant/Bowman Border	1044	1031	1033	1014	1019	1021	1070	1087	1097	1093	981	1022	1059	34
ND	43	Watford City East Border	1058	1057	1062	1044	1036	1042	1042	1108	1094	1042	1047	1060	1062	43
ND/MT	241	Fairview Border	1192	1197	1199	1186	1178	1191	1191	1197	1200	1208	1197	1162	1193	241
ND	267	North Tioga Transfer - Nesson Plant	1157	1184	1184	1173	1172	1176	1172	1157	1122	1122	1137	1135	1145	267
ND	261	Tioga Comp Station - Robinson Lake Plan	1186	1196	1201	1200	1200	1191	1191	1155	1175	1161	1176	1197	1192	261
ND	262	Minot Bdr - Palermo Bdr - Bismarck Stn	1198	1196	1203	1205	1202	1202	1194	1187	1180	1199	1198	1211	1203	262
ND	263	Lignite Plant	1131	1131	1130	1131	1131	1131	1131	1131	1131	1131	1131	1131	1134	263
ND	264	Epping Border	1171	1192	1188	1182	1188	1188	1185	1173	1145	1147	1152	1145	1164	264
ND	265	Tioga Comp Station - County Line Plant	1165	1178	1180	1176	1163	1170	1167	1150	1157	1152	1159	1166	1165	265
ND	266	County Line Plant	1176	1182	1179	1179	1167	1173	1172	1166	1175	1178	1183	1174	1185	266
ND	271	Bismarck Station - Cleveland Station	1190	1198	1202	1205	1205	1164	1185	1169	1162	1188	1198	1208	1197	271
ND	272	Cleveland Station - Mapleton	1191	1198	1202	1205	1204	1175	1184	1167	1161	1189	1198	1211	1196	272
ND	273	Cleveland Station - Grafton Border	1189	1198	1200	1205	1202	1168	1176	1166	1161	1188	1198	1210	1195	273
ND	550	Mandan Border / NBPL-St Anthony	1153	1194	1182	1201	1189	1087	1103	1119	1116	1136	1135	1173	1196	550
ND	610	MDU-Watford City BTU	1097	1068	1065	1063	1086	1093	1087	1138	1129	1095	1110	1130	1098	610
ND	802	NBPL - Linton	1083	1083	1086	1084	1074	1067	1073	1088	1091	1085	1086	1089	1094	802
ND	903	Hettinger Propane	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	903
ND	600	Alliance Pipeline - Hankinson	1155	1157	1160	1153	1151	1155	1157	1152	1149	1155	1158	1158	1158	600
ND	601	Alliance Pipeline - Milnor	1155	1157	1160	1153	1151	1154	1157	1152	1149	1154	1157	1158	1158	602

THERMAL ZONE VARIANCE DOCUMENTATION		
August 2022		
<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
No Variance		