

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

November 18, 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 – September 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 October 2022.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our suppliers for the month of September 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 September 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
Oct-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	1.1559
MDU-318-BEACH	032	1.0433
MDU-319-BELFIELD	032	1.0510
MDU-323-BERTHOLD	262	1.1296
MDU-327-BISMARCK	028	1.1559
MDU-330-BOWMAN	034	0.9458
MDU-337-BURLINGTON	262	1.1540
MDU-343-CARRINGTON	273	1.1559
MDU-344-CLEVELAND	272	1.1478
MDU-364-CAVALIER	273	1.1803
MDU-365-DAWSON	271	1.1478
MDU-368-DES LACS	262	1.1377
MDU-369-DICKINSON	031	1.0193
MDU-374-FT TOTTEN	273	1.1640
MDU-375-DEVILS LAKE	273	1.1640
MDU-379-BARLOW	273	1.1559
MDU-384-EPPING	264	1.1258
MDU-387-ELDRIDGE	272	1.1559
MDU-407-GLADSTONE	031	1.0193
MDU-411-GLEN ULLIN	031	1.0267
MDU-413-GOLVA	032	1.0280
MDU-416-GARRISON	262	1.1377
MDU-417-GRAFTON	273	1.1884
MDU-403-GWINNER	601	1.1399
MDU-429-HEBRON	031	1.0267
MDU-432-HETTINGER	903	2.4049
MDU-449-JAMESTOWN	272	1.1640
MDU-459-KILLDEER	033	1.1088
MDU-463-LANGDON	273	1.1559
MDU-469-LEFOR	031	1.0193
MDU-474-LIGNITE	263	1.0759
MDU-475-LINTON	802	1.0450
MDU-478-LINCOLN	028	1.1559
MDU-488-MCKENZIE	271	1.1559
MDU-494-MEDINA	271	1.1478
MDU-498-MANDAN	028	1.1559
MDU-500-MARMARTH	034	0.9528
MDU-505-MINOT	262	1.1296
MDU-510-MOTT	031	1.0193
MDU-512-MAX	262	1.1540
MDU-513-MILNOR	601	1.1399
MDU-522-NEW ENGLAND	031	1.0119
MDU-524-NEW SALEM	028	1.1315
MDU-532-NEW ROCKFORD	273	1.1559
MDU-539-PARK RIVER	273	1.1803
MDU-540-PALERMO	262	1.1296
MDU-558-RAY	264	1.1258

MDU-561-REGENT	031	1.0193
MDU-563-RHAME	034	0.9388
MDU-564-RICHARDTON	031	1.0119
MDU-568-ROSS	261	1.1215
MDU-572-RUTHVILLE	262	1.1540
MDU-574-SANBORN	272	1.1640
MDU-583-SENTINEL BUTTE	032	1.0433
MDU-588-SOUTH HEART	031	1.0193
MDU-717-SPIRITWOOD	272	1.3422
MDU-590-SPRINGBROOK	264	1.1258
MDU-591-STANLEY	261	1.1296
MDU-593-STEELE	271	1.1478
MDU-594-STERLING	028	1.1559
MDU-598-SHEYENNE	273	1.1640
MDU-605-SURREY	262	1.1540
MDU-610-TAPPEN	271	1.1478
MDU-611-TAYLOR	031	1.0119
MDU-616-TIOGA	260	1.1103
MDU-619-TURTLE LAKE	262	1.1377
MDU-620-TRENTON	024	1.1339
MDU-624-UNDERWOOD	262	1.1377
MDU-625-VALLEY CITY	272	1.1722
MDU-629-WALHALLA	273	1.1803
MDU-632-WATFORD CITY	610	1.0087
MDU-636-WHEELOCK	264	1.1178
MDU-637-WHITE EARTH	261	1.1296
MDU-642-WILLISTON	024	1.1339
MDU-646-WASHBURN	262	1.1459
MDU-647-WILTON	262	1.1296
MDU-664-RIVERDALE	262	1.1377
MDU-691-FAIRVIEW	241	1.1387
MDU-712-MINOT AFB	262	1.1540
MDU-718-FAIRMOUNT	600	1.1376
MDU-732-NEKOMA	273	1.1559
MDU-732-MSR SITE	273	1.1559

Source Daily Summary

September 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	0.7315	1187.2	1208.2	1206.9	1.238	3.132	69.100	22.587	3.441	0.150	0.309	0.022	0.020	0.000	0.000	0.000	0.000	0.000	1412.66	
2	0.7213	1173.9	1194.7	1193.7	1.165	3.094	70.963	20.994	3.275	0.150	0.314	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1406.65	
3	0.7221	1174.8	1195.6	1194.4	1.170	3.108	70.789	21.181	3.231	0.151	0.322	0.024	0.024	0.000	0.000	0.000	0.000	0.000	1406.95	
4	0.7222	1174.8	1195.6	1194.5	1.170	3.116	70.701	21.293	3.220	0.146	0.309	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1406.91	
5	0.7222	1173.9	1194.7	1193.6	1.181	3.149	70.772	21.131	3.260	0.149	0.313	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1405.85	
6	0.7214	1172.3	1193.0	1192.0	1.187	3.174	70.764	21.228	3.169	0.142	0.295	0.021	0.020	0.000	0.000	0.000	0.000	0.000	1404.61	
7	0.7274	1177.2	1198.1	1196.7	1.240	3.352	70.009	21.384	3.475	0.162	0.334	0.023	0.021	0.000	0.000	0.000	0.000	0.000	1404.72	
8	0.7225	1172.4	1193.1	1192.2	1.185	3.269	70.615	21.215	3.228	0.145	0.301	0.021	0.020	0.000	0.000	0.000	0.000	0.000	1403.68	
9	0.7230	1172.1	1192.9	1192.0	1.212	3.292	70.516	21.282	3.210	0.146	0.301	0.021	0.019	0.000	0.000	0.000	0.000	0.000	1402.88	
10	0.7242	1174.3	1195.1	1194.2	1.215	3.271	70.387	21.337	3.278	0.151	0.316	0.022	0.021	0.000	0.000	0.000	0.000	0.000	1404.27	
11	0.7248	1175.2	1196.0	1195.1	1.213	3.266	70.289	21.437	3.286	0.152	0.314	0.023	0.021	0.000	0.000	0.000	0.000	0.000	1404.90	
12	0.7272	1175.7	1196.5	1195.5	1.249	3.408	69.995	21.376	3.449	0.158	0.321	0.022	0.020	0.000	0.000	0.000	0.000	0.000	1403.12	
13	0.7310	1177.2	1198.0	1197.1	1.315	3.576	69.483	21.451	3.624	0.171	0.338	0.022	0.019	0.000	0.000	0.000	0.000	0.000	1401.21	
14	0.7305	1178.6	1199.4	1198.6	1.293	3.476	69.489	21.655	3.541	0.168	0.335	0.022	0.019	0.000	0.000	0.000	0.000	0.000	1403.37	
15	0.7312	1177.9	1198.7	1198.0	1.310	3.565	69.410	21.568	3.591	0.172	0.342	0.023	0.019	0.000	0.000	0.000	0.000	0.000	1401.81	
16	0.7324	1179.2	1200.1	1199.3	1.319	3.579	69.208	21.720	3.613	0.172	0.345	0.023	0.020	0.000	0.000	0.000	0.000	0.000	1402.30	
17	0.7343	1182.2	1203.2	1202.4	1.318	3.568	68.888	22.007	3.653	0.174	0.348	0.023	0.020	0.000	0.000	0.000	0.000	0.000	1404.12	
18	0.7336	1181.8	1202.8	1201.8	1.309	3.550	68.972	21.984	3.620	0.172	0.348	0.023	0.020	0.000	0.000	0.000	0.000	0.000	1404.23	
19	0.7314	1184.0	1205.0	1204.0	1.237	3.313	69.375	21.927	3.576	0.170	0.354	0.025	0.023	0.000	0.000	0.000	0.000	0.000	1409.02	
20	0.7316	1181.0	1201.9	1201.2	1.285	3.443	69.277	21.896	3.552	0.168	0.337	0.022	0.019	0.000	0.000	0.000	0.000	0.000	1405.22	
21	0.7290	1177.6	1198.4	1197.6	1.259	3.453	69.670	21.634	3.428	0.168	0.343	0.023	0.021	0.000	0.000	0.000	0.000	0.000	1403.56	
22	0.7229	1174.7	1195.5	1194.8	1.115	3.268	70.556	21.277	3.280	0.150	0.310	0.023	0.022	0.000	0.000	0.000	0.000	0.000	1406.14	
23	0.7231	1176.5	1197.3	1196.6	1.144	3.138	70.601	21.300	3.300	0.152	0.318	0.023	0.023	0.000	0.000	0.000	0.000	0.000	1408.02	
24	0.7234	1175.7	1196.5	1195.7	1.170	3.175	70.663	21.100	3.355	0.156	0.331	0.025	0.025	0.000	0.000	0.000	0.000	0.000	1406.76	
25	0.7227	1175.5	1196.3	1195.6	1.171	3.112	70.879	20.905	3.388	0.160	0.335	0.025	0.025	0.000	0.000	0.000	0.000	0.000	1407.30	
26	0.7227	1175.8	1196.7	1195.9	1.161	3.112	70.910	20.837	3.428	0.162	0.339	0.025	0.025	0.000	0.000	0.000	0.000	0.000	1407.62	
27	0.7219	1174.3	1195.1	1194.3	1.174	3.115	70.820	21.123	3.248	0.154	0.320	0.023	0.022	0.000	0.000	0.000	0.000	0.000	1406.54	
28	0.7197	1170.0	1190.8	1189.9	1.185	3.149	70.860	21.384	2.968	0.135	0.280	0.020	0.019	0.000	0.000	0.000	0.000	0.000	1403.63	
29	0.7266	1177.9	1198.8	1197.8	1.198	3.299	69.919	21.716	3.374	0.151	0.304	0.020	0.018	0.000	0.000	0.000	0.000	0.000	1406.33	
30	0.7359	1188.7	1209.7	1208.9	1.274	3.399	68.624	22.341	3.823	0.167	0.331	0.021	0.018	0.000	0.000	0.000	0.000	0.000	1410.15	
Avg	0.7265	1177.0	1197.9	1197.0	1.222	3.297	70.083	21.476	3.396	0.158	0.324	0.023	0.021	0.000	0.000	0.000	0.000	0.000	1405.48	

Source Daily Summary

September 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	0.7122	1174.0	1194.8	1193.9	1.016	2.457	72.283	20.909	2.870	0.126	0.286	0.024	0.030	0.000	0.000	0.000	0.000	0.000	1415.74	
2	0.7085	1168.2	1188.9	1188.3	1.020	2.454	72.715	20.752	2.635	0.116	0.261	0.021	0.025	0.000	0.000	0.000	0.000	0.000	1412.52	
3	0.7093	1169.2	1189.9	1189.2	1.024	2.472	72.502	20.983	2.596	0.115	0.261	0.022	0.026	0.000	0.000	0.000	0.000	0.000	1412.80	
4	0.7086	1168.4	1189.1	1188.4	1.023	2.456	72.487	21.120	2.534	0.104	0.235	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1412.57	
5	0.7081	1167.6	1188.3	1187.5	1.021	2.463	72.452	21.258	2.444	0.099	0.223	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1412.06	
6	0.7077	1166.4	1187.1	1186.4	1.020	2.498	72.488	21.219	2.422	0.097	0.219	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1411.05	
7	0.7088	1167.9	1188.5	1187.7	1.016	2.516	72.636	20.756	2.659	0.113	0.256	0.021	0.026	0.000	0.000	0.000	0.000	0.000	1411.71	
8	0.7083	1166.3	1187.0	1186.3	1.037	2.529	72.455	21.148	2.467	0.100	0.224	0.018	0.021	0.000	0.000	0.000	0.000	0.000	1410.39	
9	0.7089	1166.3	1187.0	1186.3	1.047	2.566	72.452	21.021	2.531	0.106	0.236	0.019	0.022	0.000	0.000	0.000	0.000	0.000	1409.84	
10	0.7102	1168.9	1189.6	1188.9	1.045	2.541	72.186	21.315	2.524	0.107	0.241	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1411.60	
11	0.7089	1166.9	1187.6	1186.9	1.041	2.539	72.443	21.077	2.507	0.108	0.242	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1410.56	
12	0.7057	1163.7	1184.3	1183.6	1.026	2.465	72.738	21.151	2.280	0.094	0.209	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1409.79	
13	0.7053	1162.3	1182.9	1182.2	1.022	2.522	72.603	21.398	2.150	0.085	0.188	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1408.47	
14	0.7037	1160.6	1181.2	1180.6	1.018	2.479	72.952	21.079	2.161	0.087	0.191	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1408.06	
15	0.7042	1161.5	1182.0	1181.5	1.015	2.475	72.779	21.327	2.106	0.083	0.184	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1408.61	
16	0.7083	1164.0	1184.6	1184.0	1.047	2.652	72.606	20.749	2.549	0.110	0.245	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1407.60	
17	0.7133	1171.0	1191.7	1191.1	1.065	2.675	72.028	20.918	2.853	0.127	0.284	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1411.00	
18	0.7129	1171.0	1191.8	1190.9	1.060	2.636	72.163	20.795	2.877	0.129	0.289	0.023	0.028	0.000	0.000	0.000	0.000	0.000	1411.52	
19	0.7069	1164.8	1185.5	1184.6	1.035	2.487	73.020	20.426	2.607	0.118	0.261	0.021	0.025	0.000	0.000	0.000	0.000	0.000	1410.00	
20	0.7029	1155.9	1176.4	1175.8	1.008	2.702	73.086	20.759	2.117	0.089	0.203	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1403.16	
21	0.7129	1171.5	1192.2	1191.5	1.054	2.613	72.173	20.813	2.876	0.129	0.290	0.023	0.028	0.000	0.000	0.000	0.000	0.000	1412.09	
22	0.7111	1171.2	1191.9	1191.2	1.052	2.469	72.599	20.500	2.900	0.134	0.294	0.024	0.028	0.000	0.000	0.000	0.000	0.000	1413.48	
23	0.7142	1173.0	1193.8	1193.3	1.058	2.644	71.989	20.881	2.941	0.133	0.300	0.024	0.029	0.000	0.000	0.000	0.000	0.000	1412.56	
24	0.7107	1170.7	1191.4	1190.9	1.046	2.472	72.676	20.412	2.918	0.133	0.293	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1413.27	
25	0.7101	1170.3	1191.1	1190.6	1.048	2.433	72.775	20.384	2.885	0.133	0.292	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1413.44	
26	0.7110	1170.9	1191.6	1191.1	1.040	2.502	72.563	20.542	2.874	0.132	0.296	0.024	0.028	0.000	0.000	0.000	0.000	0.000	1413.15	
27	0.7037	1161.1	1181.7	1181.1	1.017	2.452	72.820	21.359	2.054	0.083	0.184	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1408.65	
28	0.7053	1162.1	1182.7	1182.1	1.023	2.531	72.446	21.688	2.025	0.079	0.177	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1408.26	
29	0.7066	1163.3	1183.9	1183.2	1.031	2.568	72.357	21.568	2.172	0.085	0.188	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1408.43	
30	0.7061	1165.5	1186.2	1185.5	1.024	2.395	72.667	21.298	2.273	0.096	0.210	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1411.61	
Avg	0.7085	1167.0	1187.5	1186.8	1.033	2.522	72.538	20.987	2.527	0.108	0.242	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1410.80	

Gas Composition and Properties

Effective September 1, 2022

Attachment B
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Source #: 0602160
Name: FAIRVIEW BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.0853		2.3153
Nitrogen, N2	2.6748		3.6322
Methane, C1	71.9618		55.9606
Ethane, C2	20.8458	5.5790	30.3840
Propane, C3	2.9478	0.8127	6.3009
iso-Butane, iC4	0.1378	0.0451	0.3882
n-Butane, nC4	0.2905	0.0917	0.8185
iso-Pentane, iC5	0.0234	0.0086	0.0818
n-Pentane, nC5	0.0272	0.0099	0.0951
Neo-Pentane, neo			
Hexanes Plus, C6+	0.0056	0.0023	0.0234
Argon, Ar			
Carbon Monoxide, CO			
Hydrogen, H2			
Oxygen, O2			
Helium, He			
Water, H2O			
Hydrogen Sulfide, H2S			
Totals	100.0000	6.5500	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-10.410	
Cricondentherm	-0.065	
HV, Dry @ Base P, T	1192.79	
HV, Sat @ Base P, T	1172.03	
HV, Sat @ Sample P, T	1192.79	
Relative Density	0.7143	
C6+: 100		

Sample

Date: 09/01/2022 Type:

Tech: Tipton, Joshua

Pressure: 470 psi Temp.: °F

Gauge: Gauge H2O:

Atm. Pressure: H2S:

Remarks:

Analysis

Date: 09/01/2022 Instrument:

Tech: Tipton, Joshua Cylinder: 100

Remarks:

Source Daily Summary

September 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	0.7129	1164.7	1185.3	1184.8	1.051	3.042	71.389	21.785	2.361	0.095	0.232	0.020	0.025	0.000	0.000	0.000	0.000	0.000	1403.91	-5.25
2	0.7080	1162.6	1183.2	1182.7	1.013	2.765	71.863	22.033	2.049	0.073	0.172	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1406.29	-9.56
3	0.7001	1156.3	1176.8	1176.3	0.967	2.484	72.798	21.991	1.573	0.049	0.115	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1406.45	-15.24
4	0.7012	1158.3	1178.8	1178.3	0.963	2.473	72.504	22.287	1.647	0.036	0.078	0.005	0.006	0.000	0.000	0.000	0.000	0.000	1407.76	-15.59
5	0.7023	1159.3	1179.8	1179.3	0.967	2.511	72.344	22.345	1.700	0.038	0.082	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1407.84	-14.90
6	0.7030	1158.4	1178.9	1178.4	0.973	2.622	72.222	22.326	1.709	0.042	0.092	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1406.12	-14.56
7	0.7116	1158.4	1178.9	1178.3	1.058	3.301	71.250	21.883	2.227	0.077	0.177	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1397.59	-8.57
8	0.7076	1156.5	1177.0	1176.5	1.044	3.061	71.814	21.814	2.018	0.069	0.156	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1399.24	-10.93
9	0.6990	1152.6	1173.0	1172.4	1.006	2.550	73.076	21.543	1.668	0.044	0.097	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1402.98	-16.24
10	0.7004	1156.4	1176.9	1176.4	0.974	2.492	72.665	22.143	1.574	0.042	0.094	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1406.32	-15.87
11	0.6975	1152.2	1172.6	1172.1	0.972	2.492	73.034	21.936	1.435	0.036	0.081	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1404.09	-17.92
12	0.7001	1153.4	1173.8	1173.2	0.995	2.627	72.732	21.909	1.577	0.044	0.100	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1402.82	-16.20
13	0.7130	1150.9	1171.2	1170.8	1.091	3.832	71.517	20.527	2.696	0.094	0.212	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1387.20	-6.59
14	0.6885	1134.3	1154.4	1153.9	0.906	2.830	74.883	19.748	1.481	0.042	0.096	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1391.02	-22.18
15	0.6818	1120.5	1140.4	1140.0	0.830	3.146	76.319	17.922	1.600	0.051	0.115	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1380.95	-25.17
16	0.7014	1148.9	1169.2	1168.8	0.995	3.020	72.790	21.152	1.813	0.064	0.145	0.010	0.011	0.000	0.000	0.000	0.000	0.000	1396.21	-14.49
17	0.6987	1154.2	1174.7	1174.2	0.991	2.438	73.316	21.341	1.684	0.065	0.142	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1405.36	-14.85
18	0.6985	1154.4	1174.9	1174.4	0.995	2.411	73.305	21.415	1.648	0.064	0.139	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1405.69	-15.04
19	0.6958	1143.7	1163.9	1163.5	0.973	2.842	73.631	20.806	1.537	0.059	0.132	0.010	0.011	0.000	0.000	0.000	0.000	0.000	1395.35	-17.56
20	0.7075	1155.3	1175.8	1175.3	1.057	3.100	72.197	21.137	2.175	0.092	0.209	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1397.93	-8.94
21	0.6975	1153.1	1173.5	1173.0	0.992	2.404	73.435	21.367	1.583	0.062	0.135	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1405.05	-15.83
22	0.6955	1149.2	1169.5	1169.1	0.988	2.455	73.435	21.659	1.301	0.045	0.101	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1402.39	-18.84
23	0.6984	1153.3	1173.7	1173.3	0.990	2.469	73.137	21.688	1.520	0.055	0.121	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1404.51	-16.23
24	0.6994	1153.9	1174.3	1173.9	0.984	2.550	72.786	22.037	1.465	0.050	0.111	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1404.18	-16.33
25	0.7000	1153.9	1174.3	1173.9	0.978	2.608	72.676	22.091	1.472	0.049	0.110	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1403.59	-16.24
26	0.6983	1152.7	1173.1	1172.6	0.982	2.532	72.877	22.067	1.381	0.045	0.101	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1403.77	-17.32
27	0.7119	1157.3	1177.8	1177.3	1.079	3.364	70.930	22.391	1.958	0.077	0.176	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1395.93	-9.49
28	0.7196	1162.2	1182.8	1182.3	1.169	3.649	69.833	22.755	2.257	0.092	0.213	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1394.31	-5.13
29	0.7110	1157.6	1178.1	1177.6	1.079	3.261	71.177	22.187	2.030	0.072	0.168	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1397.24	-9.72
30	0.6990	1153.8	1174.3	1173.8	0.981	2.515	72.855	22.001	1.508	0.039	0.088	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1404.51	-16.92
Avg	0.7020	1153.0	1173.7	1173.2	1.001	2.795	72.626	21.610	1.755	0.059	0.133	0.010	0.011	0.000	0.000	0.000	0.000	0.000	1400.89	-14.26

*** End of Report ***

Source Daily Summary

September 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	0.7541	1174.9	1195.7	1194.8	0.883	6.532	66.176	20.044	5.704	0.184	0.424	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1376.89	
2	0.7578	1181.9	1202.8	1202.3	0.886	6.440	65.825	20.188	5.932	0.201	0.467	0.029	0.033	0.000	0.000	0.000	0.000	0.000	1381.78	
3	0.7574	1182.1	1203.1	1202.4	0.890	6.388	65.612	20.636	5.844	0.173	0.405	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1382.39	
4	0.7571	1180.9	1201.8	1201.1	0.887	6.437	65.691	20.493	5.853	0.183	0.406	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1381.25	
5	0.7569	1179.7	1200.6	1199.7	0.887	6.495	65.784	20.306	5.862	0.193	0.421	0.025	0.028	0.000	0.000	0.000	0.000	0.000	1379.96	
6	0.7590	1183.3	1204.3	1203.6	0.883	6.475	65.756	20.061	6.063	0.218	0.482	0.029	0.032	0.000	0.000	0.000	0.000	0.000	1382.27	
7	0.7621	1190.3	1211.4	1210.5	0.890	6.324	65.245	20.647	6.139	0.211	0.478	0.031	0.035	0.000	0.000	0.000	0.000	0.000	1387.60	
8	0.7589	1183.0	1203.9	1203.5	0.901	6.458	65.759	20.119	5.983	0.223	0.493	0.030	0.034	0.000	0.000	0.000	0.000	0.000	1382.01	
9	0.7540	1174.0	1194.8	1194.3	0.902	6.551	66.120	20.091	5.724	0.173	0.393	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1375.93	
10	0.7556	1178.0	1198.9	1198.4	0.905	6.448	65.985	20.187	5.835	0.174	0.412	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1379.18	
11	0.7586	1184.9	1205.9	1205.3	0.894	6.325	65.531	20.638	5.965	0.175	0.418	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1384.54	
12	0.7570	1182.4	1203.3	1202.6	0.892	6.336	65.824	20.391	5.882	0.185	0.434	0.027	0.030	0.000	0.000	0.000	0.000	0.000	1382.99	
13	0.7504	1173.2	1193.9	1193.5	0.899	6.265	66.711	20.005	5.486	0.176	0.406	0.024	0.027	0.000	0.000	0.000	0.000	0.000	1378.28	
14	0.7520	1173.7	1194.5	1194.0	0.892	6.394	66.285	20.297	5.572	0.155	0.362	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1377.44	
15	0.7207	1139.3	1159.5	1159.1	0.795	5.701	71.275	17.436	4.307	0.133	0.313	0.019	0.021	0.000	0.000	0.000	0.000	0.000	1365.83	
16	0.7457	1167.1	1187.8	1187.4	0.892	6.208	67.224	19.915	5.202	0.157	0.359	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1375.47	
17	0.7537	1176.2	1197.0	1196.5	0.890	6.403	66.133	20.311	5.648	0.170	0.395	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1378.79	
18	0.7466	1170.8	1191.6	1191.0	0.911	6.039	66.985	20.414	5.083	0.159	0.363	0.022	0.024	0.000	0.000	0.000	0.000	0.000	1379.05	
19	0.7217	1140.6	1160.8	1160.1	0.848	5.640	70.730	18.349	3.977	0.130	0.289	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1366.56	
20	0.7132	1142.8	1163.0	1162.6	1.002	4.476	71.528	19.796	2.798	0.110	0.253	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1377.24	
21	0.7538	1175.6	1196.4	1196.0	0.890	6.454	66.295	19.986	5.683	0.193	0.444	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1377.95	
22	0.7544	1176.5	1197.3	1196.9	0.895	6.444	66.100	20.241	5.655	0.184	0.427	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1378.49	
23	0.7558	1180.3	1201.2	1200.8	0.894	6.349	65.854	20.529	5.727	0.176	0.417	0.025	0.028	0.000	0.000	0.000	0.000	0.000	1381.63	
24	0.7541	1176.1	1196.9	1196.4	0.892	6.444	66.039	20.365	5.648	0.168	0.395	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1378.31	
25	0.7558	1179.4	1200.3	1199.8	0.895	6.398	65.866	20.465	5.734	0.176	0.415	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1380.56	
26	0.7546	1177.7	1198.5	1198.0	0.897	6.380	66.027	20.410	5.654	0.173	0.408	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1379.71	
27	0.7544	1177.5	1198.4	1197.9	0.895	6.385	66.031	20.404	5.651	0.173	0.409	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1379.68	
28	0.7563	1181.6	1202.5	1202.0	0.895	6.310	65.950	20.352	5.790	0.191	0.453	0.028	0.030	0.000	0.000	0.000	0.000	0.000	1382.74	
29	0.7565	1181.8	1202.7	1202.1	0.897	6.304	65.945	20.361	5.787	0.193	0.453	0.029	0.032	0.000	0.000	0.000	0.000	0.000	1382.84	
30	0.7563	1181.3	1202.2	1201.7	0.896	6.329	65.847	20.500	5.759	0.183	0.428	0.028	0.031	0.000	0.000	0.000	0.000	0.000	1382.39	
Avg	0.7515	1175.0	1195.7	1195.1	0.892	6.271	66.538	20.131	5.531	0.176	0.407	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1379.33	

Source Daily Summary

September 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	0.7577	1179.3	1200.1	1199.6	0.884	6.598	65.750	20.146	5.901	0.198	0.462	0.029	0.032	0.000	0.000	0.000	0.000	0.000	1378.74	
2	0.7565	1177.0	1197.9	1197.4	0.892	6.611	65.992	19.903	5.868	0.203	0.469	0.029	0.032	0.000	0.000	0.000	0.000	0.000	1377.20	
3	0.7581	1180.8	1201.7	1201.2	0.896	6.526	65.567	20.466	5.865	0.189	0.432	0.027	0.030	0.000	0.000	0.000	0.000	0.000	1380.18	
4	0.7587	1182.4	1203.3	1202.8	0.892	6.499	65.448	20.579	5.923	0.182	0.423	0.026	0.029	0.000	0.000	0.000	0.000	0.000	1381.40	
5	0.7586	1180.9	1201.8	1201.3	0.891	6.571	65.528	20.380	5.956	0.194	0.424	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1379.85	
6	0.7574	1178.0	1198.9	1198.4	0.891	6.634	65.816	20.023	5.920	0.208	0.451	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1377.56	
7	0.7582	1180.4	1201.3	1200.7	0.884	6.579	65.745	20.074	5.990	0.214	0.455	0.028	0.031	0.000	0.000	0.000	0.000	0.000	1379.58	
8	0.7594	1181.5	1202.4	1201.9	0.893	6.604	65.606	20.117	6.033	0.213	0.472	0.029	0.033	0.000	0.000	0.000	0.000	0.000	1379.84	
9	0.7544	1172.6	1193.4	1192.8	0.909	6.660	66.102	19.964	5.713	0.186	0.412	0.025	0.028	0.000	0.000	0.000	0.000	0.000	1373.94	
10	0.7554	1174.6	1195.4	1194.9	0.915	6.615	66.061	19.918	5.827	0.183	0.425	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1375.45	
11	0.7581	1181.7	1202.6	1202.0	0.904	6.461	65.582	20.480	5.918	0.179	0.421	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1381.18	
12	0.7570	1179.8	1200.7	1200.1	0.896	6.486	65.842	20.189	5.898	0.191	0.442	0.027	0.030	0.000	0.000	0.000	0.000	0.000	1379.99	
13	0.7562	1177.9	1198.8	1198.3	0.891	6.525	65.894	20.207	5.807	0.188	0.433	0.026	0.029	0.000	0.000	0.000	0.000	0.000	1378.60	
14	0.7533	1173.2	1194.0	1193.5	0.893	6.539	66.118	20.224	5.640	0.163	0.376	0.022	0.024	0.000	0.000	0.000	0.000	0.000	1375.73	
15	0.7535	1173.3	1194.0	1193.5	0.894	6.557	66.105	20.208	5.630	0.172	0.387	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1375.56	
16	0.7572	1180.2	1201.1	1200.6	0.896	6.472	65.695	20.439	5.837	0.185	0.424	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1380.39	
17	0.7523	1171.1	1191.9	1191.3	0.897	6.571	66.273	20.100	5.547	0.173	0.390	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1374.14	
18	0.7527	1171.2	1191.9	1191.3	0.896	6.611	66.318	19.931	5.585	0.187	0.419	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1373.75	
19	0.7513	1168.1	1188.7	1188.2	0.897	6.664	66.642	19.555	5.547	0.198	0.441	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1371.41	
20	0.7556	1176.2	1197.0	1196.5	0.899	6.569	66.073	19.962	5.768	0.205	0.462	0.029	0.032	0.000	0.000	0.000	0.000	0.000	1377.02	
21	0.7550	1174.3	1195.1	1194.5	0.897	6.629	66.174	19.820	5.752	0.204	0.464	0.029	0.031	0.000	0.000	0.000	0.000	0.000	1375.38	
22	0.7559	1177.1	1197.9	1197.3	0.894	6.548	65.829	20.345	5.728	0.182	0.420	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1377.83	
23	0.7546	1175.2	1196.1	1195.5	0.891	6.544	65.979	20.276	5.680	0.174	0.405	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1376.88	
24	0.7564	1177.8	1198.6	1198.1	0.901	6.543	65.770	20.361	5.770	0.181	0.422	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1378.19	
25	0.7562	1177.9	1198.7	1198.2	0.903	6.519	65.816	20.341	5.757	0.183	0.427	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1378.48	
26	0.7551	1175.6	1196.4	1195.9	0.902	6.555	65.938	20.260	5.695	0.179	0.417	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1376.80	
27	0.7543	1174.5	1195.3	1194.8	0.896	6.550	66.073	20.170	5.665	0.178	0.415	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1376.33	
28	0.7550	1176.0	1196.8	1196.3	0.896	6.525	65.981	20.239	5.714	0.178	0.415	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1377.44	
29	0.7526	1172.0	1192.8	1192.2	0.895	6.547	66.267	20.102	5.567	0.173	0.401	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1374.93	
30	0.7567	1178.8	1199.6	1199.1	0.907	6.499	65.867	20.226	5.791	0.195	0.454	0.029	0.032	0.000	0.000	0.000	0.000	0.000	1379.09	
Avg	0.7558	1177.0	1197.5	1196.9	0.896	6.560	65.928	20.167	5.776	0.188	0.429	0.026	0.029	0.000	0.000	0.000	0.000	0.000	1377.43	

Gas Composition and Properties

Effective October 1, 2021

Attachment B
Page 8 of 24

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

September 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	0.7175	1160.5	1181.0	1180.5	1.172	3.554	70.370	22.251	2.288	0.097	0.230	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1394.23	
2	0.7180	1161.6	1182.2	1181.7	1.170	3.527	70.280	22.372	2.287	0.097	0.229	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1395.22	
3	0.7180	1162.1	1182.7	1182.2	1.165	3.507	70.240	22.469	2.257	0.097	0.229	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1395.79	
4	0.7192	1164.6	1185.2	1184.7	1.160	3.485	69.977	22.758	2.261	0.096	0.228	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1397.50	
5	0.7190	1164.5	1185.1	1184.6	1.161	3.466	70.063	22.650	2.301	0.096	0.227	0.016	0.020	0.000	0.000	0.000	0.000	0.000	1397.62	
6	0.7170	1160.9	1181.4	1181.0	1.159	3.504	70.272	22.577	2.146	0.091	0.216	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1395.21	
7	0.7155	1157.6	1178.1	1177.6	1.176	3.536	70.558	22.268	2.128	0.090	0.212	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1392.74	
8	0.7149	1157.0	1177.5	1177.0	1.170	3.524	70.744	22.026	2.200	0.090	0.212	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1392.61	
9	0.7142	1155.8	1176.3	1175.8	1.165	3.534	70.784	22.091	2.095	0.088	0.208	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1391.88	
10	0.7148	1156.8	1177.3	1176.8	1.167	3.527	70.662	22.219	2.097	0.089	0.208	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1392.54	
11	0.7157	1158.3	1178.8	1178.3	1.165	3.528	70.500	22.349	2.126	0.089	0.209	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1393.41	
12	0.7152	1157.6	1178.1	1177.6	1.176	3.503	70.760	21.972	2.251	0.091	0.214	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1393.08	
13	0.7139	1154.1	1174.5	1174.0	1.185	3.582	71.068	21.536	2.287	0.093	0.216	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1390.06	
14	0.7141	1156.2	1176.7	1176.2	1.184	3.479	70.917	21.893	2.200	0.089	0.206	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1392.39	
15	0.7155	1158.3	1178.8	1178.4	1.177	3.488	70.582	22.271	2.155	0.089	0.208	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1393.65	
16	0.7119	1151.2	1171.5	1171.1	1.197	3.553	71.257	21.576	2.100	0.086	0.200	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1388.54	
17	0.7140	1155.2	1175.7	1175.2	1.160	3.562	70.823	22.012	2.114	0.089	0.208	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1391.31	
18	0.7140	1154.8	1175.3	1174.8	1.149	3.604	70.826	21.959	2.128	0.090	0.211	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1390.88	
19	0.7119	1150.8	1171.2	1170.7	1.151	3.646	71.332	21.351	2.174	0.093	0.217	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1388.08	
20	0.7150	1152.4	1172.8	1172.4	1.141	3.852	70.715	21.727	2.212	0.095	0.222	0.016	0.020	0.000	0.000	0.000	0.000	0.000	1387.05	
21	0.7162	1157.4	1177.9	1177.4	1.126	3.687	70.442	22.185	2.231	0.089	0.208	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1391.82	
22	0.7187	1161.5	1182.1	1181.7	1.131	3.657	70.149	22.311	2.413	0.092	0.215	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1394.44	
23	0.7145	1155.6	1176.1	1175.7	1.137	3.618	70.708	22.069	2.145	0.088	0.205	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1391.38	
24	0.7140	1154.7	1175.2	1174.8	1.160	3.587	70.754	22.120	2.059	0.087	0.202	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1390.83	
25	0.7147	1155.5	1176.0	1175.6	1.159	3.614	70.584	22.271	2.055	0.086	0.201	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1391.01	
26	0.7148	1156.3	1176.8	1176.4	1.172	3.553	70.574	22.340	2.047	0.086	0.199	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1391.91	
27	0.7142	1156.0	1176.5	1176.1	1.137	3.571	70.642	22.293	2.045	0.085	0.197	0.013	0.016	0.000	0.000	0.000	0.000	0.000	1392.10	
28	0.7162	1158.9	1179.4	1179.0	1.167	3.540	70.294	22.620	2.063	0.086	0.200	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1393.60	
29	0.7171	1160.6	1181.2	1180.7	1.195	3.469	70.132	22.854	2.036	0.086	0.199	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1394.87	
30	0.7151	1158.1	1178.6	1178.2	1.199	3.433	70.513	22.527	2.018	0.084	0.195	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1393.75	
Avg	0.7155	1158.0	1178.0	1177.5	1.165	3.556	70.584	22.197	2.164	0.090	0.211	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1392.65	

Source Daily Summary

September 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	0.7580	1182.3	1203.3	1202.0	0.867	6.469	65.718	20.268	5.986	0.192	0.445	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1382.05	
2	0.7597	1185.2	1206.2	1205.1	0.869	6.442	65.549	20.338	6.073	0.202	0.469	0.029	0.030	0.000	0.000	0.000	0.000	0.000	1383.96	
3	0.7557	1177.6	1198.5	1197.4	0.865	6.540	66.059	19.976	5.865	0.194	0.446	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1378.67	
4	0.7570	1180.2	1201.1	1200.0	0.872	6.491	66.052	19.846	5.994	0.207	0.477	0.030	0.031	0.000	0.000	0.000	0.000	0.000	1380.52	
5	0.7592	1185.3	1206.3	1205.2	0.875	6.391	65.539	20.457	6.049	0.192	0.441	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1384.42	
6	0.7583	1183.5	1204.5	1203.4	0.873	6.414	65.588	20.481	5.993	0.180	0.419	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1383.20	
7	0.7566	1179.6	1200.4	1199.3	0.870	6.500	65.853	20.193	5.937	0.189	0.410	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1380.11	
8	0.7583	1181.8	1202.7	1201.7	0.870	6.525	65.872	19.894	6.082	0.220	0.478	0.029	0.030	0.000	0.000	0.000	0.000	0.000	1381.13	
9	0.7596	1184.3	1205.3	1204.2	0.876	6.482	65.720	20.029	6.110	0.225	0.494	0.030	0.033	0.000	0.000	0.000	0.000	0.000	1382.89	
10	0.7537	1173.8	1194.6	1193.6	0.888	6.552	66.185	20.027	5.731	0.180	0.392	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1376.05	
11	0.7562	1178.6	1199.5	1198.4	0.894	6.485	66.058	19.918	5.962	0.189	0.439	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1379.35	
12	0.7589	1185.1	1206.1	1205.0	0.885	6.357	65.616	20.393	6.079	0.183	0.433	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1384.46	
13	0.7549	1177.8	1198.7	1197.7	0.874	6.439	66.153	20.034	5.836	0.186	0.427	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1379.66	
14	0.7551	1178.5	1199.4	1198.3	0.873	6.418	66.017	20.229	5.856	0.168	0.393	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1380.24	
15	0.7554	1178.8	1199.7	1198.7	0.876	6.424	65.979	20.261	5.824	0.180	0.407	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1380.35	
16	0.7555	1179.5	1200.4	1199.1	0.877	6.395	65.978	20.274	5.836	0.180	0.411	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1380.99	
17	0.7525	1173.6	1194.4	1193.0	0.879	6.467	66.334	20.069	5.633	0.175	0.396	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1376.87	
18	0.7533	1174.0	1194.8	1193.2	0.878	6.516	66.404	19.807	5.703	0.195	0.440	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1376.59	
19	0.7507	1169.1	1189.8	1188.3	0.877	6.573	66.857	19.370	5.614	0.202	0.452	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1373.20	
20	0.7551	1177.8	1198.6	1197.2	0.877	6.457	66.162	20.006	5.791	0.201	0.451	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1379.38	
21	0.7560	1178.2	1199.1	1197.7	0.876	6.514	66.138	19.852	5.867	0.210	0.482	0.029	0.031	0.000	0.000	0.000	0.000	0.000	1379.10	
22	0.7559	1178.7	1199.6	1198.7	0.880	6.473	65.930	20.235	5.815	0.186	0.428	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1379.72	
23	0.7547	1177.2	1198.1	1197.2	0.878	6.455	66.061	20.197	5.773	0.176	0.411	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1379.09	
24	0.7562	1179.9	1200.8	1199.9	0.879	6.432	65.900	20.274	5.851	0.183	0.429	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1380.83	
25	0.7559	1179.6	1200.5	1199.8	0.881	6.417	65.949	20.260	5.827	0.183	0.430	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1380.78	
26	0.7553	1178.2	1199.1	1198.4	0.881	6.443	66.028	20.192	5.796	0.182	0.426	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1379.73	
27	0.6954	1118.7	1138.5	1137.8	0.919	4.395	75.413	15.696	3.216	0.100	0.231	0.014	0.015	0.000	0.000	0.000	0.000	0.000	1365.80	
28	0.6392	1060.1	1078.8	1078.0	0.975	2.614	84.133	11.459	0.764	0.018	0.034	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1349.35	
29	0.6631	1084.5	1103.7	1102.9	0.957	3.386	80.404	13.290	1.784	0.052	0.114	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1355.80	
30	0.7556	1179.5	1200.4	1199.4	0.881	6.400	66.020	20.204	5.822	0.187	0.432	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1380.89	
Avg	0.7470	1170.0	1190.8	1189.7	0.884	6.162	67.389	19.451	5.482	0.177	0.405	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1377.84	

Source Daily Summary

September 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	0.7580	1182.3	1203.2	1202.7	0.867	6.469	65.718	20.268	5.986	0.192	0.445	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1382.05	
2	0.7597	1185.3	1206.2	1205.8	0.869	6.442	65.548	20.339	6.073	0.202	0.469	0.029	0.030	0.000	0.000	0.000	0.000	0.000	1383.97	
3	0.7557	1177.6	1198.5	1198.0	0.865	6.540	66.059	19.976	5.865	0.194	0.446	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1378.67	
4	0.7570	1180.2	1201.1	1200.7	0.872	6.491	66.052	19.846	5.994	0.207	0.477	0.030	0.031	0.000	0.000	0.000	0.000	0.000	1380.52	
5	0.7592	1185.3	1206.3	1205.8	0.875	6.391	65.539	20.457	6.049	0.192	0.441	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1384.41	
6	0.7583	1183.5	1204.5	1204.0	0.873	6.414	65.588	20.481	5.993	0.180	0.419	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1383.20	
7	0.7566	1179.6	1200.4	1199.9	0.870	6.500	65.853	20.193	5.937	0.189	0.410	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1380.11	
8	0.7583	1181.8	1202.7	1202.3	0.870	6.525	65.872	19.895	6.082	0.220	0.478	0.029	0.030	0.000	0.000	0.000	0.000	0.000	1381.13	
9	0.7596	1184.3	1205.3	1204.8	0.876	6.482	65.720	20.029	6.110	0.225	0.494	0.030	0.033	0.000	0.000	0.000	0.000	0.000	1382.89	
10	0.7537	1173.8	1194.6	1194.2	0.888	6.552	66.185	20.027	5.731	0.180	0.392	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1376.05	
11	0.7562	1178.6	1199.5	1199.1	0.894	6.485	66.058	19.918	5.962	0.189	0.439	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1379.36	
12	0.7589	1185.1	1206.1	1205.6	0.885	6.357	65.616	20.393	6.079	0.184	0.433	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1384.46	
13	0.7549	1177.8	1198.7	1198.3	0.874	6.439	66.153	20.034	5.835	0.186	0.427	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1379.65	
14	0.7551	1178.5	1199.4	1198.9	0.873	6.418	66.017	20.229	5.856	0.168	0.393	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1380.24	
15	0.7554	1178.8	1199.7	1199.3	0.876	6.424	65.979	20.261	5.824	0.180	0.407	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1380.35	
16	0.7555	1179.5	1200.4	1200.0	0.877	6.395	65.978	20.274	5.836	0.180	0.411	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1380.99	
17	0.7525	1173.6	1194.4	1194.1	0.879	6.467	66.334	20.069	5.633	0.175	0.396	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1376.87	
18	0.7533	1174.0	1194.8	1194.4	0.878	6.516	66.404	19.808	5.703	0.195	0.440	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1376.59	
19	0.7507	1169.1	1189.8	1189.5	0.877	6.573	66.857	19.370	5.614	0.202	0.452	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1373.20	
20	0.7551	1177.8	1198.6	1198.3	0.877	6.457	66.162	20.006	5.791	0.202	0.451	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1379.38	
21	0.7560	1178.2	1199.1	1198.8	0.876	6.514	66.138	19.852	5.867	0.210	0.482	0.029	0.031	0.000	0.000	0.000	0.000	0.000	1379.10	
22	0.7559	1178.7	1199.6	1199.3	0.880	6.473	65.930	20.235	5.815	0.186	0.428	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1379.72	
23	0.7547	1177.2	1198.1	1197.8	0.878	6.455	66.061	20.197	5.773	0.176	0.411	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1379.09	
24	0.7562	1179.9	1200.8	1200.5	0.879	6.432	65.900	20.274	5.851	0.183	0.429	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1380.83	
25	0.7559	1179.6	1200.5	1200.1	0.881	6.417	65.950	20.260	5.826	0.183	0.430	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1380.77	
26	0.7553	1178.2	1199.1	1198.7	0.881	6.443	66.028	20.192	5.797	0.182	0.426	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1379.73	
27	0.6955	1118.8	1138.6	1138.2	0.919	4.395	75.406	15.700	3.219	0.100	0.232	0.014	0.015	0.000	0.000	0.000	0.000	0.000	1365.85	
28	0.6392	1060.1	1078.8	1078.5	0.975	2.614	84.133	11.459	0.764	0.018	0.034	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1349.35	
29	0.6630	1084.5	1103.7	1103.3	0.957	3.386	80.406	13.289	1.783	0.052	0.114	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1355.80	
30	0.7556	1179.5	1200.4	1200.0	0.881	6.400	66.019	20.204	5.822	0.187	0.432	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1380.89	
Avg	0.7470	1170.0	1190.8	1190.4	0.884	6.162	67.389	19.451	5.482	0.177	0.405	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1377.84	

Source Daily Summary

September 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	0.7599	1185.6	1206.6	1206.0	0.874	6.435	65.425	20.507	6.061	0.196	0.445	0.028	0.029	0.000	0.000	0.000	0.000	0.000	1384.15	
2	0.7556	1177.6	1198.5	1198.0	0.875	6.519	65.886	20.290	5.803	0.178	0.401	0.024	0.024	0.000	0.000	0.000	0.000	0.000	1378.75	
3	0.7605	1186.1	1207.1	1206.7	0.876	6.462	65.361	20.496	6.093	0.197	0.457	0.029	0.030	0.000	0.000	0.000	0.000	0.000	1384.17	
4	0.7594	1183.9	1204.9	1204.4	0.877	6.483	65.538	20.348	6.044	0.198	0.454	0.028	0.029	0.000	0.000	0.000	0.000	0.000	1382.68	
5	0.7605	1185.8	1206.8	1206.3	0.871	6.486	65.365	20.473	6.085	0.199	0.460	0.029	0.031	0.000	0.000	0.000	0.000	0.000	1383.81	
6	0.7536	1172.9	1193.6	1193.1	0.875	6.621	66.260	19.853	5.735	0.187	0.418	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1374.98	
7	0.7579	1181.0	1201.9	1201.3	0.883	6.515	65.961	19.834	6.038	0.214	0.490	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1380.56	
8	0.7593	1184.6	1205.6	1205.1	0.883	6.432	65.460	20.536	6.010	0.191	0.431	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1383.48	
9	0.7584	1182.8	1203.7	1203.3	0.882	6.458	65.547	20.488	5.981	0.181	0.411	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1382.21	
10	0.7577	1180.5	1201.4	1201.0	0.880	6.535	65.702	20.243	5.977	0.194	0.417	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1380.20	
11	0.7592	1183.1	1204.0	1203.6	0.878	6.521	65.675	20.100	6.088	0.216	0.462	0.029	0.031	0.000	0.000	0.000	0.000	0.000	1381.81	
12	0.7588	1181.6	1202.6	1202.1	0.893	6.544	65.764	20.002	6.047	0.217	0.473	0.029	0.031	0.000	0.000	0.000	0.000	0.000	1380.53	
13	0.7557	1176.2	1197.1	1196.6	0.900	6.574	66.034	19.941	5.899	0.184	0.416	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1377.01	
14	0.7563	1178.9	1199.7	1199.3	0.898	6.470	65.940	20.134	5.907	0.180	0.418	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1379.59	
15	0.7551	1177.6	1198.5	1198.1	0.882	6.460	66.003	20.215	5.822	0.172	0.396	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1379.22	
16	0.7527	1173.2	1194.0	1193.7	0.882	6.504	66.251	20.103	5.688	0.163	0.368	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1376.27	
17	0.7585	1183.9	1204.9	1204.6	0.884	6.389	65.624	20.437	5.990	0.189	0.432	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1383.49	
18	0.7540	1175.3	1196.1	1195.8	0.887	6.495	66.137	20.142	5.706	0.180	0.403	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1377.46	
19	0.7511	1168.6	1189.3	1188.9	0.883	6.629	66.776	19.396	5.607	0.201	0.450	0.028	0.030	0.000	0.000	0.000	0.000	0.000	1372.28	
20	0.7492	1165.7	1186.4	1185.9	0.883	6.630	66.972	19.348	5.496	0.195	0.426	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1370.62	
21	0.7532	1173.3	1194.0	1193.6	0.883	6.546	66.364	19.855	5.678	0.195	0.427	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1375.83	
22	0.7544	1174.7	1195.5	1195.1	0.885	6.568	66.272	19.796	5.771	0.201	0.450	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1376.43	
23	0.7561	1178.6	1199.4	1199.2	0.886	6.493	65.856	20.303	5.814	0.181	0.415	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1379.37	
24	0.7564	1179.4	1200.2	1199.9	0.887	6.475	65.813	20.337	5.841	0.180	0.417	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1380.01	
25	0.7582	1182.8	1203.7	1203.4	0.888	6.434	65.629	20.429	5.942	0.187	0.436	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1382.34	
26	0.7583	1183.0	1204.0	1203.6	0.891	6.418	65.653	20.406	5.944	0.189	0.443	0.028	0.029	0.000	0.000	0.000	0.000	0.000	1382.59	
27	0.7576	1181.9	1202.9	1202.5	0.891	6.421	65.722	20.385	5.904	0.186	0.435	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1381.93	
28	0.7570	1180.6	1201.5	1201.1	0.891	6.451	65.790	20.326	5.873	0.185	0.431	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1380.87	
29	0.6696	1092.0	1111.4	1111.0	0.950	3.553	79.469	13.704	2.097	0.064	0.145	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1358.55	
30	0.6605	1081.1	1100.2	1099.9	0.965	3.343	80.776	13.099	1.658	0.047	0.101	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1354.09	
Avg	0.7505	1173.0	1193.9	1193.4	0.889	6.295	66.834	19.718	5.620	0.182	0.411	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1378.18	

Source Daily Summary

September 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	0.7583	1182.9	1203.9	1202.5	0.867	6.462	65.681	20.287	6.005	0.193	0.448	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1382.46	
2	0.7596	1185.2	1206.2	1205.1	0.869	6.441	65.554	20.336	6.072	0.202	0.468	0.028	0.030	0.000	0.000	0.000	0.000	0.000	1383.95	
3	0.7557	1177.6	1198.5	1197.3	0.865	6.541	66.067	19.963	5.868	0.194	0.447	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1378.65	
4	0.7568	1179.8	1200.7	1199.4	0.871	6.499	66.071	19.833	5.983	0.206	0.475	0.029	0.031	0.000	0.000	0.000	0.000	0.000	1380.22	
5	0.7591	1185.1	1206.0	1204.8	0.875	6.394	65.560	20.440	6.041	0.193	0.441	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1384.23	
6	0.7579	1182.8	1203.7	1202.6	0.873	6.420	65.636	20.458	5.966	0.179	0.416	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1382.70	
7	0.7565	1179.4	1200.3	1198.9	0.870	6.502	65.865	20.187	5.930	0.188	0.409	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1379.99	
8	0.7587	1182.5	1203.4	1202.5	0.871	6.519	65.825	19.922	6.104	0.220	0.480	0.029	0.030	0.000	0.000	0.000	0.000	0.000	1381.57	
9	0.7593	1183.8	1204.8	1204.0	0.874	6.485	65.801	19.935	6.113	0.228	0.500	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1382.61	
10	0.7540	1174.5	1195.3	1194.5	0.888	6.539	66.165	20.032	5.747	0.183	0.399	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1376.55	
11	0.7560	1178.2	1199.1	1198.2	0.894	6.493	66.088	19.891	5.951	0.189	0.439	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1379.01	
12	0.7583	1184.0	1204.9	1204.1	0.886	6.369	65.676	20.366	6.044	0.181	0.426	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1383.69	
13	0.7552	1178.4	1199.3	1198.6	0.874	6.432	66.124	20.042	5.855	0.188	0.431	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1380.06	
14	0.7549	1178.3	1199.2	1198.3	0.873	6.420	66.028	20.224	5.847	0.168	0.392	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1380.10	
15	0.7555	1179.1	1200.0	1199.3	0.876	6.424	65.960	20.271	5.833	0.180	0.408	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1380.51	
16	0.7552	1179.0	1199.9	1199.1	0.877	6.399	66.010	20.259	5.819	0.179	0.408	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1380.66	
17	0.7525	1173.6	1194.4	1193.5	0.879	6.469	66.337	20.063	5.634	0.174	0.395	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1376.82	
18	0.7532	1174.1	1194.9	1194.0	0.878	6.502	66.381	19.869	5.692	0.192	0.432	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1376.78	
19	0.7508	1169.1	1189.8	1188.9	0.877	6.579	66.868	19.339	5.622	0.204	0.456	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1373.15	
20	0.7553	1178.2	1199.0	1198.2	0.877	6.451	66.143	20.012	5.804	0.203	0.454	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1379.66	
21	0.7562	1178.6	1199.5	1198.7	0.876	6.509	66.115	19.866	5.880	0.211	0.483	0.030	0.031	0.000	0.000	0.000	0.000	0.000	1379.38	
22	0.7560	1178.8	1199.7	1198.9	0.880	6.476	65.917	20.239	5.820	0.186	0.429	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1379.76	
23	0.7548	1177.4	1198.3	1197.5	0.878	6.452	66.048	20.205	5.779	0.177	0.411	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1379.24	
24	0.7562	1179.9	1200.8	1199.9	0.879	6.432	65.893	20.280	5.852	0.183	0.429	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1380.85	
25	0.7561	1179.9	1200.8	1200.1	0.881	6.414	65.929	20.270	5.838	0.184	0.431	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1381.01	
26	0.7551	1177.9	1198.8	1198.1	0.881	6.447	66.046	20.180	5.787	0.181	0.425	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1379.53	
27	0.6980	1121.5	1141.3	1140.7	0.918	4.475	75.010	15.890	3.330	0.104	0.242	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1366.62	
28	0.6392	1060.1	1078.9	1078.2	0.974	2.608	84.143	11.456	0.762	0.019	0.034	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1349.46	
29	0.6598	1080.9	1100.1	1099.4	0.966	3.288	80.879	13.089	1.619	0.046	0.100	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1354.57	
30	0.7536	1177.3	1198.1	1197.3	0.882	6.344	66.332	20.046	5.734	0.184	0.425	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1380.13	
Avg	0.7469	1170.0	1190.6	1189.7	0.884	6.160	67.405	19.442	5.478	0.177	0.404	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1377.80	

Source Daily Summary

September 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	0.6381	1060.8	1079.6	1079.0	0.923	2.543	84.301	11.425	0.749	0.020	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1351.46	
2	0.6420	1067.1	1086.0	1085.5	0.938	2.500	83.581	12.124	0.801	0.020	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1355.39	
3	0.6427	1067.6	1086.5	1085.9	0.929	2.547	83.422	12.243	0.801	0.021	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1355.32	
4	0.6438	1069.4	1088.3	1087.7	0.930	2.542	83.236	12.399	0.834	0.021	0.038	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1356.42	
5	0.6435	1069.1	1088.0	1087.5	0.922	2.546	83.291	12.336	0.846	0.022	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1356.32	
6	0.6423	1067.6	1086.5	1085.9	0.913	2.538	83.447	12.279	0.771	0.019	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1355.68	
7	0.6441	1070.6	1089.6	1088.9	0.914	2.517	83.244	12.365	0.891	0.025	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1357.67	
8	0.6438	1069.7	1088.7	1088.2	0.912	2.546	83.313	12.251	0.908	0.024	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1356.86	
9	0.6427	1067.9	1086.8	1086.3	0.936	2.528	83.377	12.338	0.770	0.018	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1355.56	
10	0.6420	1066.1	1084.9	1084.5	0.945	2.553	83.549	12.122	0.777	0.019	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1354.08	
11	0.6411	1064.7	1083.5	1083.1	0.946	2.549	83.763	11.888	0.796	0.020	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1353.30	
12	0.6419	1065.3	1084.2	1083.4	0.967	2.562	83.608	12.009	0.796	0.021	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1353.15	
13	0.6523	1075.9	1095.0	1094.2	0.957	2.904	81.969	12.817	1.245	0.035	0.068	0.003	0.002	0.000	0.000	0.000	0.000	0.000	1355.76	
14	0.6652	1087.9	1107.1	1106.3	0.942	3.404	79.932	13.760	1.783	0.052	0.114	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1357.49	
15	0.6760	1123.2	1143.0	1142.4	0.429	3.058	76.445	18.862	1.102	0.031	0.066	0.003	0.004	0.000	0.000	0.000	0.000	0.000	1390.13	
16	0.6874	1120.6	1140.4	1139.6	0.712	3.855	75.723	17.167	2.317	0.066	0.144	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1375.64	
17	0.6586	1082.0	1101.2	1100.5	0.938	3.148	80.947	13.329	1.503	0.042	0.087	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1356.94	
18	0.6617	1084.6	1103.8	1103.0	0.927	3.302	80.497	13.431	1.681	0.049	0.102	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1356.96	
19	0.6647	1086.9	1106.1	1105.2	0.914	3.461	80.171	13.337	1.920	0.060	0.125	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1356.74	
20	0.6566	1079.1	1098.2	1097.4	0.930	3.151	81.420	12.825	1.511	0.049	0.103	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1355.28	
21	0.6491	1073.0	1092.0	1091.3	0.917	2.837	82.518	12.455	1.166	0.034	0.067	0.002	0.003	0.000	0.000	0.000	0.000	0.000	1355.43	
22	0.6453	1069.5	1088.4	1087.6	0.927	2.686	83.091	12.235	0.973	0.029	0.055	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1354.87	
23	0.6466	1069.9	1088.9	1088.1	0.949	2.744	82.880	12.328	1.011	0.029	0.056	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1354.14	
24	0.6586	1082.0	1101.2	1100.4	0.938	3.148	80.946	13.329	1.503	0.042	0.087	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1356.92	
25	0.6586	1082.0	1101.2	1100.4	0.938	3.148	80.946	13.329	1.503	0.042	0.087	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1356.92	
26	0.6865	1110.8	1130.5	1129.7	0.896	4.077	76.645	15.318	2.773	0.083	0.186	0.011	0.011	0.000	0.000	0.000	0.000	0.000	1364.46	
27	0.6923	1141.3	1161.5	1160.8	0.391	3.549	73.812	20.288	1.783	0.051	0.112	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1396.04	
28	0.6595	1083.8	1103.0	1102.4	0.890	3.194	80.761	13.475	1.535	0.044	0.092	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1358.39	
29	0.6405	1062.6	1081.4	1080.8	0.943	2.627	83.840	11.755	0.778	0.019	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1351.24	
30	0.6433	1065.8	1084.7	1084.2	0.935	2.709	83.462	11.869	0.946	0.026	0.050	0.002	0.001	0.000	0.000	0.000	0.000	0.000	1352.34	
Avg	0.6537	1080.0	1098.7	1098.0	0.888	2.916	81.605	13.256	1.226	0.034	0.070	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1358.90	

Source Daily Summary

September 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	0.6712	1106.5	1126.1	1125.3	0.575	3.398	78.075	16.241	1.556	0.050	0.094	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1374.49	
2	0.6725	1109.5	1129.1	1128.4	0.637	3.244	77.956	16.408	1.583	0.054	0.105	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1376.87	
3	0.6732	1110.6	1130.3	1129.5	0.628	3.252	77.836	16.505	1.598	0.056	0.109	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1377.57	
4	0.6750	1112.5	1132.2	1131.5	0.640	3.292	77.572	16.619	1.689	0.058	0.114	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1378.07	
5	0.6736	1110.5	1130.1	1129.4	0.646	3.274	77.813	16.439	1.649	0.056	0.108	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1376.96	
6	0.6715	1108.0	1127.6	1126.8	0.623	3.264	78.043	16.391	1.520	0.050	0.096	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1376.05	
7	0.6740	1112.1	1131.8	1131.0	0.565	3.338	77.540	16.808	1.586	0.052	0.099	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1378.55	
8	0.6677	1102.6	1122.1	1121.4	0.655	3.184	78.775	15.790	1.448	0.047	0.089	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1373.24	
9	0.6610	1093.7	1113.1	1112.4	0.725	2.992	79.917	15.050	1.205	0.035	0.067	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1369.07	
10	0.6632	1096.2	1115.6	1114.9	0.712	3.066	79.551	15.269	1.277	0.040	0.076	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1369.88	
11	0.6639	1096.8	1116.2	1115.5	0.710	3.098	79.492	15.214	1.353	0.042	0.080	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1369.91	
12	0.6647	1097.5	1116.9	1086.9	0.701	3.149	79.363	15.258	1.382	0.046	0.089	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1369.89	
13	0.6658	1099.0	1118.5	1103.2	0.701	3.149	79.364	15.258	1.382	0.046	0.089	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1370.77	
14	0.6668	1100.5	1120.0	1097.0	0.701	3.149	79.364	15.258	1.382	0.046	0.089	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1371.58	
15	0.6679	1102.1	1121.6	1105.5	0.701	3.149	79.364	15.258	1.382	0.046	0.089	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1372.40	
16	0.6690	1103.7	1123.2	1102.8	0.701	3.149	79.364	15.258	1.382	0.046	0.089	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1373.23	
17	0.6700	1105.2	1124.8	1104.8	0.701	3.149	79.364	15.258	1.382	0.046	0.089	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1374.16	
18	0.6711	1106.7	1126.3	1111.9	0.701	3.149	79.364	15.258	1.382	0.046	0.089	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1374.87	
19	0.6721	1108.3	1127.9	1109.1	0.701	3.149	79.364	15.258	1.382	0.046	0.089	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1375.79	
20	0.6732	1109.8	1129.5	1111.7	0.701	3.149	79.364	15.258	1.382	0.046	0.089	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1376.62	
21	0.6743	1111.4	1131.1	1130.5	0.700	3.153	79.162	15.422	1.413	0.047	0.091	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1377.45	
22	0.6753	1112.9	1132.6	1132.1	0.662	3.272	76.193	17.773	1.891	0.065	0.127	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1378.25	
23	0.6764	1114.5	1134.2	1133.6	0.623	3.321	77.338	16.793	1.728	0.061	0.119	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1379.13	
24	0.6782	1116.5	1136.3	1135.7	0.641	3.345	77.089	16.906	1.805	0.066	0.131	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1379.73	
25	0.6820	1122.0	1141.8	1141.2	0.596	3.436	76.375	17.469	1.897	0.070	0.139	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1382.66	
26	0.6846	1122.7	1142.6	1142.0	0.623	3.593	76.102	17.329	2.100	0.076	0.156	0.010	0.010	0.000	0.000	0.000	0.000	0.000	1380.94	
27	0.6856	1123.9	1143.8	1143.0	0.637	3.594	76.118	17.107	2.271	0.083	0.167	0.011	0.011	0.000	0.000	0.000	0.000	0.000	1381.37	
28	0.6838	1123.6	1143.4	1142.6	0.567	3.557	75.922	17.831	1.918	0.063	0.126	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1382.74	
29	0.6772	1115.0	1134.7	1133.9	0.541	3.493	77.097	16.883	1.809	0.057	0.107	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1378.92	
30	0.6659	1098.4	1117.8	1117.1	0.602	3.355	79.046	15.398	1.462	0.044	0.082	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1369.81	
Avg	0.6724	1108.0	1128.0	1121.7	0.654	3.262	78.243	16.099	1.573	0.053	0.103	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1375.70	

Source Daily Summary

September 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	0.6856	1153.6	1174.0	1172.3	0.000	2.776	73.255	23.497	0.455	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.79	-27.02
2	0.6853	1153.5	1173.9	1172.4	0.000	2.747	73.329	23.453	0.455	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.08	-27.14
3	0.6844	1152.2	1172.6	1171.2	0.000	2.742	73.516	23.276	0.450	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.40	-27.63
4	0.6842	1151.6	1172.0	1170.4	0.000	2.754	73.556	23.226	0.448	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.96	-27.78
5	0.6840	1151.2	1171.6	1169.8	0.000	2.763	73.594	23.180	0.447	0.006	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.60	-27.91
6	0.6851	1153.4	1173.9	1172.4	0.000	2.736	73.366	23.427	0.454	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.17	-27.20
7	0.6838	1150.9	1171.3	1169.7	0.000	2.762	73.629	23.147	0.446	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.47	-27.99
8	0.6842	1151.5	1171.9	1170.1	0.000	2.761	73.535	23.261	0.428	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.83	-27.87
9	0.6842	1152.0	1172.4	1170.6	0.000	2.738	73.526	23.287	0.433	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.32	-27.76
10	0.6842	1151.9	1172.3	1170.5	0.000	2.742	73.538	23.264	0.440	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.23	-27.76
11	0.6844	1152.0	1172.4	1170.6	0.000	2.752	73.504	23.285	0.443	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.18	-27.68
12	0.6853	1153.9	1174.3	1172.8	0.000	2.725	73.329	23.476	0.453	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.53	-27.09
13	0.6844	1152.4	1172.8	1171.1	0.000	2.728	73.488	23.340	0.429	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.69	-27.67
14	0.6841	1151.8	1172.2	1170.4	0.000	2.734	73.558	23.260	0.432	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.26	-27.84
15	0.6851	1153.0	1173.4	1171.5	0.000	2.757	73.370	23.410	0.448	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.68	-27.33
16	0.6848	1152.6	1173.0	1171.1	0.000	2.754	73.420	23.366	0.444	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.51	-27.47
17	0.6847	1152.3	1172.8	1171.0	0.000	2.762	73.436	23.341	0.445	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.27	-27.52
18	0.6845	1152.2	1172.6	1170.7	0.000	2.755	73.478	23.309	0.442	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.24	-27.62
19	0.6852	1153.3	1173.7	1172.2	0.000	2.748	73.352	23.433	0.451	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.96	-27.22
20	0.6842	1152.0	1172.4	1170.6	0.000	2.739	73.528	23.284	0.433	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.31	-27.77
21	0.6851	1153.3	1173.7	1172.0	0.000	2.743	73.361	23.433	0.447	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.99	-27.27
22	0.6847	1152.6	1173.0	1171.1	0.000	2.747	73.435	23.363	0.440	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.54	-27.51
23	0.6850	1152.7	1173.1	1171.5	0.000	2.770	73.383	23.380	0.451	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.35	-27.37
24	0.6854	1153.6	1174.1	1172.1	0.000	2.747	73.316	23.465	0.456	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.15	-27.11
25	0.6851	1153.1	1173.5	1171.7	0.000	2.758	73.364	23.402	0.460	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.71	-27.24
26	0.6862	1154.8	1175.2	1173.6	0.000	2.755	73.187	23.543	0.496	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.71	-26.51
27	0.6888	1158.8	1179.4	1177.8	0.000	2.744	73.180	23.144	0.841	0.027	0.055	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1421.01	-23.04
28	0.6853	1154.0	1174.5	1173.1	0.000	2.716	73.472	23.209	0.579	0.008	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1418.69	-26.50
29	0.6853	1155.1	1175.6	1174.0	0.000	2.646	73.574	23.091	0.663	0.009	0.016	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1420.07	-26.02
30	0.6851	1153.0	1173.4	1171.7	0.000	2.754	73.389	23.379	0.462	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.71	-27.27
Avg	0.6849	1153.0	1173.4	1171.7	0.000	2.745	73.432	23.331	0.472	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.78	-27.24

Source Daily Summary

September 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	0.6291	1044.0	1062.5	1061.0	0.756	2.969	86.164	9.127	0.883	0.034	0.057	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1339.56	
2	0.6268	1040.2	1058.6	1057.4	0.746	3.002	86.554	8.764	0.834	0.033	0.057	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1337.15	
3	0.6277	1042.1	1060.6	1059.1	0.752	2.958	86.405	8.930	0.858	0.032	0.056	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1338.66	
4	0.6264	1040.7	1059.1	1057.7	0.739	2.943	86.643	8.736	0.842	0.032	0.056	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1338.20	
5	0.6296	1045.0	1063.5	1062.1	0.759	2.952	86.085	9.193	0.907	0.035	0.060	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1340.31	
6	0.6321	1049.2	1067.7	1066.4	0.769	2.921	85.627	9.630	0.945	0.036	0.062	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1342.95	
7	0.6311	1047.5	1066.0	1064.4	0.758	2.944	85.807	9.453	0.933	0.035	0.060	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1341.88	
8	0.6300	1045.9	1064.4	1063.5	0.745	2.960	85.986	9.287	0.920	0.034	0.059	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1341.03	
9	0.6289	1044.2	1062.7	1061.8	0.731	2.974	86.166	9.150	0.882	0.033	0.056	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1340.08	
10	0.6261	1040.5	1059.0	1058.0	0.699	2.986	86.636	8.756	0.831	0.031	0.053	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1338.32	
11	0.6278	1043.0	1061.4	1060.3	0.714	2.975	86.385	8.932	0.894	0.034	0.058	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1339.64	
12	0.6260	1040.1	1058.6	1057.4	0.695	3.007	86.692	8.643	0.865	0.033	0.056	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1337.90	
13	0.6304	1047.0	1065.5	1064.4	0.748	2.923	85.910	9.412	0.907	0.034	0.058	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1342.00	
14	0.6317	1048.4	1067.0	1066.0	0.780	2.906	85.739	9.517	0.950	0.036	0.063	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1342.51	
15	0.6341	1052.1	1070.8	1069.7	0.811	2.866	85.314	9.910	0.987	0.037	0.065	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1344.62	
16	0.6409	1061.7	1080.5	1079.5	0.879	2.814	84.185	10.870	1.121	0.043	0.076	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1349.68	
17	0.6320	1048.8	1067.4	1066.5	0.792	2.900	85.674	9.575	0.953	0.036	0.061	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1342.61	
18	0.6407	1060.6	1079.4	1078.4	0.858	2.888	84.292	10.633	1.186	0.048	0.083	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1348.57	
19	0.6532	1079.4	1098.5	1097.3	0.977	2.746	82.341	12.193	1.541	0.066	0.117	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1359.10	
20	0.6425	1064.1	1083.0	1082.1	0.891	2.796	83.948	11.051	1.174	0.046	0.082	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1351.11	
21	0.6419	1063.5	1082.3	1081.5	0.884	2.798	84.028	10.993	1.158	0.045	0.080	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1350.82	
22	0.6358	1055.2	1073.9	1073.0	0.829	2.809	85.139	10.009	1.082	0.044	0.077	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1346.74	
23	0.6112	1018.8	1036.8	1036.0	0.547	3.136	89.350	6.209	0.673	0.030	0.048	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1326.10	
24	0.5741	964.5	981.6	980.8	0.124	3.596	95.680	0.545	0.043	0.009	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.60	
25	0.5751	966.0	983.1	982.3	0.136	3.586	95.504	0.701	0.060	0.009	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1296.39	
26	0.6059	1009.3	1027.2	1026.3	0.483	3.315	90.210	5.347	0.573	0.026	0.040	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1319.47	
27	0.6089	1015.5	1033.5	1032.5	0.527	3.161	89.654	6.010	0.578	0.025	0.038	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1324.25	
28	0.5869	983.0	1000.4	999.5	0.273	3.451	93.448	2.567	0.230	0.014	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1305.82	
29	0.6200	1029.8	1048.1	1047.0	0.648	3.143	87.729	7.635	0.757	0.031	0.050	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1331.02	
30	0.6215	1033.3	1051.6	1050.7	0.664	3.053	87.499	7.890	0.799	0.033	0.054	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1333.86	
Avg	0.6243	1037.0	1055.8	1054.7	0.691	3.016	87.027	8.322	0.846	0.034	0.057	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1336.20	

September-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	
9/1/2022	9/2/2022	0	0	0	850	1,024	1203.9	1203.900	9/1/2022
9/2/2022	9/3/2022	0	0	0	817	986	1206.2	1206.200	9/2/2022
9/3/2022	9/4/2022	0	0	0	727	873	1198.5	1198.500	9/3/2022
9/4/2022	9/5/2022	0	0	0	707	850	1200.7	1200.700	9/4/2022
9/5/2022	9/6/2022	0	0	0	857	1034	1206	1206.000	9/5/2022
9/6/2022	9/7/2022	0	0	0	1146	1379	1203.7	1203.700	9/6/2022
9/7/2022	9/8/2022	658	714	1086.5	905	1,086	1200.3	1152.392	9/7/2022
9/8/2022	9/9/2022	0	0	0	1023	1,230	1203.4	1203.400	9/8/2022
9/9/2022	9/10/2022	0	0	0	914	1,101	1204.8	1204.800	9/9/2022
9/10/2022	9/11/2022	0	0	0	877	1,049	1195.3	1195.300	9/10/2022
9/11/2022	9/12/2022	0	0	0	812	974	1199.1	1199.100	9/11/2022
9/12/2022	9/13/2022	0	0	0	833	1,004	1204.9	1204.900	9/12/2022
9/13/2022	9/14/2022	0	0	0	1053	1,263	1199.3	1199.300	9/13/2022
9/14/2022	9/15/2022	0	0	0	814	976	1199.2	1199.200	9/14/2022
9/15/2022	9/16/2022	0	0	0	922	1,106	1200	1200.000	9/15/2022
9/16/2022	9/17/2022	0	0	0	905	1,085	1199.9	1199.900	9/16/2022
9/17/2022	9/18/2022	0	0	0	1098	1,312	1194.4	1194.400	9/17/2022
9/18/2022	9/19/2022	0	0	0	971	1,160	1194.9	1194.900	9/18/2022
9/19/2022	9/20/2022	0	0	0	964	1,147	1189.8	1189.800	9/19/2022
9/20/2022	9/21/2022	0	0	0	1053	1,264	1199	1199.000	9/20/2022
9/21/2022	9/22/2022	0	0	0	1177	1,413	1199.5	1199.500	9/21/2022
9/22/2022	9/23/2022	0	0	0	1236	1,482	1199.7	1199.700	9/22/2022
9/23/2022	9/24/2022	0	0	0	1009	1,208	1198.3	1198.300	9/23/2022
9/24/2022	9/25/2022	0	0	0	1001	1,202	1200.8	1200.800	9/24/2022
9/25/2022	9/26/2022	0	0	0	1,056	1,269	1200.8	1200.800	9/25/2022
9/26/2022	9/27/2022	0	0	0	1184	1,420	1198.8	1198.800	9/26/2022
9/27/2022	9/28/2022	0	0	0	1185	1,345	1141.3	1141.300	9/27/2022
9/28/2022	9/29/2022	0	0	0	1078	1,163	1078.9	1078.900	9/28/2022
9/29/2022	9/30/2022	0	0	0	1103	1,218	1100.1	1100.100	9/29/2022
9/30/2022	10/1/2022	0	0	0	984	1,179	1198.1	1198.100	9/30/2022
		658	714	36.2167	29,261	34,802	1190.6533	1189.0564	

Alliance Pipeline

DAILY ANALYSIS --- USA
ND07MD1 --- Hankinson Sales
September 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	1,160.425	0.6631	84.3435	9.4775	3.6956	0.3795	0.6983	0.0703	0.0591	0.0305	0.8988	0.3374	0.0093
2	1,157.916	0.6619	84.4951	9.3686	3.6359	0.3716	0.6874	0.0707	0.0600	0.0302	0.9225	0.3489	0.0092
3	1,154.065	0.6597	84.6977	9.3228	3.5247	0.3559	0.6481	0.0661	0.0560	0.0280	0.9312	0.3596	0.0099
4	1,157.986	0.6630	84.3297	9.4239	3.6493	0.3791	0.6977	0.0723	0.0578	0.0272	0.9839	0.3690	0.0100
5	1,159.089	0.6630	84.3580	9.4511	3.6659	0.3935	0.6832	0.0704	0.0531	0.0309	0.9042	0.3806	0.0090
6	1,158.742	0.6627	84.3825	9.4907	3.6042	0.3956	0.6740	0.0759	0.0598	0.0311	0.8970	0.3799	0.0093
7	1,155.585	0.6607	84.5877	9.3839	3.6423	0.3665	0.5756	0.0740	0.0590	0.0312	0.8811	0.3892	0.0095
8	1,161.425	0.6660	84.0403	9.4025	3.8087	0.4089	0.7391	0.0773	0.0582	0.0303	1.0386	0.3867	0.0093
9	1,156.532	0.6616	84.6076	9.2609	3.5852	0.3886	0.6764	0.0783	0.0622	0.0320	0.9132	0.3863	0.0094
10	1,157.682	0.6624	84.4331	9.3947	3.6271	0.3850	0.6702	0.0766	0.0608	0.0303	0.9280	0.3847	0.0095
11	1,158.818	0.6628	84.4290	9.3808	3.6515	0.3940	0.6853	0.0770	0.0613	0.0299	0.9026	0.3798	0.0090
12	1,158.239	0.6622	84.5095	9.3532	3.6269	0.3908	0.6753	0.0785	0.0613	0.0318	0.8867	0.3777	0.0084
13	1,157.682	0.6621	84.4567	9.4296	3.5881	0.3841	0.6703	0.0767	0.0618	0.0326	0.9171	0.3740	0.0090
14	1,161.017	0.6652	84.1046	9.4575	3.7729	0.3958	0.7147	0.0766	0.0607	0.0310	1.0048	0.3727	0.0089
15	1,158.493	0.6627	84.4133	9.4010	3.6513	0.3868	0.6811	0.0762	0.0592	0.0292	0.9232	0.3701	0.0086
16	1,160.791	0.6640	84.2281	9.5193	3.7161	0.3908	0.6890	0.0754	0.0600	0.0298	0.9091	0.3737	0.0086
17	1,160.463	0.6634	84.3099	9.5143	3.7068	0.3840	0.6711	0.0731	0.0591	0.0321	0.8594	0.3819	0.0084
18	1,159.774	0.6628	84.3741	9.4933	3.6604	0.3890	0.6716	0.0762	0.0592	0.0301	0.8760	0.3615	0.0087
19	1,157.928	0.6622	84.4523	9.4002	3.6427	0.3817	0.6664	0.0742	0.0585	0.0299	0.9124	0.3726	0.0091
20	1,159.396	0.6636	84.2611	9.4880	3.6951	0.3866	0.6792	0.0734	0.0581	0.0294	0.9429	0.3770	0.0091
21	1,159.023	0.6627	84.3819	9.4877	3.6495	0.3873	0.6620	0.0745	0.0593	0.0296	0.8847	0.3745	0.0089
22	1,159.342	0.6631	84.3116	9.5464	3.6529	0.3851	0.6611	0.0746	0.0591	0.0298	0.8832	0.3872	0.0090
23	1,160.699	0.6637	84.2911	9.5092	3.7007	0.3956	0.6788	0.0774	0.0591	0.0292	0.8688	0.3815	0.0086
24	1,160.526	0.6636	84.2653	9.5487	3.6846	0.3918	0.6793	0.0761	0.0593	0.0281	0.8847	0.3729	0.0092
25	1,161.496	0.6642	84.2453	9.5139	3.7104	0.3997	0.6941	0.0795	0.0633	0.0300	0.8841	0.3712	0.0085
26	1,162.063	0.6650	84.1622	9.5464	3.7244	0.4050	0.6937	0.0810	0.0644	0.0344	0.8827	0.3969	0.0090
27	1,160.742	0.6645	84.2293	9.4677	3.6959	0.4036	0.7049	0.0806	0.0633	0.0315	0.9121	0.4021	0.0089
28	1,161.669	0.6654	84.1485	9.4432	3.7510	0.4139	0.7238	0.0798	0.0621	0.0296	0.9396	0.3997	0.0088
29	1,161.150	0.6645	84.1740	9.5535	3.7005	0.4030	0.6962	0.0785	0.0596	0.0287	0.9013	0.3956	0.0091
30	1,160.836	0.6639	84.3048	9.4819	3.6715	0.4063	0.6985	0.0793	0.0614	0.0304	0.8731	0.3841	0.0087
Volume	1,159.383	0.6632	84.3406	9.4522	3.6720	0.3903	0.6819	0.0757	0.0598	0.0302	0.9104	0.3780	0.0090
Weight Avg Energy	1,159.386	0.6632	84.3404	9.4523	3.6720	0.3903	0.6819	0.0757	0.0598	0.0302	0.9104	0.3780	0.0090

Alliance Pipeline

DAILY ANALYSIS --- USA
 ND14MD1 --- Milnor Sales
 September 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%	HeI Mol%
1	1,159.983	0.6628	84.3794	9.4550	3.6861	0.3780	0.6959	0.0698	0.0587	0.0305	0.9004	0.3368	0.0093
2	1,158.466	0.6622	84.4489	9.4147	3.6467	0.3695	0.6868	0.0700	0.0598	0.0311	0.9234	0.3399	0.0091
3	1,154.251	0.6601	84.6534	9.3228	3.5439	0.3577	0.6540	0.0659	0.0550	0.0268	0.9508	0.3598	0.0100
4	1,158.179	0.6630	84.3233	9.4419	3.6478	0.3810	0.6961	0.0727	0.0571	0.0269	0.9725	0.3709	0.0099
5	1,156.483	0.6617	84.5132	9.3519	3.5983	0.3872	0.6733	0.0696	0.0518	0.0294	0.9255	0.3903	0.0094
6	1,158.966	0.6627	84.3885	9.4865	3.6090	0.3966	0.6742	0.0763	0.0607	0.0315	0.8867	0.3806	0.0093
7	1,156.012	0.6611	84.5320	9.3965	3.6599	0.3685	0.5836	0.0741	0.0588	0.0311	0.8979	0.3881	0.0094
8	1,161.111	0.6657	84.0898	9.3953	3.7904	0.4067	0.7344	0.0773	0.0584	0.0302	1.0233	0.3849	0.0092
9	1,156.688	0.6617	84.5831	9.2745	3.5915	0.3886	0.6762	0.0783	0.0622	0.0322	0.9152	0.3888	0.0094
10	1,158.975	0.6633	84.3376	9.4335	3.6664	0.3904	0.6796	0.0775	0.0615	0.0306	0.9232	0.3904	0.0093
11	1,159.639	0.6633	84.3897	9.3917	3.6766	0.3966	0.6925	0.0778	0.0614	0.0304	0.8942	0.3804	0.0087
12	1,158.623	0.6625	84.4649	9.3930	3.6326	0.3891	0.6759	0.0783	0.0618	0.0320	0.8893	0.3748	0.0084
13	1,158.349	0.6625	84.4621	9.3716	3.6321	0.3884	0.6811	0.0776	0.0622	0.0322	0.9128	0.3711	0.0089
14	1,160.760	0.6651	84.1460	9.3971	3.7806	0.3984	0.7183	0.0772	0.0607	0.0305	1.0070	0.3754	0.0088
15	1,158.357	0.6625	84.4314	9.4085	3.6429	0.3852	0.6768	0.0757	0.0590	0.0288	0.9139	0.3693	0.0085
16	1,160.805	0.6641	84.2244	9.5247	3.7160	0.3912	0.6876	0.0754	0.0598	0.0297	0.9076	0.3748	0.0087
17	1,159.485	0.6629	84.3850	9.4607	3.6809	0.3861	0.6691	0.0732	0.0582	0.0301	0.8673	0.3809	0.0085
18	1,159.590	0.6629	84.3618	9.4984	3.6530	0.3886	0.6717	0.0768	0.0597	0.0301	0.8890	0.3621	0.0087
19	1,157.779	0.6622	84.4388	9.4164	3.6339	0.3812	0.6647	0.0741	0.0585	0.0299	0.9177	0.3757	0.0092
20	1,159.734	0.6637	84.2391	9.5091	3.7001	0.3873	0.6796	0.0735	0.0584	0.0296	0.9374	0.3768	0.0091
21	1,159.108	0.6627	84.3745	9.5024	3.6481	0.3864	0.6605	0.0745	0.0595	0.0298	0.8807	0.3747	0.0089
22	1,159.267	0.6630	84.3279	9.5292	3.6538	0.3858	0.6619	0.0747	0.0590	0.0297	0.8819	0.3872	0.0090
23	1,160.900	0.6638	84.2793	9.5147	3.7039	0.3963	0.6811	0.0778	0.0595	0.0294	0.8708	0.3784	0.0087
24	1,159.873	0.6631	84.3370	9.5074	3.6658	0.3894	0.6757	0.0759	0.0592	0.0291	0.8834	0.3680	0.0092
25	1,161.607	0.6643	84.2214	9.5388	3.7112	0.3978	0.6925	0.0793	0.0634	0.0302	0.8806	0.3763	0.0085
26	1,162.120	0.6651	84.1563	9.5378	3.7294	0.4064	0.6966	0.0811	0.0644	0.0343	0.8848	0.3999	0.0090
27	1,160.239	0.6642	84.2848	9.4251	3.6825	0.4032	0.7050	0.0808	0.0638	0.0319	0.9125	0.4015	0.0088
28	1,161.853	0.6655	84.1110	9.4773	3.7545	0.4136	0.7225	0.0794	0.0612	0.0290	0.9421	0.4004	0.0089
29	1,161.048	0.6644	84.1993	9.5382	3.6965	0.4031	0.6956	0.0789	0.0599	0.0288	0.8963	0.3944	0.0091
30	1,160.877	0.6638	84.3007	9.4961	3.6665	0.4054	0.6974	0.0793	0.0616	0.0307	0.8715	0.3821	0.0087
Volume	1,159.526	0.6633	84.3315	9.4510	3.6762	0.3920	0.6828	0.0764	0.0602	0.0305	0.9109	0.3795	0.0090
Weight Avg Energy	1,159.521	0.6633	84.3320	9.4505	3.6761	0.3920	0.6829	0.0764	0.0602	0.0305	0.9109	0.3795	0.0090

September-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		
9/1/2022	9/2/2022	5	6	1209.1	106	111	1051	1058.122	9/1/2022
9/2/2022	9/3/2022	1	1	1209.1	115	121	1051	1052.363	9/2/2022
9/3/2022	9/4/2022	0	0	1209.1	101	106	1051	1051.000	9/3/2022
9/4/2022	9/5/2022	0	0	1209.1	95	100	1051	1051.000	9/4/2022
9/5/2022	9/6/2022	0	0	1209.1	103	109	1051	1051.000	9/5/2022
9/6/2022	9/7/2022	2	2	1209.1	112	117	1051	1053.774	9/6/2022
9/7/2022	9/8/2022	20	25	1209.1	95	99	1051	1078.496	9/7/2022
9/8/2022	9/9/2022	32	38	1209.1	123	129	1051	1083.640	9/8/2022
9/9/2022	9/10/2022	23	27	1209.1	149	156	1051	1072.141	9/9/2022
9/10/2022	9/11/2022	9	11	1209.1	122	128	1051	1061.862	9/10/2022
9/11/2022	9/12/2022	12	14	1209.1	119	125	1051	1065.482	9/11/2022
9/12/2022	9/13/2022	7	8	1209.1	126	132	1051	1059.321	9/12/2022
9/13/2022	9/14/2022	33	40	1209.1	143	150	1051	1080.644	9/13/2022
9/14/2022	9/15/2022	19	23	1209.1	133	140	1051	1070.763	9/14/2022
9/15/2022	9/16/2022	15	18	1209.1	186	195	1051	1062.799	9/15/2022
9/16/2022	9/17/2022	8	10	1209.1	162	170	1051	1058.440	9/16/2022
9/17/2022	9/18/2022	11	14	1209.1	135	142	1051	1062.912	9/17/2022
9/18/2022	9/19/2022	25	30	1209.1	130	137	1051	1076.500	9/18/2022
9/19/2022	9/20/2022	8	10	1209.1	118	124	1051	1061.038	9/19/2022
9/20/2022	9/21/2022	98	118	1209.1	178	187	1051	1107.137	9/20/2022
9/21/2022	9/22/2022	123	148	1209.1	201	211	1051	1111.019	9/21/2022
9/22/2022	9/23/2022	112	136	1209.1	174	183	1051	1112.913	9/22/2022
9/23/2022	9/24/2022	12	14	1209.1	166	175	1051	1061.658	9/23/2022
9/24/2022	9/25/2022	9	11	1209.1	144	151	1051	1060.300	9/24/2022
9/25/2022	9/26/2022	24	29	1209.1	150	157	1051	1072.807	9/25/2022
9/26/2022	9/27/2022	26	31	1209.1	161	169	1051	1072.982	9/26/2022
9/27/2022	9/28/2022	45	55	1209.1	143	150	1051	1088.843	9/27/2022
9/28/2022	9/29/2022	41	50	1209.1	135	142	1051	1087.830	9/28/2022
9/29/2022	9/30/2022	34	41	1209.1	127	133	1051	1084.388	9/29/2022
9/30/2022	10/1/2022	29	36	1209.1	128	135	1051	1080.203	9/30/2022
		783	946	1209.1000	4,080	4,284	1051.0000	1071.7125	

Tsp	EffDate	EndDate	Device	GasDay	EndDt	BTU	SpecGrav	CriconTherm	WobbeIndex	CO2	N2	Methane	Ethane	Propane	iButane	nButane	iPentane	nPentane	Neopentane	COPlus	Hydrogen	Helium	WaterVapor	TotalSulfur	HydrogenSulfur	Oxygen
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/1/2022	9/2/2022	1081	0.6403	-52.9	1350.933412	0.9749	2.5784	83.639	11.768	0.8131	0.0198	0.037	0.0019	0.0019	N/A	0.0001	0.1415	0.0246	0.4547	0.0418	0.0568	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/2/2022	9/3/2022	1082	0.6409	-52.7	1351.550025	0.9645	2.5602	83.4532	11.9955	0.7887	0.0184	0.034	0.0017	0.0015	N/A	0	0.158	0.0243	0.4238	0.0304	0.056	0.0013
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/3/2022	9/4/2022	1084	0.6428	-51.2	1352.045628	0.9733	2.5835	83.2592	12.1415	0.8523	0.0207	0.0385	0.0019	0.0018	N/A	0	0.1026	0.0248	0.4273	0.0414	0.0644	0.0015
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/4/2022	9/5/2022	1086	0.6434	-50.9	1353.908444	0.9683	2.5782	83.2195	12.2288	0.8623	0.0208	0.0378	0.0018	0.0016	N/A	0.0001	0.0557	0.0253	0.4441	0.0363	0.0646	0.0014
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/5/2022	9/6/2022	1084	0.6425	-51.8	1352.361244	0.9543	2.5883	83.3232	12.1654	0.8195	0.0191	0.0345	0.0017	0.0014	N/A	0.0001	0.0677	0.0249	0.4419	0.0343	0.0643	0.0014
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/6/2022	9/7/2022	1086	0.6432	-50.7	1354.118924	0.9517	2.5463	83.2536	12.2246	0.8677	0.0219	0.0398	0.0019	0.0017	N/A	0.0001	0.0659	0.025	0.4206	0.0291	0.0722	0.0013
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/7/2022	9/8/2022	1087	0.644	-49.4	1354.523707	0.953	2.5868	83.1958	12.162	0.9448	0.0252	0.0462	0.0025	0.0023	N/A	0.0002	0.0562	0.0253	0.4306	0.0429	0.0775	0.0015
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/8/2022	9/9/2022	1085	0.6426	-51.4	1353.503483	0.9531	2.5733	83.3763	12.1037	0.8548	0.0205	0.038	0.0018	0.0017	N/A	0	0.0519	0.0249	0.444	0.0306	0.0717	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/9/2022	9/10/2022	1084	0.6422	-52.2	1352.677081	0.956	2.5649	83.3603	12.1861	0.7934	0.0177	0.0324	0.0016	0.0014	N/A	0.0001	0.0615	0.0248	0.4226	0.0376	0.0625	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/10/2022	9/11/2022	1081	0.6403	-53.5	1350.933412	0.9709	2.5889	83.7882	11.7358	0.7876	0.0188	0.0346	0.0017	0.0014	N/A	0.0001	0.0474	0.0246	0.4224	0.0422	0.0585	0.0011
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/11/2022	9/12/2022	1081	0.6406	-52.9	1350.617047	0.9798	2.5701	83.7729	11.7184	0.8206	0.0201	0.0375	0.0019	0.0018	N/A	0.0001	0.0524	0.0246	0.4136	0.0427	0.0554	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/12/2022	9/13/2022	1082	0.6414	-52.6	1351.023126	0.9777	2.6054	83.6007	11.8649	0.8129	0.0198	0.0368	0.0018	0.0017	N/A	0.0001	0.0538	0.0247	0.4237	0.055	0.06	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/13/2022	9/14/2022	1081	0.6416	-53.1	1349.564098	0.9922	2.6348	83.5136	11.9588	0.7771	0.0176	0.0311	0.0012	0.001	N/A	0	0.0475	0.0251	0.4211	0.1563	0.0755	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/14/2022	9/15/2022	1078	0.6401	-55.1	1347.394739	0.9959	2.6981	83.6692	11.8268	0.6785	0.0144	0.0264	0.0009	0.0007	N/A	0	0.0634	0.0257	0.4141	0.1574	0.0772	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/15/2022	9/16/2022	1079	0.6406	-54.3	1348.118218	0.9879	2.6632	83.5788	11.9212	0.7073	0.0156	0.0282	0.001	0.0006	N/A	0	0.0709	0.0254	0.4166	0.217	0.0889	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/16/2022	9/17/2022	1081	0.641	-53.4	1350.195571	0.9803	2.6158	83.5887	11.9156	0.7591	0.0177	0.0327	0.0014	0.0012	N/A	0	0.0624	0.0251	0.4226	0.2212	0.0902	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/17/2022	9/18/2022	1080	0.6405	-53.7	1349.472965	0.9819	2.5994	83.6617	11.8444	0.7587	0.0176	0.0322	0.0014	0.0011	N/A	0	0.0773	0.0245	0.431	0.211	0.0882	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/18/2022	9/19/2022	1079	0.6393	-54	1349.488203	0.971	2.5695	83.9025	11.6114	0.7683	0.0196	0.0362	0.0017	0.0013	N/A	0	0.0938	0.0248	0.4285	0.2001	0.0815	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/19/2022	9/20/2022	1073	0.6347	-57.6	1346.838346	0.9563	2.5102	84.8069	10.8973	0.6948	0.0172	0.031	0.0014	0.0012	N/A	0	0.0591	0.0248	0.4415	0.2118	0.0827	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/20/2022	9/21/2022	1080	0.6396	-53.6	1350.422073	0.965	2.5797	83.8926	11.5928	0.8089	0.0196	0.0361	0.0017	0.0014	N/A	0	0.0778	0.0246	0.4206	0.1535	0.0674	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/21/2022	9/22/2022	1080	0.6402	-53.5	1349.789112	0.966	2.5941	83.7578	11.7275	0.7964	0.0188	0.034	0.0015	0.0013	N/A	0	0.078	0.0246	0.4093	0.1214	0.0518	0.0011
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/22/2022	9/23/2022	1080	0.6398	-53.9	1350.210987	0.9772	2.5608	83.7989	11.7437	0.7542	0.0183	0.0336	0.0016	0.0013	N/A	0	0.0858	0.0249	0.4095	0.127	0.0571	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/23/2022	9/24/2022	1081	0.6407	-53.3	1350.511641	0.9774	2.5784	83.6864	11.8495	0.7739	0.0186	0.0339	0.0016	0.0012	N/A	0	0.0542	0.025	0.4142	0.1348	0.0645	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/24/2022	9/25/2022	1080	0.6402	-53.9	1349.789112	0.9794	2.5913	83.7981	11.7625	0.754	0.0181	0.033	0.0015	0.0012	N/A	0	0.0359	0.0253	0.4135	0.1293	0.0611	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/25/2022	9/26/2022	1078	0.6384	-54.8	1349.18754	0.966	2.5773	83.9555	11.5577	0.7389	0.0176	0.0324	0.0016	0.0013	N/A	0	0.1272	0.0247	0.4246	0.995	0.0507	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/26/2022	9/27/2022	1080	0.639	-54.1	1351.055925	0.956	2.5484	83.8826	11.6444	0.7696	0.0185	0.0338	0.0016	0.0013	N/A	0	0.1199	0.0241	0.4219	0.0939	0.0509	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/27/2022	9/28/2022	1077	0.637	-55.3	1349.41641	0.947	2.5189	84.1931	11.349	0.7488	0.0183	0.0337	0.0017	0.0015	N/A	0	0.164	0.0242	0.4291	0.0726	0.0466	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/28/2022	9/29/2022	1079	0.6401	-53.3	1348.644641	0.9735	2.6582	83.6443	11.6866	0.8083	0.0188	0.0354	0.0017	0.0016	N/A	0	0.1465	0.0253	0.418	0.0756	0.0522	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/29/2022	9/30/2022	1077	0.6387	-54.4	1347.619372	0.9625	2.6434	83.9034	11.4929	0.7726	0.0186	0.0352	0.0018	0.0018	N/A	0	0.1434	0.0246	0.4375	0.0366	0.0234	0.0012
NBPL	8/31/2022 0:00	10/1/2022 0:00	GLNU1 - GLEN ULLIN	9/30/2022	10/1/2022	1078	0.6386	-54.2	1348.976251	0.964	2.6207	83.9098	11.466	0.7928	0.0191	0.0358	0.0019	0.0018	N/A	0	0.1634	0.0247	0.4475	0.0035	0.0012	0.0012

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	SEP22	AUG22	JUL22	JUN22	MAY22	APR22	MAR22	FEB22	JAN22	DEC21	NOV21	OCT21	ZONE
MT/ND	211	Sidney Border - MonDak Tfr - Sidney Plt	1197	1198	1205	1200	1198	1185	1191	1196	1196	1171	1215	1208	1201	211
ND	24	Williston Border - Charbonneau Station	1178	1188	1192	1195	1187	1185	1188	1189	1180	1155	1152	1161	1159	24
ND	25	Watford City West Border	1202	1209	1210	1201	1199	1195	1200	1197	1200	1198	1202	1208	1206	25
ND	28	Bismarck Station - Glen Ullin Station	1161	1191	1198	1202	1204	1196	1087	1131	1131	1126	1142	1135	1185	28
ND	31	Dickinson Brd - Belfield Trf - G Ullin Stn	1118	1099	1087	1094	1105	1100	1108	1130	1132	1132	1143	1141	1141	31
ND/MT	32	Cabin Creek Station - Belfield Transfer	1125	1128	1129	1115	1124	1138	1126	1095	1122	1127	1131	1129	1132	32
ND	33	Little Knife Plant	1176	1173	1174	1177	1175	1175	1176	1178	1176	1173	1176	1182	1177	33
ND	34	Badlands Plant/Bowman Border	1044	1056	1031	1033	1014	1019	1021	1070	1087	1097	1093	981	1022	34
ND	43	Watford City East Border	1057	1051	1057	1062	1044	1036	1042	1042	1108	1094	1042	1047	1060	43
ND/MT	241	Fairview Border	1192	1193	1197	1199	1186	1178	1191	1191	1197	1200	1208	1197	1162	241
ND	267	North Tioga Transfer - Nesson Plant	1159	1174	1184	1184	1173	1172	1176	1172	1157	1122	1122	1137	1135	267
ND	261	Tioga Comp Station - Robinson Lake Plan	1187	1196	1196	1201	1200	1200	1191	1191	1155	1175	1161	1176	1197	261
ND	262	Minot Bdr - Palermo Bdr - Bismarck Stn	1198	1198	1196	1203	1205	1202	1202	1194	1187	1180	1199	1198	1211	262
ND	263	Lignite Plant	1131	1131	1131	1130	1131	1131	1131	1131	1131	1131	1131	1131	1131	263
ND	264	Epping Border	1173	1196	1192	1188	1182	1188	1188	1185	1173	1145	1147	1152	1145	264
ND	265	Tioga Comp Station - County Line Plant	1166	1178	1178	1180	1176	1163	1170	1167	1150	1157	1152	1159	1166	265
ND	266	County Line Plant	1176	1180	1182	1179	1179	1167	1173	1172	1166	1175	1178	1183	1174	266
ND	271	Bismarck Station - Cleveland Station	1190	1191	1198	1202	1205	1205	1164	1185	1169	1162	1188	1198	1208	271
ND	272	Cleveland Station - Mapleton	1190	1191	1198	1202	1205	1204	1175	1184	1167	1161	1189	1198	1211	272
ND	273	Cleveland Station - Grafton Border	1189	1194	1198	1200	1205	1202	1168	1176	1166	1161	1188	1198	1210	273
ND	550	Mandan Border / NBPL-St Anthony	1152	1189	1194	1182	1201	1189	1087	1103	1119	1116	1136	1135	1173	550
ND	610	MDU-Watford City BTU	1095	1072	1068	1065	1063	1086	1093	1087	1138	1129	1095	1110	1130	610
ND	802	NBPL - Linton	1082	1081	1083	1086	1084	1074	1067	1073	1088	1091	1085	1086	1089	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	1159	1157	1160	1153	1151	1155	1157	1152	1149	1155	1158	1158	600
ND	601	Alliance Pipeline - Milnor	1155	1160	1157	1160	1153	1151	1154	1157	1152	1149	1154	1157	1158	602

THERMAL ZONE VARIANCE DOCUMENTATION		
September 2022		
<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
34	-24	Operational