

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

March 24, 2023

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

Re: Case No. PU-23-002 (Therm Billing)
Monthly Report – January 2023

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 February 2023.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our suppliers for the month of January 2023.
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 January 2023.

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
Feb-23

<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	1.1347
MDU-318-BEACH	032	1.0526
MDU-319-BELFIELD	032	1.0603
MDU-323-BERTHOLD	262	1.1230
MDU-327-BISMARCK	028	1.0932
MDU-330-BOWMAN	034	0.9962
MDU-337-BURLINGTON	262	1.1472
MDU-343-CARRINGTON	273	1.1347
MDU-344-CLEVELAND	272	1.1267
MDU-364-CAVALIER	273	1.1586
MDU-365-DAWSON	271	1.1267
MDU-368-DES LACS	262	1.1311
MDU-369-DICKINSON	031	1.0690
MDU-374-FT TOTTEN	273	1.1427
MDU-375-DEVILS LAKE	273	1.1427
MDU-379-BARLOW	273	1.1347
MDU-384-EPPING	264	1.1315
MDU-387-ELDRIDGE	272	1.1347
MDU-407-GLADSTONE	031	1.0690
MDU-411-GLEN ULLIN	031	1.0767
MDU-413-GOLVA	032	1.0371
MDU-416-GARRISON	262	1.1311
MDU-417-GRAFTON	273	1.1666
MDU-403-GWINNER	601	1.1261
MDU-429-HEBRON	031	1.0767
MDU-432-HETTINGER	903	2.3875
MDU-449-JAMESTOWN	272	1.1427
MDU-459-KILLDEER	033	1.1107
MDU-463-LANGDON	273	1.1347
MDU-469-LEFOR	031	1.0690
MDU-474-LIGNITE	263	1.0759
MDU-475-LINTON	802	1.0517
MDU-478-LINCOLN	028	1.0932
MDU-488-MCKENZIE	271	1.1347
MDU-494-MEDINA	271	1.1267
MDU-498-MANDAN	028	1.0932
MDU-500-MARMARTH	034	1.0036
MDU-505-MINOT	262	1.1472
MDU-510-MOTT	031	1.0690
MDU-512-MAX	262	1.1472
MDU-513-MILNOR	601	1.1261
MDU-522-NEW ENGLAND	031	1.0613
MDU-524-NEW SALEM	028	1.0701
MDU-532-NEW ROCKFORD	273	1.1347
MDU-539-PARK RIVER	273	1.1586
MDU-540-PALERMO	262	1.1230
MDU-558-RAY	264	1.1315

MDU-561-REGENT	031	1.0690
MDU-563-RHAME	034	0.9889
MDU-564-RICHARDTON	031	1.0613
MDU-568-ROSS	261	1.1027
MDU-572-RUTHVILLE	262	1.1472
MDU-574-SANBORN	272	1.1427
MDU-583-SENTINEL BUTTE	032	1.0526
MDU-588-SOUTH HEART	031	1.0690
MDU-717-SPIRITWOOD	272	1.1427
MDU-590-SPRINGBROOK	264	1.1315
MDU-591-STANLEY	261	1.1107
MDU-593-STEELE	271	1.1267
MDU-594-STERLING	028	1.0932
MDU-598-SHEYENNE	273	1.1427
MDU-605-SURREY	262	1.1472
MDU-610-TAPPEN	271	1.1267
MDU-611-TAYLOR	031	1.0613
MDU-616-TIOGA	260	1.1027
MDU-619-TURTLE LAKE	262	1.1311
MDU-620-TRENTON	024	1.1349
MDU-624-UNDERWOOD	262	1.1311
MDU-625-VALLEY CITY	272	1.1507
MDU-629-WALHALLA	273	1.1586
MDU-632-WATFORD CITY	610	1.0909
MDU-636-WHEELOCK	264	1.1234
MDU-637-WHITE EARTH	261	1.1107
MDU-642-WILLISTON	024	1.1349
MDU-646-WASHBURN	262	1.1392
MDU-647-WILTON	262	1.1230
MDU-664-RIVERDALE	262	1.1311
MDU-691-FAIRVIEW	241	1.1425
MDU-712-MINOT AFB	262	1.1472
MDU-718-FAIRMOUNT	600	1.1238
MDU-732-NEKOMA	273	1.1347
MDU-732-MSR SITE	273	1.1347

Source Daily Summary

January 2023

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	0.7424	1197.0	1218.2	1217.9	1.338	3.405	67.065	24.095	3.600	0.168	0.306	0.013	0.009	0.000	0.000	0.000	0.000	0.000	1413.85	
2	0.7456	1202.2	1223.5	1223.2	1.336	3.389	66.362	24.873	3.549	0.166	0.302	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1417.03	
3	0.7456	1204.9	1226.2	1225.9	1.273	3.330	66.083	25.447	3.413	0.154	0.279	0.012	0.008	0.000	0.000	0.000	0.000	0.000	1420.11	
4	0.7462	1210.0	1231.4	1231.1	1.145	3.270	65.762	26.006	3.395	0.145	0.259	0.010	0.007	0.000	0.000	0.000	0.000	0.000	1425.64	
5	0.7353	1199.5	1220.8	1220.5	0.930	3.209	67.381	24.989	3.134	0.123	0.218	0.009	0.006	0.000	0.000	0.000	0.000	0.000	1423.84	
6	0.7379	1197.9	1219.1	1218.8	1.119	3.267	67.046	25.115	3.041	0.138	0.256	0.011	0.007	0.000	0.000	0.000	0.000	0.000	1419.31	
7	0.7317	1190.1	1211.2	1210.9	1.053	3.258	68.217	24.067	2.982	0.138	0.263	0.013	0.009	0.000	0.000	0.000	0.000	0.000	1416.07	
8	0.7406	1195.7	1216.8	1216.5	1.344	3.311	67.334	24.066	3.419	0.169	0.327	0.017	0.013	0.000	0.000	0.000	0.000	0.000	1413.98	
9	0.7058	1169.9	1190.6	1190.3	0.389	3.071	71.330	23.057	1.990	0.057	0.098	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1417.39	
10	0.6939	1162.8	1183.4	1183.1	0.025	2.938	72.626	22.904	1.476	0.014	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.71	
11	0.6949	1163.8	1184.4	1184.1	0.027	2.977	72.447	22.999	1.520	0.014	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.76	
12	0.7006	1172.9	1193.6	1193.3	0.031	2.946	71.764	23.254	1.966	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.08	
13	0.6980	1168.7	1189.4	1189.1	0.027	2.965	72.075	23.145	1.747	0.018	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.63	
14	0.7016	1170.4	1191.2	1190.9	0.146	3.017	71.716	23.103	1.935	0.031	0.048	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1422.15	
15	0.7276	1188.4	1209.5	1209.2	0.915	3.183	68.843	23.666	3.031	0.119	0.221	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1418.12	
16	0.7321	1192.1	1213.2	1212.9	1.029	3.217	68.197	24.037	3.123	0.130	0.244	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1417.99	
17	0.7314	1190.4	1211.5	1211.2	1.029	3.250	68.314	23.903	3.108	0.131	0.243	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1416.71	
18	0.7244	1186.4	1207.4	1207.0	0.781	3.215	69.088	23.754	2.835	0.108	0.201	0.010	0.007	0.000	0.000	0.000	0.000	0.000	1418.72	
19	0.7062	1175.7	1196.5	1196.2	0.230	3.001	70.977	23.691	1.998	0.038	0.062	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1423.90	
20	0.7000	1171.6	1192.4	1192.1	0.035	2.966	71.552	23.766	1.649	0.015	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.15	
21	0.7070	1172.6	1193.4	1193.0	0.350	3.080	71.049	23.333	2.047	0.050	0.085	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1419.43	
22	0.6956	1164.0	1184.6	1184.2	0.035	3.022	72.209	23.275	1.432	0.013	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.27	
23	0.6963	1165.6	1186.2	1185.9	0.037	2.989	72.143	23.301	1.503	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.49	
24	0.7226	1185.7	1206.7	1206.4	0.736	3.157	69.196	23.931	2.687	0.098	0.179	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1419.74	
25	0.7396	1194.7	1215.8	1215.5	1.324	3.307	67.431	24.040	3.407	0.160	0.303	0.015	0.012	0.000	0.000	0.000	0.000	0.000	1413.76	
26	0.7325	1190.9	1212.0	1211.6	1.090	3.233	68.068	24.198	3.009	0.131	0.248	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1416.17	
27	0.6950	1162.2	1182.8	1182.5	0.068	3.015	72.399	23.044	1.439	0.014	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.85	
28	0.7213	1182.1	1203.0	1202.8	0.782	3.185	69.510	23.527	2.704	0.099	0.178	0.008	0.006	0.000	0.000	0.000	0.000	0.000	1416.69	
29	0.7032	1169.4	1190.1	1189.8	0.254	3.066	71.397	23.384	1.801	0.036	0.059	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1419.32	
30	0.6950	1162.4	1183.0	1182.7	0.038	3.050	72.284	23.221	1.385	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.07	
31	0.7162	1177.4	1198.2	1197.9	0.682	3.143	70.051	23.499	2.381	0.082	0.149	0.008	0.006	0.000	0.000	0.000	0.000	0.000	1416.12	
Avg	0.7183	1182.0	1202.8	1202.5	0.632	3.143	69.675	23.829	2.474	0.084	0.151	0.007	0.005	0.000	0.000	0.000	0.000	0.000	1419.42	

Source Daily Summary

January 2023

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	0.7171	1174.1	1194.9	1194.6	0.822	3.209	70.513	22.485	2.588	0.108	0.234	0.019	0.021	0.000	0.000	0.000	0.000	0.000	1411.10	
2	0.7177	1176.5	1197.3	1197.0	0.874	3.046	70.412	22.713	2.597	0.100	0.221	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1413.29	
3	0.7230	1182.9	1203.9	1203.6	1.029	2.919	69.906	22.831	2.913	0.112	0.251	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1415.76	
4	0.7163	1177.4	1198.3	1197.9	0.658	3.185	70.624	22.395	2.796	0.101	0.208	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1415.82	
5	0.7137	1177.5	1198.3	1198.0	0.462	3.236	70.825	22.401	2.786	0.090	0.173	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1418.43	
6	0.7016	1162.7	1183.3	1183.0	0.291	3.267	72.015	22.342	1.898	0.058	0.111	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1412.67	
7	0.7030	1163.9	1184.5	1184.2	0.350	3.232	71.889	22.364	1.963	0.062	0.120	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1412.76	
8	0.7073	1167.9	1188.6	1188.3	0.380	3.343	71.412	22.365	2.257	0.073	0.144	0.012	0.013	0.000	0.000	0.000	0.000	0.000	1413.29	
9	0.7059	1165.6	1186.2	1185.9	0.386	3.341	71.542	22.401	2.090	0.073	0.143	0.012	0.013	0.000	0.000	0.000	0.000	0.000	1411.94	
10	0.7113	1167.4	1188.0	1187.7	0.512	3.555	70.952	22.311	2.347	0.096	0.193	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1408.62	
11	0.7044	1164.3	1185.0	1184.6	0.353	3.331	71.707	22.362	2.023	0.068	0.133	0.011	0.012	0.000	0.000	0.000	0.000	0.000	1411.88	
12	0.7085	1172.7	1193.5	1193.1	0.304	3.280	70.987	23.000	2.225	0.064	0.120	0.010	0.010	0.000	0.000	0.000	0.000	0.000	1417.91	
13	0.7122	1174.2	1195.0	1194.7	0.407	3.380	70.713	22.738	2.496	0.081	0.158	0.013	0.014	0.000	0.000	0.000	0.000	0.000	1416.03	
14	0.7128	1171.3	1192.1	1191.7	0.536	3.417	70.756	22.540	2.445	0.090	0.185	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1411.94	
15	0.7121	1170.8	1191.6	1191.3	1.038	2.613	71.916	21.383	2.655	0.111	0.242	0.019	0.022	0.000	0.000	0.000	0.000	0.000	1412.03	
16	0.7231	1180.0	1200.9	1200.6	1.078	3.017	70.181	22.205	3.080	0.121	0.272	0.020	0.024	0.000	0.000	0.000	0.000	0.000	1412.33	
17	0.7182	1178.5	1199.3	1199.1	1.046	2.704	71.174	21.581	3.049	0.126	0.275	0.021	0.024	0.000	0.000	0.000	0.000	0.000	1415.24	
18	0.7231	1183.3	1204.3	1204.0	1.054	2.860	70.492	21.804	3.301	0.136	0.303	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1416.18	
19	0.7234	1182.1	1203.0	1202.7	1.065	2.946	70.274	22.060	3.192	0.128	0.288	0.022	0.026	0.000	0.000	0.000	0.000	0.000	1414.41	
20	0.7291	1187.5	1208.6	1208.3	1.073	3.135	69.308	22.639	3.358	0.133	0.304	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1415.38	
21	0.7315	1191.7	1212.8	1212.5	1.073	3.104	69.013	22.814	3.491	0.138	0.314	0.024	0.029	0.000	0.000	0.000	0.000	0.000	1418.02	
22	0.7309	1189.9	1210.9	1210.6	1.063	3.177	69.126	22.645	3.466	0.143	0.324	0.025	0.030	0.000	0.000	0.000	0.000	0.000	1416.42	
23	0.7121	1171.6	1192.3	1192.0	0.512	3.373	70.837	22.587	2.373	0.093	0.190	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1412.93	
24	0.7022	1169.7	1190.4	1190.1	0.174	3.073	71.513	23.366	1.767	0.036	0.062	0.004	0.005	0.000	0.000	0.000	0.000	0.000	1420.59	
25	0.7337	1195.3	1216.4	1216.1	1.074	3.092	68.933	22.658	3.662	0.155	0.358	0.029	0.037	0.000	0.000	0.000	0.000	0.000	1420.11	
26	0.7323	1193.1	1214.2	1213.9	1.071	3.100	69.191	22.403	3.661	0.155	0.354	0.029	0.036	0.000	0.000	0.000	0.000	0.000	1418.85	
27	0.7255	1182.6	1203.5	1203.2	1.051	3.129	69.824	22.377	3.133	0.129	0.302	0.024	0.030	0.000	0.000	0.000	0.000	0.000	1412.99	
28	0.7146	1179.3	1200.2	1199.9	0.500	3.149	70.563	22.874	2.617	0.084	0.182	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1419.88	
29	0.7090	1173.8	1194.6	1194.3	0.295	3.271	71.095	22.736	2.357	0.076	0.147	0.011	0.011	0.000	0.000	0.000	0.000	0.000	1418.78	
30	0.7046	1167.7	1188.4	1188.1	0.280	3.259	71.490	22.806	1.961	0.064	0.122	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1415.73	
31	0.7124	1174.6	1195.4	1195.1	0.518	3.202	70.687	22.982	2.341	0.077	0.165	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1416.39	
Avg	0.7159	1176.0	1197.3	1197.0	0.688	3.160	70.641	22.489	2.674	0.099	0.213	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1415.09	

Gas Composition and Properties

Effective January 1, 2023

Source #: 0602160
Name: FAIRVIEW BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.2013		2.4833
Nitrogen, N2	3.1291		4.1174
Methane, C1	67.6344		50.9652
Ethane, C2	24.2138	6.4818	34.1992
Propane, C3	3.3617	0.9270	6.9629
iso-Butane, iC4	0.1570	0.0514	0.4286
n-Butane, nC4	0.2768	0.0873	0.7557
iso-Pentane, iC5	0.0145	0.0053	0.0491
n-Pentane, nC5	0.0114	0.0041	0.0386
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	7.5560	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-10.369	
Cricondentherm	6.753	
HV, Dry @ Base P, T	1218.44	
HV, Sat @ Base P, T	1197.23	
HV, Sat @ Sample P, T	1218.44	
Relative Density	0.7374	
C6+: 100		

Sample

Date: 01/01/2023 Type:

Tech: Tipton, Joshua

Pressure: 430 psi Temp.: °F

Gauge: Gauge H2O:

Atm. Pressure: H2S:

Remarks:

Analysis

Date: 01/01/2023 Instrument:

Tech: Tipton, Joshua Cylinder: 300

Remarks:

Source Daily Summary

January 2023

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	0.7014	1162.3	1182.8	1182.6	1.000	2.185	73.547	20.765	2.151	0.101	0.215	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1412.38	-9.49
2	0.7006	1159.3	1179.8	1179.6	1.005	2.287	73.461	20.940	1.990	0.091	0.195	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1409.56	-11.15
3	0.6985	1155.6	1176.1	1175.9	0.998	2.322	73.702	20.821	1.868	0.083	0.177	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1407.24	-12.99
4	0.7027	1162.2	1182.7	1182.5	0.991	2.333	73.326	20.760	2.234	0.101	0.218	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1410.88	-8.84
5	0.7048	1164.5	1185.1	1184.9	0.988	2.390	72.902	21.100	2.283	0.097	0.203	0.016	0.021	0.000	0.000	0.000	0.000	0.000	1411.62	-8.22
6	0.7045	1164.0	1184.6	1184.4	0.990	2.394	72.860	21.204	2.234	0.090	0.195	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1411.32	-8.88
7	0.7056	1165.9	1186.5	1186.3	0.990	2.376	72.753	21.240	2.308	0.092	0.208	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1412.54	-7.91
8	0.7043	1164.4	1185.0	1184.8	0.991	2.347	72.908	21.195	2.250	0.086	0.192	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1412.01	-8.97
9	0.7032	1162.9	1183.4	1183.2	0.992	2.329	73.086	21.095	2.196	0.084	0.188	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1411.31	-9.72
10	0.7020	1161.6	1182.2	1181.9	0.986	2.309	73.177	21.151	2.092	0.082	0.174	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1410.92	-10.78
11	0.7008	1160.4	1181.0	1180.8	0.987	2.263	73.474	20.885	2.083	0.089	0.188	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1410.75	-10.83
12	0.7032	1163.3	1183.9	1183.7	0.992	2.308	73.192	20.939	2.227	0.098	0.208	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1411.76	-8.90
13	0.7047	1164.2	1184.8	1184.6	1.004	2.376	72.943	21.056	2.279	0.099	0.207	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1411.37	-8.22
14	0.7053	1163.4	1184.0	1183.8	1.003	2.476	72.947	20.838	2.383	0.102	0.214	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1409.83	-7.66
15	0.6959	1146.3	1166.6	1166.4	0.940	2.731	74.294	19.721	2.002	0.090	0.190	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1398.47	-13.90
16	0.6964	1151.9	1172.3	1172.1	0.995	2.356	73.934	20.711	1.742	0.075	0.161	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1404.82	-14.95
17	0.6949	1148.2	1168.5	1168.3	1.011	2.427	73.923	20.891	1.525	0.064	0.136	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1401.72	-17.27
18	0.6962	1150.8	1171.2	1171.0	0.996	2.404	73.847	20.850	1.656	0.071	0.152	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1403.67	-15.72
19	0.6940	1147.5	1167.8	1167.6	0.954	2.459	74.480	20.010	1.819	0.080	0.169	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1401.79	-15.62
20	0.6996	1157.7	1178.2	1178.0	0.995	2.301	73.566	20.894	1.947	0.086	0.181	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1408.69	-12.11
21	0.7027	1161.3	1181.9	1181.7	1.002	2.364	73.138	21.069	2.106	0.092	0.196	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1409.93	-10.00
22	0.7066	1165.9	1186.5	1186.3	1.010	2.442	72.638	21.218	2.338	0.100	0.218	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1411.52	-7.22
23	0.7112	1171.7	1192.5	1192.2	1.019	2.505	72.104	21.339	2.624	0.113	0.253	0.020	0.023	0.000	0.000	0.000	0.000	0.000	1413.95	-3.69
24	0.7103	1170.9	1191.6	1191.4	1.014	2.475	72.257	21.253	2.601	0.110	0.246	0.020	0.024	0.000	0.000	0.000	0.000	0.000	1413.90	-4.18
25	0.7040	1162.4	1183.0	1182.8	0.987	2.441	73.173	20.651	2.427	0.092	0.196	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1409.91	-8.45
26	0.7042	1161.5	1182.1	1181.9	1.022	2.462	72.946	21.034	2.221	0.090	0.194	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1408.67	-9.39
27	0.7030	1159.1	1179.7	1179.5	1.029	2.481	73.028	21.064	2.113	0.081	0.175	0.013	0.016	0.000	0.000	0.000	0.000	0.000	1406.99	-10.84
28	0.7033	1161.5	1182.1	1181.9	1.024	2.376	73.056	21.079	2.162	0.087	0.187	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1409.54	-9.93
29	0.7055	1164.4	1185.0	1184.8	1.011	2.421	72.721	21.281	2.241	0.092	0.200	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1410.89	-8.44
30	0.7050	1164.7	1185.3	1185.1	0.996	2.382	72.877	21.124	2.285	0.096	0.207	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1411.70	-8.21
31	0.7020	1160.4	1180.9	1180.7	1.000	2.361	73.179	21.100	2.068	0.084	0.179	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1409.45	-10.88
Avg	0.7025	1161.0	1181.2	1181.0	0.997	2.390	73.208	20.944	2.144	0.090	0.194	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1409.33	-10.11

*** End of Report ***

Source Daily Summary

January 2023

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	0.7035	1155.6	1176.1	1175.9	1.038	2.732	72.903	20.957	2.043	0.092	0.202	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1402.22	
2	0.7048	1158.8	1179.4	1179.2	1.027	2.674	72.843	20.914	2.188	0.099	0.219	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1404.80	
3	0.7033	1155.5	1175.9	1175.8	1.025	2.746	72.776	21.202	1.947	0.085	0.188	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1402.19	
4	0.7047	1158.0	1178.5	1178.3	1.022	2.730	72.686	21.149	2.084	0.092	0.204	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1403.80	
5	0.7071	1160.4	1180.9	1180.7	1.003	2.836	72.402	21.128	2.279	0.098	0.219	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1404.34	
6	0.7041	1155.1	1175.6	1175.4	0.972	2.922	72.836	20.752	2.188	0.092	0.206	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1400.96	
7	0.7101	1164.6	1185.2	1185.0	1.017	2.837	71.856	21.600	2.351	0.092	0.213	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1406.48	
8	0.7110	1165.7	1186.3	1186.2	1.016	2.859	71.761	21.546	2.495	0.088	0.203	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1406.91	
9	0.7109	1165.8	1186.4	1186.2	1.022	2.835	71.803	21.513	2.508	0.088	0.201	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1407.10	
10	0.7105	1165.0	1185.6	1185.4	1.017	2.853	71.775	21.628	2.413	0.088	0.195	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1406.54	
11	0.7099	1164.2	1184.9	1184.7	1.017	2.837	71.890	21.566	2.360	0.093	0.205	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1406.31	
12	0.7070	1159.7	1180.2	1180.1	1.020	2.844	72.137	21.625	2.059	0.089	0.194	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1403.63	
13	0.7089	1161.8	1182.3	1182.1	1.011	2.905	72.081	21.334	2.316	0.100	0.216	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1404.29	
14	0.7076	1160.8	1181.3	1181.1	1.014	2.840	72.196	21.419	2.196	0.096	0.205	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1404.37	
15	0.6832	1119.7	1139.6	1139.4	0.814	3.353	76.597	16.966	1.972	0.084	0.185	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1378.48	
16	0.6778	1110.1	1129.8	1129.6	0.785	3.475	77.352	16.394	1.719	0.076	0.174	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1372.22	
17	0.6990	1146.0	1166.3	1166.1	0.964	3.012	73.523	20.283	1.917	0.083	0.189	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1394.92	
18	0.7040	1151.5	1171.9	1171.7	1.022	3.069	72.125	21.911	1.631	0.067	0.152	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1396.60	
19	0.6942	1138.3	1158.5	1158.3	0.903	3.121	74.307	19.550	1.832	0.080	0.178	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1390.29	
20	0.6982	1146.3	1166.6	1166.4	0.934	2.968	73.617	20.295	1.889	0.084	0.183	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1396.00	
21	0.7073	1160.5	1181.1	1180.9	1.005	2.847	72.046	21.738	2.049	0.089	0.195	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1404.29	
22	0.7089	1161.8	1182.4	1182.2	1.012	2.907	71.897	21.668	2.178	0.093	0.211	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1404.27	
23	0.7092	1163.4	1184.0	1183.8	1.008	2.840	71.893	21.709	2.207	0.095	0.213	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1405.97	
24	0.7098	1163.8	1184.4	1184.2	1.006	2.883	71.748	21.810	2.213	0.095	0.212	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1405.79	
25	0.6955	1140.0	1160.2	1160.0	0.885	3.161	74.444	19.017	2.173	0.089	0.198	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1391.03	
26	0.7034	1151.3	1171.7	1171.6	0.964	3.096	72.826	20.696	2.108	0.086	0.192	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1397.07	
27	0.7107	1162.1	1182.7	1182.5	1.049	2.996	71.673	21.652	2.297	0.093	0.207	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1402.93	
28	0.7079	1158.5	1179.0	1178.9	1.041	2.969	71.893	21.757	2.052	0.081	0.181	0.013	0.014	0.000	0.000	0.000	0.000	0.000	1401.33	
29	0.7102	1162.4	1183.0	1182.8	1.032	2.966	71.689	21.741	2.242	0.092	0.207	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1403.68	
30	0.7105	1163.8	1184.4	1184.3	1.025	2.914	71.691	21.752	2.278	0.095	0.212	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1405.13	
31	0.7090	1161.5	1182.0	1181.9	1.021	2.919	71.926	21.579	2.225	0.093	0.205	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1403.85	
Avg	0.7046	1155.0	1175.7	1175.5	0.990	2.934	72.684	20.931	2.142	0.089	0.199	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1400.57	

Source Daily Summary

January 2023

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	0.7475	1165.0	1185.7	1185.4	0.895	6.493	67.081	19.514	5.440	0.172	0.367	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1371.40	
2	0.7482	1168.4	1189.1	1188.9	0.904	6.337	67.034	19.670	5.458	0.177	0.380	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1374.74	
3	0.7461	1167.5	1188.1	1187.9	0.904	6.201	67.307	19.682	5.332	0.170	0.365	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1375.53	
4	0.7459	1165.8	1186.5	1186.2	0.899	6.287	67.301	19.629	5.319	0.167	0.359	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1373.81	
5	0.7438	1159.5	1180.0	1179.8	0.894	6.491	67.479	19.414	5.193	0.157	0.337	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1368.22	
6	0.7439	1161.4	1181.9	1181.7	0.901	6.371	67.521	19.477	5.189	0.161	0.346	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1370.39	
7	0.7450	1164.0	1184.6	1184.4	0.891	6.327	67.432	19.487	5.308	0.164	0.354	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1372.49	
8	0.7481	1166.9	1187.6	1187.4	0.891	6.441	66.987	19.636	5.466	0.172	0.368	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1373.08	
9	0.7516	1171.3	1192.1	1191.8	0.887	6.512	66.537	19.760	5.697	0.179	0.387	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1374.98	
10	0.7522	1171.6	1192.3	1192.1	0.894	6.541	66.472	19.753	5.724	0.183	0.392	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1374.73	
11	0.7483	1161.3	1181.8	1181.6	0.881	6.823	66.811	19.460	5.487	0.161	0.343	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1366.19	
12	0.7468	1160.4	1181.0	1180.8	0.898	6.709	67.055	19.389	5.422	0.158	0.336	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1366.58	
13	0.7493	1167.0	1187.7	1187.4	0.890	6.549	66.808	19.606	5.584	0.166	0.360	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1372.07	
14	0.7490	1167.2	1187.8	1187.6	0.887	6.523	66.839	19.628	5.557	0.168	0.361	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1372.46	
15	0.7482	1165.3	1185.9	1185.7	0.890	6.554	66.958	19.526	5.510	0.166	0.358	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1371.00	
16	0.7497	1169.4	1190.2	1189.9	0.898	6.430	66.784	19.727	5.577	0.172	0.372	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1374.52	
17	0.7465	1167.3	1187.9	1187.7	0.894	6.262	67.299	19.561	5.403	0.171	0.370	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1374.95	
18	0.7433	1161.9	1182.5	1182.2	0.901	6.285	67.634	19.453	5.194	0.160	0.339	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1371.54	
19	0.7483	1166.6	1187.3	1187.1	0.901	6.460	66.943	19.660	5.466	0.169	0.363	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1372.56	
20	0.7496	1165.8	1186.5	1186.2	0.893	6.647	66.770	19.512	5.610	0.170	0.362	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1370.37	
21	0.7504	1169.1	1189.8	1189.6	0.896	6.512	66.706	19.654	5.648	0.173	0.373	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1373.57	
22	0.7525	1174.8	1195.6	1195.3	0.896	6.372	66.501	19.837	5.767	0.185	0.401	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1378.16	
23	0.7545	1175.7	1196.5	1196.2	0.911	6.475	66.326	19.743	5.868	0.195	0.431	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1377.45	
24	0.7504	1169.6	1190.3	1190.1	0.899	6.484	66.695	19.686	5.672	0.168	0.360	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1374.05	
25	0.7520	1172.7	1193.5	1193.3	0.899	6.442	66.421	19.940	5.746	0.169	0.349	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1376.29	
26	0.7524	1175.8	1196.6	1196.4	0.901	6.289	66.358	20.180	5.706	0.171	0.358	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1379.54	
27	0.7457	1167.9	1188.6	1188.4	0.903	6.141	67.175	19.987	5.315	0.147	0.302	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1376.42	
28	0.7438	1165.0	1185.7	1185.4	0.913	6.120	67.377	19.969	5.171	0.141	0.283	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1374.82	
29	0.7437	1163.9	1184.5	1184.3	0.915	6.181	67.323	19.990	5.164	0.134	0.269	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1373.55	
30	0.7449	1168.2	1188.9	1188.7	0.917	6.024	67.182	20.244	5.183	0.140	0.283	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1377.56	
31	0.7454	1168.9	1189.6	1189.4	0.918	6.032	67.133	20.240	5.211	0.145	0.292	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1377.84	
Avg	0.7480	1167.0	1187.9	1187.7	0.899	6.397	66.976	19.710	5.464	0.166	0.352	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1373.58	

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

January 2023

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	0.7154	1150.0	1170.4	1170.2	1.130	4.050	70.707	21.450	2.289	0.099	0.236	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1383.79	
2	0.7149	1149.5	1169.9	1169.7	1.112	4.066	70.785	21.370	2.296	0.099	0.234	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1383.61	
3	0.7178	1156.7	1177.2	1176.9	1.095	3.933	70.146	22.185	2.281	0.097	0.228	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1389.37	
4	0.7192	1159.3	1179.8	1179.6	1.098	3.899	69.873	22.489	2.280	0.097	0.229	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1391.18	
5	0.7204	1161.2	1181.7	1181.5	1.085	3.912	69.601	22.773	2.276	0.096	0.224	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1392.32	
6	0.7203	1161.1	1181.7	1181.5	1.087	3.911	69.625	22.729	2.294	0.096	0.226	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1392.28	
7	0.7214	1162.5	1183.0	1182.8	1.076	3.940	69.505	22.730	2.391	0.094	0.230	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1392.91	
8	0.7271	1171.5	1192.2	1192.0	1.080	3.917	69.028	22.546	3.081	0.092	0.225	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1398.14	
9	0.7281	1173.8	1194.6	1194.4	1.076	3.880	68.857	22.704	3.137	0.091	0.222	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1399.95	
10	0.7197	1160.7	1181.2	1181.0	1.092	3.872	69.737	22.670	2.284	0.092	0.219	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1392.36	
11	0.7191	1159.9	1180.5	1180.2	1.100	3.847	69.698	22.899	2.121	0.090	0.211	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1392.06	
12	0.7196	1160.6	1181.2	1181.0	1.080	3.882	69.572	22.999	2.136	0.090	0.208	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1392.40	
13	0.7179	1157.7	1178.2	1178.0	1.043	3.956	70.029	22.378	2.242	0.096	0.220	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1390.55	
14	0.7210	1162.7	1183.3	1183.1	1.046	3.943	69.274	23.229	2.183	0.089	0.204	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1393.53	
15	0.7217	1164.5	1185.1	1184.9	1.052	3.889	69.271	23.169	2.278	0.093	0.214	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1394.97	
16	0.7192	1159.2	1179.7	1179.5	1.062	3.955	69.820	22.550	2.252	0.096	0.230	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1391.13	
17	0.7204	1160.0	1180.5	1180.3	1.057	4.027	69.528	22.805	2.217	0.097	0.232	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1390.92	
18	0.7224	1163.8	1184.5	1184.2	1.040	4.011	69.068	23.319	2.208	0.095	0.225	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1393.57	
19	0.7228	1165.4	1186.0	1185.8	1.027	3.971	68.969	23.486	2.195	0.095	0.223	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1395.06	
20	0.7246	1168.0	1188.7	1188.5	1.018	3.991	68.567	23.901	2.168	0.095	0.224	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1396.51	
21	0.7242	1166.6	1187.2	1187.0	1.024	4.041	68.691	23.659	2.231	0.096	0.224	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1395.05	
22	0.7235	1165.4	1186.1	1185.8	1.034	4.025	68.848	23.527	2.204	0.095	0.232	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1394.41	
23	0.7216	1161.0	1181.6	1181.3	1.025	4.132	69.306	22.894	2.262	0.100	0.242	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1390.92	
24	0.7233	1163.4	1184.0	1183.8	1.009	4.165	69.071	22.985	2.392	0.100	0.240	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1392.16	
25	0.7141	1151.4	1171.8	1171.6	0.956	4.113	70.573	21.873	2.145	0.092	0.217	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1386.65	
26	0.7228	1165.2	1185.8	1185.6	1.030	3.984	68.979	23.442	2.208	0.096	0.226	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1394.78	
27	0.7234	1166.7	1187.4	1187.2	1.078	3.863	69.090	23.262	2.350	0.096	0.227	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1396.03	
28	0.7212	1162.4	1183.0	1182.8	1.079	3.925	69.413	22.962	2.267	0.096	0.226	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1393.02	
29	0.7204	1161.5	1182.0	1181.8	1.068	3.927	69.589	22.768	2.290	0.096	0.228	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1392.62	
30	0.7203	1161.9	1182.5	1182.3	1.065	3.891	69.618	22.784	2.284	0.097	0.228	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1393.27	
31	0.7196	1159.9	1180.4	1180.2	1.063	3.954	69.745	22.593	2.290	0.097	0.223	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1391.49	
Avg	0.7209	1162.0	1182.3	1182.1	1.061	3.964	69.503	22.811	2.307	0.095	0.225	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1392.48	

Source Daily Summary

January 2023

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	0.7421	1164.4	1185.0	1184.0	0.849	6.098	67.958	19.298	5.236	0.167	0.357	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1375.62	
2	0.7371	1160.2	1180.7	1179.8	0.840	5.900	68.602	19.221	4.916	0.156	0.332	0.017	0.016	0.000	0.000	0.000	0.000	0.000	1375.28	
3	0.7378	1161.2	1181.8	1180.9	0.857	5.872	68.535	19.262	4.943	0.158	0.338	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1375.91	
4	0.7217	1150.8	1171.1	1170.4	0.806	5.083	70.871	18.683	4.122	0.130	0.277	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1378.59	
5	0.7145	1141.6	1161.8	1161.1	0.765	5.028	71.766	18.360	3.704	0.114	0.238	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1374.51	
6	0.7145	1140.1	1160.3	1159.6	0.719	5.184	71.808	18.116	3.789	0.116	0.244	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1372.76	
7	0.7175	1143.4	1163.6	1162.8	0.740	5.242	71.343	18.364	3.915	0.120	0.251	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1373.74	
8	0.7230	1148.7	1169.0	1168.2	0.765	5.394	70.631	18.548	4.219	0.133	0.282	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1374.86	
9	0.7259	1152.0	1172.4	1171.6	0.752	5.483	70.244	18.640	4.419	0.139	0.293	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1376.08	
10	0.7259	1153.4	1173.9	1173.0	0.766	5.375	70.268	18.723	4.401	0.141	0.295	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1377.77	
11	0.7182	1144.4	1164.7	1164.4	0.810	5.135	71.462	18.133	4.044	0.125	0.264	0.014	0.013	0.000	0.000	0.000	0.000	0.000	1374.30	
12	0.7125	1133.2	1153.3	1152.5	0.838	5.240	72.189	17.641	3.744	0.106	0.222	0.010	0.010	0.000	0.000	0.000	0.000	0.000	1366.33	
13	0.7105	1132.8	1152.8	1152.0	0.845	5.067	72.578	17.482	3.676	0.106	0.225	0.011	0.010	0.000	0.000	0.000	0.000	0.000	1367.72	
14	0.7194	1142.6	1162.8	1162.0	0.861	5.278	71.370	17.907	4.167	0.124	0.267	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1371.03	
15	0.7262	1148.6	1169.0	1168.1	0.875	5.534	70.346	18.302	4.486	0.136	0.292	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1371.73	
16	0.7274	1148.6	1168.9	1168.0	0.877	5.639	70.103	18.430	4.500	0.135	0.289	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1370.59	
17	0.7240	1151.0	1171.4	1170.6	0.871	5.187	70.660	18.527	4.294	0.136	0.293	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1376.67	
18	0.7154	1139.1	1159.3	1158.5	0.853	5.131	71.820	17.958	3.852	0.116	0.246	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1370.63	
19	0.7194	1144.0	1164.3	1163.5	0.864	5.187	71.258	18.232	4.047	0.124	0.263	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1372.74	
20	0.7239	1149.7	1170.0	1169.2	0.798	5.370	70.470	18.689	4.246	0.129	0.272	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1375.15	
21	0.7266	1151.8	1172.2	1171.4	0.745	5.576	70.046	18.759	4.432	0.134	0.282	0.014	0.013	0.000	0.000	0.000	0.000	0.000	1375.11	
22	0.7263	1151.6	1172.0	1171.2	0.752	5.549	70.123	18.707	4.422	0.135	0.285	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1375.19	
23	0.7316	1162.2	1182.7	1181.9	0.778	5.363	69.651	18.907	4.748	0.161	0.350	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1382.70	
24	0.7277	1153.0	1173.4	1172.6	0.777	5.554	70.008	18.670	4.523	0.139	0.298	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1375.55	
25	0.7237	1148.5	1168.8	1168.0	0.815	5.393	70.600	18.423	4.367	0.124	0.255	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1373.98	
26	0.7229	1149.1	1169.4	1168.7	0.823	5.276	70.720	18.477	4.290	0.127	0.262	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1375.40	
27	0.7225	1151.4	1171.8	1171.0	0.803	5.119	70.749	18.686	4.246	0.122	0.251	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1378.67	
28	0.7080	1137.1	1157.2	1156.4	0.760	4.710	72.652	18.189	3.391	0.094	0.187	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1375.24	
29	0.7074	1137.0	1157.2	1156.4	0.733	4.693	72.698	18.235	3.355	0.091	0.179	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1375.82	
30	0.7066	1136.7	1156.9	1156.1	0.751	4.604	72.863	18.180	3.317	0.090	0.178	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1376.29	
31	0.7093	1137.5	1157.7	1156.9	0.783	4.758	72.599	18.008	3.536	0.099	0.196	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1374.64	
Avg	0.7216	1147.0	1167.6	1166.8	0.802	5.291	70.871	18.444	4.173	0.127	0.267	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1374.54	

Source Daily Summary

January 2023

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	0.7456	1165.8	1186.5	1186.3	0.867	6.312	67.450	19.377	5.425	0.171	0.362	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1374.06	
2	0.7346	1156.0	1176.5	1176.4	0.833	5.930	68.946	18.994	4.798	0.150	0.317	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1372.70	
3	0.7417	1164.8	1185.4	1185.3	0.862	6.020	67.980	19.430	5.156	0.166	0.351	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1376.41	
4	0.7313	1157.2	1177.7	1177.0	0.837	5.548	69.444	19.094	4.593	0.146	0.307	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1377.13	
5	0.7182	1146.3	1166.6	1165.8	0.804	5.034	71.338	18.486	3.932	0.123	0.256	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1376.54	
6	0.7146	1140.0	1160.2	1159.4	0.744	5.171	71.734	18.248	3.730	0.114	0.236	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1372.43	
7	0.7140	1140.4	1160.6	1159.8	0.720	5.126	71.865	18.165	3.747	0.115	0.238	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1373.50	
8	0.7215	1147.4	1167.7	1166.9	0.761	5.333	70.839	18.512	4.128	0.129	0.270	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1374.81	
9	0.7248	1150.4	1170.8	1170.0	0.763	5.461	70.361	18.657	4.310	0.136	0.283	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1375.22	
10	0.7272	1153.7	1174.2	1173.3	0.759	5.490	70.063	18.754	4.468	0.140	0.295	0.016	0.015	0.000	0.000	0.000	0.000	0.000	1376.88	
11	0.7256	1153.3	1173.8	1173.0	0.783	5.329	70.309	18.760	4.359	0.139	0.289	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1377.92	
12	0.7132	1135.0	1155.1	1154.4	0.842	5.190	72.192	17.592	3.818	0.111	0.232	0.011	0.011	0.000	0.000	0.000	0.000	0.000	1367.79	
13	0.7111	1132.6	1152.7	1151.8	0.847	5.138	72.430	17.564	3.676	0.105	0.219	0.010	0.010	0.000	0.000	0.000	0.000	0.000	1366.88	
14	0.7150	1138.3	1158.5	1157.6	0.861	5.128	71.984	17.727	3.916	0.115	0.245	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1370.08	
15	0.7235	1146.0	1166.3	1165.5	0.874	5.434	70.713	18.237	4.311	0.129	0.274	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1371.24	
16	0.7282	1149.0	1169.3	1168.6	0.891	5.673	69.986	18.471	4.527	0.135	0.288	0.015	0.014	0.000	0.000	0.000	0.000	0.000	1370.28	
17	0.7278	1151.3	1171.7	1170.9	0.879	5.511	70.102	18.521	4.520	0.139	0.297	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1373.44	
18	0.7191	1144.5	1164.8	1164.0	0.868	5.125	71.362	18.179	4.045	0.125	0.267	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1373.56	
19	0.7178	1141.6	1161.8	1161.0	0.867	5.187	71.469	18.126	3.956	0.120	0.250	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1371.27	
20	0.7191	1143.5	1163.7	1162.9	0.858	5.208	71.298	18.190	4.040	0.122	0.258	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1372.28	
21	0.7279	1153.3	1173.8	1173.0	0.766	5.567	69.828	18.961	4.438	0.134	0.278	0.014	0.013	0.000	0.000	0.000	0.000	0.000	1375.79	
22	0.7273	1152.7	1173.1	1172.3	0.750	5.574	70.003	18.737	4.484	0.136	0.287	0.015	0.014	0.000	0.000	0.000	0.000	0.000	1375.60	
23	0.7270	1153.8	1174.2	1173.5	0.765	5.457	70.093	18.770	4.451	0.140	0.294	0.016	0.015	0.000	0.000	0.000	0.000	0.000	1377.18	
24	0.7340	1162.8	1183.4	1182.7	0.805	5.503	69.295	18.997	4.838	0.164	0.354	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1381.29	
25	0.7263	1150.9	1171.3	1170.5	0.783	5.541	70.191	18.598	4.442	0.134	0.282	0.015	0.014	0.000	0.000	0.000	0.000	0.000	1374.35	
26	0.7249	1150.0	1170.4	1169.7	0.829	5.389	70.472	18.464	4.434	0.128	0.260	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1374.69	
27	0.7222	1148.9	1169.3	1169.2	0.821	5.220	70.788	18.561	4.206	0.124	0.255	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1375.91	
28	0.7211	1149.0	1169.4	1169.3	0.807	5.128	70.907	18.632	4.148	0.117	0.238	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1377.14	
29	0.7057	1134.5	1154.5	1154.4	0.760	4.648	73.008	18.026	3.272	0.091	0.178	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1374.38	
30	0.7079	1137.9	1158.0	1157.9	0.730	4.694	72.596	18.338	3.362	0.090	0.175	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1376.36	
31	0.7064	1135.5	1155.7	1155.5	0.781	4.616	72.965	18.011	3.336	0.092	0.181	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1375.00	
Avg	0.7227	1148.0	1168.3	1167.7	0.810	5.345	70.710	18.490	4.221	0.128	0.268	0.014	0.013	0.000	0.000	0.000	0.000	0.000	1374.26	

Source Daily Summary

January 2023

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	0.7456	1165.9	1186.5	1186.4	0.867	6.312	67.446	19.378	5.426	0.171	0.362	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1374.09	
2	0.7352	1156.7	1177.2	1177.1	0.835	5.945	68.865	19.019	4.833	0.152	0.320	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1372.91	
3	0.7419	1165.0	1185.6	1185.6	0.862	6.026	67.949	19.441	5.169	0.166	0.352	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1376.49	
4	0.7317	1157.5	1178.0	1177.9	0.839	5.558	69.400	19.102	4.613	0.147	0.309	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1377.20	
5	0.7181	1146.0	1166.3	1166.1	0.803	5.040	71.361	18.466	3.925	0.123	0.256	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1376.31	
6	0.7144	1139.6	1159.8	1159.6	0.744	5.176	71.759	18.227	3.721	0.114	0.236	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1372.17	
7	0.7139	1140.1	1160.3	1160.1	0.720	5.132	71.880	18.148	3.743	0.115	0.237	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1373.28	
8	0.7212	1146.9	1167.2	1167.0	0.761	5.340	70.872	18.489	4.113	0.128	0.269	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1374.44	
9	0.7247	1150.1	1170.5	1170.2	0.763	5.466	70.379	18.645	4.299	0.135	0.283	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1374.96	
10	0.7271	1153.4	1173.8	1173.5	0.760	5.504	70.069	18.736	4.466	0.140	0.294	0.016	0.015	0.000	0.000	0.000	0.000	0.000	1376.51	
11	0.7256	1153.2	1173.6	1173.3	0.783	5.337	70.312	18.749	4.360	0.139	0.289	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1377.76	
12	0.7131	1134.9	1155.0	1154.7	0.842	5.188	72.208	17.583	3.814	0.111	0.232	0.011	0.011	0.000	0.000	0.000	0.000	0.000	1367.75	
13	0.7110	1132.2	1152.3	1152.1	0.847	5.144	72.459	17.539	3.668	0.105	0.219	0.010	0.010	0.000	0.000	0.000	0.000	0.000	1366.59	
14	0.7146	1137.7	1157.8	1157.7	0.861	5.134	72.034	17.690	3.899	0.114	0.244	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1369.64	
15	0.7233	1145.6	1165.9	1165.7	0.874	5.445	70.735	18.211	4.305	0.129	0.273	0.014	0.013	0.000	0.000	0.000	0.000	0.000	1370.88	
16	0.7279	1148.6	1168.9	1168.7	0.891	5.670	70.033	18.441	4.514	0.135	0.287	0.015	0.014	0.000	0.000	0.000	0.000	0.000	1370.07	
17	0.7275	1150.7	1171.1	1170.9	0.879	5.520	70.139	18.493	4.505	0.138	0.295	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1373.01	
18	0.7191	1144.4	1164.7	1164.5	0.869	5.133	71.357	18.175	4.046	0.125	0.267	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1373.42	
19	0.7174	1141.1	1161.3	1161.1	0.865	5.184	71.527	18.088	3.941	0.120	0.250	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1371.04	
20	0.7188	1142.9	1163.1	1162.9	0.860	5.208	71.350	18.154	4.022	0.122	0.258	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1371.91	
21	0.7274	1152.7	1173.1	1172.9	0.761	5.572	69.889	18.924	4.416	0.134	0.276	0.014	0.013	0.000	0.000	0.000	0.000	0.000	1375.45	
22	0.7271	1152.3	1172.7	1172.5	0.749	5.580	70.030	18.717	4.472	0.136	0.287	0.015	0.014	0.000	0.000	0.000	0.000	0.000	1375.32	
23	0.7264	1152.7	1173.1	1172.8	0.764	5.466	70.174	18.721	4.416	0.138	0.289	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1376.44	
24	0.7341	1163.3	1183.9	1183.7	0.800	5.492	69.293	18.998	4.851	0.165	0.357	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1381.73	
25	0.7262	1150.7	1171.1	1170.9	0.782	5.546	70.208	18.581	4.438	0.134	0.282	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1374.21	
26	0.7249	1150.0	1170.3	1170.1	0.830	5.396	70.466	18.458	4.439	0.128	0.259	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1374.58	
27	0.7222	1148.5	1168.9	1168.8	0.823	5.243	70.786	18.535	4.209	0.124	0.255	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1375.42	
28	0.7223	1150.6	1170.9	1170.8	0.811	5.149	70.733	18.705	4.215	0.120	0.243	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1377.73	
29	0.7061	1134.9	1155.0	1154.9	0.762	4.661	72.942	18.058	3.290	0.091	0.179	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1374.45	
30	0.7080	1137.9	1158.0	1157.9	0.731	4.696	72.593	18.332	3.365	0.090	0.175	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1376.30	
31	0.7069	1136.1	1156.2	1156.1	0.780	4.626	72.889	18.059	3.354	0.093	0.182	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1375.23	
Avg	0.7227	1148.0	1168.1	1167.9	0.810	5.351	70.714	18.479	4.221	0.128	0.268	0.014	0.013	0.000	0.000	0.000	0.000	0.000	1374.11	

Source Daily Summary

January 2023

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	0.6649	1100.6	1120.1	1119.7	0.596	3.136	78.956	16.019	1.189	0.035	0.062	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1373.62	
2	0.6671	1105.5	1125.1	1124.7	0.498	3.196	78.448	16.507	1.249	0.034	0.061	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1377.44	
3	0.6714	1111.2	1130.9	1130.5	0.589	3.107	77.906	16.867	1.395	0.045	0.080	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1380.18	
4	0.6698	1109.9	1129.6	1128.7	0.627	2.975	78.333	16.488	1.442	0.045	0.080	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1380.25	
5	0.6718	1111.4	1131.1	1130.2	0.600	3.120	77.909	16.755	1.473	0.048	0.085	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1379.97	
6	0.6692	1106.5	1126.1	1125.2	0.484	3.345	78.349	16.164	1.515	0.048	0.085	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1376.59	
7	0.6693	1107.2	1126.8	1125.9	0.478	3.326	78.270	16.308	1.477	0.046	0.083	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1377.32	
8	0.6681	1105.1	1124.7	1123.7	0.487	3.330	78.437	16.210	1.397	0.045	0.082	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1375.90	
9	0.6680	1105.5	1125.1	1124.2	0.466	3.319	78.433	16.261	1.386	0.044	0.080	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1376.63	
10	0.6704	1109.7	1129.3	1128.4	0.531	3.194	78.131	16.527	1.471	0.048	0.086	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1379.30	
11	0.6610	1097.7	1117.1	1116.2	0.675	2.827	79.802	15.478	1.114	0.034	0.062	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1374.01	
12	0.6528	1085.2	1104.5	1103.6	0.802	2.620	81.204	14.545	0.770	0.020	0.036	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1366.99	
13	0.6527	1084.3	1103.5	1103.2	0.789	2.687	81.216	14.463	0.783	0.021	0.037	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1365.91	
14	0.6499	1080.7	1099.8	1099.5	0.823	2.597	81.733	14.092	0.704	0.017	0.031	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1364.21	
15	0.6508	1081.1	1100.3	1100.0	0.869	2.579	81.604	14.192	0.706	0.017	0.030	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1363.93	
16	0.6505	1081.0	1100.1	1099.8	0.874	2.553	81.628	14.230	0.668	0.015	0.028	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1364.03	
17	0.6517	1083.2	1102.4	1102.1	0.832	2.599	81.319	14.540	0.664	0.015	0.027	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1365.53	
18	0.6538	1086.6	1105.9	1105.6	0.800	2.629	80.974	14.789	0.753	0.018	0.033	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1367.72	
19	0.6532	1085.8	1105.1	1104.8	0.809	2.607	81.080	14.718	0.740	0.016	0.028	0.002	0.001	0.000	0.000	0.000	0.000	0.000	1367.35	
20	0.6674	1106.5	1126.1	1125.8	0.623	2.975	78.390	16.708	1.187	0.035	0.062	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1378.36	
21	0.6710	1110.5	1130.2	1129.9	0.422	3.370	77.852	16.747	1.473	0.045	0.080	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1379.66	
22	0.6682	1105.8	1125.4	1125.1	0.408	3.408	78.300	16.380	1.377	0.042	0.075	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1376.80	
23	0.6693	1107.1	1126.7	1126.4	0.519	3.270	78.273	16.368	1.427	0.047	0.084	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1377.19	
24	0.6686	1105.6	1125.2	1124.9	0.495	3.328	78.282	16.359	1.385	0.046	0.083	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1376.12	
25	0.6562	1089.2	1108.5	1108.2	0.626	2.962	80.512	14.868	0.953	0.026	0.046	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1368.44	
26	0.6571	1091.3	1110.7	1110.4	0.677	2.846	80.384	15.053	0.964	0.025	0.045	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1370.11	
27	0.6609	1096.5	1115.9	1115.7	0.623	2.963	79.714	15.514	1.091	0.032	0.057	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1372.72	
28	0.6631	1099.4	1118.8	1118.6	0.577	3.069	79.257	15.857	1.141	0.033	0.059	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1373.98	
29	0.6669	1105.1	1124.6	1124.4	0.553	3.112	78.618	16.335	1.266	0.038	0.068	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1377.19	
30	0.6670	1104.7	1124.2	1124.0	0.592	3.086	78.750	16.093	1.351	0.042	0.076	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1376.57	
31	0.6623	1096.5	1115.9	1115.6	0.637	3.073	79.721	15.139	1.294	0.044	0.080	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1371.22	
Avg	0.6627	1099.0	1118.1	1117.6	0.625	3.007	79.412	15.696	1.155	0.034	0.062	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1373.39	

Source Daily Summary

January 2023

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	0.6713	1114.6	1134.3	1134.1	0.328	3.293	77.600	17.246	1.418	0.040	0.069	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1384.43	
2	0.6763	1120.9	1140.7	1140.6	0.473	3.158	76.977	17.665	1.571	0.053	0.093	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1387.10	
3	0.6759	1121.0	1140.8	1140.6	0.507	3.060	77.174	17.468	1.634	0.054	0.093	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1387.63	
4	0.6734	1116.3	1136.1	1135.9	0.579	3.005	77.609	17.150	1.511	0.050	0.087	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1384.37	
5	0.6685	1107.6	1127.3	1127.1	0.459	3.253	78.385	16.314	1.448	0.048	0.085	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1378.69	
6	0.6686	1108.6	1128.2	1128.1	0.436	3.234	78.396	16.294	1.503	0.046	0.081	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1379.81	
7	0.6674	1106.2	1125.8	1125.6	0.474	3.227	78.421	16.371	1.370	0.046	0.080	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1378.06	
8	0.6671	1106.6	1126.2	1126.0	0.435	3.221	78.537	16.325	1.352	0.043	0.078	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1378.83	
9	0.6690	1109.8	1129.4	1129.3	0.480	3.134	78.314	16.498	1.434	0.047	0.084	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1380.86	
10	0.6691	1110.9	1130.6	1130.4	0.513	3.022	78.286	16.665	1.377	0.046	0.081	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1382.19	
11	0.6684	1110.0	1129.7	1129.5	0.436	3.136	78.213	16.794	1.296	0.042	0.075	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1381.75	
12	0.6690	1109.8	1129.5	1129.3	0.397	3.265	78.089	16.777	1.338	0.045	0.080	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1380.85	
13	0.6691	1110.2	1129.8	1129.7	0.356	3.312	77.996	16.889	1.318	0.043	0.077	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1381.21	
14	0.6703	1113.1	1132.8	1132.6	0.370	3.231	77.742	17.240	1.289	0.043	0.076	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1383.54	
15	0.6703	1113.3	1133.0	1132.9	0.317	3.289	77.643	17.378	1.253	0.040	0.072	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1383.94	
16	0.6724	1116.8	1136.5	1136.4	0.364	3.211	77.382	17.557	1.358	0.044	0.077	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1385.95	
17	0.6741	1120.5	1140.3	1140.2	0.322	3.204	76.971	18.029	1.359	0.040	0.069	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1388.91	
18	0.6802	1128.6	1148.6	1148.4	0.469	3.062	76.219	18.491	1.597	0.054	0.096	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1392.62	
19	0.6799	1129.0	1149.0	1148.9	0.435	3.059	76.194	18.597	1.562	0.051	0.090	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1393.47	
20	0.6705	1111.8	1131.5	1131.4	0.404	3.264	77.924	16.820	1.453	0.046	0.080	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1381.88	
21	0.6670	1106.5	1126.1	1125.9	0.369	3.321	78.448	16.398	1.343	0.041	0.073	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1378.76	
22	0.6681	1107.8	1127.4	1127.2	0.467	3.193	78.411	16.410	1.385	0.045	0.080	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1379.29	
23	0.6684	1108.4	1128.1	1127.9	0.475	3.170	78.346	16.508	1.365	0.045	0.081	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1379.80	
24	0.6635	1100.9	1120.4	1120.2	0.374	3.323	79.057	15.884	1.248	0.038	0.069	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1375.47	
25	0.6669	1107.6	1127.3	1127.1	0.414	3.170	78.444	16.587	1.274	0.037	0.066	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1380.36	
26	0.6715	1113.1	1132.8	1132.6	0.411	3.272	77.655	17.142	1.385	0.046	0.080	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1382.42	
27	0.6681	1108.6	1128.3	1128.1	0.371	3.285	78.210	16.700	1.316	0.040	0.071	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1380.38	
28	0.6686	1108.0	1127.6	1127.5	0.431	3.284	78.264	16.494	1.389	0.046	0.082	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1379.03	
29	0.6745	1118.3	1138.1	1137.9	0.428	3.209	77.250	17.423	1.546	0.049	0.086	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1385.82	
30	0.6669	1103.8	1123.3	1123.2	0.501	3.265	78.828	15.778	1.468	0.052	0.095	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1375.61	
31	0.6664	1103.0	1122.5	1122.3	0.434	3.374	78.809	15.775	1.452	0.051	0.092	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1375.06	
Avg	0.6703	1112.0	1131.7	1131.5	0.427	3.210	77.929	16.893	1.407	0.045	0.081	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1382.20	

Source Daily Summary

January 2023

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	0.6767	1117.6	1137.4	1136.6	0.559	3.256	77.222	17.018	1.765	0.059	0.106	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1382.73	
2	0.6755	1115.7	1135.5	1134.8	0.585	3.222	77.510	16.718	1.791	0.058	0.104	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1381.57	
3	0.6730	1111.8	1131.5	1130.9	0.679	3.082	78.029	16.343	1.697	0.057	0.101	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1379.30	
4	0.6696	1105.4	1124.9	1124.2	0.633	3.229	78.530	15.857	1.587	0.054	0.098	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1374.72	
5	0.6666	1101.5	1121.0	1120.0	0.585	3.253	79.053	15.389	1.564	0.051	0.092	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1373.00	
6	0.6661	1101.9	1121.5	1120.5	0.720	2.974	79.249	15.428	1.473	0.051	0.093	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1374.08	
7	0.6652	1100.4	1119.9	1118.9	0.643	3.104	79.282	15.384	1.435	0.049	0.090	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1373.04	
8	0.6659	1101.1	1120.6	1119.6	0.572	3.231	79.106	15.459	1.479	0.049	0.091	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1373.23	
9	0.6683	1106.3	1125.9	1125.2	0.737	2.882	78.927	15.747	1.542	0.054	0.097	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1377.34	
10	0.6648	1099.9	1119.4	1118.4	0.646	3.082	79.391	15.287	1.443	0.049	0.089	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1372.97	
11	0.6655	1098.6	1118.1	1117.1	0.579	3.339	79.237	15.154	1.527	0.053	0.098	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1370.51	
12	0.6652	1097.8	1117.3	1116.2	0.549	3.397	79.256	15.124	1.513	0.052	0.096	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1369.91	
13	0.6645	1095.5	1114.9	1113.8	0.555	3.465	79.445	14.818	1.544	0.055	0.102	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1367.70	
14	0.6680	1101.5	1121.0	1120.1	0.558	3.431	78.856	15.320	1.656	0.058	0.106	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1371.48	
15	0.6720	1109.8	1129.4	1128.4	0.514	3.369	78.008	16.251	1.692	0.055	0.099	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1377.71	
16	0.6766	1116.7	1136.4	1135.4	0.587	3.271	77.336	16.793	1.825	0.062	0.111	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1381.53	
17	0.6825	1125.2	1145.1	1144.4	0.712	3.108	76.588	17.328	2.040	0.073	0.132	0.010	0.010	0.000	0.000	0.000	0.000	0.000	1386.10	
18	0.6753	1113.6	1133.3	1132.4	0.632	3.264	77.684	16.389	1.832	0.065	0.117	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1379.07	
19	0.6697	1107.4	1127.0	1126.0	0.485	3.344	78.322	16.105	1.593	0.049	0.090	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1377.09	
20	0.6669	1101.7	1121.2	1120.2	0.521	3.365	78.890	15.530	1.543	0.049	0.090	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1372.98	
21	0.6653	1099.7	1119.1	1118.2	0.474	3.415	79.050	15.460	1.460	0.046	0.083	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1372.03	
22	0.6661	1100.5	1120.0	1119.3	0.544	3.330	79.016	15.476	1.482	0.049	0.090	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1372.29	
23	0.6640	1096.8	1116.2	1115.3	0.513	3.406	79.375	15.104	1.452	0.048	0.089	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1369.80	
24	0.6625	1096.1	1115.5	1114.7	0.505	3.315	79.542	15.162	1.350	0.041	0.074	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1370.56	
25	0.6689	1105.4	1125.0	1124.0	0.490	3.382	78.358	16.146	1.479	0.047	0.086	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1375.46	
26	0.6664	1101.5	1121.1	1120.2	0.473	3.401	78.832	15.697	1.458	0.046	0.083	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1373.30	
27	0.6669	1101.4	1120.9	1120.1	0.516	3.396	78.839	15.587	1.508	0.050	0.091	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1372.55	
28	0.6708	1108.6	1128.2	1127.3	0.526	3.305	78.144	16.303	1.566	0.051	0.092	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1377.49	
29	0.6758	1116.1	1135.9	1135.0	0.717	3.031	77.602	16.701	1.762	0.061	0.110	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1381.66	
30	0.6766	1118.7	1138.5	1137.6	0.663	3.026	77.332	17.073	1.732	0.057	0.103	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1384.12	
31	0.6696	1106.1	1125.7	1124.7	0.456	3.449	78.289	16.088	1.563	0.050	0.092	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1375.67	
Avg	0.6694	1106.0	1125.4	1124.5	0.578	3.262	78.526	15.879	1.592	0.053	0.097	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1375.52	

Source Daily Summary

January 2023

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	0.6866	1155.1	1175.6	1173.9	0.000	2.767	73.244	23.345	0.622	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.74	-25.88
2	0.6863	1154.4	1174.9	1173.3	0.000	2.781	73.304	23.274	0.621	0.008	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.20	-26.08
3	0.6861	1153.9	1174.3	1172.7	0.000	2.795	73.343	23.219	0.623	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.76	-26.21
4	0.6871	1155.5	1176.0	1174.5	0.000	2.795	73.129	23.429	0.627	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.68	-25.64
5	0.6870	1155.3	1175.8	1174.3	0.000	2.794	73.147	23.424	0.615	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.56	-25.76
6	0.6869	1155.0	1175.4	1173.6	0.000	2.809	73.159	23.393	0.619	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.22	-25.81
7	0.6872	1155.8	1176.3	1174.3	0.000	2.787	73.139	23.400	0.652	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.90	-25.49
8	0.6866	1155.0	1175.4	1173.3	0.000	2.781	73.255	23.299	0.645	0.008	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.51	-25.81
9	0.6875	1156.4	1176.8	1175.0	0.000	2.774	73.095	23.455	0.654	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.36	-25.33
10	0.6874	1155.5	1176.0	1174.4	0.000	2.819	73.104	23.397	0.659	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.41	-25.45
11	0.6870	1155.2	1175.6	1174.1	0.000	2.800	73.153	23.410	0.616	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.41	-25.79
12	0.6871	1155.6	1176.1	1174.5	0.000	2.785	73.141	23.423	0.629	0.008	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.83	-25.63
13	0.6880	1157.1	1177.6	1175.8	0.000	2.781	73.013	23.503	0.682	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.69	-24.97
14	0.6875	1156.2	1176.7	1174.9	0.000	2.788	73.112	23.397	0.681	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.13	-25.24
15	0.6872	1155.6	1176.0	1174.2	0.000	2.793	73.151	23.384	0.650	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.71	-25.54
16	0.6870	1155.3	1175.8	1174.0	0.000	2.791	73.176	23.374	0.638	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.59	-25.68
17	0.6874	1155.5	1176.0	1174.3	0.000	2.818	73.099	23.410	0.651	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.41	-25.48
18	0.6875	1155.7	1176.2	1174.0	0.000	2.816	73.090	23.413	0.660	0.008	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.54	-25.40
19	0.6874	1155.8	1176.2	1174.5	0.000	2.806	73.093	23.433	0.647	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.69	-25.46
20	0.6870	1155.6	1176.0	1174.6	0.000	2.782	73.155	23.414	0.628	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.83	-25.67
21	0.6874	1155.8	1176.3	1174.6	0.000	2.803	73.090	23.440	0.646	0.008	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.75	-25.45
22	0.6874	1155.7	1176.2	1174.6	0.000	2.804	73.102	23.425	0.648	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.69	-25.46
23	0.6874	1156.0	1176.4	1175.0	0.000	2.793	73.083	23.467	0.635	0.008	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.93	-25.47
24	0.6879	1156.2	1176.7	1175.4	0.000	2.824	72.973	23.556	0.626	0.008	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.72	-25.34
25	0.6874	1156.0	1176.4	1174.9	0.000	2.789	73.097	23.456	0.638	0.008	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.99	-25.47
26	0.6861	1154.6	1175.0	1173.9	0.000	2.753	73.327	23.299	0.600	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.62	-26.18
27	0.6869	1154.7	1175.2	1173.6	0.000	2.818	73.172	23.370	0.620	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.98	-25.86
28	0.6864	1154.6	1175.0	1173.5	0.000	2.788	73.237	23.367	0.588	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.20	-26.14
29	0.6861	1153.9	1174.3	1172.8	0.000	2.797	73.282	23.333	0.568	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.73	-26.40
30	0.6859	1153.6	1174.0	1172.6	0.000	2.800	73.331	23.260	0.589	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.54	-26.41
31	0.6862	1154.1	1174.5	1173.0	0.000	2.798	73.309	23.251	0.621	0.008	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.82	-26.14
Avg	0.6870	1155.0	1175.8	1174.1	0.000	2.794	73.165	23.388	0.632	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.55	-25.70

Source Daily Summary

January 2023

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	0.5723	962.6	979.6	979.4	0.108	3.571	96.003	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1294.98	
2	0.5722	962.6	979.7	979.4	0.108	3.566	96.008	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.08	
3	0.5722	962.6	979.7	979.4	0.108	3.564	96.009	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.10	
4	0.5722	962.7	979.7	979.5	0.109	3.559	96.013	0.296	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.19	
5	0.5722	962.6	979.7	979.4	0.108	3.568	96.005	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.04	
6	0.6284	1042.7	1061.1	1060.9	0.455	3.440	85.921	9.216	0.870	0.032	0.058	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1338.41	
7	0.6539	1079.0	1098.1	1097.9	0.613	3.386	81.340	13.256	1.263	0.044	0.086	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1358.03	
8	0.6535	1078.6	1097.7	1097.4	0.614	3.380	81.396	13.221	1.250	0.043	0.085	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1357.81	
9	0.6544	1080.4	1099.5	1099.3	0.626	3.336	81.258	13.368	1.269	0.044	0.087	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1359.16	
10	0.6516	1075.0	1094.0	1093.8	0.609	3.423	81.742	12.876	1.213	0.042	0.083	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1355.33	
11	0.6527	1078.0	1097.1	1096.8	0.616	3.329	81.554	13.139	1.225	0.042	0.082	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1358.00	
12	0.6525	1077.4	1096.5	1096.2	0.615	3.347	81.586	13.094	1.221	0.042	0.082	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1357.48	
13	0.6529	1077.6	1096.7	1096.4	0.614	3.381	81.508	13.118	1.237	0.043	0.086	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1357.23	
14	0.6569	1082.8	1102.0	1101.7	0.627	3.415	80.874	13.560	1.364	0.049	0.096	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1359.67	
15	0.6586	1084.3	1103.5	1103.2	0.556	3.593	80.466	13.822	1.405	0.048	0.096	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1359.76	
16	0.6673	1099.2	1118.6	1118.3	0.558	3.505	78.931	15.225	1.608	0.055	0.104	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1369.37	
17	0.6692	1101.9	1121.4	1121.1	0.683	3.322	78.863	15.220	1.710	0.063	0.120	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1370.81	
18	0.6711	1103.6	1123.2	1122.9	0.632	3.472	78.469	15.453	1.773	0.063	0.120	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1371.01	
19	0.6637	1092.7	1112.1	1111.8	0.585	3.519	79.602	14.598	1.524	0.053	0.104	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1364.99	
20	0.6527	1074.9	1093.9	1093.6	0.597	3.549	81.541	12.923	1.245	0.044	0.089	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1354.06	
21	0.6535	1076.3	1095.4	1095.1	0.610	3.520	81.411	13.050	1.260	0.044	0.091	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1354.99	
22	0.6528	1076.1	1095.1	1094.8	0.611	3.471	81.525	13.010	1.239	0.043	0.088	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1355.38	
23	0.6522	1075.9	1094.9	1094.6	0.611	3.426	81.629	12.970	1.222	0.043	0.086	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1355.75	
24	0.6561	1081.5	1100.6	1100.3	0.579	3.500	80.926	13.509	1.332	0.047	0.093	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1358.76	
25	0.6576	1082.8	1102.0	1101.7	0.572	3.572	80.659	13.658	1.376	0.049	0.099	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1358.85	
26	0.6553	1080.7	1099.9	1099.5	0.587	3.455	81.083	13.416	1.308	0.046	0.092	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1358.69	
27	0.6488	1071.5	1090.5	1090.2	0.585	3.412	82.246	12.449	1.174	0.042	0.081	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1353.77	
28	0.6440	1064.6	1083.5	1083.3	0.588	3.367	83.117	11.736	1.073	0.038	0.071	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1350.20	
29	0.6446	1066.0	1084.9	1084.8	0.594	3.331	83.005	11.874	1.076	0.038	0.071	0.005	0.006	0.000	0.000	0.000	0.000	0.000	1351.33	
30	0.6460	1069.1	1088.0	1087.8	0.596	3.278	82.741	12.171	1.093	0.038	0.072	0.005	0.006	0.000	0.000	0.000	0.000	0.000	1353.67	
31	0.6454	1068.0	1086.9	1086.7	0.596	3.285	82.863	12.049	1.086	0.038	0.072	0.005	0.006	0.000	0.000	0.000	0.000	0.000	1352.94	
Avg	0.6405	1060.0	1078.6	1078.3	0.518	3.447	83.751	11.079	1.080	0.039	0.074	0.005	0.006	0.000	0.000	0.000	0.000	0.000	1347.45	

January-23

ZONE 550

MANDAN BORDER

Weighted

Start Date	End Date	NBPL - St Anthony			WBI-MandanBorder WBI			AVG BTU	
		MCF	DK	BTU	MCF	DK	BTU Zone 28		
1/1/2023	1/2/2023	2,016	2,204	1093.30	4,011	4,495	1120.1	1111.136	1/1/2023
1/2/2023	1/3/2023	2,036	2,227	1093.50	4,187	4,710	1125.1	1114.761	1/2/2023
1/3/2023	1/4/2023	2,000	2,176	1088.20	4,812	5,440	1130.9	1118.363	1/3/2023
1/4/2023	1/5/2023	1,996	2,165	1084.60	4,889	5,519	1129.6	1116.554	1/4/2023
1/5/2023	1/6/2023	1,983	2,149	1084.10	4,401	4,979	1131.1	1116.501	1/5/2023
1/6/2023	1/7/2023	8,687	9,434	1084.80	4,881	5,498	1126.1	1099.657	1/6/2023
1/7/2023	1/8/2023	2,015	2,186	1085.00	4,731	5,331	1126.8	1114.315	1/7/2023
1/8/2023	1/9/2023	2,034	2,208	1085.20	4,109	4,622	1124.7	1111.621	1/8/2023
1/9/2023	1/10/2023	2,055	2,234	1087.40	3,483	3,920	1125.1	1111.111	1/9/2023
1/10/2023	1/11/2023	2,040	2,223	1089.70	3,431	3,877	1129.3	1114.534	1/10/2023
1/11/2023	1/12/2023	2,055	2,240	1089.80	4,373	4,880	1117.1	1108.372	1/11/2023
1/12/2023	1/13/2023	2,043	2,232	1092.50	4,860	5,367	1104.2	1100.737	1/12/2023
1/13/2023	1/14/2023	2,020	2,204	1091.00	3,872	4,272	1103.5	1099.215	1/13/2023
1/14/2023	1/15/2023	2,023	2,211	1093.40	2,699	2,968	1099.8	1097.058	1/14/2023
1/15/2023	1/16/2023	2,039	2,233	1095.10	2,325	2,557	1100.3	1097.870	1/15/2023
1/16/2023	1/17/2023	2,017	2,205	1093.10	3,453	3,799	1100.1	1097.519	1/16/2023
1/17/2023	1/18/2023	2,015	2,204	1093.90	3,778	4,166	1102.4	1099.443	1/17/2023
1/18/2023	1/19/2023	2,001	2,189	1094.10	3,766	4,165	1105.9	1101.806	1/18/2023
1/19/2023	1/20/2023	2,028	2,220	1094.30	3,141	3,470	1105.1	1100.863	1/19/2023
1/20/2023	1/21/2023	2,017	2,215	1098.40	3,690	4,155	1126.1	1116.310	1/20/2023
1/21/2023	1/22/2023	2,029	2,225	1096.60	3,578	4,042	1130.2	1118.041	1/21/2023
1/22/2023	1/23/2023	2,020	2,214	1096.20	2,976	3,350	1125.4	1113.594	1/22/2023
1/23/2023	1/24/2023	2,005	2,200	1097.10	2,828	3,187	1126.7	1114.420	1/23/2023
1/24/2023	1/25/2023	2,016	2,209	1095.60	3,729	4,194	1125.2	1114.813	1/24/2023
1/25/2023	1/26/2023	2,166	2,364	1090.80	4,230	4,689	1108.5	1102.506	1/25/2023
1/26/2023	1/27/2023	1,628	1,777	1091.60	3,913	4,348	1110.7	1105.088	1/26/2023
1/27/2023	1/28/2023	1,610	1,757	1091.20	4,998	5,577	1115.9	1109.882	1/27/2023
1/28/2023	1/29/2023	1,635	1,795	1098.30	6,923	7,746	1118.8	1114.883	1/28/2023
1/29/2023	1/30/2023	1,619	1,777	1097.80	7,481	8,419	1124.6	1119.832	1/29/2023
1/30/2023	1/31/2023	1,605	1,761	1097.00	7,358	8,269	1124.2	1119.329	1/30/2023
1/31/2023	2/1/2023	1,615	1,769	1095.00	6,262	6,990	1115.9	1111.615	1/31/2023
		67,068	73,207	1092.2129	133,168	149,001	1118.0452	1109.4113	



Alliance Pipeline

DAILY ANALYSIS --- USA
 ND07MD1 --- Hankinson Sales
 January 2023

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	1,141.256	0.6493	85.8409	9.1197	2.9921	0.3156	0.5016	0.0577	0.0458	0.0204	0.7588	0.3363	0.0111
2	1,141.539	0.6496	85.7886	9.1590	2.9794	0.3172	0.5071	0.0594	0.0475	0.0217	0.7730	0.3357	0.0114
3	1,140.138	0.6490	85.8534	9.1259	2.9461	0.3122	0.4938	0.0582	0.0477	0.0222	0.7952	0.3343	0.0111
4	1,141.899	0.6506	85.6481	9.1868	3.0254	0.3154	0.5107	0.0587	0.0490	0.0223	0.8280	0.3444	0.0111
5	1,141.299	0.6501	85.7533	9.0929	3.0167	0.3191	0.5130	0.0610	0.0493	0.0209	0.8122	0.3507	0.0111
6	1,143.784	0.6518	85.5424	9.1586	3.1532	0.3212	0.5160	0.0594	0.0471	0.0202	0.8195	0.3513	0.0110
7	1,147.221	0.6539	85.3555	9.1558	3.3196	0.3307	0.5389	0.0616	0.0472	0.0203	0.8011	0.3585	0.0109
8	1,146.405	0.6534	85.4018	9.1403	3.3178	0.3238	0.5244	0.0592	0.0449	0.0188	0.7977	0.3604	0.0109
9	1,148.337	0.6547	85.2943	9.1321	3.3761	0.3352	0.5669	0.0575	0.0449	0.0184	0.8057	0.3577	0.0112
10	1,148.323	0.6548	85.2700	9.1629	3.3718	0.3344	0.5633	0.0568	0.0439	0.0184	0.8033	0.3637	0.0114
11	1,148.805	0.6549	85.2744	9.1475	3.3805	0.3377	0.5720	0.0581	0.0453	0.0182	0.7921	0.3628	0.0114
12	1,149.099	0.6550	85.2790	9.1432	3.3845	0.3396	0.5790	0.0570	0.0443	0.0186	0.7854	0.3581	0.0114
13	1,151.756	0.6573	85.0440	9.1564	3.4721	0.3589	0.6357	0.0577	0.0454	0.0187	0.8374	0.3620	0.0116
14	1,151.181	0.6569	85.1291	9.0722	3.4640	0.3607	0.6393	0.0602	0.0451	0.0188	0.8392	0.3602	0.0113
15	1,151.392	0.6571	85.0752	9.1221	3.4748	0.3569	0.6318	0.0587	0.0460	0.0185	0.8429	0.3617	0.0113
16	1,151.523	0.6573	85.0729	9.1135	3.4832	0.3585	0.6314	0.0591	0.0464	0.0191	0.8341	0.3704	0.0115
17	1,151.502	0.6572	85.0638	9.1362	3.4724	0.3584	0.6314	0.0585	0.0457	0.0189	0.8329	0.3703	0.0114
18	1,150.970	0.6569	85.0536	9.1866	3.4734	0.3473	0.6005	0.0591	0.0462	0.0187	0.8320	0.3713	0.0115
19	1,151.325	0.6567	85.1445	9.1015	3.4664	0.3560	0.6283	0.0576	0.0458	0.0187	0.8040	0.3658	0.0114
20	1,148.771	0.6548	85.3263	9.1320	3.3319	0.3439	0.5939	0.0578	0.0454	0.0189	0.7704	0.3678	0.0116
21	1,147.932	0.6541	85.3651	9.1826	3.2885	0.3376	0.5735	0.0565	0.0436	0.0183	0.7558	0.3668	0.0117
22	1,148.568	0.6546	85.2287	9.2750	3.3803	0.3244	0.5160	0.0593	0.0473	0.0205	0.7732	0.3638	0.0115
23	1,150.255	0.6547	85.4548	9.0149	3.4293	0.3537	0.5433	0.0681	0.0570	0.0242	0.6799	0.3637	0.0112
24	1,149.287	0.6550	85.4076	9.0098	3.3655	0.3587	0.5687	0.0695	0.0579	0.0269	0.7542	0.3702	0.0110
25	1,147.439	0.6543	85.4324	9.0807	3.2180	0.3619	0.5817	0.0706	0.0557	0.0246	0.7815	0.3817	0.0112
26	1,146.777	0.6542	85.4111	9.0831	3.2119	0.3594	0.5749	0.0697	0.0553	0.0251	0.8160	0.3821	0.0113
27	1,150.298	0.6558	85.2984	9.0120	3.4681	0.3573	0.5594	0.0688	0.0562	0.0253	0.7762	0.3666	0.0117
28	1,153.256	0.6579	85.1113	8.9883	3.6319	0.3658	0.5806	0.0715	0.0574	0.0250	0.7856	0.3716	0.0110
29	1,152.480	0.6574	85.1092	9.0156	3.6463	0.3548	0.5519	0.0668	0.0537	0.0258	0.8074	0.3578	0.0107
30	1,152.532	0.6575	85.1330	8.9625	3.6505	0.3584	0.5626	0.0688	0.0570	0.0251	0.8152	0.3563	0.0106
31	1,150.464	0.6561	85.3088	8.9219	3.5481	0.3583	0.5535	0.0683	0.0526	0.0244	0.7727	0.3809	0.0102
Volume	1,148.224	0.6546	85.3395	9.1060	3.3458	0.3428	0.5655	0.0616	0.0489	0.0212	0.7963	0.3612	0.0112
Weight Avg Energy	1,148.236	0.6546	85.3388	9.1059	3.3464	0.3428	0.5656	0.0616	0.0489	0.0212	0.7963	0.3612	0.0112



Alliance Pipeline

DAILY ANALYSIS --- USA
 ND14MD1 --- Milnor Sales
 January 2023

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	1,141.048	0.6491	85.8854	9.0955	2.9787	0.3162	0.5007	0.0588	0.0468	0.0211	0.7528	0.3329	0.0111
2	1,141.469	0.6496	85.7833	9.1621	2.9782	0.3171	0.5074	0.0589	0.0472	0.0215	0.7782	0.3348	0.0114
3	1,140.315	0.6492	85.8290	9.1335	2.9532	0.3130	0.4955	0.0582	0.0480	0.0224	0.7992	0.3369	0.0110
4	1,141.809	0.6506	85.6535	9.1781	3.0256	0.3155	0.5106	0.0589	0.0490	0.0222	0.8295	0.3458	0.0111
5	1,141.482	0.6502	85.7468	9.0978	3.0203	0.3194	0.5143	0.0611	0.0494	0.0210	0.8082	0.3507	0.0111
6	1,144.256	0.6521	85.5129	9.1513	3.1893	0.3217	0.5162	0.0593	0.0466	0.0200	0.8191	0.3526	0.0111
7	1,146.872	0.6537	85.3902	9.1401	3.3053	0.3299	0.5376	0.0616	0.0473	0.0204	0.7978	0.3591	0.0109
8	1,147.342	0.6540	85.3324	9.1654	3.3490	0.3270	0.5335	0.0593	0.0450	0.0185	0.7987	0.3603	0.0109
9	1,148.308	0.6547	85.2936	9.1354	3.3743	0.3348	0.5663	0.0574	0.0449	0.0184	0.8058	0.3577	0.0113
10	1,148.333	0.6548	85.2565	9.1737	3.3707	0.3344	0.5634	0.0566	0.0438	0.0183	0.8059	0.3653	0.0114
11	1,148.563	0.6547	85.3176	9.1168	3.3758	0.3377	0.5710	0.0583	0.0454	0.0184	0.7859	0.3619	0.0113
12	1,149.412	0.6552	85.2392	9.1688	3.3912	0.3406	0.5821	0.0566	0.0440	0.0183	0.7896	0.3581	0.0116
13	1,151.738	0.6573	85.0586	9.1345	3.4745	0.3597	0.6388	0.0582	0.0456	0.0189	0.8369	0.3628	0.0116
14	1,151.009	0.6569	85.1404	9.0637	3.4612	0.3605	0.6382	0.0600	0.0449	0.0187	0.8381	0.3631	0.0113
15	1,151.373	0.6572	85.0725	9.1222	3.4751	0.3566	0.6302	0.0590	0.0469	0.0189	0.8428	0.3644	0.0115
16	1,151.822	0.6574	85.0465	9.1341	3.4903	0.3587	0.6323	0.0589	0.0463	0.0190	0.8335	0.3691	0.0114
17	1,151.430	0.6571	85.0742	9.1345	3.4699	0.3576	0.6299	0.0586	0.0457	0.0187	0.8306	0.3689	0.0114
18	1,151.388	0.6572	85.0195	9.1854	3.4912	0.3494	0.6081	0.0590	0.0464	0.0189	0.8378	0.3730	0.0114
19	1,150.938	0.6563	85.2007	9.0800	3.4491	0.3552	0.6250	0.0576	0.0458	0.0186	0.7920	0.3645	0.0114
20	1,148.524	0.6545	85.3558	9.1363	3.3154	0.3426	0.5891	0.0577	0.0453	0.0190	0.7611	0.3662	0.0116
21	1,147.896	0.6541	85.3036	9.2733	3.2610	0.3346	0.5669	0.0562	0.0435	0.0184	0.7687	0.3623	0.0115
22	1,149.674	0.6553	85.2103	9.1810	3.4749	0.3302	0.5212	0.0614	0.0493	0.0214	0.7728	0.3660	0.0116
23	1,151.030	0.6552	85.4070	9.0188	3.4552	0.3571	0.5523	0.0690	0.0582	0.0250	0.6799	0.3664	0.0111
24	1,148.393	0.6545	85.4533	9.0156	3.3121	0.3581	0.5674	0.0693	0.0572	0.0266	0.7589	0.3703	0.0110
25	1,147.089	0.6541	85.4560	9.0583	3.2116	0.3616	0.5817	0.0705	0.0556	0.0245	0.7875	0.3817	0.0112
26	1,147.330	0.6544	85.3889	9.0901	3.2369	0.3599	0.5745	0.0696	0.0556	0.0253	0.8083	0.3796	0.0113
27	1,150.823	0.6561	85.2690	8.9997	3.5083	0.3580	0.5599	0.0687	0.0561	0.0250	0.7798	0.3637	0.0117
28	1,153.348	0.6579	85.1044	9.0038	3.6239	0.3664	0.5824	0.0717	0.0572	0.0252	0.7797	0.3744	0.0110
29	1,152.101	0.6573	85.1038	9.0055	3.6532	0.3520	0.5458	0.0663	0.0539	0.0256	0.8277	0.3556	0.0107
30	1,152.511	0.6573	85.1591	8.9518	3.6436	0.3593	0.5637	0.0692	0.0570	0.0251	0.8052	0.3555	0.0105
31	1,150.458	0.6561	85.3056	8.9240	3.5461	0.3586	0.5545	0.0682	0.0525	0.0245	0.7711	0.3845	0.0102
Volume	1,148.411	0.6547	85.3328	9.0969	3.3583	0.3440	0.5654	0.0622	0.0495	0.0215	0.7962	0.3620	0.0112
Weight Avg Energy	1,148.420	0.6547	85.3322	9.0968	3.3586	0.3441	0.5656	0.0622	0.0495	0.0215	0.7963	0.3620	0.0112

January-23

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		
1/1/2023	1/2/2023	417	498	1195.1	865	989	1143.2	1160.082	1/1/2023
1/2/2023	1/3/2023	422	504	1195.1	974	1,113	1143.2	1158.889	1/2/2023
1/3/2023	1/4/2023	471	563	1195.1	983	1,123	1143.2	1160.012	1/3/2023
1/4/2023	1/5/2023	485	579	1195.1	997	1,140	1143.2	1160.185	1/4/2023
1/5/2023	1/6/2023	438	524	1195.1	928	1,061	1143.2	1159.841	1/5/2023
1/6/2023	1/7/2023	487	583	1195.1	1,010	1,154	1143.2	1160.084	1/6/2023
1/7/2023	1/8/2023	374	447	1195.1	852	973	1143.2	1159.032	1/7/2023
1/8/2023	1/9/2023	349	417	1195.1	828	947	1143.2	1158.589	1/8/2023
1/9/2023	1/10/2023	312	372	1195.1	772	882	1143.2	1158.138	1/9/2023
1/10/2023	1/11/2023	317	378	1195.1	792	905	1143.2	1158.035	1/10/2023
1/11/2023	1/12/2023	432	517	1195.1	961	1,099	1143.2	1159.295	1/11/2023
1/12/2023	1/13/2023	415	495	1195.1	938	1,072	1143.2	1159.119	1/12/2023
1/13/2023	1/14/2023	302	360	1195.1	823	941	1143.2	1157.132	1/13/2023
1/14/2023	1/15/2023	255	305	1195.1	693	792	1143.2	1157.160	1/14/2023
1/15/2023	1/16/2023	318	380	1195.1	802	917	1143.2	1157.936	1/15/2023
1/16/2023	1/17/2023	369	441	1195.1	901	1,030	1143.2	1158.280	1/16/2023
1/17/2023	1/18/2023	377	451	1195.1	937	1,071	1143.2	1158.091	1/17/2023
1/18/2023	1/19/2023	312	372	1195.1	855	978	1143.2	1157.076	1/18/2023
1/19/2023	1/20/2023	354	424	1195.1	906	1,036	1143.2	1157.781	1/19/2023
1/20/2023	1/21/2023	392	469	1195.1	1,034	1,182	1143.2	1157.467	1/20/2023
1/21/2023	1/22/2023	365	436	1195.1	985	1,126	1143.2	1157.232	1/21/2023
1/22/2023	1/23/2023	312	373	1195.1	775	886	1143.2	1158.097	1/22/2023
1/23/2023	1/24/2023	325	388	1195.1	810	926	1143.2	1158.061	1/23/2023
1/24/2023	1/25/2023	391	467	1195.1	881	1,007	1143.2	1159.154	1/24/2023
1/25/2023	1/26/2023	365	437	1195.1	809	925	1143.2	1159.336	1/25/2023
1/26/2023	1/27/2023	367	439	1195.1	828	946	1143.2	1159.139	1/26/2023
1/27/2023	1/28/2023	445	532	1195.1	936	1,070	1143.2	1159.924	1/27/2023
1/28/2023	1/29/2023	586	701	1195.1	1,267	1,448	1143.2	1159.613	1/28/2023
1/29/2023	1/30/2023	651	778	1195.1	1,399	1,599	1143.2	1159.681	1/29/2023
1/30/2023	1/31/2023	604	721	1195.1	1,282	1,466	1143.2	1159.821	1/30/2023
1/31/2023	2/1/2023	498	596	1195.1	1,086	1,242	1143.2	1159.517	1/31/2023
		12,507	14,947	1195.1000	28,909	33,046	1143.2000	1158.7678	

Tsp	EffDate	EndDate	Device	GasDay	EndDt	BTU	SpecGrav	CriconTherm	WobbeIndex	CO2	N2	Methane	Ethane	Propane	iButane	nButane	iPentane	nPentane	NeoPentane	C6Plus	Hydrogen	Helium	WaterVapor	TotalSulfur	HydrogenSulfur	Oxygen
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/1/2023	1/2/2023	1094	0.6482	-49.7	1358.822748	0.9632	2.5654	81.9221	13.7735	0.6317	0.0139	0.0249	0.0003	0.0003	N/A	0	0.081	0.0238	6.9618	0.0044	0.0006	0.4141
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/2/2023	1/3/2023	1093	0.6465	-50.9	1359.364416	0.9439	2.4834	82.0444	13.7886	0.5503	0.0115	0.0205	0	0	N/A	0	0.1342	0.0232	6.9618	0.0043	0.0006	0.3762
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/3/2023	1/4/2023	1088	0.6414	-53.5	1358.514936	0.9034	2.3825	82.9166	12.9782	0.5476	0.0117	0.0208	0.0002	0.0002	N/A	0	0.2168	0.022	6.9618	0.0041	0.0006	0.3216
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/4/2023	1/5/2023	1085	0.6387	-55	1357.629543	0.8821	2.3174	83.487	12.4885	0.5633	0.0118	0.0205	0.0001	0	N/A	0	0.2077	0.0217	6.9618	0.0044	0.0006	0.3032
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/5/2023	1/6/2023	1085	0.6377	-55.7	1358.6936	0.8807	2.2444	83.7535	12.3596	0.5401	0.0114	0.02	0.0001	0	N/A	0	0.1859	0.0213	6.9618	0.0047	0.0008	0.2834
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/6/2023	1/7/2023	1094	0.6364	-56.5	1358.827091	0.8576	2.1658	84.0932	12.1365	0.5265	0.0114	0.0203	0.0001	0.0001	N/A	0	0.1179	0.0209	6.9618	0.0044	0.0007	0.3267
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/7/2023	1/8/2023	1085	0.6357	-56.5	1360.82924	0.8504	2.0827	84.1873	12.1438	0.5357	0.0111	0.0195	0	0.0001	N/A	0	0.1491	0.0204	6.9618	0.0045	0.0007	0.3252
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/8/2023	1/9/2023	1085	0.6368	-56	1359.653393	0.8637	2.1454	83.9582	12.2934	0.5382	0.0106	0.0187	0	0	N/A	0	0.1514	0.0205	6.9618	0.005	0.0008	0.2949
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/9/2023	1/10/2023	1087	0.6391	-54.7	1359.70638	0.8884	2.1928	83.5045	12.6582	0.5462	0.0107	0.0191	0	0	N/A	0	0.1597	0.0205	6.9618	0.005	0.0009	0.3279
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/10/2023	1/11/2023	1090	0.6421	-53	1360.270134	0.9061	2.3062	82.8857	13.1375	0.5473	0.0109	0.0197	0.0001	0.0001	N/A	0	0.1646	0.0218	6.9618	0.0051	0.0009	0.3723
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/11/2023	1/12/2023	1090	0.6418	-53.3	1360.588017	0.9009	2.278	82.9482	13.1329	0.5333	0.0107	0.0191	0	0	N/A	0	0.1553	0.0217	6.9618	0.0048	0.0008	0.4704
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/12/2023	1/13/2023	1093	0.6447	-51.6	1361.607064	0.9194	2.3594	82.3853	13.5794	0.5551	0.0107	0.0189	0	0.0001	N/A	0	0.1498	0.022	6.9618	0.0048	0.0008	0.4843
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/13/2023	1/14/2023	1091	0.6436	-52.3	1359.930559	0.9041	2.3794	82.5858	13.3655	0.5575	0.0106	0.019	0.0001	0	N/A	0	0.1554	0.0225	6.9618	0.0049	0.0009	0.4424
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/14/2023	1/15/2023	1093	0.6452	-51.2	1360.733205	0.9095	2.3786	82.2992	13.6468	0.5696	0.0111	0.02	0	0.0001	N/A	0	0.1431	0.0221	6.9618	0.0051	0.0009	0.4615
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/15/2023	1/16/2023	1095	0.6466	-50.4	1361.746504	0.9345	2.389	82.1091	13.8195	0.5824	0.0112	0.0198	0	0	N/A	0	0.1116	0.0229	6.9618	0.0052	0.0009	0.4297
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/16/2023	1/17/2023	1093	0.6447	-51.6	1361.260764	0.9239	2.344	82.4267	13.5301	0.5444	0.0107	0.0193	0.0002	0.0002	N/A	0	0.1285	0.0222	6.9618	0.0052	0.0009	0.4921
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/17/2023	1/18/2023	1094	0.6458	-51.3	1361.345517	0.9266	2.3828	82.1437	13.8405	0.5228	0.0088	0.0149	0	0	N/A	0	0.1377	0.0223	6.9618	0.0044	0.0009	0.2557
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/18/2023	1/19/2023	1095	0.646	-50.6	1362.378747	0.9145	2.3593	82.1721	13.7873	0.583	0.0107	0.0182	0.0001	0	N/A	0	0.1331	0.0217	6.9618	0.0031	0.0008	0.0008
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/19/2023	1/20/2023	1094	0.6457	-50.9	1361.450729	0.917	2.3628	82.245	13.7224	0.5794	0.01	0.0171	0	0	N/A	0	0.1246	0.0218	6.9618	0.0031	0.0009	0.0013
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/20/2023	1/21/2023	1099	0.6482	-48.2	1365.033089	0.9262	2.3276	81.8773	14.0312	0.6477	0.0187	0.0268	0.0019	0.0013	N/A	0.0003	0.1191	0.0219	6.9618	0.0028	0.0008	0.4185
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/21/2023	1/22/2023	1096	0.6469	-50.2	1362.674028	0.9199	2.37	82.0474	13.9219	0.5798	0.0114	0.0191	0	0	N/A	0	0.1086	0.0219	6.9618	0.0028	0.0008	0.4556
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/22/2023	1/23/2023	1097	0.6474	-49.5	1363.390552	0.9281	2.3573	81.9978	13.9152	0.6234	0.0139	0.0223	0.0005	0.0003	N/A	0.0001	0.1191	0.022	6.9618	0.0031	0.001	0.4124
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/23/2023	1/24/2023	1097	0.6464	-49.3	1364.444747	0.9307	2.2715	82.2136	13.7677	0.6232	0.0171	0.0254	0.0015	0.0012	N/A	0.0005	0.1258	0.0218	6.9618	0.0032	0.0009	0.4124
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/24/2023	1/25/2023	1095	0.6464	-50.6	1361.957154	0.9473	2.3337	82.1428	13.8429	0.5653	0.0099	0.0167	0	0.0001	N/A	0	0.1192	0.0222	6.9618	0.0032	0.0009	0.4124
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/25/2023	1/26/2023	1091	0.6421	-53.3	1361.518089	0.9173	2.2476	82.9534	13.1819	0.5396	0.0093	0.0153	0.0001	0.0001	N/A	0	0.1231	0.0215	6.9618	0.0032	0.0008	0.4124
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/26/2023	1/27/2023	1091	0.6435	-52.2	1360.036221	0.9295	2.3295	82.7448	13.2468	0.5867	0.0109	0.0184	0.0001	0.0001	N/A	0	0.1108	0.0225	6.9618	0.0032	0.0009	0.4124
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/27/2023	1/28/2023	1092	0.6431	-51.9	1361.705102	0.9084	2.2935	82.8782	13.111	0.6396	0.0129	0.0219	0.0001	0.0001	N/A	0	0.1125	0.0219	6.9618	0.0031	0.0008	0.4124
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/28/2023	1/29/2023	1098	0.6478	-49.1	1364.210099	0.9155	2.3283	81.9801	13.9743	0.6568	0.0122	0.0202	0	0	N/A	0	0.0906	0.0221	6.9618	0.0028	0.0008	0.4124
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/29/2023	1/30/2023	1098	0.6465	-49.4	1365.582918	0.9066	2.2299	82.214	13.7951	0.6763	0.0126	0.0209	0	0	N/A	0	0.1233	0.0213	6.9618	0.0028	0.0008	0.4124
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/30/2023	1/31/2023	1097	0.645	-50.1	1365.924737	0.8925	2.2004	82.447	13.5966	0.6636	0.0131	0.0217	0	0	N/A	0	0.1441	0.021	6.9618	0.0028	0.0007	0.4124
NBPL	12/31/2022 0:00	2/1/2023 0:00	GLNU1 - GLEN ULLIN	1/31/2023	2/1/2023	1095	0.6443	-50.7	1364.174897	0.898	2.2084	82.6143	13.4136	0.6696	0.0126	0.0212	0	0	N/A	0	0.1413	0.0211	6.9618	0.0028	0.0008	0.4738

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	JAN23	DEC22	NOV22	OCT22	SEP22	AUG22	JUL22	JUN22	MAY22	APR22	MAR22	FEB22	ZONE
MT/ND	211	Sidney Border - MonDak Tfr - Sidney Plt	1198	1203	1206	1202	1201	1198	1205	1200	1198	1185	1191	1196	1196	211
ND	24	Williston Border - Charbonneau Station	1191	1197	1193	1198	1194	1188	1192	1195	1187	1185	1188	1189	1180	24
ND	25	Watford City West Border	1202	1195	1202	1207	1210	1209	1210	1201	1199	1195	1200	1197	1200	25
ND	28	Bismarck Station - Glen Ullin Station	1158	1118	1133	1126	1175	1191	1198	1202	1204	1196	1087	1131	1131	28
ND	31	Dickinson Brd - Belfield Trf - G Ullin Stn	1113	1132	1140	1131	1097	1099	1087	1094	1105	1100	1108	1130	1132	31
ND/MT	32	Cabin Creek Station - Belfied Transfer	1125	1125	1139	1132	1122	1128	1129	1115	1124	1138	1126	1095	1122	32
ND	33	Little Knife Plant	1176	1176	1176	1176	1179	1173	1174	1177	1175	1175	1176	1178	1176	33
ND	34	Badlands Plant/Bowman Border	1047	1079	1086	1077	989	1056	1031	1033	1014	1019	1021	1070	1087	34
ND	43	Watford City East Border	1069	1143	1133	1054	1050	1051	1057	1062	1044	1036	1042	1042	1108	43
ND/MT	241	Fairview Border	1197	1218	1201	1210	1205	1193	1197	1199	1186	1178	1191	1191	1197	241
ND	267	North Tioga Transfer - Nesson Plant	1175	1181	1176	1176	1178	1174	1184	1173	1172	1172	1176	1172	1157	267
ND	261	Tioga Comp Station - Robinson Lake Plan	1188	1176	1176	1182	1194	1196	1196	1201	1200	1200	1191	1191	1155	261
ND	262	Minot Bdr - Palermo Bdr - Bismarck Stn	1195	1188	1189	1186	1195	1198	1196	1203	1205	1202	1202	1194	1187	262
ND	263	Lignite Plant	1131	1131	1131	1131	1131	1131	1130	1131	1131	1131	1131	1131	1131	263
ND	264	Epping Border	1190	1202	1198	1194	1198	1196	1192	1188	1182	1188	1188	1185	1173	264
ND	265	Tioga Comp Station - County Line Plant	1173	1182	1169	1182	1180	1178	1178	1180	1176	1163	1170	1167	1150	265
ND	266	County Line Plant	1176	1183	1168	1181	1180	1180	1182	1179	1179	1167	1173	1172	1166	266
ND	271	Bismarck Station - Cleveland Station	1187	1168	1176	1181	1197	1191	1198	1202	1205	1205	1164	1185	1169	271
ND	272	Cleveland Station - Mapleton	1187	1168	1176	1181	1197	1191	1198	1202	1205	1204	1175	1184	1167	272
ND	273	Cleveland Station - Grafton Border	1186	1168	1176	1181	1198	1194	1198	1200	1205	1202	1168	1176	1166	273
ND	550	Mandan Border / NBPL-St Anthony	1148	1109	1127	1107	1173	1189	1194	1182	1201	1189	1087	1103	1119	550
ND	610	MDU-Watford City BTU	1100	1159	1155	1102	1113	1072	1068	1065	1063	1086	1093	1087	1138	610
ND	802	NBPL - Linton	1083	1093	1090	1087	1084	1081	1083	1086	1084	1074	1067	1073	1088	802
ND	903	Hettinger Propane	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	903
ND	600	Alliance Pipeline - Hankinson	1154	1148	1143	1149	1159	1159	1157	1160	1153	1151	1155	1157	1152	600
ND	601	Alliance Pipeline - Milnor	1154	1148	1143	1149	1159	1160	1157	1160	1153	1151	1154	1157	1152	602

THERMAL ZONE VARIANCE DOCUMENTATION		
January 2023		
<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
		No variance