

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

September 28, 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 – July 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 August 2023.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our suppliers for the month of July 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 July 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
Aug-23

<u>Town</u>	<u>Heat Zone</u>	<u>Therm Factor</u>
MDU-303-ALEXANDER	025	1.1240
MDU-308-ARNEGARD	025	1.1240
MDU-314-APPLE VALLEY	271	1.1530
MDU-318-BEACH	032	1.0387
MDU-319-BELFIELD	032	1.0464
MDU-323-BERTHOLD	262	1.1268
MDU-327-BISMARCK	028	1.4522
MDU-330-BOWMAN	034	0.9540
MDU-337-BURLINGTON	262	1.1511
MDU-343-CARRINGTON	273	1.1521
MDU-344-CLEVELAND	272	1.1439
MDU-364-CAVALIER	273	1.1764
MDU-365-DAWSON	271	1.1449
MDU-368-DES LACS	262	1.1349
MDU-369-DICKINSON	031	1.0380
MDU-374-FT TOTTEN	273	1.1602
MDU-375-DEVILS LAKE	273	1.1602
MDU-379-BARLOW	273	1.1521
MDU-384-EPPING	264	1.1155
MDU-387-ELDRIDGE	272	1.1521
MDU-407-GLADSTONE	031	1.0380
MDU-411-GLEN ULLIN	031	1.0456
MDU-413-GOLVA	032	1.0235
MDU-416-GARRISON	262	1.1349
MDU-417-GRAFTON	273	1.1845
MDU-403-GWINNER	601	1.1399
MDU-429-HEBRON	031	1.0456
MDU-432-HETTINGER	903	2.3875
MDU-449-JAMESTOWN	272	1.1602
MDU-459-KILLDEER	033	1.1145
MDU-463-LANGDON	273	1.1521
MDU-469-LEFOR	031	1.0380
MDU-474-LIGNITE	263	1.0759
MDU-475-LINTON	802	1.0633
MDU-478-LINCOLN	028	1.1530
MDU-488-MCKENZIE	271	1.1530
MDU-494-MEDINA	271	1.1449
MDU-498-MANDAN	028	1.1530
MDU-500-MARMARTH	034	0.9611
MDU-505-MINOT	262	1.1511
MDU-510-MOTT	031	1.0380
MDU-512-MAX	262	1.1268
MDU-513-MILNOR	601	1.1399
MDU-522-NEW ENGLAND	031	1.0305
MDU-524-NEW SALEM	028	1.1287
MDU-532-NEW ROCKFORD	273	1.1521
MDU-539-PARK RIVER	273	1.1764
MDU-540-PALERMO	262	1.1268
MDU-558-RAY	264	1.1155

MDU-561-REGENT	031	1.0380
MDU-563-RHAME	034	0.9470
MDU-564-RICHARDTON	031	1.0305
MDU-568-ROSS	261	1.1149
MDU-572-RUTHVILLE	262	1.1511
MDU-574-SANBORN	272	1.1602
MDU-583-SENTINEL BUTTE	032	1.0387
MDU-588-SOUTH HEART	031	1.0305
MDU-717-SPIRITWOOD	272	1.1602
MDU-590-SPRINGBROOK	264	1.1240
MDU-591-STANLEY	261	1.1230
MDU-593-STEELE	271	1.1449
MDU-594-STERLING	028	1.1530
MDU-598-SHEYENNE	273	1.1602
MDU-605-SURREY	262	1.1482
MDU-610-TAPPEN	271	1.1449
MDU-611-TAYLOR	031	1.0305
MDU-616-TIOGA	260	1.1112
MDU-619-TURTLE LAKE	262	1.1349
MDU-620-TRENTON	024	1.1377
MDU-624-UNDERWOOD	262	1.1349
MDU-625-VALLEY CITY	272	1.1683
MDU-629-WALHALLA	273	1.1764
MDU-632-WATFORD CITY	610	1.0305
MDU-636-WHEELOCK	264	1.1074
MDU-637-WHITE EARTH	261	1.1230
MDU-642-WILLISTON	024	1.1377
MDU-646-WASHBURN	262	1.1430
MDU-647-WILTON	262	1.1268
MDU-664-RIVERDALE	262	1.1320
MDU-691-FAIRVIEW	241	1.1311
MDU-712-MINOT AFB	262	1.1511
MDU-718-FAIRMOUNT	600	1.1376
MDU-732-NEKOMA	273	1.1521
MDU-732-MSR SITE	273	1.1521

Source Daily Summary

July 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	0.6991	1166.1	1186.8	1185.7	0.037	3.209	72.166	22.465	2.065	0.024	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.38
2	0.7019	1163.5	1184.1	1182.9	0.249	3.305	72.023	22.150	2.153	0.042	0.072	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1413.45
3	0.7282	1171.7	1192.5	1191.6	1.338	3.617	69.387	22.046	3.160	0.143	0.277	0.017	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1397.38
4	0.7234	1172.0	1192.7	1191.9	1.094	3.524	69.810	22.232	2.938	0.128	0.247	0.014	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1402.31
5	0.7240	1180.3	1201.2	1200.2	0.851	3.442	69.428	22.926	3.002	0.109	0.216	0.014	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1411.68
6	0.7215	1172.9	1193.6	1192.7	0.987	3.450	70.137	22.046	2.992	0.120	0.238	0.016	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1405.25
7	0.7272	1176.7	1197.6	1196.6	1.215	3.399	69.464	22.371	3.092	0.141	0.283	0.018	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1404.40
8	0.7229	1175.4	1196.2	1195.3	0.957	3.478	69.672	22.632	2.888	0.117	0.229	0.015	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1406.89
9	0.7228	1173.4	1194.2	1193.1	1.001	3.514	69.847	22.295	2.948	0.123	0.241	0.015	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1404.70
10	0.7219	1174.3	1195.1	1194.1	0.922	3.496	69.831	22.503	2.889	0.114	0.221	0.014	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1406.65
11	0.7023	1169.2	1189.9	1189.1	0.122	3.200	71.680	22.823	2.081	0.035	0.056	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1419.83
12	0.7276	1177.2	1198.0	1197.1	1.120	3.557	69.260	22.493	3.127	0.137	0.272	0.017	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1404.59
13	0.7346	1181.0	1201.9	1200.9	1.337	3.646	68.550	22.480	3.468	0.161	0.319	0.021	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1402.37
14	0.7306	1175.4	1196.2	1195.3	1.342	3.613	69.171	22.061	3.294	0.161	0.320	0.020	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1399.44
15	0.7301	1174.8	1195.6	1194.7	1.343	3.597	69.334	21.873	3.331	0.162	0.322	0.021	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1399.22
16	0.7297	1173.7	1194.5	1193.6	1.342	3.624	69.402	21.797	3.309	0.162	0.324	0.021	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1398.37
17	0.7321	1177.9	1198.7	1197.8	1.339	3.603	68.931	22.245	3.382	0.157	0.307	0.020	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1400.99
18	0.7334	1179.7	1200.6	1199.5	1.326	3.638	68.609	22.567	3.366	0.156	0.302	0.019	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1401.87
19	0.7250	1180.8	1201.7	1200.8	0.885	3.454	69.337	22.883	3.083	0.114	0.219	0.013	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1411.35
20	0.7238	1176.7	1197.6	1196.5	0.934	3.510	69.635	22.527	2.996	0.123	0.244	0.016	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1407.65
21	0.7364	1186.1	1207.1	1206.0	1.285	3.591	68.251	22.787	3.540	0.167	0.336	0.022	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1406.59
22	0.7365	1184.6	1205.6	1204.5	1.323	3.626	68.297	22.629	3.596	0.164	0.325	0.021	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1404.82
23	0.7386	1188.3	1209.3	1208.2	1.325	3.595	68.165	22.571	3.749	0.183	0.367	0.024	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1407.17
24	0.7372	1186.2	1207.2	1205.8	1.303	3.627	68.352	22.427	3.708	0.180	0.359	0.023	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1405.99
25	0.7280	1182.5	1203.4	1202.1	1.002	3.450	69.604	21.932	3.495	0.157	0.320	0.021	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1410.41
26	0.7304	1179.0	1199.9	1198.6	1.235	3.532	69.328	21.926	3.433	0.167	0.337	0.022	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1403.98
27	0.7143	1182.8	1203.8	1202.6	0.285	3.234	70.741	22.450	2.987	0.097	0.189	0.009	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1424.39
28	0.7078	1178.9	1199.7	1198.6	0.041	3.234	71.443	22.294	2.761	0.074	0.142	0.005	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1426.06
29	0.7177	1180.3	1201.2	1200.1	0.530	3.337	70.475	22.238	3.055	0.114	0.226	0.013	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1418.03
30	0.7362	1184.5	1205.5	1204.3	1.333	3.589	68.602	22.203	3.668	0.185	0.372	0.025	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1404.95
31	0.7404	1191.2	1212.3	1211.1	1.324	3.586	68.330	22.032	4.002	0.220	0.446	0.032	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1408.87
Avg	0.7253	1178.0	1198.8	1197.8	0.991	3.493	69.589	22.352	3.147	0.133	0.263	0.017	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1407.71

Source Daily Summary

July 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	0.7194	1167.8	1188.5	1187.5	0.932	3.637	70.592	21.412	2.979	0.136	0.269	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1401.29	
2	0.7222	1172.0	1192.7	1191.7	0.951	3.619	70.134	21.812	3.011	0.141	0.284	0.024	0.024	0.000	0.000	0.000	0.000	0.000	1403.52	
3	0.7200	1170.3	1191.1	1190.3	0.984	3.463	70.477	21.727	2.906	0.128	0.268	0.022	0.024	0.000	0.000	0.000	0.000	0.000	1403.71	
4	0.7186	1169.4	1190.2	1189.5	0.984	3.391	70.580	21.838	2.803	0.117	0.246	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1403.96	
5	0.7162	1167.0	1187.6	1186.9	1.101	3.133	71.217	21.359	2.788	0.109	0.250	0.020	0.023	0.000	0.000	0.000	0.000	0.000	1403.38	
6	0.7093	1165.4	1186.1	1185.2	1.045	2.665	72.420	20.870	2.619	0.107	0.235	0.018	0.021	0.000	0.000	0.000	0.000	0.000	1408.34	
7	0.7062	1164.9	1185.5	1184.5	1.014	2.453	72.938	20.704	2.521	0.104	0.227	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1410.75	
8	0.7144	1169.1	1189.8	1188.9	1.021	2.956	71.858	20.757	2.903	0.143	0.307	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1407.79	
9	0.7355	1183.0	1203.9	1202.7	1.019	4.088	69.063	21.128	3.872	0.233	0.502	0.046	0.049	0.000	0.000	0.000	0.000	0.000	1403.81	
10	0.7372	1186.8	1207.9	1206.9	0.997	4.047	68.897	21.198	4.004	0.241	0.515	0.049	0.051	0.000	0.000	0.000	0.000	0.000	1406.73	
11	0.7117	1174.5	1195.3	1194.7	0.340	3.415	70.931	22.419	2.584	0.093	0.184	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1416.92	
12	0.7097	1173.0	1193.8	1193.1	0.298	3.386	71.070	22.512	2.476	0.079	0.154	0.012	0.013	0.000	0.000	0.000	0.000	0.000	1417.02	
13	0.7023	1165.1	1185.7	1184.9	0.217	3.295	71.878	22.399	2.058	0.049	0.089	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1414.90	
14	0.7039	1169.2	1189.9	1189.0	0.164	3.274	71.645	22.561	2.215	0.046	0.081	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1418.27	
15	0.7068	1172.3	1193.1	1192.2	0.232	3.255	71.449	22.445	2.417	0.063	0.119	0.010	0.010	0.000	0.000	0.000	0.000	0.000	1419.09	
16	0.7067	1171.7	1192.4	1191.6	0.233	3.280	71.414	22.502	2.376	0.061	0.115	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1418.47	
17	0.7082	1173.5	1194.3	1193.6	0.237	3.302	71.245	22.516	2.493	0.065	0.123	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1419.19	
18	0.7088	1173.2	1194.0	1193.0	0.276	3.313	71.335	22.251	2.579	0.076	0.146	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1418.28	
19	0.7109	1174.9	1195.7	1194.9	0.323	3.338	71.140	22.228	2.689	0.085	0.169	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1418.16	
20	0.7118	1174.7	1195.5	1194.5	0.383	3.347	71.026	22.314	2.601	0.096	0.198	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1416.96	
21	0.7250	1184.5	1205.5	1204.4	0.727	3.460	70.144	21.593	3.444	0.178	0.383	0.034	0.036	0.000	0.000	0.000	0.000	0.000	1415.75	
22	0.7360	1193.5	1214.6	1213.5	1.041	3.462	69.469	20.986	4.153	0.249	0.541	0.049	0.051	0.000	0.000	0.000	0.000	0.000	1415.74	
23	0.7259	1185.4	1206.4	1205.2	0.765	3.427	70.142	21.486	3.528	0.182	0.394	0.036	0.039	0.000	0.000	0.000	0.000	0.000	1416.05	
24	0.7284	1185.4	1206.4	1204.9	0.848	3.534	70.032	21.171	3.677	0.206	0.447	0.041	0.044	0.000	0.000	0.000	0.000	0.000	1413.53	
25	0.7209	1178.6	1199.5	1198.3	1.034	2.960	71.241	20.765	3.422	0.155	0.358	0.030	0.036	0.000	0.000	0.000	0.000	0.000	1412.77	
26	0.7194	1173.0	1193.7	1192.4	1.082	3.093	71.163	20.984	3.181	0.132	0.308	0.025	0.031	0.000	0.000	0.000	0.000	0.000	1407.46	
27	0.7204	1175.1	1195.9	1194.7	1.081	3.059	71.158	20.862	3.308	0.143	0.330	0.027	0.032	0.000	0.000	0.000	0.000	0.000	1409.02	
28	0.7195	1172.7	1193.5	1192.4	1.095	3.103	71.120	20.997	3.208	0.129	0.296	0.023	0.028	0.000	0.000	0.000	0.000	0.000	1406.99	
29	0.7110	1167.9	1188.6	1187.7	1.063	2.640	72.417	20.605	2.857	0.118	0.258	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1409.67	
30	0.7106	1168.3	1189.0	1188.0	1.057	2.595	72.457	20.653	2.815	0.119	0.261	0.020	0.023	0.000	0.000	0.000	0.000	0.000	1410.44	
31	0.7109	1168.1	1188.8	1187.8	1.064	2.624	72.536	20.416	2.915	0.125	0.274	0.021	0.025	0.000	0.000	0.000	0.000	0.000	1409.92	
Avg	0.7164	1174.0	1194.7	1193.7	0.761	3.246	71.071	21.531	2.948	0.126	0.269	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1411.54	

Gas Composition and Properties

Effective July 1, 2023

Attachment B
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Source #: 0602160
Name: FAIRVIEW BORDER

Component	Mole %	Liquid Content	Mass %	Property	Total Sample	C6 Plus Fraction
Carbon Dioxide, CO2	0.9140		1.9365	Pressure Base	14.730	
Nitrogen, N2	3.3831		4.5624	Temperature Base	60.00	
Methane, C1	70.5027		54.4495	HCDP @ Sample Pressure	-12.168	
Ethane, C2	21.8240	5.8409	31.5914	Cricondentherm	-1.051	
Propane, C3	2.9754	0.8203	6.3162	HV, Dry @ Base P, T	1193.15	
iso-Butane, iC4	0.1292	0.0423	0.3615	HV, Sat @ Base P, T	1172.38	
n-Butane, nC4	0.2390	0.0754	0.6687	HV, Sat @ Sample P, T	1193.15	
iso-Pentane, iC5	0.0169	0.0062	0.0587	Relative Density	0.7193	
n-Pentane, nC5	0.0148	0.0054	0.0514			
Neo-Pentane, neo						
Hexanes Plus, C6+	0.0009	0.0004	0.0037			
Argon, Ar						
Carbon Monoxide, CO						
Hydrogen, H2						
Oxygen, O2						
Helium, He						
Water, H2O						
Hydrogen Sulfide, H2S						
				C6+: 100		
Totals	100.0000	6.7890	100.0000			

Sample

Date: 07/01/2023 Type:

Tech: Tipton, Joshua

Pressure: 490 psi Temp.: °F

Gauge: Gauge H2O:

Atm. Pressure: H2S:

Remarks:

Analysis

Date: 07/01/2023 Instrument:

Tech: Tipton, Joshua Cylinder: 328

Remarks:

Source Daily Summary

July 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	0.7110	1167.1	1187.8	1187.3	0.992	2.811	72.165	20.874	2.761	0.115	0.242	0.019	0.022	0.000	0.000	0.000	0.000	0.000	1408.67	-3.92
2	0.7083	1166.7	1187.3	1186.9	0.950	2.642	72.518	20.890	2.633	0.107	0.223	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1410.78	-5.57
3	0.7001	1162.9	1183.5	1183.1	0.925	2.142	73.723	20.650	2.260	0.088	0.183	0.014	0.015	0.000	0.000	0.000	0.000	0.000	1414.45	-10.28
4	0.6982	1161.8	1182.3	1181.9	0.910	2.055	74.007	20.564	2.176	0.084	0.176	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1414.97	-11.39
5	0.6983	1161.6	1182.2	1181.8	0.905	2.080	74.013	20.503	2.211	0.085	0.176	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1414.68	-11.26
6	0.6933	1156.5	1177.0	1176.6	0.868	1.980	74.389	20.785	1.782	0.058	0.118	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1413.56	-16.27
7	0.6940	1157.9	1178.4	1178.0	0.891	1.925	74.495	20.544	1.908	0.070	0.143	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1414.57	-14.76
8	0.7009	1163.0	1183.6	1183.2	0.931	2.210	73.675	20.495	2.382	0.089	0.187	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1413.77	-9.50
9	0.7016	1163.7	1184.3	1183.8	0.931	2.219	73.613	20.511	2.411	0.091	0.193	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1413.93	-9.06
10	0.7003	1161.4	1182.0	1181.6	0.938	2.227	73.852	20.289	2.373	0.092	0.196	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1412.46	-9.66
11	0.7079	1166.9	1187.6	1187.2	0.888	2.685	72.582	20.797	2.676	0.107	0.228	0.018	0.020	0.000	0.000	0.000	0.000	0.000	1411.49	-5.50
12	0.7067	1166.6	1187.3	1186.8	0.804	2.714	72.547	21.040	2.568	0.095	0.199	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1412.34	-6.88
13	0.7061	1165.8	1186.4	1185.9	0.770	2.763	72.545	21.101	2.505	0.092	0.193	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1411.90	-7.49
14	0.7055	1166.2	1186.8	1186.4	0.756	2.708	72.712	20.923	2.596	0.090	0.186	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1412.95	-7.48
15	0.7052	1166.0	1186.7	1186.2	0.775	2.659	72.758	20.963	2.528	0.092	0.192	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1413.06	-7.59
16	0.7058	1166.5	1187.1	1186.7	0.780	2.672	72.695	20.970	2.567	0.092	0.192	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1413.10	-7.29
17	0.7033	1163.9	1184.5	1184.1	0.800	2.573	73.028	20.897	2.406	0.086	0.181	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1412.40	-9.01
18	0.7062	1166.8	1187.5	1187.1	0.786	2.683	72.622	21.017	2.572	0.093	0.194	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1413.11	-7.05
19	0.6988	1160.1	1180.7	1180.2	0.830	2.329	73.752	20.626	2.194	0.079	0.164	0.013	0.014	0.000	0.000	0.000	0.000	0.000	1412.42	-11.72
20	0.6967	1157.8	1178.3	1177.9	0.887	2.191	74.108	20.476	2.083	0.075	0.155	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1411.70	-13.08
21	0.6946	1155.8	1176.2	1175.8	0.919	2.065	74.501	20.265	2.001	0.073	0.151	0.012	0.013	0.000	0.000	0.000	0.000	0.000	1411.37	-14.21
22	0.6942	1154.6	1175.1	1174.6	0.918	2.099	74.586	20.130	2.016	0.073	0.151	0.012	0.013	0.000	0.000	0.000	0.000	0.000	1410.37	-14.38
23	0.6963	1157.3	1177.8	1177.4	0.934	2.113	74.373	20.137	2.166	0.081	0.169	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1411.47	-12.52
24	0.6961	1155.8	1176.3	1175.8	0.927	2.192	74.660	19.552	2.359	0.090	0.188	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1409.85	-11.40
25	0.6931	1154.3	1174.7	1174.3	0.902	2.044	74.670	20.226	1.930	0.067	0.139	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1411.04	-15.43
26	0.6937	1156.4	1176.9	1176.4	0.911	1.961	74.645	20.274	1.959	0.073	0.151	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1412.95	-14.46
27	0.6931	1156.2	1176.7	1176.2	0.889	1.945	74.701	20.295	1.934	0.068	0.143	0.012	0.013	0.000	0.000	0.000	0.000	0.000	1413.39	-15.00
28	0.6937	1156.7	1177.1	1176.7	0.903	1.956	74.466	20.606	1.847	0.064	0.135	0.011	0.012	0.000	0.000	0.000	0.000	0.000	1413.31	-15.37
29	0.6926	1151.3	1171.7	1171.2	0.865	2.237	74.641	20.158	1.873	0.065	0.138	0.011	0.012	0.000	0.000	0.000	0.000	0.000	1407.85	-16.07
30	0.6892	1146.9	1167.2	1166.7	0.831	2.233	75.318	19.498	1.907	0.063	0.129	0.010	0.011	0.000	0.000	0.000	0.000	0.000	1405.96	-17.64
31	0.6965	1157.5	1178.0	1177.5	0.844	2.257	73.922	20.744	2.036	0.058	0.120	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1411.47	-14.36
Avg	0.6994	1160.0	1180.9	1180.5	0.876	2.302	73.751	20.542	2.246	0.082	0.172	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1412.11	-11.15

Source Daily Summary

July 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	0.7535	1173.5	1194.3	1193.3	0.888	6.556	66.036	20.243	5.751	0.175	0.318	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1375.82	
2	0.7469	1166.7	1187.3	1186.5	0.890	6.352	66.869	20.119	5.283	0.161	0.294	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1373.85	
3	0.7522	1170.7	1191.4	1190.9	0.887	6.610	66.289	19.969	5.685	0.179	0.343	0.018	0.020	0.000	0.000	0.000	0.000	0.000	1373.69	
4	0.7466	1168.2	1188.9	1188.5	0.889	6.223	67.096	19.960	5.283	0.171	0.340	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1376.06	
5	0.7506	1167.9	1188.6	1188.1	0.889	6.620	66.431	19.985	5.547	0.169	0.325	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1371.94	
6	0.7348	1161.0	1181.5	1180.8	0.921	5.512	68.572	20.150	4.394	0.140	0.278	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1378.56	
7	0.7110	1150.8	1171.2	1170.5	0.947	3.871	71.784	20.361	2.697	0.098	0.210	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1389.10	
8	0.7515	1170.6	1191.3	1190.7	0.893	6.533	66.305	20.126	5.634	0.164	0.312	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1374.28	
9	0.7517	1171.2	1192.0	1191.1	0.897	6.510	66.273	20.191	5.608	0.169	0.320	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1374.84	
10	0.7486	1170.6	1191.3	1190.7	0.900	6.248	66.731	20.206	5.407	0.162	0.312	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1376.99	
11	0.7511	1169.3	1190.0	1189.6	0.896	6.572	66.391	20.007	5.611	0.170	0.321	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1373.12	
12	0.7459	1166.8	1187.4	1186.9	0.896	6.246	67.021	20.129	5.229	0.155	0.294	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1374.89	
13	0.7496	1171.0	1191.7	1191.0	0.894	6.336	66.534	20.252	5.508	0.150	0.295	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1376.41	
14	0.7505	1169.7	1190.4	1189.8	0.895	6.485	66.447	20.114	5.570	0.157	0.301	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1374.11	
15	0.7508	1169.6	1190.3	1189.8	0.893	6.534	66.470	19.966	5.598	0.172	0.333	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1373.72	
16	0.7498	1167.7	1188.4	1187.8	0.895	6.548	66.537	19.984	5.536	0.162	0.307	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1372.44	
17	0.7503	1168.5	1189.2	1188.6	0.895	6.554	66.467	20.008	5.572	0.163	0.309	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1372.83	
18	0.7499	1169.2	1189.9	1189.1	0.901	6.466	66.537	20.051	5.541	0.163	0.309	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1373.98	
19	0.7392	1170.9	1191.6	1191.1	0.900	5.360	68.166	20.326	4.696	0.160	0.347	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1386.14	
20	0.7533	1176.5	1197.4	1196.7	0.912	6.310	66.201	20.340	5.639	0.186	0.369	0.020	0.023	0.000	0.000	0.000	0.000	0.000	1379.60	
21	0.7458	1168.0	1188.7	1187.9	0.922	6.112	67.117	20.162	5.185	0.157	0.311	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1376.48	
22	0.7506	1171.7	1192.5	1191.6	0.911	6.358	66.476	20.179	5.559	0.163	0.320	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1376.37	
23	0.7475	1169.9	1190.6	1189.6	0.907	6.179	66.945	20.105	5.332	0.166	0.330	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1377.18	
24	0.7394	1162.8	1183.4	1182.3	0.891	5.877	68.169	19.651	4.898	0.159	0.318	0.018	0.020	0.000	0.000	0.000	0.000	0.000	1376.28	
25	0.7396	1168.4	1189.1	1188.2	0.916	5.517	68.032	20.279	4.755	0.153	0.312	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1382.85	
26	0.7007	1151.6	1172.0	1171.2	0.947	2.850	73.406	20.359	2.139	0.083	0.184	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1400.15	
27	0.6992	1151.5	1171.9	1171.1	0.950	2.713	73.824	20.009	2.189	0.088	0.194	0.015	0.019	0.000	0.000	0.000	0.000	0.000	1401.49	
28	0.6988	1151.4	1171.7	1171.1	0.943	2.695	73.836	20.082	2.132	0.086	0.192	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1401.70	
29	0.7250	1159.0	1179.5	1178.9	0.916	4.729	69.967	20.199	3.784	0.122	0.253	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1385.57	
30	0.7195	1141.1	1161.3	1160.6	0.810	5.461	71.138	18.147	4.019	0.129	0.263	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1369.21	
31	0.7419	1166.1	1186.8	1185.9	0.891	5.916	67.639	20.087	4.995	0.150	0.290	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1377.86	
Avg	0.7402	1166.0	1186.2	1185.5	0.903	5.769	67.926	20.056	4.864	0.151	0.297	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1378.95	

Source Daily Summary

July 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	0.7525	1168.3	1189.0	1188.4	0.896	6.770	66.102	20.031	5.690	0.172	0.308	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1370.59	
2	0.7554	1172.2	1193.0	1192.4	0.895	6.797	65.897	19.918	5.906	0.189	0.360	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1372.60	
3	0.7544	1170.6	1191.3	1190.7	0.892	6.809	65.992	19.920	5.800	0.188	0.360	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1371.57	
4	0.7524	1167.9	1188.6	1188.0	0.899	6.774	66.177	19.935	5.685	0.172	0.323	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1370.27	
5	0.7515	1166.6	1187.2	1186.7	0.902	6.771	66.251	19.927	5.654	0.162	0.303	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1369.50	
6	0.7548	1172.6	1193.4	1192.8	0.901	6.706	65.861	20.166	5.830	0.172	0.331	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1373.66	
7	0.7538	1171.4	1192.2	1191.6	0.906	6.680	65.993	20.147	5.724	0.179	0.336	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1373.14	
8	0.7544	1172.8	1193.6	1193.0	0.904	6.657	65.896	20.224	5.782	0.175	0.329	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1374.19	
9	0.7534	1170.5	1191.3	1190.6	0.906	6.701	66.027	20.106	5.728	0.175	0.324	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1372.40	
10	0.7517	1168.0	1188.7	1188.1	0.908	6.693	66.297	19.918	5.658	0.173	0.321	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1370.96	
11	0.7512	1167.4	1188.0	1187.5	0.904	6.686	66.291	20.006	5.630	0.157	0.296	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1370.75	
12	0.7551	1174.4	1195.2	1194.6	0.903	6.623	65.829	20.234	5.902	0.162	0.314	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1375.46	
13	0.7527	1170.5	1191.3	1190.6	0.901	6.640	66.145	20.068	5.734	0.166	0.313	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1373.07	
14	0.7524	1169.6	1190.3	1189.7	0.898	6.677	66.257	19.904	5.707	0.179	0.342	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1372.22	
15	0.7517	1168.7	1189.4	1188.8	0.905	6.658	66.283	19.975	5.664	0.168	0.315	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1371.77	
16	0.7516	1168.7	1189.4	1188.8	0.906	6.646	66.292	19.986	5.657	0.168	0.314	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1371.88	
17	0.7508	1167.9	1188.6	1188.0	0.917	6.596	66.404	19.999	5.572	0.167	0.314	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1371.74	
18	0.7524	1170.9	1191.6	1191.0	0.927	6.548	66.247	20.097	5.615	0.174	0.354	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1373.80	
19	0.7537	1172.9	1193.7	1193.1	0.929	6.543	66.109	20.134	5.702	0.182	0.362	0.019	0.021	0.000	0.000	0.000	0.000	0.000	1374.99	
20	0.7524	1171.4	1192.1	1191.5	0.919	6.533	66.238	20.099	5.672	0.169	0.334	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1374.35	
21	0.7524	1171.6	1192.3	1191.7	0.915	6.529	66.212	20.136	5.682	0.168	0.323	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1374.54	
22	0.7534	1172.8	1193.6	1192.9	0.907	6.561	66.116	20.126	5.726	0.179	0.348	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1375.07	
23	0.7535	1173.9	1194.7	1194.0	0.906	6.506	66.111	20.193	5.708	0.182	0.357	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1376.23	
24	0.7529	1172.4	1193.2	1192.5	0.913	6.527	66.238	20.037	5.710	0.183	0.355	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1375.07	
25	0.7541	1174.2	1195.0	1194.4	0.909	6.535	66.214	19.870	5.860	0.192	0.378	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1376.10	
26	0.7553	1176.7	1197.6	1196.9	0.909	6.490	66.006	20.090	5.910	0.183	0.371	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1377.97	
27	0.7553	1176.8	1197.6	1197.0	0.906	6.492	66.011	20.087	5.897	0.185	0.379	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1378.04	
28	0.7521	1171.0	1191.8	1191.2	0.912	6.539	66.321	20.010	5.660	0.177	0.344	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1374.17	
29	0.7530	1171.7	1192.5	1191.9	0.909	6.577	66.165	20.079	5.734	0.171	0.328	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1374.25	
30	0.7546	1174.6	1195.4	1194.8	0.908	6.558	65.983	20.143	5.868	0.168	0.334	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1376.12	
31	0.7547	1175.1	1195.9	1195.3	0.908	6.535	65.990	20.143	5.873	0.173	0.340	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1376.65	
Avg	0.7532	1171.0	1192.2	1191.6	0.907	6.624	66.128	20.055	5.740	0.174	0.336	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1373.65	

Gas Composition and Properties

Effective October 1, 2021

Attachment B
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Source #: 2501030
Name: LIGNITE PLANT

Component	Mole %	Liquid Content	Mass %	Property	Total Sample	C6 Plus Fraction
Carbon Dioxide, CO2	0.2283		0.5237	Pressure Base	14.730	
Nitrogen, N2	2.9631		4.3268	Temperature Base	60.00	
Methane, C1	79.4957		66.4767	HCDP @ Sample Pressure		
Ethane, C2	15.2390	4.0765	23.8852	Cricondentherm	-32.804	
Propane, C3	2.0456	0.5637	4.7019	HV, Dry @ Base P, T	1130.73	
iso-Butane, iC4	0.0244	0.0080	0.0739	HV, Sat @ Base P, T	1111.05	
n-Butane, nC4	0.0039	0.0012	0.0118	HV, Sat @ Sample P, T	1130.73	
iso-Pentane, iC5				Relative Density	0.6640	
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						
				C6+: 100		
Totals	100.0000	4.6490	100.0000			

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

July 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	0.7031	1139.8	1160.0	1159.6	0.975	3.752	73.120	19.497	2.278	0.102	0.234	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1383.43	
2	0.7039	1141.0	1161.2	1160.8	0.976	3.753	72.985	19.612	2.294	0.103	0.236	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1384.06	
3	0.7037	1141.4	1161.6	1161.1	0.971	3.726	73.012	19.614	2.293	0.102	0.240	0.018	0.023	0.000	0.000	0.000	0.000	0.000	1384.64	
4	0.7041	1141.0	1161.2	1160.8	0.969	3.776	72.971	19.579	2.320	0.103	0.241	0.018	0.023	0.000	0.000	0.000	0.000	0.000	1383.88	
5	0.7054	1143.0	1163.2	1162.8	0.989	3.760	72.714	19.830	2.320	0.104	0.243	0.018	0.023	0.000	0.000	0.000	0.000	0.000	1384.93	
6	0.7060	1141.3	1161.5	1161.1	1.007	3.887	72.524	19.943	2.261	0.101	0.237	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1382.37	
7	0.7072	1143.6	1163.8	1163.4	1.004	3.865	72.284	20.204	2.265	0.101	0.237	0.018	0.023	0.000	0.000	0.000	0.000	0.000	1383.97	
8	0.7052	1141.5	1161.7	1161.3	0.983	3.836	72.825	19.580	2.375	0.107	0.250	0.020	0.024	0.000	0.000	0.000	0.000	0.000	1383.39	
9	0.7075	1144.6	1164.9	1164.5	0.991	3.852	72.380	19.980	2.392	0.107	0.254	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1384.90	
10	0.7067	1143.6	1163.8	1163.4	0.984	3.848	72.514	19.890	2.364	0.106	0.251	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1384.46	
11	0.7076	1143.7	1164.0	1163.5	1.005	3.892	72.360	19.965	2.378	0.106	0.252	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1383.72	
12	0.7075	1144.2	1164.5	1164.1	0.995	3.868	72.380	19.960	2.399	0.106	0.249	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1384.43	
13	0.7063	1142.4	1162.6	1162.2	1.004	3.848	72.628	19.741	2.379	0.106	0.251	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1383.44	
14	0.7071	1145.2	1165.5	1165.0	1.003	3.754	72.463	20.019	2.364	0.106	0.249	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1386.05	
15	0.7070	1144.8	1165.1	1164.6	1.005	3.774	72.490	19.948	2.384	0.106	0.250	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1385.58	
16	0.7075	1145.6	1165.8	1165.4	1.001	3.773	72.407	20.026	2.394	0.106	0.250	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1386.08	
17	0.7083	1147.5	1167.8	1167.4	0.998	3.741	72.213	20.272	2.378	0.106	0.249	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1387.59	
18	0.7072	1143.8	1164.0	1163.6	0.991	3.873	72.458	19.864	2.415	0.107	0.250	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1384.18	
19	0.7072	1144.1	1164.4	1163.9	1.002	3.835	72.453	19.917	2.395	0.107	0.250	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1384.60	
20	0.7074	1145.0	1165.3	1164.8	1.026	3.767	72.415	20.026	2.371	0.106	0.248	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1385.43	
21	0.7080	1146.0	1166.3	1165.9	1.031	3.753	72.288	20.165	2.366	0.106	0.249	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1386.10	
22	0.7087	1146.9	1167.2	1166.7	1.027	3.770	72.157	20.268	2.384	0.105	0.247	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1386.48	
23	0.7093	1148.0	1168.4	1167.9	1.015	3.775	72.000	20.452	2.363	0.106	0.248	0.019	0.022	0.000	0.000	0.000	0.000	0.000	1387.27	
24	0.7100	1149.2	1169.5	1169.1	1.035	3.747	71.826	20.692	2.304	0.105	0.249	0.020	0.025	0.000	0.000	0.000	0.000	0.000	1387.92	
25	0.7078	1145.9	1166.1	1165.7	1.012	3.771	72.248	20.276	2.300	0.104	0.245	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1386.12	
26	0.7085	1146.4	1166.7	1166.3	1.019	3.797	72.170	20.259	2.355	0.106	0.250	0.020	0.024	0.000	0.000	0.000	0.000	0.000	1386.04	
27	0.7075	1144.9	1165.2	1164.8	1.013	3.802	72.331	20.126	2.334	0.104	0.247	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1385.23	
28	0.7075	1146.6	1166.9	1166.4	1.012	3.699	72.320	20.274	2.303	0.103	0.246	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1387.28	
29	0.7080	1146.8	1167.1	1166.7	1.010	3.732	72.220	20.341	2.304	0.103	0.246	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1387.09	
30	0.7078	1146.3	1166.6	1166.2	1.002	3.757	72.244	20.300	2.309	0.103	0.244	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1386.69	
31	0.7082	1145.3	1165.6	1165.1	1.005	3.857	72.137	20.305	2.309	0.103	0.243	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1385.03	
Avg	0.7070	1144.0	1164.8	1164.3	1.002	3.795	72.437	20.030	2.344	0.105	0.246	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1385.24	

Source Daily Summary

July 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	0.7510	1170.1	1190.8	1189.4	0.850	6.587	66.468	19.843	5.729	0.173	0.322	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1374.10	
2	0.7552	1176.4	1197.2	1195.8	0.848	6.597	66.148	19.742	6.031	0.198	0.397	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1377.66	
3	0.7522	1171.2	1192.0	1190.7	0.846	6.634	66.389	19.758	5.803	0.181	0.356	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1374.37	
4	0.7508	1169.7	1190.4	1189.2	0.853	6.581	66.517	19.808	5.712	0.169	0.329	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1373.91	
5	0.7504	1169.1	1189.8	1188.6	0.855	6.580	66.563	19.770	5.728	0.162	0.314	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1373.54	
6	0.7533	1174.6	1195.4	1194.2	0.855	6.515	66.240	19.951	5.890	0.173	0.343	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1377.34	
7	0.7512	1171.2	1192.0	1190.8	0.858	6.526	66.473	19.883	5.717	0.176	0.337	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1375.24	
8	0.7533	1175.3	1196.1	1194.8	0.858	6.472	66.239	20.005	5.875	0.176	0.344	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1378.10	
9	0.7518	1172.2	1192.9	1191.6	0.859	6.525	66.402	19.906	5.763	0.178	0.338	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1375.77	
10	0.7494	1168.3	1189.0	1187.8	0.861	6.529	66.737	19.701	5.650	0.168	0.324	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1373.45	
11	0.7499	1169.7	1190.4	1189.3	0.855	6.497	66.575	19.925	5.660	0.155	0.304	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1374.70	
12	0.7537	1176.4	1197.2	1196.0	0.858	6.439	66.183	20.048	5.953	0.162	0.326	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1379.08	
13	0.7512	1172.3	1193.1	1191.8	0.857	6.457	66.533	19.833	5.792	0.168	0.329	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1376.55	
14	0.7508	1171.1	1191.8	1190.5	0.854	6.500	66.627	19.712	5.743	0.179	0.352	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1375.46	
15	0.7498	1169.7	1190.4	1189.1	0.858	6.489	66.679	19.771	5.686	0.167	0.322	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1374.73	
16	0.7490	1168.4	1189.1	1187.8	0.857	6.496	66.697	19.751	5.671	0.166	0.320	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1373.97	
17	0.7497	1170.5	1191.2	1189.9	0.869	6.413	66.707	19.832	5.654	0.167	0.328	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1375.75	
18	0.7510	1172.6	1193.4	1192.0	0.882	6.385	66.605	19.877	5.665	0.175	0.374	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1377.07	
19	0.7531	1176.5	1197.3	1195.9	0.880	6.349	66.349	20.013	5.815	0.184	0.373	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1379.65	
20	0.7505	1172.4	1193.1	1191.7	0.871	6.368	66.626	19.899	5.707	0.165	0.333	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1377.27	
21	0.7519	1174.9	1195.7	1194.3	0.869	6.346	66.462	19.989	5.788	0.171	0.342	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1378.94	
22	0.7518	1174.1	1194.9	1193.6	0.862	6.398	66.511	19.879	5.771	0.180	0.365	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1378.11	
23	0.7513	1174.1	1194.9	1193.5	0.862	6.351	66.575	19.906	5.730	0.179	0.364	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1378.53	
24	0.7516	1174.2	1195.0	1193.4	0.864	6.371	66.657	19.689	5.807	0.190	0.385	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1378.34	
25	0.7531	1177.0	1197.8	1196.1	0.861	6.348	66.528	19.677	5.967	0.190	0.390	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1380.21	
26	0.7542	1179.3	1200.2	1198.3	0.861	6.309	66.376	19.808	6.028	0.184	0.394	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1381.92	
27	0.7538	1178.5	1199.3	1197.6	0.861	6.321	66.374	19.873	5.961	0.182	0.388	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1381.35	
28	0.7501	1171.7	1192.5	1190.8	0.864	6.379	66.696	19.848	5.665	0.172	0.343	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1376.86	
29	0.7523	1174.8	1195.6	1194.0	0.861	6.400	66.394	19.979	5.822	0.169	0.341	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1378.49	
30	0.7539	1177.7	1198.5	1197.2	0.861	6.376	66.266	19.960	5.977	0.171	0.354	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1380.37	
31	0.7537	1177.5	1198.4	1197.2	0.863	6.360	66.298	19.966	5.943	0.177	0.356	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1380.41	
Avg	0.7518	1173.0	1194.0	1192.7	0.860	6.448	66.480	19.858	5.797	0.174	0.348	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1377.14	

Source Daily Summary

July 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	0.7548	1174.1	1194.9	1194.5	0.894	6.629	65.881	20.203	5.860	0.179	0.321	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1375.37	
2	0.7536	1171.8	1192.6	1192.2	0.887	6.669	66.035	20.089	5.787	0.179	0.321	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1373.75	
3	0.7563	1175.4	1196.2	1195.8	0.884	6.705	65.888	19.908	5.992	0.199	0.383	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1375.49	
4	0.7531	1170.2	1190.9	1190.5	0.884	6.729	66.151	19.915	5.770	0.179	0.336	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1372.26	
5	0.7512	1167.7	1188.4	1188.0	0.890	6.696	66.358	19.881	5.663	0.168	0.312	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1371.06	
6	0.7523	1169.7	1190.5	1190.1	0.892	6.667	66.212	19.980	5.745	0.165	0.309	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1372.51	
7	0.7555	1175.9	1196.8	1196.4	0.893	6.590	65.845	20.199	5.922	0.178	0.339	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1376.84	
8	0.7525	1170.7	1191.4	1191.1	0.896	6.623	66.179	20.081	5.691	0.176	0.324	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1373.44	
9	0.7545	1174.5	1195.3	1195.0	0.896	6.572	65.956	20.192	5.844	0.177	0.330	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1376.14	
10	0.7536	1172.6	1193.3	1193.0	0.896	6.614	66.076	20.082	5.785	0.181	0.332	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1374.58	
11	0.7501	1166.8	1187.5	1187.2	0.898	6.631	66.521	19.849	5.596	0.166	0.307	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1371.07	
12	0.7510	1168.8	1189.5	1189.2	0.893	6.600	66.358	20.006	5.668	0.155	0.292	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1372.59	
13	0.7547	1175.2	1196.0	1195.7	0.896	6.547	65.936	20.200	5.910	0.164	0.315	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1376.80	
14	0.7531	1172.8	1193.5	1193.2	0.894	6.551	66.186	20.044	5.791	0.173	0.327	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1375.35	
15	0.7521	1170.6	1191.3	1191.0	0.891	6.595	66.330	19.931	5.706	0.178	0.335	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1373.69	
16	0.7513	1169.4	1190.1	1189.7	0.895	6.586	66.387	19.952	5.670	0.168	0.311	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1373.05	
17	0.7506	1168.5	1189.2	1188.9	0.896	6.577	66.462	19.931	5.631	0.166	0.306	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1372.63	
18	0.7512	1170.4	1191.1	1190.8	0.909	6.497	66.397	20.044	5.635	0.167	0.318	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1374.30	
19	0.7540	1175.2	1196.0	1195.6	0.921	6.450	66.135	20.159	5.730	0.184	0.379	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1377.33	
20	0.7540	1175.3	1196.1	1195.7	0.917	6.450	66.104	20.188	5.768	0.182	0.353	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1377.44	
21	0.7513	1171.0	1191.7	1191.4	0.908	6.474	66.396	20.046	5.662	0.164	0.317	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1374.88	
22	0.7540	1175.9	1196.7	1196.3	0.906	6.431	66.084	20.213	5.815	0.177	0.339	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1378.16	
23	0.7532	1173.7	1194.5	1194.1	0.898	6.496	66.208	20.079	5.750	0.181	0.352	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1376.39	
24	0.7532	1174.8	1195.6	1195.2	0.898	6.431	66.233	20.114	5.745	0.184	0.360	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1377.62	
25	0.7527	1173.3	1194.1	1193.7	0.900	6.473	66.378	19.881	5.771	0.190	0.370	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1376.34	
26	0.7529	1173.4	1194.2	1193.8	0.898	6.485	66.432	19.724	5.866	0.186	0.369	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1376.30	
27	0.7561	1179.7	1200.6	1200.2	0.897	6.411	65.968	20.093	6.025	0.186	0.378	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1380.64	
28	0.7553	1178.2	1199.0	1198.7	0.898	6.420	66.074	20.046	5.960	0.184	0.376	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1379.68	
29	0.7528	1173.8	1194.6	1194.2	0.900	6.452	66.306	20.015	5.762	0.179	0.348	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1376.83	
30	0.7532	1173.7	1194.5	1194.1	0.898	6.501	66.193	20.060	5.808	0.172	0.331	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1376.33	
31	0.7553	1177.5	1198.4	1198.0	0.898	6.470	65.960	20.147	5.969	0.173	0.344	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1378.83	
Avg	0.7532	1173.0	1193.7	1193.3	0.897	6.549	66.182	20.040	5.784	0.176	0.337	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1375.41	

Source Daily Summary

July 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	0.7547	1174.0	1194.8	1194.6	0.890	6.634	65.895	20.186	5.861	0.179	0.322	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1375.32	
2	0.7533	1171.3	1192.0	1191.8	0.888	6.677	66.066	20.066	5.773	0.179	0.320	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1373.34	
3	0.7561	1175.0	1195.8	1195.5	0.884	6.711	65.913	19.883	5.985	0.199	0.382	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1375.20	
4	0.7531	1169.9	1190.7	1190.3	0.883	6.740	66.164	19.889	5.771	0.180	0.338	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1372.04	
5	0.7511	1167.2	1187.8	1187.5	0.891	6.709	66.388	19.848	5.648	0.170	0.314	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1370.62	
6	0.7530	1171.0	1191.7	1191.5	0.893	6.656	66.128	20.023	5.787	0.167	0.314	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1373.33	
7	0.7554	1175.6	1196.4	1196.2	0.892	6.597	65.867	20.174	5.917	0.178	0.340	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1376.58	
8	0.7525	1170.6	1191.3	1191.1	0.896	6.627	66.189	20.065	5.690	0.176	0.324	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1373.30	
9	0.7545	1174.3	1195.1	1194.9	0.900	6.578	65.965	20.173	5.843	0.177	0.331	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1375.91	
10	0.7534	1172.0	1192.8	1192.6	0.896	6.624	66.109	20.050	5.775	0.181	0.332	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1374.19	
11	0.7504	1167.2	1187.9	1187.7	0.899	6.631	66.497	19.852	5.614	0.167	0.309	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1371.30	
12	0.7510	1168.6	1189.3	1189.1	0.894	6.606	66.365	19.993	5.666	0.155	0.293	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1372.44	
13	0.7544	1174.7	1195.5	1195.2	0.896	6.557	65.973	20.168	5.895	0.164	0.315	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1376.36	
14	0.7528	1172.2	1192.9	1192.7	0.894	6.562	66.224	20.009	5.779	0.172	0.326	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1374.91	
15	0.7518	1169.8	1190.5	1190.1	0.891	6.617	66.386	19.863	5.687	0.180	0.340	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1373.02	
16	0.7511	1169.0	1189.7	1189.5	0.895	6.595	66.408	19.926	5.666	0.168	0.311	0.016	0.015	0.000	0.000	0.000	0.000	0.000	1372.75	
17	0.7507	1168.5	1189.2	1189.0	0.896	6.581	66.461	19.920	5.636	0.167	0.308	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1372.59	
18	0.7510	1169.9	1190.6	1190.3	0.909	6.508	66.427	20.015	5.624	0.167	0.317	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1373.89	
19	0.7534	1174.0	1194.8	1194.5	0.921	6.465	66.209	20.108	5.698	0.182	0.375	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1376.51	
20	0.7541	1175.3	1196.1	1195.9	0.917	6.454	66.103	20.173	5.775	0.183	0.356	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1377.42	
21	0.7512	1170.7	1191.4	1191.2	0.908	6.482	66.416	20.021	5.657	0.164	0.318	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1374.63	
22	0.7539	1175.7	1196.5	1196.2	0.906	6.435	66.099	20.197	5.811	0.177	0.339	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1377.99	
23	0.7532	1173.7	1194.5	1194.3	0.898	6.499	66.206	20.070	5.754	0.182	0.354	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1376.35	
24	0.7531	1174.6	1195.4	1195.1	0.899	6.434	66.233	20.118	5.737	0.184	0.358	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1377.48	
25	0.7528	1173.4	1194.2	1193.9	0.901	6.476	66.356	19.901	5.770	0.190	0.369	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1376.35	
26	0.7532	1174.1	1194.9	1194.5	0.898	6.478	66.434	19.681	5.895	0.191	0.381	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1376.73	
27	0.7547	1176.7	1197.6	1197.1	0.898	6.459	66.119	19.999	5.935	0.182	0.368	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1378.47	
28	0.7617	1189.7	1210.7	1210.0	0.900	6.316	65.340	20.417	6.346	0.207	0.424	0.025	0.025	0.000	0.000	0.000	0.000	0.000	1387.27	
29	0.7581	1183.4	1204.4	1203.6	0.899	6.365	65.750	20.222	6.127	0.195	0.396	0.023	0.023	0.000	0.000	0.000	0.000	0.000	1383.23	
30	0.7553	1178.2	1199.0	1198.1	0.900	6.418	66.048	20.099	5.936	0.186	0.371	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1379.67	
31	0.7545	1176.5	1197.4	1196.9	0.899	6.450	66.095	20.084	5.895	0.180	0.356	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1378.45	
Avg	0.7535	1173.0	1194.2	1193.9	0.898	6.547	66.156	20.038	5.805	0.178	0.342	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1375.73	

Source Daily Summary

July 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	0.7508	1169.7	1190.4	1189.4	0.850	6.591	66.488	19.835	5.717	0.172	0.319	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1373.86	
2	0.7551	1176.4	1197.2	1196.2	0.849	6.592	66.145	19.760	6.024	0.197	0.393	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1377.68	
3	0.7527	1172.1	1192.9	1192.1	0.846	6.625	66.346	19.769	5.832	0.184	0.362	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1374.96	
4	0.7512	1170.5	1191.3	1190.5	0.853	6.575	66.466	19.831	5.740	0.171	0.332	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1374.43	
5	0.7502	1168.9	1189.6	1188.8	0.854	6.582	66.578	19.764	5.717	0.161	0.313	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1373.38	
6	0.7533	1174.6	1195.4	1194.5	0.855	6.519	66.231	19.954	5.893	0.172	0.342	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1377.30	
7	0.7516	1171.9	1192.7	1191.8	0.858	6.516	66.436	19.903	5.738	0.177	0.340	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1375.72	
8	0.7534	1175.5	1196.3	1195.4	0.858	6.470	66.221	20.020	5.878	0.176	0.344	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1378.24	
9	0.7518	1172.1	1192.9	1191.9	0.859	6.522	66.404	19.912	5.760	0.177	0.336	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1375.78	
10	0.7497	1168.8	1189.5	1188.7	0.861	6.526	66.710	19.704	5.671	0.169	0.328	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1373.78	
11	0.7498	1169.5	1190.2	1189.5	0.856	6.500	66.586	19.923	5.645	0.157	0.306	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1374.52	
12	0.7534	1176.0	1196.8	1196.0	0.857	6.444	66.187	20.038	5.956	0.161	0.324	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1378.82	
13	0.7511	1172.1	1192.8	1191.9	0.858	6.461	66.536	19.841	5.783	0.166	0.325	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1376.36	
14	0.7508	1171.1	1191.8	1190.9	0.854	6.502	66.633	19.701	5.744	0.179	0.353	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1375.43	
15	0.7500	1170.1	1190.9	1190.0	0.858	6.481	66.658	19.786	5.697	0.167	0.323	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1375.05	
16	0.7501	1170.4	1191.1	1190.3	0.858	6.470	66.655	19.798	5.699	0.167	0.322	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1375.30	
17	0.7494	1169.9	1190.6	1189.7	0.869	6.421	66.747	19.810	5.632	0.166	0.325	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1375.32	
18	0.7510	1172.7	1193.4	1192.5	0.881	6.381	66.604	19.885	5.666	0.174	0.370	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1377.13	
19	0.7531	1176.4	1197.2	1196.3	0.879	6.359	66.303	20.013	5.842	0.186	0.379	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1379.55	
20	0.7510	1173.2	1194.0	1193.1	0.872	6.360	66.578	19.919	5.731	0.167	0.339	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1377.79	
21	0.7511	1173.5	1194.3	1193.4	0.868	6.365	66.471	19.960	5.777	0.170	0.340	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1378.02	
22	0.7521	1174.8	1195.6	1194.6	0.862	6.388	66.474	19.904	5.790	0.181	0.366	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1378.56	
23	0.7515	1174.4	1195.2	1194.2	0.862	6.348	66.551	19.922	5.739	0.179	0.365	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1378.78	
24	0.7517	1174.4	1195.2	1194.0	0.865	6.367	66.628	19.729	5.804	0.188	0.382	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1378.50	
25	0.7531	1176.7	1197.6	1196.6	0.861	6.355	66.558	19.634	5.965	0.192	0.395	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1380.01	
26	0.7543	1179.3	1200.2	1199.1	0.860	6.313	66.365	19.814	6.030	0.184	0.393	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1381.90	
27	0.7539	1178.7	1199.6	1198.6	0.861	6.315	66.364	19.876	5.970	0.182	0.389	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1381.57	
28	0.7504	1172.3	1193.1	1192.1	0.864	6.375	66.669	19.850	5.687	0.173	0.347	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1377.24	
29	0.7522	1174.7	1195.5	1194.5	0.861	6.399	66.409	19.971	5.815	0.169	0.340	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1378.41	
30	0.7538	1177.5	1198.3	1197.4	0.861	6.380	66.269	19.960	5.969	0.171	0.353	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1380.23	
31	0.7537	1177.7	1198.6	1197.5	0.863	6.356	66.294	19.966	5.950	0.176	0.357	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1380.54	
Avg	0.7518	1173.0	1194.2	1193.3	0.860	6.447	66.470	19.863	5.802	0.175	0.348	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1377.23	

Source Daily Summary

July 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	0.6620	1091.1	1110.4	1109.5	0.924	2.943	79.851	15.011	1.176	0.033	0.060	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1364.74
2	0.6665	1095.7	1115.1	1114.2	0.924	3.086	79.118	15.397	1.365	0.039	0.069	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1365.89
3	0.6690	1098.4	1117.8	1117.3	0.896	3.198	78.858	15.310	1.604	0.047	0.084	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1366.66
4	0.6627	1091.9	1111.2	1110.8	0.910	2.977	79.848	14.861	1.289	0.039	0.073	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1365.08
5	0.6607	1088.6	1107.9	1107.3	0.951	2.929	80.083	14.827	1.117	0.032	0.059	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1363.03
6	0.6634	1092.8	1112.1	1111.5	0.953	2.926	79.631	15.194	1.196	0.035	0.062	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1365.43
7	0.6653	1094.7	1114.1	1113.5	0.981	2.948	79.230	15.569	1.178	0.033	0.059	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1365.85
8	0.6635	1093.6	1113.0	1112.4	0.970	2.863	79.475	15.534	1.075	0.030	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1366.34
9	0.6636	1093.6	1113.0	1112.2	0.978	2.854	79.455	15.573	1.060	0.029	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1366.32
10	0.6613	1091.0	1110.3	1109.6	0.978	2.801	79.778	15.444	0.931	0.024	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1365.35
11	0.6589	1088.7	1108.0	1107.5	0.982	2.712	80.102	15.368	0.782	0.020	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1364.96
12	0.6576	1087.4	1106.7	1105.9	0.989	2.654	80.363	15.187	0.757	0.019	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1364.74
13	0.6664	1095.9	1115.3	1114.3	0.974	2.987	78.987	15.791	1.173	0.031	0.056	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1366.24
14	0.6653	1094.6	1113.9	1113.1	0.971	2.971	79.192	15.617	1.160	0.031	0.056	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1365.71
15	0.6678	1097.1	1116.5	1115.9	0.962	3.065	78.895	15.613	1.354	0.038	0.070	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1366.27
16	0.6664	1095.4	1114.8	1114.2	0.982	3.007	79.091	15.564	1.256	0.034	0.063	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1365.58
17	0.6664	1095.5	1114.9	1114.3	0.980	2.998	79.132	15.502	1.287	0.036	0.065	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1365.79
18	0.6672	1095.7	1115.1	1114.3	0.983	3.063	78.878	15.632	1.333	0.038	0.068	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1365.17
19	0.6673	1096.6	1116.0	1115.4	1.000	2.992	78.959	15.656	1.292	0.035	0.064	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1366.17
20	0.6692	1097.7	1117.2	1116.5	0.993	3.108	78.644	15.787	1.352	0.039	0.073	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1365.68
21	0.6694	1098.0	1117.5	1116.6	0.982	3.125	78.660	15.699	1.415	0.040	0.074	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1365.84
22	0.6676	1097.1	1116.5	1115.4	0.948	3.068	78.883	15.664	1.333	0.036	0.067	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1366.50
23	0.6686	1098.7	1118.2	1117.0	0.941	3.071	78.785	15.669	1.418	0.040	0.073	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1367.51
24	0.6737	1103.7	1123.2	1122.0	0.932	3.260	78.013	15.986	1.661	0.049	0.093	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1368.49
25	0.6828	1111.3	1131.0	1129.8	0.934	3.646	76.701	16.362	2.157	0.065	0.124	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1368.74
26	0.6832	1111.9	1131.6	1130.4	0.924	3.661	76.746	16.191	2.263	0.070	0.133	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1369.07
27	0.6771	1106.6	1126.2	1125.2	0.937	3.397	77.615	15.953	1.928	0.055	0.107	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1368.59
28	0.6784	1107.2	1126.8	1126.0	0.937	3.482	77.328	16.163	1.915	0.055	0.109	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1368.03
29	0.6893	1116.9	1136.7	1135.8	0.922	3.937	75.645	16.829	2.440	0.073	0.141	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1369.07
30	0.6897	1116.2	1136.0	1134.8	0.921	4.018	75.458	17.009	2.382	0.069	0.131	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1367.85
31	0.6774	1104.7	1124.3	1123.0	0.938	3.539	77.266	16.393	1.719	0.047	0.090	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1366.01
Avg	0.6693	1098.0	1117.8	1117.0	0.955	3.138	78.667	15.689	1.431	0.041	0.075	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1366.35

Source Daily Summary

July 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	0.6681	1102.6	1122.1	1121.4	1.127	2.504	79.155	15.737	1.329	0.048	0.088	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1372.83	
2	0.6687	1102.9	1122.4	1121.7	1.122	2.555	79.009	15.835	1.335	0.047	0.086	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1372.54	
3	0.6672	1101.5	1121.0	1120.3	1.108	2.510	79.311	15.598	1.330	0.046	0.084	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1372.46	
4	0.6669	1101.7	1121.2	1120.4	1.103	2.488	79.359	15.573	1.335	0.046	0.085	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1372.89	
5	0.6660	1098.8	1118.3	1117.5	1.117	2.551	79.468	15.471	1.259	0.044	0.080	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1370.32	
6	0.6659	1099.2	1118.6	1117.9	1.111	2.535	79.451	15.532	1.239	0.043	0.079	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1370.80	
7	0.6697	1105.2	1124.8	1124.0	1.124	2.506	78.809	16.079	1.341	0.046	0.084	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1374.38	
8	0.6743	1110.3	1129.9	1129.2	1.165	2.563	78.097	16.525	1.488	0.052	0.095	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1376.02	
9	0.6742	1110.7	1130.4	1129.7	1.166	2.523	78.133	16.520	1.497	0.053	0.095	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1376.69	
10	0.6737	1109.6	1129.2	1128.5	1.168	2.542	78.195	16.471	1.469	0.050	0.092	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1375.80	
11	0.6690	1107.3	1126.9	1126.2	0.919	2.626	78.375	16.907	1.074	0.032	0.059	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1377.71	
12	0.6745	1117.1	1136.9	1136.2	0.902	2.567	77.426	17.779	1.207	0.038	0.071	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1384.28	
13	0.6754	1116.2	1136.0	1135.3	0.996	2.557	77.542	17.403	1.362	0.045	0.083	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1382.34	
14	0.6739	1110.8	1130.5	1129.8	1.107	2.586	77.991	16.769	1.400	0.047	0.087	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1377.03	
15	0.6708	1105.9	1125.5	1124.8	1.144	2.531	78.666	16.134	1.374	0.048	0.089	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1374.17	
16	0.6688	1103.1	1122.6	1121.9	1.124	2.545	78.925	15.988	1.283	0.043	0.080	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1372.71	
17	0.6680	1101.7	1121.2	1120.5	1.120	2.560	79.055	15.871	1.263	0.042	0.078	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1371.85	
18	0.6677	1101.7	1121.2	1120.5	1.127	2.522	79.128	15.835	1.256	0.043	0.079	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1372.12	
19	0.6683	1102.7	1122.2	1121.5	1.133	2.507	79.092	15.814	1.314	0.045	0.084	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1372.76	
20	0.6702	1104.6	1124.1	1123.4	1.151	2.543	78.694	16.175	1.300	0.044	0.082	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1373.17	
21	0.6680	1101.7	1121.2	1120.4	1.135	2.542	79.034	15.928	1.232	0.042	0.076	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1371.76	
22	0.6701	1104.5	1124.1	1123.2	1.138	2.559	78.744	16.079	1.338	0.046	0.085	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1373.17	
23	0.6696	1104.3	1123.9	1123.1	1.132	2.533	78.845	16.001	1.346	0.046	0.085	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1373.46	
24	0.6697	1104.1	1123.6	1122.9	1.123	2.566	78.824	15.995	1.354	0.045	0.083	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1373.10	
25	0.6699	1104.1	1123.7	1122.8	1.122	2.591	78.837	15.892	1.412	0.047	0.087	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1372.87	
26	0.6676	1100.7	1120.2	1119.4	1.126	2.574	79.154	15.741	1.274	0.042	0.078	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1370.99	
27	0.6675	1101.5	1121.0	1120.3	1.111	2.534	79.220	15.683	1.319	0.043	0.080	0.005	0.006	0.000	0.000	0.000	0.000	0.000	1372.17	
28	0.6683	1102.0	1121.5	1120.7	1.118	2.579	78.986	15.912	1.273	0.042	0.078	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1371.81	
29	0.6684	1102.2	1121.7	1120.8	1.119	2.575	78.987	15.909	1.270	0.045	0.084	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1371.95	
30	0.6677	1099.5	1118.9	1118.1	1.114	2.676	78.871	16.150	1.078	0.035	0.066	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1369.40	
31	0.6658	1096.3	1115.7	1114.9	1.107	2.701	79.141	15.961	0.986	0.033	0.062	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1367.41	
Avg	0.6695	1104.0	1123.9	1123.1	1.109	2.556	78.791	16.106	1.301	0.044	0.081	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1373.58	

Source Daily Summary

July 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	0.6881	1159.6	1180.2	1178.5	0.000	2.633	73.097	23.483	0.768	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.72	-24.34
2	0.6884	1159.8	1180.4	1178.7	0.000	2.648	73.087	23.437	0.802	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1422.67	-23.98
3	0.6851	1154.7	1175.1	1173.5	0.000	2.658	73.629	23.005	0.683	0.008	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.68	-26.07
4	0.6869	1157.4	1177.9	1176.2	0.000	2.652	73.260	23.398	0.664	0.009	0.016	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1421.30	-25.22
5	0.6819	1149.1	1169.5	1167.9	0.000	2.689	74.307	22.277	0.701	0.009	0.016	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1416.24	-27.73
6	0.6760	1139.3	1159.5	1157.8	0.000	2.729	75.599	20.850	0.803	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1410.24	-30.73
7	0.6677	1125.1	1145.0	1143.5	0.000	2.813	77.276	19.093	0.796	0.008	0.012	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1401.29	-35.42
8	0.6592	1111.0	1130.7	1129.1	0.000	2.866	79.096	17.142	0.870	0.009	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1392.71	-39.94
9	0.6501	1095.8	1115.2	1113.5	0.000	2.941	81.019	15.076	0.934	0.011	0.019	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1383.13	-45.08
10	0.6463	1089.6	1108.9	1107.6	0.000	2.962	81.442	14.960	0.619	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1379.36	-49.38
11	0.6802	1146.4	1166.7	1165.2	0.000	2.702	74.584	22.049	0.641	0.008	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1414.46	-29.24
12	0.6887	1160.4	1180.9	1179.3	0.000	2.641	72.957	23.632	0.752	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.06	-24.11
13	0.6890	1160.8	1181.4	1179.8	0.000	2.649	72.919	23.643	0.764	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1423.21	-23.81
14	0.6891	1160.7	1181.2	1179.9	0.000	2.664	72.886	23.670	0.757	0.008	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.98	-23.85
15	0.6889	1160.4	1180.9	1179.4	0.000	2.661	72.918	23.661	0.736	0.008	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1422.83	-24.03
16	0.6894	1161.2	1181.8	1180.2	0.000	2.663	72.819	23.740	0.752	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1423.27	-23.65
17	0.6882	1159.5	1180.0	1178.5	0.000	2.657	72.986	23.645	0.695	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.39	-24.59
18	0.6899	1162.1	1182.7	1181.1	0.000	2.653	72.813	23.685	0.808	0.012	0.024	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1423.88	-22.93
19	0.6887	1160.3	1180.8	1179.3	0.000	2.654	72.919	23.690	0.714	0.008	0.014	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1422.87	-24.17
20	0.6890	1161.1	1181.6	1180.1	0.000	2.633	72.903	23.688	0.748	0.009	0.017	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1423.54	-23.78
21	0.6897	1162.0	1182.5	1181.0	0.000	2.645	72.828	23.683	0.819	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1423.89	-23.25
22	0.6983	1175.6	1196.5	1194.7	0.000	2.611	71.998	23.628	1.741	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1431.77	-16.25
23	0.6892	1161.3	1181.8	1180.1	0.000	2.641	72.947	23.549	0.837	0.009	0.016	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1423.53	-23.41
24	0.6921	1165.7	1186.3	1184.4	0.000	2.641	72.728	23.411	1.180	0.014	0.024	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1425.97	-20.69
25	0.6910	1163.9	1184.5	1182.6	0.000	2.649	72.763	23.544	1.014	0.011	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.90	-21.91
26	0.6910	1163.8	1184.4	1182.6	0.000	2.650	72.739	23.596	0.987	0.010	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.85	-22.03
27	0.6902	1162.6	1183.2	1181.6	0.000	2.648	72.765	23.710	0.852	0.009	0.016	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1424.23	-22.91
28	0.6914	1164.2	1184.8	1183.3	0.000	2.664	72.493	23.995	0.817	0.010	0.019	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1424.94	-22.38
29	0.6910	1163.5	1184.1	1182.7	0.000	2.669	72.535	23.980	0.797	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.49	-22.84
30	0.6919	1164.8	1185.5	1183.9	0.000	2.680	72.409	24.026	0.858	0.009	0.016	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1425.11	-22.06
31	0.6922	1165.6	1186.2	1184.7	0.000	2.658	72.411	23.987	0.916	0.009	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.75	-21.69
Avg	0.6845	1153.0	1173.6	1172.0	0.000	2.688	73.907	22.546	0.833	0.009	0.015	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1418.43	-26.18

Source Daily Summary

July 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	0.5763	968.6	985.7	984.3	0.137	3.544	95.315	0.906	0.074	0.011	0.005	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1298.44	
2	0.5750	966.7	983.8	982.4	0.131	3.544	95.533	0.721	0.054	0.010	0.003	0.002	0.001	0.000	0.000	0.000	0.000	0.000	1297.42	
3	0.5726	963.2	980.3	979.6	0.113	3.554	95.949	0.356	0.020	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.51	
4	0.5722	962.7	979.8	979.4	0.109	3.555	96.017	0.296	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.25	
5	0.5724	963.0	980.1	979.4	0.110	3.557	95.981	0.325	0.018	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.40	
6	0.5722	962.7	979.8	979.0	0.108	3.555	96.018	0.296	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.27	
7	0.5721	963.0	980.1	979.2	0.110	3.528	96.043	0.297	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.74	
8	0.5722	962.6	979.7	978.7	0.107	3.567	96.009	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.08	
9	0.5722	962.7	979.7	978.5	0.107	3.562	96.014	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.16	
10	0.5722	962.7	979.7	978.4	0.108	3.561	96.015	0.294	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.17	
11	0.5722	962.7	979.8	978.9	0.108	3.554	96.020	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.29	
12	0.5722	962.8	979.8	978.8	0.108	3.554	96.020	0.296	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.30	
13	0.5722	962.7	979.8	978.6	0.108	3.554	96.020	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.28	
14	0.5722	962.7	979.7	978.9	0.108	3.559	96.015	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.20	
15	0.5722	962.6	979.7	978.9	0.108	3.566	96.010	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.08	
16	0.5722	962.6	979.7	978.9	0.107	3.565	96.010	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.10	
17	0.5722	962.6	979.7	978.7	0.107	3.567	96.009	0.294	0.014	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.06	
18	0.5722	962.7	979.8	978.7	0.107	3.559	96.018	0.294	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.23	
19	0.5721	962.9	980.0	979.2	0.105	3.539	96.040	0.292	0.016	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.64	
20	0.5721	962.9	979.9	979.0	0.106	3.540	96.037	0.293	0.016	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.59	
21	0.5722	962.8	979.8	978.8	0.108	3.551	96.024	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.35	
22	0.5722	962.8	979.8	978.5	0.108	3.552	96.023	0.294	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.33	
23	0.5722	962.7	979.7	978.2	0.107	3.562	96.014	0.294	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.16	
24	0.5722	962.6	979.6	978.0	0.107	3.567	96.010	0.293	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.06	
25	0.5722	962.6	979.6	978.1	0.107	3.567	96.011	0.293	0.014	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.06	
26	0.5722	962.6	979.7	978.2	0.107	3.564	96.013	0.294	0.014	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.12	
27	0.5722	962.8	979.8	978.5	0.109	3.552	96.020	0.296	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.31	
28	0.5722	962.7	979.7	978.6	0.109	3.557	96.016	0.295	0.014	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.21	
29	0.5722	962.6	979.6	978.4	0.108	3.572	96.003	0.294	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1294.95	
30	0.5722	962.6	979.7	978.5	0.108	3.563	96.012	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.12	
31	0.5722	962.6	979.7	978.3	0.109	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	1295.05	
Avg	0.5724	963.0	980.1	979.0	0.110	3.557	95.976	0.331	0.018	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.42	

July-23

ZONE 550

MANDAN BORDER

NBPL - St Anthony

WBI - Mandan Border
WBI Meter #0202220

Weighted

Start Date	End Date	MCF	DK	BTU	MCF	DK	BTU Zone 28	AVG BTU	
7/1/2023	7/2/2023	9,088	9,969	1098	701	834	1190.4	1104.617	7/1/2023
7/2/2023	7/3/2023	7,599	8,353	1098.8	721	864	1197.2	1107.327	7/2/2023
7/3/2023	7/4/2023	9,410	10,332	1098	842	1,005	1192.9	1105.794	7/3/2023
7/4/2023	7/5/2023	0	0	0	794	946	1191.3	1191.300	7/4/2023
7/5/2023	7/6/2023	0	0	0	863	1,026	1189.6	1189.600	7/5/2023
7/6/2023	7/7/2023	0	0	0	841	1,006	1195.4	1195.400	7/6/2023
7/7/2023	7/8/2023	0	0	0	806	961	1192.7	1192.700	7/7/2023
7/8/2023	7/9/2023	0	0	0	755	903	1196.3	1196.300	7/8/2023
7/9/2023	7/10/2023	0	0	0	751	895	1192.9	1192.900	7/9/2023
7/10/2023	7/11/2023	0	0	0	832	990	1189.5	1189.500	7/10/2023
7/11/2023	7/12/2023	7,719	8,531	1105.7	986	1,174	1190.2	1115.271	7/11/2023
7/12/2023	7/13/2023	0	0	0	858	1,027	1196.8	1196.800	7/12/2023
7/13/2023	7/14/2023	0	0	0	838	999	1192.8	1192.800	7/13/2023
7/14/2023	7/15/2023	0	0	0	790	941	1191.8	1191.800	7/14/2023
7/15/2023	7/16/2023	0	0	0	744	886	1190.9	1190.900	7/15/2023
7/16/2023	7/17/2023	0	0	0	832	991	1191.1	1191.100	7/16/2023
7/17/2023	7/18/2023	0	0	0	801	953	1190.6	1190.600	7/17/2023
7/18/2023	7/19/2023	0	0	0	811	967	1193.4	1193.400	7/18/2023
7/19/2023	7/20/2023	0	0	0	808	968	1197.2	1197.200	7/19/2023
7/20/2023	7/21/2023	0	0	0	830	991	1194	1194.000	7/20/2023
7/21/2023	7/22/2023	0	0	0	802	957	1194.3	1194.300	7/21/2023
7/22/2023	7/23/2023	0	0	0	712	851	1195.6	1195.600	7/22/2023
7/23/2023	7/24/2023	0	0	0	710	848	1195.2	1195.200	7/23/2023
7/24/2023	7/25/2023	0	0	0	750	896	1195.2	1195.200	7/24/2023
7/25/2023	7/26/2023	6,012	6,645	1105.3	789	944	1197.6	1116.008	7/25/2023
7/26/2023	7/27/2023	11,285	12,448	1103.2	807	968	1200.2	1109.674	7/26/2023
7/27/2023	7/28/2023	8,964	9,902	1104.9	789	946	1199.6	1112.561	7/27/2023
7/28/2023	7/29/2023	5,633	6,220	1104.4	792	944	1193.1	1115.334	7/28/2023
7/29/2023	7/30/2023	0	0	0	712	851	1195.5	1195.500	7/29/2023
7/30/2023	7/31/2023	0	0	0	731	877	1198.3	1198.300	7/30/2023
7/31/2023	8/1/2023	0	0	0	781	936	1198.6	1198.600	7/31/2023
		65,710	72,400	284.4613	24,579	29,345	1194.2000	1172.4383	



Alliance Pipeline

DAILY ANALYSIS --- USA
 ND07MD1 --- Hankinson Sales
 July 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	1,156.499	0.6599	84.7443	9.3316	3.5439	0.3748	0.6740	0.0662	0.0558	0.0247	0.8362	0.3382	0.0104
2	1,157.672	0.6605	84.6785	9.3903	3.5610	0.3773	0.6786	0.0672	0.0564	0.0259	0.8163	0.3386	0.0099
3	1,155.753	0.6591	84.8427	9.3154	3.5130	0.3689	0.6620	0.0644	0.0542	0.0258	0.8074	0.3361	0.0101
4	1,153.455	0.6576	84.9614	9.3359	3.4332	0.3547	0.6308	0.0615	0.0516	0.0233	0.7993	0.3385	0.0100
5	1,155.557	0.6590	84.8323	9.3525	3.5063	0.3667	0.6529	0.0637	0.0526	0.0233	0.8007	0.3386	0.0102
6	1,157.010	0.6600	84.7750	9.2884	3.5672	0.3761	0.6827	0.0666	0.0555	0.0256	0.8180	0.3346	0.0104
7	1,154.484	0.6584	84.8567	9.3711	3.4818	0.3564	0.6420	0.0600	0.0493	0.0224	0.8180	0.3322	0.0102
8	1,154.721	0.6583	84.8687	9.4081	3.4421	0.3596	0.6383	0.0641	0.0540	0.0250	0.7951	0.3347	0.0105
9	1,152.242	0.6568	85.0440	9.3107	3.3908	0.3498	0.6199	0.0607	0.0512	0.0241	0.8064	0.3319	0.0105
10	1,155.213	0.6590	84.7721	9.4184	3.4909	0.3586	0.6488	0.0619	0.0512	0.0236	0.8336	0.3303	0.0106
11	1,155.498	0.6591	84.8006	9.3661	3.5072	0.3632	0.6550	0.0634	0.0530	0.0242	0.8254	0.3318	0.0101
12	1,156.411	0.6595	84.8224	9.3114	3.5126	0.3770	0.6712	0.0684	0.0581	0.0269	0.8081	0.3336	0.0101
13	1,157.439	0.6604	84.7509	9.2718	3.5777	0.3835	0.6910	0.0691	0.0573	0.0258	0.8298	0.3332	0.0098
14	1,154.435	0.6580	84.8998	9.3964	3.4481	0.3582	0.6323	0.0622	0.0510	0.0228	0.7868	0.3323	0.0101
15	1,155.139	0.6584	84.8469	9.4283	3.4657	0.3570	0.6409	0.0611	0.0520	0.0225	0.7833	0.3318	0.0106
16	1,154.152	0.6577	84.9262	9.4029	3.4303	0.3537	0.6291	0.0614	0.0517	0.0236	0.7812	0.3294	0.0104
17	1,153.856	0.6576	84.9221	9.4009	3.4379	0.3513	0.6258	0.0599	0.0500	0.0217	0.7894	0.3309	0.0102
18	1,153.871	0.6577	84.9162	9.3940	3.4383	0.3519	0.6273	0.0606	0.0506	0.0231	0.7985	0.3295	0.0101
19	1,153.837	0.6574	84.9718	9.3862	3.3996	0.3557	0.6309	0.0637	0.0533	0.0240	0.7773	0.3274	0.0102
20	1,153.189	0.6572	84.9693	9.3880	3.4193	0.3486	0.5993	0.0651	0.0543	0.0245	0.7932	0.3284	0.0100
21	1,155.328	0.6588	84.8377	9.3299	3.5235	0.3586	0.6550	0.0620	0.0513	0.0234	0.8280	0.3208	0.0099
22	1,153.743	0.6577	84.9379	9.3644	3.4288	0.3551	0.6344	0.0622	0.0516	0.0226	0.8066	0.3264	0.0099
23	1,155.992	0.6592	84.7575	9.4532	3.4753	0.3644	0.6548	0.0646	0.0551	0.0247	0.8200	0.3206	0.0099
24	1,155.503	0.6586	84.8641	9.3949	3.4529	0.3649	0.6516	0.0654	0.0561	0.0257	0.7933	0.3213	0.0098
25	1,154.684	0.6579	84.9669	9.3386	3.4245	0.3661	0.6483	0.0658	0.0559	0.0242	0.7700	0.3300	0.0097
26	1,156.917	0.6596	84.7926	9.3762	3.5144	0.3735	0.6731	0.0654	0.0551	0.0249	0.7787	0.3360	0.0101
27	1,156.458	0.6590	84.8536	9.3554	3.5130	0.3688	0.6710	0.0609	0.0516	0.0225	0.7726	0.3209	0.0100
28	1,152.817	0.6564	85.1350	9.2747	3.3784	0.3554	0.6287	0.0611	0.0537	0.0245	0.7685	0.3108	0.0092
29	1,152.450	0.6558	85.2549	9.1942	3.3636	0.3602	0.6344	0.0602	0.0512	0.0249	0.7388	0.3079	0.0097
30	1,154.730	0.6576	85.0634	9.2480	3.4334	0.3704	0.6552	0.0663	0.0556	0.0257	0.7539	0.3185	0.0094
31	1,155.649	0.6583	84.9217	9.3446	3.4754	0.3661	0.6397	0.0688	0.0583	0.0260	0.7805	0.3102	0.0087
Volume	1,154.974	0.6584	84.8907	9.3525	3.4691	0.3627	0.6475	0.0637	0.0535	0.0243	0.7975	0.3286	0.0100
Weight Avg Energy	1,154.975	0.6584	84.8906	9.3525	3.4692	0.3627	0.6475	0.0637	0.0535	0.0243	0.7975	0.3286	0.0100



Alliance Pipeline

DAILY ANALYSIS --- USA
 ND14MD1 --- Milnor Sales
 July 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	1,156.621	0.6600	84.7383	9.3363	3.5446	0.3754	0.6752	0.0664	0.0559	0.0249	0.8346	0.3380	0.0104
2	1,157.176	0.6601	84.7221	9.3773	3.5430	0.3757	0.6730	0.0670	0.0563	0.0259	0.8130	0.3368	0.0099
3	1,155.760	0.6592	84.8214	9.3448	3.5097	0.3665	0.6592	0.0641	0.0538	0.0254	0.8066	0.3383	0.0101
4	1,154.067	0.6580	84.9266	9.3331	3.4606	0.3572	0.6385	0.0615	0.0511	0.0233	0.8034	0.3347	0.0100
5	1,156.053	0.6593	84.8172	9.3360	3.5251	0.3706	0.6610	0.0644	0.0533	0.0237	0.7989	0.3397	0.0102
6	1,156.258	0.6595	84.8041	9.3109	3.5344	0.3713	0.6711	0.0659	0.0548	0.0253	0.8175	0.3344	0.0104
7	1,154.881	0.6584	84.8601	9.3918	3.4614	0.3593	0.6445	0.0632	0.0524	0.0240	0.7990	0.3340	0.0103
8	1,154.974	0.6583	84.8930	9.3824	3.4446	0.3627	0.6439	0.0650	0.0549	0.0258	0.7894	0.3279	0.0104
9	1,151.594	0.6565	85.0630	9.3087	3.3786	0.3461	0.6146	0.0589	0.0495	0.0230	0.8178	0.3293	0.0106
10	1,155.399	0.6591	84.7527	9.4365	3.4931	0.3588	0.6493	0.0620	0.0511	0.0233	0.8303	0.3324	0.0105
11	1,155.293	0.6590	84.8296	9.3377	3.5032	0.3638	0.6553	0.0640	0.0538	0.0247	0.8241	0.3337	0.0102
12	1,157.211	0.6600	84.7793	9.3089	3.5404	0.3815	0.6811	0.0693	0.0590	0.0276	0.8121	0.3308	0.0101
13	1,156.953	0.6601	84.7763	9.2706	3.5655	0.3805	0.6846	0.0682	0.0562	0.0253	0.8290	0.3339	0.0098
14	1,154.523	0.6580	84.8904	9.4161	3.4467	0.3567	0.6306	0.0618	0.0509	0.0227	0.7831	0.3310	0.0100
15	1,156.004	0.6589	84.7597	9.5164	3.4726	0.3569	0.6400	0.0608	0.0522	0.0234	0.7781	0.3294	0.0107
16	1,153.286	0.6573	84.9778	9.3695	3.4211	0.3513	0.6201	0.0598	0.0501	0.0224	0.7816	0.3359	0.0103
17	1,153.801	0.6576	84.9306	9.3946	3.4374	0.3510	0.6256	0.0598	0.0500	0.0218	0.7892	0.3298	0.0102
18	1,153.956	0.6578	84.8966	9.4044	3.4396	0.3524	0.6284	0.0607	0.0506	0.0232	0.8033	0.3306	0.0101
19	1,153.042	0.6569	85.0337	9.3666	3.3636	0.3543	0.6251	0.0645	0.0540	0.0244	0.7764	0.3272	0.0102
20	1,153.568	0.6574	84.9533	9.3761	3.4519	0.3482	0.6005	0.0640	0.0533	0.0241	0.7935	0.3253	0.0099
21	1,156.029	0.6593	84.7867	9.3502	3.5389	0.3619	0.6642	0.0624	0.0519	0.0235	0.8288	0.3213	0.0099
22	1,153.533	0.6574	85.0014	9.3008	3.4319	0.3569	0.6349	0.0632	0.0529	0.0233	0.8013	0.3237	0.0098
23	1,156.061	0.6592	84.7404	9.4700	3.4761	0.3633	0.6543	0.0644	0.0550	0.0244	0.8203	0.3219	0.0099
24	1,155.247	0.6584	84.8905	9.3792	3.4461	0.3650	0.6504	0.0653	0.0559	0.0253	0.7903	0.3223	0.0097
25	1,154.911	0.6581	84.9458	9.3517	3.4290	0.3663	0.6497	0.0660	0.0561	0.0246	0.7700	0.3308	0.0098
26	1,157.223	0.6597	84.7839	9.3680	3.5274	0.3753	0.6775	0.0657	0.0551	0.0248	0.7775	0.3347	0.0100
27	1,155.843	0.6585	84.8970	9.3439	3.4933	0.3661	0.6646	0.0600	0.0511	0.0224	0.7726	0.3190	0.0099
28	1,152.735	0.6564	85.1342	9.2834	3.3736	0.3549	0.6268	0.0609	0.0534	0.0242	0.7683	0.3109	0.0093
29	1,151.568	0.6553	85.2910	9.2077	3.3293	0.3540	0.6234	0.0595	0.0504	0.0250	0.7458	0.3040	0.0098
30	1,154.730	0.6577	85.0290	9.2852	3.4329	0.3680	0.6515	0.0660	0.0546	0.0247	0.7562	0.3226	0.0093
31	1,155.493	0.6582	84.9377	9.3365	3.4703	0.3659	0.6379	0.0686	0.0585	0.0265	0.7827	0.3068	0.0087
Volume	1,154.859	0.6583	84.9030	9.3567	3.4616	0.3617	0.6448	0.0636	0.0535	0.0242	0.7945	0.3263	0.0099
Weight Avg Energy	1,154.872	0.6583	84.9021	9.3571	3.4620	0.3618	0.6449	0.0637	0.0535	0.0242	0.7945	0.3263	0.0099

July-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		
7/1/2023	7/2/2023	3	4	1209.9	83	93	1117.5	1120.723	7/1/2023
7/2/2023	7/3/2023	1	1	1209.9	79	89	1117.5	1118.655	7/2/2023
7/3/2023	7/4/2023	3	3	1209.9	123	137	1117.5	1119.700	7/3/2023
7/4/2023	7/5/2023	8	10	1209.9	106	119	1117.5	1123.984	7/4/2023
7/5/2023	7/6/2023	5	6	1209.9	101	113	1117.5	1121.858	7/5/2023
7/6/2023	7/7/2023	1	1	1209.9	101	113	1117.5	1118.406	7/6/2023
7/7/2023	7/8/2023	9	11	1209.9	101	113	1117.5	1125.060	7/7/2023
7/8/2023	7/9/2023	7	8	1209.9	118	132	1117.5	1122.674	7/8/2023
7/9/2023	7/10/2023	1	1	1209.9	129	144	1117.5	1118.211	7/9/2023
7/10/2023	7/11/2023	8	9	1209.9	100	112	1117.5	1124.344	7/10/2023
7/11/2023	7/12/2023	5	6	1209.9	110	123	1117.5	1121.517	7/11/2023
7/12/2023	7/13/2023	0	0	1209.9	100	112	1117.5	1117.500	7/12/2023
7/13/2023	7/14/2023	2	2	1209.9	90	101	1117.5	1119.509	7/13/2023
7/14/2023	7/15/2023	10	12	1209.9	98	109	1117.5	1126.056	7/14/2023
7/15/2023	7/16/2023	2	3	1209.9	78	87	1117.5	1119.810	7/15/2023
7/16/2023	7/17/2023	4	5	1209.9	87	97	1117.5	1121.562	7/16/2023
7/17/2023	7/18/2023	0	0	1209.9	95	106	1117.5	1117.500	7/17/2023
7/18/2023	7/19/2023	6	8	1209.9	80	89	1117.5	1123.947	7/18/2023
7/19/2023	7/20/2023	10	12	1209.9	101	113	1117.5	1125.824	7/19/2023
7/20/2023	7/21/2023	14	16	1209.9	90	100	1117.5	1129.938	7/20/2023
7/21/2023	7/22/2023	7	9	1209.9	81	91	1117.5	1124.850	7/21/2023
7/22/2023	7/23/2023	0	0	1209.9	64	72	1117.5	1117.500	7/22/2023
7/23/2023	7/24/2023	0	0	1209.9	84	93	1117.5	1117.500	7/23/2023
7/24/2023	7/25/2023	2	3	1209.9	74	82	1117.5	1119.932	7/24/2023
7/25/2023	7/26/2023	18	22	1209.9	68	76	1117.5	1136.840	7/25/2023
7/26/2023	7/27/2023	22	26	1209.9	107	120	1117.5	1133.258	7/26/2023
7/27/2023	7/28/2023	19	23	1209.9	84	94	1117.5	1134.545	7/27/2023
7/28/2023	7/29/2023	31	38	1209.9	103	115	1117.5	1138.876	7/28/2023
7/29/2023	7/30/2023	4	5	1209.9	78	87	1117.5	1122.007	7/29/2023
7/30/2023	7/31/2023	1	2	1209.9	90	101	1117.5	1118.515	7/30/2023
7/31/2023	8/1/2023	4	5	1209.9	103	115	1117.5	1120.954	7/31/2023
		207	251	1209.9000	2,906	3,248	1117.5000	1123.2760	

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	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/1/2023	7/2/2023	1098	0.6516	-45.8	1360.228288	0.9765	2.5846	81.3166	14.059	0.816	0.0213	0.0393	0.0019	0.0017	N/A	0	0.159	0.0242	0.335	0.0938	0.0603	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/2/2023	7/3/2023	1099	0.6514	-46.1	1361.676101	0.9612	2.5557	81.3742	14.0914	0.8043	0.0196	0.0357	0.0016	0.0014	N/A	0	0.1308	0.0243	0.3226	0.0902	0.058	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/3/2023	7/4/2023	1098	0.6503	-46.1	1361.58721	0.9481	2.5036	81.395	13.8734	0.8404	0.0219	0.0396	0.0018	0.0015	N/A	0	0.1512	0.0238	0.3116	0.0942	0.0634	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/4/2023	7/5/2023	1094	0.6483	-48	1358.717945	0.9642	2.5244	81.8346	13.6501	0.7494	0.0194	0.0355	0.0014	0.0011	N/A	0	0.1959	0.0241	0.3374	0.0881	0.0594	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/5/2023	7/6/2023	1095	0.6496	-47.3	1358.598438	0.9819	2.561	81.6047	13.823	0.7592	0.02	0.0357	0.0016	0.0012	N/A	0	0.1878	0.0242	0.3255	0.0826	0.0537	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/6/2023	7/7/2023	1104	0.6553	-43.9	1363.794672	0.969	2.6338	80.4461	14.907	0.7791	0.021	0.0368	0.0019	0.0015	N/A	0	0.1799	0.0239	0.3367	0.0868	0.0549	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/7/2023	7/8/2023	1105	0.6576	-42.6	1362.64076	0.9667	2.7514	79.8627	15.3054	0.7952	0.0204	0.0363	0.0018	0.0013	N/A	0	0.2341	0.0248	0.3399	0.0826	0.0531	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/8/2023	7/9/2023	1106	0.6576	-42.7	1363.873919	0.9679	2.7067	80.0037	15.2682	0.8003	0.0202	0.035	0.0015	0.0012	N/A	0	0.1712	0.0244	0.3371	0.0896	0.0582	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/9/2023	7/10/2023	1107	0.6586	-42.4	1364.070314	0.9728	2.726	79.8355	15.4477	0.7902	0.0191	0.0345	0.0014	0.0011	N/A	0	0.1471	0.0249	0.3235	0.0918	0.0621	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/10/2023	7/11/2023	1105	0.6573	-43.4	1362.951888	0.9647	2.7182	80.0555	15.3012	0.7503	0.0176	0.0321	0.0012	0.0009	N/A	0	0.1335	0.0248	0.3184	0.0885	0.0593	0.0013
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/11/2023	7/12/2023	1105	0.6578	-43.4	1362.433593	0.9732	2.7479	79.9819	15.3668	0.7412	0.017	0.031	0.001	0.0006	N/A	0	0.1146	0.0251	0.3228	0.0911	0.0691	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/12/2023	7/13/2023	1105	0.6572	-43.5	1363.055378	0.9731	2.7252	80.1738	15.1706	0.7721	0.0182	0.033	0.0012	0.0007	N/A	0	0.1071	0.025	0.316	0.093	0.0645	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/13/2023	7/14/2023	1107	0.659	-42.4	1363.65627	0.9775	2.7482	79.814	15.485	0.7894	0.0183	0.033	0.0013	0.0008	N/A	0	0.1074	0.0252	0.3139	0.0868	0.0583	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/14/2023	7/15/2023	1103	0.6559	-44	1361.935991	0.9665	2.7025	80.3628	14.98	0.7619	0.0191	0.0356	0.0015	0.0012	N/A	0	0.1442	0.025	0.3298	0.0843	0.0579	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/15/2023	7/16/2023	1106	0.6572	-43	1364.288912	0.9674	2.6864	80.1519	15.1748	0.8002	0.0199	0.0366	0.0014	0.0009	N/A	0	0.1362	0.0245	0.3316	0.09	0.0618	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/16/2023	7/17/2023	1104	0.6565	-43.4	1362.547679	0.9632	2.7066	80.2587	15.0366	0.7975	0.02	0.037	0.0016	0.0013	N/A	0	0.153	0.0248	0.3359	0.0836	0.0571	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/17/2023	7/18/2023	1104	0.6561	-43.7	1362.962963	0.9713	2.6646	80.3093	15.034	0.7773	0.0192	0.0351	0.0014	0.001	N/A	0	0.1622	0.0247	0.3322	0.0839	0.0582	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/18/2023	7/19/2023	1103	0.6554	-44.1	1362.455398	0.9734	2.645	80.5056	14.8771	0.775	0.0196	0.0369	0.0016	0.0014	N/A	0	0.1399	0.0245	0.3399	0.1592	0.0621	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/19/2023	7/20/2023	1107	0.6586	-42.4	1364.070314	0.9882	2.6887	79.9268	15.4034	0.799	0.0191	0.0347	0.0012	0.0008	N/A	0	0.1136	0.0246	0.3179	0.0819	0.0608	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/20/2023	7/21/2023	1102	0.6552	-44.7	1361.427912	0.9811	2.68	80.4084	14.9685	0.7221	0.0169	0.0308	0.0008	0.0005	N/A	0	0.1666	0.0245	0.3574	0.0823	0.058	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/21/2023	7/22/2023	1103	0.6558	-44	1362.039825	0.9702	2.6953	80.308	14.9944	0.7669	0.0187	0.0341	0.0013	0.0013	N/A	0	0.1859	0.0242	0.3421	0.0877	0.0635	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/22/2023	7/23/2023	1105	0.6577	-42.5	1362.537165	0.9731	2.7417	79.9716	15.2207	0.8229	0.0205	0.0372	0.0015	0.0013	N/A	0	0.1853	0.0245	0.346	0.0877	0.0632	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/23/2023	7/24/2023	1106	0.6576	-42.1	1363.873919	0.963	2.685	80.1095	15.1051	0.8204	0.022	0.0401	0.0017	0.0014	N/A	0	0.1657	0.0241	0.3395	0.087	0.063	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/24/2023	7/25/2023	1107	0.6588	-41.1	1363.863245	0.9597	2.7616	79.9662	15.1173	0.9496	0.0243	0.0449	0.002	0.0019	N/A	0	0.1475	0.0251	0.3488	0.083	0.0603	0.0012
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/25/2023	7/26/2023	1105	0.657	-42.5	1363.262829	0.9595	2.6952	80.2696	14.9765	0.8759	0.0214	0.0401	0.0019	0.0017	N/A	0	0.1334	0.025	0.3616	0.0824	0.0578	0.0013
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/26/2023	7/27/2023	1103	0.655	-43.8	1362.871351	0.9503	2.6742	80.521	14.7487	0.8319	0.0208	0.0384	0.0018	0.0016	N/A	0	0.1869	0.0247	0.3479	0.0827	0.0563	0.0011
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/27/2023	7/28/2023	1105	0.6569	-42.8	1363.36659	0.9718	2.7002	80.2231	14.9946	0.8621	0.0201	0.0369	0.0015	0.0012	N/A	0	0.1642	0.0244	0.3454	0.0799	0.0559	0.0008
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/27/2023	7/28/2023	1105	0.6569	-42.8	1363.36659	0.9718	2.7002	80.2231	14.9946	0.8621	0.0201	0.0369	0.0015	0.0012	N/A	0	0.1642	0.0244	0.3454	0.0799	0.0559	0.0008
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/29/2023	7/30/2023	1105	0.6579	-43.1	1362.330045	0.9801	2.7874	79.9178	15.3305	0.7499	0.0184	0.0346	0.0015	0.0015	N/A	0	0.1535	0.025	0.3287	0.0804	0.0599	0.0011
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/30/2023	7/31/2023	1102	0.6565	-44.9	1360.079295	0.9794	2.8146	80.0186	15.3204	0.626	0.0147	0.0279	0.0012	0.0008	N/A	0	0.171	0.0255	0.3256	0.0808	0.0591	0.0014
NBPL	6/29/2023 0:00	9/14/2023 0:00	GLNU1 - GLEN ULLIN	7/31/2023	8/1/2023	1105	0.6592	-43	1360.986065	0.9901	2.8672	79.6232	15.6056	0.6967	0.0172	0.0329	0.0015	0.0013	N/A	0	0.1385	0.0258	0.3124	0.0806	0.0612	0.0013

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	JUL23	JUN23	MAY23	APR23	MAR23	FEB23	JAN23	DEC22	NOV22	OCT22	SEP22	AUG22	0
MT/ND	211	Sidney Border - MonDak Tfr - Sidney Plt	1201	1199	1195	1200	1204	1208	1191	1203	1206	1202	1201	1198	1205	211
ND	24	Williston Border - Charbonneau Station	1195	1195	1196	1198	1194	1195	1198	1197	1193	1198	1194	1188	1192	24
ND	25	Watford City West Border	1199	1210	1190	1189	1180	1183	1200	1195	1202	1207	1210	1209	1210	25
ND	28	Bismarck Station - Glen Ullin Station	1157	1194	1195	1192	1118	1127	1115	1118	1133	1126	1175	1191	1198	28
ND	31	Dickinson Brd - Belfield Trf - G Ullin Stn	1113	1118	1107	1086	1100	1132	1126	1132	1140	1131	1097	1099	1087	31
ND/MT	32	Cabin Creek Station - Belfied Transfer	1126	1124	1124	1111	1119	1137	1116	1125	1139	1132	1122	1128	1129	32
ND	33	Little Knife Plant	1177	1174	1180	1182	1179	1177	1175	1176	1176	1176	1179	1173	1174	33
ND	34	Badlands Plant/Bowman Border	1043	980	1040	1021	1005	1071	1086	1079	1086	1077	989	1056	1031	34
ND	43	Watford City East Border	1088	1118	1081	1042	1083	1116	1128	1143	1133	1054	1050	1051	1057	43
ND/MT	241	Fairview Border	1201	1193	1189	1200	1196	1201	1212	1218	1201	1210	1205	1193	1197	241
ND	267	North Tioga Transfer - Nesson Plant	1182	1181	1185	1188	1187	1189	1188	1181	1176	1176	1178	1174	1184	267
ND	261	Tioga Comp Station - Robinson Lake Plan	1186	1186	1189	1188	1184	1185	1184	1176	1182	1194	1196	1196	1196	261
ND	262	Minot Bdr - Palermo Bdr - Bismarck Stn	1191	1192	1193	1190	1189	1187	1187	1188	1189	1186	1195	1198	1196	262
ND	263	Lignite Plant	1131	1131	1131	1131	1131	1131	1131	1131	1131	1131	1131	1131	1131	263
ND	264	Epping Border	1196	1190	1181	1195	1202	1200	1208	1202	1198	1194	1198	1196	1192	264
ND	265	Tioga Comp Station - County Line Plant	1177	1165	1168	1176	1182	1183	1181	1182	1169	1182	1180	1178	1178	265
ND	266	County Line Plant	1178	1166	1168	1178	1182	1183	1180	1183	1168	1181	1180	1180	1182	266
ND	271	Bismarck Station - Cleveland Station	1186	1194	1195	1192	1189	1181	1168	1168	1176	1181	1197	1191	1198	271
ND	272	Cleveland Station - Mapleton	1186	1194	1194	1191	1188	1181	1168	1168	1176	1181	1197	1191	1198	272
ND	273	Cleveland Station - Grafton Border	1186	1194	1194	1192	1187	1180	1168	1168	1176	1181	1198	1194	1198	273
ND	550	Mandan Border / NBPL-St Anthony	1137	1172	1160	1085	1101	1118	1109	1109	1127	1107	1173	1189	1194	550
ND	610	MDU-Watford City BTU	1112	1123	1091	1065	1111	1137	1149	1159	1155	1102	1113	1072	1068	610
ND	802	NBPL - Linton	1090	1104	1102	1080	1085	1097	1095	1093	1090	1087	1084	1081	1083	0
ND	903	Hettinger Propane	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	0
ND	600	Alliance Pipeline - Hankinson	1153	1155	1157	1154	1153	1149	1152	1148	1143	1149	1159	1159	1157	0
ND	601	Alliance Pipeline - Milnor	1153	1155	1157	1155	1154	1149	1152	1148	1143	1149	1159	1160	1157	0

THERMAL ZONE VARIANCE DOCUMENTATION		
July 2023		
<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
25	20	Blend
34	60	Operational
43	37	Blend
610	32	Blend