

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

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

<u>Town</u>	<u>Heat Zone</u>	<u>Therm Factor</u>
MDU-303-ALEXANDER	025	1.1230
MDU-308-ARNEGARD	025	1.1230
MDU-314-APPLE VALLEY	271	1.1501
MDU-318-BEACH	032	1.0267
MDU-319-BELFIELD	032	1.0343
MDU-323-BERTHOLD	262	1.1240
MDU-327-BISMARCK	028	1.1501
MDU-330-BOWMAN	034	0.9366
MDU-337-BURLINGTON	262	1.1482
MDU-343-CARRINGTON	273	1.1501
MDU-344-CLEVELAND	272	1.1411
MDU-364-CAVALIER	273	1.1744
MDU-365-DAWSON	271	1.1420
MDU-368-DES LACS	262	1.1320
MDU-369-DICKINSON	031	1.0184
MDU-374-FT TOTTEN	273	1.1582
MDU-375-DEVILS LAKE	273	1.1582
MDU-379-BARLOW	273	1.1501
MDU-384-EPPING	264	1.1287
MDU-387-ELDRIDGE	272	1.1492
MDU-407-GLADSTONE	031	1.0184
MDU-411-GLEN ULLIN	031	1.0257
MDU-413-GOLVA	032	1.0116
MDU-416-GARRISON	262	1.1320
MDU-417-GRAFTON	273	1.1825
MDU-403-GWINNER	601	1.1379
MDU-429-HEBRON	031	1.0257
MDU-432-HETTINGER	903	2.4049
MDU-449-JAMESTOWN	272	1.1572
MDU-459-KILLDEER	033	1.1164
MDU-463-LANGDON	273	1.1501
MDU-469-LEFOR	031	1.0184
MDU-474-LIGNITE	263	1.0759
MDU-475-LINTON	802	1.2975
MDU-478-LINCOLN	028	1.1501
MDU-488-MCKENZIE	271	1.1501
MDU-494-MEDINA	271	1.1582
MDU-498-MANDAN	028	1.1501
MDU-500-MARMARTH	034	0.9435
MDU-505-MINOT	262	1.1240
MDU-510-MOTT	031	1.0184
MDU-512-MAX	262	1.1240
MDU-513-MILNOR	601	1.1379
MDU-522-NEW ENGLAND	031	1.0110
MDU-524-NEW SALEM	028	1.1258
MDU-532-NEW ROCKFORD	273	1.1501
MDU-539-PARK RIVER	273	1.1744
MDU-540-PALERMO	262	1.1240
MDU-558-RAY	264	1.1287

MDU-561-REGENT	031	1.0184
MDU-563-RHAME	034	0.9297
MDU-564-RICHARDTON	031	1.0110
MDU-568-ROSS	261	1.1140
MDU-572-RUTHVILLE	262	1.1482
MDU-574-SANBORN	272	1.1572
MDU-583-SENTINEL BUTTE	032	1.0267
MDU-588-SOUTH HEART	031	1.0184
MDU-717-SPIRITWOOD	272	1.1572
MDU-590-SPRINGBROOK	264	1.1287
MDU-591-STANLEY	261	1.1221
MDU-593-STEELE	271	1.1420
MDU-594-STERLING	028	1.1501
MDU-598-SHEYENNE	273	1.1582
MDU-605-SURREY	262	1.1482
MDU-610-TAPPEN	271	1.1420
MDU-611-TAYLOR	031	1.0110
MDU-616-TIOGA	260	1.1140
MDU-619-TURTLE LAKE	262	1.1320
MDU-620-TRENTON	024	1.1396
MDU-624-UNDERWOOD	262	1.1320
MDU-625-VALLEY CITY	272	1.1653
MDU-629-WALHALLA	273	1.1744
MDU-632-WATFORD CITY	610	1.0059
MDU-636-WHEELOCK	264	1.1206
MDU-637-WHITE EARTH	261	1.1221
MDU-642-WILLISTON	024	1.1396
MDU-646-WASHBURN	262	1.1320
MDU-647-WILTON	262	1.1240
MDU-664-RIVERDALE	262	1.1320
MDU-691-FAIRVIEW	241	1.1415
MDU-712-MINOT AFB	262	1.1482
MDU-718-FAIRMOUNT	600	1.1346
MDU-732-NEKOMA	273	1.1501
MDU-732-MSR SITE	273	1.1501

Source Daily Summary

June 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	0.7258	1180.3	1201.2	1200.2	0.980	3.411	69.726	22.127	3.289	0.144	0.289	0.017	0.016	0.000	0.000	0.000	0.000	0.000	1409.91	
2	0.7346	1190.0	1211.1	1210.2	1.118	3.427	69.121	21.750	3.920	0.202	0.411	0.026	0.023	0.000	0.000	0.000	0.000	0.000	1413.03	
3	0.7264	1175.8	1196.6	1195.7	1.140	3.491	70.009	21.450	3.361	0.167	0.339	0.022	0.020	0.000	0.000	0.000	0.000	0.000	1403.96	
4	0.7279	1179.3	1200.2	1199.2	1.115	3.458	69.563	22.031	3.315	0.161	0.318	0.020	0.017	0.000	0.000	0.000	0.000	0.000	1406.74	
5	0.7303	1183.2	1204.1	1203.2	1.109	3.465	69.003	22.587	3.364	0.147	0.290	0.018	0.015	0.000	0.000	0.000	0.000	0.000	1409.01	
6	0.7335	1180.9	1201.8	1200.6	1.332	3.565	68.757	22.347	3.489	0.161	0.314	0.019	0.015	0.000	0.000	0.000	0.000	0.000	1403.19	
7	0.7140	1179.9	1200.8	1199.6	0.397	3.218	70.808	22.411	2.845	0.102	0.201	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1421.15	
8	0.7118	1188.6	1209.7	1208.6	0.046	3.011	71.002	22.714	2.907	0.101	0.204	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1433.79	
9	0.7301	1181.6	1202.5	1201.4	1.165	3.454	69.139	22.404	3.342	0.154	0.309	0.018	0.015	0.000	0.000	0.000	0.000	0.000	1407.38	
10	0.7102	1184.8	1205.8	1204.9	0.044	3.091	71.221	22.475	2.884	0.092	0.182	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1430.86	
11	0.7073	1181.2	1202.1	1201.2	0.040	3.052	71.532	22.423	2.719	0.077	0.149	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1429.34	
12	0.7053	1176.1	1196.9	1196.0	0.042	3.177	71.567	22.548	2.491	0.059	0.109	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1425.13	
13	0.7045	1175.6	1196.4	1195.5	0.034	3.140	71.287	23.225	2.240	0.030	0.043	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1425.46	
14	0.7042	1174.7	1195.5	1194.5	0.033	3.168	71.451	22.974	2.253	0.043	0.075	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1424.65	
15	0.7024	1173.0	1193.8	1192.9	0.043	3.089	71.824	22.666	2.270	0.039	0.066	0.002	0.001	0.000	0.000	0.000	0.000	0.000	1424.39	
16	0.7003	1170.1	1190.8	1189.9	0.046	3.064	72.031	22.698	2.070	0.035	0.056	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1423.01	
17	0.6944	1162.0	1182.6	1181.7	0.054	2.991	72.913	22.203	1.775	0.025	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.15	
18	0.6958	1161.7	1182.3	1181.3	0.055	3.140	72.539	22.465	1.757	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.35	
19	0.6966	1163.4	1184.0	1183.2	0.055	3.115	72.519	22.380	1.870	0.025	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.59	
20	0.6973	1163.9	1184.6	1183.7	0.051	3.149	72.339	22.573	1.822	0.026	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.58	
21	0.6968	1164.3	1184.9	1184.1	0.043	3.098	72.448	22.489	1.872	0.021	0.029	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1419.45	
22	0.6977	1164.8	1185.4	1184.5	0.045	3.150	72.293	22.553	1.916	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.12	
23	0.7007	1170.5	1191.3	1190.4	0.044	3.081	71.881	22.850	2.094	0.022	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.11	
24	0.6999	1167.7	1188.4	1187.6	0.039	3.188	71.916	22.816	1.988	0.022	0.030	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1420.49	
25	0.7011	1170.8	1191.6	1190.6	0.042	3.100	71.861	22.799	2.139	0.024	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.10	
26	0.6977	1165.2	1185.8	1184.8	0.036	3.133	72.307	22.558	1.918	0.020	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.69	
27	0.7063	1167.8	1188.5	1187.5	0.377	3.264	71.622	22.157	2.404	0.058	0.106	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1414.28	
28	0.7314	1176.9	1197.7	1196.7	1.337	3.601	69.036	22.169	3.361	0.156	0.305	0.019	0.016	0.000	0.000	0.000	0.000	0.000	1400.48	
29	0.7215	1175.3	1196.1	1195.1	0.930	3.391	69.813	22.709	2.813	0.109	0.211	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1408.30	
30	0.7023	1165.8	1186.5	1185.4	0.215	3.263	71.823	22.484	2.109	0.038	0.063	0.003	0.002	0.000	0.000	0.000	0.000	0.000	1415.79	
Avg	0.7103	1174.0	1194.6	1193.7	0.400	3.231	71.112	22.468	2.553	0.077	0.145	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1417.62	

Source Daily Summary

June 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	0.7313	1190.0	1211.1	1210.2	1.133	3.088	70.234	20.797	3.946	0.202	0.499	0.044	0.054	0.000	0.000	0.000	0.000	0.000	1416.21	
2	0.7164	1173.0	1193.8	1192.9	1.106	2.774	71.939	20.422	3.240	0.142	0.320	0.025	0.030	0.000	0.000	0.000	0.000	0.000	1410.38	
3	0.7198	1171.1	1191.8	1190.8	1.142	3.155	71.016	21.072	3.151	0.126	0.289	0.023	0.027	0.000	0.000	0.000	0.000	0.000	1404.80	
4	0.7229	1175.1	1195.9	1194.8	1.141	3.210	70.645	21.154	3.343	0.136	0.315	0.025	0.030	0.000	0.000	0.000	0.000	0.000	1406.47	
5	0.7185	1173.9	1194.7	1193.9	1.098	2.928	71.312	21.007	3.185	0.128	0.291	0.023	0.028	0.000	0.000	0.000	0.000	0.000	1409.49	
6	0.7230	1175.4	1196.3	1194.8	1.137	3.201	70.602	21.230	3.331	0.134	0.310	0.025	0.030	0.000	0.000	0.000	0.000	0.000	1406.86	
7	0.7229	1175.0	1195.8	1194.5	1.137	3.218	70.651	21.150	3.330	0.136	0.320	0.026	0.031	0.000	0.000	0.000	0.000	0.000	1406.42	
8	0.7255	1179.1	1200.0	1198.8	1.132	3.212	70.440	21.142	3.496	0.151	0.360	0.030	0.037	0.000	0.000	0.000	0.000	0.000	1408.87	
9	0.7209	1171.7	1192.4	1191.4	1.146	3.221	70.808	21.198	3.150	0.127	0.298	0.024	0.029	0.000	0.000	0.000	0.000	0.000	1404.40	
10	0.7246	1178.0	1198.9	1198.1	1.028	3.354	70.286	21.427	3.359	0.153	0.336	0.027	0.030	0.000	0.000	0.000	0.000	0.000	1408.45	
11	0.7241	1183.4	1204.4	1203.6	0.775	3.368	69.718	22.491	3.205	0.138	0.271	0.018	0.016	0.000	0.000	0.000	0.000	0.000	1415.37	
12	0.7196	1175.7	1196.5	1195.7	0.762	3.437	70.327	22.083	2.981	0.128	0.249	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1410.53	
13	0.7181	1179.2	1200.0	1199.1	0.589	3.354	70.160	22.708	2.874	0.101	0.189	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1416.13	
14	0.7172	1177.8	1198.7	1197.6	0.568	3.380	70.217	22.770	2.740	0.101	0.196	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1415.44	
15	0.7182	1178.1	1199.0	1198.0	0.641	3.343	70.181	22.697	2.798	0.107	0.204	0.015	0.014	0.000	0.000	0.000	0.000	0.000	1414.80	
16	0.7190	1179.4	1200.2	1199.3	0.650	3.331	70.176	22.589	2.881	0.117	0.226	0.016	0.015	0.000	0.000	0.000	0.000	0.000	1415.48	
17	0.7170	1176.3	1197.1	1196.2	0.677	3.289	70.654	22.114	2.867	0.124	0.241	0.018	0.017	0.000	0.000	0.000	0.000	0.000	1413.75	
18	0.7164	1175.0	1195.8	1194.8	0.667	3.324	70.590	22.307	2.734	0.116	0.228	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1412.83	
19	0.7178	1175.0	1195.8	1195.0	0.739	3.352	70.594	22.023	2.872	0.128	0.253	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1411.37	
20	0.7199	1180.3	1201.2	1200.3	0.681	3.309	70.267	22.291	3.038	0.130	0.248	0.018	0.017	0.000	0.000	0.000	0.000	0.000	1415.72	
21	0.7193	1175.2	1196.0	1195.3	0.987	3.099	70.927	21.443	3.053	0.134	0.303	0.025	0.029	0.000	0.000	0.000	0.000	0.000	1410.17	
22	0.7188	1173.4	1194.2	1193.4	1.070	3.038	71.115	21.250	3.031	0.131	0.309	0.025	0.031	0.000	0.000	0.000	0.000	0.000	1408.46	
23	0.7201	1174.8	1195.6	1194.8	1.067	3.069	70.949	21.316	3.085	0.136	0.320	0.026	0.031	0.000	0.000	0.000	0.000	0.000	1408.99	
24	0.7226	1174.6	1195.4	1194.6	1.089	3.284	70.629	21.238	3.201	0.154	0.343	0.029	0.033	0.000	0.000	0.000	0.000	0.000	1406.29	
25	0.7149	1165.8	1186.5	1185.6	1.099	3.091	71.348	21.363	2.725	0.102	0.233	0.018	0.021	0.000	0.000	0.000	0.000	0.000	1403.19	
26	0.7156	1166.7	1187.4	1186.4	1.104	3.088	71.249	21.438	2.743	0.103	0.236	0.018	0.021	0.000	0.000	0.000	0.000	0.000	1403.67	
27	0.7147	1165.4	1186.1	1185.1	1.102	3.087	71.340	21.432	2.670	0.100	0.230	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1402.98	
28	0.7108	1166.3	1187.0	1186.0	1.084	2.693	72.429	20.577	2.778	0.122	0.271	0.022	0.025	0.000	0.000	0.000	0.000	0.000	1407.87	
29	0.7132	1162.5	1183.1	1182.1	1.115	3.108	71.645	21.121	2.620	0.104	0.242	0.020	0.024	0.000	0.000	0.000	0.000	0.000	1400.89	
30	0.7234	1172.7	1193.5	1192.5	0.968	3.666	70.092	21.626	3.139	0.151	0.307	0.025	0.025	0.000	0.000	0.000	0.000	0.000	1403.19	
Avg	0.7196	1175.0	1195.5	1194.5	0.955	3.202	70.751	21.583	3.052	0.129	0.281	0.022	0.025	0.000	0.000	0.000	0.000	0.000	1409.32	

Gas Composition and Properties

Effective June 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	0.7167		1.5304	Pressure Base	14.730	
Nitrogen, N2	3.3858		4.6020	Temperature Base	60.00	
Methane, C1	71.0291		55.2871	HCDP @ Sample Pressure		
Ethane, C2	21.8363	5.8440	31.8576	Cricondentherm	-4.680	
Propane, C3	2.7137	0.7481	5.8059	HV, Dry @ Base P, T	1189.30	
iso-Butane, iC4	0.0988	0.0324	0.2786	HV, Sat @ Base P, T	1168.60	
n-Butane, nC4	0.1945	0.0614	0.5485	HV, Sat @ Sample P, T	1189.30	
iso-Pentane, iC5	0.0119	0.0044	0.0417	Relative Density	0.7137	
n-Pentane, nC5	0.0103	0.0037	0.0361			
Neo-Pentane, neo						
Hexanes Plus, C6+	0.0029	0.0012	0.0121			
Argon, Ar						
Carbon Monoxide, CO						
Hydrogen, H2						
Oxygen, O2						
Helium, He						
Water, H2O						
Hydrogen Sulfide, H2S						
				C6+: 100		
Totals	100.0000	6.6940	100.0000			

Sample

Date: 06/01/2023 Type:
Tech: Sampson, Wayne
Pressure: Temp.:
Gauge: H2O:
Atm. Pressure: H2S:

Remarks:

Analysis

Date: 06/01/2023 Instrument:
Tech: Sampson, Wayne Cylinder:

Remarks:

Gas Composition and Properties

Effective June 1, 2023

Attachment B
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Source #: 0602225
Name: WATFORD CITY WEST BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.1437		2.3994
Nitrogen, N2	3.8923		5.1977
Methane, C1	70.4904		53.9068
Ethane, C2	20.2381	5.4166	29.0088
Propane, C3	3.4729	0.9575	7.3001
iso-Butane, iC4	0.2083	0.0682	0.5771
n-Butane, nC4	0.4571	0.1442	1.2665
iso-Pentane, iC5	0.0414	0.0152	0.1424
n-Pentane, nC5	0.0420	0.0152	0.1445
Neo-Pentane, neo			
Hexanes Plus, C6+	0.0138	0.0057	0.0567
Argon, Ar			
Carbon Monoxide, CO			
Hydrogen, H2			
Oxygen, O2			
Helium, He			
Water, H2O			
Hydrogen Sulfide, H2S			
Totals	100.0000	6.6230	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure		
Cricondentherm	9.008	
HV, Dry @ Base P, T	1189.84	
HV, Sat @ Base P, T	1169.13	
HV, Sat @ Sample P, T	1189.84	
Relative Density	0.7264	
C6+:		

Sample

Date: 06/01/2023 Type:

Tech: Sampson, Wayne

Pressure: Temp.:

Gauge: H2O:

Atm. Pressure: H2S:

Remarks:

Analysis

Date: 06/01/2023 Instrument:

 Cylinder:

Tech: Sampson, Wayne

Remarks:

Source Daily Summary

June 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	0.7012	1165.2	1185.8	1185.4	0.951	2.063	73.878	20.227	2.571	0.091	0.188	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1416.10	-8.52
2	0.6878	1139.1	1159.2	1158.9	0.863	2.535	75.781	18.521	2.061	0.070	0.146	0.011	0.012	0.000	0.000	0.000	0.000	0.000	1397.72	-17.86
3	0.7010	1160.6	1181.1	1180.8	0.991	2.265	74.151	19.550	2.670	0.110	0.227	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1410.65	-7.70
4	0.7088	1167.5	1188.2	1187.8	1.048	2.487	72.944	20.165	2.946	0.117	0.251	0.019	0.022	0.000	0.000	0.000	0.000	0.000	1411.27	-3.55
5	0.7046	1154.0	1174.5	1174.0	0.956	3.053	73.292	19.663	2.642	0.110	0.243	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1399.24	-7.29
6	0.7004	1157.7	1178.2	1177.8	0.976	2.406	74.130	19.567	2.546	0.106	0.229	0.018	0.021	0.000	0.000	0.000	0.000	0.000	1407.79	-8.36
7	0.7043	1164.1	1184.7	1184.3	0.981	2.374	73.309	20.444	2.524	0.105	0.226	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1411.67	-7.13
8	0.7088	1165.8	1186.4	1186.0	1.040	2.608	72.686	20.540	2.718	0.113	0.251	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1409.18	-4.50
9	0.7072	1165.7	1186.4	1186.0	1.028	2.474	72.919	20.553	2.634	0.111	0.241	0.019	0.022	0.000	0.000	0.000	0.000	0.000	1410.77	-5.46
10	0.7059	1163.8	1184.4	1184.0	1.024	2.482	73.022	20.561	2.539	0.105	0.228	0.018	0.021	0.000	0.000	0.000	0.000	0.000	1409.67	-6.58
11	0.7115	1168.2	1188.9	1188.5	1.008	2.757	72.154	20.891	2.778	0.118	0.252	0.019	0.022	0.000	0.000	0.000	0.000	0.000	1409.50	-3.45
12	0.7101	1168.3	1188.9	1188.6	0.968	2.687	72.290	20.949	2.719	0.112	0.238	0.018	0.020	0.000	0.000	0.000	0.000	0.000	1410.90	-4.42
13	0.7113	1169.4	1190.1	1189.7	0.898	2.835	71.995	21.123	2.767	0.112	0.233	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1411.09	-4.02
14	0.7121	1171.6	1192.3	1191.9	0.881	2.802	71.839	21.315	2.778	0.112	0.235	0.018	0.020	0.000	0.000	0.000	0.000	0.000	1412.95	-3.52
15	0.7113	1170.6	1191.3	1190.9	0.852	2.832	71.940	21.241	2.752	0.112	0.234	0.018	0.020	0.000	0.000	0.000	0.000	0.000	1412.55	-3.90
16	0.7131	1173.3	1194.1	1193.7	0.875	2.802	71.782	21.255	2.867	0.121	0.255	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1414.03	-2.28
17	0.7129	1172.2	1193.0	1192.6	0.890	2.822	71.829	21.173	2.883	0.118	0.247	0.019	0.021	0.000	0.000	0.000	0.000	0.000	1412.95	-2.63
18	0.7120	1171.3	1192.0	1191.6	0.886	2.800	71.986	21.084	2.830	0.120	0.252	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1412.71	-2.93
19	0.7077	1167.2	1187.8	1187.4	0.908	2.615	72.522	21.035	2.565	0.103	0.217	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1412.02	-6.12
20	0.7038	1164.2	1184.9	1184.5	0.910	2.430	72.964	21.093	2.300	0.089	0.186	0.014	0.015	0.000	0.000	0.000	0.000	0.000	1412.35	-9.12
21	0.7016	1162.3	1182.9	1182.5	0.911	2.340	72.995	21.520	1.991	0.071	0.149	0.011	0.012	0.000	0.000	0.000	0.000	0.000	1412.23	-11.93
22	0.7044	1165.7	1186.4	1186.0	0.934	2.370	72.976	21.003	2.397	0.093	0.196	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1413.55	-8.15
23	0.7054	1165.1	1185.7	1185.3	0.962	2.457	72.860	20.966	2.419	0.095	0.206	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1411.78	-7.57
24	0.7003	1161.1	1181.7	1181.3	0.941	2.243	73.608	20.715	2.208	0.082	0.174	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1412.07	-10.89
25	0.6972	1160.5	1181.0	1180.6	0.903	2.050	74.104	20.548	2.130	0.078	0.161	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1414.43	-12.37
26	0.6983	1160.6	1181.2	1180.8	0.911	2.145	73.915	20.577	2.179	0.080	0.167	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1413.45	-11.70
27	0.7003	1161.4	1182.0	1181.5	0.928	2.251	73.634	20.649	2.248	0.085	0.177	0.014	0.015	0.000	0.000	0.000	0.000	0.000	1412.37	-10.59
28	0.6977	1159.1	1179.7	1179.2	0.908	2.174	74.018	20.490	2.131	0.082	0.169	0.013	0.015	0.000	0.000	0.000	0.000	0.000	1412.26	-12.10
29	0.7016	1162.9	1183.5	1183.0	0.941	2.265	73.433	20.776	2.284	0.087	0.183	0.014	0.016	0.000	0.000	0.000	0.000	0.000	1412.94	-9.78
30	0.7081	1165.5	1186.1	1185.7	1.000	2.623	72.599	20.805	2.593	0.109	0.231	0.018	0.021	0.000	0.000	0.000	0.000	0.000	1409.50	-5.63
Avg	0.7050	1164.0	1184.7	1184.3	0.942	2.502	73.052	20.633	2.522	0.100	0.213	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1410.99	-7.34

Source Daily Summary

June 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	0.7483	1164.7	1185.3	1184.5	0.903	6.581	66.659	19.991	5.373	0.164	0.300	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1370.25	
2	0.7469	1165.0	1185.6	1184.9	0.907	6.426	66.910	19.961	5.306	0.161	0.298	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1371.82	
3	0.7488	1166.2	1186.9	1186.0	0.907	6.530	66.668	19.971	5.389	0.175	0.328	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1371.57	
4	0.7510	1169.8	1190.5	1189.6	0.908	6.521	66.410	20.080	5.519	0.183	0.345	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1373.69	
5	0.7255	1146.3	1166.6	1165.8	0.810	5.700	70.495	18.028	4.472	0.155	0.305	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1369.81	
6	0.7436	1162.6	1183.1	1182.2	0.882	6.303	67.645	19.376	5.241	0.172	0.342	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1372.04	
7	0.7503	1170.0	1190.7	1189.8	0.910	6.434	66.694	19.804	5.564	0.184	0.367	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1374.65	
8	0.7448	1170.9	1191.7	1190.9	0.925	5.837	67.486	20.061	5.088	0.182	0.373	0.022	0.025	0.000	0.000	0.000	0.000	0.000	1380.93	
9	0.7450	1171.7	1192.5	1191.8	0.923	5.811	67.359	20.273	5.056	0.178	0.357	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1381.69	
10	0.7504	1169.8	1190.5	1190.0	0.906	6.461	66.597	19.927	5.533	0.183	0.354	0.018	0.020	0.000	0.000	0.000	0.000	0.000	1374.31	
11	0.7536	1175.1	1195.9	1195.3	0.905	6.437	66.205	20.120	5.728	0.191	0.373	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1377.65	
12	0.7503	1171.1	1191.8	1191.1	0.915	6.348	66.593	20.124	5.440	0.182	0.359	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1375.97	
13	0.7496	1168.2	1188.9	1188.1	0.907	6.479	66.678	19.896	5.472	0.180	0.350	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1373.23	
14	0.7424	1167.7	1188.4	1187.5	0.912	5.832	67.543	20.338	4.856	0.164	0.320	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1379.31	
15	0.7501	1168.2	1188.9	1188.3	0.902	6.541	66.475	20.077	5.471	0.174	0.327	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1372.67	
16	0.7517	1170.5	1191.2	1190.7	0.902	6.547	66.270	20.179	5.562	0.175	0.332	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1373.96	
17	0.7548	1176.0	1196.8	1196.1	0.900	6.502	65.905	20.341	5.801	0.178	0.336	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1377.59	
18	0.7536	1174.0	1194.8	1194.0	0.898	6.516	66.042	20.282	5.717	0.175	0.334	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1376.36	
19	0.7486	1172.4	1193.2	1192.5	0.900	6.147	66.690	20.412	5.325	0.168	0.322	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1379.06	
20	0.7483	1169.7	1190.4	1189.7	0.900	6.284	66.714	20.248	5.341	0.166	0.313	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1376.13	
21	0.7523	1172.3	1193.0	1192.5	0.894	6.499	66.207	20.248	5.625	0.173	0.321	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1375.51	
22	0.7560	1178.2	1199.1	1198.5	0.896	6.493	65.770	20.390	5.876	0.186	0.350	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1379.01	
23	0.7525	1170.2	1190.9	1190.3	0.900	6.643	66.144	20.131	5.670	0.166	0.313	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1372.80	
24	0.7460	1165.7	1186.4	1185.8	0.909	6.293	67.077	19.964	5.268	0.156	0.300	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1373.71	
25	0.7430	1164.8	1185.4	1184.8	0.912	6.065	67.423	20.123	5.013	0.149	0.283	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1375.37	
26	0.7506	1169.1	1189.8	1189.1	0.902	6.524	66.423	20.067	5.599	0.157	0.296	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1373.38	
27	0.7518	1166.8	1187.5	1186.7	0.901	6.779	66.239	19.903	5.683	0.163	0.299	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1369.55	
28	0.7307	1155.9	1176.4	1175.6	0.879	5.498	69.457	19.233	4.473	0.143	0.281	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1376.52	
29	0.7424	1163.2	1183.8	1183.0	0.875	6.159	67.693	19.624	5.161	0.157	0.296	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1374.00	
30	0.7528	1171.8	1192.5	1191.7	0.885	6.595	66.130	20.145	5.736	0.169	0.307	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1374.48	
Avg	0.7479	1168.0	1188.9	1188.2	0.899	6.326	66.887	19.977	5.379	0.170	0.326	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1374.90	

Source Daily Summary

June 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	0.7499	1165.5	1186.1	1185.7	0.916	6.658	66.516	19.878	5.522	0.171	0.308	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1369.77	
2	0.7554	1166.9	1187.6	1187.1	0.909	6.751	65.747	20.370	5.542	0.318	0.322	0.025	0.016	0.000	0.000	0.000	0.000	0.000	1366.74	
3	0.7519	1168.2	1188.9	1188.3	0.925	6.675	66.278	19.970	5.588	0.186	0.345	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1371.01	
4	0.7553	1174.6	1195.4	1194.8	0.926	6.602	65.902	20.164	5.793	0.199	0.374	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1375.39	
5	0.7544	1172.1	1192.8	1192.3	0.929	6.661	66.108	19.879	5.815	0.193	0.373	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1373.34	
6	0.7555	1173.8	1194.6	1194.1	0.918	6.674	65.995	19.894	5.882	0.200	0.391	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1374.38	
7	0.7561	1175.5	1196.3	1195.8	0.920	6.623	65.972	19.926	5.887	0.210	0.415	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1375.83	
8	0.7588	1180.6	1201.5	1201.0	0.917	6.569	65.634	20.158	6.015	0.220	0.435	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1379.32	
9	0.7534	1171.4	1192.2	1191.6	0.917	6.622	66.230	19.899	5.719	0.196	0.377	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1373.51	
10	0.7538	1172.0	1192.7	1192.2	0.918	6.626	66.161	19.939	5.744	0.195	0.376	0.019	0.021	0.000	0.000	0.000	0.000	0.000	1373.78	
11	0.7536	1171.6	1192.3	1191.8	0.925	6.618	66.165	19.985	5.701	0.194	0.373	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1373.53	
12	0.7528	1170.1	1190.8	1190.3	0.918	6.650	66.263	19.891	5.677	0.192	0.369	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1372.46	
13	0.7535	1171.1	1191.9	1191.3	0.917	6.650	66.146	19.989	5.699	0.194	0.367	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1373.09	
14	0.7516	1167.9	1188.6	1188.0	0.916	6.672	66.300	19.996	5.559	0.183	0.340	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1371.01	
15	0.7522	1168.2	1188.9	1188.4	0.911	6.720	66.185	20.042	5.583	0.184	0.341	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1370.81	
16	0.7544	1172.6	1193.3	1192.8	0.913	6.652	65.922	20.199	5.769	0.179	0.333	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1373.97	
17	0.7570	1176.9	1197.8	1197.2	0.906	6.641	65.613	20.325	5.947	0.184	0.347	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1376.69	
18	0.7552	1173.8	1194.6	1194.0	0.908	6.663	65.826	20.231	5.809	0.184	0.343	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1374.63	
19	0.7544	1172.6	1193.4	1192.9	0.907	6.663	65.938	20.152	5.784	0.183	0.338	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1373.98	
20	0.7550	1174.2	1195.0	1194.4	0.906	6.628	65.843	20.257	5.810	0.183	0.338	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1375.23	
21	0.7547	1173.2	1194.0	1193.4	0.906	6.657	65.902	20.178	5.799	0.182	0.338	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1374.37	
22	0.7547	1169.7	1190.5	1189.9	0.913	6.856	65.838	20.045	5.822	0.170	0.322	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1370.36	
23	0.7538	1167.5	1188.2	1187.7	0.915	6.905	65.974	19.897	5.782	0.172	0.321	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1368.55	
24	0.7545	1168.9	1189.6	1189.1	0.913	6.883	65.879	19.958	5.856	0.168	0.309	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1369.62	
25	0.7541	1168.3	1188.9	1188.4	0.912	6.894	65.927	19.926	5.828	0.170	0.310	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1369.14	
26	0.7560	1171.8	1192.6	1192.0	0.915	6.847	65.678	20.129	5.893	0.178	0.327	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1371.62	
27	0.7565	1173.2	1194.0	1193.5	0.908	6.818	65.638	20.137	5.959	0.176	0.328	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1372.81	
28	0.7555	1174.6	1195.4	1194.9	0.899	6.659	65.801	20.196	5.895	0.180	0.333	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1375.29	
29	0.7557	1174.0	1194.8	1194.2	0.896	6.716	65.746	20.207	5.894	0.179	0.327	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1374.39	
30	0.7557	1174.4	1195.2	1194.6	0.898	6.696	65.735	20.241	5.883	0.181	0.331	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1374.80	
Avg	0.7545	1172.0	1192.6	1192.1	0.913	6.698	65.962	20.069	5.782	0.190	0.348	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1372.98	

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:

Gas Composition and Properties

Effective June 1, 2023

Attachment B
Page 9 of 24

Source #: 3002013
Name: EPPING BORDER

Component	Mole %	Liquid Content	Mass %	Property	Total Sample	C6 Plus Fraction
Carbon Dioxide, CO2	1.1484		2.4544	Pressure Base	14.730	
Nitrogen, N2	3.1767		4.3217	Temperature Base	60.00	
Methane, C1	71.7754		55.9187	HCDP @ Sample Pressure		
Ethane, C2	20.8027	5.5672	30.3773	Cricondentherm	-3.756	
Propane, C3	2.7124	0.7478	5.8084	HV, Dry @ Base P, T	1180.75	
iso-Butane, iC4	0.1011	0.0331	0.2854	HV, Sat @ Base P, T	1160.20	
n-Butane, nC4	0.2392	0.0755	0.6752	HV, Sat @ Sample P, T	1180.75	
iso-Pentane, iC5	0.0177	0.0065	0.0620	Relative Density	0.7130	
n-Pentane, nC5	0.0200	0.0073	0.0701			
Neo-Pentane, neo						
Hexanes Plus, C6+	0.0064	0.0026	0.0268			
Argon, Ar						
Carbon Monoxide, CO						
Hydrogen, H2						
Oxygen, O2						
Helium, He						
Water, H2O						
Hydrogen Sulfide, H2S						
				C6+: 100		
Totals	100.0000	6.4390	100.0000			

Sample

Date: 06/01/2023 Type:

Tech: Sampson, Wayne

Pressure: Temp.:

Gauge: H2O:

Atm. Pressure: H2S:

Remarks:

Analysis

Date: 06/01/2023 Instrument:

Tech: Sampson, Wayne Cylinder:

Remarks:

*** End of Report ***

Source Daily Summary

June 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	0.7084	1149.2	1169.5	1169.2	0.976	3.682	72.081	20.569	2.307	0.102	0.241	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1389.53	
2	0.7077	1147.7	1168.0	1167.6	0.971	3.708	72.191	20.472	2.279	0.101	0.237	0.018	0.023	0.000	0.000	0.000	0.000	0.000	1388.43	
3	0.7036	1153.5	1173.9	1173.6	0.946	3.005	73.166	20.188	2.306	0.105	0.242	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1399.57	
4	0.7091	1149.1	1169.5	1169.1	0.972	3.746	71.959	20.623	2.311	0.104	0.243	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1388.84	
5	0.7092	1150.4	1170.8	1170.4	0.967	3.701	71.958	20.637	2.343	0.105	0.247	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1390.17	
6	0.7095	1150.5	1170.8	1170.5	0.973	3.710	71.921	20.657	2.339	0.106	0.251	0.020	0.024	0.000	0.000	0.000	0.000	0.000	1390.02	
7	0.7094	1150.6	1171.0	1170.6	0.979	3.678	71.990	20.587	2.363	0.107	0.252	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1390.31	
8	0.7101	1151.1	1171.5	1171.1	0.972	3.731	71.826	20.694	2.377	0.107	0.251	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1390.16	
9	0.7106	1152.1	1172.5	1172.1	0.972	3.713	71.632	20.993	2.306	0.103	0.241	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1390.94	
10	0.7098	1150.8	1171.2	1170.8	0.976	3.714	71.771	20.867	2.288	0.102	0.240	0.018	0.023	0.000	0.000	0.000	0.000	0.000	1390.13	
11	0.7100	1150.4	1170.8	1170.4	0.963	3.774	71.761	20.788	2.325	0.104	0.243	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1389.48	
12	0.7095	1149.8	1170.2	1169.7	0.970	3.752	71.843	20.760	2.289	0.103	0.243	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1389.27	
13	0.7122	1160.5	1181.1	1180.6	0.922	3.423	71.954	20.462	2.783	0.115	0.281	0.026	0.033	0.000	0.000	0.000	0.000	0.000	1399.52	
14	0.7108	1152.9	1173.3	1172.9	0.978	3.674	71.660	20.953	2.344	0.104	0.244	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1391.71	
15	0.7110	1152.9	1173.3	1172.9	0.975	3.699	71.589	21.014	2.334	0.104	0.243	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1391.48	
16	0.7099	1150.5	1170.9	1170.5	0.971	3.746	71.778	20.789	2.330	0.103	0.242	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1389.68	
17	0.7086	1146.5	1166.8	1166.4	0.975	3.857	72.067	20.373	2.339	0.104	0.243	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1386.18	
18	0.7099	1149.3	1169.7	1169.3	0.971	3.818	71.750	20.769	2.308	0.103	0.240	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1388.27	
19	0.7096	1150.2	1170.6	1170.2	0.966	3.748	71.802	20.796	2.310	0.102	0.238	0.018	0.021	0.000	0.000	0.000	0.000	0.000	1389.62	
20	0.7094	1149.3	1169.6	1169.2	0.967	3.778	71.836	20.750	2.288	0.102	0.239	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1388.66	
21	0.7097	1150.2	1170.5	1170.1	0.976	3.740	71.771	20.853	2.283	0.101	0.236	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1389.49	
22	0.7093	1149.8	1170.1	1169.7	0.979	3.729	71.880	20.725	2.306	0.102	0.239	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1389.33	
23	0.7096	1149.8	1170.2	1169.7	0.989	3.735	71.826	20.772	2.298	0.102	0.238	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1389.13	
24	0.7047	1142.2	1162.4	1162.0	0.986	3.741	72.809	19.809	2.273	0.101	0.238	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1384.75	
25	0.7044	1141.4	1161.7	1161.2	0.968	3.786	72.850	19.734	2.281	0.101	0.238	0.018	0.023	0.000	0.000	0.000	0.000	0.000	1384.10	
26	0.7036	1141.0	1161.2	1160.8	0.954	3.763	73.020	19.580	2.302	0.102	0.238	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1384.30	
27	0.7031	1139.1	1159.3	1158.9	0.937	3.854	73.235	19.155	2.423	0.108	0.247	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1382.55	
28	0.7014	1137.0	1157.2	1156.8	0.940	3.817	73.549	18.917	2.382	0.107	0.246	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1381.69	
29	0.7020	1137.7	1157.9	1157.4	0.945	3.820	73.461	18.981	2.399	0.107	0.246	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1381.96	
30	0.7020	1137.5	1157.7	1157.3	0.964	3.800	73.352	19.215	2.286	0.102	0.237	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1381.77	
Avg	0.7079	1148.0	1168.4	1168.0	0.967	3.715	72.210	20.383	2.337	0.104	0.243	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1388.70	

Source Daily Summary

June 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	0.7483	1167.4	1188.0	1186.7	0.868	6.472	66.866	19.718	5.563	0.169	0.316	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1373.38	
2	0.7481	1166.1	1186.8	1185.6	0.869	6.526	66.868	19.727	5.468	0.176	0.337	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1372.11	
3	0.7506	1170.6	1191.3	1190.1	0.871	6.486	66.618	19.809	5.638	0.187	0.361	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1375.04	
4	0.7537	1176.3	1197.2	1196.0	0.870	6.427	66.292	19.941	5.845	0.198	0.388	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1378.96	
5	0.7535	1175.2	1196.0	1194.9	0.870	6.475	66.407	19.709	5.916	0.194	0.391	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1377.86	
6	0.7534	1174.4	1195.2	1194.0	0.868	6.524	66.385	19.614	5.939	0.202	0.410	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1376.97	
7	0.7552	1178.6	1199.5	1198.2	0.872	6.418	66.304	19.724	5.988	0.212	0.434	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1380.32	
8	0.7565	1181.1	1202.1	1201.0	0.869	6.392	66.095	19.913	6.031	0.216	0.437	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1382.07	
9	0.7526	1174.7	1195.5	1194.7	0.868	6.421	66.490	19.780	5.817	0.195	0.390	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1378.12	
10	0.7521	1173.4	1194.2	1193.4	0.868	6.456	66.512	19.786	5.768	0.192	0.382	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1377.01	
11	0.7524	1174.1	1194.9	1194.2	0.873	6.439	66.448	19.867	5.760	0.193	0.384	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1377.52	
12	0.7520	1173.1	1193.8	1192.9	0.871	6.468	66.547	19.723	5.775	0.195	0.386	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1376.65	
13	0.7517	1172.3	1193.1	1192.1	0.870	6.481	66.554	19.751	5.739	0.194	0.377	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1376.13	
14	0.7500	1169.3	1190.0	1189.0	0.868	6.509	66.686	19.752	5.619	0.184	0.351	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1374.14	
15	0.7504	1169.9	1190.6	1189.6	0.865	6.522	66.562	19.888	5.604	0.181	0.347	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1374.39	
16	0.7538	1176.3	1197.1	1196.1	0.863	6.453	66.138	20.117	5.876	0.177	0.344	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1378.80	
17	0.7557	1178.8	1199.7	1198.7	0.858	6.476	65.946	20.135	6.003	0.185	0.361	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1380.11	
18	0.7532	1174.7	1195.5	1194.5	0.860	6.490	66.254	19.996	5.831	0.183	0.352	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1377.58	
19	0.7526	1173.8	1194.6	1193.5	0.860	6.490	66.344	19.930	5.814	0.183	0.347	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1377.06	
20	0.7542	1177.2	1198.0	1196.8	0.858	6.441	66.135	20.086	5.908	0.185	0.354	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1379.49	
21	0.7530	1174.6	1195.4	1194.4	0.858	6.487	66.262	19.992	5.846	0.179	0.342	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1377.58	
22	0.7534	1172.1	1192.8	1191.8	0.865	6.670	66.149	19.902	5.882	0.169	0.332	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1374.22	
23	0.7521	1169.2	1189.9	1188.9	0.865	6.723	66.332	19.738	5.816	0.170	0.327	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1372.05	
24	0.7534	1171.8	1192.6	1191.6	0.865	6.682	66.160	19.854	5.923	0.167	0.320	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1373.98	
25	0.7529	1170.9	1191.6	1190.5	0.866	6.688	66.243	19.799	5.881	0.170	0.322	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1373.32	
26	0.7548	1174.3	1195.1	1194.1	0.865	6.664	66.002	19.942	5.974	0.178	0.342	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1375.59	
27	0.7546	1174.8	1195.6	1194.5	0.858	6.624	66.049	19.923	6.006	0.173	0.334	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1376.34	
28	0.7551	1178.4	1199.3	1198.0	0.851	6.467	66.039	20.052	6.025	0.182	0.351	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1380.05	
29	0.7535	1174.4	1195.2	1193.8	0.847	6.559	66.184	19.961	5.913	0.175	0.330	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1376.88	
30	0.7539	1175.8	1196.6	1195.2	0.851	6.514	66.117	20.060	5.910	0.179	0.338	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1378.07	
Avg	0.7529	1174.0	1194.6	1193.5	0.864	6.515	66.333	19.873	5.836	0.185	0.360	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1376.73	

Source Daily Summary

June 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	0.7500	1166.6	1187.2	1187.0	0.903	6.626	66.492	19.937	5.534	0.172	0.307	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1370.91	
2	0.7499	1167.3	1187.9	1187.7	0.905	6.571	66.560	19.882	5.575	0.170	0.306	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1371.80	
3	0.7493	1165.5	1186.2	1185.9	0.908	6.620	66.602	19.892	5.441	0.179	0.328	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1370.29	
4	0.7525	1171.1	1191.8	1191.6	0.908	6.582	66.254	20.018	5.661	0.190	0.353	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1373.88	
5	0.7549	1175.5	1196.4	1196.1	0.907	6.535	66.032	20.073	5.836	0.200	0.376	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1376.90	
6	0.7553	1175.5	1196.3	1196.0	0.907	6.569	66.058	19.920	5.929	0.196	0.378	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1376.53	
7	0.7549	1174.6	1195.4	1195.1	0.909	6.590	66.158	19.799	5.902	0.202	0.394	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1375.78	
8	0.7574	1179.8	1200.7	1200.4	0.910	6.498	65.889	20.003	6.008	0.216	0.425	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1379.66	
9	0.7571	1179.3	1200.2	1199.9	0.906	6.505	65.870	20.071	5.978	0.213	0.412	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1379.40	
10	0.7535	1173.6	1194.4	1194.1	0.907	6.520	66.265	19.923	5.778	0.195	0.372	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1375.93	
11	0.7540	1173.9	1194.7	1194.5	0.906	6.550	66.187	19.945	5.802	0.197	0.375	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1375.86	
12	0.7542	1174.4	1195.2	1194.9	0.912	6.531	66.140	20.012	5.794	0.197	0.375	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1376.22	
13	0.7531	1171.9	1192.7	1192.4	0.907	6.585	66.278	19.891	5.738	0.194	0.368	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1374.32	
14	0.7530	1171.9	1192.7	1192.4	0.908	6.572	66.240	19.984	5.710	0.192	0.358	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1374.45	
15	0.7518	1169.3	1190.1	1189.8	0.903	6.628	66.302	20.004	5.603	0.186	0.342	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1372.49	
16	0.7517	1169.5	1190.2	1190.0	0.905	6.608	66.299	20.044	5.597	0.181	0.334	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1372.77	
17	0.7562	1177.7	1198.5	1198.3	0.900	6.534	65.782	20.268	5.960	0.182	0.339	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1378.26	
18	0.7559	1176.3	1197.2	1196.9	0.896	6.597	65.796	20.225	5.924	0.184	0.342	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1376.93	
19	0.7551	1175.3	1196.1	1195.8	0.897	6.582	65.895	20.208	5.851	0.187	0.344	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1376.45	
20	0.7539	1173.4	1194.2	1193.9	0.898	6.584	66.039	20.140	5.787	0.183	0.335	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1375.34	
21	0.7559	1177.4	1198.2	1198.0	0.894	6.536	65.793	20.295	5.912	0.188	0.346	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1378.17	
22	0.7536	1172.8	1193.5	1193.3	0.896	6.601	66.063	20.114	5.792	0.177	0.324	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1374.84	
23	0.7543	1170.6	1191.3	1191.0	0.905	6.786	65.937	20.004	5.846	0.170	0.321	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1371.65	
24	0.7539	1169.4	1190.2	1189.9	0.902	6.820	66.013	19.900	5.839	0.173	0.319	0.017	0.016	0.000	0.000	0.000	0.000	0.000	1370.71	
25	0.7552	1172.1	1192.9	1192.6	0.903	6.774	65.847	20.008	5.953	0.171	0.312	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1372.69	
26	0.7535	1169.1	1189.8	1189.5	0.904	6.805	66.041	19.915	5.824	0.171	0.308	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1370.61	
27	0.7564	1174.4	1195.2	1194.9	0.901	6.753	65.693	20.127	5.977	0.180	0.333	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1374.20	
28	0.7559	1174.5	1195.3	1195.0	0.894	6.710	65.768	20.103	5.992	0.174	0.323	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1374.82	
29	0.7565	1177.9	1198.8	1198.5	0.887	6.571	65.729	20.248	6.003	0.185	0.340	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1378.23	
30	0.7544	1173.3	1194.1	1193.8	0.885	6.659	65.920	20.142	5.872	0.175	0.314	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1374.77	
Avg	0.7541	1173.0	1193.9	1193.6	0.902	6.613	66.065	20.036	5.814	0.186	0.347	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1374.83	

Source Daily Summary

June 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	0.7499	1166.5	1187.1	1186.3	0.903	6.626	66.489	19.932	5.563	0.166	0.293	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1370.86	
2	0.7501	1166.9	1187.6	1186.6	0.903	6.615	66.477	19.943	5.565	0.169	0.300	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1371.20	
3	0.7499	1166.7	1187.4	1186.4	0.905	6.607	66.525	19.910	5.548	0.171	0.306	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1371.15	
4	0.7515	1169.5	1190.2	1189.8	0.907	6.578	66.374	19.973	5.616	0.183	0.337	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1373.03	
5	0.7548	1175.2	1196.0	1195.9	0.907	6.543	66.058	20.040	5.835	0.200	0.377	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1376.64	
6	0.7553	1175.6	1196.4	1196.3	0.907	6.570	66.052	19.915	5.936	0.196	0.380	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1376.59	
7	0.7547	1174.0	1194.8	1194.6	0.908	6.598	66.196	19.769	5.887	0.202	0.394	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1375.39	
8	0.7573	1179.7	1200.6	1200.4	0.910	6.501	65.907	19.978	6.010	0.216	0.427	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1379.57	
9	0.7572	1179.5	1200.4	1200.2	0.905	6.508	65.864	20.059	5.987	0.214	0.415	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1379.47	
10	0.7536	1173.6	1194.4	1194.3	0.907	6.525	66.265	19.906	5.785	0.197	0.376	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1375.92	
11	0.7536	1173.1	1193.9	1193.7	0.905	6.563	66.240	19.901	5.782	0.196	0.373	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1375.26	
12	0.7543	1174.5	1195.3	1195.1	0.912	6.533	66.142	19.996	5.801	0.198	0.378	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1376.24	
13	0.7528	1171.3	1192.0	1191.9	0.908	6.596	66.320	19.854	5.722	0.194	0.368	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1373.84	
14	0.7526	1171.2	1191.9	1191.7	0.908	6.583	66.294	19.942	5.691	0.191	0.356	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1373.91	
15	0.7516	1168.7	1189.4	1189.2	0.903	6.643	66.342	19.962	5.591	0.186	0.341	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1371.98	
16	0.7518	1169.6	1190.3	1190.2	0.904	6.607	66.302	20.035	5.599	0.183	0.337	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1372.84	
17	0.7560	1177.2	1198.1	1197.9	0.899	6.546	65.808	20.236	5.956	0.181	0.338	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1377.89	
18	0.7554	1175.4	1196.2	1196.0	0.896	6.610	65.863	20.173	5.898	0.184	0.341	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1376.25	
19	0.7548	1174.6	1195.4	1195.2	0.898	6.594	65.942	20.160	5.839	0.187	0.344	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1375.94	
20	0.7537	1173.0	1193.8	1193.6	0.897	6.590	66.067	20.118	5.777	0.182	0.334	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1375.06	
21	0.7557	1176.9	1197.7	1197.6	0.894	6.548	65.827	20.257	5.904	0.187	0.346	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1377.76	
22	0.7532	1171.7	1192.5	1192.4	0.896	6.621	66.122	20.059	5.770	0.176	0.322	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1374.06	
23	0.7536	1169.2	1189.9	1189.7	0.904	6.806	66.030	19.934	5.804	0.169	0.319	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1370.65	
24	0.7535	1168.7	1189.3	1189.2	0.902	6.832	66.067	19.854	5.822	0.173	0.318	0.017	0.016	0.000	0.000	0.000	0.000	0.000	1370.12	
25	0.7549	1171.5	1192.2	1192.1	0.903	6.787	65.889	19.971	5.938	0.170	0.311	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1372.19	
26	0.7530	1168.1	1188.8	1188.6	0.903	6.820	66.102	19.868	5.797	0.170	0.307	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1369.90	
27	0.7565	1174.6	1195.4	1195.2	0.902	6.752	65.686	20.121	5.987	0.181	0.334	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1374.32	
28	0.7551	1172.8	1193.5	1193.1	0.896	6.737	65.863	20.050	5.924	0.174	0.321	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1373.53	
29	0.7563	1177.5	1198.3	1198.1	0.887	6.579	65.760	20.218	5.994	0.184	0.340	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1377.91	
30	0.7548	1173.9	1194.7	1194.5	0.886	6.656	65.883	20.152	5.896	0.176	0.317	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1375.13	
Avg	0.7539	1173.0	1193.5	1193.2	0.902	6.622	66.092	20.010	5.807	0.185	0.345	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1374.49	

Source Daily Summary

June 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	0.7484	1167.4	1188.1	1186.7	0.869	6.480	66.854	19.715	5.569	0.169	0.317	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1373.32	
2	0.7483	1166.5	1187.2	1185.8	0.869	6.525	66.839	19.742	5.484	0.176	0.336	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1372.35	
3	0.7504	1170.3	1191.0	1189.4	0.871	6.485	66.636	19.806	5.625	0.186	0.359	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1374.90	
4	0.7539	1176.8	1197.6	1196.0	0.870	6.421	66.268	19.960	5.854	0.199	0.390	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1379.27	
5	0.7536	1175.5	1196.3	1195.3	0.870	6.471	66.395	19.719	5.918	0.194	0.392	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1378.02	
6	0.7527	1173.2	1194.0	1193.1	0.868	6.534	66.406	19.596	5.931	0.201	0.407	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1376.21	
7	0.7551	1178.4	1199.3	1198.4	0.872	6.427	66.307	19.718	5.984	0.211	0.433	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1380.11	
8	0.7575	1183.1	1204.0	1203.1	0.869	6.370	65.988	19.960	6.095	0.220	0.448	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1383.40	
9	0.7526	1174.7	1195.5	1194.8	0.868	6.426	66.480	19.789	5.814	0.195	0.389	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1378.08	
10	0.7523	1173.7	1194.5	1193.8	0.868	6.453	66.494	19.795	5.777	0.192	0.383	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1377.25	
11	0.7527	1174.6	1195.4	1194.7	0.873	6.435	66.411	19.888	5.777	0.194	0.386	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1377.86	
12	0.7522	1173.5	1194.2	1193.4	0.871	6.460	66.528	19.735	5.785	0.195	0.387	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1376.95	
13	0.7519	1172.7	1193.5	1192.6	0.870	6.479	66.531	19.758	5.752	0.195	0.379	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1376.35	
14	0.7500	1169.7	1190.4	1189.5	0.871	6.488	66.688	19.762	5.625	0.184	0.351	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1374.54	
15	0.7524	1173.8	1194.6	1193.8	0.868	6.463	66.390	19.948	5.727	0.192	0.375	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1377.19	
16	0.7536	1175.7	1196.6	1195.9	0.865	6.465	66.200	20.040	5.864	0.180	0.352	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1378.34	
17	0.7561	1179.8	1200.7	1199.9	0.858	6.461	65.894	20.168	6.033	0.186	0.363	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1380.80	
18	0.7532	1174.7	1195.5	1194.5	0.860	6.494	66.249	19.999	5.830	0.183	0.352	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1377.52	
19	0.7531	1174.8	1195.6	1194.7	0.860	6.480	66.286	19.957	5.847	0.184	0.351	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1377.71	
20	0.7540	1176.9	1197.7	1196.7	0.858	6.443	66.153	20.081	5.895	0.184	0.353	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1379.30	
21	0.7536	1175.7	1196.5	1195.7	0.859	6.472	66.205	20.027	5.876	0.181	0.347	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1378.33	
22	0.7537	1172.6	1193.3	1192.6	0.864	6.666	66.118	19.920	5.896	0.169	0.334	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1374.57	
23	0.7521	1169.3	1190.0	1189.3	0.866	6.714	66.336	19.747	5.810	0.169	0.327	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1372.16	
24	0.7533	1171.7	1192.4	1191.8	0.864	6.681	66.177	19.848	5.912	0.167	0.319	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1373.91	
25	0.7533	1171.6	1192.4	1191.5	0.866	6.680	66.199	19.821	5.909	0.171	0.323	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1373.83	
26	0.7546	1173.9	1194.7	1193.9	0.865	6.667	66.025	19.934	5.958	0.177	0.340	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1375.32	
27	0.7548	1175.2	1196.0	1195.1	0.859	6.624	66.022	19.939	6.013	0.174	0.336	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1376.54	
28	0.7552	1178.5	1199.4	1198.5	0.851	6.467	66.028	20.054	6.033	0.181	0.350	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1380.11	
29	0.7538	1175.1	1195.9	1195.0	0.847	6.550	66.144	19.978	5.939	0.177	0.333	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1377.40	
30	0.7542	1176.2	1197.0	1196.2	0.851	6.511	66.090	20.070	5.927	0.180	0.339	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1378.37	
Avg	0.7531	1174.0	1195.0	1194.1	0.865	6.510	66.311	19.882	5.849	0.186	0.362	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1377.00	

Source Daily Summary

June 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	0.6487	1074.7	1093.7	1092.9	0.917	2.707	82.438	12.817	1.033	0.032	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1357.85
2	0.6481	1077.1	1096.1	1095.5	0.918	2.499	82.404	13.250	0.852	0.028	0.048	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1361.58
3	0.6504	1079.4	1098.5	1097.7	0.920	2.569	81.874	13.750	0.820	0.024	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1362.13
4	0.6531	1082.6	1101.8	1101.1	0.928	2.618	81.435	14.027	0.903	0.032	0.055	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1363.33
5	0.6537	1083.7	1102.9	1102.0	0.939	2.595	81.360	14.084	0.930	0.033	0.057	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1364.03
6	0.6526	1081.7	1100.8	1099.9	0.931	2.625	81.563	13.872	0.915	0.032	0.060	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1362.64
7	0.6525	1082.1	1101.2	1100.4	0.921	2.598	81.647	13.769	0.974	0.031	0.058	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1363.33
8	0.6559	1085.4	1104.6	1103.8	0.925	2.718	81.101	14.020	1.134	0.036	0.065	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1363.86
9	0.6558	1087.3	1106.5	1105.9	0.918	2.601	81.115	14.164	1.090	0.040	0.066	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1366.38
10	0.6527	1082.4	1101.6	1101.1	0.918	2.601	81.556	13.893	0.950	0.029	0.052	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1363.56
11	0.6579	1087.8	1107.1	1106.5	0.952	2.713	80.536	14.733	0.985	0.029	0.052	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1364.91
12	0.6613	1092.4	1111.7	1111.1	0.950	2.760	79.738	15.566	0.917	0.024	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1367.10
13	0.6567	1087.8	1107.1	1106.3	0.905	2.675	80.583	14.916	0.852	0.025	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1366.12
14	0.6583	1089.7	1109.0	1108.2	0.912	2.701	80.344	15.046	0.918	0.027	0.051	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1366.82
15	0.6573	1088.3	1107.6	1107.1	0.905	2.704	80.452	15.011	0.867	0.022	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1366.11
16	0.6554	1085.6	1104.8	1104.3	0.903	2.691	80.809	14.698	0.838	0.022	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1364.71
17	0.6588	1090.9	1110.2	1109.5	0.933	2.640	80.286	15.134	0.929	0.027	0.049	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1367.81
18	0.6581	1090.0	1109.4	1108.6	0.939	2.617	80.327	15.208	0.843	0.024	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1367.50
19	0.6585	1090.6	1109.9	1109.1	0.949	2.613	80.296	15.183	0.892	0.024	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1367.66
20	0.6613	1094.7	1114.1	1113.4	0.957	2.610	79.780	15.652	0.933	0.024	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.96
21	0.6607	1094.4	1113.8	1113.2	0.951	2.583	79.887	15.590	0.919	0.025	0.044	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.19
22	0.6607	1095.4	1114.8	1114.3	0.928	2.550	79.931	15.556	0.963	0.026	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1371.53
23	0.6604	1094.0	1113.4	1112.9	0.936	2.600	79.881	15.643	0.875	0.024	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.04
24	0.6597	1092.8	1112.2	1111.7	0.943	2.595	80.059	15.448	0.880	0.026	0.048	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1369.29
25	0.6603	1092.5	1111.8	1111.1	0.967	2.635	79.820	15.736	0.786	0.020	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1368.27
26	0.6605	1093.1	1112.5	1111.7	0.962	2.625	79.821	15.706	0.825	0.022	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1368.83
27	0.6589	1089.9	1109.2	1108.5	0.970	2.661	80.050	15.524	0.745	0.018	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1366.39
28	0.6562	1086.1	1105.3	1104.7	0.964	2.648	80.695	14.814	0.816	0.023	0.041	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1364.42
29	0.6571	1085.3	1104.5	1103.8	0.979	2.754	80.579	14.740	0.881	0.024	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1362.56
30	0.6592	1087.7	1107.0	1106.4	0.953	2.838	80.291	14.818	1.020	0.028	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1363.46
Avg	0.6567	1088.0	1106.8	1106.1	0.936	2.645	80.689	14.746	0.910	0.027	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1365.75

Source Daily Summary

June 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	0.6568	1087.1	1106.4	1105.8	1.088	2.444	81.451	13.529	1.329	0.051	0.095	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1365.15	
2	0.6593	1092.1	1111.4	1110.8	1.081	2.383	80.916	14.162	1.307	0.049	0.090	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1368.82	
3	0.6611	1095.3	1114.7	1114.0	1.068	2.382	80.480	14.649	1.274	0.047	0.087	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1370.92	
4	0.6626	1096.0	1115.4	1114.7	1.075	2.466	80.188	14.843	1.279	0.049	0.088	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1370.27	
5	0.6639	1098.1	1117.5	1116.8	1.085	2.447	80.036	14.914	1.354	0.053	0.097	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1371.53	
6	0.6641	1097.9	1117.4	1116.6	1.086	2.471	80.012	14.901	1.361	0.054	0.100	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1371.17	
7	0.6649	1101.9	1121.4	1120.9	0.943	2.530	79.561	15.547	1.270	0.047	0.091	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1375.21	
8	0.6672	1105.0	1124.6	1124.1	0.950	2.543	79.204	15.778	1.373	0.049	0.092	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1376.78	
9	0.6693	1108.5	1128.1	1127.5	0.970	2.496	78.922	15.989	1.457	0.054	0.098	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1378.91	
10	0.6695	1108.4	1128.1	1127.5	1.024	2.432	79.019	15.842	1.506	0.058	0.104	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1378.70	
11	0.6684	1106.0	1125.6	1125.0	1.031	2.471	79.142	15.744	1.451	0.052	0.096	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1376.77	
12	0.6718	1107.7	1127.3	1126.7	1.063	2.640	78.430	16.273	1.441	0.050	0.091	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1375.37	
13	0.6689	1104.4	1123.9	1123.4	1.051	2.588	78.889	15.992	1.337	0.046	0.083	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1374.22	
14	0.6672	1104.2	1123.7	1123.1	0.948	2.599	78.953	16.180	1.200	0.039	0.071	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1375.71	
15	0.6708	1110.3	1130.0	1129.4	0.921	2.602	78.290	16.785	1.272	0.042	0.078	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1379.66	
16	0.6729	1115.6	1135.3	1134.7	0.841	2.597	77.747	17.445	1.246	0.040	0.073	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1384.10	
17	0.6706	1109.6	1129.3	1128.7	0.961	2.561	78.481	16.504	1.351	0.046	0.084	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1379.06	
18	0.6698	1106.0	1125.6	1125.0	1.078	2.531	78.781	16.100	1.363	0.048	0.088	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1375.35	
19	0.6682	1103.2	1122.8	1122.2	1.092	2.526	79.095	15.808	1.335	0.047	0.086	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1373.57	
20	0.6685	1104.3	1123.9	1123.2	1.085	2.500	79.035	15.888	1.354	0.045	0.082	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1374.58	
21	0.6698	1105.9	1125.5	1124.9	1.084	2.533	78.741	16.161	1.342	0.045	0.083	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1375.17	
22	0.6700	1107.9	1127.5	1126.9	1.062	2.463	78.714	16.256	1.367	0.045	0.083	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1377.45	
23	0.6703	1108.3	1127.9	1127.3	1.056	2.476	78.644	16.320	1.365	0.046	0.083	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1377.64	
24	0.6721	1109.8	1129.5	1128.9	1.073	2.520	78.355	16.508	1.390	0.050	0.092	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1377.76	
25	0.6709	1109.9	1129.6	1129.0	0.983	2.540	78.244	16.915	1.198	0.039	0.071	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1379.09	
26	0.6733	1112.4	1132.1	1131.5	1.028	2.546	77.918	17.081	1.291	0.044	0.080	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1379.72	
27	0.6729	1109.7	1129.3	1128.7	1.127	2.527	78.196	16.639	1.364	0.048	0.087	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1376.70	
28	0.6690	1103.6	1123.1	1122.5	1.116	2.552	78.861	16.058	1.277	0.044	0.081	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1373.08	
29	0.6683	1101.6	1121.1	1120.4	1.126	2.584	79.095	15.722	1.326	0.047	0.087	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1371.39	
30	0.6701	1104.7	1124.3	1123.6	1.152	2.526	78.835	15.946	1.387	0.050	0.092	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1373.41	
Avg	0.6681	1105.0	1124.1	1123.5	1.042	2.516	79.074	15.883	1.339	0.047	0.087	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1375.24	

Source Daily Summary

June 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	0.6871	1156.7	1177.2	1175.5	0.000	2.724	73.009	23.749	0.502	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.11	-26.00
2	0.6877	1157.3	1177.8	1175.9	0.000	2.745	72.929	23.758	0.552	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.21	-25.56
3	0.6875	1157.3	1177.8	1176.2	0.000	2.719	72.908	23.881	0.478	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.53	-25.89
4	0.6875	1157.4	1177.9	1176.3	0.000	2.715	72.913	23.875	0.483	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.61	-25.87
5	0.6874	1156.7	1177.2	1175.6	0.000	2.752	72.914	23.848	0.473	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.80	-26.03
6	0.6870	1156.5	1176.9	1175.1	0.000	2.729	73.000	23.780	0.478	0.005	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.92	-26.17
7	0.6873	1157.0	1177.5	1175.6	0.000	2.720	73.041	23.656	0.568	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.31	-25.68
8	0.6901	1161.9	1182.5	1180.7	0.000	2.684	72.636	23.949	0.705	0.009	0.016	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1423.43	-23.57
9	0.6905	1162.5	1183.1	1181.6	0.000	2.682	72.592	23.962	0.738	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1423.80	-23.24
10	0.6897	1161.5	1182.1	1180.5	0.000	2.674	72.657	23.983	0.670	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.33	-23.97
11	0.6903	1162.5	1183.1	1181.5	0.000	2.667	72.610	23.982	0.717	0.009	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.95	-23.39
12	0.6902	1161.7	1182.2	1180.8	0.000	2.704	72.644	23.893	0.734	0.009	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.09	-23.48
13	0.6902	1162.1	1182.6	1181.0	0.000	2.688	72.649	23.883	0.756	0.009	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.49	-23.31
14	0.6902	1162.5	1183.1	1181.4	0.000	2.661	72.722	23.777	0.814	0.009	0.016	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1424.01	-23.03
15	0.6890	1160.3	1180.8	1179.2	0.000	2.680	72.806	23.830	0.668	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.57	-24.37
16	0.6901	1162.0	1182.6	1181.1	0.000	2.681	72.658	23.899	0.738	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1423.53	-23.41
17	0.6905	1162.7	1183.2	1181.9	0.000	2.672	72.628	23.900	0.774	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1423.98	-23.10
18	0.6904	1162.6	1183.2	1181.7	0.000	2.671	72.693	23.784	0.826	0.009	0.016	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1423.95	-22.93
19	0.6900	1161.6	1182.1	1180.5	0.000	2.694	72.698	23.832	0.751	0.008	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1423.14	-23.47
20	0.6899	1161.7	1182.2	1180.7	0.000	2.681	72.729	23.794	0.774	0.008	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.33	-23.46
21	0.6889	1160.3	1180.9	1179.2	0.000	2.668	72.860	23.755	0.691	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1422.74	-24.13
22	0.6895	1161.5	1182.0	1180.2	0.000	2.653	72.803	23.771	0.748	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1423.54	-23.64
23	0.6884	1159.8	1180.3	1178.4	0.000	2.649	73.033	23.543	0.750	0.008	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1422.65	-24.18
24	0.6873	1158.1	1178.7	1176.9	0.000	2.647	73.270	23.296	0.761	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1421.73	-24.67
25	0.6885	1160.2	1180.7	1179.0	0.000	2.640	73.000	23.585	0.758	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.95	-24.19
26	0.6871	1157.8	1178.3	1176.7	0.000	2.650	73.322	23.220	0.779	0.009	0.017	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1421.53	-24.66
27	0.6856	1155.5	1176.0	1174.4	0.000	2.648	73.582	23.016	0.729	0.009	0.015	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1420.25	-25.68
28	0.6867	1157.4	1177.8	1176.2	0.000	2.638	73.291	23.386	0.664	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.41	-25.39
29	0.6858	1155.9	1176.3	1174.8	0.000	2.644	73.476	23.195	0.663	0.008	0.013	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1420.50	-25.85
30	0.6855	1155.8	1176.2	1174.8	0.000	2.622	73.550	23.133	0.673	0.008	0.013	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1420.70	-25.91
Avg	0.6885	1160.0	1180.1	1178.4	0.000	2.680	72.921	23.697	0.680	0.008	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.17	-24.47

Source Daily Summary

June 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	0.5722	962.7	979.8	978.8	0.109	3.560	96.008	0.299	0.016	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.18
2	0.5731	963.8	980.9	979.9	0.114	3.560	95.855	0.438	0.024	0.008	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.78
3	0.6100	1009.6	1027.5	1026.5	0.366	3.868	88.925	6.404	0.394	0.015	0.025	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1315.30
4	0.6051	1009.5	1027.4	1026.3	0.477	3.243	90.311	5.378	0.527	0.024	0.034	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1320.67
5	0.5981	998.3	1015.9	1014.8	0.402	3.384	91.481	4.290	0.392	0.020	0.026	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1313.58
6	0.6120	1020.3	1038.3	1037.1	0.550	3.120	89.126	6.499	0.628	0.028	0.043	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1327.22
7	0.6234	1038.9	1057.3	1056.1	0.658	2.897	87.088	8.506	0.760	0.031	0.052	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1339.02
8	0.5725	963.2	980.2	979.2	0.113	3.554	95.956	0.348	0.020	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.48
9	0.5723	962.8	979.9	979.1	0.109	3.563	95.992	0.310	0.017	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.20
10	0.5722	962.6	979.7	979.1	0.108	3.567	96.006	0.295	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1295.05
11	0.5942	995.0	1012.6	1012.0	0.337	3.316	92.145	3.839	0.322	0.018	0.021	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1313.44
12	0.6206	1033.3	1051.6	1050.8	0.612	3.048	87.566	7.942	0.741	0.032	0.051	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1334.80
13	0.6253	1040.3	1058.7	1057.8	0.657	2.990	86.905	8.408	0.922	0.040	0.068	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1338.83
14	0.6082	1014.1	1032.1	1031.2	0.481	3.242	89.833	5.727	0.635	0.030	0.045	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1323.34
15	0.6309	1049.0	1067.6	1067.2	0.709	2.902	85.947	9.293	1.023	0.043	0.072	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1344.11
16	0.6290	1044.8	1063.3	1062.8	0.675	3.035	86.108	9.174	0.904	0.036	0.060	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1340.74
17	0.6290	1044.7	1063.2	1062.4	0.658	3.067	86.010	9.330	0.841	0.033	0.054	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1340.57
18	0.6275	1043.1	1061.6	1060.5	0.653	3.034	86.277	9.130	0.812	0.032	0.053	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1340.07
19	0.6278	1043.0	1061.4	1060.2	0.659	3.059	86.309	8.987	0.882	0.036	0.058	0.005	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1339.61
20	0.6342	1052.5	1071.1	1070.3	0.720	2.986	85.325	9.770	1.069	0.044	0.075	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1345.02
21	0.6347	1053.7	1072.4	1071.8	0.727	2.945	85.153	10.049	1.008	0.040	0.068	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1346.11
22	0.6276	1043.3	1061.8	1061.2	0.652	3.033	86.317	9.038	0.859	0.034	0.057	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1340.25
23	0.6251	1039.8	1058.2	1057.8	0.633	3.039	86.675	8.811	0.756	0.030	0.049	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1338.45
24	0.6379	1058.7	1077.4	1077.0	0.756	2.901	84.417	10.898	0.928	0.034	0.057	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1349.06
25	0.6409	1062.9	1081.7	1080.7	0.773	2.907	83.845	11.409	0.963	0.034	0.059	0.005	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1351.16
26	0.6391	1061.4	1080.2	1079.5	0.761	2.847	84.161	11.204	0.931	0.033	0.055	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1351.14
27	0.6340	1053.5	1072.1	1071.3	0.707	2.930	85.142	10.198	0.923	0.034	0.057	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1346.45
28	0.6234	1037.3	1055.7	1054.7	0.611	3.065	86.972	8.538	0.733	0.029	0.046	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1337.04
29	0.6182	1029.8	1048.1	1046.9	0.560	3.112	87.907	7.665	0.675	0.029	0.045	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1332.91
30	0.5801	974.1	991.4	990.2	0.157	3.534	94.694	1.443	0.131	0.015	0.010	0.007	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1301.56
Avg	0.6133	1022.0	1040.3	1039.4	0.517	3.177	88.815	6.787	0.628	0.027	0.041	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1328.24

Gas Composition and Properties

Effective June 1, 2023

Attachment B
Page 19 of 24

Source #: 2702230
Name: WATFORD CITY EAST BORDER

Component	Mole %	Liquid Content	Mass %	Property	Total Sample	C6 Plus Fraction
Carbon Dioxide, CO2	1.3126		3.0769	Pressure Base	14.730	
Nitrogen, N2	2.9440		4.3927	Temperature Base	60.00	
Methane, C1	81.9641		70.0364	HCDP @ Sample Pressure		
Ethane, C2	13.2318	3.5388	21.1917	Cricondentherm	-52.346	
Propane, C3	0.5256	0.1448	1.2345	HV, Dry @ Base P, T	1081.20	4755.9000
iso-Butane, iC4	0.0088	0.0029	0.0272	HV, Sat @ Base P, T	1062.38	
n-Butane, nC4	0.0131	0.0041	0.0406	HV, Sat @ Sample P, T	1081.20	
iso-Pentane, iC5				Relative Density	0.6497	0.66406
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	3.6910	100.0000			

Sample

Date: 06/01/2023 Type:
Tech: Sampson, Wayne
Pressure: Temp.:
Gauge: H2O:
Atm. Pressure: H2S:

Remarks:

Analysis

Date: 06/01/2023 Instrument:
 Cylinder:
Tech: Sampson, Wayne

Remarks:

June-23

ZONE 550

MANDAN BORDER

NBPL - St Anthony

WBI - Mandan Border

Weighted

Start Date	End Date	MCF	DK	BTU	MCF	DK	BTU Zone 28	AVG BTU	
6/1/2023	6/2/2023	740	804	1086.2	17	21	1193.7	1088.614	6/1/2023
6/2/2023	6/3/2023	756	825	1090.8	3	4	1196	1091.216	6/2/2023
6/3/2023	6/4/2023	731	798	1092.7	0	0	1191	1092.700	6/3/2023
6/4/2023	6/5/2023	769	844	1096.9	0	0	1197.6	1096.900	6/4/2023
6/5/2023	6/6/2023	182	200	1097.5	800	956	1195.6	1177.419	6/5/2023
6/6/2023	6/7/2023	0	0	0	830	991	1194	1194.000	6/6/2023
6/7/2023	6/8/2023	4,998	5,494	1098.2	893	1,070	1199.3	1113.525	6/7/2023
6/8/2023	6/9/2023	0	0	0	834	1,005	1204	1204.000	6/8/2023
6/9/2023	6/10/2023	0	0	0	825	987	1195.5	1195.500	6/9/2023
6/10/2023	6/11/2023	0	0	0	804	961	1194.5	1194.500	6/10/2023
6/11/2023	6/12/2023	0	0	0	841	1,005	1195.4	1195.400	6/11/2023
6/12/2023	6/13/2023	0	0	0	834	996	1194.2	1194.200	6/12/2023
6/13/2023	6/14/2023	0	0	0	842	1,004	1193.5	1193.500	6/13/2023
6/14/2023	6/15/2023	8,039	8,884	1104.9	828	986	1190.4	1112.884	6/14/2023
6/15/2023	6/16/2023	0	0	0	862	1,029	1194.6	1194.600	6/15/2023
6/16/2023	6/17/2023	0	0	0	912	1,091	1196.6	1196.600	6/16/2023
6/17/2023	6/18/2023	0	0	0	797	958	1200.7	1200.700	6/17/2023
6/18/2023	6/19/2023	0	0	0	759	908	1195.5	1195.500	6/18/2023
6/19/2023	6/20/2023	0	0	0	935	1,119	1195.6	1195.600	6/19/2023
6/20/2023	6/21/2023	0	0	0	839	1,005	1197.7	1197.700	6/20/2023
6/21/2023	6/22/2023	0	0	0	891	1,066	1196.5	1196.500	6/21/2023
6/22/2023	6/23/2023	0	0	0	950	1,134	1193.3	1193.300	6/22/2023
6/23/2023	6/24/2023	1	1	1110.6	920	1,094	1190	1189.914	6/23/2023
6/24/2023	6/25/2023	0	0	0	960	1,144	1192.4	1192.400	6/24/2023
6/25/2023	6/26/2023	359	398	1108.5	873	1,041	1192.4	1167.952	6/25/2023
6/26/2023	6/27/2023	9,502	10,526	1107.2	970	1,159	1194.7	1115.305	6/26/2023
6/27/2023	6/28/2023	7,601	8,374	1102.5	887	1,062	1196	1112.271	6/27/2023
6/28/2023	6/29/2023	13,425	14,732	1097.5	891	1,068	1199.4	1103.842	6/28/2023
6/29/2023	6/30/2023	15,303	16,778	1096.3	882	1,054	1195.9	1101.728	6/29/2023
6/30/2023	7/1/2023	11,449	12,556	1096.5	793	949	1197	1103.010	6/30/2023
		73,855	81,214	512.8767	22,472	26,867	1195.4333	1160.0426	



Alliance Pipeline

DAILY ANALYSIS --- USA
 ND07MD1 --- Hankinson Sales
 June 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	1,156.045	0.6591	84.8617	9.2488	3.5848	0.3694	0.6602	0.0601	0.0501	0.0226	0.8183	0.3132	0.0107
2	1,157.076	0.6602	84.6900	9.3562	3.5899	0.3736	0.6707	0.0640	0.0528	0.0222	0.8336	0.3356	0.0114
3	1,157.470	0.6607	84.6189	9.3990	3.5925	0.3750	0.6756	0.0646	0.0535	0.0227	0.8479	0.3391	0.0113
4	1,156.471	0.6608	84.5596	9.4336	3.5952	0.3681	0.6584	0.0607	0.0506	0.0224	0.8685	0.3720	0.0109
5	1,155.512	0.6599	84.6001	9.5054	3.5375	0.3579	0.6403	0.0587	0.0485	0.0205	0.8539	0.3664	0.0106
6	1,158.969	0.6624	84.3894	9.4712	3.6793	0.3756	0.6919	0.0620	0.0519	0.0217	0.8866	0.3600	0.0105
7	1,160.878	0.6646	84.0132	9.6726	3.7616	0.3752	0.6966	0.0607	0.0511	0.0214	0.9828	0.3550	0.0098
8	1,156.627	0.6607	84.5121	9.5436	3.5755	0.3600	0.6462	0.0591	0.0495	0.0214	0.8545	0.3677	0.0103
9	1,154.701	0.6591	84.7853	9.3738	3.5065	0.3631	0.6469	0.0589	0.0492	0.0209	0.8186	0.3668	0.0099
10	1,154.573	0.6591	84.7336	9.4492	3.4763	0.3602	0.6360	0.0616	0.0519	0.0221	0.8321	0.3669	0.0101
11	1,150.525	0.6564	85.0827	9.2790	3.3700	0.3461	0.6028	0.0573	0.0490	0.0220	0.8017	0.3791	0.0103
12	1,152.802	0.6585	84.8003	9.4156	3.4245	0.3536	0.6302	0.0597	0.0497	0.0228	0.8453	0.3886	0.0095
13	1,159.356	0.6622	84.3856	9.5609	3.6187	0.3798	0.6835	0.0645	0.0557	0.0268	0.8733	0.3406	0.0107
14	1,160.865	0.6641	84.1519	9.5511	3.7525	0.3813	0.7171	0.0616	0.0510	0.0229	0.9528	0.3467	0.0111
15	1,156.545	0.6601	84.5998	9.4967	3.5538	0.3624	0.6560	0.0589	0.0497	0.0217	0.8554	0.3343	0.0112
16	1,163.592	0.6651	84.1182	9.5984	3.7801	0.4023	0.7221	0.0672	0.0573	0.0266	0.8523	0.3641	0.0113
17	1,158.609	0.6620	84.4668	9.4958	3.5795	0.3825	0.6838	0.0703	0.0593	0.0289	0.8515	0.3724	0.0092
18	1,158.120	0.6620	84.4423	9.5259	3.5650	0.3751	0.6857	0.0678	0.0570	0.0283	0.8581	0.3853	0.0095
19	1,156.727	0.6609	84.5253	9.5248	3.5142	0.3668	0.6793	0.0650	0.0534	0.0246	0.8717	0.3648	0.0103
20	1,155.949	0.6602	84.6363	9.4682	3.4840	0.3667	0.6690	0.0652	0.0561	0.0265	0.8546	0.3627	0.0107
21	1,156.609	0.6597	84.6851	9.5410	3.4342	0.3694	0.6554	0.0690	0.0609	0.0295	0.8000	0.3451	0.0105
22	1,157.710	0.6607	84.5526	9.4919	3.6749	0.3529	0.5919	0.0668	0.0597	0.0291	0.8318	0.3381	0.0104
23	1,156.630	0.6595	84.8283	9.3569	3.4770	0.3772	0.6691	0.0692	0.0615	0.0299	0.7816	0.3395	0.0097
24	1,158.476	0.6614	84.6728	9.2583	3.6238	0.3862	0.7121	0.0676	0.0579	0.0290	0.8250	0.3574	0.0099
25	1,156.861	0.6605	84.7207	9.2853	3.5694	0.3820	0.6909	0.0659	0.0543	0.0259	0.8433	0.3523	0.0101
26	1,156.883	0.6600	84.7917	9.2684	3.5532	0.3813	0.6855	0.0671	0.0562	0.0277	0.8241	0.3348	0.0099
27	1,155.884	0.6592	84.8670	9.2817	3.5052	0.3732	0.6687	0.0677	0.0571	0.0273	0.8129	0.3290	0.0103
28	1,159.286	0.6619	84.5144	9.4297	3.6126	0.3860	0.6992	0.0700	0.0589	0.0277	0.8554	0.3354	0.0106
29	1,155.252	0.6585	84.8309	9.4811	3.4107	0.3639	0.6372	0.0674	0.0568	0.0261	0.7852	0.3298	0.0109
30	1,158.679	0.6609	84.7022	9.3191	3.5970	0.3850	0.6943	0.0699	0.0597	0.0282	0.8044	0.3293	0.0109
Volume	1,157.109	0.6607	84.6046	9.4363	3.5665	0.3716	0.6684	0.0642	0.0543	0.0249	0.8460	0.3526	0.0104
Weight Avg Energy	1,157.115	0.6607	84.6042	9.4364	3.5667	0.3717	0.6684	0.0642	0.0543	0.0249	0.8461	0.3526	0.0104



Alliance Pipeline

DAILY ANALYSIS --- USA
 ND14MD1 --- Milnor Sales
 June 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	1,156.177	0.6591	84.8420	9.2817	3.5802	0.3681	0.6572	0.0600	0.0501	0.0228	0.8153	0.3117	0.0109
2	1,157.789	0.6606	84.6406	9.3908	3.6034	0.3751	0.6741	0.0647	0.0537	0.0227	0.8298	0.3336	0.0115
3	1,158.908	0.6614	84.5754	9.3896	3.6369	0.3825	0.6908	0.0664	0.0552	0.0233	0.8393	0.3295	0.0111
4	1,155.435	0.6603	84.5958	9.4316	3.5718	0.3613	0.6499	0.0584	0.0481	0.0209	0.8791	0.3723	0.0108
5	1,155.342	0.6598	84.6186	9.4928	3.5317	0.3583	0.6395	0.0590	0.0488	0.0206	0.8528	0.3671	0.0107
6	1,159.138	0.6625	84.3850	9.4666	3.6821	0.3770	0.6950	0.0627	0.0526	0.0220	0.8872	0.3592	0.0105
7	1,160.429	0.6640	84.0473	9.7214	3.7147	0.3708	0.6825	0.0612	0.0518	0.0232	0.9698	0.3473	0.0100
8	1,156.910	0.6610	84.4671	9.5695	3.5837	0.3602	0.6489	0.0590	0.0493	0.0211	0.8616	0.3693	0.0103
9	1,154.753	0.6591	84.7868	9.3675	3.5089	0.3639	0.6480	0.0592	0.0494	0.0211	0.8184	0.3671	0.0099
10	1,155.025	0.6597	84.6683	9.4603	3.4992	0.3629	0.6409	0.0627	0.0531	0.0220	0.8495	0.3711	0.0101
11	1,148.759	0.6556	85.2051	9.1889	3.3304	0.3411	0.6014	0.0560	0.0471	0.0207	0.7970	0.4019	0.0102
12	1,154.075	0.6593	84.6878	9.4747	3.4603	0.3576	0.6378	0.0603	0.0505	0.0232	0.8595	0.3787	0.0096
13	1,160.009	0.6626	84.3674	9.5304	3.6528	0.3829	0.6946	0.0646	0.0562	0.0273	0.8774	0.3357	0.0107
14	1,160.276	0.6639	84.1460	9.5706	3.7394	0.3768	0.7103	0.0604	0.0494	0.0217	0.9649	0.3494	0.0111
15	1,156.520	0.6599	84.6489	9.4749	3.5432	0.3646	0.6552	0.0597	0.0505	0.0221	0.8352	0.3343	0.0113
16	1,164.153	0.6656	84.0591	9.6162	3.8018	0.4047	0.7264	0.0681	0.0579	0.0269	0.8569	0.3709	0.0112
17	1,158.758	0.6620	84.4767	9.4920	3.5809	0.3846	0.6858	0.0699	0.0591	0.0284	0.8444	0.3694	0.0089
18	1,157.865	0.6617	84.4958	9.4985	3.5487	0.3745	0.6880	0.0688	0.0570	0.0284	0.8472	0.3834	0.0097
19	1,155.995	0.6604	84.5702	9.5120	3.4911	0.3639	0.6727	0.0644	0.0531	0.0241	0.8745	0.3637	0.0105
20	1,156.238	0.6602	84.6360	9.4699	3.4898	0.3682	0.6688	0.0656	0.0568	0.0271	0.8471	0.3601	0.0106
21	1,157.163	0.6601	84.6588	9.5391	3.4506	0.3724	0.6618	0.0702	0.0621	0.0302	0.7990	0.3455	0.0104
22	1,157.090	0.6602	84.6143	9.4535	3.6611	0.3518	0.5891	0.0660	0.0590	0.0286	0.8291	0.3371	0.0103
23	1,156.933	0.6597	84.8073	9.3608	3.4884	0.3781	0.6737	0.0690	0.0612	0.0298	0.7831	0.3388	0.0097
24	1,159.184	0.6618	84.6365	9.2840	3.6318	0.3880	0.7173	0.0690	0.0593	0.0305	0.8151	0.3588	0.0098
25	1,156.463	0.6602	84.7436	9.2755	3.5683	0.3799	0.6845	0.0650	0.0527	0.0250	0.8430	0.3523	0.0102
26	1,156.524	0.6597	84.8258	9.2575	3.5399	0.3798	0.6818	0.0670	0.0564	0.0277	0.8223	0.3320	0.0099
27	1,156.292	0.6595	84.8129	9.3127	3.5141	0.3745	0.6717	0.0681	0.0574	0.0275	0.8223	0.3285	0.0103
28	1,158.125	0.6609	84.6137	9.4452	3.5485	0.3801	0.6814	0.0691	0.0586	0.0280	0.8300	0.3346	0.0108
29	1,156.167	0.6591	84.7780	9.4571	3.4600	0.3685	0.6517	0.0674	0.0569	0.0260	0.7950	0.3287	0.0108
30	1,157.869	0.6602	84.7731	9.3213	3.5420	0.3828	0.6845	0.0717	0.0615	0.0298	0.7952	0.3272	0.0109
Volume	1,157.151	0.6607	84.6003	9.4443	3.5657	0.3712	0.6677	0.0642	0.0543	0.0250	0.8463	0.3506	0.0105
Weight Avg Energy	1,157.163	0.6607	84.5988	9.4451	3.5663	0.3712	0.6676	0.0642	0.0543	0.0250	0.8464	0.3506	0.0105

June-23

ZONE 610

Watford City		01325 Watford City West Border WBI Meter #0602225			01312 Watford City East Border WBI Meter #2702230			Weighted	
Start Date	End Date	MCF	DK	BTU Zone 25	MCF	DK	BTU Zone 43	AVG BTU	
6/1/2023	6/2/2023	0	0	1189.8	134	145	1081.2	1081.200	6/1/2023
6/2/2023	6/3/2023	0	0	1189.8	131	141	1081.2	1081.200	6/2/2023
6/3/2023	6/4/2023	0	0	1189.8	106	115	1081.2	1081.200	6/3/2023
6/4/2023	6/5/2023	3	3	1189.8	112	122	1081.2	1084.033	6/4/2023
6/5/2023	6/6/2023	0	0	1189.8	101	109	1081.2	1081.200	6/5/2023
6/6/2023	6/7/2023	18	22	1189.8	103	111	1081.2	1097.355	6/6/2023
6/7/2023	6/8/2023	10	12	1189.8	96	104	1081.2	1091.445	6/7/2023
6/8/2023	6/9/2023	17	20	1189.8	125	135	1081.2	1094.201	6/8/2023
6/9/2023	6/10/2023	8	10	1189.8	119	129	1081.2	1088.041	6/9/2023
6/10/2023	6/11/2023	15	18	1189.8	102	110	1081.2	1095.123	6/10/2023
6/11/2023	6/12/2023	23	28	1189.8	113	122	1081.2	1099.566	6/11/2023
6/12/2023	6/13/2023	23	28	1189.8	116	126	1081.2	1099.170	6/12/2023
6/13/2023	6/14/2023	20	24	1189.8	97	104	1081.2	1099.764	6/13/2023
6/14/2023	6/15/2023	28	33	1189.8	101	109	1081.2	1104.772	6/14/2023
6/15/2023	6/16/2023	51	61	1189.8	123	133	1081.2	1113.031	6/15/2023
6/16/2023	6/17/2023	29	35	1189.8	95	102	1081.2	1106.598	6/16/2023
6/17/2023	6/18/2023	15	18	1189.8	79	85	1081.2	1098.530	6/17/2023
6/18/2023	6/19/2023	18	21	1189.8	102	111	1081.2	1097.490	6/18/2023
6/19/2023	6/20/2023	5	6	1189.8	103	112	1081.2	1086.228	6/19/2023
6/20/2023	6/21/2023	9	10	1189.8	110	119	1081.2	1089.413	6/20/2023
6/21/2023	6/22/2023	2	2	1189.8	127	137	1081.2	1082.884	6/21/2023
6/22/2023	6/23/2023	5	6	1189.8	117	127	1081.2	1085.651	6/22/2023
6/23/2023	6/24/2023	4	5	1189.8	99	107	1081.2	1085.417	6/23/2023
6/24/2023	6/25/2023	3	3	1189.8	98	106	1081.2	1084.426	6/24/2023
6/25/2023	6/26/2023	7	8	1189.8	102	110	1081.2	1088.174	6/25/2023
6/26/2023	6/27/2023	17	20	1189.8	92	100	1081.2	1098.138	6/26/2023
6/27/2023	6/28/2023	10	12	1189.8	97	105	1081.2	1091.350	6/27/2023
6/28/2023	6/29/2023	4	4	1189.8	128	138	1081.2	1084.491	6/28/2023
6/29/2023	6/30/2023	2	2	1189.8	109	118	1081.2	1083.157	6/29/2023
6/30/2023	7/1/2023	7	8	1189.8	88	95	1081.2	1089.202	6/30/2023
		353	419	1189.8000	3,225	3,487	1081.2000	1091.4150	

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	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/1/2023	6/2/2023	1086	0.6412	-52	1356.229131	0.9281	2.4134	83.5248	12.1836	0.7684	0.0228	0.0417	0.002	0.0018	N/A	0	0.0905	0.0229	N/A	0.0036	0.0009	0.4936
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/2/2023	6/3/2023	1091	0.6437	-50.1	1359.824921	0.9216	2.3581	82.9812	12.7825	0.7585	0.0237	0.0432	0.0023	0.0021	N/A	0	0.1042	0.0227	N/A	0.0036	0.0009	0.4936
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/3/2023	6/4/2023	1093	0.6462	-49.1	1359.679924	0.9273	2.4857	82.419	13.2146	0.7585	0.0218	0.0378	0.0019	0.0015	N/A	0	0.1086	0.0236	N/A	0.0036	0.0009	0.4936
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/4/2023	6/5/2023	1097	0.6493	-46.6	1361.394294	0.9407	2.5155	82.0562	13.5132	0.8323	0.0282	0.0502	0.003	0.0025	N/A	0	0.0341	0.0242	N/A	0.0036	0.0009	0.4936
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/5/2023	6/6/2023	1097	0.6493	-46.1	1361.394294	0.9393	2.4876	82.0977	13.4544	0.8676	0.0304	0.0542	0.0033	0.0027	N/A	0	0.0388	0.024	N/A	0.0036	0.0009	0.4936
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/6/2023	6/7/2023	1095	0.6484	-46.7	1359.855043	0.9356	2.5164	82.2979	13.2228	0.8747	0.0293	0.0572	0.0028	0.0026	N/A	0	0.0371	0.0237	N/A	0.0036	0.001	0.4957
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/7/2023	6/8/2023	1098	0.6497	-45.5	1362.21578	0.9365	2.5012	82.1345	13.3414	0.9513	0.0299	0.0566	0.0029	0.0027	N/A	0	0.0189	0.0241	N/A	0.0083	0.001	0.4839
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/8/2023	6/9/2023	1099	0.6504	-44.3	1362.722498	0.9313	2.4666	82.0527	13.4325	0.9758	0.0354	0.059	0.0043	0.0035	N/A	0.0005	0.0148	0.0236	N/A	0.006	0.001	0.1628
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/9/2023	6/10/2023	1097	0.6484	-46.9	1362.338796	0.9206	2.4503	82.3193	13.306	0.8882	0.0258	0.0468	0.0024	0.002	N/A	0	0.0149	0.0238	N/A	0.0032	0.0009	0.0008
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/10/2023	6/11/2023	1098	0.65	-46.1	1361.901386	0.9323	2.5357	82.0083	13.4998	0.9068	0.0261	0.0474	0.0022	0.002	N/A	0	0.0151	0.0245	N/A	0.0036	0.0009	0.0008
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/11/2023	6/12/2023	1107	0.6583	-41	1364.381096	0.9708	2.7103	80.4557	14.7054	1.0281	0.0292	0.0531	0.0025	0.0023	N/A	0	0.0163	0.026	9.4919	0.0036	0.0009	0.0009
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/12/2023	6/13/2023	1105	0.6567	-42.8	1363.574183	0.9467	2.6907	80.5766	14.7813	0.8965	0.0224	0.0407	0.0021	0.0019	N/A	0	0.0158	0.0255	9.4919	0.0036	0.0008	0.403
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/13/2023	6/14/2023	1103	0.6544	-44	1363.495997	0.9283	2.6299	81.0476	14.4038	0.878	0.0245	0.0429	0.0024	0.0022	N/A	0	0.0154	0.0251	9.4919	0.0036	0.0009	0.4743
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/14/2023	6/15/2023	1105	0.6563	-42.4	1363.989653	0.9356	2.6753	80.7669	14.539	0.9588	0.0269	0.0517	0.0026	0.0023	N/A	0	0.0156	0.0254	0.3135	0.0628	0.0322	0.0943
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/15/2023	6/16/2023	1101	0.6531	-45.2	1362.377546	0.9163	2.6536	81.2339	14.2487	0.8434	0.0211	0.0387	0.0017	0.0018	N/A	0	0.0156	0.0255	0.2769	0.0912	0.053	0.0012
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/16/2023	6/17/2023	1104	0.6551	-43.1	1364.002837	0.9203	2.6277	80.9809	14.4067	0.945	0.026	0.0484	0.0024	0.0022	N/A	0.0001	0.0155	0.025	0.2727	0.096	0.0573	0.0008
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/17/2023	6/18/2023	1106	0.6559	-43.1	1365.64026	0.9463	2.6012	80.7602	14.6936	0.8878	0.0235	0.0432	0.0021	0.0019	N/A	0	0.0155	0.0248	0.2678	0.0958	0.0572	0.0008
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/18/2023	6/19/2023	1106	0.6558	-43.2	1365.744376	0.9525	2.5707	80.7816	14.7128	0.8724	0.0235	0.0428	0.0021	0.0019	N/A	0	0.0153	0.0245	0.2648	0.1047	0.0639	0.001
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/19/2023	6/20/2023	1106	0.6563	-42.6	1365.224033	0.9569	2.5588	80.758	14.6785	0.938	0.0237	0.0428	0.002	0.002	N/A	0	0.0152	0.0245	0.2711	0.1035	0.0626	0.0011
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/20/2023	6/21/2023	1111	0.6597	-40.5	1367.857377	0.9714	2.5848	80.087	15.2841	0.9587	0.0245	0.0451	0.0023	0.0021	N/A	0	0.0156	0.0244	0.2718	0.1093	0.067	0.0011
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/21/2023	6/22/2023	1110	0.6576	-41.8	1368.806556	0.9549	2.4913	80.4615	15.065	0.9222	0.0223	0.04	0.0018	0.0017	N/A	0	0.0153	0.0241	0.2635	0.1093	0.0678	0.0012
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/22/2023	6/23/2023	1110	0.6581	-41.1	1368.286473	0.9565	2.5098	80.4348	15.0112	0.9733	0.0253	0.0451	0.0022	0.0019	N/A	0	0.0154	0.0245	0.2674	0.1093	0.0677	0.0012
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/23/2023	6/24/2023	1107	0.657	-42.3	1365.730273	0.9624	2.5718	80.4591	14.9612	0.8794	0.0243	0.045	0.0022	0.002	N/A	0	0.0683	0.0245	0.2864	0.1171	0.0769	0.0012
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/24/2023	6/25/2023	1107	0.6566	-42.8	1366.14621	0.9743	2.5557	80.4815	14.9767	0.8413	0.0228	0.0415	0.0019	0.0014	N/A	0	0.0788	0.0244	0.2587	0.1093	0.0727	0.0012
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/25/2023	6/26/2023	1107	0.6572	-43	1365.522447	0.9801	2.6029	80.2873	15.1633	0.7965	0.02	0.0361	0.0016	0.0013	N/A	0	0.0863	0.0247	0.2764	0.0992	0.0652	0.0012
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/26/2023	6/27/2023	1106	0.6567	-43	1364.808186	0.9701	2.5828	80.3198	15.1004	0.8144	0.0202	0.0369	0.0017	0.0015	N/A	0	0.128	0.0243	0.2736	0.0993	0.0641	0.0015
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/27/2023	6/28/2023	1103	0.6549	-44.4	1362.975399	0.9849	2.6137	80.6281	14.7843	0.776	0.0191	0.0347	0.0015	0.0013	N/A	0	0.1319	0.0246	0.2861	0.1022	0.0671	0.0012
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/28/2023	6/29/2023	1098	0.6512	-46.1	1360.645984	0.9716	2.5971	81.3463	14.027	0.7979	0.0215	0.0398	0.0019	0.0017	N/A	0	0.1714	0.0246	0.3038	0.0998	0.065	0.0012
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/29/2023	6/30/2023	1097	0.6508	-46.8	1359.824481	0.9757	2.6121	81.3727	14.0351	0.7536	0.0194	0.0356	0.0016	0.0014	N/A	0	0.1684	0.0245	0.3143	0.096	0.0633	0.0012
NBPL	5/30/2023 0:00	7/1/2023 0:00	GLNU1 - GLEN ULLIN	6/30/2023	7/1/2023	1097	0.6501	-47	1360.556384	0.9601	2.5623	81.4948	13.9613	0.7566	0.0197	0.0362	0.0016	0.0015	N/A	0	0.1818	0.0242	0.3143	0.0957	0.0629	0.0012

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

MONTANA DAKOTA UTILITIES CO
NORTH DAKOTA
HEATING VALUE DATA

STATE	ZONE	ZONE BOUNDARY	12 MONTH AVERAGE	JUN23	MAY23	APR23	MAR23	FEB23	JAN23	DEC22	NOV22	OCT22	SEP22	AUG22	JUL22	Zone
MT/ND	211	Sidney Border - MonDak Tfr - Sidney Plt	1201	1195	1200	1204	1208	1191	1203	1206	1202	1201	1198	1205	1200	211
ND	24	Williston Border - Charbonneau Station	1195	1196	1198	1194	1195	1198	1197	1193	1198	1194	1188	1192	1195	24
ND	25	Watford City West Border	1198	1190	1189	1180	1183	1200	1195	1202	1207	1210	1209	1210	1201	25
ND	28	Bismarck Station - Glen Ullin Station	1158	1195	1192	1118	1127	1115	1118	1133	1126	1175	1191	1198	1202	28
ND	31	Dickinson Brd - Belfield Trf - G Ullin Stn	1111	1107	1086	1100	1132	1126	1132	1140	1131	1097	1099	1087	1094	31
ND/MT	32	Cabin Creek Station - Belfield Transfer	1125	1124	1111	1119	1137	1116	1125	1139	1132	1122	1128	1129	1115	32
ND	33	Little Knife Plant	1177	1180	1182	1179	1177	1175	1176	1176	1176	1179	1173	1174	1177	33
ND	34	Badlands Plant/Bowman Border	1048	1040	1021	1005	1071	1086	1079	1086	1077	989	1056	1031	1033	34
ND	43	Watford City East Border	1083	1081	1042	1083	1116	1128	1143	1133	1054	1050	1051	1057	1062	43
ND/MT	241	Fairview Border	1202	1189	1200	1196	1201	1212	1218	1201	1210	1205	1193	1197	1199	241
ND	267	North Tioga Transfer - Nesson Plant	1183	1185	1188	1187	1189	1188	1181	1176	1176	1178	1174	1184	1184	267
ND	261	Tioga Comp Station - Robinson Lake Plan	1188	1189	1188	1184	1185	1184	1176	1176	1182	1194	1196	1196	1201	261
ND	262	Minot Bdr - Palermo Bdr - Bismarck Stn	1192	1193	1190	1189	1187	1187	1188	1189	1186	1195	1198	1196	1203	262
ND	263	Lignite Plant	1131	1131	1131	1131	1131	1131	1131	1131	1131	1131	1131	1131	1130	263
ND	264	Epping Border	1196	1181	1195	1202	1200	1208	1202	1198	1194	1198	1196	1192	1188	264
ND	265	Tioga Comp Station - County Line Plant	1178	1168	1176	1182	1183	1181	1182	1169	1182	1180	1178	1178	1180	265
ND	266	County Line Plant	1179	1168	1178	1182	1183	1180	1183	1168	1181	1180	1180	1182	1179	266
ND	271	Bismarck Station - Cleveland Station	1187	1195	1192	1189	1181	1168	1168	1176	1181	1197	1191	1198	1202	271
ND	272	Cleveland Station - Mapleton	1186	1194	1191	1188	1181	1168	1168	1176	1181	1197	1191	1198	1202	272
ND	273	Cleveland Station - Grafton Border	1186	1194	1192	1187	1180	1168	1168	1176	1181	1198	1194	1198	1200	273
ND	550	Mandan Border / NBPL-St Anthony	1138	1160	1085	1101	1118	1109	1109	1127	1107	1173	1189	1194	1182	550
ND	610	MDU-Watford City BTU	1107	1091	1065	1111	1137	1149	1159	1155	1102	1113	1072	1068	1065	610
ND	802	NBPL - Linton	1089	1102	1080	1085	1097	1095	1093	1090	1087	1084	1081	1083	1086	802
ND	903	Hettinger Propane	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	903
ND	600	Alliance Pipeline - Hankinson	1153	1157	1154	1153	1149	1152	1148	1143	1149	1159	1159	1157	1160	600
ND	601	Alliance Pipeline - Milnor	1154	1157	1155	1154	1149	1152	1148	1143	1149	1159	1160	1157	1160	601

THERMAL ZONE VARIANCE DOCUMENTATION		
June 2023		
<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
31	21	Direction - Blend
43	39	Blend
550	75	Direction - Blend
610	26	Blend
802	22	Operational