

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

June 22, 2021

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

Re: Case No. PU-21-002 (Therm Billing)
Monthly Report – April 2021

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 May 2021.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our suppliers for the month of April 2021.
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 April 2021.

Montana-Dakota respectfully request 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
May-21

<u>Town</u>	<u>Heat Zone</u>	<u>Therm Factor</u>
MDU-303-ALEXANDER	025	1.1277
MDU-308-ARNEGARD	025	1.1277
MDU-314-APPLE VALLEY	271	1.1492
MDU-318-BEACH	032	1.0360
MDU-319-BELFIELD	032	1.0436
MDU-323-BERTHOLD	262	1.1249
MDU-324-BEULAH	032	1.0436
MDU-327-BISMARCK	028	1.1077
MDU-330-BOWMAN	034	0.9540
MDU-337-BURLINGTON	262	1.1492
MDU-343-CARRINGTON	273	1.1472
MDU-344-CLEVELAND	272	1.1401
MDU-364-CAVALIER	273	1.1714
MDU-365-DAWSON	271	1.1411
MDU-368-DES LACS	262	1.1330
MDU-369-DICKINSON	031	1.0568
MDU-374-FT TOTTEN	273	1.1553
MDU-375-DEVILS LAKE	273	1.1553
MDU-379-BARLOW	273	1.1472
MDU-384-EPPING	264	1.1032
MDU-387-ELDRIDGE	272	1.1482
MDU-407-GLADSTONE	031	1.0568
MDU-411-GLEN ULLIN	031	1.0645
MDU-413-GOLVA	032	1.0207
MDU-416-GARRISON	262	1.1330
MDU-417-GRAFTON	273	1.1795
MDU-403-GWINNER	601	1.1330
MDU-429-HEBRON	031	1.0645
MDU-432-HETTINGER	903	2.4049
MDU-449-JAMESTOWN	272	1.1563
MDU-459-KILLDEER	033	1.1070
MDU-463-LANGDON	273	1.1472
MDU-469-LEFOR	031	1.0568
MDU-474-LIGNITE	263	1.0921
MDU-475-LINTON	802	1.0604
MDU-478-LINCOLN	028	1.1077
MDU-488-MCKENZIE	271	1.1492
MDU-494-MEDINA	271	1.1411
MDU-498-MANDAN	028	1.1077
MDU-500-MARMARTH	034	0.9611
MDU-505-MINOT	262	1.1492
MDU-510-MOTT	031	1.0568
MDU-512-MAX	262	1.1492
MDU-513-MILNOR	601	1.1330
MDU-522-NEW ENGLAND	031	1.0492
MDU-524-NEW SALEM	028	1.0843
MDU-532-NEW ROCKFORD	273	1.1472
MDU-539-PARK RIVER	273	1.1714
MDU-540-PALERMO	262	1.1249

MDU-558-RAY	264	1.1032
MDU-561-REGENT	031	1.0492
MDU-563-RHAME	034	0.9470
MDU-564-RICHARDTON	031	1.0492
MDU-568-ROSS	261	1.0999
MDU-572-RUTHVILLE	262	1.1492
MDU-574-SANBORN	272	1.1563
MDU-583-SENTINEL BUTTE	032	1.0360
MDU-588-SOUTH HEART	031	1.0492
MDU-717-SPIRITWOOD	272	1.1563
MDU-590-SPRINGBROOK	264	1.1032
MDU-591-STANLEY	261	1.0790
MDU-593-STEELE	271	1.1411
MDU-594-STERLING	028	1.1077
MDU-598-SHEYENNE	273	1.1553
MDU-605-SURREY	262	1.1492
MDU-610-TAPPEN	271	1.1411
MDU-611-TAYLOR	031	1.0492
MDU-616-TIOGA	260	1.0877
MDU-619-TURTLE LAKE	262	1.1330
MDU-620-TRENTON	024	1.1187
MDU-624-UNDERWOOD	262	1.1330
MDU-625-VALLEY CITY	272	1.1644
MDU-629-WALHALLA	273	1.1714
MDU-632-WATFORD CITY	610	1.0937
MDU-636-WHEELOCK	264	1.0952
MDU-637-WHITE EARTH	261	1.1079
MDU-642-WILLISTON	024	1.1187
MDU-646-WASHBURN	262	1.1411
MDU-647-WILTON	262	1.1249
MDU-664-RIVERDALE	262	1.1330
MDU-691-FAIRVIEW	241	1.1396
MDU-712-MINOT AFB	262	1.1492
MDU-718-FAIRMOUNT	600	1.1307
MDU-732-NEKOMA	273	1.1472
MDU-732-MSR SITE	273	0.1472

Source Daily Summary

April 2021

Number: 251

Pressure Base: 14.730

Contract Day: 1

Name: SDNY BDR-MNDK JNCTN-SDNY PLT

Temperature Base:

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	0.7408	1191.6	1212.7	1209.2	1.363	3.553	66.075	26.052	2.622	0.114	0.202	0.010	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1405.64
2	0.7369	1187.6	1208.7	1205.1	1.326	3.487	66.991	25.123	2.714	0.117	0.218	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1404.57
3	0.7279	1177.1	1198.0	1194.4	1.232	3.420	68.911	23.253	2.786	0.122	0.243	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1400.73
4	0.7270	1175.2	1196.0	1192.4	1.242	3.439	69.110	23.001	2.817	0.121	0.238	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1399.27
5	0.7317	1181.6	1202.5	1198.9	1.271	3.454	68.127	23.967	2.802	0.121	0.231	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1402.32
6	0.7394	1191.4	1212.5	1208.9	1.335	3.485	66.587	25.416	2.813	0.121	0.221	0.012	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1406.58
7	0.7343	1185.7	1206.7	1203.1	1.278	3.437	67.521	24.651	2.746	0.119	0.224	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1404.76
8	0.7364	1188.2	1209.3	1205.6	1.302	3.439	67.149	24.969	2.780	0.117	0.219	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1405.75
9	0.7436	1196.2	1217.4	1213.7	1.372	3.529	65.765	26.134	2.852	0.118	0.210	0.011	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1408.27
10	0.7503	1207.2	1228.6	1224.8	1.362	3.498	64.919	26.515	3.355	0.119	0.212	0.011	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1414.84
11	0.7466	1201.0	1222.3	1218.6	1.368	3.525	65.342	26.372	3.047	0.118	0.210	0.010	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1411.06
12	0.7370	1194.3	1215.4	1212.0	1.068	3.486	66.606	25.773	2.796	0.094	0.163	0.008	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1412.48
13	0.7447	1197.9	1219.1	1215.7	1.376	3.521	65.562	26.318	2.876	0.119	0.210	0.010	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1409.30
14	0.7455	1199.1	1220.3	1216.8	1.372	3.530	65.428	26.431	2.885	0.121	0.214	0.010	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1409.91
15	0.7414	1191.7	1212.8	1209.3	1.392	3.564	66.262	25.561	2.859	0.123	0.219	0.011	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1405.09
16	0.7410	1190.9	1212.0	1208.5	1.385	3.584	66.384	25.376	2.911	0.122	0.218	0.011	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1404.57
17	0.7447	1198.4	1219.6	1216.1	1.376	3.490	65.573	26.369	2.822	0.125	0.225	0.011	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1409.87
18	0.7240	1174.8	1195.6	1192.1	1.196	3.259	69.366	23.267	2.553	0.112	0.219	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1401.71
19	0.7010	1148.3	1168.6	1165.2	0.950	3.081	73.727	19.470	2.404	0.100	0.227	0.019	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1392.35
20	0.7032	1150.8	1171.1	1167.7	0.941	3.143	73.478	19.495	2.554	0.105	0.240	0.020	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1393.22
21	0.7013	1150.6	1170.9	1167.5	0.831	3.153	73.345	20.042	2.307	0.088	0.198	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1394.83
22	0.7003	1148.6	1168.9	1165.5	0.952	2.997	73.681	19.769	2.260	0.093	0.211	0.017	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1393.39
23	0.6993	1147.8	1168.2	1164.8	0.951	2.941	73.977	19.482	2.294	0.096	0.219	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1393.57
24	0.6978	1145.7	1166.0	1162.5	0.958	2.928	74.289	19.169	2.297	0.097	0.221	0.019	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1392.36
25	0.7036	1150.9	1171.3	1167.8	0.958	3.152	73.351	19.622	2.539	0.104	0.233	0.019	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1392.96
26	0.7098	1156.3	1176.7	1173.2	1.033	3.289	72.423	20.076	2.783	0.114	0.243	0.018	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1393.38
27	0.7199	1166.0	1186.7	1183.1	1.180	3.425	70.426	21.802	2.808	0.111	0.218	0.015	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1395.17
28	0.7230	1171.0	1191.7	1195.0	1.249	3.331	68.691	23.744	2.688	0.095	0.182	0.011	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1401.78
29	0.7262	1176.0	1196.8	1195.0	1.249	3.331	68.691	23.744	2.688	0.095	0.182	0.011	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1401.78
30	0.7293	1180.9	1201.8	1198.1	1.233	3.326	68.429	23.935	2.758	0.099	0.195	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1403.88
Avg	0.7269	1177.0	1198.3	1195.0	1.203	3.360	68.873	23.496	2.714	0.111	0.216	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1402.18

Source Daily Summary

April 2021

Number: 571

Pressure Base: 14.730

Contract Day: 1

Name: WILLISTON BDR-CHARBN STN

Temperature Base:

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	0.7023	1151.9	1172.3	1169.0	0.934	2.997	73.683	19.467	2.502	0.111	0.257	0.022	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1395.54
2	0.7036	1152.7	1173.1	1169.7	0.927	3.087	73.631	19.225	2.679	0.121	0.279	0.023	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1395.12
3	0.7033	1151.7	1172.1	1168.7	0.925	3.124	73.626	19.256	2.619	0.120	0.277	0.024	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1394.17
4	0.7027	1150.8	1171.2	1167.8	0.920	3.129	73.728	19.151	2.632	0.119	0.272	0.022	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1393.72
5	0.7020	1148.8	1169.2	1165.8	0.930	3.169	73.804	19.080	2.588	0.115	0.265	0.022	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1392.04
6	0.7012	1149.1	1169.5	1166.1	0.936	3.062	73.940	19.100	2.540	0.114	0.260	0.022	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1393.26
7	0.7015	1149.5	1169.9	1166.5	0.941	3.057	73.901	19.115	2.568	0.113	0.258	0.021	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1393.45
8	0.7017	1149.2	1169.5	1166.2	0.949	3.092	73.800	19.213	2.539	0.109	0.251	0.021	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1392.74
9	0.7006	1147.4	1167.8	1164.5	0.941	3.097	73.946	19.126	2.503	0.106	0.239	0.019	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1391.89
10	0.7017	1149.6	1170.0	1166.6	0.947	3.063	73.786	19.279	2.520	0.108	0.249	0.021	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1393.34
11	0.6999	1147.0	1167.3	1164.0	0.942	3.061	74.000	19.190	2.433	0.103	0.231	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1391.98
12	0.6989	1146.7	1167.1	1163.7	0.944	2.983	74.164	19.145	2.388	0.103	0.231	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1392.63
13	0.6872	1129.1	1149.1	1146.0	0.836	3.125	75.950	17.714	2.066	0.087	0.190	0.014	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1382.88
14	0.6931	1139.7	1159.9	1156.7	0.913	2.916	74.951	18.772	2.126	0.089	0.197	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1389.88
15	0.6965	1144.9	1165.2	1162.0	0.939	2.872	74.378	19.293	2.187	0.092	0.203	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1392.92
16	0.6969	1145.8	1166.1	1162.8	0.941	2.853	74.272	19.459	2.140	0.091	0.204	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1393.54
17	0.6965	1144.9	1165.2	1162.0	0.930	2.891	74.381	19.268	2.190	0.093	0.209	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1392.85
18	0.6960	1143.6	1163.9	1160.7	0.939	2.909	74.441	19.215	2.164	0.091	0.203	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1391.77
19	0.7009	1148.2	1168.6	1165.3	0.932	3.096	73.774	19.404	2.411	0.103	0.236	0.020	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1392.47
20	0.7000	1146.8	1167.1	1163.9	0.929	3.100	73.917	19.277	2.410	0.101	0.227	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1391.74
21	0.6996	1146.9	1167.2	1164.0	0.938	3.042	73.888	19.472	2.307	0.095	0.217	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1392.23
22	0.6966	1144.2	1164.5	1161.3	0.929	2.947	74.319	19.285	2.186	0.091	0.206	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1391.89
23	0.6966	1145.5	1165.8	1162.5	0.945	2.844	74.394	19.279	2.197	0.093	0.210	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1393.42
24	0.6962	1143.6	1163.8	1160.6	0.938	2.926	74.498	19.068	2.225	0.094	0.211	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1391.58
25	0.7014	1148.6	1168.9	1165.7	0.947	3.102	73.659	19.491	2.436	0.101	0.225	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1392.43
26	0.7011	1148.6	1169.0	1165.7	0.936	3.088	73.674	19.530	2.411	0.099	0.223	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1392.79
27	0.6930	1137.9	1158.0	1154.8	0.910	3.018	75.107	18.388	2.231	0.095	0.212	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1387.81
28	0.6931	1139.7	1159.9	1156.7	0.921	2.903	74.880	18.929	2.044	0.088	0.198	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1389.91
29	0.6971	1144.8	1165.1	1161.8	0.956	2.912	74.143	19.602	2.057	0.088	0.203	0.017	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1392.15
30	0.7006	1147.8	1168.2	1164.8	0.947	3.072	73.603	19.780	2.253	0.093	0.212	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1392.32
Avg	0.6987	1146.0	1166.5	1163.2	0.932	3.018	74.141	19.186	2.352	0.101	0.229	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1392.15

Source Daily Summary

April 2021

Number: 164

Pressure Base: 14.730

Contract Day: 1

Name: N TIOGA TRANSFER-NESSON PLT

Temperature Base:

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	0.6964	1134.2	1154.3		0.800	3.732	74.516	18.068	2.514	0.094	0.222	0.021	0.026	0.007					1380.01	
2	0.7005	1135.7	1155.8		0.811	4.011	73.881	18.150	2.780	0.098	0.224	0.019	0.022	0.003					1377.76	
3	0.7007	1135.9	1156.0		0.816	4.012	73.846	18.186	2.772	0.098	0.225	0.019	0.022	0.003					1377.76	
4	0.6964	1134.6	1154.7		0.800	3.732	74.517	18.068	2.514	0.094	0.222	0.021	0.026	0.007					1383.66	
5	0.6988	1133.3	1153.4		0.817	3.979	74.262	17.809	2.754	0.101	0.232	0.019	0.023	0.004					1376.62	
6	0.6951	1130.4	1150.5		0.819	3.807	74.899	17.488	2.608	0.099	0.229	0.020	0.025	0.006					1376.75	
7	0.6959	1130.0	1150.0		0.823	3.906	74.695	17.596	2.613	0.096	0.223	0.019	0.023	0.005					1375.39	
8	0.6969	1130.5	1150.6		0.830	3.959	74.582	17.578	2.665	0.099	0.234	0.021	0.026	0.007					1375.03	
9	0.6951	1127.7	1147.6		0.823	3.970	74.832	17.403	2.613	0.096	0.221	0.017	0.021	0.004					1373.37	
10	0.6971	1131.3	1151.4		0.832	3.925	74.595	17.571	2.679	0.101	0.240	0.022	0.027	0.008					1375.81	
11	0.6939	1126.2	1146.2		0.827	3.940	75.004	17.309	2.584	0.092	0.208	0.016	0.018	0.003					1372.81	
12	0.6909	1124.9	1144.8		0.825	3.746	75.515	17.131	2.442	0.089	0.207	0.018	0.022	0.005					1374.11	
13	0.6668	1090.4	1109.8		0.597	3.928	79.273	14.214	1.753	0.064	0.143	0.012	0.014	0.002					1355.90	
14	0.6884	1125.1	1145.1		0.797	3.538	75.907	17.090	2.336	0.087	0.197	0.018	0.023	0.006					1376.91	
15	0.6911	1129.6	1149.6		0.805	3.511	75.403	17.582	2.360	0.090	0.204	0.018	0.022	0.005					1379.61	
16	0.6912	1129.5	1149.5		0.800	3.530	75.309	17.754	2.261	0.088	0.206	0.020	0.025	0.007					1379.47	
17	0.6908	1129.1	1149.1		0.785	3.538	75.359	17.719	2.260	0.087	0.205	0.019	0.023	0.005					1379.39	
18	0.6894	1125.1	1145.0		0.824	3.595	75.685	17.267	2.295	0.087	0.201	0.018	0.022	0.005					1375.83	
19	0.6979	1133.7	1153.8		0.811	3.884	74.442	17.766	2.695	0.104	0.242	0.022	0.027	0.007					1377.96	
20	0.6958	1130.4	1150.4		0.810	3.894	74.713	17.598	2.614	0.098	0.226	0.019	0.023	0.005					1375.93	
21	0.6949	1131.4	1151.4		0.813	3.744	74.730	17.917	2.431	0.093	0.219	0.020	0.025	0.007					1378.06	
22	0.6922	1130.9	1150.9		0.816	3.516	75.030	18.086	2.226	0.085	0.199	0.017	0.021	0.004					1380.19	
23	0.6894	1126.9	1146.9		0.818	3.491	75.786	17.228	2.316	0.092	0.217	0.021	0.026	0.007					1378.09	
24	0.6927	1129.0	1149.0		0.808	3.685	75.168	17.556	2.425	0.093	0.217	0.019	0.024	0.005					1377.42	
25	0.7015	1137.8	1157.9		0.829	3.945	73.844	18.154	2.825	0.106	0.245	0.021	0.025	0.005					1379.35	
26	0.7005	1137.5	1157.6		0.808	3.898	73.941	18.211	2.750	0.102	0.238	0.021	0.025	0.005					1380.02	
27	0.6670	1096.2	1115.6		0.496	3.755	78.848	15.238	1.425	0.058	0.142	0.014	0.018	0.006					1362.81	
28	0.6703	1100.3	1119.8		0.571	3.719	78.306	15.678	1.510	0.059	0.140	0.013	0.016	0.004					1364.37	
29	0.6958	1135.3	1155.4		0.841	3.545	74.616	18.223	2.393	0.095	0.230	0.022	0.027	0.007					1381.96	
30	0.7019	1141.2	1161.4		0.825	3.785	73.634	18.657	2.706	0.102	0.240	0.020	0.025	0.005					1383.09	
Avg	0.6925	1128.0	1147.8		0.789	3.774	75.171	17.477	2.437	0.092	0.213	0.019	0.023	0.005					1376.18	

Source Daily Summary

April 2021

Number: 601

Pressure Base: 14.730

Contract Day: 1

Name: TIOGA STN-ROBINSON LAKE PLNT

Temperature Base:

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	0.7477	1163.5	1184.1	1181.0	0.916	6.577	66.820	19.855	5.294	0.162	0.338	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1366.21
2	0.7383	1162.5	1183.1	1179.8	0.931	5.733	68.243	19.914	4.663	0.147	0.326	0.020	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1373.78
3	0.7483	1164.8	1185.4	1182.2	0.911	6.559	66.758	19.894	5.330	0.163	0.347	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1367.19
4	0.7518	1171.2	1192.0	1188.8	0.911	6.501	66.358	20.100	5.525	0.179	0.383	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1371.47
5	0.7505	1168.7	1189.4	1186.2	0.908	6.537	66.504	20.020	5.440	0.176	0.373	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1369.67
6	0.7512	1170.1	1190.8	1187.7	0.911	6.511	66.454	20.024	5.494	0.179	0.383	0.022	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1370.72
7	0.7418	1164.2	1184.8	1181.6	0.927	5.964	67.829	19.786	4.930	0.164	0.353	0.021	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1372.56
8	0.7316	1156.7	1177.2	1173.8	0.952	5.427	69.273	19.573	4.266	0.145	0.317	0.022	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1373.15
9	0.7479	1164.9	1185.5	1182.4	0.914	6.514	66.836	19.878	5.298	0.169	0.352	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1367.66
10	0.7489	1165.0	1185.6	1182.3	0.915	6.592	66.874	19.608	5.384	0.188	0.395	0.023	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1366.85
11	0.7499	1167.3	1188.0	1184.9	0.929	6.532	66.781	19.663	5.443	0.193	0.409	0.028	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1368.62
12	0.7515	1170.5	1191.3	1188.2	0.913	6.508	66.434	20.026	5.502	0.181	0.388	0.023	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1370.94
13	0.7303	1160.6	1181.1	1177.9	0.963	5.057	69.579	19.674	4.200	0.147	0.327	0.024	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1378.91
14	0.7211	1156.3	1176.7	1173.6	0.956	4.462	70.711	19.865	3.579	0.123	0.266	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1382.73
15	0.7066	1151.7	1172.1	1168.9	0.977	3.353	72.893	19.669	2.753	0.099	0.218	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1391.04
16	0.7071	1151.0	1171.4	1168.3	0.975	3.439	72.707	19.862	2.651	0.100	0.225	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1389.80
17	0.7063	1151.3	1171.7	1168.3	0.986	3.336	72.995	19.618	2.665	0.105	0.243	0.023	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1390.76
18	0.7059	1150.9	1171.3	1168.0	0.983	3.328	73.111	19.474	2.706	0.104	0.243	0.022	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1390.65
19	0.7048	1149.0	1169.4	1166.1	0.985	3.334	73.314	19.287	2.679	0.104	0.245	0.023	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1389.50
20	0.7406	1160.7	1181.3	1178.2	0.922	6.070	67.866	19.800	4.818	0.154	0.330	0.019	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1369.56
21	0.7502	1167.9	1188.5	1185.4	0.910	6.555	66.592	19.896	5.447	0.180	0.378	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1368.99
22	0.7452	1164.6	1185.2	1182.0	0.918	6.278	67.271	19.836	5.132	0.169	0.355	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1369.78
23	0.7090	1150.9	1171.2	1168.1	0.996	3.600	72.414	19.898	2.698	0.104	0.246	0.020	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1387.70
24	0.7074	1150.4	1170.8	1167.5	0.998	3.476	72.796	19.632	2.691	0.106	0.249	0.023	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1388.61
25	0.7073	1146.5	1166.8	1163.6	0.979	3.733	72.962	19.020	2.893	0.110	0.255	0.021	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1384.08
26	0.7508	1170.2	1190.9	1187.7	0.912	6.463	66.540	20.000	5.479	0.182	0.381	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1371.22
27	0.7513	1170.0	1190.7	1187.4	0.912	6.526	66.445	20.003	5.506	0.184	0.381	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1370.48
28	0.7205	1156.2	1176.7	1173.3	0.995	4.350	70.855	19.895	3.448	0.125	0.281	0.023	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1383.12
29	0.7091	1153.3	1173.8	1170.3	1.050	3.381	72.478	20.049	2.618	0.108	0.260	0.024	0.031	0.000	0.000	0.000	0.000	0.000	0.000	1390.42
30	0.7037	1144.9	1165.2	1161.7	1.000	3.464	73.226	19.510	2.418	0.098	0.236	0.021	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1385.56
Avg	0.7312	1160.0	1180.4	1177.2	0.948	5.205	69.331	19.778	4.232	0.145	0.316	0.021	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1377.39

Source Daily Summary

April 2021

Number: 091

Pressure Base: 14.730

Contract Day: 1

Name: MNT BRD-PLRMO BRD-BIS STN

Temperature Base:

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	0.7521	1168.2	1188.9	1185.8	0.919	6.697	66.279	19.947	5.571	0.177	0.371	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1367.72
2	0.7500	1164.5	1185.2	1182.0	0.921	6.723	66.553	19.794	5.426	0.175	0.365	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1365.28
3	0.7484	1161.2	1181.8	1178.6	0.918	6.778	66.721	19.694	5.330	0.169	0.350	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1362.88
4	0.7501	1164.7	1185.3	1182.2	0.922	6.724	66.534	19.809	5.431	0.176	0.365	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1365.36
5	0.7507	1166.2	1186.8	1183.7	0.925	6.681	66.492	19.837	5.474	0.178	0.372	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1366.59
6	0.7473	1160.1	1180.7	1177.5	0.925	6.730	66.896	19.623	5.278	0.167	0.345	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1362.60
7	0.7491	1163.0	1183.6	1180.5	0.922	6.732	66.661	19.730	5.386	0.172	0.358	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1364.34
8	0.7502	1164.2	1184.8	1181.7	0.920	6.761	66.582	19.684	5.448	0.183	0.381	0.021	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1364.75
9	0.7534	1170.9	1191.7	1188.5	0.926	6.643	66.206	19.952	5.635	0.190	0.402	0.023	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1369.67
10	0.7494	1163.1	1183.6	1180.4	0.922	6.756	66.604	19.770	5.374	0.173	0.360	0.019	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1364.09
11	0.7499	1163.3	1183.9	1180.8	0.921	6.782	66.561	19.743	5.413	0.175	0.365	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1364.03
12	0.7512	1165.8	1186.4	1183.3	0.921	6.754	66.387	19.856	5.501	0.175	0.366	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1365.73
13	0.7535	1169.9	1190.6	1187.5	0.922	6.719	66.118	19.997	5.627	0.185	0.387	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1368.40
14	0.7557	1173.9	1194.7	1191.5	0.920	6.684	65.877	20.110	5.762	0.192	0.408	0.023	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1371.07
15	0.7557	1174.0	1194.8	1191.6	0.921	6.676	65.895	20.088	5.769	0.197	0.407	0.023	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1371.19
16	0.7558	1174.1	1194.9	1191.7	0.920	6.685	65.870	20.094	5.782	0.197	0.406	0.023	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1371.20
17	0.7548	1172.1	1192.9	1189.7	0.919	6.715	66.002	19.986	5.738	0.194	0.400	0.022	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1369.77
18	0.7559	1174.4	1195.2	1192.0	0.918	6.682	65.892	20.047	5.799	0.199	0.415	0.024	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1371.41
19	0.7508	1165.0	1185.6	1182.5	0.920	6.766	66.475	19.753	5.501	0.179	0.367	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1365.16
20	0.7513	1166.3	1186.9	1183.8	0.920	6.736	66.409	19.819	5.525	0.182	0.369	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1366.19
21	0.7534	1170.0	1190.8	1187.6	0.920	6.710	66.144	19.957	5.660	0.186	0.382	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1368.62
22	0.7539	1170.9	1191.6	1188.4	0.921	6.700	66.111	19.967	5.665	0.194	0.396	0.022	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1369.17
23	0.7541	1171.3	1192.0	1188.8	0.918	6.702	66.103	19.951	5.686	0.195	0.400	0.022	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1369.41
24	0.7518	1167.0	1187.7	1184.5	0.920	6.736	66.370	19.820	5.545	0.187	0.380	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1366.61
25	0.7537	1170.7	1191.4	1188.3	0.922	6.692	66.122	19.984	5.655	0.191	0.390	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1369.13
26	0.7521	1167.5	1188.2	1185.1	0.923	6.730	66.304	19.882	5.556	0.186	0.377	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1366.93
27	0.7530	1169.4	1190.1	1186.7	0.922	6.709	66.205	19.919	5.635	0.187	0.381	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1368.20
28	0.7500	1167.4	1188.1	1184.7	0.923	6.544	66.636	19.847	5.457	0.179	0.372	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1368.67
29	0.7441	1165.3	1185.9	1182.4	0.966	6.059	67.444	19.967	5.002	0.168	0.352	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1371.57
30	0.7569	1177.0	1197.8	1194.2	0.924	6.610	65.776	20.159	5.865	0.200	0.419	0.023	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1373.50
Avg	0.7519	1168.0	1188.7	1185.5	0.923	6.687	66.341	19.893	5.550	0.184	0.380	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1367.64

Source Daily Summary

April 2021

Number: 603 Pressure Base: 14.730 Contract Day: 1
 Name: TIOGA STN-COUNTY LINE PLANT Temperature Base: 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	0.7072	1153.9	1174.3	1171.0	0.964	3.297	72.880	19.695	2.771	0.104	0.241	0.021	0.027	0.000	0.000	0.000	0.000	0.000	1392.99	
2	0.7076	1154.8	1175.2	1171.8	0.964	3.278	72.767	19.921	2.652	0.106	0.254	0.025	0.033	0.000	0.000	0.000	0.000	0.000	1393.63	
3	0.7071	1153.6	1174.0	1170.7	0.968	3.301	72.828	19.825	2.679	0.104	0.245	0.022	0.029	0.000	0.000	0.000	0.000	0.000	1392.72	
4	0.7072	1152.9	1173.3	1169.9	0.977	3.333	72.970	19.550	2.738	0.110	0.263	0.026	0.034	0.000	0.000	0.000	0.000	0.000	1391.77	
5	0.7059	1151.3	1171.7	1168.4	0.974	3.322	73.084	19.523	2.695	0.105	0.245	0.022	0.028	0.000	0.000	0.000	0.000	0.000	1391.11	
6	0.7064	1151.0	1171.4	1168.0	1.000	3.341	73.119	19.388	2.723	0.110	0.261	0.025	0.033	0.000	0.000	0.000	0.000	0.000	1390.25	
7	0.7055	1149.8	1170.1	1166.8	0.984	3.353	73.219	19.336	2.694	0.107	0.253	0.023	0.030	0.000	0.000	0.000	0.000	0.000	1389.74	
8	0.7050	1148.2	1168.6	1165.2	1.001	3.372	73.339	19.178	2.702	0.106	0.249	0.023	0.030	0.000	0.000	0.000	0.000	0.000	1388.40	
9	0.7062	1149.9	1170.3	1166.9	1.017	3.363	73.053	19.513	2.648	0.104	0.248	0.024	0.031	0.000	0.000	0.000	0.000	0.000	1389.17	
10	0.7035	1146.3	1166.6	1163.4	1.000	3.352	73.421	19.283	2.572	0.098	0.228	0.020	0.025	0.000	0.000	0.000	0.000	0.000	1387.58	
11	0.7059	1149.1	1169.5	1166.0	1.026	3.368	73.143	19.401	2.648	0.107	0.250	0.023	0.032	0.000	0.000	0.000	0.000	0.000	1388.47	
12	0.7022	1144.2	1164.5	1161.2	0.997	3.366	73.714	18.947	2.597	0.099	0.232	0.021	0.027	0.000	0.000	0.000	0.000	0.000	1386.26	
13	0.7023	1144.1	1164.4	1161.1	1.005	3.365	73.641	19.072	2.551	0.097	0.225	0.020	0.025	0.000	0.000	0.000	0.000	0.000	1386.09	
14	0.7052	1148.8	1169.2	1166.0	0.992	3.375	73.065	19.577	2.640	0.096	0.216	0.017	0.021	0.000	0.000	0.000	0.000	0.000	1388.95	
15	0.7058	1151.3	1171.7	1168.4	0.969	3.311	73.080	19.544	2.724	0.100	0.226	0.020	0.025	0.000	0.000	0.000	0.000	0.000	1391.32	
16	0.7047	1149.8	1170.1	1166.8	0.967	3.307	73.337	19.264	2.745	0.104	0.232	0.020	0.025	0.000	0.000	0.000	0.000	0.000	1390.52	
17	0.7065	1151.9	1172.3	1168.8	0.993	3.309	73.077	19.471	2.736	0.109	0.251	0.024	0.031	0.000	0.000	0.000	0.000	0.000	1391.19	
18	0.7061	1151.8	1172.2	1168.9	0.968	3.311	72.976	19.715	2.643	0.101	0.235	0.022	0.028	0.000	0.000	0.000	0.000	0.000	1391.60	
19	0.7033	1146.9	1167.2	1163.8	0.981	3.329	73.528	19.155	2.626	0.101	0.233	0.021	0.026	0.000	0.000	0.000	0.000	0.000	1388.37	
20	0.7043	1148.2	1168.6	1165.3	0.986	3.335	73.479	19.082	2.694	0.110	0.259	0.024	0.031	0.000	0.000	0.000	0.000	0.000	1389.02	
21	0.7038	1147.7	1168.1	1164.6	0.978	3.331	73.502	19.141	2.639	0.105	0.250	0.023	0.030	0.000	0.000	0.000	0.000	0.000	1388.85	
22	0.7045	1148.6	1169.0	1165.6	0.985	3.324	73.391	19.261	2.617	0.106	0.257	0.025	0.033	0.000	0.000	0.000	0.000	0.000	1389.34	
23	0.7058	1150.9	1171.2	1168.0	0.981	3.323	72.913	19.871	2.531	0.099	0.235	0.020	0.026	0.000	0.000	0.000	0.000	0.000	1390.78	
24	0.7052	1150.3	1170.7	1167.3	0.984	3.288	73.219	19.467	2.644	0.104	0.243	0.023	0.029	0.000	0.000	0.000	0.000	0.000	1390.71	
25	0.7020	1144.8	1165.1	1161.8	0.984	3.329	73.865	18.772	2.641	0.106	0.250	0.023	0.029	0.000	0.000	0.000	0.000	0.000	1387.14	
26	0.7051	1149.7	1170.1	1166.7	0.993	3.306	73.229	19.447	2.621	0.104	0.248	0.023	0.030	0.000	0.000	0.000	0.000	0.000	1390.05	
27	0.7060	1151.7	1172.1	1168.7	0.976	3.296	73.082	19.575	2.656	0.106	0.254	0.024	0.031	0.000	0.000	0.000	0.000	0.000	1391.56	
28	0.7072	1153.2	1173.6	1170.2	0.996	3.293	72.744	19.989	2.585	0.100	0.239	0.023	0.031	0.000	0.000	0.000	0.000	0.000	1392.10	
29	0.7081	1153.5	1173.9	1170.5	1.026	3.314	72.618	20.043	2.590	0.105	0.251	0.023	0.030	0.000	0.000	0.000	0.000	0.000	1391.57	
30	0.7074	1153.7	1174.1	1170.7	0.993	3.277	72.725	20.022	2.583	0.102	0.246	0.023	0.030	0.000	0.000	0.000	0.000	0.000	1392.63	
Avg	0.7054	1150.0	1170.4	1167.1	0.988	3.326	73.167	19.468	2.653	0.104	0.244	0.022	0.029	0.000	0.000	0.000	0.000	0.000	1390.13	

Source Daily Summary

April 2021

Number: 043 Pressure Base: 14.730 Contract Day: 1
 Name: BISMARCK STN-CLEVELAND STN Temperature Base: 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	0.7506	1169.0	1189.7	1185.7	0.901	6.541	66.540	19.915	5.514	0.176	0.373	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1369.89	
2	0.7520	1170.8	1191.6	1187.7	0.903	6.553	66.364	20.001	5.565	0.183	0.388	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1370.82	
3	0.7510	1168.9	1189.6	1185.7	0.901	6.585	66.460	19.956	5.495	0.181	0.380	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1369.40	
4	0.7517	1170.2	1191.0	1187.1	0.903	6.558	66.415	19.961	5.548	0.184	0.388	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1370.41	
5	0.7507	1168.8	1189.5	1185.7	0.907	6.551	66.535	19.913	5.487	0.182	0.382	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1369.62	
6	0.7468	1162.8	1183.4	1179.6	0.910	6.545	67.022	19.699	5.265	0.170	0.354	0.019	0.018	0.000	0.000	0.000	0.000	0.000	1366.17	
7	0.7497	1167.1	1187.8	1184.0	0.905	6.563	66.665	19.827	5.445	0.179	0.375	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1368.57	
8	0.7500	1166.3	1186.9	1183.1	0.902	6.647	66.735	19.583	5.489	0.193	0.406	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1367.27	
9	0.7528	1172.8	1193.6	1189.7	0.908	6.503	66.404	19.874	5.638	0.198	0.426	0.024	0.024	0.000	0.000	0.000	0.000	0.000	1372.34	
10	0.7491	1167.8	1188.4	1184.6	0.906	6.469	66.812	19.776	5.430	0.182	0.382	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1369.80	
11	0.7364	1156.0	1176.5	1172.8	0.917	5.972	68.788	18.931	4.854	0.162	0.340	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1367.73	
12	0.7112	1133.7	1153.8	1150.3	0.837	5.090	72.204	18.049	3.479	0.105	0.214	0.011	0.010	0.000	0.000	0.000	0.000	0.000	1364.98	
13	0.7303	1152.0	1172.4	1168.8	0.904	5.663	69.616	18.817	4.514	0.146	0.306	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1368.74	
14	0.7339	1156.2	1176.7	1173.0	0.907	5.742	69.187	18.897	4.736	0.158	0.334	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1370.28	
15	0.7345	1157.2	1177.7	1174.0	0.905	5.738	69.136	18.901	4.781	0.164	0.339	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1370.93	
16	0.7431	1165.3	1185.9	1182.2	0.894	6.074	67.788	19.488	5.174	0.177	0.366	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1372.45	
17	0.7514	1172.6	1193.4	1189.6	0.892	6.402	66.576	19.907	5.586	0.192	0.400	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1373.47	
18	0.7482	1171.1	1191.8	1188.1	0.886	6.209	67.060	19.794	5.424	0.188	0.394	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1374.58	
19	0.7295	1151.6	1172.0	1168.4	0.827	5.739	69.518	19.054	4.395	0.143	0.292	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1368.87	
20	0.7243	1146.9	1167.2	1163.7	0.815	5.549	70.300	18.744	4.158	0.134	0.272	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1368.29	
21	0.7360	1158.3	1178.8	1175.1	0.845	5.909	68.709	19.217	4.801	0.158	0.326	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1370.79	
22	0.7546	1175.9	1196.7	1192.9	0.901	6.494	66.132	20.062	5.742	0.202	0.420	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1374.31	
23	0.7537	1174.8	1195.6	1191.8	0.893	6.488	66.242	20.025	5.690	0.200	0.416	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1373.89	
24	0.7480	1166.6	1187.2	1183.5	0.898	6.444	66.975	19.711	5.370	0.184	0.377	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1369.49	
25	0.7473	1167.1	1187.8	1183.9	0.913	6.322	67.168	19.611	5.381	0.184	0.379	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1370.78	
26	0.7509	1168.3	1189.0	1185.1	0.906	6.597	66.528	19.840	5.523	0.187	0.380	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1368.90	
27	0.7510	1168.3	1189.0	1185.1	0.906	6.605	66.503	19.856	5.528	0.185	0.378	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1368.86	
28	0.7458	1167.0	1187.7	1183.7	0.911	6.198	67.238	19.890	5.185	0.173	0.364	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1371.99	
29	0.7508	1173.7	1194.5	1190.5	0.922	6.238	66.639	20.091	5.468	0.190	0.404	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1375.26	
30	0.7566	1178.1	1198.9	1194.9	0.901	6.542	66.077	19.816	5.911	0.222	0.475	0.028	0.028	0.000	0.000	0.000	0.000	0.000	1375.06	
Avg	0.7447	1165.0	1185.5	1181.7	0.894	6.251	67.478	19.574	5.219	0.176	0.368	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1370.46	

Source Daily Summary

April 2021

Number: 041 Pressure Base: 14.730 Contract Day: 1
 Name: BISMARCK STN-GLEN ULLIN STN Temperature Base: 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	0.6820	1114.3	1134.0	1130.9	0.619	3.866	76.437	16.836	2.038	0.065	0.125	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1370.27	
2	0.6493	1081.8	1101.0	1098.0	0.946	2.283	82.174	13.705	0.818	0.028	0.040	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1363.18	
3	0.6465	1075.7	1094.8	1091.7	1.003	2.297	83.002	12.659	0.929	0.041	0.056	0.007	0.005	0.000	0.000	0.000	0.000	0.000	1358.45	
4	0.6450	1072.6	1091.6	1088.6	0.982	2.377	82.922	12.964	0.714	0.014	0.024	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1356.15	
5	0.6495	1078.2	1097.3	1094.3	0.981	2.473	82.021	13.705	0.776	0.015	0.026	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1358.37	
6	0.6524	1080.9	1100.1	1097.1	1.002	2.538	81.527	14.063	0.824	0.016	0.028	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1358.86	
7	0.6490	1076.9	1095.9	1093.3	0.985	2.499	82.097	13.583	0.789	0.016	0.027	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1357.44	
8	0.6712	1096.2	1115.6	1112.5	0.980	3.412	78.648	15.054	1.752	0.048	0.096	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1358.83	
9	0.6498	1077.1	1096.1	1093.1	0.992	2.548	81.979	13.661	0.779	0.014	0.024	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1356.64	
10	0.6723	1096.1	1115.6	1112.4	0.971	3.527	78.576	14.876	1.881	0.053	0.105	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1357.90	
11	0.6462	1073.2	1092.2	1089.2	0.989	2.453	82.652	13.151	0.720	0.012	0.020	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1355.49	
12	0.6564	1092.0	1111.4	1108.5	0.762	2.606	80.403	15.407	0.778	0.016	0.026	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1368.56	
13	0.6552	1087.3	1106.6	1103.6	0.908	2.556	80.959	14.622	0.887	0.023	0.039	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1363.96	
14	0.6516	1083.0	1102.2	1099.2	0.927	2.449	81.671	14.055	0.839	0.020	0.034	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1362.30	
15	0.6498	1081.1	1100.3	1097.3	0.909	2.428	81.930	13.909	0.775	0.017	0.028	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1361.75	
16	0.6541	1088.9	1108.2	1105.2	0.824	2.487	80.953	14.910	0.779	0.016	0.027	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1367.05	
17	0.6583	1097.5	1116.9	1113.8	0.749	2.477	80.103	15.775	0.840	0.019	0.033	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1373.37	
18	0.6588	1095.1	1114.5	1111.4	0.838	2.533	80.209	15.413	0.936	0.024	0.041	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1369.84	
19	0.6639	1103.4	1122.9	1119.8	0.588	2.889	78.780	16.798	0.894	0.018	0.030	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1374.90	
20	0.6621	1098.2	1117.7	1114.7	0.608	2.999	79.201	16.202	0.935	0.019	0.032	0.002	0.001	0.000	0.000	0.000	0.000	0.000	1370.41	
21	0.6598	1095.6	1115.0	1111.9	0.620	2.930	79.754	15.655	0.977	0.022	0.038	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1369.41	
22	0.6773	1106.5	1126.1	1122.9	0.657	3.843	77.424	15.834	2.039	0.062	0.125	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1365.55	
23	0.6620	1095.5	1114.9	1111.8	0.501	3.317	79.380	15.542	1.173	0.027	0.052	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1367.07	
24	0.6591	1095.3	1114.7	1111.6	0.709	2.749	79.842	15.812	0.838	0.017	0.030	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1369.76	
25	0.6508	1078.8	1097.9	1094.9	1.012	2.505	81.828	13.812	0.801	0.015	0.026	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1357.82	
26	0.6498	1078.0	1097.1	1094.1	1.003	2.475	81.976	13.758	0.747	0.015	0.024	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1357.83	
27	0.6929	1115.6	1135.4	1132.1	0.986	4.251	75.403	16.288	2.796	0.086	0.173	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1361.37	
28	0.7474	1167.8	1188.5	1184.9	0.905	6.310	67.027	19.863	5.304	0.177	0.371	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1371.44	
29	0.7351	1157.8	1178.3	1174.8	0.932	5.715	69.097	18.902	4.798	0.165	0.350	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1371.38	
30	0.7562	1177.5	1198.4	1194.7	0.901	6.538	66.118	19.809	5.882	0.222	0.473	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1374.79	
Avg	0.6671	1097.0	1116.7	1113.6	0.860	3.144	79.136	15.221	1.501	0.043	0.084	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1364.34	

Source Daily Summary

April 2021

Number: 051 Pressure Base: 14.730 Contract Day: 1
 Name: CABIN CRK STN-BELFIELD TRSFR Temperature Base: 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	0.6600	1091.6	1110.9	1107.8	0.732	3.015	80.356	14.397	1.353	0.048	0.086	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1364.28	
2	0.6748	1115.3	1135.0	1132.1	1.076	2.434	78.313	16.224	1.723	0.074	0.135	0.010	0.010	0.000	0.000	0.000	0.000	0.000	1378.49	
3	0.6804	1124.4	1144.3	1141.1	1.214	2.194	77.613	16.807	1.898	0.088	0.161	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1384.05	
4	0.6814	1125.2	1145.2	1142.2	1.231	2.209	77.687	16.498	2.054	0.106	0.183	0.017	0.015	0.000	0.000	0.000	0.000	0.000	1384.02	
5	0.6731	1112.2	1131.9	1129.0	1.155	2.342	78.675	15.949	1.659	0.071	0.130	0.010	0.010	0.000	0.000	0.000	0.000	0.000	1376.45	
6	0.6760	1110.9	1130.6	1127.6	0.802	3.230	77.674	16.314	1.765	0.068	0.130	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1371.93	
7	0.6751	1108.7	1128.3	1125.5	0.751	3.365	77.549	16.543	1.620	0.056	0.103	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1370.04	
8	0.6694	1104.7	1124.2	1121.3	1.069	2.586	78.990	15.732	1.454	0.055	0.100	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1370.91	
9	0.6680	1103.2	1122.8	1119.9	1.098	2.499	79.277	15.536	1.422	0.054	0.099	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1370.55	
10	0.6650	1099.7	1119.2	1116.2	1.069	2.471	79.788	15.159	1.358	0.050	0.092	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1369.33	
11	0.6652	1100.0	1119.4	1116.7	1.048	2.513	79.767	15.107	1.396	0.054	0.099	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1369.33	
12	0.6628	1096.8	1116.3	1113.6	1.074	2.437	80.141	14.916	1.287	0.047	0.085	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1367.95	
13	0.6609	1094.1	1113.4	1110.8	1.061	2.452	80.366	14.808	1.189	0.041	0.073	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1366.42	
14	0.6593	1092.8	1112.1	1109.4	1.053	2.391	80.688	14.566	1.177	0.041	0.073	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1366.46	
15	0.6617	1096.9	1116.3	1113.6	1.081	2.320	80.462	14.649	1.334	0.050	0.090	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1369.12	
16	0.6669	1102.1	1121.6	1118.3	0.973	2.654	79.425	15.296	1.479	0.056	0.101	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1370.27	
17	0.6713	1108.5	1128.2	1124.6	1.014	2.608	78.778	15.777	1.624	0.064	0.116	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1373.81	
18	0.6704	1106.3	1125.9	1122.5	0.914	2.822	78.730	15.782	1.570	0.060	0.107	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1371.84	
19	0.6778	1118.2	1138.0	1134.5	0.979	2.688	77.725	16.514	1.851	0.078	0.144	0.011	0.011	0.000	0.000	0.000	0.000	0.000	1379.02	
20	0.6704	1107.3	1126.9	1123.6	0.896	2.782	78.760	15.784	1.591	0.059	0.110	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1373.15	
21	0.6691	1105.5	1125.1	1121.5	0.958	2.678	78.963	15.743	1.482	0.056	0.104	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1372.24	
22	0.6720	1109.8	1129.4	1125.9	1.012	2.604	78.638	15.924	1.616	0.065	0.121	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1374.58	
23	0.6706	1108.5	1128.1	1124.7	0.969	2.617	78.839	15.786	1.592	0.063	0.116	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1374.41	
24	0.6683	1104.4	1124.0	1120.8	1.034	2.551	79.162	15.658	1.424	0.055	0.101	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1371.73	
25	0.6664	1101.9	1121.4	1118.6	1.095	2.434	79.577	15.341	1.384	0.054	0.099	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1370.53	
26	0.6643	1098.4	1117.8	1114.9	1.011	2.582	79.798	15.133	1.322	0.050	0.091	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1368.30	
27	0.6652	1099.2	1118.6	1115.6	1.052	2.553	79.832	14.954	1.427	0.059	0.107	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1368.39	
28	0.6676	1101.8	1121.3	1118.2	0.959	2.765	79.417	15.059	1.605	0.063	0.115	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1369.10	
29	0.6670	1100.0	1119.5	1116.3	0.910	2.887	79.419	15.035	1.558	0.061	0.112	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1367.54	
30	0.6641	1095.0	1114.4	1111.3	0.878	2.973	79.876	14.604	1.485	0.059	0.108	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1364.25	
Avg	0.6688	1105.0	1124.3	1121.3	1.006	2.622	79.143	15.520	1.523	0.060	0.110	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1371.62	

April-21

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	
4/1/2021	4/2/2021				2,713	3,069	1134	1134.000	4/1/2021
4/2/2021	4/3/2021				2,140	2,359	1101	1101.000	4/2/2021
4/3/2021	4/4/2021				1,711	1,873	1094.8	1094.800	4/3/2021
4/4/2021	4/5/2021				1,709	1,867	1091.6	1091.600	4/4/2021
4/5/2021	4/6/2021				2,125	2,332	1097.3	1097.300	4/5/2021
4/6/2021	4/7/2021				2,917	3,208	1100.1	1100.100	4/6/2021
4/7/2021	4/8/2021				2,491	2,730	1095.9	1095.900	4/7/2021
4/8/2021	4/9/2021				1,968	2,188	1115.6	1115.600	4/8/2021
4/9/2021	4/10/2021				2,704	2,963	1096.1	1096.100	4/9/2021
4/10/2021	4/11/2021				1,790	1,985	1115.6	1115.600	4/10/2021
4/11/2021	4/12/2021				3,420	3,735	1092.2	1092.200	4/11/2021
4/12/2021	4/13/2021				4,884	5,430	1111.4	1111.400	4/12/2021
4/13/2021	4/14/2021				5,153	5,701	1106.6	1106.600	4/13/2021
4/14/2021	4/15/2021				4,184	4,610	1102.2	1102.200	4/14/2021
4/15/2021	4/16/2021				3,825	4,209	1100.3	1100.300	4/15/2021
4/16/2021	4/17/2021				3,710	4,113	1108.2	1108.200	4/16/2021
4/17/2021	4/18/2021				2,262	2,525	1116.9	1116.900	4/17/2021
4/18/2021	4/19/2021				3,747	4,181	1114.5	1114.500	4/18/2021
4/19/2021	4/20/2021				4,103	4,602	1122.9	1122.900	4/19/2021
4/20/2021	4/21/2021				4,559	5,095	1117.7	1117.700	4/20/2021
4/21/2021	4/22/2021				2,971	3,308	1115	1115.000	4/21/2021
4/22/2021	4/23/2021				2,446	2,737	1126.1	1126.100	4/22/2021
4/23/2021	4/24/2021				3,834	4,271	1114.9	1114.900	4/23/2021
4/24/2021	4/25/2021				2,645	2,945	1114.7	1114.700	4/24/2021
4/25/2021	4/26/2021				3,590	3,942	1097.9	1097.900	4/25/2021
4/26/2021	4/27/2021	9,114	9,968	1185.0000	2,532	2,779	1097.1	1165.889	4/26/2021
4/27/2021	4/28/2021	4,316	4,716	1180.5000	1,798	2,054	1135.4	1167.237	4/27/2021
4/28/2021	4/29/2021				1,939	2,306	1188.5	1188.500	4/28/2021
4/29/2021	4/30/2021				1,712	2,018	1178.3	1178.300	4/29/2021
4/30/2021	5/1/2021				1,376	1,651	1198.4	1198.400	4/30/2021
		13,430	14,684	1182.7500	86,958	96,786	1116.7067	1120.0609	



Alliance Pipeline

DAILY ANALYSIS --- USA
 ND07MD1 --- Hankinson Sales
 April 2021

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	1,150.270	0.6585	85.0418	8.8204	3.5778	0.3761	0.6726	0.0586	0.0442	0.0196	0.9542	0.4246	0.0100
2	1,151.375	0.6596	84.8909	8.8859	3.6149	0.3802	0.6782	0.0615	0.0465	0.0195	0.9928	0.4203	0.0092
3	1,150.439	0.6589	84.9730	8.8904	3.5512	0.3751	0.6774	0.0598	0.0466	0.0202	0.9699	0.4271	0.0092
4	1,154.820	0.6621	84.5337	9.0787	3.7050	0.3897	0.7072	0.0617	0.0472	0.0204	1.0412	0.4057	0.0094
5	1,157.561	0.6641	84.2741	9.1958	3.7773	0.4021	0.7291	0.0655	0.0498	0.0219	1.0668	0.4081	0.0097
6	1,158.936	0.6654	84.0863	9.2871	3.8337	0.4024	0.7388	0.0647	0.0490	0.0208	1.0887	0.4185	0.0100
7	1,158.269	0.6647	84.2129	9.2423	3.7496	0.4062	0.7607	0.0664	0.0502	0.0212	1.0620	0.4182	0.0102
8	1,158.108	0.6644	84.2668	9.2195	3.7347	0.4080	0.7602	0.0674	0.0507	0.0206	1.0519	0.4105	0.0097
9	1,155.434	0.6619	84.6022	9.1048	3.6235	0.4026	0.7296	0.0661	0.0500	0.0219	0.9821	0.4073	0.0100
10	1,155.190	0.6618	84.6199	9.0677	3.6280	0.4046	0.7368	0.0638	0.0489	0.0210	0.9953	0.4041	0.0099
11	1,156.892	0.6637	84.3602	9.1598	3.7071	0.4058	0.7543	0.0660	0.0496	0.0200	1.0537	0.4141	0.0094
12	1,157.918	0.6641	84.2439	9.3194	3.7010	0.4050	0.7438	0.0642	0.0482	0.0204	1.0278	0.4165	0.0099
13	1,156.078	0.6625	84.5068	9.1449	3.6717	0.4009	0.7304	0.0639	0.0468	0.0202	0.9865	0.4175	0.0104
14	1,154.537	0.6613	84.5874	9.2477	3.5515	0.3939	0.6996	0.0638	0.0486	0.0209	0.9438	0.4321	0.0107
15	1,155.053	0.6625	84.4893	9.1111	3.6729	0.3961	0.7242	0.0636	0.0483	0.0210	1.0402	0.4228	0.0105
16	1,154.235	0.6611	84.7425	8.9971	3.6012	0.3994	0.7304	0.0645	0.0494	0.0225	0.9692	0.4132	0.0105
17	1,155.178	0.6622	84.4767	9.2261	3.6059	0.3916	0.7209	0.0657	0.0492	0.0219	1.0142	0.4176	0.0104
18	1,156.658	0.6637	84.2866	9.2727	3.6645	0.4032	0.7436	0.0642	0.0491	0.0224	1.0648	0.4187	0.0103
19	1,150.751	0.6594	84.7493	9.1992	3.4139	0.3817	0.6793	0.0617	0.0483	0.0230	1.0168	0.4163	0.0104
20	1,150.862	0.6595	84.7270	9.2015	3.4443	0.3780	0.6708	0.0614	0.0478	0.0222	1.0143	0.4223	0.0105
21	1,153.742	0.6618	84.4198	9.3248	3.5451	0.3869	0.7035	0.0614	0.0470	0.0200	1.0598	0.4212	0.0104
22	1,152.948	0.6612	84.5189	9.2942	3.4989	0.3854	0.6957	0.0637	0.0487	0.0214	1.0357	0.4268	0.0106
23	1,152.936	0.6616	84.4571	9.2990	3.5209	0.3836	0.6941	0.0654	0.0493	0.0212	1.0681	0.4307	0.0107
24	1,152.311	0.6611	84.4603	9.3450	3.4949	0.3793	0.6804	0.0629	0.0477	0.0199	1.0689	0.4299	0.0107
25	1,151.334	0.6598	84.6534	9.2722	3.4723	0.3740	0.6543	0.0619	0.0474	0.0204	1.0084	0.4249	0.0109
26	1,150.758	0.6591	84.6967	9.3258	3.4175	0.3689	0.6421	0.0629	0.0470	0.0197	0.9872	0.4215	0.0108
27	1,150.225	0.6588	84.7418	9.2997	3.4098	0.3652	0.6386	0.0613	0.0463	0.0196	0.9732	0.4334	0.0109
28	1,151.051	0.6598	84.5854	9.3925	3.4323	0.3651	0.6393	0.0641	0.0476	0.0198	1.0062	0.4371	0.0107
29	1,153.677	0.6611	84.4838	9.3920	3.5330	0.3752	0.6671	0.0610	0.0463	0.0205	0.9736	0.4368	0.0108
30	1,154.776	0.6611	84.5918	9.2536	3.5901	0.3844	0.6890	0.0618	0.0460	0.0200	0.9263	0.4262	0.0108
Volume	1,154.069	0.6616	84.5431	9.1962	3.5910	0.3890	0.7029	0.0634	0.0481	0.0208	1.0146	0.4208	0.0102
Weight Avg Energy	1,154.075	0.6616	84.5426	9.1962	3.5912	0.3890	0.7030	0.0634	0.0481	0.0208	1.0147	0.4208	0.0102



Alliance Pipeline

DAILY ANALYSIS --- USA
 ND14MD1 --- Milnor Sales
 April 2021

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	1,149.912	0.6585	85.0548	8.8116	3.5670	0.3744	0.6716	0.0593	0.0444	0.0197	0.9621	0.4253	0.0100
2	1,150.771	0.6593	84.9460	8.8518	3.6038	0.3772	0.6737	0.0609	0.0464	0.0197	0.9890	0.4222	0.0093
3	1,151.566	0.6597	84.8630	8.9674	3.5673	0.3786	0.6852	0.0615	0.0471	0.0202	0.9752	0.4255	0.0090
4	1,157.614	0.6640	84.3274	9.1512	3.7835	0.4014	0.7361	0.0647	0.0493	0.0216	1.0517	0.4035	0.0096
5	1,157.525	0.6642	84.2743	9.1978	3.7814	0.4010	0.7278	0.0645	0.0490	0.0211	1.0643	0.4088	0.0098
6	1,159.262	0.6657	84.0543	9.3141	3.8278	0.4038	0.7463	0.0652	0.0492	0.0208	1.0912	0.4173	0.0100
7	1,158.126	0.6646	84.2264	9.2488	3.7421	0.4051	0.7550	0.0669	0.0504	0.0210	1.0567	0.4173	0.0103
8	1,157.854	0.6642	84.2931	9.2212	3.7175	0.4076	0.7583	0.0669	0.0504	0.0206	1.0463	0.4086	0.0096
9	1,155.429	0.6618	84.6207	9.0980	3.6222	0.4031	0.7290	0.0651	0.0497	0.0222	0.9748	0.4051	0.0100
10	1,155.458	0.6622	84.5824	9.0678	3.6439	0.4057	0.7433	0.0639	0.0491	0.0206	1.0083	0.4052	0.0097
11	1,157.464	0.6640	84.3257	9.1884	3.7176	0.4074	0.7556	0.0671	0.0498	0.0200	1.0508	0.4082	0.0094
12	1,157.876	0.6641	84.2435	9.3176	3.7031	0.4053	0.7432	0.0636	0.0476	0.0204	1.0284	0.4172	0.0101
13	1,155.487	0.6620	84.5659	9.1372	3.6431	0.3979	0.7232	0.0639	0.0469	0.0203	0.9733	0.4178	0.0104
14	1,155.119	0.6619	84.5325	9.2496	3.5802	0.3969	0.7076	0.0641	0.0487	0.0209	0.9564	0.4324	0.0107
15	1,154.639	0.6622	84.5494	9.0839	3.6569	0.3952	0.7209	0.0635	0.0485	0.0211	1.0273	0.4228	0.0104
16	1,154.177	0.6611	84.7522	8.9925	3.5994	0.3987	0.7292	0.0650	0.0497	0.0225	0.9654	0.4148	0.0105
17	1,155.985	0.6630	84.3669	9.2719	3.6387	0.3936	0.7291	0.0652	0.0485	0.0215	1.0354	0.4188	0.0104
18	1,155.250	0.6626	84.3967	9.2774	3.5976	0.3983	0.7224	0.0629	0.0490	0.0226	1.0491	0.4139	0.0102
19	1,150.509	0.6594	84.7604	9.1840	3.4130	0.3807	0.6791	0.0616	0.0482	0.0227	1.0206	0.4191	0.0104
20	1,151.444	0.6599	84.6842	9.2204	3.4604	0.3798	0.6780	0.0611	0.0476	0.0220	1.0150	0.4210	0.0106
21	1,153.329	0.6616	84.4609	9.3071	3.5323	0.3856	0.6984	0.0617	0.0472	0.0201	1.0540	0.4222	0.0104
22	1,153.740	0.6618	84.4377	9.3405	3.5187	0.3868	0.7008	0.0651	0.0492	0.0213	1.0429	0.4263	0.0106
23	1,152.585	0.6615	84.4660	9.2928	3.5122	0.3826	0.6961	0.0635	0.0482	0.0208	1.0751	0.4320	0.0107
24	1,152.075	0.6609	84.4726	9.3662	3.4832	0.3770	0.6707	0.0623	0.0474	0.0198	1.0622	0.4279	0.0107
25	1,151.498	0.6598	84.6599	9.2862	3.4669	0.3743	0.6537	0.0624	0.0473	0.0200	0.9945	0.4240	0.0108
26	1,150.532	0.6590	84.7090	9.3257	3.4130	0.3668	0.6381	0.0624	0.0468	0.0196	0.9858	0.4221	0.0108
27	1,150.352	0.6590	84.7351	9.2863	3.4162	0.3673	0.6438	0.0619	0.0466	0.0196	0.9787	0.4337	0.0109
28	1,151.132	0.6599	84.5532	9.4278	3.4274	0.3649	0.6377	0.0634	0.0472	0.0198	1.0095	0.4383	0.0108
29	1,154.239	0.6613	84.4803	9.3884	3.5502	0.3768	0.6721	0.0612	0.0462	0.0205	0.9580	0.4355	0.0108
30	1,154.316	0.6609	84.6211	9.2558	3.5707	0.3813	0.6841	0.0612	0.0455	0.0201	0.9232	0.4262	0.0109
Volume	1,154.150	0.6617	84.5275	9.2123	3.5884	0.3892	0.7033	0.0634	0.0480	0.0208	1.0158	0.4211	0.0103
Weight Avg Energy	1,154.163	0.6617	84.5267	9.2126	3.5887	0.3892	0.7034	0.0634	0.0480	0.0208	1.0158	0.4210	0.0103

April-21

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		
4/1/2021	4/2/2021	258	310	1198.7	254	284	1118.9	1159.112	4/1/2021
4/2/2021	4/3/2021	226	271	1198.7	200	224	1118.9	1161.235	4/2/2021
4/3/2021	4/4/2021	188	225	1198.7	170	190	1118.9	1160.806	4/3/2021
4/4/2021	4/5/2021	179	215	1198.7	145	163	1118.9	1162.987	4/4/2021
4/5/2021	4/6/2021	263	315	1198.7	268	300	1118.9	1158.424	4/5/2021
4/6/2021	4/7/2021	259	310	1198.7	260	291	1118.9	1158.723	4/6/2021
4/7/2021	4/8/2021	218	261	1198.7	208	232	1118.9	1159.737	4/7/2021
4/8/2021	4/9/2021	199	238	1198.7	216	241	1118.9	1157.166	4/8/2021
4/9/2021	4/10/2021	300	360	1198.7	286	320	1118.9	1159.753	4/9/2021
4/10/2021	4/11/2021	203	243	1198.7	163	183	1118.9	1163.161	4/10/2021
4/11/2021	4/12/2021	371	445	1198.7	501	560	1118.9	1152.852	4/11/2021
4/12/2021	4/13/2021	438	526	1198.7	680	761	1118.9	1150.163	4/12/2021
4/13/2021	4/14/2021	430	515	1198.7	673	754	1118.9	1150.010	4/13/2021
4/14/2021	4/15/2021	383	459	1198.7	490	548	1118.9	1153.910	4/14/2021
4/15/2021	4/16/2021	343	412	1198.7	366	409	1118.9	1157.506	4/15/2021
4/16/2021	4/17/2021	336	403	1198.7	392	438	1118.9	1155.731	4/16/2021
4/17/2021	4/18/2021	243	291	1198.7	202	226	1118.9	1162.476	4/17/2021
4/18/2021	4/19/2021	376	451	1198.7	470	526	1118.9	1154.367	4/18/2021
4/19/2021	4/20/2021	375	450	1198.7	463	518	1118.9	1154.610	4/19/2021
4/20/2021	4/21/2021	409	490	1198.7	556	623	1118.9	1152.722	4/20/2021
4/21/2021	4/22/2021	302	362	1198.7	362	405	1118.9	1155.195	4/21/2021
4/22/2021	4/23/2021	262	314	1198.7	264	296	1118.9	1158.648	4/22/2021
4/23/2021	4/24/2021	353	423	1198.7	409	457	1118.9	1155.868	4/23/2021
4/24/2021	4/25/2021	259	310	1198.7	206	230	1118.9	1163.348	4/24/2021
4/25/2021	4/26/2021	306	367	1198.7	282	316	1118.9	1160.429	4/25/2021
4/26/2021	4/27/2021	265	318	1198.7	288	322	1118.9	1157.141	4/26/2021
4/27/2021	4/28/2021	147	177	1198.7	162	181	1118.9	1156.863	4/27/2021
4/28/2021	4/29/2021	175	210	1198.7	186	209	1118.9	1157.584	4/28/2021
4/29/2021	4/30/2021	156	187	1198.7	128	144	1118.9	1162.734	4/29/2021
4/30/2021	5/1/2021	106	127	1198.7	100	112	1118.9	1159.962	4/30/2021
		8,328	9,985	1198.7000	9,350	10,463	1118.9000	1157.7740	

OW ID	LOCATION DESCRIPTION	GROSS HEATING VALUE (BTU/Gal)	SPECIFIC GRAVITY	WOBBE (calc)	CRICONDENTHE RM (deg F)	NITROGEN (mole percent)	CARBON DIOXIDE (mole percent)	METHANE (mole percent)	ETHANE (mole percent)	PROPANE (mole percent)	NORMAL BUTANE (mole percent)	ISO BUTANE (mole percent)	PENTANE (mole percent)	ISO PENTANE (mole percent)	NEO PENTANE (mole percent)	HEXANES PLUS (mole percent)	HYDROGEN (mole percent)	HELIUM (mole percent)	PRODUCTION DATE	POSTING DATE	Changetimestamp	NOTES
11587	GLEN ULLIN	1095.2	0.6449	1363.8	-50.5	2.161	0.9787	82.5815	13.4006	0.6821	0.0186	0.0111	0	0.0001	N/A	0	0.1437	0.0228	3/31/2021	4/1/2021	4/1/2021 17:29	
11587	GLEN ULLIN	1097.8	0.6468	1365	-43.8	2.1358	1.0099	82.597	13.0553	0.9166	0.0508	0.0382	0.0044	0.0062	N/A	0.0038	0.1595	0.0226	4/1/2021	4/2/2021	4/2/2021 17:42	
11587	GLEN ULLIN	1090.3	0.6432	1359.5	-47.8	2.2659	0.9979	83.2153	12.3826	0.8761	0.0428	0.0305	0.003	0.0043	N/A	0.0026	0.1556	0.0236	4/2/2021	4/3/2021	4/3/2021 18:11	
11587	GLEN ULLIN	1092.2	0.6453	1359.7	-50	2.3711	0.987	82.5258	13.1253	0.7662	0.0244	0.0141	0.0003	0.0005	N/A	0	0.161	0.0245	4/3/2021	4/4/2021	4/4/2021 17:15	
11587	GLEN ULLIN	1096.2	0.6487	1361	-47.9	2.443	0.9915	82.0195	13.5574	0.8247	0.0266	0.0155	0.0004	0.0006	N/A	0	0.0961	0.0249	4/4/2021	4/5/2021	4/5/2021 17:11	
11587	GLEN ULLIN	1099.4	0.6518	1361.7	-46.2	2.5038	1.0151	81.5875	13.9219	0.8703	0.0279	0.0164	0.0005	0.001	N/A	0	0.0299	0.0259	4/5/2021	4/6/2021	4/6/2021 17:53	
11587	GLEN ULLIN	1095.6	0.6489	1360	-47.9	2.4884	0.9953	81.9521	13.5482	0.8319	0.0263	0.0152	0.0003	0.0006	N/A	0	0.1162	0.0256	4/6/2021	4/7/2021	4/7/2021 17:31	
11587	GLEN ULLIN	1094.9	0.6489	1359.2	-47.9	2.5343	0.9949	81.7968	13.5913	0.832	0.0241	0.0142	0.0002	0.0002	N/A	0	0.1872	0.025	4/7/2021	4/8/2021	4/8/2021 17:46	
11587	GLEN ULLIN	1093.5	0.6478	1358.6	-48.7	2.5072	0.9998	82.033	13.4262	0.801	0.0237	0.0138	0.0003	0.0003	N/A	0	0.1696	0.0251	4/8/2021	4/9/2021	4/9/2021 17:01	
11587	GLEN ULLIN	1091.6	0.6455	1358.7	-50.2	2.4021	1.0017	82.4909	13.1278	0.7633	0.0206	0.0124	0.0002	0.0002	N/A	0	0.1563	0.0245	4/9/2021	4/10/2021	4/10/2021 17:24	
11587	GLEN ULLIN	1090.8	0.6448	1358.4	-50.8	2.3918	0.9977	82.6113	13.0433	0.7413	0.0198	0.0122	0.0002	0.0002	N/A	0	0.158	0.0242	4/10/2021	4/11/2021	4/11/2021 16:53	
11587	GLEN ULLIN	1088.7	0.6443	1356.4	-51.2	2.4567	1.0038	82.7215	12.8496	0.7524	0.0202	0.0124	0.0001	0.0003	N/A	0	0.1584	0.0246	4/11/2021	4/12/2021	4/12/2021 17:11	
11587	GLEN ULLIN	1089	0.6447	1356.3	-51.1	2.4765	1.0066	82.6322	12.9239	0.747	0.0197	0.0123	0.0001	0.0002	N/A	0	0.1569	0.0248	4/12/2021	4/13/2021	4/13/2021 17:22	
11587	GLEN ULLIN	1089.3	0.6441	1357.2	-51.2	2.4235	0.9932	82.7603	12.8536	0.7525	0.0216	0.0132	0.0002	0.0004	N/A	0	0.1571	0.0246	4/13/2021	4/14/2021	4/14/2021 17:17	
11587	GLEN ULLIN	1085.3	0.6405	1356	-53.6	2.332	0.9904	83.4594	12.2908	0.7171	0.018	0.0116	0	0.0002	N/A	0	0.1563	0.0242	4/14/2021	4/15/2021	4/15/2021 18:00	
11587	GLEN ULLIN	1086.4	0.6415	1356.4	-52.8	2.3341	1.0031	83.3034	12.4166	0.7311	0.0202	0.0125	0.0002	0.0004	N/A	0	0.1548	0.0238	4/15/2021	4/16/2021	4/16/2021 17:09	
11587	GLEN ULLIN	1087.1	0.6418	1356.9	-52.4	2.3343	0.9922	83.2896	12.4217	0.7596	0.0215	0.013	0.0001	0.0002	N/A	0	0.1441	0.024	4/16/2021	4/17/2021	4/17/2021 16:59	
11587	GLEN ULLIN	1093.2	0.6459	1360.2	-49.6	2.319	1.0197	82.4842	13.1834	0.7829	0.0234	0.0142	0	0.0003	N/A	0	0.1494	0.0237	4/17/2021	4/18/2021	4/18/2021 16:51	
11587	GLEN ULLIN	1094.2	0.6468	1360.5	-49	2.3243	1.0322	82.3259	13.309	0.793	0.0249	0.0151	0.0003	0.001	N/A	0	0.1507	0.0238	4/18/2021	4/19/2021	4/19/2021 17:06	
11587	GLEN ULLIN	1093.2	0.6466	1359.5	-49.3	2.3656	1.0317	82.3171	13.286	0.7718	0.0249	0.0149	0.0003	0.0008	N/A	0	0.1631	0.0239	4/19/2021	4/20/2021	4/20/2021 17:16	
11587	GLEN ULLIN	1092.4	0.6456	1359.6	-50.1	2.3198	1.0312	82.477	13.2087	0.74	0.0222	0.013	0.0001	0.0001	N/A	0	0.1641	0.0238	4/20/2021	4/21/2021	4/21/2021 16:43	
11587	GLEN ULLIN	1093.6	0.6448	1361.9	-49.6	2.2027	1.0089	82.7395	13.0063	0.8138	0.0262	0.0158	0.0004	0.0009	N/A	0	0.1626	0.023	4/21/2021	4/22/2021	4/22/2021 16:49	
11587	GLEN ULLIN	1093.2	0.6466	1359.5	-49.3	2.3577	1.0373	82.3641	13.2506	0.78	0.025	0.0145	0.0006	0.0007	N/A	0	0.1456	0.0241	4/22/2021	4/23/2021	4/23/2021 16:38	
11587	GLEN ULLIN	1093.8	0.6473	1359.5	-49.1	2.3721	1.0468	82.1766	13.4402	0.7496	0.0232	0.0137	0.0004	0.0005	N/A	0	0.1532	0.024	4/23/2021	4/24/2021	4/24/2021 16:26	
11587	GLEN ULLIN	1094.5	0.6478	1359.8	-48.8	2.368	1.0504	82.1082	13.4849	0.7751	0.0216	0.0133	0	0.0001	N/A	0	0.1548	0.0238	4/24/2021	4/25/2021	4/25/2021 16:38	
11587	GLEN ULLIN	1092.9	0.6468	1358.9	-49.5	2.3718	1.0502	82.2712	13.3404	0.7463	0.0224	0.0139	0.0002	0.0006	N/A	0	0.1594	0.0238	4/25/2021	4/26/2021	4/26/2021 16:48	
11587	GLEN ULLIN	1093.9	0.6474	1359.5	-49.2	2.3707	1.0499	82.1729	13.4504	0.7506	0.0212	0.0133	0.0002	0.0003	N/A	0	0.1465	0.024	4/26/2021	4/27/2021	4/27/2021 16:53	
11587	GLEN ULLIN	1091.8	0.6458	1358.5	-50.5	2.3651	1.0413	82.3798	13.2828	0.7088	0.0169	0.0109	0	0	N/A	0	0.1709	0.0238	4/27/2021	4/28/2021	4/28/2021 17:03	
11587	GLEN ULLIN	1094.8	0.648	1360.1	-48.8	2.365	1.0531	82.0689	13.5424	0.7676	0.0203	0.0126	0.0002	0.0002	N/A	0	0.146	0.0237	4/28/2021	4/29/2021	4/29/2021 16:46	
11587	GLEN ULLIN	1095.6	0.6491	1359.9	-48.1	2.4182	1.055	81.8518	13.6703	0.7919	0.0222	0.0133	0	0.0001	N/A	0	0.1531	0.0242	4/29/2021	4/30/2021	4/30/2021 17:19	
11587	GLEN ULLIN	1097.7	0.6512	1360.3	-47	2.4915	1.0538	81.3882	14.0453	0.797	0.0205	0.0125	0	0.0001	N/A	0	0.1667	0.0241	4/30/2021	5/1/2021	5/1/2021 17:20	

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	APR 21	MAR 21	FEB 21	JAN 21	DEC 20	NOV 20	OCT 20	SEPT 20	AUG 20	JULY 20	JUNE 20	MAY 20	ZONE
MT/ND	211	Sidney Border - MonDak Tfr - Sidney Plt	1197	1198	1208	1206	1209	1207	1198	1200	1202	1196	1191	1169	1174	211
ND	24	Williston Border - Charbonneau Station	1165	1167	1176	1176	1177	1175	1167	1158	1157	1157	1153	1163	1159	24
ND	25	Watford City West Border	1192	1199	1194	1194	1195	1195	1193	1193	1194	1191	1194	1161	1206	25
ND	28	Bismarck Station - Glen Ullin Station	1149	1117	1148	1110	1121	1135	1131	1152	1174	1195	1190	1186	1129	28
ND	31	Dickinson Brd - Belfield Trf - G Ullin Stn	1118	1154	1127	1113	1122	1131	1129	1136	1125	1104	1092	1085	1093	31
ND/MT	32	Cabin Creek Station - Belfied Transfer	1116	1124	1121	1091	1105	1119	1123	1127	1134	1120	1115	1109	1109	32
ND	33	Little Knife Plant	1175	1173	1172	1171	1172	1172	1172	1172	1174	1179	1183	1182	1179	33
ND	34	Badlands Plant/Bowman Border	1048	981	1040	1079	1172	1094	1070	1060	1025	984	984	1036	1047	34
ND	43 1/	Watford City East Border	1133	1119	1126	1106	1104	1147	1147	1140	1139	1137	1142	1138	1151	43
ND/MT	241	Fairview Border	1179	1185	1198	1204	1192	1195	1203	1169	1157	1172	1153	1159	1164	241
ND	260	North Tioga Transfer - Nesson Plant	1132	1148	1160	1149	1144	1142	1134	1114	1131	1129	1116	1116	1099	260
ND	261	Tioga Comp Station - Robinson Lake Plan	1170	1180	1173	1171	1168	1166	1159	1164	1162	1172	1167	1177	1178	261
ND	262	Minot Bdr - Palermo Bdr - Bismarck Stn	1188	1189	1191	1187	1184	1181	1178	1182	1191	1195	1189	1192	1193	262
ND	263	Lignite Plant	1141	1147	1148	1125	1133	1134	1137	1137	1149	1147	1143	1149	1146	263
ND	264	Epping Border	1160	1165	1168	1168	1167	1165	1163	1156	1155	1147	1147	1153	1168	264
ND	265	Tioga Comp Station - County Line Plant	1168	1170	1172	1171	1168	1166	1159	1164	1163	1173	1168	1178	1158	265
ND	266	County Line Plant	1176	1169	1174	1176	1164	1166	1165	1161	1190	1194	1191	1194	1168	266
ND	271	Bismarck Station - Cleveland Station	1185	1186	1191	1165	1180	1179	1174	1181	1191	1195	1190	1193	1190	271
ND	272	Cleveland Station - Mapleton	1184	1185	1190	1165	1179	1178	1173	1182	1191	1195	1190	1192	1189	272
ND	273	Cleveland Station - Grafton Border	1184	1184	1189	1164	1179	1178	1173	1181	1190	1194	1190	1192	1189	273
ND	550	Mandan Border / NBPL-St Anthony	1148	1120	1148	1110	1121	1133	1131	1152	1174	1190	1181	1186	1129	550
ND	610	MDU-Watford City BTU	1160	1158	1158	1141	1140	1167	1166	1165	1170	1163	1163	1149	1182	610
ND	802	NBPL - Linton	1101	1093	1099	1101	1103	1111	1113	1110	1120	1102	1088	1082	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	1157	1154	1150	1146	1148	1155	1155	1166	1166	1160	1158	1164	1158	600
ND	601	Alliance Pipeline - Milnor	1157	1154	1150	1146	1148	1155	1155	1166	1167	1161	1158	1164	1157	602

1/ Values for June 2020 forward reflect the BTU from the accumulated sampler and previous values were from the chromatograph

THERMAL ZONE VARIANCE DOCUMENTATION		
April 2021		
<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
28	-31	Blend of Gas and Direction of Flow
550	-28	Blend of Gas
31	27	Direction of Flow
34	-59	Blend of Gas