

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

October 26, 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 – August 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 September 2021.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our suppliers for the month of August 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 August 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
Sep-21

<u>Town</u>	<u>Heat Zone</u>	<u>Therm Factor</u>
MDU-303-ALEXANDER	025	1.1362
MDU-308-ARNEGARD	025	1.1362
MDU-314-APPLE VALLEY	271	1.1578
MDU-318-BEACH	032	1.0489
MDU-319-BELFIELD	032	1.0566
MDU-323-BERTHOLD	262	1.1334
MDU-324-BEULAH	032	1.0566
MDU-327-BISMARCK	028	1.1598
MDU-330-BOWMAN	034	0.8990
MDU-337-BURLINGTON	262	1.1578
MDU-343-CARRINGTON	273	1.1578
MDU-344-CLEVELAND	272	1.1487
MDU-364-CAVALIER	273	1.1823
MDU-365-DAWSON	271	1.1497
MDU-368-DES LACS	262	1.1415
MDU-369-DICKINSON	031	1.0531
MDU-374-FT TOTTEN	273	1.1660
MDU-375-DEVILS LAKE	273	1.1660
MDU-379-BARLOW	273	1.1578
MDU-384-EPPING	264	1.1070
MDU-387-ELDRIDGE	272	1.1569
MDU-407-GLADSTONE	031	1.0531
MDU-411-GLEN ULLIN	031	1.0607
MDU-413-GOLVA	032	1.0335
MDU-416-GARRISON	262	1.1415
MDU-417-GRAFTON	273	1.1904
MDU-403-GWINNER	601	1.1389
MDU-429-HEBRON	031	1.0607
MDU-432-HETTINGER	903	2.4049
MDU-449-JAMESTOWN	272	1.1650
MDU-459-KILLDEER	033	1.1183
MDU-463-LANGDON	273	1.1578
MDU-469-LEFOR	031	1.0531
MDU-474-LIGNITE	263	1.0873
MDU-475-LINTON	802	1.0507
MDU-478-LINCOLN	028	1.0578
MDU-488-MCKENZIE	271	1.1578
MDU-494-MEDINA	271	1.1497
MDU-498-MANDAN	028	1.1578
MDU-500-MARMARTH	034	0.9057
MDU-505-MINOT	262	1.1578
MDU-510-MOTT	031	1.0531
MDU-512-MAX	262	1.1334
MDU-513-MILNOR	601	1.1389
MDU-522-NEW ENGLAND	031	1.0454
MDU-524-NEW SALEM	028	1.1334
MDU-532-NEW ROCKFORD	273	1.1578
MDU-539-PARK RIVER	273	1.1823
MDU-540-PALERMO	262	1.1334

MDU-558-RAY	264	1.1070
MDU-561-REGENT	031	1.0531
MDU-563-RHAME	034	0.8923
MDU-564-RICHARDTON	031	1.0454
MDU-568-ROSS	261	1.1215
MDU-572-RUTHVILLE	262	1.1578
MDU-574-SANBORN	272	1.1650
MDU-583-SENTINEL BUTTE	032	1.0489
MDU-588-SOUTH HEART	031	1.0454
MDU-717-SPIRITWOOD	272	1.1650
MDU-590-SPRINGBROOK	264	1.1070
MDU-591-STANLEY	261	1.1296
MDU-593-STEELE	271	1.1497
MDU-594-STERLING	028	1.1578
MDU-598-SHEYENNE	273	1.1660
MDU-605-SURREY	262	1.1578
MDU-610-TAPPEN	271	1.1497
MDU-611-TAYLOR	031	1.0454
MDU-616-TIOGA	260	1.1102
MDU-619-TURTLE LAKE	262	1.1415
MDU-620-TRENTON	024	1.1149
MDU-624-UNDERWOOD	262	1.1415
MDU-625-VALLEY CITY	272	1.1732
MDU-629-WALHALLA	273	1.1823
MDU-632-WATFORD CITY	610	1.0588
MDU-636-WHEELOCK	264	1.0990
MDU-637-WHITE EARTH	261	1.1296
MDU-642-WILLISTON	024	1.1149
MDU-646-WASHBURN	262	1.1497
MDU-647-WILTON	262	1.1334
MDU-664-RIVERDALE	262	1.1415
MDU-691-FAIRVIEW	241	1.1539
MDU-712-MINOT AFB	262	1.1578
MDU-718-FAIRMOUNT	600	1.1366
MDU-732-NEKOMA	273	1.1578
MDU-732-MSR SITE	273	1.1578

Source Daily Summary

August 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	0.7491	1206.7	1228.0	1223.4	1.333	3.455	65.648	25.468	3.646	0.140	0.276	0.018	0.015	0.000	0.000	0.000	0.000	0.000	1415.41	
2	0.7527	1213.0	1234.5	1230.0	1.321	3.427	65.172	25.727	3.892	0.144	0.283	0.018	0.016	0.000	0.000	0.000	0.000	0.000	1419.39	
3	0.7348	1189.3	1210.4	1206.1	1.235	3.322	67.923	23.958	3.136	0.129	0.263	0.018	0.016	0.000	0.000	0.000	0.000	0.000	1408.57	
4	0.7263	1178.5	1199.4	1195.1	1.188	3.250	69.408	22.796	2.939	0.124	0.258	0.018	0.017	0.000	0.000	0.000	0.000	0.000	1403.96	
5	0.7340	1187.3	1208.3	1204.1	1.247	3.352	67.919	24.075	2.989	0.127	0.257	0.017	0.016	0.000	0.000	0.000	0.000	0.000	1406.98	
6	0.7371	1191.8	1212.9	1208.6	1.256	3.354	67.406	24.476	3.087	0.128	0.259	0.018	0.016	0.000	0.000	0.000	0.000	0.000	1409.34	
7	0.7364	1189.7	1210.8	1206.5	1.268	3.398	67.622	24.147	3.127	0.133	0.270	0.018	0.017	0.000	0.000	0.000	0.000	0.000	1407.54	
8	0.7410	1195.6	1216.8	1212.3	1.296	3.429	67.061	24.340	3.400	0.146	0.292	0.019	0.017	0.000	0.000	0.000	0.000	0.000	1410.07	
9	0.7400	1193.6	1214.7	1210.5	1.314	3.429	66.926	24.763	3.137	0.133	0.265	0.017	0.015	0.000	0.000	0.000	0.000	0.000	1408.70	
10	0.7394	1193.7	1214.9	1210.6	1.291	3.403	66.913	24.924	3.049	0.129	0.259	0.017	0.015	0.000	0.000	0.000	0.000	0.000	1409.41	
11	0.7454	1201.9	1223.2	1218.9	1.318	3.424	66.063	25.413	3.335	0.138	0.275	0.018	0.016	0.000	0.000	0.000	0.000	0.000	1413.35	
12	0.7405	1194.2	1215.3	1211.2	1.310	3.450	66.897	24.694	3.211	0.135	0.270	0.018	0.015	0.000	0.000	0.000	0.000	0.000	1408.87	
13	0.7465	1203.6	1224.9	1220.5	1.316	3.430	65.833	25.644	3.327	0.139	0.277	0.018	0.016	0.000	0.000	0.000	0.000	0.000	1414.25	
14	0.7440	1199.9	1221.1	1216.7	1.304	3.434	66.559	24.754	3.450	0.153	0.307	0.020	0.018	0.000	0.000	0.000	0.000	0.000	1412.29	
15	0.7467	1202.7	1224.0	1219.4	1.335	3.474	66.152	24.978	3.545	0.160	0.318	0.021	0.017	0.000	0.000	0.000	0.000	0.000	1412.96	
16	0.7481	1204.7	1226.1	1221.3	1.334	3.479	65.997	25.035	3.609	0.169	0.336	0.022	0.019	0.000	0.000	0.000	0.000	0.000	1414.09	
17	0.7089	1178.0	1198.9	1194.6	0.140	3.238	71.412	22.188	2.748	0.096	0.165	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1420.65	
18	0.7112	1184.2	1205.2	1201.2	0.049	3.219	70.989	22.556	2.922	0.088	0.162	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1425.74	
19	0.7325	1194.8	1215.9	1211.9	0.846	3.360	68.046	24.073	3.302	0.118	0.230	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1417.44	
20	0.7206	1187.4	1208.5	1204.6	0.471	3.268	69.529	23.538	2.906	0.092	0.178	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1420.32	
21	0.7072	1177.9	1198.7	1194.8	0.042	3.234	71.640	22.040	2.812	0.077	0.144	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1422.18	
22	0.7338	1194.2	1215.4	1211.3	0.931	3.390	67.613	24.607	3.115	0.109	0.211	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1415.58	
23	0.7458	1201.5	1222.8	1218.4	1.341	3.457	65.893	25.586	3.310	0.130	0.253	0.016	0.014	0.000	0.000	0.000	0.000	0.000	1412.43	
24	0.7447	1199.8	1221.1	1216.9	1.338	3.457	65.902	25.779	3.131	0.124	0.241	0.015	0.013	0.000	0.000	0.000	0.000	0.000	1411.58	
25	0.7304	1194.3	1215.5	1211.4	0.787	3.290	67.912	24.782	2.911	0.101	0.198	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1418.97	
26	0.7092	1179.5	1200.4	1196.5	0.097	3.249	71.329	22.245	2.820	0.083	0.164	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1422.00	
27	0.7436	1199.5	1220.8	1216.5	1.283	3.453	66.218	25.394	3.255	0.125	0.245	0.015	0.013	0.000	0.000	0.000	0.000	0.000	1412.26	
28	0.7446	1199.8	1221.0	1216.8	1.338	3.453	65.976	25.663	3.169	0.126	0.246	0.015	0.013	0.000	0.000	0.000	0.000	0.000	1411.56	
29	0.7448	1200.5	1221.8	1217.4	1.337	3.431	65.993	25.625	3.199	0.130	0.255	0.016	0.014	0.000	0.000	0.000	0.000	0.000	1412.18	
30	0.7463	1202.7	1224.0	1219.4	1.333	3.447	65.772	25.751	3.278	0.132	0.257	0.016	0.014	0.000	0.000	0.000	0.000	0.000	1413.29	
31	0.7461	1202.1	1223.3	1218.8	1.332	3.463	65.864	25.600	3.313	0.136	0.262	0.016	0.014	0.000	0.000	0.000	0.000	0.000	1412.80	
Avg	0.7365	1195.0	1216.1	1211.8	1.075	3.384	67.406	24.536	3.196	0.126	0.247	0.015	0.014	0.000	0.000	0.000	0.000	0.000	1413.68	

Source Daily Summary

August 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	0.7068	1154.6	1175.0	1171.2	1.014	3.148	72.545	20.525	2.418	0.097	0.217	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1394.33
2	0.7065	1154.5	1174.9	1171.1	1.021	3.108	72.614	20.518	2.384	0.098	0.220	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1394.58
3	0.7027	1152.6	1173.0	1169.4	1.019	2.874	73.036	20.649	2.113	0.086	0.191	0.014	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1396.05
4	0.7040	1153.0	1173.4	1169.7	1.020	2.967	72.911	20.559	2.220	0.090	0.199	0.015	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1395.25
5	0.7045	1153.1	1173.5	1169.8	1.021	3.003	72.862	20.526	2.256	0.092	0.206	0.015	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1394.92
6	0.7050	1153.8	1174.2	1170.5	1.022	3.014	72.798	20.532	2.294	0.094	0.210	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1395.17
7	0.7060	1155.2	1175.7	1171.9	1.016	3.022	72.672	20.601	2.338	0.097	0.218	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1395.99
8	0.7071	1156.8	1177.3	1173.5	1.016	3.031	72.544	20.637	2.399	0.102	0.231	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1396.80
9	0.7052	1151.9	1172.3	1168.6	1.024	3.140	72.785	20.390	2.318	0.095	0.214	0.016	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1392.72
10	0.7069	1153.9	1174.4	1170.7	1.017	3.187	72.580	20.417	2.436	0.100	0.225	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1393.48
11	0.7076	1154.7	1175.1	1171.4	1.020	3.195	72.465	20.495	2.469	0.099	0.221	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1393.79
12	0.7088	1160.0	1180.5	1176.8	1.017	2.998	72.430	20.532	2.675	0.096	0.215	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1398.87
13	0.7067	1157.4	1177.9	1174.2	1.010	2.971	72.655	20.534	2.481	0.097	0.216	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1397.84
14	0.7065	1158.7	1179.2	1175.4	1.003	2.878	72.728	20.554	2.479	0.099	0.220	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1399.65
15	0.7086	1160.9	1181.5	1177.6	1.002	2.940	72.492	20.574	2.601	0.108	0.242	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1400.25
16	0.7158	1165.5	1186.1	1182.0	0.980	3.366	71.687	20.313	3.189	0.128	0.288	0.022	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1398.65
17	0.7120	1160.4	1180.9	1177.2	0.980	3.322	72.205	20.031	3.046	0.120	0.256	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1396.26
18	0.7143	1166.5	1187.2	1183.5	1.017	3.108	71.849	20.568	3.009	0.123	0.277	0.022	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1401.36
19	0.7049	1154.1	1174.5	1170.7	1.001	3.009	73.408	19.473	2.684	0.113	0.261	0.022	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1395.52
20	0.7025	1143.3	1163.5	1159.9	0.960	3.499	73.770	18.613	2.781	0.105	0.232	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1384.98
21	0.7051	1147.9	1168.2	1164.6	0.936	3.510	73.308	18.961	2.906	0.108	0.236	0.017	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1387.92
22	0.7004	1146.0	1166.3	1162.7	0.931	3.188	74.002	18.880	2.658	0.103	0.205	0.014	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1390.25
23	0.6960	1144.8	1165.1	1161.5	0.929	2.848	74.479	19.168	2.280	0.090	0.179	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1393.30
24	0.6950	1142.2	1162.4	1158.8	0.909	2.948	74.784	18.656	2.391	0.095	0.187	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1391.02
25	0.6963	1143.1	1163.4	1159.8	0.941	2.962	74.527	18.899	2.352	0.091	0.195	0.015	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1390.94
26	0.6959	1142.5	1162.7	1159.2	0.944	2.965	74.536	18.934	2.316	0.089	0.187	0.014	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1390.51
27	0.6968	1143.5	1163.8	1160.2	0.947	2.976	74.400	19.032	2.326	0.090	0.195	0.015	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1390.92
28	0.6993	1145.3	1165.5	1162.0	0.937	3.122	74.016	19.130	2.461	0.096	0.206	0.015	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1390.53
29	0.6985	1145.4	1165.7	1162.1	0.932	3.043	74.133	19.161	2.401	0.094	0.203	0.015	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1391.51
30	0.7008	1146.7	1167.0	1163.4	0.927	3.190	73.771	19.237	2.539	0.098	0.208	0.015	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1390.80
31	0.7010	1146.0	1166.3	1162.6	0.930	3.246	73.835	19.024	2.615	0.101	0.215	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1389.73
Avg	0.7041	1152.0	1172.5	1168.8	0.982	3.090	73.188	19.875	2.511	0.100	0.219	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1394.00

Gas Composition and Properties

Effective August 1, 2021

Source #: 0602160
Name: FAIRVIEW BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.1337		2.3760
Nitrogen, N2	3.2954		4.3961
Methane, C1	69.2187		52.8801
Ethane, C2	22.8928	6.1274	32.7804
Propane, C3	3.0417	0.8387	6.3872
iso-Butane, iC4	0.1287	0.0422	0.3562
n-Butane, nC4	0.2551	0.0805	0.7061
iso-Pentane, iC5	0.0163	0.0060	0.0560
n-Pentane, nC5	0.0155	0.0056	0.0533
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0021	0.0009	0.0086
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
Totals	100.0000	7.1010	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-14.247	
Cricondentherm	2.027	
HV, Dry @ Base P, T	1201.47	
HV, Sat @ Base P, T	1180.56	
HV, Sat @ Sample P, T	1201.47	
Relative Density	0.7272	
C6+: 100		

Sample

Date: 08/01/2021 Pressure: 420.0
Type: Temperature:
Tech: Cory Scheitlin H2O: lbs/mm
 H2S: ppm

Remarks:

Analysis

Date: 08/01/2021 Instrument:
 Cylinder: 360
Tech: Cory Scheitlin

Remarks:

Gas Composition and Properties

Effective August 1, 2021

Attachment B

Page 4 of 24

Source #: 0602225
Name: WATFORD CITY WEST BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.2794		2.6362
Nitrogen, N2	3.6691		4.8122
Methane, C1	69.5344		52.2263
Ethane, C2	20.0533	5.3679	28.2308
Propane, C3	4.3859	1.2094	9.0547
iso-Butane, iC4	0.2874	0.0941	0.7821
n-Butane, nC4	0.6455	0.2037	1.7565
iso-Pentane, iC5	0.0614	0.0225	0.2074
n-Pentane, nC5	0.0663	0.0241	0.2240
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0173	0.0071	0.0698
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
Totals	100.0000	6.9280	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	9.591	
Cricondenthem	20.223	
HV, Dry @ Base P, T	1210.84	
HV, Sat @ Base P, T	1189.77	
HV, Sat @ Sample P, T	1210.84	
Relative Density	0.7397	
C6+:		

Sample			
Date:	08/01/2021	Pressure:	450.0
Type:		Temperature:	
Tech:	Cory Scheitlin	H2O:	lbs/mm
		H2S:	ppm
Remarks:			

Analysis			
Date:	08/01/2021	Instrument:	
		Cylinder:	388
Tech:	Cory Scheitlin		
Remarks:			

Source Daily Summary

August 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	0.7146	1154.2	1174.6		0.956	3.993	71.415	20.222	3.042	0.103	0.231	0.017	0.019	0.003					1386.27	
2	0.7131	1153.3	1173.7		0.970	3.878	71.621	20.266	2.892	0.100	0.230	0.018	0.021	0.003					1386.73	
3	0.7058	1148.4	1168.7		0.961	3.508	72.415	20.485	2.357	0.076	0.171	0.012	0.014	0.001					1387.96	
4	0.7082	1149.2	1169.6		0.964	3.677	72.272	20.142	2.623	0.088	0.198	0.015	0.018	0.003					1386.61	
5	0.7100	1149.9	1170.3		0.967	3.796	72.050	20.103	2.745	0.094	0.211	0.015	0.017	0.002					1385.72	
6	0.7107	1151.1	1171.5		0.966	3.791	71.928	20.209	2.762	0.095	0.213	0.016	0.018	0.003					1386.49	
7	0.7119	1152.7	1173.1		0.954	3.827	71.740	20.304	2.823	0.098	0.220	0.015	0.017	0.002					1387.17	
8	0.7141	1155.9	1176.4		0.956	3.834	71.382	20.594	2.855	0.101	0.234	0.018	0.021	0.004					1388.93	
9	0.7119	1148.7	1169.0		0.972	4.045	71.846	19.857	2.907	0.102	0.234	0.016	0.018	0.003					1382.36	
10	0.7152	1152.6	1173.0		0.970	4.119	71.414	19.986	3.116	0.108	0.245	0.018	0.020	0.004					1383.84	
11	0.7151	1153.3	1173.8		0.968	4.063	71.398	20.093	3.105	0.103	0.233	0.016	0.018	0.003					1384.88	
12	0.7118	1150.7	1171.1		0.981	3.902	71.829	20.052	2.883	0.096	0.218	0.016	0.019	0.004					1384.84	
13	0.7112	1151.5	1171.9		0.980	3.791	71.967	20.049	2.857	0.097	0.220	0.016	0.019	0.003					1386.45	
14	0.7092	1150.5	1170.9		0.962	3.690	72.173	20.119	2.736	0.090	0.197	0.014	0.016	0.003					1387.25	
15	0.7146	1155.7	1176.2		0.966	3.875	71.490	20.267	3.000	0.109	0.247	0.019	0.022	0.006					1388.21	
16	0.7159	1155.6	1176.1		0.946	4.032	71.388	20.021	3.207	0.114	0.251	0.017	0.020	0.004					1386.81	
17	0.7077	1147.2	1167.5		0.982	3.729	72.403	19.888	2.691	0.089	0.190	0.013	0.014	0.001					1384.62	
18	0.7105	1171.2	1191.9		0.933	2.589	72.530	20.518	3.006	0.120	0.255	0.020	0.022	0.003					1414.09	
19	0.6665	1087.7	1107.0		0.764	3.809	79.502	13.975	1.707	0.064	0.148	0.013	0.015	0.002					1352.82	
20	0.6960	1122.6	1142.5		0.903	4.242	74.725	17.054	2.767	0.089	0.192	0.013	0.014	0.001					1366.33	
21	0.6992	1126.9	1146.9		0.884	4.309	74.293	17.221	2.953	0.097	0.211	0.015	0.017	0.002					1368.42	
22	0.6924	1119.9	1139.7		0.855	4.144	75.233	16.847	2.640	0.082	0.175	0.012	0.012	0.000					1366.56	
23	0.6832	1112.4	1132.1		0.822	3.787	76.683	16.221	2.245	0.069	0.148	0.011	0.013	0.002					1366.50	
24	0.6860	1115.2	1134.9		0.819	3.879	76.298	16.319	2.427	0.077	0.159	0.010	0.011	0.000					1367.18	
25	0.6891	1118.4	1138.2		0.824	3.976	75.865	16.459	2.591	0.083	0.173	0.012	0.014	0.002					1367.92	
26	0.6883	1116.9	1136.7		0.815	3.998	75.922	16.461	2.542	0.079	0.161	0.011	0.011	0.000					1367.01	
27	0.6898	1117.9	1137.7		0.822	4.064	75.716	16.530	2.582	0.082	0.174	0.013	0.015	0.002					1366.77	
28	0.6953	1124.7	1144.7		0.822	4.173	74.899	16.929	2.854	0.095	0.202	0.013	0.014	0.000					1369.55	
29	0.6922	1122.6	1142.4		0.812	4.022	75.352	16.837	2.675	0.087	0.184	0.013	0.015	0.003					1370.06	
30	0.6988	1129.2	1149.2		0.808	4.245	74.350	17.248	3.019	0.099	0.205	0.013	0.013	0.000					1371.61	
31	0.6998	1129.7	1149.7		0.821	4.293	74.264	17.184	3.087	0.103	0.214	0.015	0.016	0.003					1371.15	
Avg	0.7028	1139.0	1158.7		0.907	3.906	73.431	18.660	2.764	0.093	0.205	0.015	0.017	0.002					1379.07	

Source Daily Summary

August 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	0.7646	1194.7	1215.9	1211.9	0.937	6.220	64.981	20.882	6.133	0.224	0.542	0.038	0.043	0.000	0.000	0.000	0.000	0.000	1387.14	
2	0.7598	1186.1	1207.1	1203.0	0.938	6.286	65.651	20.432	5.888	0.218	0.514	0.035	0.039	0.000	0.000	0.000	0.000	0.000	1381.47	
3	0.7536	1181.1	1202.1	1198.1	0.949	6.006	66.356	20.490	5.460	0.203	0.467	0.032	0.036	0.000	0.000	0.000	0.000	0.000	1381.31	
4	0.7182	1155.4	1175.9	1172.3	0.974	4.223	70.709	20.653	3.066	0.105	0.236	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1384.39	
5	0.7181	1154.4	1174.8	1171.3	0.970	4.277	70.862	20.325	3.184	0.109	0.240	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1383.29	
6	0.7667	1197.8	1219.0	1215.1	0.935	6.231	65.006	20.524	6.341	0.258	0.612	0.043	0.049	0.000	0.000	0.000	0.000	0.000	1388.78	
7	0.7545	1178.9	1199.8	1195.9	0.940	6.235	66.363	20.076	5.607	0.214	0.495	0.033	0.037	0.000	0.000	0.000	0.000	0.000	1377.93	
8	0.7568	1179.9	1200.8	1196.7	0.933	6.401	66.181	19.844	5.805	0.229	0.532	0.036	0.040	0.000	0.000	0.000	0.000	0.000	1376.96	
9	0.7405	1171.6	1192.4	1188.8	0.951	5.352	68.095	20.372	4.568	0.179	0.421	0.029	0.033	0.000	0.000	0.000	0.000	0.000	1382.41	
10	0.7559	1176.4	1197.2	1193.6	0.937	6.521	66.395	19.498	5.777	0.236	0.559	0.036	0.040	0.000	0.000	0.000	0.000	0.000	1373.72	
11	0.7576	1180.3	1201.2	1197.5	0.934	6.444	65.936	20.077	5.812	0.222	0.508	0.032	0.035	0.000	0.000	0.000	0.000	0.000	1376.82	
12	0.7604	1186.3	1207.3	1203.7	0.933	6.348	65.485	20.502	5.942	0.215	0.504	0.033	0.037	0.000	0.000	0.000	0.000	0.000	1381.19	
13	0.7639	1192.1	1213.2	1209.4	0.936	6.315	65.073	20.703	6.146	0.220	0.530	0.036	0.040	0.000	0.000	0.000	0.000	0.000	1384.76	
14	0.7561	1182.7	1203.7	1199.7	0.948	6.143	66.001	20.530	5.638	0.201	0.472	0.032	0.035	0.000	0.000	0.000	0.000	0.000	1380.92	
15	0.7610	1190.1	1211.2	1207.0	0.940	6.158	65.428	20.745	5.928	0.213	0.513	0.036	0.040	0.000	0.000	0.000	0.000	0.000	1385.09	
16	0.7396	1172.4	1193.2	1189.0	0.956	5.214	68.067	20.683	4.484	0.164	0.378	0.026	0.029	0.000	0.000	0.000	0.000	0.000	1384.23	
17	0.7575	1181.4	1202.3	1198.4	0.938	6.367	66.034	20.023	5.809	0.228	0.528	0.035	0.038	0.000	0.000	0.000	0.000	0.000	1378.10	
18	0.7148	1153.4	1173.8	1170.4	1.082	3.862	71.347	20.467	2.896	0.098	0.216	0.015	0.017	0.000	0.000	0.000	0.000	0.000	1385.26	
19	0.7033	1141.9	1162.1	1158.7	1.187	3.323	72.908	20.218	2.119	0.069	0.149	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1382.49	
20	0.6852	1115.4	1135.1	1131.9	0.993	3.535	76.115	17.244	1.878	0.067	0.144	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1368.06	
21	0.7379	1159.1	1179.6	1176.2	0.962	5.859	68.399	19.537	4.694	0.160	0.349	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1370.18	
22	0.7517	1171.4	1192.1	1188.7	0.946	6.423	66.481	20.047	5.440	0.192	0.420	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1371.76	
23	0.7501	1171.9	1192.6	1189.2	0.944	6.242	66.678	20.154	5.352	0.183	0.397	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1373.88	
24	0.7252	1156.4	1176.8	1173.6	0.981	4.809	70.234	19.570	3.951	0.134	0.283	0.018	0.020	0.000	0.000	0.000	0.000	0.000	1378.88	
25	0.7386	1162.3	1182.8	1179.4	0.959	5.735	68.434	19.532	4.748	0.172	0.373	0.022	0.024	0.000	0.000	0.000	0.000	0.000	1373.14	
26	0.7566	1179.8	1200.7	1197.2	0.929	6.393	65.914	20.279	5.766	0.212	0.452	0.026	0.029	0.000	0.000	0.000	0.000	0.000	1377.13	
27	0.7557	1178.2	1199.1	1195.7	0.936	6.395	65.891	20.459	5.642	0.201	0.422	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1376.12	
28	0.7558	1178.8	1199.7	1196.2	0.931	6.380	65.879	20.482	5.642	0.203	0.429	0.025	0.028	0.000	0.000	0.000	0.000	0.000	1376.68	
29	0.7547	1177.0	1197.8	1194.2	0.923	6.397	66.114	20.236	5.621	0.212	0.447	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1375.58	
30	0.7558	1178.8	1199.7	1196.0	0.922	6.390	66.005	20.249	5.713	0.218	0.455	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1376.72	
31	0.7528	1176.1	1197.0	1193.3	0.930	6.264	66.387	20.191	5.545	0.208	0.430	0.022	0.024	0.000	0.000	0.000	0.000	0.000	1376.32	
Avg	0.7459	1173.0	1193.7	1190.1	0.957	5.766	67.400	20.162	5.051	0.186	0.420	0.027	0.030	0.000	0.000	0.000	0.000	0.000	1379.05	

Source Daily Summary

August 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	0.7632	1189.6	1210.6	1206.9	0.949	6.385	65.199	20.524	6.103	0.232	0.531	0.036	0.041	0.000	0.000	0.000	0.000	0.000	1382.44	
2	0.7654	1191.9	1213.0	1209.2	0.950	6.445	64.949	20.544	6.243	0.241	0.548	0.037	0.042	0.000	0.000	0.000	0.000	0.000	1383.18	
3	0.7603	1182.6	1203.5	1199.8	0.949	6.543	65.549	20.180	5.974	0.224	0.508	0.034	0.039	0.000	0.000	0.000	0.000	0.000	1376.91	
4	0.7613	1184.0	1205.0	1201.2	0.949	6.546	65.499	20.114	6.057	0.233	0.528	0.035	0.038	0.000	0.000	0.000	0.000	0.000	1377.70	
5	0.7607	1182.9	1203.9	1200.2	0.946	6.558	65.700	19.876	6.036	0.243	0.561	0.037	0.042	0.000	0.000	0.000	0.000	0.000	1377.00	
6	0.7588	1179.5	1200.4	1196.7	0.938	6.598	66.055	19.524	5.989	0.244	0.571	0.038	0.042	0.000	0.000	0.000	0.000	0.000	1374.76	
7	0.7652	1191.3	1212.4	1208.6	0.936	6.486	65.254	20.039	6.311	0.263	0.622	0.042	0.048	0.000	0.000	0.000	0.000	0.000	1382.61	
8	0.7587	1178.2	1199.1	1195.2	0.944	6.663	66.053	19.475	5.967	0.244	0.574	0.038	0.043	0.000	0.000	0.000	0.000	0.000	1373.27	
9	0.7600	1180.1	1201.0	1197.3	0.948	6.667	65.773	19.732	6.000	0.242	0.560	0.036	0.040	0.000	0.000	0.000	0.000	0.000	1374.27	
10	0.7616	1185.3	1206.3	1202.6	0.940	6.510	65.432	20.220	6.065	0.234	0.529	0.033	0.037	0.000	0.000	0.000	0.000	0.000	1378.95	
11	0.7638	1189.5	1210.6	1206.8	0.944	6.448	65.074	20.564	6.146	0.223	0.525	0.036	0.040	0.000	0.000	0.000	0.000	0.000	1381.90	
12	0.7641	1189.2	1210.3	1206.5	0.950	6.491	65.015	20.557	6.165	0.223	0.522	0.036	0.040	0.000	0.000	0.000	0.000	0.000	1381.20	
13	0.7655	1192.7	1213.8	1210.0	0.948	6.416	64.856	20.704	6.231	0.227	0.538	0.037	0.042	0.000	0.000	0.000	0.000	0.000	1383.94	
14	0.7639	1189.5	1210.5	1206.7	0.944	6.468	65.250	20.244	6.193	0.247	0.572	0.039	0.044	0.000	0.000	0.000	0.000	0.000	1381.64	
15	0.7599	1178.8	1199.7	1195.8	0.936	6.748	65.891	19.475	6.041	0.248	0.579	0.039	0.043	0.000	0.000	0.000	0.000	0.000	1372.90	
16	0.7647	1186.5	1207.5	1203.5	0.947	6.716	65.461	19.517	6.328	0.276	0.657	0.046	0.051	0.000	0.000	0.000	0.000	0.000	1377.44	
17	0.7574	1176.3	1197.1	1193.4	0.945	6.657	66.043	19.669	5.864	0.229	0.522	0.033	0.037	0.000	0.000	0.000	0.000	0.000	1372.26	
18	0.7433	1168.3	1189.0	1185.4	1.007	5.732	67.686	20.103	4.855	0.173	0.390	0.025	0.028	0.000	0.000	0.000	0.000	0.000	1375.88	
19	0.7331	1160.0	1180.5	1176.9	1.066	5.197	68.925	20.190	4.129	0.141	0.309	0.020	0.023	0.000	0.000	0.000	0.000	0.000	1375.53	
20	0.7496	1164.5	1185.2	1181.7	0.945	6.651	66.749	19.612	5.412	0.186	0.402	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1365.67	
21	0.7558	1175.1	1195.9	1192.3	0.945	6.584	65.882	20.236	5.667	0.200	0.434	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1372.38	
22	0.7576	1178.4	1199.2	1195.7	0.942	6.561	65.707	20.263	5.819	0.207	0.446	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1374.52	
23	0.7575	1177.5	1198.3	1194.8	0.935	6.612	65.936	19.851	5.884	0.228	0.494	0.028	0.031	0.000	0.000	0.000	0.000	0.000	1373.58	
24	0.7588	1180.5	1201.4	1197.9	0.941	6.545	65.523	20.407	5.876	0.212	0.441	0.026	0.029	0.000	0.000	0.000	0.000	0.000	1375.90	
25	0.7586	1180.3	1201.2	1197.7	0.946	6.529	65.511	20.490	5.822	0.210	0.436	0.027	0.029	0.000	0.000	0.000	0.000	0.000	1375.86	
26	0.7586	1180.5	1201.4	1197.8	0.944	6.525	65.507	20.504	5.811	0.211	0.442	0.026	0.029	0.000	0.000	0.000	0.000	0.000	1376.04	
27	0.7563	1176.6	1197.5	1194.0	0.935	6.557	65.812	20.297	5.710	0.208	0.430	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1373.68	
28	0.7591	1181.9	1202.9	1199.3	0.933	6.492	65.608	20.301	5.894	0.234	0.487	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1377.39	
29	0.7585	1180.6	1201.5	1198.0	0.933	6.517	65.663	20.246	5.901	0.226	0.465	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1376.40	
30	0.7583	1180.0	1200.9	1197.4	0.937	6.530	65.689	20.211	5.893	0.227	0.464	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1375.88	
31	0.7586	1179.8	1200.7	1197.1	0.936	6.575	65.670	20.139	5.942	0.225	0.461	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1375.31	
Avg	0.7587	1181.0	1201.9	1198.3	0.949	6.482	65.772	20.123	5.881	0.225	0.502	0.032	0.035	0.000	0.000	0.000	0.000	0.000	1376.66	

Gas Composition and Properties

Effective August 1, 2021

Attachment B

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Source #: 2501030
Name: LIGNITE PLANT

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.2436		0.5583
Nitrogen, N2	3.0696		4.4784
Methane, C1	79.3561		66.3025
Ethane, C2	15.2862	4.0891	23.9385
Propane, C3	2.0158	0.5555	4.6294
iso-Butane, iC4	0.0207	0.0068	0.0627
n-Butane, nC4	0.0039	0.0012	0.0118
iso-Pentane, iC5			
n-Pentane, nC5			
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0041	0.0017	0.0184
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
Totals	100.0000	4.6540	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-35.023	
Cricodentherm	-32.218	
HV, Dry @ Base P, T	1129.48	
HV, Sat @ Base P, T	1109.82	
HV, Sat @ Sample P, T	1129.48	
Relative Density	0.6645	
C6+: 100		

Sample

Date: 08/01/2021 Pressure: 630.0
Type: Temperature:
Tech: Cory Scheitlin H2O: lbs/mm
 H2S: ppm

Remarks:

Analysis

Date: 08/01/2021 Instrument:
 Cylinder: 109
Tech: Cory Scheitlin

Remarks:

Gas Composition and Properties

Effective August 1, 2021

Attachment B

Page 9 of 24

Source #: 3002013
Name: EPPING BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.9014		1.9592
Nitrogen, N2	3.2719		4.5267
Methane, C1	73.8389		58.5026
Ethane, C2	18.9690	5.0758	28.1696
Propane, C3	2.6634	0.7342	5.8003
iso-Butane, iC4	0.1066	0.0349	0.3060
n-Butane, nC4	0.2202	0.0695	0.6321
iso-Pentane, iC5	0.0131	0.0048	0.0467
n-Pentane, nC5	0.0133	0.0048	0.0474
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0022	0.0009	0.0094
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
Totals	100.0000	5.9250	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-15.670	
Cricodentherm	-9.271	
HV, Dry @ Base P, T	1166.59	
HV, Sat @ Base P, T	1146.29	
HV, Sat @ Sample P, T	1166.59	
Relative Density	0.7010	
C6+: 100		

Sample			
Date: 08/01/2021	Pressure:	550.0	
Type:	Temperature:		
Tech: Cory Scheitlin	H2O:	lbs/mm	
	H2S:	ppm	
Remarks:			

Analysis			
Date: 08/01/2021	Instrument:		
	Cylinder:	319	
Tech: Cory Scheitlin			
Remarks:			

*** End of Report ***

Source Daily Summary

August 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	0.7056	1147.7	1168.0	1164.7	1.009	3.455	72.611	20.239	2.398	0.080	0.177	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1387.39	
2	0.7049	1146.8	1167.1	1163.8	0.994	3.468	72.628	20.294	2.349	0.076	0.166	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1386.90	
3	0.7048	1146.5	1166.8	1163.4	1.008	3.454	72.700	20.217	2.338	0.078	0.175	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1386.62	
4	0.7059	1148.5	1168.8	1165.5	0.991	3.468	72.345	20.650	2.279	0.075	0.167	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1387.92	
5	0.7056	1147.5	1167.8	1164.4	0.990	3.501	72.537	20.319	2.370	0.079	0.175	0.013	0.016	0.000	0.000	0.000	0.000	0.000	1386.96	
6	0.7035	1143.8	1164.0	1160.7	1.000	3.517	72.836	20.091	2.291	0.075	0.165	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1384.57	
7	0.7056	1147.2	1167.5	1164.1	1.004	3.501	72.554	20.284	2.372	0.079	0.177	0.013	0.016	0.000	0.000	0.000	0.000	0.000	1386.54	
8	0.7075	1150.6	1171.0	1167.6	0.992	3.488	72.166	20.673	2.401	0.080	0.174	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1388.88	
9	0.7084	1151.8	1172.2	1168.8	0.995	3.485	72.051	20.768	2.403	0.083	0.185	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1389.52	
10	0.7037	1143.6	1163.8	1160.5	1.009	3.536	72.736	20.228	2.231	0.074	0.162	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1384.10	
11	0.7032	1143.1	1163.4	1160.0	1.025	3.483	72.955	19.995	2.270	0.075	0.169	0.013	0.016	0.000	0.000	0.000	0.000	0.000	1384.11	
12	0.7034	1143.8	1164.1	1160.7	1.021	3.471	72.859	20.123	2.272	0.073	0.157	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1384.73	
13	0.7039	1144.4	1164.7	1161.3	1.028	3.470	72.815	20.133	2.284	0.076	0.166	0.012	0.015	0.000	0.000	0.000	0.000	0.000	1384.93	
14	0.7046	1145.9	1166.2	1162.8	1.019	3.462	72.739	20.139	2.369	0.078	0.170	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1386.04	
15	0.7053	1148.4	1168.7	1165.2	0.995	3.410	72.614	20.326	2.379	0.078	0.170	0.012	0.015	0.000	0.000	0.000	0.000	0.000	1388.34	
16	0.7087	1152.7	1173.1	1169.6	0.995	3.460	72.163	20.528	2.537	0.089	0.196	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1390.25	
17	0.7068	1149.8	1170.1	1166.6	0.987	3.473	72.454	20.307	2.477	0.085	0.185	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1388.57	
18	0.7032	1144.4	1164.7	1161.3	1.069	3.342	72.916	20.180	2.249	0.071	0.149	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1385.67	
19	0.7037	1143.8	1164.0	1160.5	1.198	3.235	72.779	20.485	2.066	0.067	0.145	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1384.32	
20	0.7008	1137.0	1157.1	1153.6	1.204	3.366	73.570	19.383	2.202	0.079	0.171	0.011	0.015	0.000	0.000	0.000	0.000	0.000	1378.91	
21	0.6977	1133.5	1153.5	1150.1	1.116	3.421	74.252	18.588	2.349	0.076	0.168	0.013	0.017	0.000	0.000	0.000	0.000	0.000	1377.71	
22	0.6952	1131.6	1151.6	1148.3	1.060	3.385	74.567	18.456	2.294	0.072	0.146	0.011	0.010	0.000	0.000	0.000	0.000	0.000	1377.97	
23	0.6966	1134.6	1154.7	1151.3	1.049	3.354	74.289	18.770	2.300	0.069	0.145	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1380.15	
24	0.6971	1135.6	1155.7	1152.5	1.033	3.355	74.192	18.845	2.349	0.068	0.138	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1381.07	
25	0.6976	1136.7	1156.8	1153.4	1.033	3.335	74.210	18.774	2.404	0.072	0.147	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1381.79	
26	0.6969	1136.0	1156.1	1152.8	1.015	3.340	74.328	18.647	2.430	0.073	0.146	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1381.70	
27	0.6967	1135.7	1155.8	1152.4	1.023	3.332	74.334	18.680	2.398	0.070	0.140	0.010	0.013	0.000	0.000	0.000	0.000	0.000	1381.44	
28	0.6963	1134.6	1154.7	1151.4	1.016	3.371	74.336	18.707	2.336	0.068	0.143	0.010	0.013	0.000	0.000	0.000	0.000	0.000	1380.57	
29	0.6986	1138.5	1158.7	1155.3	1.022	3.335	74.042	18.903	2.447	0.073	0.153	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1383.04	
30	0.7005	1142.6	1162.8	1159.4	1.001	3.299	73.714	19.238	2.486	0.075	0.160	0.012	0.016	0.000	0.000	0.000	0.000	0.000	1386.05	
31	0.7006	1142.9	1163.2	1159.8	0.992	3.302	73.627	19.340	2.498	0.073	0.147	0.010	0.011	0.000	0.000	0.000	0.000	0.000	1386.42	
Avg	0.7024	1143.0	1163.1	1159.7	1.029	3.415	73.191	19.752	2.349	0.075	0.162	0.012	0.014	0.000	0.000	0.000	0.000	0.000	1384.62	

Source Daily Summary

August 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	0.7621	1189.9	1211.0	1206.0	0.930	6.297	65.402	20.449	6.072	0.235	0.538	0.037	0.040	0.000	0.000	0.000	0.000	0.000	1383.73	
2	0.7638	1191.4	1212.5	1207.7	0.930	6.365	65.258	20.359	6.200	0.247	0.563	0.038	0.041	0.000	0.000	0.000	0.000	0.000	1383.89	
3	0.7597	1184.0	1205.0	1200.4	0.930	6.430	65.728	20.097	5.986	0.232	0.525	0.034	0.037	0.000	0.000	0.000	0.000	0.000	1379.09	
4	0.7593	1182.8	1203.8	1199.1	0.930	6.465	65.853	19.914	5.991	0.237	0.539	0.035	0.037	0.000	0.000	0.000	0.000	0.000	1378.05	
5	0.7592	1182.9	1203.8	1199.0	0.927	6.451	65.933	19.842	5.970	0.243	0.559	0.036	0.039	0.000	0.000	0.000	0.000	0.000	1378.24	
6	0.7610	1186.6	1207.6	1203.3	0.923	6.405	65.732	19.952	6.083	0.250	0.576	0.038	0.041	0.000	0.000	0.000	0.000	0.000	1380.86	
7	0.7620	1187.6	1208.6	1203.9	0.919	6.438	65.718	19.804	6.168	0.259	0.610	0.040	0.044	0.000	0.000	0.000	0.000	0.000	1381.15	
8	0.7581	1179.2	1200.0	1194.9	0.924	6.581	66.243	19.327	6.006	0.251	0.590	0.038	0.040	0.000	0.000	0.000	0.000	0.000	1374.90	
9	0.7590	1180.0	1200.9	1196.5	0.926	6.611	65.933	19.698	5.948	0.245	0.565	0.036	0.038	0.000	0.000	0.000	0.000	0.000	1375.05	
10	0.7611	1186.5	1207.5	1203.3	0.923	6.421	65.596	20.128	6.065	0.242	0.551	0.035	0.038	0.000	0.000	0.000	0.000	0.000	1380.67	
11	0.7621	1188.7	1209.8	1205.3	0.926	6.375	65.317	20.483	6.087	0.221	0.520	0.034	0.037	0.000	0.000	0.000	0.000	0.000	1382.37	
12	0.7640	1191.6	1212.7	1208.5	0.930	6.372	65.092	20.589	6.174	0.228	0.537	0.037	0.040	0.000	0.000	0.000	0.000	0.000	1383.93	
13	0.7637	1191.9	1213.0	1208.6	0.928	6.327	65.179	20.538	6.173	0.231	0.545	0.037	0.040	0.000	0.000	0.000	0.000	0.000	1384.59	
14	0.7616	1187.2	1208.3	1203.7	0.924	6.418	65.669	19.953	6.121	0.251	0.582	0.039	0.042	0.000	0.000	0.000	0.000	0.000	1381.08	
15	0.7597	1183.8	1204.8	1200.1	0.923	6.449	65.947	19.720	6.065	0.248	0.571	0.037	0.039	0.000	0.000	0.000	0.000	0.000	1378.84	
16	0.7607	1184.1	1205.0	1200.3	0.933	6.513	65.816	19.735	6.087	0.253	0.584	0.038	0.041	0.000	0.000	0.000	0.000	0.000	1378.22	
17	0.7559	1175.2	1196.0	1191.4	0.931	6.612	66.272	19.552	5.816	0.230	0.522	0.032	0.033	0.000	0.000	0.000	0.000	0.000	1372.26	
18	0.7386	1165.7	1186.4	1182.0	0.998	5.469	68.259	20.143	4.572	0.161	0.355	0.021	0.023	0.000	0.000	0.000	0.000	0.000	1377.14	
19	0.7325	1158.3	1178.9	1174.5	1.036	5.287	69.052	19.949	4.188	0.143	0.309	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1374.13	
20	0.7488	1164.9	1185.5	1181.7	0.924	6.583	66.886	19.593	5.379	0.188	0.405	0.021	0.020	0.000	0.000	0.000	0.000	0.000	1366.78	
21	0.7555	1177.0	1197.9	1193.8	0.925	6.472	65.971	20.263	5.671	0.203	0.442	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1374.81	
22	0.7557	1177.5	1198.3	1194.2	0.924	6.469	66.017	20.142	5.738	0.208	0.448	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1375.11	
23	0.7576	1180.0	1200.9	1196.7	0.917	6.494	65.994	19.888	5.908	0.234	0.507	0.029	0.031	0.000	0.000	0.000	0.000	0.000	1376.37	
24	0.7574	1180.4	1201.3	1197.2	0.923	6.447	65.745	20.363	5.823	0.209	0.436	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1377.00	
25	0.7580	1181.6	1202.5	1198.1	0.928	6.422	65.660	20.461	5.816	0.212	0.445	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1377.85	
26	0.7570	1179.9	1200.8	1196.3	0.924	6.438	65.764	20.426	5.740	0.212	0.444	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1376.83	
27	0.7551	1176.8	1197.7	1193.1	0.916	6.460	66.044	20.204	5.678	0.211	0.439	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1374.97	
28	0.7580	1182.4	1203.3	1198.8	0.914	6.391	65.801	20.268	5.848	0.236	0.492	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1378.87	
29	0.7570	1180.2	1201.1	1196.7	0.915	6.429	65.905	20.173	5.841	0.227	0.464	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1377.25	
30	0.7579	1181.6	1202.5	1198.1	0.919	6.425	65.820	20.187	5.892	0.231	0.475	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1377.97	
31	0.7578	1180.8	1201.7	1197.3	0.917	6.468	65.852	20.082	5.934	0.228	0.468	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1377.13	
Avg	0.7574	1181.0	1202.2	1197.8	0.930	6.380	65.982	20.074	5.840	0.226	0.503	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1378.04	

Source Daily Summary

August 2021

Number: 063

Pressure Base: 14.730

Contract Day: 1

Name: CLEVELAND STN-MAPLETON

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	0.7631	1190.6	1211.6	1208.0	0.934	6.341	65.256	20.502	6.115	0.232	0.542	0.038	0.041	0.000	0.000	0.000	0.000	0.000	1383.59	
2	0.7621	1189.5	1210.5	1206.9	0.934	6.311	65.416	20.410	6.090	0.233	0.530	0.037	0.040	0.000	0.000	0.000	0.000	0.000	1383.28	
3	0.7644	1191.6	1212.7	1209.1	0.939	6.389	65.149	20.431	6.209	0.245	0.556	0.039	0.043	0.000	0.000	0.000	0.000	0.000	1383.65	
4	0.7593	1182.4	1203.3	1199.9	0.944	6.465	65.719	20.135	5.937	0.225	0.505	0.034	0.036	0.000	0.000	0.000	0.000	0.000	1377.63	
5	0.7598	1183.0	1203.9	1200.4	0.941	6.484	65.714	20.044	5.990	0.233	0.523	0.034	0.037	0.000	0.000	0.000	0.000	0.000	1377.83	
6	0.7581	1179.9	1200.8	1197.1	0.935	6.517	66.072	19.701	5.907	0.240	0.552	0.037	0.040	0.000	0.000	0.000	0.000	0.000	1375.78	
7	0.7603	1183.5	1204.5	1200.8	0.940	6.494	65.877	19.732	6.033	0.252	0.587	0.040	0.043	0.000	0.000	0.000	0.000	0.000	1377.99	
8	0.7616	1186.3	1207.3	1203.7	0.931	6.466	65.663	19.901	6.120	0.252	0.586	0.039	0.043	0.000	0.000	0.000	0.000	0.000	1380.02	
9	0.7575	1177.7	1198.6	1195.0	0.934	6.599	66.228	19.411	5.942	0.243	0.566	0.037	0.039	0.000	0.000	0.000	0.000	0.000	1373.78	
10	0.7574	1177.8	1198.7	1195.0	0.933	6.585	66.214	19.473	5.919	0.241	0.559	0.037	0.039	0.000	0.000	0.000	0.000	0.000	1373.96	
11	0.7616	1185.9	1206.9	1203.1	0.928	6.495	65.729	19.771	6.140	0.256	0.597	0.041	0.044	0.000	0.000	0.000	0.000	0.000	1379.49	
12	0.7612	1184.6	1205.5	1201.8	0.934	6.527	65.711	19.819	6.099	0.249	0.581	0.039	0.041	0.000	0.000	0.000	0.000	0.000	1378.36	
13	0.7626	1188.7	1209.8	1206.1	0.936	6.407	65.216	20.545	6.093	0.219	0.513	0.035	0.037	0.000	0.000	0.000	0.000	0.000	1381.90	
14	0.7639	1191.1	1212.2	1208.5	0.940	6.378	65.053	20.654	6.152	0.225	0.524	0.036	0.039	0.000	0.000	0.000	0.000	0.000	1383.51	
15	0.7628	1189.2	1210.3	1206.6	0.934	6.391	65.321	20.371	6.120	0.236	0.548	0.038	0.040	0.000	0.000	0.000	0.000	0.000	1382.41	
16	0.7610	1185.4	1206.3	1202.7	0.929	6.471	65.672	19.959	6.081	0.246	0.564	0.038	0.040	0.000	0.000	0.000	0.000	0.000	1379.49	
17	0.7614	1186.0	1207.0	1203.3	0.933	6.465	65.674	19.904	6.113	0.252	0.580	0.039	0.041	0.000	0.000	0.000	0.000	0.000	1379.84	
18	0.7597	1181.2	1202.1	1198.4	0.940	6.582	65.890	19.686	6.008	0.248	0.567	0.038	0.041	0.000	0.000	0.000	0.000	0.000	1375.82	
19	0.7468	1168.7	1189.4	1186.1	0.977	6.086	67.265	19.840	5.175	0.188	0.416	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1373.11	
20	0.7317	1158.4	1178.9	1175.6	1.056	5.180	69.141	20.041	4.107	0.139	0.299	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1374.91	
21	0.7493	1165.5	1186.1	1182.7	0.935	6.583	66.764	19.710	5.388	0.185	0.392	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1366.96	
22	0.7517	1169.7	1190.4	1187.0	0.934	6.547	66.503	19.859	5.482	0.197	0.429	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1369.77	
23	0.7574	1179.7	1200.6	1197.0	0.935	6.470	65.722	20.390	5.785	0.204	0.441	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1376.22	
24	0.7569	1178.4	1199.3	1195.8	0.927	6.513	65.955	20.018	5.836	0.221	0.473	0.028	0.029	0.000	0.000	0.000	0.000	0.000	1375.19	
25	0.7588	1181.8	1202.7	1199.2	0.933	6.479	65.637	20.307	5.900	0.223	0.465	0.028	0.029	0.000	0.000	0.000	0.000	0.000	1377.32	
26	0.7568	1178.7	1199.6	1196.2	0.937	6.470	65.760	20.421	5.726	0.207	0.426	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1375.64	
27	0.7577	1180.4	1201.3	1198.0	0.932	6.461	65.638	20.496	5.771	0.211	0.438	0.026	0.028	0.000	0.000	0.000	0.000	0.000	1376.80	
28	0.7559	1177.6	1198.4	1195.1	0.926	6.476	65.883	20.332	5.693	0.209	0.431	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1375.13	
29	0.7579	1181.6	1202.5	1199.2	0.922	6.419	65.780	20.280	5.833	0.233	0.483	0.025	0.025	0.000	0.000	0.000	0.000	0.000	1378.02	
30	0.7577	1180.7	1201.6	1198.3	0.924	6.452	65.781	20.244	5.864	0.226	0.460	0.024	0.024	0.000	0.000	0.000	0.000	0.000	1377.18	
31	0.7579	1180.8	1201.7	1198.4	0.927	6.458	65.776	20.214	5.885	0.227	0.462	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1377.14	
Avg	0.7579	1181.0	1202.1	1198.5	0.939	6.418	65.909	20.084	5.855	0.226	0.503	0.032	0.034	0.000	0.000	0.000	0.000	0.000	1377.47	

Source Daily Summary

August 2021

Number: 061

Pressure Base: 14.730

Contract Day: 1

Name: CLEVELAND STN-GRAFTON BDR

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	0.7635	1191.1	1212.2	1208.7	0.936	6.340	65.206	20.527	6.133	0.233	0.546	0.038	0.041	0.000	0.000	0.000	0.000	0.000	0.000	1383.90
2	0.7625	1190.3	1211.4	1207.9	0.932	6.302	65.370	20.429	6.118	0.235	0.536	0.037	0.041	0.000	0.000	0.000	0.000	0.000	0.000	1383.89
3	0.7651	1192.9	1214.0	1210.5	0.940	6.378	65.071	20.462	6.253	0.249	0.565	0.040	0.043	0.000	0.000	0.000	0.000	0.000	0.000	1384.50
4	0.7610	1185.6	1206.6	1203.2	0.942	6.436	65.521	20.240	6.032	0.232	0.522	0.036	0.038	0.000	0.000	0.000	0.000	0.000	0.000	1379.78
5	0.7594	1182.3	1203.3	1199.3	0.940	6.487	65.751	20.036	5.969	0.231	0.517	0.034	0.036	0.000	0.000	0.000	0.000	0.000	0.000	1377.44
6	0.7586	1181.1	1202.0	1198.4	0.940	6.492	65.825	20.023	5.914	0.228	0.510	0.033	0.035	0.000	0.000	0.000	0.000	0.000	0.000	1376.69
7	0.7602	1183.5	1204.4	1200.8	0.934	6.497	65.888	19.730	6.026	0.252	0.588	0.040	0.044	0.000	0.000	0.000	0.000	0.000	0.000	1378.00
8	0.7627	1188.4	1209.4	1205.9	0.928	6.447	65.545	19.959	6.182	0.257	0.598	0.040	0.044	0.000	0.000	0.000	0.000	0.000	0.000	1381.41
9	0.7581	1178.7	1199.5	1195.8	0.933	6.593	66.174	19.434	5.970	0.246	0.573	0.038	0.040	0.000	0.000	0.000	0.000	0.000	0.000	1374.39
10	0.7575	1177.8	1198.6	1194.9	0.934	6.594	66.208	19.462	5.924	0.242	0.560	0.037	0.039	0.000	0.000	0.000	0.000	0.000	0.000	1373.82
11	0.7612	1184.9	1205.9	1201.8	0.930	6.508	65.767	19.767	6.101	0.253	0.590	0.040	0.043	0.000	0.000	0.000	0.000	0.000	0.000	1378.75
12	0.7593	1180.9	1201.9	1198.2	0.933	6.574	65.981	19.593	6.018	0.247	0.576	0.038	0.040	0.000	0.000	0.000	0.000	0.000	0.000	1375.83
13	0.7625	1189.1	1210.2	1206.2	0.935	6.372	65.217	20.600	6.080	0.217	0.509	0.034	0.036	0.000	0.000	0.000	0.000	0.000	0.000	1382.51
14	0.7623	1188.1	1209.1	1205.1	0.939	6.413	65.252	20.518	6.075	0.220	0.511	0.035	0.037	0.000	0.000	0.000	0.000	0.000	0.000	1381.46
15	0.7635	1190.8	1211.9	1207.6	0.937	6.360	65.148	20.582	6.130	0.229	0.536	0.038	0.040	0.000	0.000	0.000	0.000	0.000	0.000	1383.58
16	0.7627	1188.7	1209.7	1205.4	0.933	6.417	65.397	20.239	6.133	0.242	0.560	0.039	0.041	0.000	0.000	0.000	0.000	0.000	0.000	1381.84
17	0.7610	1185.1	1206.1	1202.1	0.932	6.480	65.692	19.916	6.087	0.247	0.568	0.038	0.040	0.000	0.000	0.000	0.000	0.000	0.000	1379.22
18	0.7610	1182.9	1203.8	1200.2	0.942	6.600	65.778	19.655	6.093	0.257	0.592	0.040	0.043	0.000	0.000	0.000	0.000	0.000	0.000	1376.60
19	0.7483	1170.0	1190.7	1187.3	0.970	6.154	67.081	19.857	5.264	0.193	0.427	0.026	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1373.25
20	0.7319	1158.8	1179.3	1176.0	1.053	5.183	69.095	20.083	4.110	0.139	0.300	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1375.15
21	0.7495	1165.4	1186.0	1182.7	0.934	6.604	66.745	19.692	5.406	0.185	0.391	0.021	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1366.72
22	0.7519	1169.9	1190.6	1187.2	0.935	6.550	66.505	19.829	5.498	0.199	0.434	0.025	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1369.82
23	0.7575	1179.8	1200.7	1197.2	0.936	6.474	65.699	20.406	5.785	0.204	0.442	0.027	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1376.22
24	0.7575	1179.5	1200.4	1197.0	0.931	6.501	65.874	20.076	5.861	0.222	0.477	0.029	0.030	0.000	0.000	0.000	0.000	0.000	0.000	1375.86
25	0.7591	1182.1	1203.0	1199.6	0.933	6.481	65.623	20.295	5.912	0.226	0.473	0.028	0.030	0.000	0.000	0.000	0.000	0.000	0.000	1377.49
26	0.7571	1179.3	1200.1	1196.8	0.938	6.465	65.734	20.421	5.750	0.208	0.429	0.027	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1375.97
27	0.7575	1179.7	1200.6	1197.0	0.937	6.475	65.676	20.456	5.754	0.210	0.437	0.027	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1376.15
28	0.7567	1178.9	1199.8	1196.2	0.933	6.462	65.776	20.410	5.721	0.210	0.435	0.026	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1375.91
29	0.7564	1178.6	1199.4	1195.7	0.926	6.463	65.855	20.325	5.723	0.215	0.443	0.025	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1375.80
30	0.7576	1180.7	1201.6	1197.9	0.926	6.443	65.766	20.308	5.817	0.226	0.465	0.025	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1377.25
31	0.7579	1181.1	1202.0	1198.4	0.926	6.441	65.754	20.274	5.870	0.226	0.460	0.024	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1377.50
Avg	0.7581	1181.0	1202.4	1198.7	0.939	6.419	65.870	20.116	5.862	0.225	0.502	0.032	0.034	0.000	0.000	0.000	0.000	0.000	0.000	1377.64

Source Daily Summary

August 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	0.7621	1190.1	1211.2	1207.0	0.930	6.278	65.416	20.456	6.071	0.235	0.538	0.037	0.040	0.000	0.000	0.000	0.000	0.000	1384.03	
2	0.7636	1191.0	1212.0	1207.9	0.930	6.367	65.269	20.374	6.181	0.244	0.557	0.038	0.041	0.000	0.000	0.000	0.000	0.000	1383.62	
3	0.7596	1183.8	1204.8	1200.8	0.930	6.432	65.733	20.102	5.978	0.231	0.522	0.034	0.037	0.000	0.000	0.000	0.000	0.000	1378.95	
4	0.7594	1183.0	1203.9	1199.9	0.930	6.463	65.826	19.946	5.993	0.236	0.534	0.034	0.037	0.000	0.000	0.000	0.000	0.000	1378.14	
5	0.7593	1182.9	1203.9	1199.7	0.927	6.461	65.948	19.790	5.983	0.246	0.568	0.038	0.041	0.000	0.000	0.000	0.000	0.000	1378.16	
6	0.7591	1182.5	1203.5	1199.4	0.919	6.472	66.089	19.582	6.014	0.251	0.591	0.039	0.043	0.000	0.000	0.000	0.000	0.000	1377.93	
7	0.7623	1188.2	1209.3	1205.0	0.918	6.429	65.678	19.838	6.179	0.260	0.612	0.041	0.045	0.000	0.000	0.000	0.000	0.000	1381.59	
8	0.7582	1179.8	1200.7	1196.2	0.925	6.554	66.214	19.386	6.008	0.250	0.587	0.037	0.040	0.000	0.000	0.000	0.000	0.000	1375.50	
9	0.7585	1179.3	1200.2	1196.2	0.929	6.599	66.016	19.641	5.930	0.244	0.565	0.036	0.038	0.000	0.000	0.000	0.000	0.000	1374.75	
10	0.7605	1185.7	1206.7	1202.7	0.921	6.410	65.656	20.129	6.039	0.238	0.538	0.034	0.036	0.000	0.000	0.000	0.000	0.000	1380.41	
11	0.7620	1188.7	1209.7	1205.6	0.926	6.370	65.341	20.463	6.082	0.222	0.523	0.035	0.037	0.000	0.000	0.000	0.000	0.000	1382.40	
12	0.7636	1190.7	1211.7	1207.6	0.931	6.384	65.138	20.566	6.149	0.226	0.531	0.036	0.039	0.000	0.000	0.000	0.000	0.000	1383.30	
13	0.7644	1193.1	1214.2	1210.0	0.929	6.320	65.082	20.601	6.211	0.231	0.548	0.037	0.040	0.000	0.000	0.000	0.000	0.000	1385.34	
14	0.7620	1188.0	1209.1	1204.7	0.925	6.402	65.613	20.012	6.135	0.251	0.581	0.039	0.042	0.000	0.000	0.000	0.000	0.000	1381.67	
15	0.7595	1183.4	1204.3	1199.9	0.923	6.455	65.962	19.721	6.051	0.246	0.567	0.036	0.038	0.000	0.000	0.000	0.000	0.000	1378.54	
16	0.7612	1185.2	1206.2	1201.6	0.932	6.496	65.758	19.775	6.112	0.255	0.591	0.039	0.042	0.000	0.000	0.000	0.000	0.000	1379.02	
17	0.7562	1175.6	1196.4	1192.1	0.929	6.613	66.267	19.527	5.834	0.233	0.530	0.033	0.034	0.000	0.000	0.000	0.000	0.000	1372.49	
18	0.7399	1166.3	1186.9	1182.8	0.993	5.558	68.120	20.087	4.664	0.165	0.367	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1376.63	
19	0.7317	1158.5	1179.0	1174.9	1.045	5.187	69.165	20.006	4.111	0.141	0.306	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1375.05	
20	0.7489	1164.9	1185.6	1181.9	0.924	6.590	66.863	19.603	5.391	0.187	0.401	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1366.75	
21	0.7548	1175.8	1196.6	1192.9	0.925	6.476	66.077	20.197	5.627	0.203	0.442	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1374.06	
22	0.7559	1177.6	1198.5	1194.7	0.925	6.470	65.979	20.182	5.741	0.206	0.444	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1375.18	
23	0.7569	1178.8	1199.7	1195.8	0.917	6.502	66.084	19.830	5.873	0.232	0.503	0.029	0.030	0.000	0.000	0.000	0.000	0.000	1375.61	
24	0.7574	1180.2	1201.1	1197.4	0.923	6.455	65.760	20.336	5.821	0.212	0.441	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1376.84	
25	0.7580	1181.7	1202.6	1198.8	0.927	6.419	65.653	20.470	5.820	0.211	0.444	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1377.95	
26	0.7570	1179.9	1200.8	1197.1	0.925	6.438	65.766	20.420	5.744	0.212	0.443	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1376.79	
27	0.7551	1176.8	1197.6	1193.9	0.917	6.460	66.040	20.217	5.672	0.209	0.435	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1374.92	
28	0.7576	1181.8	1202.8	1199.1	0.914	6.390	65.846	20.249	5.824	0.235	0.491	0.025	0.025	0.000	0.000	0.000	0.000	0.000	1378.54	
29	0.7569	1180.1	1201.0	1197.3	0.914	6.432	65.904	20.181	5.829	0.227	0.465	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1377.16	
30	0.7574	1180.7	1201.6	1197.8	0.919	6.435	65.870	20.165	5.864	0.229	0.469	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1377.38	
31	0.7584	1181.9	1202.8	1199.0	0.918	6.453	65.770	20.150	5.959	0.229	0.470	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1377.89	
Avg	0.7573	1181.0	1202.1	1198.0	0.930	6.380	65.997	20.065	5.835	0.226	0.503	0.031	0.033	0.000	0.000	0.000	0.000	0.000	1377.95	

Source Daily Summary

August 2021

Number: 271

Pressure Base: 14.730

Contract Day: 1

Name: DCKSN BRD-BLFD TSF-G.U. 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	0.7237	1153.4	1173.8	1169.6	0.918	4.934	71.203	17.979	4.370	0.163	0.380	0.026	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1376.69
2	0.7303	1172.6	1193.3	1189.1	0.684	4.744	69.439	20.358	4.204	0.156	0.362	0.026	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1393.46
3	0.7548	1184.2	1205.2	1200.6	0.924	5.964	66.499	20.077	5.732	0.222	0.507	0.035	0.039	0.000	0.000	0.000	0.000	0.000	0.000	1383.86
4	0.7631	1191.9	1213.0	1208.5	0.919	6.283	65.319	20.446	6.155	0.242	0.555	0.038	0.042	0.000	0.000	0.000	0.000	0.000	0.000	1385.20
5	0.7595	1185.0	1206.0	1201.5	0.918	6.364	65.794	20.099	5.982	0.234	0.535	0.036	0.038	0.000	0.000	0.000	0.000	0.000	0.000	1380.54
6	0.7374	1162.9	1183.5	1179.0	0.925	5.636	69.190	18.531	4.988	0.201	0.466	0.031	0.034	0.000	0.000	0.000	0.000	0.000	0.000	1374.93
7	0.6918	1119.8	1139.6	1135.9	0.949	3.946	76.030	15.749	2.923	0.111	0.256	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1367.04
8	0.6706	1099.6	1119.1	1115.5	0.940	3.201	79.283	14.263	2.057	0.074	0.162	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1363.43
9	0.6818	1108.9	1128.6	1125.2	0.938	3.683	77.693	14.718	2.616	0.099	0.224	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1363.67
10	0.7147	1142.0	1162.2	1158.5	0.928	4.773	72.499	17.307	3.969	0.150	0.333	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1371.60
11	0.7472	1175.0	1195.8	1191.2	0.917	5.825	67.664	19.404	5.431	0.211	0.482	0.032	0.035	0.000	0.000	0.000	0.000	0.000	0.000	1380.08
12	0.7633	1192.4	1213.5	1209.1	0.915	6.276	65.155	20.687	6.142	0.223	0.526	0.036	0.039	0.000	0.000	0.000	0.000	0.000	0.000	1385.66
13	0.7643	1194.0	1215.1	1210.4	0.918	6.269	65.048	20.726	6.192	0.229	0.537	0.038	0.042	0.000	0.000	0.000	0.000	0.000	0.000	1386.55
14	0.7621	1190.6	1211.7	1206.5	0.916	6.277	65.377	20.505	6.075	0.234	0.538	0.038	0.041	0.000	0.000	0.000	0.000	0.000	0.000	1384.59
15	0.7615	1188.8	1209.8	1204.4	0.910	6.334	65.635	20.127	6.084	0.252	0.575	0.040	0.043	0.000	0.000	0.000	0.000	0.000	0.000	1383.04
16	0.7600	1186.0	1207.0	1201.3	0.912	6.358	65.867	19.922	6.040	0.251	0.570	0.038	0.041	0.000	0.000	0.000	0.000	0.000	0.000	1381.23
17	0.7567	1181.8	1202.7	1197.3	0.924	6.293	66.284	19.819	5.806	0.240	0.552	0.039	0.041	0.000	0.000	0.000	0.000	0.000	0.000	1379.23
18	0.7547	1176.2	1197.1	1192.6	0.919	6.447	66.369	19.755	5.727	0.220	0.498	0.031	0.032	0.000	0.000	0.000	0.000	0.000	0.000	1374.70
19	0.7379	1167.1	1187.7	1183.6	0.991	5.330	68.302	20.338	4.498	0.156	0.343	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1379.46
20	0.7015	1163.2	1183.8	1180.3	0.235	3.310	71.765	22.776	1.767	0.044	0.092	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1410.49
21	0.7314	1162.2	1182.8	1179.1	0.956	5.071	69.041	20.413	4.044	0.138	0.298	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1379.93
22	0.7500	1169.3	1190.0	1186.3	0.912	6.453	66.685	19.895	5.407	0.192	0.411	0.023	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1370.82
23	0.7566	1181.0	1201.9	1197.8	0.912	6.354	65.851	20.408	5.767	0.206	0.447	0.026	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1378.48
24	0.7560	1179.2	1200.0	1196.3	0.905	6.414	66.128	19.984	5.803	0.224	0.485	0.027	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1376.94
25	0.7569	1181.0	1201.9	1198.2	0.909	6.387	65.890	20.266	5.806	0.222	0.465	0.026	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1378.17
26	0.7593	1185.9	1206.9	1203.2	0.911	6.302	65.503	20.643	5.919	0.215	0.448	0.029	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1381.83
27	0.7036	1163.7	1184.3	1180.7	0.191	3.544	71.434	22.744	1.922	0.052	0.101	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1409.21
28	0.7400	1178.0	1198.9	1195.2	0.666	5.358	67.537	21.395	4.514	0.160	0.328	0.021	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1390.97
29	0.7549	1178.2	1199.1	1195.2	0.902	6.374	66.075	20.283	5.661	0.215	0.442	0.023	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1376.87
30	0.7567	1182.1	1203.0	1199.1	0.900	6.309	65.951	20.300	5.774	0.232	0.483	0.024	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1379.73
31	0.7587	1185.1	1206.1	1202.1	0.902	6.312	65.694	20.422	5.892	0.237	0.490	0.025	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1381.39
Avg	0.7407	1170.0	1191.1	1186.9	0.860	5.585	68.265	19.688	4.944	0.187	0.416	0.026	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1380.96

Source Daily Summary

August 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	0.6844	1126.8	1146.7	1143.2	0.785	3.076	76.475	17.215	2.205	0.071	0.151	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1382.94
2	0.6805	1123.9	1143.8	1140.3	0.673	3.058	76.676	17.553	1.862	0.054	0.109	0.007	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1383.38
3	0.6907	1151.9	1172.3	1168.6	0.258	2.951	73.711	21.456	1.510	0.035	0.070	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1407.35
4	0.6885	1148.8	1169.1	1165.5	0.254	2.945	74.035	21.236	1.432	0.030	0.059	0.003	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1405.70
5	0.6975	1144.5	1164.8	1161.1	0.515	3.645	73.538	19.741	2.322	0.071	0.149	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1391.50
6	0.7080	1150.5	1170.9	1167.1	0.568	4.183	72.264	19.649	2.979	0.102	0.226	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1388.28
7	0.6886	1125.0	1144.9	1141.3	0.584	3.889	75.417	17.553	2.297	0.075	0.163	0.011	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1376.48
8	0.6789	1116.6	1136.3	1132.8	0.654	3.388	77.031	16.810	1.921	0.058	0.123	0.008	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1375.92
9	0.6791	1116.0	1135.8	1132.3	0.658	3.426	77.116	16.574	2.019	0.062	0.130	0.008	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1375.12
10	0.6891	1127.5	1147.5	1143.9	0.583	3.779	75.217	17.951	2.236	0.069	0.146	0.009	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1379.18
11	0.7007	1141.9	1162.1	1158.3	0.522	4.090	73.250	19.206	2.648	0.083	0.178	0.011	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1385.05
12	0.7086	1152.9	1173.3	1169.5	0.481	4.224	71.955	20.073	2.943	0.092	0.205	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1390.57
13	0.7058	1150.0	1170.4	1166.7	0.501	4.110	72.374	19.903	2.812	0.086	0.190	0.012	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1389.84
14	0.7056	1151.0	1171.4	1167.7	0.480	4.062	72.478	19.807	2.858	0.091	0.198	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1391.22
15	0.7031	1146.5	1166.8	1163.2	0.463	4.118	72.949	19.346	2.794	0.096	0.209	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1388.36
16	0.6978	1142.0	1162.2	1158.5	0.388	4.011	73.684	19.045	2.571	0.091	0.187	0.011	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1388.09
17	0.6846	1124.8	1144.7	1141.0	0.252	4.032	76.008	17.017	2.422	0.084	0.166	0.009	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1380.20
18	0.6908	1130.7	1150.7	1147.1	0.262	4.230	74.953	17.681	2.578	0.090	0.185	0.011	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1381.37
19	0.6973	1143.3	1163.5	1159.9	0.299	4.029	73.672	19.104	2.619	0.084	0.175	0.010	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1390.11
20	0.6956	1135.2	1155.3	1151.9	0.498	4.057	74.068	18.622	2.487	0.082	0.168	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1381.97
21	0.6967	1157.7	1178.2	1174.5	0.165	3.306	72.497	22.253	1.655	0.037	0.077	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1408.33
22	0.6993	1149.9	1170.2	1166.5	0.332	3.764	72.793	20.697	2.212	0.061	0.127	0.007	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1396.20
23	0.7054	1153.1	1173.5	1169.8	0.363	4.099	72.061	20.576	2.636	0.080	0.168	0.009	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1393.94
24	0.7052	1154.2	1174.6	1170.9	0.329	4.063	72.176	20.438	2.721	0.082	0.172	0.009	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1395.49
25	0.7021	1151.1	1171.5	1167.8	0.279	4.027	72.694	20.103	2.616	0.084	0.177	0.009	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1394.94
26	0.7022	1151.7	1172.1	1168.4	0.315	3.949	72.523	20.471	2.497	0.075	0.153	0.008	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1395.51
27	0.6778	1120.7	1140.5	1137.1	0.679	2.998	77.128	17.248	1.781	0.053	0.101	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1382.06
28	0.7001	1158.3	1178.8	1175.1	0.251	3.461	72.278	21.871	1.966	0.052	0.108	0.007	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1405.53
29	0.6971	1160.1	1180.6	1177.0	0.129	3.252	72.239	22.734	1.539	0.033	0.066	0.003	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1410.82
30	0.6919	1145.8	1166.1	1162.5	0.397	3.219	73.910	20.544	1.778	0.047	0.093	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1398.66
31	0.6900	1145.6	1165.8	1162.2	0.354	3.127	74.075	20.675	1.638	0.042	0.081	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1400.25
Avg	0.6949	1142.0	1162.1	1158.4	0.428	3.696	73.911	19.457	2.276	0.069	0.145	0.009	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1390.79

Source Daily Summary

August 2021

Number: 111

Pressure Base: 14.730

Contract Day: 1

Name: LITTLE KNIFE 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	0.6900	1161.1	1181.7	1177.4	0.000	2.716	72.941	23.327	0.991	0.009	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.38	-22.70
2	0.6902	1160.9	1181.5	1177.3	0.000	2.745	72.907	23.314	1.008	0.009	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.98	-22.58
3	0.6908	1162.5	1183.0	1178.6	0.000	2.715	72.791	23.454	1.016	0.009	0.014	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1420.12	-22.20
4	0.6905	1162.0	1182.6	1178.3	0.000	2.707	72.890	23.334	1.044	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.97	-22.25
5	0.6901	1161.0	1181.6	1177.3	0.000	2.733	72.909	23.354	0.978	0.009	0.016	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.11	-22.70
6	0.6899	1161.0	1181.5	1177.4	0.000	2.720	72.953	23.311	0.992	0.008	0.014	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.24	-22.74
7	0.6904	1161.8	1182.3	1178.2	0.000	2.721	72.872	23.366	1.017	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.67	-22.40
8	0.6916	1163.1	1183.7	1179.4	0.000	2.745	72.752	23.348	1.124	0.011	0.019	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1420.16	-21.43
9	0.6905	1161.8	1182.4	1178.3	0.000	2.726	72.834	23.414	1.000	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.65	-22.40
10	0.6902	1161.2	1181.7	1177.6	0.000	2.736	72.894	23.352	0.993	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.17	-22.61
11	0.6903	1161.2	1181.7	1177.4	0.000	2.746	72.884	23.339	1.005	0.009	0.016	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.05	-22.53
12	0.6898	1160.1	1180.6	1177.3	0.000	2.765	72.945	23.286	0.986	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.26	-22.80
13	0.6910	1162.1	1182.7	1179.3	0.000	2.753	72.781	23.389	1.049	0.010	0.017	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.52	-21.79
14	0.6904	1161.2	1181.7	1177.5	0.000	2.758	72.900	23.264	1.052	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1418.92	-22.34
15	0.6909	1161.9	1182.5	1178.1	0.000	2.761	72.814	23.327	1.073	0.009	0.015	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1419.29	-22.03
16	0.6963	1170.7	1191.4	1186.9	0.000	2.723	72.340	23.264	1.620	0.019	0.032	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1424.50	-17.40
17	0.6932	1165.6	1186.2	1181.9	0.000	2.751	72.575	23.356	1.287	0.012	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.43	-20.15
18	0.6905	1161.5	1182.1	1177.9	0.000	2.748	72.816	23.422	0.988	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.23	-22.48
19	0.6929	1164.2	1184.8	1180.5	0.000	2.806	72.409	23.696	1.058	0.011	0.018	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1420.07	-21.17
20	0.6908	1161.6	1182.2	1178.0	0.000	2.762	72.754	23.485	0.970	0.010	0.017	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.14	-22.41
21	0.6909	1161.8	1182.3	1178.2	0.000	2.767	72.768	23.420	1.017	0.010	0.016	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.18	-22.22
22	0.6905	1161.3	1181.9	1177.6	0.000	2.757	72.818	23.410	0.989	0.009	0.015	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1419.03	-22.52
23	0.6903	1161.0	1181.5	1177.2	0.000	2.759	72.942	23.193	1.087	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.81	-22.38
24	0.6905	1160.6	1181.2	1177.1	0.000	2.799	72.822	23.359	0.994	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1418.18	-22.57
25	0.6903	1159.8	1180.4	1176.3	0.000	2.823	72.841	23.341	0.972	0.009	0.014	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1417.49	-22.87
26	0.6903	1159.9	1180.5	1176.1	0.000	2.826	72.816	23.373	0.957	0.009	0.016	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1417.49	-22.82
27	0.6906	1160.0	1180.6	1176.3	0.000	2.843	72.774	23.387	0.967	0.009	0.017	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1417.38	-22.66
28	0.6913	1160.8	1181.3	1176.9	0.000	2.861	72.642	23.493	0.980	0.009	0.015	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1417.60	-22.39
29	0.6903	1159.5	1180.1	1176.0	0.000	2.842	72.847	23.308	0.980	0.009	0.014	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1417.12	-22.86
30	0.6905	1159.8	1180.4	1176.0	0.000	2.849	72.791	23.354	0.981	0.008	0.014	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1417.19	-22.76
31	0.6905	1160.2	1180.7	1176.6	0.000	2.829	72.781	23.395	0.972	0.008	0.014	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1417.61	-22.75
Avg	0.6908	1162.0	1182.2	1178.0	0.000	2.768	72.800	23.369	1.037	0.010	0.016	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.09	-22.19

Source Daily Summary

August 2021

Number: 351

Pressure Base: 14.730

Contract Day: 1

Name: BADLANDS 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	0.5730	960.9	978.0	974.4	0.107	3.748	95.814	0.307	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1288.89	
2	0.5728	961.7	978.7	975.1	0.106	3.674	95.886	0.310	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1290.24	
3	0.5725	962.2	979.2	975.6	0.106	3.624	95.941	0.305	0.015	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1291.12	
4	0.5758	957.5	974.5	971.1	0.115	4.203	95.198	0.447	0.030	0.006	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1281.31	
5	0.6115	1011.0	1028.9	1025.2	0.220	4.146	88.779	6.092	0.695	0.023	0.039	0.002	0.003	0.000	0.000	0.000	0.000	0.000	1312.54	
6	0.6282	1042.4	1060.8	1057.1	0.574	3.256	86.304	8.711	1.043	0.038	0.065	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1335.37	
7	0.6250	1040.1	1058.6	1054.8	0.669	2.952	86.926	8.444	0.915	0.033	0.053	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1335.84	
8	0.6245	1039.2	1057.6	1053.7	0.661	2.975	86.917	8.516	0.850	0.029	0.045	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1335.19	
9	0.6255	1040.8	1059.2	1055.5	0.674	2.959	86.687	8.779	0.828	0.026	0.041	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1336.08	
10	0.6214	1034.2	1052.5	1048.8	0.628	3.040	87.410	8.079	0.774	0.025	0.039	0.003	0.002	0.000	0.000	0.000	0.000	0.000	1332.07	
11	0.6203	1033.8	1052.1	1048.2	0.618	2.978	87.673	7.855	0.801	0.027	0.042	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1332.67	
12	0.6130	1022.8	1040.9	1037.4	0.540	3.075	88.955	6.677	0.686	0.025	0.037	0.003	0.002	0.000	0.000	0.000	0.000	0.000	1326.39	
13	0.6119	1020.7	1038.8	1035.1	0.538	3.099	89.152	6.483	0.659	0.025	0.038	0.003	0.002	0.000	0.000	0.000	0.000	0.000	1324.93	
14	0.6211	1034.6	1052.9	1049.0	0.635	2.978	87.527	7.993	0.791	0.028	0.044	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1332.87	
15	0.6261	1043.1	1061.6	1057.6	0.692	2.843	86.699	8.784	0.895	0.031	0.049	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1338.45	
16	0.6161	1027.2	1045.4	1041.3	0.582	3.038	88.416	7.165	0.725	0.027	0.041	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1328.69	
17	0.6230	1038.0	1056.4	1052.2	0.666	2.901	87.258	8.233	0.856	0.030	0.048	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1335.21	
18	0.6006	1002.8	1020.5	1017.0	0.409	3.326	91.088	4.649	0.477	0.020	0.026	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1313.81	
19	0.5922	990.6	1008.1	1004.8	0.317	3.423	92.535	3.340	0.346	0.017	0.019	0.002	0.001	0.000	0.000	0.000	0.000	0.000	1306.96	
20	0.5798	972.8	990.0	986.8	0.184	3.541	94.689	1.426	0.141	0.011	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1297.15	
21	0.5728	963.0	980.0	976.6	0.111	3.594	95.900	0.365	0.022	0.008	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1291.90	
22	0.5735	963.9	981.0	977.7	0.119	3.587	95.781	0.469	0.034	0.009	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1292.42	
23	0.5730	963.5	980.6	977.1	0.114	3.576	95.865	0.409	0.027	0.008	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1292.40	
24	0.5793	972.9	990.1	986.7	0.182	3.495	94.786	1.380	0.137	0.011	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1297.80	
25	0.5864	983.1	1000.5	997.0	0.255	3.431	93.553	2.471	0.260	0.014	0.013	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1303.35	
26	0.5755	965.2	982.3	979.1	0.122	3.696	95.419	0.658	0.086	0.011	0.007	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1291.92	
27	0.6061	1005.5	1023.3	1019.8	0.456	3.612	90.072	5.220	0.583	0.021	0.031	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1311.20	
28	0.6228	1032.7	1051.0	1047.6	0.222	3.881	86.925	7.841	1.017	0.037	0.068	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1328.56	
29	0.6408	1063.4	1082.2	1078.5	0.420	3.393	84.008	10.613	1.411	0.051	0.093	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1348.82	
30	0.6223	1035.8	1054.2	1050.4	0.630	3.023	87.238	8.268	0.766	0.027	0.042	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1333.15	
31	0.6266	1043.1	1061.5	1057.8	0.674	2.918	86.527	8.938	0.860	0.030	0.047	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1337.91	
Avg	0.6037	1007.0	1025.2	1021.6	0.398	3.354	90.514	5.136	0.541	0.022	0.031	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1316.30	

Gas Composition and Properties

Effective August 1, 2021

Source #: 2702230
Name: WATFORD CITY EAST BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.1448		2.6827
Nitrogen, N2	2.8146		4.1984
Methane, C1	81.8103		69.8839
Ethane, C2	13.6481	3.6502	21.8519
Propane, C3	0.5605	0.1544	1.3160
iso-Butane, iC4	0.0077	0.0025	0.0238
n-Butane, nC4	0.0140	0.0044	0.0433
iso-Pentane, iC5			
n-Pentane, nC5			
Neo-Pentane, NeoC5			
Hexanes Plus, C6+			
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
Totals	100.0000	3.8110	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-98.122	
Cricodentherm	-51.024	
HV, Dry @ Base P, T	1087.95	
HV, Sat @ Base P, T	1069.02	
HV, Sat @ Sample P, T	1087.95	
Relative Density	0.6499	
C6+: 100		

Sample

Date: 08/01/2021 Pressure: 150.0
 Type: Temperature:
 Tech: Cory Scheitlin H2O: lbs/mm
 H2S: ppm

Remarks:

Analysis

Date: 08/01/2021 Instrument:
 Cylinder: 399
 Tech: Cory Scheitlin

Remarks:

August-21

ZONE 550

MANDAN BORDER

Weighted

Start Date	End Date	NBPL - St Anthony			WBI - Mandan Border			AVG BTU	
		MCF	DK	BTU	MCF	DK	BTU Zone 28		
8/1/2021	8/2/2021	0	0	0.00	681	825	1211.2	1211.200	8/1/2021
8/2/2021	8/3/2021	0	0	0.00	794	962	1212	1212.000	8/2/2021
8/3/2021	8/4/2021	0	0	0.00	775	935	1204.8	1204.800	8/3/2021
8/4/2021	8/5/2021	0	0	0.00	732	882	1203.9	1203.900	8/4/2021
8/5/2021	8/6/2021	0	0	0.00	734	884	1203.9	1203.900	8/5/2021
8/6/2021	8/7/2021	0	0	0.00	703	845	1203.5	1203.500	8/6/2021
8/7/2021	8/8/2021	0	0	0.00	667	807	1209.3	1209.300	8/7/2021
8/8/2021	8/9/2021	0	0	0.00	649	779	1200.7	1200.700	8/8/2021
8/9/2021	8/10/2021	0	0	0.00	792	949	1200.2	1200.200	8/9/2021
8/10/2021	8/11/2021	0	0	0.00	759	916	1206.7	1206.700	8/10/2021
8/11/2021	8/12/2021	0	0	0.00	730	883	1209.7	1209.700	8/11/2021
8/12/2021	8/13/2021	0	0	0.00	742	899	1211.6	1211.600	8/12/2021
8/13/2021	8/14/2021	0	0	0.00	668	811	1214.2	1214.200	8/13/2021
8/14/2021	8/15/2021	0	0	0.00	588	711	1209.1	1209.100	8/14/2021
8/15/2021	8/16/2021	0	0	0.00	816	983	1204.3	1204.300	8/15/2021
8/16/2021	8/17/2021	0	0	0.00	709	854	1206.2	1206.200	8/16/2021
8/17/2021	8/18/2021	0	0	0.00	696	833	1196.4	1196.400	8/17/2021
8/18/2021	8/19/2021	0	0	0.00	818	970	1186.9	1186.900	8/18/2021
8/19/2021	8/20/2021	0	0	0.00	749	883	1179	1179.000	8/19/2021
8/20/2021	8/21/2021	0	0	0.00	800	949	1185.6	1185.600	8/20/2021
8/21/2021	8/22/2021	0	0	0.00	693	829	1196.6	1196.600	8/21/2021
8/22/2021	8/23/2021	0	0	0.00	727	872	1198.5	1198.500	8/22/2021
8/23/2021	8/24/2021	0	0	0.00	825	990	1199.7	1199.700	8/23/2021
8/24/2021	8/25/2021	0	0	0.00	818	982	1201.1	1201.100	8/24/2021
8/25/2021	8/26/2021	7,192	7,873	1094.60	776	933	1202.6	1105.118	8/25/2021
8/26/2021	8/27/2021	2,307	2,523	1093.70	780	936	1200.8	1120.761	8/26/2021
8/27/2021	8/28/2021	0	0	0.00	850	1018	1197.6	1197.600	8/27/2021
8/28/2021	8/29/2021	0	0	0.00	812	976	1202.8	1202.800	8/28/2021
8/29/2021	8/30/2021	0	0	0.00	732	879	1201	1201.000	8/29/2021
8/30/2021	8/31/2021	0	0	0.00	794	954	1201.6	1201.600	8/30/2021
8/31/2021	9/1/2021	0	0	0.00	758	912	1202.8	1202.800	8/31/2021
		9,499	10,396	70.5903	23,167	27,841	1202.0742	1196.3477	



Alliance Pipeline

DAILY ANALYSIS --- USA
ND07MD1 --- Hankinson Sales
August 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	1,155.299	0.6602	84.5946	9.5670	3.4010	0.3773	0.6595	0.0682	0.0544	0.0264	0.8222	0.4191	0.0104
2	1,155.634	0.6598	84.7114	9.5296	3.3705	0.3835	0.6547	0.0720	0.0594	0.0303	0.7659	0.4124	0.0104
3	1,157.357	0.6610	84.5744	9.5769	3.4216	0.3910	0.6700	0.0746	0.0613	0.0311	0.7749	0.4137	0.0105
4	1,160.021	0.6628	84.3589	9.6605	3.5002	0.4014	0.6914	0.0770	0.0644	0.0331	0.7885	0.4143	0.0104
5	1,159.238	0.6622	84.4579	9.6085	3.4685	0.4045	0.6911	0.0747	0.0628	0.0333	0.7787	0.4096	0.0103
6	1,156.950	0.6605	84.6551	9.5340	3.4073	0.3933	0.6670	0.0725	0.0603	0.0322	0.7474	0.4201	0.0108
7	1,155.922	0.6600	84.7453	9.4675	3.3747	0.3919	0.6691	0.0736	0.0604	0.0322	0.7540	0.4207	0.0107
8	1,154.988	0.6593	84.8052	9.4628	3.3456	0.3893	0.6546	0.0725	0.0592	0.0309	0.7506	0.4187	0.0107
9	1,155.415	0.6594	84.8521	9.4307	3.3325	0.3926	0.6600	0.0752	0.0633	0.0369	0.7127	0.4334	0.0106
10	1,158.307	0.6616	84.5113	9.5993	3.4511	0.3981	0.6810	0.0720	0.0594	0.0316	0.7706	0.4150	0.0105
11	1,158.469	0.6626	84.2864	9.7390	3.4672	0.3917	0.6763	0.0709	0.0585	0.0315	0.8332	0.4346	0.0107
12	1,156.334	0.6604	84.6284	9.5731	3.3892	0.3868	0.6601	0.0717	0.0581	0.0317	0.7634	0.4266	0.0109
13	1,155.250	0.6596	84.7286	9.5521	3.3426	0.3842	0.6406	0.0730	0.0597	0.0331	0.7449	0.4305	0.0106
14	1,155.114	0.6599	84.6993	9.5314	3.3535	0.3837	0.6552	0.0729	0.0586	0.0297	0.7567	0.4483	0.0106
15	1,155.642	0.6599	84.7437	9.4730	3.3679	0.3939	0.6714	0.0723	0.0579	0.0284	0.7542	0.4268	0.0104
16	1,155.947	0.6597	84.7350	9.5106	3.3645	0.3950	0.6666	0.0711	0.0580	0.0280	0.7549	0.4058	0.0105
17	1,155.440	0.6606	84.4249	9.8226	3.2873	0.3802	0.6435	0.0730	0.0595	0.0310	0.8485	0.4193	0.0102
18	1,149.043	0.6575	84.7530	9.5554	3.2004	0.3579	0.6091	0.0640	0.0516	0.0269	0.9677	0.4036	0.0103
19	1,145.539	0.6554	85.1745	9.1317	3.2017	0.3594	0.6009	0.0636	0.0527	0.0256	0.9663	0.4132	0.0104
20	1,147.895	0.6568	85.1583	8.9804	3.3364	0.3709	0.6412	0.0654	0.0524	0.0262	0.9300	0.4280	0.0107
21	1,153.516	0.6594	84.8365	9.2063	3.4431	0.3894	0.6738	0.0690	0.0570	0.0290	0.8974	0.3882	0.0103
22	1,150.005	0.6580	85.0121	9.0549	3.3990	0.3756	0.6533	0.0653	0.0526	0.0287	0.9270	0.4214	0.0101
23	1,147.202	0.6562	85.1796	9.0288	3.3306	0.3566	0.6088	0.0624	0.0507	0.0283	0.9131	0.4305	0.0105
24	1,149.360	0.6581	85.0336	8.9753	3.4174	0.3728	0.6523	0.0668	0.0542	0.0305	0.9578	0.4287	0.0105
25	1,147.024	0.6570	85.1167	8.9185	3.4303	0.3526	0.6000	0.0666	0.0538	0.0289	0.9791	0.4431	0.0104
26	1,145.730	0.6561	85.1787	8.9128	3.4357	0.3386	0.5793	0.0603	0.0473	0.0226	0.9722	0.4419	0.0106
27	1,150.172	0.6587	84.7730	9.2077	3.5318	0.3469	0.5804	0.0635	0.0488	0.0302	1.0017	0.4063	0.0097
28	1,150.771	0.6592	84.7630	9.1839	3.5425	0.3523	0.5923	0.0651	0.0501	0.0336	0.9790	0.4283	0.0099
29	1,152.263	0.6598	84.7431	9.1224	3.6332	0.3547	0.6054	0.0649	0.0519	0.0317	0.9720	0.4110	0.0097
30	1,153.103	0.6603	84.6847	9.1478	3.6552	0.3568	0.6084	0.0664	0.0548	0.0334	0.9719	0.4107	0.0100
31	1,151.772	0.6593	84.7925	9.1174	3.6133	0.3511	0.5964	0.0641	0.0523	0.0324	0.9573	0.4131	0.0101
Volume	1,153.361	0.6594	84.7675	9.3611	3.4102	0.3769	0.6431	0.0692	0.0563	0.0302	0.8545	0.4206	0.0104
Weight Avg Energy	1,153.375	0.6594	84.7667	9.3619	3.4102	0.3769	0.6432	0.0692	0.0563	0.0302	0.8542	0.4206	0.0104



Alliance Pipeline

DAILY ANALYSIS --- USA
 ND14MD1 --- Milnor Sales
 August 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	1,155.364	0.6600	84.6462	9.5488	3.3817	0.3805	0.6609	0.0696	0.0565	0.0277	0.8137	0.4038	0.0105
2	1,155.987	0.6600	84.6926	9.5402	3.3792	0.3851	0.6566	0.0723	0.0595	0.0305	0.7628	0.4110	0.0104
3	1,157.878	0.6615	84.5139	9.6032	3.4355	0.3926	0.6761	0.0752	0.0620	0.0313	0.7858	0.4140	0.0104
4	1,159.798	0.6626	84.4108	9.6338	3.4902	0.4013	0.6893	0.0773	0.0647	0.0337	0.7739	0.4146	0.0105
5	1,159.271	0.6623	84.4508	9.6113	3.4709	0.4050	0.6919	0.0742	0.0623	0.0332	0.7816	0.4086	0.0103
6	1,156.523	0.6604	84.6547	9.5554	3.3967	0.3887	0.6544	0.0730	0.0602	0.0324	0.7464	0.4273	0.0108
7	1,156.167	0.6602	84.7213	9.4872	3.3784	0.3919	0.6689	0.0740	0.0607	0.0326	0.7543	0.4200	0.0107
8	1,153.929	0.6587	84.8855	9.4264	3.3155	0.3853	0.6422	0.0722	0.0603	0.0318	0.7454	0.4244	0.0110
9	1,155.317	0.6594	84.8502	9.4269	3.3363	0.3918	0.6613	0.0741	0.0623	0.0362	0.7167	0.4336	0.0107
10	1,158.694	0.6620	84.4524	9.6321	3.4623	0.3988	0.6832	0.0723	0.0595	0.0317	0.7811	0.4160	0.0105
11	1,158.303	0.6626	84.3023	9.7348	3.4631	0.3908	0.6745	0.0703	0.0580	0.0312	0.8308	0.4335	0.0107
12	1,156.158	0.6603	84.6634	9.5564	3.3799	0.3865	0.6589	0.0722	0.0585	0.0321	0.7549	0.4263	0.0109
13	1,155.280	0.6597	84.7143	9.5623	3.3437	0.3841	0.6406	0.0727	0.0595	0.0329	0.7467	0.4326	0.0106
14	1,155.054	0.6600	84.6980	9.5276	3.3488	0.3851	0.6585	0.0729	0.0586	0.0295	0.7592	0.4512	0.0106
15	1,154.505	0.6591	84.8506	9.4171	3.3423	0.3911	0.6606	0.0708	0.0572	0.0277	0.7450	0.4271	0.0105
16	1,156.378	0.6601	84.6937	9.5270	3.3770	0.3964	0.6690	0.0720	0.0589	0.0289	0.7586	0.4080	0.0105
17	1,155.407	0.6609	84.3489	9.8845	3.2772	0.3781	0.6460	0.0719	0.0584	0.0303	0.8756	0.4189	0.0102
18	1,147.985	0.6568	84.8720	9.4694	3.1863	0.3558	0.5991	0.0641	0.0521	0.0269	0.9623	0.4016	0.0103
19	1,146.034	0.6559	85.1412	9.1242	3.2263	0.3615	0.6087	0.0638	0.0525	0.0259	0.9696	0.4157	0.0105
20	1,147.965	0.6568	85.1671	8.9802	3.3357	0.3713	0.6404	0.0655	0.0527	0.0262	0.9226	0.4276	0.0106
21	1,153.634	0.6596	84.8252	9.2049	3.4493	0.3904	0.6766	0.0686	0.0573	0.0286	0.9023	0.3866	0.0102
22	1,148.510	0.6572	85.1000	9.0081	3.3720	0.3702	0.6393	0.0628	0.0506	0.0278	0.9378	0.4213	0.0102
23	1,147.154	0.6563	85.1901	9.0162	3.3317	0.3567	0.6107	0.0625	0.0505	0.0280	0.9116	0.4316	0.0105
24	1,149.511	0.6583	85.0028	8.9915	3.4267	0.3720	0.6495	0.0672	0.0548	0.0310	0.9672	0.4269	0.0105
25	1,147.159	0.6571	85.1189	8.9154	3.4413	0.3518	0.5984	0.0666	0.0536	0.0284	0.9704	0.4451	0.0102
26	1,145.103	0.6558	85.2190	8.8919	3.4215	0.3362	0.5743	0.0595	0.0466	0.0227	0.9787	0.4389	0.0107
27	1,151.095	0.6594	84.6943	9.2511	3.5524	0.3506	0.5866	0.0645	0.0494	0.0308	1.0026	0.4080	0.0096
28	1,149.965	0.6588	84.8007	9.1901	3.5061	0.3499	0.5832	0.0655	0.0505	0.0329	0.9790	0.4320	0.0099
29	1,153.250	0.6605	84.6318	9.2134	3.6559	0.3517	0.6022	0.0655	0.0541	0.0319	0.9705	0.4132	0.0098
30	1,152.950	0.6603	84.6984	9.1444	3.6478	0.3565	0.6074	0.0664	0.0547	0.0333	0.9701	0.4108	0.0100
31	1,152.338	0.6599	84.7311	9.1427	3.6339	0.3518	0.6011	0.0647	0.0529	0.0322	0.9662	0.4132	0.0102
Volume	1,153.266	0.6594	84.7616	9.3601	3.4153	0.3754	0.6401	0.0690	0.0564	0.0303	0.8608	0.4205	0.0104
Weight Avg Energy	1,153.274	0.6594	84.7620	9.3591	3.4157	0.3755	0.6403	0.0690	0.0564	0.0303	0.8607	0.4204	0.0104

August-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		
8/1/2021	8/2/2021	10	12	1210.8	82	89	1088	1101.348	8/1/2021
8/2/2021	8/3/2021	13	16	1210.8	95	104	1088	1102.781	8/2/2021
8/3/2021	8/4/2021	4	5	1210.8	86	94	1088	1093.458	8/3/2021
8/4/2021	8/5/2021	9	11	1210.8	100	109	1088	1098.139	8/4/2021
8/5/2021	8/6/2021	24	28	1210.8	104	113	1088	1111.025	8/5/2021
8/6/2021	8/7/2021	11	13	1210.8	104	113	1088	1099.746	8/6/2021
8/7/2021	8/8/2021	2	3	1210.8	95	103	1088	1090.532	8/7/2021
8/8/2021	8/9/2021	8	9	1210.8	88	96	1088	1098.233	8/8/2021
8/9/2021	8/10/2021	51	62	1210.8	120	131	1088	1124.625	8/9/2021
8/10/2021	8/11/2021	40	48	1210.8	112	122	1088	1120.316	8/10/2021
8/11/2021	8/12/2021	32	38	1210.8	106	115	1088	1116.475	8/11/2021
8/12/2021	8/13/2021	27	32	1210.8	121	132	1088	1110.403	8/12/2021
8/13/2021	8/14/2021	13	16	1210.8	84	91	1088	1104.458	8/13/2021
8/14/2021	8/15/2021	2	3	1210.8	76	82	1088	1091.149	8/14/2021
8/15/2021	8/16/2021	12	14	1210.8	97	105	1088	1101.519	8/15/2021
8/16/2021	8/17/2021	14	17	1210.8	81	89	1088	1106.097	8/16/2021
8/17/2021	8/18/2021	17	20	1210.8	93	102	1088	1106.978	8/17/2021
8/18/2021	8/19/2021	51	62	1210.8	109	119	1088	1127.143	8/18/2021
8/19/2021	8/20/2021	34	41	1210.8	125	136	1088	1114.259	8/19/2021
8/20/2021	8/21/2021	64	78	1210.8	144	157	1088	1125.785	8/20/2021
8/21/2021	8/22/2021	10	12	1210.8	100	109	1088	1099.164	8/21/2021
8/22/2021	8/23/2021	20	25	1210.8	109	119	1088	1107.039	8/22/2021
8/23/2021	8/24/2021	8	9	1210.8	91	100	1088	1097.923	8/23/2021
8/24/2021	8/25/2021	41	50	1210.8	112	122	1088	1120.907	8/24/2021
8/25/2021	8/26/2021	15	18	1210.8	112	122	1088	1102.504	8/25/2021
8/26/2021	8/27/2021	44	54	1210.8	116	126	1088	1121.770	8/26/2021
8/27/2021	8/28/2021	11	13	1210.8	136	148	1088	1097.189	8/27/2021
8/28/2021	8/29/2021	5	6	1210.8	100	109	1088	1093.848	8/28/2021
8/29/2021	8/30/2021	25	30	1210.8	100	109	1088	1112.560	8/29/2021
8/30/2021	8/31/2021	10	12	1210.8	102	111	1088	1098.964	8/30/2021
8/31/2021	9/1/2021	6	7	1210.8	109	119	1088	1094.407	8/31/2021
		633	764	1210.8000	3,209	3,496	1088.0000	1106.1530	

ROW ID	LOCATION DESCRIPTION	GROSS HEATING VALUE (BTU/CF)	SPECIFIC GRAVITY	WOBBE (cal)	CRICONDENTH ERM (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
11587	GLEN ULLIN	1089.1	0.6422	1359.1	-50.9	2.2618	0.9839	83.422	12.2483	0.8955	0.0293	0.0178	0.0005	0.0011	N/A	0	0.1165	0.0234	7/31/2021	8/1/2021	8/1/2021 15:10
11587	GLEN ULLIN	1090.2	0.6434	1359.2	-50.2	2.2825	1	83.2424	12.3861	0.9133	0.03	0.0181	0.0005	0.0012	N/A	0	0.1027	0.0234	8/1/2021	8/2/2021	8/2/2021 15:13
11587	GLEN ULLIN	1088.5	0.6417	1358.8	-51.2	2.247	0.987	83.5428	12.1394	0.9025	0.0283	0.0171	0.0002	0.0009	N/A	0	0.112	0.023	8/2/2021	8/3/2021	8/3/2021 15:15
11587	GLEN ULLIN	1086.5	0.6408	1357.3	-52.3	2.2986	0.9813	83.548	12.1151	0.8392	0.0255	0.0154	0	0.0003	N/A	0	0.1534	0.0232	8/3/2021	8/4/2021	8/4/2021 15:11
11587	GLEN ULLIN	1087.7	0.6427	1356.7	-51.6	2.4012	0.9822	83.0855	12.4837	0.8174	0.0218	0.0133	0.0001	0.0004	N/A	0	0.1706	0.024	8/4/2021	8/5/2021	8/5/2021 15:14
11587	GLEN ULLIN	1088.8	0.6435	1357.3	-50.7	2.3968	0.9886	82.9294	12.5701	0.8541	0.0258	0.0154	0	0.0004	N/A	0	0.1957	0.0239	8/5/2021	8/6/2021	8/6/2021 15:11
11587	GLEN ULLIN	1089.8	0.6444	1357.6	-49.9	2.4195	0.9961	82.74	12.6989	0.8713	0.0278	0.0163	0.0003	0.0007	N/A	0	0.2054	0.024	8/6/2021	8/7/2021	8/7/2021 15:09
11587	GLEN ULLIN	1090.8	0.645	1358.2	-49.7	2.415	0.9957	82.7507	12.7642	0.8695	0.0277	0.0165	0.0001	0.0009	N/A	0	0.1356	0.0244	8/7/2021	8/8/2021	8/8/2021 15:10
11587	GLEN ULLIN	1087.6	0.6401	1359.4	-52.1	2.1899	0.9635	83.9543	11.8917	0.8765	0.031	0.0185	0.0009	0.0014	N/A	0	0.0496	0.0228	8/8/2021	8/9/2021	8/9/2021 15:11
11587	GLEN ULLIN	1089.6	0.6425	1359.3	-51.1	2.2798	0.9714	83.4707	12.2735	0.889	0.0276	0.0167	0.0002	0.0007	N/A	0	0.047	0.0235	8/9/2021	8/10/2021	8/10/2021 14:46
11587	GLEN ULLIN	1089.5	0.643	1358.7	-51	2.3114	0.9825	83.382	12.3456	0.8728	0.0274	0.0167	0.0004	0.0008	N/A	0	0.0367	0.0239	8/10/2021	8/11/2021	8/11/2021 14:46
11587	GLEN ULLIN	1090	0.6431	1359.2	-50.6	2.3023	0.9821	83.3651	12.3298	0.9059	0.0275	0.0171	0.0003	0.001	N/A	0	0.0451	0.0239	8/11/2021	8/12/2021	8/12/2021 14:47
11587	GLEN ULLIN	1088.2	0.6419	1358.3	-51.7	2.2951	0.9742	83.6169	12.1483	0.8667	0.0277	0.0168	0.0005	0.0009	N/A	0	0.0293	0.0239	8/12/2021	8/13/2021	8/13/2021 14:45
11587	GLEN ULLIN	1085.6	0.6402	1356.7	-52.6	2.2876	0.9823	83.827	11.871	0.8668	0.027	0.0162	0.0001	0.0005	N/A	0	0.0979	0.0237	8/13/2021	8/14/2021	8/14/2021 15:22
11587	GLEN ULLIN	1086.9	0.6413	1357.2	-50.7	2.3155	0.9828	83.5925	11.8586	0.9999	0.031	0.0189	0.0005	0.0011	N/A	0	0.1759	0.0235	8/14/2021	8/15/2021	8/15/2021 15:22
11587	GLEN ULLIN	1089.4	0.643	1358.6	-47.5	2.3191	0.9858	83.4285	11.8175	1.1393	0.0578	0.0303	0.0023	0.0027	N/A	0	0.1933	0.0236	8/15/2021	8/16/2021	8/16/2021 15:23
11587	GLEN ULLIN	1092.6	0.645	1360.4	-43.6	2.3156	0.985	83.2677	11.8286	1.2607	0.0841	0.0396	0.0063	0.0057	N/A	0.001	0.1821	0.0237	8/16/2021	8/17/2021	8/17/2021 15:22
11587	GLEN ULLIN	1093	0.6447	1361.2	-40.2	2.2677	0.9847	83.4548	11.6071	1.2822	0.1158	0.0503	0.012	0.0098	N/A	0.0025	0.1906	0.0226	8/17/2021	8/18/2021	8/18/2021 15:23
11587	GLEN ULLIN	1087.5	0.6416	1357.7	-48	2.2861	0.995	83.7351	11.5975	1.0898	0.06	0.0305	0.0035	0.0032	N/A	0.0008	0.1748	0.0238	8/18/2021	8/19/2021	8/19/2021 15:24
11587	GLEN ULLIN	1087.7	0.6424	1357.1	-50.8	2.3288	1.0061	83.4401	12.0986	0.9357	0.0305	0.0192	0.0002	0.0005	N/A	0	0.1164	0.0241	8/19/2021	8/20/2021	8/20/2021 15:22
11587	GLEN ULLIN	1090.2	0.6442	1358.3	-49.3	2.3531	1.0015	83.1866	12.3736	0.9317	0.0359	0.0231	0.0011	0.0019	N/A	0.0004	0.0663	0.0248	8/20/2021	8/21/2021	8/21/2021 15:19
11587	GLEN ULLIN	1091.7	0.6448	1359.5	-47.5	2.3549	0.9804	83.1801	12.2969	1.0198	0.0457	0.03	0.0026	0.0035	N/A	0.0009	0.0605	0.0249	8/21/2021	8/22/2021	8/22/2021 15:55
11587	GLEN ULLIN	1092.2	0.6451	1359.8	-47.9	2.3569	0.9769	83.0566	12.4863	0.9632	0.0417	0.0282	0.0024	0.0034	N/A	0.0009	0.0588	0.0246	8/22/2021	8/23/2021	8/23/2021 15:14
11587	GLEN ULLIN	1094	0.6452	1361.9	-48.7	2.2668	0.977	82.9321	12.7641	0.9127	0.0329	0.0212	0.0017	0.0022	N/A	0.0001	0.0657	0.0238	8/23/2021	8/24/2021	8/24/2021 15:20
11587	GLEN ULLIN	1095.7	0.6459	1363.4	-48.6	2.2137	0.9827	82.7912	12.9882	0.8916	0.0294	0.0177	0.001	0.0015	N/A	0	0.0598	0.0234	8/24/2021	8/25/2021	8/25/2021 15:36
11587	GLEN ULLIN	1094.6	0.6456	1362.3	-49	2.2531	0.9879	82.7431	12.9932	0.8674	0.0271	0.016	0.0005	0.0011	N/A	0	0.0881	0.0227	8/25/2021	8/26/2021	8/26/2021 15:36
11587	GLEN ULLIN	1092.6	0.6453	1360.1	-49.3	2.3442	0.9897	82.6502	12.913	0.8752	0.0264	0.0156	0.0003	0.0007	N/A	0	0.1615	0.0232	8/26/2021	8/27/2021	8/27/2021 15:21
11587	GLEN ULLIN	1092.3	0.6454	1359.7	-48.8	2.3835	0.9769	82.6935	12.7905	0.9205	0.0322	0.0186	0.0009	0.0013	N/A	0	0.1585	0.0239	8/27/2021	8/28/2021	8/28/2021 15:21
11587	GLEN ULLIN	1092.1	0.6454	1359.4	-48.7	2.3682	0.9922	82.7334	12.7461	0.9236	0.0342	0.0196	0.0012	0.0015	N/A	0	0.1562	0.024	8/28/2021	8/29/2021	8/29/2021 15:22
11587	GLEN ULLIN	1090.4	0.6438	1359	-49.6	2.3266	0.99	82.9837	12.5307	0.9072	0.0326	0.0192	0.0009	0.0015	N/A	0	0.1841	0.0236	8/29/2021	8/30/2021	8/30/2021 15:22
11587	GLEN ULLIN	1091.6	0.6445	1359.7	-49	2.3202	0.9957	82.8736	12.6128	0.9391	0.0326	0.0195	0.001	0.0015	N/A	0	0.1808	0.0234	8/30/2021	8/31/2021	8/31/2021 15:22
11587	GLEN ULLIN	1091	0.644	1359.5	-48.4	2.3243	0.9794	83.0141	12.3518	1.0254	0.0392	0.0238	0.001	0.0017	N/A	0	0.2163	0.0232	8/31/2021	9/1/2021	9/1/2021 15:25

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	AUG21	JUL21	JUN 21	MAY 21	APR 21	MAR 21	FEB 21	JAN 21	DEC 20	NOV 20	OCT 20	SEPT 20	ZONE
MT/ND	211	Sidney Border - MonDak Tfr - Sidney Plt	1201	1216	1210	1152	1204	1198	1208	1206	1209	1207	1198	1200	1202	211
ND	24	Williston Border - Charbonneau Station	1169	1173	1172	1164	1168	1167	1176	1176	1177	1175	1167	1158	1157	24
ND	25	Watford City West Border	1198	1211	1203	1199	1202	1199	1194	1194	1195	1195	1193	1193	1194	25
ND	28	Bismarck Station - Glen Ullin Station	1154	1202	1200	1202	1161	1117	1148	1110	1121	1135	1131	1152	1174	28
ND	31	Dickinson Brd - Belfield Trf - G Ullin Stn	1137	1191	1123	1129	1160	1154	1127	1113	1122	1131	1129	1136	1125	31
ND/MT	32	Cabin Creek Station - Belfied Transfer	1124	1162	1135	1127	1122	1124	1121	1091	1105	1119	1123	1127	1134	32
ND	33	Little Knife Plant	1175	1182	1184	1179	1175	1173	1172	1171	1172	1172	1172	1172	1174	33
ND	34	Badlands Plant/Bowman Border	1041	1025	980	980	989	981	1040	1079	1172	1094	1070	1060	1025	34
ND	43	Watford City East Border	1122	1088	1109	1119	1123	1119	1126	1106	1104	1147	1147	1140	1139	43
ND/MT	241	Fairview Border	1190	1201	1213	1185	1173	1185	1198	1204	1192	1195	1203	1169	1157	241
ND	260	North Tioga Transfer - Nesson Plant	1147	1159	1167	1153	1159	1148	1160	1149	1144	1142	1134	1114	1131	260
ND	261	Tioga Comp Station - Robinson Lake Plan	1177	1194	1196	1195	1193	1180	1173	1171	1168	1166	1159	1164	1162	261
ND	262	Minot Bdr - Palermo Bdr - Bismarck Stn	1190	1202	1200	1203	1195	1189	1191	1187	1184	1181	1178	1182	1191	262
ND	263	Lignite Plant	1139	1129	1143	1147	1137	1147	1148	1125	1133	1134	1137	1137	1149	263
ND	264	Epping Border	1165	1167	1172	1165	1163	1165	1168	1168	1167	1165	1163	1156	1155	264
ND	265	Tioga Comp Station - County Line Plant	1167	1163	1166	1165	1172	1170	1172	1171	1168	1166	1159	1164	1163	265
ND	266	County Line Plant	1171	1175	1174	1169	1171	1169	1174	1176	1164	1166	1165	1161	1190	266
ND	271	Bismarck Station - Cleveland Station	1187	1202	1200	1202	1196	1186	1191	1165	1180	1179	1174	1181	1191	271
ND	272	Cleveland Station - Mapleton	1187	1202	1199	1200	1196	1185	1190	1165	1179	1178	1173	1182	1191	272
ND	273	Cleveland Station - Grafton Border	1186	1202	1200	1200	1195	1184	1189	1164	1179	1178	1173	1181	1190	273
ND	550	Mandan Border / NBPL-St Anthony	1152	1196	1190	1182	1161	1120	1148	1110	1121	1133	1131	1152	1174	550
ND	610	MDU-Watford City BTU	1149	1106	1121	1132	1162	1158	1158	1141	1140	1167	1166	1165	1170	610
ND	802	NBPL - Linton	1101	1090	1089	1090	1094	1093	1099	1101	1103	1111	1113	1110	1120	802
ND	903	Hettinger Propane	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	903
ND	600	Alliance Pipeline - Hankinson	1155	1153	1156	1157	1158	1154	1150	1146	1148	1155	1155	1166	1166	600
ND	601	Alliance Pipeline - Milnor	1155	1153	1156	1157	1158	1154	1150	1146	1148	1155	1155	1166	1167	602

THERMAL ZONE VARIANCE DOCUMENTATION		
August 2021		
<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
31	68	Directional Change
32	27	Operational
34	45	Blend of Gas
43	-21	Operational