MONTANA-DAKOTA
UTILITIES CO.
A Subsidiary of MDU Resources Group, Inc.

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

October 26, 2020

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

Re: Case No. PU-20-002 (Therm Billing)
Monthly Report – August 2020

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 2020.

2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our suppliers for the month of August 2020.

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 2020.

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-20

Town	Heat Zone	
MDU-303-ALEXANDER	025	1.1277
MDU-308-ARNEGARD	025	1.1277
MDU-314-APPLE VALLEY	271	1.1482
MDU-318-BEACH	032	1.0304
MDU-319-BELFIELD	032	1.0380
MDU-323-BERTHOLD	262	1.1230
MDU-324-BEULAH	032	1.0380
MDU-327-BISMARCK	028	1.1482
MDU-330-BOWMAN	034	0.9027
MDU-337-BURLINGTON	262	1.1472
MDU-343-CARRINGTON	273	1.1482
MDU-344-CLEVELAND	272	1.1401
MDU-364-CAVALIER	273	1.1724
MDU-365-DAWSON	271	1.1401
MDU-368-DES LACS	262	1.1311
MDU-369-DICKINSON	031	1.0240
MDU-374-FT TOTTEN	273	1.1563
MDU-375-DEVILS LAKE	273	1.1563
MDU-379-BARLOW	273	1.1482
MDU-384-EPPING	264	1.0833
MDU-387-ELDRIDGE	272	1.1482
MDU-407-GLADSTONE	031	1.0240
MDU-411-GLEN ULLIN	031	1.0314
MDU-413-GOLVA	032	1.0153
MDU-416-GARRISON	262	1.1311
MDU-417-GRAFTON	273	1.1805
MDU-403-GWINNER	601	1.1409
MDU-429-HEBRON	031	1.0314
MDU-432-HETTINGER	903	2.4049
MDU-449-JAMESTOWN	272	1.1563
MDU-459-KILLDEER	033	1.1173
MDU-463-LANGDON	273	1.1482
MDU-469-LEFOR	031	1.0240
MDU-474-LIGNITE	263	1.0873
MDU-475-LINTON	802	1.0498
MDU-478-LINCOLN	028	1.1530
MDU-488-MCKENZIE	271	1.1482
MDU-494-MEDINA	271	1.1401
MDU-498-MANDAN	028	1.1482
MDU-500-MARMARTH	034	0.9093
MDU-505-MINOT	262	1.1472
MDU-510-MOTT	031	1.0240
MDU-512-MAX	262	1.1230
MDU-513-MILNOR	601	1.1409
MDU-522-NEW ENGLAND	031	1.0166
MDU-524-NEW SALEM	028	1.1240
MDU-532-NEW ROCKFORD	273	1.1482
MDU-539-PARK RIVER	273	1.1724
MDU-540-PALERMO	262	1.1230

MDU-558-RAY	264	1.0833
MDU-561-REGENT	031	1.0240
MDU-563-RHAME	034	0.8960
MDU-564-RICHARDTON	031	1.0166
MDU-568-ROSS	261	1.0943
MDU-572-RUTHVILLE	262	1.1472
MDU-574-SANBORN	272	1.1563
MDU-583-SENTINEL BUTTE	032	1.0304
MDU-588-SOUTH HEART	031	1.0166
MDU-717-SPIRITWOOD	272	1.1563
MDU-590-SPRINGBROOK	264	1.0833
MDU-591-STANLEY	261	1.1022
MDU-593-STEELE	271	1.1401
MDU-594-STERLING	028	1.1482
MDU-598-SHEYENNE	273	1.1563
MDU-605-SURREY	262	1.1472
MDU-610-TAPPEN	271	1.1401
MDU-611-TAYLOR	031	1.0166
MDU-616-TIOGA	260	1.0616
MDU-619-TURTLE LAKE	262	1.1311
MDU-620-TRENTON	024	1.0968
MDU-624-UNDERWOOD	262	1.1311
MDU-625-VALLEY CITY	272	1.1644
MDU-629-WALHALLA	273	1.1724
MDU-632-WATFORD CITY	610	1.0985
MDU-636-WHEELOCK	264	1.0756
MDU-637-WHITE EARTH	261	1.1022
MDU-642-WILLISTON	024	1.0968
MDU-646-WASHBURN	262	1.1392
MDU-647-WILTON	262	1.1230
MDU-664-RIVERDALE	262	1.1311
MDU-691-FAIRVIEW	241	1.0968
MDU-712-MINOT AFB	262	1.1472
MDU-718-FAIRMOUNT	600	1.1385
MDU-732-NEKOMA	273	1.1482
MDU-732-MSR SITE	273	1.1482

Source Daily Summary

August 2020

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	0.7450	1196.7	1217.8	1213.6	1.332	3.688	66.575	24.095	3.908	0.128	0.244	0.016	0.013	0.000	0.000	0.000	0.000	0.000	1407.49	
2	0.7448	1196.1	1217.3	1213.0	1.340	3.691	66.722	23.881	3.930	0.139	0.266	0.017	0.014	0.000	0.000	0.000	0.000	0.000	1407.00	
3	0.7295	1178.1	1198.9	1194.6	1.212	3.544	69.521	21.571	3.737	0.128	0.252	0.018	0.016	0.000	0.000	0.000	0.000	0.000	1400.21	
4	0.7236	1170.0	1190.7	1186.4	1.187	3.521	70.445	20.953	3.477	0.129	0.253	0.017	0.016	0.000	0.000	0.000	0.000	0.000	1396.25	
5	0.7226	1169.4	1190.1	1185.8	1.163	3.501	70.278	21.501	3.151	0.125	0.246	0.017	0.016	0.000	0.000	0.000	0.000	0.000	1396.54	
6	0.7228	1171.1	1191.9	1187.4	1.161	3.414	70.309	21.540	3.141	0.133	0.265	0.019	0.018	0.000	0.000	0.000	0.000	0.000	1398.45	
7	0.7179	1163.7	1184.3	1180.0	1.136	3.443	71.023	21.043	2.955	0.124	0.242	0.017	0.016	0.000	0.000	0.000	0.000	0.000	1394.33	
8	0.7186	1164.4	1185.0	1180.7	1.160	3.433	70.885	21.189	2.927	0.125	0.247	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1394.47	
9	0.7166	1160.8	1181.4	1177.3	1.165	3.456	71.203	20.924	2.853	0.122	0.243	0.018	0.017	0.000	0.000	0.000	0.000	0.000	1392.15	
10	0.7159	1160.3	1180.8	1176.7	1.156	3.438	71.352	20.778	2.878	0.121	0.242	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1392.17	
11	0.7242	1168.4	1189.1	1184.7	1.225	3.616	70.082	21.467	3.164	0.139	0.271	0.019	0.017	0.000	0.000	0.000	0.000	0.000	1393.87	
12	0.7196	1165.5	1186.1	1181.6	1.164	3.455	70.866	20.969	3.168	0.117	0.229	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1394.76	
13	0.7156	1161.2	1181.8	1177.6	1.126	3.393	71.400	20.797	2.908	0.113	0.227	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1393.57	
14	0.7186	1164.1	1184.7	1180.5	1.160	3.450	70.855	21.209	2.945	0.116	0.231	0.017	0.016	0.000	0.000	0.000	0.000	0.000	1394.11	
15	0.7224	1168.7	1189.4	1185.1	1.187	3.478	70.340	21.466	3.121	0.124	0.248	0.018	0.017	0.000	0.000	0.000	0.000	0.000	1396.02	
16	0.7246	1173.5	1194.2	1189.8	1.180	3.413	70.085	21.563	3.382	0.115	0.230	0.017	0.016	0.000	0.000	0.000	0.000	0.000	1399.48	
17	0.7365	1189.8	1210.9	1206.3	1.208	3.483	68.866	21.683	4.221	0.161	0.324	0.027	0.025	0.000	0.000	0.000	0.000	0.000	1407.29	
18	0.7319	1181.2	1202.1	1197.6	1.233	3.544	68.951	22.187	3.704	0.118	0.231	0.016	0.015	0.000	0.000	0.000	0.000	0.000	1401.69	
19	0.7305	1180.5	1201.4	1196.9	1.190	3.518	69.267	21.905	3.718	0.124	0.245	0.017	0.016	0.000	0.000	0.000	0.000	0.000	1402.20	
20	0.7335	1180.5	1201.4	1196.9	1.257	3.704	68.804	22.103	3.617	0.162	0.314	0.021	0.019	0.000	0.000	0.000	0.000	0.000	1399.29	
21	0.7249	1168.6	1189.3	1185.0	1.232	3.655	69.855	21.710	3.135	0.130	0.251	0.017	0.015	0.000	0.000	0.000	0.000	0.000	1393.48	
22	0.7333	1178.1	1199.0	1194.6	1.305	3.753	68.762	22.149	3.536	0.155	0.301	0.020	0.018	0.000	0.000	0.000	0.000	0.000	1396.71	
23	0.7326	1174.0	1194.7	1190.5	1.350	3.875	68.612	22.392	3.330	0.141	0.268	0.018	0.015	0.000	0.000	0.000	0.000	0.000	1392.46	
24	0.7340	1176.3	1197.1	1192.7	1.344	3.875	68.475	22.398	3.441	0.148	0.284	0.019	0.016	0.000	0.000	0.000	0.000	0.000	1393.90	
25	0.7361	1179.8	1200.7	1196.2	1.343	3.855	68.266	22.453	3.584	0.158	0.303	0.020	0.017	0.000	0.000	0.000	0.000	0.000	1396.11	
26	0.7406	1188.9	1210.0	1205.7	1.370	3.689	67.136	23.928	3.422	0.144	0.277	0.018	0.015	0.000	0.000	0.000	0.000	0.000	1402.56	
27	0.7366	1184.7	1205.7	1201.6	1.341	3.615	67.645	23.765	3.217	0.132	0.254	0.017	0.014	0.000	0.000	0.000	0.000	0.000	1401.43	
28	0.7308	1179.0	1199.9	1195.8	1.274	3.514	68.587	23.181	3.053	0.121	0.237	0.017	0.015	0.000	0.000	0.000	0.000	0.000	1400.20	
29	0.7243	1172.7	1193.5	1189.2	1.201	3.395	69.761	22.299	2.955	0.118	0.236	0.017	0.016	0.000	0.000	0.000	0.000	0.000	1398.99	
30	0.7229	1170.9	1191.6	1187.7	1.186	3.400	69.830	22.400	2.835	0.108	0.212	0.015	0.014	0.000	0.000	0.000	0.000	0.000	1398.15	
31	0.7268	1177.5	1198.4	1194.3	1.187	3.368	69.210	22.869	3.013	0.108	0.215	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1402.20	
Avg	0.7277	1175.0	1195.5	1191.2	1.228	3.554	69.483	22.012	3.304	0.130	0.254	0.018	0.016	0.000	0.000	0.000	0.000	0.000	1397.99	

Zone 211

Source Daily Summary

August 2020

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	0.6896	1138.9	1159.1	1155.4	0.882	2.678	75.581	18.469	2.114	0.078	0.167	0.014	0.018	0.000	0.000	0.000	0.000	0.000	1392.47	
2	0.6884	1136.2	1156.3	1152.5	0.876	2.746	75.825	18.151	2.123	0.078	0.167	0.015	0.019	0.000	0.000	0.000	0.000	0.000	1390.21	
3	0.6878	1135.4	1155.5	1151.8	0.873	2.741	75.948	18.022	2.139	0.078	0.166	0.014	0.018	0.000	0.000	0.000	0.000	0.000	1389.92	
4	0.6872	1135.2	1155.3	1151.6	0.864	2.705	75.974	18.135	2.056	0.074	0.159	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1390.34	
5	0.6867	1134.5	1154.6	1150.8	0.875	2.687	76.090	18.034	2.038	0.077	0.166	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1389.93	
6	0.6897	1139.3	1159.5	1155.8	0.878	2.667	75.541	18.539	2.097	0.078	0.167	0.014	0.018	0.000	0.000	0.000	0.000	0.000	1392.90	
7	0.6889	1138.4	1158.5	1154.8	0.863	2.676	75.670	18.435	2.078	0.078	0.167	0.014	0.018	0.000	0.000	0.000	0.000	0.000	1392.48	
8	0.6895	1138.9	1159.1	1155.3	0.873	2.683	75.535	18.575	2.061	0.076	0.164	0.014	0.018	0.000	0.000	0.000	0.000	0.000	1392.55	
9	0.6907	1140.8	1161.0	1157.3	0.875	2.678	75.409	18.621	2.119	0.082	0.180	0.016	0.020	0.000	0.000	0.000	0.000	0.000	1393.61	
10	0.6895	1137.8	1157.9	1154.2	0.879	2.742	75.612	18.364	2.127	0.077	0.166	0.014	0.018	0.000	0.000	0.000	0.000	0.000	1391.13	
11	0.6892	1137.5	1157.6	1153.8	0.872	2.743	75.607	18.430	2.075	0.076	0.163	0.014	0.018	0.000	0.000	0.000	0.000	0.000	1391.05	
12	0.6861	1132.0	1152.0	1148.3	0.884	2.769	75.939	18.353	1.792	0.074	0.156	0.014	0.018	0.000	0.000	0.000	0.000	0.000	1387.53	
13	0.6851	1131.2	1151.2	1147.4	0.884	2.730	76.068	18.348	1.702	0.076	0.158	0.015	0.019	0.000	0.000	0.000	0.000	0.000	1387.44	
14	0.6859	1132.6	1152.7	1148.9	0.888	2.706	75.912	18.544	1.676	0.077	0.162	0.015	0.019	0.000	0.000	0.000	0.000	0.000	1388.46	
15	0.6901	1139.3	1159.4	1155.6	0.885	2.704	75.540	18.462	2.097	0.085	0.188	0.017	0.021	0.000	0.000	0.000	0.000	0.000	1392.26	
16	0.6894	1137.9	1158.1	1154.3	0.892	2.708	75.622	18.410	2.076	0.080	0.176	0.016	0.020	0.000	0.000	0.000	0.000	0.000	1391.39	
17	0.6896	1138.5	1158.6	1154.8	0.884	2.701	75.545	18.524	2.063	0.078	0.170	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1391.91	
18	0.6918	1141.9	1162.1	1158.3	0.888	2.697	75.146	18.876	2.104	0.080	0.174	0.015	0.020	0.000	0.000	0.000	0.000	0.000	1393.87	
19	0.6914	1141.6	1161.8	1157.9	0.894	2.669	75.226	18.824	2.102	0.079	0.171	0.015	0.019	0.000	0.000	0.000	0.000	0.000	1393.87	
20	0.6906	1140.4	1160.6	1156.8	0.886	2.675	75.340	18.738	2.087	0.077	0.166	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1393.30	
21	0.6889	1138.2	1158.3	1154.6	0.873	2.670	75.554	18.651	1.990	0.074	0.158	0.013	0.016	0.000	0.000	0.000	0.000	0.000	1392.33	
22	0.6878	1134.9	1155.0	1151.2	0.865	2.781	75.869	18.127	2.086	0.077	0.164	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1389.35	
23	0.6883	1134.4	1154.5	1150.8	0.881	2.830	75.679	18.344	2.013	0.070	0.152	0.013	0.017	0.000	0.000	0.000	0.000	0.000	1388.30	
24	0.6893	1137.2	1157.4	1153.6	0.896	2.730	75.540	18.534	2.033	0.075	0.161	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1390.77	
25	0.6902	1138.8	1159.0	1155.1	0.880	2.746	75.439	18.545	2.116	0.076	0.164	0.014	0.018	0.000	0.000	0.000	0.000	0.000	1391.69	
26	0.6892	1137.3	1157.5	1153.8	0.885	2.734	75.577	18.474	2.064	0.075	0.161	0.014	0.017	0.000	0.000	0.000	0.000	0.000	1390.95	
27	0.6901	1137.7	1157.8	1154.1	0.895	2.783	75.518	18.382	2.139	0.078	0.171	0.015	0.019	0.000	0.000	0.000	0.000	0.000	1390.40	
28	0.6885	1134.7	1154.8	1151.1	0.885	2.823	75.811	18.087	2.114	0.078	0.170	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1388.44	
29	0.6889	1135.5	1155.6	1151.7	0.906	2.785	75.811	18.060	2.144	0.081	0.177	0.016	0.020	0.000	0.000	0.000	0.000	0.000	1388.90	
30	0.6874	1133.6	1153.7	1150.1	0.897	2.769	76.017	17.962	2.070	0.080	0.172	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1388.18	
31	0.6892	1136.8	1156.9	1153.1	0.900	2.751	75.684	18.283	2.091	0.080	0.175	0.016	0.020	0.000	0.000	0.000	0.000	0.000	1390.08	
Avg	0.6889	1137.0	1157.1	1153.4	0.882	2.726	75.667	18.395	2.051	0.077	0.167	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1390.83	

Zone 24

Gas Composition and Properties

Effective August 1, 2020

Source #: 0602160
Name: FAIRVIEW BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.9876		2.1392
Nitrogen, N2	3.0659		4.2271
Methane, C1	73.5072		58.0394
Ethane, C2	19.3498	5.1779	28.6363
Propane, C3	2.7654	0.7623	6.0017
iso-Butane, iC4	0.0900	0.0295	0.2575
n-Butane, nC4	0.1968	0.0621	0.5630
iso-Pentane, iC5	0.0153	0.0056	0.0543
n-Pentane, nC5	0.0172	0.0062	0.0611
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0048	0.0020	0.0204
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
Totals	100.0000	6.0450	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-20.618	
Cricondentherm	-7.782	
HV, Dry @ Base P, T	1171.68	
HV, Sat @ Base P, T	1151.29	
HV, Sat @ Sample P, T	1171.68	
Relative Density	0.7035	

C6+: 100

Sample

Date: 08/01/2020
Type:
Tech: Joshua Tipton
Pressure: 425.0
Temperature:
H2O: lbs/mm
H2S: ppm

Remarks:

Analysis

Date: 08/01/2020
Tech: Joshua Tipton
Instrument:
Cylinder: 383

Remarks:

Zone 241

Gas Composition and Properties

Effective August 1, 2020

Source #: 0602225
Name: WATFORD CITY WEST BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.2140		2.5353
Nitrogen, N2	4.0214		5.3457
Methane, C1	70.2708		53.4945
Ethane, C2	19.9093	5.3287	28.4078
Propane, C3	3.7697	1.0394	7.8879
iso-Butane, iC4	0.2146	0.0703	0.5919
n-Butane, nC4	0.4909	0.1549	1.3539
iso-Pentane, iC5	0.0459	0.0168	0.1571
n-Pentane, nC5	0.0502	0.0182	0.1719
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0132	0.0054	0.0540
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
Totals	100.0000	6.6330	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-0.604	
Cricondentherm	11.520	
HV, Dry @ Base P, T	1191.09	
HV, Sat @ Base P, T	1170.36	
HV, Sat @ Sample P, T	1191.09	
Relative Density	0.7298	

C6+: 100

Sample

Date: 08/01/2020
Type:
Tech: Joshua Tipton

Pressure: 420.0
Temperature:
H2O: lbs/mm
H2S: ppm

Remarks:

Analysis

Date: 08/01/2020
Tech: Joshua Tipton

Instrument:
Cylinder: 356

Remarks:

Zone 25

Source Daily Summary

August 2020

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	0.6713	1103.1	1122.6		0.599	3.577	78.617	14.899	2.170	0.042	0.084	0.006	0.006	0.000					1366.99	
2	0.6736	1106.2	1125.8		0.645	3.525	78.309	15.145	2.218	0.046	0.095	0.007	0.009	0.001					1368.62	
3	0.6727	1105.9	1125.5		0.646	3.466	78.536	14.919	2.282	0.046	0.092	0.006	0.007	0.000					1369.03	
4	0.6744	1108.8	1128.4		0.637	3.460	78.240	15.205	2.285	0.050	0.103	0.008	0.010	0.002					1370.90	
5	0.6707	1101.8	1121.3		0.638	3.537	78.777	14.765	2.133	0.045	0.091	0.007	0.007	0.000					1366.06	
6	0.6781	1114.5	1134.3		0.630	3.473	77.458	15.977	2.296	0.051	0.099	0.007	0.008	0.001					1374.20	
7	0.6746	1109.5	1129.2		0.586	3.516	77.946	15.647	2.160	0.046	0.088	0.006	0.006	0.000					1371.58	
8	0.6792	1115.4	1135.1		0.645	3.505	77.173	16.284	2.228	0.047	0.099	0.008	0.009	0.001					1374.13	
9	0.6816	1118.6	1138.4		0.649	3.518	76.971	16.271	2.367	0.059	0.134	0.012	0.015	0.003					1375.74	
10	0.6785	1112.1	1131.8		0.669	3.592	77.465	15.760	2.350	0.047	0.099	0.008	0.010	0.001					1370.90	
11	0.6731	1103.9	1123.4		0.608	3.684	78.215	15.225	2.127	0.042	0.086	0.006	0.007	0.000					1366.14	
12	0.6765	1108.6	1128.3		0.671	3.618	77.811	15.445	2.282	0.049	0.104	0.008	0.010	0.002					1368.57	
13	0.6738	1104.9	1124.5		0.638	3.634	78.186	15.210	2.180	0.045	0.093	0.006	0.007	0.000					1366.82	
14	0.6763	1108.4	1128.1		0.637	3.661	77.901	15.303	2.287	0.055	0.126	0.011	0.014	0.006					1368.62	
15	0.6759	1107.9	1127.5		0.647	3.645	77.885	15.386	2.263	0.048	0.107	0.008	0.010	0.001					1368.26	
16	0.6753	1106.4	1126.0		0.662	3.652	77.932	15.396	2.204	0.044	0.095	0.007	0.008	0.002					1367.09	
17	0.6782	1112.1	1131.8		0.651	3.590	77.472	15.818	2.294	0.049	0.104	0.009	0.011	0.002					1371.23	
18	0.6829	1120.0	1139.8		0.669	3.530	76.568	16.748	2.291	0.055	0.118	0.009	0.010	0.001					1376.12	
19	0.6859	1123.9	1143.8		0.679	3.554	76.119	16.997	2.475	0.049	0.106	0.009	0.011	0.003					1377.97	
20	0.6631	1089.1	1108.4		0.538	3.747	79.902	13.816	1.864	0.038	0.082	0.006	0.006	0.000					1358.04	
21	0.6713	1102.7	1122.2		0.561	3.656	78.405	15.256	1.973	0.042	0.091	0.007	0.008	0.001					1366.56	
22	0.6805	1115.8	1135.6		0.667	3.560	76.993	16.313	2.309	0.047	0.097	0.007	0.008	0.000					1373.44	
23	0.6817	1115.9	1135.7		0.707	3.598	76.945	16.164	2.403	0.050	0.109	0.009	0.011	0.003					1372.44	
24	0.6764	1108.4	1128.1		0.662	3.637	77.700	15.649	2.189	0.046	0.100	0.008	0.009	0.001					1368.42	
25	0.6810	1116.7	1136.5		0.657	3.568	76.923	16.361	2.322	0.047	0.100	0.008	0.010	0.003					1374.03	
26	0.6774	1110.5	1130.2		0.657	3.605	77.548	15.785	2.248	0.046	0.096	0.007	0.007	0.000					1370.03	
27	0.6793	1112.9	1132.6		0.696	3.583	77.342	15.866	2.329	0.051	0.110	0.009	0.011	0.003					1371.00	
28	0.6756	1106.7	1126.3		0.671	3.652	78.003	15.201	2.295	0.051	0.110	0.008	0.009	0.000					1367.09	
29	0.6753	1105.1	1124.7		0.698	3.677	78.184	14.912	2.323	0.056	0.124	0.010	0.013	0.003					1365.47	
30	0.6749	1105.1	1124.6		0.691	3.651	78.125	15.106	2.250	0.051	0.109	0.008	0.009	0.000					1365.84	
31	0.6785	1110.7	1130.4		0.698	3.629	77.552	15.589	2.329	0.055	0.122	0.010	0.012	0.003					1369.23	
Avg	0.6764	1109.0	1129.1		0.649	3.590	77.781	15.562	2.249	0.048	0.102	0.008	0.009	0.001					1369.70	

Zone 260

Source Daily Summary

August 2020

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	0.7042	1150.6	1170.9	1167.4	0.887	3.335	73.157	19.465	2.952	0.062	0.122	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1392.08	
2	0.7055	1153.5	1173.9	1170.5	0.858	3.322	72.871	19.753	3.010	0.058	0.112	0.007	0.009	0.000	0.000	0.000	0.000	0.000	1394.39	
3	0.7034	1148.7	1169.0	1165.6	0.889	3.367	73.293	19.327	2.924	0.060	0.120	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1390.64	
4	0.7024	1147.5	1167.8	1164.4	0.886	3.349	73.537	19.049	2.981	0.062	0.119	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1390.22	
5	0.6997	1143.5	1163.8	1160.3	0.877	3.356	74.130	18.427	2.996	0.065	0.128	0.009	0.012	0.000	0.000	0.000	0.000	0.000	1387.97	
6	0.6979	1139.2	1159.4	1155.9	0.905	3.405	74.375	18.221	2.892	0.062	0.122	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1384.62	
7	0.7049	1151.0	1171.4	1167.8	0.894	3.363	73.166	19.279	3.082	0.068	0.129	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1391.93	
8	0.7048	1151.8	1172.2	1168.7	0.856	3.356	73.069	19.494	3.024	0.064	0.120	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1393.08	
9	0.7042	1149.1	1169.4	1166.1	0.900	3.403	73.219	19.282	2.982	0.064	0.128	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1390.32	
10	0.7064	1152.6	1173.0	1169.4	0.910	3.379	72.943	19.454	3.074	0.070	0.146	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1392.31	
11	0.7052	1150.2	1170.6	1167.0	0.936	3.372	73.092	19.374	3.012	0.063	0.128	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1390.69	
12	0.7051	1151.5	1171.9	1168.2	0.892	3.351	73.082	19.404	3.075	0.060	0.119	0.008	0.010	0.000	0.000	0.000	0.000	0.000	1392.40	
13	0.7048	1151.0	1171.4	1167.9	0.885	3.366	73.052	19.506	2.995	0.059	0.119	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1392.08	
14	0.7035	1149.0	1169.3	1165.9	0.908	3.333	73.342	19.238	2.975	0.062	0.124	0.008	0.010	0.000	0.000	0.000	0.000	0.000	1390.87	
15	0.7044	1151.1	1171.5	1168.1	0.912	3.282	73.132	19.525	2.948	0.061	0.122	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1392.56	
16	0.7070	1154.5	1174.9	1171.4	0.931	3.291	72.770	19.751	3.028	0.065	0.138	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1394.05	
17	0.7050	1151.0	1171.3	1167.6	0.926	3.323	73.223	19.222	3.079	0.064	0.137	0.011	0.015	0.000	0.000	0.000	0.000	0.000	1391.78	
18	0.7055	1151.2	1171.6	1167.7	0.947	3.326	73.063	19.418	3.028	0.062	0.133	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1391.56	
19	0.7057	1153.5	1173.9	1169.9	0.897	3.287	72.942	19.637	3.029	0.062	0.128	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1394.09	
20	0.7052	1151.8	1172.2	1168.2	0.925	3.293	73.041	19.584	2.927	0.066	0.140	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1392.59	
21	0.7085	1158.0	1178.5	1174.9	0.889	3.278	72.384	20.197	3.048	0.060	0.124	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1396.90	
22	0.7049	1152.4	1172.8	1169.1	0.872	3.316	72.929	19.775	2.912	0.058	0.120	0.008	0.010	0.000	0.000	0.000	0.000	0.000	1393.60	
23	0.7065	1154.7	1175.1	1171.5	0.889	3.296	72.753	19.891	2.944	0.064	0.137	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1394.77	
24	0.7088	1157.1	1177.6	1173.8	0.924	3.311	72.292	20.288	2.982	0.061	0.124	0.008	0.010	0.000	0.000	0.000	0.000	0.000	1395.46	
25	0.7076	1155.0	1175.4	1171.5	0.917	3.334	72.552	20.032	2.955	0.061	0.126	0.010	0.014	0.000	0.000	0.000	0.000	0.000	1394.02	
26	0.7082	1156.3	1176.8	1172.9	0.920	3.303	72.582	19.993	2.922	0.071	0.164	0.019	0.027	0.000	0.000	0.000	0.000	0.000	1394.98	
27	0.7051	1152.2	1172.6	1169.2	0.890	3.309	72.961	19.713	2.916	0.063	0.128	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1393.27	
28	0.7068	1154.8	1175.2	1171.9	0.897	3.307	72.683	19.913	2.992	0.062	0.127	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1394.63	
29	0.7054	1151.1	1171.5	1168.1	0.939	3.331	73.005	19.533	2.983	0.062	0.129	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1391.65	
30	0.7035	1148.3	1168.6	1165.4	0.927	3.348	73.438	19.042	3.021	0.067	0.136	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1390.02	
31	0.7037	1147.4	1167.7	1164.2	0.953	3.379	73.567	18.778	3.068	0.073	0.155	0.012	0.016	0.000	0.000	0.000	0.000	0.000	1388.64	
Avg	0.7050	1151.0	1171.7	1168.1	0.905	3.334	73.085	19.470	2.992	0.063	0.129	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1392.20	

Zone 261

Source Daily Summary

August 2020

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	0.7483	1172.1	1192.8	1189.4	0.927	6.098	66.794	20.321	5.322	0.154	0.345	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1375.72	
2	0.7514	1176.9	1197.7	1194.3	0.932	6.082	66.417	20.522	5.469	0.164	0.369	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1378.57	
3	0.7495	1170.7	1191.5	1188.0	0.939	6.273	66.583	20.320	5.330	0.158	0.356	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1373.05	
4	0.7473	1169.9	1190.7	1187.3	0.936	6.120	66.884	20.319	5.204	0.154	0.343	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1374.15	
5	0.7539	1179.3	1200.2	1196.8	0.939	6.161	66.076	20.614	5.603	0.170	0.388	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1379.08	
6	0.7510	1177.6	1198.4	1195.0	0.938	5.993	66.505	20.539	5.437	0.164	0.376	0.023	0.025	0.000	0.000	0.000	0.000	0.000	1379.71	
7	0.7465	1170.0	1190.7	1187.2	0.937	6.036	67.082	20.200	5.207	0.152	0.343	0.020	0.022	0.000	0.000	0.000	0.000	0.000	1374.95	
8	0.7442	1166.7	1187.4	1183.9	0.932	6.033	67.398	20.013	5.101	0.150	0.333	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1373.17	
9	0.7495	1174.3	1195.0	1191.6	0.930	6.069	66.664	20.420	5.345	0.163	0.366	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1377.20	
10	0.7443	1165.0	1185.6	1182.2	0.935	6.142	67.281	20.099	5.022	0.150	0.332	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1371.07	
11	0.7515	1175.5	1196.3	1192.8	0.940	6.162	66.384	20.481	5.449	0.167	0.373	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1376.88	
12	0.7460	1165.5	1186.2	1182.7	0.937	6.266	66.973	20.213	5.102	0.149	0.324	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1370.16	
13	0.7502	1173.1	1193.8	1190.4	0.929	6.210	66.476	20.470	5.346	0.162	0.365	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1375.16	
14	0.7448	1167.6	1188.3	1184.9	0.926	6.041	67.216	20.253	5.038	0.151	0.336	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1373.72	
15	0.7493	1174.2	1195.0	1191.6	0.925	6.057	66.689	20.405	5.369	0.164	0.351	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1377.39	
16	0.7506	1177.3	1198.2	1194.7	0.929	5.984	66.524	20.563	5.437	0.160	0.359	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1379.82	
17	0.7491	1173.4	1194.2	1190.7	0.925	6.091	66.711	20.360	5.368	0.154	0.349	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1376.54	
18	0.7553	1182.9	1203.9	1200.3	0.926	6.091	65.974	20.654	5.725	0.176	0.404	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1382.00	
19	0.7581	1185.1	1206.1	1202.4	0.917	6.237	65.566	20.753	5.870	0.185	0.422	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1381.94	
20	0.7578	1184.9	1205.9	1202.2	0.923	6.210	65.472	21.024	5.728	0.180	0.412	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1381.99	
21	0.7568	1187.9	1209.0	1205.4	0.924	5.927	65.751	21.049	5.668	0.188	0.436	0.028	0.030	0.000	0.000	0.000	0.000	0.000	1386.47	
22	0.7560	1189.1	1210.2	1206.5	0.925	5.775	65.892	21.115	5.618	0.184	0.432	0.029	0.032	0.000	0.000	0.000	0.000	0.000	1388.62	
23	0.7505	1170.7	1191.4	1187.9	0.926	6.384	66.356	20.463	5.306	0.160	0.364	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1372.12	
24	0.7481	1166.7	1187.3	1183.8	0.927	6.405	66.640	20.309	5.191	0.153	0.338	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1369.60	
25	0.7528	1175.2	1196.0	1192.4	0.926	6.331	66.132	20.531	5.475	0.172	0.388	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1375.22	
26	0.7502	1171.0	1191.8	1188.3	0.930	6.331	66.399	20.481	5.309	0.158	0.352	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1372.79	
27	0.7475	1166.0	1186.6	1183.2	0.930	6.393	66.661	20.377	5.129	0.148	0.325	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1369.26	
28	0.7497	1169.8	1190.5	1187.1	0.927	6.366	66.399	20.513	5.263	0.152	0.341	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1371.78	
29	0.7510	1172.0	1192.7	1189.3	0.930	6.347	66.276	20.553	5.335	0.161	0.357	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1373.18	
30	0.7485	1170.4	1191.2	1187.8	0.927	6.209	66.657	20.445	5.225	0.154	0.343	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1373.68	
31	0.7488	1171.3	1192.1	1188.6	0.930	6.185	66.639	20.440	5.266	0.155	0.345	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1374.36	
Avg	0.7503	1174.0	1194.7	1191.3	0.930	6.162	66.499	20.478	5.363	0.162	0.364	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1376.11	

Zone 262

Gas Composition and Properties

Effective August 1, 2020

Source #: 2501030
Name: LIGNITE PLANT

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.2717		0.6157
Nitrogen, N2	2.7123		3.9126
Methane, C1	77.8510		64.3131
Ethane, C2	17.1429	4.5862	26.5439
Propane, C3	1.9900	0.5484	4.5187
iso-Butane, iC4	0.0240	0.0079	0.0718
n-Butane, nC4	0.0081	0.0026	0.0242
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	5.1450	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-44.919	
Cricondentherm	-28.399	
HV, Dry @ Base P, T	1146.74	
HV, Sat @ Base P, T	1126.78	
HV, Sat @ Sample P, T	1146.74	
Relative Density	0.6722	

C6+: 100

Sample

Date: 08/01/2020
Type:
Tech: Joshua Tipton
Pressure: 410.0
Temperature:
H2O: lbs/mm
H2S: ppm

Remarks:

Analysis

Date: 08/01/2020
Tech: Joshua Tipton
Instrument:
Cylinder: 393

Remarks:

Gas Composition and Properties

Effective August 1, 2020

Source #: 3002013
Name: EPPING BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.8549		1.9066
Nitrogen, N2	2.8369		4.0272
Methane, C1	76.5197		62.2062
Ethane, C2	17.6288	4.7165	26.8615
Propane, C3	1.9426	0.5354	4.3408
iso-Butane, iC4	0.0607	0.0199	0.1788
n-Butane, nC4	0.1324	0.0418	0.3900
iso-Pentane, iC5	0.0105	0.0038	0.0384
n-Pentane, nC5	0.0119	0.0043	0.0435
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0016	0.0007	0.0070
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
Totals	100.0000	5.3220	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-26.775	
Cricondentherm	-20.937	
HV, Dry @ Base P, T	1146.99	
HV, Sat @ Base P, T	1127.03	
HV, Sat @ Sample P, T	1146.99	
Relative Density	0.6831	

C6+: 100

Sample

Date: 08/01/2020
Type:
Tech: Joshua Tipton
Pressure: 550.0
Temperature:
H2O: lbs/mm
H2S: ppm

Remarks:

Analysis

Date: 08/01/2020
Tech: Joshua Tipton
Instrument:
Cylinder: BC13

Remarks:

*** End of Report ***

Zone 264

Source Daily Summary

August 2020

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	0.7051	1151.7	1172.1	1168.7	0.888	3.340	73.128	19.366	3.057	0.068	0.132	0.009	0.012	0.000	0.000	0.000	0.000	0.000	1392.65	
2	0.7056	1153.6	1174.0	1170.7	0.863	3.317	72.866	19.761	3.005	0.058	0.113	0.007	0.009	0.000	0.000	0.000	0.000	0.000	1394.41	
3	0.7043	1150.0	1170.4	1167.0	0.895	3.362	73.117	19.498	2.926	0.060	0.121	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1391.38	
4	0.7017	1146.7	1167.0	1163.7	0.878	3.345	73.615	19.033	2.933	0.061	0.117	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1389.95	
5	0.7032	1149.0	1169.4	1166.0	0.889	3.324	73.498	19.026	3.049	0.065	0.129	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1391.28	
6	0.6958	1136.1	1156.2	1152.9	0.883	3.428	74.818	17.755	2.910	0.064	0.125	0.008	0.010	0.000	0.000	0.000	0.000	0.000	1382.92	
7	0.7036	1148.8	1169.1	1165.8	0.906	3.362	73.319	19.223	2.983	0.064	0.124	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1390.50	
8	0.7052	1152.6	1173.0	1169.7	0.858	3.342	73.085	19.408	3.096	0.069	0.126	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1393.66	
9	0.7046	1149.9	1170.3	1166.9	0.891	3.399	73.164	19.325	3.003	0.065	0.131	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1390.99	
10	0.7077	1154.9	1175.4	1171.8	0.901	3.374	72.849	19.435	3.153	0.079	0.176	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1393.81	
11	0.7049	1150.0	1170.4	1167.0	0.922	3.375	73.069	19.464	2.965	0.061	0.122	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1390.80	
12	0.7047	1151.1	1171.5	1168.2	0.888	3.347	73.085	19.478	3.006	0.059	0.118	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1392.28	
13	0.7051	1151.0	1171.4	1168.0	0.913	3.349	73.044	19.515	2.962	0.062	0.130	0.010	0.013	0.000	0.000	0.000	0.000	0.000	1391.75	
14	0.7036	1149.6	1170.0	1166.7	0.913	3.297	73.321	19.291	2.974	0.062	0.124	0.008	0.010	0.000	0.000	0.000	0.000	0.000	1391.56	
15	0.7064	1153.9	1174.3	1170.9	0.929	3.278	72.815	19.779	2.982	0.063	0.131	0.010	0.013	0.000	0.000	0.000	0.000	0.000	1393.87	
16	0.7075	1155.2	1175.6	1172.2	0.920	3.309	72.934	19.358	3.209	0.075	0.164	0.014	0.018	0.000	0.000	0.000	0.000	0.000	1394.38	
17	0.7056	1151.4	1171.8	1168.4	0.947	3.320	73.067	19.402	3.041	0.063	0.136	0.010	0.013	0.000	0.000	0.000	0.000	0.000	1391.75	
18	0.7058	1152.5	1172.9	1169.5	0.921	3.313	72.955	19.574	3.026	0.062	0.130	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1392.90	
19	0.7064	1154.8	1175.2	1171.6	0.897	3.268	72.837	19.805	2.943	0.070	0.150	0.013	0.017	0.000	0.000	0.000	0.000	0.000	1394.94	
20	0.7113	1161.6	1182.1	1178.8	0.911	3.293	71.933	20.514	3.137	0.062	0.130	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1398.41	
21	0.7099	1160.2	1180.7	1177.2	0.891	3.277	72.107	20.485	3.034	0.060	0.124	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1398.06	
22	0.7065	1154.6	1175.0	1171.7	0.890	3.300	72.723	19.906	2.972	0.062	0.128	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1394.73	
23	0.7087	1158.1	1178.7	1175.1	0.899	3.276	72.368	20.226	3.015	0.062	0.129	0.010	0.014	0.000	0.000	0.000	0.000	0.000	1396.75	
24	0.7063	1153.4	1173.8	1170.5	0.915	3.313	72.791	19.789	2.988	0.061	0.125	0.008	0.010	0.000	0.000	0.000	0.000	0.000	1393.53	
25	0.7092	1156.7	1177.2	1173.7	0.955	3.329	72.335	20.129	3.023	0.065	0.139	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1394.53	
26	0.7066	1154.7	1175.1	1171.7	0.892	3.302	72.684	19.950	2.968	0.061	0.124	0.008	0.010	0.000	0.000	0.000	0.000	0.000	1394.72	
27	0.7076	1156.3	1176.7	1173.2	0.902	3.288	72.497	20.167	2.936	0.061	0.126	0.009	0.014	0.000	0.000	0.000	0.000	0.000	1395.52	
28	0.7072	1154.7	1175.1	1171.6	0.922	3.307	72.732	19.781	3.030	0.065	0.137	0.011	0.014	0.000	0.000	0.000	0.000	0.000	1394.12	
29	0.7036	1148.4	1168.7	1165.3	0.928	3.349	73.391	19.120	2.989	0.066	0.136	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1390.03	
30	0.7046	1148.9	1169.3	1165.7	0.955	3.363	73.421	18.914	3.086	0.074	0.158	0.013	0.017	0.000	0.000	0.000	0.000	0.000	1389.67	
31	0.7010	1143.2	1163.4	1160.1	0.948	3.391	73.945	18.505	2.977	0.069	0.143	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1386.29	
Avg	0.7055	1152.0	1172.5	1169.0	0.907	3.330	73.017	19.516	3.012	0.064	0.132	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1392.65	

Zone 265

Source Daily Summary

August 2020

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	0.7470	1172.6	1193.4	1189.4	0.911	5.969	67.019	20.306	5.255	0.156	0.346	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1377.45	
2	0.7510	1178.2	1199.1	1195.1	0.915	5.993	66.506	20.552	5.446	0.167	0.376	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1380.35	
3	0.7480	1170.4	1191.1	1187.1	0.921	6.186	66.822	20.255	5.262	0.158	0.356	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1373.86	
4	0.7479	1173.0	1193.7	1189.7	0.918	6.020	66.912	20.311	5.276	0.160	0.362	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1377.02	
5	0.7525	1179.4	1200.3	1196.3	0.922	6.050	66.351	20.515	5.552	0.171	0.393	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1380.37	
6	0.7490	1176.7	1197.6	1193.5	0.921	5.888	66.845	20.399	5.360	0.164	0.376	0.023	0.023	0.000	0.000	0.000	0.000	0.000	1380.40	
7	0.7452	1170.1	1190.8	1186.8	0.918	5.938	67.332	20.085	5.191	0.153	0.345	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1376.19	
8	0.7444	1168.9	1189.6	1185.6	0.914	5.950	67.437	20.016	5.139	0.155	0.348	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1375.41	
9	0.7479	1173.2	1194.0	1190.0	0.912	6.019	66.906	20.315	5.280	0.162	0.365	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1377.25	
10	0.7448	1168.0	1188.7	1184.7	0.918	6.036	67.297	20.126	5.077	0.156	0.351	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1373.98	
11	0.7495	1175.7	1196.5	1192.5	0.919	6.007	66.741	20.354	5.394	0.166	0.377	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1378.67	
12	0.7457	1166.9	1187.5	1183.6	0.916	6.185	67.122	20.109	5.138	0.153	0.340	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1371.93	
13	0.7495	1174.7	1195.5	1191.5	0.911	6.078	66.656	20.436	5.337	0.166	0.375	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1377.53	
14	0.7438	1167.8	1188.5	1184.6	0.908	5.963	67.378	20.231	4.998	0.151	0.335	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1374.79	
15	0.7489	1175.6	1196.4	1192.5	0.907	5.966	66.805	20.388	5.366	0.166	0.361	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1379.23	
16	0.7488	1175.9	1196.8	1192.8	0.911	5.930	66.801	20.453	5.350	0.157	0.355	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1379.71	
17	0.7498	1176.0	1196.9	1192.8	0.907	6.030	66.701	20.336	5.452	0.162	0.369	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1378.81	
18	0.7543	1182.8	1203.7	1199.5	0.908	6.037	66.148	20.586	5.689	0.177	0.407	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1382.61	
19	0.7585	1187.7	1208.7	1204.4	0.897	6.147	65.646	20.679	5.934	0.194	0.449	0.027	0.027	0.000	0.000	0.000	0.000	0.000	1384.46	
20	0.7552	1184.0	1205.0	1200.8	0.909	6.044	65.902	20.886	5.624	0.178	0.409	0.024	0.024	0.000	0.000	0.000	0.000	0.000	1383.26	
21	0.7554	1189.2	1210.3	1206.0	0.906	5.749	66.029	21.006	5.622	0.188	0.442	0.028	0.029	0.000	0.000	0.000	0.000	0.000	1389.10	
22	0.7471	1175.2	1196.0	1191.9	0.900	5.832	67.010	20.508	5.181	0.161	0.367	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1380.42	
23	0.7481	1169.7	1190.4	1186.4	0.911	6.249	66.689	20.420	5.186	0.157	0.351	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1373.02	
24	0.7477	1168.4	1189.1	1185.1	0.909	6.297	66.764	20.286	5.203	0.157	0.348	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1371.82	
25	0.7521	1176.3	1197.1	1193.1	0.909	6.227	66.297	20.486	5.465	0.176	0.397	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1377.06	
26	0.7501	1173.6	1194.4	1190.5	0.911	6.200	66.494	20.473	5.355	0.162	0.365	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1375.76	
27	0.7465	1166.5	1187.2	1183.3	0.912	6.297	66.835	20.348	5.097	0.148	0.328	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1370.71	
28	0.7491	1171.5	1192.2	1188.3	0.911	6.241	66.529	20.534	5.244	0.156	0.348	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1374.13	
29	0.7495	1171.9	1192.7	1188.8	0.911	6.247	66.530	20.472	5.276	0.162	0.362	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1374.32	
30	0.7470	1170.0	1190.7	1186.9	0.910	6.126	66.860	20.435	5.144	0.152	0.338	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1374.45	
31	0.7485	1173.1	1193.9	1189.9	0.912	6.074	66.730	20.480	5.254	0.156	0.353	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1376.67	
Avg	0.7491	1174.0	1195.1	1191.1	0.912	6.064	66.713	20.412	5.327	0.163	0.368	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1377.44	

Zone 271

Source Daily Summary

August 2020

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	0.7499	1174.9	1195.7	1192.6	0.913	6.095	66.579	20.458	5.402	0.159	0.353	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1377.55	
2	0.7469	1171.7	1192.4	1189.3	0.921	5.994	67.014	20.304	5.236	0.155	0.337	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1376.56	
3	0.7511	1177.3	1198.2	1194.9	0.930	6.036	66.472	20.538	5.443	0.166	0.370	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1379.19	
4	0.7484	1170.3	1191.0	1187.8	0.933	6.207	66.738	20.309	5.266	0.157	0.350	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1373.49	
5	0.7478	1172.4	1193.2	1190.0	0.925	6.034	66.876	20.361	5.252	0.158	0.352	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1376.51	
6	0.7528	1179.5	1200.3	1197.1	0.929	6.068	66.254	20.598	5.545	0.169	0.387	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1380.14	
7	0.7485	1175.4	1196.2	1193.0	0.929	5.906	66.850	20.447	5.301	0.160	0.362	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1379.41	
8	0.7455	1170.1	1190.8	1187.7	0.924	5.953	67.246	20.168	5.178	0.152	0.339	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1376.01	
9	0.7451	1169.1	1189.8	1186.7	0.922	5.988	67.293	20.110	5.149	0.155	0.344	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1375.11	
10	0.7483	1173.1	1193.8	1189.9	0.924	6.042	66.850	20.324	5.295	0.162	0.362	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1376.81	
11	0.7454	1168.2	1188.8	1185.1	0.927	6.067	67.186	20.176	5.099	0.156	0.348	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1373.70	
12	0.7500	1176.0	1196.8	1193.0	0.927	6.015	66.652	20.416	5.407	0.166	0.373	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1378.77	
13	0.7468	1168.0	1188.7	1184.9	0.924	6.206	66.937	20.220	5.180	0.154	0.341	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1372.36	
14	0.7503	1175.7	1196.5	1192.6	0.919	6.076	66.534	20.523	5.365	0.166	0.373	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1378.04	
15	0.7440	1167.3	1187.9	1184.0	0.916	6.003	67.328	20.233	5.004	0.150	0.329	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1373.98	
16	0.7492	1175.7	1196.5	1192.5	0.916	5.982	66.719	20.454	5.369	0.164	0.354	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1379.02	
17	0.7498	1176.9	1197.8	1194.2	0.916	5.955	66.691	20.444	5.428	0.160	0.361	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1379.98	
18	0.7495	1174.8	1195.6	1192.4	0.914	6.065	66.671	20.391	5.402	0.158	0.356	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1377.72	
19	0.7550	1183.1	1204.0	1200.8	0.920	6.063	66.021	20.659	5.704	0.177	0.405	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1382.43	
20	0.7583	1186.9	1208.0	1204.7	0.906	6.155	65.604	20.769	5.888	0.190	0.435	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1383.93	
21	0.7553	1183.3	1204.3	1201.1	0.917	6.078	65.817	20.983	5.583	0.175	0.398	0.024	0.024	0.000	0.000	0.000	0.000	0.000	1382.46	
22	0.7548	1188.0	1209.1	1205.8	0.915	5.745	66.067	21.032	5.573	0.184	0.427	0.028	0.029	0.000	0.000	0.000	0.000	0.000	1388.41	
23	0.7464	1173.2	1194.0	1190.8	0.906	5.880	67.051	20.477	5.136	0.157	0.353	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1378.81	
24	0.7478	1168.6	1189.3	1186.2	0.920	6.275	66.690	20.416	5.164	0.156	0.343	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1372.11	
25	0.7485	1169.2	1189.9	1186.8	0.917	6.311	66.629	20.365	5.235	0.157	0.347	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1372.09	
26	0.7525	1176.2	1197.0	1193.8	0.918	6.253	66.199	20.561	5.461	0.174	0.390	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1376.65	
27	0.7502	1173.0	1193.8	1190.7	0.920	6.224	66.447	20.514	5.339	0.160	0.356	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1375.11	
28	0.7466	1165.8	1186.5	1183.3	0.920	6.329	66.805	20.356	5.087	0.147	0.321	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1369.93	
29	0.7494	1171.2	1192.0	1188.8	0.919	6.267	66.489	20.527	5.255	0.157	0.346	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1373.63	
30	0.7498	1171.7	1192.4	1189.2	0.919	6.271	66.477	20.495	5.278	0.161	0.357	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1373.85	
31	0.7469	1169.4	1190.1	1186.9	0.918	6.141	66.865	20.418	5.141	0.150	0.330	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1373.82	
Avg	0.7494	1174.0	1194.9	1191.5	0.920	6.087	66.647	20.453	5.328	0.162	0.361	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1377.02	

Zone 272

Source Daily Summary

August 2020

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	0.7504	1175.4	1196.3	1193.2	0.913	6.105	66.529	20.466	5.428	0.160	0.357	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1377.73	
2	0.7471	1172.0	1192.7	1189.7	0.920	5.998	66.995	20.301	5.250	0.156	0.340	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1376.69	
3	0.7512	1177.5	1198.4	1195.1	0.923	6.037	66.469	20.537	5.451	0.166	0.372	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1379.41	
4	0.7481	1170.5	1191.3	1187.6	0.929	6.168	66.828	20.255	5.268	0.158	0.354	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1374.05	
5	0.7486	1173.9	1194.7	1191.7	0.924	6.018	66.798	20.386	5.306	0.161	0.361	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1377.54	
6	0.7531	1179.8	1200.7	1197.7	0.929	6.071	66.229	20.597	5.563	0.171	0.390	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1380.32	
7	0.7487	1175.7	1196.5	1193.4	0.929	5.915	66.828	20.434	5.320	0.161	0.366	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1379.47	
8	0.7455	1170.2	1190.9	1187.9	0.924	5.958	67.242	20.158	5.183	0.153	0.341	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1375.99	
9	0.7453	1169.3	1190.0	1187.0	0.922	5.992	67.283	20.099	5.161	0.156	0.347	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1375.16	
10	0.7480	1172.5	1193.2	1189.7	0.921	6.051	66.894	20.297	5.274	0.161	0.360	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1376.41	
11	0.7453	1167.9	1188.5	1184.9	0.928	6.069	67.204	20.170	5.088	0.155	0.346	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1373.51	
12	0.7495	1175.2	1196.0	1192.6	0.927	6.021	66.713	20.375	5.386	0.165	0.370	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1378.22	
13	0.7465	1167.4	1188.1	1184.7	0.924	6.217	66.965	20.203	5.162	0.153	0.338	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1371.88	
14	0.7503	1175.8	1196.6	1193.2	0.920	6.071	66.533	20.522	5.369	0.167	0.375	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1378.18	
15	0.7430	1165.5	1186.2	1182.8	0.917	6.016	67.444	20.171	4.947	0.147	0.322	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1372.86	
16	0.7490	1175.2	1196.0	1192.6	0.917	5.990	66.752	20.430	5.353	0.164	0.354	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1378.64	
17	0.7475	1174.3	1195.1	1191.7	0.919	5.903	66.953	20.405	5.280	0.153	0.344	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1378.98	
18	0.7508	1177.3	1198.2	1195.0	0.914	6.032	66.595	20.349	5.525	0.165	0.373	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1379.48	
19	0.7542	1181.2	1202.1	1198.7	0.916	6.105	66.130	20.552	5.675	0.175	0.399	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1381.01	
20	0.7558	1182.3	1203.3	1199.9	0.907	6.207	65.907	20.569	5.756	0.184	0.418	0.025	0.026	0.000	0.000	0.000	0.000	0.000	1380.78	
21	0.7555	1183.9	1204.8	1201.7	0.918	6.067	65.801	20.979	5.609	0.176	0.401	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1382.87	
22	0.7554	1188.8	1209.8	1206.6	0.917	5.758	65.990	21.049	5.610	0.186	0.433	0.028	0.029	0.000	0.000	0.000	0.000	0.000	1388.67	
23	0.7423	1167.9	1188.6	1185.2	0.907	5.818	67.568	20.299	4.901	0.146	0.324	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1376.36	
24	0.7505	1175.4	1196.2	1193.0	0.922	6.108	66.403	20.678	5.319	0.164	0.366	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1377.63	
25	0.7437	1160.6	1181.1	1177.7	0.920	6.381	67.186	20.087	4.938	0.144	0.311	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1366.43	
26	0.7523	1175.9	1196.7	1193.3	0.918	6.255	66.225	20.534	5.464	0.173	0.387	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1376.49	
27	0.7479	1168.7	1189.4	1186.1	0.922	6.271	66.728	20.341	5.204	0.155	0.342	0.019	0.018	0.000	0.000	0.000	0.000	0.000	1372.12	
28	0.7464	1165.4	1186.0	1183.0	0.920	6.337	66.837	20.322	5.081	0.147	0.321	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1369.59	
29	0.7496	1171.4	1192.1	1189.1	0.919	6.271	66.473	20.525	5.266	0.157	0.349	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1373.68	
30	0.7501	1172.3	1193.0	1190.0	0.919	6.267	66.440	20.508	5.300	0.163	0.361	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1374.22	
31	0.7472	1169.8	1190.6	1187.5	0.919	6.145	66.830	20.423	5.162	0.151	0.333	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1374.03	
Avg	0.7490	1174.0	1194.3	1191.0	0.920	6.085	66.702	20.420	5.310	0.161	0.360	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1376.72	

Zone 273

Source Daily Summary

August 2020

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	0.7470	1172.6	1193.3	1189.4	0.911	5.973	67.022	20.298	5.256	0.156	0.345	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1377.37	
2	0.7509	1178.2	1199.1	1195.2	0.914	5.983	66.526	20.545	5.443	0.167	0.376	0.022	0.023	0.000	0.000	0.000	0.000	0.000	1380.47	
3	0.7479	1170.2	1190.9	1187.1	0.921	6.184	66.842	20.245	5.256	0.158	0.355	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1373.79	
4	0.7472	1171.6	1192.3	1188.5	0.918	6.041	66.975	20.281	5.233	0.158	0.354	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1376.03	
5	0.7527	1179.7	1200.6	1196.6	0.921	6.054	66.333	20.506	5.568	0.172	0.397	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1380.48	
6	0.7494	1177.0	1197.9	1193.9	0.920	5.911	66.787	20.410	5.381	0.165	0.378	0.023	0.024	0.000	0.000	0.000	0.000	0.000	1380.35	
7	0.7451	1170.2	1190.9	1187.0	0.919	5.926	67.343	20.091	5.183	0.153	0.345	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1376.34	
8	0.7441	1168.6	1189.3	1185.4	0.914	5.930	67.494	20.000	5.121	0.155	0.347	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1375.48	
9	0.7479	1173.2	1194.0	1190.1	0.912	6.012	66.923	20.306	5.279	0.162	0.365	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1377.33	
10	0.7446	1167.5	1188.1	1184.3	0.918	6.045	67.322	20.113	5.061	0.155	0.348	0.019	0.020	0.000	0.000	0.000	0.000	0.000	1373.61	
11	0.7499	1176.0	1196.8	1192.9	0.920	6.016	66.705	20.358	5.410	0.167	0.380	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1378.77	
12	0.7453	1167.0	1187.7	1183.7	0.917	6.139	67.192	20.098	5.125	0.152	0.340	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1372.47	
13	0.7494	1174.0	1194.8	1190.9	0.911	6.101	66.665	20.420	5.325	0.165	0.372	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1376.94	
14	0.7443	1168.7	1189.4	1185.6	0.908	5.958	67.331	20.244	5.029	0.152	0.340	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1375.33	
15	0.7485	1174.8	1195.6	1191.8	0.907	5.977	66.847	20.363	5.342	0.165	0.358	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1378.69	
16	0.7485	1175.5	1196.3	1192.4	0.911	5.930	66.835	20.441	5.331	0.156	0.354	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1379.46	
17	0.7493	1174.9	1195.7	1191.8	0.907	6.047	66.755	20.307	5.421	0.159	0.361	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1378.02	
18	0.7539	1182.3	1203.3	1199.2	0.908	6.024	66.200	20.577	5.664	0.175	0.403	0.024	0.025	0.000	0.000	0.000	0.000	0.000	1382.47	
19	0.7581	1186.9	1207.9	1203.8	0.898	6.153	65.697	20.653	5.906	0.193	0.446	0.027	0.028	0.000	0.000	0.000	0.000	0.000	1383.96	
20	0.7552	1183.5	1204.5	1200.5	0.907	6.079	65.896	20.852	5.632	0.178	0.408	0.024	0.024	0.000	0.000	0.000	0.000	0.000	1382.65	
21	0.7553	1189.0	1210.1	1206.1	0.907	5.752	66.038	20.996	5.622	0.188	0.441	0.028	0.029	0.000	0.000	0.000	0.000	0.000	1388.97	
22	0.7471	1175.7	1196.5	1192.6	0.899	5.807	67.026	20.508	5.184	0.162	0.370	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1380.94	
23	0.7487	1171.1	1191.9	1188.0	0.911	6.219	66.627	20.464	5.225	0.159	0.357	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1374.14	
24	0.7470	1167.0	1187.7	1183.8	0.910	6.309	66.845	20.252	5.152	0.155	0.342	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1370.93	
25	0.7521	1176.3	1197.1	1193.1	0.908	6.229	66.305	20.472	5.469	0.175	0.397	0.022	0.022	0.000	0.000	0.000	0.000	0.000	1377.03	
26	0.7498	1172.9	1193.7	1189.8	0.911	6.208	66.538	20.448	5.333	0.161	0.361	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1375.28	
27	0.7467	1166.7	1187.4	1183.6	0.912	6.297	66.828	20.343	5.106	0.149	0.330	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1370.82	
28	0.7485	1170.4	1191.2	1187.4	0.911	6.246	66.602	20.497	5.210	0.154	0.343	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1373.50	
29	0.7491	1171.1	1191.8	1188.0	0.912	6.259	66.577	20.443	5.251	0.160	0.358	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1373.71	
30	0.7470	1169.9	1190.6	1187.0	0.910	6.139	66.857	20.422	5.143	0.152	0.340	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1374.24	
31	0.7479	1172.1	1192.8	1189.1	0.912	6.079	66.804	20.440	5.222	0.154	0.348	0.020	0.020	0.000	0.000	0.000	0.000	0.000	1376.03	
Avg	0.7490	1174.0	1194.8	1190.9	0.912	6.065	66.733	20.400	5.319	0.162	0.366	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1377.28	

Zone 28

Source Daily Summary

August 2020

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	0.6469	1079.1	1098.2	1094.7	0.946	2.219	82.481	13.620	0.705	0.011	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1362.29	
2	0.6500	1083.1	1102.2	1098.8	0.943	2.277	81.906	14.060	0.780	0.013	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1364.03	
3	0.6486	1080.1	1099.2	1095.7	0.953	2.313	82.137	13.837	0.729	0.012	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1361.70	
4	0.6475	1078.8	1097.9	1094.4	0.938	2.312	82.282	13.771	0.666	0.011	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1361.24	
5	0.6464	1078.1	1097.2	1093.4	0.950	2.230	82.492	13.677	0.630	0.009	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1361.53	
6	0.6455	1077.7	1096.8	1093.1	0.954	2.155	82.706	13.526	0.632	0.010	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1362.11	
7	0.6388	1068.2	1087.1	1083.4	0.930	2.148	83.916	12.472	0.515	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1357.08	
8	0.6459	1076.2	1095.2	1091.9	0.940	2.315	82.545	13.569	0.608	0.009	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1359.67	
9	0.6451	1075.6	1094.7	1091.4	0.933	2.286	82.697	13.463	0.596	0.009	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1359.78	
10	0.6468	1077.5	1096.6	1093.3	0.959	2.286	82.398	13.718	0.613	0.009	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1360.44	
11	0.6478	1080.2	1099.3	1095.9	0.961	2.221	82.288	13.805	0.694	0.012	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1362.66	
12	0.6487	1081.6	1100.8	1097.2	0.972	2.193	82.189	13.863	0.749	0.013	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1363.64	
13	0.6496	1083.7	1102.9	1099.3	0.942	2.195	82.012	14.041	0.774	0.013	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1365.31	
14	0.6508	1084.9	1104.1	1100.8	0.945	2.235	81.753	14.252	0.783	0.012	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1365.53	
15	0.6472	1080.6	1099.7	1096.4	0.945	2.157	82.448	13.694	0.729	0.011	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1363.90	
16	0.6483	1081.7	1100.8	1097.4	0.940	2.208	82.265	13.766	0.789	0.013	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1364.03	
17	0.6495	1083.8	1103.0	1099.6	0.922	2.217	82.115	13.820	0.882	0.016	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1365.46	
18	0.6508	1086.0	1105.2	1101.7	0.925	2.200	81.920	13.973	0.938	0.018	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1366.86	
19	0.6514	1086.8	1106.0	1102.5	0.939	2.187	81.915	13.871	1.042	0.019	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1367.23	
20	0.6529	1088.5	1107.8	1104.3	0.952	2.204	81.576	14.222	1.002	0.018	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1367.82	
21	0.6536	1089.3	1108.6	1105.2	0.975	2.180	81.342	14.580	0.884	0.015	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1368.16	
22	0.6534	1089.0	1108.3	1104.9	0.963	2.200	81.271	14.726	0.809	0.013	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1368.00	
23	0.6564	1092.7	1112.0	1108.6	0.981	2.229	80.804	15.027	0.922	0.015	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.47	
24	0.6571	1094.1	1113.4	1109.9	0.975	2.222	80.671	15.154	0.936	0.017	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.45	
25	0.6550	1091.5	1110.8	1107.3	0.995	2.147	81.066	14.885	0.867	0.016	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.47	
26	0.6528	1090.7	1110.0	1106.6	0.959	2.050	81.538	14.496	0.912	0.018	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.69	
27	0.6532	1092.0	1111.4	1108.0	0.950	2.016	81.497	14.549	0.939	0.020	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1371.99	
28	0.6523	1090.0	1109.3	1106.0	0.953	2.054	81.597	14.478	0.877	0.016	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.31	
29	0.6540	1091.1	1110.4	1107.0	0.948	2.152	81.247	14.714	0.900	0.016	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.96	
30	0.6568	1092.9	1112.3	1109.1	0.965	2.277	80.666	15.160	0.899	0.013	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.35	
31	0.6591	1095.5	1114.9	1111.6	0.961	2.346	80.163	15.610	0.888	0.013	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.14	
Avg	0.6504	1085.0	1103.8	1100.3	0.952	2.207	81.868	14.142	0.797	0.013	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1365.49	

Zone 31

Source Daily Summary

August 2020

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	0.6756	1112.8	1132.5	1128.8	0.922	2.898	78.191	15.798	1.933	0.083	0.151	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1374.54	
2	0.6706	1106.2	1125.8	1122.2	0.925	2.825	78.928	15.401	1.689	0.075	0.136	0.010	0.010	0.000	0.000	0.000	0.000	0.000	1371.53	
3	0.6708	1110.4	1130.1	1126.4	1.031	2.433	78.680	16.241	1.439	0.057	0.103	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1376.47	
4	0.6655	1103.4	1122.9	1119.4	1.018	2.380	79.295	16.087	1.112	0.036	0.064	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1373.31	
5	0.6677	1106.6	1126.2	1122.6	1.045	2.349	78.955	16.379	1.147	0.041	0.073	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1375.03	
6	0.6598	1092.3	1111.7	1108.1	0.843	2.784	80.354	14.692	1.200	0.041	0.076	0.005	0.006	0.000	0.000	0.000	0.000	0.000	1365.38	
7	0.6603	1090.5	1109.8	1106.3	0.762	3.065	80.402	14.209	1.394	0.053	0.100	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1362.56	
8	0.6605	1091.4	1110.7	1107.1	0.808	2.964	80.437	14.226	1.387	0.057	0.105	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1363.38	
9	0.6589	1089.2	1108.5	1104.9	0.811	2.937	80.780	13.908	1.382	0.058	0.107	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1362.38	
10	0.6638	1096.2	1115.6	1112.0	0.849	2.915	79.889	14.713	1.444	0.060	0.112	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1366.05	
11	0.6627	1095.0	1114.4	1110.8	0.838	2.893	80.049	14.650	1.393	0.057	0.105	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1365.80	
12	0.6631	1096.3	1115.7	1112.1	0.832	2.866	79.961	14.765	1.400	0.056	0.104	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1366.92	
13	0.6645	1098.3	1117.8	1114.1	0.851	2.848	79.853	14.733	1.514	0.063	0.120	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1367.95	
14	0.6635	1096.4	1115.8	1112.2	0.816	2.921	79.930	14.681	1.479	0.056	0.102	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1366.65	
15	0.6667	1100.6	1120.1	1116.4	0.824	2.953	79.379	15.094	1.574	0.057	0.104	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1368.61	
16	0.6662	1100.3	1119.8	1116.2	0.820	2.928	79.465	15.049	1.565	0.056	0.102	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1368.76	
17	0.6695	1105.4	1125.0	1121.3	0.858	2.871	79.009	15.376	1.693	0.061	0.114	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1371.68	
18	0.6693	1106.0	1125.6	1121.8	0.870	2.801	79.033	15.426	1.686	0.060	0.109	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1372.62	
19	0.6686	1104.6	1124.2	1120.4	0.834	2.875	79.092	15.354	1.676	0.056	0.100	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1371.60	
20	0.6690	1104.8	1124.4	1120.6	0.813	2.933	79.061	15.273	1.747	0.057	0.102	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1371.42	
21	0.6685	1103.0	1122.5	1118.7	0.787	3.040	79.055	15.259	1.685	0.058	0.102	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1369.62	
22	0.6688	1103.5	1123.1	1119.2	0.760	3.071	78.928	15.416	1.659	0.056	0.097	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1370.05	
23	0.6697	1104.4	1123.9	1120.2	0.772	3.082	78.809	15.474	1.686	0.058	0.104	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1370.22	
24	0.6670	1100.7	1120.2	1116.5	0.722	3.130	79.137	15.284	1.577	0.050	0.088	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1368.44	
25	0.6692	1104.3	1123.8	1120.1	0.813	2.979	78.942	15.434	1.649	0.059	0.108	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1370.63	
26	0.6670	1102.1	1121.7	1118.0	0.753	2.991	79.226	15.278	1.593	0.053	0.093	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1370.28	
27	0.6681	1104.1	1123.6	1120.0	0.767	2.961	79.043	15.439	1.633	0.052	0.092	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1371.50	
28	0.6672	1100.3	1119.8	1116.2	0.760	3.116	79.233	15.094	1.614	0.059	0.108	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1367.73	
29	0.6621	1092.0	1111.3	1107.7	0.711	3.218	80.134	14.212	1.549	0.056	0.105	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1362.60	
30	0.6627	1092.8	1112.1	1108.4	0.734	3.195	80.064	14.259	1.568	0.058	0.107	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1362.91	
31	0.6720	1106.3	1125.9	1122.1	0.833	3.083	78.694	15.295	1.869	0.072	0.134	0.010	0.011	0.000	0.000	0.000	0.000	0.000	1370.30	
Avg	0.6664	1101.0	1120.1	1116.5	0.832	2.913	79.420	15.113	1.546	0.057	0.104	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1368.93	

Zone 32

Source Daily Summary

August 2020

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	0.6932	1161.7	1182.2	1177.8	0.000	2.994	72.152	23.914	0.919	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.64	-22.02
2	0.6932	1161.7	1182.3	1178.2	0.000	2.993	72.120	23.973	0.892	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.67	-22.09
3	0.6927	1160.7	1181.2	1176.9	0.000	3.004	72.225	23.863	0.886	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.99	-22.41
4	0.6936	1161.5	1182.0	1177.6	0.000	3.038	72.078	23.939	0.922	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.05	-21.92
5	0.6931	1160.8	1181.3	1176.9	0.000	3.038	72.173	23.842	0.924	0.009	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.67	-22.13
6	0.6946	1163.7	1184.3	1179.7	0.000	2.993	72.005	23.944	1.034	0.010	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.76	-20.94
7	0.6943	1163.7	1184.3	1179.9	0.000	2.970	72.079	23.870	1.057	0.010	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.02	-20.94
8	0.6934	1162.0	1182.6	1178.1	0.000	2.990	72.175	23.836	0.975	0.010	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.85	-21.70
9	0.6928	1160.8	1181.3	1176.9	0.000	3.012	72.214	23.848	0.903	0.009	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.94	-22.28
10	0.6932	1161.3	1181.8	1177.5	0.000	3.018	72.187	23.817	0.954	0.009	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.14	-21.93
11	0.6930	1158.4	1178.9	1178.4	0.000	2.942	72.437	23.450	1.151	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.40	-21.60
12	0.6905	1158.3	1178.8	1174.3	0.000	2.941	72.626	23.583	0.831	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.34	-23.59
13	0.6906	1157.8	1178.3	1173.8	0.000	2.979	72.584	23.607	0.811	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.67	-23.70
14	0.6913	1158.9	1179.4	1175.1	0.000	2.986	72.484	23.644	0.864	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.16	-23.13
15	0.6912	1158.7	1179.2	1175.0	0.000	2.978	72.579	23.500	0.922	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.18	-22.99
16	0.6915	1159.6	1180.2	1175.7	0.000	2.954	72.554	23.514	0.955	0.009	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.92	-22.64
17	0.6922	1160.5	1181.1	1176.6	0.000	2.967	72.477	23.504	1.028	0.010	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.28	-22.06
18	0.6902	1156.8	1177.3	1172.7	0.000	3.003	72.694	23.435	0.849	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.86	-23.80
19	0.6907	1157.8	1178.3	1173.8	0.000	2.992	72.588	23.554	0.848	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.51	-23.55
20	0.6900	1157.5	1178.0	1173.6	0.000	2.946	72.717	23.487	0.830	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.85	-23.83
21	0.6895	1156.8	1177.2	1172.9	0.000	2.947	72.768	23.482	0.784	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.42	-24.24
22	0.6901	1157.5	1178.0	1173.7	0.000	2.951	72.691	23.522	0.816	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.80	-23.86
23	0.6894	1156.3	1176.8	1172.5	0.000	2.968	72.757	23.498	0.758	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.93	-24.43
24	0.6892	1156.0	1176.4	1171.8	0.000	2.965	72.823	23.418	0.775	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.78	-24.48
25	0.6896	1156.7	1177.1	1172.8	0.000	2.958	72.774	23.449	0.801	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.25	-24.18
26	0.6891	1156.0	1176.4	1172.1	0.000	2.954	72.856	23.388	0.783	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.90	-24.47
27	0.6889	1155.1	1175.6	1171.0	0.000	2.989	72.859	23.373	0.760	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.06	-24.73
28	0.6897	1156.0	1176.5	1172.2	0.000	3.009	72.708	23.498	0.767	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.33	-24.36
29	0.6890	1155.2	1175.7	1171.4	0.000	2.992	72.841	23.388	0.759	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.07	-24.69
30	0.6882	1154.0	1174.5	1170.1	0.000	2.988	72.941	23.362	0.692	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.45	-25.35
31	0.6876	1154.3	1174.7	1170.1	0.000	2.918	73.114	23.216	0.734	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.35	-25.35
Avg	0.6912	1159.0	1179.1	1174.8	0.000	2.980	72.525	23.604	0.870	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.14	-23.21

Zone 33

Source Daily Summary

August 2020

Number: 621 **Pressure Base:** 14.730 **Contract Day:** 1

Name: BEAR DEN 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	0.6786	1113.5	1133.2	1130.2	1.033	2.973	76.295	18.627	1.059	0.007	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1372.54	-32.11
2	0.6777	1111.8	1131.5	1128.5	1.035	2.993	76.445	18.473	1.041	0.007	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1371.32	-32.69
3	0.6771	1110.5	1130.2	1127.2	1.034	3.015	76.555	18.355	1.027	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.34	-33.14
4	0.6770	1110.4	1130.1	1127.1	1.035	3.017	76.554	18.366	1.016	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.25	-33.22
5	0.6776	1111.6	1131.2	1128.2	1.037	2.994	76.419	18.550	0.988	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1371.13	-33.01
6	0.6778	1112.2	1131.9	1128.8	1.038	2.979	76.364	18.625	0.982	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1371.63	-32.87
7	0.6777	1112.1	1131.8	1128.8	1.038	2.970	76.376	18.635	0.970	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1371.72	-32.96
8	0.6777	1112.3	1132.0	1129.0	1.040	2.955	76.367	18.667	0.960	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1371.96	-32.98
9	0.6778	1112.7	1132.4	1129.5	1.038	2.947	76.347	18.695	0.962	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1372.25	-32.90
10	0.6782	1113.4	1133.2	1130.2	1.038	2.938	76.275	18.768	0.971	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1372.82	-32.63
11	0.6784	1113.8	1133.6	1130.6	1.037	2.935	76.238	18.803	0.977	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1373.08	-32.49
12	0.6786	1114.1	1133.9	1130.8	1.034	2.936	76.216	18.815	0.989	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1373.29	-32.35
13	0.6788	1114.5	1134.2	1131.3	1.034	2.929	76.191	18.838	0.998	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1373.59	-32.21
14	0.6794	1115.7	1135.4	1132.5	1.034	2.913	76.098	18.923	1.022	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1374.43	-31.74
15	0.6800	1116.8	1136.6	1133.6	1.034	2.904	76.006	18.989	1.054	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1375.16	-31.24
16	0.6805	1117.7	1137.5	1134.5	1.036	2.891	75.929	19.058	1.073	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1375.82	-30.86
17	0.6809	1118.5	1138.3	1135.1	1.035	2.883	75.873	19.104	1.092	0.006	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1376.33	-30.56
18	0.6813	1119.2	1139.0	1135.8	1.033	2.880	75.814	19.136	1.121	0.007	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1376.82	-30.18
19	0.6818	1120.1	1140.0	1136.7	1.030	2.879	75.752	19.157	1.165	0.008	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1377.40	-29.68
20	0.6823	1120.9	1140.7	1137.5	1.027	2.877	75.709	19.158	1.210	0.009	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1377.92	-29.22
21	0.6825	1121.5	1141.3	1138.2	1.024	2.872	75.689	19.149	1.244	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1378.35	-28.89
22	0.6827	1121.8	1141.7	1138.5	1.022	2.866	75.677	19.152	1.260	0.011	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1378.66	-28.72
23	0.6827	1122.0	1141.8	1138.8	1.023	2.864	75.673	19.151	1.266	0.011	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1378.73	-28.65
24	0.6829	1122.3	1142.2	1139.1	1.024	2.859	75.641	19.182	1.271	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1378.98	-28.52
25	0.6830	1122.5	1142.4	1139.3	1.024	2.853	75.625	19.206	1.267	0.012	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1379.17	-28.45
26	0.6831	1122.8	1142.7	1139.7	1.024	2.849	75.620	19.198	1.280	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1379.34	-28.27
27	0.6831	1122.5	1142.4	1139.5	1.025	2.856	75.659	19.129	1.300	0.014	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1379.10	-28.23
28	0.6828	1121.9	1141.7	1138.8	1.026	2.870	75.737	19.009	1.328	0.014	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1378.57	-28.28
29	0.6829	1121.8	1141.7	1138.7	1.027	2.877	75.742	18.977	1.347	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1378.43	-28.21
30	0.6826	1121.2	1141.1	1138.2	1.027	2.891	75.839	18.820	1.395	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1377.94	-28.18
31	0.6827	1121.3	1141.2	1138.3	1.027	2.890	75.823	18.834	1.398	0.013	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1378.01	-28.16
Avg	0.6803	1117.0	1137.0	1134.0	1.031	2.915	76.018	18.889	1.130	0.008	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1375.32	-30.70

Gas Composition and Properties

Effective August 1, 2020

Source #: 2702230
Name: WATFORD CITY EAST BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.0691		2.4076
Nitrogen, N2	2.4867		3.5645
Methane, C1	75.9820		62.3729
Ethane, C2	20.2260	5.4111	31.1202
Propane, C3	0.2337	0.0644	0.5273
iso-Butane, iC4	0.0009	0.0003	0.0027
n-Butane, nC4	0.0016	0.0005	0.0048
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	5.4760	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-107.007	
Cricondentherm	-35.615	
HV, Dry @ Base P, T	1137.23	
HV, Sat @ Base P, T	1117.44	
HV, Sat @ Sample P, T	1137.23	
Relative Density	0.6765	

C6+: 100

Sample

Date: 08/01/2020
Type:
Tech: Joshua Tipton
Pressure: 100.0
Temperature:
H2O: lbs/mm
H2S: ppm

Remarks:

Analysis

Date: 08/01/2020
Tech: Joshua Tipton
Instrument:
Cylinder: BC18

Remarks:

Zone 43

August-20

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**	
8/1/2020	8/2/2020				680	812	1.1933	1.193	8/1/2020
8/2/2020	8/3/2020				719	862	1.1991	1.199	8/2/2020
8/3/2020	8/4/2020				757	902	1.1909	1.191	8/3/2020
8/4/2020	8/5/2020				810	966	1.1923	1.192	8/4/2020
8/5/2020	8/6/2020				812	974	1.2006	1.201	8/5/2020
8/6/2020	8/7/2020				712	852	1.1979	1.198	8/6/2020
8/7/2020	8/8/2020				715	851	1.1909	1.191	8/7/2020
8/8/2020	8/9/2020				633	754	1.1893	1.189	8/8/2020
8/9/2020	8/10/2020				741	886	1.1940	1.194	8/9/2020
8/10/2020	8/11/2020				872	1036	1.1881	1.188	8/10/2020
8/11/2020	8/12/2020				828	991	1.1968	1.197	8/11/2020
8/12/2020	8/13/2020				829	985	1.1877	1.188	8/12/2020
8/13/2020	8/14/2020				842	1006	1.1948	1.195	8/13/2020
8/14/2020	8/15/2020				937	1114	1.1894	1.189	8/14/2020
8/15/2020	8/16/2020				742	887	1.1956	1.196	8/15/2020
8/16/2020	8/17/2020				877	1049	1.1963	1.196	8/16/2020
8/17/2020	8/18/2020	1932	2136	1.1055	824	986	1.1957	1.132	8/17/2020
8/18/2020	8/19/2020	5290	5831	1.1018	771	929	1.2033	1.115	8/18/2020
8/19/2020	8/20/2020				809	977	1.2079	1.208	8/19/2020
8/20/2020	8/21/2020				922	1110	1.2045	1.205	8/20/2020
8/21/2020	8/22/2020				703	851	1.2101	1.210	8/21/2020
8/22/2020	8/23/2020				728	872	1.1965	1.197	8/22/2020
8/23/2020	8/24/2020				694	828	1.1919	1.192	8/23/2020
8/24/2020	8/25/2020				840	998	1.1877	1.188	8/24/2020
8/25/2020	8/26/2020				753	901	1.1971	1.197	8/25/2020
8/26/2020	8/27/2020				810	968	1.1937	1.194	8/26/2020
8/27/2020	8/28/2020				926	1100	1.1874	1.187	8/27/2020
8/28/2020	8/29/2020				844	1005	1.1912	1.191	8/28/2020
8/29/2020	8/30/2020				890	1060	1.1918	1.192	8/29/2020
8/30/2020	8/31/2020				855	1019	1.1906	1.191	8/30/2020
8/31/2020	9/1/2020				991	1182	1.1928	1.193	8/31/2020
		7,222	7,967	1.1037	24,866	29,713	1.1948	1.1899	

Alliance Pipeline

DAILY ANALYSIS --- USA
ND07MD1 --- Hankinson Sales
August 2020

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	1,160.572	0.6665	83.8694	9.4070	4.0501	0.3759	0.6381	0.0653	0.0516	0.0263	1.0820	0.4229	0.0115
2	1,160.514	0.6664	83.8794	9.3802	4.0638	0.3759	0.6385	0.0653	0.0514	0.0255	1.0953	0.4134	0.0112
3	1,160.367	0.6662	83.9253	9.3546	4.0528	0.3744	0.6416	0.0658	0.0507	0.0271	1.0771	0.4194	0.0111
4	1,160.398	0.6660	83.9504	9.3635	4.0436	0.3708	0.6370	0.0672	0.0516	0.0277	1.0650	0.4123	0.0109
5	1,161.917	0.6670	83.8238	9.4448	4.0682	0.3771	0.6516	0.0676	0.0527	0.0272	1.0523	0.4236	0.0110
6	1,163.665	0.6678	83.7150	9.6161	3.9874	0.3911	0.6895	0.0684	0.0533	0.0289	1.0122	0.4271	0.0109
7	1,163.451	0.6683	83.6558	9.5580	4.0199	0.3950	0.7098	0.0670	0.0519	0.0272	1.0757	0.4290	0.0108
8	1,163.992	0.6685	83.6133	9.6376	4.0065	0.3964	0.7073	0.0662	0.0514	0.0268	1.0503	0.4332	0.0110
9	1,163.233	0.6682	83.6374	9.6347	3.9743	0.3905	0.7063	0.0656	0.0518	0.0289	1.0670	0.4321	0.0114
10	1,165.060	0.6693	83.4884	9.7059	4.0376	0.3978	0.7164	0.0665	0.0517	0.0258	1.0705	0.4286	0.0107
11	1,163.240	0.6681	83.6583	9.5967	3.9968	0.3899	0.7069	0.0671	0.0517	0.0257	1.0696	0.4265	0.0108
12	1,161.498	0.6671	83.8145	9.4532	3.9787	0.3908	0.6976	0.0665	0.0510	0.0262	1.0882	0.4227	0.0107
13	1,161.560	0.6671	83.8499	9.4096	3.9840	0.3907	0.7071	0.0652	0.0512	0.0279	1.0812	0.4225	0.0108
14	1,159.887	0.6660	83.9769	9.3615	3.9319	0.3878	0.6948	0.0622	0.0492	0.0263	1.0678	0.4310	0.0107
15	1,160.985	0.6668	83.8542	9.4460	3.9593	0.3889	0.6991	0.0613	0.0491	0.0263	1.0736	0.4316	0.0107
16	1,162.117	0.6677	83.7441	9.4664	4.0126	0.3948	0.7138	0.0610	0.0480	0.0244	1.0886	0.4356	0.0107
17	1,161.334	0.6671	83.7893	9.5142	3.9471	0.3928	0.6988	0.0621	0.0499	0.0246	1.0755	0.4349	0.0109
18	1,160.602	0.6667	83.8507	9.4714	3.9210	0.3908	0.7008	0.0631	0.0506	0.0246	1.0758	0.4403	0.0109
19	1,158.289	0.6646	84.0828	9.4664	3.7752	0.3835	0.6861	0.0612	0.0490	0.0244	1.0283	0.4323	0.0108
20	1,157.066	0.6639	84.2016	9.3451	3.7635	0.3844	0.6764	0.0635	0.0514	0.0271	1.0530	0.4234	0.0105
21	1,157.127	0.6640	84.2619	9.2738	3.7589	0.3882	0.6982	0.0638	0.0509	0.0272	1.0230	0.4435	0.0107
22	1,157.288	0.6646	84.1272	9.3587	3.7606	0.3899	0.6991	0.0631	0.0500	0.0261	1.0699	0.4447	0.0106
23	1,159.496	0.6657	83.9968	9.4554	3.7925	0.3961	0.7176	0.0650	0.0521	0.0265	1.0422	0.4451	0.0106
24	1,156.893	0.6639	84.2637	9.2769	3.7282	0.3929	0.7031	0.0663	0.0530	0.0266	1.0375	0.4411	0.0107
25	1,156.298	0.6629	84.4700	9.1770	3.7166	0.3907	0.6818	0.0686	0.0541	0.0270	0.9387	0.4645	0.0110
26	1,159.693	0.6660	84.0454	9.3425	3.8032	0.4082	0.7289	0.0742	0.0592	0.0269	1.0479	0.4531	0.0104
27	1,157.795	0.6651	84.1038	9.3356	3.7448	0.3986	0.7236	0.0681	0.0545	0.0278	1.0955	0.4375	0.0101
28	1,158.266	0.6649	84.0994	9.4388	3.6874	0.3978	0.7182	0.0718	0.0566	0.0299	1.0578	0.4315	0.0107
29	1,156.134	0.6632	84.2535	9.4410	3.5980	0.3851	0.6954	0.0679	0.0549	0.0286	1.0327	0.4325	0.0106
30	1,151.595	0.6617	84.4113	9.2849	3.5131	0.3706	0.6804	0.0654	0.0522	0.0283	1.1288	0.4542	0.0109
31	1,151.287	0.6615	84.4629	9.2534	3.4804	0.3693	0.6804	0.0688	0.0559	0.0348	1.1312	0.4516	0.0113
Volume Weight Avg	**1,159.718**	**0.6659**	**83.9649**	**9.4278**	**3.8753**	**0.3879**	**0.6917**	**0.0659**	**0.0520**	**0.0271**	**1.0629**	**0.4336**	**0.0108**
Energy	**1,159.726**	**0.6659**	**83.9642**	**9.4281**	**3.8758**	**0.3879**	**0.6917**	**0.0659**	**0.0520**	**0.0271**	**1.0629**	**0.4336**	**0.0108**

Zone 600

Alliance Pipeline

DAILY ANALYSIS --- USA
ND14MD1 --- Milnor Sales
August 2020

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	1,161.043	0.6666	83.8452	9.4572	4.0435	0.3781	0.6363	0.0652	0.0516	0.0259	1.0726	0.4128	0.0117
2	1,159.665	0.6659	83.9817	9.3058	4.0516	0.3741	0.6306	0.0657	0.0515	0.0266	1.0841	0.4173	0.0111
3	1,160.387	0.6663	83.9245	9.3507	4.0499	0.3749	0.6455	0.0661	0.0508	0.0274	1.0775	0.4218	0.0110
4	1,160.347	0.6660	83.9574	9.3579	4.0458	0.3699	0.6348	0.0674	0.0519	0.0279	1.0637	0.4125	0.0109
5	1,162.290	0.6672	83.8008	9.4740	4.0559	0.3801	0.6606	0.0678	0.0527	0.0273	1.0477	0.4223	0.0110
6	1,163.992	0.6681	83.6660	9.6480	3.9921	0.3921	0.6928	0.0685	0.0534	0.0287	1.0205	0.4271	0.0108
7	1,163.150	0.6682	83.6902	9.5289	4.0171	0.3955	0.7088	0.0665	0.0515	0.0270	1.0719	0.4317	0.0108
8	1,163.863	0.6684	83.6316	9.6397	3.9961	0.3966	0.7053	0.0660	0.0513	0.0265	1.0460	0.4300	0.0109
9	1,166.467	0.6708	83.3195	9.7546	4.0990	0.3998	0.7290	0.0681	0.0532	0.0277	1.0807	0.4575	0.0108
10	1,164.289	0.6688	83.5603	9.6634	4.0155	0.3959	0.7128	0.0666	0.0518	0.0257	1.0696	0.4277	0.0107
11	1,163.181	0.6682	83.6681	9.5781	4.0010	0.3904	0.7070	0.0678	0.0520	0.0259	1.0716	0.4273	0.0108
12	1,161.041	0.6669	83.8641	9.4147	3.9736	0.3897	0.6955	0.0658	0.0507	0.0262	1.0889	0.4202	0.0106
13	1,162.933	0.6681	83.7309	9.4640	4.0285	0.3938	0.7134	0.0670	0.0525	0.0289	1.0827	0.4276	0.0108
14	1,160.663	0.6668	83.8823	9.3988	3.9644	0.3892	0.6977	0.0631	0.0501	0.0268	1.0815	0.4353	0.0107
15	1,161.060	0.6667	83.8748	9.4343	3.9594	0.3898	0.7034	0.0599	0.0481	0.0262	1.0705	0.4229	0.0106
16	1,161.911	0.6675	83.7776	9.4620	3.9992	0.3944	0.7105	0.0608	0.0484	0.0242	1.0736	0.4386	0.0108
17	1,161.026	0.6671	83.7961	9.5054	3.9397	0.3929	0.6971	0.0624	0.0501	0.0246	1.0844	0.4364	0.0109
18	1,160.237	0.6664	83.8989	9.4571	3.9017	0.3895	0.6988	0.0631	0.0507	0.0246	1.0674	0.4374	0.0108
19	1,158.483	0.6648	84.0472	9.5025	3.7683	0.3840	0.6866	0.0617	0.0494	0.0247	1.0312	0.4336	0.0108
20	1,156.847	0.6639	84.2346	9.2912	3.7757	0.3852	0.6789	0.0633	0.0513	0.0272	1.0558	0.4263	0.0106
21	1,157.362	0.6642	84.2371	9.2922	3.7596	0.3891	0.7020	0.0639	0.0508	0.0269	1.0250	0.4428	0.0106
22	1,154.868	0.6627	84.3949	9.2209	3.6933	0.3811	0.6805	0.0622	0.0496	0.0259	1.0499	0.4310	0.0107
23	1,160.515	0.6667	83.9208	9.4148	3.8507	0.4037	0.7401	0.0664	0.0527	0.0258	1.0632	0.4510	0.0107
24	1,156.210	0.6634	84.3399	9.2468	3.7049	0.3902	0.6956	0.0661	0.0530	0.0269	1.0214	0.4444	0.0107
25	1,155.820	0.6627	84.5052	9.1460	3.7065	0.3903	0.6815	0.0688	0.0541	0.0268	0.9471	0.4626	0.0110
26	1,160.767	0.6669	83.9227	9.4046	3.8306	0.4116	0.7393	0.0747	0.0599	0.0274	1.0722	0.4468	0.0103
27	1,159.763	0.6667	84.1523	9.3290	3.7184	0.3947	0.7167	0.0669	0.0533	0.0274	1.0896	0.4415	0.0102
28	1,159.763	0.6667	84.1219	9.4615	3.6664	0.3975	0.7148	0.0722	0.0571	0.0306	1.0437	0.4235	0.0108
29	1,159.763	0.6667	84.3241	9.3861	3.5897	0.3847	0.6946	0.0664	0.0535	0.0289	1.0352	0.4262	0.0106
30	1,159.763	0.6667	84.1167	9.4198	3.6075	0.3789	0.6960	0.0669	0.0522	0.0276	1.1661	0.4576	0.0106
31	1,159.763	0.6667	84.4516	9.2130	3.5001	0.3740	0.6892	0.0721	0.0594	0.0377	1.1315	0.4600	0.0114
Volume	**1,160.504**	**0.6665**	**83.9634**	**9.4226**	**3.8766**	**0.3889**	**0.6941**	**0.0664**	**0.0524**	**0.0273**	**1.0631**	**0.4344**	**0.0108**
Weight Avg													
Energy	**1,160.514**	**0.6665**	**83.9624**	**9.4227**	**3.8769**	**0.3889**	**0.6942**	**0.0664**	**0.0524**	**0.0273**	**1.0634**	**0.4345**	**0.0108**

Zone 601

August-20

ZONE 610

Watford City

		Watford City West Border			Watford City East Border			**Weighted**	
Start Date	End Date	MCF	DK	BTU Zone 25	MCF	DK	BTU Zone 43	**AVG BTU**	
8/1/2020	8/2/2020	44	53	1.1911	49	56	1.1372	1.163	8/1/2020
8/2/2020	8/3/2020	48	58	1.1911	53	60	1.1372	1.163	8/2/2020
8/3/2020	8/4/2020	59	70	1.1911	63	72	1.1372	1.163	8/3/2020
8/4/2020	8/5/2020	56	67	1.1911	65	74	1.1372	1.162	8/4/2020
8/5/2020	8/6/2020	58	69	1.1911	59	67	1.1372	1.164	8/5/2020
8/6/2020	8/7/2020	29	35	1.1911	51	58	1.1372	1.157	8/6/2020
8/7/2020	8/8/2020	23	28	1.1911	45	51	1.1372	1.155	8/7/2020
8/8/2020	8/9/2020	31	37	1.1911	52	60	1.1372	1.157	8/8/2020
8/9/2020	8/10/2020	74	88	1.1911	58	65	1.1372	1.167	8/9/2020
8/10/2020	8/11/2020	54	65	1.1911	54	62	1.1372	1.164	8/10/2020
8/11/2020	8/12/2020	61	72	1.1911	48	54	1.1372	1.167	8/11/2020
8/12/2020	8/13/2020	53	63	1.1911	51	57	1.1372	1.165	8/12/2020
8/13/2020	8/14/2020	67	79	1.1911	55	63	1.1372	1.167	8/13/2020
8/14/2020	8/15/2020	57	68	1.1911	57	64	1.1372	1.164	8/14/2020
8/15/2020	8/16/2020	65	77	1.1911	57	65	1.1372	1.166	8/15/2020
8/16/2020	8/17/2020	62	74	1.1911	60	68	1.1372	1.165	8/16/2020
8/17/2020	8/18/2020	56	67	1.1911	57	65	1.1372	1.164	8/17/2020
8/18/2020	8/19/2020	54	64	1.1911	53	60	1.1372	1.164	8/18/2020
8/19/2020	8/20/2020	40	47	1.1911	46	52	1.1372	1.162	8/19/2020
8/20/2020	8/21/2020	51	61	1.1911	43	49	1.1372	1.166	8/20/2020
8/21/2020	8/22/2020	38	46	1.1911	41	47	1.1372	1.163	8/21/2020
8/22/2020	8/23/2020	30	35	1.1911	34	38	1.1372	1.162	8/22/2020
8/23/2020	8/24/2020	58	69	1.1911	54	62	1.1372	1.165	8/23/2020
8/24/2020	8/25/2020	19	23	1.1911	44	50	1.1372	1.153	8/24/2020
8/25/2020	8/26/2020	47	56	1.1911	50	57	1.1372	1.163	8/25/2020
8/26/2020	8/27/2020	53	63	1.1911	55	62	1.1372	1.164	8/26/2020
8/27/2020	8/28/2020	46	54	1.1911	62	71	1.1372	1.160	8/27/2020
8/28/2020	8/29/2020	63	75	1.1911	63	71	1.1372	1.164	8/28/2020
8/29/2020	8/30/2020	37	44	1.1911	40	46	1.1372	1.163	8/29/2020
8/30/2020	8/31/2020	85	101	1.1911	71	81	1.1372	1.167	8/30/2020
8/31/2020	9/1/2020	76	91	1.1911	70	79	1.1372	1.165	8/31/2020
		1,594	1,899	1.1911	1,660	1,886	1.1372	1.1631	

ROW ID	LOCATION DESCRIPTION	GROSS HEATING VALUE (BTU/CF)	SPECIFIC GRAVITY	WOBBE (calc)	CRICONDENTHERM (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	1093.8	0.644	1363	-50.9	2.163	0.9784	82.7603	13.1718	0.7219	0.015	0.0097	0	0	N/A	0	0.1589	0.0213	7/31/2020	8/1/2020	8/1/2020 4:09:40 PM	
11587	GLEN ULLIN	1097.7	0.6475	1364.2	-48.3	2.242	0.9913	82.0065	13.722	0.7733	0.0192	0.0115	0.0003	0.0004	N/A	0	0.2126	0.021	8/1/2020	8/2/2020	8/2/2020 4:08:25 PM	
11587	GLEN ULLIN	1099.8	0.6493	1364.8	-47.1	2.2984	0.9849	81.6702	13.9721	0.8123	0.0205	0.0124	0	0	N/A	0	0.2079	0.0214	8/2/2020	8/3/2020	8/3/2020 4:08:43 PM	
11587	GLEN ULLIN	1095.6	0.647	1362.1	-49	2.3207	0.9936	82.0265	13.6467	0.7382	0.0183	0.0111	0.0001	0.0001	N/A	0	0.2237	0.0212	8/3/2020	8/4/2020	8/4/2020 4:33:02 PM	
11587	GLEN ULLIN	1095.8	0.6466	1362.7	-49.6	2.2908	0.9816	82.0417	13.7455	0.6708	0.0172	0.0104	0	0	N/A	0	0.2208	0.0213	8/4/2020	8/5/2020	8/5/2020 4:02:55 PM	
11587	GLEN ULLIN	1095.3	0.6453	1363.5	-50.4	2.2043	0.9719	82.3567	13.5676	0.6626	0.0133	0.0083	0.0001	0	N/A	0	0.1941	0.0212	8/5/2020	8/6/2020	8/6/2020 4:41:33 PM	
11587	GLEN ULLIN	1088.7	0.6402	1360.7	-53.8	2.1385	0.9594	83.3232	12.7471	0.5906	0.0149	0.0091	0.0001	0	N/A	0	0.1964	0.0209	8/6/2020	8/7/2020	8/7/2020 4:32:07 PM	
11587	GLEN ULLIN	1089.6	0.6421	1359.8	-52.7	2.2788	0.9556	82.7694	13.0849	0.6037	0.0132	0.0083	0	0	N/A	0	0.2648	0.0214	8/7/2020	8/8/2020	8/8/2020 4:13:42 PM	
11587	GLEN ULLIN	1091.6	0.6435	1360.8	-51.8	2.2947	0.9481	82.5766	13.2867	0.6196	0.0145	0.0088	0.0001	0.0002	N/A	0	0.2288	0.0219	8/8/2020	8/9/2020	8/9/2020 4:17:48 PM	
11587	GLEN ULLIN	1094.1	0.6453	1362	-50.7	2.2907	0.9681	82.2646	13.5909	0.6309	0.0145	0.0089	0	0	N/A	0	0.2096	0.0219	8/9/2020	8/10/2020	8/10/2020 4:15:46 PM	
11587	GLEN ULLIN	1097.3	0.6473	1363.9	-49	2.2427	0.992	82.0336	13.7896	0.7053	0.0182	0.0107	0.0003	0.0002	N/A	0	0.1856	0.0218	8/10/2020	8/11/2020	8/11/2020 4:19:42 PM	
11587	GLEN ULLIN	1097.3	0.6471	1364.1	-48.7	2.2058	1.0058	82.1496	13.6577	0.7502	0.0199	0.0121	0.0001	0.0001	N/A	0	0.1772	0.0216	8/11/2020	8/12/2020	8/12/2020 4:27:49 PM	
11587	GLEN ULLIN	1100.5	0.6487	1366.4	-47.2	2.1951	0.9898	81.8111	13.9298	0.8104	0.0221	0.0134	0.0002	0.0001	N/A	0	0.2062	0.0219	8/12/2020	8/13/2020	8/13/2020 4:21:25 PM	
11587	GLEN ULLIN	1102.3	0.6505	1366.7	-46.1	2.2527	0.9886	81.413	14.2218	0.837	0.0208	0.0126	0.0001	0.0001	N/A	0	0.2314	0.022	8/13/2020	8/14/2020	8/14/2020 4:41:26 PM	
11587	GLEN ULLIN	1097.6	0.6465	1365.1	-49.1	2.1506	0.9923	82.2814	13.6042	0.7537	0.0159	0.0103	0	0	N/A	0	0.1702	0.0216	8/14/2020	8/15/2020	8/15/2020 4:17:06 PM	
11587	GLEN ULLIN	1099.1	0.6479	1365.5	-47.8	2.2046	0.987	81.9481	13.7924	0.8057	0.0185	0.0118	0.0001	0.0001	N/A	0	0.2103	0.0215	8/15/2020	8/16/2020	8/16/2020 4:41:40 PM	
11587	GLEN ULLIN	1099.2	0.6482	1365.2	-47.3	2.2346	0.9808	81.9981	13.6534	0.8782	0.0222	0.0143	0	0	N/A	0	0.1965	0.0219	8/16/2020	8/17/2020	8/17/2020 4:25:39 PM	
11587	GLEN ULLIN	1103.1	0.6505	1367.8	-45.6	2.1875	0.9975	81.7112	13.9768	0.9219	0.0257	0.0157	0.0003	0.0003	N/A	0	0.1416	0.0216	8/17/2020	8/18/2020	8/18/2020 4:26:11 PM	
11587	GLEN ULLIN	1102.5	0.65	1367.5	-45	2.1823	0.9926	81.9289	13.6164	1.0546	0.0283	0.0193	0.0003	0.0004	N/A	0	0.1554	0.0216	8/18/2020	8/19/2020	8/19/2020 4:39:04 PM	
11587	GLEN ULLIN	1106.3	0.6527	1369.3	-43.3	2.197	1.0013	81.4786	14.0229	1.0961	0.0294	0.0204	0.0002	0.0003	N/A	0	0.1326	0.0212	8/19/2020	8/20/2020	8/20/2020 4:43:52 PM	
11587	GLEN ULLIN	1105.3	0.6522	1368.6	-44.5	2.2059	1.0083	81.3768	14.2314	0.9628	0.023	0.0159	0	0	N/A	0	0.1548	0.0212	8/20/2020	8/21/2020	8/21/2020 4:32:02 PM	
11587	GLEN ULLIN	1107.9	0.6537	1370.3	-43.9	2.1853	1.0121	81.0401	14.6572	0.9049	0.0226	0.0148	0	0.0001	N/A	0	0.1414	0.0216	8/21/2020	8/22/2020	8/22/2020 4:13:54 PM	
11587	GLEN ULLIN	1108	0.654	1370.1	-44.1	2.207	1.0065	80.989	14.7436	0.8799	0.0193	0.0132	0	0	N/A	0	0.12	0.0218	8/22/2020	8/23/2020	8/23/2020 4:21:27 PM	
11587	GLEN ULLIN	1112.1	0.6567	1372.4	-41.9	2.2249	1.0031	80.5745	15.0592	0.9785	0.0241	0.0161	0	0	N/A	0	0.0978	0.0219	8/23/2020	8/24/2020	8/24/2020 4:16:42 PM	
11587	GLEN ULLIN	1112	0.6565	1372.4	-42.1	2.209	1.0092	80.5962	15.0782	0.9481	0.0248	0.0165	0	0	N/A	0	0.0959	0.0223	8/24/2020	8/25/2020	8/25/2020 4:43:55 PM	
11587	GLEN ULLIN	1107.8	0.6522	1371.8	-44.4	2.0667	0.9959	81.479	14.3804	0.9201	0.026	0.0171	0	0.0002	N/A	0	0.0929	0.0218	8/25/2020	8/26/2020	8/26/2020 4:19:40 PM	
11587	GLEN ULLIN	1111	0.6534	1374.4	-43	2.0244	0.97	81.3003	14.5506	0.9872	0.0303	0.0196	0.0001	0.0002	N/A	0	0.0961	0.0214	8/26/2020	8/27/2020	8/27/2020 4:20:39 PM	
11587	GLEN ULLIN	1108.2	0.6519	1372.5	-44.4	2.0507	0.9772	81.4351	14.4399	0.9091	0.0249	0.0163	0	0.0001	N/A	0	0.1256	0.0211	8/27/2020	8/28/2020	8/28/2020 4:15:41 PM	
11587	GLEN ULLIN	1108.8	0.6527	1372.4	-43.9	2.1093	0.9662	81.2083	14.5714	0.9296	0.0234	0.0153	0.0001	0.0001	N/A	0	0.1548	0.0216	8/28/2020	8/29/2020	8/29/2020 4:18:21 PM	
11587	GLEN ULLIN	1109.3	0.6545	1371.2	-43.2	2.2267	0.9789	80.8097	14.82	0.9386	0.0206	0.0135	0	0	N/A	0	0.1706	0.0215	8/29/2020	8/30/2020	8/30/2020 4:16:06 PM	
11587	GLEN ULLIN	1110.9	0.6566	1371	-42.4	2.3154	0.9877	80.3562	15.1917	0.9269	0.0193	0.0128	0	0	N/A	0	0.1678	0.0223	8/30/2020	8/31/2020	8/31/2020 4:23:14 PM	
11587	GLEN ULLIN	1114.4	0.6587	1373.1	-40.9	2.3207	0.9783	79.9829	15.5346	0.97	0.0205	0.0132	0	0	N/A	0	0.1572	0.0227	8/31/2020	9/1/2020	9/1/2020 4:41:51 PM	

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	AUG 20	JULY 20	JUNE 20	MAY 20	APR 20	MAR 20	FEB 20	JAN 20	DEC 19	NOV 19	OCT 19	SEPT 19	ZONE
MT/ND	211		Sidney Border - MonDak Tfr - Sidney Plt	1200	1196	1191	1169	1174	1202	1211	1215	1207	1209	1198	1210	1218	211
ND	24		Williston Border - Charbonneau Station	1164	1157	1153	1163	1159	1155	1169	1171	1172	1173	1177	1160	1164	24
ND	25		Watford City West Border	1194	1191	1194	1161	1206	1188	1202	1204	1196	1192	1194	1199	1195	25
ND	28		Bismarck Station - Glen Ullin Station	1151	1195	1190	1186	1129	1149	1138	1126	1123	1128	1125	1137	1189	28
ND	31		Dickinson Brd - Belfield Trf - G Ullin Stn	1122	1104	1092	1085	1093	1150	1138	1126	1122	1128	1125	1137	1163	31
ND/MT	32		Cabin Creek Station - Belfied Transfer	1112	1120	1115	1109	1109	1133	1103	1096	1093	1074	1122	1134	1130	32
ND	33		Little Knife Plant	1176	1179	1183	1182	1179	1175	1173	1175	1174	1173	1172	1173	1174	33
ND	34		Badlands Plant/Bowman Border	1045	984	984	1036	1047	1048	1024	1073	1082	1110	1102	1054	1001	34
ND	43	1/	Watford City East Border	1147	1137	1142	1138	1151	1157	1152	1151	1154	1144	1151	1143	1144	43
ND/MT	241		Fairview Border	1189	1172	1153	1159	1164	1182	1195	1203	1209	1206	1202	1208	1210	241
ND	260		North Tioga Transfer - Nesson Plant	1117	1129	1116	1116	1099	1096	1132	1111	1089	1106	1146	1126	1136	260
ND	261		Tioga Comp Station - Robinson Lake Plan	1175	1172	1167	1177	1178	1179	1174	1173	1168	1166	1178	1174	1189	261
ND	262		Minot Bdr - Palermo Bdr - Bismarck Stn	1188	1195	1189	1192	1193	1190	1180	1180	1176	1184	1193	1195	1193	262
ND	263		Lignite Plant	1147	1147	1143	1149	1146	1146	1160	1143	1145	1149	1149	1146	1146	263
ND	264		Epping Border	1155	1147	1147	1153	1168	1147	1157	1165	1163	1162	1164	1144	1148	264
ND	265		Tioga Comp Station - County Line Plant	1171	1173	1168	1178	1158	1180	1174	1174	1168	1167	1168	1169	1176	265
ND	266		County Line Plant	1175	1194	1191	1194	1168	1193	1164	1161	1162	1165	1170	1170	1172	266
ND	271		Bismarck Station - Cleveland Station	1181	1195	1190	1193	1190	1186	1169	1165	1159	1168	1174	1189	1191	271
ND	272		Cleveland Station - Mapleton	1180	1195	1190	1192	1189	1185	1169	1165	1159	1168	1174	1188	1191	272
ND	273		Cleveland Station - Grafton Border	1180	1194	1190	1192	1189	1184	1169	1165	1159	1168	1173	1188	1190	273
ND	550		Mandan Border / NBPL-St Anthony	1147	1190	1181	1186	1129	1149	1119	1117	1115	1121	1125	1137	1189	550
ND	610		MDU-Watford City BTU	1168	1163	1163	1149	1182	1171	1169	1168	1168	1161	1172	1174	1178	610
ND	802		NBPL - Linton	1098	1102	1088	1082	1086	1105	1102	1102	1102	1102	1107	1098	1094	802
ND	903		Hettinger Propane	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	903
ND	600		Alliance Pipeline - Hankinson	1163	1160	1158	1164	1158	1163	1164	1162	1160	1159	1166	1170	1167	600
ND	601		Alliance Pipeline - Milnor	1162	1161	1158	1164	1157	1158	1164	1162	1160	1159	1166	1170	1167	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 August 2020		
ZONE	***BTU VARIANCE***	***REASON***
		No Variance greater than 20 for this time period