



MONTANA-DAKOTA

UTILITIES CO.

A Subsidiary of MDU Resources Group, Inc.

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

March 19, 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 – January 2020

Montana-Dakota Utilities Co., a Subsidiary of MDU Resources Group, Inc., herewith 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 February 2020.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our suppliers for the month of January 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 January 2020.

Please acknowledge receipt by stamping or initialing the duplicate copy of this letter attached hereto and returning the same in the enclosed self-addressed, stamped envelope. Should the Commission or its Staff have any comments or questions with respect to these reports, please call me.

Sincerely,

Travis R. Jacobson
Director of Regulatory Affairs

Montana-Dakota Utilities Co.
Therm Billing Factors - North Dakota
Feb-20

Town	Heat Zone	Therm Factor
MDU-303-ALEXANDER	025	1.1258
MDU-308-ARNEGARD	025	1.1258
MDU-314-APPLE VALLEY	271	1.1270
MDU-318-BEACH	032	0.9925
MDU-319-BELFIELD	032	0.9998
MDU-323-BERTHOLD	262	1.1183
MDU-324-BEULAH	032	0.9998
MDU-327-BISMARCK	028	1.0884
MDU-330-BOWMAN	034	1.0183
MDU-337-BURLINGTON	262	1.1424
MDU-343-CARRINGTON	273	1.1318
MDU-344-CLEVELAND	272	1.1190
MDU-364-CAVALIER	273	1.1508
MDU-365-DAWSON	271	1.1190
MDU-368-DES LACS	262	1.1263
MDU-369-DICKINSON	031	1.0577
MDU-374-FT TOTTEN	273	1.1349
MDU-375-DEVILS LAKE	273	1.1349
MDU-379-BARLOW	273	1.1270
MDU-384-EPPING	264	1.0975
MDU-387-ELDRIDGE	272	1.1270
MDU-407-GLADSTONE	031	1.0577
MDU-411-GLEN ULLIN	031	1.0654
MDU-413-GOLVA	032	0.9779
MDU-416-GARRISON	262	1.1263
MDU-417-GRAFTON	273	1.1587
MDU-403-GWINNER	601	1.1419
MDU-429-HEBRON	031	1.0654
MDU-432-HETTINGER	903	2.3875
MDU-449-JAMESTOWN	272	1.1587
MDU-459-KILLDEER	033	1.1079
MDU-463-LANGDON	273	1.1270
MDU-469-LEFOR	031	1.0577
MDU-474-LIGNITE	263	1.0930
MDU-475-LINTON	802	1.0633
MDU-478-LINCOLN	028	1.0884
MDU-488-MCKENZIE	271	1.1270
MDU-494-MEDINA	271	1.1190
MDU-498-MANDAN	028	1.0884
MDU-500-MARMARTH	034	1.0258
MDU-505-MINOT	262	1.1424
MDU-510-MOTT	031	1.0578
MDU-512-MAX	262	1.1183
MDU-513-MILNOR	601	1.1419
MDU-522-NEW ENGLAND	031	1.0501
MDU-524-NEW SALEM	028	1.0654
MDU-532-NEW ROCKFORD	273	1.1270
MDU-539-PARK RIVER	273	1.1508
MDU-540-PALERMO	262	1.1183

MDU-558-RAY	264	1.0975
MDU-561-REGENT	031	1.0577
MDU-563-RHAME	034	1.0107
MDU-564-RICHARDTON	031	1.0501
MDU-568-ROSS	261	1.0934
MDU-572-RUTHVILLE	262	1.1424
MDU-574-SANBORN	272	1.1349
MDU-583-SENTINEL BUTTE	032	0.9925
MDU-588-SOUTH HEART	031	1.0501
MDU-717-SPIRITWOOD	272	1.1349
MDU-590-SPRINGBROOK	264	1.0975
MDU-591-STANLEY	261	1.1013
MDU-593-STEELE	271	1.1190
MDU-594-STERLING	028	1.0884
MDU-598-SHEYENNE	273	1.1349
MDU-605-SURREY	262	1.1424
MDU-610-TAPPEN	271	1.1190
MDU-611-TAYLOR	031	1.0501
MDU-616-TIOGA	260	1.0521
MDU-619-TURTLE LAKE	262	1.1263
MDU-620-TRENTON	024	1.1159
MDU-624-UNDERWOOD	262	1.1263
MDU-625-VALLEY CITY	272	1.1428
MDU-629-WALHALLA	273	1.1508
MDU-632-WATFORD CITY	610	1.0966
MDU-636-WHEELOCK	264	1.0896
MDU-637-WHITE EARTH	261	1.1013
MDU-642-WILLISTON	024	1.1159
MDU-646-WASHBURN	262	1.1344
MDU-647-WILTON	262	1.1183
MDU-664-RIVERDALE	262	1.1263
MDU-691-FAIRVIEW	241	1.1473
MDU-712-MINOT AFB	262	1.1424
MDU-718-FAIRMOUNT	600	1.1395
MDU-732-NEKOMA	273	1.1270
MDU-732-MSR SITE	273	1.1270

Source Daily Summary

January 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	0.7406	1190.1	1211.2	1207.9	1.368	3.620	66.758	24.668	3.202	0.131	0.233	0.011	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1404.07
2	0.7408	1190.7	1211.8	1208.4	1.370	3.603	66.706	24.750	3.188	0.131	0.233	0.011	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1404.53
3	0.7070	1176.0	1196.8	1193.6	0.182	3.126	71.489	22.323	2.806	0.031	0.042	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1420.07
4	0.7081	1177.7	1198.5	1195.4	0.155	3.165	71.214	22.600	2.795	0.030	0.040	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.06
5	0.7058	1174.6	1195.4	1192.3	0.152	3.144	71.559	22.400	2.675	0.030	0.040	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.63
6	0.7131	1185.5	1206.5	1203.3	0.151	3.167	70.622	22.781	3.185	0.039	0.054	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1425.38
7	0.7101	1182.3	1203.3	1200.1	0.142	3.092	71.023	22.656	3.008	0.033	0.044	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.60
8	0.7051	1173.9	1194.7	1191.6	0.147	3.127	71.668	22.342	2.652	0.028	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.50
9	0.7083	1178.6	1199.5	1196.4	0.163	3.117	71.285	22.480	2.872	0.034	0.047	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.91
10	0.7082	1179.5	1200.4	1197.3	0.163	3.051	71.470	22.240	2.966	0.041	0.064	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1423.13
11	0.7095	1181.6	1202.6	1199.4	0.167	3.037	71.279	22.348	3.084	0.037	0.049	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.40
12	0.7056	1173.7	1194.5	1191.5	0.171	3.153	71.687	22.169	2.741	0.033	0.045	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.74
13	0.7123	1186.3	1207.3	1204.1	0.163	3.022	71.156	22.214	3.207	0.073	0.143	0.011	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1427.10
14	0.7217	1197.6	1218.8	1215.5	0.126	3.271	69.641	23.121	3.542	0.086	0.179	0.017	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1431.23
15	0.7200	1194.9	1216.1	1212.7	0.104	3.305	70.199	22.419	3.596	0.106	0.225	0.022	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1429.67
16	0.7115	1179.5	1200.4	1197.3	0.145	3.389	70.610	22.850	2.946	0.027	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.81
17	0.7089	1177.1	1198.0	1194.9	0.109	3.349	70.728	23.173	2.587	0.024	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.54
18	0.7118	1182.0	1202.9	1199.8	0.133	3.286	70.506	23.126	2.873	0.032	0.042	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.47
19	0.7152	1188.3	1209.3	1206.2	0.114	3.246	70.233	23.023	3.310	0.033	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.71
20	0.7131	1184.9	1205.9	1202.8	0.120	3.255	70.500	22.891	3.161	0.032	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.65
21	0.7138	1185.5	1206.5	1203.3	0.134	3.266	70.274	23.204	3.030	0.037	0.052	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1424.60
22	0.7392	1191.9	1213.0	1209.6	1.238	3.576	67.399	23.793	3.562	0.146	0.263	0.013	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1407.45
23	0.7425	1193.1	1214.2	1210.7	1.373	3.608	66.951	24.020	3.575	0.159	0.287	0.015	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1405.65
24	0.7409	1190.1	1211.2	1207.7	1.375	3.638	67.174	23.861	3.482	0.158	0.287	0.015	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1403.66
25	0.7437	1195.3	1216.4	1212.9	1.367	3.597	66.605	24.482	3.475	0.160	0.288	0.015	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1407.11
26	0.7425	1193.1	1214.2	1210.7	1.375	3.608	66.847	24.211	3.492	0.157	0.283	0.014	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1405.63
27	0.7423	1192.8	1213.9	1210.5	1.373	3.609	66.886	24.185	3.471	0.160	0.289	0.015	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1405.49
28	0.7437	1195.2	1216.3	1212.9	1.366	3.603	66.561	24.565	3.435	0.159	0.286	0.014	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1407.02
29	0.7445	1197.1	1218.3	1214.7	1.349	3.589	66.351	24.839	3.408	0.154	0.282	0.015	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1408.45
30	0.7143	1186.3	1207.3	1204.2	0.120	3.277	70.214	23.198	3.118	0.031	0.040	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.18
31	0.7405	1191.0	1212.1	1208.7	1.325	3.616	66.898	24.462	3.293	0.138	0.247	0.012	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1405.23
Avg	0.7221	1186.0	1207.0	1203.8	0.572	3.339	69.435	23.271	3.153	0.080	0.138	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1417.22

Zone 211

Source Daily Summary

January 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	0.6992	1152.6	1173.0	1169.7	0.996	2.572	74.130	19.628	2.315	0.101	0.217	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1399.44
2	0.6972	1150.1	1170.5	1167.3	0.957	2.593	74.389	19.474	2.240	0.098	0.210	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1398.49
3	0.6979	1151.9	1172.3	1169.0	0.942	2.575	74.345	19.454	2.321	0.103	0.219	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1399.90
4	0.6984	1153.1	1173.6	1170.3	0.965	2.516	74.303	19.507	2.335	0.105	0.226	0.019	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1400.86
5	0.6979	1151.6	1172.0	1168.8	0.965	2.560	74.289	19.558	2.279	0.099	0.212	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1399.59
6	0.6968	1151.5	1171.9	1168.7	0.952	2.478	74.493	19.487	2.240	0.099	0.212	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1400.56
7	0.6968	1152.1	1172.5	1169.3	0.944	2.458	74.504	19.480	2.260	0.101	0.215	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1401.28
8	0.6981	1154.0	1174.5	1171.2	0.967	2.423	74.383	19.526	2.328	0.106	0.226	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1402.34
9	0.6993	1156.2	1176.6	1173.4	0.986	2.385	74.164	19.744	2.349	0.106	0.225	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1403.65
10	0.6975	1154.1	1174.6	1171.4	0.973	2.353	74.399	19.670	2.247	0.103	0.217	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1403.09
11	0.6969	1153.0	1173.5	1170.3	0.974	2.360	74.452	19.677	2.188	0.100	0.210	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1402.36
12	0.6969	1152.3	1172.7	1169.5	0.971	2.418	74.381	19.736	2.153	0.097	0.206	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1401.35
13	0.6965	1151.2	1171.6	1168.4	0.956	2.466	74.422	19.683	2.139	0.096	0.203	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1400.48
14	0.6968	1152.6	1173.0	1169.9	0.960	2.397	74.448	19.663	2.183	0.101	0.212	0.017	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1401.96
15	0.6994	1157.6	1178.1	1174.8	0.977	2.318	74.172	19.807	2.344	0.109	0.232	0.019	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1405.28
16	0.6993	1157.3	1177.8	1174.6	0.986	2.313	74.161	19.842	2.324	0.107	0.227	0.019	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1405.06
17	0.6970	1152.3	1172.7	1169.4	0.965	2.433	74.508	19.475	2.255	0.103	0.220	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1401.26
18	0.6977	1154.9	1175.3	1172.1	0.972	2.325	74.396	19.693	2.251	0.104	0.220	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1403.79
19	0.6954	1151.0	1171.4	1168.1	0.949	2.381	74.851	19.196	2.252	0.105	0.224	0.019	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1401.34
20	0.6959	1150.9	1171.3	1168.1	0.955	2.425	74.709	19.312	2.234	0.103	0.221	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1400.76
21	0.6966	1151.2	1171.6	1168.3	0.958	2.474	74.590	19.357	2.251	0.104	0.224	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1400.33
22	0.6957	1149.4	1169.8	1166.5	0.937	2.525	74.779	19.120	2.262	0.105	0.228	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1399.10
23	0.6972	1152.0	1172.4	1169.2	0.956	2.482	74.490	19.425	2.277	0.104	0.224	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1400.72
24	0.6947	1148.1	1168.5	1165.3	0.936	2.512	74.973	18.935	2.276	0.104	0.224	0.019	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1398.57
25	0.6931	1145.1	1165.4	1162.2	0.926	2.562	75.260	18.617	2.266	0.104	0.223	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1396.49
26	0.6955	1149.2	1169.5	1166.3	0.934	2.524	74.884	18.959	2.307	0.110	0.237	0.020	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1399.05
27	0.6975	1153.1	1173.5	1170.2	0.936	2.470	74.520	19.378	2.288	0.112	0.247	0.022	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1401.79
28	0.6948	1148.8	1169.2	1166.0	0.933	2.482	74.829	19.217	2.187	0.100	0.213	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1399.36
29	0.6962	1150.8	1171.2	1168.0	0.940	2.481	74.597	19.407	2.218	0.100	0.217	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1400.38
30	0.6959	1150.7	1171.1	1167.9	0.942	2.462	74.658	19.364	2.213	0.102	0.219	0.019	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1400.48
31	0.6961	1150.5	1170.9	1167.7	0.944	2.484	74.632	19.351	2.232	0.102	0.216	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1400.10
Avg	0.6969	1152.0	1172.3	1169.1	0.957	2.458	74.520	19.443	2.258	0.103	0.220	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1400.94

Zone 24

Gas Composition and Properties

Effective January 1, 2020

Attachment B
Page 3 of 24

Source #: 0602160
Name: FAIRVIEW BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.1760		2.4415
Nitrogen, N2	3.4598		4.5722
Methane, C1	67.9054		51.3911
Ethane, C2	23.8313	6.3790	33.8048
Propane, C3	3.2760	0.9033	6.8148
iso-Butane, iC4	0.1175	0.0385	0.3222
n-Butane, nC4	0.2165	0.0683	0.5936
iso-Pentane, iC5	0.0099	0.0036	0.0337
n-Pentane, nC5	0.0072	0.0026	0.0245
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0004	0.0002	0.0016
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-24.998	
Cricodentherm	3.604	
HV, Dry @ Base P, T	1208.54	
HV, Sat @ Base P, T	1187.51	
HV, Sat @ Sample P, T	1208.54	
Relative Density	0.7341	

C6+: 100

Totals 100.0000 7.3950 100.0000

Sample

Date: 01/01/2020 Pressure: 310.0
 Type: Temperature:
 Tech: Kevin Moos H2O: lbs/mm
 H2S: ppm

Remarks:

Analysis

Date: 01/01/2020 Instrument:
 Cylinder: 312
 Tech: Kevin Moos

Remarks:

Zone 241

Gas Composition and Properties

Effective January 1, 2020

Attachment B
Page 4 of 24

Source #: 0602225
Name: WATFORD CITY WEST BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.1282		2.3427
Nitrogen, N2	4.2280		5.5882
Methane, C1	69.1994		52.3780
Ethane, C2	20.8629	5.5841	29.5984
Propane, C3	3.8278	1.0554	7.9638
iso-Butane, iC4	0.2068	0.0677	0.5671
n-Butane, nC4	0.4608	0.1454	1.2637
iso-Pentane, iC5	0.0391	0.0143	0.1331
n-Pentane, nC5	0.0395	0.0143	0.1345
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0075	0.0031	0.0305
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
Totals	100.0000	6.8830	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-0.656	
Cricondentherm	11.058	
HV, Dry @ Base P, T	1196.48	
HV, Sat @ Base P, T	1175.66	
HV, Sat @ Sample P, T	1196.48	
Relative Density	0.7340	

C6+: 100

Sample

Date: 01/01/2020 Pressure: 450.0
 Type: Temperature:
 Tech: Kevin Moos H2O: lbs/mm
 H2S: ppm

Remarks:

Analysis

Date: 01/01/2020 Instrument:
 Cylinder: 125
 Tech: Kevin Moos

Remarks:

Zone 25

Source Daily Summary

January 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	0.6753	1106.2	1125.7		0.685	3.635	77.546	16.213	1.746	0.051	0.103	0.011	0.010	0.000					1366.76	
2	0.6789	1111.0	1130.7		0.716	3.634	76.916	16.759	1.779	0.054	0.115	0.012	0.013	0.002					1369.06	
3	0.6724	1101.6	1121.1		0.658	3.686	77.952	15.907	1.628	0.048	0.099	0.010	0.009	0.000					1364.01	
4	0.6700	1098.1	1117.6		0.652	3.682	78.486	15.363	1.634	0.050	0.107	0.012	0.011	0.002					1362.11	
5	0.6694	1097.1	1116.6		0.644	3.692	78.543	15.352	1.603	0.049	0.099	0.010	0.009	0.000					1361.58	
6	0.6628	1087.5	1106.7		0.590	3.749	79.696	14.317	1.483	0.046	0.097	0.011	0.010	0.001					1356.22	
7	0.6595	1082.0	1101.2		0.569	3.797	80.287	13.762	1.425	0.045	0.095	0.010	0.009	0.001					1352.85	
8	0.6403	1052.8	1071.5		0.416	4.008	83.561	10.837	1.064	0.032	0.067	0.007	0.006	0.000					1335.89	
9	0.6212	1024.4	1042.6		0.257	4.180	86.862	7.925	0.698	0.021	0.047	0.005	0.004	0.000					1319.71	
10	0.6159	1014.9	1032.8		0.209	4.338	87.755	7.031	0.597	0.015	0.045	0.003	0.006	0.000					1313.04	
11	0.6072	1000.7	1018.4		0.140	4.496	89.242	5.628	0.438	0.013	0.037	0.002	0.004	0.000					1303.83	
12	0.6418	1054.4	1073.1		0.394	4.087	83.301	11.009	1.063	0.035	0.082	0.012	0.014	0.002					1336.32	
13	0.6544	1073.2	1092.2		0.493	3.976	81.110	12.955	1.296	0.044	0.102	0.010	0.011	0.001					1346.95	
14	0.6274	1033.2	1051.5		0.296	4.175	85.812	8.788	0.818	0.029	0.067	0.008	0.007	0.001					1324.36	
15	0.6115	1008.5	1026.4		0.169	4.371	88.525	6.358	0.504	0.019	0.044	0.005	0.005	0.000					1309.53	
16	0.5990	986.8	1004.3		0.092	4.648	90.690	4.236	0.289	0.012	0.030	0.003	0.003	0.000					1294.47	
17	0.6398	1050.3	1068.9		0.387	4.155	83.797	10.392	1.088	0.044	0.107	0.011	0.014	0.004					1333.24	
18	0.6022	992.3	1009.8		0.097	4.601	90.091	4.836	0.322	0.014	0.033	0.003	0.004	0.000					1298.28	
19	0.6306	1035.6	1054.0		0.318	4.291	85.526	8.673	1.003	0.044	0.113	0.012	0.016	0.005					1324.13	
20	0.6427	1053.9	1072.6		0.399	4.186	83.439	10.524	1.236	0.051	0.126	0.014	0.018	0.006					1334.82	
21	0.6632	1086.2	1105.4		0.553	3.910	80.124	13.399	1.703	0.073	0.180	0.020	0.026	0.011					1354.28	
22	0.6707	1099.0	1118.4		0.605	3.762	78.837	14.592	1.884	0.078	0.190	0.019	0.025	0.007					1362.49	
23	0.6720	1100.3	1119.8		0.638	3.751	78.568	14.851	1.895	0.075	0.178	0.017	0.022	0.005					1362.87	
24	0.6691	1095.4	1114.8		0.617	3.809	78.919	14.618	1.783	0.067	0.154	0.014	0.017	0.002					1359.74	
25	0.6737	1103.1	1122.6		0.649	3.721	78.238	15.198	1.905	0.073	0.171	0.017	0.021	0.006					1364.61	
26	0.6755	1105.9	1125.5		0.655	3.718	77.856	15.568	1.922	0.074	0.170	0.016	0.019	0.003					1366.19	
27	0.6737	1102.8	1122.3		0.649	3.740	78.181	15.273	1.879	0.071	0.167	0.016	0.020	0.004					1364.26	
28	0.6749	1105.2	1124.8		0.648	3.712	77.944	15.528	1.886	0.072	0.169	0.016	0.020	0.005					1365.99	
29	0.6777	1110.1	1129.8		0.661	3.654	77.569	15.821	1.981	0.079	0.187	0.019	0.024	0.007					1369.22	
30	0.6749	1105.1	1124.7		0.653	3.712	78.117	15.248	1.942	0.079	0.191	0.020	0.027	0.011					1365.83	
31	0.6737	1102.6	1122.2		0.653	3.749	78.199	15.220	1.901	0.073	0.167	0.016	0.019	0.005					1363.99	
Avg	0.6523	1070.0	1089.3		0.489	3.956	81.667	12.328	1.368	0.049	0.114	0.012	0.014	0.003					1345.37	

Zone 260

Source Daily Summary

January 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	0.7029	1147.9	1168.3	1165.1	0.919	3.332	72.738	20.601	2.190	0.065	0.133	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1390.10
2	0.7007	1144.4	1164.7	1161.6	0.918	3.340	73.209	20.093	2.225	0.065	0.130	0.009	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1388.03
3	0.7018	1145.6	1165.8	1162.7	0.928	3.356	73.013	20.266	2.211	0.066	0.137	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1388.31
4	0.7014	1144.9	1165.2	1162.1	0.921	3.366	72.995	20.351	2.155	0.064	0.129	0.009	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1388.02
5	0.7007	1143.7	1164.0	1160.8	0.933	3.360	73.245	20.026	2.206	0.068	0.140	0.011	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1387.15
6	0.7014	1145.4	1165.7	1162.6	0.929	3.324	73.082	20.232	2.214	0.067	0.133	0.009	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1388.60
7	0.7019	1146.2	1166.5	1163.4	0.937	3.310	73.017	20.294	2.213	0.068	0.139	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1389.04
8	0.7009	1144.3	1164.6	1161.5	0.929	3.347	73.175	20.113	2.212	0.068	0.136	0.009	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1387.72
9	0.7016	1145.1	1165.4	1162.3	0.939	3.352	73.041	20.239	2.207	0.066	0.135	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1387.95
10	0.7009	1144.4	1164.7	1161.6	0.904	3.381	73.038	20.330	2.141	0.063	0.126	0.008	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1387.84
11	0.7033	1147.4	1167.7	1164.6	0.905	3.418	72.650	20.618	2.174	0.069	0.146	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1389.12
12	0.7013	1144.1	1164.3	1161.3	0.886	3.464	72.858	20.523	2.060	0.063	0.127	0.008	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1387.07
13	0.7035	1148.4	1168.7	1165.5	0.874	3.426	72.804	20.364	2.230	0.080	0.175	0.022	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1390.00
14	0.7007	1142.8	1163.0	1159.9	0.902	3.462	73.190	20.045	2.151	0.070	0.152	0.012	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1386.02
15	0.7032	1146.5	1166.8	1163.6	0.904	3.464	72.913	20.156	2.259	0.081	0.185	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1388.05
16	0.7005	1143.0	1163.2	1159.9	0.929	3.385	73.693	19.308	2.341	0.089	0.207	0.020	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1386.36
17	0.6881	1121.3	1141.1	1138.1	0.909	3.576	75.788	17.319	2.126	0.078	0.172	0.014	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1372.32
18	0.7059	1149.1	1169.4	1166.0	0.953	3.481	72.775	19.993	2.415	0.096	0.232	0.024	0.031	0.000	0.000	0.000	0.000	0.000	0.000	1388.42
19	0.7070	1151.2	1171.6	1168.3	0.959	3.453	72.332	20.580	2.349	0.086	0.200	0.017	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1389.93
20	0.7030	1144.3	1164.6	1161.2	0.956	3.495	73.592	18.965	2.573	0.103	0.255	0.026	0.034	0.000	0.000	0.000	0.000	0.000	0.000	1385.49
21	0.7029	1144.2	1164.4	1160.9	0.901	3.580	73.485	19.111	2.516	0.101	0.245	0.025	0.035	0.000	0.000	0.000	0.000	0.000	0.000	1385.31
22	0.7055	1149.0	1169.3	1165.6	0.906	3.519	73.141	19.398	2.599	0.109	0.261	0.028	0.039	0.000	0.000	0.000	0.000	0.000	0.000	1388.53
23	0.7087	1155.5	1176.0	1172.5	0.919	3.408	72.584	19.946	2.702	0.112	0.266	0.027	0.036	0.000	0.000	0.000	0.000	0.000	0.000	1393.32
24	0.7079	1154.1	1174.5	1171.1	0.940	3.391	72.619	19.992	2.656	0.105	0.244	0.023	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1392.41
25	0.7055	1150.4	1170.8	1167.5	0.931	3.400	72.869	19.903	2.542	0.096	0.216	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1390.49
26	0.7039	1147.8	1168.1	1164.8	0.918	3.425	73.226	19.529	2.538	0.097	0.220	0.021	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1388.85
27	0.7077	1154.5	1174.9	1171.6	0.930	3.363	72.502	20.249	2.589	0.099	0.224	0.020	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1393.18
28	0.7074	1153.7	1174.2	1170.8	0.941	3.362	72.573	20.185	2.568	0.098	0.226	0.021	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1392.57
29	0.7068	1153.2	1173.6	1170.3	0.917	3.373	72.604	20.222	2.527	0.095	0.217	0.020	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1392.51
30	0.7094	1157.5	1178.0	1174.6	0.934	3.328	72.279	20.444	2.620	0.103	0.239	0.023	0.030	0.000	0.000	0.000	0.000	0.000	0.000	1395.12
31	0.7076	1154.3	1174.7	1171.1	0.928	3.364	72.736	19.916	2.635	0.107	0.252	0.026	0.035	0.000	0.000	0.000	0.000	0.000	0.000	1392.88
Avg	0.7034	1147.0	1167.5	1164.3	0.923	3.407	73.025	19.978	2.359	0.084	0.187	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1388.73

Zone 261

Source Daily Summary

January 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	0.7359	1162.3	1182.9	1179.8	0.919	5.545	68.379	20.244	4.457	0.137	0.287	0.015	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1375.66
2	0.7349	1160.1	1180.6	1177.5	0.919	5.586	68.538	20.074	4.440	0.134	0.279	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1373.95
3	0.7335	1156.7	1177.2	1174.1	0.924	5.654	68.678	19.985	4.327	0.132	0.270	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1371.26
4	0.7322	1157.3	1177.8	1174.7	0.923	5.498	68.847	20.080	4.230	0.129	0.264	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1373.19
5	0.7308	1155.4	1175.8	1172.8	0.925	5.477	69.053	19.978	4.156	0.125	0.258	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1372.25
6	0.7308	1156.0	1176.5	1173.5	0.929	5.432	69.013	20.103	4.116	0.124	0.256	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1373.05
7	0.7285	1154.3	1174.8	1171.7	0.920	5.332	69.342	20.016	4.002	0.118	0.243	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1373.17
8	0.7278	1154.3	1174.7	1171.6	0.936	5.247	69.392	20.154	3.883	0.116	0.244	0.013	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1373.77
9	0.7277	1154.2	1174.6	1171.5	0.925	5.266	69.422	20.087	3.911	0.117	0.246	0.013	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1373.68
10	0.7257	1151.4	1171.8	1168.7	0.917	5.257	69.530	20.251	3.694	0.107	0.222	0.011	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1372.31
11	0.7273	1153.4	1173.8	1170.7	0.913	5.295	69.366	20.234	3.812	0.114	0.240	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1373.12
12	0.7327	1162.1	1182.7	1179.6	0.905	5.273	68.772	20.439	4.159	0.133	0.285	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1378.49
13	0.7270	1152.7	1173.1	1170.0	0.911	5.314	69.443	20.131	3.818	0.113	0.239	0.015	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1372.52
14	0.7257	1149.9	1170.2	1167.1	0.917	5.350	69.684	19.880	3.782	0.113	0.243	0.014	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1370.45
15	0.7249	1150.3	1170.6	1167.5	0.926	5.237	69.836	19.880	3.730	0.113	0.245	0.015	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1371.68
16	0.7185	1140.1	1160.3	1157.2	0.915	5.266	71.027	18.773	3.640	0.110	0.237	0.015	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1365.63
17	0.7274	1153.7	1174.2	1171.0	0.942	5.230	69.688	19.743	3.957	0.126	0.277	0.018	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1373.47
18	0.7272	1155.1	1175.6	1172.4	0.940	5.138	69.547	20.140	3.815	0.120	0.262	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1375.22
19	0.7277	1156.0	1176.5	1173.3	0.953	5.102	69.634	19.929	3.944	0.126	0.276	0.017	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1375.92
20	0.7320	1162.4	1183.0	1179.7	0.937	5.143	69.183	20.018	4.197	0.142	0.326	0.024	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1379.31
21	0.7297	1157.2	1177.7	1174.5	0.909	5.286	69.413	19.802	4.116	0.134	0.297	0.020	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1375.34
22	0.7287	1154.9	1175.3	1172.0	0.929	5.308	69.470	19.862	3.963	0.130	0.290	0.021	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1373.45
23	0.7301	1156.7	1177.2	1174.0	0.930	5.323	69.282	19.914	4.087	0.133	0.289	0.019	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1374.42
24	0.7287	1154.0	1174.4	1171.3	0.929	5.358	69.432	19.825	4.028	0.125	0.267	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1372.53
25	0.7305	1156.1	1176.6	1173.4	0.927	5.397	69.154	19.970	4.122	0.127	0.269	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1373.39
26	0.7294	1153.8	1174.2	1171.1	0.927	5.440	69.316	19.813	4.075	0.125	0.267	0.017	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1371.62
27	0.7304	1155.9	1176.3	1173.2	0.934	5.400	69.152	19.983	4.097	0.128	0.271	0.017	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1373.13
28	0.7310	1157.2	1177.7	1174.5	0.926	5.386	69.091	20.004	4.156	0.129	0.272	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1374.14
29	0.7297	1154.9	1175.3	1172.2	0.929	5.395	69.230	19.979	4.045	0.124	0.264	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1372.69
30	0.7314	1156.6	1177.1	1173.9	0.923	5.463	69.032	19.964	4.169	0.131	0.279	0.018	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1373.07
31	0.7317	1157.0	1177.5	1174.3	0.931	5.456	69.078	19.848	4.219	0.135	0.292	0.019	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1373.23
Avg	0.7294	1155.0	1175.7	1172.5	0.926	5.350	69.291	19.971	4.037	0.125	0.266	0.016	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1373.39

Zone 2b2

Gas Composition and Properties

Effective January 1, 2020 09:00 - January 18, 2038 21:14

Attachment B
Page 8 of 24

Source #: 2501030
Name: LIGNITE PLANT

Component	Mole %	Liquid Content	Mass %
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Carbon Dioxide, CO2	0.2314		0.5238
Nitrogen, N2	2.9534		4.2554
Methane, C1	77.6900		64.1052
Ethane, C2	17.0520	4.5619	26.3725
Propane, C3	2.0286	0.5591	4.6010
iso-Butane, iC4	0.0246	0.0081	0.0735
n-Butane, nC4	0.0125	0.0039	0.0374
iso-Pentane, iC5	0.0012	0.0004	0.0045
n-Pentane, nC5	0.0017	0.0006	0.0063
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0046	0.0019	0.0204
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			

Property	Total Sample	C6 Plus Fraction
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Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-36.257	
Cricondentherm	-27.261	
HV, Dry @ Base P, T	1144.96	
HV, Sat @ Base P, T	1125.03	
HV, Sat @ Sample P, T	1144.96	
Relative Density	0.6730	

C6+: 100

Totals	100.0000	5.1360	100.0000
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Sample

Date: 01/01/2020 Pressure: 490.0
 Type: Temperature:
 Tech: Kevin Moos H2O: lbs/mm
 H2S: ppm

Remarks:

Analysis

Date: 01/01/2020 Instrument:
 Cylinder: 321
 Tech: Kevin Moos

Remarks:

Zone 263

Gas Composition and Properties

Effective January 1, 2020 09:00 - January 18, 2038 21:14

Attachment B
Page 9 of 24

Source #: 3002013
Name: EPPING BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.8886		1.9607
Nitrogen, N2	2.5250		3.5463
Methane, C1	75.5351		60.7536
Ethane, C2	18.5761	4.9704	28.0043
Propane, C3	2.1415	0.5903	4.7344
iso-Butane, iC4	0.0930	0.0304	0.2710
n-Butane, nC4	0.2040	0.0643	0.5945
iso-Pentane, iC5	0.0158	0.0058	0.0572
n-Pentane, nC5	0.0174	0.0063	0.0629
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0035	0.0014	0.0151
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-22.616	
Cricodonterm	-13.991	
HV, Dry @ Base P, T	1162.92	
HV, Sat @ Base P, T	1142.68	
HV, Sat @ Sample P, T	1162.92	
Relative Density	0.6905	

C6+: 100

Totals 100.0000 5.6670 100.0000

Sample
Date: 01/01/2020 Pressure: 480.0
Type: Temperature:
Tech: Kevin Moos H2O: lbs/mm
H2S: ppm
Remarks:

Analysis
Date: 01/01/2020 Instrument:
Cylinder: 370
Tech: Kevin Moos
Remarks:

*** End of Report ***

Zone 264

Source Daily Summary

January 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	0.7047	1150.6	1171.0	1167.8	0.922	3.327	72.418	20.886	2.231	0.065	0.132	0.009	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1391.62
2	0.7014	1145.4	1165.6	1162.4	0.923	3.337	73.118	20.163	2.232	0.067	0.136	0.011	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1388.47
3	0.7016	1145.4	1165.7	1162.6	0.925	3.353	73.035	20.251	2.214	0.066	0.135	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1388.36
4	0.7019	1145.6	1165.9	1162.8	0.926	3.360	72.937	20.389	2.171	0.065	0.131	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1388.39
5	0.7012	1144.5	1164.7	1161.5	0.932	3.361	73.127	20.159	2.189	0.067	0.141	0.011	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1387.58
6	0.7014	1145.4	1165.7	1162.6	0.922	3.335	73.091	20.201	2.231	0.067	0.133	0.009	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1388.58
7	0.7020	1146.3	1166.6	1163.4	0.941	3.308	72.967	20.375	2.181	0.067	0.139	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1389.07
8	0.7012	1144.9	1165.2	1162.0	0.928	3.337	73.139	20.147	2.229	0.067	0.134	0.009	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1388.19
9	0.7026	1146.7	1167.0	1163.8	0.948	3.330	72.889	20.382	2.218	0.068	0.141	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1388.95
10	0.7005	1143.5	1163.8	1160.7	0.910	3.387	73.194	20.098	2.197	0.065	0.131	0.008	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1387.19
11	0.7040	1148.9	1169.3	1166.1	0.906	3.394	72.556	20.686	2.217	0.072	0.150	0.009	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1390.23
12	0.7018	1144.8	1165.0	1161.9	0.896	3.457	72.752	20.633	2.055	0.062	0.127	0.009	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1387.38
13	0.7040	1149.3	1169.6	1166.3	0.871	3.426	72.723	20.415	2.260	0.083	0.177	0.021	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1390.56
14	0.7011	1143.9	1164.2	1161.1	0.896	3.435	72.999	20.344	2.099	0.065	0.138	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1387.13
15	0.7021	1144.0	1164.3	1161.0	0.902	3.513	73.112	19.933	2.240	0.080	0.183	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1386.13
16	0.7029	1147.0	1167.3	1164.0	0.918	3.382	73.152	19.879	2.335	0.087	0.203	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1388.92
17	0.6905	1125.7	1145.7	1142.4	0.915	3.517	75.456	17.611	2.199	0.081	0.182	0.017	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1375.36
18	0.7020	1142.7	1163.0	1159.6	0.958	3.500	73.432	19.402	2.350	0.092	0.218	0.021	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1384.57
19	0.7069	1151.2	1171.5	1168.1	0.948	3.460	72.399	20.495	2.357	0.089	0.207	0.019	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1389.95
20	0.7043	1146.4	1166.7	1163.3	0.967	3.478	73.197	19.456	2.513	0.098	0.240	0.022	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1386.73
21	0.7047	1146.9	1167.2	1163.6	0.925	3.543	73.297	19.215	2.577	0.107	0.267	0.029	0.040	0.000	0.000	0.000	0.000	0.000	0.000	1386.84
22	0.7030	1144.8	1165.0	1161.4	0.887	3.568	73.477	19.134	2.527	0.103	0.244	0.026	0.035	0.000	0.000	0.000	0.000	0.000	0.000	1385.97
23	0.7100	1157.6	1178.1	1174.4	0.916	3.404	72.437	20.033	2.745	0.117	0.280	0.029	0.040	0.000	0.000	0.000	0.000	0.000	0.000	1394.53
24	0.7099	1157.1	1177.6	1174.1	0.942	3.382	72.366	20.158	2.716	0.112	0.264	0.026	0.034	0.000	0.000	0.000	0.000	0.000	0.000	1394.19
25	0.7064	1151.8	1172.2	1168.8	0.932	3.394	72.808	19.894	2.596	0.100	0.228	0.021	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1391.27
26	0.7049	1149.6	1169.9	1166.6	0.921	3.408	73.029	19.726	2.548	0.098	0.222	0.021	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1390.02
27	0.7082	1155.2	1175.7	1172.3	0.931	3.358	72.497	20.197	2.632	0.102	0.234	0.022	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1393.62
28	0.7088	1155.9	1176.4	1173.0	0.944	3.351	72.346	20.395	2.581	0.100	0.233	0.022	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1393.86
29	0.7072	1153.8	1174.2	1170.9	0.919	3.370	72.572	20.204	2.570	0.097	0.221	0.020	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1392.90
30	0.7103	1158.6	1179.1	1175.6	0.941	3.337	72.162	20.501	2.646	0.106	0.250	0.025	0.033	0.000	0.000	0.000	0.000	0.000	0.000	1395.54
31	0.7088	1156.7	1177.2	1173.6	0.920	3.337	72.553	20.087	2.667	0.110	0.262	0.027	0.037	0.000	0.000	0.000	0.000	0.000	0.000	1394.72
Avg	0.7039	1148.0	1168.4	1165.1	0.924	3.402	72.943	20.047	2.372	0.085	0.190	0.017	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1389.25

Zone 2b5

Source Daily Summary

January 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	0.7225	1153.7	1174.1	1170.4	0.787	5.012	70.341	19.612	3.867	0.117	0.239	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1378.02
2	0.7214	1153.7	1174.1	1170.3	0.760	4.953	70.455	19.661	3.799	0.113	0.233	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1379.03
3	0.7131	1146.1	1166.3	1162.7	0.682	4.760	71.562	19.294	3.390	0.097	0.195	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1377.89
4	0.7175	1146.7	1167.0	1163.3	0.792	4.969	71.048	19.227	3.610	0.110	0.220	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1374.36
5	0.7193	1148.6	1168.9	1165.3	0.801	5.001	70.772	19.393	3.673	0.110	0.225	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1375.01
6	0.7166	1146.7	1167.1	1163.4	0.749	4.941	71.077	19.367	3.538	0.102	0.207	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1375.40
7	0.7059	1139.1	1159.3	1155.7	0.671	4.524	72.672	18.789	3.065	0.086	0.173	0.009	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1376.48
8	0.6983	1129.8	1149.8	1146.3	0.667	4.383	74.033	17.773	2.873	0.085	0.167	0.010	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1372.66
9	0.6989	1130.6	1150.6	1147.1	0.692	4.354	73.925	17.913	2.840	0.085	0.171	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1372.99
10	0.6956	1127.6	1147.5	1144.0	0.673	4.259	74.381	17.756	2.680	0.078	0.154	0.009	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1372.57
11	0.6943	1125.8	1145.8	1142.1	0.752	4.116	74.822	17.357	2.675	0.085	0.169	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1371.73
12	0.7015	1132.5	1152.5	1148.9	0.771	4.356	73.675	17.931	2.962	0.093	0.189	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1372.78
13	0.7055	1138.3	1158.5	1154.8	0.769	4.377	73.162	18.174	3.165	0.104	0.216	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1375.93
14	0.6924	1123.9	1143.8	1140.1	0.731	4.086	75.138	17.144	2.627	0.084	0.166	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1371.27
15	0.6901	1121.1	1140.9	1137.2	0.748	4.022	75.555	16.859	2.539	0.084	0.167	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1370.02
16	0.6878	1119.6	1139.4	1135.7	0.752	3.891	75.994	16.611	2.474	0.084	0.167	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1370.47
17	0.6890	1119.1	1138.9	1135.2	0.757	4.025	75.844	16.510	2.579	0.086	0.172	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1368.67
18	0.6947	1127.6	1147.6	1143.8	0.782	4.002	74.973	17.170	2.747	0.095	0.197	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1373.42
19	0.6954	1127.4	1147.4	1143.6	0.795	4.061	74.787	17.304	2.744	0.092	0.189	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1372.51
20	0.6996	1131.6	1151.7	1147.8	0.809	4.174	74.343	17.272	3.036	0.105	0.224	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1373.49
21	0.7150	1146.7	1167.1	1163.1	0.841	4.653	71.882	18.569	3.619	0.123	0.271	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1376.71
22	0.7232	1149.9	1170.3	1166.2	0.886	5.157	70.437	19.223	3.848	0.127	0.279	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1372.71
23	0.7233	1152.8	1173.2	1169.2	0.871	5.019	70.344	19.521	3.806	0.126	0.274	0.019	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1376.03
24	0.7164	1146.5	1166.9	1163.1	0.793	4.865	71.261	19.194	3.521	0.109	0.227	0.014	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1375.28
25	0.7178	1147.5	1167.8	1164.0	0.823	4.895	71.109	19.173	3.624	0.112	0.234	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1375.05
26	0.7172	1145.6	1165.9	1162.1	0.804	4.985	71.172	19.059	3.613	0.109	0.228	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1373.32
27	0.7144	1144.2	1164.5	1160.8	0.786	4.832	71.570	18.991	3.471	0.105	0.217	0.013	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1374.40
28	0.7145	1145.8	1166.1	1162.3	0.781	4.754	71.582	19.056	3.468	0.107	0.222	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1376.15
29	0.7129	1144.2	1164.5	1160.8	0.774	4.715	71.793	18.976	3.398	0.103	0.213	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1375.80
30	0.7119	1142.5	1162.8	1159.0	0.781	4.711	71.993	18.797	3.369	0.104	0.215	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1374.72
31	0.7138	1143.2	1163.4	1159.5	0.796	4.823	71.847	18.629	3.520	0.112	0.237	0.016	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1373.64
Avg	0.7077	1139.0	1158.8	1155.1	0.770	4.570	72.695	18.397	3.230	0.101	0.208	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1374.14

Zone 271

Source Daily Summary

January 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	0.7133	1145.6	1165.8	1162.0	0.746	4.706	71.664	19.158	3.406	0.100	0.199	0.011	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1377.07
2	0.7223	1153.3	1173.7	1169.9	0.788	5.017	70.368	19.600	3.852	0.116	0.235	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1377.67
3	0.7212	1153.1	1173.5	1169.8	0.762	4.964	70.506	19.611	3.789	0.112	0.230	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1378.48
4	0.7130	1145.3	1165.6	1161.9	0.688	4.784	71.616	19.202	3.400	0.097	0.193	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1377.06
5	0.7180	1146.7	1167.1	1163.3	0.801	4.996	70.983	19.246	3.622	0.109	0.219	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1373.91
6	0.7195	1148.5	1168.8	1165.1	0.805	5.019	70.756	19.384	3.680	0.110	0.223	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1374.61
7	0.7168	1146.7	1167.0	1163.4	0.753	4.959	71.050	19.370	3.541	0.102	0.204	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1375.03
8	0.7059	1138.7	1158.8	1155.2	0.673	4.550	72.684	18.747	3.070	0.086	0.171	0.010	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1375.87
9	0.6987	1129.9	1149.9	1146.3	0.673	4.405	73.976	17.798	2.877	0.084	0.166	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1372.31
10	0.6990	1130.3	1150.3	1146.8	0.696	4.372	73.919	17.898	2.842	0.085	0.168	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1372.53
11	0.6957	1127.2	1147.2	1143.7	0.682	4.268	74.393	17.724	2.682	0.079	0.153	0.009	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1372.08
12	0.6945	1125.5	1145.4	1141.9	0.757	4.147	74.787	17.360	2.675	0.085	0.167	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1371.10
13	0.7022	1133.3	1153.4	1149.8	0.774	4.370	73.574	17.982	2.991	0.095	0.190	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1373.01
14	0.7055	1138.0	1158.1	1154.6	0.773	4.395	73.146	18.188	3.150	0.103	0.212	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1375.43
15	0.6924	1123.6	1143.5	1140.0	0.736	4.103	75.137	17.128	2.625	0.083	0.163	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1370.79
16	0.6902	1120.7	1140.5	1136.9	0.753	4.047	75.558	16.816	2.550	0.084	0.166	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1369.38
17	0.6875	1118.8	1138.6	1135.0	0.754	3.906	76.058	16.537	2.471	0.083	0.164	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1369.76
18	0.6900	1119.4	1139.2	1135.8	0.769	4.076	75.726	16.511	2.627	0.088	0.176	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1368.08
19	0.6944	1126.5	1146.5	1142.8	0.787	4.028	75.059	17.051	2.752	0.095	0.195	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1372.37
20	0.6950	1126.3	1146.3	1142.6	0.799	4.084	74.890	17.162	2.756	0.092	0.187	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1371.50
21	0.7006	1132.3	1152.3	1148.5	0.816	4.211	74.189	17.355	3.062	0.105	0.223	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1373.31
22	0.7156	1147.0	1167.4	1163.5	0.846	4.677	71.773	18.653	3.619	0.122	0.266	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1376.53
23	0.7235	1150.0	1170.3	1166.5	0.893	5.168	70.359	19.313	3.822	0.126	0.276	0.020	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1372.50
24	0.7235	1152.3	1172.7	1168.9	0.877	5.053	70.320	19.502	3.812	0.125	0.270	0.019	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1375.29
25	0.7166	1146.3	1166.6	1162.9	0.797	4.890	71.228	19.196	3.526	0.108	0.224	0.015	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1374.80
26	0.7181	1147.5	1167.8	1164.1	0.829	4.918	71.047	19.206	3.627	0.111	0.231	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1374.70
27	0.7175	1145.3	1165.6	1161.8	0.811	5.013	71.149	19.033	3.630	0.109	0.226	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1372.73
28	0.7146	1144.0	1164.2	1160.5	0.792	4.855	71.560	18.961	3.484	0.105	0.215	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1373.88
29	0.7146	1145.4	1165.7	1162.0	0.786	4.780	71.567	19.035	3.476	0.107	0.218	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1375.58
30	0.7133	1144.2	1164.5	1160.8	0.778	4.739	71.747	18.979	3.414	0.104	0.211	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1375.44
31	0.7123	1142.7	1162.9	1159.1	0.787	4.728	71.935	18.827	3.377	0.104	0.212	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1374.49
Avg	0.7079	1139.0	1158.7	1155.0	0.774	4.588	72.668	18.404	3.233	0.101	0.205	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1373.78

Zone 272

Source Daily Summary

January 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	0.7129	1145.0	1165.2	1162.1	0.747	4.709	71.714	19.120	3.390	0.100	0.198	0.011	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1376.68
2	0.7215	1152.2	1172.6	1169.3	0.786	5.013	70.481	19.535	3.815	0.115	0.232	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1377.13
3	0.7220	1153.3	1173.7	1170.5	0.771	5.011	70.397	19.618	3.830	0.114	0.234	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1378.00
4	0.7130	1145.1	1165.4	1162.3	0.688	4.792	71.621	19.189	3.399	0.097	0.194	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1376.86
5	0.7177	1146.4	1166.7	1163.5	0.797	5.001	71.015	19.227	3.609	0.109	0.218	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1373.70
6	0.7196	1148.1	1168.5	1165.3	0.811	5.047	70.740	19.353	3.689	0.110	0.224	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1374.03
7	0.7168	1146.4	1166.7	1163.5	0.754	4.976	71.055	19.340	3.547	0.102	0.205	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1374.67
8	0.7063	1138.7	1158.9	1155.8	0.676	4.573	72.627	18.763	3.084	0.086	0.172	0.010	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1375.64
9	0.6987	1129.7	1149.7	1146.6	0.673	4.411	73.989	17.780	2.878	0.084	0.166	0.010	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1372.13
10	0.6991	1130.2	1150.2	1147.1	0.698	4.381	73.911	17.892	2.843	0.085	0.169	0.011	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1372.35
11	0.6958	1127.3	1147.2	1144.1	0.675	4.290	74.355	17.745	2.686	0.078	0.153	0.009	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1372.00
12	0.6944	1125.5	1145.4	1142.1	0.757	4.139	74.810	17.343	2.675	0.085	0.167	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1371.15
13	0.7014	1131.9	1152.0	1148.8	0.776	4.374	73.678	17.931	2.940	0.092	0.184	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1372.13
14	0.7061	1138.8	1159.0	1155.8	0.775	4.402	73.068	18.213	3.186	0.105	0.217	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1375.80
15	0.6930	1124.0	1144.0	1140.8	0.737	4.126	75.039	17.184	2.642	0.084	0.164	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1370.79
16	0.6903	1120.5	1140.3	1137.1	0.753	4.062	75.547	16.810	2.552	0.084	0.166	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1369.12
17	0.6880	1119.1	1139.0	1135.7	0.758	3.920	75.988	16.575	2.481	0.084	0.166	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1369.74
18	0.6890	1118.2	1138.0	1134.8	0.764	4.062	75.867	16.440	2.583	0.086	0.171	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1367.62
19	0.6946	1126.7	1146.6	1143.3	0.789	4.039	75.034	17.040	2.770	0.096	0.197	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1372.32
20	0.6952	1126.5	1146.5	1143.2	0.800	4.091	74.837	17.221	2.744	0.092	0.186	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1371.52
21	0.6996	1131.1	1151.2	1147.9	0.815	4.189	74.344	17.269	3.022	0.104	0.220	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1372.90
22	0.7152	1146.9	1167.2	1163.8	0.847	4.649	71.835	18.640	3.596	0.123	0.268	0.020	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1376.71
23	0.7228	1149.3	1169.7	1166.4	0.890	5.154	70.469	19.230	3.814	0.126	0.274	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1372.33
24	0.7238	1152.4	1172.8	1169.5	0.881	5.078	70.262	19.513	3.826	0.126	0.272	0.019	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1375.03
25	0.7170	1146.6	1166.9	1163.7	0.802	4.907	71.169	19.208	3.546	0.109	0.227	0.015	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1374.72
26	0.7181	1147.2	1167.5	1164.3	0.830	4.929	71.056	19.191	3.622	0.111	0.231	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1374.40
27	0.7174	1145.0	1165.2	1162.0	0.812	5.028	71.163	19.004	3.627	0.109	0.227	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1372.35
28	0.7145	1143.6	1163.9	1160.7	0.794	4.870	71.564	18.941	3.484	0.105	0.215	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1373.50
29	0.7145	1145.0	1165.3	1162.1	0.787	4.790	71.587	19.009	3.471	0.107	0.219	0.015	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1375.24
30	0.7132	1143.9	1164.2	1161.0	0.778	4.750	71.759	18.960	3.410	0.103	0.211	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1375.16
31	0.7122	1142.3	1162.5	1159.3	0.787	4.740	71.951	18.804	3.371	0.103	0.212	0.015	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1374.14
Avg	0.7079	1138.0	1158.5	1155.2	0.774	4.597	72.675	18.390	3.230	0.101	0.205	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1373.54

Zone 293

Source Daily Summary

January 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	0.6703	1116.3	1136.1	1132.9	0.329	3.091	78.072	16.759	1.641	0.038	0.059	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1384.28	
2	0.6748	1122.9	1142.8	1139.6	0.283	3.187	77.027	17.791	1.622	0.032	0.050	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1387.80	
3	0.6748	1120.5	1140.3	1137.3	0.292	3.321	76.960	17.755	1.585	0.032	0.049	0.003	0.003	0.000	0.000	0.000	0.000	0.000	1384.86	
4	0.6665	1108.1	1127.7	1124.5	0.383	3.151	78.763	16.108	1.478	0.040	0.064	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1378.00	
5	0.6665	1108.7	1128.4	1125.2	0.303	3.232	78.597	16.313	1.464	0.032	0.050	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1378.85	
6	0.6701	1113.7	1133.5	1130.4	0.230	3.376	77.763	17.047	1.511	0.027	0.040	0.003	0.002	0.000	0.000	0.000	0.000	0.000	1381.42	
7	0.6688	1111.9	1131.6	1128.5	0.269	3.309	78.118	16.691	1.528	0.031	0.047	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1380.45	
8	0.6618	1098.4	1117.8	1114.7	0.366	3.325	79.729	14.935	1.524	0.042	0.067	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1370.79	
9	0.6602	1096.2	1115.6	1112.5	0.394	3.260	79.999	14.806	1.421	0.041	0.066	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1369.80	
10	0.6616	1098.9	1118.3	1115.2	0.401	3.226	79.756	15.033	1.459	0.043	0.069	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1371.59	
11	0.6571	1094.3	1113.7	1110.4	0.575	2.816	80.983	14.042	1.415	0.055	0.091	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1370.42	
12	0.6567	1093.0	1112.4	1109.1	0.564	2.868	81.031	13.978	1.394	0.053	0.089	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1369.32	
13	0.6589	1096.8	1116.2	1112.9	0.551	2.866	80.626	14.334	1.460	0.053	0.088	0.011	0.010	0.000	0.000	0.000	0.000	0.000	1371.70	
14	0.6583	1095.8	1115.2	1111.9	0.556	2.868	80.730	14.245	1.436	0.054	0.090	0.011	0.010	0.000	0.000	0.000	0.000	0.000	1371.02	
15	0.6558	1091.7	1111.0	1107.8	0.597	2.818	81.238	13.809	1.365	0.056	0.093	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1368.53	
16	0.6568	1093.6	1113.0	1109.7	0.609	2.774	81.093	13.963	1.384	0.057	0.096	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1369.91	
17	0.6572	1094.3	1113.7	1110.4	0.598	2.790	81.047	13.949	1.431	0.058	0.100	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1370.31	
18	0.6567	1093.2	1112.5	1109.2	0.630	2.758	81.191	13.813	1.421	0.059	0.100	0.014	0.012	0.000	0.000	0.000	0.000	0.000	1369.46	
19	0.6557	1090.8	1110.1	1106.8	0.623	2.826	81.349	13.608	1.414	0.057	0.097	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1367.42	
20	0.6552	1090.3	1109.6	1106.3	0.632	2.795	81.468	13.509	1.415	0.058	0.097	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1367.35	
21	0.6559	1091.1	1110.4	1107.1	0.607	2.848	81.376	13.489	1.501	0.058	0.096	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1367.63	
22	0.6573	1093.1	1112.5	1109.1	0.594	2.873	81.093	13.741	1.524	0.056	0.094	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1368.76	
23	0.6607	1098.2	1117.7	1114.4	0.480	3.061	80.183	14.585	1.551	0.047	0.075	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1371.59	
24	0.6770	1119.4	1139.2	1136.1	0.399	3.426	77.060	17.048	1.930	0.049	0.077	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1381.24	
25	0.6683	1107.7	1127.3	1124.1	0.445	3.250	78.635	15.894	1.642	0.046	0.074	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1375.63	
26	0.6673	1107.4	1127.0	1123.8	0.389	3.262	78.804	15.730	1.697	0.042	0.065	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1376.27	
27	0.6696	1110.7	1130.4	1127.2	0.390	3.269	78.419	16.039	1.757	0.044	0.069	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1378.06	
28	0.6706	1112.3	1132.0	1128.8	0.424	3.222	78.184	16.351	1.686	0.046	0.073	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1378.94	
29	0.6718	1114.1	1133.9	1130.6	0.442	3.189	78.043	16.446	1.740	0.048	0.077	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1380.04	
30	0.6689	1110.2	1129.9	1126.6	0.468	3.121	78.602	15.999	1.665	0.049	0.079	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1378.08	
31	0.6615	1099.1	1118.6	1115.3	0.447	3.126	79.959	14.809	1.518	0.047	0.076	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1371.98	
Avg	0.6636	1103.0	1122.5	1119.3	0.460	3.074	79.545	15.246	1.535	0.047	0.076	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1374.56	

Zone 28

Source Daily Summary

January 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	0.6737	1121.9	1141.8	1139.0	0.271	3.160	77.225	17.620	1.637	0.032	0.049	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1387.83
2	0.6741	1119.9	1139.7	1136.9	0.293	3.282	77.122	17.617	1.600	0.033	0.051	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1385.00
3	0.6685	1112.0	1131.7	1128.9	0.329	3.185	78.268	16.591	1.528	0.035	0.056	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1380.91
4	0.6653	1107.6	1127.2	1124.4	0.294	3.205	78.795	16.163	1.455	0.032	0.050	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1378.73
5	0.6698	1114.4	1134.2	1131.4	0.223	3.315	77.826	17.031	1.536	0.027	0.040	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1382.67
6	0.6680	1111.3	1131.0	1128.2	0.238	3.314	78.191	16.676	1.508	0.029	0.042	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1380.66
7	0.6638	1103.3	1122.9	1120.1	0.311	3.301	79.199	15.547	1.542	0.037	0.056	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1374.95
8	0.6606	1098.2	1117.6	1114.8	0.371	3.223	79.905	14.902	1.482	0.041	0.065	0.006	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1371.83
9	0.6599	1096.9	1116.3	1113.5	0.371	3.232	79.993	14.862	1.428	0.039	0.064	0.006	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1370.99
10	0.6590	1097.2	1116.6	1113.7	0.476	2.963	80.430	14.535	1.451	0.047	0.079	0.009	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1372.31
11	0.6557	1092.9	1112.2	1109.3	0.533	2.830	81.161	13.923	1.392	0.052	0.088	0.011	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1370.33
12	0.6569	1094.9	1114.3	1111.4	0.525	2.829	80.959	14.083	1.446	0.051	0.086	0.011	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1371.65
13	0.6586	1097.7	1117.1	1114.2	0.517	2.832	80.611	14.427	1.456	0.051	0.085	0.011	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1373.34
14	0.6557	1092.2	1111.5	1108.6	0.565	2.828	81.189	13.862	1.392	0.053	0.089	0.011	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1369.40
15	0.6556	1092.1	1111.4	1108.6	0.610	2.748	81.279	13.817	1.375	0.055	0.093	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1369.49
16	0.6560	1093.1	1112.4	1109.6	0.589	2.764	81.181	13.900	1.398	0.054	0.092	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1370.23
17	0.6566	1093.5	1112.9	1110.0	0.635	2.726	81.221	13.763	1.464	0.060	0.104	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1370.08
18	0.6556	1091.3	1110.6	1107.7	0.640	2.759	81.337	13.682	1.408	0.056	0.094	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1368.35
19	0.6549	1090.2	1109.5	1106.6	0.637	2.763	81.485	13.527	1.414	0.056	0.094	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1367.76
20	0.6553	1090.7	1110.0	1107.2	0.622	2.791	81.426	13.529	1.459	0.057	0.094	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1368.01
21	0.6562	1092.6	1112.0	1109.1	0.595	2.805	81.253	13.666	1.512	0.055	0.091	0.012	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1369.39
22	0.6564	1092.1	1111.5	1108.6	0.507	2.984	80.999	13.898	1.473	0.047	0.076	0.009	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1368.63
23	0.6756	1119.0	1138.8	1136.0	0.373	3.358	77.272	16.958	1.912	0.046	0.073	0.005	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1382.27
24	0.6708	1111.4	1131.1	1128.3	0.415	3.301	78.147	16.265	1.745	0.045	0.072	0.006	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1377.86
25	0.6654	1105.2	1124.7	1121.9	0.393	3.215	79.133	15.477	1.664	0.042	0.065	0.006	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1375.55
26	0.6686	1110.1	1129.8	1127.0	0.389	3.218	78.598	15.892	1.781	0.043	0.067	0.006	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1378.44
27	0.6698	1111.5	1131.2	1128.4	0.399	3.226	78.305	16.243	1.704	0.043	0.068	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1378.97
28	0.6703	1112.8	1132.5	1129.7	0.417	3.166	78.258	16.314	1.716	0.045	0.071	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1380.06
29	0.6693	1111.4	1131.1	1128.2	0.458	3.104	78.521	16.062	1.714	0.049	0.078	0.008	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1379.24
30	0.6633	1102.4	1121.9	1119.0	0.451	3.091	79.594	15.174	1.550	0.047	0.075	0.009	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1374.30
31	0.6661	1108.1	1127.8	1124.9	0.372	3.129	79.010	15.689	1.682	0.041	0.064	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1378.54
Avg	0.6631	1103.0	1122.4	1119.5	0.446	3.053	79.610	15.216	1.543	0.045	0.073	0.008	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1375.09

Zone 31

Source Daily Summary

January 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	0.6384	1057.6	1076.4	1073.1	0.307	3.699	83.977	10.744	1.175	0.035	0.055	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1343.97
2	0.6385	1057.8	1076.5	1073.3	0.306	3.701	83.951	10.769	1.176	0.035	0.055	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1344.07
3	0.6386	1057.8	1076.6	1073.3	0.307	3.701	83.945	10.773	1.176	0.035	0.055	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1344.08
4	0.6386	1057.9	1076.6	1073.3	0.307	3.700	83.944	10.774	1.177	0.035	0.055	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1344.11
5	0.6385	1057.7	1076.5	1073.2	0.306	3.699	83.962	10.760	1.176	0.035	0.055	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1344.06
6	0.6385	1057.7	1076.5	1073.2	0.306	3.699	83.963	10.759	1.175	0.035	0.055	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1344.05
7	0.6304	1044.8	1063.3	1060.2	0.284	3.758	85.447	9.372	1.050	0.033	0.049	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1336.13
8	0.6278	1041.2	1059.6	1056.5	0.278	3.751	85.905	8.980	1.001	0.032	0.047	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1334.16
9	0.6334	1049.9	1068.5	1065.4	0.296	3.719	84.900	9.885	1.107	0.034	0.051	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1339.36
10	0.6466	1081.3	1100.5	1096.5	0.980	1.997	83.994	11.283	1.472	0.083	0.146	0.023	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1364.92
11	0.6485	1086.3	1105.5	1101.4	1.106	1.681	83.918	11.467	1.521	0.092	0.163	0.026	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1369.09
12	0.6486	1086.4	1105.6	1101.5	1.109	1.676	83.920	11.467	1.522	0.092	0.163	0.027	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1369.14
13	0.6480	1085.7	1104.9	1100.7	1.119	1.649	84.057	11.349	1.517	0.093	0.164	0.027	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1368.83
14	0.6486	1085.8	1105.0	1100.9	1.061	1.790	83.769	11.601	1.492	0.087	0.153	0.025	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1368.36
15	0.6486	1085.6	1104.8	1100.7	1.060	1.799	83.765	11.603	1.488	0.086	0.152	0.024	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1368.19
16	0.6467	1083.6	1102.7	1098.6	1.129	1.635	84.297	11.157	1.478	0.091	0.161	0.027	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1367.61
17	0.6466	1083.0	1102.2	1098.1	1.108	1.696	84.249	11.181	1.469	0.089	0.157	0.026	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1366.98
18	0.6498	1086.3	1105.5	1101.5	0.970	2.006	83.324	11.967	1.470	0.081	0.140	0.022	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1367.87
19	0.6466	1082.7	1101.9	1097.8	1.093	1.735	84.200	11.224	1.460	0.087	0.153	0.025	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1366.68
20	0.6465	1082.7	1101.9	1097.8	1.070	1.764	84.195	11.212	1.471	0.088	0.152	0.025	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1366.74
21	0.6448	1080.7	1099.8	1095.6	1.126	1.641	84.620	10.875	1.442	0.090	0.157	0.026	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1365.95
22	0.6405	1074.4	1093.4	1089.3	1.200	1.506	85.531	10.081	1.387	0.090	0.155	0.027	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1362.56
23	0.6409	1075.0	1094.0	1089.9	1.171	1.553	85.380	10.225	1.386	0.087	0.149	0.025	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1362.89
24	0.6414	1075.5	1094.5	1090.4	1.156	1.594	85.250	10.337	1.378	0.087	0.150	0.025	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1362.96
25	0.6423	1077.6	1096.7	1092.5	1.162	1.540	85.149	10.445	1.407	0.090	0.156	0.027	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1364.67
26	0.6443	1080.7	1099.8	1095.6	1.116	1.606	84.776	10.735	1.455	0.094	0.164	0.028	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1366.47
27	0.6445	1081.0	1100.2	1095.9	1.115	1.608	84.742	10.757	1.467	0.095	0.164	0.028	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1366.67
28	0.6444	1081.0	1100.2	1095.9	1.119	1.593	84.778	10.730	1.464	0.095	0.166	0.029	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1366.73
29	0.6442	1080.7	1099.9	1095.6	1.118	1.594	84.812	10.700	1.459	0.095	0.166	0.029	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1366.55
30	0.6438	1080.4	1099.5	1095.2	1.130	1.563	84.919	10.613	1.456	0.097	0.167	0.029	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1366.48
31	0.6453	1081.1	1100.2	1096.0	1.025	1.821	84.381	11.034	1.447	0.089	0.154	0.026	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1365.86
Avg	0.6427	1074.0	1092.6	1088.7	0.869	2.273	84.452	10.802	1.365	0.074	0.127	0.020	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1359.23

Zone 32

Source Daily Summary

January 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	0.6849	1152.9	1173.3	1168.4	0.000	2.749	73.569	23.046	0.623	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.44	-26.78
2	0.6850	1153.0	1173.4	1168.9	0.000	2.749	73.549	23.073	0.615	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.49	-26.77
3	0.6850	1153.1	1173.5	1168.3	0.000	2.745	73.550	23.066	0.624	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.61	-26.71
4	0.6851	1153.0	1173.4	1168.8	0.000	2.760	73.526	23.082	0.618	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.37	-26.73
5	0.6848	1152.6	1173.0	1168.2	0.000	2.759	73.580	23.037	0.610	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.14	-26.91
6	0.6848	1152.5	1172.9	1167.9	0.000	2.758	73.596	23.013	0.618	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.12	-26.90
7	0.6842	1151.8	1172.2	1167.4	0.000	2.749	73.688	22.960	0.590	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.81	-27.28
8	0.6841	1152.0	1172.4	1167.4	0.000	2.726	73.706	22.976	0.580	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.18	-27.33
9	0.6838	1151.4	1171.8	1167.1	0.000	2.730	73.741	22.960	0.556	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.83	-27.58
10	0.6844	1152.1	1172.5	1167.3	0.000	2.746	73.650	23.006	0.585	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.01	-27.21
11	0.6848	1152.8	1173.2	1168.1	0.000	2.743	73.572	23.079	0.593	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.44	-26.95
12	0.6851	1153.0	1173.4	1168.7	0.000	2.764	73.509	23.106	0.607	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.33	-26.76
13	0.6849	1152.8	1173.2	1168.3	0.000	2.753	73.540	23.107	0.586	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.33	-26.94
14	0.6849	1152.4	1172.8	1167.3	0.000	2.777	73.535	23.092	0.583	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.85	-27.01
15	0.6849	1152.5	1172.9	1167.8	0.000	2.773	73.535	23.088	0.590	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.96	-26.96
16	0.6845	1152.1	1172.5	1167.5	0.000	2.760	73.588	23.077	0.561	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.89	-27.23
17	0.6856	1152.8	1173.2	1168.9	0.000	2.815	73.357	23.263	0.551	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.69	-26.84
18	0.6874	1154.5	1174.9	1170.2	0.000	2.888	72.991	23.536	0.570	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.79	-26.00
19	0.6893	1156.0	1176.5	1170.9	0.000	2.972	72.652	23.732	0.627	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.73	-25.01
20	0.6891	1155.9	1176.3	1171.4	0.000	2.961	72.706	23.674	0.642	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.79	-25.02
21	0.6894	1156.5	1177.0	1172.3	0.000	2.950	72.663	23.721	0.650	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.25	-24.83
22	0.6888	1155.8	1176.2	1171.7	0.000	2.935	72.775	23.641	0.633	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.00	-25.18
23	0.6896	1156.3	1176.7	1171.9	0.000	2.986	72.621	23.716	0.661	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.73	-24.75
24	0.6880	1154.8	1175.3	1170.6	0.000	2.924	72.914	23.519	0.628	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.62	-25.54
25	0.6880	1155.1	1175.5	1170.9	0.000	2.909	72.936	23.497	0.642	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.90	-25.46
26	0.6882	1155.4	1175.9	1171.2	0.000	2.908	72.892	23.547	0.638	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.10	-25.37
27	0.6884	1155.7	1176.1	1171.4	0.000	2.905	72.867	23.566	0.646	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.29	-25.25
28	0.6880	1154.9	1175.3	1170.5	0.000	2.921	72.930	23.494	0.639	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.67	-25.49
29	0.6883	1155.9	1176.4	1171.5	0.000	2.880	72.893	23.570	0.641	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.68	-25.28
30	0.6880	1155.2	1175.6	1171.2	0.000	2.895	72.925	23.548	0.615	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.12	-25.56
31	0.6893	1157.5	1178.0	1173.1	0.000	2.882	72.699	23.739	0.664	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.54	-24.68
Avg	0.6865	1154.0	1174.4	1169.5	0.000	2.831	73.234	23.307	0.612	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.12	-26.20

Zone 33

Source Daily Summary

January 2020

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	0.6579	1087.8	1107.0	1103.9	0.401	3.555	80.585	13.757	1.565	0.047	0.077	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1361.54	
2	0.6576	1086.4	1105.7	1102.6	0.363	3.663	80.553	13.748	1.544	0.045	0.073	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1360.24	
3	0.6568	1084.4	1103.6	1100.5	0.351	3.732	80.670	13.594	1.525	0.045	0.072	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1358.46	
4	0.6562	1083.1	1102.3	1099.2	0.345	3.755	80.799	13.441	1.533	0.044	0.071	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1357.59	
5	0.6560	1082.9	1102.1	1099.1	0.337	3.770	80.811	13.420	1.540	0.044	0.069	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1357.48	
6	0.6561	1083.0	1102.2	1099.2	0.350	3.747	80.817	13.433	1.525	0.045	0.072	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1357.54	
7	0.6566	1084.2	1103.4	1100.4	0.353	3.720	80.712	13.560	1.528	0.045	0.072	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1358.50	
8	0.6567	1084.5	1103.7	1100.7	0.355	3.712	80.692	13.582	1.530	0.045	0.072	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1358.70	
9	0.6386	1051.9	1070.5	1067.7	0.305	4.067	83.959	10.348	1.206	0.041	0.063	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1336.45	
10	0.6365	1048.1	1066.7	1063.8	0.300	4.110	84.332	9.976	1.168	0.041	0.062	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1333.84	
11	0.6392	1052.9	1071.5	1068.6	0.308	4.057	83.862	10.437	1.219	0.041	0.063	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1337.11	
12	0.6390	1052.4	1071.0	1068.0	0.308	4.076	83.894	10.381	1.222	0.042	0.064	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1336.59	
13	0.6391	1052.8	1071.4	1068.5	0.309	4.058	83.873	10.427	1.219	0.041	0.063	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1337.04	
14	0.6387	1052.1	1070.7	1067.8	0.308	4.064	83.946	10.357	1.210	0.041	0.062	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1336.55	
15	0.6380	1050.8	1069.4	1066.5	0.307	4.076	84.078	10.224	1.199	0.041	0.062	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1335.67	
16	0.6393	1053.1	1071.8	1068.9	0.313	4.043	83.869	10.425	1.232	0.042	0.064	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1337.33	
17	0.6396	1053.8	1072.5	1069.6	0.315	4.034	83.805	10.488	1.239	0.042	0.065	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1337.78	
18	0.6400	1054.6	1073.3	1070.3	0.318	4.019	83.740	10.556	1.248	0.043	0.065	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1338.37	
19	0.6394	1053.4	1072.0	1069.1	0.317	4.033	83.864	10.425	1.242	0.043	0.065	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1337.51	
20	0.6390	1052.6	1071.2	1068.2	0.317	4.046	83.936	10.345	1.236	0.043	0.065	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1336.90	
21	0.6372	1049.5	1068.1	1065.1	0.316	4.068	84.267	10.023	1.206	0.043	0.065	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1334.81	
22	0.6436	1061.3	1080.1	1077.1	0.329	3.927	83.109	11.202	1.309	0.044	0.067	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1343.12	
23	0.6460	1065.9	1084.8	1081.8	0.335	3.863	82.670	11.664	1.344	0.044	0.068	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1346.50	
24	0.6458	1065.6	1084.4	1081.5	0.335	3.868	82.704	11.624	1.344	0.044	0.068	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1346.23	
25	0.6449	1064.0	1082.8	1079.8	0.333	3.882	82.866	11.469	1.326	0.044	0.067	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1345.18	
26	0.6447	1063.7	1082.5	1079.5	0.332	3.890	82.894	11.434	1.326	0.044	0.068	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1344.90	
27	0.6452	1064.5	1083.4	1080.4	0.334	3.876	82.818	11.512	1.335	0.044	0.068	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1345.52	
28	0.6436	1061.1	1079.9	1076.9	0.343	3.920	83.149	11.135	1.323	0.046	0.071	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1342.87	
29	0.6413	1057.1	1075.8	1072.8	0.328	3.974	83.535	10.760	1.279	0.044	0.068	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1340.16	
30	0.6404	1055.8	1074.5	1071.5	0.327	3.965	83.709	10.619	1.257	0.044	0.066	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1339.49	
31	0.6417	1058.3	1077.0	1074.0	0.331	3.926	83.476	10.866	1.277	0.044	0.067	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1341.34	
Avg	0.6450	1064.0	1082.4	1079.5	0.330	3.919	82.839	11.459	1.331	0.043	0.067	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1344.56	

Zone 34

Source Daily Summary

January 2020

Number: 471

Pressure Base: 14.730

Contract Day:

Name: SPRING CREEK I - SAX VALVE I

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	0.6915	1136.3	1156.4	1153.4	1.059	2.772	72.889	23.015	0.263	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.43	-27.98
2	0.6919	1136.7	1156.8	1153.8	1.054	2.797	72.883	22.910	0.346	0.004	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.45	-27.41
3	0.6906	1134.5	1154.6	1151.7	1.059	2.797	73.059	22.821	0.261	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.15	-28.49
4	0.6912	1135.8	1155.9	1152.9	1.062	2.776	73.005	22.828	0.324	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.05	-27.86
5	0.6911	1135.8	1155.9	1153.0	1.059	2.760	72.969	22.949	0.260	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.31	-28.17
6	0.6903	1134.3	1154.4	1151.5	1.058	2.779	73.110	22.806	0.244	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.25	-28.68
7	0.6901	1133.9	1154.0	1151.1	1.061	2.782	73.146	22.767	0.242	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1385.97	-28.80
8	0.6910	1135.4	1155.5	1152.5	1.064	2.777	72.964	22.947	0.245	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.79	-28.28
9	0.6861	1132.1	1152.2	1149.2	1.048	2.530	74.334	21.510	0.577	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.79	-29.14
10	0.6878	1133.7	1153.7	1150.8	1.048	2.599	73.953	21.843	0.544	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.94	-28.33
11	0.6869	1132.4	1152.5	1149.5	1.048	2.584	74.155	21.648	0.554	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.40	-28.79
12	0.6888	1135.7	1155.8	1152.8	1.045	2.577	73.885	21.809	0.662	0.008	0.013	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1389.34	-27.17
13	0.6872	1133.1	1153.2	1150.2	1.047	2.575	74.045	21.804	0.524	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.91	-28.78
14	0.6861	1132.4	1152.4	1149.5	1.047	2.521	74.343	21.495	0.586	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.05	-28.95
15	0.6869	1134.6	1154.6	1151.7	1.050	2.456	74.135	21.830	0.517	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1389.94	-28.61
16	0.6863	1134.0	1154.1	1151.1	1.055	2.429	74.133	21.977	0.396	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1389.84	-29.33
17	0.6868	1133.0	1153.1	1150.1	1.029	2.576	73.888	22.199	0.304	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.13	-29.72
18	0.6894	1136.8	1156.9	1154.0	1.022	2.602	73.369	22.675	0.327	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1390.11	-28.31
19	0.6873	1133.6	1153.7	1150.8	1.029	2.582	73.822	22.228	0.333	0.003	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.44	-29.35
20	0.6863	1134.1	1154.2	1151.3	1.053	2.424	74.011	22.229	0.283	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1390.02	-29.83
21	0.6862	1133.7	1153.8	1150.9	1.056	2.437	74.027	22.191	0.286	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1389.59	-29.88
22	0.6886	1136.8	1156.9	1153.9	1.054	2.473	73.703	22.335	0.422	0.005	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1390.96	-28.10
23	0.6889	1136.6	1156.7	1153.8	1.057	2.513	73.679	22.268	0.466	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1390.37	-27.80
24	0.6888	1136.8	1156.9	1154.0	1.053	2.498	73.690	22.280	0.462	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1390.74	-27.81
25	0.6885	1136.1	1156.2	1153.3	1.054	2.505	73.743	22.236	0.446	0.006	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1390.26	-28.08
26	0.6884	1135.9	1156.0	1153.1	1.060	2.496	73.764	22.231	0.436	0.005	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1390.14	-28.22
27	0.6850	1131.1	1151.1	1148.1	1.049	2.487	74.575	21.303	0.578	0.003	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.64	-29.53
28	0.6795	1122.0	1141.8	1139.0	1.071	2.491	75.550	20.474	0.406	0.003	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1382.03	-33.27
29	0.6843	1131.0	1151.0	1148.1	1.057	2.419	74.419	21.824	0.278	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.23	-30.89
30	0.6838	1130.1	1150.1	1147.2	1.057	2.431	74.465	21.812	0.234	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.58	-31.35
31	0.6842	1130.4	1150.4	1147.5	1.061	2.440	74.392	21.873	0.233	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.60	-31.20
Avg	0.6877	1134.0	1153.9	1151.0	1.052	2.577	73.810	22.165	0.388	0.003	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.21	-28.97

Zone 43

January-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	
1/1/2020	1/2/2020	1831	2018	1.1023	2225	2528	1.1361	1.121	1/1/2020
1/2/2020	1/3/2020	1846	2035	1.1020	2482	2836	1.1428	1.125	1/2/2020
1/3/2020	1/4/2020	1809	1988	1.0993	3516	4009	1.1403	1.126	1/3/2020
1/4/2020	1/5/2020	1840	2026	1.1012	2473	2789	1.1277	1.116	1/4/2020
1/5/2020	1/6/2020	1830	2016	1.1021	2919	3298	1.1284	1.118	1/5/2020
1/6/2020	1/7/2020	1849	2039	1.1027	3371	3819	1.1335	1.123	1/6/2020
1/7/2020	1/8/2020	2728	3004	1.1005	5020	5680	1.1316	1.121	1/7/2020
1/8/2020	1/9/2020	1789	1976	1.1043	5377	6010	1.1178	1.114	1/8/2020
1/9/2020	1/10/2020	1839	2027	1.1017	5650	6305	1.1156	1.112	1/9/2020
1/10/2020	1/11/2020	1811	2011	1.1109	6511	7281	1.1183	1.117	1/10/2020
1/11/2020	1/12/2020	1811	2002	1.1058	6055	6744	1.1137	1.112	1/11/2020
1/12/2020	1/13/2020	1816	2007	1.1051	4812	5353	1.1124	1.110	1/12/2020
1/13/2020	1/14/2020	1812	2002	1.1051	5971	6666	1.1162	1.114	1/13/2020
1/14/2020	1/15/2020	1783	1975	1.1078	7302	8142	1.1152	1.114	1/14/2020
1/15/2020	1/16/2020	1803	2004	1.1112	8169	9076	1.1110	1.111	1/15/2020
1/16/2020	1/17/2020	1769	1958	1.1070	7206	8021	1.1130	1.112	1/16/2020
1/17/2020	1/18/2020	1820	2005	1.1018	6496	7237	1.1137	1.111	1/17/2020
1/18/2020	1/19/2020	1769	1956	1.1053	8290	9222	1.1125	1.111	1/18/2020
1/19/2020	1/20/2020	1744	1921	1.1016	7119	7903	1.1101	1.108	1/19/2020
1/20/2020	1/21/2020	1825	2014	1.1037	6035	6695	1.1096	1.108	1/20/2020
1/21/2020	1/22/2020	1788	1964	1.0983	3837	4260	1.1104	1.107	1/21/2020
1/22/2020	1/23/2020	1826	2004	1.0974	3268	3635	1.1125	1.107	1/22/2020
1/23/2020	1/24/2020	1849	2037	1.1020	3867	4324	1.1177	1.113	1/23/2020
1/24/2020	1/25/2020	1852	2035	1.0991	4126	4700	1.1392	1.127	1/24/2020
1/25/2020	1/26/2020	1821	1993	1.0945	2931	3305	1.1273	1.115	1/25/2020
1/26/2020	1/27/2020	1825	2002	1.0969	3282	3700	1.1270	1.116	1/26/2020
1/27/2020	1/28/2020	1832	2011	1.0977	3066	3465	1.1304	1.118	1/27/2020
1/28/2020	1/29/2020	1846	2018	1.0934	2738	3097	1.1320	1.116	1/28/2020
1/29/2020	1/30/2020	1838	2013	1.0952	3400	3856	1.1339	1.120	1/29/2020
1/30/2020	1/31/2020	2052	2250	1.0965	3518	3974	1.1299	1.118	1/30/2020
1/31/2020	2/1/2020	1855	2035	1.0968	2971	3323	1.1186	1.110	1/31/2020
		57,508	63,346	1.1016	144,003	161,253	1.1225	1.1152	



Alliance Pipeline

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

DAY	Heating Value (BTU/R3)	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	1,157.281	0.6630	83.9791	9.8958	3.6343	0.3572	0.6279	0.0511	0.0368	0.0171	0.9924	0.3983	0.0102
2	1,158.767	0.6648	83.7350	9.9719	3.6930	0.3646	0.6537	0.0518	0.0367	0.0170	1.0606	0.4057	0.0100
3	1,158.835	0.6648	83.7540	9.9391	3.7102	0.3663	0.6579	0.0487	0.0354	0.0172	1.0563	0.4049	0.0101
4	1,160.608	0.6656	83.7227	9.8964	3.7891	0.3706	0.6709	0.0514	0.0361	0.0201	1.0313	0.4012	0.0102
5	1,159.452	0.6647	83.8686	9.7591	3.7966	0.3664	0.6683	0.0493	0.0358	0.0189	1.0389	0.3881	0.0100
6	1,159.879	0.6650	83.8622	9.7159	3.8217	0.3712	0.6756	0.0518	0.0383	0.0194	1.0529	0.3809	0.0100
7	1,159.620	0.6647	83.9267	9.6754	3.8131	0.3723	0.6753	0.0518	0.0384	0.0194	1.0339	0.3837	0.0101
8	1,158.043	0.6639	83.9825	9.6349	3.8209	0.3607	0.6489	0.0484	0.0347	0.0176	1.0546	0.3864	0.0103
9	1,158.299	0.6644	83.9182	9.6446	3.8499	0.3588	0.6504	0.0494	0.0348	0.0170	1.0794	0.3874	0.0101
10	1,158.656	0.6645	83.9679	9.5850	3.8275	0.3727	0.6756	0.0523	0.0366	0.0172	1.0675	0.3877	0.0100
11	1,157.961	0.6636	84.0645	9.5971	3.7861	0.3665	0.6576	0.0521	0.0362	0.0168	1.0208	0.3922	0.0102
12	1,159.853	0.6651	83.8668	9.6803	3.8488	0.3728	0.6768	0.0517	0.0360	0.0169	1.0490	0.3907	0.0101
13	1,160.854	0.6659	83.7568	9.7259	3.9003	0.3754	0.6780	0.0512	0.0353	0.0152	1.0512	0.4003	0.0104
14	1,161.129	0.6657	83.7826	9.7208	3.9120	0.3749	0.6744	0.0502	0.0349	0.0152	1.0378	0.3870	0.0101
15	1,160.531	0.6654	83.7739	9.7686	3.8987	0.3656	0.6524	0.0495	0.0353	0.0157	1.0458	0.3843	0.0103
16	1,160.589	0.6652	83.8479	9.6998	3.9016	0.3712	0.6607	0.0506	0.0354	0.0146	1.0185	0.3893	0.0105
17	1,161.459	0.6662	83.6962	9.7810	3.9403	0.3703	0.6617	0.0510	0.0345	0.0144	1.0474	0.3927	0.0102
18	1,162.591	0.6677	83.5538	9.6924	4.0571	0.3791	0.6911	0.0514	0.0340	0.0133	1.1251	0.3922	0.0105
19	1,160.390	0.6654	83.7934	9.7167	3.8979	0.3704	0.6668	0.0513	0.0342	0.0145	1.0621	0.3816	0.0111
20	1,159.175	0.6638	84.0438	9.6127	3.8492	0.3673	0.6508	0.0498	0.0337	0.0154	0.9889	0.3782	0.0102
21	1,156.781	0.6618	84.2421	9.6649	3.6751	0.3584	0.6336	0.0488	0.0333	0.0153	0.9419	0.3763	0.0103
22	1,160.734	0.6657	83.7209	9.8078	3.8543	0.3687	0.6883	0.0491	0.0332	0.0153	1.0752	0.3772	0.0101
23	1,159.995	0.6651	83.8125	9.7457	3.8533	0.3657	0.6761	0.0467	0.0331	0.0167	1.0629	0.3773	0.0100
24	1,157.803	0.6636	83.9793	9.7133	3.7475	0.3606	0.6570	0.0487	0.0339	0.0180	1.0557	0.3759	0.0101
25	1,159.407	0.6646	83.8898	9.7654	3.7477	0.3753	0.6818	0.0521	0.0373	0.0181	1.0407	0.3819	0.0101
26	1,161.174	0.6658	83.8093	9.7237	3.8136	0.3869	0.7099	0.0571	0.0396	0.0191	1.0428	0.3879	0.0100
27	1,161.326	0.6660	83.7442	9.8103	3.8034	0.3842	0.7022	0.0552	0.0390	0.0184	1.0374	0.3955	0.0101
28	1,160.213	0.6652	83.7961	9.7960	3.8310	0.3650	0.6718	0.0502	0.0348	0.0168	1.0373	0.3908	0.0102
29	1,160.212	0.6654	83.7417	9.8354	3.8338	0.3624	0.6687	0.0504	0.0342	0.0163	1.0559	0.3910	0.0101
30	1,158.595	0.6640	83.9036	9.7931	3.7866	0.3510	0.6435	0.0491	0.0332	0.0162	1.0268	0.3867	0.0102
31	1,157.631	0.6627	84.0608	9.8105	3.6773	0.3513	0.6374	0.0500	0.0345	0.0163	0.9633	0.3885	0.0101
Volume	1,159.625	0.6648	83.8573	9.7481	3.8187	0.3680	0.6661	0.0507	0.0355	0.0167	1.0401	0.3884	0.0102
Weight Avg Energy	1,159.627	0.6648	83.8572	9.7481	3.8188	0.3680	0.6662	0.0507	0.0355	0.0167	1.0402	0.3884	0.0102

FORM 1000



Alliance Pipeline

DAILY ANALYSIS — USA
 ND14MD1 — Milnor Sales
 January 2020

DAY	Heating Value (BTU/#3)	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	1,157.710	0.6634	83.9170	9.9323	3.6472	0.3570	0.6302	0.0514	0.0367	0.0171	1.0008	0.4002	0.0102
2	1,158.319	0.6646	83.7704	9.9419	3.6867	0.3638	0.6527	0.0509	0.0365	0.0169	1.0632	0.4070	0.0100
3	1,158.042	0.6644	83.8160	9.9051	3.6851	0.3643	0.6544	0.0488	0.0353	0.0172	1.0553	0.4083	0.0102
4	1,160.423	0.6655	83.7547	9.8587	3.7943	0.3709	0.6720	0.0512	0.0361	0.0199	1.0322	0.3998	0.0102
5	1,160.161	0.6652	83.8153	9.7812	3.8201	0.3680	0.6710	0.0505	0.0365	0.0198	1.0428	0.3849	0.0100
6	1,159.773	0.6650	83.8719	9.7023	3.8231	0.3717	0.6760	0.0516	0.0382	0.0192	1.0538	0.3822	0.0100
7	1,159.854	0.6649	83.9049	9.6886	3.8241	0.3722	0.6751	0.0514	0.0378	0.0192	1.0356	0.3811	0.0101
8	1,158.059	0.6641	83.9624	9.6454	3.8224	0.3606	0.6487	0.0488	0.0347	0.0175	1.0616	0.3876	0.0102
9	1,158.115	0.6643	83.9558	9.6049	3.8477	0.3612	0.6544	0.0487	0.0352	0.0171	1.0766	0.3883	0.0101
10	1,158.845	0.6646	83.9598	9.6108	3.8201	0.3733	0.6738	0.0529	0.0368	0.0173	1.0563	0.3889	0.0100
11	1,158.052	0.6638	84.0522	9.6008	3.7870	0.3673	0.6616	0.0516	0.0360	0.0167	1.0238	0.3927	0.0102
12	1,160.188	0.6654	83.8386	9.6919	3.8628	0.3740	0.6767	0.0521	0.0361	0.0170	1.0497	0.3910	0.0102
13	1,160.531	0.6658	83.7779	9.7261	3.8909	0.3727	0.6726	0.0509	0.0350	0.0150	1.0479	0.4006	0.0105
14	1,161.571	0.6661	83.7372	9.7453	3.9265	0.3756	0.6766	0.0498	0.0350	0.0156	1.0442	0.3841	0.0101
15	1,160.460	0.6655	83.7838	9.7548	3.8955	0.3666	0.6556	0.0498	0.0355	0.0156	1.0440	0.3886	0.0103
16	1,160.279	0.6651	83.8771	9.6872	3.8921	0.3706	0.6575	0.0505	0.0354	0.0145	1.0139	0.3908	0.0105
17	1,161.860	0.6667	83.6322	9.7834	3.9741	0.3705	0.6648	0.0518	0.0346	0.0146	1.0694	0.3941	0.0104
18	1,162.696	0.6677	83.5572	9.7020	4.0491	0.3799	0.6928	0.0518	0.0341	0.0133	1.1176	0.3916	0.0105
19	1,159.394	0.6646	83.9134	9.6844	3.8537	0.3670	0.6560	0.0501	0.0340	0.0147	1.0363	0.3793	0.0111
20	1,159.235	0.6639	84.0432	9.6222	3.8449	0.3673	0.6502	0.0504	0.0337	0.0154	0.9850	0.3775	0.0101
21	1,156.524	0.6616	84.2541	9.6797	3.6537	0.3571	0.6327	0.0480	0.0334	0.0154	0.9392	0.3763	0.0103
22	1,161.235	0.6663	83.6580	9.8288	3.8716	0.3707	0.6956	0.0493	0.0334	0.0154	1.0894	0.3778	0.0100
23	1,159.884	0.6650	83.8319	9.7478	3.8464	0.3646	0.6721	0.0464	0.0332	0.0168	1.0550	0.3758	0.0100
24	1,157.715	0.6636	83.9761	9.7297	3.7365	0.3601	0.6548	0.0489	0.0340	0.0181	1.0555	0.3760	0.0101
25	1,160.111	0.6651	83.8427	9.7827	3.7619	0.3796	0.6910	0.0530	0.0378	0.0184	1.0388	0.3842	0.0101
26	1,160.798	0.6657	83.8474	9.6928	3.8080	0.3861	0.7087	0.0571	0.0398	0.0190	1.0437	0.3875	0.0100
27	1,161.088	0.6658	83.7513	9.8264	3.8001	0.3803	0.6946	0.0537	0.0379	0.0179	1.0341	0.3937	0.0101
28	1,160.377	0.6654	83.7773	9.7993	3.8369	0.3656	0.6740	0.0509	0.0352	0.0170	1.0401	0.3934	0.0102
29	1,159.926	0.6653	83.7629	9.8287	3.8248	0.3614	0.6660	0.0499	0.0340	0.0164	1.0551	0.3907	0.0101
30	1,158.227	0.6638	83.9458	9.7583	3.7816	0.3503	0.6425	0.0493	0.0333	0.0162	1.0258	0.3868	0.0102
31	1,157.565	0.6629	84.0434	9.8219	3.6705	0.3515	0.6392	0.0503	0.0346	0.0164	0.9714	0.3907	0.0101
Volume	1,159.512	0.6648	83.8686	9.7356	3.8219	0.3675	0.6646	0.0505	0.0354	0.0166	1.0406	0.3884	0.0102
Weight Avg Energy	1,159.516	0.6648	83.8682	9.7357	3.8222	0.3675	0.6646	0.0505	0.0354	0.0166	1.0407	0.3884	0.0102

202001

January-20

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		
1/1/2020	1/2/2020	299	358	1.1965	574	663	1.1564	1.170	1/1/2020
1/2/2020	1/3/2020	353	423	1.1965	726	840	1.1568	1.170	1/2/2020
1/3/2020	1/4/2020	409	489	1.1965	757	874	1.1546	1.169	1/3/2020
1/4/2020	1/5/2020	333	399	1.1965	731	845	1.1559	1.169	1/4/2020
1/5/2020	1/6/2020	377	451	1.1965	851	983	1.1559	1.168	1/5/2020
1/6/2020	1/7/2020	422	505	1.1965	836	966	1.1544	1.169	1/6/2020
1/7/2020	1/8/2020	520	622	1.1965	1040	1200	1.1540	1.168	1/7/2020
1/8/2020	1/9/2020	467	559	1.1965	923	1067	1.1555	1.169	1/8/2020
1/9/2020	1/10/2020	586	701	1.1965	1168	1346	1.1522	1.167	1/9/2020
1/10/2020	1/11/2020	569	680	1.1965	1070	1234	1.1537	1.169	1/10/2020
1/11/2020	1/12/2020	515	616	1.1965	886	1021	1.1525	1.169	1/11/2020
1/12/2020	1/13/2020	469	561	1.1965	888	1026	1.1558	1.170	1/12/2020
1/13/2020	1/14/2020	638	763	1.1965	1222	1409	1.1532	1.168	1/13/2020
1/14/2020	1/15/2020	687	822	1.1965	1289	1485	1.1524	1.168	1/14/2020
1/15/2020	1/16/2020	710	849	1.1965	1314	1516	1.1546	1.169	1/15/2020
1/16/2020	1/17/2020	692	828	1.1965	1255	1448	1.1541	1.169	1/16/2020
1/17/2020	1/18/2020	708	847	1.1965	1406	1621	1.1531	1.168	1/17/2020
1/18/2020	1/19/2020	728	871	1.1965	1382	1599	1.1569	1.171	1/18/2020
1/19/2020	1/20/2020	638	763	1.1965	1328	1532	1.1537	1.168	1/19/2020
1/20/2020	1/21/2020	451	539	1.1965	884	1020	1.1542	1.168	1/20/2020
1/21/2020	1/22/2020	363	435	1.1965	767	885	1.1538	1.168	1/21/2020
1/22/2020	1/23/2020	377	451	1.1965	761	880	1.1569	1.170	1/22/2020
1/23/2020	1/24/2020	394	472	1.1965	851	984	1.1567	1.169	1/23/2020
1/24/2020	1/25/2020	367	439	1.1965	813	941	1.1569	1.169	1/24/2020
1/25/2020	1/26/2020	295	353	1.1965	655	757	1.1562	1.169	1/25/2020
1/26/2020	1/27/2020	354	423	1.1965	691	799	1.1560	1.170	1/26/2020
1/27/2020	1/28/2020	361	432	1.1965	681	784	1.1511	1.167	1/27/2020
1/28/2020	1/29/2020	358	429	1.1965	718	820	1.1418	1.160	1/28/2020
1/29/2020	1/30/2020	400	478	1.1965	887	1022	1.1510	1.165	1/29/2020
1/30/2020	1/31/2020	438	524	1.1965	975	1121	1.1501	1.164	1/30/2020
1/31/2020	2/1/2020	364	436	1.1965	826	951	1.1504	1.165	1/31/2020
		14,642	17,518	1.1965	29,155	33,639	1.1539	1.1681	

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	Changestimestamp	NOTES
11587	GLEN ULLIN	1103.2	0.6494	1369	-45.8	2.2142	0.9103	81.8139	13.9163	0.9168	0.0285	0.0174	0.0004	0.001	0	0	0.1588	0.0224	12/31/2019	1/1/2020	1/1/2020 3:59:12 PM	
11587	GLEN ULLIN	1102.2	0.6485	1368.8	-46.4	2.1725	0.9188	82.0956	13.6875	0.9338	0.0279	0.017	0.0003	0.0006	0	0	0.1237	0.0223	1/1/2020	1/2/2020	1/2/2020 4:04:58 PM	
11587	GLEN ULLIN	1101.9	0.6478	1369.1	-46.8	2.1339	0.9148	82.2194	13.6346	0.9107	0.027	0.0165	0.0004	0.0006	0	0	0.1201	0.0222	1/2/2020	1/3/2020	1/3/2020 4:11:52 PM	
11587	GLEN ULLIN	1099	0.6457	1367.6	-48.4	2.1303	0.8986	82.6167	13.2962	0.8798	0.0244	0.0154	0.0001	0.0002	0	0	0.1165	0.022	1/3/2020	1/4/2020	1/4/2020 4:07:50 PM	
11587	GLEN ULLIN	1101.6	0.6478	1368.7	-46.8	2.1438	0.9155	82.1855	13.617	0.9241	0.0257	0.016	0.0002	0.0007	0	0	0.1501	0.0217	1/4/2020	1/5/2020	1/5/2020 4:03:38 PM	
11587	GLEN ULLIN	1102.2	0.6483	1368.9	-46.8	2.1496	0.9216	82.1552	13.7164	0.8979	0.0251	0.0157	0.0001	0.0003	0	0	0.0962	0.0221	1/5/2020	1/6/2020	1/6/2020 4:07:13 PM	
11587	GLEN ULLIN	1102.5	0.6482	1369.4	-46.6	2.1217	0.9228	82.1607	13.7021	0.9141	0.0251	0.0161	0.0002	0.0007	0	0	0.1149	0.022	1/6/2020	1/7/2020	1/7/2020 4:11:24 PM	
11587	GLEN ULLIN	1100.4	0.6468	1368.2	-47.9	2.1221	0.9197	82.3401	13.5889	0.8388	0.0245	0.0152	0.0001	0.0003	0	0	0.1281	0.0223	1/7/2020	1/8/2020	1/8/2020 4:07:51 PM	
11587	GLEN ULLIN	1104.1	0.6497	1369.7	-45.8	2.1602	0.9271	81.8556	13.9838	0.8905	0.0295	0.0177	0.0005	0.0011	0	0	0.1123	0.022	1/8/2020	1/9/2020	1/9/2020 4:09:16 PM	
11587	GLEN ULLIN	1101.9	0.6482	1368.6	-46.4	2.1688	0.9151	82.1292	13.6475	0.9294	0.0291	0.0174	0.0004	0.0011	0	0	0.1401	0.022	1/9/2020	1/10/2020	1/10/2020 4:08:41 PM	
11587	GLEN ULLIN	1111	0.6553	1372.5	-40.7	2.2811	0.9245	80.8524	14.557	1.1085	0.0527	0.0281	0.0016	0.002	0	0	0.1697	0.0227	1/10/2020	1/11/2020	1/11/2020 4:08:53 PM	
11587	GLEN ULLIN	1105.1	0.651	1369.6	-45.4	2.2311	0.9259	81.4628	14.2922	0.8756	0.0253	0.0157	0	0.0002	0	0	0.149	0.0223	1/11/2020	1/12/2020	1/12/2020 4:04:47 PM	
11587	GLEN ULLIN	1104.8	0.6509	1369.4	-45.3	2.216	0.9341	81.5169	14.2257	0.8888	0.0255	0.0159	0.0002	0.0009	0	0	0.154	0.0222	1/12/2020	1/13/2020	1/13/2020 4:05:26 PM	
11587	GLEN ULLIN	1105.2	0.6508	1370	-45.2	2.2097	0.924	81.4621	14.2693	0.8908	0.0256	0.0158	0.0003	0.0007	0	0	0.1798	0.0221	1/13/2020	1/14/2020	1/14/2020 4:11:56 PM	
11587	GLEN ULLIN	1108.3	0.653	1371.5	-43.2	2.2279	0.9208	81.214	14.4745	0.9445	0.0396	0.0216	0.002	0.0022	0	0.0001	0.1305	0.0223	1/14/2020	1/15/2020	1/15/2020 4:09:24 PM	
11587	GLEN ULLIN	1110.7	0.6547	1372.7	-42.5	2.2647	0.9108	80.7073	14.9326	0.9288	0.0328	0.0188	0.001	0.0014	0	0	0.1793	0.0227	1/15/2020	1/16/2020	1/16/2020 4:08:14 PM	
11587	GLEN ULLIN	1107	0.651	1372	-43.9	2.1578	0.8942	81.6711	14.0679	0.9949	0.0401	0.0229	0.0012	0.0015	0	0	0.1262	0.0223	1/16/2020	1/17/2020	1/17/2020 4:06:10 PM	
11587	GLEN ULLIN	1101.8	0.6474	1369.3	-47.5	2.176	0.864	82.1804	13.7591	0.8323	0.0272	0.0167	0.0001	0.0005	0	0	0.1209	0.0228	1/17/2020	1/18/2020	1/18/2020 4:04:27 PM	
11587	GLEN ULLIN	1105.7	0.6502	1371.3	-45.2	2.16	0.8927	81.7114	14.1725	0.8765	0.0286	0.0193	0.0012	0.0019	0	0.0003	0.1132	0.0226	1/18/2020	1/19/2020	1/19/2020 4:05:34 PM	
11587	GLEN ULLIN	1101.8	0.6458	1371.1	-46.7	2.0143	0.8691	82.703	13.2912	0.9237	0.0384	0.0257	0.0014	0.0026	0	0.0007	0.1082	0.022	1/19/2020	1/20/2020	1/20/2020 4:05:35 PM	
11587	GLEN ULLIN	1103.9	0.6462	1373.3	-42.4	1.868	0.9038	82.933	13.0253	1.0488	0.0529	0.0396	0.0042	0.0061	0	0.004	0.094	0.0206	1/20/2020	1/21/2020	1/21/2020 4:09:21 PM	
11587	GLEN ULLIN	1098.2	0.6438	1368.7	-48.7	1.9727	0.918	82.9878	13.0717	0.8394	0.0298	0.02	0.001	0.0019	0	0.0005	0.1361	0.0213	1/21/2020	1/22/2020	1/22/2020 4:06:14 PM	
11587	GLEN ULLIN	1097.9	0.6445	1367.6	-49.2	2.068	0.9094	82.6457	13.4168	0.7247	0.0264	0.0174	0.0014	0.0019	0	0.0005	0.1667	0.0212	1/22/2020	1/23/2020	1/23/2020 4:10:17 PM	
11587	GLEN ULLIN	1101.8	0.648	1368.7	-47.5	2.1577	0.9163	82.01	13.9289	0.7828	0.0242	0.0149	0.0006	0.0011	0	0	0.1414	0.0221	1/23/2020	1/24/2020	1/24/2020 4:16:29 PM	
11587	GLEN ULLIN	1099.2	0.6456	1368.1	-48.9	2.0938	0.9092	82.4993	13.5214	0.7782	0.0227	0.0143	0.0002	0.0006	0	0	0.1384	0.022	1/24/2020	1/25/2020	1/25/2020 4:10:04 PM	
11587	GLEN ULLIN	1094.1	0.6418	1365.7	-51.2	2.0809	0.8836	83.2245	12.8525	0.7556	0.0233	0.0143	0.0002	0.0006	0	0	0.1427	0.022	1/25/2020	1/26/2020	1/26/2020 4:10:59 PM	
11587	GLEN ULLIN	1097.7	0.6451	1366.7	-49.2	2.1578	0.8989	82.5533	13.3974	0.7827	0.0228	0.0139	0.0002	0.0006	0	0	0.1501	0.0223	1/26/2020	1/27/2020	1/27/2020 4:13:50 PM	
11587	GLEN ULLIN	1097.3	0.6432	1368.2	-49.4	2.0111	0.8924	83.0491	13.0141	0.8276	0.0269	0.0173	0.0011	0.0014	0	0.0003	0.1372	0.0217	1/27/2020	1/28/2020	1/28/2020 4:14:28 PM	
11587	GLEN ULLIN	1092.9	0.6399	1366.2	-51.8	1.9662	0.8896	83.7112	12.4282	0.8066	0.0247	0.0152	0.0007	0.001	0	0.0001	0.135	0.0216	1/28/2020	1/29/2020	1/29/2020 4:13:19 PM	
11587	GLEN ULLIN	1095.3	0.6417	1367.3	-50.9	1.9823	0.8956	83.2902	12.842	0.7842	0.022	0.0138	0.0004	0.0008	0	0	0.1477	0.0212	1/29/2020	1/30/2020	1/30/2020 4:21:02 PM	
11587	GLEN ULLIN	1096.9	0.6431	1367.8	-49.8	2.0265	0.8878	83.0637	12.9855	0.8341	0.024	0.015	0.0005	0.0009	0	0	0.1405	0.0216	1/30/2020	1/31/2020	1/31/2020 4:15:55 PM	
11587	GLEN ULLIN	1097	0.6434	1367.6	-49.9	2.0661	0.8805	82.9467	13.1199	0.7929	0.0236	0.0147	0.0003	0.0009	0	0	0.1331	0.0213	1/31/2020	2/1/2020	2/1/2020 4:09:28 PM	

10/21/2021

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	Chromatograph	Spring Creek
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	JAN 20	DEC 19	NOV 19	OCT 19	SEPT 19	AUG 19	JULY 19	JUNE 19	MAY 19	APR 19	MAR 19	FEB 19	ZONE
MT/ND	211	Sidney Border - MonDak Tfr - Sidney Plt	1206	1207	1209	1198	1210	1218	1200	1199	1208	1207	1202	1205	1207	211
ND	24	Williston Border - Charbonneau Station	1165	1172	1173	1177	1160	1164	1165	1165	1152	1158	1164	1166	1162	24
ND	25	Watford City West Border	1197	1196	1192	1194	1199	1195	1197	1195	1199	1188	1202	1198	1204	25
ND	28	Bismarck Station - Glen Ullin Station	1156	1123	1128	1125	1137	1189	1196	1186	1205	1178	1147	1144	1115	28
ND	31	Dickinson Brd - Belfield Trf - G Ullin Str	1138	1122	1128	1125	1137	1163	1114	1128	1168	1165	1152	1143	1116	31
ND/MT	32	Cabin Creek Station - Belfield Transfer	1124	1093	1074	1122	1134	1130	1137	1133	1147	1138	1131	1139	1104	32
ND	33	Little Knife Plant	1174	1174	1173	1172	1173	1174	1175	1175	1174	1173	1173	1173	1173	33
ND	34	Badlands Plant/Bowman Border	1030	1082	1110	1102	1054	1001	1013	989	978	979	979	1013	1062	34
ND	43	Spring Creek I - Sax Valve I	1137	1154	1144	1151	1143	1144	1150	1140	1149	1148	1136	1127	1061	43
ND/MT	241	Fairview Border	1201	1209	1206	1202	1208	1210	1194	1191	1200	1202	1196	1188	1204	241
ND	260	North Tioga Transfer - Nesson Plant	1122	1089	1106	1146	1126	1136	1135	1132	1115	1118	1121	1127	1109	260
ND	261	Tioga Comp Station - Robinson Lake Plan	1176	1168	1166	1178	1174	1189	1189	1179	1175	1164	1170	1179	1184	261
ND	262	Minot Bdr - Palermo Bdr - Bismarck Stn	1189	1176	1184	1193	1195	1193	1197	1198	1205	1185	1183	1182	1182	262
ND	263	Lignite Plant	1151	1145	1149	1149	1146	1146	1163	1164	1160	1152	1148	1149	1146	263
ND	264	Epping Border	1153	1163	1162	1164	1144	1148	1155	1154	1150	1143	1151	1153	1148	264
ND	265	Tioga Comp Station - County Line Plant	1174	1168	1167	1168	1169	1176	1177	1175	1175	1177	1171	1181	1184	265
ND	266	County Line Plant	1170	1162	1165	1170	1170	1172	1170	1166	1170	1171	1174	1176	1170	266
ND	271	Bismarck Station - Cleveland Station	1183	1159	1168	1174	1189	1191	1197	1196	1206	1186	1183	1181	1168	271
ND	272	Cleveland Station - Mapleton	1183	1159	1168	1174	1188	1191	1196	1195	1206	1185	1183	1180	1167	272
ND	273	Cleveland Station - Grafton Border	1182	1159	1168	1173	1188	1190	1195	1194	1204	1185	1180	1181	1167	273
ND	550	Mandan Border / NBPL-St Anthony	1152	1115	1121	1125	1137	1189	1196	1186	1202	1176	1147	1119	1107	550
ND	610	MDU-Watford City BTU	1169	1168	1161	1172	1174	1178	1181	1180	1187	1176	1175	1158	1113	610
ND	802	NBPL - Linton	1096	1102	1102	1107	1098	1094	1094	1091	1098	1101	1101	1083	1083	802
ND	903	Hettinger Propane	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	903
ND	600	Alliance Pipeline - Hankinson	1162	1160	1159	1166	1170	1167	1162	1161	1158	1169	1163	1157	1151	600
ND	601	Alliance Pipeline - Milnor	1162	1160	1159	1166	1170	1167	1162	1160	1156	1169	1162	1156	1151	602

THERMAL ZONE VARIANCE DOCUMENTATION		
January 2020		
<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
34	-28	Source of Gas