

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

May 31, 2019

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

Re: Case No. PU-19-002 (Therm Billing)  
Monthly Report – March 2019

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 April 2019.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our suppliers for the month of March 2019.
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 March 2019.

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,



Tamie Aberle  
Director of Regulatory Affairs

**Montana-Dakota Utilities Co.**  
**Therm Billing Factors - North Dakota**  
**Apr-19**

Town	Heat Zone	Therm Factor
MDU-303-ALEXANDER	025	1.1372
MDU-308-ARNEGARD	025	1.1372
MDU-314-APPLE VALLEY	271	1.1270
MDU-318-BEACH	032	1.0202
MDU-319-BELFIELD	032	1.0277
MDU-323-BERTHOLD	262	1.1164
MDU-324-BEULAH	032	1.0277
MDU-327-BISMARCK	028	1.0683
MDU-330-BOWMAN	034	0.9959
MDU-337-BURLINGTON	262	1.1405
MDU-343-CARRINGTON	273	1.1260
MDU-344-CLEVELAND	272	1.1181
MDU-364-CAVALIER	273	1.1498
MDU-365-DAWSON	271	1.1190
MDU-368-DES LACS	262	1.1244
MDU-369-DICKINSON	031	1.0465
MDU-374-FT TOTTEN	273	1.1339
MDU-375-DEVILS LAKE	273	1.1339
MDU-379-BARLOW	273	1.1260
MDU-384-EPPING	264	1.0843
MDU-387-ELDRIDGE	272	1.1260
MDU-407-GLADSTONE	031	1.0465
MDU-411-GLEN ULLIN	031	1.0541
MDU-413-GOLVA	032	1.0371
MDU-416-GARRISON	262	1.1244
MDU-417-GRAFTON	273	1.1577
MDU-429-HEBRON	031	1.0541
MDU-432-HETTINGER	903	2.4049
MDU-449-JAMESTOWN	272	1.1339
MDU-459-KILLDEER	033	1.1079
MDU-463-LANGDON	273	1.1260
MDU-469-LEFOR	031	1.0465
MDU-474-LIGNITE	263	1.0902
MDU-475-LINTON	802	1.0450
MDU-478-LINCOLN	028	1.0758
MDU-488-MCKENZIE	271	1.1270
MDU-494-MEDINA	271	1.1190
MDU-498-MANDAN	028	1.0758
MDU-500-MARMARTH	034	0.9814
MDU-505-MINOT	262	1.1405
MDU-510-MOTT	031	1.0465
MDU-512-MAX	262	1.1405
MDU-522-NEW ENGLAND	031	1.0389
MDU-524-NEW SALEM	028	1.0531
MDU-532-NEW ROCKFORD	273	1.1260
MDU-539-PARK RIVER	273	1.1498
MDU-540-PALERMO	262	1.1164
MDU-558-RAY	264	1.0843
MDU-561-REGENT	031	1.0465

MDU-563-RHAME	034	0.9670
MDU-564-RICHARDTON	031	1.0389
MDU-568-ROSS	261	1.1103
MDU-572-RUTHVILLE	262	1.1405
MDU-574-SANBORN	272	1.1339
MDU-583-SENTINEL BUTTE	032	1.0526
MDU-588-SOUTH HEART	031	1.0389
MDU-717-SPIRITWOOD	272	1.1339
MDU-590-SPRINGBROOK	264	1.0843
MDU-591-STANLEY	261	1.1263
MDU-593-STEELE	271	1.1190
MDU-594-STERLING	028	1.0758
MDU-598-SHEYENNE	273	1.1339
MDU-605-SURREY	262	1.1405
MDU-610-TAPPEN	271	1.1190
MDU-611-TAYLOR	031	1.0389
MDU-616-TIOGA	260	1.0475
MDU-619-TURTLE LAKE	262	1.1244
MDU-620-TRENTON	024	1.1054
MDU-624-UNDERWOOD	262	1.1244
MDU-625-VALLEY CITY	272	1.1418
MDU-629-WALHALLA	273	1.1498
MDU-632-WATFORD CITY	610	1.0512
MDU-636-WHEELOCK	264	1.0765
MDU-637-WHITE EARTH	261	1.1183
MDU-642-WILLISTON	024	1.1054
MDU-646-WASHBURN	262	1.1324
MDU-647-WILTON	262	1.1164
MDU-664-RIVERDALE	262	1.1244
MDU-691-FAIRVIEW	241	1.1454
MDU-712-MINOT AFB	262	1.1405
MDU-718-FAIRMOUNT	600	1.1317
MDU-732-NEKOMA	273	1.1260
MDU-732-MSR SITE	273	1.1260

# Source Daily Summary

March 2019

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	0.7339	1189.3	1210.4	1207.1	1.070	3.485	68.265	23.186	3.616	0.130	0.228	0.011	0.008	0.000	0.000	0.000	0.000	0.000	1409.62	
2	0.7396	1190.8	1211.9	1208.5	1.297	3.585	67.438	23.591	3.689	0.138	0.242	0.011	0.008	0.000	0.000	0.000	0.000	0.000	1405.79	
3	0.7135	1186.7	1207.8	1204.7	0.197	3.057	70.750	22.607	3.256	0.054	0.076	0.002	0.001	0.000	0.000	0.000	0.000	0.000	1426.55	
4	0.7470	1209.3	1230.8	1227.2	1.068	3.484	67.551	22.522	4.515	0.254	0.525	0.043	0.038	0.000	0.000	0.000	0.000	0.000	1420.58	
5	0.7263	1202.1	1223.4	1220.1	0.362	3.065	69.653	22.555	3.907	0.138	0.272	0.024	0.022	0.000	0.000	0.000	0.000	0.000	1432.26	
6	0.7100	1185.1	1206.1	1203.0	0.089	2.993	71.185	22.490	3.143	0.044	0.055	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1428.05	
7	0.7212	1191.0	1212.1	1209.0	0.414	3.193	69.738	22.962	3.499	0.074	0.114	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1424.02	
8	0.7384	1186.0	1207.0	1203.7	1.338	3.699	67.537	23.524	3.490	0.141	0.249	0.012	0.009	0.000	0.000	0.000	0.000	0.000	1401.30	
9	0.7384	1186.6	1207.6	1204.2	1.334	3.681	67.384	23.833	3.359	0.141	0.248	0.012	0.009	0.000	0.000	0.000	0.000	0.000	1401.88	
10	0.7471	1201.0	1222.2	1218.7	1.318	3.636	66.604	23.699	4.327	0.142	0.252	0.012	0.009	0.000	0.000	0.000	0.000	0.000	1410.59	
11	0.7502	1206.1	1227.5	1223.9	1.315	3.615	66.575	23.166	4.901	0.146	0.259	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1413.64	
12	0.7413	1192.4	1213.5	1210.1	1.319	3.615	67.293	23.524	3.829	0.143	0.254	0.013	0.009	0.000	0.000	0.000	0.000	0.000	1405.98	
13	0.7401	1189.5	1210.6	1207.2	1.330	3.659	67.157	23.981	3.463	0.140	0.248	0.012	0.009	0.000	0.000	0.000	0.000	0.000	1403.80	
14	0.7387	1187.2	1208.2	1204.8	1.336	3.662	67.410	23.769	3.399	0.144	0.257	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1402.37	
15	0.7347	1181.7	1202.7	1199.3	1.311	3.658	68.027	23.354	3.227	0.143	0.256	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1399.74	
16	0.7346	1182.9	1203.8	1200.5	1.302	3.600	68.047	23.386	3.242	0.143	0.256	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1401.10	
17	0.7359	1183.8	1204.7	1201.4	1.326	3.624	67.849	23.507	3.264	0.146	0.259	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1401.00	
18	0.7336	1182.3	1203.2	1199.9	1.284	3.563	68.210	23.322	3.202	0.141	0.254	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1401.43	
19	0.7329	1180.5	1201.4	1198.1	1.285	3.601	68.431	22.986	3.265	0.145	0.262	0.014	0.011	0.000	0.000	0.000	0.000	0.000	1400.03	
20	0.7368	1187.6	1208.6	1205.2	1.271	3.560	68.018	23.105	3.572	0.157	0.288	0.015	0.012	0.000	0.000	0.000	0.000	0.000	1404.58	
21	0.7332	1178.9	1199.8	1196.5	1.289	3.715	68.930	21.748	3.933	0.132	0.232	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1397.86	
22	0.7267	1171.5	1192.3	1188.9	1.233	3.648	69.679	21.681	3.347	0.137	0.250	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1395.20	
23	0.7269	1172.1	1192.8	1189.5	1.225	3.646	69.636	21.733	3.340	0.139	0.254	0.014	0.011	0.000	0.000	0.000	0.000	0.000	1395.66	
24	0.7286	1170.5	1191.2	1187.9	1.286	3.806	69.422	21.642	3.414	0.147	0.261	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1392.21	
25	0.7285	1170.1	1190.9	1187.6	1.287	3.812	69.474	21.569	3.415	0.150	0.268	0.014	0.011	0.000	0.000	0.000	0.000	0.000	1391.93	
26	0.7266	1169.8	1190.5	1187.1	1.248	3.722	69.770	21.452	3.376	0.144	0.262	0.014	0.012	0.000	0.000	0.000	0.000	0.000	1393.22	
27	0.7310	1172.1	1192.8	1189.4	1.314	3.889	69.224	21.489	3.622	0.157	0.280	0.014	0.011	0.000	0.000	0.000	0.000	0.000	1391.80	
28	0.7309	1172.3	1193.1	1189.7	1.316	3.866	69.066	21.844	3.447	0.156	0.279	0.014	0.011	0.000	0.000	0.000	0.000	0.000	1392.16	
29	0.7262	1177.2	1198.0	1194.7	0.989	3.628	69.539	22.027	3.450	0.128	0.220	0.010	0.008	0.000	0.000	0.000	0.000	0.000	1402.59	
30	0.7285	1173.9	1194.7	1191.4	1.192	3.735	69.337	21.896	3.414	0.146	0.257	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1396.41	
31	0.7275	1173.6	1194.4	1191.1	1.151	3.722	69.447	21.892	3.370	0.143	0.252	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1397.01	
Avg	0.7325	1184.0	1205.0	1201.6	1.132	3.588	68.601	22.711	3.558	0.138	0.247	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1404.53	

Zone 211

# Source Daily Summary

March 2019

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	0.6928	1142.3	1162.5	1159.5	0.848	2.824	75.046	18.711	2.291	0.081	0.171	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1393.40
2	0.6960	1148.1	1168.5	1165.3	0.852	2.764	74.481	19.266	2.351	0.081	0.176	0.014	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1397.28
3	0.6933	1144.7	1165.0	1161.9	0.843	2.737	74.902	18.973	2.278	0.076	0.165	0.012	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1395.78
4	0.6943	1144.8	1165.0	1161.9	0.852	2.810	74.751	19.010	2.301	0.078	0.169	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1394.87
5	0.6946	1145.5	1165.8	1162.6	0.855	2.786	74.712	19.058	2.316	0.078	0.168	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1395.49
6	0.6921	1141.9	1162.1	1159.0	0.836	2.801	75.143	18.664	2.293	0.076	0.162	0.012	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1393.62
7	0.6947	1145.4	1165.7	1162.6	0.846	2.812	74.676	19.073	2.325	0.077	0.165	0.012	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1395.35
8	0.6957	1146.7	1167.0	1163.9	0.854	2.820	74.577	19.065	2.398	0.082	0.176	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1395.84
9	0.6954	1146.1	1166.4	1163.2	0.848	2.841	74.619	19.019	2.385	0.082	0.176	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1395.32
10	0.6961	1146.9	1167.2	1164.1	0.851	2.853	74.408	19.260	2.352	0.078	0.170	0.012	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1395.65
11	0.6935	1143.4	1163.7	1160.6	0.836	2.842	74.811	18.981	2.272	0.074	0.159	0.011	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1394.07
12	0.6928	1142.9	1163.1	1160.0	0.835	2.812	74.942	18.898	2.252	0.074	0.158	0.012	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1394.06
13	0.6937	1143.6	1163.9	1160.8	0.841	2.842	74.778	19.014	2.263	0.076	0.161	0.012	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1394.09
14	0.6962	1149.5	1169.9	1166.8	0.860	2.686	74.408	19.436	2.341	0.078	0.166	0.012	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1398.78
15	0.6941	1144.9	1165.2	1162.1	0.836	2.810	74.865	18.827	2.372	0.083	0.177	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1395.18
16	0.6951	1147.4	1167.8	1164.6	0.831	2.754	74.825	18.806	2.466	0.087	0.193	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1397.28
17	0.6954	1147.2	1167.5	1164.3	0.835	2.786	74.748	18.879	2.433	0.088	0.195	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1396.73
18	0.6945	1145.1	1165.4	1162.3	0.844	2.816	74.748	18.974	2.333	0.080	0.174	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1395.13
19	0.6937	1143.9	1164.1	1161.1	0.847	2.815	74.864	18.893	2.306	0.079	0.168	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1394.41
20	0.6933	1143.7	1164.0	1160.9	0.843	2.795	74.948	18.815	2.326	0.078	0.166	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1394.63
21	0.6944	1144.4	1164.7	1161.6	0.847	2.844	74.779	18.904	2.343	0.081	0.172	0.014	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1394.38
22	0.6946	1145.1	1165.4	1162.4	0.849	2.827	74.690	19.020	2.343	0.079	0.168	0.012	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1394.99
23	0.6949	1145.3	1165.6	1162.6	0.845	2.839	74.638	19.063	2.345	0.078	0.165	0.012	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1395.04
24	0.6952	1145.9	1166.2	1163.1	0.849	2.834	74.601	19.090	2.340	0.081	0.176	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1395.33
25	0.6949	1144.7	1164.9	1161.9	0.854	2.868	74.661	18.991	2.349	0.079	0.170	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1394.20
26	0.6951	1144.3	1164.6	1161.4	0.857	2.903	74.685	18.887	2.379	0.082	0.177	0.014	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1393.53
27	0.6958	1145.7	1166.0	1162.9	0.859	2.880	74.512	19.092	2.381	0.080	0.169	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1394.59
28	0.6954	1145.5	1165.8	1162.7	0.847	2.877	74.542	19.117	2.336	0.081	0.172	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1394.68
29	0.6961	1145.7	1166.0	1162.8	0.851	2.930	74.355	19.274	2.317	0.078	0.167	0.012	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1394.15
30	0.6959	1145.8	1166.1	1162.9	0.851	2.898	74.455	19.177	2.335	0.081	0.173	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1394.52
31	0.6956	1146.6	1166.9	1163.7	0.853	2.819	74.542	19.150	2.356	0.079	0.170	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1395.80
Avg	0.6947	1145.0	1165.5	1162.4	0.847	2.823	74.700	19.012	2.338	0.079	0.171	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1395.10

Zone 24

# Gas Composition and Properties

Effective March 1, 2019

Source #: 0602160  
Name: FAIRVIEW BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.0530		2.2406
Nitrogen, N2	3.2088		4.3461
Methane, C1	71.5079		55.4649
Ethane, C2	20.6536	5.5275	30.0267
Propane, C3	3.1770	0.8759	6.7734
iso-Butane, iC4	0.1206	0.0395	0.3389
n-Butane, nC4	0.2456	0.0775	0.6902
iso-Pentane, iC5	0.0155	0.0057	0.0541
n-Pentane, nC5	0.0146	0.0053	0.0509
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0034	0.0014	0.0142
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	-13.435	
Cricondentherm	-1.301	
HV, Dry @ Base P, T	1187.61	
HV, Sat @ Base P, T	1166.94	
HV, Sat @ Sample P, T	1187.61	
Relative Density	0.7162	

C6+: 100

Totals	100.0000	6.5310	100.0000
--------	----------	--------	----------

## Sample

Date: 04/01/2019      Pressure: 460.0  
Type:                      Temperature:  
Tech: Kevin Moos      H2O: lbs/mm  
                                 H2S: ppm

Remarks:

## Analysis

Date: 04/01/2019      Instrument:  
                                 Cylinder: 310

Tech: Kevin Moos

Remarks:

Zone 241

# Gas Composition and Properties

Effective March 1, 2019 09:00

Source #: 0602225  
Name: WATFORD CITY WEST BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.1405		2.3762
Nitrogen, N2	3.8966		5.1676
Methane, C1	70.1136		53.2486
Ethane, C2	20.0079	5.3552	28.4811
Propane, C3	4.0147	1.1069	8.3808
iso-Butane, iC4	0.2264	0.0741	0.6230
n-Butane, nC4	0.5024	0.1585	1.3824
iso-Pentane, iC5	0.0445	0.0163	0.1520
n-Pentane, nC5	0.0445	0.0161	0.1520
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0089	0.0037	0.0363
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	0.759	
Cricondentherm	12.493	
HV, Dry @ Base P, T	1197.78	
HV, Sat @ Base P, T	1176.93	
HV, Sat @ Sample P, T	1197.78	
Relative Density	0.7315	

C6+: 100

Totals	100.0000	6.7310	100.0000
--------	----------	--------	----------

## Sample

Date: 04/01/2019      Pressure: 440.0  
 Type:                      Temperature:  
 Tech: Kevin Moos      H2O: lbs/mm  
                                  H2S: ppm

Remarks:

## Analysis

Date: 04/01/2019      Instrument:  
                                  Cylinder:  
 Tech: Kevin Moos

Remarks:

Zone 25

# Source Daily Summary

March 2019

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	0.6768	1109.4	1129.1		0.697	3.555	77.604	15.959	1.934	0.071	0.154	0.011	0.013	0.001					1369.30	
2	0.6736	1105.8	1125.4		0.648	3.555	78.164	15.519	1.842	0.072	0.163	0.015	0.018	0.004					1368.02	
3	0.6688	1098.9	1118.4		0.619	3.567	78.930	14.916	1.732	0.065	0.144	0.012	0.014	0.003					1364.35	
4	0.6756	1108.3	1128.0		0.683	3.538	77.765	15.888	1.881	0.068	0.149	0.012	0.014	0.003					1369.09	
5	0.6734	1106.1	1125.6		0.662	3.499	78.096	15.692	1.831	0.064	0.135	0.009	0.010	0.001					1368.53	
6	0.6733	1105.0	1124.6		0.654	3.564	78.200	15.462	1.878	0.068	0.148	0.011	0.013	0.001					1367.34	
7	0.6770	1109.7	1129.4		0.687	3.573	77.456	16.162	1.901	0.065	0.136	0.009	0.010	0.001					1369.44	
8	0.6782	1111.9	1131.6		0.684	3.559	77.381	16.104	2.023	0.072	0.153	0.011	0.012	0.000					1370.88	
9	0.6784	1111.4	1131.1		0.685	3.607	77.263	16.254	1.941	0.071	0.152	0.012	0.013	0.002					1370.07	
10	0.6787	1112.1	1131.8		0.710	3.556	77.094	16.541	1.884	0.064	0.133	0.009	0.010	0.000					1370.65	
11	0.6700	1099.5	1119.0		0.633	3.627	78.563	15.291	1.682	0.059	0.124	0.009	0.011	0.002					1363.82	
12	0.6663	1093.5	1112.9		0.611	3.678	79.078	14.909	1.557	0.050	0.102	0.007	0.007	0.000					1360.18	
13	0.6717	1101.8	1121.3		0.654	3.617	78.132	15.772	1.652	0.052	0.106	0.007	0.007	0.000					1364.93	
14	0.6509	1072.5	1091.5		0.478	3.704	81.781	12.619	1.279	0.041	0.084	0.006	0.007	0.001					1349.80	
15	0.6694	1100.1	1119.6		0.610	3.561	78.742	15.136	1.749	0.058	0.123	0.009	0.010	0.001					1365.31	
16	0.6755	1110.4	1130.1		0.604	3.509	78.196	15.229	2.116	0.086	0.204	0.021	0.026	0.008					1371.86	
17	0.6779	1112.8	1132.5		0.652	3.524	77.502	16.014	2.025	0.076	0.171	0.015	0.018	0.004					1372.33	
18	0.6750	1107.0	1126.6		0.668	3.582	77.692	16.074	1.779	0.060	0.126	0.009	0.010	0.001					1368.08	
19	0.6751	1107.7	1127.3		0.679	3.538	77.697	16.083	1.800	0.059	0.124	0.009	0.011	0.002					1368.79	
20	0.6749	1108.7	1128.3		0.661	3.478	77.795	16.007	1.854	0.061	0.126	0.009	0.010	0.001					1370.28	
21	0.6747	1106.0	1125.6		0.674	3.604	77.735	16.019	1.766	0.057	0.121	0.009	0.011	0.002					1367.16	
22	0.6758	1108.1	1127.7		0.677	3.578	77.501	16.273	1.780	0.057	0.118	0.008	0.008	0.000					1368.60	
23	0.6764	1109.5	1129.1		0.667	3.563	77.439	16.310	1.817	0.059	0.124	0.009	0.010	0.001					1369.73	
24	0.6769	1109.5	1129.1		0.679	3.591	77.344	16.373	1.801	0.061	0.129	0.009	0.011	0.002					1369.26	
25	0.6784	1111.4	1131.0		0.700	3.589	77.018	16.690	1.812	0.057	0.118	0.008	0.008	0.000					1370.03	
26	0.6809	1114.2	1133.9		0.722	3.616	76.665	16.889	1.892	0.062	0.130	0.010	0.011	0.002					1371.00	
27	0.6798	1113.8	1133.5		0.707	3.567	76.776	16.904	1.856	0.058	0.117	0.007	0.008	0.000					1371.56	
28	0.6805	1115.1	1134.8		0.700	3.564	76.641	17.053	1.841	0.059	0.122	0.009	0.010	0.002					1372.45	
29	0.6818	1116.5	1136.3		0.710	3.577	76.399	17.266	1.845	0.060	0.124	0.009	0.010	0.000					1372.98	
30	0.6818	1117.2	1137.0		0.705	3.549	76.431	17.223	1.892	0.060	0.122	0.008	0.009	0.000					1373.74	
31	0.6775	1110.4	1130.1		0.687	3.579	77.193	16.559	1.785	0.058	0.119	0.009	0.010	0.002					1369.81	
Avg	0.6750	1107.0	1126.8		0.665	3.573	77.751	15.974	1.820	0.062	0.132	0.010	0.011	0.002					1368.37	

Zone 260

# Source Daily Summary

March 2019

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	NC6	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7155	1164.7	1185.3	1182.1	1.046	3.293	71.143	21.427	2.736	0.100	0.219	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1397.93
2	0.7120	1161.5	1182.1	1179.1	0.974	3.269	71.655	21.093	2.681	0.096	0.203	0.014	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1397.60
3	0.7121	1162.7	1183.3	1180.0	0.939	3.258	71.676	21.145	2.605	0.101	0.228	0.021	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1398.78
4	0.7108	1160.6	1181.2	1178.0	0.929	3.281	71.763	21.138	2.556	0.093	0.203	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1397.61
5	0.7126	1162.7	1183.3	1180.0	0.955	3.279	71.498	21.330	2.598	0.095	0.208	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1398.37
6	0.7108	1161.1	1181.6	1178.5	0.946	3.230	71.734	21.201	2.585	0.089	0.188	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1398.18
7	0.7121	1162.0	1182.6	1179.5	0.950	3.280	71.568	21.233	2.655	0.093	0.195	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1398.14
8	0.7119	1161.4	1182.0	1178.8	0.945	3.311	71.534	21.305	2.593	0.090	0.191	0.014	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1397.51
9	0.7127	1162.6	1183.2	1180.1	0.950	3.304	71.547	21.134	2.737	0.097	0.203	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1398.21
10	0.7123	1161.8	1182.4	1179.1	0.932	3.340	71.574	21.150	2.672	0.096	0.204	0.015	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1397.60
11	0.7118	1160.9	1181.5	1178.4	0.958	3.312	71.484	21.391	2.563	0.086	0.181	0.011	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1397.07
12	0.7090	1157.3	1177.8	1174.7	0.933	3.309	71.878	21.153	2.455	0.082	0.168	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1395.45
13	0.7083	1155.6	1176.1	1172.9	0.926	3.358	71.907	21.181	2.367	0.077	0.157	0.012	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1394.06
14	0.7083	1155.4	1175.8	1172.8	0.937	3.350	71.852	21.272	2.348	0.074	0.147	0.009	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1393.89
15	0.6991	1143.9	1164.2	1161.1	0.841	3.331	73.491	19.900	2.199	0.071	0.144	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1389.02
16	0.7083	1157.8	1178.3	1175.2	0.919	3.230	72.044	21.060	2.487	0.079	0.160	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1396.75
17	0.7155	1170.1	1190.8	1187.3	0.900	3.188	71.462	21.031	2.987	0.114	0.262	0.024	0.032	0.000	0.000	0.000	0.000	0.000	0.000	1404.21
18	0.7152	1168.3	1189.0	1185.5	0.910	3.243	71.434	21.091	2.901	0.112	0.256	0.023	0.030	0.000	0.000	0.000	0.000	0.000	0.000	1402.49
19	0.7120	1161.0	1181.6	1178.4	0.944	3.346	71.418	21.459	2.530	0.087	0.186	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1396.96
20	0.7090	1156.6	1177.1	1173.9	0.933	3.351	71.883	21.104	2.465	0.079	0.162	0.011	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1394.56
21	0.7091	1158.6	1179.1	1176.0	0.925	3.250	71.941	21.079	2.530	0.082	0.169	0.011	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1396.92
22	0.7089	1156.2	1176.7	1173.7	0.933	3.365	71.830	21.173	2.443	0.077	0.157	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1394.31
23	0.7086	1156.1	1176.5	1173.6	0.914	3.378	71.910	21.069	2.458	0.079	0.166	0.012	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1394.42
24	0.7096	1156.9	1177.4	1174.4	0.931	3.395	71.731	21.220	2.442	0.082	0.173	0.013	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1394.44
25	0.7088	1155.2	1175.7	1172.8	0.940	3.415	71.777	21.212	2.406	0.075	0.154	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1393.15
26	0.7105	1157.3	1177.8	1174.8	0.953	3.425	71.580	21.294	2.475	0.080	0.167	0.013	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1393.99
27	0.7082	1154.7	1175.2	1172.3	0.928	3.401	71.898	21.112	2.416	0.075	0.150	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1393.21
28	0.7083	1155.7	1176.1	1173.1	0.911	3.381	71.858	21.218	2.376	0.076	0.156	0.011	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1394.19
29	0.7092	1156.9	1177.4	1174.4	0.919	3.379	71.673	21.399	2.373	0.077	0.158	0.011	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1394.81
30	0.7081	1155.5	1176.0	1173.0	0.906	3.379	71.909	21.141	2.412	0.076	0.154	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1394.22
31	0.7082	1154.7	1175.1	1172.1	0.926	3.412	71.892	21.133	2.380	0.076	0.156	0.012	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1393.06
Avg	0.7102	1159.0	1179.4	1176.3	0.934	3.324	71.759	21.156	2.530	0.086	0.181	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1396.16

Zone 261

# Source Daily Summary

March 2019

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	0.7376	1162.3	1182.9	1179.9	0.945	5.669	68.105	20.288	4.537	0.140	0.294	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1374.03
2	0.7330	1154.1	1174.6	1171.6	0.934	5.748	68.616	20.022	4.311	0.121	0.238	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1368.73
3	0.7381	1164.8	1185.4	1182.3	0.923	5.595	68.114	20.320	4.542	0.148	0.326	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1376.51
4	0.7404	1166.7	1187.4	1184.3	0.926	5.684	67.810	20.376	4.688	0.153	0.332	0.015	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1376.67
5	0.7409	1165.4	1186.1	1183.0	0.922	5.821	67.710	20.299	4.732	0.152	0.333	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1374.63
6	0.7360	1161.6	1182.1	1179.1	0.931	5.581	68.361	20.212	4.453	0.141	0.300	0.011	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1374.70
7	0.7390	1163.9	1184.5	1181.4	0.933	5.720	68.026	20.178	4.622	0.152	0.335	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1374.59
8	0.7400	1164.4	1185.1	1182.0	0.932	5.783	67.916	20.138	4.695	0.161	0.343	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1374.29
9	0.7395	1164.2	1184.8	1181.8	0.931	5.743	67.960	20.182	4.673	0.150	0.330	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1374.57
10	0.7362	1158.7	1179.2	1176.2	0.931	5.771	68.390	19.926	4.508	0.141	0.307	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1371.14
11	0.7368	1160.6	1181.1	1178.1	0.932	5.716	68.287	20.068	4.516	0.142	0.311	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1372.75
12	0.7374	1164.5	1185.1	1182.0	0.932	5.536	68.221	20.299	4.513	0.146	0.322	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1376.78
13	0.7395	1165.6	1186.3	1183.1	0.923	5.672	67.960	20.281	4.644	0.151	0.335	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1376.17
14	0.7291	1155.3	1175.7	1172.7	0.907	5.356	69.331	19.914	4.065	0.128	0.276	0.012	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1373.70
15	0.7337	1157.4	1177.9	1174.9	0.906	5.653	68.729	19.882	4.365	0.138	0.300	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1371.95
16	0.7353	1159.1	1179.6	1176.5	0.925	5.674	68.463	20.065	4.405	0.140	0.297	0.016	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1372.40
17	0.7370	1160.7	1181.3	1178.2	0.921	5.745	68.276	20.027	4.541	0.144	0.316	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1372.69
18	0.7377	1161.7	1182.3	1179.1	0.922	5.744	68.222	20.036	4.569	0.148	0.326	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1373.23
19	0.7376	1162.1	1182.6	1179.5	0.924	5.714	68.162	20.163	4.551	0.144	0.314	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1373.72
20	0.7374	1161.2	1181.8	1178.7	0.927	5.735	68.203	20.104	4.549	0.143	0.310	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1373.00
21	0.7366	1159.5	1180.1	1177.0	0.933	5.761	68.289	20.044	4.499	0.140	0.306	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1371.68
22	0.7352	1160.2	1180.7	1177.7	0.931	5.591	68.480	20.134	4.402	0.137	0.298	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1373.77
23	0.7356	1160.6	1181.2	1178.1	0.934	5.602	68.399	20.193	4.411	0.137	0.298	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1373.86
24	0.7358	1159.4	1180.0	1176.9	0.929	5.699	68.392	20.061	4.455	0.139	0.300	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1372.30
25	0.7374	1161.9	1182.5	1179.4	0.932	5.693	68.207	20.135	4.549	0.143	0.312	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1373.72
26	0.7404	1164.3	1184.9	1181.8	0.932	5.826	67.873	20.086	4.759	0.154	0.338	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1373.76
27	0.7379	1159.6	1180.2	1177.1	0.932	5.877	68.139	19.960	4.602	0.145	0.317	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1370.60
28	0.7378	1158.9	1179.5	1176.4	0.931	5.913	68.158	19.898	4.607	0.146	0.318	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1369.85
29	0.7378	1159.5	1180.1	1177.0	0.929	5.880	68.155	19.943	4.600	0.146	0.319	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1370.56
30	0.7385	1160.3	1180.8	1177.7	0.930	5.897	68.065	19.973	4.638	0.147	0.322	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1370.81
31	0.7394	1161.5	1182.0	1179.0	0.928	5.913	67.932	20.039	4.681	0.149	0.327	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1371.36
Avg	0.7373	1161.0	1181.9	1178.8	0.928	5.720	68.224	20.105	4.538	0.144	0.313	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1373.18

Zone 262

# Gas Composition and Properties

Effective March 1, 2019

Source #: 2501030  
Name: LIGNITE PLANT

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.1262		0.2857
Nitrogen, N2	2.8686		4.1337
Methane, C1	77.6090		64.0446
Ethane, C2	17.3511	4.6420	26.8376
Propane, C3	1.9839	0.5468	4.5000
iso-Butane, iC4	0.0339	0.0111	0.1014
n-Butane, nC4	0.0166	0.0052	0.0496
iso-Pentane, iC5			
n-Pentane, nC5			
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0107	0.0044	0.0474
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	-29.965	
Cricondentherm	-25.938	
HV, Dry @ Base P, T	1148.99	
HV, Sat @ Base P, T	1128.99	
HV, Sat @ Sample P, T	1148.99	
Relative Density	0.6729	

C6+: 100

Totals	100.0000	5.2090	100.0000
--------	----------	--------	----------

## Sample

Date: 04/01/2019      Pressure: 575.0  
 Type:                      Temperature:  
 Tech: Kevin Moos      H2O: lbs/mm  
                                  H2S: ppm

Remarks:

## Analysis

Date: 04/01/2019      Instrument:  
                                  Cylinder: 101  
 Tech: Kevin Moos

Remarks:

Zone 2b3

# Gas Composition and Properties

Effective March 1, 2019

Source #: 3002013  
Name: EPPING BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.8046		1.7887
Nitrogen, N2	2.7848		3.9406
Methane, C1	76.2214		61.7662
Ethane, C2	17.8383	4.7727	27.0941
Propane, C3	2.1302	0.5871	4.7448
iso-Butane, iC4	0.0621	0.0203	0.1823
n-Butane, nC4	0.1371	0.0432	0.4025
iso-Pentane, iC5	0.0086	0.0031	0.0313
n-Pentane, nC5	0.0094	0.0034	0.0343
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0035	0.0014	0.0152
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	-30.012	
Cricondentherm	-18.818	
HV, Dry @ Base P, T	1152.61	
HV, Sat @ Base P, T	1132.55	
HV, Sat @ Sample P, T	1152.61	
Relative Density	0.6853	

C6+: 100

Totals	100.0000	5.4300	100.0000
--------	----------	--------	----------

Sample			
Date:	03/01/2019	Pressure:	440.0
Type:		Temperature:	
Tech:	Kevin Moos	H2O:	lbs/mm
		H2S:	ppm
Remarks:			

Analysis			
Date:	03/01/2019	Instrument:	
		Cylinder:	397
Tech:	Kevin Moos		
Remarks:			

\*\*\* End of Report \*\*\*

Zone 264

# Source Daily Summary

March 2019

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	0.7175	1165.6	1186.3	1183.0	1.106	3.329	70.803	21.682	2.710	0.102	0.229	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1397.15
2	0.7130	1163.3	1183.9	1180.7	0.976	3.249	71.545	21.153	2.739	0.098	0.209	0.014	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1398.76
3	0.7109	1160.6	1181.2	1178.0	0.944	3.264	71.793	21.075	2.587	0.095	0.206	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1397.59
4	0.7111	1161.3	1181.9	1178.5	0.921	3.277	71.834	21.004	2.593	0.100	0.225	0.020	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1398.08
5	0.7124	1162.5	1183.1	1179.8	0.952	3.282	71.479	21.377	2.575	0.094	0.206	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1398.29
6	0.7115	1161.6	1182.1	1178.9	0.952	3.256	71.678	21.176	2.617	0.092	0.197	0.015	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1398.03
7	0.7108	1160.5	1181.1	1177.9	0.944	3.259	71.703	21.226	2.574	0.088	0.182	0.012	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1397.62
8	0.7127	1162.7	1183.2	1180.0	0.952	3.299	71.462	21.322	2.636	0.094	0.202	0.015	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1398.21
9	0.7125	1162.3	1182.9	1179.8	0.952	3.303	71.472	21.294	2.668	0.092	0.192	0.012	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1398.04
10	0.7122	1161.8	1182.4	1179.2	0.931	3.330	71.660	21.002	2.736	0.099	0.211	0.015	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1397.80
11	0.7127	1162.5	1183.0	1179.8	0.945	3.326	71.392	21.407	2.618	0.090	0.192	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1397.93
12	0.7104	1159.0	1179.5	1176.4	0.961	3.295	71.642	21.357	2.469	0.083	0.170	0.011	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1396.12
13	0.7086	1156.3	1176.8	1173.5	0.924	3.350	71.934	21.098	2.414	0.082	0.170	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1394.54
14	0.7087	1155.9	1176.4	1173.3	0.935	3.360	71.781	21.317	2.363	0.074	0.149	0.009	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1394.13
15	0.7082	1157.2	1177.7	1174.5	0.906	3.284	71.882	21.326	2.347	0.076	0.156	0.011	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1396.07
16	0.7096	1159.5	1180.0	1176.8	0.933	3.228	71.735	21.412	2.435	0.077	0.156	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1397.50
17	0.7128	1165.8	1186.4	1183.1	0.905	3.188	71.692	21.026	2.821	0.102	0.225	0.018	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1401.81
18	0.7173	1172.6	1193.4	1189.7	0.901	3.199	71.313	21.037	3.065	0.124	0.293	0.029	0.039	0.000	0.000	0.000	0.000	0.000	0.000	1405.40
19	0.7126	1162.3	1182.9	1179.6	0.937	3.335	71.388	21.427	2.600	0.090	0.192	0.014	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1397.89
20	0.7104	1158.6	1179.1	1175.9	0.940	3.346	71.676	21.258	2.501	0.082	0.171	0.012	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1395.66
21	0.7085	1156.7	1177.2	1174.1	0.932	3.301	71.887	21.217	2.415	0.075	0.152	0.009	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1395.22
22	0.7110	1161.0	1181.5	1178.4	0.932	3.274	71.666	21.239	2.593	0.086	0.182	0.012	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1397.87
23	0.7114	1159.7	1180.3	1177.0	0.953	3.351	71.447	21.504	2.474	0.079	0.165	0.012	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1396.02
24	0.7098	1157.6	1178.1	1175.0	0.929	3.373	71.669	21.313	2.458	0.077	0.158	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1395.02
25	0.7108	1159.4	1179.9	1176.7	0.924	3.358	71.655	21.244	2.515	0.087	0.187	0.014	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1396.21
26	0.7096	1157.1	1177.6	1174.5	0.937	3.373	71.626	21.431	2.388	0.074	0.151	0.009	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1394.61
27	0.7101	1157.1	1177.6	1174.4	0.949	3.399	71.654	21.280	2.447	0.079	0.164	0.012	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1394.13
28	0.7116	1159.1	1179.6	1176.5	0.961	3.404	71.353	21.543	2.483	0.077	0.157	0.010	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1395.02
29	0.7093	1156.7	1177.2	1174.1	0.933	3.368	71.725	21.307	2.418	0.076	0.151	0.009	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1394.53
30	0.7099	1157.8	1178.3	1175.0	0.939	3.358	71.606	21.459	2.378	0.077	0.158	0.011	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1395.06
31	0.7104	1159.1	1179.6	1176.4	0.923	3.347	71.506	21.563	2.399	0.078	0.160	0.011	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1396.22
Avg	0.7112	1160.0	1181.0	1177.8	0.943	3.312	71.602	21.293	2.550	0.087	0.184	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1396.98

Zone 265

# Source Daily Summary

March 2019

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	0.7394	1166.6	1187.3	1183.4	0.923	5.604	68.020	20.272	4.649	0.154	0.340	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1377.43
2	0.7274	1155.7	1176.2	1172.3	0.811	5.314	69.700	19.603	4.130	0.131	0.281	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1375.76
3	0.7237	1154.0	1174.4	1170.6	0.792	5.100	70.183	19.604	3.916	0.122	0.256	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1377.24
4	0.7256	1155.4	1175.8	1171.9	0.826	5.139	70.068	19.457	4.063	0.132	0.283	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1377.07
5	0.7321	1159.6	1180.1	1176.2	0.839	5.478	69.088	19.717	4.395	0.142	0.308	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1375.92
6	0.7352	1163.4	1184.0	1180.1	0.876	5.474	68.581	20.125	4.453	0.144	0.313	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1377.59
7	0.7334	1160.7	1181.3	1177.4	0.892	5.442	68.884	19.917	4.377	0.143	0.311	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1376.14
8	0.7384	1163.2	1183.8	1179.9	0.913	5.733	68.167	20.028	4.631	0.154	0.338	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1374.34
9	0.7399	1166.5	1187.2	1183.2	0.910	5.675	67.977	20.185	4.714	0.156	0.346	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1376.87
10	0.7363	1161.0	1181.6	1177.6	0.912	5.672	68.409	20.000	4.520	0.143	0.313	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1373.71
11	0.7353	1158.9	1179.5	1175.5	0.911	5.707	68.571	19.833	4.492	0.142	0.311	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1372.18
12	0.7365	1164.0	1184.7	1180.6	0.913	5.503	68.446	20.107	4.524	0.148	0.324	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1377.10
13	0.7379	1165.0	1185.6	1181.5	0.907	5.581	68.288	20.082	4.612	0.153	0.339	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1376.93
14	0.7306	1157.9	1178.4	1174.3	0.908	5.327	69.098	20.140	4.089	0.129	0.279	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1375.49
15	0.7307	1155.3	1175.7	1171.6	0.870	5.562	69.237	19.587	4.280	0.136	0.297	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1372.12
16	0.7344	1159.3	1179.8	1175.7	0.907	5.607	68.612	20.039	4.363	0.139	0.301	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1373.44
17	0.7358	1160.5	1181.1	1177.0	0.905	5.668	68.488	19.954	4.490	0.144	0.315	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1373.55
18	0.7363	1161.3	1181.8	1177.7	0.904	5.671	68.466	19.914	4.533	0.147	0.325	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1373.93
19	0.7361	1160.3	1180.9	1176.8	0.906	5.709	68.421	19.970	4.503	0.144	0.313	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1373.01
20	0.7373	1163.4	1184.0	1179.9	0.908	5.630	68.266	20.134	4.566	0.145	0.319	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1375.56
21	0.7363	1160.0	1180.5	1176.4	0.913	5.731	68.395	19.966	4.507	0.142	0.312	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1372.48
22	0.7347	1160.4	1180.9	1176.8	0.914	5.556	68.594	20.078	4.387	0.138	0.301	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1374.46
23	0.7350	1160.7	1181.3	1177.0	0.914	5.563	68.552	20.090	4.408	0.138	0.302	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1374.59
24	0.7349	1159.4	1180.0	1175.7	0.912	5.636	68.570	19.988	4.422	0.139	0.301	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1373.16
25	0.7359	1161.5	1182.1	1178.1	0.913	5.601	68.453	20.073	4.478	0.142	0.308	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1374.69
26	0.7393	1164.7	1185.3	1181.5	0.913	5.729	68.071	20.037	4.720	0.154	0.340	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1375.25
27	0.7367	1159.0	1179.5	1175.7	0.913	5.829	68.393	19.778	4.588	0.146	0.320	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1370.98
28	0.7369	1159.3	1179.8	1176.0	0.914	5.828	68.351	19.829	4.577	0.146	0.321	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1371.13
29	0.7373	1159.8	1180.4	1176.5	0.912	5.834	68.293	19.860	4.595	0.148	0.324	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1371.42
30	0.7370	1159.7	1180.3	1176.3	0.910	5.822	68.311	19.879	4.579	0.147	0.319	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1371.51
31	0.7392	1161.2	1181.8	1177.8	0.910	5.933	68.035	19.888	4.714	0.152	0.334	0.018	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1371.28
Avg	0.7350	1161.0	1181.1	1177.1	0.896	5.602	68.612	19.940	4.460	0.143	0.313	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1374.40

Zone 271

# Source Daily Summary

March 2019

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	0.7252	1152.9	1173.3	1169.9	0.832	5.244	70.182	19.205	4.083	0.134	0.287	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1374.45	
2	0.7398	1166.8	1187.5	1184.1	0.930	5.616	67.957	20.316	4.652	0.153	0.337	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1377.28	
3	0.7269	1154.7	1175.1	1172.0	0.812	5.332	69.747	19.582	4.095	0.128	0.273	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1374.93	
4	0.7237	1153.5	1173.9	1170.8	0.798	5.122	70.188	19.577	3.913	0.122	0.253	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1376.57	
5	0.7258	1155.3	1175.8	1172.7	0.831	5.155	70.027	19.481	4.063	0.132	0.280	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1376.78	
6	0.7328	1159.6	1180.1	1177.0	0.847	5.524	68.977	19.763	4.408	0.142	0.305	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1375.30	
7	0.7349	1162.8	1183.4	1180.3	0.880	5.480	68.621	20.094	4.441	0.143	0.307	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1377.08	
8	0.7340	1160.4	1180.9	1177.8	0.900	5.512	68.766	19.948	4.392	0.142	0.306	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1375.05	
9	0.7388	1162.9	1183.5	1180.4	0.920	5.775	68.118	20.010	4.651	0.154	0.335	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1373.60	
10	0.7402	1166.1	1186.7	1183.6	0.918	5.720	67.927	20.178	4.722	0.155	0.342	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1375.99	
11	0.7362	1160.1	1180.7	1177.6	0.919	5.705	68.432	19.942	4.520	0.142	0.308	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1372.72	
12	0.7359	1159.0	1179.5	1176.3	0.919	5.746	68.478	19.878	4.497	0.142	0.307	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1371.58	
13	0.7368	1163.3	1183.9	1180.7	0.923	5.559	68.362	20.170	4.488	0.145	0.318	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1375.89	
14	0.7384	1164.6	1185.2	1182.0	0.916	5.641	68.157	20.179	4.590	0.150	0.329	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1375.90	
15	0.7304	1157.3	1177.8	1174.5	0.915	5.344	69.139	20.087	4.081	0.129	0.275	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1374.71	
16	0.7307	1154.4	1174.9	1171.6	0.876	5.602	69.257	19.524	4.283	0.135	0.291	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1371.02	
17	0.7345	1158.5	1179.1	1175.8	0.915	5.647	68.631	19.965	4.375	0.138	0.297	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1372.38	
18	0.7360	1160.2	1180.7	1177.5	0.911	5.698	68.466	19.941	4.495	0.143	0.311	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1372.86	
19	0.7368	1161.0	1181.5	1178.2	0.911	5.718	68.402	19.920	4.542	0.147	0.321	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1373.09	
20	0.7365	1160.3	1180.9	1177.6	0.913	5.733	68.364	20.001	4.504	0.143	0.309	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1372.56	
21	0.7373	1162.4	1183.0	1179.8	0.915	5.679	68.273	20.080	4.561	0.144	0.313	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1374.28	
22	0.7363	1159.3	1179.9	1176.6	0.921	5.763	68.399	19.929	4.506	0.141	0.307	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1371.59	
23	0.7349	1159.8	1180.4	1177.2	0.921	5.599	68.578	20.031	4.403	0.138	0.298	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1373.54	
24	0.7353	1160.4	1180.9	1177.7	0.921	5.598	68.516	20.091	4.406	0.138	0.297	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1373.83	
25	0.7352	1159.0	1179.5	1176.3	0.920	5.673	68.559	19.941	4.437	0.139	0.299	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1372.31	
26	0.7361	1160.9	1181.4	1178.2	0.920	5.650	68.436	20.028	4.488	0.141	0.305	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1373.61	
27	0.7398	1164.6	1185.2	1182.0	0.920	5.772	68.005	20.042	4.735	0.154	0.336	0.019	0.019	0.000	0.000	0.000	0.000	0.000	1374.53	
28	0.7373	1159.2	1179.8	1176.5	0.920	5.860	68.299	19.833	4.592	0.145	0.315	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1370.56	
29	0.7373	1159.2	1179.7	1176.5	0.921	5.868	68.290	19.834	4.591	0.146	0.317	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1370.46	
30	0.7373	1159.0	1179.6	1176.3	0.919	5.870	68.296	19.837	4.580	0.146	0.316	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1370.36	
31	0.7375	1159.5	1180.0	1176.8	0.917	5.866	68.262	19.865	4.594	0.146	0.316	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1370.70	
Avg	0.7348	1160.0	1180.4	1177.2	0.900	5.615	68.649	19.912	4.441	0.142	0.307	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1373.73	

Zone 272

# Source Daily Summary

March 2019

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	0.7236	1151.2	1171.6	1168.2	0.824	5.208	70.439	19.059	4.022	0.132	0.282	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1373.95
2	0.7401	1167.0	1187.7	1184.4	0.930	5.637	67.906	20.326	4.670	0.154	0.338	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1377.17
3	0.7288	1156.5	1176.9	1173.8	0.830	5.373	69.502	19.659	4.188	0.133	0.284	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1375.26
4	0.7240	1154.0	1174.5	1171.4	0.796	5.121	70.120	19.650	3.915	0.121	0.251	0.014	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1376.94
5	0.7258	1155.3	1175.8	1172.6	0.832	5.151	70.032	19.487	4.055	0.131	0.279	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1376.78
6	0.7323	1159.5	1180.0	1176.9	0.846	5.486	69.066	19.735	4.389	0.141	0.304	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1375.63
7	0.7356	1163.4	1184.0	1180.9	0.879	5.514	68.511	20.131	4.476	0.144	0.310	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1377.09
8	0.7334	1160.2	1180.8	1177.6	0.899	5.466	68.868	19.924	4.363	0.142	0.305	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1375.44
9	0.7384	1162.6	1183.2	1180.1	0.922	5.760	68.161	20.011	4.625	0.153	0.332	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1373.53
10	0.7405	1166.4	1187.1	1183.9	0.918	5.724	67.892	20.188	4.737	0.157	0.345	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1376.14
11	0.7368	1160.7	1181.3	1178.2	0.921	5.716	68.355	19.976	4.543	0.143	0.311	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1372.91
12	0.7360	1159.1	1179.6	1176.4	0.920	5.745	68.471	19.878	4.503	0.142	0.308	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1371.66
13	0.7373	1163.9	1184.5	1181.3	0.925	5.564	68.297	20.197	4.514	0.147	0.321	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1376.16
14	0.7381	1164.5	1185.2	1181.9	0.917	5.618	68.205	20.168	4.574	0.150	0.329	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1376.04
15	0.7318	1158.0	1178.5	1175.3	0.918	5.426	68.945	20.112	4.155	0.131	0.283	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1374.27
16	0.7296	1153.5	1174.0	1170.8	0.876	5.553	69.404	19.503	4.214	0.133	0.286	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1371.00
17	0.7346	1158.7	1179.2	1176.0	0.916	5.651	68.609	19.977	4.378	0.139	0.299	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1372.41
18	0.7359	1159.9	1180.4	1177.2	0.913	5.701	68.484	19.929	4.485	0.143	0.310	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1372.62
19	0.7367	1161.0	1181.5	1178.3	0.913	5.712	68.406	19.923	4.541	0.147	0.321	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1373.14
20	0.7366	1160.0	1180.6	1177.4	0.914	5.753	68.359	19.983	4.504	0.143	0.310	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1372.19
21	0.7377	1163.4	1184.0	1180.8	0.916	5.653	68.227	20.130	4.579	0.145	0.316	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1375.12
22	0.7365	1159.4	1179.9	1176.7	0.921	5.779	68.372	19.924	4.518	0.142	0.308	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1371.45
23	0.7348	1159.4	1179.9	1176.7	0.922	5.613	68.589	20.015	4.394	0.138	0.297	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1373.12
24	0.7354	1160.5	1181.0	1177.7	0.923	5.606	68.494	20.096	4.411	0.138	0.299	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1373.77
25	0.7353	1159.4	1179.9	1176.7	0.921	5.665	68.538	19.961	4.442	0.139	0.301	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1372.58
26	0.7359	1160.5	1181.0	1177.9	0.920	5.656	68.465	19.998	4.483	0.141	0.304	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1373.33
27	0.7388	1162.8	1183.4	1180.3	0.921	5.778	68.110	20.011	4.675	0.149	0.322	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1373.45
28	0.7369	1158.5	1179.1	1175.9	0.921	5.865	68.342	19.810	4.575	0.144	0.310	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1370.11
29	0.7373	1159.1	1179.6	1176.5	0.922	5.864	68.294	19.842	4.582	0.146	0.316	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1370.45
30	0.7378	1159.9	1180.4	1177.2	0.920	5.866	68.231	19.872	4.608	0.148	0.320	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1370.88
31	0.7373	1159.3	1179.8	1176.7	0.918	5.864	68.276	19.861	4.586	0.146	0.316	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1370.62
Avg	0.7348	1160.0	1180.5	1177.3	0.901	5.616	68.644	19.914	4.442	0.142	0.307	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1373.72

Zone 273

# Source Daily Summary

March 2019

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	0.6629	1100.2	1119.7	1116.6	0.332	3.370	79.438	15.236	1.505	0.044	0.064	0.007	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1371.94
2	0.6686	1110.8	1130.5	1127.5	0.201	3.459	78.185	16.441	1.619	0.036	0.052	0.004	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1379.26
3	0.6847	1132.7	1152.8	1149.7	0.400	3.334	75.808	18.104	2.197	0.058	0.089	0.006	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1389.82
4	0.6670	1105.9	1125.5	1122.4	0.402	3.302	79.007	15.377	1.760	0.054	0.083	0.008	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1374.70
5	0.6657	1105.6	1125.2	1122.1	0.270	3.401	78.942	15.602	1.676	0.041	0.058	0.006	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1375.70
6	0.6830	1135.2	1155.3	1152.1	0.322	3.143	76.036	18.223	2.124	0.054	0.085	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1394.54
7	0.6747	1121.9	1141.8	1138.6	0.375	3.085	77.755	16.618	1.967	0.066	0.113	0.011	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1386.69
8	0.6806	1132.2	1152.2	1149.1	0.411	2.965	76.551	17.908	1.998	0.059	0.093	0.008	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1393.29
9	0.6738	1120.2	1140.0	1136.8	0.353	3.148	77.481	17.199	1.679	0.049	0.076	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1385.40
10	0.6824	1134.1	1154.2	1151.1	0.269	3.240	75.791	18.686	1.881	0.048	0.076	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1393.83
11	0.6986	1147.1	1167.4	1164.3	0.385	3.784	73.364	19.682	2.580	0.068	0.124	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1393.58
12	0.6933	1126.2	1146.2	1143.1	0.798	3.922	75.308	16.835	2.827	0.091	0.194	0.011	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1373.55
13	0.6780	1108.4	1128.0	1124.9	0.879	3.453	78.092	14.902	2.398	0.079	0.175	0.011	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1366.69
14	0.6686	1099.3	1118.8	1115.7	0.878	3.132	79.484	14.318	1.974	0.063	0.134	0.008	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1364.96
15	0.7154	1141.4	1161.6	1158.4	0.865	4.975	71.751	18.304	3.704	0.118	0.255	0.014	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1370.29
16	0.7064	1133.5	1153.5	1150.4	0.890	4.580	73.242	17.571	3.353	0.107	0.231	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1369.36
17	0.7039	1131.4	1151.4	1148.3	0.889	4.467	73.709	17.284	3.295	0.104	0.226	0.013	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1369.40
18	0.6951	1123.3	1143.1	1140.0	0.882	4.150	75.206	16.419	3.013	0.096	0.210	0.012	0.013	0.000	0.000	0.000	0.000	0.000	0.000	1368.01
19	0.7234	1148.4	1168.7	1165.5	0.900	5.246	70.485	18.925	4.011	0.127	0.275	0.015	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1370.98
20	0.7348	1160.9	1181.5	1178.2	0.906	5.540	68.675	19.930	4.463	0.142	0.311	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1375.07
21	0.7360	1159.7	1180.2	1176.8	0.913	5.725	68.428	19.958	4.492	0.141	0.310	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1372.38
22	0.7314	1157.2	1177.7	1174.5	0.912	5.449	69.117	19.798	4.267	0.134	0.292	0.015	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1373.76
23	0.7351	1160.9	1181.4	1177.9	0.915	5.562	68.539	20.102	4.408	0.139	0.302	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1374.67
24	0.7352	1159.7	1180.3	1177.1	0.913	5.642	68.539	19.991	4.440	0.140	0.303	0.016	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1373.25
25	0.6663	1097.9	1117.3	1114.4	0.890	2.984	79.782	14.332	1.828	0.055	0.116	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1365.88
26	0.6356	1070.5	1089.5	1086.6	0.895	1.761	84.793	11.858	0.641	0.017	0.031	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1363.30
27	0.6493	1082.3	1101.4	1098.9	0.895	2.334	82.656	12.676	1.308	0.039	0.081	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1364.08
28	0.6508	1085.8	1105.1	1102.0	0.895	2.246	82.481	12.943	1.291	0.043	0.088	0.007	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1366.70
29	0.6564	1088.9	1108.2	1105.2	0.898	2.584	81.586	13.210	1.551	0.051	0.105	0.007	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1364.72
30	0.6849	1114.7	1134.4	1131.3	0.905	3.683	76.852	15.700	2.575	0.084	0.180	0.011	0.012	0.000	0.000	0.000	0.000	0.000	0.000	1367.80
31	0.7156	1140.5	1160.7	1157.6	0.908	4.977	71.882	18.028	3.783	0.123	0.269	0.015	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1369.17
Avg	0.6889	1124.0	1143.7	1140.6	0.695	3.827	75.773	16.844	2.600	0.080	0.161	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1374.93

Zone 28

# Source Daily Summary

March 2019

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	0.6655	1106.3	1125.9	1123.2	0.214	3.417	78.685	16.101	1.491	0.035	0.051	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1377.03
2	0.6854	1135.7	1155.8	1153.0	0.322	3.336	75.578	18.388	2.235	0.052	0.081	0.006	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1392.85
3	0.6717	1113.5	1133.2	1130.4	0.428	3.241	78.196	16.084	1.893	0.056	0.086	0.010	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1379.43
4	0.6648	1105.0	1124.6	1121.8	0.246	3.385	79.079	15.507	1.677	0.039	0.057	0.005	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1376.02
5	0.6825	1135.2	1155.3	1152.4	0.319	3.101	76.154	18.122	2.144	0.054	0.093	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1395.15
6	0.6732	1120.8	1140.6	1137.8	0.339	3.070	77.930	16.538	1.943	0.058	0.105	0.010	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1386.93
7	0.6772	1126.9	1146.8	1144.0	0.399	2.985	77.036	17.575	1.852	0.054	0.086	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1390.37
8	0.6767	1126.5	1146.5	1143.7	0.227	3.229	76.686	18.030	1.719	0.041	0.063	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1390.41
9	0.6865	1143.8	1164.1	1161.2	0.196	3.136	75.008	19.507	2.040	0.043	0.065	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1401.72
10	0.6901	1144.3	1164.6	1161.7	0.383	3.168	74.453	19.870	1.972	0.056	0.091	0.004	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1398.57
11	0.6905	1148.7	1169.0	1166.2	0.371	2.958	74.072	20.791	1.660	0.052	0.087	0.005	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1403.58
12	0.6845	1150.8	1171.1	1168.3	0.000	2.838	73.624	22.920	0.602	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.27
13	0.6850	1151.2	1171.6	1168.7	0.000	2.859	73.531	22.986	0.610	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.27
14	0.6853	1151.6	1172.0	1169.1	0.000	2.863	73.461	23.056	0.606	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.47
15	0.6638	1113.9	1133.6	1130.8	0.452	2.441	78.798	17.316	0.934	0.022	0.036	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1388.03
16	0.6297	1064.5	1083.3	1080.7	0.847	1.640	85.860	11.067	0.543	0.014	0.026	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1362.06
17	0.6292	1063.5	1082.3	1079.6	0.851	1.649	85.977	10.927	0.553	0.014	0.028	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1361.31
18	0.6293	1063.7	1082.5	1079.8	0.842	1.659	85.918	11.003	0.538	0.014	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1361.48
19	0.6297	1064.5	1083.3	1080.6	0.843	1.647	85.837	11.097	0.537	0.013	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1362.07
20	0.6293	1064.2	1083.1	1080.3	0.847	1.625	85.853	11.151	0.496	0.010	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1362.10
21	0.6603	1112.7	1132.4	1129.5	0.374	2.305	79.018	17.707	0.574	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1390.18
22	0.6826	1148.4	1168.8	1165.8	0.007	2.793	74.037	22.531	0.617	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.34
23	0.6425	1084.0	1103.2	1100.3	0.705	1.879	83.091	13.698	0.589	0.014	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1372.96
24	0.6683	1125.1	1145.0	1142.1	0.274	2.459	77.287	19.349	0.605	0.009	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1397.24
25	0.6838	1149.8	1170.1	1167.1	0.000	2.833	73.765	22.791	0.595	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.76
26	0.6837	1150.0	1170.4	1167.4	0.000	2.806	73.814	22.750	0.614	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.19
27	0.6840	1150.4	1170.7	1167.7	0.000	2.818	73.748	22.796	0.623	0.007	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.27
28	0.6843	1150.6	1171.0	1168.0	0.000	2.828	73.692	22.842	0.623	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.30
29	0.6838	1150.5	1170.8	1167.8	0.000	2.790	73.798	22.774	0.623	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.63
30	0.6835	1149.5	1169.9	1166.9	0.000	2.819	73.841	22.717	0.609	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.79
31	0.6839	1149.7	1170.1	1167.1	0.000	2.851	73.765	22.738	0.631	0.007	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.53
Avg	0.6700	1123.0	1143.0	1140.1	0.306	2.691	77.471	18.411	1.056	0.023	0.038	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1392.98

Zone 31

# Source Daily Summary

March 2019

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	0.6465	1076.4	1095.5	1091.6	0.767	2.607	83.648	11.205	1.571	0.070	0.103	0.016	0.012	0.000	0.000	0.000	0.000	0.000	1358.93	
2	0.6531	1085.4	1104.6	1100.7	0.746	2.715	82.397	12.231	1.706	0.071	0.107	0.015	0.012	0.000	0.000	0.000	0.000	0.000	1363.30	
3	0.6522	1082.4	1101.6	1098.0	0.526	3.150	82.101	12.417	1.640	0.058	0.086	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1360.66	
4	0.6456	1078.6	1097.7	1093.7	0.866	2.242	84.020	11.088	1.571	0.072	0.108	0.018	0.014	0.000	0.000	0.000	0.000	0.000	1362.50	
5	0.6316	1057.6	1076.3	1072.2	1.117	1.819	86.975	8.590	1.264	0.078	0.119	0.021	0.017	0.000	0.000	0.000	0.000	0.000	1350.67	
6	0.6297	1053.1	1071.8	1067.6	1.013	2.076	87.110	8.411	1.161	0.078	0.111	0.022	0.017	0.000	0.000	0.000	0.000	0.000	1346.88	
7	0.6713	1112.9	1132.6	1129.0	0.431	3.235	78.672	15.264	2.219	0.064	0.100	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1378.92	
8	0.6879	1139.5	1159.7	1156.3	0.318	3.339	75.463	18.126	2.589	0.060	0.094	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1395.03	
9	0.6947	1144.6	1164.9	1161.6	0.576	3.279	74.493	18.822	2.598	0.080	0.136	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1394.32	
10	0.6983	1150.5	1170.9	1167.6	0.715	3.047	74.158	19.076	2.721	0.096	0.166	0.011	0.010	0.000	0.000	0.000	0.000	0.000	1397.86	
11	0.6930	1143.5	1163.8	1160.7	0.478	3.338	74.840	18.359	2.786	0.071	0.116	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1394.67	
12	0.6986	1151.8	1172.2	1169.2	0.749	2.941	74.309	18.859	2.839	0.101	0.176	0.012	0.012	0.000	0.000	0.000	0.000	0.000	1399.15	
13	0.6921	1142.0	1162.2	1159.2	0.638	3.099	75.144	18.288	2.574	0.087	0.150	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1393.73	
14	0.6826	1129.8	1149.8	1146.8	0.575	3.044	76.671	17.167	2.353	0.067	0.111	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1388.46	
15	0.6800	1125.2	1145.1	1142.1	0.616	3.016	76.965	17.136	2.084	0.063	0.107	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1385.48	
16	0.6812	1127.7	1147.6	1144.6	0.622	2.973	76.731	17.412	2.073	0.065	0.111	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1387.27	
17	0.6813	1128.3	1148.3	1145.3	0.644	2.915	76.749	17.414	2.083	0.067	0.114	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1387.89	
18	0.6803	1127.1	1147.0	1144.0	0.592	2.971	76.781	17.478	2.000	0.061	0.104	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1387.44	
19	0.6797	1126.6	1146.6	1143.5	0.630	2.884	77.019	17.238	2.042	0.064	0.109	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1387.49	
20	0.6829	1130.0	1150.0	1146.9	0.451	3.250	76.176	17.822	2.138	0.058	0.096	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1388.43	
21	0.6849	1132.0	1152.0	1148.9	0.444	3.331	75.885	17.892	2.291	0.057	0.092	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1388.79	
22	0.6888	1137.6	1157.8	1154.7	0.631	3.066	75.501	18.246	2.332	0.076	0.132	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1391.77	
23	0.6847	1132.9	1152.9	1149.8	0.585	3.048	75.964	18.142	2.061	0.067	0.118	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1390.01	
24	0.6849	1131.3	1151.3	1148.2	0.560	3.198	76.013	17.825	2.212	0.067	0.113	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1387.91	
25	0.6845	1127.7	1147.7	1144.9	0.500	3.464	76.057	17.509	2.289	0.065	0.107	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1384.02	
26	0.6869	1133.4	1153.4	1150.4	0.657	3.109	76.014	17.562	2.424	0.080	0.137	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1388.43	
27	0.6746	1116.2	1136.0	1133.2	0.594	3.096	78.018	16.020	2.094	0.062	0.105	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1379.82	
28	0.6760	1117.8	1137.6	1134.7	0.765	2.865	78.050	16.010	2.075	0.078	0.138	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1380.40	
29	0.6738	1116.8	1136.5	1133.5	0.712	2.801	78.320	15.980	1.975	0.071	0.124	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1381.38	
30	0.6675	1111.8	1131.4	1128.5	0.601	2.686	79.182	15.624	1.743	0.054	0.094	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1381.61	
31	0.6651	1108.7	1128.4	1125.3	0.787	2.362	79.827	15.234	1.600	0.061	0.111	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1380.32	
Avg	0.6753	1119.0	1138.5	1135.2	0.642	2.934	78.041	16.079	2.100	0.070	0.116	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1382.05	

Zone 32

# Source Daily Summary

March 2019

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	0.6866	1152.7	1173.1	1168.4	0.000	2.921	73.185	23.270	0.610	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.44	-26.35
2	0.6858	1151.9	1172.3	1167.7	0.000	2.889	73.315	23.215	0.567	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.38	-26.85
3	0.6863	1152.0	1172.4	1167.7	0.000	2.930	73.200	23.302	0.554	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.96	-26.76
4	0.6869	1152.9	1173.3	1168.6	0.000	2.931	73.101	23.375	0.580	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.48	-26.34
5	0.6856	1151.5	1171.9	1167.0	0.000	2.892	73.400	23.092	0.603	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.11	-26.87
6	0.6848	1150.5	1170.9	1166.0	0.000	2.882	73.549	22.959	0.596	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.66	-27.26
7	0.6857	1151.7	1172.1	1167.1	0.000	2.897	73.384	23.086	0.619	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.14	-26.74
8	0.6858	1152.1	1172.5	1167.4	0.000	2.883	73.360	23.127	0.616	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.51	-26.66
9	0.6860	1152.2	1172.6	1168.2	0.000	2.892	73.296	23.211	0.587	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.48	-26.70
10	0.6857	1152.3	1172.7	1167.9	0.000	2.861	73.354	23.179	0.591	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.89	-26.73
11	0.6860	1153.3	1173.7	1168.6	0.000	2.828	73.315	23.243	0.601	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.79	-26.48
12	0.6865	1153.6	1174.1	1169.4	0.000	2.857	73.201	23.327	0.601	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.68	-26.27
13	0.6857	1152.7	1173.1	1168.5	0.000	2.837	73.354	23.209	0.586	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.37	-26.69
14	0.6853	1152.9	1173.3	1168.5	0.000	2.782	73.491	23.095	0.617	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.06	-26.70
15	0.6857	1153.1	1173.5	1168.5	0.000	2.808	73.401	23.156	0.621	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.92	-26.52
16	0.6862	1153.1	1173.5	1168.5	0.000	2.855	73.293	23.224	0.614	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.38	-26.41
17	0.6861	1152.9	1173.3	1168.4	0.000	2.854	73.320	23.194	0.618	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.29	-26.45
18	0.6855	1152.4	1172.8	1168.2	0.000	2.836	73.409	23.141	0.600	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.22	-26.74
19	0.6858	1152.3	1172.7	1167.9	0.000	2.865	73.370	23.141	0.609	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.82	-26.66
20	0.6862	1152.9	1173.3	1168.5	0.000	2.870	73.307	23.168	0.640	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.12	-26.32
21	0.6851	1152.1	1172.5	1167.6	0.000	2.814	73.533	23.010	0.629	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.27	-26.82
22	0.6852	1152.1	1172.5	1167.6	0.000	2.826	73.483	23.067	0.610	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.17	-26.83
23	0.6854	1152.4	1172.8	1168.0	0.000	2.827	73.459	23.073	0.627	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.32	-26.67
24	0.6854	1152.2	1172.6	1168.2	0.000	2.837	73.430	23.127	0.591	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.09	-26.84
25	0.6852	1152.2	1172.6	1167.9	0.000	2.816	73.491	23.074	0.605	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.32	-26.86
26	0.6853	1152.5	1172.9	1168.2	0.000	2.811	73.472	23.081	0.621	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.56	-26.70
27	0.6856	1152.7	1173.1	1168.5	0.000	2.826	73.419	23.121	0.619	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.48	-26.61
28	0.6854	1152.5	1172.9	1168.3	0.000	2.822	73.463	23.069	0.632	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.42	-26.64
29	0.6849	1151.9	1172.3	1167.6	0.000	2.810	73.559	23.002	0.616	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.20	-26.95
30	0.6855	1152.3	1172.7	1167.8	0.000	2.835	73.449	23.074	0.628	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.20	-26.66
31	0.6857	1152.6	1173.0	1168.3	0.000	2.845	73.393	23.119	0.628	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.21	-26.55
Avg	0.6857	1152.0	1172.8	1168.0	0.000	2.853	73.379	23.146	0.608	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.03	-26.67

Zone 33

# Source Daily Summary

March 2019

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	0.6520	1075.6	1094.7	1091.7	0.364	3.796	81.789	12.291	1.615	0.052	0.078	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1352.34	
2	0.6398	1053.0	1071.6	1068.7	0.378	4.001	83.919	10.303	1.263	0.048	0.073	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1336.54	
3	0.6377	1049.4	1067.9	1065.1	0.375	4.029	84.288	9.959	1.215	0.047	0.070	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1334.13	
4	0.6383	1050.4	1069.0	1066.1	0.375	4.025	84.161	10.084	1.222	0.047	0.070	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1334.80	
5	0.6385	1050.9	1069.6	1066.6	0.368	4.020	84.113	10.149	1.219	0.046	0.069	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1335.30	
6	0.6389	1052.2	1070.8	1067.9	0.378	3.968	84.080	10.191	1.247	0.048	0.072	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1336.45	
7	0.6417	1051.6	1070.2	1067.4	0.354	4.306	83.505	10.371	1.309	0.053	0.088	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1332.83	
8	0.6417	1051.6	1070.2	1067.4	0.354	4.306	83.505	10.371	1.309	0.053	0.088	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1332.83	
9	0.6417	1051.6	1070.2	1067.4	0.354	4.306	83.505	10.371	1.309	0.053	0.088	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1332.83	
10	0.6417	1051.6	1070.2	1067.4	0.354	4.306	83.505	10.371	1.309	0.053	0.088	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1332.83	
11	0.6417	1051.6	1070.2	1067.4	0.354	4.306	83.505	10.371	1.309	0.053	0.088	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1332.83	
12	0.5870	980.7	998.1	995.5	0.160	3.774	93.337	2.405	0.286	0.018	0.018	0.002	0.001	0.000	0.000	0.000	0.000	0.000	1299.68	
13	0.5870	980.7	998.1	995.5	0.160	3.774	93.337	2.404	0.286	0.018	0.018	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1299.64	
14	0.5726	962.1	979.1	976.6	0.109	3.635	95.922	0.309	0.017	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1290.89	
15	0.5726	962.1	979.1	976.6	0.109	3.634	95.923	0.308	0.017	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1290.90	
16	0.5726	962.0	979.1	976.6	0.109	3.636	95.922	0.308	0.017	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1290.87	
17	0.5726	962.0	979.1	976.6	0.108	3.638	95.921	0.308	0.017	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1290.85	
18	0.5738	959.4	976.4	973.9	0.109	3.907	95.649	0.308	0.018	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1286.12	
19	0.5727	962.0	979.0	976.5	0.109	3.647	95.911	0.309	0.017	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1290.69	
20	0.5728	961.6	978.7	976.1	0.107	3.680	95.881	0.308	0.017	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1290.13	
21	0.5728	961.5	978.5	976.0	0.107	3.690	95.873	0.306	0.016	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1289.93	
22	0.5727	961.9	978.9	976.4	0.108	3.651	95.909	0.307	0.016	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1290.62	
23	0.5726	962.0	979.0	976.5	0.109	3.641	95.918	0.307	0.016	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1290.78	
24	0.5726	962.2	979.2	976.7	0.110	3.622	95.933	0.310	0.017	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1291.10	
25	0.5726	962.2	979.3	976.7	0.111	3.617	95.937	0.310	0.017	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1291.17	
26	0.5728	961.4	978.4	975.9	0.108	3.698	95.865	0.305	0.016	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1289.77	
27	0.5727	961.8	978.9	976.3	0.108	3.656	95.902	0.308	0.017	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1290.52	
28	0.5728	961.5	978.6	976.0	0.108	3.687	95.874	0.307	0.016	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1289.98	
29	0.5728	961.6	978.7	976.1	0.108	3.677	95.883	0.308	0.016	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1290.15	
30	0.5728	961.6	978.6	976.1	0.108	3.680	95.880	0.307	0.016	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1290.10	
31	0.5728	961.5	978.6	976.0	0.108	3.685	95.876	0.306	0.016	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1289.99	
Avg	0.5980	996.0	1013.2	1010.5	0.203	3.839	91.372	4.038	0.490	0.024	0.029	0.003	0.002	0.000	0.000	0.000	0.000	0.000	1307.02	

Zone 34

# Source Daily Summary

March 2019

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	0.6727	1107.0	1126.6	1123.8	1.054	2.797	76.618	19.359	0.171	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.40	-38.77
2	0.6734	1107.5	1127.1	1124.3	1.051	2.833	76.500	19.424	0.190	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.34	-38.38
3	0.6732	1107.1	1126.7	1123.9	1.053	2.836	76.525	19.401	0.182	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.07	-38.51
4	0.6729	1107.0	1126.6	1123.7	1.050	2.823	76.570	19.387	0.167	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.16	-38.71
5	0.6725	1106.4	1126.0	1123.2	1.050	2.814	76.705	19.221	0.206	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.92	-38.79
6	0.6721	1105.9	1125.5	1122.6	1.059	2.797	76.768	19.192	0.182	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.68	-39.09
7	0.6712	1103.9	1123.4	1120.6	1.056	2.841	76.920	19.013	0.168	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1368.10	-39.77
8	0.6712	1103.6	1123.1	1120.3	1.062	2.850	76.941	18.961	0.183	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1367.71	-39.75
9	0.6707	1103.7	1123.3	1120.4	1.065	2.790	77.088	18.843	0.208	0.002	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1368.38	-39.75
10	0.6713	1104.6	1124.2	1121.3	1.058	2.804	76.961	18.964	0.202	0.003	0.006	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1368.85	-39.34
11	0.6711	1103.6	1123.2	1120.3	1.063	2.833	77.008	18.889	0.198	0.003	0.006	0.000	0.001	0.000	0.000	0.000	0.000	0.000	1367.88	-39.62
12	0.6703	1102.5	1122.0	1119.2	1.065	2.829	77.113	18.821	0.168	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1367.25	-40.29
13	0.6711	1104.5	1124.1	1121.3	1.061	2.785	76.992	18.958	0.198	0.002	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1368.97	-39.51
14	0.6705	1103.6	1123.1	1120.2	1.050	2.802	77.101	18.856	0.184	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1368.41	-39.93
15	0.6707	1104.0	1123.6	1120.7	1.054	2.788	77.074	18.877	0.200	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1368.77	-39.72
16	0.6685	1099.1	1118.6	1115.8	1.057	2.872	77.487	18.403	0.177	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1364.99	-41.41
17	0.6697	1102.9	1122.4	1119.6	1.051	2.763	77.287	18.691	0.201	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1368.44	-40.26
18	0.6724	1105.6	1125.1	1122.3	1.054	2.857	76.704	19.181	0.197	0.002	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1368.91	-38.91
19	0.6720	1106.7	1126.3	1123.5	1.043	2.760	76.789	19.217	0.185	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.82	-38.96
20	0.6734	1106.7	1126.3	1123.4	1.059	2.877	76.505	19.349	0.202	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.24	-38.37
21	0.6725	1106.2	1125.8	1123.0	1.049	2.827	76.691	19.232	0.197	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.70	-38.85
22	0.6747	1109.6	1129.2	1126.4	1.047	2.832	76.271	19.617	0.231	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1371.62	-37.47
23	0.6821	1121.9	1141.7	1138.8	1.027	2.815	74.738	21.183	0.235	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1379.21	-33.16
24	0.6747	1108.1	1127.7	1124.8	1.050	2.925	76.260	19.523	0.240	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.70	-37.64
25	0.6739	1107.9	1127.5	1124.6	1.054	2.855	76.491	19.307	0.290	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.25	-37.73
26	0.6800	1118.5	1138.3	1135.4	1.034	2.816	75.153	20.769	0.228	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1377.16	-34.40
27	0.6791	1116.3	1136.1	1133.2	1.042	2.847	75.406	20.431	0.268	0.002	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1375.42	-34.78
28	0.6720	1104.2	1123.7	1120.9	1.061	2.891	76.799	19.038	0.207	0.001	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1367.63	-39.26
29	0.6737	1108.8	1128.4	1125.5	1.050	2.787	76.573	19.286	0.280	0.006	0.014	0.001	0.002	0.000	0.000	0.000	0.000	0.000	1371.55	-37.31
30	0.6750	1111.8	1131.5	1128.5	1.043	2.733	76.365	19.512	0.316	0.008	0.018	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1373.98	-36.11
31	0.6777	1116.2	1136.0	1133.1	1.037	2.728	75.685	20.299	0.238	0.004	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1376.73	-35.26
Avg	0.6731	1107.0	1126.9	1124.0	1.052	2.820	76.583	19.329	0.210	0.002	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.33	-38.38

Zone 43

March-19

ZONE 550

MANDAN BORDER

NBPL - St Anthony

Weighted

Start Date	End Date	MCF	DK	BTU	MCF	DK	BTU Zone 28	AVG BTU	
3/1/2019	3/2/2019	2011	2175	1.0814	5037	5641	1.1197	1.109	3/1/2019
3/2/2019	3/3/2019	1858	2005	1.0790	7168	8110	1.1305	1.120	3/2/2019
3/3/2019	3/4/2019	1893	2035	1.0753	7235	8335	1.1528	1.137	3/3/2019
3/4/2019	3/5/2019	1798	1931	1.0742	6299	7088	1.1255	1.114	3/4/2019
3/5/2019	3/6/2019	1854	1990	1.0736	5039	5677	1.1252	1.111	3/5/2019
3/6/2019	3/7/2019	1874	2032	1.0841	5395	6234	1.1553	1.137	3/6/2019
3/7/2019	3/8/2019	2009	2182	1.0860	4895	5588	1.1418	1.126	3/7/2019
3/8/2019	3/9/2019	1782	1916	1.0754	3321	3826	1.1522	1.125	3/8/2019
3/9/2019	3/10/2019	1839	1982	1.0780	3719	4236	1.1400	1.119	3/9/2019
3/10/2019	3/11/2019	3366	3642	1.0827	3884	4488	1.1542	1.121	3/10/2019
3/11/2019	3/12/2019	1920	2077	1.0817	3741	4364	1.1674	1.138	3/11/2019
3/12/2019	3/13/2019	1837	1978	1.0769	2993	3412	1.1462	1.120	3/12/2019
3/13/2019	3/14/2019	1839	1989	1.0815	3506	3955	1.1280	1.112	3/13/2019
3/14/2019	3/15/2019	1868	2023	1.0825	3107	3469	1.1188	1.105	3/14/2019
3/15/2019	3/16/2019	1889	2043	1.0814	2404	2796	1.1616	1.126	3/15/2019
3/16/2019	3/17/2019	1882	2031	1.0789	2684	3087	1.1535	1.123	3/16/2019
3/17/2019	3/18/2019	1888	2041	1.0814	2649	3030	1.1514	1.122	3/17/2019
3/18/2019	3/19/2019	1902	2056	1.0812	2502	2853	1.1431	1.116	3/18/2019
3/19/2019	3/20/2019	1860	2010	1.0808	1996	2335	1.1687	1.126	3/19/2019
3/20/2019	3/21/2019	1837	1991	1.0842	1578	1865	1.1815	1.129	3/20/2019
3/21/2019	3/22/2019	1947	2109	1.0829	1563	1846	1.1802	1.126	3/21/2019
3/22/2019	3/23/2019	1826	1989	1.0894	1985	2340	1.1777	1.135	3/22/2019
3/23/2019	3/24/2019	1868	2041	1.0927	994	1176	1.1814	1.124	3/23/2019
3/24/2019	3/25/2019	1852	2018	1.0895	2691	3177	1.1803	1.143	3/24/2019
3/25/2019	3/26/2019	1858	2018	1.0863	2751	3080	1.1173	1.105	3/25/2019
3/26/2019	3/27/2019	1894	2059	1.0877	2178	2372	1.0895	1.089	3/26/2019
3/27/2019	3/28/2019	1921	2095	1.0909	1306	1446	1.1014	1.095	3/27/2019
3/28/2019	3/29/2019	1872	2031	1.0847	1863	2055	1.1051	1.095	3/28/2019
3/29/2019	3/30/2019	1874	2042	1.0895	2048	2262	1.1082	1.099	3/29/2019
3/30/2019	3/31/2019	1869	2036	1.0895	1937	2190	1.1344	1.112	3/30/2019
3/31/2019	4/1/2019	1880	2051	1.0911	1797	2080	1.1607	1.125	3/31/2019
		59,667	64,618	1.0830	100,265	114,413	1.1437	1.1189	



# Alliance Pipeline

DAILY ANALYSIS — USA  
 ND07MD1 — Hankinson Sales  
 March 2019

DAY	Heating Value (BTU/m3)	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	1,145.027	0.6552	84.9518	9.4729	3.1675	0.3329	0.5565	0.0533	0.0403	0.0211	0.9882	0.4035	0.0119
2	1,142.769	0.6535	85.1287	9.4241	3.1103	0.3197	0.5273	0.0493	0.0373	0.0201	0.9675	0.4040	0.0118
3	1,143.250	0.6539	85.0816	9.4378	3.1227	0.3217	0.5347	0.0505	0.0375	0.0207	0.9801	0.4010	0.0117
4	1,143.932	0.6543	85.0249	9.4702	3.1526	0.3194	0.5390	0.0505	0.0363	0.0189	0.9783	0.3983	0.0118
5	1,147.104	0.6558	84.9234	9.4862	3.1903	0.3567	0.5860	0.0524	0.0380	0.0195	0.9494	0.3862	0.0119
6	1,148.288	0.6565	84.8616	9.4998	3.2167	0.3695	0.6000	0.0516	0.0380	0.0205	0.9473	0.3828	0.0122
7	1,149.218	0.6571	84.8141	9.5043	3.2373	0.3705	0.6090	0.0554	0.0429	0.0231	0.9479	0.3835	0.0119
8	1,154.129	0.6602	84.5804	9.5177	3.3302	0.4054	0.6745	0.0678	0.0548	0.0314	0.9441	0.3817	0.0119
9	1,155.776	0.6614	84.3969	9.4920	3.6213	0.3831	0.6279	0.0581	0.0446	0.0241	0.9596	0.3804	0.0120
10	1,160.404	0.6645	84.1780	9.4426	3.7273	0.4257	0.7078	0.0671	0.0538	0.0297	0.9799	0.3763	0.0119
11	1,159.744	0.6641	84.1394	9.5373	3.7458	0.3986	0.6736	0.0652	0.0511	0.0250	0.9709	0.3807	0.0123
12	1,162.441	0.6660	84.0368	9.4506	3.8229	0.4309	0.7229	0.0706	0.0565	0.0292	0.9772	0.3906	0.0117
13	1,160.180	0.6645	84.1998	9.3818	3.7807	0.4124	0.6988	0.0690	0.0544	0.0280	0.9800	0.3836	0.0115
14	1,159.053	0.6637	84.3353	9.2913	3.7165	0.4205	0.7118	0.0695	0.0542	0.0286	0.9848	0.3759	0.0115
15	1,158.271	0.6630	84.3455	9.3652	3.7131	0.3986	0.6742	0.0685	0.0523	0.0278	0.9615	0.3815	0.0117
16	1,157.043	0.6623	84.3942	9.3737	3.6685	0.3937	0.6671	0.0646	0.0495	0.0263	0.9744	0.3762	0.0117
17	1,159.523	0.6644	84.1342	9.4497	3.7672	0.4084	0.6893	0.0644	0.0494	0.0273	1.0153	0.3830	0.0117
18	1,161.072	0.6659	83.8686	9.5906	3.8935	0.3932	0.6686	0.0621	0.0473	0.0248	1.0420	0.3973	0.0118
19	1,162.433	0.6671	83.7711	9.5351	3.9964	0.4014	0.6803	0.0631	0.0478	0.0252	1.0749	0.3928	0.0118
20	1,160.829	0.6657	83.9936	9.4299	3.9021	0.4036	0.6861	0.0628	0.0492	0.0273	1.0459	0.3878	0.0116
21	1,161.993	0.6662	83.9838	9.4293	3.9073	0.4156	0.7039	0.0633	0.0506	0.0292	1.0138	0.3921	0.0113
22	1,157.694	0.6634	84.2738	9.3310	3.7891	0.3956	0.6621	0.0590	0.0473	0.0261	1.0135	0.3911	0.0115
23	1,160.932	0.6667	83.9245	9.3991	3.9105	0.4084	0.7045	0.0680	0.0521	0.0283	1.0482	0.4443	0.0120
24	1,159.759	0.6660	83.9785	9.3479	3.9568	0.3882	0.6641	0.0671	0.0549	0.0270	1.0590	0.4435	0.0131
25	1,158.652	0.6649	84.0505	9.3834	3.9177	0.3803	0.6383	0.0656	0.0503	0.0244	1.0507	0.4257	0.0130
26	1,160.966	0.6663	83.8775	9.4773	3.9755	0.3914	0.6607	0.0646	0.0487	0.0230	1.0553	0.4132	0.0129
27	1,161.432	0.6656	83.9783	9.5350	3.8509	0.4116	0.6896	0.0626	0.0464	0.0257	0.9971	0.3913	0.0115
28	1,160.057	0.6644	84.1310	9.4653	3.8416	0.4068	0.6610	0.0569	0.0459	0.0238	0.9670	0.3891	0.0117
29	1,162.189	0.6657	83.9471	9.5853	3.8721	0.4134	0.6817	0.0602	0.0466	0.0243	0.9720	0.3858	0.0115
30	1,162.101	0.6655	84.0496	9.4505	3.9206	0.4096	0.6835	0.0620	0.0469	0.0248	0.9567	0.3843	0.0116
31	1,162.925	0.6667	83.8943	9.4779	3.9644	0.4218	0.6957	0.0619	0.0472	0.0245	1.0149	0.3857	0.0116
Volume	1,156.606	0.6625	84.3054	9.4511	3.6668	0.3898	0.6528	0.0613	0.0473	0.0251	0.9947	0.3936	0.0119
Weight Avg Energy	1,156.642	0.6625	84.3032	9.4511	3.6685	0.3900	0.6531	0.0614	0.0473	0.0251	0.9948	0.3936	0.0119

70152

March-19

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		
3/1/2019	3/2/2019	601	720	1.1978	1062	1197	1.1266	1.152	3/1/2019
3/2/2019	3/3/2019	738	884	1.1978	1176	1325	1.1271	1.154	3/2/2019
3/3/2019	3/4/2019	750	898	1.1978	1221	1375	1.1267	1.154	3/3/2019
3/4/2019	3/5/2019	672	805	1.1978	1066	1200	1.1266	1.154	3/4/2019
3/5/2019	3/6/2019	592	710	1.1978	955	1075	1.1260	1.153	3/5/2019
3/6/2019	3/7/2019	603	722	1.1978	1038	1168	1.1255	1.152	3/6/2019
3/7/2019	3/8/2019	549	657	1.1978	963	1082	1.1234	1.150	3/7/2019
3/8/2019	3/9/2019	440	527	1.1978	658	739	1.1231	1.153	3/8/2019
3/9/2019	3/10/2019	467	559	1.1978	814	914	1.1233	1.150	3/9/2019
3/10/2019	3/11/2019	509	609	1.1978	850	956	1.1242	1.152	3/10/2019
3/11/2019	3/12/2019	436	522	1.1978	699	785	1.1232	1.152	3/11/2019
3/12/2019	3/13/2019	403	483	1.1978	568	637	1.1220	1.153	3/12/2019
3/13/2019	3/14/2019	437	523	1.1978	633	711	1.1241	1.154	3/13/2019
3/14/2019	3/15/2019	439	525	1.1978	614	690	1.1231	1.154	3/14/2019
3/15/2019	3/16/2019	420	503	1.1978	573	644	1.1236	1.155	3/15/2019
3/16/2019	3/17/2019	416	498	1.1978	498	557	1.1186	1.155	3/16/2019
3/17/2019	3/18/2019	417	500	1.1978	506	568	1.1224	1.156	3/17/2019
3/18/2019	3/19/2019	404	484	1.1978	542	610	1.1251	1.156	3/18/2019
3/19/2019	3/20/2019	378	453	1.1978	491	553	1.1263	1.157	3/19/2019
3/20/2019	3/21/2019	353	423	1.1978	397	447	1.1263	1.160	3/20/2019
3/21/2019	3/22/2019	353	423	1.1978	348	392	1.1258	1.162	3/21/2019
3/22/2019	3/23/2019	356	426	1.1978	293	331	1.1292	1.167	3/22/2019
3/23/2019	3/24/2019	321	384	1.1978	228	260	1.1417	1.175	3/23/2019
3/24/2019	3/25/2019	431	516	1.1978	578	652	1.1277	1.158	3/24/2019
3/25/2019	3/26/2019	391	468	1.1978	392	442	1.1275	1.163	3/25/2019
3/26/2019	3/27/2019	314	376	1.1978	203	231	1.1383	1.174	3/26/2019
3/27/2019	3/28/2019	386	462	1.1978	354	402	1.1361	1.168	3/27/2019
3/28/2019	3/29/2019	399	478	1.1978	458	515	1.1237	1.158	3/28/2019
3/29/2019	3/30/2019	432	517	1.1978	461	520	1.1284	1.162	3/29/2019
3/30/2019	3/31/2019	400	480	1.1978	360	407	1.1315	1.166	3/30/2019
3/31/2019	4/1/2019	419	502	1.1978	436	496	1.1360	1.166	3/31/2019

14,226 17,037

19,435 21,881

1.1269

1.1580

ROW ID	LOCATION DESCRIPTION	GROSS HEATING VALUE (BTU/GF)	SPECIFIC GRAVITY	WOBBE (cal)	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	Chargetimestamp	NOTES
11587	GLEN ULLIN	1076.4	0.6263	1360.2	-61.2	1.6956	0.8752	86.1915	10.5057	0.5261	0.0201	0.0122	0.0018	0.002	0	0.0009	0.1529	0.0194	2/28/2019	3/1/2019	3/1/2019 4:06:08 PM	
11587	GLEN ULLIN	1081.2	0.6297	1362.5	-58.1	1.7053	0.8942	85.5718	11.0513	0.5527	0.0283	0.0187	0.0022	0.003	0	0.0012	0.1529	0.0194	3/1/2019	3/2/2019	3/2/2019 4:12:55 PM	
11587	GLEN ULLIN	1078.2	0.6274	1361.3	-60.9	1.6565	0.8974	85.9371	10.7826	0.5065	0.0186	0.0113	0.0009	0.0012	0	0.0005	0.1703	0.019	3/2/2019	3/3/2019	3/3/2019 4:03:33 PM	
11587	GLEN ULLIN	1075.9	0.6254	1360.5	-61.6	1.6089	0.9003	86.3783	10.3569	0.5264	0.0217	0.014	0.0015	0.0018	0	0.0009	0.1728	0.0185	3/3/2019	3/4/2019	3/4/2019 4:14:01 PM	
11587	GLEN ULLIN	1071.8	0.6223	1358.7	-64.4	1.6019	0.8688	86.9024	9.9316	0.4573	0.0204	0.0126	0.0013	0.0016	0	0.0007	0.1844	0.0183	3/4/2019	3/5/2019	3/5/2019 4:09:34 PM	
11587	GLEN ULLIN	1075.3	0.624	1361.2	-59.4	1.5807	0.8581	86.7518	9.9088	0.6127	0.0394	0.0266	0.0031	0.0043	0	0.0017	0.1948	0.0181	3/5/2019	3/6/2019	3/6/2019 4:11:36 PM	
11587	GLEN ULLIN	1084.4	0.6306	1365.5	-55.1	1.6023	0.8901	85.6146	10.9855	0.6706	0.0423	0.0289	0.0032	0.0045	0	0.0017	0.1382	0.0179	3/6/2019	3/7/2019	3/7/2019 4:07:37 PM	
11587	GLEN ULLIN	1084	0.6305	1365.2	-54.4	1.6162	0.8887	85.6191	10.9032	0.6958	0.0467	0.0322	0.0036	0.005	0	0.0019	0.17	0.0177	3/7/2019	3/8/2019	3/8/2019 4:07:20 PM	
11587	GLEN ULLIN	1075.9	0.6253	1360.5	-60.5	1.6553	0.8614	86.469	10.2074	0.5655	0.0356	0.0179	0.0029	0.0026	0	0.0011	0.1637	0.0182	3/8/2019	3/9/2019	3/9/2019 4:02:43 PM	
11587	GLEN ULLIN	1080	0.6281	1362.7	-58.1	1.6432	0.8784	85.9258	10.7751	0.5461	0.0345	0.0166	0.0038	0.0031	0	0.0019	0.1537	0.0176	3/9/2019	3/10/2019	3/10/2019 4:02:20 PM	
11587	GLEN ULLIN	1085.3	0.6318	1365.4	-51.5	1.6813	0.8782	85.2916	11.2768	0.625	0.0454	0.0207	0.0062	0.0049	0	0.0041	0.1474	0.0183	3/10/2019	3/11/2019	3/11/2019 4:03:15 PM	
11587	GLEN ULLIN	1079.1	0.6271	1362.7	-56.5	1.6197	0.8685	86.1857	10.5549	0.554	0.0383	0.0176	0.005	0.004	0	0.0031	0.1315	0.0178	3/11/2019	3/12/2019	3/12/2019 4:16:30 PM	
11587	GLEN ULLIN	1076.2	0.6252	1361.1	-59.8	1.6208	0.8619	86.5393	10.2153	0.5496	0.0342	0.0169	0.0038	0.0032	0	0.0021	0.1368	0.018	3/12/2019	3/13/2019	3/13/2019 4:06:11 PM	
11587	GLEN ULLIN	1082.9	0.6296	1364.7	-56.1	1.6165	0.8795	85.6865	10.9849	0.6158	0.0328	0.0169	0.0034	0.0029	0	0.0026	0.1439	0.0177	3/13/2019	3/14/2019	3/14/2019 4:22:59 PM	
11587	GLEN ULLIN	1080.5	0.6279	1363.6	-56.9	1.6228	0.8629	85.9851	10.7321	0.5733	0.0333	0.0159	0.0044	0.0035	0	0.0029	0.147	0.0178	3/14/2019	3/15/2019	3/15/2019 4:04:44 PM	
11587	GLEN ULLIN	1080.4	0.6282	1363.2	-59.4	1.6593	0.8602	85.8602	10.8537	0.5656	0.0237	0.0125	0.0022	0.0019	0	0.0009	0.1442	0.0181	3/15/2019	3/16/2019	3/16/2019 4:02:03 PM	
11587	GLEN ULLIN	1079.6	0.6274	1362.9	-59.9	1.6409	0.8571	86.0048	10.7115	0.571	0.0244	0.0132	0.002	0.0019	0	0.0005	0.1568	0.0182	3/16/2019	3/17/2019	3/17/2019 4:02:03 PM	
11587	GLEN ULLIN	1081.1	0.6288	1363.3	-59.7	1.6686	0.8651	85.7411	11.0022	0.5372	0.0231	0.0122	0.0015	0.0014	0	0.0002	0.1296	0.0185	3/17/2019	3/18/2019	3/18/2019 4:09:58 PM	
11587	GLEN ULLIN	1081.2	0.6286	1363.7	-59.1	1.6459	0.8597	85.7965	10.9115	0.5726	0.0274	0.0138	0.002	0.0017	0	0.0005	0.1507	0.0182	3/18/2019	3/19/2019	3/19/2019 4:04:51 PM	
11587	GLEN ULLIN	1081.2	0.6286	1363.7	-59.1	1.6459	0.8597	85.7965	10.9115	0.5726	0.0274	0.0138	0.002	0.0017	0	0.0005	0.1507	0.0182	3/18/2019	3/20/2019	3/20/2019 4:09:41 PM	
11587	GLEN ULLIN	1085.2	0.632	1365	-57.2	1.6727	0.8987	85.1243	11.5236	0.5714	0.025	0.0127	0.0018	0.0015	0	0.0004	0.1501	0.0182	3/20/2019	3/21/2019	3/21/2019 4:06:16 PM	
11587	GLEN ULLIN	1085.3	0.6316	1365.6	-55.4	1.6475	0.8855	85.2831	11.297	0.6531	0.0314	0.0181	0.0025	0.0027	0	0.002	0.161	0.0182	3/21/2019	3/22/2019	3/22/2019 4:12:52 PM	
11587	GLEN ULLIN	1089.8	0.6351	1367.4	-54.2	1.6907	0.8977	84.5868	11.9803	0.6307	0.03	0.0184	0.0023	0.0027	0	0.001	0.1419	0.0184	3/22/2019	3/23/2019	3/23/2019 4:02:27 PM	
11587	GLEN ULLIN	1094.2	0.6377	1370.3	-49.6	1.6706	0.8919	84.2515	12.1849	0.7478	0.0479	0.0298	0.0051	0.0059	0	0.0025	0.1456	0.0179	3/23/2019	3/24/2019	3/24/2019 4:00:13 PM	
11587	GLEN ULLIN	1087.5	0.6336	1366.3	-55.4	1.6959	0.8912	84.8843	11.6778	0.6413	0.0297	0.0165	0.0019	0.002	0	0.0006	0.1409	0.0183	3/24/2019	3/25/2019	3/25/2019 4:09:53 PM	
11587	GLEN ULLIN	1086.5	0.6328	1365.8	-56.4	1.6667	0.9022	84.9954	11.629	0.5992	0.0255	0.0146	0.0016	0.0017	0	0.0004	0.1467	0.0181	3/25/2019	3/26/2019	3/26/2019 4:01:07 PM	
11587	GLEN ULLIN	1088.4	0.634	1367	-53.1	1.6674	0.9002	84.8486	11.5668	0.7397	0.04	0.0209	0.004	0.0038	0	0.0014	0.1918	0.0178	3/26/2019	3/27/2019	3/27/2019 4:05:49 PM	
11587	GLEN ULLIN	1088.5	0.6335	1367.6	-53.5	1.6192	0.8922	85.0882	11.4237	0.7466	0.0421	0.0231	0.0035	0.0035	0	0.0012	0.1392	0.0178	3/27/2019	3/28/2019	3/28/2019 4:02:50 PM	
11587	GLEN ULLIN	1086.9	0.6328	1366.4	-52.1	1.6393	0.9025	85.1907	11.2063	0.7702	0.048	0.0258	0.0055	0.005	0	0.0025	0.1863	0.0177	3/28/2019	3/29/2019	3/29/2019 4:11:11 PM	
11587	GLEN ULLIN	1091.1	0.6364	1367.7	-48.8	1.7167	0.9089	84.5085	11.7723	0.7914	0.0555	0.0268	0.0072	0.006	0	0.0031	0.1854	0.0183	3/29/2019	3/30/2019	3/30/2019 4:14:35 PM	
11587	GLEN ULLIN	1090.2	0.6359	1367.1	-49.1	1.7226	0.9064	84.6434	11.6211	0.805	0.057	0.0295	0.0071	0.0063	0	0.003	0.1802	0.0183	3/30/2019	3/31/2019	3/31/2019 3:59:43 PM	
11587	GLEN ULLIN	1093.6	0.6381	1369.1	-45.6	1.712	0.9191	84.2438	11.9979	0.8119	0.0648	0.0337	0.0088	0.0078	0	0.0043	0.178	0.0179	3/31/2019	4/1/2019	4/1/2019 4:08:09 PM	

32 record(s) retrieved

zone 402

<b>NORTH DAKOTA HEATING VALUE ZONES</b>		
<b>ZONES</b>	<b>MEASURING DEVICE</b>	<b>LOCATION</b>
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
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	MAR 19	FEB 19	JAN 19	DEC 18	NOV 18	OCT 18	SEPT 18	AUG 18	JULY 18	JUNE 18	MAY 18	APRIL 18	ZONE
MT/ND	211	Sidney Border - MonDak Tfr - Sidney Pll	1198	1205	1207	1202	1200	1207	1202	1191	1203	1202	1171	1193	1191	211
ND	24	Williston Border - Charbonneau Station	1151	1166	1162	1163	1164	1163	1140	1152	1136	1158	1141	1135	1136	24
ND	25	Watford City West Border	1197	1198	1204	1191	1196	1199	1199	1200	1197	1204	1202	1192	1185	25
ND	28	Bismarck Station - Glen Ullin Station	1148	1144	1115	1141	1120	1112	1153	1173	1162	1153	1173	1172	1163	28
ND	31	Dickinson Brd - Belfield Trf - G Ullin Stn	1136	1143	1116	1139	1132	1110	1134	1144	1132	1147	1139	1158	1134	31
ND/MT	32	Cabin Creek Station - Belfied Transfer	1114	1139	1104	1128	1093	1068	1110	1106	1133	1136	1127	1113	1116	32
ND	33	Little Knife Plant	1174	1173	1173	1172	1173	1174	1172	1172	1176	1175	1174	1176	1175	33
ND	34	Badlands Plant/Bowman Border	1021	1013	1062	1048	1042	1073	1063	1018	979	983	984	996	996	34
ND	43	Spring Creek I - Sax Valve I	1121	1127	1061	1044	1051	1062	1144	1158	1172	1152	1155	1160	1164	43
ND/MT	241	Fairview Border	1183	1188	1204	1173	1181	1193	1175	1186	1195	1196	1180	1168	1151	241
ND	260	North Tioga Transfer - Nesson Plant	1089	1127	1109	1113	1104	1095	1102	1120	1101	1127	1089	989	989	260
ND	261	Tioga Comp Station - Robinson Lake Plant	1178	1179	1184	1180	1173	1177	1183	1181	1175	1177	1178	1169	1176	261
ND	262	Minol Bdr - Palermo Bdr - Bismarck Stn	1178	1182	1182	1183	1182	1182	1179	1175	1160	1156	1175	1180	1198	262
ND	263	Lignite Plant	1140	1149	1146	1149	1146	1127	1140	1146	1162	1135	1115	1128	1135	263
ND	264	Epping Border	1143	1153	1148	1149	1147	1153	1139	1135	1135	1148	1148	1129	1128	264
ND	265	Tioga Comp Station - County Line Plant	1179	1181	1184	1179	1173	1177	1183	1182	1178	1176	1178	1175	1176	265
ND	266	County Line Plant	1179	1176	1170	1177	1179	1180	1181	1180	1178	1181	1181	1180	1181	266
ND	271	Bismarck Station - Cleveland Station	1174	1181	1168	1176	1180	1180	1178	1173	1162	1153	1173	1173	1194	271
ND	272	Cleveland Station - Mapleton	1174	1180	1167	1176	1180	1179	1177	1173	1160	1154	1173	1172	1194	272
ND	273	Cleveland Station - Grafton Border	1174	1181	1167	1176	1180	1179	1177	1173	1161	1153	1173	1171	1192	273
ND	550	Mandan Border / NBPL-St Anthony	1141	1119	1107	1121	1106	1102	1145	1173	1162	1150	1173	1172	1163	550
ND	610	MDU-Watford City BTU	1150	1158	1113	1101	1109	1131	1180	1181	1175	1152	1156	1164	1174	610
ND	802	NBPL - Linton	1088	1083	1083	1083	1084	1086	1092	1097	1092	1101	1097	1083	1074	802
ND	903	Hettinger Propane	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	903
ND	600	Alliance Pipeline - Hankinson	1155	1157	1151	1155	1153	1155	1155	1160	1159	1159	1153	1148	1152	600

**THERMAL ZONE VARIANCE  
DOCUMENTATION**

**March 2019**

<b><i>ZONE</i></b>	<b><i>BTU VARIANCE</i></b>	<b><i>REASON</i></b>
28	29	Direction of Flow
31	27	Direction of Flow
32	35	Direction of Flow
34	-49	Source of Gas
43	66	Operational Change