

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

April 6, 2021

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

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

Montana-Dakota Utilities Co. herewith electronically submits the following information, pursuant to the Ordering paragraphs one and two of the Order issued in Case No. 11,006, dated October 20, 1987 and pursuant to the North Dakota Administrative Code 69-09-01-02, part 2.

1. Attachment A is a schedule showing the thermal billing factors by community that reflect the BTU values shown on Attachment B and were used for billing purposes in March 2021.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our suppliers for the month of February 2021.
3. Attachment C is a listing which states the type of measuring device in place at each zone.
4. Attachment D is a monthly list of the heating value data, by zone, for the most recent 12-month period and an average thereof. It is being provided pursuant to a Staff request.
5. Attachment E provides a brief explanation of the thermal variances, where applicable, for the month of February 2021.

Montana-Dakota respectfully request this electronic filing, in lieu of an original and one copy, be accepted as being in full compliance with the filing requirements of this Commission.

Sincerely,

*/s/ Travis R. Jacobson*

Travis R. Jacobson  
Director of Regulatory Affairs

**Montana-Dakota Utilities Co.**  
**Therm Billing Factors - North Dakota**  
**Mar-21**

<u>Town</u>	<u>Heat Zone</u>	<u>Therm Factor</u>
MDU-303-ALEXANDER	025	1.1287
MDU-308-ARNEGARD	025	1.1287
MDU-314-APPLE VALLEY	271	1.1385
MDU-318-BEACH	032	1.0212
MDU-319-BELFIELD	032	1.0287
MDU-323-BERTHOLD	262	1.1183
MDU-324-BEULAH	032	1.0287
MDU-327-BISMARCK	028	1.0816
MDU-330-BOWMAN	034	1.0751
MDU-337-BURLINGTON	262	1.1424
MDU-343-CARRINGTON	273	1.1376
MDU-344-CLEVELAND	272	1.1296
MDU-364-CAVALIER	273	1.1616
MDU-365-DAWSON	271	1.1305
MDU-368-DES LACS	262	1.1263
MDU-369-DICKINSON	031	1.0521
MDU-374-FT TOTTEN	273	1.1456
MDU-375-DEVILS LAKE	273	1.1456
MDU-379-BARLOW	273	1.1376
MDU-384-EPPING	264	1.1022
MDU-387-ELDRIDGE	272	1.1376
MDU-407-GLADSTONE	031	1.0521
MDU-411-GLEN ULLIN	031	1.0597
MDU-413-GOLVA	032	1.0062
MDU-416-GARRISON	262	1.1263
MDU-417-GRAFTON	273	1.1696
MDU-403-GWINNER	601	1.1311
MDU-429-HEBRON	031	1.0597
MDU-432-HETTINGER	903	2.3875
MDU-449-JAMESTOWN	272	1.1456
MDU-459-KILLDEER	033	1.1070
MDU-463-LANGDON	273	1.1376
MDU-469-LEFOR	031	1.0521
MDU-474-LIGNITE	263	1.0778
MDU-475-LINTON	802	1.0642
MDU-478-LINCOLN	028	1.0816
MDU-488-MCKENZIE	271	1.1385
MDU-494-MEDINA	271	1.1305
MDU-498-MANDAN	028	1.0816
MDU-500-MARMARTH	034	1.0831
MDU-505-MINOT	262	1.1424
MDU-510-MOTT	031	1.0521
MDU-512-MAX	262	1.1183
MDU-513-MILNOR	601	1.1311
MDU-522-NEW ENGLAND	031	1.0445
MDU-524-NEW SALEM	028	1.0588
MDU-532-NEW ROCKFORD	273	1.1376
MDU-539-PARK RIVER	273	1.1616
MDU-540-PALERMO	262	1.1183

MDU-558-RAY	264	1.1022
MDU-561-REGENT	031	1.0521
MDU-563-RHAME	034	1.0672
MDU-564-RICHARDTON	031	1.0445
MDU-568-ROSS	261	1.0952
MDU-572-RUTHVILLE	262	1.1424
MDU-574-SANBORN	272	1.1456
MDU-583-SENTINEL BUTTE	032	1.0212
MDU-588-SOUTH HEART	031	1.0445
MDU-717-SPIRITWOOD	272	1.1456
MDU-590-SPRINGBROOK	264	1.1022
MDU-591-STANLEY	261	1.1032
MDU-593-STEELE	271	1.1305
MDU-594-STERLING	028	1.0816
MDU-598-SHEYENNE	273	1.1456
MDU-605-SURREY	262	1.1424
MDU-610-TAPPEN	271	1.1305
MDU-611-TAYLOR	031	1.0445
MDU-616-TIOGA	260	1.0727
MDU-619-TURTLE LAKE	262	1.1263
MDU-620-TRENTON	024	1.1197
MDU-624-UNDERWOOD	262	1.1263
MDU-625-VALLEY CITY	272	1.1536
MDU-629-WALHALLA	273	1.1616
MDU-632-WATFORD CITY	610	1.0767
MDU-636-WHEELOCK	264	1.0943
MDU-637-WHITE EARTH	261	1.1032
MDU-642-WILLISTON	024	1.1197
MDU-646-WASHBURN	262	1.1344
MDU-647-WILTON	262	1.1183
MDU-664-RIVERDALE	262	1.1263
MDU-691-FAIRVIEW	241	1.1339
MDU-712-MINOT AFB	262	1.1424
MDU-718-FAIRMOUNT	600	1.1287
MDU-732-NEKOMA	273	1.1376
MDU-732-MSR SITE	273	1.1376

# Source Daily Summary

February 2021

Number: 251

Pressure Base: 14.730

Contract Day: 1

Name: SDNY BDR-MNDK JNCTN-SDNY PLT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7006	1166.8	1187.4	1184.3	0.039	3.306	71.797	22.768	2.060	0.015	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.42
2	0.7288	1181.1	1202.0	1198.6	1.055	3.533	68.434	23.771	2.905	0.104	0.182	0.009	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1404.80
3	0.7138	1176.4	1197.2	1194.0	0.429	3.367	70.401	22.908	2.748	0.055	0.087	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1413.88
4	0.7101	1181.6	1202.5	1199.4	0.045	3.284	70.891	22.715	2.976	0.036	0.050	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.69
5	0.7070	1175.0	1195.8	1192.8	0.056	3.373	71.665	21.709	3.095	0.042	0.058	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1418.86
6	0.6969	1157.5	1178.0	1175.1	0.060	3.485	73.029	20.883	2.476	0.029	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1407.90
7	0.7071	1176.1	1196.9	1193.8	0.066	3.303	71.640	21.854	3.006	0.049	0.076	0.003	0.003	0.000	0.000	0.000	0.000	0.000	0.000	1420.05
8	0.7268	1208.5	1229.9	1226.7	0.061	3.173	69.721	21.965	4.810	0.103	0.158	0.005	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1439.33
9	0.7286	1210.9	1232.4	1229.3	0.054	3.207	69.295	22.389	4.792	0.103	0.154	0.004	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1440.45
10	0.7270	1209.6	1231.0	1227.9	0.053	3.139	69.344	22.646	4.614	0.085	0.117	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1440.47
11	0.7282	1211.8	1233.3	1230.2	0.048	3.128	69.150	22.761	4.737	0.076	0.099	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1441.88
12	0.7330	1195.2	1216.3	1213.1	0.812	3.443	67.682	24.465	3.325	0.099	0.163	0.006	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1417.42
13	0.7143	1186.7	1207.7	1204.7	0.102	3.263	71.549	20.697	4.179	0.080	0.123	0.004	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1425.76
14	0.7129	1182.4	1203.3	1200.3	0.151	3.321	71.753	20.622	3.835	0.109	0.193	0.009	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1421.99
15	0.7163	1180.6	1201.5	1198.4	0.364	3.437	70.782	21.590	3.642	0.073	0.108	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1416.43
16	0.7173	1190.3	1211.4	1208.3	0.178	3.217	70.832	21.513	4.107	0.063	0.088	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1427.05
17	0.7238	1180.3	1201.2	1198.0	0.766	3.556	69.340	22.860	3.240	0.087	0.141	0.005	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1408.67
18	0.7393	1187.5	1208.5	1205.1	1.398	3.612	66.841	24.772	3.024	0.122	0.214	0.010	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1402.14
19	0.7422	1201.4	1222.6	1219.1	1.081	3.511	67.172	23.877	3.819	0.163	0.325	0.027	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1415.75
20	0.7154	1176.1	1196.9	1193.7	0.490	3.437	70.457	22.421	3.029	0.063	0.097	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1411.94
21	0.7366	1185.8	1206.8	1203.4	1.309	3.592	67.150	24.726	2.875	0.119	0.210	0.010	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1402.80
22	0.7375	1184.6	1205.5	1202.1	1.397	3.625	67.050	24.704	2.866	0.123	0.216	0.011	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1400.36
23	0.7392	1187.4	1208.5	1205.0	1.393	3.612	66.728	25.016	2.899	0.121	0.212	0.010	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1402.17
24	0.7035	1167.9	1188.5	1185.5	0.167	3.320	71.542	22.761	2.085	0.045	0.075	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1413.81
25	0.7085	1165.7	1186.4	1183.2	0.457	3.485	70.610	23.410	1.911	0.046	0.075	0.003	0.002	0.000	0.000	0.000	0.000	0.000	0.000	1406.26
26	0.7375	1184.6	1205.6	1202.2	1.399	3.619	67.015	24.767	2.854	0.119	0.208	0.010	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1400.43
27	0.7358	1187.9	1208.9	1205.5	1.218	3.538	67.013	25.166	2.760	0.106	0.184	0.008	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1405.98
28	0.7360	1188.2	1209.2	1205.8	1.204	3.559	66.938	25.252	2.750	0.104	0.181	0.008	0.005	0.000	0.000	0.000	0.000	0.000	0.000	1406.16
Avg	0.7223	1185.0	1206.3	1203.0	0.566	3.409	69.494	23.035	3.265	0.083	0.137	0.006	0.004	0.000	0.000	0.000	0.000	0.000	0.000	1416.14

# Source Daily Summary

February 2021

Number: 571

Pressure Base: 14.730

Contract Day: 1

Name: WILLISTON BDR-CHARBN STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7021	1155.8	1176.2	1173.0	0.987	2.662	73.684	19.871	2.387	0.110	0.251	0.021	0.025	0.000	0.000	0.000	0.000	0.000	1400.45	
2	0.7024	1156.4	1176.9	1173.7	0.974	2.671	73.708	19.758	2.475	0.112	0.255	0.021	0.026	0.000	0.000	0.000	0.000	0.000	1400.94	
3	0.6990	1151.9	1172.3	1169.2	0.963	2.641	74.299	19.282	2.419	0.109	0.241	0.020	0.024	0.000	0.000	0.000	0.000	0.000	1398.87	
4	0.7005	1155.6	1176.0	1172.9	0.970	2.557	73.895	19.844	2.352	0.106	0.235	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1401.78	
5	0.7000	1154.7	1175.2	1172.1	0.971	2.556	73.896	19.945	2.261	0.103	0.228	0.018	0.021	0.000	0.000	0.000	0.000	0.000	1401.31	
6	0.6981	1153.4	1173.8	1170.7	0.960	2.479	74.192	19.798	2.214	0.101	0.218	0.017	0.019	0.000	0.000	0.000	0.000	0.000	1401.56	
7	0.7001	1155.2	1175.6	1172.5	0.968	2.541	74.005	19.750	2.343	0.110	0.242	0.019	0.022	0.000	0.000	0.000	0.000	0.000	1401.74	
8	0.6989	1153.6	1174.0	1170.9	0.956	2.550	74.117	19.720	2.286	0.105	0.229	0.017	0.020	0.000	0.000	0.000	0.000	0.000	1400.99	
9	0.6999	1155.1	1175.6	1172.3	0.949	2.556	74.022	19.765	2.310	0.109	0.242	0.020	0.025	0.000	0.000	0.000	0.000	0.000	1401.77	
10	0.7000	1155.0	1175.4	1172.3	0.960	2.557	73.939	19.868	2.300	0.106	0.231	0.018	0.021	0.000	0.000	0.000	0.000	0.000	1401.60	
11	0.7008	1156.3	1176.8	1173.5	0.962	2.545	73.768	20.096	2.241	0.106	0.237	0.020	0.025	0.000	0.000	0.000	0.000	0.000	1402.39	
12	0.7005	1154.2	1174.6	1171.6	0.956	2.659	73.652	20.182	2.203	0.098	0.215	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1400.19	
13	0.7013	1155.3	1175.8	1172.5	0.957	2.665	73.652	20.079	2.255	0.106	0.240	0.020	0.025	0.000	0.000	0.000	0.000	0.000	1400.63	
14	0.7012	1155.2	1175.6	1172.5	0.944	2.684	73.645	20.062	2.286	0.104	0.235	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1400.65	
15	0.7008	1154.4	1174.9	1171.7	0.946	2.691	73.694	20.032	2.265	0.101	0.229	0.019	0.022	0.000	0.000	0.000	0.000	0.000	1400.06	
16	0.7001	1153.2	1173.7	1170.5	0.943	2.706	73.784	19.953	2.255	0.099	0.221	0.017	0.021	0.000	0.000	0.000	0.000	0.000	1399.30	
17	0.7006	1153.8	1174.3	1171.1	0.935	2.724	73.735	19.959	2.270	0.103	0.230	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1399.55	
18	0.7015	1155.5	1176.0	1172.9	0.941	2.696	73.616	20.040	2.333	0.104	0.230	0.018	0.022	0.000	0.000	0.000	0.000	0.000	1400.73	
19	0.7032	1158.1	1178.6	1175.4	0.947	2.689	73.403	20.159	2.405	0.108	0.243	0.020	0.024	0.000	0.000	0.000	0.000	0.000	1402.13	
20	0.7034	1158.0	1178.5	1175.2	0.940	2.720	73.472	19.997	2.447	0.113	0.260	0.023	0.028	0.000	0.000	0.000	0.000	0.000	1401.80	
21	0.7042	1159.0	1179.5	1176.3	0.947	2.728	73.328	20.100	2.473	0.114	0.261	0.022	0.027	0.000	0.000	0.000	0.000	0.000	1402.18	
22	0.7042	1159.1	1179.7	1176.5	0.949	2.714	73.319	20.129	2.465	0.114	0.260	0.022	0.027	0.000	0.000	0.000	0.000	0.000	1402.41	
23	0.7038	1158.6	1179.1	1175.9	0.952	2.705	73.323	20.206	2.400	0.112	0.255	0.022	0.026	0.000	0.000	0.000	0.000	0.000	1402.18	
24	0.7023	1157.1	1177.6	1174.5	0.943	2.668	73.481	20.199	2.318	0.108	0.240	0.019	0.023	0.000	0.000	0.000	0.000	0.000	1401.90	
25	0.7028	1156.8	1177.2	1174.0	0.945	2.739	73.487	20.025	2.395	0.110	0.251	0.021	0.026	0.000	0.000	0.000	0.000	0.000	1400.86	
26	0.7032	1156.8	1177.3	1174.1	0.944	2.768	73.438	20.018	2.423	0.110	0.251	0.021	0.026	0.000	0.000	0.000	0.000	0.000	1400.63	
27	0.7034	1157.6	1178.1	1175.0	0.952	2.731	73.368	20.145	2.396	0.112	0.250	0.020	0.025	0.000	0.000	0.000	0.000	0.000	1401.34	
28	0.7033	1157.3	1177.8	1174.6	0.953	2.741	73.394	20.108	2.388	0.113	0.255	0.021	0.025	0.000	0.000	0.000	0.000	0.000	1401.04	
Avg	0.7015	1156.0	1176.3	1173.1	0.954	2.655	73.690	19.967	2.342	0.107	0.241	0.020	0.024	0.000	0.000	0.000	0.000	0.000	1401.11	

# Gas Composition and Properties

Effective February 1, 2021

Attachment B  
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Source #: 0602160  
Name: FAIRVIEW BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.1331		2.3598
Nitrogen, N2	3.5906		4.7599
Methane, C1	68.1324		51.7234
Ethane, C2	23.6844	6.3395	33.7011
Propane, C3	3.1201	0.8603	6.5107
iso-Butane, iC4	0.1140	0.0373	0.3136
n-Butane, nC4	0.2081	0.0657	0.5724
iso-Pentane, iC5	0.0096	0.0035	0.0328
n-Pentane, nC5	0.0077	0.0028	0.0263
Neo-Pentane, NeoC5			
Hexanes Plus, C6+			
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
<b>Totals</b>	<b>100.0000</b>	<b>7.3100</b>	<b>100.0000</b>

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-16.050	
Cricondentherm	2.034	
HV, Dry @ Base P, T	1203.84	
HV, Sat @ Base P, T	1182.89	
HV, Sat @ Sample P, T	1203.84	
Relative Density	0.7318	

C6+: 100

## Sample

Date: 02/01/2021      Pressure: 420.0  
 Type:                      Temperature:  
 Tech: Zach Curtiss      H2O: lbs/mm  
    H2S: ppm

Remarks:

## Analysis

Date: 02/01/2021      Instrument:  
    Cylinder: 364  
 Tech: Zach Curtiss

Remarks:

# Gas Composition and Properties

Effective February 1, 2021

Attachment B  
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Source #: 0602225  
Name: WATFORD CITY WEST BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.3084		2.7382
Nitrogen, N2	3.5625		4.7456
Methane, C1	70.4382		53.7343
Ethane, C2	20.3241	5.4397	29.0604
Propane, C3	3.6051	0.9940	7.5594
iso-Butane, iC4	0.2097	0.0687	0.5796
n-Butane, nC4	0.4720	0.1489	1.3045
iso-Pentane, iC5	0.0380	0.0139	0.1304
n-Pentane, nC5	0.0368	0.0134	0.1263
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0052	0.0021	0.0213
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
<b>Totals</b>	<b>100.0000</b>	<b>6.6810</b>	<b>100.0000</b>

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-17.389	
Cricondentherm	8.989	
HV, Dry @ Base P, T	1194.00	
HV, Sat @ Base P, T	1173.22	
HV, Sat @ Sample P, T	1194.00	
Relative Density	0.7282	
C6+:		

## Sample

Date: 02/01/2021      Pressure: 270.0  
 Type:                      Temperature:  
 Tech: Zach Curtiss      H2O: lbs/mm  
    H2S: ppm

Remarks:

## Analysis

Date: 02/01/2021      Instrument:  
    Cylinder: 371  
 Tech: Zach Curtiss

Remarks:

# Source Daily Summary

February 2021

Number: 164

Pressure Base: 14.730

Contract Day: 1

Name: N TIOGA TRANSFER-NESSON PLT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6919	1130.0	1150.0		0.882	3.446	75.064	18.190	2.076	0.083	0.206	0.021	0.026	0.007					1379.33	
2	0.6914	1130.1	1150.1		0.850	3.440	75.179	18.065	2.123	0.083	0.205	0.020	0.026	0.007					1379.95	
3	0.6879	1125.7	1145.6		0.820	3.428	75.596	17.884	1.990	0.073	0.170	0.015	0.019	0.004					1378.05	
4	0.6831	1117.5	1137.3		0.794	3.508	76.430	17.100	1.897	0.071	0.166	0.014	0.017	0.003					1372.92	
5	0.6836	1118.9	1138.7		0.760	3.520	76.244	17.364	1.845	0.070	0.163	0.014	0.017	0.004					1374.20	
6	0.6734	1103.6	1123.1		0.674	3.628	77.936	15.881	1.663	0.060	0.136	0.011	0.012	0.002					1365.56	
7	0.6813	1114.7	1134.5		0.757	3.572	76.644	16.948	1.815	0.069	0.164	0.014	0.016	0.003					1371.25	
8	0.6776	1109.4	1129.1		0.697	3.630	77.169	16.552	1.728	0.061	0.140	0.011	0.012	0.000					1368.54	
9	0.6818	1116.5	1136.2		0.740	3.536	76.544	17.088	1.834	0.067	0.158	0.014	0.016	0.003					1372.91	
10	0.6835	1119.5	1139.3		0.758	3.486	76.175	17.518	1.816	0.066	0.154	0.012	0.014	0.001					1374.89	
11	0.6686	1097.1	1116.6		0.636	3.635	78.594	15.489	1.455	0.052	0.118	0.009	0.011	0.002					1362.37	
12	0.6912	1131.4	1151.4		0.809	3.400	74.757	18.890	1.896	0.067	0.155	0.012	0.014	0.001					1381.84	
13	0.6915	1131.3	1151.4		0.794	3.455	74.937	18.481	2.017	0.080	0.196	0.017	0.020	0.003					1381.46	
14	0.6928	1133.6	1153.7		0.790	3.452	74.670	18.737	2.040	0.079	0.193	0.016	0.020	0.003					1382.85	
15	0.6906	1129.6	1149.6		0.799	3.475	74.936	18.583	1.937	0.070	0.167	0.014	0.016	0.003					1380.18	
16	0.6926	1132.9	1152.9		0.796	3.464	74.602	18.870	1.992	0.072	0.170	0.014	0.017	0.002					1382.19	
17	0.6948	1137.3	1157.4		0.777	3.429	74.467	18.812	2.178	0.083	0.201	0.020	0.026	0.007					1385.38	
18	0.6956	1139.6	1159.8		0.784	3.348	74.356	18.939	2.254	0.083	0.193	0.018	0.022	0.005					1387.48	
19	0.6973	1141.2	1161.4		0.801	3.393	74.125	19.032	2.300	0.087	0.208	0.020	0.026	0.006					1387.58	
20	0.6966	1140.3	1160.5		0.789	3.396	74.215	18.995	2.262	0.085	0.205	0.020	0.026	0.007					1387.27	
21	0.6994	1144.7	1165.0		0.823	3.339	73.774	19.385	2.318	0.090	0.216	0.021	0.027	0.007					1389.82	
22	0.6995	1144.8	1165.1		0.821	3.343	73.673	19.538	2.286	0.087	0.205	0.018	0.023	0.005					1389.89	
23	0.6969	1140.7	1160.9		0.808	3.369	74.053	19.268	2.177	0.083	0.198	0.018	0.022	0.005					1387.50	
24	0.6910	1132.5	1152.6		0.743	3.418	74.849	18.733	1.998	0.070	0.158	0.013	0.016	0.002					1383.34	
25	0.6964	1139.9	1160.0		0.812	3.372	74.299	18.900	2.266	0.087	0.207	0.021	0.028	0.007					1386.89	
26	0.6976	1141.6	1161.8		0.816	3.369	74.083	19.085	2.300	0.089	0.206	0.020	0.027	0.005					1387.85	
27	0.6959	1138.4	1158.5		0.822	3.397	74.236	19.051	2.178	0.083	0.191	0.017	0.021	0.003					1385.62	
28	0.6959	1138.1	1158.2		0.816	3.421	74.286	18.946	2.203	0.084	0.198	0.018	0.023	0.004					1385.30	
Avg	0.6900	1129.0	1149.3		0.785	3.452	75.210	18.226	2.030	0.076	0.180	0.016	0.020	0.004					1380.44	

# Source Daily Summary

February 2021

<b>Number:</b>	601	<b>Pressure Base:</b>	14.730	<b>Contract Day:</b>	1
<b>Name:</b>	TIOGA STN-ROBINSON LAKE PLNT	<b>Temperature Base:</b>		<b>Contract Hour:</b>	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	0.7044	1147.0	1167.3	1164.2	1.017	3.371	72.937	20.019	2.303	0.090	0.220	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1387.57
2	0.7047	1148.0	1168.3	1165.0	1.029	3.322	72.982	19.971	2.322	0.093	0.231	0.022	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1388.36
3	0.7039	1147.2	1167.5	1164.3	1.004	3.328	73.171	19.749	2.371	0.094	0.231	0.022	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1388.26
4	0.7021	1145.3	1165.6	1162.4	0.977	3.318	73.383	19.660	2.323	0.087	0.207	0.019	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1387.72
5	0.7019	1145.2	1165.5	1162.5	0.981	3.303	73.263	19.891	2.252	0.083	0.192	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1387.87
6	0.7041	1148.8	1169.2	1166.1	0.971	3.307	72.909	20.186	2.289	0.089	0.209	0.018	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1390.00
7	0.7036	1149.4	1169.7	1166.7	0.936	3.277	72.758	20.550	2.196	0.078	0.176	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1391.27
8	0.7068	1152.5	1172.9	1169.9	0.999	3.296	72.342	20.753	2.285	0.086	0.202	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1391.81
9	0.7045	1149.1	1169.4	1166.5	0.949	3.359	72.664	20.482	2.245	0.081	0.189	0.014	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1390.03
10	0.7042	1149.6	1170.0	1166.9	0.949	3.298	72.751	20.451	2.249	0.081	0.186	0.015	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1390.91
11	0.7040	1149.8	1170.2	1167.2	0.958	3.254	72.790	20.463	2.227	0.082	0.193	0.015	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1391.39
12	0.7031	1147.6	1167.9	1165.0	0.976	3.279	72.816	20.525	2.128	0.075	0.172	0.013	0.016	0.000	0.000	0.000	0.000	0.000	0.000	1389.60
13	0.7047	1151.0	1171.4	1168.5	0.965	3.237	72.469	20.935	2.122	0.074	0.171	0.012	0.014	0.000	0.000	0.000	0.000	0.000	0.000	1392.21
14	0.7067	1154.0	1174.4	1171.4	0.951	3.269	72.339	20.830	2.268	0.088	0.214	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1393.68
15	0.7075	1155.5	1176.0	1172.9	0.930	3.285	72.230	20.887	2.310	0.092	0.224	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1394.71
16	0.7046	1150.4	1170.8	1167.7	0.937	3.305	72.613	20.644	2.194	0.080	0.191	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1391.49
17	0.7048	1150.7	1171.1	1168.0	0.922	3.334	72.613	20.567	2.253	0.082	0.193	0.016	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1391.58
18	0.7052	1151.6	1172.0	1168.8	0.903	3.343	72.755	20.273	2.370	0.090	0.219	0.021	0.028	0.000	0.000	0.000	0.000	0.000	0.000	1392.23
19	0.7049	1152.5	1172.9	1169.7	0.903	3.255	72.910	20.108	2.473	0.092	0.214	0.019	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1393.67
20	0.7062	1154.0	1174.4	1171.2	0.920	3.265	72.720	20.224	2.511	0.094	0.219	0.020	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1394.10
21	0.7060	1153.3	1173.7	1170.4	0.912	3.301	72.828	20.051	2.524	0.097	0.232	0.023	0.031	0.000	0.000	0.000	0.000	0.000	0.000	1393.39
22	0.7067	1154.4	1174.8	1171.5	0.939	3.260	72.663	20.266	2.499	0.096	0.227	0.022	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1394.07
23	0.7075	1155.9	1176.4	1173.1	0.938	3.244	72.514	20.409	2.521	0.098	0.228	0.022	0.027	0.000	0.000	0.000	0.000	0.000	0.000	1395.14
24	0.7078	1155.6	1176.1	1172.9	0.952	3.266	72.386	20.568	2.464	0.095	0.223	0.020	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1394.55
25	0.7045	1151.5	1171.9	1168.9	0.907	3.273	72.708	20.495	2.321	0.081	0.182	0.015	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1392.99
26	0.7049	1151.3	1171.7	1168.4	0.937	3.283	73.001	19.925	2.485	0.096	0.223	0.022	0.030	0.000	0.000	0.000	0.000	0.000	0.000	1392.10
27	0.7053	1151.9	1172.3	1169.1	0.935	3.282	72.962	19.926	2.521	0.098	0.225	0.021	0.029	0.000	0.000	0.000	0.000	0.000	0.000	1392.52
28	0.7056	1152.0	1172.4	1169.3	0.950	3.282	72.814	20.124	2.474	0.096	0.218	0.019	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1392.39
<b>Avg</b>	<b>0.7050</b>	<b>1151.0</b>	<b>1171.3</b>	<b>1168.2</b>	<b>0.952</b>	<b>3.293</b>	<b>72.760</b>	<b>20.319</b>	<b>2.339</b>	<b>0.088</b>	<b>0.207</b>	<b>0.018</b>	<b>0.023</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>0.000</b>	<b>1391.63</b>

# Source Daily Summary

February 2021

Number: 091

Pressure Base: 14.730

Contract Day: 1

Name: MNT BRD-PLRMO BRD-BIS STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7466	1167.5	1188.2	1185.0	0.938	6.195	67.111	19.990	5.194	0.173	0.358	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1371.89
2	0.7446	1166.1	1186.8	1183.7	0.941	6.091	67.359	19.969	5.097	0.162	0.341	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1372.09
3	0.7411	1161.4	1182.0	1178.9	0.944	6.039	67.824	19.819	4.847	0.158	0.328	0.019	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1369.83
4	0.7388	1159.0	1179.5	1176.4	0.940	5.982	68.031	19.876	4.690	0.146	0.299	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1369.08
5	0.7376	1157.0	1177.5	1174.4	0.939	5.990	68.186	19.797	4.618	0.142	0.294	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1367.86
6	0.7401	1163.6	1184.2	1181.1	0.921	5.851	67.812	20.206	4.733	0.141	0.301	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1373.31
7	0.7400	1161.4	1182.0	1178.9	0.931	5.959	67.780	20.149	4.716	0.140	0.294	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1370.86
8	0.7417	1164.8	1185.4	1182.3	0.934	5.909	67.619	20.220	4.827	0.146	0.310	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1373.22
9	0.7418	1165.7	1186.3	1183.2	0.921	5.890	67.630	20.184	4.878	0.148	0.313	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1374.12
10	0.7416	1163.8	1184.5	1181.4	0.922	5.973	67.647	20.105	4.862	0.146	0.310	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1372.23
11	0.7381	1162.2	1182.8	1179.7	0.936	5.725	68.107	20.159	4.610	0.138	0.293	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1373.59
12	0.7457	1164.0	1184.6	1181.6	0.921	6.350	67.127	19.896	5.186	0.158	0.327	0.017	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1368.65
13	0.7472	1166.8	1187.5	1184.4	0.921	6.321	66.868	20.148	5.217	0.161	0.331	0.017	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1370.53
14	0.7498	1170.2	1190.9	1187.8	0.917	6.364	66.558	20.220	5.383	0.169	0.351	0.019	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1372.11
15	0.7530	1174.8	1195.6	1192.5	0.915	6.388	66.178	20.336	5.591	0.179	0.371	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1374.53
16	0.7501	1170.7	1191.4	1188.3	0.917	6.362	66.548	20.191	5.415	0.172	0.355	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1372.42
17	0.7524	1173.2	1194.0	1190.9	0.917	6.430	66.299	20.168	5.588	0.180	0.376	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1373.18
18	0.7495	1169.3	1190.0	1186.9	0.917	6.389	66.623	20.124	5.389	0.170	0.349	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1371.35
19	0.7473	1167.8	1188.5	1185.4	0.911	6.290	66.915	20.074	5.271	0.163	0.339	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1371.55
20	0.7496	1170.8	1191.5	1188.4	0.913	6.318	66.627	20.179	5.400	0.170	0.353	0.020	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1372.97
21	0.7496	1170.5	1191.3	1188.2	0.917	6.325	66.621	20.177	5.403	0.168	0.349	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1372.71
22	0.7515	1174.0	1194.8	1191.7	0.914	6.293	66.422	20.264	5.521	0.175	0.367	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1375.03
23	0.7472	1169.7	1190.4	1187.3	0.933	6.129	67.030	20.092	5.251	0.166	0.355	0.021	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1373.85
24	0.7411	1162.7	1183.3	1180.2	0.954	5.954	67.781	19.977	4.821	0.156	0.320	0.018	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1371.25
25	0.7468	1170.8	1191.5	1188.4	0.942	6.013	67.100	20.166	5.203	0.174	0.361	0.020	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1375.52
26	0.7504	1170.3	1191.0	1187.9	0.921	6.405	66.618	19.976	5.485	0.178	0.375	0.021	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1371.71
27	0.7444	1162.7	1183.3	1180.2	0.919	6.315	67.313	19.830	5.094	0.161	0.330	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1368.24
28	0.7441	1162.8	1183.4	1180.4	0.921	6.277	67.337	19.882	5.059	0.160	0.327	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1368.66
Avg	0.7454	1167.0	1187.2	1184.1	0.926	6.162	67.181	20.078	5.120	0.161	0.335	0.018	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1371.87

# Gas Composition and Properties

Effective February 1, 2021

Attachment B  
Page 8 of 24

Source #: 2501030  
Name: LIGNITE PLANT

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.1600		0.3690
Nitrogen, N2	3.1002		4.5515
Methane, C1	79.3688		66.7302
Ethane, C2	16.0533	4.2941	25.2978
Propane, C3	1.3091	0.3607	3.0253
iso-Butane, iC4	0.0078	0.0026	0.0238
n-Butane, nC4	0.0008	0.0003	0.0024
iso-Pentane, iC5			
n-Pentane, nC5			
Neo-Pentane, NeoC5			
Hexanes Plus, C6+			
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
Totals	100.0000	4.6580	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-54.838	
Cricondentherm	-38.639	
HV, Dry @ Base P, T	1124.62	
HV, Sat @ Base P, T	1105.05	
HV, Sat @ Sample P, T	1124.62	
Relative Density	0.6604	
C6+: 100		

## Sample

Date: 02/01/2021      Pressure: 410.0  
 Type:                      Temperature:  
 Tech: Zach Curtiss      H2O: lbs/mm  
    H2S: ppm

Remarks:

## Analysis

Date: 02/01/2021      Instrument:  
    Cylinder: 377  
 Tech: Zach Curtiss

Remarks:

# Gas Composition and Properties

Effective February 1, 2021

Attachment B  
Page 9 of 24

Source #: 3002013  
Name: EPPING BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.9611		2.1058
Nitrogen, N2	2.5895		3.6115
Methane, C1	74.5714		59.5586
Ethane, C2	19.4286	5.1987	29.0845
Propane, C3	2.1100	0.5816	4.6321
iso-Butane, iC4	0.0931	0.0305	0.2694
n-Butane, nC4	0.2128	0.0671	0.6158
iso-Pentane, iC5	0.0148	0.0054	0.0532
n-Pentane, nC5	0.0160	0.0058	0.0575
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0027	0.0011	0.0116
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
Totals	100.0000	5.8900	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-20.869	
Cricondentherm	-12.525	
HV, Dry @ Base P, T	1167.71	
HV, Sat @ Base P, T	1147.39	
HV, Sat @ Sample P, T	1167.71	
Relative Density	0.6954	
C6+: 100		

Sample		
Date: 02/01/2021	Pressure:	500.0
Type:	Temperature:	
Tech: Zach Curtiss	H2O:	lbs/mm
	H2S:	ppm
Remarks:		

Analysis		
Date: 02/01/2021	Instrument:	
	Cylinder:	312
Tech: Zach Curtiss		
Remarks:		

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



















# Gas Composition and Properties

Effective February 1, 2021

Attachment B  
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Source #: 2702230  
Name: WATFORD CITY EAST BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.1555		2.6622
Nitrogen, N2	2.8180		4.1327
Methane, C1	79.4018		66.6857
Ethane, C2	16.1552	4.3212	25.4309
Propane, C3	0.4632	0.1276	1.0693
iso-Butane, iC4	0.0063	0.0021	0.0192
n-Butane, nC4			
iso-Pentane, iC5			
n-Pentane, nC5			
Neo-Pentane, NeoC5			
Hexanes Plus, C6+			
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
<b>Totals</b>	<b>100.0000</b>	<b>4.4510</b>	<b>100.0000</b>

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-47.178	
Cricodentherm	-44.843	
HV, Dry @ Base P, T	1105.50	
HV, Sat @ Base P, T	1086.26	
HV, Sat @ Sample P, T	1105.50	
Relative Density	0.6612	
C6+: 100		

## Sample

Date: 02/01/2021      Pressure: 700.0  
 Type:                      Temperature:  
 Tech: Zach Curtiss      H2O: lbs/mm  
    H2S: ppm

Remarks:

## Analysis

Date: 02/01/2021      Instrument:  
    Cylinder: 384  
 Tech: Zach Curtiss

Remarks:

January-21

ZONE 550

MANDAN BORDER

		NBPL - St Anthony			WBI - Mandan Border			Weighted	
Start Date	End Date	MCF	DK	BTU	MCF	DK	BTU Zone 28	AVG BTU	
2/1/2021	2/2/2021				5,171	5,722	1106.6	1106.600	2/1/2021
2/2/2021	2/3/2021	869	953	1096.1000	5,357	5,919	1104.8	1103.586	2/2/2021
2/3/2021	2/4/2021				6,990	7,728	1104.9	1104.900	2/3/2021
2/4/2021	2/5/2021				8,078	8,904	1102.2	1102.200	2/4/2021
2/5/2021	2/6/2021				8,932	9,841	1101.8	1101.800	2/5/2021
2/6/2021	2/7/2021				9,558	10,501	1098.8	1098.800	2/6/2021
2/7/2021	2/8/2021				10,095	11,088	1098.4	1098.400	2/7/2021
2/8/2021	2/9/2021				9,802	10,751	1096.9	1096.900	2/8/2021
2/9/2021	2/10/2021				9,644	10,626	1101.7	1101.700	2/9/2021
2/10/2021	2/11/2021				9,670	10,765	1113	1113.000	2/10/2021
2/11/2021	2/12/2021				10,994	12,284	1117.5	1117.500	2/11/2021
2/12/2021	2/13/2021				10,675	12,023	1126.2	1126.200	2/12/2021
2/13/2021	2/14/2021				11,127	12,399	1114	1114.000	2/13/2021
2/14/2021	2/15/2021				9,806	11,104	1133.2	1133.200	2/14/2021
2/15/2021	2/16/2021				9,557	10,699	1119.7	1119.700	2/15/2021
2/16/2021	2/17/2021	1324	1458	1101.2000	8,637	9,665	1118.9	1116.547	2/16/2021
2/17/2021	2/18/2021	4900	5374	1096.9000	7,068	7,894	1116.8	1108.652	2/17/2021
2/18/2021	2/19/2021				7,635	8,536	1117.8	1117.800	2/18/2021
2/19/2021	2/20/2021				5,831	6,541	1121.7	1121.700	2/19/2021
2/20/2021	2/21/2021				4,762	5,341	1121.8	1121.800	2/20/2021
2/21/2021	2/22/2021				4,044	4,519	1118	1118.000	2/21/2021
2/22/2021	2/23/2021				3,774	4,194	1110.8	1110.800	2/22/2021
2/23/2021	2/24/2021				4,447	4,951	1112.9	1112.900	2/23/2021
2/24/2021	2/25/2021				5,106	5,658	1108.3	1108.300	2/24/2021
2/25/2021	2/26/2021				4,114	4,531	1101.1	1101.100	2/25/2021
2/26/2021	2/27/2021				4,097	4,504	1098.8	1098.800	2/26/2021
2/27/2021	2/28/2021				6,498	7,155	1101.1	1101.100	2/27/2021
2/28/2021	3/1/2021				5,430	5,971	1099.9	1099.900	2/28/2021
		7,093	7,785	1098.0667	206,899	229,814	1110.2714	1109.8531	



# Alliance Pipeline

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

DAY	Heating Value (BTU/ft3)	Relative Density	C1 Mol%	C2 Mol%	C3 Mol%	IC4 Mol%	NC4 Mol%	IC5 Mol%	NC5 Mol%	C6+ Mol%	N2 Mol%	CO2 Mol%	Hel Mol%
1	1,145.792	0.6561	85.1957	8.9552	3.2726	0.3675	0.6494	0.0622	0.0461	0.0223	0.9864	0.4320	0.0104
2	1,145.709	0.6558	85.2852	8.8971	3.2719	0.3672	0.6463	0.0641	0.0480	0.0229	0.9537	0.4330	0.0107
3	1,146.068	0.6565	85.1396	8.9693	3.2959	0.3642	0.6492	0.0637	0.0475	0.0224	1.0080	0.4295	0.0106
4	1,146.132	0.6562	85.1636	8.9971	3.2888	0.3630	0.6390	0.0616	0.0468	0.0224	0.9797	0.4274	0.0108
5	1,151.848	0.6612	84.5942	9.0675	3.5841	0.3834	0.7026	0.0630	0.0460	0.0214	1.0938	0.4339	0.0103
6	1,147.573	0.6566	85.2695	8.7970	3.4004	0.3751	0.6620	0.0616	0.0460	0.0218	0.9317	0.4245	0.0103
7	1,147.325	0.6566	85.2935	8.7467	3.4063	0.3734	0.6625	0.0641	0.0482	0.0240	0.9396	0.4316	0.0101
8	1,146.404	0.6557	85.3961	8.7689	3.3237	0.3747	0.6567	0.0626	0.0473	0.0236	0.9051	0.4311	0.0101
9	1,147.675	0.6569	85.2430	8.7987	3.3826	0.3783	0.6739	0.0656	0.0482	0.0228	0.9446	0.4324	0.0099
10	1,145.747	0.6555	85.3682	8.7795	3.3353	0.3671	0.6409	0.0648	0.0459	0.0212	0.9400	0.4275	0.0096
11	1,147.037	0.6566	85.2301	8.8621	3.3437	0.3748	0.6633	0.0637	0.0463	0.0221	0.9520	0.4319	0.0099
12	1,147.670	0.6571	85.1926	8.7988	3.4039	0.3797	0.6755	0.0646	0.0464	0.0223	0.9893	0.4170	0.0098
13	1,148.877	0.6574	85.2013	8.7898	3.4337	0.3860	0.6821	0.0654	0.0483	0.0222	0.9558	0.4059	0.0096
14	1,145.490	0.6541	85.5406	8.8228	3.2478	0.3663	0.6282	0.0614	0.0456	0.0219	0.8445	0.4104	0.0105
15	1,144.293	0.6532	85.6855	8.7516	3.1928	0.3671	0.6287	0.0598	0.0450	0.0229	0.8193	0.4172	0.0102
16	1,144.466	0.6537	85.6422	8.7335	3.2065	0.3717	0.6368	0.0627	0.0467	0.0225	0.8350	0.4324	0.0099
17	1,142.330	0.6520	85.7991	8.7348	3.1301	0.3552	0.6022	0.0606	0.0452	0.0229	0.8145	0.4254	0.0101
18	1,143.019	0.6527	85.6643	8.8368	3.1394	0.3535	0.6043	0.0606	0.0446	0.0231	0.8355	0.4280	0.0099
19	1,144.719	0.6541	85.4600	8.9496	3.1762	0.3598	0.6174	0.0624	0.0464	0.0241	0.8637	0.4306	0.0100
20	1,145.172	0.6547	85.3915	8.9467	3.2002	0.3613	0.6274	0.0648	0.0476	0.0255	0.8991	0.4266	0.0095
21	1,142.345	0.6528	85.5687	8.9317	3.0994	0.3463	0.5986	0.0603	0.0450	0.0239	0.8863	0.4299	0.0098
22	1,144.610	0.6542	85.3945	9.0077	3.1747	0.3538	0.6144	0.0604	0.0453	0.0236	0.9035	0.4128	0.0093
23	1,145.178	0.6554	85.2316	9.0637	3.2067	0.3577	0.6216	0.0615	0.0453	0.0236	0.9352	0.4438	0.0093
24	1,143.986	0.6546	85.3496	9.0066	3.1684	0.3541	0.6153	0.0609	0.0448	0.0230	0.9115	0.4559	0.0098
25	1,143.130	0.6538	85.4625	8.9224	3.1450	0.3548	0.6159	0.0606	0.0455	0.0238	0.9223	0.4375	0.0097
26	1,144.844	0.6554	85.1939	9.1028	3.1800	0.3579	0.6242	0.0605	0.0452	0.0231	0.9573	0.4454	0.0096
27	1,145.978	0.6565	85.0435	9.1813	3.2159	0.3603	0.6335	0.0603	0.0452	0.0227	0.9752	0.4525	0.0098
28	1,146.113	0.6563	85.0916	9.1074	3.2555	0.3642	0.6349	0.0573	0.0442	0.0216	0.9732	0.4402	0.0100
<b>Volume</b>	<b>1,145.697</b>	<b>0.6554</b>	<b>85.3263</b>	<b>8.9034</b>	<b>3.2673</b>	<b>0.3657</b>	<b>0.6395</b>	<b>0.0622</b>	<b>0.0462</b>	<b>0.0228</b>	<b>0.9265</b>	<b>0.4302</b>	<b>0.0100</b>
<b>Weight</b>	<b>1,145.700</b>	<b>0.6554</b>	<b>85.3259</b>	<b>8.9034</b>	<b>3.2675</b>	<b>0.3657</b>	<b>0.6396</b>	<b>0.0622</b>	<b>0.0462</b>	<b>0.0228</b>	<b>0.9266</b>	<b>0.4302</b>	<b>0.0100</b>
<b>Avg</b>													
<b>Energav</b>													



# Alliance Pipeline

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

DAY	Heating Value (BTU/ft3)	Relative Density	C1 Mol%	C2 Mol%	C3 Mol%	IC4 Mol%	NC4 Mol%	IC5 Mol%	NC5 Mol%	C6+ Mol%	N2 Mol%	CO2 Mol%	Hel Mol%
1	1,145.575	0.6560	85.2311	8.9334	3.2684	0.3669	0.6469	0.0625	0.0464	0.0225	0.9783	0.4333	0.0105
2	1,145.872	0.6560	85.2621	8.9055	3.2776	0.3675	0.6484	0.0645	0.0482	0.0229	0.9607	0.4320	0.0107
3	1,146.010	0.6565	85.1349	8.9887	3.2880	0.3629	0.6462	0.0634	0.0473	0.0225	1.0050	0.4304	0.0106
4	1,146.428	0.6563	85.1667	8.9859	3.3047	0.3650	0.6409	0.0607	0.0463	0.0221	0.9716	0.4254	0.0108
5	1,151.409	0.6610	84.6290	9.0342	3.5769	0.3829	0.7020	0.0634	0.0462	0.0213	1.0990	0.4350	0.0102
6	1,147.752	0.6567	85.2626	8.8117	3.4007	0.3748	0.6614	0.0613	0.0461	0.0221	0.9231	0.4259	0.0103
7	1,146.927	0.6564	85.3221	8.7288	3.3955	0.3732	0.6617	0.0635	0.0476	0.0237	0.9430	0.4307	0.0102
8	1,146.483	0.6557	85.3913	8.7821	3.3192	0.3746	0.6559	0.0632	0.0477	0.0236	0.9011	0.4313	0.0100
9	1,147.728	0.6571	85.2205	8.8147	3.3831	0.3782	0.6740	0.0655	0.0480	0.0226	0.9475	0.4358	0.0099
10	1,146.099	0.6557	85.3463	8.7972	3.3436	0.3677	0.6422	0.0647	0.0458	0.0212	0.9379	0.4239	0.0097
11	1,146.771	0.6566	85.2308	8.8471	3.3479	0.3732	0.6625	0.0634	0.0460	0.0220	0.9641	0.4331	0.0100
12	1,148.353	0.6575	85.1567	8.8106	3.4227	0.3834	0.6819	0.0650	0.0469	0.0223	0.9889	0.4121	0.0097
13	1,147.967	0.6568	85.2855	8.7581	3.4047	0.3822	0.6733	0.0648	0.0478	0.0220	0.9434	0.4085	0.0097
14	1,145.382	0.6540	85.5652	8.8200	3.2328	0.3673	0.6293	0.0609	0.0454	0.0226	0.8339	0.4120	0.0105
15	1,144.103	0.6532	85.6928	8.7403	3.1906	0.3664	0.6286	0.0604	0.0452	0.0226	0.8229	0.4200	0.0101
16	1,144.600	0.6538	85.6288	8.7442	3.2108	0.3716	0.6359	0.0626	0.0468	0.0226	0.8337	0.4330	0.0100
17	1,142.096	0.6519	85.8090	8.7414	3.1198	0.3530	0.5988	0.0606	0.0450	0.0228	0.8139	0.4255	0.0101
18	1,143.187	0.6529	85.6454	8.8492	3.1437	0.3540	0.6043	0.0605	0.0448	0.0233	0.8358	0.4291	0.0099
19	1,144.976	0.6544	85.4353	8.9567	3.1850	0.3610	0.6209	0.0624	0.0463	0.0241	0.8687	0.4295	0.0100
20	1,145.067	0.6547	85.3979	8.9446	3.1951	0.3608	0.6264	0.0652	0.0480	0.0258	0.8989	0.4278	0.0096
21	1,142.409	0.6530	85.5508	8.9415	3.1059	0.3455	0.5986	0.0598	0.0445	0.0235	0.8872	0.4331	0.0097
22	1,145.164	0.6546	85.3417	9.0362	3.1918	0.3557	0.6167	0.0605	0.0453	0.0237	0.9070	0.4121	0.0093
23	1,144.885	0.6553	85.2539	9.0486	3.1982	0.3571	0.6208	0.0617	0.0454	0.0236	0.9317	0.4496	0.0094
24	1,144.025	0.6547	85.3405	9.0037	3.1743	0.3549	0.6165	0.0606	0.0445	0.0228	0.9209	0.4516	0.0098
25	1,143.045	0.6538	85.4814	8.9175	3.1372	0.3552	0.6145	0.0610	0.0459	0.0240	0.9173	0.4364	0.0097
26	1,145.142	0.6557	85.1589	9.1286	3.1865	0.3574	0.6249	0.0607	0.0455	0.0233	0.9558	0.4489	0.0096
27	1,145.676	0.6563	85.0769	9.1523	3.2084	0.3615	0.6346	0.0602	0.0452	0.0225	0.9766	0.4520	0.0098
28	1,146.569	0.6566	85.0775	9.1054	3.2831	0.3632	0.6341	0.0573	0.0442	0.0215	0.9650	0.4388	0.0100
<b>Volume</b>	<b>1,145.812</b>	<b>0.6555</b>	<b>85.3341</b>	<b>8.8853</b>	<b>3.2775</b>	<b>0.3668</b>	<b>0.6415</b>	<b>0.0623</b>	<b>0.0462</b>	<b>0.0227</b>	<b>0.9241</b>	<b>0.4295</b>	<b>0.0100</b>
<b>Weight</b>	<b>1,145.816</b>	<b>0.6555</b>	<b>85.3336</b>	<b>8.8853</b>	<b>3.2777</b>	<b>0.3668</b>	<b>0.6415</b>	<b>0.0623</b>	<b>0.0462</b>	<b>0.0227</b>	<b>0.9243</b>	<b>0.4295</b>	<b>0.0100</b>
<b>Avg</b>													
<b>Energ</b>													

January-21

ZONE 610

Watford City

Watford City West Border

Watford City East Border

Weighted

Start Date	End Date	Watford City West Border			Watford City East Border			AVG BTU	
		MCF	DK	BTU Zone 25	MCF	DK	BTU Zone 43		
2/1/2021	2/2/2021	395	472	1194	584	646	1105.5	1141.207	2/1/2021
2/2/2021	2/3/2021	344	411	1194	511	565	1105.5	1141.107	2/2/2021
2/3/2021	2/4/2021	591	705	1194	1053	1164	1105.5	1137.315	2/3/2021
2/4/2021	2/5/2021	611	730	1194	1052	1163	1105.5	1138.016	2/4/2021
2/5/2021	2/6/2021	693	827	1194	1240	1371	1105.5	1137.228	2/5/2021
2/6/2021	2/7/2021	710	847	1194	1257	1390	1105.5	1137.445	2/6/2021
2/7/2021	2/8/2021	754	900	1194	1291	1427	1105.5	1138.130	2/7/2021
2/8/2021	2/9/2021	779	930	1194	1314	1452	1105.5	1138.439	2/8/2021
2/9/2021	2/10/2021	772	922	1194	1306	1444	1105.5	1138.379	2/9/2021
2/10/2021	2/11/2021	767	915	1194	1344	1486	1105.5	1137.655	2/10/2021
2/11/2021	2/12/2021	835	997	1194	1421	1571	1105.5	1138.256	2/11/2021
2/12/2021	2/13/2021	805	961	1194	1384	1530	1105.5	1138.046	2/12/2021
2/13/2021	2/14/2021	787	940	1194	1366	1511	1105.5	1137.850	2/13/2021
2/14/2021	2/15/2021	716	855	1194	1289	1425	1105.5	1137.104	2/14/2021
2/15/2021	2/16/2021	688	821	1194	1170	1294	1105.5	1138.271	2/15/2021
2/16/2021	2/17/2021	680	812	1194	1207	1334	1105.5	1137.392	2/16/2021
2/17/2021	2/18/2021	613	731	1194	1060	1172	1105.5	1137.927	2/17/2021
2/18/2021	2/19/2021	591	706	1194	1003	1109	1105.5	1138.313	2/18/2021
2/19/2021	2/20/2021	461	550	1194	704	778	1105.5	1140.520	2/19/2021
2/20/2021	2/21/2021	421	502	1194	617	683	1105.5	1141.395	2/20/2021
2/21/2021	2/22/2021	385	460	1194	495	547	1105.5	1144.219	2/21/2021
2/22/2021	2/23/2021	377	450	1194	474	524	1105.5	1144.706	2/22/2021
2/23/2021	2/24/2021	420	502	1194	659	729	1105.5	1139.949	2/23/2021
2/24/2021	2/25/2021	454	542	1194	699	772	1105.5	1140.347	2/24/2021
2/25/2021	2/26/2021	410	490	1194	551	609	1105.5	1143.258	2/25/2021
2/26/2021	2/27/2021	396	473	1194	572	632	1105.5	1141.705	2/26/2021
2/27/2021	2/28/2021	513	613	1194	840	929	1105.5	1139.055	2/27/2021
2/28/2021	3/1/2021	479	572	1194	713	788	1105.5	1141.063	2/28/2021
		16,447	19,636	1194.0000	27,176	30,045	1105.5000	1139.4391	

ROW ID	LOCATION DESCRIPTION	GROSS HEATING VALUE (BTU/CF)	SPECIFIC GRAVITY	WOBBE (calc)	CRICONDENTH ERM (deg F)	NITROGEN (mole percent)	CARBON DIOXIDE (mole percent)	METHANE (mole percent)	ETHANE (mole percent)	PROPANE (mole percent)	NORMAL BUTANE (mole percent)	ISO BUTANE (mole percent)	PENTANE (mole percent)	ISO PENTANE (mole percent)	NEO PENTANE (mole percent)	HEXANES PLUS (mole percent)	HYDROGEN (mole percent)	HELIUM (mole percent)	PRODUCTION DATE	POSTING DATE	Changetimestamp	NOTES
1587	GLEN ULLIN	1095	0.6445	1363.9	-50.4	2.1546	0.9683	82.8223	13.1865	0.7221	0.0231	0.0141	0.0004	0.001	N/A	0	0.0853	0.0225	1/31/2021	2/1/2021	2/1/2021 16:35	
1587	GLEN ULLIN	1096	0.6451	1364.6	-49.9	2.1414	0.9705	82.6997	13.3029	0.7282	0.024	0.0136	0.0007	0.0008	N/A	0	0.0959	0.0225	2/1/2021	2/2/2021	2/2/2021 17:05	
1587	GLEN ULLIN	1095.3	0.645	1363.8	-50	2.1547	0.9869	82.7034	13.2388	0.747	0.0217	0.0129	0.0001	0.0003	N/A	0	0.112	0.0225	2/2/2021	2/3/2021	2/3/2021 17:16	
1587	GLEN ULLIN	1096.4	0.6465	1363.6	-49.2	2.2208	0.9908	82.4862	13.3831	0.7768	0.0228	0.0136	0.0002	0.0003	N/A	0	0.0824	0.0232	2/3/2021	2/4/2021	2/4/2021 17:29	
1587	GLEN ULLIN	1099.3	0.6487	1364.9	-48.2	2.235	0.9922	82.1576	13.7734	0.7603	0.0224	0.0136	0	0.0001	N/A	0	0.0148	0.0237	2/4/2021	2/5/2021	2/5/2021 16:36	
1587	GLEN ULLIN	1099.9	0.6491	1365.2	-47.8	2.2557	0.9925	82.0794	13.8183	0.7808	0.0231	0.0139	0	0.0001	N/A	0	0.0126	0.0236	2/5/2021	2/6/2021	2/6/2021 16:23	
1587	GLEN ULLIN	1099.1	0.646	1367.5	-49.2	2.0281	0.9795	82.6912	13.4568	0.7632	0.0205	0.0129	0	0	N/A	0	0.026	0.022	2/6/2021	2/7/2021	2/7/2021 16:16	
1587	GLEN ULLIN	1099	0.6449	1368.5	-49.1	1.9752	0.9574	82.6085	13.4561	0.7709	0.0205	0.0132	0.0002	0.0004	N/A	0.0001	0.1765	0.0212	2/7/2021	2/8/2021	2/8/2021 16:16	
1587	GLEN ULLIN	1096.7	0.6427	1368	-49.8	1.9213	0.9447	83.0243	13.0109	0.8119	0.0254	0.0158	0.0001	0.0004	N/A	0	0.2247	0.0207	2/8/2021	2/9/2021	2/9/2021 16:32	
1587	GLEN ULLIN	1098.3	0.6433	1369.4	-49.5	1.898	0.9327	82.8898	13.1953	0.8061	0.0228	0.0142	0	0.0002	N/A	0	0.2204	0.0205	2/9/2021	2/10/2021	2/10/2021 16:24	
1587	GLEN ULLIN	1101.8	0.6456	1371.3	-48.2	1.8683	0.9526	82.6548	13.5063	0.8338	0.0217	0.0136	0	0.0001	N/A	0	0.1285	0.0205	2/10/2021	2/11/2021	2/11/2021 16:56	
1587	GLEN ULLIN	1097.8	0.6414	1370.7	-50.9	1.7779	0.9158	83.2585	13.0652	0.7385	0.0195	0.0118	0.0001	0.0002	N/A	0	0.193	0.0195	2/11/2021	2/12/2021	2/12/2021 16:27	
1587	GLEN ULLIN	1098.6	0.6417	1371.4	-50	1.7868	0.8973	83.1452	13.1073	0.7669	0.0272	0.0154	0.0004	0.0006	N/A	0	0.2335	0.0194	2/12/2021	2/13/2021	2/13/2021 16:23	
1587	GLEN ULLIN	1098	0.641	1371.4	-50.3	1.739	0.9075	83.4197	12.8889	0.784	0.0304	0.0176	0.0004	0.001	N/A	0	0.1925	0.0193	2/13/2021	2/14/2021	2/14/2021 16:21	
1587	GLEN ULLIN	1098.8	0.6416	1371.8	-49.9	1.7156	0.9293	83.3579	12.9692	0.7848	0.0301	0.0181	0.001	0.0013	N/A	0	0.1736	0.0192	2/14/2021	2/15/2021	2/15/2021 16:35	
1587	GLEN ULLIN	1101.6	0.6436	1373.2	-46.7	1.7289	0.9326	83.1277	13.0612	0.8932	0.0379	0.0273	0.0028	0.0039	N/A	0.0015	0.1638	0.0194	2/15/2021	2/16/2021	2/16/2021 16:35	
1587	GLEN ULLIN	1099.4	0.642	1372.2	-48.7	1.7145	0.9303	83.3705	12.8948	0.8394	0.0357	0.0231	0.0018	0.0027	N/A	0.0007	0.1673	0.0193	2/16/2021	2/17/2021	2/17/2021 16:35	
1587	GLEN ULLIN	1098.7	0.6418	1371.5	-49.1	1.7456	0.9209	83.2728	12.9226	0.8395	0.0294	0.0202	0.0009	0.0016	N/A	0.0005	0.2269	0.0193	2/17/2021	2/18/2021	2/18/2021 17:09	
1587	GLEN ULLIN	1111.8	0.6516	1377.3	-36.1	1.856	0.9391	81.9948	13.777	1.15	0.0665	0.0539	0.0068	0.0097	N/A	0.0067	0.1192	0.0205	2/18/2021	2/19/2021	2/19/2021 16:20	
1587	GLEN ULLIN	1113.1	0.6544	1376	-40.9	2.0447	0.9342	81.1964	14.7182	0.9593	0.0399	0.03	0.003	0.0044	N/A	0.0023	0.0459	0.022	2/19/2021	2/20/2021	2/20/2021 16:22	
1587	GLEN ULLIN	1108.2	0.6508	1373.8	-45.1	1.988	0.9468	81.5066	14.522	0.8174	0.0246	0.0167	0.0007	0.0013	N/A	0.0001	0.155	0.021	2/20/2021	2/21/2021	2/21/2021 16:27	
1587	GLEN ULLIN	1106.4	0.6501	1372.2	-45.7	2.04	0.9451	81.3613	14.5431	0.7859	0.0215	0.0135	0	0.0001	N/A	0	0.2682	0.0215	2/21/2021	2/22/2021	2/22/2021 16:32	
1587	GLEN ULLIN	1107.1	0.6509	1372.2	-45.7	2.0264	0.9719	81.3951	14.6137	0.7637	0.0208	0.013	0.0001	0.0001	N/A	0	0.1736	0.0216	2/22/2021	2/23/2021	2/23/2021 16:30	
1587	GLEN ULLIN	1108.2	0.6522	1372.2	-44.9	2.0883	0.9692	81.0421	14.8469	0.7773	0.0203	0.0128	0.0001	0	N/A	0	0.2209	0.0222	2/23/2021	2/24/2021	2/24/2021 16:48	
1587	GLEN ULLIN	1104.2	0.6511	1368.4	-46.2	2.2017	0.9835	81.3057	14.5173	0.7575	0.0179	0.0115	0	0	N/A	0	0.1821	0.023	2/24/2021	2/25/2021	2/25/2021 16:34	
1587	GLEN ULLIN	1099.2	0.6476	1365.9	-48.4	2.1854	0.9795	81.9585	13.8992	0.7302	0.0184	0.0115	0	0	N/A	0	0.1945	0.0229	2/25/2021	2/26/2021	2/26/2021 16:48	
1587	GLEN ULLIN	1101.8	0.6494	1367.3	-47.2	2.1805	0.987	81.6829	14.2065	0.7269	0.0206	0.0132	0.0004	0.0006	N/A	0.0002	0.1585	0.0227	2/26/2021	2/27/2021	2/27/2021 17:05	
1587	GLEN ULLIN	1105.7	0.6542	1367	-44.8	2.3898	0.997	80.6258	14.9793	0.7581	0.0193	0.0118	0.0001	0.0003	N/A	0	0.1943	0.0243	2/27/2021	2/28/2021	2/28/2021 16:43	
1587	GLEN ULLIN	1103.8	0.6519	1367.1	-46.1	2.295	0.9873	81.075	14.6721	0.7211	0.0194	0.0118	0.0001	0.0002	N/A	0	0.1946	0.0236	2/28/2021	3/1/2021	3/1/2021 16:42	

<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	Accumulated Sample	Watford City East Border
550	Accumulated Sample & Chromatograph	Mandan Border
600	Chromatograph	Hankinson Area
601	Chromatograph	Milnor Area
610	Accumulated Sample & Chromatograph	Watford City
802	Chromatograph	Linton

MONTANA DAKOTA UTILITIES CO  
NORTH DAKOTA  
HEATING VALUE DATA

STATE	ZONE	ZONE BOUNDARY	12 MONTH AVERAGE	FEB 21	JAN 21	DEC 20	NOV 20	OCT 20	SEPT 20	AUG 20	JULY 20	JUNE 20	MAY 20	APR 20	MAR 20	ZONE
MT/ND	211	Sidney Border - MonDak Tfr - Sidney Plt	1197	1206	1209	1207	1198	1200	1202	1196	1191	1169	1174	1202	1211	211
ND	24	Williston Border - Charbonneau Station	1164	1176	1177	1175	1167	1158	1157	1157	1153	1163	1159	1155	1169	24
ND	25	Watford City West Border	1192	1194	1195	1195	1193	1193	1194	1191	1194	1161	1206	1188	1202	25
ND	28	Bismarck Station - Glen Ullin Station	1151	1110	1121	1135	1131	1152	1174	1195	1190	1186	1129	1149	1138	28
ND	31	Dickinson Brd - Belfield Trf - G Ullin Stn	1118	1113	1122	1131	1129	1136	1125	1104	1092	1085	1093	1150	1138	31
ND/MT	32	Cabin Creek Station - Belfied Transfer	1116	1091	1105	1119	1123	1127	1134	1120	1115	1109	1109	1133	1103	32
ND	33	Little Knife Plant	1175	1171	1172	1172	1172	1172	1174	1179	1183	1182	1179	1175	1173	33
ND	34	Badlands Plant/Bowman Border	1052	1079	1172	1094	1070	1060	1025	984	984	1036	1047	1048	1024	34
ND	43 1/	Watford City East Border	1138	1106	1104	1147	1147	1140	1139	1137	1142	1138	1151	1157	1152	43
ND/MT	241	Fairview Border	1179	1204	1192	1195	1203	1169	1157	1172	1153	1159	1164	1182	1195	241
ND	260	North Tioga Transfer - Nesson Plant	1125	1149	1144	1142	1134	1114	1131	1129	1116	1116	1099	1096	1132	260
ND	261	Tioga Comp Station - Robinson Lake Plan	1170	1171	1168	1166	1159	1164	1162	1172	1167	1177	1178	1179	1174	261
ND	262	Minot Bdr - Palermo Bdr - Bismarck Stn	1187	1187	1184	1181	1178	1182	1191	1195	1189	1192	1193	1190	1180	262
ND	263	Lignite Plant	1142	1125	1133	1134	1137	1137	1149	1147	1143	1149	1146	1146	1160	263
ND	264	Epping Border	1158	1168	1167	1165	1163	1156	1155	1147	1147	1153	1168	1147	1157	264
ND	265	Tioga Comp Station - County Line Plant	1169	1171	1168	1166	1159	1164	1163	1173	1168	1178	1158	1180	1174	265
ND	266	County Line Plant	1177	1176	1164	1166	1165	1161	1190	1194	1191	1194	1168	1193	1164	266
ND	271	Bismarck Station - Cleveland Station	1183	1165	1180	1179	1174	1181	1191	1195	1190	1193	1190	1186	1169	271
ND	272	Cleveland Station - Mapleton	1182	1165	1179	1178	1173	1182	1191	1195	1190	1192	1189	1185	1169	272
ND	273	Cleveland Station - Grafton Border	1182	1164	1179	1178	1173	1181	1190	1194	1190	1192	1189	1184	1169	273
ND	550	Mandan Border / NBPL-St Anthony	1148	1110	1121	1133	1131	1152	1174	1190	1181	1186	1129	1149	1119	550
ND	610	MDU-Watford City BTU	1162	1141	1140	1167	1166	1165	1170	1163	1163	1149	1182	1171	1169	610
ND	802	NBPL - Linton	1102	1101	1103	1111	1113	1110	1120	1102	1088	1082	1086	1105	1102	802
ND	903	Hettinger Propane	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	903
ND	600	Alliance Pipeline - Hankinson	1159	1146	1148	1155	1155	1166	1166	1160	1158	1164	1158	1163	1164	600
ND	601	Alliance Pipeline - Milnor	1158	1146	1148	1155	1155	1166	1167	1161	1158	1164	1157	1158	1164	602

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

<b>THERMAL ZONE VARIANCE DOCUMENTATION</b>		
<b>February 2021</b>		
<b><i>ZONE</i></b>	<b><i>BTU VARIANCE</i></b>	<b><i>REASON</i></b>
34	(93)	Operational – Blend of Gas