

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

May 29, 2020

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

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

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

1. Attachment A is a schedule showing the thermal billing factors by community that reflect the BTU values shown on Attachment B and were used for billing purposes in March 2020.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our suppliers for the month of February 2020.
3. Attachment C is a listing which states the type of measuring device in place at each zone.
4. Attachment D is a monthly list of the heating value data, by zone, for the most recent 12-month period and an average thereof. It is being provided pursuant to a Staff request.
5. Attachment E provides a brief explanation of the thermal variances, where applicable, for the month of February 2020.

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

Sincerely,

/s/ Travis R. Jacobson

Travis R. Jacobson
Director of Regulatory Affairs

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

<u>Town</u>	<u>Heat Zone</u>	<u>Therm Factor</u>
MDU-303-ALEXANDER	025	1.1296
MDU-308-ARNEGARD	025	1.1296
MDU-314-APPLE VALLEY	271	1.1183
MDU-318-BEACH	032	1.0101
MDU-319-BELFIELD	032	1.0175
MDU-323-BERTHOLD	262	1.1107
MDU-324-BEULAH	032	1.0175
MDU-327-BISMARCK	028	1.0835
MDU-330-BOWMAN	034	0.9926
MDU-337-BURLINGTON	262	1.1347
MDU-343-CARRINGTON	273	1.1183
MDU-344-CLEVELAND	272	1.1104
MDU-364-CAVALIER	273	1.1419
MDU-365-DAWSON	271	1.1104
MDU-368-DES LACS	262	1.1187
MDU-369-DICKINSON	031	1.0521
MDU-374-FT TOTTEN	273	1.1261
MDU-375-DEVILS LAKE	273	1.1261
MDU-379-BARLOW	273	1.1183
MDU-384-EPPING	264	1.0985
MDU-387-ELDRIDGE	272	1.1183
MDU-407-GLADSTONE	031	1.0521
MDU-411-GLEN ULLIN	031	1.0597
MDU-413-GOLVA	032	0.9952
MDU-416-GARRISON	262	1.1187
MDU-417-GRAFTON	273	1.1498
MDU-403-GWINNER	601	1.1429
MDU-429-HEBRON	031	1.0597
MDU-432-HETTINGER	903	2.4049
MDU-449-JAMESTOWN	272	1.1261
MDU-459-KILLDEER	033	1.1088
MDU-463-LANGDON	273	1.1183
MDU-469-LEFOR	031	1.0521
MDU-474-LIGNITE	263	1.0892
MDU-475-LINTON	802	1.0633
MDU-478-LINCOLN	028	1.0835
MDU-488-MCKENZIE	271	1.1183
MDU-494-MEDINA	271	1.1104
MDU-498-MANDAN	028	1.0835
MDU-500-MARMARTH	034	0.9999
MDU-505-MINOT	262	1.1347
MDU-510-MOTT	031	1.0521
MDU-512-MAX	262	1.1107
MDU-513-MILNOR	601	1.1429
MDU-522-NEW ENGLAND	031	1.0445
MDU-524-NEW SALEM	028	1.0607
MDU-532-NEW ROCKFORD	273	1.1183
MDU-539-PARK RIVER	273	1.1419
MDU-540-PALERMO	262	1.1107

MDU-558-RAY	264	1.0985
MDU-561-REGENT	031	1.0521
MDU-563-RHAME	034	0.9852
MDU-564-RICHARDTON	031	1.0445
MDU-568-ROSS	261	1.0952
MDU-572-RUTHVILLE	262	1.1347
MDU-574-SANBORN	272	1.1261
MDU-583-SENTINEL BUTTE	032	1.0101
MDU-588-SOUTH HEART	031	1.0445
MDU-717-SPIRITWOOD	272	1.1261
MDU-590-SPRINGBROOK	264	1.0975
MDU-591-STANLEY	261	1.1032
MDU-593-STEELE	271	1.1104
MDU-594-STERLING	028	1.0835
MDU-598-SHEYENNE	273	1.1261
MDU-605-SURREY	262	1.1347
MDU-610-TAPPEN	271	1.1104
MDU-611-TAYLOR	031	1.0445
MDU-616-TIOGA	260	1.0212
MDU-619-TURTLE LAKE	262	1.1187
MDU-620-TRENTON	024	1.1149
MDU-624-UNDERWOOD	262	1.1149
MDU-625-VALLEY CITY	272	1.1340
MDU-629-WALHALLA	273	1.1419
MDU-632-WATFORD CITY	610	1.1032
MDU-636-WHEELOCK	264	1.0896
MDU-637-WHITE EARTH	261	1.1013
MDU-642-WILLISTON	024	1.1149
MDU-646-WASHBURN	262	1.1267
MDU-647-WILTON	262	1.1107
MDU-664-RIVERDALE	262	1.1225
MDU-691-FAIRVIEW	241	1.1501
MDU-712-MINOT AFB	262	1.1347
MDU-718-FAIRMOUNT	600	1.1405
MDU-732-NEKOMA	273	1.1183
MDU-732-MSR SITE	273	1.1183

Source Daily Summary

February 2020

Number: 251

Pressure Base: 14.730

Contract Day: 1

Name: SDNY BDR-MNDK JNCTN-SDNY PLT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7422	1193.1	1214.2	1210.7	1.362	3.598	66.700	24.548	3.364	0.145	0.259	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1405.93	
2	0.7421	1192.9	1214.0	1210.6	1.365	3.590	66.635	24.697	3.302	0.140	0.248	0.012	0.009	0.000	0.000	0.000	0.000	0.000	1405.88	
3	0.7182	1188.1	1209.1	1206.0	0.281	3.285	69.788	23.338	3.157	0.057	0.089	0.003	0.002	0.000	0.000	0.000	0.000	0.000	1423.52	
4	0.7342	1192.5	1213.6	1210.3	0.960	3.495	67.605	24.369	3.255	0.110	0.193	0.008	0.006	0.000	0.000	0.000	0.000	0.000	1413.06	
5	0.7338	1187.8	1208.8	1205.5	1.091	3.543	67.723	24.180	3.125	0.116	0.204	0.010	0.007	0.000	0.000	0.000	0.000	0.000	1407.89	
6	0.7334	1194.7	1215.9	1212.6	0.854	3.438	67.773	24.224	3.435	0.098	0.165	0.007	0.005	0.000	0.000	0.000	0.000	0.000	1416.51	
7	0.7311	1192.5	1213.6	1210.3	0.827	3.408	68.185	23.907	3.383	0.103	0.175	0.008	0.005	0.000	0.000	0.000	0.000	0.000	1416.00	
8	0.7373	1188.9	1209.9	1206.5	1.319	3.455	67.459	24.195	3.154	0.140	0.254	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1405.71	
9	0.7328	1184.8	1205.8	1202.4	1.272	3.349	68.270	23.622	3.072	0.136	0.252	0.014	0.012	0.000	0.000	0.000	0.000	0.000	1405.21	
10	0.7437	1196.2	1217.4	1214.0	1.356	3.553	66.274	25.129	3.275	0.142	0.250	0.012	0.008	0.000	0.000	0.000	0.000	0.000	1408.31	
11	0.7429	1194.6	1215.7	1212.4	1.364	3.572	66.385	25.036	3.231	0.141	0.250	0.012	0.009	0.000	0.000	0.000	0.000	0.000	1407.05	
12	0.7342	1204.6	1225.9	1222.6	0.592	3.308	68.187	23.588	3.875	0.136	0.275	0.020	0.019	0.000	0.000	0.000	0.000	0.000	1427.36	
13	0.7233	1200.3	1221.6	1218.3	0.109	3.284	69.494	22.930	3.992	0.066	0.113	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1432.92	
14	0.7320	1196.4	1217.6	1214.4	0.711	3.421	67.864	24.294	3.480	0.084	0.136	0.006	0.004	0.000	0.000	0.000	0.000	0.000	1419.97	
15	0.7425	1193.8	1214.9	1211.6	1.348	3.606	66.443	24.955	3.244	0.139	0.244	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1406.55	
16	0.7415	1192.1	1213.2	1209.8	1.363	3.587	66.777	24.553	3.292	0.146	0.260	0.012	0.009	0.000	0.000	0.000	0.000	0.000	1405.53	
17	0.7337	1185.6	1206.6	1203.3	1.263	3.408	68.106	23.663	3.155	0.136	0.246	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1405.22	
18	0.7429	1196.3	1217.5	1214.2	1.345	3.492	66.509	24.879	3.359	0.144	0.253	0.011	0.008	0.000	0.000	0.000	0.000	0.000	1409.18	
19	0.7173	1188.1	1209.1	1206.0	0.241	3.265	69.979	23.153	3.218	0.055	0.085	0.003	0.001	0.000	0.000	0.000	0.000	0.000	1424.36	
20	0.7333	1191.8	1212.9	1209.6	0.952	3.462	68.133	23.584	3.499	0.127	0.223	0.011	0.008	0.000	0.000	0.000	0.000	0.000	1413.08	
21	0.7456	1198.3	1219.5	1216.1	1.367	3.586	66.373	24.592	3.593	0.165	0.297	0.015	0.012	0.000	0.000	0.000	0.000	0.000	1408.92	
22	0.7413	1193.4	1214.5	1211.1	1.331	3.536	67.147	23.965	3.546	0.160	0.289	0.015	0.012	0.000	0.000	0.000	0.000	0.000	1407.22	
23	0.7435	1196.5	1217.7	1214.2	1.344	3.538	66.707	24.384	3.557	0.158	0.286	0.014	0.011	0.000	0.000	0.000	0.000	0.000	1408.73	
24	0.7451	1197.5	1218.7	1215.3	1.366	3.587	66.454	24.516	3.607	0.160	0.286	0.014	0.011	0.000	0.000	0.000	0.000	0.000	1408.50	
25	0.7449	1197.6	1218.8	1215.4	1.368	3.568	66.465	24.523	3.618	0.158	0.279	0.013	0.009	0.000	0.000	0.000	0.000	0.000	1408.72	
26	0.7449	1197.8	1219.0	1215.5	1.366	3.558	66.218	25.007	3.423	0.145	0.260	0.012	0.009	0.000	0.000	0.000	0.000	0.000	1408.94	
27	0.7428	1193.9	1215.0	1211.6	1.370	3.595	66.540	24.755	3.298	0.150	0.268	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1406.32	
28	0.7430	1194.9	1216.1	1212.6	1.364	3.558	66.557	24.769	3.278	0.158	0.288	0.015	0.012	0.000	0.000	0.000	0.000	0.000	1407.31	
29	0.7414	1192.5	1213.7	1210.2	1.368	3.543	66.907	24.380	3.364	0.149	0.266	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1406.11	
Avg	0.7374	1194.0	1214.8	1211.5	1.111	3.489	67.368	24.267	3.385	0.130	0.231	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1411.38	

Zone 211

Source Daily Summary

February 2020

Number: 571

Pressure Base: 14.730

Contract Day: 1

Name: WILLISTON BDR-CHARBN STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6948	1148.5	1168.8	1165.6	0.934	2.506	74.818	19.203	2.189	0.099	0.211	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1398.86
2	0.6966	1150.8	1171.2	1168.0	0.942	2.514	74.519	19.449	2.214	0.102	0.219	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1399.98
3	0.6978	1152.4	1172.8	1169.6	0.935	2.547	74.573	19.090	2.455	0.114	0.243	0.020	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1400.60
4	0.6974	1152.2	1172.6	1169.4	0.942	2.504	74.493	19.397	2.266	0.110	0.240	0.021	0.026	0.000	0.000	0.000	0.000	0.000	0.000	1400.84
5	0.6969	1150.6	1171.0	1167.8	0.946	2.551	74.500	19.384	2.252	0.103	0.222	0.019	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1399.39
6	0.6963	1150.5	1170.9	1167.7	0.952	2.491	74.525	19.501	2.185	0.099	0.211	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1399.92
7	0.6952	1148.9	1169.2	1166.0	0.940	2.512	74.709	19.329	2.159	0.100	0.213	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1398.93
8	0.6977	1151.9	1172.3	1169.0	0.957	2.534	74.321	19.602	2.219	0.103	0.222	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1400.10
9	0.6976	1151.7	1172.0	1168.8	0.954	2.542	74.331	19.593	2.217	0.101	0.220	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1399.94
10	0.6968	1150.9	1171.2	1168.0	0.951	2.525	74.427	19.563	2.175	0.100	0.217	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1399.72
11	0.6979	1151.8	1172.2	1169.0	0.961	2.555	74.292	19.586	2.241	0.102	0.222	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1399.78
12	0.6971	1151.9	1172.3	1169.1	0.962	2.472	74.386	19.639	2.183	0.101	0.217	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1400.73
13	0.6946	1148.1	1168.5	1165.2	0.951	2.483	74.826	19.259	2.129	0.100	0.214	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1398.64
14	0.6968	1149.8	1170.2	1167.0	0.958	2.570	74.470	19.442	2.201	0.101	0.218	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1398.56
15	0.6979	1151.9	1172.3	1169.1	0.973	2.530	74.298	19.602	2.236	0.102	0.219	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1399.88
16	0.6970	1150.4	1170.8	1167.5	0.967	2.546	74.422	19.506	2.207	0.099	0.213	0.017	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1398.95
17	0.6981	1152.7	1173.1	1169.9	0.976	2.498	74.254	19.681	2.229	0.102	0.220	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1400.61
18	0.6963	1151.7	1172.1	1168.9	0.969	2.400	74.547	19.563	2.167	0.101	0.216	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1401.26
19	0.6957	1150.1	1170.4	1167.3	0.962	2.452	74.657	19.404	2.171	0.101	0.215	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1399.89
20	0.6953	1149.1	1169.4	1166.2	0.956	2.481	74.671	19.422	2.126	0.098	0.209	0.017	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1399.12
21	0.6970	1150.5	1170.9	1167.6	0.962	2.548	74.389	19.572	2.177	0.098	0.214	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1399.09
22	0.6989	1152.3	1172.7	1169.5	0.975	2.594	74.129	19.671	2.264	0.101	0.222	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1399.40
23	0.6978	1151.4	1171.8	1168.5	0.966	2.560	74.288	19.605	2.223	0.100	0.217	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1399.42
24	0.6959	1149.4	1169.7	1166.5	0.966	2.504	74.623	19.382	2.167	0.101	0.218	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1398.88
25	0.6960	1149.5	1169.9	1166.7	0.963	2.506	74.658	19.300	2.210	0.102	0.221	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1398.99
26	0.6948	1147.5	1167.8	1164.6	0.939	2.562	74.851	19.082	2.204	0.103	0.221	0.018	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1397.63
27	0.6945	1145.5	1165.7	1162.6	0.925	2.671	75.066	18.628	2.323	0.108	0.237	0.019	0.023	0.000	0.000	0.000	0.000	0.000	0.000	1395.52
28	0.6995	1152.6	1173.0	1169.8	0.987	2.612	74.124	19.555	2.338	0.106	0.234	0.020	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1399.19
29	0.7004	1154.8	1175.2	1172.0	0.994	2.560	73.925	19.818	2.320	0.106	0.234	0.020	0.024	0.000	0.000	0.000	0.000	0.000	0.000	1400.87
Avg	0.6968	1151.0	1171.0	1167.8	0.958	2.529	74.486	19.442	2.222	0.102	0.221	0.018	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1399.47

Zone 24

Gas Composition and Properties

Effective February 1, 2020

Source #: 0602160
Name: FAIRVIEW BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.2250		2.5580
Nitrogen, N2	3.3230		4.4168
Methane, C1	68.8441		52.4020
Ethane, C2	23.0398	6.1669	32.8706
Propane, C3	3.1646	0.8726	6.6210
iso-Butane, iC4	0.1299	0.0425	0.3582
n-Butane, nC4	0.2476	0.0781	0.6828
iso-Pentane, iC5	0.0130	0.0048	0.0445
n-Pentane, nC5	0.0106	0.0038	0.0363
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0024	0.0010	0.0098
Water, H2O			
Hydrogen Sulfide, H2S			
Oxygen, O2			
Carbon Monoxide, CO			
Hydrogen, H2			
Helium, He			
Argon, Ar			
Totals	100.0000	7.1710	100.0000

Property	Total Sample	C6 Plus Fraction
Pressure Base	14.730	
Temperature Base	60.00	
HCDP @ Sample Pressure	-78.455	
Cricondentherm	2.772	
HV, Dry @ Base P, T	1202.90	
HV, Sat @ Base P, T	1181.96	
HV, Sat @ Sample P, T	1202.90	
Relative Density	0.7299	

C6+: 100

Sample

Date: 02/01/2020 Pressure: 45.0
 Type: Temperature:
 Tech: Kevin Moos H2O: lbs/mm
 H2S: ppm

Remarks:

Analysis

Date: 02/01/2020 Instrument:
 Cylinder: 300

Tech: Kevin Moos

Remarks:

Zone 241

Gas Composition and Properties

Effective February 1, 2020

Source #: 0602225
Name: WATFORD CITY WEST BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	1.1217		2.3200
Nitrogen, N2	4.0877		5.3815
Methane, C1	68.7481		51.8309
Ethane, C2	21.3458	5.7136	30.1639
Propane, C3	3.9284	1.0832	8.1408
iso-Butane, iC4	0.2103	0.0689	0.5744
n-Butane, nC4	0.4691	0.1480	1.2813
iso-Pentane, iC5	0.0400	0.0146	0.1356
n-Pentane, nC5	0.0401	0.0145	0.1360
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0088	0.0036	0.0356
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	-0.474	
Cricondentherm	12.696	
HV, Dry @ Base P, T	1203.60	
HV, Sat @ Base P, T	1182.65	
HV, Sat @ Sample P, T	1203.60	
Relative Density	0.7369	

C6+: 100

Totals 100.0000 7.0480 100.0000

Sample
Date: 02/01/2020 Pressure: 430.0
Type: Temperature:
Tech: Kevin Moos H2O: lbs/mm
H2S: ppm
Remarks:

Analysis
Date: 02/01/2020 Instrument:
Cylinder: 100
Tech: Kevin Moos
Remarks:

Zone 25

Source Daily Summary

February 2020

Number: 164

Pressure Base: 14.730

Contract Day: 1

Name: N TIOGA TRANSFER-NESSON PLT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6743	1104.5	1124.1		0.640	3.707	78.177	15.220	1.957	0.076	0.175	0.018	0.022	0.008					1365.74	
2	0.6820	1116.3	1136.1		0.703	3.618	76.885	16.371	2.083	0.085	0.202	0.020	0.025	0.007					1372.50	
3	0.6792	1112.1	1131.8		0.690	3.636	77.163	16.284	1.950	0.073	0.169	0.015	0.018	0.003					1370.10	
4	0.6728	1102.3	1121.8		0.626	3.727	78.250	15.306	1.830	0.068	0.157	0.015	0.018	0.003					1364.46	
5	0.6819	1116.5	1136.3		0.699	3.605	76.884	16.389	2.096	0.083	0.195	0.019	0.025	0.006					1372.80	
6	0.6622	1085.8	1105.0		0.567	3.825	79.957	13.878	1.571	0.056	0.124	0.010	0.012	0.000					1354.77	
7	0.6770	1108.5	1128.1		0.665	3.680	77.651	15.751	1.955	0.077	0.179	0.017	0.021	0.004					1367.91	
8	0.6818	1116.1	1135.8		0.695	3.622	76.942	16.299	2.110	0.083	0.197	0.020	0.025	0.007					1372.43	
9	0.6815	1115.3	1135.1		0.695	3.648	76.909	16.358	2.075	0.081	0.189	0.018	0.022	0.005					1371.73	
10	0.6781	1110.4	1130.0		0.672	3.660	77.455	15.943	1.967	0.077	0.181	0.018	0.022	0.005					1369.12	
11	0.6753	1106.0	1125.6		0.651	3.697	77.813	15.698	1.877	0.070	0.160	0.014	0.017	0.002					1366.53	
12	0.6529	1071.6	1090.6		0.487	3.932	81.529	12.495	1.376	0.050	0.111	0.009	0.010	0.000					1346.64	
13	0.6299	1037.1	1055.4		0.314	4.143	85.481	9.004	0.926	0.035	0.080	0.007	0.009	0.001					1326.73	
14	0.6746	1104.1	1123.6		0.659	3.738	77.978	15.477	1.879	0.070	0.161	0.015	0.019	0.005					1364.85	
15	0.6715	1099.7	1119.2		0.636	3.750	78.365	15.268	1.751	0.062	0.139	0.012	0.015	0.002					1362.59	
16	0.6692	1096.1	1115.5		0.620	3.769	78.735	14.966	1.705	0.057	0.124	0.011	0.013	0.002					1360.56	
17	0.6657	1091.6	1110.9		0.594	3.760	79.477	14.229	1.707	0.062	0.139	0.013	0.016	0.003					1358.42	
18	0.6221	1027.7	1045.9		0.254	4.071	86.804	7.991	0.785	0.027	0.058	0.005	0.005	0.000					1322.99	
19	0.6376	1050.2	1068.8		0.377	3.971	84.243	10.125	1.132	0.042	0.093	0.008	0.010	0.001					1335.37	
20	0.6545	1074.8	1093.8		0.500	3.870	81.403	12.540	1.473	0.055	0.127	0.012	0.016	0.003					1348.91	
21	0.6764	1107.6	1127.2		0.660	3.690	77.720	15.696	1.953	0.073	0.166	0.016	0.021	0.006					1367.40	
22	0.6785	1110.9	1130.6		0.675	3.663	77.362	16.022	1.989	0.074	0.170	0.017	0.021	0.006					1369.32	
23	0.6734	1102.1	1121.6		0.656	3.747	78.119	15.414	1.810	0.067	0.153	0.014	0.017	0.003					1363.68	
24	0.6634	1082.8	1102.0		0.657	3.980	79.846	13.742	1.525	0.062	0.152	0.014	0.018	0.005					1349.88	
25	0.6546	1070.7	1089.7		0.574	4.018	81.256	12.611	1.338	0.053	0.125	0.010	0.012	0.002					1343.73	
26	0.6567	1074.2	1093.2		0.578	4.002	80.919	12.903	1.372	0.056	0.137	0.013	0.016	0.004					1345.86	
27	0.6486	1061.9	1080.7		0.512	4.085	82.325	11.638	1.233	0.051	0.126	0.012	0.014	0.003					1338.80	
28	0.6773	1102.8	1122.3		0.780	3.880	77.508	15.740	1.797	0.073	0.178	0.017	0.021	0.006					1360.63	
29	0.6793	1106.6	1126.2		0.804	3.807	77.240	15.973	1.857	0.077	0.191	0.019	0.024	0.008					1363.21	
Avg	0.6666	1092.0	1111.3		0.608	3.803	79.324	14.322	1.692	0.065	0.150	0.014	0.017	0.004					1357.85	

Zone 260

Source Daily Summary

February 2020

Number: 601

Pressure Base: 14.730

Contract Day: 1

Name: TIOGA STN-ROBINSON LAKE PLNT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7040	1148.2	1168.6	1165.2	0.920	3.409	73.133	19.681	2.507	0.095	0.212	0.019	0.025	0.000	0.000	0.000	0.000	0.000	1389.26	
2	0.7009	1144.3	1164.6	1161.2	0.866	3.434	73.751	19.070	2.524	0.095	0.212	0.020	0.026	0.000	0.000	0.000	0.000	0.000	1387.59	
3	0.7092	1156.6	1177.1	1173.7	0.942	3.344	72.422	20.220	2.652	0.109	0.255	0.024	0.032	0.000	0.000	0.000	0.000	0.000	1394.34	
4	0.7076	1154.8	1175.2	1172.0	0.936	3.326	72.459	20.387	2.528	0.098	0.222	0.020	0.025	0.000	0.000	0.000	0.000	0.000	1393.68	
5	0.7060	1152.4	1172.9	1169.6	0.909	3.353	72.686	20.217	2.494	0.093	0.206	0.018	0.023	0.000	0.000	0.000	0.000	0.000	1392.49	
6	0.7079	1155.7	1176.2	1172.9	0.921	3.317	72.603	20.110	2.646	0.105	0.244	0.024	0.031	0.000	0.000	0.000	0.000	0.000	1394.49	
7	0.7044	1150.2	1170.5	1167.4	0.924	3.323	72.867	20.151	2.427	0.086	0.188	0.015	0.019	0.000	0.000	0.000	0.000	0.000	1391.37	
8	0.7077	1155.0	1175.4	1172.2	0.937	3.317	72.565	20.202	2.595	0.102	0.234	0.021	0.027	0.000	0.000	0.000	0.000	0.000	1393.84	
9	0.7080	1155.6	1176.0	1172.7	0.915	3.346	72.615	20.044	2.668	0.106	0.248	0.024	0.032	0.000	0.000	0.000	0.000	0.000	1394.14	
10	0.7077	1154.9	1175.4	1172.1	0.919	3.349	72.600	20.104	2.633	0.104	0.239	0.022	0.029	0.000	0.000	0.000	0.000	0.000	1393.75	
11	0.7073	1154.0	1174.5	1171.2	0.934	3.340	72.650	20.105	2.583	0.102	0.235	0.023	0.030	0.000	0.000	0.000	0.000	0.000	1393.08	
12	0.7070	1153.7	1174.1	1171.0	0.920	3.354	72.546	20.296	2.532	0.095	0.214	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1393.07	
13	0.7058	1151.3	1171.7	1168.7	0.937	3.363	72.620	20.315	2.452	0.088	0.191	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1391.41	
14	0.7054	1150.7	1171.1	1168.0	0.920	3.392	72.745	20.128	2.487	0.092	0.199	0.016	0.020	0.000	0.000	0.000	0.000	0.000	1390.99	
15	0.7059	1150.6	1171.0	1167.7	0.931	3.423	72.798	19.957	2.533	0.095	0.214	0.020	0.027	0.000	0.000	0.000	0.000	0.000	1390.33	
16	0.7049	1149.7	1170.0	1166.9	0.920	3.404	72.796	20.122	2.443	0.087	0.191	0.017	0.021	0.000	0.000	0.000	0.000	0.000	1390.27	
17	0.7016	1144.9	1165.1	1162.1	0.912	3.405	73.194	19.913	2.314	0.076	0.158	0.012	0.015	0.000	0.000	0.000	0.000	0.000	1387.69	
18	0.7053	1150.4	1170.8	1167.6	0.931	3.380	72.885	19.918	2.545	0.093	0.206	0.018	0.023	0.000	0.000	0.000	0.000	0.000	1390.71	
19	0.7021	1145.3	1165.5	1162.5	0.901	3.440	73.220	19.732	2.432	0.081	0.167	0.012	0.015	0.000	0.000	0.000	0.000	0.000	1387.74	
20	0.7032	1146.8	1167.1	1164.0	0.911	3.427	73.192	19.647	2.505	0.089	0.193	0.016	0.020	0.000	0.000	0.000	0.000	0.000	1388.55	
21	0.7043	1148.9	1169.2	1166.0	0.909	3.414	73.022	19.802	2.519	0.091	0.202	0.018	0.023	0.000	0.000	0.000	0.000	0.000	1389.83	
22	0.7066	1152.3	1172.7	1169.3	0.922	3.401	72.733	19.989	2.587	0.097	0.222	0.021	0.029	0.000	0.000	0.000	0.000	0.000	1391.63	
23	0.7071	1153.5	1173.9	1170.6	0.918	3.379	72.599	20.161	2.581	0.096	0.218	0.020	0.027	0.000	0.000	0.000	0.000	0.000	1392.64	
24	0.7082	1154.5	1175.0	1171.7	0.953	3.372	72.303	20.501	2.525	0.093	0.211	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1392.79	
25	0.7154	1157.9	1178.4	1175.1	1.154	3.531	71.146	21.240	2.530	0.102	0.246	0.022	0.029	0.000	0.000	0.000	0.000	0.000	1389.88	
26	0.7149	1157.3	1177.8	1174.7	1.149	3.535	71.116	21.330	2.497	0.098	0.232	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1389.68	
27	0.7156	1158.2	1178.7	1175.4	1.162	3.525	71.129	21.236	2.540	0.104	0.251	0.023	0.030	0.000	0.000	0.000	0.000	0.000	1389.98	
28	0.7152	1157.8	1178.3	1175.0	1.156	3.525	71.171	21.218	2.526	0.103	0.249	0.022	0.028	0.000	0.000	0.000	0.000	0.000	1389.85	
29	0.7158	1158.6	1179.1	1175.8	1.163	3.518	71.125	21.231	2.546	0.105	0.255	0.024	0.032	0.000	0.000	0.000	0.000	0.000	1390.23	
Avg	0.7074	1153.0	1173.0	1169.7	0.962	3.402	72.507	20.242	2.529	0.096	0.218	0.019	0.025	0.000	0.000	0.000	0.000	0.000	1391.22	

Zone 261

Source Daily Summary

February 2020

Number: 091

Pressure Base: 14.730

Contract Day: 1

Name: MNT BRD-PLRMO BRD-BIS STN

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7341	1157.7	1178.2	1175.0	0.924	5.644	68.700	19.897	4.371	0.138	0.290	0.017	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1371.88
2	0.7327	1154.8	1175.3	1172.2	0.918	5.699	68.892	19.709	4.329	0.133	0.282	0.017	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1369.76
3	0.7323	1155.5	1176.0	1172.9	0.931	5.601	68.871	19.939	4.213	0.131	0.279	0.017	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1370.98
4	0.7337	1155.4	1175.9	1172.8	0.931	5.739	68.640	19.943	4.306	0.132	0.276	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1369.54
5	0.7334	1157.1	1177.5	1174.4	0.920	5.622	68.754	19.942	4.308	0.135	0.284	0.017	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1371.81
6	0.7295	1151.6	1172.0	1168.9	0.923	5.588	69.277	19.696	4.087	0.127	0.267	0.016	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1368.95
7	0.7328	1159.1	1179.6	1176.5	0.928	5.431	68.870	20.043	4.269	0.136	0.288	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1374.80
8	0.7368	1163.8	1184.4	1181.3	0.925	5.528	68.405	20.110	4.514	0.150	0.325	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1376.55
9	0.7338	1158.0	1178.5	1175.4	0.922	5.599	68.809	19.813	4.365	0.143	0.308	0.019	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1372.53
10	0.7325	1157.4	1177.9	1174.8	0.924	5.513	68.951	19.868	4.272	0.137	0.297	0.018	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1373.04
11	0.7345	1160.3	1180.8	1177.7	0.927	5.522	68.723	19.944	4.378	0.146	0.320	0.019	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1374.55
12	0.7269	1150.0	1170.4	1167.3	0.929	5.431	69.699	19.569	3.938	0.127	0.272	0.016	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1369.52
13	0.7268	1153.6	1174.0	1170.9	0.927	5.207	69.730	19.788	3.912	0.128	0.275	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1373.88
14	0.7392	1169.7	1190.4	1187.3	0.924	5.388	68.242	20.181	4.685	0.165	0.368	0.023	0.025	0.000	0.000	0.000	0.000	0.000	0.000	1381.34
15	0.7337	1157.8	1178.3	1175.2	0.923	5.598	68.867	19.733	4.378	0.145	0.315	0.019	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1372.41
16	0.7317	1155.0	1175.5	1172.4	0.921	5.590	69.083	19.664	4.275	0.138	0.294	0.016	0.018	0.000	0.000	0.000	0.000	0.000	0.000	1370.93
17	0.7313	1155.2	1175.7	1172.6	0.926	5.536	69.083	19.782	4.222	0.133	0.283	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1371.52
18	0.7271	1151.5	1171.9	1168.8	0.936	5.355	69.516	19.932	3.867	0.115	0.247	0.015	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1371.04
19	0.7263	1151.0	1171.4	1168.4	0.930	5.311	69.659	19.865	3.844	0.115	0.246	0.014	0.015	0.000	0.000	0.000	0.000	0.000	0.000	1371.34
20	0.7310	1157.7	1178.2	1175.1	0.924	5.359	69.099	20.023	4.144	0.131	0.285	0.017	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1374.78
21	0.7335	1158.8	1179.3	1176.2	0.927	5.513	68.826	19.935	4.317	0.139	0.303	0.018	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1373.79
22	0.7344	1159.8	1180.3	1177.2	0.923	5.544	68.740	19.900	4.402	0.143	0.309	0.019	0.021	0.000	0.000	0.000	0.000	0.000	0.000	1374.10
23	0.7522	1190.7	1211.7	1208.4	0.920	5.336	66.717	20.849	5.424	0.206	0.478	0.033	0.037	0.000	0.000	0.000	0.000	0.000	0.000	1393.77
24	0.7528	1190.6	1211.7	1208.3	0.938	5.371	66.610	20.922	5.394	0.206	0.484	0.035	0.040	0.000	0.000	0.000	0.000	0.000	0.000	1393.08
25	0.7388	1162.5	1183.0	1179.9	0.983	5.704	68.077	20.172	4.542	0.150	0.331	0.020	0.022	0.000	0.000	0.000	0.000	0.000	0.000	1373.14
26	0.7334	1152.0	1172.4	1169.4	0.978	5.847	68.720	19.734	4.263	0.135	0.291	0.016	0.017	0.000	0.000	0.000	0.000	0.000	0.000	1365.79
27	0.7370	1157.2	1177.7	1174.6	0.979	5.863	68.358	19.772	4.510	0.151	0.329	0.018	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1368.63
28	0.7364	1156.0	1176.5	1173.4	0.975	5.889	68.394	19.764	4.484	0.145	0.313	0.017	0.019	0.000	0.000	0.000	0.000	0.000	0.000	1367.74
29	0.7387	1157.5	1178.0	1174.9	0.962	6.029	68.121	19.706	4.666	0.152	0.326	0.018	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1367.41
Avg	0.7344	1159.0	1179.7	1176.6	0.934	5.564	68.705	19.938	4.368	0.143	0.309	0.019	0.020	0.000	0.000	0.000	0.000	0.000	0.000	1373.40

Zone 2b2

Gas Composition and Properties

Effective February 1, 2020

Source #: 2501030
Name: LIGNITE PLANT

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.2747		0.6209
Nitrogen, N2	3.1008		4.4611
Methane, C1	77.5361		63.8823
Ethane, C2	16.9931	4.5461	26.2420
Propane, C3	2.0409	0.5625	4.6219
iso-Butane, iC4	0.0319	0.0104	0.0952
n-Butane, nC4	0.0160	0.0050	0.0478
iso-Pentane, iC5			
n-Pentane, nC5			
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0065	0.0027	0.0288
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	-34.793	
Cricondentherm	-26.826	
HV, Dry @ Base P, T	1142.98	
HV, Sat @ Base P, T	1123.09	
HV, Sat @ Sample P, T	1142.98	
Relative Density	0.6740	

C6+: 100

Totals	100.0000	5.1260	100.0000
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Sample

Date: 02/01/2020 Pressure: 500.0
 Type: Temperature:
 Tech: Kevin Moos H2O: lbs/mm
 H2S: ppm

Remarks:

Analysis

Date: 02/01/2020 Instrument:
 Cylinder: 310
 Tech: Kevin Moos

Remarks:

Zone 2b3

Gas Composition and Properties

Effective February 1, 2020

Source #: 3002013
Name: EPPING BORDER

Component	Mole %	Liquid Content	Mass %
Carbon Dioxide, CO2	0.9447		2.0833
Nitrogen, N2	2.3545		3.3050
Methane, C1	75.3519		60.5730
Ethane, C2	19.0598	5.0999	28.7177
Propane, C3	1.9609	0.5405	4.3327
iso-Butane, iC4	0.0898	0.0294	0.2615
n-Butane, nC4	0.1985	0.0626	0.5781
iso-Pentane, iC5	0.0159	0.0058	0.0575
n-Pentane, nC5	0.0177	0.0064	0.0640
Neo-Pentane, NeoC5			
Hexanes Plus, C6+	0.0063	0.0026	0.0272
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	-21.771	
Cricondentherm	-14.072	
HV, Dry @ Base P, T	1164.97	
HV, Sat @ Base P, T	1144.69	
HV, Sat @ Sample P, T	1164.97	
Relative Density	0.6909	
C6+: 100		

Totals 100.0000 5.7480 100.0000

Sample

Date: 02/01/2020 Pressure: 490.0
 Type: Temperature:
 Tech: Kevin Moos H2O: lbs/mm
 H2S: ppm

Remarks:

Analysis

Date: 02/01/2020 Instrument:
 Cylinder: 326

Tech: Kevin Moos

Remarks:

*** End of Report ***

Zone 264

Source Daily Summary

February 2020

Number: 603

Pressure Base: 14.730

Contract Day: 1

Name: TIOGA STN-COUNTY LINE PLANT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7057	1150.8	1171.2	1167.7	0.930	3.396	72.925	19.821	2.545	0.100	0.231	0.023	0.030	0.000	0.000	0.000	0.000	0.000	1390.64	
2	0.7047	1150.5	1170.9	1167.5	0.874	3.406	73.183	19.501	2.638	0.104	0.240	0.023	0.031	0.000	0.000	0.000	0.000	0.000	1391.31	
3	0.7071	1152.8	1173.2	1169.7	0.945	3.378	72.772	19.887	2.614	0.105	0.243	0.023	0.031	0.000	0.000	0.000	0.000	0.000	1391.72	
4	0.7089	1156.9	1177.4	1174.0	0.938	3.315	72.319	20.457	2.576	0.103	0.240	0.022	0.029	0.000	0.000	0.000	0.000	0.000	1394.91	
5	0.7061	1152.7	1173.1	1169.8	0.913	3.344	72.607	20.332	2.480	0.090	0.196	0.016	0.021	0.000	0.000	0.000	0.000	0.000	1392.68	
6	0.7088	1157.1	1177.5	1174.1	0.921	3.317	72.472	20.215	2.661	0.107	0.251	0.025	0.032	0.000	0.000	0.000	0.000	0.000	1395.21	
7	0.7056	1151.9	1172.3	1169.1	0.926	3.323	72.759	20.171	2.487	0.092	0.204	0.017	0.022	0.000	0.000	0.000	0.000	0.000	1392.28	
8	0.7071	1154.2	1174.6	1171.4	0.935	3.311	72.600	20.232	2.557	0.098	0.222	0.019	0.025	0.000	0.000	0.000	0.000	0.000	1393.52	
9	0.7085	1156.3	1176.8	1173.4	0.919	3.336	72.527	20.136	2.669	0.107	0.249	0.024	0.032	0.000	0.000	0.000	0.000	0.000	1394.64	
10	0.7083	1155.9	1176.3	1173.0	0.921	3.344	72.524	20.158	2.649	0.105	0.245	0.024	0.031	0.000	0.000	0.000	0.000	0.000	1394.29	
11	0.7077	1154.9	1175.3	1172.0	0.931	3.333	72.605	20.129	2.602	0.104	0.241	0.024	0.031	0.000	0.000	0.000	0.000	0.000	1393.68	
12	0.7077	1155.0	1175.5	1172.2	0.921	3.337	72.446	20.381	2.554	0.097	0.219	0.019	0.025	0.000	0.000	0.000	0.000	0.000	1393.96	
13	0.7068	1152.6	1173.0	1169.8	0.943	3.366	72.524	20.342	2.491	0.092	0.204	0.017	0.021	0.000	0.000	0.000	0.000	0.000	1391.97	
14	0.7060	1152.0	1172.4	1169.3	0.921	3.363	72.619	20.292	2.483	0.090	0.196	0.016	0.019	0.000	0.000	0.000	0.000	0.000	1392.02	
15	0.7064	1151.5	1171.9	1168.6	0.929	3.418	72.712	20.025	2.556	0.097	0.216	0.020	0.026	0.000	0.000	0.000	0.000	0.000	1390.95	
16	0.7058	1150.8	1171.1	1167.9	0.927	3.411	72.680	20.172	2.482	0.090	0.199	0.017	0.021	0.000	0.000	0.000	0.000	0.000	1390.69	
17	0.7018	1145.3	1165.5	1162.4	0.917	3.393	73.137	20.007	2.284	0.076	0.158	0.013	0.016	0.000	0.000	0.000	0.000	0.000	1387.95	
18	0.7065	1152.4	1172.8	1169.5	0.928	3.376	72.723	20.026	2.588	0.097	0.216	0.020	0.025	0.000	0.000	0.000	0.000	0.000	1391.92	
19	0.7029	1146.7	1167.0	1163.9	0.908	3.416	73.112	19.830	2.446	0.083	0.175	0.013	0.016	0.000	0.000	0.000	0.000	0.000	1388.70	
20	0.7031	1146.7	1167.0	1163.9	0.912	3.428	73.163	19.703	2.487	0.087	0.186	0.015	0.018	0.000	0.000	0.000	0.000	0.000	1388.46	
21	0.7046	1149.5	1169.9	1166.7	0.904	3.409	72.975	19.833	2.546	0.092	0.202	0.017	0.022	0.000	0.000	0.000	0.000	0.000	1390.38	
22	0.7076	1153.9	1174.3	1170.9	0.928	3.389	72.557	20.163	2.591	0.097	0.224	0.022	0.030	0.000	0.000	0.000	0.000	0.000	1392.56	
23	0.7067	1152.8	1173.2	1170.0	0.917	3.384	72.644	20.129	2.571	0.095	0.215	0.019	0.024	0.000	0.000	0.000	0.000	0.000	1392.27	
24	0.7082	1155.1	1175.5	1172.1	0.940	3.358	72.377	20.402	2.561	0.095	0.218	0.021	0.027	0.000	0.000	0.000	0.000	0.000	1393.41	
25	0.7141	1157.9	1178.4	1175.0	1.104	3.492	71.335	21.148	2.530	0.101	0.240	0.022	0.028	0.000	0.000	0.000	0.000	0.000	1391.05	
26	0.7152	1157.8	1178.3	1175.1	1.149	3.532	71.126	21.277	2.528	0.101	0.241	0.020	0.026	0.000	0.000	0.000	0.000	0.000	1389.94	
27	0.7153	1157.8	1178.3	1175.0	1.158	3.525	71.126	21.282	2.515	0.101	0.243	0.021	0.027	0.000	0.000	0.000	0.000	0.000	1389.84	
28	0.7155	1158.2	1178.8	1175.4	1.151	3.526	71.135	21.243	2.539	0.104	0.251	0.022	0.029	0.000	0.000	0.000	0.000	0.000	1390.18	
29	0.7165	1159.7	1180.2	1176.8	1.162	3.513	71.046	21.280	2.573	0.107	0.261	0.025	0.033	0.000	0.000	0.000	0.000	0.000	1390.90	
Avg	0.7079	1153.0	1173.9	1170.6	0.961	3.394	72.439	20.296	2.545	0.097	0.222	0.020	0.026	0.000	0.000	0.000	0.000	0.000	1391.79	

Zone 2b5

Source Daily Summary

February 2020

Number:	043	Pressure Base:	14.730	Contract Day:	1
Name:	BISMARCK STN-CLEVELAND STN	Temperature Base:		Contract Hour:	9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7206	1149.9	1170.2	1166.4	0.805	5.042	70.739	19.195	3.818	0.120	0.249	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1375.19	
2	0.7227	1150.3	1170.7	1167.0	0.814	5.192	70.407	19.273	3.909	0.121	0.253	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1373.82	
3	0.7135	1143.8	1164.1	1160.3	0.741	4.842	71.663	18.974	3.434	0.104	0.215	0.013	0.014	0.000	0.000	0.000	0.000	0.000	1374.76	
4	0.7083	1136.6	1156.7	1153.0	0.767	4.753	72.660	18.141	3.337	0.104	0.211	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1371.09	
5	0.7089	1137.5	1157.6	1153.9	0.761	4.759	72.609	18.126	3.401	0.105	0.211	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1371.62	
6	0.7063	1136.7	1156.8	1153.2	0.741	4.597	73.048	17.968	3.302	0.104	0.210	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1373.15	
7	0.7016	1131.3	1151.3	1147.7	0.743	4.484	73.715	17.682	3.064	0.096	0.191	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1371.18	
8	0.7123	1144.3	1164.6	1160.9	0.773	4.648	72.273	18.292	3.608	0.121	0.252	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1376.51	
9	0.7188	1149.4	1169.7	1166.0	0.795	4.913	71.076	19.064	3.741	0.122	0.255	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1376.38	
10	0.7173	1148.8	1169.2	1165.4	0.822	4.773	71.287	19.084	3.635	0.119	0.247	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1377.06	
11	0.7167	1147.6	1167.9	1164.1	0.850	4.746	71.533	18.776	3.674	0.124	0.261	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1376.16	
12	0.7056	1138.7	1158.8	1155.1	0.809	4.308	73.278	18.016	3.219	0.111	0.226	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1376.18	
13	0.6973	1127.1	1147.0	1143.4	0.780	4.282	74.519	17.200	2.896	0.098	0.196	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1370.24	
14	0.7073	1139.2	1159.4	1155.6	0.801	4.444	73.191	17.740	3.406	0.123	0.260	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1375.21	
15	0.7187	1148.6	1169.0	1165.1	0.832	4.893	71.455	18.426	3.916	0.139	0.299	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1375.50	
16	0.7165	1144.4	1164.6	1160.8	0.829	4.959	71.535	18.549	3.716	0.123	0.258	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1372.48	
17	0.7193	1147.2	1167.5	1163.8	0.829	5.044	70.976	18.976	3.772	0.122	0.252	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1373.30	
18	0.7051	1137.7	1157.8	1154.1	0.792	4.345	73.111	18.361	3.070	0.097	0.195	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1375.54	
19	0.6956	1127.6	1147.6	1143.9	0.752	4.131	74.673	17.384	2.775	0.088	0.171	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1372.57	
20	0.7061	1135.7	1155.8	1152.1	0.799	4.549	73.091	17.987	3.225	0.104	0.216	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1372.17	
21	0.7171	1145.4	1165.7	1161.9	0.824	4.952	71.431	18.649	3.733	0.121	0.256	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1373.24	
22	0.7237	1152.6	1173.0	1169.1	0.840	5.112	70.402	19.219	3.981	0.130	0.279	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1375.46	
23	0.7348	1170.2	1190.9	1187.0	0.862	5.040	69.076	19.860	4.570	0.166	0.374	0.026	0.027	0.000	0.000	0.000	0.000	0.000	1385.91	
24	0.7375	1179.0	1199.9	1195.8	0.845	4.781	68.958	19.957	4.774	0.186	0.431	0.032	0.035	0.000	0.000	0.000	0.000	0.000	1393.73	
25	0.7207	1153.0	1173.5	1169.6	0.850	4.787	71.066	18.915	3.902	0.137	0.300	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1378.83	
26	0.7124	1139.3	1159.4	1155.7	0.835	4.872	72.146	18.241	3.521	0.115	0.239	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1370.34	
27	0.7164	1142.5	1162.7	1159.0	0.849	5.035	71.553	18.442	3.707	0.123	0.260	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1370.30	
28	0.7257	1149.4	1169.8	1166.0	0.892	5.410	70.097	19.075	4.071	0.135	0.287	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1369.89	
29	0.7298	1153.5	1173.9	1170.1	0.900	5.537	69.505	19.294	4.287	0.142	0.301	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1370.85	
Avg	0.7151	1145.0	1165.4	1161.6	0.811	4.801	71.761	18.582	3.637	0.121	0.254	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1374.78	

Zone 271

Source Daily Summary

February 2020

Number: 063

Pressure Base: 14.730

Contract Day: 1

Name: CLEVELAND STN-MAPLETON

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7141	1143.2	1163.4	1159.6	0.803	4.841	71.789	18.661	3.526	0.112	0.233	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1373.35	
2	0.7206	1149.6	1170.0	1166.2	0.808	5.054	70.736	19.193	3.813	0.119	0.246	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1374.84	
3	0.7222	1149.7	1170.1	1166.4	0.815	5.187	70.478	19.234	3.888	0.120	0.247	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1373.44	
4	0.7134	1143.3	1163.5	1159.8	0.745	4.854	71.706	18.916	3.436	0.103	0.212	0.013	0.014	0.000	0.000	0.000	0.000	0.000	1374.20	
5	0.7087	1136.6	1156.7	1152.9	0.773	4.779	72.614	18.148	3.347	0.104	0.209	0.014	0.013	0.000	0.000	0.000	0.000	0.000	1370.65	
6	0.7096	1138.2	1158.3	1154.6	0.768	4.772	72.502	18.199	3.415	0.105	0.211	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1371.72	
7	0.7066	1136.7	1156.8	1153.0	0.746	4.617	73.003	17.993	3.299	0.104	0.208	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1372.77	
8	0.7025	1132.0	1152.1	1148.3	0.750	4.509	73.593	17.740	3.093	0.097	0.192	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1371.17	
9	0.7124	1144.0	1164.3	1160.6	0.776	4.665	72.273	18.273	3.609	0.120	0.248	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1376.04	
10	0.7189	1149.1	1169.4	1165.7	0.801	4.933	71.068	19.043	3.747	0.122	0.253	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1375.85	
11	0.7176	1148.7	1169.0	1165.3	0.828	4.797	71.260	19.064	3.654	0.119	0.246	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1376.59	
12	0.7167	1147.3	1167.6	1164.0	0.856	4.752	71.534	18.780	3.661	0.123	0.257	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1375.80	
13	0.7046	1137.0	1157.2	1153.5	0.812	4.309	73.455	17.871	3.191	0.109	0.220	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1375.12	
14	0.6971	1126.2	1146.2	1142.5	0.783	4.309	74.580	17.105	2.903	0.098	0.194	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1369.35	
15	0.7081	1140.2	1160.4	1156.8	0.808	4.450	73.057	17.842	3.421	0.124	0.261	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1375.56	
16	0.7189	1148.4	1168.8	1165.0	0.838	4.913	71.423	18.437	3.914	0.138	0.294	0.020	0.021	0.000	0.000	0.000	0.000	0.000	1375.02	
17	0.7169	1144.4	1164.7	1160.9	0.835	4.979	71.472	18.587	3.717	0.122	0.254	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1372.14	
18	0.7192	1146.7	1167.0	1163.4	0.833	5.059	70.998	18.944	3.768	0.121	0.248	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1372.75	
19	0.7047	1136.8	1157.0	1153.2	0.794	4.356	73.207	18.251	3.073	0.097	0.193	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1374.83	
20	0.6954	1126.7	1146.6	1142.9	0.755	4.159	74.754	17.253	2.793	0.089	0.172	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1371.65	
21	0.7064	1135.8	1155.9	1152.2	0.804	4.564	73.047	18.006	3.229	0.104	0.214	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1371.93	
22	0.7179	1146.1	1166.4	1162.7	0.828	4.980	71.282	18.760	3.741	0.121	0.254	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1373.24	
23	0.7243	1153.2	1173.6	1169.8	0.847	5.124	70.280	19.330	3.976	0.130	0.276	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1375.55	
24	0.7343	1168.8	1189.5	1185.7	0.868	5.071	69.126	19.814	4.542	0.164	0.364	0.025	0.027	0.000	0.000	0.000	0.000	0.000	1384.66	
25	0.7376	1178.6	1199.5	1195.5	0.851	4.808	68.947	19.934	4.781	0.186	0.427	0.032	0.035	0.000	0.000	0.000	0.000	0.000	1393.07	
26	0.7202	1151.8	1172.2	1168.4	0.856	4.807	71.154	18.827	3.883	0.136	0.295	0.021	0.021	0.000	0.000	0.000	0.000	0.000	1377.75	
27	0.7129	1139.6	1159.7	1156.0	0.841	4.887	72.085	18.272	3.532	0.115	0.237	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1370.17	
28	0.7172	1142.9	1163.2	1159.4	0.856	5.063	71.432	18.521	3.716	0.122	0.257	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1370.11	
29	0.7264	1150.2	1170.5	1166.7	0.898	5.421	69.981	19.167	4.081	0.134	0.285	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1370.06	
Avg	0.7147	1145.0	1164.8	1161.1	0.813	4.794	71.822	18.557	3.612	0.119	0.248	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1374.46	

Zone 272

Source Daily Summary

February 2020

Number:	061	Pressure Base:	14.730	Contract Day:	1
Name:	CLEVELAND STN-GRAFTON BDR	Temperature Base:		Contract Hour:	9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7139	1142.6	1162.8	1159.6	0.803	4.855	71.824	18.621	3.518	0.112	0.233	0.016	0.018	0.000	0.000	0.000	0.000	0.000	1372.88	
2	0.7207	1149.5	1169.8	1166.6	0.809	5.067	70.725	19.190	3.812	0.119	0.246	0.015	0.016	0.000	0.000	0.000	0.000	0.000	1374.60	
3	0.7230	1150.1	1170.4	1167.1	0.822	5.224	70.375	19.257	3.918	0.121	0.251	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1373.14	
4	0.7135	1143.1	1163.4	1160.1	0.748	4.877	71.681	18.905	3.447	0.104	0.213	0.013	0.014	0.000	0.000	0.000	0.000	0.000	1373.85	
5	0.7085	1136.2	1156.3	1153.0	0.773	4.786	72.641	18.119	3.341	0.104	0.209	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1370.35	
6	0.7095	1137.9	1158.1	1154.9	0.768	4.783	72.506	18.186	3.413	0.105	0.210	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1371.48	
7	0.7064	1136.3	1156.5	1153.2	0.746	4.618	73.034	17.973	3.289	0.103	0.207	0.015	0.015	0.000	0.000	0.000	0.000	0.000	1372.56	
8	0.7020	1131.3	1151.3	1148.0	0.748	4.511	73.657	17.706	3.069	0.096	0.189	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1370.77	
9	0.7122	1143.8	1164.0	1160.6	0.777	4.663	72.306	18.250	3.601	0.120	0.248	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1375.89	
10	0.7191	1149.2	1169.6	1166.3	0.802	4.943	71.042	19.044	3.759	0.122	0.253	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1375.80	
11	0.7177	1148.5	1168.9	1165.6	0.828	4.811	71.245	19.069	3.651	0.119	0.246	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1376.38	
12	0.7167	1147.0	1167.3	1164.0	0.857	4.773	71.522	18.775	3.658	0.123	0.256	0.018	0.018	0.000	0.000	0.000	0.000	0.000	1375.38	
13	0.7057	1138.2	1158.3	1155.1	0.815	4.336	73.292	17.953	3.235	0.111	0.224	0.017	0.016	0.000	0.000	0.000	0.000	0.000	1375.45	
14	0.6973	1126.4	1146.4	1143.1	0.786	4.309	74.547	17.134	2.903	0.098	0.194	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1369.41	
15	0.7064	1137.7	1157.8	1154.5	0.804	4.454	73.285	17.707	3.347	0.119	0.249	0.017	0.018	0.000	0.000	0.000	0.000	0.000	1374.11	
16	0.7191	1149.0	1169.3	1165.9	0.839	4.902	71.416	18.429	3.932	0.140	0.300	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1375.44	
17	0.7170	1144.4	1164.7	1161.4	0.837	4.984	71.473	18.569	3.725	0.123	0.256	0.016	0.017	0.000	0.000	0.000	0.000	0.000	1372.06	
18	0.7193	1146.5	1166.8	1163.7	0.835	5.080	70.980	18.931	3.774	0.121	0.249	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1372.40	
19	0.7047	1136.6	1156.8	1153.5	0.795	4.366	73.205	18.241	3.073	0.097	0.193	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1374.60	
20	0.6954	1126.5	1146.5	1143.2	0.757	4.171	74.736	17.264	2.787	0.088	0.171	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1371.40	
21	0.7066	1135.8	1155.9	1152.6	0.806	4.582	73.013	18.019	3.232	0.103	0.214	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1371.68	
22	0.7176	1145.6	1165.9	1162.6	0.830	4.977	71.344	18.711	3.730	0.121	0.253	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1372.93	
23	0.7242	1152.6	1173.0	1169.8	0.846	5.144	70.298	19.301	3.969	0.129	0.275	0.018	0.019	0.000	0.000	0.000	0.000	0.000	1375.04	
24	0.7336	1167.4	1188.0	1184.7	0.869	5.088	69.211	19.762	4.502	0.161	0.356	0.024	0.026	0.000	0.000	0.000	0.000	0.000	1383.64	
25	0.7375	1178.2	1199.0	1195.5	0.853	4.822	68.961	19.911	4.774	0.185	0.426	0.032	0.035	0.000	0.000	0.000	0.000	0.000	1392.67	
26	0.7210	1152.6	1173.0	1169.6	0.857	4.828	71.059	18.850	3.926	0.138	0.300	0.021	0.022	0.000	0.000	0.000	0.000	0.000	1377.98	
27	0.7129	1139.4	1159.5	1156.3	0.842	4.898	72.084	18.261	3.531	0.115	0.238	0.016	0.015	0.000	0.000	0.000	0.000	0.000	1369.92	
28	0.7168	1142.4	1162.7	1159.4	0.856	5.063	71.482	18.489	3.701	0.122	0.256	0.016	0.016	0.000	0.000	0.000	0.000	0.000	1369.82	
29	0.7262	1149.7	1170.0	1166.7	0.899	5.433	70.005	19.141	4.070	0.134	0.284	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1369.63	
Avg	0.7146	1144.0	1164.6	1161.3	0.814	4.805	71.826	18.544	3.610	0.119	0.248	0.017	0.017	0.000	0.000	0.000	0.000	0.000	1374.18	

Zone 223

Source Daily Summary

February 2020

Number:	041	Pressure Base:	14.730	Contract Day:	1
Name:	BISMARCK STN-GLEN ULLIN STN	Temperature Base:		Contract Hour:	9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6698	1113.0	1132.7	1129.5	0.370	3.178	78.357	16.222	1.754	0.042	0.064	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1380.70	
2	0.6755	1118.4	1138.2	1135.0	0.459	3.248	77.413	16.899	1.829	0.052	0.084	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1381.57	
3	0.6757	1118.1	1137.9	1134.8	0.372	3.429	77.192	17.038	1.839	0.046	0.073	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1380.91	
4	0.6634	1101.3	1120.8	1117.6	0.489	3.104	79.792	14.801	1.655	0.054	0.086	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1372.77	
5	0.6616	1099.8	1119.3	1116.0	0.464	3.066	80.125	14.538	1.657	0.051	0.080	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1372.72	
6	0.6645	1104.6	1124.1	1120.9	0.479	3.027	79.596	15.056	1.687	0.052	0.084	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1375.64	
7	0.6608	1097.6	1117.1	1113.8	0.485	3.094	80.254	14.410	1.603	0.052	0.083	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1370.80	
8	0.6610	1098.2	1117.7	1114.4	0.491	3.070	80.262	14.382	1.635	0.054	0.085	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1371.30	
9	0.6743	1119.2	1139.0	1135.8	0.466	3.077	77.800	16.580	1.918	0.055	0.088	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1383.72	
10	0.6781	1122.5	1142.4	1139.1	0.599	3.038	77.260	16.952	1.959	0.065	0.108	0.011	0.010	0.000	0.000	0.000	0.000	0.000	1383.81	
11	0.6711	1114.9	1134.6	1131.2	0.681	2.713	78.826	15.678	1.886	0.071	0.118	0.015	0.013	0.000	0.000	0.000	0.000	0.000	1381.54	
12	0.6688	1111.6	1131.2	1127.8	0.667	2.722	79.203	15.382	1.818	0.068	0.113	0.015	0.013	0.000	0.000	0.000	0.000	0.000	1379.75	
13	0.6585	1094.6	1114.0	1110.7	0.597	2.893	80.929	13.816	1.577	0.062	0.101	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1369.31	
14	0.6535	1086.4	1105.7	1102.3	0.570	2.959	81.878	12.880	1.511	0.064	0.109	0.014	0.013	0.000	0.000	0.000	0.000	0.000	1364.29	
15	0.6555	1090.6	1109.9	1106.5	0.579	2.879	81.556	13.229	1.549	0.066	0.113	0.016	0.014	0.000	0.000	0.000	0.000	0.000	1367.43	
16	0.6599	1097.4	1116.9	1113.5	0.533	2.948	80.572	14.158	1.625	0.054	0.087	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1371.41	
17	0.6725	1114.3	1134.0	1130.8	0.523	3.116	78.232	16.070	1.879	0.061	0.099	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1379.53	
18	0.6726	1115.3	1135.1	1131.8	0.606	2.939	78.300	16.133	1.828	0.065	0.106	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1380.64	
19	0.6631	1101.3	1120.8	1117.5	0.573	2.953	80.084	14.493	1.709	0.062	0.101	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1372.92	
20	0.6564	1090.9	1110.2	1106.8	0.551	2.991	81.170	13.636	1.481	0.056	0.090	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1366.86	
21	0.6602	1097.9	1117.3	1113.9	0.507	2.991	80.453	14.284	1.596	0.056	0.090	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1371.65	
22	0.6680	1108.7	1128.3	1125.0	0.448	3.154	78.866	15.644	1.732	0.053	0.085	0.010	0.008	0.000	0.000	0.000	0.000	0.000	1377.16	
23	0.6737	1117.3	1137.1	1133.6	0.624	2.896	78.216	16.148	1.913	0.068	0.111	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1381.88	
24	0.6696	1110.4	1130.0	1126.7	0.591	2.982	78.880	15.541	1.813	0.065	0.105	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1377.55	
25	0.6642	1103.1	1122.6	1119.2	0.581	2.937	79.842	14.775	1.677	0.062	0.101	0.013	0.012	0.000	0.000	0.000	0.000	0.000	1373.97	
26	0.6634	1103.0	1122.5	1119.1	0.551	2.911	79.999	14.651	1.706	0.061	0.096	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1374.69	
27	0.6624	1102.3	1121.8	1118.4	0.510	2.922	80.088	14.644	1.669	0.056	0.088	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1374.89	
28	0.6662	1107.4	1127.0	1123.6	0.484	3.012	79.244	15.422	1.681	0.053	0.084	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1377.31	
29	0.6705	1115.5	1135.2	1131.8	0.537	2.843	78.560	16.131	1.758	0.057	0.091	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1382.88	
Avq	0.6660	1106.0	1125.6	1122.3	0.531	3.003	79.412	15.158	1.722	0.058	0.094	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1375.85	

Zone 28

Source Daily Summary

February 2020

Number:	271	Pressure Base:	14.730	Contract Day:	1
Name:	DCKSN BRD-BLFD TSF-G.U. STN	Temperature Base:		Contract Hour:	9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6743	1117.6	1137.4	1134.5	0.448	3.205	77.598	16.778	1.827	0.051	0.081	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1381.89	
2	0.6747	1117.2	1137.0	1134.2	0.353	3.410	77.318	16.990	1.807	0.044	0.069	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1381.02	
3	0.6687	1109.0	1128.6	1125.8	0.445	3.212	78.706	15.693	1.797	0.051	0.082	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1376.89	
4	0.6600	1098.2	1117.6	1114.8	0.457	3.030	80.348	14.417	1.597	0.051	0.081	0.010	0.008	0.000	0.000	0.000	0.000	0.000	1372.44	
5	0.6626	1102.8	1122.4	1119.5	0.451	3.003	79.897	14.804	1.699	0.050	0.079	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1375.54	
6	0.6612	1099.6	1119.0	1116.2	0.479	3.028	80.164	14.538	1.638	0.051	0.083	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1372.90	
7	0.6607	1099.1	1118.5	1115.7	0.457	3.044	80.220	14.504	1.628	0.050	0.080	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1372.80	
8	0.6675	1110.5	1130.2	1127.3	0.431	3.023	78.995	15.588	1.814	0.051	0.081	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1380.05	
9	0.6795	1125.0	1144.9	1142.0	0.555	3.075	76.937	17.237	2.013	0.062	0.103	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1385.73	
10	0.6722	1116.0	1135.7	1132.8	0.647	2.804	78.524	15.892	1.928	0.068	0.113	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1381.94	
11	0.6682	1111.9	1131.6	1128.7	0.660	2.653	79.272	15.392	1.820	0.067	0.109	0.014	0.012	0.000	0.000	0.000	0.000	0.000	1381.03	
12	0.6644	1105.3	1124.9	1122.0	0.612	2.771	79.871	14.820	1.736	0.063	0.103	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1376.78	
13	0.6540	1088.4	1107.7	1104.8	0.562	2.904	81.694	13.136	1.522	0.061	0.099	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1366.40	
14	0.6535	1088.0	1107.3	1104.4	0.564	2.870	81.897	12.926	1.534	0.065	0.116	0.015	0.014	0.000	0.000	0.000	0.000	0.000	1366.50	
15	0.6554	1091.8	1111.2	1108.3	0.539	2.853	81.416	13.464	1.561	0.055	0.088	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1369.33	
16	0.6697	1112.4	1132.1	1129.2	0.469	3.060	78.626	15.849	1.833	0.055	0.089	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1380.08	
17	0.6725	1115.2	1135.0	1132.1	0.536	3.046	78.238	16.096	1.903	0.062	0.101	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1380.74	
18	0.6665	1107.6	1127.3	1124.3	0.591	2.861	79.441	15.143	1.774	0.063	0.104	0.012	0.011	0.000	0.000	0.000	0.000	0.000	1377.49	
19	0.6585	1095.0	1114.4	1111.5	0.545	2.944	80.816	13.923	1.601	0.057	0.092	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1370.07	
20	0.6579	1094.6	1113.9	1111.1	0.529	2.941	80.849	13.977	1.539	0.055	0.088	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1370.11	
21	0.6668	1108.0	1127.6	1124.8	0.429	3.110	79.037	15.558	1.718	0.051	0.081	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1377.71	
22	0.6719	1116.0	1135.8	1132.9	0.618	2.814	78.499	15.980	1.894	0.064	0.106	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1382.35	
23	0.6697	1110.8	1130.4	1127.5	0.571	2.999	78.803	15.602	1.841	0.061	0.102	0.011	0.010	0.000	0.000	0.000	0.000	0.000	1378.10	
24	0.6653	1105.0	1124.5	1121.6	0.596	2.904	79.627	14.964	1.722	0.061	0.102	0.013	0.011	0.000	0.000	0.000	0.000	0.000	1375.38	
25	0.6617	1101.2	1120.7	1117.9	0.528	2.897	80.199	14.543	1.662	0.057	0.091	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1374.45	
26	0.6615	1102.0	1121.5	1118.6	0.498	2.869	80.262	14.503	1.701	0.056	0.088	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1375.71	
27	0.6656	1107.7	1127.3	1124.5	0.466	2.958	79.316	15.430	1.681	0.051	0.080	0.010	0.008	0.000	0.000	0.000	0.000	0.000	1378.59	
28	0.6697	1114.9	1134.7	1131.8	0.526	2.816	78.646	16.108	1.737	0.056	0.090	0.012	0.010	0.000	0.000	0.000	0.000	0.000	1383.24	
29	0.6712	1116.0	1135.8	1132.9	0.475	2.967	78.201	16.499	1.705	0.052	0.083	0.010	0.008	0.000	0.000	0.000	0.000	0.000	1383.10	
Avg	0.6657	1106.0	1126.0	1123.2	0.519	2.968	79.428	15.185	1.732	0.057	0.092	0.011	0.009	0.000	0.000	0.000	0.000	0.000	1376.84	

Zone 31

Source Daily Summary

February 2020

Number:	051	Pressure Base:	14.730	Contract Day:	1
Name:	CABIN CRK STN-BELFIELD TRSFR	Temperature Base:		Contract Hour:	9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6457	1080.9	1100.1	1095.9	0.976	1.940	84.186	11.185	1.435	0.085	0.146	0.024	0.022	0.000	0.000	0.000	0.000	0.000	1365.30	
2	0.6441	1080.2	1099.3	1094.9	1.085	1.670	84.765	10.727	1.444	0.093	0.161	0.028	0.026	0.000	0.000	0.000	0.000	0.000	1365.90	
3	0.6428	1078.8	1097.9	1093.5	1.127	1.570	85.093	10.465	1.434	0.095	0.164	0.028	0.025	0.000	0.000	0.000	0.000	0.000	1365.48	
4	0.6404	1074.8	1093.8	1089.6	1.117	1.601	85.487	10.101	1.397	0.091	0.156	0.027	0.024	0.000	0.000	0.000	0.000	0.000	1363.08	
5	0.6438	1079.7	1098.9	1094.6	1.107	1.634	84.829	10.695	1.427	0.093	0.162	0.028	0.025	0.000	0.000	0.000	0.000	0.000	1365.73	
6	0.6432	1079.3	1098.4	1094.1	1.124	1.582	84.969	10.592	1.423	0.094	0.163	0.028	0.026	0.000	0.000	0.000	0.000	0.000	1365.76	
7	0.6435	1079.3	1098.4	1094.3	1.106	1.632	84.867	10.668	1.422	0.092	0.160	0.028	0.025	0.000	0.000	0.000	0.000	0.000	1365.57	
8	0.6433	1078.9	1098.0	1093.8	1.101	1.649	84.891	10.639	1.416	0.092	0.159	0.028	0.025	0.000	0.000	0.000	0.000	0.000	1365.22	
9	0.6435	1079.4	1098.5	1094.2	1.121	1.605	84.916	10.619	1.430	0.094	0.162	0.028	0.025	0.000	0.000	0.000	0.000	0.000	1365.63	
10	0.6427	1078.6	1097.7	1093.4	1.129	1.572	85.078	10.492	1.415	0.095	0.164	0.029	0.026	0.000	0.000	0.000	0.000	0.000	1365.35	
11	0.6425	1078.2	1097.3	1093.0	1.122	1.577	85.124	10.453	1.411	0.095	0.164	0.029	0.026	0.000	0.000	0.000	0.000	0.000	1365.23	
12	0.6446	1079.6	1098.7	1094.6	1.023	1.851	84.474	10.946	1.419	0.088	0.150	0.026	0.023	0.000	0.000	0.000	0.000	0.000	1364.72	
13	0.6428	1078.0	1097.1	1092.9	1.090	1.672	84.965	10.569	1.402	0.092	0.158	0.028	0.025	0.000	0.000	0.000	0.000	0.000	1364.64	
14	0.6424	1077.6	1096.7	1092.4	1.106	1.629	85.098	10.460	1.399	0.093	0.160	0.029	0.026	0.000	0.000	0.000	0.000	0.000	1364.56	
15	0.6419	1077.2	1096.3	1091.9	1.124	1.587	85.222	10.362	1.394	0.094	0.162	0.029	0.026	0.000	0.000	0.000	0.000	0.000	1364.47	
16	0.6417	1076.8	1095.9	1091.6	1.125	1.580	85.271	10.323	1.389	0.095	0.162	0.029	0.026	0.000	0.000	0.000	0.000	0.000	1364.33	
17	0.6417	1076.7	1095.8	1091.5	1.117	1.603	85.249	10.333	1.388	0.094	0.161	0.029	0.026	0.000	0.000	0.000	0.000	0.000	1364.15	
18	0.6417	1076.7	1095.8	1091.5	1.116	1.604	85.257	10.324	1.388	0.095	0.161	0.029	0.026	0.000	0.000	0.000	0.000	0.000	1364.12	
19	0.6414	1076.3	1095.3	1091.0	1.111	1.615	85.287	10.297	1.382	0.094	0.159	0.029	0.026	0.000	0.000	0.000	0.000	0.000	1363.84	
20	0.6415	1076.1	1095.1	1090.8	1.096	1.654	85.244	10.322	1.379	0.093	0.157	0.029	0.025	0.000	0.000	0.000	0.000	0.000	1363.57	
21	0.6414	1075.7	1094.8	1090.5	1.085	1.682	85.242	10.314	1.376	0.092	0.156	0.029	0.025	0.000	0.000	0.000	0.000	0.000	1363.24	
22	0.6411	1075.3	1094.3	1088.3	1.078	1.740	85.407	10.101	1.368	0.093	0.159	0.029	0.026	0.000	0.000	0.000	0.000	0.000	1361.47	
23	0.6407	1074.9	1093.9	1088.3	1.077	1.743	85.407	10.099	1.367	0.093	0.158	0.029	0.026	0.000	0.000	0.000	0.000	0.000	1361.42	
24	0.6404	1074.4	1093.5	1089.1	1.099	1.645	85.472	10.116	1.362	0.094	0.158	0.029	0.026	0.000	0.000	0.000	0.000	0.000	1362.63	
25	0.6403	1074.5	1093.5	1089.1	1.100	1.634	85.494	10.102	1.362	0.095	0.158	0.029	0.026	0.000	0.000	0.000	0.000	0.000	1362.75	
26	0.6400	1074.1	1093.1	1088.7	1.106	1.616	85.571	10.039	1.357	0.095	0.159	0.030	0.026	0.000	0.000	0.000	0.000	0.000	1362.62	
27	0.6396	1073.6	1092.6	1088.2	1.105	1.619	85.631	9.983	1.351	0.095	0.159	0.030	0.026	0.000	0.000	0.000	0.000	0.000	1362.30	
28	0.6395	1073.3	1092.3	1087.8	1.105	1.626	85.653	9.958	1.350	0.095	0.158	0.030	0.026	0.000	0.000	0.000	0.000	0.000	1362.06	
29	0.6393	1073.0	1092.0	1087.4	1.101	1.631	85.700	9.912	1.345	0.096	0.158	0.030	0.026	0.000	0.000	0.000	0.000	0.000	1361.85	
Avg	0.6420	1077.0	1096.0	1091.6	1.099	1.647	85.167	10.386	1.394	0.093	0.159	0.028	0.025	0.000	0.000	0.000	0.000	0.000	1364.03	

Zone 32

Source Daily Summary

February 2020

Number:	111	Pressure Base:	14.730	Contract Day:	1
Name:	LITTLE KNIFE PLANT	Temperature Base:		Contract Hour:	9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6878	1154.8	1175.3	1170.9	0.000	2.900	72.993	23.444	0.648	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.87	-25.55
2	0.6886	1156.3	1176.8	1172.7	0.000	2.885	72.812	23.654	0.632	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.87	-25.14
3	0.6875	1155.0	1175.5	1171.1	0.000	2.864	73.020	23.486	0.615	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1414.37	-25.71
4	0.6885	1155.4	1175.8	1171.5	0.000	2.929	72.824	23.609	0.621	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.86	-25.36
5	0.6888	1155.2	1175.7	1170.9	0.000	2.973	72.768	23.599	0.644	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.29	-25.19
6	0.6885	1154.5	1175.0	1170.5	0.000	2.990	72.800	23.571	0.622	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.72	-25.45
7	0.6885	1155.1	1175.6	1170.9	0.000	2.952	72.810	23.598	0.624	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.46	-25.37
8	0.6886	1154.7	1175.1	1170.5	0.000	2.990	72.804	23.543	0.647	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.81	-25.31
9	0.6886	1154.9	1175.3	1170.9	0.000	2.974	72.799	23.581	0.630	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.09	-25.36
10	0.6887	1154.9	1175.3	1170.9	0.000	2.982	72.763	23.624	0.614	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.00	-25.39
11	0.6887	1154.8	1175.3	1170.8	0.000	2.986	72.767	23.604	0.627	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.96	-25.33
12	0.6882	1153.7	1174.1	1169.6	0.000	3.013	72.813	23.579	0.580	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.02	-25.81
13	0.6885	1154.2	1174.6	1169.9	0.000	3.011	72.781	23.585	0.609	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.31	-25.55
14	0.6880	1153.3	1173.7	1169.4	0.000	3.011	72.910	23.439	0.624	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.81	-25.78
15	0.6881	1153.7	1174.1	1169.5	0.000	3.000	72.897	23.459	0.628	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.11	-25.68
16	0.6885	1154.3	1174.7	1170.0	0.000	3.005	72.804	23.549	0.626	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.41	-25.48
17	0.6882	1154.2	1174.6	1170.2	0.000	2.975	72.867	23.530	0.612	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.71	-25.64
18	0.6888	1155.4	1175.8	1171.1	0.000	2.960	72.737	23.685	0.602	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.51	-25.35
19	0.6886	1154.8	1175.2	1170.5	0.000	2.977	72.802	23.578	0.626	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.99	-25.40
20	0.6885	1154.5	1175.0	1170.3	0.000	2.984	72.828	23.539	0.634	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.77	-25.44
21	0.6891	1155.7	1176.2	1171.6	0.000	2.970	72.734	23.613	0.667	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.59	-24.96
22	0.6880	1153.4	1173.8	1169.4	0.000	3.005	72.937	23.398	0.644	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.90	-25.71
23	0.6885	1154.7	1175.1	1170.3	0.000	2.977	72.932	23.367	0.685	0.011	0.023	0.002	0.003	0.000	0.000	0.000	0.000	0.000	1412.89	-24.81
24	0.6874	1152.5	1173.0	1168.5	0.000	3.006	73.021	23.339	0.618	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.43	-26.08
25	0.6880	1153.9	1174.3	1169.7	0.000	2.981	72.912	23.460	0.630	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.45	-25.66
26	0.6875	1152.6	1173.0	1168.6	0.000	3.006	73.023	23.323	0.632	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.48	-26.00
27	0.6872	1152.6	1173.0	1168.3	0.000	2.976	73.099	23.268	0.643	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.83	-26.05
28	0.6872	1152.6	1173.0	1168.1	0.000	2.982	73.101	23.244	0.657	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.75	-25.98
29	0.6872	1152.9	1173.3	1168.8	0.000	2.967	73.084	23.296	0.639	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.06	-26.01
Avg	0.6882	1154.0	1174.7	1170.2	0.000	2.973	72.877	23.502	0.630	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.77	-25.54

Zone 33

Source Daily Summary

February 2020

Number:	351	Pressure Base:	14.730	Contract Day:	1
Name:	BADLANDS PLANT	Temperature Base:		Contract Hour:	9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6391	1053.6	1072.3	1069.2	0.321	3.982	83.937	10.409	1.228	0.044	0.065	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1338.11
2	0.6400	1055.3	1074.0	1071.0	0.325	3.960	83.776	10.571	1.245	0.044	0.066	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1339.30
3	0.6412	1057.5	1076.3	1073.3	0.332	3.927	83.568	10.777	1.271	0.044	0.067	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1340.87
4	0.6405	1056.3	1075.0	1072.1	0.333	3.935	83.701	10.643	1.263	0.044	0.067	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1340.04
5	0.6404	1056.3	1075.0	1072.0	0.333	3.928	83.721	10.635	1.259	0.045	0.067	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1340.10
6	0.6400	1055.6	1074.3	1071.3	0.333	3.935	83.789	10.562	1.256	0.045	0.067	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1339.63
7	0.6394	1054.4	1073.1	1070.1	0.332	3.950	83.912	10.429	1.252	0.045	0.067	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1338.76
8	0.6416	1059.8	1078.6	1075.5	0.416	3.695	83.704	10.733	1.307	0.050	0.078	0.009	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1343.32
9	0.6419	1060.6	1079.4	1076.3	0.405	3.700	83.599	10.857	1.296	0.049	0.076	0.009	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1343.89
10	0.6483	1071.7	1090.7	1087.6	0.413	3.611	82.455	11.946	1.429	0.051	0.079	0.009	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1351.26
11	0.6414	1058.7	1077.4	1074.4	0.349	3.851	83.571	10.827	1.273	0.045	0.069	0.008	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1342.06
12	0.6378	1051.7	1070.3	1067.4	0.331	3.969	84.202	10.152	1.221	0.044	0.066	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1336.94
13	0.6344	1045.3	1063.8	1060.9	0.327	4.044	84.828	9.514	1.164	0.044	0.065	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	1332.37
14	0.6336	1043.5	1062.0	1058.9	0.324	4.086	84.969	9.342	1.154	0.044	0.066	0.007	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1330.87
15	0.6335	1044.1	1062.6	1059.6	0.339	4.009	85.029	9.344	1.152	0.045	0.067	0.008	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1331.87
16	0.6348	1047.9	1066.5	1063.4	0.396	3.816	84.925	9.536	1.184	0.049	0.075	0.010	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1335.23
17	0.6383	1054.5	1073.1	1070.1	0.411	3.723	84.307	10.168	1.245	0.050	0.078	0.010	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1339.90
18	0.6343	1045.3	1063.8	1060.9	0.329	4.030	84.851	9.503	1.161	0.044	0.067	0.008	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1332.50
19	0.6314	1040.2	1058.7	1055.7	0.323	4.077	85.373	8.996	1.109	0.043	0.064	0.008	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1329.07
20	0.6315	1040.5	1058.9	1055.9	0.334	4.052	85.391	8.977	1.118	0.045	0.067	0.008	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1329.30
21	0.6385	1055.8	1074.5	1071.4	0.460	3.582	84.393	10.144	1.260	0.054	0.085	0.012	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1341.39
22	0.6427	1061.9	1080.7	1077.5	0.418	3.671	83.512	10.925	1.323	0.052	0.081	0.010	0.008	0.000	0.000	0.000	0.000	0.000	0.000	1344.73
23	0.6421	1060.9	1079.7	1076.5	0.442	3.634	83.707	10.720	1.339	0.054	0.083	0.011	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1344.14
24	0.6418	1059.3	1078.1	1075.1	0.369	3.815	83.586	10.775	1.318	0.048	0.073	0.008	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1342.52
25	0.6412	1058.4	1077.1	1074.2	0.358	3.833	83.666	10.711	1.298	0.047	0.071	0.008	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1341.95
26	0.6406	1057.9	1076.6	1073.6	0.377	3.778	83.823	10.592	1.292	0.048	0.073	0.009	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1341.91
27	0.6330	1049.1	1067.7	1064.5	0.441	3.504	85.369	9.393	1.146	0.050	0.076	0.011	0.009	0.000	0.000	0.000	0.000	0.000	0.000	1338.62
28	0.6418	1062.6	1081.4	1078.2	0.466	3.474	83.775	10.817	1.308	0.054	0.084	0.011	0.010	0.000	0.000	0.000	0.000	0.000	0.000	1346.49
29	0.6427	1065.4	1084.3	1081.0	0.520	3.302	83.744	10.922	1.340	0.058	0.090	0.013	0.011	0.000	0.000	0.000	0.000	0.000	0.000	1349.12
Avg	0.6389	1055.0	1073.3	1070.3	0.374	3.823	84.110	10.308	1.249	0.048	0.072	0.009	0.007	0.000	0.000	0.000	0.000	0.000	0.000	1339.53

Zone 34

Source Daily Summary

February 2020

Number:	471	Pressure Base:	14.730	Contract Day:	
Name:	SPRING CREEK I - SAX VALVE I	Temperature Base:		Contract Hour:	9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6840	1129.8	1149.8	1146.9	1.061	2.458	74.422	21.836	0.222	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.04	-31.40
2	0.6844	1130.6	1150.6	1147.7	1.065	2.444	74.342	21.922	0.226	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.59	-31.12
3	0.6844	1130.2	1150.2	1147.3	1.066	2.467	74.345	21.892	0.229	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.11	-31.17
4	0.6852	1131.1	1151.2	1148.3	1.069	2.480	74.198	22.005	0.246	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.48	-30.69
5	0.6860	1132.4	1152.5	1149.6	1.063	2.488	74.147	21.941	0.353	0.004	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.20	-29.79
6	0.6846	1130.4	1150.4	1147.5	1.066	2.469	74.312	21.925	0.227	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.21	-31.09
7	0.6839	1129.8	1149.8	1146.9	1.063	2.442	74.475	21.780	0.236	0.002	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.18	-31.35
8	0.6841	1130.3	1150.3	1147.4	1.071	2.426	74.447	21.800	0.247	0.003	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.51	-31.08
9	0.6843	1130.2	1150.3	1147.4	1.071	2.447	74.390	21.845	0.242	0.002	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.28	-31.09
10	0.6842	1130.3	1150.3	1147.4	1.070	2.434	74.401	21.857	0.236	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.47	-31.18
11	0.6840	1129.9	1149.9	1147.0	1.071	2.438	74.461	21.780	0.250	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.17	-31.27
12	0.6838	1129.5	1149.5	1146.7	1.069	2.437	74.504	21.746	0.242	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.01	-31.42
13	0.6831	1128.4	1148.4	1145.5	1.069	2.442	74.644	21.602	0.242	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.30	-31.82
14	0.6838	1128.9	1148.8	1145.5	1.067	2.483	74.482	21.736	0.231	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.17	-31.57
15	0.6838	1129.5	1149.5	1146.6	1.072	2.445	74.494	21.738	0.249	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.85	-31.38
16	0.6831	1128.5	1148.5	1145.6	1.075	2.430	74.633	21.626	0.237	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.43	-31.80
17	0.6836	1128.9	1148.9	1146.0	1.074	2.449	74.558	21.663	0.252	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.46	-31.50
18	0.6855	1133.5	1153.6	1150.6	1.066	2.365	74.543	21.471	0.487	0.018	0.041	0.004	0.005	0.000	0.000	0.000	0.000	0.000	1390.05	-28.24
19	0.6877	1137.6	1157.8	1154.7	1.049	2.334	74.520	21.241	0.700	0.038	0.092	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1392.88	-24.57
20	0.6854	1132.1	1152.2	1149.2	1.063	2.445	74.349	21.761	0.341	0.011	0.024	0.003	0.004	0.000	0.000	0.000	0.000	0.000	1388.46	-29.45
21	0.6841	1130.9	1151.0	1148.0	1.069	2.382	74.643	21.509	0.364	0.008	0.020	0.002	0.003	0.000	0.000	0.000	0.000	0.000	1388.35	-30.12
22	0.6829	1128.8	1148.8	1145.9	1.072	2.396	74.759	21.462	0.303	0.002	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.98	-31.47
23	0.6832	1129.0	1149.0	1146.1	1.068	2.414	74.698	21.508	0.310	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.96	-31.44
24	0.6836	1129.8	1149.8	1146.9	1.067	2.413	74.655	21.508	0.347	0.003	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1387.45	-30.90
25	0.6836	1129.9	1149.9	1147.0	1.063	2.415	74.647	21.520	0.343	0.003	0.007	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1387.52	-30.88
26	0.6844	1131.1	1151.1	1148.2	1.062	2.411	74.541	21.595	0.375	0.005	0.010	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1388.27	-30.29
27	0.6845	1131.0	1151.0	1148.1	1.060	2.429	74.444	21.727	0.337	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.08	-30.62
28	0.6855	1133.3	1153.3	1150.3	1.058	2.392	74.449	21.608	0.446	0.011	0.027	0.004	0.005	0.000	0.000	0.000	0.000	0.000	1389.72	-28.77
29	0.6836	1130.7	1150.7	1147.8	1.062	2.365	74.669	21.532	0.362	0.003	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1388.55	-30.74
Avg	0.6843	1131.0	1150.6	1147.7	1.066	2.429	74.489	21.694	0.306	0.004	0.009	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1387.71	-30.63

Zone 43

February-20

ZONE 550

MANDAN BORDER

NBPL - St Anthony

WBI - Mandan Border

Weighted

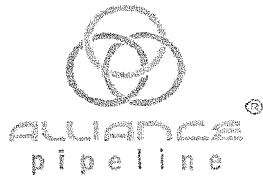
Start Date	End Date	MCF	DK	BTU	MCF	DK	BTU Zone 28	AVG BTU	
2/1/2020	2/2/2020	1882	2073	1.1012	1519	1722	1.1327	1.115	2/1/2020
2/2/2020	2/3/2020	1885	2077	1.1020	2753	3134	1.1382	1.123	2/2/2020
2/3/2020	2/4/2020	1848	2033	1.1000	3891	4427	1.1379	1.126	2/3/2020
2/4/2020	2/5/2020	1846	2031	1.1003	3732	4180	1.1208	1.114	2/4/2020
2/5/2020	2/6/2020	1814	1993	1.0990	2996	3353	1.1193	1.112	2/5/2020
2/6/2020	2/7/2020	1853	2039	1.1004	5272	5929	1.1241	1.118	2/6/2020
2/7/2020	2/8/2020	1827	2014	1.1021	4554	5087	1.1171	1.113	2/7/2020
2/8/2020	2/9/2020	1863	2056	1.1041	2756	3082	1.1177	1.112	2/8/2020
2/9/2020	2/10/2020	1853	2043	1.1025	3218	3670	1.1390	1.126	2/9/2020
2/10/2020	2/11/2020	1836	2020	1.1001	3947	4507	1.1424	1.129	2/10/2020
2/11/2020	2/12/2020	1855	2046	1.1025	3422	3881	1.1346	1.123	2/11/2020
2/12/2020	2/13/2020	1785	1968	1.1027	6928	7833	1.1312	1.125	2/12/2020
2/13/2020	2/14/2020	1818	2012	1.1064	6429	7159	1.1140	1.112	2/13/2020
2/14/2020	2/15/2020	1840	2036	1.1063	3496	3864	1.1057	1.106	2/14/2020
2/15/2020	2/16/2020	1840	2040	1.1085	3619	4017	1.1099	1.109	2/15/2020
2/16/2020	2/17/2020	1826	2022	1.1072	3335	3728	1.1169	1.113	2/16/2020
2/17/2020	2/18/2020	1841	2037	1.1067	4000	4538	1.1340	1.125	2/17/2020
2/18/2020	2/19/2020	1778	1967	1.1062	6383	7243	1.1351	1.129	2/18/2020
2/19/2020	2/20/2020	1776	1966	1.1070	6264	7020	1.1208	1.118	2/19/2020
2/20/2020	2/21/2020	1832	2028	1.1070	3902	4330	1.1102	1.109	2/20/2020
2/21/2020	2/22/2020	1816	1991	1.0966	2644	2959	1.1173	1.109	2/21/2020
2/22/2020	2/23/2020	1826	1997	1.0938	1814	2047	1.1283	1.111	2/22/2020
2/23/2020	2/24/2020	1820	1996	1.0966	2148	2444	1.1371	1.119	2/23/2020
2/24/2020	2/25/2020	1852	2034	1.0982	2810	3177	1.1300	1.117	2/24/2020
2/25/2020	2/26/2020	1851	2034	1.0987	3701	4152	1.1226	1.115	2/25/2020
2/26/2020	2/27/2020	1828	2006	1.0970	3953	4436	1.1225	1.114	2/26/2020
2/27/2020	2/28/2020	1849	2029	1.0972	2813	3156	1.1218	1.112	2/27/2020
2/28/2020	2/29/2020	1853	2034	1.0977	1810	2040	1.1270	1.112	2/28/2020
2/29/2020	3/1/2020	1874	2055	1.0963	1498	1700	1.1352	1.114	2/29/2020
		53,267	58,677	1.1015	105,607	118,815	1.1256	1.1166	



Alliance Pipeline

DAILY ANALYSIS — USA
ND07MD1 — Hankinson Sales
February 2020

DAY	Heating Value (BTU/ft3)	Relative Density	C1 Mol%	C2 Mol%	C3 Mol%	IC4 Mol%	NC4 Mol%	IC5 Mol%	NC5 Mol%	C6+ Mol%	N2 Mol%	CO2 Mol%	He1 Mol%
1	1,159.770	0.6651	83.7662	9.8345	3.8008	0.3605	0.6754	0.0506	0.0344	0.0161	1.0666	0.3849	0.0099
2	1,159.480	0.6656	83.6968	9.8078	3.8308	0.3606	0.6810	0.0503	0.0339	0.0157	1.1308	0.3824	0.0099
3	1,159.076	0.6646	83.8006	9.8328	3.7990	0.3517	0.6607	0.0470	0.0332	0.0162	1.0704	0.3785	0.0098
4	1,159.215	0.6646	83.8389	9.8077	3.8006	0.3511	0.6625	0.0495	0.0337	0.0161	1.0447	0.3851	0.0100
5	1,157.920	0.6642	83.9005	9.7060	3.8117	0.3524	0.6540	0.0470	0.0333	0.0155	1.0807	0.3888	0.0101
6	1,154.151	0.6611	84.3356	9.4776	3.7070	0.3417	0.6235	0.0460	0.0323	0.0152	1.0284	0.3825	0.0102
7	1,159.941	0.6658	83.9119	9.4728	3.8831	0.3865	0.7216	0.0586	0.0403	0.0187	1.1060	0.3900	0.0105
8	1,162.715	0.6671	83.8654	9.4398	3.9053	0.4125	0.7771	0.0650	0.0455	0.0211	1.0770	0.3810	0.0103
9	1,162.342	0.6671	83.8416	9.4638	3.8968	0.4087	0.7729	0.0625	0.0464	0.0208	1.0884	0.3880	0.0101
10	1,164.260	0.6687	83.6861	9.4831	3.9661	0.4199	0.7974	0.0651	0.0485	0.0213	1.1005	0.4015	0.0104
11	1,165.361	0.6695	83.5952	9.5030	3.9997	0.4262	0.8150	0.0662	0.0491	0.0205	1.1226	0.3923	0.0102
12	1,164.462	0.6686	83.6730	9.5326	3.9492	0.4205	0.7921	0.0657	0.0493	0.0208	1.0954	0.3912	0.0101
13	1,166.509	0.6702	83.4351	9.6679	4.0143	0.4228	0.7971	0.0684	0.0508	0.0205	1.1180	0.3951	0.0100
14	1,162.668	0.6657	84.0421	9.5220	3.8072	0.4092	0.7454	0.0663	0.0499	0.0232	0.9364	0.3879	0.0105
15	1,165.691	0.6683	83.7074	9.6141	3.9676	0.4181	0.7591	0.0667	0.0501	0.0218	0.9863	0.3985	0.0102
16	1,169.109	0.6725	83.1415	9.7237	4.1596	0.4309	0.8241	0.0667	0.0471	0.0196	1.1832	0.3939	0.0097
17	1,164.573	0.6695	83.3410	9.7774	4.0515	0.3915	0.7550	0.0529	0.0343	0.0171	1.1822	0.3878	0.0093
18	1,161.665	0.6667	83.6847	9.7127	3.9042	0.3790	0.7228	0.0520	0.0341	0.0174	1.1040	0.3795	0.0096
19	1,159.181	0.6648	83.9283	9.6055	3.8137	0.3721	0.7103	0.0506	0.0337	0.0166	1.0862	0.3731	0.0098
20	1,160.918	0.6662	83.7796	9.6047	3.9245	0.3765	0.7228	0.0496	0.0327	0.0161	1.1103	0.3736	0.0096
21	1,154.363	0.6602	84.4828	9.4872	3.6208	0.3487	0.6324	0.0480	0.0336	0.0168	0.9483	0.3712	0.0102
22	1,157.270	0.6620	84.3023	9.5523	3.6979	0.3621	0.6649	0.0488	0.0341	0.0179	0.9326	0.3770	0.0101
23	1,163.940	0.6684	83.4387	9.8439	3.9886	0.3823	0.7288	0.0516	0.0346	0.0169	1.1159	0.3891	0.0097
24	1,162.531	0.6682	83.4899	9.7537	3.9629	0.3829	0.7354	0.0523	0.0354	0.0177	1.1599	0.4004	0.0096
25	1,163.797	0.6693	83.4253	9.6709	4.0420	0.3943	0.7685	0.0520	0.0334	0.0180	1.1844	0.4017	0.0095
26	1,162.166	0.6675	83.5957	9.7013	3.9617	0.3824	0.7287	0.0486	0.0333	0.0176	1.1208	0.4001	0.0098
27	1,163.647	0.6678	83.5501	9.8274	3.9174	0.3929	0.7350	0.0513	0.0365	0.0182	1.0644	0.3972	0.0097
28	1,158.869	0.6643	83.9218	9.7331	3.8019	0.3586	0.6616	0.0453	0.0334	0.0177	1.0146	0.4021	0.0099
29	1,162.239	0.6672	83.5799	9.8226	3.9281	0.3683	0.7065	0.0497	0.0345	0.0180	1.0771	0.4055	0.0097
Volume	1,161.612	0.6665	83.7534	9.6528	3.8926	0.3849	0.7250	0.0550	0.0387	0.0182	1.0807	0.3888	0.0100
Weight Avg Energy	1,161.622	0.6666	83.7527	9.6529	3.8930	0.3850	0.7251	0.0550	0.0387	0.0182	1.0808	0.3888	0.0100



Alliance Pipeline

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

DAY	Heating Value (BTU/R3)	Relative Density	C1 Mol%	C2 Mol%	C3 Mol%	IC4 Mol%	NC4 Mol%	IC5 Mol%	NC5 Mol%	C6+ Mol%	N2 Mol%	CO2 Mol%	Hel Mol%
1	1,159.590	0.6651	83.7796	9.8206	3.7993	0.3604	0.6761	0.0500	0.0341	0.0160	1.0696	0.3844	0.0099
2	1,159.572	0.6655	83.7117	9.8132	3.8284	0.3598	0.6792	0.0500	0.0340	0.0157	1.1205	0.3776	0.0100
3	1,159.532	0.6649	83.7790	9.8403	3.8158	0.3526	0.6626	0.0476	0.0332	0.0163	1.0647	0.3783	0.0097
4	1,159.150	0.6646	83.8349	9.8209	3.7904	0.3518	0.6617	0.0494	0.0339	0.0162	1.0440	0.3867	0.0101
5	1,157.443	0.6639	83.9500	9.6571	3.8168	0.3509	0.6492	0.0468	0.0332	0.0152	1.0830	0.3877	0.0101
6	1,153.856	0.6609	84.3731	9.4695	3.6913	0.3404	0.6198	0.0465	0.0322	0.0155	1.0187	0.3826	0.0103
7	1,161.058	0.6666	83.8474	9.4706	3.9101	0.3958	0.7413	0.0603	0.0421	0.0192	1.1145	0.3881	0.0105
8	1,162.711	0.6672	83.8652	9.4366	3.9041	0.4124	0.7777	0.0661	0.0459	0.0213	1.0783	0.3821	0.0103
9	1,163.001	0.6676	83.7959	9.4703	3.9235	0.4121	0.7803	0.0622	0.0465	0.0204	1.0895	0.3891	0.0102
10	1,164.220	0.6687	83.6991	9.4708	3.9666	0.4199	0.7980	0.0651	0.0490	0.0212	1.1003	0.3996	0.0103
11	1,165.407	0.6696	83.5882	9.5062	4.0024	0.4261	0.8150	0.0662	0.0488	0.0206	1.1261	0.3902	0.0102
12	1,164.732	0.6688	83.6501	9.5580	3.9506	0.4208	0.7901	0.0666	0.0501	0.0209	1.0903	0.3924	0.0101
13	1,166.613	0.6703	83.4290	9.6717	4.0177	0.4235	0.7984	0.0677	0.0503	0.0204	1.1149	0.3962	0.0101
14	1,162.163	0.6653	84.1002	9.5064	3.7873	0.4071	0.7386	0.0661	0.0499	0.0230	0.9235	0.3875	0.0104
15	1,166.221	0.6690	83.6301	9.6133	4.0043	0.4215	0.7686	0.0669	0.0496	0.0215	1.0155	0.3983	0.0102
16	1,168.161	0.6719	83.1943	9.7218	4.1368	0.4232	0.8127	0.0642	0.0447	0.0187	1.1838	0.3899	0.0097
17	1,164.468	0.6695	83.3377	9.7930	4.0395	0.3911	0.7544	0.0526	0.0340	0.0173	1.1823	0.3888	0.0093
18	1,161.228	0.6663	83.7417	9.6928	3.8873	0.3767	0.7179	0.0520	0.0343	0.0173	1.0915	0.3788	0.0097
19	1,158.590	0.6644	83.9893	9.5764	3.7970	0.3705	0.7054	0.0498	0.0332	0.0167	1.0808	0.3712	0.0098
20	1,160.471	0.6659	83.8204	9.5967	3.9052	0.3746	0.7176	0.0497	0.0328	0.0162	1.1040	0.3734	0.0096
21	1,154.211	0.6601	84.5125	9.4760	3.6154	0.3484	0.6296	0.0478	0.0336	0.0167	0.9392	0.3706	0.0102
22	1,157.798	0.6626	84.2494	9.5536	3.7207	0.3654	0.6751	0.0492	0.0342	0.0178	0.9465	0.3779	0.0101
23	1,164.364	0.6690	83.3513	9.8972	4.0018	0.3825	0.7282	0.0518	0.0352	0.0170	1.1366	0.3888	0.0096
24	1,162.880	0.6685	83.4519	9.7640	3.9790	0.3840	0.7390	0.0522	0.0350	0.0178	1.1665	0.4011	0.0094
25	1,163.885	0.6693	83.4227	9.6739	4.0447	0.3946	0.7691	0.0515	0.0332	0.0178	1.1816	0.4013	0.0095
26	1,162.292	0.6675	83.5938	9.7219	3.9558	0.3823	0.7264	0.0482	0.0336	0.0178	1.1093	0.4012	0.0098
27	1,162.024	0.6668	83.6504	9.8255	3.8432	0.3869	0.7207	0.0504	0.0361	0.0181	1.0623	0.3966	0.0098
28	1,158.694	0.6642	83.9746	9.6723	3.8225	0.3567	0.6576	0.0460	0.0338	0.0178	1.0040	0.4049	0.0100
29	1,162.752	0.6677	83.5210	9.8287	3.9555	0.3707	0.7136	0.0499	0.0344	0.0179	1.0946	0.4040	0.0097
Volume	1,161.583	0.6666	83.7615	9.6412	3.8931	0.3856	0.7264	0.0551	0.0388	0.0183	1.0817	0.3883	0.0100
Weight Avg Energy	1,161.600	0.6666	83.7602	9.6411	3.8937	0.3858	0.7266	0.0551	0.0389	0.0183	1.0820	0.3883	0.0100

February-20

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		
2/1/2020	2/2/2020	273	328	1.2036	628	722	1.1498	1.166	2/1/2020
2/2/2020	2/3/2020	400	482	1.2036	705	811	1.1506	1.170	2/2/2020
2/3/2020	2/4/2020	440	530	1.2036	794	913	1.1502	1.169	2/3/2020
2/4/2020	2/5/2020	461	555	1.2036	924	1064	1.1512	1.169	2/4/2020
2/5/2020	2/6/2020	389	468	1.2036	709	817	1.1525	1.171	2/5/2020
2/6/2020	2/7/2020	484	583	1.2036	1131	1301	1.1504	1.166	2/6/2020
2/7/2020	2/8/2020	423	509	1.2036	948	1090	1.1498	1.166	2/7/2020
2/8/2020	2/9/2020	371	446	1.2036	686	789	1.1503	1.169	2/8/2020
2/9/2020	2/10/2020	406	488	1.2036	764	878	1.1503	1.169	2/9/2020
2/10/2020	2/11/2020	459	553	1.2036	902	1037	1.1503	1.168	2/10/2020
2/11/2020	2/12/2020	436	525	1.2036	947	1089	1.1499	1.167	2/11/2020
2/12/2020	2/13/2020	631	760	1.2036	1410	1621	1.1495	1.166	2/12/2020
2/13/2020	2/14/2020	555	668	1.2036	1198	1376	1.1484	1.166	2/13/2020
2/14/2020	2/15/2020	396	477	1.2036	783	899	1.1488	1.167	2/14/2020
2/15/2020	2/16/2020	395	476	1.2036	779	895	1.1495	1.168	2/15/2020
2/16/2020	2/17/2020	369	445	1.2036	771	886	1.1485	1.166	2/16/2020
2/17/2020	2/18/2020	453	545	1.2036	944	1085	1.1489	1.167	2/17/2020
2/18/2020	2/19/2020	616	741	1.2036	1229	1418	1.1536	1.170	2/18/2020
2/19/2020	2/20/2020	560	675	1.2036	1095	1268	1.1578	1.173	2/19/2020
2/20/2020	2/21/2020	405	487	1.2036	752	867	1.1522	1.170	2/20/2020
2/21/2020	2/22/2020	318	382	1.2036	660	759	1.1510	1.168	2/21/2020
2/22/2020	2/23/2020	291	350	1.2036	554	636	1.1488	1.168	2/22/2020
2/23/2020	2/24/2020	303	365	1.2036	588	675	1.1490	1.168	2/23/2020
2/24/2020	2/25/2020	376	453	1.2036	699	804	1.1498	1.169	2/24/2020
2/25/2020	2/26/2020	430	518	1.2036	822	946	1.1499	1.168	2/25/2020
2/26/2020	2/27/2020	388	467	1.2036	727	837	1.1511	1.169	2/26/2020
2/27/2020	2/28/2020	324	390	1.2036	639	736	1.1510	1.169	2/27/2020
2/28/2020	2/29/2020	256	308	1.2036	501	577	1.1533	1.170	2/28/2020
2/29/2020	3/1/2020	265	318	1.2036	493	568	1.1507	1.169	2/29/2020
		11,873	14,292	1.2036	23,782	27,364	1.1506	1.1683	

ROW ID	LOCATION DESCRIPTION	GROSS HEATING VALUE (BTU/CF)	SPECIFIC GRAVITY	WOBBE (calc)	CRICONDENTHERM (deg F)	NITROGEN (mole percent)	CARBON DIOXIDE (mole percent)	METHANE (mole percent)	ETHANE (mole percent)	PROPANE (mole percent)	NORMAL BUTANE (mole percent)	ISO BUTANE (mole percent)	PENTANE (mole percent)	ISO PENTANE (mole percent)	NEO PENTANE (mole percent)	HEXANES PLUS (mole percent)	HYDROGEN (mole percent)	HELIUM (mole percent)	PRODUCTION DATE	POSTING DATE	Changetimestamp	NOTES
11587	GLEN ULLIN	1097	0.6434	1367.6	-49.9	2.0661	0.8805	82.9467	13.1199	0.7929	0.0236	0.0147	0.0003	0.0009	0	0	0.1331	0.0213	1/31/2020	2/1/2020	2/1/2020 4:09:28 PM	
11587	GLEN ULLIN	1101.1	0.6464	1369.5	-47.4	2.0662	0.8989	82.5082	13.5181	0.8333	0.0298	0.02	0.0017	0.0024	0	0.0005	0.0996	0.0214	2/1/2020	2/2/2020	2/2/2020 4:13:31 PM	
11587	GLEN ULLIN	1101.7	0.6474	1369.2	-47.2	2.1018	0.9159	82.3247	13.6589	0.8341	0.0302	0.0195	0.0017	0.0021	0	0.0001	0.0892	0.0219	2/2/2020	2/3/2020	2/3/2020 4:18:00 PM	
11587	GLEN ULLIN	1100.1	0.6466	1368.1	-48.1	2.1193	0.9181	82.4198	13.5695	0.8071	0.0259	0.0165	0.0007	0.0012	0	0.0001	0.0999	0.022	2/3/2020	2/4/2020	2/4/2020 4:17:57 PM	
11587	GLEN ULLIN	1100.3	0.6465	1368.5	-47.6	2.1138	0.9078	82.3745	13.5641	0.8241	0.0285	0.0185	0.0015	0.0019	0	0.0003	0.1433	0.0219	2/4/2020	2/5/2020	2/5/2020 4:09:41 PM	
11587	GLEN ULLIN	1099.2	0.6457	1367.9	-48	2.1232	0.9006	82.4735	13.4539	0.811	0.0289	0.0189	0.0016	0.0021	0	0.0003	0.1642	0.0219	2/5/2020	2/6/2020	2/6/2020 4:14:36 PM	
11587	GLEN ULLIN	1100.1	0.6464	1368.3	-48.2	2.1265	0.9036	82.3456	13.6008	0.8114	0.025	0.0153	0.0003	0.0006	0	0	0.1491	0.022	2/6/2020	2/7/2020	2/7/2020 4:11:20 PM	
11587	GLEN ULLIN	1102.2	0.6482	1369	-46.9	2.1603	0.9097	82.1108	13.794	0.8524	0.0285	0.0169	0.0006	0.0007	0	0	0.1037	0.0225	2/7/2020	2/8/2020	2/8/2020 4:06:25 PM	
11587	GLEN ULLIN	1104	0.6493	1370.1	-44.5	2.1519	0.907	82.0075	13.7105	0.9698	0.0518	0.0272	0.0024	0.0028	0	0	0.1469	0.0223	2/8/2020	2/9/2020	2/9/2020 4:05:43 PM	
11587	GLEN ULLIN	1102.3	0.6485	1368.8	-45.7	2.1677	0.9195	82.1051	13.6636	0.9097	0.0457	0.0239	0.0019	0.0024	0	0	0.1382	0.0224	2/9/2020	2/10/2020	2/10/2020 4:07:56 PM	
11587	GLEN ULLIN	1100.1	0.6471	1367.6	-47.9	2.1705	0.9158	82.2406	13.645	0.8285	0.0234	0.0149	0.0002	0.0006	0	0	0.1383	0.0224	2/10/2020	2/11/2020	2/11/2020 4:10:33 PM	
11587	GLEN ULLIN	1102.9	0.6489	1369.2	-46.3	2.1584	0.9269	81.9635	13.848	0.9044	0.0246	0.0158	0.0004	0.0007	0	0	0.1352	0.0223	2/11/2020	2/12/2020	2/12/2020 4:06:55 PM	
11587	GLEN ULLIN	1102	0.6481	1368.9	-46.6	2.1469	0.9195	82.0858	13.7094	0.9099	0.0263	0.0169	0.0003	0.0009	0	0	0.1617	0.0227	2/12/2020	2/13/2020	2/13/2020 4:14:14 PM	
11587	GLEN ULLIN	1106.7	0.6507	1372	-42.8	2.1033	0.9215	81.7415	13.9736	0.9995	0.0422	0.0302	0.0024	0.0036	0	0.0017	0.1585	0.022	2/13/2020	2/14/2020	2/14/2020 4:10:57 PM	
11587	GLEN ULLIN	1106.3	0.6508	1371.3	-45.3	2.1441	0.9238	81.4506	14.4127	0.8362	0.0271	0.0167	0.0004	0.0011	0	0	0.1648	0.0227	2/14/2020	2/15/2020	2/15/2020 4:09:15 PM	
11587	GLEN ULLIN	1108.5	0.6531	1371.6	-43.5	2.2225	0.9227	81.0403	14.7038	0.8689	0.0308	0.0202	0.0016	0.0022	0	0.0005	0.1636	0.023	2/15/2020	2/16/2020	2/16/2020 4:09:47 PM	
11587	GLEN ULLIN	1107	0.652	1371	-45	2.1921	0.9343	81.2682	14.6059	0.8105	0.0257	0.0162	0.0007	0.0012	0	0.0001	0.1224	0.0228	2/16/2020	2/17/2020	2/17/2020 4:08:50 PM	
11587	GLEN ULLIN	1106.6	0.6512	1371.3	-45.4	2.1533	0.9278	81.3838	14.5352	0.7969	0.0259	0.0158	0.0005	0.001	0	0	0.1376	0.0224	2/17/2020	2/18/2020	2/18/2020 4:14:09 PM	
11587	GLEN ULLIN	1106.1	0.6512	1370.7	-44.2	2.1602	0.9419	81.4414	14.3256	0.8707	0.036	0.0205	0.0023	0.0027	0	0.0006	0.176	0.0222	2/18/2020	2/19/2020	2/19/2020 4:10:04 PM	
11587	GLEN ULLIN	1107.1	0.6514	1371.7	-42.9	2.1231	0.943	81.5012	14.2512	0.9086	0.0484	0.0256	0.004	0.004	0	0.0013	0.1676	0.0221	2/19/2020	2/20/2020	2/20/2020 4:12:55 PM	
11587	GLEN ULLIN	1106.7	0.6514	1371.2	-42.2	2.1368	0.9443	81.6379	14.0988	0.9332	0.0524	0.029	0.0053	0.005	0	0.0023	0.1328	0.0224	2/20/2020	2/21/2020	2/21/2020 4:07:24 PM	
11587	GLEN ULLIN	1096.3	0.6449	1365.2	-47.9	2.1865	0.9153	82.8007	13.0475	0.8351	0.0397	0.0226	0.0031	0.0033	0	0.001	0.1227	0.0227	2/21/2020	2/22/2020	2/22/2020 4:06:43 PM	
11587	GLEN ULLIN	1093.7	0.6431	1363.9	-50.4	2.2106	0.8939	83.0011	12.9224	0.7727	0.027	0.0161	0.001	0.0014	0	0.0002	0.1308	0.023	2/22/2020	2/23/2020	2/23/2020 4:05:08 PM	
11587	GLEN ULLIN	1096.7	0.645	1365.6	-49.3	2.2051	0.8973	82.6746	13.2627	0.7856	0.0269	0.0166	0.0009	0.0015	0	0.0001	0.1059	0.0229	2/23/2020	2/24/2020	2/24/2020 4:07:43 PM	
11587	GLEN ULLIN	1098.2	0.6454	1367	-48.9	2.135	0.9102	82.529	13.4326	0.7803	0.026	0.0159	0.0007	0.0012	0	0.0001	0.1468	0.0222	2/24/2020	2/25/2020	2/25/2020 4:09:33 PM	
11587	GLEN ULLIN	1098.6	0.6459	1367	-48.8	2.1487	0.9141	82.4739	13.5009	0.7738	0.0248	0.0157	0.0006	0.0014	0	0	0.1237	0.0224	2/25/2020	2/26/2020	2/26/2020 4:09:21 PM	
11587	GLEN ULLIN	1097.1	0.6443	1366.8	-49.4	2.0909	0.9155	82.7185	13.2928	0.7538	0.0263	0.0161	0.0013	0.0018	0	0.0002	0.1612	0.0219	2/26/2020	2/27/2020	2/27/2020 4:07:23 PM	
11587	GLEN ULLIN	1097.4	0.6453	1366.1	-48.6	2.1669	0.9138	82.5689	13.3379	0.7934	0.0271	0.0176	0.0011	0.0017	0	0.0005	0.149	0.0224	2/27/2020	2/28/2020	2/28/2020 4:07:09 PM	
11587	GLEN ULLIN	1097.6	0.6454	1366.3	-47.6	2.1812	0.9042	82.5868	13.2527	0.8309	0.037	0.02	0.0031	0.0031	0	0.0011	0.1574	0.0227	2/28/2020	2/29/2020	2/29/2020 4:10:31 PM	
11587	GLEN ULLIN	1097.6	0.6454	1366.3	-47.6	2.1812	0.9042	82.5868	13.2527	0.8309	0.037	0.02	0.0031	0.0031	0	0.0011	0.1574	0.0227	2/28/2020	3/1/2020	3/1/2020 4:11:26 PM	

NORTH DAKOTA HEATING VALUE ZONES		
ZONES	MEASURING DEVICE	LOCATION
211	Chromatograph	Sidney Border
24	Chromatograph	Williston Border
241	Accumulated Sample	Fairview Border
25	Accumulated Sample	Watford City West Border
260	Chromatograph	North Tioga Transfer
261	Chromatograph	Tioga Comp Station – Robinson Lake Plant
262	Chromatograph	Minot Border
263	Accumulated Sample	Lignite Plant
264	Accumulated Sample	Epping Border
265	Chromatograph	Tioga Comp Station – County Line Plant
271	Chromatograph	Bismarck – Cleveland
272	Chromatograph	Cleveland – Mapleton
273	Chromatograph	Cleveland – Grafton
28	Chromatograph	Bismarck Station
31	Chromatograph	Dickinson Border
32	Chromatograph	Cabin Creek Station
33	Chromatograph	Little Knife Plant
34	Chromatograph	Bowman Border
43	Chromatograph	Spring Creek
550	Accumulated Sample & Chromatograph	Mandan Border
600	Chromatograph	Hankinson Area
601	Chromatograph	Milnor Area
610	Accumulated Sample & Chromatograph	Watford City
802	Chromatograph	Linton

MONTANA DAKOTA UTILITIES CO
NORTH DAKOTA
HEATING VALUE DATA

STATE	ZONE	ZONE BOUNDARY	12 MONTH AVERAGE	FEB 20	JAN 20	DEC 19	NOV 19	OCT 19	SEPT 19	AUG 19	JULY 19	JUNE 19	MAY 19	APR 19	MAR 19	ZONE
MT/ND	211	Sidney Border - MonDak Trf - Sidney Pit	1207	1215	1207	1209	1198	1210	1218	1200	1199	1208	1207	1202	1205	211
ND	24	Williston Border - Charbonneau Station	1166	1171	1172	1173	1177	1160	1164	1165	1165	1152	1157	1164	1166	24
ND	25	Watford City West Border	1197	1204	1196	1192	1194	1199	1195	1197	1195	1199	1188	1202	1198	25
ND	28	Bismarck Station - Glen Ullin Station	1157	1126	1123	1128	1125	1137	1189	1196	1186	1205	1178	1147	1144	28
ND	31	Dickinson Bdr - Bellfield Trf - G Ullin Sin	1139	1126	1122	1128	1125	1137	1163	1174	1128	1168	1165	1152	1143	31
ND/MT	32	Cabin Creek Station - Bellfield Transfer	1123	1096	1093	1074	1122	1134	1130	1137	1133	1147	1138	1131	1139	32
ND	33	Little Knife Plant	1174	1175	1174	1173	1172	1173	1174	1175	1175	1174	1173	1173	1173	33
ND	34	Badlands Plant/Bowman Border	1031	1073	1082	1110	1102	1054	1001	1013	989	978	979	979	1013	34
ND	43	Spring Creek I - Sax Valve I	1145	1151	1154	1144	1151	1143	1144	1150	1140	1149	1148	1136	1127	43
ND/MT	241	Fairview Border	1201	1203	1209	1206	1202	1208	1210	1194	1191	1200	1202	1196	1188	241
ND	260	North Tioga Transfer - Nesson Plant	1122	1111	1089	1106	1146	1126	1136	1135	1132	1115	1118	1121	1127	260
ND	261	Tioga Comp Station - Robinson Lake Plan	1175	1173	1168	1166	1178	1174	1189	1189	1179	1175	1164	1170	1179	261
ND	262	Minot Bdr - Palermo Bdr - Bismarck Sin	1189	1180	1176	1184	1193	1195	1193	1197	1198	1205	1185	1183	1182	262
ND	263	Lignite Plant	1151	1143	1145	1149	1149	1146	1146	1163	1164	1160	1152	1148	1149	263
ND	264	Epping Border	1154	1165	1163	1162	1164	1144	1148	1155	1154	1150	1143	1151	1153	264
ND	265	Tioga Comp Station - County Line Plant	1173	1174	1168	1167	1168	1169	1176	1177	1175	1175	1177	1171	1181	265
ND	266	County Line Plant	1169	1161	1162	1165	1170	1170	1172	1170	1166	1170	1171	1174	1176	266
ND	271	Bismarck Station - Cleveland Station	1183	1165	1159	1168	1174	1189	1191	1197	1196	1206	1186	1183	1181	271
ND	272	Cleveland Station - Mapleton	1183	1165	1159	1168	1174	1188	1191	1196	1195	1206	1185	1183	1181	272
ND	273	Cleveland Station - Gratton Border	1182	1165	1159	1168	1173	1188	1190	1195	1194	1204	1185	1180	1181	273
ND	550	Mandan Border / NBPL - St/Anthony	1153	1117	1115	1121	1125	1137	1189	1196	1186	1202	1176	1147	1119	550
ND	610	MDU-Watford City BTU	1173	1168	1168	1161	1172	1174	1178	1181	1180	1187	1176	1175	1158	610
ND	802	NBPL - Linton	1098	1102	1102	1102	1107	1098	1094	1094	1091	1098	1101	1101	1083	802
ND	903	Hettinger Propane	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	903
ND	600	Alliance Pipeline - Hankinson	1163	1162	1160	1159	1166	1170	1167	1162	1161	1158	1169	1163	1157	600
ND	601	Alliance Pipeline - Mlinor	1162	1162	1160	1159	1166	1170	1167	1162	1160	1156	1169	1162	1156	602

THERMAL ZONE VARIANCE DOCUMENTATION		
February 2020		
<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
260	22	Operational