

RECEIVED

MAY 09 2008



PUBLIC SERVICE COMMISSION

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

May 8, 2008

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

Re: Case No. 11,006 (Therm Billing)
Monthly Report – March 2008

Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc., herewith submits the following information, pursuant to the Ordering paragraphs one and two of the Order issued in the above-referenced docket, dated October 20, 1987:

1. Attachment A is a schedule showing the thermal billing factors by community that reflect the BTU values shown on Attachment B and were used for billing purposes in April 2008.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our supplier for the month of March 2008. There is a report for each of the 15 thermal zones for the month.
3. Attachment C is a listing which states the type of measuring device in place at each zone.
4. Attachment D is a monthly list of the heating value data, by zone, for the most recent 12-month period and an average thereof. It is being provided pursuant to a Staff request.
5. Attachment E provides a brief explanation of the thermal variances, where applicable, for the month of March.

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

Sincerely,

Tamie Aberle
Pricing & Tariff Manager

4 **PU-08-2** Filed: 5/9/2008 Pages: 22
March 2008 Report

Montana-Dakota Utilities Co., a Division of MDU Resources
Group, Inc.
Tamie Aberle

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
APR 2008

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	314	APPLE VALLEY	271	1.0479
12	327	BISMARCK	28	.9871
12	343	CARRINGTON	273	1.0479
12	344	CLEVELAND	272	1.0405
12	364	CAVALIER	273	1.0699
12	365	DAWSON	271	1.0405
12	374	FT TOTTEN	273	1.0553
12	375	DEVILS LAKE	273	1.0553
12	379	BARLOW	273	1.0479
12	387	ELDRIDGE	272	1.0479
12	411	GLEN ULLIN	31	.9653
12	417	GRAFTON	273	1.0773
12	449	JAMESTOWN	272	1.0553
12	463	LANGDON	273	1.0479
12	475	LINTON	802	.9736
12	478	LINCOLN	28	.9871
12	494	MEDINA	271	1.0405
12	498	MANDAN	28	.9871
12	524	NEW SALEM	28	.9662
12	532	NEW ROCKFORD	273	1.0479
12	539	PARK RIVER	273	1.0699
12	574	SANBORN	272	1.0553
12	593	STEELE	271	1.0405
12	598	SHEYENNE	273	1.0553
12	610	TAPPEN	271	1.0405
12	625	VALLEY CITY	272	1.0625
12	629	WALHALLA	273	1.0699
12	647	WILTON	262	1.0777
12	717	SPIRITWOOD	272	1.0553
12	732	MSR SITE	273	1.0479
12	733	PAR SITE	273	1.0479
15	303	ALEXANDER	25	1.0569
15	308	ARNEGARD	25	1.0569
15	318	BEACH	32	.9426
15	319	BELFIELD	32	.9495

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
APR 2008

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	323	BERTHOLD	261	1.0767
15	330	BOWMAN	34	1.0650
15	337	BURLINGTON	262	1.1010
15	368	DES LACS	261	1.0845
15	369	DICKINSON	31	.9583
15	384	EPPING	261	1.0767
15	407	GLADSTONE	31	.9583
15	413	GOLVA	32	.9288
15	416	GARRISON	262	1.0854
15	429	HEBRON	31	.9653
15	459	KILLDEER	33	1.0597
15	469	LEFOR	31	.9583
15	474	LIGNITE	263	1.0702
15	500	MARMARTH	34	1.0729
15	505	MINOT	262	1.1010
15	510	MOTT	31	.9583
15	512	MAX	262	1.0777
15	522	NEW ENGLAND	31	.9514
15	540	PALERMO	261	1.0767
15	558	RAY	261	1.0767
15	561	REGENT	31	.9583
15	563	RHAME	34	1.0572
15	564	RICHARDTON	31	.9514
15	568	ROSS	261	1.0690
15	572	RUTHVILLE	262	1.1010
15	583	SENTINEL BUTTE	32	.9426
15	588	SOUTH HEART	31	.9514
15	590	SPRINGBROOK	261	1.0767
15	591	STANLEY	261	1.0767
15	605	SURREY	262	1.1010
15	611	TAYLOR	31	.9514
15	616	TIOGA	261	1.0690
15	619	TURTLE LAKE	262	1.0854
15	620	TRENTON	24	1.1035
15	624	UNDERWOOD	262	1.0854

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
APR 2008

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	632	WATFORD CITY	25	1.0569
15	636	WHEELLOCK	261	1.0690
15	637	WHITE EARTH	261	1.0767
15	642	WILLISTON	24	1.1035
15	646	WASHBURN	262	1.0932
15	664	RIVERDALE	262	1.0854
15	691	FAIRVIEW	24	1.1035
15	712	MINOT AFB	262	1.1010
15	743	BAKER FIELD	35	.8953

* * * E N D O F R E P O R T * * *

GQ Source Daily Summary

March 2008

Number: 251

Name: SIDNEY BORDER

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 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	Crit'herm
1	0.6586	1091.8	1111.1		0.055	3.900	79.422	15.427	1.163	0.017	0.016	0.000	0.001	0.000	0.000				1368.49	
2	0.5952	968.7	985.9		0.118	5.336	91.254	3.079	0.203	0.005	0.003	0.000	0.000	0.001	0.000				1277.80	
3	0.6448	1065.4	1084.2		0.069	4.190	81.765	13.219	0.739	0.010	0.008	0.000	0.000	0.000	0.000				1349.93	
4	0.6055	989.2	1006.7		0.107	5.074	89.281	5.215	0.312	0.006	0.004	0.000	0.000	0.001	0.000				1293.00	
5	0.6035	984.7	1002.1		0.109	5.165	89.631	4.806	0.277	0.006	0.005	0.000	0.000	0.001	0.000				1289.72	
6	0.5924	963.1	980.2		0.121	5.416	91.737	2.573	0.146	0.004	0.002	0.000	0.000	0.001	0.000				1273.46	
7	0.6039	985.2	1002.6		0.109	5.164	89.643	4.719	0.351	0.007	0.006	0.000	0.000	0.001	0.000				1290.03	
8	0.6300	1033.6	1051.9		0.088	4.693	85.359	8.534	1.259	0.033	0.033	0.000	0.000	0.000	0.000				1325.15	
9	0.6784	1124.9	1144.8		0.052	3.735	77.212	16.095	2.758	0.069	0.076	0.001	0.001	0.000	0.000				1388.87	
10	0.6128	1002.3	1020.1		0.110	4.958	87.972	6.469	0.476	0.007	0.006	0.000	0.000	0.000	0.000				1302.67	
11	0.6765	1126.3	1146.2		0.049	3.487	75.860	19.379	1.190	0.016	0.017	0.000	0.000	0.000	0.000				1393.19	
12	0.6150	1006.2	1024.0		0.102	4.944	87.490	6.999	0.451	0.008	0.006	0.000	0.000	0.002	0.000				1305.06	
13	0.6518	1078.3	1097.4		0.062	4.067	80.539	14.402	0.901	0.014	0.014	0.000	0.000	0.000	0.000				1358.07	
14	0.6024	982.4	999.8		0.110	5.190	89.851	4.575	0.264	0.006	0.004	0.000	0.000	0.000	0.000				1288.22	
15	0.6423	1060.0	1078.8		0.069	4.279	82.409	12.365	0.842	0.016	0.018	0.001	0.001	0.001	0.000				1344.86	
16	0.6671	1108.3	1127.9		0.046	3.711	77.817	17.134	1.235	0.024	0.031	0.001	0.001	0.000	0.000				1380.50	
17	0.6337	1043.6	1062.1		0.076	4.460	84.001	10.723	0.710	0.012	0.017	0.001	0.001	0.000	0.000				1333.75	
18	0.7086	1160.9	1181.4		0.512	4.577	79.894	13.151	1.717	0.052	0.089	0.004	0.003	0.001	0.000				1343.03	
19	0.6990	1150.9	1171.3		0.551	3.638	71.272	21.945	2.416	0.063	0.108	0.005	0.004	0.000	0.000				1403.59	
20	0.6990	1150.9	1171.3		0.402	3.562	72.748	21.020	2.122	0.052	0.088	0.004	0.003	0.000	0.000				1401.05	
21	0.6442	1065.4	1084.2		0.068	4.131	81.954	13.046	0.777	0.010	0.012	0.000	0.000	0.001	0.000				1349.94	
22	0.6855	1145.5	1165.8		0.032	3.193	74.229	21.139	1.367	0.016	0.021	0.001	0.001	0.001	0.000				1408.00	
23	0.6565	1088.8	1108.1		0.055	3.882	79.707	15.314	1.010	0.013	0.016	0.001	0.001	0.001	0.000				1366.81	
24	0.6511	1078.8	1097.9		0.057	3.986	80.702	14.302	0.921	0.012	0.017	0.001	0.001	0.000	0.000				1359.73	
25	0.6617	1098.0	1117.4		0.053	3.815	78.963	15.830	1.292	0.019	0.025	0.001	0.001	0.000	0.000				1373.00	
26	0.6851	1144.4	1164.7		0.030	3.226	74.404	20.829	1.464	0.018	0.025	0.001	0.001	0.001	0.000				1407.06	
27	0.6869	1147.1	1167.4		0.024	3.244	74.113	21.030	1.537	0.019	0.028	0.002	0.002	0.001	0.000				1408.46	
28	0.6850	1145.7	1166.0		0.023	3.144	74.463	20.856	1.458	0.019	0.031	0.002	0.003	0.001	0.000				1408.80	
29	0.6812	1140.1	1160.3		0.023	3.131	75.084	20.387	1.330	0.016	0.024	0.002	0.002	0.001	0.000				1405.79	
30	0.6852	1146.5	1166.8		0.022	3.121	74.478	20.815	1.492	0.024	0.040	0.003	0.003	0.001	0.000				1409.50	
31	0.6824	1140.6	1160.8		0.022	3.210	74.825	20.579	1.315	0.017	0.026	0.002	0.002	0.001	0.000				1405.26	
Avg	0.6512	1076.0	1094.6		0.107	4.117	80.906	13.741	1.081	0.020	0.026	0.001	0.001	0.001	0.000				1355.25	

Done all

Williston Basin Interstate Pipeline Co. GQ Source Analysis

GQ Source Number:	0602330	Specific Gravity:	0.7050
GQ Source Name:	WILLISTON BORDER	BTU Base:	Dry
Effective Date:	3/12/2008 9:00:00 AM	Dry Heat Value:	1159.92
Effective End Date:	1/18/2038 9:14:07 PM	Wet Heat Value:	1139.73
Pressure Base:	14.730	As Deliv. Heat Value:	1159.92
Viscosity:			

		<u>Mol %</u>	<u>Imported GPM</u>	<u>Calculated GPM</u>
C1	Methane	72.594		
C2	Ethane	19.065		5.084
C3	Propane	3.087	0.849	0.848
IC4	Iso-Butane	0.086	0.028	0.028
NC4	N-Butane	0.145	0.046	0.046
IC5	Iso-Pentane	0.008	0.003	0.003
NC5	N-Pentane	0.006	0.002	0.002
C6+	Hexanes Plus	0.000	0.000	0.000
CO2	Carbon Dioxide	0.741		
N2	Nitrogen	4.267		
O2	Oxygen	0.000		
HE	Helium			
H2	Hydrogen			
H2S	Hydrogen Sulfide			
Totals		100.000	0.928	6.010

Sample Date: 2/28/2008 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
Sample Remarks: Zone 24

Analysis Remarks:

Williston Basin Interstate Pipeline Co. GQ Source Analysis

GQ Source Number:	0602230	Specific Gravity:	0.7281
GQ Source Name:	WATFORD CITY BORDER	BTU Base:	Dry
Effective Date:	3/12/2008 9:00:00 AM	Dry Heat Value:	1118.73
Effective End Date:	1/18/2038 9:14:07 PM	Wet Heat Value:	1099.26
Pressure Base:	14.730	As Deliv. Heat Value:	1118.73
Viscosity:			

		<u>Mol %</u>	<u>Imported GPM</u>	<u>Calculated GPM</u>
C1	Methane	68.498		
C2	Ethane	17.571	0.000	4.685
C3	Propane	3.665	1.008	1.007
IC4	Iso-Butane	0.195	0.064	0.064
NC4	N-Butane	0.353	0.111	0.111
IC5	Iso-Pentane	0.029	0.011	0.011
NC5	N-Pentane	0.029	0.010	0.010
C6+	Hexanes Plus	0.005	0.002	0.002
CO2	Carbon Dioxide	0.737		
N2	Nitrogen	8.918		
O2	Oxygen	0.000		
HE	Helium			
H2	Hydrogen			
H2S	Hydrogen Sulfide			
Totals		100.000	1.206	5.890

Sample Date: 2/29/2008 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
Sample Remarks: *Zone 25*

Analysis Remarks:

GQ Source Daily Summary

March 2008

Number: 163

Name: NORTH TIOGA MINOT

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 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	Crittherm
1	0.6856	1120.7	1140.5		0.503	3.989	75.652	17.477	2.216	0.054	0.091	0.005	0.003	0.010					1377.49	
2	0.6866	1122.9	1142.8		0.515	3.940	75.320	17.975	2.084	0.057	0.095	0.005	0.004	0.006					1379.09	
3	0.6717	1099.1	1118.6		0.457	4.077	77.710	16.070	1.540	0.049	0.088	0.004	0.003	0.008					1364.80	
4	0.6818	1117.7	1137.5		0.463	3.883	75.939	17.783	1.778	0.053	0.082	0.004	0.003	0.005					1377.56	
5	0.6681	1093.0	1112.3		0.446	4.122	78.315	15.539	1.446	0.045	0.074	0.003	0.002	0.006					1360.90	
6	0.6700	1095.9	1115.3		0.442	4.135	77.961	15.837	1.489	0.047	0.078	0.004	0.003	0.005					1362.53	
7	0.6680	1092.0	1111.3		0.443	4.184	78.349	15.417	1.469	0.046	0.076	0.003	0.002	0.009					1359.72	
8	0.6760	1104.2	1123.7		0.466	4.156	77.059	16.420	1.739	0.055	0.091	0.004	0.003	0.007					1366.74	
9	0.6803	1112.4	1132.1		0.480	4.042	76.315	17.167	1.825	0.060	0.097	0.004	0.003	0.007					1372.50	
10	0.6863	1123.1	1142.9		0.494	3.926	75.370	17.990	2.036	0.064	0.103	0.005	0.004	0.008					1379.68	
11	0.6814	1113.6	1133.4		0.508	4.023	76.114	17.371	1.813	0.058	0.097	0.005	0.004	0.008					1372.99	
12	0.6869	1123.5	1143.4		0.520	3.916	75.078	18.448	1.867	0.057	0.097	0.005	0.004	0.007					1379.62	
13	0.6866	1121.4	1141.3		0.540	3.992	75.187	18.196	1.910	0.060	0.101	0.005	0.004	0.006					1377.31	
14	0.6880	1123.4	1143.3		0.552	3.985	75.013	18.264	2.007	0.062	0.103	0.005	0.004	0.006					1378.31	
15	0.6844	1116.6	1136.4		0.551	4.057	75.689	17.577	1.949	0.060	0.101	0.005	0.004	0.007					1373.62	
16	0.6895	1127.1	1147.1		0.536	3.922	74.800	18.462	2.098	0.061	0.103	0.005	0.004	0.007					1381.39	
17	0.6888	1125.9	1145.8		0.533	3.931	74.905	18.393	2.059	0.060	0.102	0.005	0.004	0.007					1380.63	
18	0.6848	1120.2	1140.1		0.517	3.924	75.551	17.930	1.906	0.057	0.099	0.005	0.004	0.008					1377.70	
19	0.6825	1117.6	1137.4		0.479	3.924	75.840	17.807	1.790	0.053	0.090	0.005	0.004	0.009					1376.84	
20	0.6940	1133.4	1153.5		0.580	3.890	74.105	19.005	2.213	0.069	0.119	0.007	0.005	0.007					1384.64	
21	0.6912	1129.3	1149.3		0.561	3.912	74.508	18.717	2.115	0.063	0.109	0.006	0.004	0.006					1382.35	
22	0.6863	1122.3	1142.2		0.520	3.937	75.224	18.237	1.917	0.056	0.095	0.005	0.004	0.006					1378.76	
23	0.6911	1129.2	1149.2		0.547	3.928	74.449	18.832	2.060	0.062	0.104	0.005	0.004	0.007					1382.34	
24	0.6898	1127.9	1147.9		0.531	3.914	74.622	18.759	1.998	0.059	0.101	0.005	0.004	0.007					1382.01	
25	0.6851	1122.6	1142.5		0.525	3.794	75.675	17.844	1.930	0.075	0.125	0.011	0.012	0.010					1380.31	
26	0.6843	1126.5	1146.5		0.485	3.540	75.998	17.752	1.926	0.090	0.147	0.019	0.022	0.019					1385.93	
27	0.6852	1127.4	1147.4		0.492	3.560	75.819	17.889	1.952	0.089	0.145	0.017	0.019	0.018					1386.10	
28	0.6921	1130.6	1150.6		0.579	3.888	74.290	19.000	2.059	0.062	0.105	0.005	0.004	0.007					1383.05	
29	0.6919	1131.3	1151.3		0.565	3.845	74.293	19.078	2.039	0.061	0.102	0.005	0.004	0.007					1384.15	
30	0.6905	1130.6	1150.6		0.544	3.793	74.459	19.075	1.958	0.058	0.098	0.005	0.004	0.007					1384.67	
31	0.6904	1130.2	1150.2		0.551	3.793	74.524	18.984	1.972	0.059	0.100	0.005	0.004	0.008					1384.31	
Avg	0.6845	1120.0	1139.6		0.514	3.933	75.617	17.848	1.908	0.060	0.101	0.006	0.005	0.008					1377.36	

Zone 261

GQ Source Daily Summary

March 2008

Number: 091
Name: MINOT

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 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	Gritherm
1	0.6848	1120.6	1140.4		0.510	3.919	75.718	17.580	2.109	0.056	0.094	0.000	0.000	0.015	0.000				1378.04	
2	0.6892	1127.8	1147.8		0.520	3.869	74.963	18.259	2.225	0.057	0.095	0.001	0.000	0.012	0.000				1382.59	
3	0.6753	1104.6	1124.2		0.491	4.022	77.234	16.371	1.727	0.053	0.089	0.000	0.000	0.013	0.000				1368.01	
4	0.6794	1113.2	1133.0		0.475	3.911	76.381	17.353	1.728	0.053	0.090	0.000	0.000	0.011	0.000				1374.48	
5	0.6748	1106.0	1125.6		0.463	3.939	77.147	16.720	1.591	0.048	0.081	0.000	0.000	0.011	0.000				1370.16	
6	0.6707	1098.3	1117.7		0.453	4.043	77.885	15.950	1.531	0.048	0.080	0.000	0.000	0.010	0.000				1364.73	
7	0.6675	1092.1	1111.5		0.448	4.120	78.415	15.466	1.418	0.045	0.075	0.000	0.000	0.014	0.000				1360.41	
8	0.6725	1098.8	1118.2		0.473	4.144	77.685	15.892	1.656	0.052	0.088	0.000	0.000	0.011	0.000				1363.58	
9	0.6798	1111.6	1131.3		0.485	4.027	76.413	17.102	1.804	0.059	0.096	0.000	0.000	0.013	0.000				1372.13	
10	0.6858	1123.0	1142.9		0.492	3.886	75.440	17.997	2.004	0.064	0.104	0.001	0.000	0.013	0.000				1380.11	
11	0.6813	1114.5	1134.2		0.506	3.962	76.204	17.294	1.862	0.059	0.098	0.001	0.000	0.014	0.000				1374.12	
12	0.6862	1121.2	1141.1		0.548	3.946	75.295	18.131	1.902	0.060	0.103	0.002	0.000	0.012	0.000				1377.55	
13	0.6840	1119.8	1139.7		0.510	3.883	75.581	18.067	1.797	0.055	0.094	0.001	0.000	0.012	0.000				1378.02	
14	0.6921	1130.9	1151.0		0.570	3.880	74.259	19.070	2.038	0.063	0.107	0.002	0.000	0.011	0.000				1383.49	
15	0.6858	1119.6	1139.4		0.571	3.976	75.475	17.815	1.984	0.062	0.105	0.002	0.000	0.012	0.000				1375.90	
16	0.6847	1117.8	1137.6		0.557	4.006	75.669	17.601	1.992	0.060	0.102	0.002	0.000	0.012	0.000				1374.79	
17	0.6913	1130.7	1150.7		0.551	3.853	74.518	18.741	2.153	0.062	0.106	0.002	0.000	0.012	0.000				1383.91	
18	0.6891	1127.3	1147.2		0.540	3.870	74.785	18.630	1.999	0.059	0.102	0.002	0.000	0.012	0.000				1377.23	
19	0.6802	1116.0	1135.8		0.470	3.817	76.260	17.564	1.730	0.051	0.089	0.002	0.001	0.015	0.000				1372.66	
20	0.6943	1132.0	1152.1		0.621	3.940	74.084	18.930	2.217	0.070	0.120	0.004	0.002	0.012	0.000				1386.09	
21	0.6945	1135.0	1155.1		0.583	3.835	73.999	19.176	2.208	0.067	0.116	0.004	0.001	0.011	0.000				1378.49	
22	0.6858	1121.7	1141.6		0.540	3.896	75.382	18.078	1.935	0.058	0.099	0.001	0.000	0.011	0.000				1384.99	
23	0.6929	1132.8	1152.8		0.563	3.848	74.148	19.176	2.082	0.062	0.106	0.002	0.000	0.012	0.000				1381.52	
24	0.6899	1127.5	1147.5		0.548	3.912	74.698	18.613	2.049	0.061	0.104	0.002	0.001	0.012	0.000				1382.63	
25	0.6902	1128.7	1148.6		0.550	3.869	74.527	18.938	1.940	0.060	0.103	0.002	0.000	0.012	0.000				1381.73	
26	0.6838	1122.7	1142.6		0.527	3.666	75.970	17.672	1.915	0.080	0.136	0.012	0.013	0.009	0.000				1389.89	
27	0.6838	1129.3	1149.3		0.466	3.349	76.316	17.527	1.972	0.110	0.180	0.026	0.033	0.020	0.000				1384.96	
28	0.6890	1129.6	1149.6		0.547	3.703	74.935	18.605	1.995	0.072	0.120	0.007	0.005	0.012	0.000				1384.57	
29	0.6927	1132.3	1152.4		0.593	3.818	74.212	19.117	2.078	0.062	0.107	0.002	0.000	0.012	0.000				1385.55	
30	0.6919	1132.4	1152.5		0.569	3.768	74.274	19.212	2.002	0.059	0.102	0.001	0.000	0.012	0.000				1385.55	
31	0.6912	1131.9	1151.9		0.565	3.748	74.382	19.151	1.978	0.059	0.102	0.001	0.000	0.013	0.000				1385.55	
Avg	0.6850	1121.0	1140.8		0.526	3.885	75.557	17.929	1.923	0.061	0.103	0.003	0.002	0.012	0.000				1378.38	

Zone 262

Williston Basin Interstate Pipeline Co. GQ Source Analysis

GQ Source Number:	2501030	Specific Gravity:	0.6590
GQ Source Name:	LIGNITE PLANT	BTU Base:	Dry
Effective Date:	3/12/2008 9:00:00 AM	Dry Heat Value:	1124.78
Effective End Date:	1/18/2038 9:14:07 PM	Wet Heat Value:	1105.21
Pressure Base:	14.730	As Deliv. Heat Value:	1124.78
Viscosity:			

		Mol %	Imported GPM	Calculated GPM
C1	Methane	79.127		
C2	Ethane	16.868		4.498
C3	Propane	0.834	0.229	0.229
IC4	Iso-Butane	0.000	0.000	0.000
NC4	N-Butane	0.000	0.000	0.000
IC5	Iso-Pentane	0.000	0.000	0.000
NC5	N-Pentane	0.000	0.000	0.000
C6+	Hexanes Plus	0.051	0.024	0.021
CO2	Carbon Dioxide	0.113		
N2	Nitrogen	3.006		
O2	Oxygen	0.000		
HE	Helium			
H2	Hydrogen			
H2S	Hydrogen Sulfide			
Totals		100.000	0.253	4.748

Sample Date: 2/28/2008 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
Sample Remarks: *Zone 263*

Analysis Remarks:

GQ Source Daily Summary

March 2008

Number: 043

Pressure Base: 14.730

Name: BISMARCK PLANT CLEVELAND PLANT

Temperature Base:

Contract Day: 1 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	Crittherm
1	0.6591	1081.4	1100.6		0.546	3.821	80.592	13.280	1.580	0.058	0.088	0.009	0.007	0.020	0.000					1355.65
2	0.6469	1062.2	1081.0		0.562	3.823	82.925	11.108	1.401	0.057	0.083	0.011	0.008	0.021	0.000					1344.00
3	0.6434	1058.8	1077.6		0.594	3.647	83.706	10.488	1.369	0.063	0.087	0.014	0.010	0.022	0.000					1343.43
4	0.6255	1031.0	1049.3		0.683	3.527	87.141	7.447	0.984	0.070	0.089	0.019	0.014	0.026	0.000					1326.68
5	0.6340	1045.0	1063.5		0.665	3.501	85.470	9.083	1.061	0.070	0.092	0.018	0.013	0.027	0.000					1335.63
6	0.6297	1039.5	1057.9		0.697	3.384	86.398	8.264	1.022	0.075	0.096	0.021	0.015	0.029	0.000					1333.14
7	0.6315	1041.2	1059.6		0.664	3.503	85.102	8.485	1.025	0.069	0.091	0.017	0.012	0.027	0.000					1333.37
8	0.6302	1038.3	1056.7		0.638	3.591	86.102	8.485	0.976	0.066	0.086	0.017	0.012	0.026	0.000					1331.12
9	0.6352	1045.0	1063.5		0.628	3.668	85.188	9.205	1.100	0.067	0.090	0.016	0.012	0.026	0.000					1334.39
10	0.6484	1065.1	1084.0		0.596	3.734	82.646	11.492	1.325	0.067	0.095	0.013	0.010	0.023	0.000					1346.18
11	0.6641	1090.4	1109.7		0.568	3.713	79.749	14.091	1.669	0.068	0.102	0.011	0.008	0.021	0.000					1361.73
12	0.6706	1097.5	1116.9		0.529	3.957	78.249	15.436	1.647	0.057	0.095	0.007	0.005	0.018	0.000					1363.85
13	0.6654	1089.9	1109.2		0.594	3.826	79.386	14.410	1.583	0.063	0.100	0.010	0.007	0.020	0.000					1359.77
14	0.6449	1061.0	1079.8		0.595	3.658	83.258	11.071	1.216	0.064	0.090	0.014	0.010	0.024	0.000					1344.57
15	0.6564	1077.9	1097.0		0.620	3.675	81.185	12.840	1.466	0.068	0.100	0.013	0.010	0.022	0.000					1353.94
16	0.6503	1067.3	1086.2		0.614	3.750	82.336	11.705	1.386	0.067	0.097	0.013	0.010	0.022	0.000					1347.00
17	0.6480	1063.8	1082.6		0.610	3.758	82.782	11.272	1.371	0.066	0.095	0.014	0.010	0.023	0.000					1344.87
18	0.6625	1087.1	1106.4		0.601	3.712	80.085	13.744	1.650	0.066	0.100	0.012	0.009	0.021	0.000					1359.26
19	0.6428	1056.7	1075.4		0.623	3.678	83.747	10.515	1.228	0.066	0.092	0.015	0.011	0.025	0.000					1341.26
20	0.6505	1069.3	1088.3		0.587	3.690	82.203	11.990	1.331	0.061	0.092	0.013	0.010	0.024	0.000					1349.30
21	0.6411	1053.5	1072.2		0.683	3.622	84.253	9.937	1.274	0.073	0.102	0.018	0.013	0.026	0.000					1339.05
22	0.6463	1062.2	1081.0		0.626	3.669	83.180	10.943	1.358	0.071	0.101	0.016	0.012	0.023	0.000					1344.66
23	0.6499	1067.8	1086.7		0.599	3.709	82.372	11.754	1.361	0.065	0.095	0.014	0.010	0.021	0.000					1347.99
24	0.6540	1074.2	1093.2		0.604	3.700	81.638	12.395	1.451	0.067	0.099	0.014	0.010	0.021	0.000					1351.74
25	0.6530	1072.8	1091.8		0.580	3.724	81.816	12.219	1.451	0.068	0.098	0.013	0.010	0.021	0.000					1351.06
26	0.6519	1071.9	1090.8		0.604	3.644	82.012	12.151	1.373	0.070	0.099	0.015	0.011	0.022	0.000					1351.01
27	0.6595	1085.1	1104.3		0.573	3.595	80.688	13.359	1.527	0.079	0.122	0.017	0.016	0.024	0.000					1359.83
28	0.6574	1085.7	1104.9		0.528	3.422	81.310	12.882	1.521	0.098	0.149	0.026	0.028	0.037	0.000					1362.81
29	0.6546	1077.0	1096.1		0.596	3.592	81.579	12.559	1.439	0.074	0.109	0.016	0.012	0.024	0.000					1354.74
30	0.6570	1078.6	1097.7		0.632	3.667	81.120	12.871	1.491	0.069	0.102	0.014	0.010	0.023	0.000					1354.28
31	0.6553	1077.0	1096.0		0.620	3.624	81.414	12.691	1.433	0.069	0.100	0.015	0.011	0.024	0.000					1353.94
Avg	0.6490	1067.0	1085.8		0.608	3.664	82.596	11.559	1.357	0.068	0.098	0.015	0.011	0.024	0.000					1347.75

Zone 271

GQ Source Daily Summary

March 2008

Number: 063

Name: CLEVELAND PLANT MAPLETON

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 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	Crittherm
1	0.6583	1080.1	1099.3		0.538	3.832	80.657	13.258	1.537	0.058	0.088	0.009	0.007	0.016	0.000				1354.86	
2	0.6540	1072.8	1091.8		0.545	3.855	81.528	12.380	1.516	0.058	0.087	0.010	0.007	0.015	0.000				1350.04	
3	0.6456	1060.6	1079.4		0.575	3.777	83.182	10.872	1.411	0.060	0.085	0.012	0.009	0.018	0.000				1343.32	
4	0.6313	1039.8	1058.2		0.659	3.571	85.978	8.479	1.105	0.068	0.089	0.017	0.012	0.021	0.000				1331.78	
5	0.6314	1039.8	1058.2		0.651	3.596	85.864	8.665	1.017	0.068	0.089	0.017	0.012	0.022	0.000				1331.63	
6	0.6303	1040.2	1058.6		0.696	3.399	86.264	8.364	1.046	0.075	0.096	0.020	0.015	0.025	0.000				1333.30	
7	0.6315	1040.6	1059.0		0.669	3.524	85.912	8.653	1.023	0.070	0.091	0.018	0.013	0.025	0.000				1332.62	
8	0.6292	1036.8	1055.2		0.652	3.566	86.288	8.310	0.973	0.068	0.088	0.018	0.013	0.024	0.000				1330.21	
9	0.6326	1040.9	1059.3		0.630	3.673	85.602	8.850	1.041	0.066	0.088	0.016	0.013	0.023	0.000				1331.81	
10	0.6455	1060.1	1078.9		0.601	3.755	83.133	11.037	1.270	0.066	0.093	0.014	0.010	0.020	0.000				1342.84	
11	0.6553	1075.4	1094.4		0.583	3.776	81.291	12.691	1.455	0.067	0.097	0.012	0.009	0.019	0.000				1351.94	
12	0.6675	1094.6	1114.0		0.552	3.799	78.994	14.747	1.709	0.066	0.101	0.009	0.007	0.016	0.000				1363.46	
13	0.6650	1088.9	1108.2		0.594	3.905	79.314	14.478	1.559	0.061	0.096	0.009	0.006	0.015	0.000				1358.89	
14	0.6586	1080.0	1099.1		0.594	3.789	80.600	13.373	1.450	0.063	0.095	0.011	0.008	0.016	0.000				1354.29	
15	0.6500	1067.5	1086.4		0.612	3.714	82.315	11.814	1.340	0.067	0.096	0.014	0.010	0.019	0.000				1347.48	
16	0.6546	1074.1	1093.1		0.609	3.744	81.470	12.528	1.444	0.067	0.098	0.013	0.009	0.018	0.000				1351.09	
17	0.6494	1065.1	1084.0		0.610	3.800	82.443	11.578	1.367	0.066	0.095	0.013	0.010	0.018	0.000				1345.17	
18	0.6527	1071.6	1090.6		0.606	3.728	81.850	12.158	1.454	0.067	0.096	0.013	0.010	0.018	0.000				1349.84	
19	0.6515	1069.6	1088.6		0.626	3.698	82.148	11.866	1.456	0.067	0.097	0.014	0.010	0.019	0.000				1348.53	
20	0.6545	1073.4	1092.4		0.602	3.791	81.452	12.524	1.430	0.064	0.097	0.012	0.009	0.018	0.000				1350.25	
21	0.6414	1054.5	1073.1		0.630	3.664	83.994	10.305	1.199	0.066	0.092	0.015	0.011	0.022	0.000				1339.93	
22	0.6434	1057.3	1076.1		0.649	3.652	83.745	10.405	1.320	0.074	0.103	0.017	0.013	0.022	0.000				1341.51	
23	0.6496	1066.5	1085.4		0.614	3.733	82.453	11.595	1.396	0.068	0.099	0.014	0.011	0.018	0.000				1346.67	
24	0.6536	1073.0	1092.0		0.595	3.741	81.609	12.440	1.414	0.065	0.095	0.013	0.010	0.017	0.000				1350.74	
25	0.6527	1071.6	1090.6		0.591	3.745	81.822	12.205	1.431	0.068	0.098	0.014	0.010	0.017	0.000				1349.93	
26	0.6536	1074.1	1093.1		0.589	3.690	81.646	12.434	1.430	0.070	0.099	0.014	0.010	0.018	0.000				1352.00	
27	0.6541	1075.1	1094.1		0.591	3.666	81.625	12.440	1.440	0.076	0.113	0.016	0.014	0.019	0.000				1352.84	
28	0.6620	1090.2	1109.5		0.552	3.546	80.221	13.842	1.564	0.085	0.130	0.019	0.020	0.023	0.000				1363.64	
29	0.6539	1079.1	1098.2		0.543	3.477	81.845	12.371	1.454	0.093	0.139	0.024	0.024	0.029	0.000				1358.05	
30	0.6570	1078.1	1097.2		0.626	3.701	81.062	12.911	1.484	0.070	0.103	0.014	0.011	0.019	0.000				1353.64	
31	0.6555	1077.7	1096.8		0.595	3.630	81.296	12.820	1.460	0.063	0.093	0.012	0.009	0.022	0.000				1354.74	
Avg	0.6492	1067.0	1085.6		0.605	3.695	82.503	11.626	1.361	0.068	0.098	0.014	0.011	0.020	0.000				1347.32	

Zone 272

GQ Source Daily Summary

March 2008

Number: 061

Name: CLEVELAND PLANT GRAFTON

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 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	Crit therm
1	0.6587	1080.8	1100.0		0.539	3.832	80.566	13.341	1.543	0.058	0.088	0.009	0.007	0.016	0.000				1355.27	
2	0.6541	1072.9	1091.9		0.555	3.850	81.505	12.400	1.513	0.058	0.087	0.010	0.007	0.015	0.000				1350.13	
3	0.6474	1063.6	1082.4		0.573	3.766	82.835	11.206	1.436	0.060	0.086	0.012	0.009	0.018	0.000				1345.24	
4	0.6314	1039.9	1058.3		0.660	3.569	85.973	8.485	1.106	0.068	0.089	0.017	0.012	0.022	0.000				1331.87	
5	0.6315	1039.8	1058.2		0.651	3.592	85.868	8.662	1.018	0.068	0.089	0.017	0.012	0.022	0.000				1331.71	
6	0.6302	1040.0	1058.4		0.697	3.395	86.280	8.349	1.048	0.075	0.096	0.020	0.015	0.025	0.000				1333.21	
7	0.6314	1040.5	1058.9		0.671	3.516	85.942	8.628	1.023	0.071	0.092	0.018	0.013	0.026	0.000				1332.64	
8	0.6293	1037.0	1055.4		0.652	3.564	86.272	8.324	0.976	0.069	0.089	0.018	0.013	0.024	0.000				1330.33	
9	0.6327	1041.0	1059.5		0.630	3.670	85.588	8.863	1.043	0.067	0.088	0.016	0.012	0.023	0.000				1331.94	
10	0.6454	1060.0	1078.8		0.601	3.755	83.153	11.018	1.269	0.066	0.093	0.014	0.010	0.020	0.000				1342.79	
11	0.6556	1075.8	1094.8		0.584	3.774	81.249	12.729	1.460	0.067	0.097	0.012	0.009	0.019	0.000				1352.19	
12	0.6674	1094.5	1113.8		0.553	3.797	79.011	14.734	1.706	0.066	0.101	0.009	0.007	0.016	0.000				1363.40	
13	0.6649	1088.7	1108.0		0.558	3.902	79.340	14.453	1.559	0.061	0.096	0.009	0.006	0.015	0.000				1358.81	
14	0.6587	1080.1	1099.3		0.594	3.785	80.588	13.388	1.451	0.063	0.095	0.011	0.008	0.017	0.000				1354.42	
15	0.6505	1068.3	1087.2		0.612	3.715	82.206	11.911	1.350	0.067	0.096	0.014	0.010	0.019	0.000				1347.92	
16	0.6548	1074.4	1093.4		0.609	3.745	81.430	12.565	1.446	0.067	0.098	0.013	0.009	0.018	0.000				1351.26	
17	0.6494	1065.2	1084.0		0.609	3.800	82.443	11.579	1.367	0.066	0.095	0.013	0.010	0.018	0.000				1345.19	
18	0.6529	1071.8	1090.8		0.606	3.726	81.826	12.182	1.455	0.067	0.097	0.013	0.010	0.018	0.000				1350.00	
19	0.6516	1069.8	1088.7		0.627	3.699	82.124	11.883	1.459	0.067	0.097	0.014	0.010	0.019	0.000				1348.58	
20	0.6547	1073.5	1092.5		0.602	3.804	81.384	12.567	1.443	0.064	0.097	0.012	0.009	0.018	0.000				1350.21	
21	0.6414	1054.5	1073.2		0.633	3.664	83.944	10.313	1.209	0.066	0.093	0.015	0.011	0.058	0.000				1339.99	
22	0.6433	1057.2	1076.0		0.649	3.651	83.740	10.392	1.319	0.074	0.103	0.017	0.013	0.048	0.000				1341.47	
23	0.6497	1066.6	1085.5		0.614	3.732	82.442	11.604	1.397	0.068	0.099	0.014	0.011	0.018	0.000				1346.73	
24	0.6537	1073.3	1092.3		0.594	3.740	81.589	12.461	1.416	0.065	0.095	0.013	0.010	0.017	0.000				1350.90	
25	0.6528	1071.7	1090.7		0.591	3.746	81.811	12.213	1.432	0.068	0.098	0.014	0.010	0.017	0.000				1349.95	
26	0.6537	1074.1	1093.1		0.590	3.689	81.643	12.435	1.432	0.070	0.099	0.014	0.010	0.018	0.000				1352.00	
27	0.6540	1074.9	1093.9		0.592	3.664	81.657	12.411	1.438	0.076	0.112	0.016	0.013	0.019	0.000				1352.70	
28	0.6619	1090.1	1109.4		0.551	3.540	80.241	13.828	1.564	0.085	0.129	0.019	0.019	0.023	0.000				1363.70	
29	0.6540	1079.1	1098.2		0.543	3.478	81.841	12.372	1.455	0.093	0.139	0.024	0.024	0.029	0.000				1358.02	
30	0.6569	1078.0	1097.1		0.626	3.699	81.079	12.895	1.484	0.070	0.103	0.014	0.010	0.019	0.000				1353.63	
31	0.6556	1077.7	1096.8		0.605	3.624	81.284	12.828	1.460	0.064	0.093	0.012	0.009	0.022	0.000				1354.64	
Avg	0.6493	1067.0	1085.8		0.606	3.693	82.479	11.646	1.364	0.068	0.098	0.014	0.011	0.022	0.000				1347.45	

Zone 273

GQ Source Daily Summary

March 2008

Number: 041

Name: BISMARCK PLANT DICKINSON PLANT

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 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	Crit therm	
1	0.6067	1001.5	1019.2		0.609	3.672	90.526	4.338	0.660	0.064	0.075	0.019	0.014	0.024	0.000					1308.48	
2	0.6060	999.6	1017.3		0.601	3.728	90.614	4.242	0.630	0.060	0.071	0.018	0.013	0.023	0.000					1306.85	
3	0.6094	1007.8	1025.6		0.640	3.490	90.138	4.808	0.712	0.069	0.082	0.021	0.015	0.026	0.000					1313.83	
4	0.6075	1004.4	1022.2		0.743	3.364	90.666	4.311	0.682	0.075	0.088	0.024	0.017	0.031	0.000					1311.43	
5	0.6101	1009.9	1027.8		0.773	3.226	90.299	4.699	0.747	0.081	0.096	0.026	0.019	0.034	0.000					1315.84	
6	0.6104	1010.4	1028.3		0.783	3.207	90.295	4.690	0.760	0.084	0.099	0.027	0.020	0.035	0.000					1316.15	
7	0.6106	1010.9	1028.8		0.777	3.200	90.252	4.745	0.764	0.083	0.098	0.026	0.019	0.035	0.000					1316.63	
8	0.6099	1009.2	1027.1		0.738	3.302	90.269	4.704	0.738	0.079	0.093	0.025	0.018	0.034	0.000					1315.14	
9	0.6086	1006.5	1024.4		0.733	3.346	90.504	4.459	0.710	0.078	0.092	0.025	0.018	0.034	0.000					1313.10	
10	0.6075	1004.5	1022.3		0.730	3.369	90.701	4.265	0.689	0.078	0.091	0.025	0.018	0.034	0.000					1311.68	
11	0.6077	1004.9	1022.7		0.707	3.403	90.626	4.332	0.690	0.077	0.090	0.025	0.018	0.034	0.000					1311.91	
12	0.6133	1011.9	1029.8		0.639	3.608	89.379	5.396	0.759	0.069	0.085	0.021	0.015	0.029	0.000					1314.93	
13	0.6059	1000.6	1018.3		0.682	3.535	90.867	4.035	0.652	0.072	0.085	0.023	0.017	0.031	0.000					1308.25	
14	0.6076	1004.7	1022.5		0.676	3.454	90.568	4.391	0.679	0.074	0.087	0.024	0.017	0.031	0.000					1311.73	
15	0.6088	1007.4	1025.2		0.673	3.407	90.365	4.610	0.705	0.076	0.089	0.024	0.017	0.032	0.000					1313.96	
16	0.6080	1005.2	1023.0		0.659	3.489	90.475	4.453	0.690	0.074	0.088	0.024	0.017	0.031	0.000					1311.92	
17	0.6078	1004.8	1022.6		0.661	3.492	90.509	4.418	0.687	0.074	0.087	0.024	0.017	0.031	0.000					1311.66	
18	0.6073	1003.9	1021.6		0.681	3.466	90.636	4.306	0.679	0.074	0.087	0.024	0.017	0.031	0.000					1311.02	
19	0.6059	1000.3	1018.0		0.686	3.551	90.868	4.018	0.646	0.072	0.085	0.023	0.017	0.033	0.000					1307.79	
20	0.6056	1000.2	1017.9		0.696	3.514	90.944	3.967	0.646	0.073	0.087	0.024	0.017	0.032	0.000					1307.97	
21	0.6076	1004.4	1022.2		0.711	3.420	90.633	4.310	0.684	0.076	0.090	0.025	0.018	0.033	0.000					1311.35	
22	0.6080	1004.2	1022.0		0.655	3.556	90.452	4.419	0.686	0.074	0.088	0.024	0.017	0.030	0.000					1310.63	
23	0.6080	1004.9	1022.7		0.654	3.518	90.456	4.445	0.693	0.075	0.089	0.024	0.017	0.030	0.000					1311.54	
24	0.6073	1003.6	1021.4		0.643	3.541	90.590	4.311	0.680	0.075	0.088	0.024	0.017	0.030	0.000					1310.65	
25	0.6090	1007.6	1025.4		0.611	3.504	90.282	4.623	0.742	0.079	0.091	0.024	0.017	0.028	0.000					1314.06	
26	0.6084	1007.3	1025.2		0.653	3.402	90.471	4.499	0.724	0.082	0.094	0.026	0.018	0.030	0.000					1314.34	
27	0.6080	1005.5	1023.3		0.650	3.484	90.511	4.393	0.716	0.080	0.093	0.026	0.018	0.030	0.000					1312.36	
28	0.6078	1004.9	1022.7		0.622	3.548	90.487	4.403	0.698	0.078	0.091	0.025	0.018	0.030	0.000					1311.72	
29	0.6088	1006.9	1024.7		0.656	3.468	90.367	4.544	0.713	0.080	0.094	0.026	0.019	0.032	0.000					1313.24	
30	0.6083	1005.7	1023.5		0.669	3.473	90.476	4.428	0.700	0.080	0.094	0.027	0.019	0.034	0.000					1312.27	
31	0.6093	1007.3	1025.2		0.672	3.456	90.327	4.564	0.720	0.082	0.097	0.027	0.019	0.035	0.000					1313.40	
Avg	0.6082	1006.0	1023.3		0.680	3.458	90.469	4.456	0.699	0.076	0.089	0.024	0.017	0.031	0.000					1312.12	

Zone 28

GQ Source Daily Summary

March 2008

Number: 271

Name: DICKINSON BORDER

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 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	Critherm
1	0.6050	998.3	1015.9		0.615	3.689	90.743	4.163	0.633	0.058	0.068	0.000	0.000	0.031	0.000	0.000			1306.17	
2	0.6065	1002.4	1020.1		0.616	3.574	90.498	4.488	0.661	0.061	0.071	0.000	0.000	0.032	0.000	0.000			1309.98	
3	0.6075	1005.5	1023.3		0.697	3.365	90.478	4.576	0.699	0.069	0.081	0.001	0.000	0.035	0.000	0.000			1312.84	
4	0.6073	1004.9	1022.7		0.755	3.292	90.649	4.396	0.703	0.074	0.087	0.007	0.000	0.038	0.000	0.000			1312.28	
5	0.6090	1008.8	1026.7		0.780	3.171	90.436	4.642	0.744	0.079	0.093	0.014	0.000	0.040	0.000	0.000			1315.63	
6	0.6097	1010.1	1028.0		0.799	3.131	90.359	4.706	0.769	0.082	0.097	0.017	0.000	0.040	0.000	0.000			1316.54	
7	0.6096	1009.9	1027.8		0.765	3.188	90.290	4.783	0.752	0.079	0.092	0.011	0.000	0.040	0.000	0.000			1316.33	
8	0.6084	1007.0	1024.9		0.742	3.283	90.439	4.605	0.721	0.076	0.089	0.007	0.000	0.038	0.000	0.000			1313.91	
9	0.6069	1004.5	1022.3		0.737	3.305	90.707	4.350	0.691	0.075	0.088	0.009	0.000	0.039	0.000	0.000			1312.24	
10	0.6068	1003.9	1021.7		0.732	3.334	90.734	4.294	0.695	0.075	0.088	0.009	0.000	0.039	0.000	0.000			1311.64	
11	0.6060	1002.3	1020.0		0.678	3.447	90.754	4.263	0.663	0.070	0.082	0.002	0.000	0.042	0.000	0.000			1310.28	
12	0.6057	1001.4	1019.2		0.690	3.448	90.830	4.177	0.660	0.070	0.082	0.001	0.000	0.042	0.000	0.000			1309.55	
13	0.6053	999.8	1017.5		0.688	3.512	90.902	4.043	0.658	0.069	0.082	0.001	0.000	0.043	0.000	0.000			1307.85	
14	0.6076	1006.3	1024.1		0.681	3.346	90.499	4.578	0.695	0.072	0.085	0.002	0.000	0.043	0.000	0.000			1313.80	
15	0.6077	1006.3	1024.1		0.673	3.362	90.478	4.586	0.698	0.072	0.085	0.002	0.000	0.044	0.000	0.000			1313.75	
16	0.6066	1003.6	1021.4		0.663	3.444	90.636	4.384	0.677	0.071	0.083	0.001	0.000	0.042	0.000	0.000			1311.37	
17	0.6067	1003.9	1021.7		0.677	3.415	90.616	4.414	0.685	0.071	0.084	0.001	0.000	0.036	0.000	0.000			1311.63	
18	0.6054	1001.3	1019.1		0.709	3.395	90.915	4.126	0.659	0.071	0.083	0.004	0.000	0.037	0.000	0.000			1309.74	
19	0.6049	998.1	1015.7		0.675	3.599	90.923	3.963	0.652	0.067	0.082	0.003	0.000	0.035	0.000	0.000			1306.02	
20	0.6046	1000.1	1017.8		0.715	3.388	91.061	4.003	0.638	0.070	0.082	0.004	0.000	0.038	0.000	0.000			1308.98	
21	0.6076	1005.1	1022.9		0.688	3.404	90.505	4.497	0.702	0.074	0.087	0.006	0.000	0.038	0.000	0.000			1312.31	
22	0.6063	1002.4	1020.2		0.654	3.503	90.646	4.334	0.672	0.071	0.083	0.003	0.000	0.035	0.000	0.000			1310.14	
23	0.6070	1004.0	1021.8		0.659	3.459	90.555	4.441	0.689	0.072	0.085	0.003	0.000	0.036	0.000	0.000			1311.52	
24	0.6069	1004.7	1022.4		0.625	3.461	90.546	4.477	0.697	0.073	0.084	0.001	0.000	0.035	0.000	0.000			1312.48	
25	0.6083	1007.9	1025.7		0.643	3.373	90.379	4.641	0.749	0.080	0.091	0.010	0.000	0.035	0.000	0.000			1315.13	
26	0.6071	1005.0	1022.8		0.650	3.416	90.593	4.418	0.712	0.077	0.090	0.008	0.000	0.036	0.000	0.000			1312.79	
27	0.6070	1004.4	1022.2		0.642	3.461	90.584	4.400	0.700	0.076	0.090	0.010	0.000	0.036	0.000	0.000			1312.01	
28	0.6078	1005.8	1023.7		0.637	3.453	90.435	4.555	0.708	0.076	0.089	0.011	0.000	0.037	0.000	0.000			1313.07	
29	0.6072	1004.7	1022.5		0.674	3.417	90.596	4.399	0.695	0.077	0.090	0.013	0.000	0.039	0.000	0.000			1312.12	
30	0.6078	1005.8	1023.6		0.673	3.407	90.500	4.489	0.707	0.078	0.092	0.015	0.000	0.039	0.000	0.000			1312.92	
31	0.6084	1007.1	1025.0		0.692	3.349	90.451	4.550	0.723	0.081	0.096	0.018	0.000	0.040	0.000	0.000			1314.08	
Avg	0.6071	1004.0	1022.2		0.688	3.400	90.604	4.411	0.694	0.073	0.086	0.006	0.000	0.038	0.000	0.000			1311.91	

Zone 31

GQ Source Daily Summary

March 2008

Number: 051

Pressure Base: 14.730

Name: CABIN CREEK DICKINSON PLANT

Temperature Base:

Contract Day: 1 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	Crit'therm
1	0.6041	995.4	1013.0		0.607	3.800	90.969	3.817	0.626	0.060	0.071	0.018	0.013	0.020	0.000				1303.36	
2	0.6072	1002.4	1020.1		0.649	3.606	90.542	4.289	0.705	0.069	0.082	0.020	0.015	0.023	0.000				1309.07	
3	0.6063	1001.7	1019.4		0.730	3.437	90.875	4.037	0.693	0.074	0.087	0.023	0.017	0.027	0.000				1309.16	
4	0.6082	1005.4	1023.2		0.759	3.342	90.614	4.313	0.729	0.079	0.093	0.025	0.018	0.029	0.000				1311.99	
5	0.6090	1007.8	1025.7		0.784	3.234	90.538	4.433	0.752	0.083	0.098	0.027	0.019	0.031	0.000				1314.26	
6	0.6100	1009.7	1027.6		0.790	3.198	90.388	4.591	0.773	0.084	0.099	0.027	0.019	0.032	0.000				1315.70	
7	0.6090	1007.3	1025.2		0.758	3.304	90.472	4.473	0.745	0.080	0.094	0.025	0.018	0.030	0.000				1313.63	
8	0.6074	1004.0	1021.8		0.739	3.384	90.709	4.220	0.708	0.077	0.091	0.025	0.018	0.028	0.000				1311.05	
9	0.6076	1004.4	1022.2		0.742	3.370	90.705	4.224	0.713	0.079	0.093	0.026	0.019	0.029	0.000				1311.39	
10	0.6068	1002.6	1020.3		0.725	3.430	90.830	4.070	0.701	0.078	0.092	0.025	0.018	0.030	0.000				1309.88	
11	0.6049	998.2	1015.9		0.670	3.611	91.004	3.850	0.646	0.070	0.083	0.022	0.016	0.027	0.000				1306.11	
12	0.6054	999.3	1017.0		0.688	3.562	90.961	3.906	0.655	0.073	0.086	0.024	0.018	0.027	0.000				1307.03	
13	0.6059	1000.4	1018.1		0.689	3.538	90.882	3.993	0.669	0.074	0.087	0.024	0.017	0.027	0.000				1307.96	
14	0.6076	1004.2	1022.0		0.690	3.461	90.620	4.281	0.708	0.077	0.091	0.025	0.018	0.028	0.000				1311.12	
15	0.6068	1002.6	1020.4		0.677	3.508	90.730	4.152	0.698	0.076	0.089	0.024	0.018	0.027	0.000				1309.84	
16	0.6014	993.1	1010.7		0.678	3.575	91.828	2.990	0.693	0.076	0.089	0.024	0.018	0.027	0.000				1303.23	
17	0.6046	998.7	1016.3		0.689	3.519	91.158	3.735	0.673	0.073	0.086	0.023	0.017	0.026	0.000				1307.10	
18	0.6048	999.0	1016.7		0.714	3.480	91.136	3.792	0.645	0.074	0.087	0.025	0.018	0.029	0.000				1307.33	
19	0.6045	996.0	1013.6		0.674	3.703	91.085	3.669	0.647	0.071	0.086	0.023	0.017	0.026	0.000				1303.63	
20	0.6053	999.9	1017.6		0.727	3.458	91.069	3.845	0.662	0.076	0.090	0.025	0.018	0.029	0.000				1307.88	
21	0.6074	1002.9	1020.6		0.679	3.543	90.621	4.214	0.707	0.076	0.090	0.024	0.018	0.028	0.000				1309.57	
22	0.6067	1001.4	1019.2		0.664	3.588	90.723	4.099	0.692	0.076	0.090	0.024	0.018	0.027	0.000				1308.44	
23	0.6063	1000.9	1018.6		0.665	3.581	90.816	4.010	0.693	0.076	0.090	0.024	0.018	0.027	0.000				1308.17	
24	0.6071	1003.8	1021.5		0.617	3.556	90.617	4.257	0.719	0.078	0.089	0.024	0.017	0.025	0.000				1311.04	
25	0.6081	1005.7	1023.6		0.665	3.457	90.550	4.327	0.751	0.084	0.096	0.026	0.018	0.027	0.000				1312.55	
26	0.6070	1003.2	1020.9		0.653	3.524	90.723	4.131	0.724	0.081	0.094	0.025	0.018	0.027	0.000				1310.42	
27	0.6068	1002.4	1020.2		0.637	3.578	90.706	4.133	0.702	0.080	0.093	0.025	0.018	0.027	0.000				1309.62	
28	0.6074	1003.7	1021.4		0.659	3.523	90.651	4.197	0.721	0.081	0.095	0.026	0.018	0.029	0.000				1310.62	
29	0.6071	1002.9	1020.6		0.678	3.515	90.721	4.133	0.701	0.081	0.094	0.026	0.019	0.031	0.000				1309.91	
30	0.6078	1004.1	1021.9		0.679	3.502	90.618	4.221	0.723	0.082	0.097	0.027	0.019	0.032	0.000				1310.80	
31	0.6079	1004.8	1022.6		0.706	3.428	90.683	4.182	0.733	0.086	0.101	0.028	0.020	0.034	0.000				1311.58	
Avg	0.6067	1002.0	1019.9		0.693	3.494	90.792	4.083	0.700	0.077	0.090	0.025	0.018	0.028	0.000				1309.47	

Zone 32

GQ Source Daily Summary

March 2008

Number: 111

Name: LITTLE KNIFE PLANT

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 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	Crit'herm
1	0.6383	1100.9	1120.4		0.000	1.514	83.218	14.724	0.521	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1402.42	
2	0.6385	1101.4	1121.0		0.000	1.502	83.144	14.845	0.487	0.010	0.012	0.000	0.000	0.000	0.000	0.000			1402.86	
3	0.6372	1100.0	1119.5		0.000	1.465	83.451	14.546	0.515	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1402.48	
4	0.6434	1107.3	1126.9		0.000	1.610	82.131	15.734	0.502	0.010	0.012	0.000	0.000	0.000	0.000	0.000			1404.91	
5	0.6451	1109.6	1129.2		0.000	1.632	81.789	16.050	0.506	0.010	0.012	0.000	0.000	0.000	0.000	0.000			1405.93	
6	0.6531	1119.8	1139.7		0.000	1.763	80.128	17.576	0.510	0.010	0.013	0.000	0.000	0.000	0.000	0.000			1410.19	
7	0.6428	1106.3	1125.8		0.000	1.618	82.258	15.596	0.506	0.010	0.012	0.000	0.000	0.000	0.000	0.000			1404.22	
8	0.6419	1104.4	1124.0		0.000	1.646	82.449	15.362	0.520	0.010	0.012	0.000	0.000	0.000	0.000	0.000			1402.87	
9	0.6392	1101.8	1121.3		0.000	1.547	83.035	14.864	0.532	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1402.56	
10	0.6357	1097.2	1116.6		0.000	1.501	83.757	14.181	0.539	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1400.48	
11	0.6369	1098.5	1118.0		0.000	1.531	83.519	14.387	0.540	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1400.88	
12	0.6368	1099.0	1118.4		0.000	1.497	83.525	14.428	0.527	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1401.52	
13	0.6358	1097.9	1117.4		0.000	1.460	83.701	14.337	0.481	0.010	0.012	0.000	0.000	0.000	0.000	0.000			1401.37	
14	0.6366	1097.8	1117.3		0.000	1.547	83.526	14.411	0.494	0.010	0.012	0.000	0.000	0.000	0.000	0.000			1400.29	
15	0.6379	1099.7	1119.2		0.000	1.558	83.261	14.659	0.501	0.010	0.012	0.000	0.000	0.000	0.000	0.000			1401.23	
16	0.6398	1102.2	1121.7		0.000	1.587	82.899	14.959	0.533	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1402.27	
17	0.6400	1102.3	1121.9		0.000	1.588	82.872	14.987	0.531	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1402.37	
18	0.6476	1111.6	1131.3		0.000	1.739	81.341	16.318	0.577	0.011	0.013	0.000	0.000	0.000	0.000	0.000			1405.84	
19	0.6432	1106.6	1126.2		0.000	1.627	82.217	15.599	0.533	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1404.33	
20	0.6384	1100.4	1119.9		0.000	1.557	83.186	14.714	0.521	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1401.65	
21	0.6384	1100.5	1120.0		0.000	1.550	83.201	14.703	0.524	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1401.75	
22	0.6385	1100.9	1120.4		0.000	1.533	83.188	14.727	0.529	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1402.20	
23	0.6383	1100.5	1120.0		0.000	1.537	83.226	14.683	0.531	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1401.94	
24	0.6378	1099.9	1119.4		0.000	1.532	83.321	14.593	0.531	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1401.65	
25	0.6386	1100.9	1120.4		0.000	1.549	83.159	14.736	0.533	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1401.99	
26	0.6386	1100.7	1120.2		0.000	1.560	83.147	14.742	0.527	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1401.76	
27	0.6396	1101.5	1121.0		0.000	1.601	82.947	14.897	0.532	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1401.75	
28	0.6404	1102.4	1121.9		0.000	1.630	82.769	15.049	0.530	0.010	0.012	0.000	0.000	0.000	0.000	0.000			1401.89	
29	0.6403	1102.5	1122.1		0.000	1.607	82.793	15.057	0.521	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1402.26	
30	0.6398	1101.7	1121.2		0.000	1.610	82.912	14.923	0.531	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1401.72	
31	0.6402	1102.9	1122.4		0.000	1.581	82.827	15.029	0.540	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1402.74	
Avg	0.6400	1103.0	1122.1		0.000	1.573	82.868	15.013	0.523	0.011	0.012	0.000	0.000	0.000	0.000	0.000			1402.65	

Zone 33

Williston Basin Interstate Pipeline Co. GQ Source Analysis

GQ Source Number:	1202160	Specific Gravity:	0.7916
GQ Source Name:	BOWMAN BORDER	BTU Base:	Dry
Effective Date:	3/1/2008 9:00:00 AM	Dry Heat Value:	1161.26
Effective End Date:	1/18/2038 9:14:07 PM	Wet Heat Value:	1141.05
Pressure Base:	14.730	As Deliv. Heat Value:	1161.26
Viscosity:			

		<u>Mol %</u>	<u>Imported GPM</u>	<u>Calculated GPM</u>
C1	Methane	56.257		
C2	Ethane	27.199		7.252
C3	Propane	3.896	1.071	1.070
IC4	Iso-Butane	0.073	0.024	0.024
NC4	N-Butane	0.199	0.063	0.063
IC5	Iso-Pentane	0.008	0.003	0.003
NC5	N-Pentane	0.022	0.008	0.008
C6+	Hexanes Plus	0.006	0.003	0.002
CO2	Carbon Dioxide	2.211		
N2	Nitrogen	10.129		
O2	Oxygen	0.000		
HE	Helium			
H2	Hydrogen			
H2S	Hydrogen Sulfide			
Totals		100.000	1.171	8.422

Sample Date: 2/28/2008 12:00:00 AM
 Sample Type: Composite
 Sample Tech: sampler

Sample Remarks: Zone 34

Analysis Remarks:

Williston Basin Interstate Pipeline Co. GQ Source Analysis

GQ Source Number:	1201140	Specific Gravity:	0.5730
GQ Source Name:	EAGLE 8B ND	BTU Base:	Dry
Effective Date:	7/17/2007 9:00:00 AM	Dry Heat Value:	976.12
Effective End Date:	1/18/2038 9:14:07 PM	Wet Heat Value:	959.13
Pressure Base:	14.730	As Deliv. Heat Value:	976.12
Viscosity:			

		<u>Mol %</u>	<u>Imported GPM</u>	<u>Calculated GPM</u>
C1	Methane	95.696		
C2	Ethane	0.290	0.000	0.078
C3	Propane	0.009	0.003	0.002
IC4	Iso-Butane	0.007	0.003	0.002
NC4	N-Butane	0.000	0.000	
IC5	Iso-Pentane	0.000	0.000	
NC5	N-Pentane	0.000	0.000	
C6+	Hexanes Plus	0.000	0.000	0.000
CO2	Carbon Dioxide	0.083		
N2	Nitrogen	3.915		
O2	Oxygen	0.000		
HE	Helium	0.000		
H2	Hydrogen	0.000		
H2S	Hydrogen Sulfide	0.000		
Totals		100.000	0.006	0.082

Sample Date: 6/11/2007 9:00:00 AM
Sample Type: Spot
Sample Tech: MG
Sample Remarks: *Zone 35*

Analysis Remarks:

NORTH DAKOTA HEATING VALUE ZONES		
ZONES	MEASURING DEVICE	LOCATION
211	Chromatograph	Sidney Area
24	Monthly Sampler	Williston Area
25	Monthly Sampler	Watford City Area
261	Chromatograph	Williston – Tioga – Minot Line
262	Chromatograph	Minot Area
263	Monthly Sampler	Tioga – Portal
271	Chromatograph	Bismarck – Cleveland
272	Chromatograph	Cleveland – Mapleton
273	Chromatograph	Cleveland – Grafton
28	Chromatograph	Bismarck
31	Chromatograph	Dickinson
32	Chromatograph	Cabin Creek – Dickinson
33	Chromatograph	Killdeer
34	Monthly Sampler	Bowman Area
35	Monthly Sampler	Baker Field – North Dakota

MONTANA DAKOTA UTILITIES CO
 NORTH DAKOTA
 HEATING VALUE DATA
 12 MONTH ACCUMULATIVE AT 14.73 psia, 60 f. DRY

STATE	ZONE	ZONE BOUNDARY	12 MONTH AVERAGE	MAR 08	FEB 08	JAN 08	DEC 07	NOV 07	OCT 07	SEPT 07	AUG 07	JULY 07	JUNE 07	MAY 07	APR 07	ZONE
MT/ND	211	Sidney Area	1144	1095	1028	1075	1124	1160	1170	1183	1189	1188	1185	1175	1151	21
ND	24	Williston Area	1182	1160	1173	1181	1192	1195	1194	1190	1193	1186	1186	1179	1150	24
ND	25	Watford City Area	1120	1119	1125	1126	1118	1118	1119	1119	1120	1118	1118	1125	1117	25
ND	261	Williston - Tioga - Minot Line	1152	1140	1126	1136	1142	1147	1158	1152	1164	1168	1173	1159	1159	261
ND	262	Minot Area	1153	1141	1127	1136	1143	1149	1159	1153	1167	1170	1175	1160	1160	262
ND	263	Tioga - Portal	1126	1125	1130	1129	1132	1128	1129	1131	1130	1117	1117	1122	1117	263
ND	271	Bismarck - Cleveland	1123	1086	1053	1059	1063	1105	1158	1153	1166	1169	1174	1159	1125	271
ND	272	Cleveland - Mapleton	1123	1086	1052	1059	1062	1107	1158	1152	1167	1169	1175	1159	1124	272
ND	273	Cleveland - Grafton	1123	1086	1052	1059	1062	1107	1158	1152	1167	1170	1175	1159	1124	273
ND	28	Bismarck	1094	1023	1022	1017	1015	1030	1124	1151	1167	1169	1171	1143	1091	28
ND	31	Dickinson	1023	1022	1021	1016	1014	1023	1023	1017	1006	1033	1033	1038	1027	31
ND/MT	32	Cabin Creek - Dickinson	1018	1020	1019	1014	1012	1021	1020	1013	991	1023	1028	1028	1022	32
ND	33	Killdeer	1110	1122	1118	1114	1111	1118	1113	1109	1106	1104	1101	1103	1102	33
ND	34	Bowman Area	1177	1161	1165	1174	1182	1189	1175	1175	1172	1190	1172	1180	1185	34
ND	35	Baker Field - North Dakota	975	976	976	976	976	976	976	976	976	974	974	974	974	35

THERMAL ZONE VARIANCE DOCUMENTATION		
March 2008		
<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
211	67	Receipt from Saco and Sidney Area
271	33	Receipt from Cabin Creek Area
272	34	Receipt from Cabin Creek Area
273	34	Receipt from Cabin Creek Area