

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

December 11, 2008

**RECEIVED**

DEC 15 2008

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

**PUBLIC SERVICE COMMISSION**

Re: Case No. 11,006 (Therm Billing)  
Monthly Report – October 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 November 2008.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our supplier for the month of October 2008. There is a report for each of the 16 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 October.

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

MONTANA-DAKOTA UTILITIES CO.  
Therm Billing Factor  
NOV 2008

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	314	APPLE VALLEY	271	1.0431
12	327	BISMARCK	28	1.0016
12	343	CARRINGTON	273	1.0305
12	344	CLEVELAND	272	1.0233
12	364	CAVALIER	273	1.0522
12	365	DAWSON	271	1.0357
12	374	FT TOTTEN	273	1.0378
12	375	DEVILS LAKE	273	1.0378
12	379	BARLOW	273	1.0305
12	387	ELDRIDGE	272	1.0305
12	411	GLEN ULLIN	31	.9794
12	417	GRAFTON	273	1.0595
12	439	HANKINSON	600	1.0689
12	449	JAMESTOWN	272	1.0378
12	463	LANGDON	273	1.0305
12	475	LINTON	802	.9755
12	478	LINCOLN	28	1.0016
12	494	MEDINA	271	1.0357
12	498	MANDAN	28	1.0016
12	524	NEW SALEM	28	.9804
12	532	NEW ROCKFORD	273	1.0305
12	539	PARK RIVER	273	1.0522
12	574	SANBORN	272	1.0378
12	593	STEELE	271	1.0357
12	598	SHEYENNE	273	1.0378
12	610	TAPPEN	271	1.0357
12	625	VALLEY CITY	272	1.0449
12	629	WALHALLA	273	1.0522
12	647	WILTON	262	1.0541
12	717	SPIRITWOOD	272	1.0378
12	718	FAIRMOUNT	600	1.0668
12	732	MSR SITE	273	1.0305
12	733	PAR SITE	273	1.0305
15	303	ALEXANDER	25	1.0673
15	308	ARNEGARD	25	1.0673

MONTANA-DAKOTA UTILITIES CO.  
 Therm Billing Factor  
 NOV 2008

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	318	BEACH	32	.9583
15	319	BELFIELD	32	.9653
15	323	BERTHOLD	262	1.0541
15	330	BOWMAN	34	1.0787
15	337	BURLINGTON	262	1.0768
15	368	DES LACS	262	1.0617
15	369	DICKINSON	31	.9724
15	384	EPPING	264	1.1079
15	407	GLADSTONE	31	.9724
15	413	GOLVA	32	.9443
15	416	GARRISON	262	1.0617
15	429	HEBRON	31	.9794
15	459	KILLDEER	33	1.0937
15	469	LEFOR	31	.9724
15	474	LIGNITE	263	1.0740
15	500	MARMARTH	34	1.0867
15	505	MINOT	262	1.0768
15	510	MOTT	31	.9724
15	512	MAX	262	1.0541
15	522	NEW ENGLAND	31	.9653
15	540	PALERMO	262	1.0541
15	558	RAY	264	1.1079
15	561	REGENT	31	.9724
15	563	RHAME	34	1.0709
15	564	RICHARDTON	31	.9653
15	568	ROSS	261	1.0427
15	572	RUTHVILLE	262	1.0768
15	583	SENTINEL BUTTE	32	.9583
15	588	SOUTH HEART	31	.9653
15	590	SPRINGBROOK	264	1.1079
15	591	STANLEY	261	1.0503
15	605	SURREY	262	1.0768
15	611	TAYLOR	31	.9653
15	616	TIOGA	261	1.0427
15	619	TURTLE LAKE	262	1.0617

MONTANA-DAKOTA UTILITIES CO.  
Therm Billing Factor  
NOV 2008

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	620	TRENTON	24	1.1159
15	624	UNDERWOOD	262	1.0617
15	632	WATFORD CITY	25	1.0673
15	636	WHEELLOCK	264	1.0999
15	637	WHITE EARTH	261	1.0503
15	642	WILLISTON	24	1.1159
15	646	WASHBURN	262	1.0692
15	664	RIVERDALE	262	1.0617
15	691	FAIRVIEW	24	1.1159
15	712	MINOT AFB	262	1.0768
15	743	BAKER FIELD	35	.8935

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

**GQ Source Daily Summary**

October 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	0.7291	1173.1	1193.9	1193.9	1.085	4.000	68.875	22.375	3.252	0.135	0.251	0.014	0.012	0.001	0.000					1398.14	
2	0.7292	1173.3	1194.1	1194.1	1.080	4.002	68.837	22.426	3.252	0.132	0.243	0.014	0.012	0.001	0.000					1398.30	
3	0.7287	1172.4	1193.1	1193.1	1.084	3.999	68.916	22.381	3.218	0.132	0.243	0.014	0.012	0.001	0.000					1397.76	
4	0.7292	1173.5	1194.2	1194.2	1.081	3.993	68.850	22.401	3.272	0.132	0.244	0.014	0.012	0.001	0.000					1398.48	
5	0.7272	1169.1	1189.8	1189.8	1.082	4.070	69.262	21.904	3.274	0.135	0.246	0.014	0.012	0.001	0.000					1395.13	
6	0.7299	1174.1	1194.9	1194.9	1.082	4.012	68.784	22.381	3.334	0.134	0.246	0.014	0.012	0.001	0.000					1398.66	
7	0.7296	1173.7	1194.5	1194.5	1.085	4.008	68.810	22.385	3.307	0.133	0.244	0.014	0.012	0.001	0.000					1398.40	
8	0.7293	1173.2	1194.0	1194.0	1.082	4.013	68.867	22.330	3.305	0.133	0.244	0.014	0.011	0.001	0.000					1398.13	
9	0.7290	1172.1	1192.8	1192.8	1.085	4.045	68.975	22.136	3.360	0.133	0.242	0.013	0.011	0.001	0.000					1397.08	
10	0.7305	1175.0	1195.8	1195.8	1.085	4.018	68.803	22.203	3.482	0.137	0.250	0.012	0.010	0.001	0.000					1399.01	
11	0.7292	1172.6	1193.3	1193.3	1.088	4.031	68.933	22.227	3.286	0.142	0.264	0.015	0.012	0.001	0.000					1397.45	
12	0.7303	1174.8	1195.6	1195.6	1.083	4.011	68.782	22.301	3.411	0.137	0.248	0.014	0.012	0.001	0.000					1399.00	
13	0.7227	1160.2	1180.7	1180.7	1.072	4.197	70.409	20.436	3.438	0.148	0.271	0.015	0.013	0.001	0.000					1388.81	
14	0.7315	1176.9	1197.7	1197.7	1.086	3.987	68.572	22.524	3.409	0.139	0.256	0.014	0.012	0.001	0.000					1400.42	
15	0.7309	1175.7	1196.5	1196.5	1.083	4.007	68.664	22.454	3.363	0.140	0.260	0.015	0.013	0.001	0.000					1399.54	
16	0.7307	1175.4	1196.3	1196.3	1.085	4.002	68.711	22.387	3.401	0.137	0.250	0.014	0.012	0.001	0.000					1399.45	
17	0.7309	1175.9	1196.7	1196.7	1.084	3.998	68.719	22.339	3.438	0.138	0.256	0.014	0.012	0.001	0.000					1399.74	
18	0.7308	1175.3	1196.1	1196.1	1.090	4.012	68.740	22.292	3.456	0.135	0.248	0.014	0.012	0.001	0.000					1399.17	
19	0.7310	1175.9	1196.7	1196.7	1.087	4.003	68.683	22.379	3.426	0.139	0.255	0.014	0.012	0.001	0.000					1399.64	
20	0.7306	1175.4	1196.2	1196.2	1.084	3.997	68.791	22.262	3.444	0.139	0.256	0.014	0.012	0.001	0.000					1399.47	
21	0.7304	1175.0	1195.8	1195.8	1.084	4.005	68.827	22.211	3.451	0.139	0.255	0.014	0.012	0.001	0.000					1399.17	
22	0.7311	1176.1	1197.0	1197.0	1.089	3.994	68.757	22.221	3.513	0.141	0.259	0.014	0.012	0.001	0.000					1399.85	
23	0.7312	1176.3	1197.2	1197.2	1.085	3.997	68.745	22.229	3.508	0.150	0.260	0.014	0.011	0.001	0.000					1400.00	
24	0.7309	1175.7	1196.5	1196.5	1.091	3.997	68.688	22.402	3.397	0.140	0.258	0.014	0.012	0.001	0.000					1399.57	
25	0.7315	1176.7	1197.6	1197.6	1.086	4.002	68.643	22.355	3.490	0.140	0.257	0.014	0.012	0.001	0.000					1400.15	
26	0.7333	1179.5	1200.4	1200.4	1.085	3.994	68.487	22.336	3.657	0.146	0.268	0.014	0.011	0.001	0.000					1401.83	
27	0.7317	1177.0	1197.9	1197.9	1.086	3.997	68.686	22.252	3.547	0.142	0.261	0.015	0.012	0.001	0.000					1400.37	
28	0.7314	1176.6	1197.4	1197.4	1.084	3.999	68.736	22.204	3.556	0.139	0.254	0.014	0.012	0.001	0.000					1400.11	
29	0.7313	1176.7	1197.5	1197.5	1.084	3.985	68.739	22.226	3.543	0.140	0.256	0.014	0.012	0.001	0.000					1400.34	
30	0.7308	1175.9	1196.8	1196.8	1.087	3.981	68.772	22.274	3.457	0.141	0.261	0.014	0.012	0.001	0.000					1399.90	
31	0.7311	1176.3	1197.1	1197.1	1.088	3.985	68.707	22.336	3.458	0.140	0.259	0.014	0.012	0.001	0.000					1400.07	
Avg	0.7302	1174.0	1195.3	1195.3	1.085	4.011	68.831	22.244	3.410	0.138	0.254	0.014	0.012	0.001	0.000					1398.81	

*Zone 211*

## Williston Basin Interstate Pipeline Co. GQ Source Analysis

GQ Source Number:	0602330	Specific Gravity:	0.7300
GQ Source Name:	WILLISTON BORDER	BTU Base:	Dry
Effective Date:	10/10/2008 9:00:00 AM	Dry Heat Value:	1172.85
Effective End Date:	1/18/2038 9:14:07 PM	Wet Heat Value:	1152.44
Pressure Base:	14.730	As Deliv. Heat Value:	1172.85
Viscosity:			

		Mol %	Imported GPM	Calculated GPM
C1	Methane	68.635		
C2	Ethane	20.697		5.519
C3	Propane	3.655	1.004	1.004
IC4	Iso-Butane	0.169	0.055	0.055
NC4	N-Butane	0.319	0.100	0.100
IC5	Iso-Pentane	0.023	0.008	0.008
NC5	N-Pentane	0.021	0.008	0.008
C6+	Hexanes Plus	0.004	0.002	0.002
CO2	Carbon Dioxide	0.903		
N2	Nitrogen	5.573		
O2	Oxygen	0.000		
HE	Helium			
H2	Hydrogen			
H2S	Hydrogen Sulfide			
<b>Totals</b>		99.999	1.177	6.696

**Sample Date:** 9/30/2008 12:00:00 AM  
**Sample Type:** Composite  
**Sample Tech:** sampler  
**Sample Remarks:** Zone 2A #264  
**Analysis Remarks:**

## Williston Basin Interstate Pipeline Co. GQ Source Analysis

<b>GQ Source Number:</b>	0602230	<b>Specific Gravity:</b>	0.7310
<b>GQ Source Name:</b>	WATFORD CITY BORDER	<b>BTU Base:</b>	Dry
<b>Effective Date:</b>	10/10/2008 9:00:00 AM	<b>Dry Heat Value:</b>	1129.68
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>Wet Heat Value:</b>	1110.02
<b>Pressure Base:</b>	14.730	<b>As Deliv. Heat Value:</b>	1129.68
<b>Viscosity:</b>			

		<u>Mol %</u>	<u>Imported GPM</u>	<u>Calculated GPM</u>
C1	Methane	68.225		
C2	Ethane	17.992		4.797
C3	Propane	3.856	1.059	1.059
IC4	Iso-Butane	0.199	0.065	0.065
NC4	N-Butane	0.376	0.118	0.118
IC5	Iso-Pentane	0.031	0.011	0.011
NC5	N-Pentane	0.032	0.011	0.012
C6+	Hexanes Plus	0.010	0.004	0.004
CO2	Carbon Dioxide	0.745		
N2	Nitrogen	8.532		
O2	Oxygen	0.000		
HE	Helium			
H2	Hydrogen			
H2S	Hydrogen Sulfide			
<b>Totals</b>		99.998	1.268	6.067

**Sample Date:** 9/30/2008 12:00:00 AM  
**Sample Type:** Composite  
**Sample Tech:** sampler

**Sample Remarks:** Zone 25  
**Analysis Remarks:** \_\_\_\_\_

**GQ Source Daily Summary**

October 2008

Number: 163

Pressure Base: 14.730

Name: NORTH TIOGA MINOT

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	0.6495	1095.7	1115.1		0.051	2.805	81.295	14.916	0.826	0.034	0.043	0.005	0.006	0.017					1383.72	
2	0.6494	1093.6	1112.9		0.050	2.933	81.311	14.769	0.814	0.037	0.056	0.006	0.007	0.017					1381.06	
3	0.6732	1111.9	1131.6		0.325	3.632	77.317	17.112	1.445	0.052	0.093	0.006	0.006	0.012					1379.23	
4	0.6637	1098.8	1118.2		0.204	3.732	78.772	15.979	1.182	0.040	0.068	0.005	0.005	0.013					1372.57	
5	0.6463	1088.5	1107.8		0.106	2.866	82.067	13.958	0.868	0.047	0.063	0.006	0.006	0.011					1377.96	
6	0.6453	1088.9	1108.2		0.097	2.757	82.274	13.889	0.840	0.051	0.066	0.007	0.007	0.011					1379.58	
7	0.6682	1106.4	1126.0		0.278	3.566	78.174	16.495	1.324	0.053	0.086	0.006	0.006	0.011					1377.56	
8	0.6617	1096.5	1115.9		0.225	3.651	79.097	15.827	1.075	0.040	0.066	0.005	0.004	0.010					1371.78	
9	0.6453	1083.5	1102.7		0.088	3.104	81.815	14.330	0.601	0.021	0.027	0.002	0.002	0.011					1372.69	
10	0.6402	1081.8	1100.9		0.083	2.733	83.222	13.070	0.752	0.051	0.065	0.007	0.007	0.011					1375.96	
11	0.6437	1086.5	1105.8		0.076	2.786	82.314	14.063	0.660	0.037	0.046	0.004	0.005	0.010					1378.26	
12	0.6501	1093.8	1113.2		0.087	2.934	80.891	15.384	0.633	0.025	0.031	0.002	0.002	0.011					1380.60	
13	0.6469	1087.2	1106.5		0.068	3.059	81.338	14.984	0.507	0.015	0.018	0.001	0.001	0.011					1375.74	
14	0.6513	1092.6	1112.0		0.101	3.102	80.504	15.682	0.573	0.012	0.015	0.000	0.000	0.012					1377.78	
15	0.6478	1087.6	1106.9		0.067	3.129	81.101	15.174	0.493	0.010	0.013	0.001	0.001	0.012					1375.18	
16	0.6472	1085.7	1104.9		0.055	3.204	81.247	14.932	0.528	0.008	0.010	0.001	0.001	0.015					1373.42	
17	0.6492	1087.7	1107.0		0.069	3.247	80.807	15.343	0.507	0.004	0.006	0.000	0.000	0.017					1373.91	
18	0.6534	1093.8	1113.2		0.071	3.266	80.080	15.918	0.643	0.003	0.004	0.000	0.000	0.015					1377.14	
19	0.6540	1095.6	1115.0		0.087	3.195	79.935	16.149	0.611	0.004	0.005	0.000	0.000	0.014					1378.69	
20	0.6543	1095.6	1115.0		0.102	3.199	79.965	16.031	0.676	0.004	0.006	0.000	0.000	0.016					1378.38	
21	0.6510	1090.2	1109.5		0.098	3.223	80.537	15.525	0.595	0.004	0.005	0.000	0.000	0.012					1375.07	
22	0.6546	1096.5	1115.9		0.095	3.181	79.878	16.163	0.662	0.003	0.004	0.000	0.000	0.014					1379.24	
23	0.6532	1093.3	1112.6		0.137	3.183	80.182	15.838	0.632	0.006	0.008	0.000	0.000	0.014					1376.64	
24	0.6471	1088.9	1108.2		0.083	2.948	81.553	14.696	0.636	0.028	0.036	0.004	0.004	0.013					1377.69	
25	0.6460	1087.8	1107.0		0.073	2.937	81.761	14.507	0.629	0.032	0.040	0.005	0.005	0.011					1377.32	
26	0.6450	1086.9	1106.2		0.078	2.878	82.034	14.265	0.638	0.037	0.048	0.006	0.007	0.010					1377.41	
27	0.6438	1085.2	1104.4		0.066	2.894	82.362	13.871	0.672	0.043	0.058	0.009	0.010	0.015					1376.39	
28	0.6489	1090.8	1110.1		0.080	3.009	81.175	15.014	0.639	0.025	0.032	0.004	0.004	0.016					1378.11	
29	0.6536	1098.0	1117.5		0.086	3.001	80.339	15.722	0.777	0.022	0.029	0.003	0.003	0.016					1382.25	
30	0.6521	1093.0	1112.4		0.082	3.174	80.577	15.370	0.691	0.037	0.050	0.005	0.005	0.009					1377.54	
31	0.6538	1098.7	1118.1		0.196	2.807	81.049	14.612	1.138	0.070	0.097	0.010	0.010	0.012					1382.88	
Avg	0.6513	1092.0	1111.6		0.108	3.101	80.806	15.148	0.751	0.028	0.039	0.004	0.004	0.013					1377.48	

*Zone 261*

**GQ Source Daily Summary**

October 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	Cr'l'therm
1	0.6502	1087.1	1106.3		0.090	3.346	81.227	14.324	0.864	0.048	0.064	0.006	0.006	0.023	0.000				1371.99	
2	0.6506	1085.1	1104.3		0.077	3.523	81.148	14.190	0.920	0.047	0.062	0.005	0.006	0.022	0.000				1369.08	
3	0.6585	1091.0	1110.3		0.101	3.864	79.694	15.085	1.120	0.043	0.063	0.003	0.003	0.023	0.000				1368.35	
4	0.6812	1106.9	1126.5		0.380	4.613	75.935	17.144	1.726	0.062	0.114	0.005	0.004	0.018	0.000				1364.82	
5	0.6759	1099.1	1118.6		0.309	4.698	76.693	16.569	1.562	0.052	0.095	0.003	0.002	0.017	0.000				1360.55	
6	0.6600	1084.5	1103.7		0.194	4.260	79.670	14.393	1.315	0.057	0.085	0.005	0.005	0.017	0.000				1358.65	
7	0.6545	1084.7	1103.9		0.136	3.820	80.794	13.818	1.224	0.068	0.105	0.008	0.008	0.017	0.000				1364.50	
8	0.6737	1106.2	1125.8		0.303	4.064	77.265	16.642	1.531	0.060	0.106	0.006	0.005	0.017	0.000				1371.61	
9	0.6795	1106.5	1126.1		0.292	4.609	76.622	16.218	1.956	0.093	0.175	0.010	0.008	0.016	0.000				1366.06	
10	0.6637	1094.2	1113.5		0.164	4.067	78.936	15.351	1.287	0.057	0.109	0.006	0.005	0.018	0.000				1366.87	
11	0.6494	1080.7	1099.9		0.134	3.590	81.725	13.254	1.092	0.067	0.104	0.008	0.008	0.016	0.000				1364.80	
12	0.6533	1086.6	1105.8		0.123	3.615	80.848	14.140	1.107	0.056	0.085	0.004	0.004	0.017	0.000				1368.13	
13	0.6635	1092.3	1111.6		0.151	4.181	78.841	15.431	1.228	0.052	0.092	0.004	0.003	0.018	0.000				1364.77	
14	0.6598	1089.8	1109.1		0.134	4.013	79.417	15.186	1.114	0.042	0.073	0.002	0.001	0.018	0.000				1365.46	
15	0.6636	1088.8	1108.1		0.160	4.397	78.625	15.527	1.163	0.040	0.069	0.001	0.001	0.018	0.000				1360.29	
16	0.6698	1100.6	1120.1		0.168	4.240	77.779	16.190	1.449	0.055	0.097	0.002	0.001	0.018	0.000				1368.77	
17	0.6648	1091.5	1110.8		0.143	4.371	78.509	15.579	1.246	0.044	0.082	0.003	0.003	0.020	0.000				1362.35	
18	0.6580	1083.1	1102.3		0.120	4.278	79.542	14.948	1.017	0.026	0.046	0.000	0.000	0.021	0.000				1358.88	
19	0.6617	1085.6	1104.9		0.136	4.444	78.740	15.601	0.999	0.021	0.039	0.000	0.000	0.019	0.000				1358.27	
20	0.6795	1102.5	1122.0		0.194	5.004	76.324	16.316	1.909	0.078	0.147	0.005	0.004	0.020	0.000				1361.15	
21	0.6713	1103.2	1122.7		0.173	4.216	77.566	16.352	1.510	0.052	0.104	0.004	0.004	0.019	0.000				1370.38	
22	0.6804	1099.3	1118.8		0.238	5.208	76.180	16.148	2.004	0.073	0.128	0.002	0.001	0.017	0.000				1356.34	
23	0.6762	1113.0	1132.7		0.182	4.063	76.858	16.956	1.746	0.058	0.112	0.003	0.003	0.020	0.000				1377.56	
24	0.6809	1110.8	1130.5		0.233	4.561	76.233	16.738	1.976	0.079	0.151	0.006	0.005	0.018	0.000				1370.02	
25	0.6717	1100.4	1119.9		0.199	4.390	77.661	15.886	1.658	0.068	0.114	0.005	0.004	0.016	0.000				1366.42	
26	0.6706	1095.3	1114.7		0.188	4.607	77.950	15.323	1.705	0.077	0.124	0.006	0.005	0.015	0.000				1361.21	
27	0.6656	1089.0	1108.3		0.176	4.542	78.611	15.037	1.455	0.064	0.092	0.004	0.003	0.016	0.000				1358.51	
28	0.6685	1093.0	1112.4		0.171	4.580	78.359	14.967	1.577	0.082	0.132	0.009	0.009	0.014	0.000				1360.49	
29	0.6883	1116.8	1136.5		0.235	4.893	75.499	16.430	2.551	0.127	0.224	0.014	0.013	0.014	0.000				1369.92	
30	0.6832	1114.8	1134.5		0.212	4.568	76.050	16.686	2.164	0.103	0.179	0.010	0.009	0.018	0.000				1372.55	
31	0.6770	1101.0	1120.5		0.206	4.839	76.790	16.071	1.852	0.081	0.131	0.007	0.006	0.017	0.000				1361.76	
Avg	0.6679	1096.0	1115.7		0.185	4.305	78.261	15.565	1.488	0.062	0.107	0.005	0.005	0.018	0.000				1365.18	

*Zone 26a*

## Williston Basin Interstate Pipeline Co. GQ Source Analysis

<b>GQ Source Number:</b>	2501030	<b>Specific Gravity:</b>	0.6620
<b>GQ Source Name:</b>	LIGNITE PLANT	<b>BTU Base:</b>	Dry
<b>Effective Date:</b>	10/10/2008 9:00:00 AM	<b>Dry Heat Value:</b>	1128.52
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>Wet Heat Value:</b>	1108.88
<b>Pressure Base:</b>	14.730	<b>As Deliv. Heat Value:</b>	1128.52
<b>Viscosity:</b>			

		<u>Mol %</u>	<u>Imported GPM</u>	<u>Calculated GPM</u>
C1	Methane	78.835		
C2	Ethane	16.935		4.516
C3	Propane	1.023	0.281	0.281
IC4	Iso-Butane	0.002	0.001	0.001
NC4	N-Butane	0.002	0.001	0.001
IC5	Iso-Pentane	0.002	0.001	0.001
NC5	N-Pentane	0.002	0.001	0.001
C6+	Hexanes Plus	0.043	0.020	0.018
CO2	Carbon Dioxide	0.088		
N2	Nitrogen	3.054		
O2	Oxygen	0.000		
HE	Helium			
H2	Hydrogen			
H2S	Hydrogen Sulfide			
<b>Totals</b>		99.986	0.305	4.817

**Sample Date:** 9/30/2008 12:00:00 AM  
**Sample Type:** Composite  
**Sample Tech:** sampler

**Sample Remarks:** Zone 263

**Analysis Remarks:** \_\_\_\_\_

**GQ Source Daily Summary**

October 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	Cr'ltherm
1	0.6419	1065.6	1084.5		0.259	3.605	83.096	11.952	0.935	0.050	0.074	0.007	0.007	0.013	0.000				1353.47	
2	0.6496	1084.0	1103.2		0.093	3.461	81.364	14.028	0.910	0.047	0.062	0.007	0.008	0.021	0.000				1368.79	
3	0.6544	1088.1	1107.4		0.103	3.636	80.487	14.606	1.031	0.044	0.060	0.006	0.007	0.022	0.000				1369.00	
4	0.6505	1065.1	1083.9		0.277	4.419	81.419	12.599	1.156	0.041	0.062	0.004	0.004	0.017	0.000				1343.90	
5	0.6665	1085.6	1104.9		0.372	4.522	78.623	14.836	1.478	0.053	0.092	0.005	0.005	0.015	0.000				1353.31	
6	0.6659	1086.8	1106.0		0.242	4.596	78.528	15.067	1.397	0.053	0.089	0.006	0.006	0.016	0.000				1355.42	
7	0.6454	1061.6	1080.4		0.317	4.088	82.501	11.864	1.086	0.047	0.073	0.005	0.005	0.014	0.000				1344.84	
8	0.6384	1046.4	1064.9		0.424	4.196	83.976	10.199	1.070	0.044	0.070	0.005	0.006	0.009	0.000				1332.71	
9	0.6325	1030.4	1048.6		0.543	4.439	85.180	8.671	1.053	0.039	0.063	0.004	0.004	0.004	0.000				1318.47	
10	0.6503	1062.3	1081.1		0.452	4.298	81.862	11.918	1.307	0.052	0.092	0.006	0.006	0.006	0.000				1340.48	
11	0.6308	1030.3	1048.5		0.467	4.398	85.551	8.359	1.093	0.043	0.074	0.005	0.004	0.006	0.000				1320.06	
12	0.6317	1032.9	1051.2		0.424	4.387	85.219	8.808	1.041	0.042	0.069	0.004	0.004	0.002	0.000				1322.52	
13	0.6350	1043.9	1062.4		0.344	4.146	84.563	9.782	1.031	0.045	0.074	0.005	0.005	0.006	0.000				1333.24	
14	0.6247	1023.8	1041.9		0.378	4.358	86.525	7.686	0.934	0.041	0.065	0.005	0.004	0.004	0.000				1318.17	
15	0.6273	1028.8	1047.0		0.376	4.286	86.121	8.085	1.000	0.045	0.073	0.005	0.005	0.004	0.000				1322.02	
16	0.6250	1021.7	1039.8		0.505	4.318	86.599	7.516	0.953	0.038	0.062	0.004	0.004	0.002	0.000				1315.21	
17	0.6249	1018.9	1037.0		0.567	4.385	86.624	7.399	0.918	0.035	0.062	0.004	0.004	0.002	0.000				1311.76	
18	0.6321	1037.7	1056.1		0.453	4.092	85.249	9.058	1.012	0.047	0.072	0.007	0.005	0.006	0.000				1328.31	
19	0.6447	1054.1	1072.7		0.372	4.398	82.866	10.946	1.240	0.055	0.101	0.008	0.008	0.000	0.000				1336.07	
20	0.6416	1048.3	1066.9		0.381	4.444	83.267	10.667	1.117	0.040	0.068	0.004	0.004	0.008	0.000				1331.96	
21	0.6426	1050.6	1069.2		0.341	4.464	82.887	11.174	1.032	0.033	0.056	0.003	0.003	0.008	0.000				1333.78	
22	0.6440	1049.5	1068.1		0.350	4.645	82.935	10.635	1.280	0.050	0.087	0.005	0.004	0.008	0.000				1330.99	
23	0.6403	1047.8	1066.4		0.350	4.395	83.742	10.091	1.253	0.054	0.096	0.006	0.006	0.007	0.000				1332.69	
24	0.6390	1044.4	1062.9		0.358	4.473	83.866	9.972	1.197	0.045	0.075	0.004	0.004	0.006	0.000				1329.65	
25	0.6415	1043.5	1062.0		0.394	4.712	83.513	9.903	1.325	0.051	0.088	0.005	0.004	0.005	0.000				1325.86	
26	0.6422	1046.2	1064.7		0.405	4.590	83.348	10.242	1.269	0.047	0.083	0.005	0.005	0.006	0.000				1328.66	
27	0.6341	1036.8	1055.2		0.504	4.252	85.053	8.873	1.165	0.052	0.082	0.007	0.006	0.007	0.000				1325.11	
28	0.6304	1034.2	1052.5		0.530	4.024	85.906	8.224	1.143	0.063	0.086	0.009	0.007	0.009	0.000				1325.58	
29	0.6358	1042.3	1060.8		0.491	4.097	84.902	9.067	1.243	0.071	0.101	0.011	0.008	0.009	0.000				1330.29	
30	0.6434	1053.8	1072.4		0.404	4.246	83.236	10.671	1.253	0.066	0.095	0.010	0.009	0.011	0.000				1336.96	
31	0.6535	1066.7	1085.6		0.426	4.372	81.666	11.672	1.617	0.082	0.133	0.011	0.009	0.012	0.000				1342.92	
Avg	0.6406	1049.0	1068.0		0.384	4.282	83.570	10.470	1.146	0.049	0.079	0.006	0.005	0.009	0.000				1334.26	

*Zone 272 & 271*

GQ Source Daily Summary

October 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	Critherm
1	0.6418	1065.7	1084.6		0.260	3.589	83.124	11.942	0.934	0.050	0.074	0.007	0.007	0.013	0.000				1353.68	
2	0.6495	1084.0	1103.2		0.095	3.450	81.388	14.012	0.910	0.047	0.062	0.007	0.008	0.021	0.000				1368.86	
3	0.6542	1087.3	1106.5		0.111	3.674	80.407	14.739	0.943	0.039	0.053	0.006	0.006	0.021	0.000				1368.05	
4	0.6496	1065.3	1084.2		0.274	4.322	81.610	12.529	1.131	0.043	0.064	0.005	0.005	0.017	0.000				1345.18	
5	0.6670	1086.4	1105.6		0.372	4.532	78.517	14.921	1.487	0.053	0.092	0.005	0.005	0.015	0.000				1353.68	
6	0.6658	1086.7	1106.0		0.242	4.590	78.550	15.055	1.395	0.053	0.088	0.006	0.006	0.016	0.000				1355.47	
7	0.6452	1061.5	1080.3		0.318	4.075	82.546	11.836	1.083	0.047	0.072	0.005	0.005	0.014	0.000				1344.89	
8	0.6386	1046.7	1065.3		0.426	4.191	83.949	10.230	1.071	0.044	0.070	0.006	0.005	0.009	0.000				1332.99	
9	0.6330	1032.2	1050.5		0.553	4.357	85.122	8.796	1.055	0.039	0.065	0.004	0.004	0.004	0.000				1320.32	
10	0.6506	1062.6	1081.5		0.453	4.303	81.804	11.956	1.320	0.053	0.094	0.006	0.006	0.007	0.000				1340.59	
11	0.6310	1030.7	1048.9		0.465	4.393	85.479	8.429	1.099	0.043	0.076	0.005	0.005	0.006	0.000				1320.37	
12	0.6312	1031.9	1050.1		0.428	4.399	85.343	8.687	1.024	0.041	0.068	0.004	0.004	0.002	0.000				1321.76	
13	0.6349	1043.7	1062.2		0.344	4.151	84.581	9.758	1.032	0.045	0.074	0.005	0.005	0.006	0.000				1333.05	
14	0.6248	1024.0	1042.1		0.377	4.358	86.510	7.703	0.933	0.041	0.065	0.005	0.004	0.004	0.000				1318.30	
15	0.6272	1028.9	1047.1		0.376	4.283	86.120	8.090	0.999	0.045	0.073	0.005	0.005	0.004	0.000				1322.10	
16	0.6250	1021.6	1039.7		0.506	4.318	86.606	7.508	0.952	0.038	0.062	0.004	0.004	0.002	0.000				1315.13	
17	0.6249	1018.9	1036.9		0.567	4.383	86.633	7.392	0.917	0.035	0.062	0.004	0.004	0.002	0.000				1311.72	
18	0.6321	1037.6	1056.0		0.454	4.091	85.256	9.053	1.011	0.047	0.071	0.007	0.005	0.006	0.000				1328.23	
19	0.6445	1054.1	1072.8		0.371	4.381	82.897	10.944	1.230	0.054	0.101	0.008	0.008	0.008	0.000				1336.24	
20	0.6416	1048.4	1067.0		0.382	4.443	83.261	10.673	1.117	0.040	0.068	0.004	0.004	0.008	0.000				1332.00	
21	0.6426	1050.6	1069.2		0.342	4.463	82.894	11.165	1.033	0.033	0.056	0.003	0.003	0.008	0.000				1333.76	
22	0.6441	1049.6	1068.1		0.349	4.653	82.915	10.645	1.284	0.050	0.087	0.005	0.004	0.008	0.000				1330.93	
23	0.6392	1046.5	1065.1		0.353	4.372	83.884	10.043	1.185	0.050	0.093	0.007	0.006	0.007	0.000				1332.12	
24	0.6389	1044.1	1062.6		0.360	4.481	83.875	9.958	1.192	0.045	0.074	0.004	0.004	0.006	0.000				1329.37	
25	0.6414	1043.3	1061.8		0.394	4.708	83.532	9.897	1.317	0.051	0.087	0.005	0.004	0.005	0.000				1325.82	
26	0.6431	1046.7	1065.3		0.410	4.637	83.168	10.360	1.279	0.047	0.084	0.005	0.005	0.006	0.000				1328.40	
27	0.6341	1036.8	1055.2		0.505	4.251	85.054	8.872	1.165	0.052	0.082	0.007	0.006	0.007	0.000				1325.10	
28	0.6304	1034.3	1052.6		0.529	4.023	85.900	8.232	1.142	0.063	0.085	0.010	0.007	0.009	0.000				1325.68	
29	0.6353	1041.7	1060.1		0.495	4.080	85.003	8.982	1.240	0.071	0.101	0.011	0.008	0.009	0.000				1330.04	
30	0.6436	1054.0	1072.7		0.405	4.247	83.210	10.682	1.263	0.066	0.096	0.010	0.009	0.011	0.000				1337.10	
31	0.6533	1066.2	1085.1		0.425	4.383	81.691	11.654	1.601	0.081	0.132	0.011	0.010	0.012	0.000				1342.52	
Avg	0.6406	1049.0	1068.0		0.385	4.277	83.575	10.476	1.140	0.049	0.078	0.006	0.005	0.009	0.000				1334.31	

Zone 273

**GQ Source Daily Summary**

October 2008

Number: 041

Pressure Base: 14.730

Name: BISMARCK PLANT 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	CrItherm
1	0.6227	1017.7	1035.8		0.600	4.199	87.281	6.822	0.966	0.044	0.073	0.006	0.006	0.003	0.000				1312.56	
2	0.6250	1020.9	1039.0		0.564	4.277	86.844	7.140	1.034	0.046	0.079	0.006	0.006	0.003	0.000				1314.23	
3	0.6304	1029.6	1047.9		0.513	4.333	85.758	8.135	1.125	0.046	0.076	0.005	0.005	0.003	0.000				1319.76	
4	0.6457	1052.0	1070.6		0.474	4.469	82.734	10.929	1.246	0.046	0.082	0.005	0.005	0.009	0.000				1332.29	
5	0.6265	1022.5	1040.6		0.524	4.383	86.351	7.664	0.970	0.037	0.060	0.004	0.004	0.004	0.000				1314.72	
6	0.6286	1025.6	1043.8		0.559	4.336	85.973	8.037	1.000	0.033	0.054	0.003	0.003	0.003	0.000				1316.54	
7	0.6279	1023.3	1041.5		0.636	4.296	86.212	7.736	1.021	0.033	0.056	0.004	0.003	0.003	0.000				1314.28	
8	0.6193	1010.6	1028.7		0.594	4.340	87.814	6.259	0.900	0.036	0.057	0.004	0.004	0.003	0.000				1306.95	
9	0.6193	1010.6	1028.5		0.584	4.340	87.814	6.259	0.900	0.036	0.057	0.004	0.004	0.003	0.000				1306.91	
10	0.6237	1017.7	1035.7		0.566	4.349	87.050	6.896	1.016	0.039	0.070	0.005	0.005	0.003	0.000				1311.42	
11	0.6240	1019.2	1037.2		0.498	4.388	86.860	7.150	1.000	0.036	0.059	0.004	0.003	0.002	0.000				1313.09	
12	0.6262	1022.7	1040.8		0.474	4.421	86.506	7.396	1.069	0.045	0.076	0.005	0.005	0.003	0.000				1315.22	
13	0.6214	1015.1	1033.1		0.451	4.462	87.287	6.753	0.937	0.037	0.061	0.004	0.004	0.003	0.000				1310.58	
14	0.6180	1010.0	1027.9		0.429	4.494	87.935	6.111	0.916	0.040	0.065	0.005	0.004	0.002	0.000				1307.47	
15	0.6226	1017.5	1035.5		0.478	4.389	87.138	6.895	0.980	0.041	0.066	0.005	0.005	0.003	0.000				1312.39	
16	0.6211	1012.0	1029.9		0.612	4.382	87.446	6.572	0.889	0.033	0.056	0.004	0.004	0.002	0.000				1306.86	
17	0.6189	1011.3	1029.2		0.542	4.329	87.834	6.310	0.878	0.035	0.060	0.005	0.004	0.002	0.000				1308.17	
18	0.6284	1028.4	1046.6		0.581	4.114	86.524	7.372	1.194	0.068	0.116	0.013	0.012	0.007	0.000				1320.27	
19	0.6290	1025.6	1043.8		0.513	4.444	86.006	7.799	1.110	0.044	0.072	0.005	0.005	0.003	0.000				1316.10	
20	0.6273	1022.9	1041.0		0.541	4.406	86.369	7.466	1.092	0.044	0.071	0.005	0.005	0.002	0.000				1314.38	
21	0.6259	1021.4	1039.5		0.479	4.458	86.574	7.284	1.073	0.045	0.074	0.005	0.005	0.002	0.000				1313.98	
22	0.6248	1020.2	1038.3		0.421	4.521	86.656	7.256	1.026	0.042	0.067	0.005	0.004	0.002	0.000				1313.52	
23	0.6243	1019.4	1037.5		0.434	4.500	86.875	6.966	1.087	0.048	0.076	0.006	0.006	0.003	0.000				1313.03	
24	0.6270	1023.6	1041.7		0.434	4.505	86.346	7.454	1.124	0.046	0.077	0.006	0.005	0.003	0.000				1315.49	
25	0.6225	1015.7	1033.7		0.484	4.483	87.100	6.869	0.952	0.038	0.063	0.005	0.004	0.002	0.000				1310.16	
26	0.6240	1017.8	1035.8		0.500	4.469	86.874	7.045	0.994	0.039	0.067	0.005	0.005	0.003	0.000				1311.30	
27	0.6193	1017.1	1035.1		0.636	3.857	88.129	6.261	0.960	0.056	0.073	0.010	0.007	0.009	0.000				1315.39	
28	0.6224	1022.3	1040.4		0.605	3.887	87.604	6.662	1.059	0.065	0.087	0.011	0.009	0.010	0.000				1318.71	
29	0.6207	1020.6	1038.6		0.606	3.824	87.906	6.486	1.006	0.062	0.080	0.011	0.008	0.011	0.000				1318.37	
30	0.6212	1019.3	1037.3		0.669	3.859	87.719	6.674	0.935	0.052	0.066	0.009	0.006	0.009	0.000				1316.13	
31	0.6204	1019.7	1037.8		0.591	3.879	87.754	6.725	0.916	0.049	0.062	0.009	0.006	0.009	0.000				1317.52	
Avg	0.6245	1020.0	1038.5		0.535	4.303	86.876	7.146	1.011	0.044	0.069	0.006	0.005	0.004	0.000				1314.12	

*Zone 28*

**GQ Source Daily Summary**

October 2008

Number: 271

Pressure Base: 14.730

Name: DICKINSON BORDER

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	Cr'therm
1	0.6239	1019.2	1037.3		0.564	4.270	86.934	7.145	0.974	0.038	0.063	0.000	0.000	0.011	0.000				1313.24	
2	0.6304	1029.3	1047.5		0.505	4.359	85.703	8.189	1.120	0.041	0.071	0.000	0.000	0.012	0.000				1319.34	
3	0.6241	1018.6	1036.7		0.523	4.391	86.807	7.207	0.966	0.036	0.059	0.000	0.000	0.011	0.000				1312.21	
4	0.6250	1021.6	1039.6		0.508	4.316	86.544	7.626	0.920	0.028	0.047	0.000	0.000	0.011	0.000				1315.10	
5	0.6283	1024.9	1043.0		0.577	4.324	86.049	7.928	1.029	0.030	0.052	0.000	0.000	0.011	0.000				1315.88	
6	0.6275	1022.7	1040.8		0.632	4.300	86.264	7.687	1.022	0.030	0.054	0.000	0.000	0.012	0.000				1313.88	
7	0.6227	1017.0	1035.0		0.580	4.276	87.066	7.079	0.920	0.025	0.043	0.000	0.000	0.011	0.000				1311.56	
8	0.6174	1007.8	1025.6		0.578	4.334	88.142	5.978	0.873	0.032	0.052	0.000	0.000	0.012	0.000				1305.31	
9	0.6227	1016.2	1034.2		0.587	4.311	87.212	6.781	1.001	0.034	0.063	0.000	0.000	0.012	0.000				1310.55	
10	0.6230	1017.2	1035.2		0.514	4.386	87.056	6.943	0.995	0.034	0.059	0.000	0.000	0.012	0.000				1311.57	
11	0.6251	1021.7	1039.8		0.469	4.382	86.627	7.374	1.035	0.037	0.062	0.000	0.000	0.011	0.000				1315.09	
12	0.6232	1018.2	1036.2		0.461	4.425	86.999	6.988	1.007	0.039	0.069	0.000	0.000	0.012	0.000				1312.62	
13	0.6182	1010.5	1028.4		0.428	4.468	87.838	6.270	0.899	0.033	0.054	0.000	0.000	0.011	0.000				1308.06	
14	0.6208	1015.4	1033.4		0.434	4.411	87.433	6.628	0.977	0.039	0.067	0.000	0.000	0.011	0.000				1311.53	
15	0.6213	1014.9	1032.9		0.538	4.331	87.382	6.705	0.941	0.034	0.058	0.000	0.000	0.011	0.000				1310.36	
16	0.6188	1009.8	1027.7		0.581	4.339	87.869	6.233	0.878	0.032	0.057	0.000	0.000	0.011	0.000				1306.43	
17	0.6259	1025.1	1043.3		0.549	4.117	86.839	7.180	1.135	0.060	0.105	0.000	0.001	0.014	0.000				1318.75	
18	0.6285	1025.6	1043.7		0.492	4.432	86.056	7.773	1.125	0.042	0.070	0.000	0.000	0.011	0.000				1316.49	
19	0.6273	1023.1	1041.2		0.537	4.390	86.333	7.528	1.092	0.040	0.069	0.000	0.000	0.011	0.000				1314.72	
20	0.6257	1021.6	1039.6		0.486	4.422	86.594	7.286	1.086	0.043	0.073	0.000	0.000	0.011	0.000				1314.28	
21	0.6246	1020.4	1038.5		0.433	4.468	86.681	7.273	1.030	0.039	0.064	0.000	0.000	0.011	0.000				1313.96	
22	0.6231	1018.2	1036.3		0.411	4.489	86.993	6.949	1.037	0.042	0.068	0.000	0.000	0.011	0.000				1312.79	
23	0.6238	1019.1	1037.1		0.439	4.459	86.899	7.035	1.043	0.043	0.070	0.000	0.000	0.011	0.000				1313.15	
24	0.6235	1018.2	1036.2		0.456	4.456	86.937	7.017	1.018	0.038	0.067	0.000	0.000	0.011	0.000				1312.37	
25	0.6234	1017.0	1035.0		0.483	4.482	86.927	7.017	0.980	0.035	0.063	0.000	0.000	0.012	0.000				1310.87	
26	0.6204	1015.8	1033.8		0.558	4.157	87.672	6.535	0.959	0.042	0.064	0.000	0.000	0.014	0.000				1312.54	
27	0.6203	1019.7	1037.8		0.598	3.853	87.887	6.503	1.007	0.058	0.076	0.000	0.000	0.017	0.000				1317.60	
28	0.6208	1021.2	1039.3		0.600	3.808	87.853	6.534	1.040	0.064	0.084	0.000	0.000	0.018	0.000				1318.97	
29	0.6202	1018.3	1036.4		0.649	3.851	87.845	6.589	0.935	0.051	0.065	0.000	0.000	0.017	0.000				1315.95	
30	0.6193	1018.1	1036.1		0.602	3.850	87.942	6.575	0.907	0.047	0.060	0.000	0.000	0.017	0.000				1316.62	
31	0.6184	1017.9	1035.9		0.569	3.832	88.151	6.368	0.944	0.052	0.067	0.000	0.000	0.017	0.000				1317.25	
Avg	0.6231	1019.0	1036.9		0.528	4.279	87.082	6.997	0.996	0.040	0.064	0.000	0.000	0.012	0.000				1313.52	

*Zone 31*

**GQ Source Daily Summary**

October 2008

Number: 051

Name: CABIN CREEK 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'herm
1	0.6400	1019.9	1038.0		0.630	4.480	93.578	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
2	0.6400	1019.9	1038.0		0.630	4.480	93.568	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
3	0.6400	1019.9	1038.0		0.630	4.480	93.574	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
4	0.6400	1019.9	1038.0		0.630	4.480	93.578	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
5	0.6400	1019.9	1038.0		0.630	4.480	93.578	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
6	0.6400	1019.9	1038.0		0.630	4.480	93.578	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
7	0.6400	1019.9	1038.0		0.630	4.480	93.577	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
8	0.6400	1019.9	1038.0		0.630	4.480	93.578	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
9	0.6400	1019.9	1038.0		0.630	4.480	93.578	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
10	0.6400	1019.9	1038.0		0.630	4.480	93.568	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
11	0.6400	1019.9	1038.0		0.630	4.480	93.577	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
12	0.6400	1019.9	1038.0		0.630	4.480	93.578	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
13	0.6400	1019.9	1038.0		0.630	4.480	93.578	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
14	0.6400	1019.9	1038.0		0.630	4.480	93.576	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
15	0.6400	1019.9	1038.0		0.630	4.480	93.576	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
16	0.6400	1019.9	1038.0		0.630	4.480	93.578	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
17	0.6400	1019.9	1038.0		0.630	4.480	93.578	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
18	0.6400	1019.9	1038.0		0.630	4.480	93.576	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
19	0.6400	1019.9	1038.0		0.630	4.480	93.574	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
20	0.6400	1019.9	1038.0		0.630	4.480	93.573	0.000	1.178	0.046	0.077	0.005	0.005	0.001	0.000				1297.50	
21	0.6293	1018.6	1036.6		0.501	4.549	88.957	4.798	1.068	0.044	0.073	0.005	0.005	0.001	0.000				1297.50	
22	0.6220	1015.1	1033.1		0.432	4.552	87.233	6.644	1.008	0.046	0.073	0.005	0.005	0.002	0.000				1306.75	
23	0.6263	1022.1	1040.2		0.421	4.538	86.529	7.221	1.142	0.052	0.084	0.006	0.005	0.002	0.000				1309.90	
24	0.6219	1014.2	1032.1		0.486	4.521	87.228	6.693	0.956	0.039	0.067	0.005	0.004	0.002	0.000				1314.49	
25	0.6234	1015.9	1033.8		0.495	4.543	86.960	6.904	0.978	0.039	0.069	0.005	0.005	0.002	0.000				1308.76	
26	0.6186	1013.5	1031.5		0.610	4.060	88.118	6.153	0.922	0.049	0.068	0.008	0.006	0.006	0.000				1309.38	
27	0.6215	1020.5	1036.6		0.604	3.911	87.760	6.510	1.036	0.065	0.086	0.011	0.008	0.009	0.000				1311.39	
28	0.6200	1018.7	1036.8		0.631	3.834	88.040	6.341	0.983	0.062	0.080	0.011	0.008	0.010	0.000				1317.38	
29	0.6202	1016.9	1034.9		0.676	3.904	87.890	6.471	0.916	0.052	0.067	0.009	0.006	0.008	0.000				1316.73	
30	0.6185	1015.4	1033.4		0.603	3.944	88.096	6.351	0.870	0.050	0.064	0.008	0.006	0.008	0.000				1314.07	
31	0.6143	1011.0	1028.9		0.586	3.844	88.972	5.604	0.843	0.055	0.068	0.010	0.007	0.010	0.000				1314.00	
Avg	0.6334	1019.0	1036.8		0.601	4.381	91.525	2.248	1.106	0.047	0.076	0.006	0.005	0.002	0.000				1302.76	

Zone 32

**GQ Source Daily Summary**

October 2008

Number: 111

Pressure Base: 14.730

Name: LITTLE KNIFE 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	0.6579	1126.8	1146.8		0.000	1.776	80.300	16.243	1.660	0.009	0.010	0.000	0.000	0.001	0.000				1413.84	
2	0.6617	1132.2	1152.2		0.000	1.805	79.749	16.539	1.884	0.010	0.011	0.000	0.000	0.001	0.000				1416.50	
3	0.6674	1140.6	1160.8		0.000	1.827	78.992	16.859	2.296	0.012	0.012	0.000	0.000	0.002	0.000				1420.93	
4	0.6687	1142.5	1162.7		0.000	1.835	78.855	16.860	2.423	0.012	0.013	0.000	0.000	0.002	0.000				1421.85	
5	0.6688	1142.8	1163.0		0.000	1.824	78.792	16.985	2.374	0.011	0.012	0.000	0.000	0.002	0.000				1422.15	
6	0.6715	1147.2	1167.5		0.000	1.807	78.428	17.187	2.549	0.014	0.013	0.000	0.000	0.002	0.000				1424.78	
7	0.6673	1140.8	1161.0		0.000	1.808	79.093	16.693	2.377	0.013	0.013	0.000	0.000	0.002	0.000				1421.25	
8	0.6691	1143.4	1163.6		0.000	1.821	78.899	16.700	2.551	0.013	0.013	0.000	0.000	0.002	0.000				1422.49	
9	0.6706	1145.7	1166.0		0.000	1.813	78.634	16.939	2.587	0.012	0.013	0.000	0.000	0.002	0.000				1423.90	
10	0.6678	1141.4	1161.6		0.000	1.814	79.014	16.758	2.388	0.012	0.012	0.000	0.000	0.002	0.000				1421.50	
11	0.6667	1140.0	1160.2		0.000	1.797	79.056	16.909	2.214	0.011	0.011	0.000	0.000	0.002	0.000				1420.93	
12	0.6652	1137.8	1157.9		0.000	1.799	79.264	16.786	2.128	0.010	0.011	0.000	0.000	0.002	0.000				1419.66	
13	0.6642	1135.4	1155.5		0.000	1.845	79.277	16.915	1.942	0.009	0.010	0.000	0.000	0.001	0.000				1417.86	
14	0.6660	1138.5	1158.6		0.000	1.826	79.203	16.723	2.225	0.010	0.011	0.000	0.000	0.002	0.000				1419.73	
15	0.6661	1139.0	1159.1		0.000	1.810	79.161	16.806	2.195	0.011	0.014	0.001	0.001	0.002	0.000				1420.19	
16	0.6678	1141.7	1161.9		0.000	1.797	78.991	16.824	2.365	0.010	0.011	0.000	0.000	0.002	0.000				1421.83	
17	0.6690	1143.4	1163.7		0.000	1.803	78.806	16.942	2.425	0.011	0.012	0.000	0.000	0.002	0.000				1422.74	
18	0.6680	1142.9	1163.1		0.000	1.750	78.955	16.893	2.377	0.011	0.012	0.000	0.000	0.002	0.000				1423.05	
19	0.6685	1143.8	1164.1		0.000	1.738	78.955	16.805	2.477	0.011	0.012	0.000	0.000	0.002	0.000				1423.69	
20	0.6634	1135.9	1156.0		0.000	1.739	79.678	16.417	2.140	0.013	0.013	0.000	0.000	0.001	0.000				1419.29	
21	0.6655	1139.1	1159.3		0.000	1.736	79.498	16.345	2.395	0.011	0.012	0.000	0.000	0.002	0.000				1421.11	
22	0.6606	1131.6	1151.6		0.000	1.737	80.123	16.094	2.024	0.010	0.011	0.000	0.000	0.001	0.000				1416.92	
23	0.6635	1136.3	1156.4		0.000	1.729	79.685	16.371	2.192	0.010	0.011	0.000	0.000	0.001	0.000				1419.62	
24	0.6631	1135.2	1155.3		0.000	1.755	79.742	16.315	2.166	0.010	0.011	0.000	0.000	0.001	0.000				1418.72	
25	0.6620	1132.6	1152.7		0.000	1.814	79.602	16.744	1.818	0.009	0.011	0.000	0.000	0.001	0.000				1416.63	
26	0.6627	1133.7	1153.8		0.000	1.808	79.425	16.970	1.776	0.009	0.010	0.000	0.000	0.001	0.000				1417.34	
27	0.6602	1130.7	1150.8		0.000	1.754	80.160	16.098	1.950	0.013	0.017	0.002	0.002	0.004	0.000				1416.25	
28	0.6601	1131.3	1151.3		0.000	1.706	80.363	15.755	2.154	0.010	0.011	0.000	0.000	0.001	0.000				1417.09	
29	0.6616	1132.9	1153.0		0.000	1.752	80.072	15.968	2.186	0.010	0.011	0.000	0.000	0.001	0.000				1417.47	
30	0.6634	1135.1	1155.2		0.000	1.786	79.682	16.341	2.169	0.010	0.011	0.000	0.000	0.001	0.000				1418.34	
31	0.6622	1133.9	1154.0		0.000	1.746	79.924	16.150	2.159	0.010	0.011	0.000	0.000	0.001	0.000				1418.11	
AVG	0.6652	1138.0	1158.0		0.000	1.786	79.367	16.611	2.212	0.011	0.012	0.000	0.000	0.002	0.000				1419.86	

*Zone 33*

## Williston Basin Interstate Pipeline Co. GQ Source Analysis

GQ Source Number:	1202160	Specific Gravity:	0.8060
GQ Source Name:	BOWMAN BORDER	BTU Base:	Dry
Effective Date:	9/10/2008 9:00:00 AM	Dry Heat Value:	1175.53
Effective End Date:	1/18/2038 9:14:07 PM	Wet Heat Value:	1155.08
Pressure Base:	14.730	As Deliv. Heat Value:	1175.53
Viscosity:			

		Mol %	Imported GPM	Calculated GPM
C1	Methane	54.088		
C2	Ethane	28.258		7.535
C3	Propane	4.549	1.251	1.250
IC4	Iso-Butane	0.077	0.025	0.025
NC4	N-Butane	0.220	0.069	0.069
IC5	Iso-Pentane	0.010	0.004	0.004
NC5	N-Pentane	0.025	0.009	0.009
C6+	Hexanes Plus	0.003	0.001	0.001
CO2	Carbon Dioxide	2.284		
N2	Nitrogen	10.484		
O2	Oxygen	0.000		
HE	Helium			
H2	Hydrogen			
H2S	Hydrogen Sulfide			
<b>Totals</b>		99.998	1.359	8.893

Sample Date: 8/31/2008 12:00:00 AM  
 Sample Type: Composite  
 Sample Tech: sampler

Sample Remarks: Zone 34

Analysis Remarks:



<b>NORTH DAKOTA HEATING VALUE ZONES</b>		
<b>ZONES</b>	<b>MEASURING DEVICE</b>	<b>LOCATION</b>
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
264	Monthly Sampler	Williston – Ray
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	OCT 08	SEPT 08	AUG 08	JULY 08	JUNE 08	MAY 08	APR 08	MAR 08	FEB 08	JAN 08	DEC 07	NOV 07	ZONE
MT/ND	211	Sidney Area	1151	1195	1194	1192	1192	1195	1190	1180	1095	1028	1075	1124	1160	21
ND	24	Williston Area	1180	1173	1175	1189	1189	1189	1183	1167	1160	1173	1161	1192	1195	24
ND	25	Watford City Area	1126	1130	1129	1131	1132	1130	1130	1120	1119	1125	1126	1118	1118	25
ND	261	Williston - Tioga - Minot Line	1137	1112	1130	1135	1148	1141	1147	1155	1140	1126	1136	1142	1147	261
ND	262	Minot Area	1140	1116	1133	1141	1147	1144	1152	1156	1141	1127	1136	1143	1149	262
ND	263	Tioga - Portal	1133	1129	1142	1145	1141	1132	1136	1127	1125	1130	1129	1132	1128	263
ND	264	Williston - Ray	1182	1173	1175	1189	1189	1189	1193	1167	0	0	0	0	0	264
ND	271	Bismarck - Cleveland	1107	1068	1127	1140	1146	1142	1151	1138	1086	1053	1059	1063	1105	271
ND	272	Cleveland - Mapleton	1106	1068	1126	1140	1146	1142	1151	1137	1086	1052	1059	1062	1107	272
ND	273	Cleveland - Grafton	1106	1068	1127	1140	1146	1142	1151	1137	1086	1052	1059	1062	1107	273
ND	28	Bismarck - Cabin Creek	1071	1038	1088	1116	1147	1143	1135	1035	1023	1022	1017	1015	1030	28
ND	31	Dickinson Area	1029	1037	1038	1044	1040	1032	1037	1023	1022	1021	1016	1014	1023	31
ND/MT	32	Cabin Creek - Dickinson	1026	1037	1032	1036	1036	1027	1031	1019	1020	1019	1014	1012	1021	32
ND	33	Killdeer	1138	1158	1158	1161	1158	1149	1146	1126	1122	1118	1114	1111	1118	33
ND	34	Bowman Area	1170	1158	1176	1179	1170	1165	1167	1158	1161	1165	1174	1182	1189	34
ND	35	Baker Field - North Dakota	975	974	974	974	974	976	976	976	976	976	976	976	976	35

<b>THERMAL ZONE VARIANCE DOCUMENTATION</b>		
<b>October 2008</b>		
<b><i>ZONE</i></b>	<b><i>BTU VARIANCE</i></b>	<b><i>REASON</i></b>
271	-59	Receipt from Cabin Creek Area
272	-58	Receipt from Cabin Creek Area
273	-59	Receipt from Cabin Creek Area
28	-50	Receipt from Cabin Creek Area