



# MONTANA-DAKOTA

UTILITIES CO.

A Division of MDU Resources Group, Inc.

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

February 22, 2012

**RECEIVED**

FEB 24 2012

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 – January 2012

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 February 2012.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our supplier for the month of January 2012. There is a report for each of the 17 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.

There were no thermal variances for the month of January 2012.

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  
Regulatory Affairs Manager

MONTANA-DAKOTA UTILITIES CO.  
Therm Billing Factor  
FEB 2012

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	314	APPLE VALLEY	271	1.0845
12	323	BERTHOLD	262	1.0966
12	327	BISMARCK	28	1.0353
12	337	BURLINGTON	262	1.1202
12	343	CARRINGTON	273	1.0836
12	344	CLEVELAND	272	1.0750
12	364	CAVALIER	273	1.1064
12	365	DAWSON	271	1.0769
12	368	DES LACS	262	1.1045
12	374	FT TOTTEN	273	1.0912
12	375	DEVILS LAKE	273	1.0912
12	379	BARLOW	273	1.0836
12	387	ELDRIDGE	272	1.0826
12	411	GLEN ULLIN	31	1.0125
12	416	GARRISON	262	1.1045
12	417	GRAFTON	273	1.1140
12	439	HANKINSON	600	1.0758
12	449	JAMESTOWN	272	1.0902
12	463	LANGDON	273	1.0836
12	475	LINTON	802	.9861
12	478	LINCOLN	28	1.0353
12	494	MEDINA	271	1.0769
12	498	MANDAN	28	1.0353
12	505	MINOT	262	1.1202
12	512	MAX	262	1.0966
12	524	NEW SALEM	28	1.0134
12	532	NEW ROCKFORD	273	1.0836
12	539	PARK RIVER	273	1.1064
12	572	RUTHVILLE	262	1.1202
12	574	SANBORN	272	1.0902
12	593	STEELE	271	1.0769
12	598	SHEYENNE	273	1.0912
12	605	SURREY	262	1.1202
12	610	TAPPEN	271	1.0769
12	619	TURTLE LAKE	262	1.1045

MONTANA-DAKOTA UTILITIES CO.  
Therm Billing Factor  
FEB 2012

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	624	UNDERWOOD	262	1.1045
12	625	VALLEY CITY	272	1.0978
12	629	WALHALLA	273	1.1064
12	646	WASHBURN	262	1.1124
12	647	WILTON	262	1.0966
12	664	RIVERDALE	262	1.1045
12	712	MINOT AFB	262	1.1202
12	717	SPIRITWOOD	272	1.0902
12	718	FAIRMOUNT	600	1.0737
12	732	MSR SITE	273	1.0836
12	733	PAR SITE	273	1.0836
15	303	ALEXANDER	25	1.0767
15	308	ARNEGARD	25	1.0767
15	318	BEACH	32	.9768
15	319	BELFIELD	32	.9840
15	330	BOWMAN	34	1.0521
15	369	DICKINSON	31	1.0052
15	384	EPPING	264	1.1183
15	407	GLADSTONE	31	1.0052
15	413	GOLVA	32	.9625
15	429	HEBRON	31	1.0125
15	459	KILLDEER	33	1.1136
15	469	LEFOR	31	1.0052
15	474	LIGNITE	263	1.0226
15	500	MARMARTH	34	1.0599
15	510	MOTT	31	1.0052
15	522	NEW ENGLAND	31	.9979
15	540	PALERMO	262	1.0966
15	558	RAY	264	1.1183
15	561	REGENT	31	1.0052
15	563	RHAME	34	1.0445
15	564	RICHARDTON	31	.9979
15	568	ROSS	261	1.0877
15	583	SENTINEL BUTTE	32	.9768
15	588	SOUTH HEART	31	.9979

MONTANA-DAKOTA UTILITIES CO.  
Therm Billing Factor  
FEB 2012

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	590	SPRINGBROOK	264	1.1183
15	591	STANLEY	261	1.0956
15	611	TAYLOR	31	.9979
15	616	TIOGA	261	1.0877
15	620	TRENTON	24	1.1263
15	632	WATFORD CITY	25	1.0767
15	636	WHEELLOCK	264	1.1102
15	637	WHITE EARTH	261	1.0956
15	642	WILLISTON	24	1.1263
15	691	FAIRVIEW	241	1.1359
15	743	BAKER FIELD	35	.8980

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

## GQ Source Daily Summary

### January 2012

Number: 251

Pressure Base: 14.730

Contract Day: 1

Name: SIDNEY AREA

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7153	1195.5	1216.6	0.059	2.910	69.849	24.217	2.831	0.048	0.079	0.004	0.003	0.001	0.000	0.000	0.000	0.000	1438.50	
2	0.7096	1184.7	1205.7	0.063	3.025	70.670	23.578	2.554	0.042	0.085	0.002	0.001	0.000	0.000	0.000	0.000	0.000	1431.26	
3	0.7127	1189.0	1210.0	0.067	3.045	70.415	23.514	2.777	0.061	0.109	0.005	0.005	0.001	0.000	0.000	0.000	0.000	1433.33	
4	0.7157	1192.9	1214.1	0.065	3.088	69.966	23.720	2.950	0.064	0.115	0.006	0.005	0.001	0.000	0.000	0.000	0.000	1435.09	
5	0.7189	1195.8	1216.9	0.060	3.223	69.506	23.862	3.173	0.057	0.103	0.006	0.006	0.003	0.000	0.000	0.000	0.000	1435.27	
6	0.7156	1192.4	1213.5	0.050	3.143	69.774	24.015	2.899	0.044	0.068	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1434.43	
7	0.7156	1191.0	1212.1	0.057	3.213	69.834	23.867	2.873	0.055	0.093	0.004	0.004	0.001	0.000	0.000	0.000	0.000	1432.78	
8	0.7148	1189.5	1210.6	0.060	3.220	70.037	23.611	2.918	0.055	0.091	0.004	0.003	0.001	0.000	0.000	0.000	0.000	1431.86	
9	0.7164	1192.3	1213.4	0.058	3.206	69.702	23.961	2.922	0.054	0.090	0.004	0.003	0.001	0.000	0.000	0.000	0.000	1433.61	
10	0.7184	1196.3	1217.5	0.057	3.150	69.411	24.216	3.009	0.055	0.093	0.004	0.004	0.001	0.000	0.000	0.000	0.000	1436.41	
11	0.7160	1192.0	1213.1	0.053	3.198	69.647	24.123	2.861	0.044	0.069	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1433.61	
12	0.7124	1184.2	1205.1	0.054	3.335	70.209	23.565	2.735	0.041	0.057	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1427.79	
13	0.7164	1193.1	1214.3	0.051	3.164	69.540	24.285	2.864	0.040	0.053	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1434.63	
14	0.7141	1187.6	1208.6	0.058	3.273	69.964	23.800	2.790	0.043	0.067	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1430.27	
15	0.7162	1192.6	1213.7	0.054	3.173	69.636	24.120	2.927	0.036	0.052	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1434.18	
16	0.7130	1186.7	1207.8	0.057	3.227	69.951	24.071	2.610	0.033	0.049	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1430.35	
17	0.7142	1189.0	1210.0	0.050	3.219	69.774	24.164	2.721	0.029	0.041	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1431.77	
18	0.7114	1184.9	1205.9	0.052	3.198	70.089	24.128	2.469	0.025	0.035	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1429.72	
19	0.7063	1176.4	1197.2	0.044	3.257	70.813	23.638	2.191	0.023	0.032	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1424.48	
20	0.7116	1187.4	1208.4	0.043	3.080	70.193	24.028	2.581	0.029	0.043	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1432.47	
21	0.7119	1187.4	1208.4	0.042	3.103	70.221	23.906	2.643	0.031	0.049	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1432.27	
22	0.7118	1186.9	1207.9	0.043	3.125	70.324	23.687	2.731	0.033	0.052	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1431.73	
23	0.7139	1190.5	1211.6	0.045	3.093	70.101	23.752	2.920	0.035	0.051	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1434.03	
24	0.7065	1177.3	1198.1	0.048	3.208	71.008	23.304	2.353	0.029	0.045	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1425.42	
25	0.7130	1190.3	1211.3	0.043	3.034	70.176	23.843	2.817	0.034	0.049	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1434.57	
26	0.7077	1180.4	1201.3	0.053	3.128	70.897	23.473	2.435	0.030	0.042	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1427.93	
27	0.7158	1191.9	1213.0	0.049	3.184	69.614	24.244	2.808	0.038	0.059	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1433.79	
28	0.7148	1188.1	1209.1	0.059	3.315	69.758	23.998	2.779	0.036	0.055	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1430.10	
29	0.7124	1185.9	1206.9	0.051	3.234	70.056	23.966	2.611	0.032	0.046	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1429.89	
30	0.7169	1191.3	1212.4	0.048	3.329	69.420	24.220	2.896	0.033	0.050	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1431.92	
31	0.7161	1180.6	1201.5	0.274	3.559	69.880	23.271	2.861	0.053	0.091	0.005	0.005	0.001	0.000	0.000	0.000	0.000	1419.92	
Avg	0.7137	1189.0	1209.6	0.060	3.182	70.012	23.876	2.758	0.041	0.064	0.003	0.002	0.001	0.000	0.000	0.000	0.000	1431.72	

Zone 211

# GQ Source Analysis

Williston Basin Interstate Pipeline Co.

<b>GQ Source Number:</b>	0602160	<b>Specific Gravity:</b>	0.7201
<b>GQ Source Name:</b>	FAIRVIEW BORDER	<b>Dry Heat Value:</b>	1193.98
<b>Effective Date:</b>	1/1/2012 9:00:00 AM	<b>Wet Heat Value:</b>	1173.20
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>As Deliv. Heat Value:</b>	1193.98
<b>Pressure Base:</b>	14.730	<b>Sample Pressure:</b>	0.00
<b>Viscosity:</b>		<b>Sample Temperature:</b>	

	<u>Mol %</u>	<u>Liquid Content</u>		<u>Mol %</u>	
C1	Methane	69.699	CO2	Carbon Dioxide	0.724
C2	Ethane	22.455	N2	Nitrogen	3.668
C3	Propane	3.183	O2	Oxygen	0.000
IC4	Isobutane	0.094	He	Helium	
NC4	n-Butane	0.162	H2	Hydrogen	
IC5	Isopentane	0.008	H2S	Hydrogen Sulfide	
NC5	n-Pentane	0.007	Ar	Argon	
C6	Hexanes	0.000	CO	Carbon Monoxide	
C7	Heptanes		H2	Water	
C8	Octanes		Neo-C5	Neopentane	
C9	Nonanes				
C10	Decanes				

Totals 100.000% 6.949 GPM

**Sample Date:** 1/31/2012 12:00:00 AM  
**Sample Type:** Composite  
**Sample Tech:** sampler  
**H2S:** ppm

**Sample Remarks:**

**Analysis Tech:** Mary Berger

**Analysis Remarks:**

*Zone 241*

# GQ Source Analysis

Williston Basin Interstate Pipeline Co.

<b>GQ Source Number:</b>	0602230	<b>Specific Gravity:</b>	0.7286
<b>GQ Source Name:</b>	WATFORD CITY BORDER	<b>Dry Heat Value:</b>	1139.73
<b>Effective Date:</b>	1/1/2012 9:00:00 AM	<b>Wet Heat Value:</b>	1119.89
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>As Deliv. Heat Value:</b>	1139.73
<b>Pressure Base:</b>	14.730	<b>Sample Pressure:</b>	0.00
<b>Viscosity:</b>		<b>Sample Temperature:</b>	

	<u>Mol %</u>	<u>Liquid Content</u>		<u>Mol %</u>
C1 Methane	68.526		CO2 Carbon Dioxide	0.668
C2 Ethane	18.624	4.9661	N2 Nitrogen	7.806
C3 Propane	3.811	1.0469	O2 Oxygen	0.000
IC4 Isobutane	0.183	0.0596	He Helium	
NC4 n-Butane	0.332	0.1046	H2 Hydrogen	
IC5 Isopentane	0.025	0.0093	H2S Hydrogen Sulfide	
NC5 n-Pentane	0.024	0.0086	Ar Argon	
C6 Hexanes	0.000	0.0000	CO Carbon Monoxide	
C7 Heptanes			H2 Water	
C8 Octanes			Neo-C5 Neopentane	
C9 Nonanes				
C10 Decanes				

Totals 100.000% 6.195 GPM

**Sample Date:** 1/31/2012 12:00:00 AM  
**Sample Type:** Composite  
**Sample Tech:** sampler  
**H2S:** ppm

**Sample Remarks:**

**Analysis Tech:** Mary Berger

**Analysis Remarks:**

*Zone 25*

## GQ Source Daily Summary

### January 2012

**Number:** 163

**Pressure Base:** 14.730

**Contract Day:** 1

**Name:** NORTH TIOGA-MINOT

**Temperature Base:**

**Contract Hour:** 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6929	1140.5	1160.8	0.498	3.484	74.227	19.434	2.164	0.062	0.112	0.007	0.007	0.005					1394.42	
2	0.6934	1140.6	1160.8	0.490	3.586	74.172	19.388	2.234	0.059	0.104	0.006	0.005	0.007					1393.99	
3	0.6910	1137.0	1157.1	0.467	3.568	74.537	19.102	2.139	0.061	0.107	0.006	0.005	0.007					1391.98	
4	0.6909	1137.4	1157.5	0.469	3.534	74.586	19.081	2.130	0.064	0.115	0.006	0.006	0.008					1392.52	
5	0.6926	1140.6	1160.8	0.476	3.486	74.312	19.345	2.173	0.067	0.120	0.007	0.007	0.007					1394.75	
6	0.6947	1142.3	1162.5	0.501	3.538	74.043	19.407	2.297	0.070	0.125	0.007	0.006	0.006					1394.75	
7	0.6952	1143.5	1163.7	0.492	3.524	73.973	19.460	2.340	0.069	0.123	0.006	0.006	0.007					1395.73	
8	0.6954	1143.8	1164.0	0.488	3.532	73.919	19.527	2.310	0.071	0.130	0.007	0.007	0.008					1395.88	
9	0.6929	1139.1	1159.3	0.489	3.581	74.377	19.080	2.243	0.072	0.134	0.007	0.008	0.009					1392.67	
10	0.6933	1139.5	1159.7	0.499	3.578	74.281	19.174	2.249	0.070	0.128	0.007	0.007	0.007					1392.78	
11	0.6931	1139.4	1159.6	0.504	3.554	74.146	19.492	2.114	0.062	0.110	0.007	0.007	0.006					1392.93	
12	0.6941	1142.0	1162.2	0.461	3.562	73.950	19.645	2.205	0.058	0.101	0.005	0.005	0.008					1395.02	
13	0.6939	1140.0	1160.2	0.499	3.606	74.098	19.367	2.234	0.065	0.115	0.005	0.005	0.007					1392.76	
14	0.6925	1137.4	1157.6	0.515	3.605	74.243	19.344	2.114	0.060	0.102	0.005	0.004	0.007					1391.05	
15	0.6927	1137.5	1157.7	0.535	3.590	74.229	19.343	2.120	0.062	0.108	0.005	0.005	0.004					1390.95	
16	0.6938	1139.2	1159.4	0.505	3.634	74.068	19.385	2.234	0.059	0.102	0.005	0.005	0.004					1391.94	
17	0.6949	1141.6	1161.8	0.481	3.630	73.964	19.402	2.317	0.066	0.121	0.007	0.007	0.005					1393.72	
18	0.6934	1139.4	1159.6	0.456	3.664	74.048	19.420	2.271	0.052	0.084	0.004	0.003	0.000					1392.53	
19	0.6947	1142.7	1163.0	0.438	3.605	73.788	19.766	2.253	0.052	0.085	0.004	0.003	0.005					1395.34	
20	0.6941	1141.8	1162.0	0.430	3.617	73.909	19.697	2.152	0.065	0.112	0.006	0.005	0.011					1394.82	
21	0.6947	1141.0	1161.2	0.485	3.643	73.939	19.486	2.249	0.063	0.108	0.005	0.004	0.018					1393.20	
22	0.6982	1146.6	1166.9	0.488	3.623	73.616	19.543	2.435	0.088	0.173	0.011	0.009	0.012					1396.52	
23	0.6944	1139.4	1159.6	0.508	3.671	74.194	19.071	2.309	0.074	0.139	0.009	0.010	0.014					1391.59	
24	0.6933	1138.8	1159.0	0.496	3.625	74.386	18.958	2.288	0.075	0.142	0.009	0.010	0.012					1391.92	
25	0.6924	1134.9	1155.0	0.538	3.715	74.493	18.806	2.210	0.073	0.136	0.008	0.008	0.012					1388.06	
26	0.6947	1140.7	1160.9	0.528	3.592	74.396	18.712	2.491	0.086	0.164	0.010	0.010	0.010					1392.82	
27	0.6919	1133.8	1153.9	0.562	3.692	74.737	18.463	2.295	0.079	0.147	0.008	0.008	0.009					1387.29	
28	0.6927	1136.7	1156.8	0.533	3.644	74.495	18.820	2.279	0.078	0.132	0.008	0.008	0.009					1389.92	
29	0.6924	1136.2	1156.3	0.526	3.658	74.562	18.738	2.267	0.077	0.145	0.009	0.009	0.010					1389.61	
30	0.6942	1139.6	1159.8	0.526	3.608	74.476	18.646	2.467	0.084	0.160	0.010	0.011	0.012					1392.06	
31	0.6933	1138.9	1159.1	0.503	3.609	74.635	18.532	2.420	0.085	0.174	0.012	0.014	0.015					1392.01	
Avg	0.6936	1140.0	1159.9	0.496	3.597	74.219	19.214	2.258	0.068	0.124	0.007	0.007	0.008					1392.76	

Zone 261

# GQ Source Daily Summary

## January 2012

Number: 091

Pressure Base: 14.730

Contract Day: 1

Name: MINOT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6937	1141.2	1161.4	0.539	3.456	74.174	19.431	2.190	0.067	0.123	0.005	0.004	0.012	0.000	0.000	0.000	0.000	1394.36	
2	0.6944	1142.6	1162.9	0.506	3.475	73.987	19.623	2.228	0.060	0.107	0.002	0.001	0.012	0.000	0.000	0.000	0.000	1395.53	
3	0.6934	1140.8	1161.0	0.498	3.509	74.181	19.399	2.228	0.061	0.108	0.002	0.002	0.012	0.000	0.000	0.000	0.000	1394.23	
4	0.6918	1138.3	1158.5	0.483	3.537	74.444	19.175	2.162	0.064	0.117	0.004	0.002	0.012	0.000	0.000	0.000	0.000	1392.77	
5	0.6919	1139.4	1159.6	0.487	3.468	74.415	19.304	2.121	0.065	0.119	0.004	0.003	0.013	0.000	0.000	0.000	0.000	1394.08	
6	0.6948	1143.8	1164.0	0.499	3.454	74.046	19.495	2.287	0.071	0.129	0.005	0.004	0.012	0.000	0.000	0.000	0.000	1396.50	
7	0.6953	1143.3	1163.5	0.516	3.507	73.960	19.485	2.320	0.069	0.124	0.004	0.003	0.012	0.000	0.000	0.000	0.000	1395.39	
8	0.6962	1145.3	1165.6	0.504	3.484	73.815	19.630	2.350	0.071	0.128	0.004	0.003	0.012	0.000	0.000	0.000	0.000	1396.98	
9	0.6951	1143.1	1163.4	0.499	3.523	73.994	19.468	2.279	0.075	0.139	0.006	0.005	0.013	0.000	0.000	0.000	0.000	1395.40	
10	0.6936	1140.6	1160.8	0.501	3.537	74.280	19.176	2.275	0.073	0.136	0.005	0.005	0.013	0.000	0.000	0.000	0.000	1393.76	
11	0.6934	1139.8	1160.0	0.522	3.532	74.163	19.428	2.152	0.066	0.120	0.004	0.004	0.010	0.000	0.000	0.000	0.000	1393.06	
12	0.6943	1142.7	1163.0	0.477	3.512	73.926	19.707	2.198	0.059	0.104	0.001	0.001	0.014	0.000	0.000	0.000	0.000	1395.66	
13	0.6956	1143.8	1164.1	0.497	3.530	73.773	19.750	2.259	0.065	0.113	0.001	0.000	0.012	0.000	0.000	0.000	0.000	1395.76	
14	0.6933	1138.7	1158.8	0.524	3.585	74.154	19.388	2.165	0.068	0.108	0.001	0.000	0.012	0.000	0.000	0.000	0.000	1391.80	
15	0.6928	1138.2	1158.4	0.540	3.550	74.195	19.428	2.108	0.062	0.106	0.000	0.000	0.012	0.000	0.000	0.000	0.000	1391.66	
16	0.6945	1140.4	1160.6	0.550	3.553	74.002	19.485	2.225	0.062	0.110	0.002	0.002	0.010	0.000	0.000	0.000	0.000	1392.72	
17	0.6955	1142.6	1162.8	0.500	3.599	73.814	19.589	2.312	0.064	0.112	0.001	0.001	0.010	0.000	0.000	0.000	0.000	1394.27	
18	0.6944	1141.0	1161.2	0.482	3.612	73.985	19.448	2.296	0.059	0.104	0.002	0.003	0.008	0.000	0.000	0.000	0.000	1393.51	
19	0.6959	1144.5	1164.8	0.459	3.576	73.665	19.801	2.352	0.051	0.085	0.000	0.000	0.011	0.000	0.000	0.000	0.000	1396.28	
20	0.6944	1142.9	1163.1	0.437	3.568	73.791	19.897	2.136	0.056	0.099	0.000	0.000	0.016	0.000	0.000	0.000	0.000	1395.81	
21	0.6965	1144.4	1164.6	0.489	3.593	73.663	19.757	2.287	0.066	0.121	0.002	0.000	0.022	0.000	0.000	0.000	0.000	1395.53	
22	0.6952	1142.0	1162.2	0.485	3.609	73.874	19.567	2.243	0.066	0.120	0.003	0.002	0.020	0.000	0.000	0.000	0.000	1393.92	
23	0.6981	1146.5	1166.8	0.502	3.591	73.769	19.345	2.473	0.091	0.186	0.011	0.011	0.020	0.000	0.000	0.000	0.000	1396.49	
24	0.6955	1141.6	1161.9	0.535	3.597	74.102	19.127	2.368	0.081	0.156	0.008	0.008	0.018	0.000	0.000	0.000	0.000	1393.16	
25	0.6924	1135.9	1156.0	0.534	3.661	74.420	18.996	2.161	0.070	0.130	0.005	0.005	0.017	0.000	0.000	0.000	0.000	1389.25	
26	0.6943	1140.1	1160.3	0.535	3.577	73.398	19.305	2.212	0.082	0.158	0.008	0.007	0.017	0.000	0.000	0.000	0.000	1392.49	
27	0.6939	1138.4	1158.5	0.574	3.588	74.472	18.717	2.379	0.083	0.158	0.007	0.007	0.015	0.000	0.000	0.000	0.000	1390.77	
28	0.6931	1136.5	1156.6	0.566	3.637	74.498	18.716	2.306	0.077	0.145	0.006	0.005	0.014	0.000	0.000	0.000	0.000	1389.30	
29	0.6931	1137.6	1157.8	0.538	3.611	74.429	18.916	2.264	0.076	0.142	0.006	0.005	0.015	0.000	0.000	0.000	0.000	1390.69	
30	0.6945	1140.0	1160.2	0.540	3.590	74.370	18.918	2.405	0.082	0.151	0.009	0.009	0.016	0.000	0.000	0.000	0.000	1392.24	
31	0.6936	1139.4	1159.5	0.530	3.564	74.478	18.786	2.384	0.078	0.149	0.007	0.007	0.017	0.000	0.000	0.000	0.000	1392.29	
Avg	0.6943	1141.0	1161.4	0.512	3.554	74.104	19.345	2.268	0.069	0.126	0.004	0.004	0.014	0.000	0.000	0.000	0.000	1393.73	

Zone 262

# GQ Source Analysis

Williston Basin Interstate Pipeline Co.

<b>GQ Source Number:</b>	2501030	<b>Specific Gravity:</b>	0.6361
<b>GQ Source Name:</b>	LIGNITE PLANT	<b>Dry Heat Value:</b>	1074.84
<b>Effective Date:</b>	1/1/2012 9:00:00 AM	<b>Wet Heat Value:</b>	1056.13
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>As Deliv. Heat Value:</b>	1074.84
<b>Pressure Base:</b>	14.730	<b>Sample Pressure:</b>	0.00
<b>Viscosity:</b>		<b>Sample Temperature:</b>	

	<u>Mol %</u>	<u>Liquid Content</u>		<u>Mol %</u>
C1 Methane	83.147		CO2 Carbon Dioxide	0.130
C2 Ethane	12.553	3.3471	N2 Nitrogen	3.823
C3 Propane	0.325	0.0892	O2 Oxygen	0.000
IC4 Isobutane	0.000	0.0000	He Helium	
NC4 n-Butane	0.000	0.0000	H2 Hydrogen	
IC5 Isopentane	0.000	0.0000	H2S Hydrogen Sulfide	
NC5 n-Pentane	0.000	0.0000	Ar Argon	
C6 Hexanes	0.023	0.0104	CO Carbon Monoxide	
C7 Heptanes			H2O Water	
C8 Octanes			Neo-C5 Neopentane	
C9 Nonanes				
C10 Decanes				

**Totals** 100.000% 3.447 GPM

**Sample Date:** 1/31/2012 12:00:00 AM  
**Sample Type:** Composite  
**Sample Tech:** sampler  
**H2S:** ppm

**Sample Remarks:**

**Analysis Tech:** Mary Berger

**Analysis Remarks:**

*Zone 263*

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

## GQ Source Daily Summary

### January 2012

Number: 043

Pressure Base: 14.730

Contract Day: 1

Name: BISMARCK-CLEVELAND

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6732	1111.5	1131.2	0.432	3.494	77.845	16.229	1.821	0.055	0.100	0.007	0.007	0.011	0.000	0.000	0.000	0.000	1378.73	
2	0.6671	1101.9	1121.4	0.430	3.516	78.888	15.431	1.642	0.047	0.091	0.005	0.006	0.009	0.000	0.000	0.000	0.000	1372.94	
3	0.6726	1110.4	1130.1	0.433	3.510	77.846	16.282	1.779	0.048	0.083	0.005	0.005	0.010	0.000	0.000	0.000	0.000	1377.90	
4	0.6786	1119.7	1139.5	0.434	3.505	76.735	17.311	1.847	0.052	0.092	0.005	0.005	0.012	0.000	0.000	0.000	0.000	1383.26	
5	0.6808	1123.4	1143.3	0.442	3.470	76.360	17.670	1.879	0.056	0.101	0.006	0.005	0.013	0.000	0.000	0.000	0.000	1385.69	
6	0.6800	1122.6	1142.5	0.430	3.464	76.504	17.546	1.875	0.056	0.101	0.006	0.006	0.012	0.000	0.000	0.000	0.000	1385.48	
7	0.6806	1122.2	1142.1	0.450	3.518	76.474	17.421	1.953	0.058	0.103	0.006	0.006	0.011	0.000	0.000	0.000	0.000	1384.31	
8	0.6822	1125.1	1145.0	0.452	3.490	76.221	17.631	2.023	0.058	0.103	0.006	0.005	0.012	0.000	0.000	0.000	0.000	1386.23	
9	0.6844	1128.3	1148.3	0.456	3.491	75.828	17.985	2.041	0.062	0.113	0.006	0.006	0.012	0.000	0.000	0.000	0.000	1388.03	
10	0.6809	1122.3	1142.2	0.448	3.540	76.451	17.404	1.957	0.061	0.113	0.006	0.006	0.013	0.000	0.000	0.000	0.000	1384.17	
11	0.6662	1099.2	1118.7	0.416	3.614	78.999	15.171	1.646	0.049	0.086	0.005	0.005	0.009	0.000	0.000	0.000	0.000	1370.56	
12	0.6589	1088.3	1107.6	0.418	3.585	80.293	14.108	1.459	0.044	0.074	0.005	0.005	0.009	0.000	0.000	0.000	0.000	1364.49	
13	0.6661	1100.3	1119.8	0.395	3.572	78.933	15.352	1.615	0.043	0.072	0.004	0.004	0.009	0.000	0.000	0.000	0.000	1371.99	
14	0.6710	1107.1	1126.7	0.421	3.578	78.099	16.026	1.724	0.049	0.085	0.005	0.004	0.010	0.000	0.000	0.000	0.000	1375.44	
15	0.6724	1109.5	1129.1	0.428	3.552	77.781	16.404	1.696	0.047	0.076	0.004	0.003	0.010	0.000	0.000	0.000	0.000	1376.98	
16	0.6656	1098.9	1118.4	0.418	3.570	79.005	15.320	1.558	0.048	0.071	0.004	0.004	0.009	0.000	0.000	0.000	0.000	1370.85	
17	0.6556	1082.2	1101.3	0.441	3.614	80.929	13.460	1.432	0.041	0.067	0.005	0.004	0.008	0.000	0.000	0.000	0.000	1360.21	
18	0.6463	1068.2	1087.2	0.433	3.602	82.584	12.044	1.225	0.037	0.059	0.005	0.004	0.006	0.000	0.000	0.000	0.000	1352.31	
19	0.6422	1062.0	1080.8	0.415	3.627	83.299	11.406	1.151	0.034	0.052	0.005	0.004	0.007	0.000	0.000	0.000	0.000	1348.69	
20	0.6461	1068.2	1087.2	0.422	3.605	82.589	12.053	1.232	0.034	0.051	0.004	0.003	0.007	0.000	0.000	0.000	0.000	1352.49	
21	0.6563	1084.6	1103.8	0.390	3.616	80.664	13.834	1.373	0.040	0.066	0.004	0.004	0.010	0.000	0.000	0.000	0.000	1362.48	
22	0.6648	1097.5	1116.9	0.412	3.596	79.213	15.042	1.599	0.044	0.073	0.004	0.004	0.012	0.000	0.000	0.000	0.000	1369.82	
23	0.6644	1096.8	1116.3	0.396	3.618	79.413	14.750	1.641	0.055	0.101	0.007	0.007	0.012	0.000	0.000	0.000	0.000	1369.46	
24	0.6654	1097.3	1116.8	0.440	3.613	79.264	14.845	1.664	0.053	0.095	0.007	0.007	0.012	0.000	0.000	0.000	0.000	1369.08	
25	0.6731	1109.5	1129.2	0.448	3.580	77.895	16.068	1.817	0.058	0.106	0.007	0.007	0.014	0.000	0.000	0.000	0.000	1376.36	
26	0.6767	1113.1	1132.8	0.497	3.627	77.264	16.559	1.859	0.060	0.111	0.007	0.007	0.015	0.000	0.000	0.000	0.000	1377.10	
27	0.6732	1110.1	1129.7	0.465	3.529	78.024	15.862	1.914	0.062	0.116	0.007	0.007	0.013	0.000	0.000	0.000	0.000	1376.95	
28	0.6724	1107.2	1126.8	0.483	3.603	78.056	15.859	1.809	0.059	0.107	0.006	0.006	0.013	0.000	0.000	0.000	0.000	1374.22	
29	0.6734	1109.8	1129.4	0.456	3.582	77.823	16.130	1.830	0.056	0.099	0.006	0.006	0.012	0.000	0.000	0.000	0.000	1376.37	
30	0.6773	1115.2	1135.0	0.479	3.586	77.191	16.613	1.924	0.063	0.116	0.008	0.007	0.013	0.000	0.000	0.000	0.000	1379.07	
31	0.6772	1116.2	1136.0	0.452	3.552	77.294	16.489	1.996	0.064	0.121	0.008	0.008	0.015	0.000	0.000	0.000	0.000	1380.44	
Avg	0.6692	1104.0	1123.7	0.437	3.562	78.507	15.623	1.709	0.051	0.090	0.006	0.005	0.011	0.000	0.000	0.000	0.000	1373.62	

Zone 271

# GQ Source Daily Summary

January 2012

Number: 063

Pressure Base: 14.730

Contract Day: 1

Name: CLEVELAND-MAPLETON

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6727	1110.2	1129.9	0.428	3.537	77.931	16.090	1.834	0.055	0.102	0.007	0.008	0.008	0.000	0.000	0.000	0.000	1377.58	
2	0.6677	1102.1	1121.7	0.426	3.559	78.729	15.469	1.666	0.049	0.086	0.006	0.006	0.005	0.000	0.000	0.000	0.000	1372.70	
3	0.6703	1106.4	1126.0	0.431	3.538	78.228	15.933	1.729	0.047	0.082	0.005	0.005	0.001	0.000	0.000	0.000	0.000	1375.31	
4	0.6766	1116.4	1136.1	0.426	3.534	77.063	16.989	1.835	0.050	0.088	0.005	0.005	0.003	0.000	0.000	0.000	0.000	1381.18	
5	0.6796	1120.8	1140.6	0.432	3.534	76.580	17.390	1.886	0.056	0.101	0.006	0.006	0.009	0.000	0.000	0.000	0.000	1383.63	
6	0.6800	1122.0	1141.9	0.433	3.494	76.496	17.532	1.863	0.057	0.103	0.006	0.006	0.010	0.000	0.000	0.000	0.000	1384.75	
7	0.6795	1120.3	1140.2	0.434	3.547	76.666	17.233	1.934	0.059	0.105	0.006	0.006	0.009	0.000	0.000	0.000	0.000	1383.18	
8	0.6809	1122.2	1142.0	0.448	3.545	76.441	17.389	2.000	0.058	0.104	0.006	0.006	0.007	0.000	0.000	0.000	0.000	1384.04	
9	0.6830	1125.7	1145.6	0.449	3.527	76.041	17.778	2.024	0.060	0.107	0.006	0.006	0.003	0.000	0.000	0.000	0.000	1386.24	
10	0.6835	1126.0	1145.9	0.453	3.555	75.997	17.756	2.031	0.066	0.121	0.007	0.007	0.007	0.000	0.000	0.000	0.000	1386.01	
11	0.6709	1106.3	1125.9	0.413	3.632	78.146	15.904	1.738	0.052	0.094	0.006	0.006	0.008	0.000	0.000	0.000	0.000	1374.52	
12	0.6588	1087.3	1106.6	0.416	3.645	80.314	14.001	1.483	0.045	0.078	0.006	0.005	0.005	0.000	0.000	0.000	0.000	1363.31	
13	0.6622	1093.3	1112.7	0.395	3.629	79.647	14.652	1.545	0.043	0.072	0.005	0.004	0.007	0.000	0.000	0.000	0.000	1367.33	
14	0.6705	1106.2	1125.8	0.411	3.599	78.581	15.942	1.719	0.049	0.089	0.005	0.004	0.007	0.000	0.000	0.000	0.000	1374.86	
15	0.6718	1107.7	1127.3	0.423	3.616	77.884	16.231	1.705	0.047	0.078	0.004	0.004	0.007	0.000	0.000	0.000	0.000	1375.34	
16	0.6680	1102.3	1121.8	0.408	3.606	78.545	15.701	1.695	0.045	0.075	0.004	0.004	0.007	0.000	0.000	0.000	0.000	1372.60	
17	0.6567	1083.6	1102.8	0.438	3.639	80.698	13.649	1.451	0.042	0.069	0.005	0.005	0.005	0.000	0.000	0.000	0.000	1360.85	
18	0.6483	1070.7	1089.6	0.427	3.655	82.158	12.404	1.254	0.035	0.055	0.004	0.004	0.004	0.000	0.000	0.000	0.000	1353.27	
19	0.6428	1062.4	1081.2	0.411	3.664	83.220	11.417	1.176	0.037	0.061	0.005	0.005	0.005	0.000	0.000	0.000	0.000	1348.56	
20	0.6438	1064.0	1082.8	0.421	3.646	83.021	11.608	1.206	0.033	0.051	0.004	0.004	0.005	0.000	0.000	0.000	0.000	1349.54	
21	0.6526	1078.1	1097.2	0.384	3.675	81.312	13.204	1.312	0.037	0.060	0.004	0.004	0.007	0.000	0.000	0.000	0.000	1358.13	
22	0.6635	1095.0	1114.4	0.409	3.628	79.448	14.795	1.579	0.046	0.078	0.005	0.004	0.008	0.000	0.000	0.000	0.000	1368.09	
23	0.6624	1093.4	1112.7	0.388	3.658	79.620	14.649	1.539	0.046	0.079	0.005	0.005	0.010	0.000	0.000	0.000	0.000	1367.16	
24	0.6652	1097.2	1116.7	0.417	3.638	79.351	14.695	1.704	0.058	0.101	0.006	0.006	0.010	0.000	0.000	0.000	0.000	1369.13	
25	0.6699	1103.7	1123.3	0.449	3.631	78.507	15.433	1.790	0.058	0.107	0.007	0.007	0.011	0.000	0.000	0.000	0.000	1372.43	
26	0.6746	1109.5	1129.1	0.434	3.677	77.537	16.387	1.780	0.057	0.104	0.006	0.006	0.012	0.000	0.000	0.000	0.000	1374.70	
27	0.6752	1112.8	1132.5	0.444	3.590	77.625	16.172	1.960	0.063	0.119	0.008	0.008	0.012	0.000	0.000	0.000	0.000	1378.22	
28	0.6718	1106.8	1125.9	0.434	3.607	78.210	15.658	1.840	0.061	0.111	0.007	0.007	0.010	0.000	0.000	0.000	0.000	1373.59	
29	0.6714	1105.7	1125.3	0.458	3.640	78.159	15.777	1.795	0.056	0.100	0.006	0.006	0.003	0.000	0.000	0.000	0.000	1373.32	
30	0.6762	1113.1	1132.8	0.469	3.627	77.328	16.489	1.892	0.062	0.115	0.007	0.007	0.005	0.000	0.000	0.000	0.000	1377.59	
31	0.6780	1116.7	1136.5	0.452	3.596	77.134	16.595	2.004	0.065	0.123	0.008	0.009	0.012	0.000	0.000	0.000	0.000	1380.27	
Avg	0.6687	1103.0	1122.4	0.431	3.602	78.588	15.512	1.706	0.052	0.091	0.006	0.006	0.007	0.000	0.000	0.000	0.000	1372.50	

Zone 272

## GQ Source Daily Summary

### January 2012

Number: 061

Pressure Base: 14.730

Contract Day: 1

Name: CLEVELAND-GRAFTON

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6729	1110.6	1130.3	0.428	3.531	77.903	16.116	1.842	0.055	0.103	0.007	0.007	0.008	0.000	0.000	0.000	0.000	1377.88	
2	0.6679	1102.7	1122.2	0.426	3.551	78.686	15.511	1.673	0.049	0.097	0.006	0.006	0.006	0.000	0.000	0.000	0.000	1373.09	
3	0.6705	1106.8	1126.4	0.432	3.531	78.203	15.958	1.736	0.047	0.082	0.005	0.005	0.002	0.000	0.000	0.000	0.000	1375.60	
4	0.6769	1116.9	1136.7	0.427	3.526	77.021	17.030	1.843	0.051	0.089	0.005	0.005	0.003	0.000	0.000	0.000	0.000	1381.55	
5	0.6798	1121.2	1141.1	0.432	3.528	76.542	17.426	1.893	0.057	0.101	0.006	0.006	0.009	0.000	0.000	0.000	0.000	1383.95	
6	0.6803	1122.5	1142.4	0.434	3.488	76.449	17.574	1.872	0.057	0.104	0.006	0.006	0.010	0.000	0.000	0.000	0.000	1385.10	
7	0.6798	1120.9	1140.8	0.435	3.538	76.619	17.279	1.943	0.059	0.106	0.006	0.006	0.009	0.000	0.000	0.000	0.000	1383.60	
8	0.6811	1122.7	1142.6	0.449	3.539	76.393	17.431	2.009	0.059	0.104	0.006	0.006	0.004	0.000	0.000	0.000	0.000	1384.38	
9	0.6832	1126.1	1146.1	0.448	3.520	76.006	17.813	2.030	0.060	0.107	0.006	0.006	0.003	0.000	0.000	0.000	0.000	1386.59	
10	0.6838	1126.5	1146.4	0.454	3.550	75.952	17.798	2.037	0.066	0.122	0.007	0.007	0.008	0.000	0.000	0.000	0.000	1386.37	
11	0.6712	1106.8	1126.4	0.413	3.623	78.108	15.942	1.746	0.053	0.095	0.006	0.006	0.008	0.000	0.000	0.000	0.000	1374.90	
12	0.6590	1087.7	1107.0	0.416	3.639	80.281	14.034	1.488	0.046	0.079	0.006	0.005	0.007	0.000	0.000	0.000	0.000	1363.62	
13	0.6623	1093.6	1113.0	0.395	3.622	79.629	14.671	1.550	0.043	0.072	0.005	0.004	0.008	0.000	0.000	0.000	0.000	1367.59	
14	0.6707	1106.6	1126.2	0.411	3.592	78.148	15.974	1.725	0.050	0.084	0.005	0.004	0.007	0.000	0.000	0.000	0.000	1375.18	
15	0.6720	1108.0	1127.7	0.423	3.611	77.858	16.256	1.711	0.048	0.079	0.004	0.004	0.007	0.000	0.000	0.000	0.000	1375.60	
16	0.6682	1102.8	1122.3	0.408	3.601	78.505	15.741	1.611	0.049	0.075	0.004	0.004	0.007	0.000	0.000	0.000	0.000	1372.92	
17	0.6569	1083.9	1103.1	0.437	3.634	80.674	13.675	1.454	0.042	0.070	0.005	0.005	0.004	0.000	0.000	0.000	0.000	1361.10	
18	0.6486	1071.2	1090.2	0.428	3.649	82.111	12.447	1.262	0.035	0.055	0.004	0.004	0.004	0.000	0.000	0.000	0.000	1353.62	
19	0.6430	1062.8	1081.6	0.412	3.657	83.192	11.445	1.180	0.037	0.061	0.005	0.005	0.005	0.000	0.000	0.000	0.000	1348.83	
20	0.6439	1064.3	1083.1	0.423	3.639	83.005	11.526	1.210	0.034	0.054	0.004	0.004	0.005	0.000	0.000	0.000	0.000	1349.74	
21	0.6528	1078.5	1097.6	0.384	3.668	81.280	13.237	1.316	0.037	0.061	0.004	0.004	0.007	0.000	0.000	0.000	0.000	1358.44	
22	0.6687	1095.4	1114.8	0.409	3.621	79.420	14.877	1.580	0.046	0.079	0.005	0.004	0.008	0.000	0.000	0.000	0.000	1368.37	
23	0.6626	1093.8	1113.1	0.388	3.652	79.587	14.683	1.544	0.046	0.079	0.005	0.005	0.011	0.000	0.000	0.000	0.000	1367.47	
24	0.6654	1097.6	1117.0	0.417	3.631	79.325	14.723	1.706	0.050	0.081	0.008	0.008	0.010	0.000	0.000	0.000	0.000	1369.39	
25	0.6699	1103.9	1123.5	0.450	3.624	78.502	15.441	1.793	0.058	0.107	0.007	0.007	0.011	0.000	0.000	0.000	0.000	1372.60	
26	0.6748	1109.8	1129.4	0.434	3.672	77.548	15.356	1.785	0.057	0.104	0.006	0.006	0.012	0.000	0.000	0.000	0.000	1374.93	
27	0.6754	1113.1	1132.8	0.444	3.585	77.599	16.196	1.965	0.064	0.120	0.008	0.008	0.012	0.000	0.000	0.000	0.000	1378.44	
28	0.6720	1106.6	1126.2	0.485	3.600	78.367	15.685	1.845	0.062	0.124	0.007	0.007	0.010	0.000	0.000	0.000	0.000	1373.85	
29	0.6715	1106.0	1125.6	0.459	3.633	78.135	15.799	1.801	0.056	0.101	0.006	0.006	0.003	0.000	0.000	0.000	0.000	1373.58	
30	0.6764	1113.5	1133.2	0.470	3.619	77.902	16.519	1.896	0.062	0.130	0.007	0.007	0.005	0.000	0.000	0.000	0.000	1377.89	
31	0.6782	1117.2	1137.0	0.453	3.590	77.090	16.637	2.011	0.066	0.124	0.008	0.009	0.012	0.000	0.000	0.000	0.000	1380.60	
Avg	0.6689	1103.0	1122.8	0.431	3.596	78.556	15.544	1.712	0.052	0.092	0.006	0.006	0.007	0.000	0.000	0.000	0.000	1372.80	

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

Zone 273

# GQ Source Daily Summary

January 2012

Number: 041

Pressure Base: 14.730

Contract Day: 1

Name: BISMARCK-DICKINSON

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6419	1064.5	1083.4	0.274	3.662	83.088	11.820	1.078	0.027	0.040	0.004	0.003	0.003	0.000	0.000	0.000	0.000	1352.16	
2	0.6338	1050.9	1069.5	0.310	3.673	84.667	10.513	0.959	0.027	0.040	0.004	0.004	0.004	0.000	0.000	0.000	0.000	1343.40	
3	0.6375	1058.0	1076.8	0.292	3.613	83.965	11.043	1.003	0.029	0.043	0.004	0.004	0.004	0.000	0.000	0.000	0.000	1348.60	
4	0.6421	1066.9	1085.8	0.256	3.555	82.979	12.135	0.999	0.027	0.039	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1355.09	
5	0.6432	1068.0	1086.9	0.254	3.605	82.754	12.298	1.006	0.029	0.044	0.004	0.003	0.003	0.000	0.000	0.000	0.000	1355.20	
6	0.6438	1068.5	1087.4	0.240	3.649	82.630	12.376	1.020	0.029	0.045	0.004	0.003	0.003	0.000	0.000	0.000	0.000	1355.22	
7	0.6425	1065.2	1084.1	0.255	3.704	82.954	11.927	1.073	0.029	0.046	0.004	0.004	0.003	0.000	0.000	0.000	0.000	1352.43	
8	0.6410	1063.3	1082.2	0.260	3.672	83.186	11.797	1.008	0.026	0.039	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1351.61	
9	0.6431	1067.0	1085.8	0.245	3.672	82.769	12.200	1.036	0.028	0.041	0.004	0.003	0.003	0.000	0.000	0.000	0.000	1353.99	
10	0.6445	1068.6	1087.6	0.250	3.687	82.570	12.320	1.084	0.030	0.048	0.004	0.004	0.003	0.000	0.000	0.000	0.000	1354.72	
11	0.6371	1054.5	1073.2	0.309	3.766	83.986	10.883	0.982	0.026	0.040	0.003	0.003	0.003	0.000	0.000	0.000	0.000	1344.53	
12	0.6288	1042.2	1060.6	0.328	3.706	85.641	9.361	0.880	0.029	0.042	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1337.53	
13	0.6333	1050.0	1068.6	0.299	3.698	84.717	10.288	0.921	0.027	0.038	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1342.75	
14	0.6385	1058.8	1077.5	0.279	3.679	83.718	11.251	0.997	0.027	0.038	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1348.52	
15	0.6419	1065.5	1084.4	0.260	3.620	83.067	11.920	1.061	0.027	0.037	0.003	0.003	0.003	0.000	0.000	0.000	0.000	1353.46	
16	0.6391	1060.2	1078.9	0.281	3.647	83.645	11.313	1.035	0.025	0.040	0.004	0.003	0.003	0.000	0.000	0.000	0.000	1349.66	
17	0.6280	1040.1	1058.5	0.378	3.679	85.802	9.224	0.844	0.025	0.036	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1335.76	
18	0.6261	1037.3	1055.6	0.405	3.636	86.134	8.990	0.766	0.024	0.034	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1334.10	
19	0.6256	1036.7	1055.1	0.382	3.660	86.245	8.846	0.790	0.026	0.037	0.004	0.004	0.004	0.000	0.000	0.000	0.000	1333.89	
20	0.6230	1032.3	1050.5	0.406	3.643	86.751	8.402	0.724	0.026	0.036	0.004	0.004	0.005	0.000	0.000	0.000	0.000	1331.03	
21	0.6266	1038.3	1056.7	0.342	3.715	85.951	9.163	0.760	0.024	0.033	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1334.89	
22	0.6335	1050.6	1069.2	0.314	3.652	84.693	10.351	0.915	0.026	0.037	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1343.41	
23	0.6338	1050.9	1069.6	0.291	3.698	84.606	10.410	0.920	0.026	0.038	0.004	0.004	0.004	0.000	0.000	0.000	0.000	1343.48	
24	0.6303	1045.1	1063.6	0.336	3.660	85.344	9.690	0.893	0.026	0.037	0.004	0.004	0.004	0.000	0.000	0.000	0.000	1339.63	
25	0.6345	1052.2	1070.8	0.313	3.658	84.507	10.498	0.951	0.025	0.036	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1344.26	
26	0.6317	1046.9	1065.4	0.333	3.684	84.950	10.155	0.916	0.022	0.034	0.003	0.003	0.004	0.000	0.000	0.000	0.000	1340.47	
27	0.6354	1054.5	1073.2	0.317	3.589	84.306	10.797	0.929	0.023	0.031	0.003	0.002	0.003	0.000	0.000	0.000	0.000	1346.36	
28	0.6365	1056.1	1074.8	0.296	3.637	84.058	11.005	0.939	0.024	0.032	0.003	0.003	0.003	0.000	0.000	0.000	0.000	1347.11	
29	0.6385	1059.5	1078.2	0.274	3.650	83.725	11.253	1.023	0.026	0.037	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1349.34	
30	0.6366	1056.0	1074.7	0.292	3.653	84.090	10.908	0.985	0.026	0.036	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1346.97	
31	0.6410	1064.2	1083.0	0.255	3.628	83.154	11.902	0.997	0.024	0.032	0.003	0.002	0.003	0.000	0.000	0.000	0.000	1352.70	
Avg	0.6359	1055.0	1073.3	0.301	3.660	84.215	10.801	0.948	0.026	0.038	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1345.88	

Zone 28

# GQ Source Daily Summary

## January 2012

Number: 271

Pressure Base: 14.730

Contract Day: 1

Name: DICKINSON AREA

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6372	1057.2	1075.9	0.275	3.654	84.018	10.893	1.095	0.025	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1347.76	
2	0.6340	1052.2	1070.8	0.292	3.634	84.555	10.493	0.961	0.025	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1344.76	
3	0.6408	1064.4	1083.2	0.245	3.593	83.174	11.922	1.007	0.023	0.036	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1353.25	
4	0.6417	1065.2	1084.1	0.244	3.636	82.977	12.075	1.000	0.025	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1353.26	
5	0.6428	1066.6	1085.5	0.219	3.693	82.741	12.258	1.023	0.025	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1353.87	
6	0.6414	1063.0	1081.8	0.239	3.750	83.089	11.785	1.065	0.027	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1350.77	
7	0.6417	1062.7	1081.5	0.248	3.777	83.017	11.840	1.058	0.023	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1350.16	
8	0.6418	1064.5	1083.3	0.233	3.702	82.966	12.008	1.034	0.024	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1352.30	
9	0.6433	1066.4	1085.3	0.234	3.723	82.725	12.163	1.083	0.027	0.045	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1353.17	
10	0.6389	1057.6	1076.4	0.281	3.776	83.523	11.387	0.979	0.021	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1346.60	
11	0.6306	1044.1	1062.6	0.313	3.765	85.248	9.666	0.944	0.025	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1338.17	
12	0.6289	1042.0	1060.5	0.304	3.751	85.524	9.475	0.884	0.025	0.038	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1337.23	
13	0.6385	1057.6	1076.3	0.272	3.751	83.652	11.249	1.014	0.025	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1347.03	
14	0.6398	1061.5	1080.3	0.248	3.678	83.384	11.594	1.043	0.022	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1350.53	
15	0.6406	1063.1	1081.9	0.243	3.664	83.245	11.723	1.064	0.024	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1351.71	
16	0.6315	1046.4	1065.0	0.314	3.708	85.070	9.901	0.945	0.024	0.037	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1340.14	
17	0.6273	1038.7	1057.1	0.378	3.684	85.872	9.176	0.836	0.021	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1334.76	
18	0.6254	1034.9	1053.2	0.394	3.720	86.197	8.863	0.772	0.022	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1331.80	
19	0.6225	1031.0	1049.2	0.393	3.687	86.779	8.335	0.750	0.022	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1329.83	
20	0.6229	1031.8	1050.0	0.355	3.732	86.628	8.506	0.725	0.021	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1330.45	
21	0.6312	1046.3	1064.9	0.320	3.684	85.043	10.021	0.878	0.022	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1340.28	
22	0.6330	1049.7	1068.3	0.282	3.706	84.677	10.362	0.917	0.023	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1342.67	
23	0.6316	1047.1	1065.7	0.297	3.709	84.984	10.030	0.921	0.023	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1340.85	
24	0.6332	1048.3	1066.9	0.308	3.764	84.720	10.181	0.972	0.023	0.033	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1340.74	
25	0.6322	1047.9	1066.4	0.298	3.719	84.778	10.293	0.863	0.019	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1341.14	
26	0.6368	1056.9	1075.6	0.260	3.653	83.965	11.078	0.993	0.021	0.031	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1347.90	
27	0.6337	1051.1	1069.7	0.312	3.637	84.537	10.572	0.898	0.018	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1343.79	
28	0.6367	1056.1	1074.8	0.270	3.681	84.005	10.989	1.008	0.022	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1346.93	
29	0.6362	1054.9	1073.6	0.275	3.691	84.117	10.861	0.999	0.023	0.034	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1346.07	
30	0.6401	1062.4	1081.3	0.240	3.650	83.272	11.775	1.006	0.020	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1351.47	
31	0.6340	1051.3	1069.9	0.297	3.670	84.501	10.559	0.924	0.020	0.029	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1343.79	
Avg	0.6352	1053.0	1071.6	0.287	3.698	84.290	10.710	0.957	0.023	0.035	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1344.62	

Zone 31

# GQ Source Daily Summary

January 2012

**Number:** 051

**Pressure Base:** 14.730

**Contract Day:** 1

**Name:** CABIN CR-DICKINSON

**Temperature Base:**

**Contract Hour:** 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6275	1036.5	1054.8	0.357	3.885	86.038	8.632	0.999	0.031	0.046	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1331.62	
2	0.6334	1047.3	1065.9	0.320	3.831	84.934	9.710	1.110	0.033	0.049	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1339.32	
3	0.6345	1048.3	1066.8	0.306	3.899	84.697	9.881	1.120	0.033	0.052	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1339.35	
4	0.6342	1046.5	1065.1	0.306	3.982	84.773	9.689	1.145	0.035	0.056	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1337.38	
5	0.6352	1047.3	1065.9	0.299	4.039	84.618	9.732	1.202	0.036	0.060	0.005	0.005	0.004	0.000	0.000	0.000	0.000	1337.34	
6	0.6347	1047.0	1065.6	0.303	4.001	84.703	9.704	1.196	0.032	0.051	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1337.53	
7	0.6335	1045.7	1064.2	0.310	3.960	84.888	9.623	1.125	0.032	0.048	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1337.05	
8	0.6368	1050.0	1068.6	0.303	4.020	84.306	10.051	1.215	0.036	0.057	0.005	0.004	0.003	0.000	0.000	0.000	0.000	1339.09	
9	0.6316	1040.1	1058.5	0.346	4.072	85.256	9.127	1.111	0.030	0.048	0.004	0.004	0.003	0.000	0.000	0.000	0.000	1331.85	
10	0.6304	1038.7	1057.1	0.354	4.029	85.500	8.942	1.089	0.031	0.049	0.004	0.004	0.003	0.000	0.000	0.000	0.000	1331.40	
11	0.6247	1031.8	1050.1	0.362	3.894	86.594	8.099	0.958	0.032	0.048	0.005	0.005	0.004	0.000	0.000	0.000	0.000	1328.64	
12	0.6289	1038.7	1057.1	0.335	3.921	85.751	8.869	1.056	0.031	0.045	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1332.92	
13	0.6330	1045.4	1063.9	0.318	3.921	84.972	9.591	1.112	0.030	0.044	0.004	0.004	0.004	0.000	0.000	0.000	0.000	1337.18	
14	0.6354	1050.2	1068.8	0.304	3.875	84.533	10.029	1.171	0.031	0.045	0.004	0.004	0.003	0.000	0.000	0.000	0.000	1340.78	
15	0.6323	1044.8	1063.3	0.330	3.872	85.157	9.429	1.118	0.032	0.048	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1337.17	
16	0.6230	1028.0	1046.2	0.414	3.890	86.916	7.786	0.942	0.028	0.041	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1325.54	
17	0.6198	1022.7	1040.8	0.455	3.848	87.531	7.260	0.825	0.028	0.040	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1322.10	
18	0.6206	1024.8	1042.9	0.420	3.853	87.375	7.408	0.858	0.030	0.043	0.005	0.004	0.005	0.000	0.000	0.000	0.000	1323.89	
19	0.6163	1017.5	1035.6	0.456	3.833	88.218	6.630	0.777	0.029	0.042	0.005	0.004	0.005	0.000	0.000	0.000	0.000	1319.14	
20	0.6196	1022.5	1040.6	0.394	3.949	87.474	7.503	0.810	0.027	0.039	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1322.06	
21	0.6279	1037.6	1056.0	0.354	3.861	85.933	8.776	0.990	0.029	0.043	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1332.62	
22	0.6270	1035.6	1053.9	0.335	3.930	86.095	8.560	0.993	0.030	0.044	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1330.95	
23	0.6250	1032.5	1050.8	0.367	3.877	86.555	8.117	0.997	0.030	0.043	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1329.16	
24	0.6285	1038.3	1056.6	0.346	3.888	85.826	8.845	1.010	0.029	0.043	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1332.83	
25	0.6267	1034.9	1053.2	0.360	3.908	86.117	8.587	0.955	0.026	0.037	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1330.33	
26	0.6276	1037.1	1055.5	0.377	3.823	86.000	8.743	0.989	0.025	0.034	0.004	0.003	0.003	0.000	0.000	0.000	0.000	1332.32	
27	0.6313	1043.4	1061.8	0.330	3.867	85.265	9.405	1.053	0.029	0.040	0.004	0.003	0.003	0.000	0.000	0.000	0.000	1336.39	
28	0.6323	1045.0	1063.5	0.318	3.889	85.100	9.513	1.103	0.030	0.043	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1337.44	
29	0.6323	1044.6	1063.1	0.316	3.899	85.096	9.515	1.092	0.029	0.041	0.004	0.004	0.004	0.000	0.000	0.000	0.000	1337.03	
30	0.6296	1039.9	1058.3	0.344	3.894	85.620	9.016	1.050	0.027	0.039	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1333.76	
31	0.6243	1030.6	1048.9	0.361	3.936	86.616	8.063	0.947	0.027	0.038	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1327.48	
Avg	0.6290	1038.0	1056.9	0.348	3.914	85.757	8.859	1.034	0.030	0.045	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1332.63	

Zone 32

# GQ Source Daily Summary

## January 2012

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	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6856	1158.7	1179.2	0.000	2.458	73.312	23.761	0.457	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.19	
2	0.6852	1158.2	1178.7	0.000	2.450	73.401	23.670	0.455	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.00	
3	0.6858	1158.8	1179.3	0.000	2.472	73.298	23.723	0.494	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.08	
4	0.6849	1157.8	1178.3	0.000	2.447	73.392	23.559	0.492	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.78	
5	0.6863	1159.7	1180.3	0.000	2.459	73.228	23.790	0.512	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.73	
6	0.6849	1158.1	1178.6	0.000	2.437	73.459	23.621	0.472	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.05	
7	0.6850	1157.8	1178.4	0.000	2.454	73.452	23.606	0.478	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.74	
8	0.6852	1158.6	1179.1	0.000	2.424	73.411	23.688	0.467	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.51	
9	0.6868	1160.7	1181.3	0.000	2.452	73.105	23.926	0.505	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.38	
10	0.6852	1158.7	1179.2	0.000	2.418	73.379	23.731	0.448	0.006	0.007	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1424.59	
11	0.6848	1157.7	1178.2	0.000	2.446	73.424	23.702	0.417	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.78	
12	0.6840	1156.5	1176.9	0.000	2.444	73.624	23.478	0.443	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.09	
13	0.6847	1157.3	1177.8	0.000	2.464	73.499	23.561	0.465	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.31	
14	0.6840	1156.1	1176.6	0.000	2.465	73.627	23.450	0.447	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.66	
15	0.6838	1155.9	1176.4	0.000	2.459	73.646	23.453	0.432	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.63	
16	0.6840	1156.6	1177.1	0.000	2.441	73.597	23.528	0.423	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.19	
17	0.6846	1156.9	1177.4	0.000	2.473	73.473	23.622	0.421	0.004	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.02	
18	0.6849	1157.4	1177.9	0.000	2.473	73.423	23.659	0.435	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.30	
19	0.6854	1158.1	1178.6	0.000	2.478	73.339	23.720	0.453	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.62	
20	0.6852	1158.2	1178.7	0.000	2.455	73.377	23.704	0.453	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.94	
21	0.6848	1157.7	1178.2	0.000	2.443	73.460	23.641	0.445	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.81	
22	0.6851	1158.2	1178.7	0.000	2.442	73.428	23.654	0.465	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.05	
23	0.6854	1158.4	1178.9	0.000	2.458	73.428	23.582	0.510	0.007	0.013	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1423.99	
24	0.6846	1157.0	1177.5	0.000	2.467	73.506	23.569	0.448	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.13	
25	0.6850	1157.6	1178.1	0.000	2.476	73.410	23.656	0.448	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.36	
26	0.6856	1158.5	1179.0	0.000	2.471	73.327	23.722	0.468	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.90	
27	0.6860	1159.1	1179.6	0.000	2.472	73.232	23.822	0.462	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.24	
28	0.6849	1157.4	1177.8	0.000	2.471	73.447	23.629	0.441	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.28	
29	0.6860	1158.7	1179.2	0.000	2.497	73.220	23.812	0.460	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.75	
30	0.6871	1160.1	1180.6	0.000	2.515	73.050	23.921	0.495	0.006	0.010	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1424.31	
31	0.6864	1159.7	1180.3	0.000	2.477	73.145	23.897	0.470	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.54	
Avg	0.6852	1158.0	1178.6	0.000	2.460	73.394	23.673	0.461	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.80	

zone 33

## GQ Source Daily Summary

### January 2012

**Number:** 331

**Pressure Base:** 14.730

**Contract Day:** 1

**Name:** MARMARTH PLANT

**Temperature Base:**

**Contract Hour:** 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7954	1126.8	1146.7	2.099	11.546	54.278	29.168	2.610	0.067	0.199	0.008	0.022	0.003	0.000	0.000	0.000	0.000	1285.77	
2	0.7969	1129.7	1149.7	2.065	11.560	54.154	29.129	2.761	0.073	0.220	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1287.88	
3	0.7962	1129.9	1149.9	1.956	11.644	54.220	29.063	2.777	0.075	0.226	0.010	0.026	0.004	0.000	0.000	0.000	0.000	1288.73	
4	0.7970	1131.7	1151.8	2.033	11.490	54.209	29.111	2.807	0.077	0.235	0.010	0.027	0.004	0.000	0.000	0.000	0.000	1290.16	
5	0.7948	1132.1	1152.1	1.865	11.519	54.381	29.170	2.721	0.075	0.227	0.010	0.026	0.004	0.000	0.000	0.000	0.000	1292.34	
6	0.7944	1132.3	1152.3	1.867	11.465	54.223	29.598	2.542	0.068	0.206	0.009	0.022	0.004	0.000	0.000	0.000	0.000	1292.92	
7	0.7962	1131.7	1151.8	2.013	11.446	54.220	29.272	2.722	0.073	0.218	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1290.80	
8	0.7894	1124.3	1144.2	1.886	11.457	55.401	28.302	2.612	0.075	0.227	0.010	0.026	0.004	0.000	0.000	0.000	0.000	1287.80	
9	0.8001	1136.9	1157.0	2.096	11.369	53.844	29.379	2.932	0.083	0.253	0.011	0.029	0.004	0.000	0.000	0.000	0.000	1293.55	
10	0.7971	1136.8	1157.0	1.909	11.376	54.002	29.650	2.709	0.078	0.236	0.010	0.027	0.004	0.000	0.000	0.000	0.000	1295.92	
11	0.7987	1134.6	1154.7	2.120	11.350	53.759	29.776	2.676	0.072	0.214	0.009	0.023	0.003	0.000	0.000	0.000	0.000	1292.00	
12	0.7975	1127.9	1147.9	2.128	11.625	54.313	28.675	2.879	0.083	0.253	0.011	0.029	0.004	0.000	0.000	0.000	0.000	1285.40	
13	0.7975	1129.9	1149.9	2.049	11.630	54.216	28.855	2.867	0.083	0.255	0.011	0.029	0.005	0.000	0.000	0.000	0.000	1287.59	
14	0.8010	1135.3	1155.4	2.196	11.398	53.864	29.141	3.007	0.086	0.263	0.011	0.030	0.004	0.000	0.000	0.000	0.000	1290.98	
15	0.8015	1134.4	1154.5	2.241	11.432	53.697	29.303	2.956	0.082	0.247	0.010	0.027	0.004	0.000	0.000	0.000	0.000	1289.57	
16	0.7950	1124.5	1144.4	2.044	11.727	54.408	28.884	2.648	0.074	0.226	0.010	0.026	0.004	0.000	0.000	0.000	0.000	1283.52	
17	0.7973	1128.5	1148.5	2.075	11.650	54.162	28.991	2.744	0.082	0.252	0.011	0.028	0.005	0.000	0.000	0.000	0.000	1286.22	
18	0.7939	1121.0	1140.8	2.076	11.792	54.421	28.924	2.476	0.069	0.209	0.009	0.023	0.004	0.000	0.000	0.000	0.000	1280.37	
19	0.7901	1122.6	1142.4	1.749	11.843	54.583	29.297	2.229	0.065	0.200	0.008	0.023	0.004	0.000	0.000	0.000	0.000	1285.23	
20	0.7837	1118.2	1138.0	1.921	11.242	56.012	28.393	2.173	0.058	0.173	0.007	0.019	0.003	0.000	0.000	0.000	0.000	1285.51	
21	0.7863	1119.3	1139.2	2.128	11.097	55.946	28.185	2.370	0.061	0.182	0.008	0.020	0.003	0.000	0.000	0.000	0.000	1284.73	
22	0.7846	1109.6	1129.3	2.021	11.696	55.782	28.137	2.118	0.055	0.169	0.007	0.018	0.003	0.000	0.000	0.000	0.000	1274.93	
23	0.7937	1118.8	1138.6	2.251	11.638	54.462	29.005	2.380	0.060	0.177	0.007	0.017	0.003	0.000	0.000	0.000	0.000	1278.10	
24	0.7919	1127.1	1147.1	2.040	11.285	54.700	29.313	2.386	0.062	0.184	0.007	0.019	0.003	0.000	0.000	0.000	0.000	1289.03	
25	0.7964	1125.8	1145.7	2.278	11.433	54.312	29.038	2.620	0.070	0.213	0.009	0.024	0.003	0.000	0.000	0.000	0.000	1283.80	
26	0.7971	1117.3	1137.1	2.426	11.791	54.431	28.204	2.747	0.075	0.223	0.010	0.025	0.004	0.000	0.000	0.000	0.000	1273.55	
27	0.7929	1119.8	1139.6	2.064	11.792	54.785	28.419	2.603	0.074	0.224	0.010	0.026	0.004	0.000	0.000	0.000	0.000	1279.80	
28	0.7963	1124.1	1144.0	2.116	11.761	54.897	28.679	2.684	0.080	0.242	0.010	0.027	0.004	0.000	0.000	0.000	0.000	1282.06	
29	0.7989	1127.3	1147.3	2.182	11.714	54.200	28.524	2.979	0.087	0.267	0.011	0.030	0.005	0.000	0.000	0.000	0.000	1283.54	
30	0.7984	1127.0	1147.0	2.179	11.693	54.161	28.697	2.894	0.082	0.250	0.011	0.029	0.005	0.000	0.000	0.000	0.000	1283.60	
31	0.7952	1124.3	1144.2	2.131	11.629	54.523	28.676	2.690	0.077	0.233	0.010	0.026	0.004	0.000	0.000	0.000	0.000	1283.11	
Avg	0.7950	1127.0	1146.7	2.071	11.551	54.454	28.931	2.659	0.074	0.222	0.009	0.025	0.004	0.000	0.000	0.000	0.000	1286.08	

Zone 34

# GQ Source Analysis

Williston Basin Interstate Pipeline Co.

<b>GQ Source Number:</b>	1201140	<b>Specific Gravity:</b>	0.5726
<b>GQ Source Name:</b>	EAGLE 8B ND	<b>Dry Heat Value:</b>	978.94
<b>Effective Date:</b>	6/1/2011 9:00:00 AM	<b>Wet Heat Value:</b>	961.90
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>As Deliv. Heat Value:</b>	978.94
<b>Pressure Base:</b>	14.730	<b>Sample Pressure:</b>	32.00
<b>Viscosity:</b>		<b>Sample Temperature:</b>	

	<u>Mol %</u>	<u>Liquid Content</u>		<u>Mol %</u>
C1 Methane	95.931		CO2 Carbon Dioxide	0.106
C2 Ethane	0.312	0.0833	N2 Nitrogen	3.634
C3 Propane	0.009	0.0026	O2 Oxygen	0.000
IC4 Isobutane	0.007	0.0024	He Helium	
NC4 n-Butane	0.000	0.0000	H2 Hydrogen	
IC5 Isopentane	0.000	0.0000	H2S Hydrogen Sulfide	
NC5 n-Pentane	0.000	0.0000	Ar Argon	
C6 Hexanes	0.000	0.0000	CO Carbon Monoxide	
C7 Heptanes			H2 Water	
C8 Octanes			Neo-C5 Neopentane	
C9 Nonanes				
C10 Decanes				

Totals 100.000% 0.088 GPM

**Sample Date:** 6/22/2011 12:00:00 AM  
**Sample Type:** Composite  
**Sample Tech:** sampler  
**H2S:** ppm

**Sample Remarks:**

**Analysis Tech:** Mary Berger

**Analysis Remarks:**

*Zone 35*

<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
241	Monthly Sampler	Fairview 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	Chromatograph	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	JAN 12	DEC 11	NOV 11	OCT 11	SEPT 11	AUG 11	JULY 11	JUNE 11	MAY 11	APR 11	MAR 11	FEB 11	ZONE
MT/ND	211	Sidney Area	1209	1210	1212	1215	1212	1199	1204	1215	1205	1206	1202	1211	1216	211
ND	24	Williston Area	1197	1184	1199	1203	1197	1200	1200	1198	1197	1196	1194	1198	1196	24
ND	25	Watford City Area	1136	1140	1140	1131	1129	1136	1136	1135	1140	1128	1143	1143	1131	25
ND/MT	241	Fairview Area	1197	1194	1194	1201	1198	1200	1200	1199	1193	1193	1194	1197	0	241
ND	261	Williston - Tioga - Minot Line	1163	1160	1163	1166	1158	1144	1159	1176	1165	1159	1162	1172	1176	261
ND	262	Minot Area	1167	1161	1165	1168	1163	1160	1161	1179	1168	1161	1167	1175	1178	262
ND	263	Tioga - Portal	1103	1075	1074	1092	1126	1128	1128	1126	1082	1093	1123	1094	1090	263
ND	264	Williston - Ray	1197	1184	1199	1203	1197	1200	1200	1198	1197	1196	1194	1198	1196	264
ND	271	Bismarck - Cleveland	1149	1124	1130	1148	1161	1159	1160	1177	1166	1152	1161	1136	1118	271
ND	272	Cleveland - Mapleton	1149	1122	1129	1148	1161	1159	1160	1179	1166	1151	1161	1134	1117	272
ND	273	Cleveland - Grafton	1149	1123	1129	1148	1162	1159	1160	1179	1167	1151	1161	1135	1117	273
ND	28	Bismarck - Cabin Creek	1116	1073	1078	1084	1148	1160	1160	1180	1166	1139	1112	1051	1042	28
ND	31	Dickinson Area	1103	1072	1077	1081	1138	1162	1152	1135	1123	1109	1093	1049	1040	31
ND/MT	32	Cabin Creek - Dickinson	1090	1057	1063	1061	1100	1156	1126	1133	1153	1080	1071	1046	1037	32
ND	33	Killdeer	1180	1179	1183	1181	1181	1181	1181	1182	1183	1180	1177	1175	1175	33
ND	34	Bowman Area	1144	1147	1129	1117	1139	1132	1138	1144	1149	1153	1154	1163	1158	34
ND	35	Baker Field - North Dakota	979	979	979	979	979	979	979	979	979	979	979	979	979	35