



# MONTANA-DAKOTA

UTILITIES CO.

A Division of MDU Resources Group, Inc.

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

August 2, 2012

**RECEIVED**

AUG 03 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 – June 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 July 2012.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our supplier for the month of June 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.
5. Attachment E provides a brief explanation of the thermal variances, where applicable, for the month of June 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  
JULY 2012

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	314	APPLE VALLEY	271	1.1164
12	323	BERTHOLD	262	1.0956
12	327	BISMARCK	28	1.1164
12	337	BURLINGTON	262	1.1193
12	343	CARRINGTON	273	1.1183
12	344	CLEVELAND	272	1.1104
12	364	CAVALIER	273	1.1418
12	365	DAWSON	271	1.1085
12	368	DES LACS	262	1.1035
12	374	FT TOTTEN	273	1.1262
12	375	DEVILS LAKE	273	1.1262
12	379	BARLOW	273	1.1183
12	387	ELDRIDGE	272	1.1183
12	411	GLEN ULLIN	31	1.0314
12	416	GARRISON	262	1.1035
12	417	GRAFTON	273	1.1497
12	439	HANKINSON	600	1.0877
12	449	JAMESTOWN	272	1.1262
12	463	LANGDON	273	1.1183
12	475	LINTON	802	.9977
12	478	LINCOLN	28	1.1164
12	494	MEDINA	271	1.1085
12	498	MANDAN	28	1.1164
12	505	MINOT	262	1.1193
12	512	MAX	262	1.0956
12	524	NEW SALEM	28	1.0928
12	532	NEW ROCKFORD	273	1.1183
12	539	PARK RIVER	273	1.1418
12	572	RUTHVILLE	262	1.1193
12	574	SANBORN	272	1.1262
12	593	STEELE	271	1.1085
12	598	SHEYENNE	273	1.1262
12	605	SURREY	262	1.1193
12	610	TAPPEN	271	1.1085
12	619	TURTLE LAKE	262	1.1035

MONTANA-DAKOTA UTILITIES CO.  
Therm Billing Factor  
JULY 2012

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	624	UNDERWOOD	262	1.1035
12	625	VALLEY CITY	272	1.1340
12	629	WALHALLA	273	1.1418
12	646	WASHBURN	262	1.1114
12	647	WILTON	262	1.0956
12	664	RIVERDALE	262	1.1035
12	712	MINOT AFB	262	1.1193
12	717	SPIRITWOOD	272	1.1262
12	718	FAIRMOUNT	600	1.0855
12	732	MSR SITE	273	1.1183
12	733	PAR SITE	273	1.1183
15	303	ALEXANDER	25	1.0871
15	308	ARNEGARD	25	1.0871
15	318	BEACH	32	1.0646
15	319	BELFIELD	32	1.0724
15	330	BOWMAN	34	1.0072
15	369	DICKINSON	31	1.0240
15	384	EPPING	264	1.1306
15	407	GLADSTONE	31	1.0240
15	413	GOLVA	32	1.0490
15	429	HEBRON	31	1.0314
15	459	KILLDEER	33	1.1183
15	469	LEFOR	31	1.0240
15	474	LIGNITE	263	1.0807
15	500	MARMARTH	34	1.0147
15	510	MOTT	31	1.0240
15	522	NEW ENGLAND	31	1.0165
15	540	PALERMO	262	1.0956
15	558	RAY	264	1.1306
15	561	REGENT	31	1.0240
15	563	RHAME	34	.9998
15	564	RICHARDTON	31	1.0165
15	568	ROSS	261	1.0849
15	583	SENTINEL BUTTE	32	1.0646
15	588	SOUTH HEART	31	1.0165

MONTANA-DAKOTA UTILITIES CO.  
Therm Billing Factor  
JULY 2012

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	590	SPRINGBROOK	264	1.1306
15	591	STANLEY	261	1.0928
15	611	TAYLOR	31	1.0165
15	616	TIOGA	261	1.0849
15	620	TRENTON	24	1.1387
15	632	WATFORD CITY	25	1.0871
15	636	WHEELLOCK	264	1.1224
15	637	WHITE EARTH	261	1.0928
15	642	WILLISTON	24	1.1387
15	691	FAIRVIEW	241	1.1330
15	743	BAKER FIELD	35	.8980

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

# GQ Source Daily Summary

June 2012

**Number:** 251

**Pressure Base:** 14.730

**Contract Day:** 1

**Name:** SIDNEY BORDER

**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	0.7294	1173.0	1193.8	1.155	3.929	68.958	22.206	3.354	0.129	0.242	0.014	0.012	0.001	0.000	0.000	0.000	0.000	1397.80	
2	0.7311	1176.0	1196.8	1.154	3.912	68.803	22.208	3.499	0.137	0.259	0.015	0.013	0.001	0.000	0.000	0.000	0.000	1399.67	
3	0.7302	1174.3	1195.1	1.154	3.933	68.850	22.259	3.394	0.133	0.250	0.014	0.012	0.001	0.000	0.000	0.000	0.000	1398.49	
4	0.7316	1176.7	1197.5	1.151	3.919	68.792	22.128	3.581	0.138	0.262	0.015	0.013	0.001	0.000	0.000	0.000	0.000	1400.02	
5	0.7316	1176.5	1197.3	1.152	3.929	68.785	22.118	3.599	0.136	0.252	0.015	0.012	0.001	0.000	0.000	0.000	0.000	1399.78	
6	0.7299	1173.6	1194.4	1.155	3.938	68.894	22.228	3.381	0.132	0.244	0.014	0.012	0.001	0.000	0.000	0.000	0.000	1398.05	
7	0.7291	1172.4	1193.2	1.156	3.935	68.959	22.268	3.280	0.131	0.244	0.014	0.012	0.001	0.000	0.000	0.000	0.000	1397.40	
8	0.7305	1175.4	1196.2	1.147	3.900	68.924	22.097	3.510	0.135	0.257	0.015	0.013	0.001	0.000	0.000	0.000	0.000	1399.57	
9	0.7293	1173.2	1193.9	1.158	3.911	69.016	22.129	3.382	0.131	0.246	0.014	0.012	0.001	0.000	0.000	0.000	0.000	1398.01	
10	0.7285	1171.7	1192.5	1.156	3.921	69.083	22.147	3.298	0.127	0.240	0.014	0.011	0.001	0.000	0.000	0.000	0.000	1397.12	
11	0.7284	1171.6	1192.3	1.154	3.924	69.050	22.218	3.275	0.123	0.232	0.013	0.011	0.001	0.000	0.000	0.000	0.000	1397.05	
12	0.7285	1171.7	1192.5	1.156	3.924	69.096	22.116	3.311	0.128	0.242	0.014	0.012	0.001	0.000	0.000	0.000	0.000	1397.10	
13	0.7282	1171.0	1191.8	1.160	3.929	69.090	22.181	3.251	0.125	0.236	0.014	0.012	0.001	0.000	0.000	0.000	0.000	1396.59	
14	0.7314	1175.8	1196.7	1.166	3.931	68.693	22.251	3.619	0.114	0.207	0.011	0.008	0.000	0.000	0.000	0.000	0.000	1399.22	
15	0.7351	1182.8	1203.7	1.134	3.894	68.329	22.279	4.030	0.113	0.202	0.010	0.009	0.001	0.000	0.000	0.000	0.000	1404.02	
16	0.7340	1181.3	1202.2	1.143	3.880	68.311	22.557	3.756	0.117	0.214	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1403.16	
17	0.7319	1177.6	1198.5	1.142	3.904	68.671	22.263	3.655	0.121	0.221	0.013	0.010	0.001	0.000	0.000	0.000	0.000	1400.86	
18	0.7329	1179.1	1200.0	1.140	3.909	68.482	22.437	3.659	0.123	0.225	0.012	0.010	0.002	0.000	0.000	0.000	0.000	1401.68	
19	0.7357	1184.0	1205.0	1.139	3.873	68.222	22.419	3.984	0.120	0.219	0.012	0.010	0.002	0.000	0.000	0.000	0.000	1404.84	
20	0.7372	1186.5	1207.5	1.139	3.862	68.149	22.279	4.204	0.121	0.223	0.012	0.010	0.002	0.000	0.000	0.000	0.000	1406.34	
21	0.7378	1187.5	1208.5	1.138	3.862	68.108	22.243	4.272	0.124	0.228	0.013	0.010	0.003	0.000	0.000	0.000	0.000	1406.91	
22	0.7388	1189.1	1210.1	1.138	3.854	68.020	22.242	4.361	0.125	0.233	0.013	0.011	0.003	0.000	0.000	0.000	0.000	1407.87	
23	0.7352	1183.2	1204.2	1.146	3.867	68.356	22.288	3.948	0.129	0.238	0.014	0.011	0.003	0.000	0.000	0.000	0.000	1404.36	
24	0.7324	1178.3	1199.2	1.141	3.909	68.674	22.187	3.688	0.130	0.241	0.014	0.012	0.003	0.000	0.000	0.000	0.000	1401.19	
25	0.7324	1178.3	1199.2	1.123	3.930	68.699	22.144	3.685	0.135	0.254	0.016	0.013	0.002	0.000	0.000	0.000	0.000	1401.27	
26	0.7389	1187.6	1208.7	1.172	3.894	68.215	21.935	4.270	0.160	0.311	0.021	0.018	0.004	0.000	0.000	0.000	0.000	1406.06	
27	0.7368	1183.3	1204.2	1.111	4.067	67.607	23.237	3.588	0.126	0.236	0.014	0.012	0.003	0.000	0.000	0.000	0.000	1402.90	
28	0.7427	1192.7	1213.9	1.067	4.113	66.678	23.866	3.858	0.131	0.254	0.016	0.013	0.004	0.000	0.000	0.000	0.000	1408.47	
29	0.7435	1194.5	1215.7	1.052	4.100	66.593	23.910	3.910	0.135	0.262	0.018	0.015	0.005	0.000	0.000	0.000	0.000	1409.87	
30	0.7331	1178.2	1199.1	1.077	4.078	68.324	22.592	3.504	0.131	0.255	0.018	0.017	0.004	0.000	0.000	0.000	0.000	1400.41	
Avg	0.7332	1179.0	1200.1	1.139	3.931	68.481	22.381	3.670	0.129	0.241	0.014	0.012	0.002	0.000	0.000	0.000	0.000	1401.54	

*Zone 211*

## GQ Source Daily Summary

### June 2012

**Number:** 372

**Pressure Base:** 14.730

**Contract Day:** 1

**Name:** NESSON PLANT-WILLISTON STATION

**Temperature Base:**

**Contract Hour:** 9

Day	Relative Density	Heating Value	Heating Value																
		Wet	Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7203	1171.0	1191.8	1.066	3.339	69.332	23.854	2.154	0.081	0.157	0.009	0.007	0.001	0.000	0.000	0.000	0.000	1404.22	
2	0.7271	1174.7	1195.5	1.131	3.651	68.782	23.280	2.827	0.107	0.202	0.011	0.008	0.001	0.000	0.000	0.000	0.000	1402.03	
3	0.7318	1176.4	1197.2	1.181	3.910	68.566	22.527	3.407	0.131	0.252	0.014	0.011	0.001	0.000	0.000	0.000	0.000	1399.51	
4	0.7246	1176.2	1197.0	1.069	3.416	70.292	21.110	3.703	0.136	0.251	0.012	0.010	0.001	0.000	0.000	0.000	0.000	1406.24	
5	0.7335	1179.5	1200.4	1.174	3.891	68.362	22.632	3.512	0.136	0.264	0.015	0.012	0.002	0.000	0.000	0.000	0.000	1401.60	
6	0.7314	1175.7	1196.5	1.180	3.916	68.674	22.410	3.392	0.136	0.264	0.015	0.012	0.002	0.000	0.000	0.000	0.000	1399.08	
7	0.7341	1180.2	1201.1	1.175	3.901	68.316	22.600	3.579	0.136	0.263	0.015	0.012	0.002	0.000	0.000	0.000	0.000	1401.83	
8	0.7325	1177.5	1198.3	1.180	3.912	68.451	22.631	3.406	0.134	0.259	0.015	0.012	0.002	0.000	0.000	0.000	0.000	1400.14	
9	0.7315	1176.0	1196.9	1.179	3.911	68.575	22.581	3.329	0.135	0.262	0.015	0.012	0.002	0.000	0.000	0.000	0.000	1399.34	
10	0.7327	1178.5	1199.3	1.173	3.876	68.574	22.405	3.539	0.137	0.267	0.015	0.013	0.002	0.000	0.000	0.000	0.000	1401.17	
11	0.7155	1171.5	1192.2	0.978	2.981	72.121	19.769	3.790	0.126	0.219	0.009	0.007	0.001	0.000	0.000	0.000	0.000	1409.56	
12	0.7172	1190.8	1211.9	0.806	2.209	72.990	18.669	4.878	0.164	0.272	0.006	0.004	0.000	0.000	0.000	0.000	0.000	1430.98	
13	0.7030	1166.6	1187.3	0.825	2.326	74.789	17.692	4.062	0.116	0.186	0.004	0.002	0.000	0.000	0.000	0.000	0.000	1415.99	
14	0.7101	1178.0	1198.8	0.825	2.304	73.903	18.110	4.467	0.144	0.237	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1422.50	
15	0.7103	1180.2	1201.1	0.808	2.215	73.889	18.224	4.448	0.152	0.254	0.006	0.004	0.000	0.000	0.000	0.000	0.000	1425.03	
16	0.7005	1164.1	1184.7	0.812	2.261	75.221	17.426	3.961	0.121	0.192	0.004	0.002	0.000	0.000	0.000	0.000	0.000	1415.50	
17	0.7069	1174.5	1195.3	0.816	2.222	74.355	17.932	4.318	0.134	0.216	0.005	0.003	0.000	0.000	0.000	0.000	0.000	1421.68	
18	0.7025	1167.7	1188.4	0.815	2.229	74.936	17.626	4.067	0.124	0.197	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1417.81	
19	0.7003	1164.0	1184.7	0.815	2.248	75.186	17.531	3.913	0.117	0.185	0.004	0.002	0.000	0.000	0.000	0.000	0.000	1415.58	
20	0.7073	1174.8	1195.6	0.813	2.249	74.344	17.831	4.412	0.133	0.212	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1421.58	
21	0.7021	1168.3	1189.0	0.802	2.169	75.239	17.188	4.262	0.127	0.205	0.005	0.003	0.000	0.000	0.000	0.000	0.000	1418.98	
22	0.7053	1171.1	1191.9	0.814	2.280	74.652	17.586	4.328	0.128	0.205	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1419.16	
23	0.7099	1177.7	1198.6	0.810	2.316	73.939	18.068	4.489	0.141	0.230	0.005	0.003	0.000	0.000	0.000	0.000	0.000	1422.54	
24	0.7065	1173.5	1194.3	0.808	2.262	74.365	17.943	4.260	0.134	0.219	0.005	0.003	0.001	0.000	0.000	0.000	0.000	1420.78	
25	0.7054	1171.1	1191.8	0.813	2.293	74.544	17.765	4.243	0.128	0.205	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1419.07	
26	0.7181	1175.7	1196.6	0.973	2.968	71.878	19.732	4.097	0.124	0.214	0.007	0.005	0.001	0.000	0.000	0.000	0.000	1412.19	
27	0.7163	1184.2	1205.1	0.858	2.460	72.782	18.965	4.487	0.159	0.277	0.007	0.005	0.000	0.000	0.000	0.000	0.000	1423.94	
28	0.7174	1192.0	1213.1	0.809	2.156	73.137	18.409	5.017	0.172	0.289	0.007	0.005	0.000	0.000	0.000	0.000	0.000	1432.12	
29	0.7111	1181.3	1202.2	0.817	2.200	73.945	17.967	4.665	0.151	0.246	0.006	0.004	0.000	0.000	0.000	0.000	0.000	1425.63	
30	0.7252	1202.5	1223.8	0.812	2.238	72.329	18.433	5.628	0.196	0.344	0.010	0.008	0.001	0.000	0.000	0.000	0.000	1436.94	
Avg	0.7163	1177.0	1197.3	0.938	2.810	72.216	19.630	4.021	0.135	0.235	0.008	0.006	0.001	0.000	0.000	0.000	0.000	1414.76	

Zone 24,264

# GQ Source Analysis

WBI Energy Transmission, Inc.

<b>GQ Source Number:</b>	0602160	<b>Specific Gravity:</b>	0.7281
<b>GQ Source Name:</b>	FAIRVIEW BORDER	<b>Dry Heat Value:</b>	1190.71
<b>Effective Date:</b>	6/1/2012 9:00:00 AM	<b>Wet Heat Value:</b>	1169.99
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>As Deliv. Heat Value:</b>	1190.71
<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	68.998		CO2 Carbon Dioxide	1.168
C2 Ethane	22.046	0.0000	N2 Nitrogen	3.939
C3 Propane	3.439	0.9446	O2 Oxygen	0.000
IC4 Isobutane	0.133	0.0435	He Helium	
NC4 n-Butane	0.247	0.0776	H2 Hydrogen	
IC5 Isopentane	0.017	0.0060	H2S Hydrogen Sulfide	
NC5 n-Pentane	0.014	0.0049	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% 1.077 GPM

**Sample Date:** 6/30/2012 12:00:00 AM  
**Sample Type:** Spot  
**Sample Tech:** samper  
**H2S:** ppm

**Sample Remarks:**

**Analysis Tech:** M.Berger

**Analysis Remarks:**

*Zone 241*

# GQ Source Analysis

WBI Energy Transmission, Inc.

<b>GQ Source Number:</b>	0602230	<b>Specific Gravity:</b>	0.7391
<b>GQ Source Name:</b>	WATFORD CITY BORDER	<b>Dry Heat Value:</b>	1150.49
<b>Effective Date:</b>	6/1/2012 9:00:00 AM	<b>Wet Heat Value:</b>	1130.47
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>As Deliv. Heat Value:</b>	1150.49
<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	67.493		CO2	Carbon Dioxide	0.815
C2	Ethane	18.587	4.9563	N2	Nitrogen	7.922
C3	Propane	4.440	1.2196	O2	Oxygen	0.000
IC4	Isobutane	0.248	0.0810	He	Helium	
NC4	n-Butane	0.423	0.1330	H2	Hydrogen	
IC5	Isopentane	0.031	0.0113	H2S	Hydrogen Sulfide	
NC5	n-Pentane	0.031	0.0111	Ar	Argon	
C6	Hexanes	0.010	0.0044	CO	Carbon Monoxide	
C7	Heptanes			H2	Water	
C8	Octanes			Neo-C5	Neopentane	
C9	Nonanes					
C10	Decanes					

<b>Totals</b>	100.000%	6.417 GPM
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**Sample Date:** 6/30/2012 12:00:00 AM  
**Sample Type:** Spot  
**Sample Tech:** samper  
**H2S:** ppm

**Sample Remarks:**

**Analysis Tech:** M.Berger

**Analysis Remarks:**

*Zone 25*

# GQ Source Daily Summary

## June 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	0.6874	1133.5	1153.6	0.497	3.395	75.127	18.910	1.847	0.063	0.128	0.010	0.012	0.010					1391.37	
2	0.6875	1133.1	1153.2	0.500	3.417	75.269	18.599	1.987	0.066	0.132	0.010	0.011	0.009					1390.86	
3	0.6876	1132.3	1152.4	0.503	3.471	75.361	18.350	2.073	0.070	0.140	0.011	0.013	0.009					1389.75	
4	0.6960	1144.6	1164.9	0.579	3.399	74.187	19.069	2.495	0.081	0.157	0.011	0.012	0.009					1396.29	
5	0.6897	1135.9	1156.0	0.535	3.404	74.933	18.781	2.154	0.063	0.113	0.006	0.005	0.005					1392.01	
6	0.6890	1133.2	1153.3	0.538	3.502	74.982	18.687	2.104	0.063	0.110	0.006	0.005	0.002					1389.38	
7	0.6913	1137.2	1157.4	0.553	3.447	74.697	18.872	2.225	0.070	0.124	0.006	0.006	0.000					1392.01	
8	0.6928	1140.2	1160.4	0.546	3.418	74.504	19.015	2.295	0.072	0.130	0.008	0.008	0.004					1394.14	
9	0.6950	1144.2	1164.5	0.545	3.378	74.406	18.929	2.422	0.092	0.186	0.015	0.018	0.010					1396.84	
10	0.6951	1145.0	1165.3	0.557	3.325	74.208	19.263	2.397	0.081	0.149	0.009	0.009	0.003					1397.69	
11	0.6870	1133.9	1154.0	0.493	3.340	75.301	18.668	1.999	0.062	0.116	0.007	0.009	0.005					1392.28	
12	0.6859	1133.8	1153.9	0.455	3.298	75.543	18.463	2.044	0.061	0.113	0.007	0.008	0.008					1393.26	
13	0.6938	1146.3	1166.6	0.430	3.311	74.811	18.683	2.295	0.105	0.261	0.031	0.042	0.030					1400.55	
14	0.6879	1137.7	1157.9	0.338	3.415	75.668	18.137	1.929	0.105	0.280	0.037	0.051	0.040					1396.10	
15	0.6860	1135.7	1155.8	0.411	3.255	75.598	18.494	1.971	0.072	0.153	0.014	0.017	0.014					1395.51	
16	0.6855	1134.4	1154.5	0.411	3.295	75.532	18.616	1.914	0.066	0.135	0.010	0.012	0.008					1394.35	
17	0.6832	1130.0	1150.0	0.418	3.330	75.874	18.326	1.860	0.058	0.111	0.008	0.009	0.007					1391.38	
18	0.6836	1131.6	1151.6	0.411	3.280	75.695	18.628	1.815	0.055	0.099	0.005	0.006	0.004					1392.92	
19	0.6852	1134.2	1154.3	0.419	3.267	75.690	18.398	1.985	0.070	0.139	0.010	0.013	0.008					1394.39	
20	0.6867	1135.9	1156.0	0.418	3.299	75.500	18.510	1.990	0.074	0.158	0.015	0.020	0.015					1395.03	
21	0.6972	1152.1	1172.5	0.427	3.278	74.595	18.553	2.601	0.126	0.304	0.035	0.048	0.033					1404.21	
22	0.6846	1133.3	1153.4	0.406	3.278	75.628	18.596	1.897	0.058	0.112	0.008	0.010	0.008					1394.02	
23	0.6847	1132.9	1153.0	0.410	3.314	75.640	18.492	1.942	0.063	0.120	0.007	0.008	0.005					1393.31	
24	0.6842	1130.9	1150.9	0.422	3.363	75.725	18.399	1.882	0.062	0.122	0.008	0.010	0.006					1391.43	
25	0.6878	1135.9	1156.0	0.402	3.429	75.305	18.563	1.990	0.075	0.176	0.018	0.024	0.018					1393.90	
26	0.6880	1136.5	1156.6	0.411	3.398	75.325	18.490	2.086	0.073	0.163	0.016	0.022	0.016					1394.41	
27	0.6945	1143.9	1164.1	0.497	3.424	74.409	18.991	2.342	0.091	0.203	0.016	0.020	0.007					1396.90	
28	0.6872	1135.2	1155.3	0.400	3.413	75.424	18.407	2.093	0.074	0.149	0.012	0.016	0.012					1393.69	
29	0.6875	1135.1	1155.2	0.431	3.403	75.389	18.356	2.197	0.069	0.127	0.009	0.011	0.008					1393.26	
30	0.6877	1136.0	1156.1	0.392	3.427	75.356	18.442	2.103	0.072	0.159	0.015	0.019	0.014					1394.14	
Avg	0.6887	1137.0	1157.0	0.458	3.366	75.189	18.623	2.098	0.074	0.152	0.013	0.016	0.011					1394.18	

Zone 261

# GQ Source Daily Summary

June 2012

**Number:** 091

**Pressure Base:** 14.730

**Contract Day:** 1

**Name:** MINOT BORDER

**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	0.6930	1141.4	1161.6	0.539	3.377	74.502	19.039	2.291	0.081	0.158	0.005	0.006	0.001	0.000	0.000	0.000	0.000	1395.34	
2	0.6967	1147.0	1167.3	0.539	3.378	74.066	19.226	2.481	0.096	0.192	0.010	0.011	0.001	0.000	0.000	0.000	0.000	1398.52	
3	0.6912	1139.0	1159.2	0.532	3.359	74.568	19.289	2.025	0.070	0.142	0.007	0.009	0.001	0.000	0.000	0.000	0.000	1394.33	
4	0.6890	1135.3	1155.4	0.533	3.381	74.805	19.219	1.845	0.065	0.135	0.007	0.009	0.001	0.000	0.000	0.000	0.000	1391.95	
5	0.6891	1135.1	1155.2	0.533	3.404	74.936	18.907	2.003	0.067	0.135	0.006	0.008	0.001	0.000	0.000	0.000	0.000	1391.57	
6	0.6896	1135.1	1155.2	0.533	3.451	74.943	18.743	2.101	0.071	0.144	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1391.10	
7	0.6992	1148.2	1168.5	0.642	3.384	73.628	19.525	2.566	0.083	0.160	0.006	0.007	0.000	0.000	0.000	0.000	0.000	1397.47	
8	0.6924	1138.5	1158.6	0.570	3.447	74.402	19.211	2.182	0.066	0.121	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1392.43	
9	0.6936	1140.6	1160.8	0.582	3.420	74.279	19.245	2.279	0.071	0.125	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1393.74	
10	0.6934	1140.2	1160.4	0.583	3.422	74.301	19.254	2.233	0.071	0.132	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1393.47	
11	0.6975	1148.0	1168.4	0.582	3.324	73.875	19.478	2.461	0.088	0.174	0.007	0.008	0.002	0.000	0.000	0.000	0.000	1398.98	
12	0.6956	1145.0	1165.2	0.585	3.331	73.998	19.549	2.309	0.075	0.143	0.005	0.006	0.000	0.000	0.000	0.000	0.000	1397.14	
13	0.6888	1136.7	1156.8	0.504	3.322	74.941	19.022	2.022	0.062	0.121	0.003	0.004	0.000	0.000	0.000	0.000	0.000	1393.83	
14	0.6875	1136.5	1156.6	0.470	3.268	75.189	18.835	2.055	0.061	0.117	0.002	0.003	0.000	0.000	0.000	0.000	0.000	1394.85	
15	0.6937	1146.1	1166.4	0.442	3.297	74.595	19.028	2.227	0.099	0.246	0.024	0.032	0.010	0.000	0.000	0.000	0.000	1400.47	
16	0.6965	1151.2	1171.6	0.355	3.375	74.635	18.631	2.339	0.142	0.389	0.046	0.062	0.026	0.000	0.000	0.000	0.000	1403.85	
17	0.6875	1137.6	1157.7	0.376	3.341	75.386	18.632	1.894	0.086	0.218	0.023	0.032	0.014	0.000	0.000	0.000	0.000	1396.21	
18	0.6874	1137.4	1157.5	0.435	3.250	75.202	18.929	1.952	0.068	0.144	0.007	0.010	0.002	0.000	0.000	0.000	0.000	1396.13	
19	0.6856	1134.0	1154.1	0.435	3.290	75.359	18.861	1.881	0.058	0.110	0.002	0.003	0.001	0.000	0.000	0.000	0.000	1393.78	
20	0.6847	1133.3	1153.4	0.427	3.259	75.445	18.895	1.811	0.055	0.104	0.001	0.002	0.000	0.000	0.000	0.000	0.000	1393.88	
21	0.6870	1136.9	1157.0	0.438	3.242	75.319	18.771	1.999	0.071	0.145	0.006	0.009	0.001	0.000	0.000	0.000	0.000	1395.90	
22	0.6898	1140.6	1160.8	0.442	3.268	75.012	18.874	2.113	0.081	0.177	0.013	0.017	0.003	0.000	0.000	0.000	0.000	1397.62	
23	0.6904	1141.7	1161.9	0.439	3.264	74.913	18.963	2.120	0.082	0.182	0.014	0.019	0.004	0.000	0.000	0.000	0.000	1398.35	
24	0.6974	1152.3	1172.7	0.445	3.257	74.425	18.795	2.563	0.123	0.302	0.031	0.042	0.016	0.000	0.000	0.000	0.000	1404.29	
25	0.6867	1136.3	1156.4	0.429	3.264	75.184	19.033	1.903	0.059	0.118	0.004	0.006	0.000	0.000	0.000	0.000	0.000	1395.48	
26	0.6854	1133.6	1153.6	0.430	3.306	75.449	18.716	1.908	0.061	0.122	0.003	0.005	0.000	0.000	0.000	0.000	0.000	1393.46	
27	0.6885	1135.5	1155.6	0.450	3.450	74.952	18.980	1.925	0.068	0.151	0.009	0.013	0.002	0.000	0.000	0.000	0.000	1392.69	
28	0.6895	1134.0	1154.0	0.470	3.608	74.575	19.335	1.783	0.063	0.144	0.009	0.012	0.001	0.000	0.000	0.000	0.000	1389.80	
29	0.6863	1131.1	1151.2	0.419	3.556	74.971	19.245	1.596	0.058	0.136	0.009	0.012	0.001	0.000	0.000	0.000	0.000	1389.58	
30	0.6869	1133.8	1153.9	0.423	3.438	75.111	19.003	1.793	0.065	0.146	0.009	0.012	0.000	0.000	0.000	0.000	0.000	1392.30	
Avg	0.6907	1139.0	1159.6	0.486	3.358	74.766	19.041	2.089	0.076	0.161	0.009	0.012	0.003	0.000	0.000	0.000	0.000	1395.28	

*Zone 262*

# GQ Source Analysis

WBI Energy Transmission, Inc.

<b>GQ Source Number:</b>	2501030	<b>Specific Gravity:</b>	0.6733
<b>GQ Source Name:</b>	LIGNITE PLANT	<b>Dry Heat Value:</b>	1135.49
<b>Effective Date:</b>	6/1/2012 9:00:00 AM	<b>Wet Heat Value:</b>	1115.72
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>As Deliv. Heat Value:</b>	1135.49
<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	76.933		CO2 Carbon Dioxide	0.155
C2 Ethane	17.490	4.6637	N2 Nitrogen	3.647
C3 Propane	1.728	0.4747	O2 Oxygen	0.000
IC4 Isobutane	0.013	0.0044	He Helium	
NC4 n-Butane	0.012	0.0037	H2 Hydrogen	
IC5 Isopentane	0.000	0.0000	H2S Hydrogen Sulfide	
NC5 n-Pentane	0.000	0.0000	Ar Argon	
C6 Hexanes	0.022	0.0100	CO Carbon Monoxide	
C7 Heptanes			H2 Water	
C8 Octanes			Neo-C5 Neopentane	
C9 Nonanes				
C10 Decanes				

<b>Totals</b>		100.000%	5.156 GPM
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**Sample Date:** 6/30/2012 12:00:00 AM  
**Sample Type:** Spot  
**Sample Tech:** samper  
**H2S:** ppm

**Sample Remarks:**

**Analysis Tech:** M.Berger

**Analysis Remarks:**

*Zone 263*

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

# GQ Source Daily Summary

June 2012

**Number:** 043

**Pressure Base:** 14.730

**Contract Day:** 1

**Name:** BISMARCK STATION-CLEVELAND STATION

**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	0.6917	1140.6	1160.8	0.527	3.321	74.825	18.810	2.230	0.081	0.163	0.012	0.014	0.019	0.000	0.000	0.000	0.000	1395.65	
2	0.6870	1132.6	1152.7	0.530	3.362	75.241	18.824	1.818	0.062	0.125	0.010	0.012	0.018	0.000	0.000	0.000	0.000	1390.70	
3	0.6863	1130.8	1150.8	0.527	3.408	75.547	18.316	1.967	0.065	0.132	0.010	0.011	0.018	0.000	0.000	0.000	0.000	1389.17	
4	0.6884	1134.3	1154.4	0.524	3.398	75.339	18.346	2.130	0.072	0.149	0.011	0.013	0.018	0.000	0.000	0.000	0.000	1391.30	
5	0.6947	1143.2	1163.4	0.594	3.343	74.382	19.015	2.410	0.075	0.145	0.009	0.010	0.017	0.000	0.000	0.000	0.000	1395.82	
6	0.6894	1134.5	1154.6	0.567	3.416	74.986	18.737	2.097	0.061	0.111	0.005	0.005	0.014	0.000	0.000	0.000	0.000	1390.55	
7	0.6909	1137.3	1157.4	0.568	3.386	74.844	18.758	2.233	0.069	0.120	0.005	0.005	0.013	0.000	0.000	0.000	0.000	1392.42	
8	0.6914	1137.6	1157.8	0.576	3.398	74.774	18.803	2.218	0.071	0.133	0.007	0.007	0.013	0.000	0.000	0.000	0.000	1392.38	
9	0.6931	1140.3	1160.5	0.576	3.388	74.638	18.799	2.336	0.078	0.150	0.010	0.011	0.015	0.000	0.000	0.000	0.000	1394.00	
10	0.6968	1148.2	1168.6	0.573	3.263	74.094	19.314	2.444	0.089	0.179	0.012	0.014	0.017	0.000	0.000	0.000	0.000	1399.88	
11	0.6944	1143.5	1163.7	0.589	3.304	74.312	19.255	2.286	0.076	0.146	0.009	0.010	0.014	0.000	0.000	0.000	0.000	1396.51	
12	0.6848	1132.2	1152.2	0.486	3.247	75.669	18.500	1.915	0.055	0.102	0.006	0.007	0.014	0.000	0.000	0.000	0.000	1392.37	
13	0.6875	1136.5	1156.6	0.477	3.247	75.381	18.568	2.111	0.064	0.122	0.007	0.008	0.016	0.000	0.000	0.000	0.000	1394.96	
14	0.6943	1147.4	1167.7	0.427	3.290	74.917	18.542	2.260	0.116	0.310	0.038	0.053	0.046	0.000	0.000	0.000	0.000	1401.44	
15	0.6859	1135.3	1155.4	0.366	3.339	75.852	18.144	1.869	0.091	0.235	0.028	0.036	0.040	0.000	0.000	0.000	0.000	1395.10	
16	0.6872	1138.1	1158.3	0.443	3.170	75.453	18.652	2.011	0.071	0.151	0.012	0.015	0.022	0.000	0.000	0.000	0.000	1397.28	
17	0.6835	1130.8	1150.8	0.431	3.291	75.938	18.250	1.854	0.063	0.134	0.010	0.012	0.017	0.000	0.000	0.000	0.000	1391.99	
18	0.6839	1132.1	1152.1	0.437	3.244	75.756	18.524	1.848	0.055	0.104	0.006	0.008	0.018	0.000	0.000	0.000	0.000	1393.15	
19	0.6837	1132.2	1152.3	0.431	3.223	75.798	18.514	1.834	0.058	0.112	0.006	0.007	0.015	0.000	0.000	0.000	0.000	1393.55	
20	0.6860	1135.6	1155.8	0.436	3.220	75.644	18.446	1.986	0.072	0.149	0.011	0.015	0.019	0.000	0.000	0.000	0.000	1395.44	
21	0.6893	1140.1	1160.3	0.440	3.247	75.220	18.666	2.106	0.080	0.176	0.017	0.022	0.025	0.000	0.000	0.000	0.000	1397.61	
22	0.6950	1149.3	1169.6	0.443	3.224	74.966	18.317	2.509	0.121	0.297	0.034	0.046	0.043	0.000	0.000	0.000	0.000	1402.95	
23	0.6844	1133.1	1153.2	0.428	3.243	75.623	18.671	1.859	0.053	0.097	0.005	0.005	0.017	0.000	0.000	0.000	0.000	1393.91	
24	0.6833	1130.6	1150.6	0.433	3.283	75.896	18.334	1.853	0.058	0.114	0.007	0.008	0.015	0.000	0.000	0.000	0.000	1391.95	
25	0.6840	1130.5	1150.5	0.431	3.357	75.780	18.362	1.846	0.060	0.126	0.009	0.010	0.017	0.000	0.000	0.000	0.000	1391.12	
26	0.6897	1140.0	1160.2	0.429	3.318	75.295	18.409	2.176	0.086	0.206	0.021	0.029	0.031	0.000	0.000	0.000	0.000	1396.95	
27	0.6868	1133.5	1153.5	0.430	3.439	75.408	18.531	1.914	0.066	0.153	0.014	0.018	0.025	0.000	0.000	0.000	0.000	1391.93	
28	0.6861	1133.7	1153.8	0.427	3.366	75.496	18.554	1.888	0.069	0.151	0.013	0.016	0.020	0.000	0.000	0.000	0.000	1392.92	
29	0.6847	1132.1	1152.2	0.405	3.366	75.823	18.145	2.018	0.067	0.132	0.010	0.013	0.021	0.000	0.000	0.000	0.000	1392.38	
30	0.6864	1132.8	1152.8	0.439	3.431	75.604	18.194	2.071	0.069	0.146	0.012	0.015	0.020	0.000	0.000	0.000	0.000	1391.43	
Avg	0.6884	1137.0	1156.8	0.480	3.318	75.283	18.577	2.070	0.072	0.152	0.012	0.015	0.021	0.000	0.000	0.000	0.000	1394.23	

Zone 271

# GQ Source Daily Summary

June 2012

Number: 063

Pressure Base: 14.730

Contract Day: 1

Name: CLEVELAND STATION-MAPLETON LINE

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	0.6948	1144.5	1164.8	0.539	3.349	74.402	18.996	2.397	0.093	0.191	0.014	0.017	0.002	0.000	0.000	0.000	0.000	1397.40	
2	0.6893	1136.3	1156.5	0.536	3.345	74.820	19.177	1.897	0.066	0.136	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1392.89	
3	0.6885	1135.1	1155.2	0.530	3.349	75.028	18.918	1.957	0.065	0.132	0.010	0.011	0.000	0.000	0.000	0.000	0.000	1392.24	
4	0.6888	1134.6	1154.7	0.520	3.424	75.121	18.609	2.088	0.071	0.144	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1391.26	
5	0.6945	1143.0	1163.2	0.591	3.343	74.399	19.003	2.396	0.080	0.163	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1395.75	
6	0.6919	1139.1	1159.3	0.557	3.380	74.515	19.182	2.171	0.064	0.117	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1393.75	
7	0.6906	1135.7	1155.8	0.571	3.443	74.729	18.951	2.115	0.065	0.116	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1390.91	
8	0.6922	1138.5	1158.6	0.584	3.407	74.524	19.083	2.199	0.069	0.123	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1392.64	
9	0.6936	1141.5	1161.7	0.576	3.373	74.336	19.222	2.271	0.072	0.135	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1394.85	
10	0.6972	1147.7	1168.0	0.576	3.330	74.031	19.261	2.484	0.092	0.193	0.014	0.017	0.001	0.000	0.000	0.000	0.000	1398.79	
11	0.6963	1146.8	1167.1	0.586	3.282	74.020	19.461	2.390	0.083	0.160	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1398.67	
12	0.6909	1139.3	1159.5	0.546	3.295	74.711	19.116	2.117	0.067	0.130	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1394.94	
13	0.6866	1135.1	1155.2	0.480	3.245	75.393	18.668	2.027	0.060	0.113	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1394.16	
14	0.6901	1140.7	1160.9	0.476	3.237	75.008	18.870	2.116	0.077	0.172	0.016	0.021	0.007	0.000	0.000	0.000	0.000	1397.47	
15	0.6946	1148.2	1168.6	0.376	3.349	74.884	18.546	2.207	0.131	0.361	0.047	0.065	0.036	0.000	0.000	0.000	0.000	1402.09	
16	0.6863	1136.0	1156.1	0.419	3.255	75.499	18.631	1.915	0.073	0.167	0.017	0.022	0.003	0.000	0.000	0.000	0.000	1395.54	
17	0.6863	1136.2	1156.4	0.433	3.219	75.365	18.860	1.897	0.065	0.139	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1395.87	
18	0.6852	1133.2	1153.3	0.436	3.295	75.564	18.576	1.920	0.062	0.126	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1393.29	
19	0.6839	1132.2	1152.2	0.436	3.243	75.548	18.862	1.759	0.051	0.092	0.004	0.005	0.000	0.000	0.000	0.000	0.000	1393.27	
20	0.6868	1137.0	1157.2	0.440	3.211	75.397	18.706	2.006	0.071	0.145	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1396.27	
21	0.6876	1137.6	1157.7	0.441	3.244	75.342	18.682	2.013	0.076	0.166	0.015	0.020	0.002	0.000	0.000	0.000	0.000	1396.21	
22	0.6964	1150.9	1171.3	0.453	3.236	74.536	18.784	2.495	0.118	0.289	0.031	0.042	0.016	0.000	0.000	0.000	0.000	1403.60	
23	0.6889	1140.3	1160.5	0.431	3.217	75.146	18.836	2.099	0.073	0.156	0.014	0.018	0.010	0.000	0.000	0.000	0.000	1398.22	
24	0.6858	1134.8	1154.9	0.433	3.261	75.428	18.754	1.921	0.063	0.125	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1394.61	
25	0.6853	1133.2	1153.3	0.440	3.304	75.517	18.630	1.902	0.063	0.127	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1393.12	
26	0.6851	1132.1	1152.2	0.427	3.369	75.513	18.628	1.847	0.060	0.131	0.011	0.014	0.001	0.000	0.000	0.000	0.000	1392.00	
27	0.6915	1142.6	1162.8	0.433	3.320	74.899	18.772	2.229	0.086	0.207	0.022	0.029	0.004	0.000	0.000	0.000	0.000	1398.33	
28	0.6874	1133.4	1153.5	0.440	3.489	75.005	19.059	1.768	0.063	0.146	0.013	0.017	0.000	0.000	0.000	0.000	0.000	1391.24	
29	0.6882	1137.1	1157.2	0.425	3.358	75.238	18.627	2.075	0.076	0.166	0.015	0.019	0.001	0.000	0.000	0.000	0.000	1394.96	
30	0.6876	1136.1	1156.2	0.450	3.325	75.264	18.639	2.123	0.065	0.120	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1394.29	
Avg	0.6897	1139.0	1158.8	0.486	3.317	74.973	18.870	2.093	0.074	0.156	0.013	0.016	0.003	0.000	0.000	0.000	0.000	1395.29	

Zone 272



# GQ Source Daily Summary

June 2012

**Number:** 041

**Pressure Base:** 14.730

**Contract Day:** 1

**Name:** BISMARCK STATION-GLEN ULLIN STATION

**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	0.6919	1140.8	1161.0	0.527	3.324	74.803	18.810	2.244	0.082	0.165	0.012	0.014	0.019	0.000	0.000	0.000	0.000	1395.77	
2	0.6873	1133.1	1153.2	0.529	3.357	75.196	18.869	1.821	0.062	0.126	0.010	0.012	0.018	0.000	0.000	0.000	0.000	1391.03	
3	0.6863	1130.9	1150.9	0.528	3.404	75.539	18.333	1.961	0.065	0.131	0.010	0.012	0.018	0.000	0.000	0.000	0.000	1389.25	
4	0.6883	1134.1	1154.1	0.524	3.398	75.355	18.337	2.123	0.072	0.147	0.011	0.013	0.018	0.000	0.000	0.000	0.000	1391.17	
5	0.6953	1144.2	1164.5	0.596	3.331	74.308	19.058	2.446	0.077	0.147	0.009	0.010	0.018	0.000	0.000	0.000	0.000	1396.51	
6	0.6890	1134.2	1154.3	0.563	3.399	75.043	18.721	2.079	0.061	0.110	0.005	0.005	0.014	0.000	0.000	0.000	0.000	1390.65	
7	0.6911	1137.2	1157.4	0.568	3.400	74.802	18.798	2.222	0.068	0.119	0.005	0.005	0.013	0.000	0.000	0.000	0.000	1392.26	
8	0.6916	1137.9	1158.1	0.577	3.394	74.755	18.815	2.229	0.071	0.132	0.007	0.007	0.013	0.000	0.000	0.000	0.000	1392.57	
9	0.6926	1139.6	1159.8	0.574	3.392	74.722	18.713	2.333	0.078	0.151	0.010	0.012	0.015	0.000	0.000	0.000	0.000	1393.58	
10	0.6965	1147.6	1167.9	0.574	3.267	74.136	19.295	2.420	0.087	0.176	0.012	0.014	0.018	0.000	0.000	0.000	0.000	1399.48	
11	0.6945	1143.8	1164.0	0.588	3.296	74.310	19.247	2.303	0.076	0.147	0.009	0.010	0.014	0.000	0.000	0.000	0.000	1396.76	
12	0.6847	1131.9	1151.9	0.488	3.254	75.670	18.508	1.894	0.055	0.103	0.006	0.007	0.015	0.000	0.000	0.000	0.000	1392.09	
13	0.6875	1136.6	1156.8	0.477	3.245	75.376	18.564	2.121	0.064	0.122	0.007	0.008	0.016	0.000	0.000	0.000	0.000	1395.07	
14	0.6938	1146.7	1167.0	0.431	3.287	74.921	18.575	2.258	0.110	0.288	0.036	0.050	0.044	0.000	0.000	0.000	0.000	1401.04	
15	0.6860	1135.5	1155.6	0.364	3.341	75.827	18.181	1.855	0.090	0.237	0.028	0.037	0.041	0.000	0.000	0.000	0.000	1395.19	
16	0.6871	1138.1	1158.3	0.441	3.169	75.459	18.653	2.004	0.071	0.152	0.012	0.015	0.023	0.000	0.000	0.000	0.000	1397.33	
17	0.6836	1131.0	1151.1	0.431	3.290	75.909	18.276	1.857	0.063	0.134	0.010	0.012	0.018	0.000	0.000	0.000	0.000	1392.15	
18	0.6841	1132.3	1152.4	0.437	3.244	75.743	18.521	1.858	0.057	0.107	0.006	0.008	0.018	0.000	0.000	0.000	0.000	1393.30	
19	0.6837	1132.3	1152.3	0.430	3.228	75.784	18.526	1.834	0.058	0.111	0.006	0.007	0.015	0.000	0.000	0.000	0.000	1393.55	
20	0.6856	1135.1	1155.2	0.437	3.218	75.689	18.427	1.969	0.070	0.146	0.011	0.014	0.019	0.000	0.000	0.000	0.000	1395.15	
21	0.6889	1139.5	1159.7	0.438	3.253	75.221	18.728	2.052	0.077	0.170	0.016	0.021	0.025	0.000	0.000	0.000	0.000	1397.25	
22	0.6955	1150.0	1170.3	0.445	3.221	74.918	18.337	2.527	0.123	0.305	0.034	0.046	0.043	0.000	0.000	0.000	0.000	1403.33	
23	0.6842	1132.9	1153.0	0.428	3.235	75.658	18.656	1.844	0.052	0.097	0.006	0.006	0.017	0.000	0.000	0.000	0.000	1393.89	
24	0.6838	1131.4	1151.4	0.432	3.281	75.836	18.362	1.882	0.060	0.117	0.007	0.007	0.015	0.000	0.000	0.000	0.000	1392.43	
25	0.6840	1130.5	1150.5	0.434	3.353	75.784	18.359	1.847	0.061	0.126	0.009	0.010	0.017	0.000	0.000	0.000	0.000	1391.14	
26	0.6896	1139.7	1159.9	0.427	3.326	75.292	18.427	2.159	0.085	0.204	0.021	0.028	0.030	0.000	0.000	0.000	0.000	1396.74	
27	0.6868	1133.7	1153.8	0.429	3.425	75.429	18.503	1.933	0.067	0.154	0.015	0.019	0.026	0.000	0.000	0.000	0.000	1392.26	
28	0.6859	1133.2	1153.3	0.428	3.378	75.497	18.571	1.860	0.067	0.149	0.013	0.016	0.021	0.000	0.000	0.000	0.000	1392.50	
29	0.6852	1132.9	1153.0	0.412	3.355	75.769	18.175	2.040	0.068	0.136	0.010	0.013	0.022	0.000	0.000	0.000	0.000	1392.83	
30	0.6855	1131.3	1151.3	0.432	3.447	75.717	18.124	2.031	0.067	0.137	0.011	0.014	0.020	0.000	0.000	0.000	0.000	1390.51	
Avg	0.6883	1137.0	1156.7	0.480	3.317	75.282	18.582	2.067	0.072	0.152	0.012	0.015	0.021	0.000	0.000	0.000	0.000	1394.23	

*Zone 28*

# GQ Source Daily Summary

June 2012

**Number:** 271

**Pressure Base:** 14.730

**Contract Day:** 1

**Name:** DICKINSON STATION-GLEN ULLIN

**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	0.5862	1009.2	1027.0	0.677	1.157	94.306	3.615	0.222	0.009	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1341.44	
2	0.5858	1008.4	1026.3	0.678	1.165	94.382	3.532	0.225	0.007	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1340.91	
3	0.6528	1091.0	1110.3	0.580	2.585	82.054	13.010	1.584	0.058	0.122	0.002	0.004	0.002	0.000	0.000	0.000	0.000	1374.31	
4	0.6870	1132.3	1152.4	0.528	3.369	75.334	18.575	1.976	0.067	0.143	0.000	0.000	0.009	0.000	0.000	0.000	0.000	1390.35	
5	0.6847	1128.5	1148.5	0.525	3.389	75.561	18.552	1.772	0.060	0.130	0.000	0.000	0.011	0.000	0.000	0.000	0.000	1388.03	
6	0.6862	1131.9	1151.9	0.528	3.322	75.471	18.503	1.970	0.065	0.134	0.000	0.000	0.008	0.000	0.000	0.000	0.000	1390.60	
7	0.6846	1141.1	1161.3	0.295	2.969	74.852	20.387	1.374	0.038	0.080	0.000	0.000	0.006	0.000	0.000	0.000	0.000	1403.60	
8	0.6788	1121.4	1141.3	0.560	3.220	76.973	17.114	1.934	0.061	0.127	0.000	0.000	0.011	0.000	0.000	0.000	0.000	1385.18	
9	0.6347	1069.0	1088.0	0.637	2.143	85.148	10.921	1.058	0.030	0.056	0.000	0.000	0.006	0.000	0.000	0.000	0.000	1365.59	
10	0.6364	1071.5	1090.4	0.647	2.132	84.912	11.089	1.112	0.037	0.066	0.000	0.000	0.006	0.000	0.000	0.000	0.000	1366.96	
11	0.6400	1076.0	1095.1	0.653	2.184	84.299	11.533	1.207	0.042	0.077	0.000	0.000	0.005	0.000	0.000	0.000	0.000	1368.90	
12	0.6060	1035.1	1053.4	0.705	1.400	90.550	6.809	0.492	0.016	0.025	0.000	0.000	0.002	0.000	0.000	0.000	0.000	1353.27	
13	0.6261	1068.6	1087.5	0.494	1.576	86.103	11.378	0.418	0.014	0.018	0.000	0.000	0.001	0.000	0.000	0.000	0.000	1374.09	
14	0.5959	1023.2	1041.3	0.736	1.124	92.531	5.246	0.316	0.020	0.027	0.000	0.000	0.001	0.000	0.000	0.000	0.000	1349.04	
15	0.5945	1021.5	1039.6	0.763	1.061	92.753	5.128	0.267	0.012	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1348.29	
16	0.5929	1019.2	1037.2	0.724	1.107	92.999	4.910	0.240	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1347.10	
17	0.5912	1017.0	1035.0	0.695	1.132	93.249	4.700	0.217	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1346.04	
18	0.6006	1028.8	1047.0	0.685	1.305	91.586	5.969	0.395	0.019	0.040	0.000	0.000	0.001	0.000	0.000	0.000	0.000	1351.06	
19	0.6175	1050.8	1069.4	0.674	1.571	88.764	8.000	0.787	0.061	0.123	0.007	0.006	0.006	0.000	0.000	0.000	0.000	1360.91	
20	0.5930	1018.6	1036.7	0.762	1.092	93.069	4.781	0.259	0.016	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1346.25	
21	0.6002	1027.4	1045.6	0.710	1.315	91.693	5.836	0.387	0.021	0.035	0.000	0.000	0.004	0.000	0.000	0.000	0.000	1349.64	
22	0.6076	1036.1	1054.4	0.674	1.546	90.195	7.039	0.481	0.020	0.042	0.000	0.000	0.004	0.000	0.000	0.000	0.000	1352.67	
23	0.6404	1088.7	1108.0	0.372	1.887	83.108	14.078	0.524	0.010	0.018	0.000	0.000	0.003	0.000	0.000	0.000	0.000	1384.14	
24	0.6834	1154.6	1175.1	0.000	2.485	73.887	23.007	0.620	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.47	
25	0.6788	1147.2	1167.5	0.047	2.431	74.878	22.031	0.609	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.08	
26	0.6099	1038.7	1057.1	0.710	1.546	89.799	7.365	0.505	0.023	0.050	0.000	0.000	0.003	0.000	0.000	0.000	0.000	1353.57	
27	0.6132	1043.9	1062.3	0.723	1.520	89.221	7.869	0.600	0.021	0.045	0.000	0.000	0.001	0.000	0.000	0.000	0.000	1356.63	
28	0.6724	1137.2	1157.3	0.116	2.334	76.281	20.652	0.608	0.003	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.24	
29	0.6834	1154.6	1175.1	0.000	2.492	73.871	23.013	0.624	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.41	
30	0.6465	1099.9	1119.3	0.245	1.971	81.682	15.569	0.517	0.006	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1391.77	
Avg	0.6337	1073.0	1092.1	0.538	1.951	84.984	11.674	0.777	0.025	0.048	0.000	0.000	0.003	0.000	0.000	0.000	0.000	1371.72	

*Zone 31*

# GQ Source Daily Summary

June 2012

**Number:** 051

**Pressure Base:** 14.730

**Contract Day:** 1

**Name:** CABIN CREEK STATION-BELFIELD TRANSFER **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	0.6277	1070.8	1089.7	0.420	1.724	85.658	11.761	0.410	0.009	0.013	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1375.40	
2	0.6442	1095.7	1115.1	0.304	1.934	82.777	14.924	0.530	0.011	0.016	0.002	0.001	0.001	0.000	0.000	0.000	0.000	1389.29	
3	0.6452	1097.2	1116.6	0.291	1.952	81.989	15.276	0.462	0.010	0.014	0.002	0.001	0.001	0.000	0.000	0.000	0.000	1390.20	
4	0.6640	1122.0	1141.9	0.227	2.314	78.284	18.436	0.684	0.017	0.032	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1401.28	
5	0.6881	1155.4	1175.9	0.129	2.695	73.596	22.479	1.015	0.026	0.050	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1417.53	
6	0.6861	1149.3	1169.6	0.135	2.872	74.018	21.835	1.063	0.024	0.046	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1412.00	
7	0.6838	1146.0	1166.3	0.089	2.919	74.506	21.295	1.099	0.028	0.056	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1410.38	
8	0.6871	1156.4	1176.9	0.080	2.617	73.479	22.972	0.807	0.014	0.027	0.001	0.002	0.001	0.000	0.000	0.000	0.000	1419.76	
9	0.6782	1136.8	1157.0	0.292	2.645	75.979	19.814	1.173	0.029	0.056	0.003	0.004	0.005	0.000	0.000	0.000	0.000	1404.88	
10	0.6677	1123.3	1143.2	0.310	2.456	77.988	18.129	1.040	0.024	0.044	0.002	0.002	0.003	0.000	0.000	0.000	0.000	1399.00	
11	0.6535	1094.2	1113.6	0.298	2.905	80.623	15.270	0.821	0.025	0.048	0.004	0.003	0.003	0.000	0.000	0.000	0.000	1376.68	
12	0.6721	1132.8	1152.9	0.229	2.413	76.802	19.645	0.849	0.020	0.035	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1406.23	
13	0.6600	1118.0	1137.8	0.255	2.141	79.035	17.925	0.614	0.010	0.017	0.001	0.000	0.002	0.000	0.000	0.000	0.000	1400.47	
14	0.6832	1154.8	1175.2	0.032	2.425	73.993	22.923	0.612	0.006	0.008	0.000	0.000	0.001	0.000	0.000	0.000	0.000	1421.75	
15	0.6645	1126.4	1146.3	0.185	2.157	77.975	19.108	0.549	0.009	0.013	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1406.23	
16	0.6532	1109.5	1129.2	0.292	1.956	80.389	16.832	0.502	0.011	0.014	0.002	0.001	0.002	0.000	0.000	0.000	0.000	1397.14	
17	0.6548	1111.7	1131.4	0.258	2.032	79.991	17.198	0.497	0.009	0.012	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1398.10	
18	0.6630	1122.7	1142.6	0.193	2.224	78.340	18.609	0.608	0.009	0.014	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1403.30	
19	0.6668	1129.7	1149.7	0.160	2.213	77.452	19.607	0.549	0.008	0.011	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1407.94	
20	0.6691	1130.5	1150.6	0.193	2.328	77.245	19.470	0.697	0.019	0.038	0.004	0.004	0.001	0.000	0.000	0.000	0.000	1406.52	
21	0.6712	1134.0	1154.1	0.187	2.316	76.851	19.863	0.711	0.020	0.041	0.004	0.005	0.002	0.000	0.000	0.000	0.000	1408.72	
22	0.6639	1124.6	1144.5	0.202	2.186	78.174	18.822	0.576	0.013	0.021	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1404.61	
23	0.6868	1160.3	1180.8	0.009	2.465	73.255	23.616	0.641	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.83	
24	0.6867	1159.1	1179.7	0.007	2.521	73.286	23.523	0.647	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.60	
25	0.6866	1159.5	1180.1	0.004	2.492	73.296	23.556	0.637	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.17	
26	0.6865	1158.5	1179.0	0.011	2.542	73.374	23.353	0.700	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.90	
27	0.6789	1147.7	1168.1	0.080	2.374	75.014	21.832	0.676	0.008	0.014	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1417.60	
28	0.6789	1117.9	1137.7	0.176	4.033	76.501	17.036	2.141	0.041	0.065	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1380.76	
29	0.6831	1145.9	1166.1	0.069	2.899	74.499	21.417	1.068	0.017	0.028	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1410.89	
30	0.6869	1160.3	1180.8	0.000	2.488	73.219	23.639	0.641	0.005	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.70	
Avg	0.6707	1132.0	1151.7	0.171	2.441	76.903	19.672	0.767	0.015	0.026	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1406.23	

Zone 32

# GQ Source Daily Summary

June 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	0.6889	1163.2	1183.8	0.000	2.496	72.939	23.785	0.765	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.24	
2	0.6873	1161.2	1181.7	0.000	2.468	73.067	23.891	0.562	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.43	
3	0.6864	1159.9	1180.4	0.000	2.464	73.203	23.805	0.516	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.75	
4	0.6878	1161.7	1182.3	0.000	2.478	73.007	23.905	0.597	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.62	
5	0.6879	1161.8	1182.4	0.000	2.488	72.996	23.882	0.620	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.55	
6	0.6882	1162.4	1183.0	0.000	2.474	72.954	23.926	0.635	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.08	
7	0.6881	1162.2	1182.8	0.000	2.478	72.949	23.952	0.610	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.92	
8	0.6890	1163.6	1184.2	0.000	2.482	72.782	24.088	0.636	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.63	
9	0.6920	1168.5	1189.2	0.000	2.463	72.350	24.371	0.804	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1429.52	
10	0.6887	1163.3	1183.9	0.000	2.474	72.828	24.068	0.618	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.52	
11	0.6885	1162.6	1183.2	0.034	2.441	72.985	23.885	0.627	0.008	0.010	0.003	0.003	0.003	0.000	0.000	0.000	0.000	1425.94	
12	0.6890	1163.7	1184.3	0.000	2.473	72.806	24.060	0.650	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.77	
13	0.6886	1163.0	1183.6	0.000	2.479	72.875	23.995	0.639	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.30	
14	0.6875	1161.4	1182.0	0.000	2.472	73.094	23.794	0.629	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.51	
15	0.6889	1163.6	1184.2	0.000	2.467	72.841	24.026	0.654	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.78	
16	0.6887	1162.8	1183.4	0.000	2.502	72.834	24.024	0.629	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.97	
17	0.6889	1163.1	1183.7	0.000	2.506	72.825	24.002	0.656	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.07	
18	0.6889	1163.0	1183.6	0.000	2.503	72.819	24.022	0.645	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.09	
19	0.6893	1163.7	1184.3	0.000	2.503	72.698	24.180	0.608	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.44	
20	0.6892	1163.4	1184.1	0.000	2.504	72.751	24.103	0.625	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.30	
21	0.6884	1162.6	1183.2	0.000	2.485	72.883	24.006	0.614	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.05	
22	0.6887	1163.4	1184.0	0.000	2.468	72.851	24.026	0.642	0.005	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.68	
23	0.6878	1161.7	1182.3	0.000	2.482	73.012	23.875	0.619	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.59	
24	0.6881	1162.3	1182.9	0.000	2.469	72.969	23.923	0.627	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.07	
25	0.6892	1164.2	1184.8	0.000	2.463	72.784	24.072	0.668	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.17	
26	0.6892	1164.1	1184.7	0.000	2.471	72.800	24.026	0.691	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.03	
27	0.6889	1163.5	1184.1	0.000	2.476	72.806	24.069	0.637	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.65	
28	0.6884	1162.9	1183.5	0.000	2.469	72.900	23.991	0.628	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.37	
29	0.6885	1163.0	1183.6	0.000	2.474	72.914	23.932	0.667	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.37	
30	0.6876	1161.6	1182.2	0.000	2.468	73.063	23.841	0.616	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.67	
Avg	0.6886	1163.0	1183.5	0.001	2.478	72.886	23.984	0.638	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.27	

*Zone 33*

# GQ Source Daily Summary

June 2012

**Number:** 331

**Pressure Base:** 14.730

**Contract Day:** 1

**Name:** MARMARTH PLANT

**Temperature Base:**

**Contract Hour:** 9

Day	Relative Density	Heating Value	Heating Value																
		Wet	Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7909	1105.2	1124.8	2.075	12.466	55.667	26.330	3.091	0.083	0.245	0.010	0.027	0.005	0.000	0.000	0.000	0.000	1264.83	
2	0.7916	1109.2	1128.9	2.103	12.246	55.540	26.681	3.070	0.082	0.238	0.010	0.025	0.004	0.000	0.000	0.000	0.000	1268.82	
3	0.7896	1106.8	1126.4	2.082	12.240	55.864	26.443	3.010	0.081	0.239	0.010	0.026	0.005	0.000	0.000	0.000	0.000	1267.64	
4	0.7916	1110.9	1130.6	2.074	12.189	55.563	26.705	3.104	0.083	0.241	0.010	0.026	0.005	0.000	0.000	0.000	0.000	1270.74	
5	0.7933	1122.7	1142.5	2.068	11.636	55.441	27.252	3.234	0.084	0.243	0.010	0.026	0.005	0.000	0.000	0.000	0.000	1282.82	
6	0.7902	1116.9	1136.6	2.072	11.694	55.988	26.723	3.160	0.083	0.240	0.010	0.025	0.004	0.000	0.000	0.000	0.000	1278.69	
7	0.7895	1100.8	1120.2	2.672	11.702	56.147	26.459	2.713	0.070	0.203	0.009	0.022	0.004	0.000	0.000	0.000	0.000	1260.83	
8	0.7909	1109.7	1129.4	2.378	11.730	55.860	26.754	2.938	0.077	0.224	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1269.98	
9	0.7892	1111.7	1131.4	2.167	11.778	55.937	26.874	2.910	0.076	0.221	0.009	0.023	0.004	0.000	0.000	0.000	0.000	1273.53	
10	0.7898	1113.2	1132.9	2.104	11.835	55.773	27.034	2.914	0.078	0.225	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1274.80	
11	0.7894	1116.9	1136.6	1.995	11.744	55.658	27.432	2.844	0.075	0.217	0.009	0.023	0.004	0.000	0.000	0.000	0.000	1279.28	
12	0.7927	1120.0	1139.9	2.127	11.655	55.330	27.545	2.993	0.080	0.231	0.010	0.024	0.004	0.000	0.000	0.000	0.000	1280.26	
13	0.7891	1112.3	1132.0	2.101	11.824	56.067	26.653	2.974	0.085	0.252	0.011	0.028	0.005	0.000	0.000	0.000	0.000	1274.35	
14	0.7896	1089.7	1109.0	1.662	13.929	54.632	26.883	2.602	0.067	0.194	0.008	0.020	0.004	0.000	0.000	0.000	0.000	1248.30	
15	0.8048	995.4	1013.0	1.633	21.162	50.410	23.872	2.616	0.070	0.204	0.008	0.021	0.004	0.000	0.000	0.000	0.000	1129.24	
16	0.8050	1006.2	1024.0	1.863	20.173	50.908	23.995	2.727	0.076	0.221	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1141.33	
17	0.8020	1014.8	1032.7	1.800	19.464	51.557	24.133	2.716	0.075	0.219	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1153.18	
18	0.7843	1078.2	1097.3	1.885	13.787	56.018	25.415	2.558	0.075	0.222	0.010	0.026	0.005	0.000	0.000	0.000	0.000	1239.19	
19	0.7833	1111.2	1130.8	1.854	11.731	56.593	26.872	2.588	0.080	0.239	0.011	0.028	0.006	0.000	0.000	0.000	0.000	1277.71	
20	0.7830	1112.4	1132.1	1.817	11.685	56.512	27.125	2.511	0.077	0.230	0.010	0.027	0.005	0.000	0.000	0.000	0.000	1279.42	
21	0.7853	1113.8	1133.5	1.744	11.928	56.310	26.849	2.767	0.086	0.264	0.012	0.033	0.006	0.000	0.000	0.000	0.000	1279.03	
22	0.7868	1123.7	1143.6	1.767	11.424	56.032	27.639	2.781	0.080	0.234	0.010	0.027	0.006	0.000	0.000	0.000	0.000	1289.27	
23	0.6837	1027.8	1046.0	1.005	8.732	75.048	13.612	1.420	0.041	0.120	0.005	0.014	0.003	0.000	0.000	0.000	0.000	1266.81	
24	0.5831	934.9	951.4	0.197	6.159	93.431	0.211	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1245.89	
25	0.5828	936.5	953.1	0.273	5.912	93.609	0.202	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1248.43	
26	0.5830	935.8	952.4	0.256	5.994	93.545	0.202	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1247.36	
27	0.7879	1112.7	1132.4	2.165	11.601	55.608	27.966	2.364	0.066	0.196	0.008	0.021	0.004	0.000	0.000	0.000	0.000	1275.79	
28	0.7904	1095.7	1115.1	2.901	11.750	55.715	27.047	2.307	0.062	0.184	0.008	0.021	0.005	0.000	0.000	0.000	0.000	1254.29	
29	0.7912	1103.7	1123.3	2.686	11.666	55.310	27.769	2.304	0.059	0.175	0.008	0.019	0.004	0.000	0.000	0.000	0.000	1262.84	
30	0.7871	1110.6	1130.3	2.173	11.640	55.694	27.902	2.310	0.062	0.185	0.008	0.021	0.004	0.000	0.000	0.000	0.000	1273.99	
Avg	0.7664	1079.0	1097.7	1.857	12.116	59.726	23.553	2.451	0.067	0.197	0.008	0.022	0.004	0.000	0.000	0.000	0.000	1255.29	

*Zone 34*

# GQ Source Analysis

WBI Energy Transmission, Inc.

<b>GQ Source Number:</b>	1201140	<b>Specific Gravity:</b>	0.5728
<b>GQ Source Name:</b>	EAGLE 8B ND LMD	<b>Dry Heat Value:</b>	979.13
<b>Effective Date:</b>	6/8/2012 9:00:00 AM	<b>Wet Heat Value:</b>	962.09
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>As Deliv. Heat Value:</b>	979.13
<b>Pressure Base:</b>	14.730	<b>Sample Pressure:</b>	28.00
<b>Viscosity:</b>		<b>Sample Temperature:</b>	

	<u>Mol %</u>	<u>Liquid Content</u>		<u>Mol %</u>
C1 Methane	95.902		CO2 Carbon Dioxide	0.106
C2 Ethane	0.323	0.0860	N2 Nitrogen	3.640
C3 Propane	0.020	0.0054	O2 Oxygen	0.000
IC4 Isobutane	0.008	0.0026	He Helium	
NC4 n-Butane	0.001	0.0002	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				

<b>Totals</b>	100.000%	0.094 GPM
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**Sample Date:** 6/8/2012 12:00:00 AM  
**Sample Type:** Spot  
**Sample Tech:** MG  
**H2S:** ppm

**Sample Remarks:**

**Analysis Tech:** M. Barney

**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	Chromatograph	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	Chromatograph	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	Yearly 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	JUNE 12	MAY 12	APR 12	MAR 12	FEB 12	JAN 12	DEC 11	NOV 11	OCT 11	SEPT 11	AUG 11	JULY 11	ZONE
MT/ND	211	Sidney Area	1205	1200	1194	1196	1199	1206	1210	1212	1215	1212	1199	1204	1215	211
ND	24	Williston Area	1197	1197	1196	1194	1199	1195	1184	1199	1203	1197	1200	1200	1198	24
ND	25	Watford City Area	1139	1151	1159	1139	1138	1132	1140	1140	1131	1129	1136	1136	1135	25
ND/MT	241	Fairview Area	1194	1191	1184	1185	1189	1193	1194	1194	1201	1198	1200	1200	1199	241
ND	261	Williston - Tioga - Minot Line	1159	1157	1157	1155	1162	1156	1160	1163	1166	1158	1144	1159	1176	261
ND	262	Minot Area	1163	1160	1159	1157	1162	1158	1161	1165	1168	1163	1160	1161	1179	262
ND	263	Tioga - Portal	1111	1136	1126	1099	1135	1081	1075	1074	1092	1126	1128	1128	1126	263
ND	264	Williston - Ray	1197	1197	1196	1194	1199	1195	1184	1199	1203	1197	1200	1200	1198	264
ND	271	Bismarck - Cleveland	1151	1157	1157	1157	1154	1123	1124	1130	1148	1161	1159	1160	1177	271
ND	272	Cleveland - Mapleton	1150	1159	1158	1156	1153	1121	1122	1129	1148	1161	1159	1160	1179	272
ND	273	Cleveland - Grafton	1151	1159	1158	1157	1153	1121	1123	1129	1148	1162	1159	1160	1179	273
ND	28	Bismarck - Cabin Creek	1127	1157	1157	1143	1117	1065	1073	1078	1084	1148	1160	1160	1180	28
ND	31	Dickinson Area	1106	1092	1070	1111	1114	1064	1072	1077	1081	1138	1162	1152	1135	31
ND/MT	32	Cabin Creek - Dickinson	1098	1152	1142	1092	1047	1044	1057	1063	1061	1100	1156	1126	1133	32
ND	33	Killdeer	1182	1184	1181	1181	1183	1182	1179	1183	1181	1181	1181	1181	1182	33
ND	34	Bowman Area	1130	1098	1134	1130	1126	1126	1147	1129	1117	1139	1132	1138	1144	34
ND	35	Baker Field - North Dakota	979	979	979	979	979	979	979	979	979	979	979	979	979	35

**THERMAL ZONE VARIANCE  
DOCUMENTATION**

**June 2012**

<b><i>ZONE</i></b>	<b><i>BTU VARIANCE</i></b>	<b><i>REASON</i></b>
31	22	Mix of Gas in the area
34	-36	Receipt from Baker Field due to Marmarth Plant down for a few days