



MONTANA-DAKOTA

UTILITIES CO.

A Division of MDU Resources Group, Inc.

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

April 25, 2012

RECEIVED

APR 26 2012

PUBLIC SERVICE COMMISSION

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

Re: Case No. 11,006 (Therm Billing)
Monthly Report – March 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 April 2012.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our supplier for the month of March 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 March 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
APR 2012

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	314	APPLE VALLEY	271	1.1135
12	323	BERTHOLD	262	1.0975
12	327	BISMARCK	28	1.0778
12	337	BURLINGTON	262	1.1212
12	343	CARRINGTON	273	1.1125
12	344	CLEVELAND	272	1.1047
12	364	CAVALIER	273	1.1359
12	365	DAWSON	271	1.1056
12	368	DES LACS	262	1.1054
12	374	FT TOTTEN	273	1.1204
12	375	DEVILS LAKE	273	1.1204
12	379	BARLOW	273	1.1125
12	387	ELDRIDGE	272	1.1125
12	411	GLEN ULLIN	31	1.0522
12	416	GARRISON	262	1.1054
12	417	GRAFTON	273	1.1438
12	439	HANKINSON	600	1.0768
12	449	JAMESTOWN	272	1.1204
12	463	LANGDON	273	1.1125
12	475	LINTON	802	.9803
12	478	LINCOLN	28	1.0778
12	494	MEDINA	271	1.1056
12	498	MANDAN	28	1.0778
12	505	MINOT	262	1.1212
12	512	MAX	262	1.0975
12	524	NEW SALEM	28	1.0550
12	532	NEW ROCKFORD	273	1.1125
12	539	PARK RIVER	273	1.1359
12	572	RUTHVILLE	262	1.1212
12	574	SANBORN	272	1.1204
12	593	STEELE	271	1.1056
12	598	SHEYENNE	273	1.1204
12	605	SURREY	262	1.1212
12	610	TAPPEN	271	1.1056
12	619	TURTLE LAKE	262	1.1054

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
APR 2012

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	624	UNDERWOOD	262	1.1054
12	625	VALLEY CITY	272	1.1281
12	629	WALHALLA	273	1.1359
12	646	WASHBURN	262	1.1133
12	647	WILTON	262	1.0975
12	664	RIVERDALE	262	1.1054
12	712	MINOT AFB	262	1.1212
12	717	SPIRITWOOD	272	1.1204
12	718	FAIRMOUNT	600	1.0746
12	732	MSR SITE	273	1.1125
12	733	PAR SITE	273	1.1125
15	303	ALEXANDER	25	1.0748
15	308	ARNEGARD	25	1.0748
15	318	BEACH	32	.9675
15	319	BELFIELD	32	.9747
15	330	BOWMAN	34	1.0329
15	369	DICKINSON	31	1.0446
15	384	EPPING	264	1.1325
15	407	GLADSTONE	31	1.0446
15	413	GOLVA	32	.9534
15	429	HEBRON	31	1.0522
15	459	KILLDEER	33	1.1173
15	469	LEFOR	31	1.0446
15	474	LIGNITE	263	1.0797
15	500	MARMARTH	34	1.0405
15	510	MOTT	31	1.0446
15	522	NEW ENGLAND	31	1.0370
15	540	PALERMO	262	1.0975
15	558	RAY	264	1.1325
15	561	REGENT	31	1.0446
15	563	RHAME	34	1.0253
15	564	RICHARDTON	31	1.0370
15	568	ROSS	261	1.0896
15	583	SENTINEL BUTTE	32	.9675
15	588	SOUTH HEART	31	1.0370

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
APR 2012

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	590	SPRINGBROOK	264	1.1325
15	591	STANLEY	261	1.0975
15	611	TAYLOR	31	1.0370
15	616	TIOGA	261	1.0896
15	620	TRENTON	24	1.1406
15	632	WATFORD CITY	25	1.0748
15	636	WHEELLOCK	264	1.1243
15	637	WHITE EARTH	261	1.0975
15	642	WILLISTON	24	1.1406
15	691	FAIRVIEW	241	1.1311
15	743	BAKER FIELD	35	.8980

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

GQ Source Daily Summary

March 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	0.7104	1179.4	1200.3	0.044	3.449	70.177	23.865	2.411	0.023	0.030	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1424.11	
2	0.7086	1177.2	1198.1	0.044	3.414	70.432	23.759	2.296	0.022	0.031	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1423.28	
3	0.7076	1174.8	1195.6	0.050	3.462	70.585	23.587	2.267	0.021	0.026	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.31	
4	0.7091	1177.4	1198.3	0.048	3.450	70.354	23.769	2.314	0.025	0.037	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1422.92	
5	0.7180	1182.8	1203.8	0.312	3.542	69.624	23.413	2.953	0.054	0.094	0.004	0.003	0.000	0.000	0.000	0.000	0.000	1420.78	
6	0.7254	1175.5	1196.3	0.892	3.807	69.319	22.324	3.360	0.101	0.180	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1404.65	
7	0.7116	1176.7	1197.6	0.163	3.549	70.110	23.651	2.443	0.033	0.047	0.002	0.001	0.000	0.000	0.000	0.000	0.000	1419.66	
8	0.7088	1175.9	1196.7	0.046	3.516	70.412	23.651	2.302	0.026	0.042	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1421.40	
9	0.7120	1181.3	1202.2	0.049	3.475	69.987	23.894	2.537	0.025	0.032	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1424.80	
10	0.7223	1179.0	1199.8	0.645	3.675	69.503	22.707	3.226	0.084	0.147	0.007	0.005	0.000	0.000	0.000	0.000	0.000	1411.90	
11	0.7300	1174.3	1195.1	1.145	3.918	69.142	21.731	3.658	0.136	0.248	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1398.79	
12	0.7295	1173.4	1194.2	1.155	3.918	69.138	21.838	3.539	0.136	0.256	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1398.12	
13	0.7255	1184.3	1205.3	0.634	3.666	68.896	23.285	3.268	0.085	0.152	0.008	0.006	0.001	0.000	0.000	0.000	0.000	1415.19	
14	0.7290	1175.2	1196.0	1.070	3.887	68.882	22.446	3.363	0.118	0.215	0.011	0.008	0.001	0.000	0.000	0.000	0.000	1400.82	
15	0.7225	1179.3	1200.2	0.629	3.701	69.319	23.014	3.082	0.085	0.155	0.008	0.006	0.001	0.000	0.000	0.000	0.000	1412.07	
16	0.7294	1172.3	1193.1	1.160	3.959	69.065	21.966	3.448	0.133	0.246	0.013	0.010	0.000	0.000	0.000	0.000	0.000	1397.02	
17	0.7163	1171.3	1192.0	0.607	3.641	70.260	22.448	2.806	0.080	0.145	0.007	0.005	0.000	0.000	0.000	0.000	0.000	1408.58	
18	0.7113	1183.1	1204.1	0.085	3.245	70.337	23.651	2.572	0.039	0.064	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1427.68	
19	0.7237	1175.8	1196.6	0.824	3.732	69.283	22.823	3.058	0.095	0.170	0.008	0.007	0.001	0.000	0.000	0.000	0.000	1406.71	
20	0.7093	1180.3	1201.2	0.054	3.279	70.470	23.706	2.424	0.025	0.037	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1426.26	
21	0.7168	1192.9	1214.1	0.047	3.226	69.408	24.362	2.877	0.031	0.044	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1433.91	
22	0.7164	1177.2	1198.0	0.434	3.552	70.023	22.961	2.843	0.065	0.113	0.005	0.004	0.000	0.000	0.000	0.000	0.000	1415.58	
23	0.7287	1175.0	1195.8	1.063	3.883	69.106	22.096	3.459	0.131	0.240	0.012	0.010	0.001	0.000	0.000	0.000	0.000	1400.86	
24	0.7161	1184.8	1205.8	0.211	3.398	69.690	23.829	2.726	0.050	0.086	0.005	0.004	0.001	0.000	0.000	0.000	0.000	1424.99	
25	0.7122	1184.3	1205.3	0.047	3.315	69.904	24.221	2.433	0.033	0.042	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1428.23	
26	0.7092	1179.3	1200.1	0.053	3.336	70.351	23.903	2.288	0.030	0.036	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1425.10	
27	0.7110	1183.0	1203.9	0.051	3.281	70.246	23.825	2.503	0.038	0.049	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1427.76	
28	0.7073	1178.1	1198.9	0.052	3.231	70.758	23.593	2.296	0.029	0.036	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1425.54	
29	0.7195	1175.9	1196.7	0.618	3.649	69.713	22.901	2.855	0.090	0.157	0.009	0.007	0.001	0.000	0.000	0.000	0.000	1410.88	
30	0.7269	1167.6	1188.3	1.146	4.034	69.541	21.474	3.372	0.142	0.264	0.015	0.012	0.001	0.000	0.000	0.000	0.000	1393.73	
31	0.7263	1167.4	1188.1	1.159	3.977	69.275	22.101	3.128	0.120	0.219	0.011	0.009	0.001	0.000	0.000	0.000	0.000	1394.08	
Avg	0.7178	1178.0	1198.8	0.469	3.586	69.784	23.122	2.842	0.068	0.117	0.006	0.005	0.001	0.000	0.000	0.000	0.000	1415.06	

Zone 2 11

GQ Source Daily Summary March 2012

Number: 372

Pressure Base: 14.730

Contract Day: 1

Name: NESSON PLANT WEST

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	0.7321	1183.7	1204.7	0.967	3.817	68.711	22.387	3.631	0.143	0.294	0.024	0.022	0.004	0.000	0.000	0.000	0.000	1407.90	
2	0.7274	1179.0	1199.9	0.882	3.794	68.935	22.715	3.375	0.100	0.181	0.009	0.007	0.003	0.000	0.000	0.000	0.000	1406.85	
3	0.7270	1177.8	1198.7	0.912	3.785	69.015	22.642	3.347	0.101	0.183	0.008	0.006	0.001	0.000	0.000	0.000	0.000	1405.81	
4	0.7290	1177.7	1198.5	0.999	3.842	68.871	22.496	3.463	0.110	0.201	0.010	0.007	0.001	0.000	0.000	0.000	0.000	1403.78	
5	0.7309	1177.4	1198.3	1.095	3.891	68.765	22.282	3.609	0.119	0.219	0.011	0.008	0.001	0.000	0.000	0.000	0.000	1401.63	
6	0.7346	1181.6	1202.5	1.148	3.905	68.436	22.202	3.918	0.130	0.240	0.011	0.009	0.001	0.000	0.000	0.000	0.000	1402.99	
7	0.7315	1176.7	1197.5	1.168	3.885	68.740	22.239	3.584	0.126	0.235	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1400.11	
8	0.7244	1174.4	1195.2	0.968	3.666	69.475	22.396	3.184	0.104	0.190	0.009	0.007	0.001	0.000	0.000	0.000	0.000	1404.23	
9	0.7300	1180.2	1201.1	0.984	3.808	68.770	22.527	3.571	0.113	0.208	0.010	0.008	0.001	0.000	0.000	0.000	0.000	1405.80	
10	0.7319	1185.4	1206.4	0.928	3.753	68.496	22.755	3.738	0.109	0.202	0.010	0.008	0.001	0.000	0.000	0.000	0.000	1410.12	
11	0.7310	1176.3	1197.1	1.130	3.916	68.885	22.024	3.664	0.127	0.233	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1400.17	
12	0.7323	1177.5	1198.3	1.167	3.907	68.784	22.005	3.724	0.137	0.253	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1400.34	
13	0.7317	1176.7	1197.5	1.176	3.887	68.677	22.360	3.488	0.135	0.255	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1399.99	
14	0.7336	1180.6	1201.6	1.146	3.874	68.351	22.627	3.594	0.134	0.251	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1402.83	
15	0.7325	1177.8	1198.7	1.171	3.901	68.482	22.561	3.485	0.131	0.246	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1400.57	
16	0.7342	1180.3	1201.2	1.173	3.913	68.319	22.537	3.632	0.140	0.263	0.013	0.010	0.001	0.000	0.000	0.000	0.000	1401.81	
17	0.7348	1181.3	1202.2	1.168	3.908	68.172	22.724	3.610	0.137	0.257	0.013	0.010	0.001	0.000	0.000	0.000	0.000	1402.50	
18	0.7293	1173.9	1194.7	1.119	3.924	68.865	22.404	3.294	0.128	0.242	0.012	0.010	0.001	0.000	0.000	0.000	0.000	1398.91	
19	0.7310	1176.4	1197.2	1.128	3.917	68.557	22.668	3.350	0.125	0.234	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1400.28	
20	0.7314	1177.1	1198.0	1.137	3.894	68.570	22.594	3.418	0.127	0.237	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1400.78	
21	0.7293	1177.8	1198.6	1.024	3.827	68.763	22.702	3.321	0.120	0.223	0.011	0.008	0.001	0.000	0.000	0.000	0.000	1403.61	
22	0.7312	1179.1	1200.0	1.077	3.848	68.649	22.524	3.520	0.126	0.235	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1403.31	
23	0.7321	1179.0	1199.9	1.109	3.887	68.582	22.458	3.552	0.135	0.253	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1402.36	
24	0.7308	1174.6	1195.4	1.181	3.924	68.740	22.379	3.362	0.135	0.256	0.013	0.010	0.001	0.000	0.000	0.000	0.000	1398.36	
25	0.7304	1174.4	1195.2	1.168	3.914	68.730	22.480	3.308	0.132	0.246	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1398.56	
26	0.7304	1176.7	1197.5	1.101	3.886	68.723	22.510	3.381	0.131	0.246	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1401.18	
27	0.7300	1176.9	1197.8	1.095	3.838	68.878	22.349	3.437	0.133	0.247	0.012	0.010	0.001	0.000	0.000	0.000	0.000	1401.90	
28	0.7320	1177.2	1198.1	1.155	3.918	68.609	22.401	3.498	0.138	0.257	0.013	0.010	0.001	0.000	0.000	0.000	0.000	1400.29	
29	0.7306	1179.6	1200.4	1.053	3.798	68.754	22.517	3.479	0.131	0.245	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1404.43	
30	0.7308	1176.6	1197.5	1.110	3.903	68.715	22.461	3.397	0.135	0.254	0.013	0.010	0.001	0.000	0.000	0.000	0.000	1400.83	
31	0.7293	1171.2	1191.9	1.169	4.007	69.129	21.844	3.414	0.142	0.269	0.014	0.011	0.001	0.000	0.000	0.000	0.000	1395.71	
Avg	0.7309	1178.0	1198.8	1.091	3.869	68.714	22.444	3.495	0.127	0.237	0.012	0.009	0.001	0.000	0.000	0.000	0.000	1402.19	

*** End of Report***

Zone 24, 264

GQ Source Analysis

Williston Basin Interstate Pipeline Co.

Attachment B
Page 3 of 16

GQ Source Number:	0602160	Specific Gravity:	0.7257
GQ Source Name:	FAIRVIEW BORDER	Dry Heat Value:	1189.17
Effective Date:	3/1/2012 9:00:00 AM	Wet Heat Value:	1168.47
Effective End Date:	1/18/2038 9:14:07 PM	As Deliv. Heat Value:	1189.17
Pressure Base:	14.730	Sample Pressure:	0.00
Viscosity:		Sample Temperature:	

	<u>Mol %</u>	<u>Liquid Content</u>		<u>Mol %</u>
C1 Methane	69.315		CO2 Carbon Dioxide	1.075
C2 Ethane	21.861	0.0000	N2 Nitrogen	3.944
C3 Propane	3.439	0.9447	O2 Oxygen	0.000
IC4 Isobutane	0.124	0.0404	He Helium	
NC4 n-Butane	0.221	0.0694	H2 Hydrogen	
IC5 Isopentane	0.012	0.0044	H2S Hydrogen Sulfide	
NC5 n-Pentane	0.010	0.0036	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% 1.063 GPM

Sample Date: 3/31/2012 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.

Attachment B
Page 4 of 16

GQ Source Number:	0602230	Specific Gravity:	0.7343
GQ Source Name:	WATFORD CITY BORDER	Dry Heat Value:	1137.75
Effective Date:	3/1/2012 9:00:00 AM	Wet Heat Value:	1117.94
Effective End Date:	1/18/2038 9:14:07 PM	As Deliv. Heat Value:	1137.75
Pressure Base:	14.730	Sample Pressure:	0.00
Viscosity:		Sample Temperature:	

	<u>Mol %</u>	<u>Liquid Content</u>		<u>Mol %</u>
C1 Methane	68.002		CO2 Carbon Dioxide	0.774
C2 Ethane	18.040	4.8102	N2 Nitrogen	8.298
C3 Propane	4.237	1.1639	O2 Oxygen	0.000
IC4 Isobutane	0.209	0.0681	He Helium	
NC4 n-Butane	0.375	0.1179	H2 Hydrogen	
IC5 Isopentane	0.030	0.0109	H2S Hydrogen Sulfide	
NC5 n-Pentane	0.029	0.0103	Ar Argon	
C6 Hexanes	0.008	0.0035	CO Carbon Monoxide	
C7 Heptanes			H2 Water	
C8 Octanes			Neo-C5 Neopentane	
C9 Nonanes				
C10 Decanes				

Totals 100.000% 6.185 GPM

Sample Date: 3/31/2012 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

March 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	0.6935	1136.0	1156.1	0.564	3.714	74.275	19.041	2.148	0.077	0.149	0.011	0.011	0.010					1388.26	
2	0.6925	1135.7	1155.8	0.545	3.663	74.428	18.942	2.216	0.065	0.119	0.007	0.007	0.008					1388.98	
3	0.6925	1136.0	1156.2	0.542	3.646	74.437	18.953	2.209	0.067	0.123	0.007	0.007	0.009					1389.37	
4	0.6917	1133.9	1153.9	0.548	3.702	74.565	18.785	2.185	0.068	0.124	0.007	0.007	0.010					1387.44	
5	0.6915	1133.5	1153.6	0.559	3.683	74.666	18.661	2.204	0.070	0.130	0.008	0.008	0.010					1387.25	
6	0.6917	1133.8	1153.8	0.573	3.667	74.546	18.870	2.126	0.067	0.127	0.008	0.008	0.008					1387.36	
7	0.6945	1136.8	1156.9	0.609	3.691	74.159	19.055	2.257	0.072	0.134	0.008	0.008	0.008					1388.23	
8	0.6960	1139.1	1159.3	0.599	3.702	73.860	19.350	2.254	0.072	0.136	0.008	0.009	0.009					1389.62	
9	0.6965	1139.4	1159.6	0.572	3.778	73.686	19.494	2.243	0.069	0.130	0.008	0.009	0.010					1389.41	
10	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	
11	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	
12	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	
13	0.6994	1146.7	1167.0	0.597	3.561	73.982	18.793	2.660	0.108	0.232	0.022	0.026	0.020					1395.42	
14	0.6995	1146.7	1167.0	0.607	3.553	73.992	18.781	2.643	0.110	0.242	0.023	0.029	0.019					1395.34	
15	0.6999	1147.8	1168.2	0.611	3.515	73.917	18.910	2.611	0.112	0.250	0.024	0.030	0.019					1396.35	
16	0.6986	1145.6	1165.8	0.608	3.535	73.896	19.083	2.532	0.096	0.198	0.017	0.020	0.016					1394.89	
17	0.6953	1140.1	1160.3	0.609	3.560	74.139	19.134	2.293	0.079	0.152	0.011	0.013	0.011					1391.55	
18	0.6974	1143.1	1163.3	0.619	3.566	73.902	19.215	2.390	0.088	0.176	0.014	0.017	0.013					1392.98	
19	0.6953	1140.7	1160.9	0.605	3.537	74.014	19.363	2.244	0.075	0.139	0.009	0.009	0.006					1392.16	
20	0.6963	1140.3	1160.5	0.643	3.593	73.780	19.539	2.228	0.071	0.127	0.007	0.006	0.005					1390.74	
21	0.6950	1140.7	1160.9	0.591	3.529	73.973	19.482	2.210	0.069	0.127	0.007	0.007	0.005					1392.51	
22	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	
23	0.6965	1143.5	1163.7	0.601	3.484	73.833	19.530	2.318	0.075	0.138	0.008	0.007	0.005					1394.40	
24	0.6952	1139.9	1160.1	0.626	3.540	73.983	19.418	2.220	0.070	0.128	0.007	0.006	0.003					1391.36	
25	0.6960	1140.4	1160.6	0.631	3.578	74.040	19.172	2.302	0.082	0.161	0.012	0.013	0.009					1391.15	
26	0.6938	1137.8	1158.0	0.600	3.576	74.289	19.047	2.259	0.075	0.136	0.008	0.007	0.002					1390.20	
27	0.6943	1139.0	1159.1	0.589	3.570	74.253	19.038	2.311	0.078	0.143	0.009	0.009	0.000					1391.10	
28	0.6948	1138.1	1158.2	0.619	3.624	74.137	19.119	2.260	0.078	0.145	0.008	0.008	0.002					1389.53	
29	0.6996	1147.6	1167.9	0.582	3.544	73.892	18.931	2.645	0.111	0.237	0.021	0.026	0.010					1396.37	
30	0.7048	1156.0	1176.5	0.559	3.555	73.527	18.868	2.880	0.146	0.345	0.039	0.053	0.028					1401.33	
31	0.7020	1149.1	1169.5	0.658	3.567	73.536	19.103	2.755	0.107	0.215	0.017	0.020	0.021					1395.75	
Avg	0.6959	1141.0	1161.6	0.582	3.578	74.108	19.085	2.354	0.085	0.170	0.013	0.015	0.010					1392.47	

Zone 261

GQ Source Daily Summary

March 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	0.6945	1137.8	1157.9	0.571	3.683	74.109	19.209	2.168	0.078	0.153	0.008	0.007	0.014	0.000	0.000	0.000	0.000	1389.45	
2	0.6923	1135.6	1155.7	0.567	3.614	74.455	19.016	2.123	0.067	0.127	0.008	0.009	0.015	0.000	0.000	0.000	0.000	1389.03	
3	0.6942	1138.9	1159.1	0.567	3.587	74.254	19.051	2.319	0.069	0.128	0.005	0.005	0.015	0.000	0.000	0.000	0.000	1391.21	
4	0.6922	1135.2	1155.4	0.562	3.638	74.449	18.993	2.146	0.066	0.123	0.005	0.005	0.015	0.000	0.000	0.000	0.000	1388.66	
5	0.6925	1135.2	1155.3	0.571	3.652	74.488	18.849	2.218	0.068	0.128	0.005	0.005	0.015	0.000	0.000	0.000	0.000	1388.35	
6	0.6920	1134.6	1154.7	0.586	3.618	74.537	18.899	2.139	0.068	0.128	0.005	0.005	0.014	0.000	0.000	0.000	0.000	1388.10	
7	0.6936	1136.1	1156.2	0.607	3.644	74.318	18.987	2.213	0.070	0.135	0.006	0.006	0.014	0.000	0.000	0.000	0.000	1388.35	
8	0.6968	1140.9	1161.1	0.628	3.617	73.804	19.399	2.312	0.075	0.140	0.007	0.007	0.011	0.000	0.000	0.000	0.000	1391.05	
9	0.6968	1140.2	1160.3	0.609	3.695	73.686	19.541	2.238	0.071	0.134	0.006	0.006	0.014	0.000	0.000	0.000	0.000	1390.11	
10	0.6978	1141.4	1161.6	0.607	3.722	73.529	19.614	2.290	0.072	0.139	0.007	0.007	0.015	0.000	0.000	0.000	0.000	1390.56	
11	0.6945	1140.4	1160.6	0.559	3.539	74.322	18.934	2.401	0.073	0.142	0.007	0.007	0.015	0.000	0.000	0.000	0.000	1392.72	
12	0.6958	1141.5	1161.8	0.598	3.532	74.142	19.059	2.402	0.080	0.157	0.008	0.008	0.014	0.000	0.000	0.000	0.000	1392.77	
13	0.6972	1143.1	1163.3	0.626	3.536	73.844	19.342	2.391	0.081	0.152	0.007	0.007	0.015	0.000	0.000	0.000	0.000	1393.17	
14	0.7002	1148.3	1168.7	0.617	3.500	73.971	18.766	2.683	0.120	0.272	0.025	0.032	0.013	0.000	0.000	0.000	0.000	1396.62	
15	0.7006	1149.2	1169.5	0.624	3.473	73.767	19.069	2.651	0.113	0.248	0.021	0.025	0.009	0.000	0.000	0.000	0.000	1397.30	
16	0.7006	1149.2	1169.5	0.631	3.467	73.805	19.021	2.635	0.116	0.262	0.023	0.029	0.010	0.000	0.000	0.000	0.000	1397.26	
17	0.6996	1147.3	1167.6	0.627	3.490	73.821	19.108	2.576	0.103	0.223	0.019	0.024	0.010	0.000	0.000	0.000	0.000	1396.01	
18	0.6948	1140.2	1160.4	0.609	3.509	74.135	19.275	2.216	0.076	0.150	0.009	0.011	0.009	0.000	0.000	0.000	0.000	1392.10	
19	0.6988	1145.1	1165.4	0.645	3.528	73.676	19.399	2.456	0.088	0.175	0.011	0.013	0.009	0.000	0.000	0.000	0.000	1394.10	
20	0.6964	1141.5	1161.7	0.654	3.513	73.830	19.524	2.251	0.073	0.132	0.005	0.004	0.013	0.000	0.000	0.000	0.000	1392.05	
21	0.6971	1142.5	1162.7	0.646	3.529	73.667	19.679	2.259	0.071	0.129	0.005	0.003	0.012	0.000	0.000	0.000	0.000	1392.61	
22	0.6960	1140.9	1161.1	0.638	3.534	73.908	19.430	2.258	0.074	0.135	0.005	0.004	0.012	0.000	0.000	0.000	0.000	1391.76	
23	0.6968	1143.4	1163.6	0.605	3.502	73.794	19.546	2.319	0.074	0.137	0.006	0.005	0.011	0.000	0.000	0.000	0.000	1394.05	
24	0.6965	1142.4	1162.7	0.643	3.477	73.810	19.595	2.244	0.074	0.135	0.005	0.004	0.012	0.000	0.000	0.000	0.000	1393.16	
25	0.6969	1142.3	1162.5	0.652	3.512	73.864	19.381	2.337	0.078	0.151	0.008	0.007	0.010	0.000	0.000	0.000	0.000	1392.55	
26	0.6956	1140.2	1160.4	0.637	3.537	74.039	19.266	2.276	0.078	0.148	0.007	0.007	0.006	0.000	0.000	0.000	0.000	1391.34	
27	0.6935	1137.6	1157.8	0.613	3.538	74.403	18.945	2.265	0.075	0.141	0.006	0.005	0.009	0.000	0.000	0.000	0.000	1390.26	
28	0.6975	1142.6	1162.9	0.653	3.549	73.778	19.395	2.359	0.083	0.157	0.008	0.008	0.010	0.000	0.000	0.000	0.000	1392.34	
29	0.6945	1137.9	1158.1	0.637	3.573	74.200	19.119	2.230	0.077	0.144	0.006	0.005	0.008	0.000	0.000	0.000	0.000	1389.65	
30	0.7036	1155.2	1175.7	0.597	3.430	73.667	18.809	2.978	0.136	0.312	0.028	0.033	0.010	0.000	0.000	0.000	0.000	1401.58	
31	0.7076	1160.9	1181.4	0.575	3.490	73.251	18.963	3.038	0.166	0.412	0.043	0.050	0.013	0.000	0.000	0.000	0.000	1404.48	
Avg	0.6967	1142.0	1162.4	0.612	3.556	73.978	19.199	2.367	0.084	0.169	0.010	0.011	0.012	0.000	0.000	0.000	0.000	1392.67	

Zone 262

GQ Source Analysis

Williston Basin Interstate Pipeline Co.

Attachment B
Page 7 of 16

GQ Source Number:	2501030	Specific Gravity:	0.6718
GQ Source Name:	LIGNITE PLANT	Dry Heat Value:	1134.87
Effective Date:	3/1/2012 9:00:00 AM	Wet Heat Value:	1115.12
Effective End Date:	1/18/2038 9:14:07 PM	As Deliv. Heat Value:	1134.87
Pressure Base:	14.730	Sample Pressure:	0.00
Viscosity:		Sample Temperature:	

	<u>Mol %</u>	<u>Liquid Content</u>		<u>Mol %</u>
C1 Methane	76.765		CO2 Carbon Dioxide	0.144
C2 Ethane	18.229	4.8607	N2 Nitrogen	3.563
C3 Propane	1.265	0.3476	O2 Oxygen	0.000
IC4 Isobutane	0.007	0.0022	He Helium	
NC4 n-Butane	0.003	0.0008	H2 Hydrogen	
IC5 Isopentane	0.000	0.0000	H2S Hydrogen Sulfide	
NC5 n-Pentane	0.000	0.0000	Ar Argon	
C6 Hexanes	0.025	0.0116	CO Carbon Monoxide	
C7 Heptanes			H2 Water	
C8 Octanes			Neo-C5 Neopentane	
C9 Nonanes				
C10 Decanes				

Totals 100.000% 5.223 GPM

Sample Date: 3/31/2012 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
H2S: ppm

Sample Remarks:

Analysis Tech: Mary Berger

Analysis Remarks:

*** End of Report ***

Zone 263

GQ Source Daily Summary

March 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	0.6788	1117.1	1136.9	0.515	3.558	76.765	17.186	1.780	0.057	0.108	0.008	0.008	0.015	0.000	0.000	0.000	0.000	1379.89	
2	0.6775	1113.7	1133.4	0.518	3.635	77.137	16.656	1.829	0.065	0.125	0.010	0.009	0.014	0.000	0.000	0.000	0.000	1377.02	
3	0.6687	1102.0	1121.5	0.480	3.579	78.590	15.541	1.651	0.049	0.086	0.006	0.006	0.012	0.000	0.000	0.000	0.000	1371.48	
4	0.6646	1096.5	1115.9	0.444	3.583	79.251	15.035	1.542	0.045	0.079	0.005	0.005	0.010	0.000	0.000	0.000	0.000	1368.85	
5	0.6684	1101.3	1120.8	0.465	3.618	78.599	15.533	1.629	0.049	0.085	0.005	0.005	0.012	0.000	0.000	0.000	0.000	1370.92	
6	0.6721	1106.8	1126.4	0.487	3.594	77.976	16.069	1.703	0.052	0.094	0.006	0.006	0.013	0.000	0.000	0.000	0.000	1374.02	
7	0.6778	1115.7	1135.4	0.500	3.571	76.884	17.118	1.752	0.053	0.097	0.006	0.006	0.013	0.000	0.000	0.000	0.000	1379.16	
8	0.6833	1123.0	1142.8	0.549	3.572	75.976	17.817	1.894	0.059	0.108	0.006	0.006	0.013	0.000	0.000	0.000	0.000	1382.55	
9	0.6844	1124.4	1144.3	0.536	3.605	75.809	17.912	1.939	0.060	0.112	0.007	0.008	0.014	0.000	0.000	0.000	0.000	1383.24	
10	0.6888	1129.8	1149.8	0.565	3.650	75.094	18.394	2.082	0.064	0.121	0.008	0.008	0.016	0.000	0.000	0.000	0.000	1385.41	
11	0.6913	1137.4	1157.5	0.532	3.468	74.867	18.593	2.298	0.070	0.138	0.008	0.009	0.017	0.000	0.000	0.000	0.000	1392.18	
12	0.6956	1141.9	1162.2	0.604	3.487	74.214	19.020	2.406	0.079	0.154	0.009	0.010	0.018	0.000	0.000	0.000	0.000	1393.42	
13	0.6989	1144.3	1164.5	0.665	3.554	73.835	19.150	2.448	0.087	0.185	0.026	0.032	0.018	0.000	0.000	0.000	0.000	1393.03	
14	0.6990	1144.5	1164.7	0.667	3.555	73.813	19.168	2.445	0.087	0.184	0.028	0.034	0.018	0.000	0.000	0.000	0.000	1393.10	
15	0.7000	1148.2	1168.5	0.645	3.454	73.914	18.946	2.620	0.108	0.239	0.021	0.026	0.027	0.000	0.000	0.000	0.000	1396.63	
16	0.7007	1149.4	1169.8	0.641	3.451	73.936	18.843	2.647	0.118	0.274	0.027	0.034	0.030	0.000	0.000	0.000	0.000	1397.43	
17	0.6983	1145.4	1165.7	0.640	3.476	73.902	19.182	2.466	0.091	0.188	0.014	0.017	0.024	0.000	0.000	0.000	0.000	1394.92	
18	0.6959	1141.5	1161.7	0.633	3.500	74.123	19.135	2.329	0.079	0.158	0.011	0.012	0.020	0.000	0.000	0.000	0.000	1392.57	
19	0.6969	1143.6	1163.8	0.631	3.466	73.964	19.320	2.319	0.083	0.168	0.012	0.014	0.021	0.000	0.000	0.000	0.000	1394.13	
20	0.6962	1142.3	1162.5	0.654	3.448	73.881	19.562	2.221	0.071	0.132	0.007	0.007	0.016	0.000	0.000	0.000	0.000	1393.23	
21	0.6969	1143.0	1163.3	0.649	3.474	73.715	19.707	2.234	0.070	0.127	0.006	0.006	0.013	0.000	0.000	0.000	0.000	1393.49	
22	0.6952	1141.5	1161.7	0.620	3.457	73.991	19.512	2.196	0.069	0.128	0.007	0.006	0.014	0.000	0.000	0.000	0.000	1393.24	
23	0.6967	1144.4	1164.7	0.620	3.414	73.915	19.460	2.333	0.077	0.148	0.009	0.009	0.016	0.000	0.000	0.000	0.000	1395.35	
24	0.6968	1144.2	1164.5	0.642	3.401	73.812	19.638	2.271	0.073	0.135	0.007	0.006	0.015	0.000	0.000	0.000	0.000	1395.03	
25	0.6961	1141.7	1162.0	0.662	3.454	73.944	19.448	2.262	0.071	0.132	0.007	0.007	0.013	0.000	0.000	0.000	0.000	1392.74	
26	0.6955	1140.3	1160.5	0.658	3.489	74.192	19.100	2.282	0.080	0.158	0.011	0.012	0.017	0.000	0.000	0.000	0.000	1391.61	
27	0.6919	1135.9	1156.0	0.616	3.492	74.702	18.737	2.220	0.073	0.135	0.007	0.007	0.012	0.000	0.000	0.000	0.000	1389.74	
28	0.6970	1143.0	1163.2	0.653	3.477	73.900	19.362	2.346	0.080	0.151	0.009	0.009	0.013	0.000	0.000	0.000	0.000	1393.33	
29	0.6948	1139.1	1159.2	0.644	3.526	74.208	19.113	2.259	0.077	0.145	0.008	0.008	0.012	0.000	0.000	0.000	0.000	1390.73	
30	0.7046	1156.5	1177.0	0.610	3.427	73.550	18.921	2.932	0.140	0.327	0.030	0.037	0.025	0.000	0.000	0.000	0.000	1402.18	
31	0.7010	1150.7	1171.1	0.590	3.474	73.896	18.902	2.632	0.118	0.277	0.031	0.042	0.039	0.000	0.000	0.000	0.000	1398.69	
Avg	0.6904	1134.0	1153.9	0.592	3.513	75.044	18.390	2.192	0.076	0.152	0.012	0.013	0.017	0.000	0.000	0.000	0.000	1388.69	

Zone 271

GQ Source Daily Summary

March 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	0.6783	1116.3	1136.1	0.510	3.564	76.790	17.189	1.768	0.056	0.107	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1379.46	
2	0.6782	1114.5	1134.2	0.509	3.672	76.902	16.884	1.827	0.064	0.124	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1377.22	
3	0.6708	1104.2	1123.7	0.488	3.637	78.178	15.838	1.696	0.053	0.095	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1372.00	
4	0.6645	1096.0	1115.4	0.442	3.604	79.279	14.950	1.585	0.047	0.082	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1368.40	
5	0.6660	1097.4	1116.9	0.451	3.652	78.951	15.237	1.566	0.048	0.084	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1368.53	
6	0.6705	1103.6	1123.2	0.483	3.647	78.248	15.751	1.711	0.053	0.096	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1371.66	
7	0.6745	1110.4	1130.0	0.483	3.611	77.423	16.629	1.694	0.052	0.096	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1375.96	
8	0.6807	1118.3	1138.1	0.530	3.640	76.427	17.329	1.895	0.058	0.107	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1379.45	
9	0.6834	1122.5	1142.3	0.542	3.619	75.946	17.784	1.922	0.060	0.113	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1381.89	
10	0.6886	1129.0	1149.0	0.547	3.705	74.987	18.536	2.029	0.062	0.119	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1384.66	
11	0.6897	1134.0	1154.0	0.526	3.535	74.909	18.684	2.139	0.065	0.126	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1389.63	
12	0.6940	1139.5	1159.7	0.576	3.525	74.477	18.738	2.425	0.080	0.159	0.010	0.010	0.000	0.000	0.000	0.000	0.000	1392.07	
13	0.6960	1141.3	1161.6	0.622	3.528	74.133	19.035	2.414	0.082	0.160	0.010	0.011	0.005	0.000	0.000	0.000	0.000	1392.35	
14	0.6991	1146.2	1166.5	0.629	3.517	73.965	18.870	2.644	0.104	0.220	0.018	0.022	0.010	0.000	0.000	0.000	0.000	1395.09	
15	0.7002	1148.2	1168.5	0.634	3.489	73.984	18.769	2.666	0.116	0.263	0.025	0.032	0.022	0.000	0.000	0.000	0.000	1396.41	
16	0.6998	1147.8	1168.2	0.642	3.461	73.918	18.940	2.617	0.112	0.251	0.023	0.028	0.007	0.000	0.000	0.000	0.000	1396.41	
17	0.6994	1147.0	1167.3	0.639	3.475	73.929	18.983	2.582	0.104	0.227	0.021	0.025	0.016	0.000	0.000	0.000	0.000	1395.84	
18	0.6955	1141.1	1161.3	0.627	3.491	74.119	19.197	2.300	0.081	0.161	0.012	0.013	0.000	0.000	0.000	0.000	0.000	1392.54	
19	0.6990	1145.6	1165.9	0.656	3.502	73.726	19.314	2.482	0.092	0.192	0.015	0.019	0.002	0.000	0.000	0.000	0.000	1394.50	
20	0.6949	1140.7	1160.9	0.615	3.485	74.116	19.297	2.242	0.076	0.147	0.009	0.010	0.002	0.000	0.000	0.000	0.000	1392.56	
21	0.6956	1139.9	1160.1	0.670	3.518	73.900	19.505	2.193	0.072	0.130	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1390.87	
22	0.6960	1142.2	1162.4	0.623	3.484	73.840	19.589	2.250	0.071	0.130	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1393.30	
23	0.6954	1141.5	1161.7	0.611	3.484	73.975	19.452	2.259	0.071	0.133	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1393.10	
24	0.6967	1144.0	1164.2	0.628	3.431	73.869	19.484	2.342	0.078	0.149	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1394.81	
25	0.6956	1140.9	1161.1	0.654	3.475	73.946	19.480	2.227	0.072	0.133	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1392.16	
26	0.6962	1141.4	1161.6	0.658	3.494	74.018	19.239	2.324	0.081	0.161	0.011	0.012	0.000	0.000	0.000	0.000	0.000	1392.18	
27	0.6945	1138.9	1159.1	0.635	3.515	74.226	19.122	2.267	0.076	0.143	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1390.93	
28	0.6939	1138.8	1158.9	0.615	3.502	74.364	18.982	2.300	0.077	0.145	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1391.28	
29	0.6961	1140.5	1160.7	0.658	3.547	73.974	19.264	2.306	0.081	0.154	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1391.08	
30	0.6977	1144.8	1165.1	0.616	3.493	74.018	19.021	2.511	0.098	0.206	0.016	0.018	0.003	0.000	0.000	0.000	0.000	1394.76	
31	0.7075	1161.0	1181.5	0.584	3.466	73.323	18.903	3.029	0.164	0.409	0.045	0.054	0.023	0.000	0.000	0.000	0.000	1404.67	
Avg	0.6899	1133.0	1152.9	0.584	3.541	75.092	18.322	2.200	0.078	0.156	0.011	0.013	0.003	0.000	0.000	0.000	0.000	1387.93	

Zone 272

GQ Source Daily Summary

March 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	0.6785	1116.7	1136.5	0.511	3.558	76.754	17.226	1.773	0.057	0.107	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1379.76	
2	0.6785	1115.0	1134.7	0.509	3.665	76.856	16.932	1.832	0.065	0.124	0.009	0.008	0.001	0.000	0.000	0.000	0.000	1377.62	
3	0.6711	1104.7	1124.3	0.489	3.628	78.137	15.877	1.705	0.053	0.096	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1372.39	
4	0.6646	1096.4	1115.8	0.443	3.595	79.252	14.980	1.589	0.047	0.083	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1368.70	
5	0.6662	1097.8	1117.3	0.452	3.646	78.916	15.272	1.571	0.048	0.085	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1368.83	
6	0.6706	1103.9	1123.5	0.482	3.641	78.226	15.776	1.714	0.053	0.096	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1371.91	
7	0.6746	1110.6	1130.3	0.484	3.604	77.406	16.648	1.697	0.052	0.097	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1376.17	
8	0.6809	1118.8	1138.6	0.531	3.633	76.388	17.367	1.902	0.058	0.108	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1379.78	
9	0.6836	1123.0	1142.9	0.542	3.607	75.908	17.824	1.930	0.061	0.113	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1382.33	
10	0.6889	1129.5	1149.5	0.548	3.701	74.945	18.575	2.033	0.062	0.119	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1384.92	
11	0.6899	1134.3	1154.4	0.528	3.530	74.882	18.706	2.146	0.065	0.126	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1389.84	
12	0.6942	1139.9	1160.0	0.576	3.519	74.446	18.768	2.431	0.080	0.160	0.010	0.010	0.000	0.000	0.000	0.000	0.000	1392.33	
13	0.6961	1141.7	1161.9	0.623	3.524	74.101	19.067	2.417	0.082	0.161	0.010	0.010	0.005	0.000	0.000	0.000	0.000	1392.56	
14	0.6992	1146.5	1166.8	0.627	3.513	73.944	18.896	2.645	0.104	0.221	0.018	0.022	0.010	0.000	0.000	0.000	0.000	1395.33	
15	0.7005	1148.7	1169.0	0.634	3.483	73.951	18.797	2.673	0.116	0.264	0.026	0.032	0.025	0.000	0.000	0.000	0.000	1396.75	
16	0.7001	1148.4	1168.7	0.642	3.456	73.873	18.980	2.626	0.112	0.252	0.023	0.029	0.007	0.000	0.000	0.000	0.000	1396.75	
17	0.6997	1147.6	1167.9	0.637	3.472	73.883	19.023	2.590	0.105	0.227	0.020	0.025	0.018	0.000	0.000	0.000	0.000	1396.22	
18	0.6956	1141.5	1161.7	0.623	3.485	74.094	19.224	2.307	0.081	0.162	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1392.92	
19	0.6991	1145.7	1166.0	0.657	3.503	73.717	19.311	2.495	0.092	0.190	0.016	0.018	0.001	0.000	0.000	0.000	0.000	1394.54	
20	0.6950	1140.8	1161.0	0.613	3.481	74.098	19.331	2.235	0.075	0.145	0.009	0.010	0.003	0.000	0.000	0.000	0.000	1392.72	
21	0.6944	1138.5	1158.7	0.660	3.500	74.121	19.332	2.173	0.072	0.129	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1390.46	
22	0.6956	1142.0	1162.2	0.623	3.455	73.901	19.583	2.225	0.070	0.129	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1393.51	
23	0.6953	1141.4	1161.6	0.611	3.487	73.978	19.454	2.253	0.071	0.132	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1393.01	
24	0.6964	1142.9	1163.1	0.639	3.448	73.985	19.314	2.352	0.083	0.158	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1393.82	
25	0.6956	1141.2	1161.4	0.648	3.464	73.953	19.485	2.227	0.074	0.136	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1392.57	
26	0.6962	1141.5	1161.7	0.657	3.492	74.014	19.249	2.327	0.081	0.158	0.011	0.012	0.000	0.000	0.000	0.000	0.000	1392.27	
27	0.6946	1139.2	1159.4	0.635	3.514	74.197	19.150	2.269	0.076	0.144	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1391.08	
28	0.6943	1139.2	1159.4	0.620	3.503	74.305	19.016	2.316	0.077	0.145	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1391.45	
29	0.6961	1140.4	1160.6	0.656	3.548	73.981	19.260	2.304	0.081	0.153	0.009	0.009	0.000	0.000	0.000	0.000	0.000	1391.05	
30	0.6975	1144.4	1164.7	0.616	3.495	74.041	19.006	2.509	0.097	0.203	0.016	0.017	0.001	0.000	0.000	0.000	0.000	1394.54	
31	0.7069	1159.9	1180.4	0.589	3.470	73.353	18.911	3.011	0.160	0.397	0.043	0.051	0.016	0.000	0.000	0.000	0.000	1403.93	
Avg	0.6900	1133.0	1153.0	0.584	3.536	75.084	18.334	2.203	0.078	0.156	0.011	0.012	0.003	0.000	0.000	0.000	0.000	1388.07	

*** End of Report***

Zone 273

GQ Source Daily Summary

March 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	0.6323	1049.7	1068.3	0.299	3.621	84.826	10.357	0.828	0.024	0.032	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1343.48	
2	0.6321	1048.4	1067.0	0.302	3.678	85.025	9.960	0.937	0.032	0.050	0.006	0.005	0.005	0.000	0.000	0.000	0.000	1342.01	
3	0.6277	1041.8	1060.3	0.329	3.627	85.673	9.585	0.721	0.023	0.030	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1338.22	
4	0.6308	1047.3	1065.9	0.297	3.626	85.014	10.274	0.733	0.021	0.027	0.003	0.002	0.003	0.000	0.000	0.000	0.000	1342.07	
5	0.6321	1049.0	1067.6	0.295	3.654	84.769	10.459	0.767	0.021	0.027	0.003	0.002	0.004	0.000	0.000	0.000	0.000	1342.76	
6	0.6338	1052.2	1070.8	0.296	3.620	84.401	10.874	0.756	0.020	0.025	0.003	0.002	0.003	0.000	0.000	0.000	0.000	1345.04	
7	0.6421	1066.8	1085.7	0.243	3.586	82.733	12.558	0.831	0.018	0.023	0.002	0.002	0.003	0.000	0.000	0.000	0.000	1354.90	
8	0.6411	1064.6	1083.5	0.250	3.615	82.836	12.512	0.749	0.015	0.018	0.002	0.001	0.002	0.000	0.000	0.000	0.000	1353.19	
9	0.6397	1064.3	1083.2	0.244	3.513	83.105	12.377	0.717	0.017	0.022	0.002	0.002	0.003	0.000	0.000	0.000	0.000	1354.27	
10	0.6396	1063.9	1082.8	0.221	3.560	83.136	12.295	0.736	0.019	0.025	0.003	0.002	0.003	0.000	0.000	0.000	0.000	1353.91	
11	0.6543	1094.0	1113.4	0.110	3.282	79.934	15.988	0.660	0.010	0.012	0.001	0.000	0.002	0.000	0.000	0.000	0.000	1376.33	
12	0.6554	1090.8	1110.1	0.099	3.596	79.809	15.666	0.789	0.014	0.022	0.001	0.001	0.002	0.000	0.000	0.000	0.000	1371.21	
13	0.6503	1085.2	1104.4	0.171	3.351	80.727	15.130	0.597	0.009	0.013	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1369.56	
14	0.6501	1084.8	1104.0	0.172	3.356	80.763	15.086	0.598	0.009	0.013	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1369.27	
15	0.6889	1153.4	1173.9	0.201	2.782	73.685	22.091	1.115	0.034	0.072	0.006	0.007	0.008	0.000	0.000	0.000	0.000	1414.28	
16	0.6971	1150.8	1171.1	0.504	3.243	73.886	19.800	2.184	0.094	0.216	0.021	0.027	0.024	0.000	0.000	0.000	0.000	1402.69	
17	0.6985	1145.8	1166.0	0.639	3.474	73.916	19.132	2.491	0.094	0.195	0.016	0.018	0.024	0.000	0.000	0.000	0.000	1395.14	
18	0.6955	1140.9	1161.1	0.634	3.500	74.166	19.124	2.306	0.077	0.152	0.011	0.011	0.020	0.000	0.000	0.000	0.000	1392.19	
19	0.6966	1142.8	1163.0	0.634	3.481	74.032	19.235	2.320	0.082	0.167	0.013	0.015	0.022	0.000	0.000	0.000	0.000	1393.48	
20	0.6958	1141.6	1161.8	0.648	3.456	73.960	19.485	2.217	0.071	0.132	0.007	0.007	0.016	0.000	0.000	0.000	0.000	1392.88	
21	0.6968	1142.8	1163.0	0.653	3.478	73.724	19.694	2.228	0.070	0.127	0.007	0.006	0.014	0.000	0.000	0.000	0.000	1393.25	
22	0.6951	1141.5	1161.7	0.619	3.450	74.011	19.504	2.192	0.069	0.127	0.007	0.006	0.014	0.000	0.000	0.000	0.000	1393.31	
23	0.6965	1144.0	1164.2	0.621	3.420	73.949	19.424	2.330	0.076	0.146	0.009	0.009	0.016	0.000	0.000	0.000	0.000	1395.04	
24	0.6968	1144.3	1164.6	0.639	3.400	73.814	19.629	2.281	0.073	0.135	0.007	0.006	0.015	0.000	0.000	0.000	0.000	1395.16	
25	0.6565	1093.8	1113.2	0.662	2.655	81.273	13.726	1.523	0.049	0.091	0.005	0.005	0.012	0.000	0.000	0.000	0.000	1373.91	
26	0.5939	1015.9	1033.9	0.699	1.452	92.895	4.555	0.358	0.012	0.022	0.001	0.001	0.004	0.000	0.000	0.000	0.000	1341.67	
27	0.5801	999.5	1017.2	0.680	1.185	95.430	2.580	0.114	0.004	0.006	0.000	0.000	0.002	0.000	0.000	0.000	0.000	1335.57	
28	0.6673	1127.1	1147.1	0.207	2.340	77.551	19.195	0.665	0.013	0.023	0.001	0.001	0.003	0.000	0.000	0.000	0.000	1404.02	
29	0.6896	1142.5	1162.7	0.435	3.151	74.337	20.256	1.655	0.052	0.096	0.005	0.005	0.008	0.000	0.000	0.000	0.000	1400.22	
30	0.6960	1145.4	1165.7	0.566	3.362	74.823	18.142	2.613	0.124	0.288	0.027	0.033	0.021	0.000	0.000	0.000	0.000	1397.21	
31	0.7011	1151.3	1171.7	0.579	3.465	73.936	18.832	2.659	0.122	0.290	0.033	0.045	0.039	0.000	0.000	0.000	0.000	1399.32	
Avg	0.6614	1098.0	1117.1	0.418	3.257	79.746	15.081	1.344	0.044	0.085	0.007	0.007	0.010	0.000	0.000	0.000	0.000	1373.41	

Zone 2 P

GQ Source Daily Summary

March 2012

Number: 271

Pressure Base: 14.730

Contract Day: 1

Name: DICKINSON 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	0.6310	1046.4	1064.9	0.284	3.707	85.108	9.935	0.899	0.026	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1340.66	
2	0.6273	1040.8	1059.3	0.313	3.661	85.706	9.521	0.747	0.020	0.030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1337.39	
3	0.6298	1046.3	1064.8	0.276	3.617	85.136	10.197	0.736	0.016	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1341.78	
4	0.6297	1045.4	1063.9	0.283	3.647	85.182	10.099	0.750	0.017	0.023	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1340.80	
5	0.6324	1050.3	1068.9	0.274	3.621	84.610	10.705	0.755	0.015	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1344.18	
6	0.6408	1064.6	1083.5	0.224	3.620	82.914	12.368	0.840	0.014	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1353.44	
7	0.6398	1062.6	1081.4	0.228	3.644	83.017	12.325	0.766	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1351.95	
8	0.6390	1062.7	1081.5	0.221	3.567	83.178	12.277	0.727	0.012	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1352.98	
9	0.6490	1083.4	1102.6	0.138	3.380	80.987	14.804	0.675	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1368.53	
10	0.6547	1091.6	1110.9	0.077	3.509	79.783	15.898	0.720	0.003	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1372.90	
11	0.6540	1093.1	1112.5	0.059	3.380	79.772	16.201	0.587	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1375.50	
12	0.6664	1112.2	1131.9	0.040	3.405	77.931	17.363	1.226	0.013	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1386.52	
13	0.6827	1153.2	1173.7	0.000	2.507	73.902	23.088	0.503	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.47	
14	0.6820	1151.6	1172.0	0.000	2.541	74.030	22.933	0.496	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.18	
15	0.6726	1131.2	1151.2	0.014	2.881	75.991	20.533	0.579	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1403.62	
16	0.6813	1151.1	1171.5	0.000	2.505	74.279	22.638	0.559	0.005	0.014	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1419.32	
17	0.6834	1154.3	1174.7	0.000	2.510	73.806	23.131	0.551	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.02	
18	0.6825	1153.1	1173.5	0.000	2.499	74.001	22.933	0.567	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.49	
19	0.6820	1152.3	1172.7	0.000	2.499	74.077	22.880	0.543	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.05	
20	0.6819	1152.2	1172.6	0.000	2.498	74.106	22.849	0.547	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.97	
21	0.6520	1107.6	1127.2	0.213	2.074	80.484	16.728	0.477	0.009	0.014	0.000	0.000	0.001	0.000	0.000	0.000	0.000	1395.54	
22	0.5799	999.7	1017.4	0.696	1.113	95.508	2.546	0.126	0.005	0.006	0.000	0.000	0.001	0.000	0.000	0.000	0.000	1336.04	
23	0.6261	1059.7	1078.4	0.541	2.047	86.473	10.121	0.757	0.022	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1362.89	
24	0.6339	1065.3	1084.2	0.655	2.267	85.374	10.481	1.129	0.032	0.062	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1361.68	
25	0.6153	1042.7	1061.2	0.639	1.911	88.815	7.803	0.772	0.021	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1352.89	
26	0.5797	999.2	1016.9	0.680	1.156	95.470	2.584	0.109	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1335.52	
27	0.6639	1124.9	1144.8	0.128	2.271	77.906	19.189	0.505	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1404.75	
28	0.6586	1108.7	1128.3	0.118	2.769	78.864	17.798	0.449	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1390.10	
29	0.6641	1118.4	1138.2	0.098	2.732	77.709	19.008	0.453	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1396.52	
30	0.6833	1154.2	1174.6	0.000	2.506	73.816	23.135	0.543	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.02	
31	0.6832	1153.6	1174.1	0.000	2.534	73.846	23.058	0.562	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.40	
Avg	0.6510	1095.0	1114.0	0.200	2.793	80.703	15.649	0.634	0.008	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1380.26	

Zone 31

GQ Source Daily Summary

March 2012

Number: 051

Pressure Base: 14.730

Contract Day: 1

Name: CABIN CR-BISMARCK

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	0.6169	1018.2	1036.2	0.382	3.963	88.002	6.782	0.794	0.028	0.037	0.005	0.004	0.004	0.000	0.000	0.000	0.000	1319.35	
2	0.6168	1017.7	1035.7	0.383	3.982	87.973	6.823	0.769	0.025	0.033	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1318.82	
3	0.6179	1019.3	1037.4	0.373	4.005	87.737	7.044	0.771	0.025	0.034	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1319.71	
4	0.6191	1021.2	1039.3	0.376	3.997	87.500	7.273	0.786	0.024	0.032	0.004	0.003	0.004	0.000	0.000	0.000	0.000	1320.89	
5	0.6249	1030.1	1048.3	0.325	4.080	86.344	8.301	0.887	0.023	0.031	0.003	0.003	0.003	0.000	0.000	0.000	0.000	1326.14	
6	0.6243	1028.5	1046.7	0.337	4.104	86.392	8.280	0.837	0.019	0.024	0.003	0.002	0.002	0.000	0.000	0.000	0.000	1324.74	
7	0.6218	1025.5	1043.7	0.329	4.065	86.940	7.755	0.845	0.024	0.032	0.004	0.003	0.003	0.000	0.000	0.000	0.000	1323.50	
8	0.6228	1025.4	1043.6	0.236	4.302	86.587	7.977	0.847	0.019	0.026	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1322.37	
9	0.6263	1024.9	1043.0	0.144	4.804	85.762	8.327	0.913	0.017	0.028	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1318.01	
10	0.5804	963.6	980.7	0.335	3.931	94.601	1.018	0.105	0.008	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1287.25	
11	0.5782	955.2	972.2	0.631	3.782	95.284	0.272	0.022	0.006	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1278.53	
12	0.5815	959.9	976.9	0.625	3.818	94.656	0.812	0.078	0.007	0.002	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1281.02	
13	0.5785	954.9	971.8	0.623	3.848	95.200	0.296	0.024	0.007	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1277.67	
14	0.5788	954.4	971.3	0.691	3.803	95.209	0.266	0.021	0.006	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1276.68	
15	0.5794	954.9	971.8	0.708	3.802	95.117	0.334	0.029	0.006	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1276.67	
16	0.5804	955.3	972.2	0.763	3.784	94.976	0.431	0.038	0.006	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1276.21	
17	0.5791	954.7	971.6	0.691	3.811	95.154	0.309	0.025	0.007	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1276.78	
18	0.6103	1015.8	1033.8	0.181	3.802	88.650	6.954	0.388	0.011	0.012	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1322.35	
19	0.6814	1150.0	1170.3	0.031	2.546	74.257	22.630	0.522	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1417.67	
20	0.6775	1142.0	1162.2	0.099	2.566	75.232	21.458	0.617	0.010	0.016	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1411.67	
21	0.6865	1159.3	1179.8	0.000	2.507	73.205	23.730	0.546	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.97	
22	0.6860	1158.4	1178.9	0.000	2.517	73.371	23.499	0.594	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.33	
23	0.6677	1131.4	1151.5	0.123	2.251	77.162	19.949	0.502	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1409.06	
24	0.6685	1125.5	1145.4	0.229	2.518	77.424	19.008	0.772	0.017	0.029	0.002	0.001	0.000	0.000	0.000	0.000	0.000	1400.93	
25	0.6777	1142.6	1162.9	0.133	2.490	75.324	21.332	0.689	0.012	0.020	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1412.58	
26	0.6773	1142.4	1162.6	0.112	2.503	75.326	21.378	0.654	0.010	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.61	
27	0.5774	959.7	976.7	0.408	3.776	95.242	0.521	0.041	0.008	0.002	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1285.37	
28	0.5773	956.8	973.8	0.542	3.739	95.384	0.301	0.024	0.007	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1281.61	
29	0.5781	955.7	972.7	0.642	3.729	95.316	0.283	0.022	0.006	0.001	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1279.26	
30	0.5833	967.6	984.7	0.435	3.810	94.200	1.372	0.165	0.010	0.006	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1289.19	
31	0.6175	1033.4	1051.7	0.203	3.379	87.117	9.018	0.270	0.007	0.004	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1336.79	
Avg	0.6191	1029.0	1047.4	0.358	3.549	87.118	8.507	0.439	0.012	0.014	0.002	0.001	0.001	0.000	0.000	0.000	0.000	1330.02	

Zone 32

GQ Source Daily Summary

March 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	0.6961	1174.4	1195.2	0.000	2.480	72.331	23.721	1.310	0.047	0.093	0.007	0.007	0.003	0.000	0.000	0.000	0.000	1432.44	
2	0.6889	1163.6	1184.2	0.000	2.468	72.866	23.977	0.671	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.77	
3	0.6891	1163.6	1184.2	0.000	2.485	72.837	23.973	0.691	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.59	
4	0.6898	1164.4	1185.1	0.000	2.504	72.720	24.032	0.729	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.85	
5	0.6903	1165.0	1185.7	0.000	2.514	72.649	24.065	0.757	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.07	
6	0.6897	1164.1	1184.8	0.000	2.512	72.696	24.090	0.687	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.59	
7	0.6865	1159.3	1179.8	0.000	2.509	73.138	23.864	0.479	0.004	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.94	
8	0.6877	1161.7	1182.3	0.000	2.474	72.940	24.053	0.522	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.68	
9	0.6876	1161.2	1181.8	0.000	2.493	72.970	23.993	0.533	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.20	
10	0.6868	1159.9	1180.5	0.000	2.496	73.089	23.914	0.490	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.44	
11	0.6894	1163.7	1184.3	0.000	2.505	72.815	23.936	0.727	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.44	
12	0.6871	1160.4	1180.9	0.000	2.500	73.031	23.958	0.500	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.66	
13	0.6869	1160.0	1180.6	0.000	2.498	73.085	23.901	0.504	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.48	
14	0.6863	1159.4	1180.0	0.000	2.483	73.197	23.810	0.499	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.31	
15	0.6868	1160.2	1180.7	0.000	2.482	73.190	23.737	0.574	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.72	
16	0.6917	1168.1	1188.7	0.000	2.461	72.927	23.437	1.032	0.037	0.080	0.010	0.011	0.005	0.000	0.000	0.000	0.000	1429.16	
17	0.6864	1159.5	1180.1	0.000	2.486	73.215	23.748	0.540	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.33	
18	0.6867	1160.1	1180.6	0.000	2.473	73.219	23.712	0.585	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.76	
19	0.6882	1162.6	1183.2	0.000	2.467	72.897	24.045	0.580	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.24	
20	0.6875	1160.3	1180.8	0.000	2.542	73.003	23.890	0.554	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.13	
21	0.6882	1161.9	1182.5	0.000	2.506	72.898	23.999	0.585	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.43	
22	0.6882	1162.0	1182.6	0.000	2.500	72.917	23.969	0.604	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.57	
23	0.6881	1162.0	1182.6	0.000	2.497	72.916	23.986	0.589	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.57	
24	0.6883	1162.1	1182.6	0.000	2.510	72.859	24.049	0.571	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.48	
25	0.6884	1162.1	1182.7	0.000	2.512	72.841	24.069	0.567	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.47	
26	0.6881	1162.0	1182.6	0.000	2.495	72.903	24.018	0.573	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.59	
27	0.6880	1161.6	1182.1	0.000	2.509	72.913	24.008	0.559	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.20	
28	0.6882	1162.2	1182.7	0.000	2.494	72.880	24.052	0.562	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.71	
29	0.6882	1162.0	1182.6	0.000	2.499	72.878	24.046	0.566	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.58	
30	0.6884	1162.3	1182.9	0.000	2.505	72.841	24.064	0.578	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.66	
31	0.6888	1162.9	1183.5	0.000	2.504	72.779	24.116	0.590	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.00	
Avg	0.6884	1162.0	1183.0	0.000	2.496	72.917	23.943	0.623	0.008	0.012	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1425.81	

Zone 33

GQ Source Daily Summary

March 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	0.7951	1123.0	1142.9	2.116	11.724	54.386	28.827	2.620	0.072	0.217	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1281.70	
2	0.7984	1122.9	1142.8	2.426	11.568	54.112	28.870	2.707	0.071	0.211	0.009	0.022	0.003	0.000	0.000	0.000	0.000	1278.92	
3	0.8000	1114.6	1134.4	2.327	12.373	53.804	28.272	2.865	0.080	0.240	0.010	0.025	0.004	0.000	0.000	0.000	0.000	1268.32	
4	0.7988	1130.0	1150.0	2.091	11.680	53.831	29.262	2.792	0.078	0.230	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1286.72	
5	0.8074	1098.7	1118.1	2.200	14.230	52.218	27.868	3.064	0.091	0.282	0.012	0.031	0.004	0.000	0.000	0.000	0.000	1244.42	
6	0.8079	1077.8	1096.9	2.137	15.652	51.775	26.995	3.022	0.091	0.277	0.012	0.033	0.005	0.000	0.000	0.000	0.000	1220.33	
7	0.7977	1117.9	1137.7	2.141	12.236	54.412	27.774	3.009	0.092	0.283	0.013	0.034	0.006	0.000	0.000	0.000	0.000	1273.92	
8	0.7995	1121.1	1140.9	2.557	11.577	54.596	27.805	3.039	0.092	0.282	0.013	0.034	0.006	0.000	0.000	0.000	0.000	1276.03	
9	0.7987	1128.5	1148.5	2.333	11.393	54.432	28.494	2.929	0.090	0.277	0.012	0.033	0.006	0.000	0.000	0.000	0.000	1285.09	
10	0.8013	1128.2	1148.1	2.236	11.798	53.892	28.595	3.056	0.092	0.282	0.012	0.032	0.005	0.000	0.000	0.000	0.000	1282.71	
11	0.8004	1133.7	1153.7	2.188	11.459	54.110	28.729	3.081	0.093	0.288	0.013	0.034	0.005	0.000	0.000	0.000	0.000	1289.56	
12	0.8123	1061.3	1080.1	2.164	17.032	50.720	26.620	3.040	0.092	0.283	0.012	0.032	0.005	0.000	0.000	0.000	0.000	1198.36	
13	0.8108	1055.6	1074.3	2.234	17.136	50.749	26.684	2.829	0.080	0.245	0.010	0.028	0.004	0.000	0.000	0.000	0.000	1193.05	
14	0.8092	1061.2	1080.0	2.033	16.955	50.625	27.397	2.682	0.070	0.205	0.008	0.022	0.003	0.000	0.000	0.000	0.000	1200.50	
15	0.8110	1055.6	1074.3	2.105	17.352	50.469	26.938	2.779	0.078	0.237	0.010	0.027	0.004	0.000	0.000	0.000	0.000	1192.92	
16	0.7997	1112.7	1132.4	2.185	12.676	53.689	28.233	2.854	0.079	0.241	0.011	0.028	0.005	0.000	0.000	0.000	0.000	1266.47	
17	0.8007	1134.0	1154.1	2.263	11.349	53.832	29.278	2.913	0.081	0.243	0.010	0.027	0.005	0.000	0.000	0.000	0.000	1289.78	
18	0.8041	1125.2	1145.2	2.338	12.097	53.123	29.131	2.942	0.082	0.247	0.010	0.026	0.004	0.000	0.000	0.000	0.000	1277.11	
19	0.7974	1132.2	1152.3	2.155	11.319	54.281	29.076	2.808	0.080	0.242	0.010	0.025	0.004	0.000	0.000	0.000	0.000	1290.32	
20	0.7986	1130.9	1150.9	2.275	11.326	54.287	28.842	2.886	0.083	0.256	0.011	0.030	0.004	0.000	0.000	0.000	0.000	1287.88	
21	0.7939	1117.8	1137.6	2.276	11.679	55.147	27.661	2.866	0.080	0.244	0.011	0.030	0.005	0.000	0.000	0.000	0.000	1276.75	
22	0.7968	1123.7	1143.6	2.265	11.611	54.524	28.387	2.850	0.080	0.242	0.011	0.028	0.005	0.000	0.000	0.000	0.000	1281.15	
23	0.7964	1123.0	1142.9	2.269	11.606	54.563	28.389	2.818	0.078	0.235	0.010	0.027	0.005	0.000	0.000	0.000	0.000	1280.71	
24	0.7939	1120.1	1139.9	2.231	11.614	54.822	28.322	2.689	0.072	0.213	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1279.33	
25	0.7970	1115.5	1135.2	2.621	11.588	54.435	28.466	2.600	0.065	0.192	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1271.67	
26	0.7965	1098.1	1117.5	2.321	13.064	53.966	27.808	2.543	0.067	0.197	0.008	0.022	0.004	0.000	0.000	0.000	0.000	1252.38	
27	0.7992	1085.3	1104.6	1.722	15.002	52.674	27.655	2.612	0.074	0.222	0.009	0.025	0.004	0.000	0.000	0.000	0.000	1235.91	
28	0.8002	1092.3	1111.7	2.261	13.857	53.119	27.830	2.630	0.067	0.201	0.009	0.022	0.004	0.000	0.000	0.000	0.000	1242.93	
29	0.7938	1120.7	1140.5	2.280	11.487	54.744	28.618	2.583	0.065	0.191	0.008	0.020	0.004	0.000	0.000	0.000	0.000	1280.14	
30	0.8072	1062.0	1080.8	2.157	16.530	51.169	27.220	2.603	0.072	0.214	0.009	0.022	0.004	0.000	0.000	0.000	0.000	1203.01	
31	0.8225	1071.5	1090.5	2.282	17.186	48.504	28.722	2.955	0.078	0.233	0.010	0.027	0.005	0.000	0.000	0.000	0.000	1202.41	
Avg	0.8015	1106.0	1125.9	2.232	13.166	53.258	28.154	2.828	0.080	0.240	0.010	0.027	0.004	0.000	0.000	0.000	0.000	1257.76	

Zone 34

GQ Source Analysis

Williston Basin Interstate Pipeline Co.

Attachment B
Page 16 of 16

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

	<u>Mol %</u>	<u>Liquid Content</u>		<u>Mol %</u>	
C1	Methane	95.931	CO2	Carbon Dioxide	0.106
C2	Ethane	0.312	N2	Nitrogen	3.634
C3	Propane	0.009	O2	Oxygen	0.000
IC4	Isobutane	0.007	He	Helium	
NC4	n-Butane	0.000	H2	Hydrogen	
IC5	Isopentane	0.000	H2S	Hydrogen Sulfide	
NC5	n-Pentane	0.000	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% 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

NORTH DAKOTA HEATING VALUE ZONES		
ZONES	MEASURING DEVICE	LOCATION
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	MAR 12	FEB 12	JAN 12	DEC 11	NOV 11	OCT 11	SEPT 11	AUG 11	JULY 11	JUNE 11	MAY 11	APR 11	ZONE
MT/ND	211	Sidney Area	1207	1199	1206	1210	1212	1215	1212	1199	1204	1215	1205	1206	1202	211
ND	24	Williston Area	1197	1199	1195	1184	1199	1203	1197	1200	1198	1197	1196	1196	1194	24
ND	25	Watford City Area	1136	1138	1132	1140	1140	1131	1129	1136	1136	1135	1140	1128	1143	25
ND/MT	241	Fairview Area	1196	1189	1193	1194	1194	1201	1198	1200	1200	1199	1193	1193	1194	241
ND	261	Williston - Tioga - Minot Line	1161	1162	1156	1160	1163	1166	1158	1144	1159	1176	1165	1159	1162	261
ND	262	Minot Area	1164	1162	1158	1161	1165	1168	1163	1160	1161	1179	1168	1161	1167	262
ND	263	Tioga - Portal	1105	1135	1081	1075	1074	1092	1126	1128	1128	1126	1082	1093	1123	263
ND	264	Williston - Ray	1197	1199	1195	1184	1199	1203	1197	1200	1198	1197	1196	1196	1194	264
ND	271	Bismarck - Cleveland	1151	1154	1123	1124	1130	1148	1161	1159	1160	1177	1166	1152	1161	271
ND	272	Cleveland - Mapleton	1151	1153	1121	1122	1129	1148	1161	1159	1160	1179	1166	1151	1161	272
ND	273	Cleveland - Grafton	1151	1153	1121	1123	1129	1148	1162	1159	1160	1179	1167	1151	1161	273
ND	28	Bismarck - Cabin Creek	1124	1117	1065	1073	1078	1084	1148	1160	1160	1180	1166	1139	1112	28
ND	31	Dickinson Area	1110	1114	1064	1072	1077	1081	1138	1162	1152	1135	1123	1109	1093	31
ND/MT	32	Cabin Creek - Dickinson	1091	1047	1044	1057	1063	1061	1100	1156	1126	1133	1153	1080	1071	32
ND	33	Killdeer	1181	1183	1182	1179	1183	1181	1181	1181	1181	1182	1183	1180	1177	33
ND	34	Bowman Area	1138	1126	1126	1147	1129	1117	1139	1132	1138	1144	1149	1153	1154	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		
March 2012		
<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
263	54	Mix of Gas in the area
271	31	Mix of Gas in the area
272	32	Mix of Gas in the area
273	32	Mix of Gas in the area
28	52	Mix of Gas in the area
31	50	Mix of Gas in the area