



MONTANA-DAKOTA

UTILITIES CO.

A Division of MDU Resources Group, Inc.

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

September 28, 2012

RECEIVED

OCT 01 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 – August 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 September 2012.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our supplier for the month of August 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 August 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
SEPT 2012

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	314	APPLE VALLEY	271	1.1367
12	323	BERTHOLD	262	1.1136
12	327	BISMARCK	28	1.1367
12	337	BURLINGTON	262	1.1376
12	343	CARRINGTON	273	1.1386
12	344	CLEVELAND	272	1.1306
12	364	CAVALIER	273	1.1625
12	365	DAWSON	271	1.1286
12	368	DES LACS	262	1.1216
12	374	FT TOTTEN	273	1.1466
12	375	DEVILS LAKE	273	1.1466
12	379	BARLOW	273	1.1386
12	387	ELDRIDGE	272	1.1386
12	411	GLEN ULLIN	31	1.0408
12	416	GARRISON	262	1.1216
12	417	GRAFTON	273	1.1706
12	449	JAMESTOWN	272	1.1466
12	463	LANGDON	273	1.1386
12	475	LINTON	802	.9900
12	478	LINCOLN	28	1.1367
12	494	MEDINA	271	1.1286
12	498	MANDAN	28	1.1367
12	505	MINOT	262	1.1376
12	512	MAX	262	1.1136
12	524	NEW SALEM	28	1.1126
12	532	NEW ROCKFORD	273	1.1386
12	539	PARK RIVER	273	1.1625
12	572	RUTHVILLE	262	1.1376
12	574	SANBORN	272	1.1466
12	593	STEELE	271	1.1286
12	598	SHEYENNE	273	1.1466
12	605	SURREY	262	1.1376
12	610	TAPPEN	271	1.1286
12	619	TURTLE LAKE	262	1.1216
12	624	UNDERWOOD	262	1.1216

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
SEPT 2012

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	625	VALLEY CITY	272	1.1545
12	629	WALHALLA	273	1.1625
12	646	WASHBURN	262	1.1296
12	647	WILTON	262	1.1136
12	664	RIVERDALE	262	1.1216
12	712	MINOT AFB	262	1.1376
12	717	SPIRITWOOD	272	1.1466
12	732	MSR SITE	273	1.1386
12	733	PAR SITE	273	1.1386
15	303	ALEXANDER	25	1.1183
15	308	ARNEGARD	25	1.1183
15	318	BEACH	32	1.0489
15	319	BELFIELD	32	1.0566
15	330	BOWMAN	34	1.0365
15	369	DICKINSON	31	1.0333
15	384	EPPING	264	1.1315
15	407	GLADSTONE	31	1.0333
15	413	GOLVA	32	1.0335
15	429	HEBRON	31	1.0408
15	459	KILLDEER	33	1.1136
15	469	LEFOR	31	1.0333
15	474	LIGNITE	263	1.0873
15	500	MARMARTH	34	1.0442
15	510	MOTT	31	1.0333
15	522	NEW ENGLAND	31	1.0259
15	540	PALERMO	262	1.1136
15	558	RAY	264	1.1315
15	561	REGENT	31	1.0333
15	563	RHAME	34	1.0290
15	564	RICHARDTON	31	1.0259
15	568	ROSS	261	1.0793
15	583	SENTINEL BUTTE	32	1.0489
15	588	SOUTH HEART	31	1.0259
15	590	SPRINGBROOK	264	1.1315
15	591	STANLEY	261	1.0871

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
SEPT 2012

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	611	TAYLOR	31	1.0259
15	616	TIOGA	261	1.0793
15	620	TRENTON	24	1.1397
15	632	WATFORD CITY	25	1.1183
15	636	WHEELLOCK	264	1.1234
15	637	WHITE EARTH	261	1.0871
15	642	WILLISTON	24	1.1397
15	691	FAIRVIEW	241	1.1292
15	743	BAKER FIELD	35	.8980

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

GQ Source Daily Summary

August 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	0.7280	1171.5	1192.3	1.141	3.911	69.090	22.232	3.245	0.121	0.229	0.015	0.012	0.003	0.000	0.000	0.000	0.000	1397.37	
2	0.7280	1171.0	1191.7	1.160	3.911	69.173	22.094	3.266	0.125	0.239	0.016	0.013	0.003	0.000	0.000	0.000	0.000	1396.75	
3	0.7274	1170.3	1191.0	1.150	3.917	69.220	22.098	3.225	0.124	0.237	0.015	0.013	0.003	0.000	0.000	0.000	0.000	1396.45	
4	0.7281	1171.4	1192.2	1.152	3.906	69.086	22.234	3.246	0.119	0.229	0.015	0.012	0.002	0.000	0.000	0.000	0.000	1397.17	
5	0.7294	1173.6	1194.4	1.150	3.898	69.032	22.096	3.432	0.123	0.238	0.015	0.013	0.003	0.000	0.000	0.000	0.000	1398.53	
6	0.7316	1177.4	1198.2	1.148	3.884	68.749	22.231	3.585	0.127	0.245	0.016	0.013	0.003	0.000	0.000	0.000	0.000	1400.84	
7	0.7333	1179.9	1200.8	1.147	3.886	68.686	22.152	3.611	0.152	0.312	0.024	0.023	0.007	0.000	0.000	0.000	0.000	1402.23	
8	0.7286	1172.3	1193.1	1.149	3.904	68.992	22.315	3.267	0.118	0.226	0.014	0.012	0.003	0.000	0.000	0.000	0.000	1397.77	
9	0.7291	1173.0	1193.8	1.153	3.907	69.004	22.197	3.351	0.123	0.235	0.015	0.013	0.003	0.000	0.000	0.000	0.000	1398.04	
10	0.7307	1175.6	1196.4	1.150	3.897	68.810	22.285	3.460	0.126	0.241	0.015	0.013	0.003	0.000	0.000	0.000	0.000	1399.68	
11	0.7287	1172.5	1193.2	1.153	3.902	68.973	22.339	3.249	0.122	0.232	0.015	0.012	0.003	0.000	0.000	0.000	0.000	1397.80	
12	0.7292	1173.4	1194.2	1.153	3.896	68.914	22.359	3.289	0.122	0.235	0.015	0.013	0.003	0.000	0.000	0.000	0.000	1398.38	
13	0.7316	1177.5	1198.3	1.146	3.873	68.729	22.329	3.493	0.135	0.262	0.017	0.014	0.003	0.000	0.000	0.000	0.000	1401.04	
14	0.7359	1184.6	1205.6	1.142	3.851	68.444	22.134	3.900	0.164	0.321	0.022	0.019	0.004	0.000	0.000	0.000	0.000	1405.33	
15	0.7377	1186.9	1208.0	1.145	3.867	68.409	21.941	4.013	0.190	0.379	0.027	0.024	0.004	0.000	0.000	0.000	0.000	1406.41	
16	0.7339	1180.6	1201.5	1.145	3.904	68.723	21.946	3.739	0.167	0.330	0.023	0.020	0.003	0.000	0.000	0.000	0.000	1402.44	
17	0.7303	1174.6	1195.4	1.149	3.923	68.951	22.103	3.433	0.138	0.268	0.017	0.015	0.003	0.000	0.000	0.000	0.000	1398.85	
18	0.7302	1174.8	1195.6	1.146	3.912	68.944	22.131	3.432	0.136	0.264	0.017	0.015	0.003	0.000	0.000	0.000	0.000	1399.10	
19	0.7317	1177.4	1198.2	1.145	3.898	68.763	22.210	3.544	0.137	0.267	0.018	0.015	0.004	0.000	0.000	0.000	0.000	1400.73	
20	0.7319	1177.1	1198.0	1.149	3.914	68.929	21.928	3.560	0.155	0.312	0.024	0.022	0.006	0.000	0.000	0.000	0.000	1400.31	
21	0.7308	1175.5	1196.3	1.151	3.915	68.924	22.062	3.507	0.138	0.267	0.017	0.015	0.004	0.000	0.000	0.000	0.000	1399.39	
22	0.7310	1175.8	1196.6	1.146	3.917	68.888	22.068	3.563	0.131	0.252	0.016	0.014	0.003	0.000	0.000	0.000	0.000	1399.63	
23	0.7323	1178.2	1199.1	1.147	3.899	68.814	21.939	3.797	0.126	0.245	0.016	0.014	0.004	0.000	0.000	0.000	0.000	1401.15	
24	0.7307	1176.1	1196.9	1.146	3.881	68.965	22.013	3.567	0.133	0.259	0.017	0.015	0.004	0.000	0.000	0.000	0.000	1400.15	
25	0.7304	1175.1	1195.9	1.147	3.903	68.926	22.116	3.500	0.127	0.247	0.016	0.014	0.003	0.000	0.000	0.000	0.000	1399.38	
26	0.7304	1175.9	1196.7	1.117	3.904	68.947	22.098	3.500	0.136	0.263	0.017	0.014	0.003	0.000	0.000	0.000	0.000	1400.25	
27	0.7349	1182.9	1203.8	1.138	3.866	68.549	22.093	3.853	0.155	0.304	0.020	0.018	0.004	0.000	0.000	0.000	0.000	1404.27	
28	0.7360	1184.3	1205.2	1.124	3.898	68.832	21.513	3.941	0.198	0.410	0.036	0.034	0.012	0.000	0.000	0.000	0.000	1404.81	
29	0.7298	1175.0	1195.8	1.119	3.899	69.028	22.056	3.475	0.133	0.254	0.017	0.015	0.004	0.000	0.000	0.000	0.000	1399.76	
30	0.7317	1177.9	1198.8	1.121	3.898	68.901	21.937	3.698	0.139	0.270	0.017	0.015	0.004	0.000	0.000	0.000	0.000	1401.40	
31	0.7332	1179.9	1200.7	1.140	3.892	68.703	22.049	3.764	0.136	0.273	0.020	0.018	0.005	0.000	0.000	0.000	0.000	1402.23	
Avg	0.7312	1177.0	1197.3	1.144	3.898	68.874	22.106	3.532	0.138	0.269	0.018	0.016	0.004	0.000	0.000	0.000	0.000	1400.25	

Zone 211

GQ Source Daily Summary

August 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		CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
		Wet	Dry																
1	0.7212	1189.4	1210.4	0.905	2.526	71.574	20.354	4.165	0.162	0.295	0.010	0.008	0.001	0.000	0.000	0.000	0.000	0.000	1425.37
2	0.7191	1191.0	1212.1	0.807	2.379	72.466	19.248	4.546	0.185	0.346	0.012	0.010	0.001	0.000	0.000	0.000	0.000	0.000	1429.23
3	0.7044	1164.4	1185.0	0.813	2.622	73.805	19.035	3.411	0.106	0.191	0.007	0.007	0.002	0.000	0.000	0.000	0.000	0.000	1411.89
4	0.7054	1166.2	1186.8	0.811	2.603	73.668	19.129	3.483	0.106	0.186	0.006	0.006	0.002	0.000	0.000	0.000	0.000	0.000	1413.14
5	0.7064	1167.7	1188.4	0.804	2.623	73.624	19.017	3.589	0.115	0.210	0.008	0.008	0.003	0.000	0.000	0.000	0.000	0.000	1413.86
6	0.7093	1170.0	1190.7	0.786	2.779	73.162	19.270	3.592	0.125	0.251	0.014	0.016	0.007	0.000	0.000	0.000	0.000	0.000	1413.78
7	0.7101	1169.9	1190.6	0.775	2.880	72.803	19.693	3.449	0.120	0.242	0.014	0.016	0.008	0.000	0.000	0.000	0.000	0.000	1412.83
8	0.7082	1168.1	1188.8	0.789	2.784	73.072	19.610	3.386	0.112	0.217	0.011	0.012	0.006	0.000	0.000	0.000	0.000	0.000	1412.65
9	0.7052	1163.1	1183.7	0.794	2.801	73.374	19.549	3.171	0.099	0.189	0.009	0.010	0.005	0.000	0.000	0.000	0.000	0.000	1409.60
10	0.7117	1176.7	1197.5	0.808	2.560	72.944	19.427	3.862	0.135	0.246	0.009	0.008	0.002	0.000	0.000	0.000	0.000	0.000	1419.49
11	0.7090	1170.0	1190.7	0.796	2.740	72.899	19.806	3.418	0.112	0.209	0.009	0.009	0.004	0.000	0.000	0.000	0.000	0.000	1414.07
12	0.7104	1173.5	1194.3	0.791	2.660	72.932	19.563	3.699	0.122	0.218	0.007	0.006	0.003	0.000	0.000	0.000	0.000	0.000	1416.91
13	0.7061	1165.5	1186.1	0.791	2.752	73.397	19.395	3.323	0.108	0.207	0.010	0.011	0.006	0.000	0.000	0.000	0.000	0.000	1411.46
14	0.7134	1172.4	1193.1	0.763	3.052	72.160	20.263	3.261	0.126	0.297	0.026	0.032	0.019	0.000	0.000	0.000	0.000	0.000	1412.63
15	0.7186	1179.8	1200.7	0.753	3.100	71.344	20.803	3.470	0.137	0.322	0.025	0.030	0.016	0.000	0.000	0.000	0.000	0.000	1416.48
16	0.7176	1181.8	1202.7	0.811	2.801	71.814	20.337	3.746	0.140	0.300	0.019	0.021	0.010	0.000	0.000	0.000	0.000	0.000	1419.76
17	0.7114	1171.5	1192.3	0.799	2.862	72.643	19.863	3.369	0.127	0.281	0.020	0.024	0.012	0.000	0.000	0.000	0.000	0.000	1413.57
18	0.7138	1175.7	1196.5	0.792	2.839	72.600	19.592	3.625	0.146	0.332	0.026	0.031	0.016	0.000	0.000	0.000	0.000	0.000	1416.24
19	0.7148	1177.2	1198.0	0.788	2.853	72.479	19.601	3.728	0.150	0.333	0.024	0.029	0.015	0.000	0.000	0.000	0.000	0.000	1416.98
20	0.7152	1178.8	1199.6	0.787	2.797	72.361	19.762	3.784	0.146	0.307	0.020	0.024	0.013	0.000	0.000	0.000	0.000	0.000	1418.48
21	0.7142	1180.0	1200.9	0.809	2.588	72.839	19.204	4.075	0.153	0.296	0.014	0.014	0.008	0.000	0.000	0.000	0.000	0.000	1421.04
22	0.7152	1178.5	1199.3	0.813	2.769	72.470	19.593	3.837	0.149	0.315	0.019	0.023	0.012	0.000	0.000	0.000	0.000	0.000	1418.17
23	0.7143	1178.6	1199.5	0.803	2.694	72.814	19.209	3.923	0.158	0.337	0.022	0.027	0.013	0.000	0.000	0.000	0.000	0.000	1419.23
24	0.7153	1180.2	1201.1	0.801	2.695	72.608	19.419	3.918	0.158	0.336	0.022	0.026	0.015	0.000	0.000	0.000	0.000	0.000	1420.12
25	0.7174	1180.3	1201.2	0.765	2.934	72.044	19.934	3.715	0.157	0.365	0.029	0.037	0.019	0.000	0.000	0.000	0.000	0.000	1418.27
26	0.7123	1172.6	1193.4	0.773	2.925	72.514	19.868	3.442	0.132	0.288	0.020	0.024	0.014	0.000	0.000	0.000	0.000	0.000	1413.94
27	0.7171	1180.4	1201.3	0.761	2.914	72.041	19.962	3.750	0.156	0.346	0.025	0.030	0.015	0.000	0.000	0.000	0.000	0.000	1418.55
28	0.7231	1192.6	1213.7	0.798	2.667	71.734	19.684	4.493	0.188	0.381	0.021	0.022	0.010	0.000	0.000	0.000	0.000	0.000	1427.31
29	0.7257	1199.3	1220.5	0.795	2.514	71.182	20.325	4.629	0.183	0.343	0.013	0.011	0.007	0.000	0.000	0.000	0.000	0.000	1432.70
30	0.7196	1183.8	1204.8	0.777	2.917	71.547	20.540	3.588	0.154	0.369	0.034	0.044	0.029	0.000	0.000	0.000	0.000	0.000	1420.22
31	0.7149	1176.9	1197.7	0.777	2.902	71.787	20.805	3.279	0.121	0.267	0.020	0.024	0.018	0.000	0.000	0.000	0.000	0.000	1416.54
Avg	0.7136	1177.0	1197.5	0.795	2.759	72.539	19.737	3.701	0.138	0.285	0.017	0.019	0.010	0.000	0.000	0.000	0.000	0.000	1417.57

Zone 24, 264

GQ Source Analysis

WBI Energy Transmission, Inc.

GQ Source Number:	0602160	Specific Gravity:	0.7260
GQ Source Name:	FAIRVIEW BORDER	Dry Heat Value:	1187.45
Effective Date:	8/1/2012 9:00:00 AM	Wet Heat Value:	1166.78
Effective End Date:	1/18/2038 9:14:07 PM	As Deliv. Heat Value:	1187.45
Pressure Base:	14.730	Sample Pressure:	0.00
Viscosity:		Sample Temperature:	

		<u>Mol %</u>	<u>Liquid Content</u>			<u>Mol %</u>
C1	Methane	69.467		CO2	Carbon Dioxide	1.153
C2	Ethane	21.544	5.7446	N2	Nitrogen	3.957
C3	Propane	3.455	0.9490	O2	Oxygen	0.000
IC4	Isobutane	0.133	0.0433	He	Helium	
NC4	n-Butane	0.261	0.0820	H2	Hydrogen	
IC5	Isopentane	0.016	0.0060	H2S	Hydrogen Sulfide	
NC5	n-Pentane	0.014	0.0050	Ar	Argon	
C6	Hexanes	0.001	0.0006	CO	Carbon Monoxide	
C7	Heptanes			H2	Water	
C8	Octanes			Neo-C5	Neopentane	
C9	Nonanes					
C10	Decanes					

Totals 100.000% 6.830 GPM

Sample Date: 8/31/2012 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
H2S: ppm

Sample Remarks:

Analysis Tech: Lab

Analysis Remarks:

Zone 241

GQ Source Analysis

WBI Energy Transmission, Inc.

GQ Source Number:	0602230	Specific Gravity:	0.7047
GQ Source Name:	WATFORD CITY BORDER	Dry Heat Value:	1183.63
Effective Date:	8/1/2012 9:00:00 AM	Wet Heat Value:	1163.03
Effective End Date:	1/18/2038 9:14:07 PM	As Deliv. Heat Value:	1183.63
Pressure Base:	14.730	Sample Pressure:	0.00
Viscosity:		Sample Temperature:	

	<u>Mol %</u>	<u>Liquid Content</u>		<u>Mol %</u>	
C1	Methane	73.030	CO2	Carbon Dioxide	0.805
C2	Ethane	20.121	N2	Nitrogen	2.712
C3	Propane	3.030	O2	Oxygen	0.000
IC4	Isobutane	0.094	He	Helium	
NC4	n-Butane	0.182	H2	Hydrogen	
IC5	Isopentane	0.010	H2S	Hydrogen Sulfide	
NC5	n-Pentane	0.011	Ar	Argon	
C6	Hexanes	0.004	CO	Carbon Monoxide	
C7	Heptanes		H2	Water	
C8	Octanes		Neo-C5	Neopentane	
C9	Nonanes				
C10	Decanes				

Totals 100.000% 6.295 GPM

Sample Date: 8/31/2012 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
H2S: ppm

Sample Remarks:

Analysis Tech: Lab

Analysis Remarks:

Zone 25

GQ Source Daily Summary

August 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	0.7009	1158.3	1178.9	0.632	2.936	74.201	18.560	3.390	0.105	0.165	0.006	0.005	0.000					1408.08	
2	0.6884	1136.7	1156.9	0.405	3.428	75.458	17.963	2.557	0.059	0.108	0.007	0.007	0.007					1394.31	
3	0.6767	1120.6	1140.4	0.309	3.467	76.445	18.270	1.393	0.030	0.063	0.005	0.006	0.011					1386.33	
4	0.6781	1122.5	1142.3	0.324	3.456	76.114	18.666	1.328	0.030	0.060	0.005	0.006	0.011					1387.27	
5	0.6783	1123.0	1142.9	0.314	3.459	76.204	18.470	1.409	0.038	0.081	0.006	0.008	0.012					1387.74	
6	0.6785	1124.2	1144.2	0.277	3.458	76.287	18.307	1.499	0.043	0.095	0.009	0.011	0.015					1389.03	
7	0.6759	1121.9	1141.8	0.216	3.452	76.447	18.466	1.304	0.030	0.061	0.005	0.006	0.015					1388.79	
8	0.6759	1122.2	1142.1	0.249	3.386	76.442	18.559	1.237	0.030	0.066	0.006	0.007	0.017					1389.13	
9	0.6764	1121.7	1141.5	0.257	3.454	76.329	18.587	1.256	0.030	0.063	0.005	0.006	0.014					1387.96	
10	0.6784	1123.6	1143.5	0.261	3.509	76.126	18.556	1.412	0.034	0.073	0.006	0.007	0.015					1388.40	
11	0.6773	1122.0	1141.9	0.267	3.494	76.179	18.650	1.311	0.025	0.050	0.004	0.005	0.015					1387.56	
12	0.6758	1119.2	1139.1	0.250	3.554	76.353	18.522	1.226	0.026	0.049	0.003	0.003	0.014					1385.60	
13	0.6960	1152.1	1172.5	0.257	3.428	74.461	18.401	3.303	0.041	0.072	0.006	0.007	0.024					1405.42	
14	0.7076	1171.7	1192.5	0.247	3.330	73.349	18.540	4.263	0.076	0.126	0.013	0.016	0.041					1417.58	
15	0.6997	1158.8	1179.4	0.226	3.412	74.196	18.270	3.685	0.056	0.106	0.009	0.011	0.030					1409.87	
16	0.7015	1160.2	1180.7	0.277	3.422	73.888	18.547	3.622	0.068	0.117	0.010	0.012	0.035					1409.68	
17	0.6937	1147.6	1168.0	0.250	3.496	74.736	18.368	2.906	0.069	0.114	0.011	0.014	0.036					1402.27	
18	0.6809	1126.7	1146.7	0.254	3.570	76.003	18.367	1.551	0.057	0.138	0.015	0.019	0.026					1389.61	
19	0.6825	1128.6	1148.6	0.271	3.578	75.724	18.583	1.595	0.058	0.137	0.014	0.018	0.023					1390.28	
20	0.6819	1128.2	1148.2	0.267	3.550	75.817	18.532	1.607	0.053	0.121	0.012	0.016	0.025					1390.42	
21	0.6861	1135.5	1155.6	0.289	3.471	75.298	18.804	1.897	0.058	0.131	0.012	0.015	0.025					1395.08	
22	0.6789	1122.6	1142.5	0.278	3.592	76.273	18.153	1.492	0.050	0.116	0.011	0.014	0.021					1386.62	
23	0.6842	1131.8	1151.8	0.289	3.513	75.650	18.493	1.784	0.062	0.146	0.016	0.021	0.027					1392.53	
24	0.6786	1123.1	1143.0	0.258	3.564	76.273	18.277	1.396	0.055	0.128	0.013	0.017	0.019					1387.55	
25	0.6751	1120.5	1140.3	0.181	3.513	76.592	18.380	1.138	0.043	0.104	0.012	0.015	0.022					1387.90	
26	0.6757	1121.1	1141.0	0.182	3.533	76.401	18.555	1.177	0.034	0.077	0.008	0.010	0.023					1388.03	
27	0.6750	1120.0	1139.8	0.190	3.522	76.667	18.213	1.230	0.040	0.093	0.009	0.012	0.023					1387.33	
28	0.6803	1127.5	1147.5	0.236	3.489	76.057	18.418	1.600	0.047	0.104	0.010	0.013	0.026					1391.22	
29	0.6813	1129.0	1149.0	0.274	3.434	75.706	18.924	1.510	0.038	0.076	0.007	0.008	0.023					1392.06	
30	0.6732	1117.3	1137.1	0.164	3.552	76.832	18.253	1.008	0.040	0.098	0.011	0.015	0.026					1385.94	
31	0.6718	1114.8	1134.5	0.147	3.605	76.764	18.499	0.883	0.021	0.048	0.004	0.006	0.023					1384.22	
Avg	0.6827	1131.0	1150.8	0.268	3.472	75.783	18.457	1.838	0.047	0.096	0.009	0.011	0.021					1392.70	

Zone 261

GQ Source Daily Summary

August 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	0.6866	1136.7	1156.8	0.359	3.330	75.163	18.989	2.008	0.048	0.097	0.001	0.004	0.000	0.000	0.000	0.000	0.000	1396.15	
2	0.6955	1149.2	1169.5	0.583	3.064	74.369	19.112	2.664	0.075	0.133	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1402.38	
3	0.7138	1168.0	1188.7	0.859	3.218	71.545	20.956	3.102	0.104	0.199	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1406.97	
4	0.7282	1177.0	1197.8	0.714	4.240	69.140	21.697	3.840	0.123	0.234	0.007	0.006	0.000	0.000	0.000	0.000	0.000	1403.72	
5	0.7234	1169.8	1190.5	0.633	4.355	69.735	21.331	3.595	0.111	0.224	0.008	0.008	0.000	0.000	0.000	0.000	0.000	1399.72	
6	0.7093	1151.1	1171.5	0.485	4.401	71.325	20.840	2.730	0.067	0.143	0.004	0.004	0.000	0.000	0.000	0.000	0.000	1390.97	
7	0.7080	1150.0	1170.4	0.500	4.321	71.274	21.287	2.420	0.061	0.131	0.003	0.004	0.000	0.000	0.000	0.000	0.000	1390.94	
8	0.7069	1147.9	1168.2	0.502	4.348	71.353	21.315	2.286	0.061	0.130	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1389.41	
9	0.7081	1149.2	1169.6	0.500	4.379	71.287	21.201	2.409	0.068	0.147	0.004	0.005	0.000	0.000	0.000	0.000	0.000	1389.89	
10	0.7126	1155.3	1175.8	0.488	4.451	70.775	21.257	2.765	0.078	0.171	0.007	0.007	0.000	0.000	0.000	0.000	0.000	1392.79	
11	0.7113	1154.0	1174.4	0.470	4.430	70.850	21.380	2.634	0.071	0.155	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1392.55	
12	0.7113	1154.4	1174.8	0.485	4.385	70.865	21.400	2.630	0.071	0.154	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1393.00	
13	0.7126	1154.7	1175.2	0.500	4.463	70.647	21.488	2.661	0.074	0.159	0.005	0.005	0.000	0.000	0.000	0.000	0.000	1392.18	
14	0.7155	1158.5	1179.0	0.546	4.440	70.213	21.791	2.754	0.077	0.167	0.006	0.006	0.000	0.000	0.000	0.000	0.000	1393.84	
15	0.7104	1151.2	1171.6	0.486	4.493	70.811	21.540	2.456	0.067	0.142	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1390.09	
16	0.7177	1163.1	1183.7	0.481	4.460	70.157	21.427	3.226	0.077	0.161	0.005	0.006	0.000	0.000	0.000	0.000	0.000	1397.27	
17	0.7269	1178.1	1199.0	0.478	4.412	69.294	21.389	4.122	0.096	0.189	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1406.24	
18	0.7252	1174.6	1195.4	0.482	4.460	69.407	21.450	3.906	0.090	0.189	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1403.72	
19	0.7240	1174.1	1194.9	0.483	4.375	69.595	21.416	3.834	0.093	0.187	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1404.31	
20	0.7225	1171.4	1192.2	0.481	4.403	69.756	21.359	3.710	0.096	0.179	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1402.53	
21	0.7132	1156.3	1176.8	0.479	4.460	70.685	21.325	2.773	0.082	0.179	0.009	0.010	0.000	0.000	0.000	0.000	0.000	1393.43	
22	0.7118	1154.4	1174.8	0.482	4.441	70.848	21.343	2.578	0.086	0.198	0.011	0.013	0.000	0.000	0.000	0.000	0.000	1392.45	
23	0.7116	1153.6	1174.1	0.486	4.460	70.838	21.366	2.560	0.083	0.187	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1391.79	
24	0.7109	1153.3	1173.7	0.482	4.422	70.958	21.302	2.557	0.080	0.179	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1392.04	
25	0.7150	1159.0	1179.5	0.498	4.431	70.674	21.073	2.997	0.095	0.210	0.010	0.012	0.001	0.000	0.000	0.000	0.000	1394.94	
26	0.7100	1153.5	1173.9	0.461	4.358	71.328	20.852	2.688	0.087	0.199	0.011	0.014	0.001	0.000	0.000	0.000	0.000	1393.14	
27	0.7118	1155.8	1176.3	0.484	4.348	71.092	20.985	2.762	0.092	0.210	0.012	0.014	0.001	0.000	0.000	0.000	0.000	1394.21	
28	0.7171	1158.9	1179.4	0.506	4.628	70.088	21.556	2.915	0.097	0.197	0.010	0.012	0.000	0.000	0.000	0.000	0.000	1392.72	
29	0.7188	1161.7	1182.3	0.494	4.631	69.790	21.788	3.002	0.084	0.190	0.009	0.011	0.000	0.000	0.000	0.000	0.000	1394.50	
30	0.7191	1162.1	1182.7	0.491	4.637	69.784	21.713	3.102	0.080	0.177	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1394.70	
31	0.7154	1157.6	1178.1	0.468	4.600	70.531	21.027	3.083	0.086	0.186	0.008	0.009	0.000	0.000	0.000	0.000	0.000	1392.87	
Avg	0.7137	1159.0	1179.1	0.511	4.318	70.780	21.192	2.928	0.082	0.174	0.007	0.008	0.000	0.000	0.000	0.000	0.000	1395.66	

Zona 262

GQ Source Analysis

GQ Source Number:	2501030	Specific Gravity:	0.6792
GQ Source Name:	LIGNITE PLANT	Dry Heat Value:	1143.35
Effective Date:	8/1/2012 9:00:00 AM	Wet Heat Value:	1123.45
Effective End Date:	1/18/2038 9:14:07 PM	As Deliv. Heat Value:	1143.35
Pressure Base:	14.730	Sample Pressure:	0.00
Viscosity:		Sample Temperature:	

	<u>Mol %</u>	<u>Liquid Content</u>		<u>Mol %</u>
C1 Methane	75.889		CO2 Carbon Dioxide	0.125
C2 Ethane	18.200	4.8530	N2 Nitrogen	3.771
C3 Propane	1.977	0.5430	O2 Oxygen	0.000
IC4 Isobutane	0.018	0.0058	He Helium	
NC4 n-Butane	0.007	0.0023	H2 Hydrogen	
IC5 Isopentane	0.000	0.0000	H2S Hydrogen Sulfide	
NC5 n-Pentane	0.000	0.0000	Ar Argon	
C6 Hexanes	0.013	0.0061	CO Carbon Monoxide	
C7 Heptanes			H2 Water	
C8 Octanes			Neo-C5 Neopentane	
C9 Nonanes				
C10 Decanes				

Totals	100.000%	5.410 GPM
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Sample Date: 8/31/2012 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
H2S: ppm

Sample Remarks:

Analysis Tech: Lab

Analysis Remarks:

Zone 263

*** End of Report ***

GQ Source Daily Summary

August 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	0.7149	1164.4	1185.0	0.871	3.523	71.384	20.774	3.105	0.102	0.196	0.015	0.017	0.014	0.000	0.000	0.000	0.000	1401.58	
2	0.7266	1172.3	1193.1	0.724	4.358	69.436	21.344	3.744	0.122	0.238	0.013	0.013	0.007	0.000	0.000	0.000	0.000	1399.68	
3	0.7114	1153.9	1174.3	0.512	4.378	71.286	20.587	2.994	0.070	0.143	0.008	0.009	0.013	0.000	0.000	0.000	0.000	1392.33	
4	0.7066	1148.4	1168.7	0.502	4.284	71.661	20.914	2.411	0.061	0.133	0.008	0.009	0.017	0.000	0.000	0.000	0.000	1390.38	
5	0.7045	1144.4	1164.7	0.505	4.329	71.839	20.905	2.212	0.059	0.123	0.007	0.007	0.014	0.000	0.000	0.000	0.000	1387.59	
6	0.7073	1148.4	1168.7	0.505	4.349	71.640	20.764	2.483	0.071	0.153	0.009	0.010	0.015	0.000	0.000	0.000	0.000	1389.62	
7	0.7114	1154.2	1174.7	0.483	4.407	71.173	20.852	2.782	0.081	0.180	0.011	0.013	0.018	0.000	0.000	0.000	0.000	1392.70	
8	0.7101	1152.1	1172.5	0.465	4.440	71.152	21.059	2.635	0.069	0.147	0.008	0.008	0.016	0.000	0.000	0.000	0.000	1391.46	
9	0.7105	1154.1	1174.5	0.485	4.332	71.141	21.135	2.648	0.070	0.153	0.009	0.010	0.018	0.000	0.000	0.000	0.000	1393.38	
10	0.7096	1151.3	1171.6	0.488	4.413	71.222	21.058	2.564	0.070	0.151	0.009	0.009	0.016	0.000	0.000	0.000	0.000	1390.89	
11	0.7139	1156.6	1177.1	0.534	4.419	70.599	21.441	2.730	0.076	0.165	0.010	0.011	0.016	0.000	0.000	0.000	0.000	1393.15	
12	0.7094	1150.8	1171.2	0.488	4.421	71.136	21.248	2.469	0.066	0.141	0.007	0.008	0.017	0.000	0.000	0.000	0.000	1390.55	
13	0.7090	1149.3	1169.7	0.484	4.481	71.188	21.156	2.449	0.067	0.143	0.008	0.008	0.017	0.000	0.000	0.000	0.000	1389.14	
14	0.7226	1171.6	1192.4	0.483	4.392	69.979	20.958	3.899	0.083	0.164	0.010	0.011	0.022	0.000	0.000	0.000	0.000	1402.70	
15	0.7262	1177.8	1198.6	0.477	4.366	69.560	21.157	4.101	0.094	0.186	0.013	0.014	0.031	0.000	0.000	0.000	0.000	1406.54	
16	0.7232	1172.6	1193.3	0.480	4.399	69.861	21.114	3.817	0.089	0.187	0.012	0.013	0.028	0.000	0.000	0.000	0.000	1403.22	
17	0.7222	1171.8	1192.5	0.487	4.342	70.020	21.060	3.773	0.093	0.174	0.010	0.011	0.030	0.000	0.000	0.000	0.000	1403.24	
18	0.7140	1158.3	1178.9	0.475	4.411	70.868	20.953	2.984	0.082	0.172	0.012	0.013	0.030	0.000	0.000	0.000	0.000	1395.11	
19	0.7104	1152.7	1173.2	0.481	4.407	71.252	20.950	2.571	0.085	0.197	0.014	0.017	0.024	0.000	0.000	0.000	0.000	1391.88	
20	0.7098	1151.5	1171.8	0.485	4.426	71.242	21.023	2.519	0.080	0.179	0.012	0.014	0.021	0.000	0.000	0.000	0.000	1390.90	
21	0.7093	1151.5	1171.9	0.477	4.382	71.407	20.872	2.551	0.080	0.179	0.013	0.015	0.023	0.000	0.000	0.000	0.000	1391.49	
22	0.7138	1157.8	1178.3	0.502	4.391	71.047	20.688	3.017	0.093	0.209	0.014	0.016	0.024	0.000	0.000	0.000	0.000	1394.56	
23	0.7104	1152.3	1172.7	0.488	4.422	71.410	20.604	2.747	0.086	0.193	0.013	0.015	0.022	0.000	0.000	0.000	0.000	1391.35	
24	0.7080	1152.2	1172.6	0.470	4.232	71.817	20.512	2.628	0.086	0.197	0.015	0.018	0.025	0.000	0.000	0.000	0.000	1393.63	
25	0.7174	1159.9	1180.4	0.515	4.573	70.252	21.334	2.977	0.091	0.207	0.014	0.017	0.020	0.000	0.000	0.000	0.000	1393.71	
26	0.7175	1160.6	1181.2	0.491	4.580	70.130	21.497	2.992	0.082	0.184	0.012	0.014	0.019	0.000	0.000	0.000	0.000	1394.43	
27	0.7169	1159.4	1179.9	0.491	4.602	70.233	21.358	3.025	0.078	0.172	0.010	0.011	0.019	0.000	0.000	0.000	0.000	1393.49	
28	0.7136	1155.1	1175.6	0.469	4.592	71.035	20.475	3.126	0.086	0.184	0.011	0.012	0.019	0.000	0.000	0.000	0.000	1391.59	
29	0.7097	1154.0	1174.5	0.453	4.303	71.566	20.557	2.814	0.079	0.178	0.012	0.014	0.025	0.000	0.000	0.000	0.000	1394.20	
30	0.7180	1161.1	1181.7	0.517	4.558	70.075	21.518	3.038	0.080	0.171	0.010	0.011	0.023	0.000	0.000	0.000	0.000	1394.53	
31	0.7185	1160.5	1181.0	0.491	4.684	69.979	21.492	3.029	0.084	0.191	0.013	0.015	0.022	0.000	0.000	0.000	0.000	1393.27	
Avg	0.7138	1157.0	1177.9	0.509	4.393	70.858	21.012	2.930	0.081	0.174	0.011	0.012	0.020	0.000	0.000	0.000	0.000	1394.27	

Zone 271

GQ Source Daily Summary

August 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	0.7117	1167.9	1188.5	0.865	3.020	71.978	20.775	3.029	0.104	0.200	0.013	0.013	0.004	0.000	0.000	0.000	0.000	1408.85	
2	0.7259	1173.5	1194.2	0.807	4.103	69.323	21.976	3.428	0.110	0.220	0.012	0.013	0.009	0.000	0.000	0.000	0.000	1401.74	
3	0.7232	1170.1	1190.8	0.629	4.318	69.852	21.221	3.618	0.109	0.223	0.012	0.011	0.006	0.000	0.000	0.000	0.000	1400.32	
4	0.7077	1149.3	1169.6	0.487	4.351	71.573	20.790	2.570	0.062	0.134	0.009	0.009	0.014	0.000	0.000	0.000	0.000	1390.41	
5	0.7078	1150.2	1170.6	0.504	4.287	71.323	21.323	2.344	0.060	0.130	0.007	0.008	0.015	0.000	0.000	0.000	0.000	1391.38	
6	0.7069	1148.0	1168.3	0.502	4.335	71.497	21.127	2.305	0.064	0.139	0.008	0.009	0.014	0.000	0.000	0.000	0.000	1389.62	
7	0.7109	1153.5	1173.9	0.498	4.387	71.076	21.124	2.644	0.074	0.163	0.010	0.010	0.014	0.000	0.000	0.000	0.000	1392.24	
8	0.7136	1157.1	1177.6	0.479	4.442	70.703	21.288	2.796	0.079	0.174	0.011	0.012	0.017	0.000	0.000	0.000	0.000	1394.05	
9	0.7113	1155.2	1175.6	0.478	4.349	70.950	21.339	2.621	0.071	0.156	0.009	0.010	0.017	0.000	0.000	0.000	0.000	1393.93	
10	0.7112	1154.4	1174.8	0.489	4.370	70.951	21.329	2.603	0.070	0.153	0.009	0.009	0.016	0.000	0.000	0.000	0.000	1393.09	
11	0.7125	1154.9	1175.4	0.497	4.443	70.762	21.365	2.669	0.073	0.157	0.009	0.009	0.016	0.000	0.000	0.000	0.000	1392.52	
12	0.7142	1157.6	1178.1	0.535	4.386	70.451	21.699	2.668	0.072	0.157	0.009	0.009	0.015	0.000	0.000	0.000	0.000	1394.05	
13	0.7097	1151.2	1171.6	0.487	4.433	70.967	21.495	2.379	0.067	0.142	0.007	0.007	0.017	0.000	0.000	0.000	0.000	1390.69	
14	0.7114	1153.3	1173.7	0.485	4.464	70.823	21.423	2.556	0.069	0.147	0.008	0.009	0.016	0.000	0.000	0.000	0.000	1391.54	
15	0.7253	1176.1	1196.9	0.483	4.375	69.566	21.273	3.994	0.090	0.174	0.011	0.013	0.021	0.000	0.000	0.000	0.000	1405.39	
16	0.7265	1177.3	1198.2	0.488	4.401	69.382	21.413	3.981	0.091	0.190	0.012	0.014	0.027	0.000	0.000	0.000	0.000	1405.75	
17	0.7242	1174.9	1195.8	0.485	4.341	69.668	21.362	3.811	0.093	0.187	0.012	0.013	0.028	0.000	0.000	0.000	0.000	1405.08	
18	0.7227	1172.3	1193.1	0.475	4.369	69.845	21.292	3.690	0.094	0.180	0.012	0.013	0.029	0.000	0.000	0.000	0.000	1403.47	
19	0.7114	1154.2	1174.6	0.474	4.429	70.975	21.256	2.544	0.080	0.184	0.014	0.016	0.027	0.000	0.000	0.000	0.000	1392.60	
20	0.7122	1155.6	1176.1	0.480	4.398	70.903	21.295	2.586	0.085	0.197	0.015	0.018	0.022	0.000	0.000	0.000	0.000	1393.64	
21	0.7104	1152.5	1172.9	0.483	4.421	71.117	21.162	2.512	0.079	0.179	0.013	0.015	0.019	0.000	0.000	0.000	0.000	1391.56	
22	0.7120	1156.0	1176.5	0.489	4.351	70.941	21.254	2.663	0.079	0.176	0.012	0.013	0.021	0.000	0.000	0.000	0.000	1394.21	
23	0.7144	1158.0	1178.5	0.502	4.426	70.951	20.742	3.013	0.096	0.217	0.015	0.017	0.021	0.000	0.000	0.000	0.000	1394.30	
24	0.7098	1154.6	1175.0	0.464	4.267	71.466	20.823	2.622	0.089	0.207	0.017	0.021	0.024	0.000	0.000	0.000	0.000	1394.69	
25	0.7156	1159.6	1180.1	0.522	4.420	70.591	21.201	2.905	0.093	0.213	0.015	0.018	0.022	0.000	0.000	0.000	0.000	1395.01	
26	0.7177	1160.1	1180.6	0.502	4.613	70.031	21.617	2.925	0.083	0.186	0.012	0.014	0.018	0.000	0.000	0.000	0.000	1393.62	
27	0.7193	1163.2	1183.8	0.495	4.583	69.835	21.707	3.079	0.080	0.178	0.011	0.013	0.018	0.000	0.000	0.000	0.000	1395.81	
28	0.7175	1159.9	1180.4	0.489	4.620	70.232	21.248	3.105	0.083	0.183	0.011	0.012	0.017	0.000	0.000	0.000	0.000	1393.63	
29	0.7141	1157.3	1177.8	0.474	4.484	70.914	20.765	3.029	0.088	0.195	0.013	0.016	0.021	0.000	0.000	0.000	0.000	1393.83	
30	0.7120	1157.2	1177.7	0.476	4.296	70.994	21.194	2.757	0.075	0.161	0.011	0.012	0.023	0.000	0.000	0.000	0.000	1395.73	
31	0.7183	1160.1	1180.7	0.501	4.673	69.890	21.677	2.967	0.078	0.171	0.011	0.012	0.019	0.000	0.000	0.000	0.000	1393.04	
Avg	0.7149	1160.0	1180.0	0.517	4.360	70.630	21.276	2.917	0.082	0.176	0.011	0.013	0.018	0.000	0.000	0.000	0.000	1395.67	

Zone 272

GQ Source Daily Summary

August 2012

Number: 061

Pressure Base: 14.730

Contract Day: 1

Name: CLEVELAND STATION-GRAFTON 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	0.7115	1168.0	1188.6	0.860	3.002	72.044	20.704	3.058	0.105	0.199	0.012	0.012	0.004	0.000	0.000	0.000	0.000	1409.16	
2	0.7261	1173.5	1194.3	0.811	4.109	69.286	22.008	3.424	0.109	0.219	0.012	0.013	0.009	0.000	0.000	0.000	0.000	1401.65	
3	0.7237	1171.0	1191.7	0.631	4.313	69.775	21.269	3.652	0.109	0.221	0.011	0.012	0.007	0.000	0.000	0.000	0.000	1400.84	
4	0.7075	1149.2	1169.6	0.482	4.350	71.594	20.777	2.570	0.062	0.135	0.008	0.008	0.014	0.000	0.000	0.000	0.000	1390.48	
5	0.7078	1150.1	1170.5	0.504	4.288	71.333	21.312	2.342	0.061	0.130	0.008	0.008	0.015	0.000	0.000	0.000	0.000	1391.31	
6	0.7068	1147.9	1168.2	0.501	4.337	71.514	21.107	2.307	0.064	0.139	0.008	0.009	0.014	0.000	0.000	0.000	0.000	1389.56	
7	0.7108	1153.3	1173.7	0.498	4.390	71.093	21.101	2.646	0.074	0.162	0.010	0.011	0.015	0.000	0.000	0.000	0.000	1392.11	
8	0.7136	1157.2	1177.7	0.479	4.444	70.703	21.279	2.803	0.079	0.174	0.011	0.012	0.017	0.000	0.000	0.000	0.000	1394.08	
9	0.7113	1155.1	1175.6	0.478	4.352	70.950	21.334	2.624	0.071	0.155	0.009	0.010	0.017	0.000	0.000	0.000	0.000	1393.90	
10	0.7112	1154.4	1174.8	0.490	4.370	70.947	21.335	2.599	0.071	0.153	0.009	0.009	0.017	0.000	0.000	0.000	0.000	1393.07	
11	0.7122	1154.6	1175.1	0.494	4.444	70.787	21.359	2.655	0.072	0.155	0.009	0.009	0.016	0.000	0.000	0.000	0.000	1392.39	
12	0.7143	1157.8	1178.3	0.535	4.386	70.443	21.689	2.682	0.073	0.158	0.009	0.009	0.015	0.000	0.000	0.000	0.000	1394.16	
13	0.7098	1151.4	1171.8	0.487	4.432	70.957	21.498	2.386	0.067	0.142	0.007	0.007	0.017	0.000	0.000	0.000	0.000	1390.80	
14	0.7116	1153.7	1174.1	0.486	4.462	70.788	21.445	2.566	0.070	0.150	0.008	0.009	0.016	0.000	0.000	0.000	0.000	1391.79	
15	0.7253	1176.1	1196.9	0.483	4.378	69.562	21.271	3.996	0.090	0.176	0.011	0.012	0.021	0.000	0.000	0.000	0.000	1405.39	
16	0.7267	1177.8	1198.6	0.489	4.395	69.342	21.450	3.989	0.091	0.191	0.012	0.013	0.028	0.000	0.000	0.000	0.000	1406.07	
17	0.7243	1175.1	1195.9	0.484	4.345	69.651	21.373	3.815	0.093	0.187	0.012	0.013	0.028	0.000	0.000	0.000	0.000	1405.14	
18	0.7232	1173.1	1193.9	0.476	4.369	69.798	21.285	3.742	0.096	0.181	0.012	0.013	0.029	0.000	0.000	0.000	0.000	1403.92	
19	0.7113	1154.1	1174.5	0.473	4.429	70.990	21.245	2.540	0.080	0.185	0.014	0.016	0.028	0.000	0.000	0.000	0.000	1392.55	
20	0.7122	1155.6	1176.1	0.482	4.401	70.898	21.293	2.589	0.086	0.197	0.015	0.017	0.023	0.000	0.000	0.000	0.000	1393.59	
21	0.7105	1152.6	1173.0	0.484	4.419	71.106	21.170	2.517	0.079	0.178	0.013	0.015	0.020	0.000	0.000	0.000	0.000	1391.65	
22	0.7121	1156.0	1176.4	0.490	4.356	70.938	21.246	2.669	0.080	0.176	0.012	0.013	0.021	0.000	0.000	0.000	0.000	1394.13	
23	0.7142	1157.6	1178.1	0.502	4.438	70.989	20.687	3.016	0.096	0.218	0.015	0.018	0.022	0.000	0.000	0.000	0.000	1393.95	
24	0.7098	1154.4	1174.9	0.464	4.273	71.484	20.788	2.632	0.090	0.208	0.017	0.021	0.024	0.000	0.000	0.000	0.000	1394.55	
25	0.7157	1159.7	1180.2	0.522	4.420	70.579	21.210	2.913	0.093	0.211	0.015	0.017	0.021	0.000	0.000	0.000	0.000	1395.08	
26	0.7178	1160.3	1180.9	0.501	4.611	70.010	21.641	2.925	0.083	0.186	0.012	0.013	0.018	0.000	0.000	0.000	0.000	1393.79	
27	0.7192	1163.1	1183.7	0.493	4.579	69.842	21.721	3.066	0.080	0.178	0.011	0.012	0.018	0.000	0.000	0.000	0.000	1395.85	
28	0.7176	1160.0	1180.5	0.489	4.626	70.226	21.228	3.122	0.083	0.184	0.011	0.013	0.017	0.000	0.000	0.000	0.000	1393.62	
29	0.7146	1158.0	1178.6	0.478	4.484	70.851	20.793	3.054	0.090	0.199	0.014	0.016	0.021	0.000	0.000	0.000	0.000	1394.17	
30	0.7122	1157.4	1177.9	0.478	4.294	70.976	21.204	2.763	0.076	0.164	0.011	0.012	0.023	0.000	0.000	0.000	0.000	1395.85	
31	0.7186	1160.5	1181.0	0.502	4.671	69.868	21.679	2.989	0.078	0.171	0.011	0.011	0.020	0.000	0.000	0.000	0.000	1393.25	
Avg	0.7150	1160.0	1180.2	0.517	4.360	70.623	21.274	2.924	0.082	0.177	0.011	0.012	0.019	0.000	0.000	0.000	0.000	1395.74	

*** End of Report***

Zone 273

GQ Source Daily Summary

August 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	0.6807	1127.5	1147.5	0.306	3.408	76.209	18.055	1.833	0.050	0.117	0.003	0.005	0.013	0.000	0.000	0.000	0.000	1390.81	
2	0.6826	1131.0	1151.1	0.354	3.298	76.001	18.146	2.063	0.042	0.085	0.000	0.000	0.011	0.000	0.000	0.000	0.000	1393.24	
3	0.6969	1150.1	1170.5	0.699	2.948	74.541	18.676	2.867	0.091	0.167	0.000	0.000	0.011	0.000	0.000	0.000	0.000	1402.13	
4	0.7170	1165.4	1186.0	0.773	3.795	71.024	20.686	3.388	0.109	0.216	0.000	0.000	0.009	0.000	0.000	0.000	0.000	1400.76	
5	0.7122	1153.7	1174.1	0.561	4.387	71.330	20.298	3.152	0.084	0.179	0.001	0.001	0.006	0.000	0.000	0.000	0.000	1391.24	
6	0.6787	1115.0	1134.7	0.544	3.618	76.840	16.923	1.913	0.047	0.105	0.000	0.000	0.010	0.000	0.000	0.000	0.000	1377.52	
7	0.6535	1085.9	1105.1	0.601	2.933	81.526	13.452	1.363	0.037	0.080	0.000	0.000	0.007	0.000	0.000	0.000	0.000	1367.10	
8	0.6442	1076.3	1095.4	0.634	2.597	83.431	11.919	1.291	0.040	0.084	0.000	0.000	0.006	0.000	0.000	0.000	0.000	1364.75	
9	0.6409	1072.8	1091.8	0.614	2.524	84.105	11.338	1.301	0.034	0.079	0.000	0.000	0.005	0.000	0.000	0.000	0.000	1363.84	
10	0.6340	1064.5	1083.3	0.568	2.453	85.300	10.422	1.162	0.028	0.063	0.000	0.000	0.005	0.000	0.000	0.000	0.000	1360.61	
11	0.6409	1072.3	1091.3	0.559	2.637	83.990	11.430	1.274	0.032	0.072	0.000	0.000	0.006	0.000	0.000	0.000	0.000	1363.24	
12	0.6431	1074.4	1093.5	0.599	2.657	83.665	11.611	1.350	0.034	0.078	0.000	0.000	0.006	0.000	0.000	0.000	0.000	1363.55	
13	0.6344	1063.9	1082.8	0.594	2.486	85.165	10.563	1.100	0.026	0.060	0.000	0.000	0.006	0.000	0.000	0.000	0.000	1359.46	
14	0.6374	1068.2	1087.2	0.585	2.525	84.698	10.835	1.256	0.029	0.065	0.000	0.000	0.006	0.000	0.000	0.000	0.000	1361.66	
15	0.6387	1072.1	1091.1	0.567	2.435	84.906	10.271	1.710	0.034	0.069	0.000	0.000	0.007	0.000	0.000	0.000	0.000	1365.19	
16	0.6313	1063.9	1082.7	0.566	2.238	86.280	9.269	1.539	0.032	0.068	0.000	0.000	0.008	0.000	0.000	0.000	0.000	1362.70	
17	0.6248	1055.1	1073.8	0.597	2.112	87.401	8.497	1.298	0.027	0.059	0.000	0.000	0.008	0.000	0.000	0.000	0.000	1358.48	
18	0.6302	1061.3	1080.1	0.602	2.234	86.410	9.246	1.403	0.032	0.065	0.000	0.000	0.008	0.000	0.000	0.000	0.000	1360.59	
19	0.6364	1068.5	1087.4	0.605	2.382	85.211	10.204	1.479	0.036	0.072	0.000	0.000	0.010	0.000	0.000	0.000	0.000	1363.09	
20	0.6291	1058.7	1077.4	0.605	2.295	86.229	9.754	1.011	0.028	0.068	0.000	0.000	0.009	0.000	0.000	0.000	0.000	1358.38	
21	0.6302	1060.5	1079.3	0.586	2.310	86.037	9.907	1.048	0.031	0.074	0.000	0.000	0.007	0.000	0.000	0.000	0.000	1359.59	
22	0.6391	1069.8	1088.7	0.566	2.618	84.265	11.262	1.172	0.033	0.075	0.000	0.000	0.007	0.000	0.000	0.000	0.000	1361.86	
23	0.6862	1124.1	1144.0	0.506	3.830	75.752	17.401	2.266	0.070	0.164	0.000	0.000	0.011	0.000	0.000	0.000	0.000	1381.04	
24	0.6378	1068.4	1087.3	0.600	2.529	84.795	10.604	1.328	0.042	0.093	0.000	0.000	0.008	0.000	0.000	0.000	0.000	1361.43	
25	0.6313	1062.3	1081.2	0.590	2.295	85.966	9.867	1.145	0.040	0.090	0.000	0.000	0.007	0.000	0.000	0.000	0.000	1360.75	
26	0.6365	1067.4	1086.3	0.654	2.376	85.110	10.423	1.298	0.040	0.093	0.000	0.000	0.006	0.000	0.000	0.000	0.000	1361.68	
27	0.6247	1053.7	1072.3	0.615	2.172	87.120	8.986	1.016	0.026	0.061	0.000	0.000	0.004	0.000	0.000	0.000	0.000	1356.67	
28	0.6311	1062.8	1081.6	0.658	2.149	85.982	10.000	1.111	0.030	0.067	0.000	0.000	0.004	0.000	0.000	0.000	0.000	1361.49	
29	0.6356	1066.0	1084.9	0.591	2.479	85.222	10.226	1.360	0.036	0.080	0.000	0.000	0.006	0.000	0.000	0.000	0.000	1360.77	
30	0.6363	1067.3	1086.2	0.590	2.472	85.120	10.300	1.390	0.037	0.081	0.000	0.004	0.006	0.000	0.000	0.000	0.000	1361.58	
31	0.6428	1074.4	1093.5	0.607	2.620	83.882	11.302	1.440	0.047	0.094	0.000	0.001	0.008	0.000	0.000	0.000	0.000	1363.82	
Avg	0.6490	1083.0	1102.3	0.584	2.704	82.694	12.318	1.559	0.042	0.091	0.000	0.000	0.008	0.000	0.000	0.000	0.000	1368.36	

Zone 31

GQ Source Daily Summary

August 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	0.6853	1154.8	1175.3	0.028	2.619	73.601	23.099	0.614	0.011	0.022	0.002	0.002	0.003	0.000	0.000	0.000	0.000	1419.76	
2	0.6853	1156.4	1176.9	0.002	2.568	73.338	23.638	0.441	0.005	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.67	
3	0.6860	1150.0	1170.3	0.127	2.834	74.022	21.893	1.045	0.022	0.045	0.003	0.004	0.005	0.000	0.000	0.000	0.000	1412.98	
4	0.6903	1155.7	1176.2	0.246	2.703	73.623	21.988	1.332	0.036	0.063	0.002	0.002	0.004	0.000	0.000	0.000	0.000	1415.64	
5	0.7017	1163.2	1183.8	0.366	3.131	72.022	22.456	1.846	0.056	0.108	0.006	0.006	0.004	0.000	0.000	0.000	0.000	1413.22	
6	0.7010	1157.3	1177.8	0.290	3.540	72.026	22.096	1.891	0.045	0.095	0.005	0.005	0.005	0.000	0.000	0.000	0.000	1406.73	
7	0.6720	1122.5	1142.4	0.341	2.863	77.117	18.543	1.044	0.026	0.053	0.003	0.003	0.006	0.000	0.000	0.000	0.000	1393.55	
8	0.6706	1123.1	1142.9	0.321	2.727	77.338	18.547	0.975	0.026	0.053	0.004	0.004	0.005	0.000	0.000	0.000	0.000	1395.68	
9	0.6631	1114.5	1134.2	0.333	2.523	78.795	17.384	0.889	0.022	0.044	0.003	0.003	0.004	0.000	0.000	0.000	0.000	1392.85	
10	0.6606	1109.8	1129.4	0.338	2.562	79.366	16.728	0.925	0.023	0.049	0.003	0.003	0.004	0.000	0.000	0.000	0.000	1389.65	
11	0.6561	1104.0	1123.5	0.349	2.481	80.249	15.953	0.895	0.021	0.043	0.002	0.002	0.004	0.000	0.000	0.000	0.000	1387.03	
12	0.6625	1109.6	1129.2	0.381	2.690	79.206	16.523	1.101	0.028	0.060	0.003	0.004	0.005	0.000	0.000	0.000	0.000	1387.37	
13	0.6528	1096.8	1116.3	0.413	2.507	81.060	14.992	0.944	0.024	0.050	0.003	0.003	0.005	0.000	0.000	0.000	0.000	1381.56	
14	0.6514	1093.9	1113.3	0.425	2.535	81.328	14.701	0.931	0.023	0.047	0.002	0.002	0.005	0.000	0.000	0.000	0.000	1379.36	
15	0.6555	1100.8	1120.3	0.405	2.530	80.846	14.841	1.286	0.027	0.054	0.003	0.003	0.005	0.000	0.000	0.000	0.000	1383.71	
16	0.6526	1098.7	1118.1	0.384	2.418	81.453	14.364	1.283	0.029	0.055	0.004	0.004	0.006	0.000	0.000	0.000	0.000	1384.06	
17	0.6491	1095.9	1115.3	0.377	2.265	81.839	14.461	0.985	0.021	0.042	0.002	0.003	0.006	0.000	0.000	0.000	0.000	1384.37	
18	0.6510	1097.2	1116.6	0.378	2.365	81.526	14.599	1.051	0.023	0.047	0.003	0.003	0.005	0.000	0.000	0.000	0.000	1383.93	
19	0.6573	1105.3	1124.9	0.379	2.467	80.353	15.537	1.175	0.027	0.050	0.003	0.003	0.006	0.000	0.000	0.000	0.000	1387.42	
20	0.6532	1099.6	1119.0	0.376	2.435	80.880	15.348	0.880	0.022	0.046	0.003	0.003	0.007	0.000	0.000	0.000	0.000	1384.57	
21	0.6529	1100.0	1119.5	0.386	2.365	81.182	14.952	0.978	0.034	0.080	0.007	0.008	0.007	0.000	0.000	0.000	0.000	1385.40	
22	0.6566	1106.8	1126.4	0.308	2.421	80.017	16.390	0.789	0.020	0.043	0.003	0.003	0.005	0.000	0.000	0.000	0.000	1389.99	
23	0.6793	1134.7	1154.8	0.248	2.944	75.615	19.987	1.102	0.029	0.062	0.004	0.004	0.005	0.000	0.000	0.000	0.000	1401.18	
24	0.6691	1117.5	1137.3	0.363	2.854	78.126	17.196	1.323	0.037	0.081	0.005	0.006	0.009	0.000	0.000	0.000	0.000	1390.36	
25	0.6514	1096.7	1116.2	0.399	2.405	81.355	14.828	0.906	0.030	0.061	0.005	0.005	0.007	0.000	0.000	0.000	0.000	1382.88	
26	0.6537	1100.2	1119.6	0.400	2.408	80.935	15.210	0.937	0.030	0.063	0.005	0.006	0.007	0.000	0.000	0.000	0.000	1384.80	
27	0.6526	1098.4	1117.9	0.410	2.390	81.134	15.040	0.933	0.025	0.055	0.004	0.004	0.005	0.000	0.000	0.000	0.000	1383.83	
28	0.6500	1096.3	1115.7	0.385	2.317	81.524	14.855	0.840	0.022	0.046	0.003	0.004	0.004	0.000	0.000	0.000	0.000	1383.87	
29	0.6559	1104.5	1124.1	0.404	2.348	80.439	15.765	0.964	0.022	0.046	0.003	0.003	0.004	0.000	0.000	0.000	0.000	1387.90	
30	0.6575	1106.2	1125.8	0.345	2.480	80.200	15.793	1.090	0.027	0.055	0.003	0.003	0.004	0.000	0.000	0.000	0.000	1388.38	
31	0.6587	1107.9	1127.5	0.349	2.488	79.866	16.217	0.979	0.029	0.057	0.005	0.005	0.006	0.000	0.000	0.000	0.000	1389.20	
Avg	0.6644	1115.0	1135.2	0.331	2.587	78.722	17.223	1.044	0.027	0.054	0.003	0.004	0.005	0.000	0.000	0.000	0.000	1392.67	

Zone 32

GQ Source Daily Summary

August 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	0.6866	1159.0	1179.5	0.000	2.531	73.084	23.931	0.443	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.54	
2	0.6868	1158.9	1179.4	0.000	2.560	73.033	23.952	0.444	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.17	
3	0.6864	1158.2	1178.7	0.000	2.566	73.088	23.915	0.420	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.71	
4	0.6858	1157.4	1177.9	0.000	2.556	73.253	23.724	0.454	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.38	
5	0.6882	1161.2	1181.8	0.000	2.552	72.982	23.778	0.672	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.52	
6	0.6863	1157.3	1177.8	0.000	2.608	73.137	23.792	0.452	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.77	
7	0.6863	1158.3	1178.8	0.000	2.554	73.201	23.734	0.487	0.007	0.014	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1422.86	
8	0.6866	1158.5	1179.0	0.000	2.561	73.134	23.802	0.492	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.93	
9	0.6863	1158.3	1178.8	0.000	2.548	73.213	23.710	0.516	0.005	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.98	
10	0.6845	1155.6	1176.0	0.000	2.552	73.535	23.422	0.477	0.005	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.39	
11	0.6858	1157.6	1178.1	0.000	2.547	73.278	23.675	0.489	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.60	
12	0.6866	1159.1	1179.6	0.000	2.528	73.176	23.757	0.523	0.006	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.60	
13	0.6821	1152.0	1172.4	0.000	2.541	74.091	22.838	0.498	0.009	0.018	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1419.51	
14	0.6853	1156.8	1177.3	0.000	2.541	73.378	23.597	0.473	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.22	
15	0.6810	1149.9	1170.3	0.000	2.559	74.217	22.777	0.436	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.16	
16	0.6793	1147.1	1167.4	0.000	2.575	74.576	22.382	0.456	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.38	
17	0.6860	1158.0	1178.5	0.000	2.543	73.236	23.726	0.484	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.88	
18	0.6860	1158.0	1178.5	0.000	2.543	73.236	23.726	0.484	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.88	
19	0.6860	1158.0	1178.5	0.000	2.543	73.236	23.726	0.484	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.88	
20	0.6860	1158.0	1178.5	0.000	2.543	73.236	23.726	0.484	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.88	
21	0.6877	1160.6	1181.1	0.000	2.536	73.143	23.616	0.665	0.011	0.023	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1424.34	
22	0.6860	1158.0	1178.5	0.000	2.543	73.236	23.726	0.484	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.85	
23	0.6869	1159.5	1180.1	0.000	2.535	73.082	23.856	0.516	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.79	
24	0.6861	1158.8	1179.3	0.000	2.504	73.227	23.763	0.494	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.72	
25	0.6861	1158.6	1179.1	0.000	2.520	73.202	23.794	0.473	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.41	
26	0.6860	1158.4	1178.9	0.000	2.514	73.245	23.751	0.479	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.38	
27	0.6862	1158.4	1178.9	0.000	2.536	73.200	23.761	0.492	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.16	
28	0.6873	1160.0	1180.6	0.000	2.539	73.082	23.786	0.574	0.006	0.011	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1424.00	
29	0.6963	1174.3	1195.1	0.000	2.503	72.259	23.686	1.488	0.024	0.039	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1432.22	
30	0.6870	1159.5	1180.0	0.000	2.539	73.048	23.917	0.479	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.72	
31	0.6864	1158.9	1179.4	0.000	2.521	73.149	23.859	0.461	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.58	
Avg	0.6861	1158.0	1178.6	0.000	2.543	73.264	23.652	0.525	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.92	

Zone 33

GQ Source Daily Summary

August 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	0.7945	1104.9	1124.4	2.684	11.912	54.783	27.901	2.425	0.064	0.195	0.008	0.023	0.005	0.000	0.000	0.000	0.000	1261.49	
2	0.7966	1107.2	1126.8	2.774	11.834	54.484	28.158	2.451	0.065	0.197	0.009	0.023	0.005	0.000	0.000	0.000	0.000	1262.54	
3	0.7987	1103.7	1123.3	3.023	11.860	54.326	28.015	2.479	0.065	0.197	0.008	0.023	0.004	0.000	0.000	0.000	0.000	1256.87	
4	0.7898	1103.7	1123.3	2.319	12.098	55.083	28.039	2.173	0.062	0.190	0.008	0.022	0.004	0.000	0.000	0.000	0.000	1263.87	
5	0.7902	1110.6	1130.3	2.118	12.020	54.812	28.630	2.110	0.066	0.206	0.009	0.025	0.005	0.000	0.000	0.000	0.000	1271.44	
6	0.7948	1119.4	1139.2	2.098	11.941	54.537	28.399	2.658	0.077	0.243	0.011	0.030	0.006	0.000	0.000	0.000	0.000	1277.80	
7	0.7946	1121.1	1140.9	2.009	11.950	54.722	28.081	2.856	0.081	0.252	0.011	0.031	0.006	0.000	0.000	0.000	0.000	1279.92	
8	0.7934	1117.4	1137.2	1.960	12.137	54.797	27.923	2.827	0.077	0.236	0.010	0.028	0.006	0.000	0.000	0.000	0.000	1276.70	
9	0.7927	1119.5	1139.3	1.837	12.128	55.001	27.697	2.962	0.081	0.247	0.011	0.030	0.006	0.000	0.000	0.000	0.000	1279.68	
10	0.7897	1107.9	1127.5	2.046	12.240	55.228	27.658	2.509	0.070	0.211	0.009	0.025	0.005	0.000	0.000	0.000	0.000	1268.78	
11	0.7919	1110.1	1129.7	2.275	11.973	54.694	28.551	2.207	0.064	0.198	0.009	0.024	0.005	0.000	0.000	0.000	0.000	1269.50	
12	0.7852	1107.8	1127.4	1.930	12.002	55.820	27.627	2.341	0.061	0.185	0.008	0.022	0.005	0.000	0.000	0.000	0.000	1272.31	
13	0.7889	1122.3	1142.2	1.657	11.881	55.081	28.531	2.536	0.068	0.208	0.009	0.024	0.005	0.000	0.000	0.000	0.000	1285.92	
14	0.7923	1117.1	1136.9	1.923	12.109	54.964	27.823	2.845	0.073	0.221	0.009	0.026	0.005	0.000	0.000	0.000	0.000	1277.23	
15	0.7872	1116.1	1135.9	1.533	12.282	55.277	28.012	2.599	0.066	0.196	0.008	0.023	0.005	0.000	0.000	0.000	0.000	1280.25	
16	0.7889	1113.4	1133.2	1.708	12.338	55.315	27.560	2.745	0.073	0.221	0.009	0.026	0.005	0.000	0.000	0.000	0.000	1275.81	
17	0.8013	1129.7	1149.7	1.924	12.179	54.266	27.392	3.822	0.096	0.277	0.010	0.028	0.005	0.000	0.000	0.000	0.000	1284.35	
18	0.7884	1081.0	1100.2	2.215	13.476	59.001	19.696	4.670	0.182	0.604	0.033	0.097	0.025	0.000	0.000	0.000	0.000	1237.79	
19	0.7911	1106.1	1125.7	2.300	12.074	57.269	23.961	3.726	0.127	0.412	0.023	0.072	0.035	0.000	0.000	0.000	0.000	1265.37	
20	0.7891	1088.7	1108.0	2.343	12.905	56.183	25.371	2.662	0.100	0.338	0.020	0.059	0.019	0.000	0.000	0.000	0.000	1247.22	
21	0.7886	1101.4	1120.9	2.344	12.088	55.203	28.053	2.032	0.060	0.184	0.008	0.022	0.005	0.000	0.000	0.000	0.000	1262.19	
22	0.7883	1102.3	1121.8	2.220	12.189	55.164	28.125	1.992	0.066	0.206	0.009	0.025	0.005	0.000	0.000	0.000	0.000	1263.49	
23	0.7933	1110.7	1130.3	2.228	12.137	54.529	28.482	2.262	0.076	0.239	0.011	0.029	0.006	0.000	0.000	0.000	0.000	1269.05	
24	0.7897	1105.8	1125.3	2.131	12.245	55.027	28.073	2.184	0.073	0.225	0.010	0.027	0.005	0.000	0.000	0.000	0.000	1266.30	
25	0.7913	1106.9	1126.5	2.210	12.206	54.698	28.450	2.096	0.072	0.226	0.010	0.027	0.005	0.000	0.000	0.000	0.000	1266.37	
26	0.7916	1109.3	1129.0	2.153	12.172	54.660	28.517	2.147	0.075	0.232	0.010	0.028	0.005	0.000	0.000	0.000	0.000	1268.90	
27	0.7918	1113.7	1133.4	1.964	12.211	54.741	28.325	2.369	0.082	0.257	0.012	0.033	0.007	0.000	0.000	0.000	0.000	1273.71	
28	0.7945	1119.7	1139.5	1.875	12.234	54.687	27.940	2.794	0.098	0.309	0.014	0.040	0.008	0.000	0.000	0.000	0.000	1278.37	
29	0.7939	1125.0	1144.9	1.672	12.161	54.644	28.234	2.821	0.099	0.309	0.014	0.038	0.008	0.000	0.000	0.000	0.000	1284.89	
30	0.7908	1110.9	1130.6	1.951	12.308	54.725	28.404	2.253	0.076	0.236	0.010	0.029	0.006	0.000	0.000	0.000	0.000	1271.31	
31	0.7945	1111.1	1130.8	2.265	12.168	54.218	28.793	2.215	0.073	0.226	0.010	0.027	0.005	0.000	0.000	0.000	0.000	1268.63	
Avg	0.7919	1110.0	1130.1	2.119	12.176	55.095	27.627	2.605	0.080	0.248	0.011	0.032	0.007	0.000	0.000	0.000	0.000	1269.94	

Zone 34

GQ Source Analysis

WBI Energy Transmission, Inc.

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

	<u>Mol %</u>	<u>Liquid Content</u>		<u>Mol %</u>	
C1	Methane	95.902	CO2	Carbon Dioxide	0.106
C2	Ethane	0.323	N2	Nitrogen	3.640
C3	Propane	0.020	O2	Oxygen	0.000
IC4	Isobutane	0.008	He	Helium	
NC4	n-Butane	0.001	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%	0.094 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

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	AUG 12	JULY 12	JUNE 12	MAY 12	APR 12	MAR 12	FEB 12	JAN 12	DEC 11	NOV 11	OCT 11	SEPT 11	ZONE
MT/ND	211	Sidney Area	1203	1197	1197	1200	1194	1196	1199	1206	1210	1212	1215	1212	1199	211
ND	24	Williston Area	1197	1198	1203	1197	1196	1194	1199	1195	1184	1199	1203	1197	1200	24
ND	25	Watford City Area	1146	1184	1176	1151	1159	1139	1138	1132	1140	1140	1131	1129	1136	25
ND/MT	241	Fairview Area	1192	1187	1185	1191	1184	1185	1189	1193	1194	1194	1201	1198	1200	241
ND	261	Williston - Tioga - Minot Line	1158	1151	1161	1157	1157	1155	1162	1156	1160	1163	1166	1158	1144	261
ND	262	Minot Area	1163	1179	1163	1160	1159	1157	1162	1158	1161	1165	1168	1163	1160	262
ND	263	Tioga - Portal	1112	1143	1132	1136	1126	1099	1135	1081	1075	1074	1092	1126	1128	263
ND	264	Williston - Ray	1197	1198	1203	1197	1196	1194	1199	1195	1184	1199	1203	1197	1200	264
ND	271	Bismarck - Cleveland	1151	1178	1161	1157	1157	1154	1154	1123	1124	1130	1148	1161	1159	271
ND	272	Cleveland - Mapleton	1151	1180	1162	1159	1158	1156	1153	1121	1122	1129	1148	1161	1159	272
ND	273	Cleveland - Grafton	1151	1180	1162	1159	1158	1157	1153	1121	1123	1129	1148	1162	1159	273
ND	28	Bismarck - Cabin Creek	1127	1178	1160	1157	1157	1143	1117	1065	1073	1078	1084	1148	1160	28
ND	31	Dickinson Area	1103	1102	1150	1092	1070	1111	1114	1064	1072	1077	1081	1138	1162	31
ND/MT	32	Cabin Creek - Dickinson	1101	1135	1164	1152	1142	1092	1047	1044	1057	1063	1061	1100	1156	32
ND	33	Killdeer	1181	1179	1181	1184	1181	1181	1183	1182	1179	1183	1181	1181	1181	33
ND	34	Bowman Area	1128	1130	1126	1098	1134	1130	1126	1126	1147	1129	1117	1139	1132	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		
August 2012		
<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
31	-48	Mix of Gas in the area
32	-29	Mix of Gas in the area