



MONTANA-DAKOTA

UTILITIES CO.

A Division of MDU Resources Group, Inc.

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

November 23, 2011

RECEIVED

NOV 25 2011

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

PUBLIC SERVICE COMMISSION

Re: Case No. 11,006 (Therm Billing)
Monthly Report – October 2011

Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc., herewith submits the following information, pursuant to the Ordering paragraphs one and two of the Order issued in the above-referenced docket, dated October 20, 1987:

1. Attachment A is a schedule showing the thermal billing factors by community that reflect the BTU values shown on Attachment B and were used for billing purposes in November 2011.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our supplier for the month of October 2011. 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 October 2011.

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
 NOV 2011

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	314	APPLE VALLEY	271	1.1202
12	327	BISMARCK	28	1.1077
12	343	CARRINGTON	273	1.1212
12	344	CLEVELAND	272	1.1124
12	364	CAVALIER	273	1.1448
12	365	DAWSON	271	1.1124
12	374	FT TOTTEN	273	1.1291
12	375	DEVILS LAKE	273	1.1291
12	379	BARLOW	273	1.1212
12	387	ELDRIDGE	272	1.1202
12	411	GLEN ULLIN	31	1.0748
12	417	GRAFTON	273	1.1527
12	439	HANKINSON	600	1.0739
12	449	JAMESTOWN	272	1.1281
12	463	LANGDON	273	1.1212
12	475	LINTON	802	1.0334
12	478	LINCOLN	28	1.1077
12	494	MEDINA	271	1.1124
12	498	MANDAN	28	1.1077
12	524	NEW SALEM	28	1.0843
12	532	NEW ROCKFORD	273	1.1212
12	539	PARK RIVER	273	1.1448
12	574	SANBORN	272	1.1281
12	593	STEELE	271	1.1124
12	598	SHEYENNE	273	1.1291
12	610	TAPPEN	271	1.1124
12	625	VALLEY CITY	272	1.1359
12	629	WALHALLA	273	1.1448
12	647	WILTON	262	1.0985
12	717	SPIRITWOOD	272	1.1281
12	718	FAIRMOUNT	600	1.0717
12	732	MSR SITE	273	1.1212
12	733	PAR SITE	273	1.1212
15	303	ALEXANDER	25	1.0663
15	308	ARNEGARD	25	1.0663

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
NOV 2011

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	318	BEACH	32	1.0165
15	319	BELFIELD	32	1.0240
15	323	BERTHOLD	262	1.0985
15	330	BOWMAN	34	1.0448
15	337	BURLINGTON	262	1.1222
15	368	DES LACS	262	1.1064
15	369	DICKINSON	31	1.0671
15	384	EPPING	264	1.1306
15	407	GLADSTONE	31	1.0671
15	413	GOLVA	32	1.0017
15	416	GARRISON	262	1.1064
15	429	HEBRON	31	1.0748
15	459	KILLDEER	33	1.1155
15	469	LEFOR	31	1.0671
15	474	LIGNITE	263	1.0712
15	500	MARMARTH	34	1.0525
15	505	MINOT	262	1.1222
15	510	MOTT	31	1.0671
15	512	MAX	262	1.0985
15	522	NEW ENGLAND	31	1.0594
15	540	PALERMO	262	1.0985
15	558	RAY	264	1.1306
15	561	REGENT	31	1.0671
15	563	RHAME	34	1.0372
15	564	RICHARDTON	31	1.0594
15	568	ROSS	261	1.0859
15	572	RUTHVILLE	262	1.1222
15	583	SENTINEL BUTTE	32	1.0165
15	588	SOUTH HEART	31	1.0594
15	590	SPRINGBROOK	264	1.1306
15	591	STANLEY	261	1.0937
15	605	SURREY	262	1.1222
15	611	TAYLOR	31	1.0594
15	616	TIOGA	261	1.0859
15	619	TURTLE LAKE	262	1.1064

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
NOV 2011

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	620	TRENTON	24	1.1387
15	624	UNDERWOOD	262	1.1064
15	632	WATFORD CITY	25	1.0663
15	636	WHEELLOCK	264	1.1224
15	637	WHITE EARTH	261	1.0937
15	642	WILLISTON	24	1.1387
15	646	WASHBURN	262	1.1143
15	664	RIVERDALE	262	1.1064
15	691	FAIRVIEW	241	1.1397
15	712	MINOT AFB	262	1.1222
15	743	BAKER FIELD	35	.8980

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

GQ Source Daily Summary

October 2011

Number: 251

Pressure Base: 14.730

Contract Day: 1

Name: SIDNEY AREA

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7324	1175.8	1196.6	1.169	4.021	68.851	21.799	3.670	0.153	0.298	0.019	0.016	0.002	0.000	0.000	0.000	0.000	1398.18	
2	0.7308	1173.3	1194.1	1.173	4.017	68.962	21.889	3.483	0.150	0.290	0.018	0.016	0.002	0.000	0.000	0.000	0.000	1396.76	
3	0.7346	1180.1	1201.0	1.160	3.972	68.339	22.419	3.644	0.149	0.283	0.018	0.015	0.002	0.000	0.000	0.000	0.000	1401.29	
4	0.7132	1189.9	1210.9	0.074	3.029	70.617	22.989	3.139	0.057	0.087	0.004	0.004	0.001	0.000	0.000	0.000	0.000	1433.85	
5	0.7141	1192.2	1213.3	0.037	3.027	70.424	23.226	3.119	0.057	0.092	0.005	0.005	0.007	0.000	0.000	0.000	0.000	1435.76	
6	0.7180	1182.4	1203.3	0.441	3.372	70.193	22.613	3.097	0.093	0.167	0.010	0.009	0.005	0.000	0.000	0.000	0.000	1420.22	
7	0.7146	1193.0	1214.1	0.049	3.002	70.503	23.112	3.064	0.084	0.159	0.011	0.012	0.005	0.000	0.000	0.000	0.000	1436.24	
8	0.7183	1198.2	1219.4	0.063	3.006	70.265	23.022	3.218	0.120	0.252	0.022	0.024	0.009	0.000	0.000	0.000	0.000	1438.81	
9	0.7190	1200.8	1222.0	0.063	2.921	70.032	23.389	3.217	0.103	0.221	0.017	0.019	0.018	0.000	0.000	0.000	0.000	1441.13	
10	0.7101	1185.5	1206.5	0.068	3.014	70.678	23.507	2.599	0.046	0.077	0.004	0.004	0.002	0.000	0.000	0.000	0.000	1431.71	
11	0.7090	1185.9	1206.9	0.060	2.896	71.014	23.232	2.631	0.055	0.098	0.006	0.006	0.002	0.000	0.000	0.000	0.000	1433.35	
12	0.7111	1188.9	1209.9	0.062	2.909	70.720	23.383	2.754	0.057	0.101	0.006	0.006	0.002	0.000	0.000	0.000	0.000	1434.78	
13	0.7117	1188.5	1209.6	0.067	2.982	70.561	23.455	2.788	0.052	0.085	0.004	0.004	0.001	0.000	0.000	0.000	0.000	1433.73	
14	0.7126	1188.7	1209.7	0.063	3.061	70.439	23.469	2.784	0.061	0.109	0.006	0.006	0.002	0.000	0.000	0.000	0.000	1433.04	
15	0.7172	1194.8	1216.0	0.064	3.114	70.001	23.473	3.054	0.088	0.175	0.012	0.013	0.005	0.000	0.000	0.000	0.000	1435.81	
16	0.7140	1191.5	1212.6	0.061	3.022	70.246	23.613	2.882	0.064	0.100	0.005	0.005	0.002	0.000	0.000	0.000	0.000	1435.05	
17	0.7207	1193.1	1214.2	0.282	3.215	69.722	23.237	3.215	0.111	0.191	0.012	0.012	0.004	0.000	0.000	0.000	0.000	1430.34	
18	0.7117	1186.9	1207.9	0.076	3.059	70.529	23.430	2.774	0.053	0.072	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1431.87	
19	0.7144	1190.3	1211.4	0.087	3.094	70.268	23.466	2.857	0.081	0.127	0.009	0.009	0.003	0.000	0.000	0.000	0.000	1433.18	
20	0.7207	1186.1	1207.1	0.460	3.370	69.632	23.155	3.127	0.088	0.149	0.009	0.008	0.002	0.000	0.000	0.000	0.000	1422.04	
21	0.7127	1189.4	1210.5	0.061	3.026	70.314	23.733	2.706	0.057	0.086	0.006	0.007	0.003	0.000	0.000	0.000	0.000	1433.86	
22	0.7105	1187.3	1208.4	0.070	2.938	70.640	23.577	2.644	0.055	0.070	0.003	0.002	0.001	0.000	0.000	0.000	0.000	1433.52	
23	0.7136	1192.6	1213.8	0.071	2.902	70.544	23.323	2.899	0.089	0.150	0.009	0.009	0.003	0.000	0.000	0.000	0.000	1436.78	
24	0.7089	1184.5	1205.4	0.070	2.958	70.917	23.331	2.598	0.047	0.073	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1431.71	
25	0.7208	1201.2	1222.5	0.067	3.061	69.518	23.794	3.238	0.096	0.196	0.013	0.014	0.004	0.000	0.000	0.000	0.000	1439.84	
26	0.7221	1203.6	1224.9	0.072	3.022	69.403	23.852	3.302	0.103	0.210	0.015	0.016	0.005	0.000	0.000	0.000	0.000	1441.50	
27	0.7174	1195.8	1217.0	0.069	3.066	69.824	23.799	2.989	0.079	0.150	0.010	0.010	0.003	0.000	0.000	0.000	0.000	1436.81	
28	0.7169	1195.4	1216.6	0.070	3.041	69.852	23.821	3.009	0.068	0.123	0.007	0.007	0.002	0.000	0.000	0.000	0.000	1436.84	
29	0.7202	1200.0	1221.3	0.070	3.064	69.617	23.705	3.239	0.091	0.182	0.012	0.013	0.005	0.000	0.000	0.000	0.000	1439.12	
30	0.7207	1201.8	1223.1	0.067	3.009	69.674	23.610	3.283	0.104	0.217	0.015	0.016	0.005	0.000	0.000	0.000	0.000	1440.75	
31	0.7192	1199.3	1220.5	0.064	3.027	69.816	23.583	3.182	0.095	0.197	0.014	0.015	0.005	0.000	0.000	0.000	0.000	1439.17	
Avg	0.7171	1191.0	1212.0	0.204	3.136	70.068	23.291	3.039	0.084	0.154	0.010	0.010	0.004	0.000	0.000	0.000	0.000	1431.19	

Zone 211

GQ Source Analysis

Williston Basin Interstate Pipeline Co.

GQ Source Number:	0602330	Specific Gravity:	0.7287
GQ Source Name:	WILLISTON BORDER	BTU Base:	Dry
Effective Date:	10/1/2011 9:00:00 AM	Measured Heat Value:	1193.61
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	1196.87
Pressure Base:	14.730	Wet Heat Value:	1176.04
Viscosity:		As Deliv. Heat Value:	1196.87
		Sample Pressure:	0.00
		Sample Temperature:	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	69.494		CO2	Carbon Dioxide	0.971
C2	Ethane	21.110	5.629	N2	Nitrogen	3.920
C3	Propane	4.034	1.108	O2	Oxygen	0.000
IC4	Iso-Butane	0.138	0.045	HE	Helium	
NC4	N-Butane	0.252	0.079	H2	Hydrogen	
IC5	Iso-Pentane	0.028	0.010	H2S	Hydrogen Sulfide	
NC5	N-Pentane	0.024	0.009	AR	Argon	
C6	Hexane	0.026	0.011	CO	Carbon Monoxide	
C7	Heptane	0.001	0.000	H2O	Water	
C8	Octane	0.001	0.001	Neo-C5	Neo-Pentane	
C9	Nonane	0.001	0.001			
C10	Decane					
		Totals	100.000%	6.893	GPM	

Sample Date: 9/30/2011 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
Sample Remarks:

Analysis Tech: Mary Berger
Analysis Remarks:

Zone 24, 264

GQ Source Analysis

Williston Basin Interstate Pipeline Co.

GQ Source Number:	0602160	Specific Gravity:	0.7282
GQ Source Name:	FAIRVIEW BORDER	BTU Base:	Dry
Effective Date:	10/1/2011 9:00:00 AM	Measured Heat Value:	1200.85
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	1197.95
Pressure Base:	14.730	Wet Heat Value:	1177.10
Viscosity:		As Deliv. Heat Value:	1197.95
		Sample Pressure:	0.00
		Sample Temperature:	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	68.995		CO2	Carbon Dioxide	0.976
C2	Ethane	22.275	5.940	N2	Nitrogen	3.803
C3	Propane	3.521	0.967	O2	Oxygen	0.000
IC4	Iso-Butane	0.128	0.042	HE	Helium	
NC4	N-Butane	0.243	0.076	H2	Hydrogen	
IC5	Iso-Pentane	0.017	0.006	H2S	Hydrogen Sulfide	
NC5	N-Pentane	0.015	0.005	AR	Argon	
C6	Hexane	0.027	0.011	CO	Carbon Monoxide	
C7	Heptane			H2O	Water	
C8	Octane			Neo-C5	Neo-Pentane	
C9	Nonane					
C10	Decane					
Totals		100.000%	7.047 GPM			

Sample Date: 9/30/2011 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
Sample Remarks:

Analysis Tech: Mary Berger
Analysis Remarks:

Zone 241

GQ Source Analysis

Williston Basin Interstate Pipeline Co.

GQ Source Number:	0602230	Specific Gravity:	0.7290
GQ Source Name:	WATFORD CITY BORDER	BTU Base:	Dry
Effective Date:	10/1/2011 9:00:00 AM	Measured Heat Value:	1127.48
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	1128.74
Pressure Base:	14.730	Wet Heat Value:	1109.10
Viscosity:		As Deliv. Heat Value:	1128.74
		Sample Pressure:	0.00
		Sample Temperature:	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	68.572		CO2	Carbon Dioxide	0.701
C2	Ethane	17.851	4.760	N2	Nitrogen	8.453
C3	Propane	3.789	1.041	O2	Oxygen	0.000
IC4	Iso-Butane	0.196	0.064	HE	Helium	
NC4	N-Butane	0.356	0.112	H2	Hydrogen	
IC5	Iso-Pentane	0.028	0.010	H2S	Hydrogen Sulfide	
NC5	N-Pentane	0.028	0.010	AR	Argon	
C6	Hexane	0.026	0.011	CO	Carbon Monoxide	
C7	Heptane			H2O	Water	
C8	Octane			Neo-C5	Neo-Pentane	
C9	Nonane					
C10	Decane					

Totals 100.000% 6.009 GPM

Sample Date: 9/30/2011 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
Sample Remarks:

Analysis Tech: Mary Berger
Analysis Remarks:

Zone 25

GQ Source Daily Summary October 2011

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	0.6907	1137.3	1157.5	0.463	3.522	74.890	18.569	2.333	0.067	0.127	0.009	0.010	0.010					1392.71	
2	0.6894	1138.4	1158.6	0.387	3.441	75.181	18.375	2.381	0.070	0.134	0.009	0.010	0.013					1395.44	
3	0.6878	1136.7	1156.8	0.383	3.411	75.372	18.312	2.304	0.067	0.127	0.008	0.008	0.008					1394.83	
4	0.6890	1135.1	1155.2	0.467	3.496	75.020	18.629	2.195	0.063	0.113	0.006	0.006	0.005					1391.64	
5	0.6942	1140.5	1160.7	0.520	3.576	74.187	19.159	2.342	0.071	0.129	0.007	0.007	0.002					1393.00	
6	0.6863	1131.0	1151.0	0.420	3.563	75.294	18.535	2.025	0.050	0.093	0.006	0.006	0.008					1389.38	
7	0.6892	1134.2	1154.3	0.486	3.539	75.061	18.458	2.269	0.061	0.110	0.006	0.005	0.006					1390.37	
8	0.6935	1140.8	1161.0	0.502	3.514	74.486	18.805	2.457	0.077	0.139	0.007	0.006	0.006					1394.13	
9	0.6965	1146.4	1166.7	0.477	3.486	74.073	19.109	2.578	0.088	0.163	0.009	0.008	0.008					1398.03	
10	0.6916	1140.7	1160.9	0.421	3.462	74.827	18.622	2.405	0.078	0.154	0.010	0.011	0.011					1395.97	
11	0.6924	1142.4	1162.6	0.445	3.395	74.839	18.631	2.344	0.093	0.198	0.016	0.020	0.018					1397.20	
12	0.6924	1142.4	1162.6	0.445	3.395	74.839	18.631	2.344	0.093	0.198	0.016	0.020	0.018					1397.20	
13	0.6831	1120.5	1140.3	0.467	3.829	76.509	16.610	2.284	0.088	0.174	0.013	0.014	0.012					1379.65	
14	0.6913	1137.1	1157.2	0.482	3.555	75.053	18.235	2.326	0.096	0.201	0.018	0.020	0.012					1391.89	
15	0.6953	1142.9	1163.1	0.477	3.589	74.421	18.661	2.486	0.100	0.212	0.018	0.021	0.015					1394.90	
16	0.6944	1138.3	1158.5	0.489	3.772	74.194	19.002	2.244	0.083	0.172	0.014	0.017	0.014					1390.18	
17	0.6929	1136.3	1156.4	0.468	3.785	74.460	18.768	2.214	0.083	0.179	0.014	0.016	0.013					1389.23	
18	0.6796	1117.3	1137.0	0.378	3.832	76.311	17.594	1.707	0.048	0.101	0.008	0.009	0.012					1379.29	
19	0.6719	1108.4	1128.0	0.250	3.848	77.258	17.192	1.336	0.031	0.063	0.005	0.005	0.012					1376.10	
20	0.6751	1113.5	1133.2	0.263	3.815	76.826	17.493	1.447	0.042	0.088	0.007	0.008	0.012					1379.20	
21	0.6921	1140.5	1160.7	0.421	3.524	75.057	18.126	2.489	0.103	0.226	0.018	0.021	0.014					1395.12	
22	0.6949	1146.3	1166.6	0.452	3.379	74.712	18.416	2.657	0.107	0.229	0.017	0.020	0.011					1399.46	
23	0.6969	1144.6	1164.9	0.504	3.588	74.213	18.763	2.553	0.105	0.222	0.018	0.021	0.013					1395.47	
24	0.6958	1144.2	1164.5	0.506	3.509	74.270	18.899	2.496	0.091	0.187	0.014	0.016	0.011					1396.07	
25	0.6969	1146.2	1166.5	0.506	3.497	74.044	19.115	2.529	0.089	0.179	0.014	0.016	0.011					1397.31	
26	0.6938	1142.5	1162.8	0.469	3.486	74.387	19.011	2.391	0.080	0.152	0.008	0.009	0.008					1395.96	
27	0.6945	1143.9	1164.1	0.460	3.484	74.316	19.084	2.337	0.091	0.188	0.013	0.015	0.012					1396.88	
28	0.6907	1135.7	1155.8	0.450	3.639	74.617	18.981	2.088	0.069	0.130	0.008	0.008	0.010					1390.78	
29	0.6983	1149.5	1169.8	0.472	3.482	73.997	18.982	2.718	0.101	0.205	0.015	0.017	0.012					1399.86	
30	0.6984	1148.7	1169.1	0.497	3.492	74.091	18.816	2.718	0.107	0.225	0.017	0.021	0.015					1398.92	
31	0.6964	1144.2	1164.4	0.513	3.562	74.136	18.952	2.538	0.087	0.173	0.012	0.014	0.012					1395.35	
Avg	0.6911	1138.0	1157.8	0.450	3.563	74.869	18.533	2.308	0.080	0.161	0.012	0.013	0.011					1392.63	

Zone 261

GQ Source Daily Summary

October 2011

Number: 091

Pressure Base: 14.730

Contract Day: 1

Name: MINOT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6941	1139.9	1160.1	0.569	3.521	74.494	18.713	2.420	0.083	0.167	0.012	0.014	0.006	0.000	0.000	0.000	0.000	1392.42	
2	0.6971	1142.2	1162.5	0.612	3.589	73.942	19.105	2.495	0.080	0.152	0.010	0.011	0.005	0.000	0.000	0.000	0.000	1392.33	
3	0.6942	1141.4	1161.6	0.528	3.498	74.377	18.921	2.434	0.076	0.144	0.008	0.009	0.006	0.000	0.000	0.000	0.000	1394.17	
4	0.6902	1140.3	1160.5	0.392	3.396	75.005	18.562	2.423	0.070	0.133	0.006	0.007	0.005	0.000	0.000	0.000	0.000	1396.89	
5	0.6871	1136.5	1156.6	0.385	3.346	75.433	18.392	2.228	0.069	0.132	0.005	0.005	0.004	0.000	0.000	0.000	0.000	1395.38	
6	0.6841	1131.9	1151.9	0.388	3.349	75.753	18.281	2.077	0.053	0.095	0.000	0.000	0.004	0.000	0.000	0.000	0.000	1392.67	
7	0.6933	1138.5	1158.6	0.532	3.588	74.320	19.057	2.297	0.069	0.126	0.005	0.003	0.004	0.000	0.000	0.000	0.000	1391.53	
8	0.6904	1136.3	1156.4	0.499	3.503	74.778	18.798	2.239	0.061	0.113	0.003	0.002	0.004	0.000	0.000	0.000	0.000	1391.72	
9	0.6921	1139.5	1159.7	0.499	3.459	74.694	18.721	2.417	0.069	0.126	0.003	0.002	0.010	0.000	0.000	0.000	0.000	1393.99	
10	0.6957	1144.1	1164.4	0.515	3.495	74.162	19.054	2.508	0.086	0.162	0.007	0.006	0.004	0.000	0.000	0.000	0.000	1395.97	
11	0.6952	1146.2	1166.5	0.450	3.419	74.259	19.040	2.573	0.082	0.159	0.006	0.006	0.006	0.000	0.000	0.000	0.000	1399.06	
12	0.6931	1143.3	1163.6	0.452	3.390	74.691	18.746	2.392	0.091	0.197	0.014	0.017	0.011	0.000	0.000	0.000	0.000	1397.66	
13	0.6925	1142.6	1162.8	0.464	3.367	74.729	18.802	2.315	0.092	0.195	0.012	0.015	0.010	0.000	0.000	0.000	0.000	1397.29	
14	0.6841	1122.3	1142.1	0.481	3.785	76.391	16.700	2.332	0.091	0.186	0.012	0.014	0.008	0.000	0.000	0.000	0.000	1380.87	
15	0.6928	1140.5	1160.7	0.494	3.477	74.738	18.623	2.321	0.096	0.206	0.017	0.019	0.009	0.000	0.000	0.000	0.000	1394.43	
16	0.6966	1145.2	1165.5	0.492	3.546	74.255	18.779	2.546	0.104	0.228	0.018	0.022	0.011	0.000	0.000	0.000	0.000	1396.40	
17	0.6956	1140.4	1160.6	0.503	3.727	74.047	19.109	2.307	0.086	0.183	0.013	0.015	0.009	0.000	0.000	0.000	0.000	1391.58	
18	0.6911	1133.9	1154.0	0.473	3.753	74.681	18.696	2.110	0.080	0.173	0.012	0.014	0.008	0.000	0.000	0.000	0.000	1388.07	
19	0.7013	1139.1	1159.3	0.477	4.389	72.612	19.901	2.426	0.057	0.121	0.006	0.006	0.005	0.000	0.000	0.000	0.000	1384.32	
20	0.7111	1147.8	1168.1	0.489	4.756	70.865	21.000	2.674	0.064	0.136	0.006	0.006	0.004	0.000	0.000	0.000	0.000	1385.29	
21	0.7078	1146.3	1166.6	0.473	4.569	71.463	20.696	2.577	0.065	0.139	0.007	0.007	0.004	0.000	0.000	0.000	0.000	1386.62	
22	0.6950	1145.8	1166.1	0.448	3.418	74.754	18.307	2.645	0.117	0.260	0.019	0.022	0.009	0.000	0.000	0.000	0.000	1398.82	
23	0.6962	1148.8	1169.1	0.464	3.334	74.546	18.529	2.723	0.115	0.248	0.016	0.018	0.007	0.000	0.000	0.000	0.000	1401.14	
24	0.6995	1149.2	1169.5	0.524	3.523	73.947	18.887	2.680	0.120	0.266	0.020	0.022	0.009	0.000	0.000	0.000	0.000	1398.36	
25	0.6976	1146.7	1167.0	0.526	3.498	73.970	19.124	2.555	0.095	0.198	0.013	0.015	0.007	0.000	0.000	0.000	0.000	1397.26	
26	0.6977	1148.7	1169.0	0.509	3.413	73.938	19.249	2.577	0.094	0.191	0.011	0.012	0.006	0.000	0.000	0.000	0.000	1399.53	
27	0.6938	1143.0	1163.2	0.480	3.438	74.324	19.173	2.336	0.079	0.153	0.006	0.006	0.005	0.000	0.000	0.000	0.000	1396.51	
28	0.6980	1147.6	1167.9	0.506	3.506	73.865	19.294	2.472	0.103	0.218	0.014	0.016	0.008	0.000	0.000	0.000	0.000	1397.99	
29	0.6964	1147.1	1167.4	0.468	3.444	74.159	19.035	2.591	0.090	0.183	0.010	0.012	0.008	0.000	0.000	0.000	0.000	1398.97	
30	0.6969	1146.8	1167.1	0.492	3.475	74.117	19.006	2.587	0.096	0.195	0.012	0.013	0.008	0.000	0.000	0.000	0.000	1398.06	
31	0.7012	1153.4	1173.8	0.509	3.454	73.813	18.886	2.900	0.121	0.264	0.019	0.024	0.011	0.000	0.000	0.000	0.000	1401.72	
Avg	0.6952	1142.0	1162.7	0.487	3.594	74.230	18.942	2.457	0.086	0.176	0.010	0.012	0.007	0.000	0.000	0.000	0.000	1394.42	

Zone 262

GQ Source Analysis

Williston Basin Interstate Pipeline Co.

GQ Source Number:	2501030	Specific Gravity:	0.6685
GQ Source Name:	LIGNITE PLANT	BTU Base:	Dry
Effective Date:	10/1/2011 9:00:00 AM	Measured Heat Value:	1130.44
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	1126.34
Pressure Base:	14.730	Wet Heat Value:	1106.74
Viscosity:		As Deliv. Heat Value:	1126.34
		Sample Pressure:	0.00
		Sample Temperature:	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	77.601		CO2	Carbon Dioxide	0.187
C2	Ethane	17.503	4.667	N2	Nitrogen	3.692
C3	Propane	0.841	0.231	O2	Oxygen	0.000
IC4	Iso-Butane	0.016	0.005	HE	Helium	
NC4	N-Butane	0.032	0.010	H2	Hydrogen	
IC5	Iso-Pentane	0.004	0.001	H2S	Hydrogen Sulfide	
NC5	N-Pentane	0.005	0.002	AR	Argon	
C6	Hexane	0.106	0.043	CO	Carbon Monoxide	
C7	Heptane	0.004	0.002	H2O	Water	
C8	Octane	0.007	0.004	Neo-C5	Neo-Pentane	
C9	Nonane	0.002	0.001			
C10	Decane					

Totals 100.000% 4.966 GPM

Sample Date: 9/30/2011 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
Sample Remarks:

Analysis Tech: Mary Berger
Analysis Remarks:

Zone 263

*** End of Report ***

GQ Source Daily Summary

October 2011

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	0.6965	1142.9	1163.1	0.598	3.519	74.073	19.087	2.455	0.078	0.151	0.011	0.012	0.017	0.000	0.000	0.000	0.000	1393.71	
2	0.6887	1136.6	1156.7	0.428	3.432	75.345	18.205	2.354	0.067	0.128	0.009	0.010	0.022	0.000	0.000	0.000	0.000	1393.79	
3	0.6898	1139.9	1160.1	0.401	3.374	75.153	18.429	2.406	0.069	0.131	0.008	0.008	0.022	0.000	0.000	0.000	0.000	1396.77	
4	0.6856	1134.2	1154.3	0.393	3.335	75.697	18.210	2.158	0.061	0.115	0.006	0.006	0.019	0.000	0.000	0.000	0.000	1394.10	
5	0.6927	1137.3	1157.5	0.557	3.564	74.550	18.811	2.286	0.072	0.131	0.007	0.006	0.016	0.000	0.000	0.000	0.000	1390.74	
6	0.6934	1141.9	1162.1	0.501	3.443	74.307	19.245	2.303	0.061	0.114	0.006	0.006	0.014	0.000	0.000	0.000	0.000	1395.56	
7	0.6903	1136.4	1156.5	0.508	3.474	74.866	18.739	2.211	0.060	0.111	0.006	0.006	0.018	0.000	0.000	0.000	0.000	1391.96	
8	0.6894	1135.8	1155.9	0.493	3.450	75.113	18.450	2.295	0.061	0.112	0.005	0.005	0.016	0.000	0.000	0.000	0.000	1392.10	
9	0.6944	1142.1	1162.4	0.529	3.476	74.372	18.946	2.416	0.079	0.149	0.008	0.008	0.016	0.000	0.000	0.000	0.000	1394.86	
10	0.6980	1150.0	1170.4	0.480	3.402	73.943	19.197	2.686	0.088	0.171	0.009	0.008	0.016	0.000	0.000	0.000	0.000	1400.91	
11	0.6917	1141.7	1161.9	0.450	3.363	74.975	18.509	2.391	0.083	0.176	0.013	0.016	0.024	0.000	0.000	0.000	0.000	1397.10	
12	0.6926	1143.3	1163.6	0.467	3.325	74.867	18.649	2.324	0.096	0.211	0.016	0.020	0.027	0.000	0.000	0.000	0.000	1398.14	
13	0.6903	1137.3	1157.5	0.478	3.454	75.143	18.351	2.262	0.085	0.179	0.012	0.014	0.021	0.000	0.000	0.000	0.000	1393.18	
14	0.6846	1122.6	1142.5	0.501	3.781	76.387	16.675	2.318	0.093	0.194	0.015	0.017	0.019	0.000	0.000	0.000	0.000	1380.81	
15	0.6942	1142.3	1162.5	0.504	3.480	74.611	18.650	2.385	0.097	0.210	0.020	0.022	0.020	0.000	0.000	0.000	0.000	1395.30	
16	0.6949	1141.8	1162.0	0.504	3.580	74.436	18.724	2.402	0.093	0.200	0.017	0.021	0.024	0.000	0.000	0.000	0.000	1393.95	
17	0.6956	1140.5	1160.7	0.508	3.713	74.139	18.988	2.328	0.086	0.184	0.014	0.017	0.022	0.000	0.000	0.000	0.000	1391.76	
18	0.6898	1131.8	1151.9	0.481	3.744	74.962	18.447	2.073	0.078	0.167	0.013	0.015	0.020	0.000	0.000	0.000	0.000	1386.90	
19	0.7026	1140.5	1160.7	0.495	4.400	72.469	19.951	2.477	0.057	0.121	0.007	0.008	0.016	0.000	0.000	0.000	0.000	1384.77	
20	0.7111	1148.3	1168.6	0.501	4.719	70.950	20.904	2.693	0.064	0.139	0.008	0.009	0.014	0.000	0.000	0.000	0.000	1385.81	
21	0.7013	1142.2	1162.4	0.453	4.241	72.731	19.918	2.416	0.065	0.141	0.009	0.010	0.017	0.000	0.000	0.000	0.000	1388.09	
22	0.6958	1147.5	1167.8	0.468	3.363	74.776	18.217	2.726	0.118	0.266	0.020	0.024	0.022	0.000	0.000	0.000	0.000	1400.05	
23	0.6947	1144.8	1165.1	0.491	3.393	74.684	18.502	2.552	0.102	0.223	0.015	0.017	0.020	0.000	0.000	0.000	0.000	1397.85	
24	0.6972	1145.5	1165.8	0.540	3.511	74.266	18.722	2.560	0.105	0.238	0.018	0.021	0.021	0.000	0.000	0.000	0.000	1396.21	
25	0.6964	1144.8	1165.0	0.532	3.491	74.239	18.896	2.500	0.092	0.198	0.015	0.016	0.019	0.000	0.000	0.000	0.000	1396.12	
26	0.6967	1146.7	1167.0	0.522	3.419	74.187	19.007	2.540	0.090	0.187	0.013	0.015	0.020	0.000	0.000	0.000	0.000	1398.16	
27	0.6913	1139.2	1159.4	0.481	3.435	74.682	18.991	2.170	0.072	0.140	0.007	0.007	0.016	0.000	0.000	0.000	0.000	1394.44	
28	0.6920	1139.9	1160.1	0.502	3.427	74.810	18.688	2.254	0.087	0.185	0.013	0.015	0.018	0.000	0.000	0.000	0.000	1394.56	
29	0.6899	1137.2	1157.3	0.466	3.452	75.164	18.348	2.282	0.081	0.165	0.011	0.012	0.019	0.000	0.000	0.000	0.000	1393.28	
30	0.6978	1148.8	1169.1	0.499	3.430	74.113	18.945	2.664	0.098	0.200	0.014	0.016	0.021	0.000	0.000	0.000	0.000	1399.58	
31	0.6959	1146.0	1166.3	0.511	3.405	74.583	18.475	2.624	0.105	0.231	0.018	0.023	0.024	0.000	0.000	0.000	0.000	1398.07	
Avg	0.6940	1141.0	1161.2	0.492	3.568	74.471	18.770	2.404	0.082	0.170	0.012	0.013	0.019	0.000	0.000	0.000	0.000	1393.83	

Zone 271

GQ Source Daily Summary October 2011

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	0.6966	1142.3	1162.5	0.610	3.544	74.058	19.042	2.480	0.081	0.157	0.012	0.013	0.004	0.000	0.000	0.000	0.000	1392.92	
2	0.6921	1139.6	1159.8	0.492	3.466	74.739	18.661	2.408	0.070	0.136	0.009	0.010	0.009	0.000	0.000	0.000	0.000	1394.15	
3	0.6888	1137.9	1158.1	0.403	3.398	75.334	18.247	2.375	0.070	0.135	0.009	0.010	0.019	0.000	0.000	0.000	0.000	1395.35	
4	0.6882	1137.8	1157.9	0.398	3.359	75.379	18.288	2.347	0.069	0.132	0.008	0.008	0.011	0.000	0.000	0.000	0.000	1395.76	
5	0.6882	1135.2	1155.3	0.468	3.404	75.256	18.441	2.239	0.063	0.115	0.006	0.006	0.003	0.000	0.000	0.000	0.000	1392.70	
6	0.6947	1140.2	1160.4	0.566	3.571	74.164	19.121	2.349	0.075	0.139	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1392.13	
7	0.6887	1135.4	1155.5	0.459	3.461	75.001	18.767	2.131	0.055	0.103	0.006	0.006	0.010	0.000	0.000	0.000	0.000	1392.33	
8	0.6896	1135.0	1155.1	0.510	3.488	75.055	18.484	2.263	0.062	0.114	0.006	0.006	0.012	0.000	0.000	0.000	0.000	1390.95	
9	0.6928	1140.7	1160.9	0.510	3.435	74.653	18.725	2.444	0.073	0.135	0.007	0.006	0.012	0.000	0.000	0.000	0.000	1394.80	
10	0.6961	1145.5	1165.8	0.510	3.455	74.190	19.004	2.556	0.088	0.169	0.009	0.009	0.009	0.000	0.000	0.000	0.000	1397.30	
11	0.6930	1143.1	1163.4	0.448	3.402	74.614	18.813	2.474	0.075	0.147	0.008	0.008	0.010	0.000	0.000	0.000	0.000	1397.53	
12	0.6931	1143.8	1164.1	0.463	3.353	74.855	18.542	2.406	0.098	0.219	0.019	0.024	0.023	0.000	0.000	0.000	0.000	1398.18	
13	0.6923	1142.6	1162.9	0.468	3.341	74.860	18.657	2.329	0.093	0.200	0.015	0.018	0.020	0.000	0.000	0.000	0.000	1397.57	
14	0.6844	1123.6	1143.5	0.484	3.728	76.320	16.867	2.292	0.087	0.179	0.013	0.015	0.016	0.000	0.000	0.000	0.000	1382.25	
15	0.6901	1135.4	1155.5	0.502	3.524	75.335	17.962	2.318	0.096	0.207	0.019	0.021	0.016	0.000	0.000	0.000	0.000	1390.89	
16	0.6994	1149.1	1169.4	0.508	3.552	74.113	18.647	2.680	0.122	0.284	0.029	0.045	0.019	0.000	0.000	0.000	0.000	1398.29	
17	0.6948	1140.0	1160.2	0.503	3.687	74.295	18.903	2.279	0.083	0.177	0.016	0.019	0.038	0.000	0.000	0.000	0.000	1391.79	
18	0.6940	1138.3	1158.5	0.495	3.724	74.396	18.771	2.287	0.087	0.190	0.015	0.017	0.017	0.000	0.000	0.000	0.000	1390.58	
19	0.6933	1133.1	1153.2	0.477	3.997	74.242	18.833	2.197	0.069	0.148	0.011	0.012	0.014	0.000	0.000	0.000	0.000	1385.04	
20	0.7104	1147.9	1168.2	0.505	4.667	71.063	20.866	2.680	0.061	0.131	0.008	0.008	0.011	0.000	0.000	0.000	0.000	1386.04	
21	0.7113	1149.7	1170.1	0.500	4.645	70.911	21.034	2.676	0.066	0.143	0.009	0.009	0.009	0.000	0.000	0.000	0.000	1387.40	
22	0.6914	1139.5	1159.7	0.415	3.524	75.166	18.065	2.447	0.101	0.226	0.018	0.021	0.017	0.000	0.000	0.000	0.000	1394.65	
23	0.6958	1148.6	1168.9	0.460	3.310	74.726	18.336	2.745	0.115	0.254	0.018	0.021	0.015	0.000	0.000	0.000	0.000	1401.37	
24	0.6976	1146.5	1166.8	0.518	3.526	74.214	18.714	2.623	0.110	0.240	0.018	0.021	0.016	0.000	0.000	0.000	0.000	1396.92	
25	0.6969	1146.3	1166.6	0.531	3.453	74.224	18.872	2.556	0.100	0.213	0.016	0.018	0.017	0.000	0.000	0.000	0.000	1397.42	
26	0.6962	1143.7	1163.9	0.545	3.525	74.075	19.146	2.420	0.083	0.169	0.012	0.013	0.013	0.000	0.000	0.000	0.000	1394.96	
27	0.6939	1143.1	1163.4	0.496	3.420	74.473	18.919	2.415	0.083	0.164	0.009	0.009	0.012	0.000	0.000	0.000	0.000	1396.57	
28	0.6920	1140.5	1160.7	0.488	3.410	74.814	18.690	2.284	0.088	0.185	0.013	0.015	0.014	0.000	0.000	0.000	0.000	1395.29	
29	0.6858	1129.7	1149.7	0.467	3.518	75.520	18.316	1.956	0.067	0.129	0.008	0.008	0.012	0.000	0.000	0.000	0.000	1388.35	
30	0.6992	1151.4	1171.7	0.503	3.396	74.015	18.912	2.797	0.106	0.220	0.016	0.019	0.015	0.000	0.000	0.000	0.000	1401.34	
31	0.6960	1145.7	1166.0	0.513	3.425	74.481	18.598	2.611	0.102	0.217	0.016	0.020	0.016	0.000	0.000	0.000	0.000	1397.67	
Avg	0.6941	1141.0	1161.2	0.491	3.571	74.469	18.750	2.421	0.084	0.174	0.012	0.014	0.014	0.000	0.000	0.000	0.000	1393.82	

Zone 272

GQ Source Daily Summary October 2011

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	0.6965	1142.4	1162.7	0.601	3.545	74.069	19.035	2.483	0.081	0.157	0.012	0.013	0.005	0.000	0.000	0.000	0.000	1393.14	
2	0.6922	1139.7	1159.9	0.496	3.467	74.714	18.684	2.405	0.070	0.135	0.009	0.010	0.009	0.000	0.000	0.000	0.000	1394.10	
3	0.6890	1138.4	1158.5	0.403	3.390	75.303	18.278	2.384	0.069	0.135	0.008	0.010	0.020	0.000	0.000	0.000	0.000	1395.67	
4	0.6884	1138.1	1158.2	0.396	3.359	75.376	18.271	2.364	0.071	0.136	0.008	0.008	0.012	0.000	0.000	0.000	0.000	1395.96	
5	0.6880	1135.0	1155.1	0.466	3.407	75.286	18.410	2.240	0.062	0.115	0.006	0.006	0.002	0.000	0.000	0.000	0.000	1392.57	
6	0.6939	1137.7	1157.9	0.567	3.645	74.281	18.967	2.309	0.075	0.140	0.008	0.007	0.000	0.000	0.000	0.000	0.000	1389.93	
7	0.6907	1137.4	1157.6	0.485	3.481	74.736	18.888	2.219	0.059	0.110	0.006	0.006	0.009	0.000	0.000	0.000	0.000	1392.89	
8	0.6899	1135.4	1155.5	0.513	3.484	75.013	18.514	2.275	0.063	0.115	0.006	0.005	0.013	0.000	0.000	0.000	0.000	1391.20	
9	0.6920	1140.3	1160.5	0.506	3.398	74.832	18.555	2.479	0.072	0.133	0.006	0.006	0.012	0.000	0.000	0.000	0.000	1395.04	
10	0.6941	1142.0	1162.3	0.509	3.484	74.557	18.647	2.508	0.093	0.174	0.009	0.008	0.012	0.000	0.000	0.000	0.000	1395.03	
11	0.6936	1143.6	1163.9	0.470	3.397	74.505	18.922	2.453	0.077	0.150	0.008	0.008	0.010	0.000	0.000	0.000	0.000	1397.50	
12	0.6949	1147.1	1167.4	0.452	3.330	74.632	18.655	2.547	0.101	0.222	0.016	0.021	0.023	0.000	0.000	0.000	0.000	1400.47	
13	0.6926	1143.0	1163.3	0.469	3.338	74.825	18.684	2.337	0.094	0.201	0.015	0.018	0.020	0.000	0.000	0.000	0.000	1397.80	
14	0.6842	1123.4	1143.3	0.484	3.726	76.337	16.868	2.277	0.087	0.179	0.013	0.014	0.016	0.000	0.000	0.000	0.000	1382.15	
15	0.6905	1136.1	1156.2	0.503	3.513	75.272	18.023	2.327	0.097	0.209	0.018	0.021	0.016	0.000	0.000	0.000	0.000	1391.43	
16	0.7035	1155.4	1175.8	0.509	3.541	73.846	18.555	2.866	0.159	0.430	0.037	0.040	0.017	0.000	0.000	0.000	0.000	1401.91	
17	0.6949	1140.3	1160.5	0.501	3.683	74.264	18.935	2.291	0.082	0.178	0.015	0.017	0.036	0.000	0.000	0.000	0.000	1392.03	
18	0.6942	1138.5	1158.7	0.496	3.720	74.377	18.788	2.292	0.087	0.190	0.015	0.017	0.017	0.000	0.000	0.000	0.000	1390.73	
19	0.6939	1134.3	1154.4	0.477	3.989	74.111	18.968	2.202	0.069	0.147	0.010	0.012	0.015	0.000	0.000	0.000	0.000	1385.80	
20	0.7105	1148.2	1168.5	0.505	4.665	71.039	20.887	2.685	0.061	0.131	0.008	0.008	0.011	0.000	0.000	0.000	0.000	1386.21	
21	0.7114	1149.9	1170.3	0.501	4.645	70.886	21.051	2.680	0.066	0.144	0.009	0.009	0.009	0.000	0.000	0.000	0.000	1387.51	
22	0.6917	1139.8	1160.0	0.416	3.526	75.138	18.073	2.457	0.103	0.232	0.018	0.021	0.017	0.000	0.000	0.000	0.000	1394.80	
23	0.6961	1149.0	1169.4	0.465	3.304	74.697	18.342	2.763	0.116	0.256	0.019	0.021	0.016	0.000	0.000	0.000	0.000	1401.59	
24	0.6979	1147.1	1167.4	0.518	3.521	74.182	18.724	2.642	0.112	0.247	0.018	0.020	0.016	0.000	0.000	0.000	0.000	1397.32	
25	0.6970	1146.5	1166.8	0.531	3.449	74.215	18.882	2.557	0.100	0.215	0.016	0.018	0.017	0.000	0.000	0.000	0.000	1397.56	
26	0.6962	1143.9	1164.2	0.543	3.514	74.087	19.144	2.421	0.083	0.171	0.012	0.013	0.013	0.000	0.000	0.000	0.000	1395.24	
27	0.6941	1143.6	1163.9	0.495	3.408	74.455	18.938	2.425	0.083	0.165	0.009	0.010	0.013	0.000	0.000	0.000	0.000	1396.98	
28	0.6922	1140.7	1160.9	0.491	3.407	74.787	18.719	2.279	0.088	0.187	0.013	0.015	0.014	0.000	0.000	0.000	0.000	1395.41	
29	0.6862	1130.2	1150.3	0.470	3.516	75.451	18.383	1.957	0.066	0.129	0.008	0.007	0.012	0.000	0.000	0.000	0.000	1388.61	
30	0.6993	1151.8	1172.2	0.494	3.393	73.991	18.942	2.799	0.106	0.222	0.017	0.019	0.016	0.000	0.000	0.000	0.000	1401.76	
31	0.6961	1146.0	1166.3	0.513	3.422	74.469	18.594	2.629	0.102	0.216	0.016	0.019	0.018	0.000	0.000	0.000	0.000	1397.86	
Avg	0.6944	1141.0	1161.7	0.492	3.570	74.443	18.752	2.437	0.086	0.180	0.013	0.014	0.014	0.000	0.000	0.000	0.000	1394.07	

*** End of Report***

Zone 273

GQ Source Daily Summary

October 2011

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	0.6965	1142.8	1163.1	0.600	3.525	74.062	19.089	2.453	0.079	0.152	0.011	0.012	0.017	0.000	0.000	0.000	0.000	1393.57	
2	0.6888	1136.5	1156.6	0.434	3.436	75.319	18.221	2.360	0.066	0.126	0.008	0.009	0.021	0.000	0.000	0.000	0.000	1393.63	
3	0.6939	1141.9	1162.1	0.434	3.585	74.349	18.961	2.436	0.067	0.131	0.008	0.009	0.020	0.000	0.000	0.000	0.000	1395.08	
4	0.6861	1135.0	1155.1	0.394	3.337	75.634	18.232	2.192	0.061	0.116	0.007	0.007	0.019	0.000	0.000	0.000	0.000	1394.49	
5	0.6918	1136.5	1156.6	0.547	3.548	74.680	18.744	2.253	0.070	0.128	0.007	0.006	0.017	0.000	0.000	0.000	0.000	1390.59	
6	0.6939	1142.4	1162.6	0.510	3.447	74.243	19.272	2.322	0.063	0.117	0.006	0.006	0.014	0.000	0.000	0.000	0.000	1395.64	
7	0.6895	1135.0	1155.1	0.493	3.503	74.961	18.675	2.174	0.058	0.107	0.006	0.006	0.018	0.000	0.000	0.000	0.000	1391.09	
8	0.6890	1135.1	1155.2	0.491	3.457	75.171	18.408	2.274	0.061	0.111	0.005	0.005	0.017	0.000	0.000	0.000	0.000	1391.65	
9	0.6942	1141.9	1162.1	0.530	3.475	74.384	18.954	2.398	0.079	0.148	0.008	0.008	0.016	0.000	0.000	0.000	0.000	1394.69	
10	0.6983	1150.5	1170.9	0.484	3.401	73.878	19.249	2.697	0.088	0.169	0.009	0.008	0.016	0.000	0.000	0.000	0.000	1401.11	
11	0.6917	1141.7	1162.0	0.448	3.369	74.974	18.490	2.410	0.083	0.174	0.013	0.016	0.024	0.000	0.000	0.000	0.000	1397.09	
12	0.6924	1143.0	1163.2	0.467	3.331	74.867	18.676	2.297	0.094	0.205	0.016	0.020	0.028	0.000	0.000	0.000	0.000	1397.88	
13	0.6908	1138.8	1158.9	0.479	3.420	75.032	18.490	2.267	0.085	0.179	0.012	0.014	0.022	0.000	0.000	0.000	0.000	1394.35	
14	0.6851	1124.3	1144.2	0.500	3.734	76.257	16.859	2.322	0.090	0.187	0.014	0.016	0.019	0.000	0.000	0.000	0.000	1382.30	
15	0.6936	1140.9	1161.1	0.501	3.512	74.627	18.672	2.350	0.091	0.194	0.016	0.018	0.020	0.000	0.000	0.000	0.000	1394.20	
16	0.6901	1137.0	1157.1	0.496	3.435	75.230	18.255	2.255	0.087	0.187	0.015	0.019	0.022	0.000	0.000	0.000	0.000	1392.91	
17	0.6955	1140.6	1160.8	0.509	3.709	74.145	18.986	2.331	0.086	0.183	0.014	0.017	0.022	0.000	0.000	0.000	0.000	1391.82	
18	0.6905	1133.0	1153.0	0.483	3.735	74.877	18.501	2.103	0.079	0.171	0.013	0.015	0.021	0.000	0.000	0.000	0.000	1387.61	
19	0.7005	1140.9	1161.1	0.459	4.237	72.707	20.088	2.310	0.054	0.114	0.007	0.008	0.015	0.000	0.000	0.000	0.000	1387.26	
20	0.7068	1148.0	1168.3	0.436	4.428	71.460	21.082	2.389	0.057	0.122	0.007	0.008	0.013	0.000	0.000	0.000	0.000	1389.74	
21	0.7036	1143.8	1164.1	0.453	4.358	72.206	20.335	2.424	0.060	0.130	0.008	0.009	0.015	0.000	0.000	0.000	0.000	1387.78	
22	0.6897	1152.5	1172.9	0.225	2.863	74.256	20.819	1.613	0.060	0.132	0.010	0.011	0.000	0.000	0.000	0.000	0.000	1412.41	
23	0.6900	1151.6	1172.0	0.250	2.913	74.166	20.851	1.618	0.056	0.120	0.008	0.009	0.010	0.000	0.000	0.000	0.000	1410.94	
24	0.6908	1155.5	1176.0	0.204	2.822	73.753	21.582	1.466	0.046	0.100	0.008	0.009	0.010	0.000	0.000	0.000	0.000	1414.91	
25	0.6912	1154.7	1175.1	0.230	2.872	73.791	21.350	1.594	0.045	0.094	0.007	0.007	0.010	0.000	0.000	0.000	0.000	1413.44	
26	0.6680	1117.0	1136.7	0.288	2.903	77.818	17.917	0.984	0.027	0.051	0.003	0.003	0.005	0.000	0.000	0.000	0.000	1390.41	
27	0.6390	1066.6	1085.5	0.376	3.111	83.184	12.801	0.499	0.011	0.014	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1357.71	
28	0.6393	1067.3	1086.2	0.394	3.068	83.186	12.796	0.518	0.013	0.020	0.002	0.001	0.001	0.000	0.000	0.000	0.000	1358.34	
29	0.6349	1058.6	1077.4	0.436	3.112	84.181	11.676	0.550	0.015	0.024	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1352.07	
30	0.6332	1057.3	1076.1	0.426	3.051	84.318	11.790	0.391	0.009	0.012	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1352.28	
31	0.6392	1068.8	1087.7	0.383	2.982	83.079	13.126	0.406	0.009	0.012	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1360.49	
Avg	0.6832	1128.0	1148.3	0.431	3.409	75.961	18.095	1.892	0.060	0.120	0.008	0.009	0.014	0.000	0.000	0.000	0.000	1389.27	

Zone 28

GQ Source Daily Summary

October 2011

Number: 271

Pressure Base: 14.730

Contract Day: 1

Name: DICKINSON AREA

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6805	1151.8	1172.2	0.000	2.384	74.393	22.698	0.525	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.05	
2	0.6810	1152.3	1172.7	0.000	2.406	74.283	22.792	0.520	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.05	
3	0.6817	1153.8	1174.2	0.000	2.384	74.165	22.895	0.555	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.13	
4	0.6815	1152.6	1173.0	0.000	2.432	74.194	22.836	0.538	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.95	
5	0.6812	1152.8	1173.2	0.000	2.395	74.240	22.839	0.526	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.47	
6	0.6831	1155.8	1176.3	0.000	2.386	73.961	23.026	0.627	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.25	
7	0.6707	1125.4	1145.3	0.257	2.674	77.208	18.801	1.003	0.017	0.038	0.000	0.000	0.002	0.000	0.000	0.000	0.000	1398.41	
8	0.5782	994.2	1011.8	0.758	1.199	95.890	2.002	0.149	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1330.60	
9	0.5779	994.1	1011.7	0.766	1.165	95.961	1.964	0.144	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1330.79	
10	0.5778	993.8	1011.4	0.756	1.185	95.985	1.927	0.147	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1330.54	
11	0.6728	1141.2	1161.4	0.038	2.257	75.956	21.286	0.464	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.74	
12	0.6776	1148.0	1168.3	0.000	2.352	74.949	22.207	0.492	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.23	
13	0.6800	1151.1	1171.4	0.000	2.387	74.453	22.676	0.485	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.58	
14	0.6812	1152.7	1173.1	0.000	2.403	74.195	22.921	0.481	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.32	
15	0.6807	1152.2	1172.6	0.000	2.387	74.300	22.828	0.486	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.23	
16	0.6805	1151.8	1172.2	0.000	2.392	74.335	22.792	0.480	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.94	
17	0.6818	1153.0	1173.4	0.000	2.440	74.086	22.982	0.492	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1421.06	
18	0.6830	1155.6	1176.1	0.000	2.395	74.155	22.638	0.813	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.01	
19	0.6810	1152.1	1172.5	0.000	2.419	74.300	22.728	0.553	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1420.82	
20	0.6831	1155.1	1175.5	0.000	2.430	74.046	22.812	0.712	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.32	
21	0.6842	1157.3	1177.8	0.000	2.396	73.984	22.754	0.857	0.002	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.95	
22	0.6855	1158.6	1179.1	0.000	2.443	73.737	22.935	0.870	0.004	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.13	
23	0.6844	1157.6	1178.1	0.000	2.402	73.935	22.787	0.876	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.04	
24	0.6834	1156.0	1176.5	0.000	2.407	73.993	22.866	0.734	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.12	
25	0.6508	1090.0	1109.3	0.282	2.926	80.650	15.641	0.491	0.003	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1374.43	
26	0.6466	1082.5	1101.7	0.295	2.970	81.518	14.697	0.512	0.002	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.93	
27	0.6407	1070.0	1089.0	0.356	3.075	82.881	13.091	0.574	0.007	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1360.34	
28	0.6364	1061.7	1080.5	0.396	3.116	83.809	12.066	0.585	0.009	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1354.44	
29	0.6348	1061.4	1080.2	0.389	2.997	83.895	12.330	0.389	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1355.80	
30	0.6387	1068.5	1087.4	0.365	2.974	83.096	13.151	0.414	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1360.62	
31	0.6434	1069.7	1088.7	0.318	3.409	82.800	12.358	1.032	0.025	0.056	0.000	0.000	0.001	0.000	0.000	0.000	0.000	1356.94	
Avg	0.6621	1118.0	1138.3	0.161	2.438	78.366	18.462	0.565	0.002	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1398.52	

zone 31

GQ Source Daily Summary

October 2011

Number: 051

Pressure Base: 14.730

Contract Day: 1

Name: CABIN CR-DICKINSON

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.6802	1150.6	1170.9	0.016	2.424	74.492	22.536	0.518	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.68	
2	0.6819	1154.2	1174.7	0.000	2.378	74.134	22.971	0.505	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.56	
3	0.6791	1148.9	1169.3	0.023	2.411	74.693	22.372	0.489	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.79	
4	0.6824	1154.7	1175.2	0.001	2.399	74.072	22.960	0.556	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.59	
5	0.6707	1131.1	1151.1	0.105	2.573	76.514	20.281	0.509	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1405.06	
6	0.6823	1154.7	1175.1	0.000	2.391	74.080	22.978	0.538	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.66	
7	0.6829	1154.9	1175.4	0.017	2.413	74.121	22.736	0.700	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.21	
8	0.6648	1122.5	1142.4	0.232	2.353	78.211	18.362	0.802	0.012	0.024	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1400.95	
9	0.6436	1093.4	1112.8	0.254	2.097	82.101	15.180	0.354	0.005	0.007	0.000	0.000	0.001	0.000	0.000	0.000	0.000	1386.69	
10	0.6701	1134.6	1154.7	0.071	2.356	76.556	20.563	0.442	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1410.44	
11	0.6178	1048.8	1067.4	0.393	2.166	87.444	9.714	0.267	0.007	0.008	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1357.43	
12	0.6427	1087.7	1106.9	0.234	2.392	82.204	14.826	0.333	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1379.70	
13	0.6798	1148.9	1169.2	0.018	2.487	74.609	22.311	0.559	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.03	
14	0.6490	1087.6	1106.9	0.305	2.879	81.054	15.282	0.459	0.008	0.011	0.001	0.000	0.001	0.000	0.000	0.000	0.000	1372.71	
15	0.6485	1075.7	1094.7	0.212	3.694	81.734	13.135	1.156	0.024	0.039	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1359.08	
16	0.6705	1123.2	1143.1	0.048	3.125	77.088	18.597	1.057	0.027	0.050	0.004	0.004	0.001	0.000	0.000	0.000	0.000	1395.75	
17	0.6251	1032.6	1050.9	0.422	3.799	86.633	8.020	1.042	0.032	0.045	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1328.86	
18	0.6420	1064.4	1083.3	0.242	3.723	83.113	11.714	1.102	0.037	0.059	0.004	0.004	0.002	0.000	0.000	0.000	0.000	1351.67	
19	0.6452	1066.5	1085.4	0.227	3.921	82.648	11.746	1.364	0.035	0.052	0.004	0.003	0.001	0.000	0.000	0.000	0.000	1351.18	
20	0.6582	1089.5	1108.8	0.131	3.889	80.133	14.147	1.613	0.033	0.046	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1366.64	
21	0.6579	1095.1	1114.5	0.157	3.475	79.787	15.356	1.169	0.023	0.030	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1373.87	
22	0.6234	1028.6	1046.8	0.527	3.727	86.878	7.924	0.886	0.022	0.029	0.003	0.002	0.002	0.000	0.000	0.000	0.000	1325.59	
23	0.6432	1062.8	1081.6	0.313	3.825	83.258	11.078	1.400	0.047	0.070	0.005	0.005	0.002	0.000	0.000	0.000	0.000	1348.60	
24	0.6038	996.3	1014.0	0.702	3.585	90.742	4.370	0.547	0.019	0.030	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1304.65	
25	0.6026	994.4	1012.0	0.699	3.590	90.905	4.269	0.496	0.015	0.021	0.002	0.001	0.001	0.000	0.000	0.000	0.000	1303.65	
26	0.6318	1044.1	1062.6	0.421	3.728	85.471	9.082	1.190	0.035	0.063	0.005	0.005	0.002	0.000	0.000	0.000	0.000	1336.74	
27	0.6038	996.0	1013.7	0.700	3.605	90.778	4.288	0.563	0.021	0.037	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1304.38	
28	0.5980	986.7	1004.1	0.736	3.573	91.785	3.473	0.397	0.014	0.018	0.002	0.001	0.002	0.000	0.000	0.000	0.000	1298.48	
29	0.6022	993.3	1010.9	0.704	3.605	91.011	4.143	0.490	0.016	0.024	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1302.72	
30	0.6028	994.3	1011.9	0.716	3.585	90.941	4.191	0.510	0.019	0.031	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1303.38	
31	0.6569	1085.9	1105.1	0.158	3.939	80.747	13.230	1.752	0.052	0.103	0.008	0.008	0.003	0.000	0.000	0.000	0.000	1363.45	
Avg	0.6466	1081.0	1099.9	0.283	3.100	81.869	13.930	0.767	0.018	0.028	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1367.04	

Zone 32

GQ Source Daily Summary October 2011

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	0.6851	1159.0	1179.6	0.000	2.387	73.527	23.521	0.553	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.14	
2	0.6865	1161.3	1181.9	0.000	2.379	73.256	23.785	0.568	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.50	
3	0.6860	1160.1	1180.6	0.000	2.411	73.305	23.749	0.524	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.46	
4	0.6856	1159.9	1180.4	0.000	2.388	73.383	23.696	0.521	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.59	
5	0.6859	1160.5	1181.0	0.000	2.379	73.363	23.687	0.559	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.02	
6	0.6903	1167.2	1187.9	0.000	2.380	72.770	23.966	0.874	0.004	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1429.75	
7	0.6896	1166.1	1186.8	0.000	2.383	72.854	23.938	0.815	0.004	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1429.11	
8	0.6853	1159.5	1180.0	0.000	2.385	73.420	23.679	0.505	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.43	
9	0.6851	1159.2	1179.7	0.000	2.378	73.463	23.657	0.492	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.35	
10	0.6856	1160.1	1180.6	0.000	2.378	73.362	23.744	0.505	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.81	
11	0.6854	1159.6	1180.1	0.000	2.387	73.397	23.706	0.499	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.45	
12	0.6857	1160.0	1180.5	0.000	2.393	73.321	23.783	0.492	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.61	
13	0.6857	1160.1	1180.7	0.000	2.386	73.325	23.786	0.492	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.75	
14	0.6858	1160.3	1180.9	0.000	2.384	73.295	23.826	0.485	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.90	
15	0.6853	1159.7	1180.2	0.000	2.371	73.409	23.723	0.486	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.67	
16	0.6860	1160.0	1180.6	0.000	2.419	73.254	23.829	0.488	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.36	
17	0.6876	1162.9	1183.5	0.000	2.389	73.196	23.674	0.723	0.007	0.010	0.000	0.000	0.001	0.000	0.000	0.000	0.000	1427.25	
18	0.6855	1159.3	1179.8	0.000	2.411	73.436	23.594	0.547	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.00	
19	0.6872	1162.1	1182.7	0.000	2.404	73.215	23.687	0.680	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.63	
20	0.6886	1164.4	1185.0	0.000	2.394	73.089	23.670	0.831	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1428.00	
21	0.6900	1166.0	1186.7	0.000	2.426	72.888	23.778	0.866	0.012	0.023	0.002	0.003	0.001	0.000	0.000	0.000	0.000	1428.55	
22	0.6896	1165.7	1186.4	0.000	2.403	72.951	23.734	0.893	0.008	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1428.64	
23	0.6889	1165.1	1185.7	0.000	2.378	73.074	23.657	0.872	0.008	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1428.57	
24	0.6862	1160.6	1181.1	0.000	2.398	73.256	23.826	0.508	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.87	
25	0.6845	1157.3	1177.8	0.000	2.445	73.495	23.622	0.428	0.004	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.53	
26	0.6846	1158.0	1178.5	0.000	2.411	73.492	23.646	0.440	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.30	
27	0.6855	1159.6	1180.1	0.000	2.391	73.374	23.740	0.484	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.41	
28	0.6840	1157.6	1178.1	0.000	2.374	73.724	23.360	0.529	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.48	
29	0.6832	1156.4	1176.8	0.000	2.379	73.785	23.388	0.438	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.75	
30	0.6843	1157.8	1178.3	0.000	2.394	73.568	23.581	0.446	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.37	
31	0.6871	1161.9	1182.5	0.000	2.403	73.287	23.570	0.724	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.53	
Avg	0.6863	1161.0	1181.4	0.000	2.393	73.308	23.697	0.589	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.09	

Zone 33

GQ Source Daily Summary

October 2011

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	0.7894	1104.6	1124.2	1.983	12.507	55.128	27.596	2.482	0.067	0.200	0.009	0.023	0.004	0.000	0.000	0.000	0.000	1265.28	
2	0.7866	1110.7	1130.4	1.875	12.037	55.694	27.585	2.498	0.069	0.204	0.009	0.024	0.005	0.000	0.000	0.000	0.000	1274.57	
3	0.7986	1119.6	1139.4	2.188	12.150	53.959	28.504	2.855	0.076	0.228	0.010	0.026	0.004	0.000	0.000	0.000	0.000	1274.99	
4	0.7993	1120.8	1140.7	2.304	11.962	54.059	28.384	2.939	0.077	0.232	0.010	0.027	0.005	0.000	0.000	0.000	0.000	1275.86	
5	0.7957	1118.9	1138.7	2.109	12.038	54.306	28.532	2.673	0.074	0.227	0.010	0.027	0.005	0.000	0.000	0.000	0.000	1276.52	
6	0.7914	1117.1	1136.9	2.087	11.775	55.188	27.941	2.686	0.070	0.212	0.009	0.026	0.006	0.000	0.000	0.000	0.000	1277.96	
7	0.7940	1115.5	1135.3	2.241	11.886	54.625	28.350	2.609	0.064	0.192	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1274.04	
8	0.7951	1118.5	1138.3	2.128	11.983	54.308	28.637	2.659	0.065	0.188	0.008	0.020	0.004	0.000	0.000	0.000	0.000	1276.49	
9	0.8012	1113.0	1132.7	2.274	12.661	53.317	28.627	2.813	0.069	0.205	0.009	0.023	0.003	0.000	0.000	0.000	0.000	1265.51	
10	0.8002	1117.8	1137.6	2.265	12.294	53.607	28.663	2.865	0.069	0.203	0.008	0.022	0.003	0.000	0.000	0.000	0.000	1271.71	
11	0.8005	1116.9	1136.7	2.299	12.317	53.605	28.595	2.874	0.069	0.205	0.009	0.023	0.004	0.000	0.000	0.000	0.000	1270.54	
12	0.7991	1121.1	1140.9	2.255	12.003	53.936	28.588	2.896	0.072	0.213	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1276.29	
13	0.7730	1107.1	1126.7	1.970	10.833	58.673	25.761	2.482	0.063	0.186	0.008	0.021	0.004	0.000	0.000	0.000	0.000	1282.20	
14	0.7116	1075.9	1094.9	1.384	7.838	70.558	18.032	1.910	0.058	0.176	0.010	0.027	0.007	0.000	0.000	0.000	0.000	1300.19	
15	0.8016	1105.8	1125.4	2.951	12.110	53.996	27.838	2.786	0.068	0.204	0.010	0.029	0.008	0.000	0.000	0.000	0.000	1256.96	
16	0.8095	1124.2	1144.1	2.867	11.855	52.963	28.687	3.211	0.091	0.277	0.012	0.032	0.005	0.000	0.000	0.000	0.000	1271.62	
17	0.8192	1144.5	1164.8	2.671	11.818	52.415	28.185	4.201	0.149	0.471	0.022	0.060	0.009	0.000	0.000	0.000	0.000	1286.87	
18	0.8240	1155.9	1176.3	2.337	12.070	52.018	27.946	4.730	0.183	0.594	0.029	0.080	0.012	0.000	0.000	0.000	0.000	1295.97	
19	0.8063	1130.9	1151.0	2.283	12.030	53.339	28.467	3.395	0.104	0.322	0.015	0.039	0.006	0.000	0.000	0.000	0.000	1281.75	
20	0.8175	1165.2	1185.8	1.962	11.472	52.880	28.184	4.645	0.176	0.565	0.028	0.076	0.012	0.000	0.000	0.000	0.000	1311.45	
21	0.8056	1129.8	1149.8	2.256	12.077	53.483	28.256	3.457	0.101	0.312	0.014	0.038	0.006	0.000	0.000	0.000	0.000	1280.94	
22	0.8009	1118.2	1138.0	2.351	12.206	53.571	28.677	2.900	0.067	0.196	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1271.57	
23	0.7978	1110.6	1130.2	2.260	12.513	53.992	28.122	2.820	0.066	0.194	0.008	0.022	0.003	0.000	0.000	0.000	0.000	1265.41	
24	0.7981	1114.1	1133.8	2.245	12.358	53.879	28.449	2.780	0.065	0.191	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1269.09	
25	0.7989	1123.6	1143.5	2.250	11.839	53.916	28.821	2.878	0.067	0.197	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1279.35	
26	0.7993	1128.3	1148.2	2.265	11.568	53.959	28.981	2.926	0.068	0.200	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1284.32	
27	0.8013	1120.0	1139.8	2.314	12.188	53.551	28.680	2.955	0.071	0.208	0.008	0.022	0.003	0.000	0.000	0.000	0.000	1273.32	
28	0.7996	1113.8	1133.5	2.181	12.609	53.688	28.275	2.929	0.072	0.212	0.009	0.023	0.003	0.000	0.000	0.000	0.000	1267.62	
29	0.7993	1115.3	1135.1	2.245	12.388	53.808	28.352	2.890	0.071	0.211	0.009	0.023	0.003	0.000	0.000	0.000	0.000	1269.64	
30	0.8093	1097.8	1117.3	2.976	13.282	52.419	28.044	2.962	0.071	0.211	0.009	0.022	0.003	0.000	0.000	0.000	0.000	1242.08	
31	0.8027	1103.8	1123.4	2.268	13.377	52.995	28.138	2.901	0.072	0.213	0.009	0.023	0.003	0.000	0.000	0.000	0.000	1254.06	
Avg	0.7976	1119.0	1138.5	2.260	12.001	54.446	27.932	2.987	0.081	0.247	0.011	0.029	0.005	0.000	0.000	0.000	0.000	1274.97	

Zone 34

GQ Source Analysis

Williston Basin Interstate Pipeline Co.

GQ Source Number:	1201140	Specific Gravity:	0.5726
GQ Source Name:	EAGLE 8B ND	BTU Base:	Dry
Effective Date:	6/1/2011 9:00:00 AM	Measured Heat Value:	979.03
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	978.94
Pressure Base:	14.730	Wet Heat Value:	961.90
Viscosity:		As Deliv. Heat Value:	978.94
		Sample Pressure:	32.00
		Sample Temperature:	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	95.931		C02	Carbon Dioxide	0.106
C2	Ethane	0.312	0.083	N2	Nitrogen	3.634
C3	Propane	0.009	0.003	O2	Oxygen	0.000
IC4	Iso-Butane	0.007	0.002	HE	Helium	
NC4	N-Butane	0.000	0.000	H2	Hydrogen	
IC5	Iso-Pentane	0.000	0.000	H2S	Hydrogen Sulfide	
NC5	N-Pentane	0.000	0.000	AR	Argon	
C6	Hexane	0.000	0.000	CO	Carbon Monoxide	
C7	Heptane			H2O	Water	
C8	Octane			Neo-C5	Neo-Pentane	
C9	Nonane					
C10	Decane					

Totals 100.000% 0.088 GPM

Sample Date: 6/22/2011 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
Sample Remarks:

Analysis Tech: Mary Berger
Analysis Remarks:

Zone 35

NORTH DAKOTA HEATING VALUE ZONES		
ZONES	MEASURING DEVICE	LOCATION
211	Chromatograph	Sidney Area
24	Monthly Sampler	Williston Area
241	Monthly Sampler	Fairview Area
25	Monthly Sampler	Watford City Area
261	Chromatograph	Williston – Tioga – Minot Line
262	Chromatograph	Minot Area
263	Monthly Sampler	Tioga – Portal
264	Monthly Sampler	Williston – Ray
271	Chromatograph	Bismarck – Cleveland
272	Chromatograph	Cleveland – Mapleton
273	Chromatograph	Cleveland – Grafton
28	Chromatograph	Bismarck
31	Chromatograph	Dickinson
32	Chromatograph	Cabin Creek – Dickinson
33	Chromatograph	Killdeer
34	Chromatograph	Bowman Area
35	Monthly Sampler	Baker Field – North Dakota

MONTANA DAKOTA UTILITIES CO
 NORTH DAKOTA
 HEATING VALUE DATA
 12 MONTH ACCUMULATIVE AT 14.73 psia, 60 f. DRY

STATE	ZONE	ZONE BOUNDARY	12 MONTH AVERAGE	OCT 11	SEPT 11	AUG 11	JULY 11	JUNE 11	MAY 11	APR 11	MAR 11	FEB 11	JAN 11	DEC 10	NOV 10	ZONE
MT/ND	211	Sidney Area	1209	1212	1199	1204	1215	1205	1206	1202	1211	1216	1212	1218	1210	211
ND	24	Williston Area	1200	1197	1200	1200	1198	1197	1196	1194	1198	1196	1204	1207	1208	24
ND	25	Watford City Area	1137	1129	1136	1136	1135	1140	1128	1143	1143	1131	1150	1135	1133	25
ND/MT	241	Fairview Area	1197	1198	1200	1200	1199	1193	1193	1194	1197	0	0	0	0	241
ND	261	Williston - Tioga - Minot Line	1161	1158	1144	1159	1176	1165	1159	1162	1172	1176	1171	1154	1135	261
ND	262	Minot Area	1173	1163	1160	1161	1179	1168	1161	1167	1175	1178	1182	1191	1186	262
ND	263	Tioga - Portal	1108	1126	1128	1128	1126	1082	1093	1123	1094	1090	1094	1100	1107	263
ND	264	Williston - Ray	1200	1197	1200	1200	1198	1197	1196	1194	1198	1196	1204	1207	1208	264
ND	271	Bismarck - Cleveland	1154	1161	1159	1160	1177	1166	1152	1161	1136	1118	1130	1160	1172	271
ND	272	Cleveland - Mapleton	1154	1161	1159	1160	1179	1166	1151	1161	1134	1117	1130	1159	1171	272
ND	273	Cleveland - Grafton	1154	1162	1159	1160	1179	1167	1151	1161	1135	1117	1130	1159	1172	273
ND	28	Bismarck - Cabin Creek	1113	1148	1160	1160	1180	1166	1139	1112	1051	1042	1045	1055	1097	28
ND	31	Dickinson Area	1098	1138	1162	1152	1135	1123	1109	1093	1049	1040	1044	1053	1082	31
ND/MT	32	Cabin Creek - Dickinson	1089	1100	1156	1126	1133	1153	1080	1071	1046	1037	1041	1050	1079	32
ND	33	Killdeer	1179	1181	1181	1181	1182	1183	1180	1177	1175	1175	1175	1175	1177	33
ND	34	Bowman Area	1153	1139	1132	1138	1144	1149	1153	1154	1163	1158	1163	1172	1167	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**

October 2011

<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
31	-24	Mix of Gas from Morgan Creek
32	-56	Mix of Gas from Morgan Creek