



MONTANA-DAKOTA

UTILITIES CO.

A Division of MDU Resources Group, Inc.

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

July 27, 2011

RECEIVED

JUL 28 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 – June 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 July 2011.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our supplier for the month of June 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 June 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
JULY 2011

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	314	APPLE VALLEY	271	1.1251
12	327	BISMARCK	28	1.1251
12	343	CARRINGTON	273	1.1260
12	344	CLEVELAND	272	1.1171
12	364	CAVALIER	273	1.1497
12	365	DAWSON	271	1.1171
12	374	FT TOTTEN	273	1.1340
12	375	DEVILS LAKE	273	1.1340
12	379	BARLOW	273	1.1260
12	387	ELDRIDGE	272	1.1251
12	411	GLEN ULLIN	31	1.0607
12	417	GRAFTON	273	1.1577
12	439	HANKINSON	600	1.0788
12	449	JAMESTOWN	272	1.1330
12	463	LANGDON	273	1.1260
12	475	LINTON	802	.9717
12	478	LINCOLN	28	1.1251
12	494	MEDINA	271	1.1171
12	498	MANDAN	28	1.1251
12	524	NEW SALEM	28	1.1013
12	532	NEW ROCKFORD	273	1.1260
12	539	PARK RIVER	273	1.1497
12	574	SANBORN	272	1.1330
12	593	STEELE	271	1.1171
12	598	SHEYENNE	273	1.1340
12	610	TAPPEN	271	1.1171
12	625	VALLEY CITY	272	1.1408
12	629	WALHALLA	273	1.1497
12	647	WILTON	262	1.1032
12	717	SPIRITWOOD	272	1.1330
12	718	FAIRMOUNT	600	1.0766
12	732	MSR SITE	273	1.1260
12	733	PAR SITE	273	1.1260
15	303	ALEXANDER	25	1.0767
15	308	ARNEGARD	25	1.0767

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
JULY 2011

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	318	BEACH	32	1.0655
15	319	BELFIELD	32	1.0733
15	323	BERTHOLD	262	1.1032
15	330	BOWMAN	34	1.0540
15	337	BURLINGTON	262	1.1270
15	368	DES LACS	262	1.1111
15	369	DICKINSON	31	1.0530
15	384	EPPING	264	1.1306
15	407	GLADSTONE	31	1.0530
15	413	GOLVA	32	1.0499
15	416	GARRISON	262	1.1111
15	429	HEBRON	31	1.0607
15	459	KILLDEER	33	1.1173
15	469	LEFOR	31	1.0530
15	474	LIGNITE	263	1.0293
15	500	MARMARTH	34	1.0618
15	505	MINOT	262	1.1270
15	510	MOTT	31	1.0530
15	512	MAX	262	1.1032
15	522	NEW ENGLAND	31	1.0454
15	540	PALERMO	262	1.1032
15	558	RAY	264	1.1306
15	561	REGENT	31	1.0530
15	563	RHAME	34	1.0463
15	564	RICHARDTON	31	1.0454
15	568	ROSS	261	1.0924
15	572	RUTHVILLE	262	1.1270
15	583	SENTINEL BUTTE	32	1.0655
15	588	SOUTH HEART	31	1.0454
15	590	SPRINGBROOK	264	1.1306
15	591	STANLEY	261	1.1003
15	605	SURREY	262	1.1270
15	611	TAYLOR	31	1.0454
15	616	TIOGA	261	1.0924
15	619	TURTLE LAKE	262	1.1111

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
JULY 2011

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	620	TRENTON	24	1.1387
15	624	UNDERWOOD	262	1.1111
15	632	WATFORD CITY	25	1.0767
15	636	WHEELOCK	264	1.1224
15	637	WHITE EARTH	261	1.1003
15	642	WILLISTON	24	1.1387
15	646	WASHBURN	262	1.1191
15	664	RIVERDALE	262	1.1111
15	691	FAIRVIEW	241	1.1349
15	712	MINOT AFB	262	1.1270
15	743	BAKER FIELD	35	.8980

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

GQ Source Daily Summary

June 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	0.7115	1187.9	1209.0	0.040	3.038	70.653	23.189	2.990	0.044	0.042	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1433.23	
2	0.7108	1187.4	1208.5	0.040	3.004	70.807	23.051	3.015	0.036	0.044	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1433.22	
3	0.7097	1186.4	1207.4	0.045	2.955	71.117	22.733	3.051	0.041	0.053	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1433.22	
4	0.7090	1185.1	1206.1	0.051	2.961	71.028	23.021	2.864	0.033	0.041	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1432.37	
5	0.7078	1182.9	1203.8	0.045	2.994	71.210	22.868	2.805	0.034	0.041	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1430.82	
6	0.7090	1184.5	1205.5	0.045	3.004	71.135	22.901	2.720	0.062	0.113	0.008	0.009	0.003	0.000	0.000	0.000	0.000	1431.64	
7	0.7107	1185.2	1206.2	0.040	3.124	70.738	23.155	2.801	0.048	0.082	0.005	0.005	0.002	0.000	0.000	0.000	0.000	1430.81	
8	0.7100	1185.0	1206.0	0.033	3.090	70.915	23.008	2.777	0.059	0.102	0.006	0.007	0.003	0.000	0.000	0.000	0.000	1431.17	
9	0.7081	1182.5	1203.5	0.034	3.054	71.098	23.036	2.640	0.053	0.080	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1430.19	
10	0.6943	1157.3	1177.7	0.048	3.276	74.001	19.895	2.548	0.072	0.139	0.009	0.009	0.003	0.000	0.000	0.000	0.000	1412.95	
11	0.7156	1193.7	1214.8	0.043	3.064	70.330	23.035	3.380	0.058	0.080	0.004	0.004	0.001	0.000	0.000	0.000	0.000	1436.05	
12	0.7081	1177.9	1198.8	0.121	3.206	71.033	22.944	2.590	0.042	0.058	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1424.65	
13	0.7305	1172.7	1193.5	1.143	4.060	69.470	20.942	3.865	0.167	0.318	0.018	0.015	0.001	0.000	0.000	0.000	0.000	1396.41	
14	0.7295	1171.7	1192.4	1.147	4.035	69.291	21.473	3.579	0.154	0.289	0.018	0.014	0.001	0.000	0.000	0.000	0.000	1396.03	
15	0.7186	1186.1	1207.1	0.337	3.363	69.842	23.099	3.164	0.075	0.108	0.005	0.005	0.001	0.000	0.000	0.000	0.000	1424.05	
16	0.7081	1180.7	1201.6	0.041	3.156	71.134	22.811	2.755	0.042	0.056	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1427.94	
17	0.7101	1187.1	1208.1	0.037	2.960	70.794	23.280	2.849	0.035	0.042	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1433.67	
18	0.7064	1180.4	1201.3	0.042	3.016	71.382	22.782	2.704	0.033	0.039	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1429.28	
19	0.7057	1179.8	1200.7	0.036	2.990	71.413	22.908	2.576	0.033	0.040	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1429.35	
20	0.7081	1183.0	1204.0	0.039	3.022	71.064	23.069	2.726	0.034	0.041	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1430.72	
21	0.7122	1189.5	1210.5	0.037	3.016	70.587	23.201	3.071	0.038	0.046	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1434.37	
22	0.7077	1182.2	1203.2	0.041	3.032	71.110	23.046	2.689	0.034	0.043	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1430.15	
23	0.7112	1187.4	1208.5	0.046	3.033	70.642	23.278	2.910	0.043	0.046	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1432.94	
24	0.7163	1195.2	1216.3	0.046	3.039	70.012	23.523	3.258	0.050	0.065	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1437.12	
25	0.7154	1186.7	1207.7	0.214	3.213	70.119	23.316	2.996	0.057	0.077	0.003	0.002	0.001	0.000	0.000	0.000	0.000	1427.94	
26	0.7317	1176.1	1197.0	1.140	3.976	68.845	21.977	3.596	0.150	0.284	0.016	0.014	0.001	0.000	0.000	0.000	0.000	1399.31	
27	0.7120	1187.4	1208.4	0.062	3.087	70.431	23.483	2.836	0.045	0.053	0.001	0.002	0.001	0.000	0.000	0.000	0.000	1432.10	
28	0.7161	1195.2	1216.4	0.039	3.022	70.165	23.317	3.312	0.056	0.080	0.003	0.004	0.002	0.000	0.000	0.000	0.000	1437.43	
29	0.7172	1195.5	1216.7	0.041	3.111	70.007	23.279	3.426	0.057	0.075	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1436.59	
30	0.7174	1195.8	1217.0	0.054	3.092	69.960	23.338	3.435	0.053	0.064	0.001	0.002	0.001	0.000	0.000	0.000	0.000	1436.77	
Avg	0.7126	1184.0	1205.3	0.171	3.166	70.678	22.832	2.998	0.058	0.088	0.004	0.004	0.001	0.000	0.000	0.000	0.000	1427.75	

zone 211

GQ Source Analysis

Williston Basin Interstate Pipeline Co.

Attachment B
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GQ Source Number:	0602330	Specific Gravity:	0.7235
GQ Source Name:	WILLISTON BORDER	BTU Base:	Dry
Effective Date:	6/1/2011 9:00:00 AM	Measured Heat Value:	1200.20
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	1197.03
Pressure Base:	14.730	Wet Heat Value:	1176.20
Viscosity:		As Deliv. Heat Value:	1197.03
		Sample Pressure:	0.00
		Sample Temperature:	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	69.587		CO2	Carbon Dioxide	0.745
C2	Ethane	21.984	5.862	N2	Nitrogen	3.770
C3	Propane	3.529	0.969	O2	Oxygen	0.000
IC4	Iso-Butane	0.129	0.042	HE	Helium	
NC4	N-Butane	0.228	0.072	H2	Hydrogen	
IC5	Iso-Pentane	0.015	0.005	H2S	Hydrogen Sulfide	
NC5	N-Pentane	0.013	0.005	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 99.999% 6.955 GPM

Sample Date: 6/30/2011 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.

Attachment B
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GQ Source Number:	0602160	Specific Gravity:	0.7221
GQ Source Name:	FAIRVIEW BORDER	BTU Base:	Dry
Effective Date:	6/1/2011 9:00:00 AM	Measured Heat Value:	1196.60
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	1193.45
Pressure Base:	14.730	Wet Heat Value:	1172.68
Viscosity:		As Deliv. Heat Value:	1193.45
		Sample Pressure:	0.00
		Sample Temperature:	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	69.760		CO2	Carbon Dioxide	0.810
C2	Ethane	21.898	5.839	N2	Nitrogen	3.756
C3	Propane	3.429	0.942	O2	Oxygen	0.000
IC4	Iso-Butane	0.115	0.038	HE	Helium	
NC4	N-Butane	0.208	0.066	H2	Hydrogen	
IC5	Iso-Pentane	0.012	0.004	H2S	Hydrogen Sulfide	
NC5	N-Pentane	0.010	0.004	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% 6.892 GPM

Sample Date: 6/30/2011 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.

Attachment B
Page 4 of 16

GQ Source Number:	0602230	Specific Gravity:	0.7337
GQ Source Name:	WATFORD CITY BORDER	BTU Base:	Dry
Effective Date:	6/1/2011 9:00:00 AM	Measured Heat Value:	1142.45
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	1139.68
Pressure Base:	14.730	Wet Heat Value:	1119.85
Viscosity:		As Deliv. Heat Value:	1139.68
		Sample Pressure:	0.00
		Sample Temperature:	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	68.009		CO2	Carbon Dioxide	0.721
C2	Ethane	18.361	4.896	N2	Nitrogen	8.206
C3	Propane	4.019	1.104	O2	Oxygen	0.000
IC4	Iso-Butane	0.204	0.066	HE	Helium	
NC4	N-Butane	0.380	0.120	H2	Hydrogen	
IC5	Iso-Pentane	0.029	0.011	H2S	Hydrogen Sulfide	
NC5	N-Pentane	0.029	0.011	AR	Argon	
C6	Hexane	0.040	0.019	CO	Carbon Monoxide	
C7	Heptane			H2O	Water	
C8	Octane			Neo-C5	Neo-Pentane	
C9	Nonane					
C10	Decane					

Totals 99.998% 6.226 GPM

Sample Date: 6/30/2011 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
Sample Remarks:

Analysis Tech: Mary Berger
Analysis Remarks:

Zone 25

GQ Source Daily Summary

June 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	0.6902	1139.4	1159.6	0.444	3.374	74.758	19.063	2.159	0.067	0.121	0.006	0.005	0.004					1395.79	
2	0.6902	1139.4	1159.6	0.444	3.374	74.758	19.063	2.159	0.067	0.121	0.006	0.005	0.004					1395.79	
3	0.6902	1139.4	1159.6	0.444	3.374	74.758	19.063	2.159	0.067	0.121	0.006	0.005	0.004					1395.79	
4	0.6949	1139.4	1159.6	0.433	3.829	74.190	18.708	2.657	0.061	0.103	0.005	0.004	0.009					1391.04	
5	0.6902	1139.4	1159.6	0.444	3.374	74.758	19.063	2.159	0.067	0.121	0.006	0.005	0.004					1395.79	
6	0.6963	1144.2	1164.5	0.395	3.728	73.990	18.942	2.757	0.063	0.107	0.005	0.004	0.010					1395.49	
7	0.6914	1140.9	1161.1	0.298	3.615	74.708	18.655	2.517	0.067	0.120	0.007	0.006	0.008					1396.43	
8	0.6921	1141.4	1161.7	0.313	3.628	74.669	18.565	2.620	0.066	0.118	0.006	0.005	0.010					1396.31	
9	0.6982	1150.1	1170.5	0.378	3.573	73.754	19.218	2.863	0.071	0.124	0.006	0.005	0.008					1400.78	
10	0.6943	1146.3	1166.6	0.384	3.435	74.318	19.018	2.654	0.063	0.112	0.005	0.004	0.007					1399.97	
11	0.6943	1141.9	1162.1	0.384	3.435	74.318	19.018	2.654	0.063	0.112	0.005	0.004	0.007					181.58	
12	0.7006	1148.1	1168.5	0.519	3.702	73.582	18.990	2.934	0.086	0.161	0.009	0.008	0.008					1395.98	
13	0.7036	1153.4	1173.9	0.542	3.627	73.281	19.126	3.092	0.099	0.197	0.013	0.013	0.009					1399.41	
14	0.7067	1157.2	1177.7	0.576	3.636	73.081	19.006	3.270	0.122	0.255	0.020	0.022	0.012					1400.87	
15	0.7058	1154.7	1175.2	0.591	3.676	73.036	19.127	3.233	0.101	0.198	0.013	0.013	0.011					1398.82	
16	0.7054	1156.0	1176.5	0.533	3.645	73.263	18.888	3.264	0.116	0.242	0.018	0.020	0.012					1400.79	
17	0.6999	1144.2	1164.4	0.507	3.893	73.668	18.755	2.894	0.091	0.168	0.009	0.008	0.007					1391.89	
18	0.6974	1144.8	1165.1	0.467	3.684	74.119	18.602	2.851	0.085	0.164	0.010	0.009	0.010					1395.12	
19	0.6985	1146.8	1167.1	0.487	3.638	73.760	19.105	2.770	0.075	0.142	0.008	0.007	0.009					1396.42	
20	0.6998	1146.8	1167.1	0.519	3.705	73.619	19.071	2.829	0.080	0.150	0.009	0.008	0.009					1395.19	
21	0.6979	1144.3	1164.6	0.495	3.721	73.794	19.049	2.708	0.074	0.136	0.008	0.007	0.009					1394.01	
22	0.7039	1152.6	1173.0	0.495	3.771	73.350	18.749	3.334	0.093	0.176	0.012	0.010	0.011					1398.12	
23	0.7003	1148.6	1168.9	0.436	3.767	73.748	18.625	3.184	0.077	0.138	0.008	0.007	0.011					1396.88	
24	0.6966	1141.6	1161.8	0.448	3.837	74.220	18.354	2.884	0.083	0.149	0.008	0.007	0.009					1391.93	
25	0.6900	1132.9	1152.9	0.400	3.816	75.008	18.101	2.479	0.061	0.113	0.006	0.006	0.010					1387.99	
26	0.6934	1140.8	1161.0	0.405	3.646	74.401	18.823	2.524	0.061	0.117	0.006	0.006	0.011					1394.27	
27	0.6917	1138.3	1158.5	0.412	3.631	74.666	18.641	2.458	0.059	0.111	0.006	0.006	0.010					1392.90	
28	0.6898	1137.7	1157.9	0.370	3.551	75.108	18.252	2.523	0.057	0.113	0.006	0.006	0.014					1394.09	
29	0.6929	1142.6	1162.8	0.376	3.536	74.779	18.367	2.689	0.069	0.144	0.010	0.012	0.018					1396.90	
30	0.6958	1143.7	1163.9	0.441	3.642	74.298	18.629	2.718	0.078	0.159	0.010	0.011	0.015					1395.34	
Avg	0.6964	1145.0	1164.8	0.446	3.629	74.125	18.821	2.733	0.076	0.144	0.008	0.008	0.009					1355.39	

zone 261

GQ Source Daily Summary

June 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	0.6903	1139.4	1159.6	0.442	3.382	74.724	19.113	2.136	0.067	0.121	0.004	0.001	0.010	0.000	0.000	0.000	0.000	1395.74	
2	0.6888	1134.2	1154.3	0.438	3.572	74.701	19.198	1.922	0.057	0.099	0.001	0.001	0.011	0.000	0.000	0.000	0.000	1390.82	
3	0.6887	1132.0	1152.0	0.446	3.685	74.744	19.000	1.965	0.054	0.093	0.001	0.000	0.011	0.000	0.000	0.000	0.000	1388.21	
4	0.6964	1143.4	1163.7	0.471	3.665	73.918	19.106	2.674	0.056	0.096	0.001	0.000	0.011	0.000	0.000	0.000	0.000	1394.49	
5	0.6957	1142.4	1162.6	0.448	3.704	74.042	18.950	2.692	0.056	0.095	0.000	0.000	0.013	0.000	0.000	0.000	0.000	1393.87	
6	0.6946	1138.9	1159.1	0.454	3.801	74.206	18.763	2.596	0.061	0.105	0.002	0.000	0.013	0.000	0.000	0.000	0.000	1390.75	
7	0.6960	1142.7	1162.9	0.427	3.748	74.005	18.931	2.708	0.061	0.104	0.002	0.000	0.014	0.000	0.000	0.000	0.000	1393.88	
8	0.6935	1144.7	1165.0	0.309	3.565	74.453	18.838	2.593	0.074	0.141	0.007	0.006	0.014	0.000	0.000	0.000	0.000	1398.91	
9	0.6948	1145.8	1166.1	0.341	3.566	74.303	18.839	2.737	0.069	0.124	0.003	0.002	0.014	0.000	0.000	0.000	0.000	1399.01	
10	0.6972	1149.5	1169.8	0.387	3.498	73.877	19.264	2.774	0.067	0.118	0.002	0.000	0.013	0.000	0.000	0.000	0.000	1401.07	
11	0.6940	1145.8	1166.1	0.396	3.410	74.386	18.987	2.628	0.063	0.114	0.002	0.000	0.013	0.000	0.000	0.000	0.000	1399.79	
12	0.6967	1145.0	1165.3	0.465	3.605	74.166	18.741	2.750	0.083	0.163	0.009	0.009	0.009	0.000	0.000	0.000	0.000	1396.10	
13	0.7020	1149.6	1169.9	0.554	3.696	73.401	19.089	2.968	0.091	0.173	0.008	0.007	0.012	0.000	0.000	0.000	0.000	1396.27	
14	0.7047	1155.4	1175.9	0.566	3.565	73.174	19.224	3.115	0.106	0.216	0.013	0.014	0.007	0.000	0.000	0.000	0.000	1400.80	
15	0.7078	1159.0	1179.5	0.592	3.599	72.971	19.058	3.338	0.126	0.268	0.020	0.022	0.007	0.000	0.000	0.000	0.000	1402.00	
16	0.7071	1157.4	1177.9	0.607	3.613	72.820	19.350	3.274	0.102	0.202	0.012	0.011	0.008	0.000	0.000	0.000	0.000	1400.76	
17	0.7059	1156.8	1177.2	0.587	3.567	73.069	19.189	3.217	0.111	0.228	0.014	0.014	0.003	0.000	0.000	0.000	0.000	1401.19	
18	0.7059	1159.2	1179.8	0.538	3.491	73.274	18.911	3.376	0.119	0.251	0.018	0.018	0.004	0.000	0.000	0.000	0.000	1404.15	
19	0.7034	1150.2	1170.6	0.532	3.818	73.271	18.984	3.054	0.103	0.206	0.013	0.013	0.008	0.000	0.000	0.000	0.000	1395.71	
20	0.6983	1145.5	1165.8	0.477	3.709	74.039	18.566	2.916	0.091	0.174	0.009	0.008	0.012	0.000	0.000	0.000	0.000	1395.08	
21	0.6994	1148.3	1168.7	0.500	3.608	73.670	19.165	2.795	0.080	0.155	0.008	0.007	0.013	0.000	0.000	0.000	0.000	1397.40	
22	0.7005	1148.6	1169.0	0.529	3.643	73.534	19.183	2.848	0.081	0.155	0.008	0.007	0.013	0.000	0.000	0.000	0.000	1396.73	
23	0.6991	1145.5	1165.8	0.514	3.725	73.663	19.099	2.750	0.077	0.145	0.007	0.006	0.014	0.000	0.000	0.000	0.000	1394.33	
24	0.7002	1149.0	1169.4	0.500	3.638	73.596	19.123	2.873	0.084	0.159	0.008	0.007	0.013	0.000	0.000	0.000	0.000	1397.49	
25	0.7040	1153.3	1173.8	0.504	3.719	73.305	18.868	3.308	0.091	0.175	0.010	0.009	0.011	0.000	0.000	0.000	0.000	1398.97	
26	0.7021	1149.6	1169.9	0.502	3.782	73.500	18.734	3.223	0.082	0.153	0.007	0.006	0.010	0.000	0.000	0.000	0.000	1396.20	
27	0.7021	1149.6	1169.9	0.502	3.782	73.500	18.734	3.223	0.082	0.153	0.007	0.006	0.010	0.000	0.000	0.000	0.000	1396.20	
28	0.7021	1149.6	1169.9	0.502	3.782	73.500	18.734	3.223	0.082	0.153	0.007	0.006	0.010	0.000	0.000	0.000	0.000	1396.20	
29	0.7021	1149.6	1169.9	0.502	3.782	73.500	18.734	3.223	0.082	0.153	0.007	0.006	0.010	0.000	0.000	0.000	0.000	1396.20	
30	0.7021	1149.6	1169.9	0.502	3.782	73.500	18.734	3.223	0.082	0.153	0.007	0.006	0.010	0.000	0.000	0.000	0.000	1396.20	
Avg	0.6992	1148.0	1168.0	0.484	3.650	73.760	18.974	2.871	0.081	0.155	0.007	0.006	0.011	0.000	0.000	0.000	0.000	1396.82	

Zone 262

GQ Source Analysis

Williston Basin Interstate Pipeline Co.

Attachment B
Page 7 of 16

GQ Source Number:	2501030	Specific Gravity:	0.6356
GQ Source Name:	LIGNITE PLANT	BTU Base:	Dry
Effective Date:	6/1/2011 9:00:00 AM	Measured Heat Value:	1082.79
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	1081.53
Pressure Base:	14.730	Wet Heat Value:	1062.70
Viscosity:		As Deliv. Heat Value:	1081.53
		Sample Pressure:	0.00
		Sample Temperature:	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	83.561		CO2	Carbon Dioxide	0.083
C2	Ethane	12.312	3.283	N2	Nitrogen	3.447
C3	Propane	0.556	0.153	O2	Oxygen	0.000
IC4	Iso-Butane	0.001	0.000	HE	Helium	
NC4	N-Butane	0.002	0.001	H2	Hydrogen	
IC5	Iso-Pentane	0.000	0.000	H2S	Hydrogen Sulfide	
NC5	N-Pentane	0.000	0.000	AR	Argon	
C6	Hexane	0.034	0.016	CO	Carbon Monoxide	
C7	Heptane			H2O	Water	
C8	Octane			Neo-C5	Neo-Pentane	
C9	Nonane					
C10	Decane					
Totals			99.996%		3.452 GPM	

Sample Date: 6/30/2011 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
Sample Remarks:

Analysis Tech: Mary Berger
Analysis Remarks:

*** End of Report ***

Zone 263

GQ Source Daily Summary

June 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	0.6898	1138.7	1158.9	0.454	3.368	74.873	18.950	2.144	0.067	0.121	0.006	0.005	0.013	0.000	0.000	0.000	0.000	1395.30	
2	0.6894	1134.1	1154.2	0.461	3.600	74.811	18.868	2.077	0.057	0.100	0.005	0.005	0.015	0.000	0.000	0.000	0.000	1390.07	
3	0.6965	1144.2	1164.4	0.472	3.630	74.069	18.857	2.801	0.054	0.091	0.005	0.004	0.016	0.000	0.000	0.000	0.000	1395.29	
4	0.6945	1139.4	1159.6	0.464	3.750	74.278	18.723	2.596	0.059	0.102	0.005	0.004	0.018	0.000	0.000	0.000	0.000	1391.42	
5	0.6948	1139.9	1160.1	0.448	3.768	74.283	18.635	2.682	0.057	0.098	0.005	0.004	0.019	0.000	0.000	0.000	0.000	1391.79	
6	0.6951	1141.2	1161.4	0.437	3.738	74.241	18.700	2.692	0.060	0.103	0.005	0.004	0.020	0.000	0.000	0.000	0.000	1393.00	
7	0.6945	1143.4	1163.6	0.376	3.642	74.282	18.849	2.662	0.059	0.102	0.005	0.004	0.020	0.000	0.000	0.000	0.000	1396.28	
8	0.6934	1144.8	1165.1	0.320	3.535	74.488	18.846	2.566	0.073	0.136	0.008	0.007	0.020	0.000	0.000	0.000	0.000	1399.14	
9	0.6944	1145.3	1165.6	0.348	3.553	74.380	18.807	2.693	0.067	0.121	0.006	0.005	0.020	0.000	0.000	0.000	0.000	1398.79	
10	0.6973	1149.8	1170.2	0.397	3.475	73.932	19.192	2.795	0.066	0.116	0.005	0.004	0.018	0.000	0.000	0.000	0.000	1401.35	
11	0.6933	1144.7	1164.9	0.405	3.407	74.569	18.794	2.623	0.062	0.113	0.005	0.005	0.017	0.000	0.000	0.000	0.000	1399.04	
12	0.6965	1144.9	1165.2	0.475	3.586	74.265	18.636	2.752	0.081	0.162	0.011	0.011	0.020	0.000	0.000	0.000	0.000	1396.10	
13	0.7025	1150.8	1171.1	0.562	3.655	73.414	19.065	2.991	0.092	0.181	0.011	0.010	0.018	0.000	0.000	0.000	0.000	1397.31	
14	0.7043	1155.1	1175.6	0.575	3.542	73.284	19.134	3.107	0.102	0.207	0.014	0.014	0.020	0.000	0.000	0.000	0.000	1400.73	
15	0.7070	1157.7	1178.2	0.601	3.587	73.178	18.870	3.315	0.122	0.261	0.021	0.023	0.023	0.000	0.000	0.000	0.000	1401.30	
16	0.7065	1157.4	1177.9	0.603	3.564	73.025	19.178	3.275	0.102	0.206	0.014	0.014	0.021	0.000	0.000	0.000	0.000	1401.38	
17	0.7045	1153.1	1173.6	0.555	3.709	73.274	18.960	3.116	0.108	0.222	0.016	0.017	0.022	0.000	0.000	0.000	0.000	1398.16	
18	0.6975	1143.1	1163.3	0.491	3.761	74.157	18.449	2.856	0.087	0.163	0.009	0.008	0.018	0.000	0.000	0.000	0.000	1392.94	
19	0.7001	1149.2	1169.5	0.515	3.598	73.697	19.032	2.867	0.084	0.166	0.010	0.010	0.020	0.000	0.000	0.000	0.000	1397.78	
20	0.6987	1147.4	1167.7	0.517	3.572	73.797	19.107	2.757	0.075	0.142	0.008	0.007	0.019	0.000	0.000	0.000	0.000	1397.04	
21	0.7001	1147.6	1168.0	0.534	3.666	73.598	19.125	2.812	0.078	0.149	0.009	0.009	0.021	0.000	0.000	0.000	0.000	1395.89	
22	0.7000	1148.3	1168.6	0.515	3.646	73.667	19.035	2.862	0.083	0.158	0.009	0.008	0.018	0.000	0.000	0.000	0.000	1396.77	
23	0.7024	1151.0	1171.4	0.495	3.733	73.550	18.689	3.257	0.081	0.155	0.010	0.010	0.021	0.000	0.000	0.000	0.000	1397.67	
24	0.6997	1147.7	1168.0	0.468	3.721	73.892	18.545	3.117	0.078	0.143	0.008	0.007	0.021	0.000	0.000	0.000	0.000	1396.38	
25	0.6946	1139.5	1159.6	0.448	3.780	74.591	18.113	2.808	0.079	0.145	0.008	0.007	0.020	0.000	0.000	0.000	0.000	1391.38	
26	0.7055	1147.7	1168.0	0.510	4.207	72.339	19.934	2.733	0.076	0.157	0.010	0.012	0.021	0.000	0.000	0.000	0.000	1390.63	
27	0.7053	1152.7	1173.1	0.495	3.906	72.614	19.810	2.869	0.082	0.176	0.013	0.014	0.021	0.000	0.000	0.000	0.000	1396.83	
28	0.6920	1139.6	1159.8	0.408	3.584	74.812	18.426	2.542	0.062	0.128	0.009	0.009	0.022	0.000	0.000	0.000	0.000	1394.22	
29	0.6922	1141.2	1161.4	0.399	3.519	74.937	18.219	2.685	0.065	0.135	0.008	0.009	0.023	0.000	0.000	0.000	0.000	1395.94	
30	0.6930	1143.2	1163.5	0.389	3.491	74.797	18.389	2.673	0.068	0.144	0.010	0.011	0.029	0.000	0.000	0.000	0.000	1397.58	
Avg	0.6978	1146.0	1166.4	0.471	3.643	73.970	18.865	2.791	0.076	0.147	0.009	0.009	0.020	0.000	0.000	0.000	0.000	1396.25	

Zone 271

GQ Source Daily Summary

June 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	0.6902	1140.0	1160.1	0.462	3.317	74.807	19.030	2.179	0.068	0.123	0.006	0.005	0.002	0.000	0.000	0.000	0.000	1396.44	
2	0.6892	1136.4	1156.5	0.443	3.468	74.876	18.941	2.072	0.063	0.114	0.007	0.006	0.010	0.000	0.000	0.000	0.000	1393.11	
3	0.6953	1141.8	1162.1	0.479	3.651	74.113	18.981	2.601	0.057	0.097	0.005	0.004	0.011	0.000	0.000	0.000	0.000	1393.64	
4	0.6947	1140.9	1161.1	0.456	3.684	74.241	18.815	2.632	0.055	0.094	0.005	0.004	0.013	0.000	0.000	0.000	0.000	1393.13	
5	0.6944	1138.9	1159.1	0.460	3.780	74.318	18.619	2.629	0.062	0.107	0.006	0.005	0.014	0.000	0.000	0.000	0.000	1390.91	
6	0.6955	1141.4	1161.7	0.441	3.752	74.146	18.776	2.699	0.059	0.101	0.006	0.005	0.015	0.000	0.000	0.000	0.000	1392.94	
7	0.6968	1144.5	1164.8	0.435	3.700	73.975	18.921	2.765	0.065	0.112	0.006	0.005	0.015	0.000	0.000	0.000	0.000	1395.34	
8	0.6916	1141.6	1161.8	0.311	3.574	74.736	18.640	2.527	0.065	0.119	0.007	0.006	0.016	0.000	0.000	0.000	0.000	1397.03	
9	0.6919	1142.0	1162.2	0.322	3.561	74.777	18.512	2.608	0.067	0.123	0.007	0.007	0.016	0.000	0.000	0.000	0.000	1397.22	
10	0.6976	1150.0	1170.3	0.373	3.528	73.924	19.099	2.849	0.071	0.127	0.007	0.006	0.015	0.000	0.000	0.000	0.000	1401.28	
11	0.6943	1146.2	1166.5	0.394	3.419	74.391	18.932	2.661	0.064	0.115	0.006	0.005	0.013	0.000	0.000	0.000	0.000	1399.97	
12	0.6939	1143.0	1163.3	0.426	3.531	74.596	18.519	2.677	0.074	0.143	0.009	0.009	0.014	0.000	0.000	0.000	0.000	1396.41	
13	0.7000	1148.9	1169.2	0.518	3.608	73.731	18.946	2.912	0.086	0.166	0.010	0.009	0.014	0.000	0.000	0.000	0.000	1397.44	
14	0.7030	1152.2	1172.6	0.566	3.605	73.382	19.078	3.048	0.096	0.190	0.012	0.011	0.009	0.000	0.000	0.000	0.000	1398.56	
15	0.7069	1158.3	1178.8	0.598	3.551	73.099	19.063	3.246	0.121	0.260	0.023	0.025	0.014	0.000	0.000	0.000	0.000	1402.08	
16	0.7059	1155.2	1175.6	0.608	3.632	73.146	18.995	3.251	0.106	0.214	0.015	0.016	0.016	0.000	0.000	0.000	0.000	1399.29	
17	0.7063	1158.3	1178.8	0.567	3.543	73.185	18.983	3.310	0.115	0.243	0.018	0.019	0.016	0.000	0.000	0.000	0.000	1402.66	
18	0.7013	1146.8	1167.1	0.535	3.820	73.635	18.699	2.977	0.100	0.193	0.013	0.012	0.015	0.000	0.000	0.000	0.000	1393.74	
19	0.6974	1145.0	1165.3	0.483	3.648	74.243	18.427	2.907	0.089	0.171	0.010	0.009	0.014	0.000	0.000	0.000	0.000	1395.36	
20	0.6987	1147.6	1167.9	0.503	3.586	73.802	19.070	2.781	0.077	0.150	0.009	0.008	0.013	0.000	0.000	0.000	0.000	1397.22	
21	0.6989	1146.9	1167.2	0.527	3.614	73.832	18.936	2.827	0.080	0.153	0.009	0.009	0.012	0.000	0.000	0.000	0.000	1396.09	
22	0.6980	1144.1	1164.3	0.518	3.714	73.857	18.943	2.718	0.076	0.143	0.009	0.008	0.015	0.000	0.000	0.000	0.000	1393.60	
23	0.7032	1152.9	1173.3	0.525	3.650	73.396	18.941	3.187	0.091	0.175	0.011	0.010	0.014	0.000	0.000	0.000	0.000	1399.15	
24	0.7003	1149.1	1169.5	0.452	3.720	73.758	18.622	3.212	0.077	0.142	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1397.44	
25	0.6980	1144.8	1165.1	0.474	3.736	74.002	18.599	2.940	0.082	0.150	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1394.47	
26	0.6960	1139.6	1159.8	0.465	3.876	74.195	18.469	2.744	0.079	0.152	0.010	0.009	0.000	0.000	0.000	0.000	0.000	1390.19	
27	0.7076	1151.6	1172.0	0.497	4.184	72.003	20.197	2.838	0.078	0.168	0.012	0.013	0.010	0.000	0.000	0.000	0.000	1393.29	
28	0.7003	1148.6	1168.9	0.465	3.733	73.482	19.259	2.772	0.079	0.169	0.014	0.016	0.012	0.000	0.000	0.000	0.000	1396.80	
29	0.6883	1135.7	1155.9	0.381	3.513	75.327	18.135	2.462	0.056	0.112	0.006	0.006	0.001	0.000	0.000	0.000	0.000	1393.23	
30	0.6943	1144.2	1164.4	0.400	3.531	74.632	18.411	2.759	0.071	0.152	0.011	0.012	0.020	0.000	0.000	0.000	0.000	1397.50	
Avg	0.6977	1146.0	1166.2	0.470	3.641	73.987	18.852	2.793	0.078	0.149	0.010	0.009	0.012	0.000	0.000	0.000	0.000	1396.18	

Zone 272

GQ Source Daily Summary

June 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	0.6902	1140.0	1160.1	0.463	3.315	74.813	19.023	2.180	0.068	0.123	0.006	0.006	0.002	0.000	0.000	0.000	0.000	1396.44	
2	0.6892	1136.4	1156.5	0.443	3.470	74.865	18.954	2.067	0.063	0.113	0.007	0.006	0.011	0.000	0.000	0.000	0.000	1393.08	
3	0.6953	1141.9	1162.2	0.479	3.651	74.106	18.982	2.606	0.057	0.097	0.005	0.005	0.011	0.000	0.000	0.000	0.000	1393.69	
4	0.6947	1140.8	1161.0	0.460	3.688	74.243	18.806	2.632	0.055	0.094	0.005	0.004	0.014	0.000	0.000	0.000	0.000	1392.96	
5	0.6944	1139.0	1159.1	0.455	3.778	74.326	18.623	2.625	0.061	0.107	0.006	0.005	0.015	0.000	0.000	0.000	0.000	1391.04	
6	0.6954	1141.3	1161.5	0.442	3.749	74.159	18.772	2.692	0.059	0.101	0.005	0.004	0.015	0.000	0.000	0.000	0.000	1392.90	
7	0.6966	1144.2	1164.4	0.433	3.706	73.996	18.913	2.750	0.065	0.111	0.006	0.005	0.016	0.000	0.000	0.000	0.000	1395.11	
8	0.6920	1142.3	1162.6	0.309	3.569	74.681	18.669	2.561	0.064	0.114	0.007	0.006	0.019	0.000	0.000	0.000	0.000	1397.55	
9	0.6922	1142.6	1162.9	0.321	3.552	74.753	18.533	2.605	0.070	0.130	0.007	0.007	0.022	0.000	0.000	0.000	0.000	1397.71	
10	0.6978	1150.3	1170.7	0.381	3.520	73.891	19.123	2.859	0.071	0.127	0.007	0.006	0.015	0.000	0.000	0.000	0.000	1401.43	
11	0.6945	1146.6	1166.9	0.392	3.415	74.380	18.932	2.675	0.064	0.115	0.006	0.006	0.015	0.000	0.000	0.000	0.000	1400.28	
12	0.6943	1143.4	1163.7	0.428	3.538	74.540	18.555	2.687	0.074	0.143	0.009	0.010	0.016	0.000	0.000	0.000	0.000	1396.52	
13	0.6999	1148.7	1169.0	0.514	3.607	73.763	18.921	2.911	0.086	0.166	0.010	0.009	0.014	0.000	0.000	0.000	0.000	1397.43	
14	0.7028	1152.5	1172.9	0.551	3.601	73.414	19.056	3.053	0.097	0.193	0.012	0.011	0.012	0.000	0.000	0.000	0.000	1399.01	
15	0.7072	1159.1	1179.6	0.593	3.544	73.045	19.103	3.270	0.123	0.262	0.021	0.024	0.014	0.000	0.000	0.000	0.000	1402.66	
16	0.7061	1155.4	1175.8	0.615	3.634	73.104	19.025	3.253	0.107	0.216	0.015	0.016	0.017	0.000	0.000	0.000	0.000	1399.29	
17	0.7065	1158.1	1178.6	0.582	3.556	73.121	19.049	3.282	0.113	0.243	0.018	0.019	0.017	0.000	0.000	0.000	0.000	1402.14	
18	0.7012	1147.0	1167.4	0.538	3.799	73.625	18.745	2.969	0.098	0.188	0.012	0.012	0.016	0.000	0.000	0.000	0.000	1394.04	
19	0.6976	1145.3	1165.6	0.482	3.647	74.209	18.457	2.911	0.088	0.171	0.010	0.009	0.014	0.000	0.000	0.000	0.000	1395.55	
20	0.6987	1147.6	1168.0	0.503	3.580	73.805	19.076	2.778	0.077	0.150	0.009	0.008	0.013	0.000	0.000	0.000	0.000	1397.30	
21	0.6990	1147.2	1167.5	0.529	3.603	73.806	18.974	2.827	0.079	0.152	0.009	0.009	0.012	0.000	0.000	0.000	0.000	1396.36	
22	0.6978	1142.9	1163.2	0.524	3.753	73.869	18.926	2.675	0.076	0.143	0.009	0.008	0.017	0.000	0.000	0.000	0.000	1392.44	
23	0.7033	1153.1	1173.5	0.528	3.647	73.374	18.958	3.191	0.091	0.175	0.011	0.010	0.014	0.000	0.000	0.000	0.000	1399.23	
24	0.6998	1149.4	1169.7	0.449	3.658	73.683	18.961	3.014	0.077	0.142	0.009	0.007	0.000	0.000	0.000	0.000	0.000	1398.30	
25	0.7004	1150.7	1171.1	0.450	3.632	73.602	19.025	3.052	0.078	0.145	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1399.35	
26	0.6991	1147.9	1168.3	0.456	3.674	73.813	18.821	2.995	0.079	0.146	0.009	0.008	0.000	0.000	0.000	0.000	0.000	1397.20	
27	0.7029	1149.2	1169.6	0.484	3.906	73.050	19.356	2.933	0.081	0.164	0.011	0.011	0.005	0.000	0.000	0.000	0.000	1395.05	
28	0.7006	1149.3	1169.6	0.457	3.726	73.439	19.301	2.787	0.078	0.169	0.014	0.016	0.013	0.000	0.000	0.000	0.000	1397.43	
29	0.6872	1133.1	1153.1	0.381	3.577	75.419	18.087	2.362	0.054	0.108	0.006	0.006	0.001	0.000	0.000	0.000	0.000	1391.02	
30	0.6912	1139.6	1159.8	0.392	3.535	74.988	18.265	2.600	0.061	0.124	0.008	0.008	0.019	0.000	0.000	0.000	0.000	1395.00	
Avg	0.6976	1146.0	1166.5	0.468	3.621	73.996	18.866	2.793	0.077	0.148	0.009	0.009	0.012	0.000	0.000	0.000	0.000	1396.58	

Zone 273

GQ Source Daily Summary

June 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	0.6897	1138.6	1158.7	0.455	3.367	74.890	18.932	2.146	0.067	0.120	0.006	0.005	0.013	0.000	0.000	0.000	0.000	1395.23	
2	0.6892	1134.0	1154.1	0.459	3.593	74.842	18.854	2.067	0.058	0.101	0.006	0.005	0.015	0.000	0.000	0.000	0.000	1390.12	
3	0.6963	1143.8	1164.0	0.474	3.638	74.085	18.845	2.788	0.054	0.091	0.005	0.004	0.016	0.000	0.000	0.000	0.000	1394.96	
4	0.6947	1139.8	1159.9	0.463	3.744	74.262	18.729	2.613	0.059	0.102	0.005	0.004	0.018	0.000	0.000	0.000	0.000	1391.71	
5	0.6946	1139.6	1159.8	0.448	3.772	74.300	18.627	2.668	0.057	0.098	0.005	0.004	0.020	0.000	0.000	0.000	0.000	1391.60	
6	0.6950	1140.9	1161.1	0.438	3.742	74.263	18.675	2.691	0.059	0.102	0.005	0.004	0.021	0.000	0.000	0.000	0.000	1392.79	
7	0.6947	1143.5	1163.7	0.381	3.650	74.253	18.854	2.671	0.059	0.103	0.005	0.004	0.020	0.000	0.000	0.000	0.000	1396.16	
8	0.6932	1144.4	1164.6	0.319	3.539	74.525	18.817	2.556	0.072	0.135	0.008	0.008	0.020	0.000	0.000	0.000	0.000	1398.86	
9	0.6940	1144.8	1165.0	0.345	3.557	74.425	18.791	2.664	0.067	0.120	0.006	0.005	0.020	0.000	0.000	0.000	0.000	1398.47	
10	0.6975	1150.1	1170.5	0.397	3.477	73.903	19.208	2.806	0.066	0.116	0.005	0.005	0.018	0.000	0.000	0.000	0.000	1401.52	
11	0.6935	1145.0	1165.3	0.405	3.399	74.546	18.822	2.625	0.062	0.113	0.005	0.005	0.017	0.000	0.000	0.000	0.000	1399.33	
12	0.6960	1144.0	1164.3	0.471	3.594	74.357	18.557	2.736	0.081	0.161	0.011	0.011	0.020	0.000	0.000	0.000	0.000	1395.57	
13	0.7021	1150.1	1170.5	0.560	3.656	73.479	19.018	2.977	0.092	0.179	0.011	0.010	0.019	0.000	0.000	0.000	0.000	1396.98	
14	0.7040	1154.8	1175.2	0.571	3.541	73.324	19.116	3.094	0.100	0.205	0.014	0.015	0.020	0.000	0.000	0.000	0.000	1400.63	
15	0.7067	1157.3	1177.8	0.601	3.587	73.200	18.873	3.297	0.120	0.256	0.020	0.023	0.024	0.000	0.000	0.000	0.000	1401.09	
16	0.7062	1156.7	1177.2	0.603	3.574	73.062	19.156	3.255	0.100	0.202	0.013	0.014	0.021	0.000	0.000	0.000	0.000	1400.89	
17	0.7048	1153.7	1174.1	0.561	3.698	73.259	18.949	3.137	0.110	0.228	0.017	0.018	0.023	0.000	0.000	0.000	0.000	1398.49	
18	0.6983	1144.1	1164.4	0.496	3.769	74.014	18.553	2.881	0.088	0.164	0.009	0.008	0.018	0.000	0.000	0.000	0.000	1393.38	
19	0.6994	1148.2	1168.5	0.510	3.605	73.822	18.916	2.853	0.085	0.168	0.010	0.010	0.020	0.000	0.000	0.000	0.000	1397.19	
20	0.6986	1147.3	1167.6	0.515	3.578	73.793	19.114	2.750	0.074	0.141	0.008	0.007	0.019	0.000	0.000	0.000	0.000	1396.93	
21	0.7000	1147.5	1167.8	0.535	3.665	73.617	19.110	2.807	0.078	0.149	0.009	0.009	0.021	0.000	0.000	0.000	0.000	1395.79	
22	0.6996	1147.7	1168.0	0.515	3.648	73.692	19.049	2.829	0.081	0.152	0.009	0.007	0.019	0.000	0.000	0.000	0.000	1396.40	
23	0.7026	1151.2	1171.6	0.497	3.730	73.553	18.662	3.269	0.084	0.161	0.011	0.010	0.021	0.000	0.000	0.000	0.000	1397.80	
24	0.6996	1147.7	1168.0	0.466	3.723	73.915	18.509	3.131	0.078	0.143	0.008	0.007	0.021	0.000	0.000	0.000	0.000	1396.35	
25	0.6949	1139.7	1159.9	0.452	3.783	74.558	18.126	2.820	0.080	0.146	0.008	0.007	0.020	0.000	0.000	0.000	0.000	1391.44	
26	0.7043	1146.2	1166.5	0.502	4.196	72.550	19.765	2.711	0.076	0.157	0.010	0.011	0.022	0.000	0.000	0.000	0.000	1390.05	
27	0.7045	1151.5	1171.9	0.491	3.903	72.707	19.778	2.831	0.078	0.166	0.012	0.012	0.021	0.000	0.000	0.000	0.000	1396.29	
28	0.6926	1140.2	1160.4	0.413	3.596	74.730	18.458	2.565	0.064	0.133	0.009	0.011	0.022	0.000	0.000	0.000	0.000	1394.37	
29	0.6916	1140.4	1160.6	0.398	3.516	74.990	18.217	2.651	0.062	0.129	0.007	0.007	0.023	0.000	0.000	0.000	0.000	1395.58	
30	0.6932	1143.2	1163.5	0.391	3.499	74.789	18.381	2.673	0.068	0.147	0.011	0.013	0.029	0.000	0.000	0.000	0.000	1397.45	
Avg	0.6977	1146.0	1166.2	0.471	3.645	73.990	18.849	2.785	0.076	0.146	0.009	0.009	0.020	0.000	0.000	0.000	0.000	1396.11	

Zone 28

GQ Source Daily Summary

June 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	0.6428	1068.9	1087.9	0.208	3.562	82.611	12.660	0.916	0.019	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1356.84	
2	0.6368	1058.5	1077.2	0.322	3.469	83.817	11.552	0.810	0.014	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1349.87	
3	0.6414	1068.3	1087.2	0.289	3.356	82.768	12.832	0.733	0.010	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1357.48	
4	0.6416	1068.8	1087.7	0.300	3.324	82.739	12.892	0.722	0.011	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1357.95	
5	0.6536	1093.0	1112.4	0.220	3.099	80.226	15.712	0.732	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1375.81	
6	0.6415	1068.6	1087.5	0.292	3.340	82.770	12.828	0.745	0.011	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1357.78	
7	0.6395	1063.6	1082.4	0.323	3.414	83.184	12.323	0.729	0.012	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1353.51	
8	0.6319	1051.2	1069.8	0.333	3.426	84.802	10.652	0.757	0.014	0.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1345.89	
9	0.6384	1062.3	1081.2	0.222	3.533	83.543	11.719	0.939	0.020	0.025	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1353.09	
10	0.6765	1117.7	1137.5	0.376	3.505	76.998	17.136	1.845	0.049	0.091	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1382.99	
11	0.6924	1136.2	1156.3	0.435	3.783	74.617	18.354	2.647	0.057	0.101	0.000	0.000	0.005	0.000	0.000	0.000	0.000	1389.61	
12	0.6941	1140.8	1161.0	0.413	3.693	74.431	18.521	2.757	0.061	0.112	0.000	0.000	0.012	0.000	0.000	0.000	0.000	1393.59	
13	0.6869	1133.9	1154.0	0.305	3.600	75.568	17.876	2.447	0.065	0.118	0.003	0.003	0.016	0.000	0.000	0.000	0.000	1392.36	
14	0.6927	1142.4	1162.6	0.358	3.546	74.709	18.461	2.713	0.069	0.128	0.000	0.000	0.016	0.000	0.000	0.000	0.000	1396.92	
15	0.6921	1143.3	1163.5	0.402	3.368	74.740	18.713	2.590	0.059	0.111	0.000	0.000	0.018	0.000	0.000	0.000	0.000	1398.64	
16	0.6109	1029.1	1047.3	0.670	2.282	89.706	6.521	0.762	0.015	0.026	0.000	0.000	0.017	0.000	0.000	0.000	0.000	1339.88	
17	0.5819	993.1	1010.7	0.833	1.497	95.297	2.128	0.234	0.000	0.001	0.000	0.000	0.010	0.000	0.000	0.000	0.000	1324.95	
18	0.5968	1014.9	1032.9	0.700	1.782	92.212	4.922	0.361	0.003	0.007	0.000	0.000	0.013	0.000	0.000	0.000	0.000	1336.69	
19	0.6761	1146.3	1166.6	0.000	2.313	75.400	21.671	0.612	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.000	0.000	1418.71	
20	0.6764	1146.5	1166.8	0.000	2.328	75.321	21.737	0.614	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.65	
21	0.6770	1147.4	1167.7	0.000	2.329	75.200	21.850	0.620	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.18	
22	0.6770	1147.5	1167.8	0.000	2.324	75.211	21.835	0.630	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.26	
23	0.6758	1145.6	1165.9	0.000	2.320	75.471	21.589	0.616	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.000	1418.25	
24	0.6291	1067.7	1086.6	0.419	2.032	85.565	11.324	0.627	0.007	0.015	0.000	0.000	0.010	0.000	0.000	0.000	0.000	1369.37	
25	0.6957	1141.8	1162.0	0.536	3.593	74.501	18.260	2.837	0.087	0.177	0.000	0.000	0.009	0.000	0.000	0.000	0.000	1393.18	
26	0.6990	1145.9	1166.2	0.539	3.654	74.049	18.448	3.007	0.094	0.192	0.001	0.002	0.014	0.000	0.000	0.000	0.000	1394.81	
27	0.6973	1142.7	1163.0	0.473	3.788	74.202	18.288	2.998	0.080	0.151	0.000	0.000	0.020	0.000	0.000	0.000	0.000	1392.67	
28	0.6926	1135.6	1155.7	0.451	3.808	74.916	17.817	2.757	0.080	0.152	0.000	0.000	0.020	0.000	0.000	0.000	0.000	1388.73	
29	0.6895	1131.7	1151.8	0.433	3.783	75.453	17.384	2.708	0.075	0.145	0.000	0.000	0.020	0.000	0.000	0.000	0.000	1387.06	
30	0.7049	1144.4	1164.6	0.539	4.301	72.431	19.700	2.760	0.079	0.171	0.000	0.000	0.017	0.000	0.000	0.000	0.000	1387.19	
Avg	0.6627	1103.0	1122.8	0.346	3.138	79.415	15.523	1.474	0.033	0.061	0.000	0.000	0.008	0.000	0.000	0.000	0.000	1379.03	

Zone 31

GQ Source Daily Summary

June 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	0.6164	1016.2	1034.2	0.483	3.885	88.201	6.539	0.837	0.023	0.026	0.003	0.002	0.002	0.000	0.000	0.000	0.000	1317.25	
2	0.6184	1020.3	1038.4	0.429	3.904	87.782	6.944	0.886	0.021	0.027	0.003	0.002	0.002	0.000	0.000	0.000	0.000	1320.45	
3	0.6243	1030.7	1049.0	0.367	3.923	86.687	7.904	1.060	0.023	0.029	0.003	0.002	0.002	0.000	0.000	0.000	0.000	1327.51	
4	0.6129	1010.7	1028.6	0.510	3.854	88.863	5.954	0.766	0.020	0.025	0.003	0.002	0.002	0.000	0.000	0.000	0.000	1313.79	
5	0.6823	1151.0	1171.4	0.035	2.560	74.390	22.200	0.771	0.012	0.025	0.002	0.003	0.001	0.000	0.000	0.000	0.000	1417.93	
6	0.6832	1155.3	1175.7	0.005	2.431	74.033	22.843	0.670	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.45	
7	0.6851	1158.7	1179.3	0.001	2.408	73.717	23.110	0.744	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.69	
8	0.6795	1146.4	1166.7	0.041	2.573	74.848	21.804	0.710	0.009	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1415.29	
9	0.6732	1134.0	1154.1	0.082	2.671	76.127	20.417	0.679	0.010	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1406.58	
10	0.6783	1144.4	1164.6	0.050	2.564	75.165	21.441	0.756	0.009	0.013	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1414.09	
11	0.6789	1144.8	1165.1	0.047	2.603	75.133	21.359	0.808	0.014	0.029	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1413.95	
12	0.6781	1142.0	1162.2	0.072	2.658	75.243	21.221	0.774	0.012	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1411.34	
13	0.6872	1152.9	1173.3	0.122	2.771	73.913	21.926	1.206	0.021	0.037	0.002	0.001	0.001	0.000	0.000	0.000	0.000	1415.36	
14	0.6884	1155.2	1175.7	0.110	2.761	73.732	22.054	1.277	0.022	0.038	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1416.99	
15	0.6875	1149.9	1170.2	0.145	2.946	74.289	20.957	1.554	0.035	0.064	0.003	0.003	0.004	0.000	0.000	0.000	0.000	1411.36	
16	0.6887	1154.6	1175.0	0.129	2.795	73.923	21.608	1.454	0.029	0.053	0.002	0.002	0.005	0.000	0.000	0.000	0.000	1415.95	
17	0.6867	1153.8	1174.2	0.108	2.694	74.095	21.752	1.283	0.023	0.040	0.002	0.001	0.003	0.000	0.000	0.000	0.000	1416.95	
18	0.6845	1151.0	1171.3	0.108	2.661	74.414	21.596	1.155	0.022	0.038	0.002	0.001	0.003	0.000	0.000	0.000	0.000	1415.74	
19	0.6856	1154.1	1174.5	0.090	2.599	74.098	22.074	1.081	0.019	0.033	0.001	0.001	0.003	0.000	0.000	0.000	0.000	1418.48	
20	0.6826	1151.9	1172.3	0.045	2.517	74.388	22.184	0.832	0.012	0.019	0.000	0.000	0.002	0.000	0.000	0.000	0.000	1418.90	
21	0.6825	1154.3	1174.7	0.006	2.429	74.135	22.783	0.629	0.007	0.010	0.000	0.000	0.001	0.000	0.000	0.000	0.000	1421.92	
22	0.6850	1157.9	1178.4	0.003	2.445	73.719	23.092	0.723	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.77	
23	0.6835	1155.7	1176.2	0.003	2.439	73.992	22.852	0.695	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.63	
24	0.6842	1157.3	1177.8	0.000	2.412	73.814	23.092	0.664	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.91	
25	0.6839	1156.6	1177.1	0.000	2.429	73.841	23.078	0.636	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.30	
26	0.6728	1132.1	1152.2	0.223	2.528	76.902	19.172	1.104	0.023	0.041	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1404.67	
27	0.6916	1152.7	1173.1	0.262	2.978	73.862	21.003	1.733	0.048	0.096	0.006	0.006	0.006	0.000	0.000	0.000	0.000	1410.64	
28	0.6909	1152.5	1172.9	0.212	3.005	73.972	20.845	1.839	0.040	0.074	0.004	0.004	0.006	0.000	0.000	0.000	0.000	1411.05	
29	0.6848	1151.5	1171.9	0.083	2.693	74.295	21.736	1.131	0.021	0.035	0.002	0.001	0.004	0.000	0.000	0.000	0.000	1416.11	
30	0.6867	1151.8	1172.2	0.129	2.779	74.147	21.578	1.284	0.027	0.049	0.002	0.002	0.003	0.000	0.000	0.000	0.000	1414.55	
Avg	0.6749	1133.0	1153.4	0.130	2.797	76.191	19.837	0.991	0.018	0.030	0.002	0.001	0.002	0.000	0.000	0.000	0.000	1403.59	

Zone 32

GQ Source Daily Summary

June 2011

Number: 111

Pressure Base: 14.730

Contract Day: 1

Name: LITTLE KNIFE PLANT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value	Heating Value	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
		Wet	Dry																
1	0.6848	1157.1	1177.5	0.000	2.483	73.592	23.339	0.570	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.96
2	0.6886	1162.7	1183.3	0.000	2.501	72.924	23.864	0.695	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.89
3	0.6906	1166.5	1187.1	0.000	2.453	72.684	24.028	0.799	0.011	0.019	0.002	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1428.52
4	0.6876	1162.5	1183.1	0.000	2.410	73.149	23.739	0.686	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.81
5	0.6877	1162.9	1183.5	0.000	2.394	73.175	23.691	0.722	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.21
6	0.6900	1165.8	1186.4	0.000	2.435	72.754	24.017	0.776	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1428.33
7	0.6872	1161.6	1182.2	0.000	2.432	73.202	23.681	0.669	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.08
8	0.6903	1167.0	1187.7	0.000	2.399	72.699	24.091	0.789	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1429.40
9	0.6885	1163.3	1183.9	0.000	2.447	73.051	23.712	0.770	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.82
10	0.6893	1164.5	1185.1	0.000	2.455	73.017	23.645	0.824	0.016	0.032	0.003	0.004	0.002	0.000	0.000	0.000	0.000	0.000	1427.38
11	0.6882	1163.1	1183.7	0.000	2.434	73.047	23.787	0.716	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.88
12	0.6894	1165.2	1185.9	0.000	2.412	72.869	23.936	0.767	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1428.30
13	0.6897	1165.7	1186.4	0.000	2.417	72.814	23.968	0.778	0.008	0.013	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	1428.51
14	0.6882	1163.4	1184.0	0.000	2.414	73.099	23.715	0.755	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.22
15	0.6874	1162.6	1183.2	0.000	2.391	73.256	23.578	0.759	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.08
16	0.6860	1160.7	1181.3	0.000	2.367	73.524	23.369	0.721	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.29
17	0.6869	1161.8	1182.3	0.000	2.392	73.264	23.672	0.656	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.58
18	0.6862	1160.5	1181.0	0.000	2.408	73.387	23.542	0.647	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.71
19	0.6880	1163.1	1183.7	0.000	2.421	73.055	23.822	0.687	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.00
20	0.6896	1165.5	1186.1	0.000	2.420	72.816	23.986	0.761	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1428.34
21	0.6879	1163.2	1183.8	0.000	2.398	73.108	23.776	0.701	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.30
22	0.6870	1161.8	1182.4	0.000	2.399	73.249	23.676	0.658	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.52
23	0.6859	1159.5	1180.0	0.000	2.439	73.398	23.547	0.602	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.81
24	0.6893	1165.2	1185.8	0.000	2.412	72.849	23.981	0.742	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1428.27
25	0.6885	1164.1	1184.8	0.000	2.396	73.036	23.799	0.752	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.86
26	0.6881	1163.2	1183.8	0.000	2.414	73.068	23.794	0.709	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.16
27	0.6881	1163.3	1183.9	0.000	2.414	73.077	23.770	0.722	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.19
28	0.6867	1161.6	1182.2	0.000	2.387	73.367	23.503	0.726	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.54
29	0.6861	1160.2	1180.7	0.000	2.411	73.376	23.592	0.607	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.50
30	0.6879	1154.3	1174.7	0.000	2.950	73.039	23.262	0.732	0.008	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.34
Avg	0.6880	1163.0	1183.3	0.000	2.437	73.098	23.729	0.717	0.007	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.63

Zone 33

GQ Source Daily Summary

June 2011

Number: 331

Pressure Base: 14.730

Contract Day: 1

Name: MARMARTH PLANT

Temperature Base:

Contract Hour: 9

Day	Relative Density	Heating Value	Heating Value																
		Wet	Dry	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	CCT
1	0.7949	1135.9	1156.0	2.124	10.904	54.623	29.329	2.720	0.068	0.198	0.008	0.022	0.004	0.000	0.000	0.000	0.000	0.000	1296.58
2	0.8096	1160.9	1181.5	2.069	10.825	53.573	28.911	3.996	0.131	0.412	0.020	0.054	0.009	0.000	0.000	0.000	0.000	0.000	1312.93
3	0.8024	1142.5	1162.8	2.213	11.064	53.962	29.067	3.274	0.091	0.277	0.013	0.034	0.006	0.000	0.000	0.000	0.000	0.000	1297.94
4	0.7981	1134.1	1154.2	2.256	11.110	54.154	29.369	2.816	0.067	0.195	0.008	0.021	0.004	0.000	0.000	0.000	0.000	0.000	1291.95
5	0.7997	1137.1	1157.2	2.257	11.081	53.903	29.579	2.879	0.068	0.199	0.008	0.022	0.004	0.000	0.000	0.000	0.000	0.000	1294.03
6	0.7951	1132.3	1152.4	1.691	11.791	54.712	28.160	3.286	0.081	0.238	0.010	0.026	0.005	0.000	0.000	0.000	0.000	0.000	1292.29
7	0.8068	1150.6	1171.0	2.198	11.007	53.158	29.755	3.538	0.081	0.230	0.009	0.023	0.003	0.000	0.000	0.000	0.000	0.000	1303.65
8	0.8134	1160.8	1181.3	2.297	10.847	53.221	28.553	4.659	0.104	0.281	0.010	0.024	0.004	0.000	0.000	0.000	0.000	0.000	1309.84
9	0.7993	1137.0	1157.2	2.275	11.014	54.648	28.297	3.421	0.080	0.229	0.009	0.024	0.004	0.000	0.000	0.000	0.000	0.000	1294.14
10	0.8015	1140.5	1160.7	2.470	10.714	53.815	29.784	2.934	0.065	0.188	0.008	0.020	0.003	0.000	0.000	0.000	0.000	0.000	1296.51
11	0.8025	1138.3	1158.5	2.537	10.838	53.813	29.459	3.055	0.068	0.197	0.008	0.021	0.003	0.000	0.000	0.000	0.000	0.000	1293.21
12	0.8085	1147.8	1168.2	2.466	10.922	53.708	28.508	3.959	0.099	0.291	0.012	0.031	0.004	0.000	0.000	0.000	0.000	0.000	1299.11
13	0.8019	1149.8	1170.1	2.024	10.862	54.289	28.788	3.589	0.098	0.294	0.013	0.036	0.007	0.000	0.000	0.000	0.000	0.000	1306.55
14	0.7944	1134.3	1154.4	2.274	10.731	54.609	29.587	2.547	0.057	0.166	0.007	0.018	0.003	0.000	0.000	0.000	0.000	0.000	1295.15
15	0.6967	1045.8	1064.3	1.432	8.206	72.870	15.882	1.459	0.037	0.098	0.004	0.010	0.003	0.000	0.000	0.000	0.000	0.000	1278.07
16	0.7437	1066.8	1085.7	2.259	10.095	64.449	20.987	1.985	0.051	0.147	0.006	0.017	0.003	0.000	0.000	0.000	0.000	0.000	1261.70
17	0.7845	1109.4	1129.1	2.542	10.906	56.793	27.042	2.464	0.057	0.168	0.007	0.018	0.003	0.000	0.000	0.000	0.000	0.000	1274.94
18	0.8010	1126.2	1146.1	2.707	11.179	53.993	28.993	2.848	0.063	0.185	0.008	0.020	0.003	0.000	0.000	0.000	0.000	0.000	1280.63
19	0.7986	1127.1	1147.1	2.487	11.240	54.160	29.058	2.787	0.061	0.178	0.007	0.019	0.003	0.000	0.000	0.000	0.000	0.000	1283.54
20	0.7977	1123.6	1143.5	2.513	11.322	54.330	28.817	2.753	0.061	0.177	0.007	0.019	0.003	0.000	0.000	0.000	0.000	0.000	1280.37
21	0.7970	1123.0	1142.9	2.363	11.522	54.274	28.838	2.735	0.061	0.178	0.007	0.019	0.003	0.000	0.000	0.000	0.000	0.000	1280.22
22	0.7955	1122.0	1141.9	2.332	11.489	54.494	28.732	2.695	0.059	0.171	0.007	0.018	0.003	0.000	0.000	0.000	0.000	0.000	1280.29
23	0.7959	1125.2	1145.1	2.351	11.306	54.488	28.875	2.721	0.060	0.172	0.007	0.018	0.003	0.000	0.000	0.000	0.000	0.000	1283.57
24	0.7950	1124.4	1144.3	2.334	11.297	54.606	28.832	2.666	0.060	0.175	0.007	0.019	0.003	0.000	0.000	0.000	0.000	0.000	1283.41
25	0.7988	1128.0	1148.0	2.476	11.212	54.141	29.099	2.804	0.061	0.178	0.007	0.019	0.003	0.000	0.000	0.000	0.000	0.000	1284.48
26	0.7978	1128.6	1148.6	2.420	11.166	54.272	29.096	2.780	0.061	0.177	0.007	0.018	0.003	0.000	0.000	0.000	0.000	0.000	1285.98
27	0.7979	1119.1	1138.9	2.689	11.352	54.476	28.444	2.767	0.062	0.181	0.007	0.019	0.003	0.000	0.000	0.000	0.000	0.000	1275.00
28	0.7957	1119.9	1139.7	2.443	11.476	54.599	28.491	2.728	0.060	0.175	0.007	0.019	0.003	0.000	0.000	0.000	0.000	0.000	1277.62
29	0.8114	1149.4	1169.8	2.304	11.344	53.539	28.056	4.087	0.134	0.435	0.023	0.064	0.014	0.000	0.000	0.000	0.000	0.000	1297.95
30	0.7949	1113.7	1133.4	2.549	11.611	54.781	28.163	2.617	0.063	0.184	0.008	0.021	0.003	0.000	0.000	0.000	0.000	0.000	1271.29
Avg	0.7943	1128.0	1148.5	2.312	11.014	55.215	28.152	2.986	0.072	0.212	0.009	0.024	0.004	0.000	0.000	0.000	0.000	0.000	1288.76

*** End of Report***

Zone 34

GQ Source Analysis

Williston Basin Interstate Pipeline Co.

Attachment B
Page 16 of 16

GQ Source Number:	1201140	Specific Gravity:	0.5726
GQ Source Name:	EAGLE 8B ND	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		CO2 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	JUNE 11	MAY 11	APR 11	MAR 11	FEB 11	JAN 11	DEC 10	NOV 10	OCT 10	SEPT 10	AUG 10	JULY 10	ZONE
MT/ND	211	Sidney Area	1209	1205	1206	1202	1211	1216	1212	1218	1210	1206	1209	1208	1204	211
ND	24	Williston Area	1201	1197	1196	1194	1198	1196	1204	1207	1208	1193	1200	1212	1208	24
ND	25	Watford City Area	1135	1140	1128	1143	1143	1131	1150	1135	1133	1130	1133	1129	1130	25
ND/MT	241	Fairview Area	1194	1193	1193	1194	1197	0	0	0	0	0	0	0	0	241
ND	261	Williston - Tioga - Minot Line	1158	1165	1159	1162	1172	1176	1171	1154	1135	1140	1145	1161	1160	261
ND	262	Minot Area	1181	1168	1161	1167	1175	1178	1182	1191	1186	1190	1191	1189	1193	262
ND	263	Tioga - Portal	1107	1082	1093	1123	1094	1090	1094	1100	1107	1120	1133	1127	1124	263
ND	264	Williston - Ray	1201	1197	1196	1194	1198	1196	1204	1207	1208	1193	1200	1212	1208	264
ND	271	Bismarck - Cleveland	1163	1166	1152	1161	1136	1118	1130	1160	1172	1190	1191	1187	1193	271
ND	272	Cleveland - Mapleton	1162	1166	1151	1161	1134	1117	1130	1159	1171	1190	1190	1187	1193	272
ND	273	Cleveland - Grafton	1163	1167	1151	1161	1135	1117	1130	1159	1172	1190	1190	1187	1193	273
ND	28	Bismarck - Cabin Creek	1121	1166	1139	1112	1051	1042	1045	1055	1097	1173	1191	1182	1193	28
ND	31	Dickinson Area	1069	1123	1109	1093	1049	1040	1044	1053	1082	1088	1056	1065	1023	31
ND/MT	32	Cabin Creek - Dickinson	1057	1153	1080	1071	1046	1037	1041	1050	1079	1075	1040	1031	986	32
ND	33	Killdeer	1177	1183	1180	1177	1175	1175	1175	1175	1177	1179	1179	1177	1177	33
ND	34	Bowman Area	1159	1149	1153	1154	1163	1158	1163	1172	1167	1163	1157	1157	1156	34
ND	35	Baker Field - North Dakota	979	979	979	979	979	979	979	979	979	979	979	979	979	35

**THERMAL ZONE VARIANCE
DOCUMENTATION**

June 2011

ZONE	BTU VARIANCE	REASON
28	27	Higher BTU coming from the North & East
32	73	Higher BTU coming from the North & East