



MONTANA-DAKOTA

UTILITIES CO.

A Division of MDU Resources Group, Inc.

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

September 9, 2011

RECEIVED

SEP 12 2011

PUBLIC SERVICE COMMISSION

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

Re: Case No. 11,006 (Therm Billing)
Monthly Report – July 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 August 2011.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our supplier for the month of July 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 July 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
 AUG 2011

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	314	APPLE VALLEY	271	1.1357
12	327	BISMARCK	28	1.1386
12	343	CARRINGTON	273	1.1376
12	344	CLEVELAND	272	1.1296
12	364	CAVALIER	273	1.1616
12	365	DAWSON	271	1.1277
12	374	FT TOTTEN	273	1.1456
12	375	DEVILS LAKE	273	1.1456
12	379	BARLOW	273	1.1376
12	387	ELDRIDGE	272	1.1376
12	411	GLEN ULLIN	31	1.0720
12	417	GRAFTON	273	1.1696
12	439	HANKINSON	600	1.0778
12	449	JAMESTOWN	272	1.1456
12	463	LANGDON	273	1.1376
12	475	LINTON	802	.9736
12	478	LINCOLN	28	1.1386
12	494	MEDINA	271	1.1277
12	498	MANDAN	28	1.1386
12	524	NEW SALEM	28	1.1145
12	532	NEW ROCKFORD	273	1.1376
12	539	PARK RIVER	273	1.1616
12	574	SANBORN	272	1.1456
12	593	STEELE	271	1.1277
12	598	SHEYENNE	273	1.1456
12	610	TAPPEN	271	1.1277
12	625	VALLEY CITY	272	1.1535
12	629	WALHALLA	273	1.1616
12	647	WILTON	262	1.1136
12	717	SPIRITWOOD	272	1.1456
12	718	FAIRMOUNT	600	1.0756
12	732	MSR SITE	273	1.1376
12	733	PAR SITE	273	1.1376
15	303	ALEXANDER	25	1.0720
15	308	ARNEGARD	25	1.0720

MONTANA-DAKOTA UTILITIES CO.
 Therm Billing Factor
 AUG 2011

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	318	BEACH	32	1.0470
15	319	BELFIELD	32	1.0547
15	323	BERTHOLD	262	1.1136
15	330	BOWMAN	34	1.0494
15	337	BURLINGTON	262	1.1376
15	368	DES LACS	262	1.1216
15	369	DICKINSON	31	1.0643
15	384	EPPING	264	1.1315
15	407	GLADSTONE	31	1.0643
15	413	GOLVA	32	1.0317
15	416	GARRISON	262	1.1216
15	429	HEBRON	31	1.0720
15	459	KILLDEER	33	1.1164
15	469	LEFOR	31	1.0643
15	474	LIGNITE	263	1.0712
15	500	MARMARTH	34	1.0572
15	505	MINOT	262	1.1376
15	510	MOTT	31	1.0643
15	512	MAX	262	1.1136
15	522	NEW ENGLAND	31	1.0566
15	540	PALERMO	262	1.1136
15	558	RAY	264	1.1315
15	561	REGENT	31	1.0643
15	563	RHAME	34	1.0417
15	564	RICHARDTON	31	1.0566
15	568	ROSS	261	1.1027
15	572	RUTHVILLE	262	1.1376
15	583	SENTINEL BUTTE	32	1.0470
15	588	SOUTH HEART	31	1.0566
15	590	SPRINGBROOK	264	1.1315
15	591	STANLEY	261	1.1107
15	605	SURREY	262	1.1376
15	611	TAYLOR	31	1.0566
15	616	TIOGA	261	1.1027
15	619	TURTLE LAKE	262	1.1216

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
AUG 2011

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	620	TRENTON	24	1.1397
15	624	UNDERWOOD	262	1.1216
15	632	WATFORD CITY	25	1.0720
15	636	WHEELLOCK	264	1.1234
15	637	WHITE EARTH	261	1.1107
15	642	WILLISTON	24	1.1397
15	646	WASHBURN	262	1.1296
15	664	RIVERDALE	262	1.1216
15	691	FAIRVIEW	241	1.1406
15	712	MINOT AFB	262	1.1376
15	743	BAKER FIELD	35	.8980

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

GQ Source Daily Summary

July 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	0.7198	1190.8	1211.9	0.279	3.280	69.689	23.217	3.368	0.062	0.095	0.004	0.004	0.001	0.000	0.000	0.000	0.000	1428.40	
2	0.7187	1194.8	1215.9	0.125	3.164	69.706	23.506	3.376	0.051	0.067	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1434.31	
3	0.7184	1197.1	1218.3	0.053	3.107	69.691	23.637	3.409	0.046	0.054	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1437.34	
4	0.7186	1196.8	1218.0	0.060	3.134	69.624	23.689	3.395	0.046	0.049	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1436.80	
5	0.7171	1194.7	1215.9	0.055	3.124	69.838	23.604	3.268	0.055	0.053	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1435.82	
6	0.7242	1206.7	1228.1	0.053	3.058	68.949	24.055	3.738	0.061	0.080	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1443.12	
7	0.7232	1204.0	1225.3	0.091	3.078	68.990	24.131	3.577	0.055	0.073	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1440.81	
8	0.7224	1184.3	1205.2	0.554	3.502	69.532	22.843	3.312	0.090	0.151	0.008	0.007	0.001	0.000	0.000	0.000	0.000	1418.06	
9	0.7192	1198.5	1219.8	0.055	3.092	69.644	23.585	3.518	0.046	0.055	0.001	0.002	0.001	0.000	0.000	0.000	0.000	1438.27	
10	0.7206	1200.6	1221.9	0.049	3.096	69.629	23.370	3.730	0.059	0.061	0.001	0.002	0.001	0.000	0.000	0.000	0.000	1439.39	
11	0.7159	1191.9	1213.0	0.074	3.154	70.069	23.363	3.216	0.051	0.068	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1433.64	
12	0.7195	1193.3	1214.5	0.174	3.252	69.808	23.052	3.573	0.058	0.078	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1431.81	
13	0.7196	1190.2	1211.2	0.263	3.322	69.739	23.134	3.359	0.067	0.105	0.005	0.005	0.001	0.000	0.000	0.000	0.000	1427.91	
14	0.7169	1195.0	1216.2	0.051	3.090	69.961	23.431	3.367	0.044	0.052	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1436.41	
15	0.7234	1198.6	1219.9	0.213	3.236	69.424	23.114	3.803	0.078	0.119	0.006	0.005	0.002	0.000	0.000	0.000	0.000	1434.28	
16	0.7182	1195.5	1216.7	0.054	3.184	69.826	23.333	3.484	0.059	0.057	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1435.62	
17	0.7310	1199.6	1220.9	0.496	3.458	68.779	22.705	4.248	0.108	0.185	0.010	0.009	0.002	0.000	0.000	0.000	0.000	1427.96	
18	0.7332	1190.7	1211.8	0.804	3.732	68.684	22.277	4.053	0.145	0.271	0.017	0.015	0.002	0.000	0.000	0.000	0.000	1415.35	
19	0.7169	1195.0	1216.2	0.040	3.113	69.929	23.497	3.287	0.055	0.072	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1436.33	
20	0.7142	1189.6	1210.7	0.044	3.179	70.135	23.528	3.016	0.040	0.052	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1432.64	
21	0.7138	1186.6	1207.6	0.134	3.190	70.386	23.115	3.052	0.049	0.068	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1429.40	
22	0.7282	1183.0	1203.9	0.809	3.738	68.979	22.629	3.448	0.128	0.241	0.015	0.012	0.002	0.000	0.000	0.000	0.000	1410.93	
23	0.7310	1193.2	1214.4	0.666	3.586	68.718	22.750	3.897	0.126	0.229	0.014	0.012	0.001	0.000	0.000	0.000	0.000	1420.45	
24	0.7160	1189.1	1210.1	0.127	3.258	69.926	23.504	3.065	0.048	0.067	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1430.18	
25	0.7316	1192.7	1213.8	0.722	3.587	68.558	22.910	3.883	0.111	0.204	0.012	0.011	0.002	0.000	0.000	0.000	0.000	1419.36	
26	0.7441	1194.7	1215.8	1.183	3.935	67.716	21.830	4.815	0.166	0.313	0.021	0.018	0.003	0.000	0.000	0.000	0.000	1409.51	
27	0.7426	1192.0	1213.1	1.185	3.955	68.087	21.367	4.879	0.167	0.320	0.020	0.017	0.004	0.000	0.000	0.000	0.000	1407.76	
28	0.7405	1189.4	1210.5	1.156	3.960	68.261	21.445	4.649	0.167	0.322	0.019	0.017	0.003	0.000	0.000	0.000	0.000	1406.70	
29	0.7299	1196.0	1217.2	0.562	3.471	68.889	22.757	3.954	0.119	0.220	0.012	0.012	0.004	0.000	0.000	0.000	0.000	1424.88	
30	0.7135	1189.5	1210.5	0.042	3.129	70.412	23.184	3.119	0.051	0.058	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1433.09	
31	0.7128	1189.8	1210.9	0.046	3.034	70.519	23.225	3.069	0.057	0.049	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1434.21	
Avg	0.7231	1194.0	1214.8	0.330	3.329	69.423	23.090	3.611	0.080	0.126	0.006	0.006	0.002	0.000	0.000	0.000	0.000	1428.73	

Zone 211

GQ Source Analysis

Williston Basin Interstate Pipeline Co.

Attachment B
Page 2 of 16

GQ Source Number:	0602330	Specific Gravity:	0.7296
GQ Source Name:	WILLISTON BORDER	BTU Base:	Dry
Effective Date:	7/1/2011 9:00:00 AM	Measured Heat Value:	1201.39
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	1198.17
Pressure Base:	14.730	Wet Heat Value:	1177.32
Viscosity:		As Deliv. Heat Value:	1198.17
		Sample Pressure:	462.00
		Sample Temperature:	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	69.187		CO2	Carbon Dioxide	0.929
C2	Ethane	21.437	0.000	N2	Nitrogen	3.987
C3	Propane	3.943	1.083	O2	Oxygen	0.000
IC4	Iso-Butane	0.165	0.054	HE	Helium	
NC4	N-Butane	0.310	0.097	H2	Hydrogen	
IC5	Iso-Pentane	0.021	0.008	H2S	Hydrogen Sulfide	
NC5	N-Pentane	0.019	0.007	AR	Argon	
C6	Hexane	0.003	0.001	CO	Carbon Monoxide	
C7	Heptane			H2O	Water	
C8	Octane			Neo-C5	Neo-Pentane	
C9	Nonane					
C10	Decane					

Totals 99.999% 1.250 GPM

Sample Date: 7/31/2011 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
Page 3 of 16

GQ Source Number:	0602160	Specific Gravity:	0.7323
GQ Source Name:	FAIRVIEW BORDER	BTU Base:	Dry
Effective Date:	7/1/2011 9:00:00 AM	Measured Heat Value:	1202.19
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	1198.92
Pressure Base:	14.730	Wet Heat Value:	1178.06
Viscosity:		As Deliv. Heat Value:	1198.92
		Sample Pressure:	365.00
		Sample Temperature:	

	<u>Mol %</u>	<u>GPM</u>		<u>Mol %</u>
C1 Methane	68.639		CO2 Carbon Dioxide	1.081
C2 Ethane	21.923	5.846	N2 Nitrogen	3.971
C3 Propane	3.914	1.075	O2 Oxygen	0.000
IC4 Iso-Butane	0.152	0.050	HE Helium	
NC4 N-Butane	0.285	0.090	H2 Hydrogen	
IC5 Iso-Pentane	0.019	0.007	H2S Hydrogen Sulfide	
NC5 N-Pentane	0.016	0.006	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% 7.073 GPM

Sample Date: 7/31/2011 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
Sample Remarks:

Analysis Tech: Mary Berger

Analysis Remarks:

Zone 241

GQ Source Daily Summary

July 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	0.7078	1164.6	1185.2	0.403	3.543	73.108	19.171	3.133	0.144	0.362	0.041	0.054	0.041					1408.79	
2	0.7126	1175.2	1196.0	0.390	3.363	73.255	18.435	3.664	0.192	0.501	0.059	0.079	0.063					1416.77	
3	0.7101	1171.6	1192.3	0.377	3.369	73.473	18.314	3.721	0.167	0.414	0.046	0.062	0.057					1414.90	
4	0.7038	1161.3	1181.8	0.365	3.424	73.911	18.417	3.312	0.136	0.322	0.033	0.042	0.036					1408.77	
5	0.6951	1146.7	1167.0	0.391	3.467	74.590	18.435	2.805	0.087	0.180	0.013	0.015	0.018					1399.74	
6	0.6905	1140.6	1160.8	0.353	3.468	74.961	18.536	2.461	0.063	0.127	0.009	0.010	0.012					1396.91	
7	0.6926	1143.3	1163.5	0.395	3.442	74.699	18.686	2.527	0.069	0.146	0.010	0.012	0.014					1398.04	
8	0.6951	1143.2	1163.5	0.418	3.641	74.360	18.641	2.676	0.076	0.155	0.011	0.012	0.012					1395.52	
9	0.6969	1146.6	1166.9	0.419	3.608	74.002	19.023	2.682	0.075	0.156	0.011	0.012	0.013					1397.77	
10	0.7034	1157.7	1178.2	0.409	3.548	73.768	18.591	3.155	0.126	0.299	0.033	0.042	0.030					1404.77	
11	0.7153	1176.5	1197.4	0.417	3.496	72.863	18.511	3.810	0.198	0.506	0.063	0.083	0.053					1415.73	
12	0.7203	1182.4	1203.4	0.490	3.491	72.187	18.976	3.851	0.221	0.565	0.071	0.094	0.054					1417.89	
13	0.7156	1176.9	1197.7	0.495	3.387	72.572	19.008	3.759	0.178	0.430	0.050	0.064	0.056					1415.84	
14	0.7032	1156.2	1176.6	0.521	3.451	73.298	19.390	3.020	0.095	0.191	0.012	0.012	0.010					1403.20	
15	0.7010	1154.8	1175.2	0.461	3.422	73.563	19.333	2.906	0.092	0.187	0.012	0.013	0.010					1403.68	
16	0.7038	1158.7	1179.2	0.487	3.407	73.245	19.442	3.079	0.101	0.203	0.013	0.013	0.010					1405.63	
17	0.7062	1162.3	1182.9	0.479	3.428	73.086	19.327	3.266	0.115	0.243	0.019	0.021	0.015					1407.54	
18	0.7129	1172.5	1193.2	0.478	3.430	72.726	19.020	3.690	0.158	0.371	0.040	0.051	0.037					1413.20	
19	0.7141	1170.7	1191.4	0.530	3.572	72.397	19.200	3.715	0.138	0.323	0.037	0.047	0.041					1409.91	
20	0.7034	1154.4	1174.8	0.496	3.617	73.460	18.935	3.100	0.105	0.227	0.020	0.023	0.018					1400.81	
21	0.7055	1158.8	1179.3	0.470	3.582	73.445	18.713	3.298	0.125	0.280	0.027	0.034	0.026					1404.05	
22	0.7035	1155.8	1176.3	0.488	3.552	73.495	18.915	3.144	0.112	0.241	0.019	0.021	0.013					1402.44	
23	0.7019	1153.4	1173.8	0.493	3.541	73.535	19.047	3.083	0.090	0.180	0.011	0.011	0.008					1401.11	
24	0.7001	1149.6	1169.9	0.499	3.602	73.767	18.869	2.964	0.090	0.181	0.011	0.011	0.006					1398.22	
25	0.7030	1156.2	1176.6	0.467	3.515	73.680	18.713	3.211	0.111	0.241	0.020	0.024	0.018					1403.35	
26	0.6926	1141.6	1161.8	0.338	3.627	74.960	18.018	2.765	0.074	0.164	0.015	0.019	0.020					1396.02	
27	0.6849	1129.2	1149.2	0.288	3.741	75.539	18.185	2.050	0.050	0.109	0.009	0.011	0.017					1388.59	
28	0.6860	1130.0	1150.0	0.362	3.680	75.283	18.575	1.884	0.057	0.126	0.010	0.012	0.012					1388.48	
29	0.6908	1138.8	1158.9	0.422	3.507	74.827	18.751	2.205	0.083	0.172	0.012	0.013	0.008					1394.35	
30	0.6969	1148.4	1168.7	0.418	3.488	74.460	18.558	2.572	0.124	0.292	0.029	0.037	0.022					1400.03	
31	0.6942	1144.8	1165.1	0.413	3.469	74.599	18.755	2.340	0.105	0.242	0.024	0.031	0.022					1398.30	
Avg	0.7020	1156.0	1176.0	0.433	3.512	73.778	18.790	3.027	0.115	0.262	0.026	0.032	0.025					1403.56	

Zone 261

GQ Source Daily Summary

July 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	0.7015	1149.0	1169.4	0.489	3.778	73.571	18.720	3.186	0.081	0.151	0.006	0.007	0.011	0.000				1396.16	
2	0.7015	1149.0	1169.4	0.489	3.778	73.571	18.720	3.186	0.081	0.151	0.006	0.007	0.011	0.000				1396.16	
3	0.7015	1149.0	1169.4	0.489	3.778	73.571	18.720	3.186	0.081	0.151	0.006	0.007	0.011	0.000				1396.16	
4	0.7015	1149.0	1169.4	0.489	3.778	73.571	18.720	3.186	0.081	0.151	0.006	0.007	0.011	0.000				1396.16	
5	0.7015	1149.0	1169.4	0.489	3.778	73.571	18.720	3.186	0.081	0.151	0.006	0.007	0.011	0.000				1396.16	
6	0.7015	1149.0	1169.4	0.489	3.778	73.571	18.720	3.186	0.081	0.151	0.006	0.007	0.011	0.000	0.000	0.000	0.000	1396.16	
7	0.7015	1149.0	1169.4	0.489	3.778	73.571	18.720	3.186	0.081	0.151	0.006	0.007	0.011	0.000	0.000	0.000	0.000	1396.16	
8	0.7015	1149.0	1169.4	0.489	3.778	73.571	18.720	3.186	0.081	0.151	0.006	0.007	0.011	0.000	0.000	0.000	0.000	1396.16	
9	0.7015	1149.0	1169.4	0.489	3.778	73.571	18.720	3.186	0.081	0.151	0.006	0.007	0.011	0.000	0.000	0.000	0.000	1396.16	
10	0.7015	1149.0	1169.4	0.489	3.778	73.571	18.720	3.186	0.081	0.151	0.006	0.007	0.011	0.000	0.000	0.000	0.000	1396.16	
11	0.7015	1149.0	1169.4	0.489	3.778	73.571	18.720	3.186	0.081	0.151	0.006	0.007	0.011	0.000	0.000	0.000	0.000	1396.16	
12	0.7015	1149.0	1169.4	0.489	3.778	73.571	18.720	3.186	0.081	0.151	0.006	0.007	0.011	0.000	0.000	0.000	0.000	1396.16	
13	0.7118	1163.4	1184.0	0.467	3.901	72.368	19.204	3.531	0.137	0.319	0.028	0.034	0.012	0.000	0.000	0.000	0.000	1403.29	
14	0.7199	1178.4	1199.3	0.470	3.733	71.783	19.285	3.914	0.191	0.479	0.052	0.067	0.025	0.000	0.000	0.000	0.000	1413.42	
15	0.7210	1183.5	1204.5	0.499	3.473	72.041	19.042	3.972	0.227	0.572	0.063	0.081	0.030	0.000	0.000	0.000	0.000	1418.53	
16	0.7216	1186.0	1207.0	0.506	3.366	72.055	19.042	4.055	0.223	0.566	0.065	0.086	0.036	0.000	0.000	0.000	0.000	1420.92	
17	0.7084	1165.4	1186.0	0.525	3.370	72.970	19.315	3.303	0.129	0.300	0.029	0.039	0.020	0.000	0.000	0.000	0.000	1409.12	
18	0.7034	1157.6	1178.1	0.510	3.404	73.272	19.456	3.014	0.099	0.208	0.014	0.017	0.006	0.000	0.000	0.000	0.000	1404.65	
19	0.7035	1159.0	1179.5	0.489	3.361	73.279	19.470	3.057	0.101	0.210	0.014	0.015	0.005	0.000	0.000	0.000	0.000	1406.22	
20	0.7047	1159.7	1180.2	0.505	3.403	73.129	19.492	3.116	0.105	0.217	0.014	0.016	0.004	0.000	0.000	0.000	0.000	1405.89	
21	0.7116	1171.0	1191.8	0.493	3.376	72.675	19.312	3.553	0.152	0.354	0.033	0.040	0.014	0.000	0.000	0.000	0.000	1412.71	
22	0.7150	1174.4	1195.2	0.513	3.449	72.442	19.116	3.823	0.159	0.384	0.040	0.052	0.023	0.000	0.000	0.000	0.000	1413.52	
23	0.7071	1160.5	1181.0	0.517	3.562	73.038	19.154	3.270	0.118	0.269	0.025	0.032	0.016	0.000	0.000	0.000	0.000	1404.45	
24	0.7075	1162.2	1182.8	0.486	3.532	73.175	18.900	3.386	0.136	0.312	0.027	0.033	0.014	0.000	0.000	0.000	0.000	1406.24	
25	0.7055	1159.3	1179.9	0.500	3.507	73.286	19.015	3.236	0.124	0.276	0.022	0.026	0.010	0.000	0.000	0.000	0.000	1404.67	
26	0.7020	1153.2	1173.6	0.514	3.533	73.508	19.084	3.043	0.095	0.196	0.011	0.012	0.004	0.000	0.000	0.000	0.000	1400.72	
27	0.7013	1152.9	1173.3	0.496	3.510	73.732	18.849	3.074	0.098	0.206	0.013	0.014	0.007	0.000	0.000	0.000	0.000	1401.05	
28	0.7063	1161.7	1182.2	0.481	3.464	73.310	18.928	3.317	0.130	0.298	0.026	0.033	0.014	0.000	0.000	0.000	0.000	1406.72	
29	0.7057	1161.0	1181.6	0.466	3.467	73.455	18.774	3.330	0.131	0.302	0.027	0.034	0.015	0.000	0.000	0.000	0.000	1406.58	
30	0.7039	1158.7	1179.3	0.450	3.464	73.697	18.627	3.273	0.126	0.290	0.026	0.033	0.014	0.000	0.000	0.000	0.000	1405.56	
31	0.6932	1142.4	1162.7	0.367	3.585	74.841	18.193	2.695	0.084	0.191	0.016	0.020	0.010	0.000	0.000	0.000	0.000	1396.43	
Avg	0.7055	1158.0	1178.5	0.488	3.606	73.255	18.932	3.296	0.114	0.250	0.020	0.025	0.013	0.000	0.000	0.000	0.000	1403.05	

Zone 262

GQ Source Analysis

Williston Basin Interstate Pipeline Co.

Attachment B
Page 7 of 16

GQ Source Number:	2501030	Specific Gravity:	0.6648
GQ Source Name:	LIGNITE PLANT	BTU Base:	Dry
Effective Date:	7/1/2011 9:00:00 AM	Measured Heat Value:	1128.26
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:	378.00
		Sample Temperature:	

	<u>Mol %</u>	<u>GPM</u>		<u>Mol %</u>
C1 Methane	77.604		CO2 Carbon Dioxide	0.087
C2 Ethane	18.102	4.827	N2 Nitrogen	3.500
C3 Propane	0.680	0.187	O2 Oxygen	0.000
IC4 Iso-Butane	0.000	0.000	HE Helium	
NC4 N-Butane	0.001	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	0.026	0.012	CO Carbon Monoxide	
C7 Heptane			H2O Water	
C8 Octane			Neo-C5 Neo-Pentane	
C9 Nonane				
C10 Decane				

Totals 99.999% 5.026 GPM

Sample Date: 7/31/2011 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

July 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	0.7002	1148.0	1168.3	0.507	3.696	73.671	18.980	2.838	0.085	0.175	0.011	0.012	0.027	0.000	0.000	0.000	0.000	1396.20	
2	0.7186	1175.7	1196.5	0.459	3.796	71.509	20.012	3.473	0.167	0.425	0.046	0.060	0.052	0.000	0.000	0.000	0.000	1411.48	
3	0.7195	1179.5	1200.4	0.457	3.648	71.932	19.307	3.788	0.189	0.492	0.055	0.072	0.061	0.000	0.000	0.000	0.000	1415.19	
4	0.7167	1174.9	1195.7	0.451	3.674	72.034	19.387	3.791	0.154	0.373	0.037	0.046	0.052	0.000	0.000	0.000	0.000	1412.43	
5	0.7101	1164.2	1184.8	0.450	3.721	72.621	19.339	3.320	0.131	0.314	0.029	0.035	0.041	0.000	0.000	0.000	0.000	1405.92	
6	0.7050	1156.1	1176.6	0.437	3.754	72.947	19.439	3.072	0.093	0.201	0.014	0.016	0.026	0.000	0.000	0.000	0.000	1401.29	
7	0.7001	1148.5	1168.9	0.444	3.745	73.443	19.376	2.710	0.077	0.163	0.010	0.011	0.021	0.000	0.000	0.000	0.000	1396.99	
8	0.7030	1152.3	1172.7	0.471	3.752	73.021	19.640	2.808	0.082	0.177	0.012	0.013	0.023	0.000	0.000	0.000	0.000	1398.60	
9	0.7061	1153.5	1173.9	0.490	3.937	72.729	19.406	3.110	0.091	0.192	0.012	0.013	0.021	0.000	0.000	0.000	0.000	1397.03	
10	0.7087	1158.7	1179.2	0.487	3.867	72.262	19.903	3.139	0.091	0.199	0.014	0.015	0.023	0.000	0.000	0.000	0.000	1400.79	
11	0.7154	1169.0	1189.7	0.474	3.886	72.242	18.988	3.722	0.161	0.395	0.040	0.051	0.041	0.000	0.000	0.000	0.000	1406.50	
12	0.7206	1180.6	1201.5	0.486	3.639	71.922	19.177	3.866	0.197	0.508	0.061	0.081	0.062	0.000	0.000	0.000	0.000	1415.39	
13	0.7225	1187.1	1208.2	0.514	3.372	72.085	18.920	4.067	0.228	0.592	0.068	0.089	0.064	0.000	0.000	0.000	0.000	1421.38	
14	0.7101	1168.3	1189.0	0.529	3.342	73.003	19.114	3.413	0.140	0.328	0.034	0.044	0.053	0.000	0.000	0.000	0.000	1410.93	
15	0.7016	1153.8	1174.3	0.533	3.428	73.528	19.301	2.892	0.090	0.184	0.011	0.011	0.022	0.000	0.000	0.000	0.000	1401.92	
16	0.7026	1158.4	1178.9	0.482	3.322	73.500	19.307	3.036	0.098	0.204	0.013	0.014	0.023	0.000	0.000	0.000	0.000	1406.44	
17	0.7036	1158.1	1178.6	0.515	3.379	73.353	19.335	3.066	0.100	0.205	0.013	0.013	0.021	0.000	0.000	0.000	0.000	1405.12	
18	0.7094	1167.7	1188.4	0.510	3.349	72.886	19.324	3.409	0.132	0.299	0.026	0.031	0.032	0.000	0.000	0.000	0.000	1410.89	
19	0.7162	1177.6	1198.5	0.503	3.379	72.606	18.823	3.918	0.174	0.430	0.048	0.065	0.053	0.000	0.000	0.000	0.000	1416.18	
20	0.7084	1162.1	1182.6	0.548	3.535	72.960	19.159	3.327	0.111	0.255	0.025	0.032	0.046	0.000	0.000	0.000	0.000	1405.16	
21	0.7062	1159.5	1180.0	0.503	3.560	73.112	19.151	3.264	0.106	0.234	0.018	0.021	0.029	0.000	0.000	0.000	0.000	1404.16	
22	0.7049	1158.1	1178.6	0.497	3.523	73.569	18.710	3.176	0.129	0.295	0.028	0.036	0.037	0.000	0.000	0.000	0.000	1403.86	
23	0.7041	1157.3	1177.8	0.510	3.487	73.425	19.014	3.163	0.108	0.236	0.016	0.017	0.023	0.000	0.000	0.000	0.000	1403.59	
24	0.7018	1153.2	1173.6	0.526	3.497	73.550	19.108	3.014	0.088	0.178	0.010	0.010	0.019	0.000	0.000	0.000	0.000	1400.93	
25	0.6998	1149.6	1170.0	0.515	3.540	73.960	18.672	2.996	0.090	0.185	0.011	0.011	0.020	0.000	0.000	0.000	0.000	1398.63	
26	0.6902	1112.4	1132.1	0.502	4.928	75.176	16.524	2.613	0.075	0.150	0.008	0.008	0.017	0.000	0.000	0.000	0.000	1362.76	
27	0.6933	1131.4	1151.5	0.443	4.146	74.863	17.494	2.750	0.080	0.171	0.013	0.015	0.025	0.000	0.000	0.000	0.000	1382.94	
28	0.6980	1110.6	1130.3	0.375	5.974	72.939	18.172	2.315	0.056	0.117	0.008	0.010	0.031	0.000	0.000	0.000	0.000	1355.83	
29	0.6870	1132.3	1152.3	0.400	3.583	75.230	18.625	1.913	0.062	0.139	0.010	0.012	0.025	0.000	0.000	0.000	0.000	1390.20	
30	0.6913	1140.3	1160.5	0.440	3.427	74.885	18.679	2.258	0.086	0.182	0.011	0.013	0.018	0.000	0.000	0.000	0.000	1395.78	
31	0.7009	1155.2	1175.6	0.439	3.420	74.261	18.451	2.758	0.150	0.380	0.043	0.056	0.044	0.000	0.000	0.000	0.000	1404.21	
Avg	0.7057	1157.0	1177.1	0.481	3.720	73.201	18.995	3.129	0.117	0.270	0.024	0.030	0.034	0.000	0.000	0.000	0.000	1401.25	

Zone 271

GQ Source Daily Summary

July 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	0.6948	1144.0	1164.3	0.432	3.542	74.527	18.521	2.696	0.077	0.161	0.011	0.011	0.022	0.000	0.000	0.000	0.000	1396.79	
2	0.7081	1158.2	1178.7	0.491	3.832	72.498	19.709	3.038	0.109	0.251	0.022	0.025	0.024	0.000	0.000	0.000	0.000	1400.77	
3	0.7200	1180.0	1200.9	0.451	3.670	71.742	19.547	3.728	0.189	0.489	0.056	0.072	0.055	0.000	0.000	0.000	0.000	1415.34	
4	0.7187	1177.9	1198.8	0.446	3.686	72.015	19.175	3.866	0.181	0.460	0.051	0.067	0.052	0.000	0.000	0.000	0.000	1414.07	
5	0.7161	1173.9	1194.7	0.446	3.688	72.066	19.434	3.690	0.158	0.385	0.038	0.049	0.047	0.000	0.000	0.000	0.000	1411.81	
6	0.7048	1156.1	1176.6	0.459	3.704	73.105	19.249	3.098	0.103	0.225	0.017	0.020	0.021	0.000	0.000	0.000	0.000	1401.45	
7	0.7015	1150.3	1170.7	0.422	3.805	73.224	19.425	2.848	0.079	0.166	0.011	0.012	0.010	0.000	0.000	0.000	0.000	1397.75	
8	0.7017	1151.3	1171.7	0.459	3.709	73.218	19.508	2.807	0.085	0.184	0.012	0.013	0.004	0.000	0.000	0.000	0.000	1398.72	
9	0.7040	1151.9	1172.3	0.476	3.861	72.995	19.345	3.002	0.091	0.195	0.013	0.014	0.009	0.000	0.000	0.000	0.000	1397.18	
10	0.7071	1155.7	1176.2	0.483	3.905	72.405	19.829	3.072	0.087	0.186	0.012	0.013	0.006	0.000	0.000	0.000	0.000	1398.78	
11	0.7107	1161.2	1181.7	0.477	3.915	72.464	19.213	3.439	0.124	0.290	0.026	0.031	0.022	0.000	0.000	0.000	0.000	1401.80	
12	0.7175	1172.8	1193.5	0.476	3.844	71.972	19.229	3.741	0.167	0.421	0.046	0.060	0.045	0.000	0.000	0.000	0.000	1409.06	
13	0.7214	1184.6	1205.6	0.497	3.447	72.189	18.850	3.966	0.232	0.604	0.070	0.089	0.057	0.000	0.000	0.000	0.000	1419.45	
14	0.7201	1184.0	1205.0	0.513	3.339	72.326	18.916	3.928	0.209	0.540	0.067	0.091	0.070	0.000	0.000	0.000	0.000	1419.98	
15	0.7037	1157.6	1178.1	0.541	3.382	73.316	19.345	3.085	0.097	0.198	0.012	0.012	0.012	0.000	0.000	0.000	0.000	1404.38	
16	0.7004	1153.7	1174.1	0.490	3.390	73.644	19.313	2.851	0.093	0.192	0.013	0.013	0.002	0.000	0.000	0.000	0.000	1402.96	
17	0.7038	1159.4	1179.9	0.504	3.339	73.312	19.377	3.124	0.103	0.213	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1406.45	
18	0.7041	1159.1	1179.6	0.508	3.387	73.268	19.331	3.161	0.104	0.214	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1405.71	
19	0.7127	1172.7	1193.5	0.497	3.364	72.801	19.017	3.643	0.161	0.388	0.041	0.052	0.036	0.000	0.000	0.000	0.000	1413.73	
20	0.7151	1173.5	1194.3	0.536	3.484	72.445	19.075	3.810	0.150	0.363	0.040	0.052	0.044	0.000	0.000	0.000	0.000	1412.29	
21	0.7049	1157.0	1177.5	0.522	3.558	73.362	18.982	3.129	0.110	0.250	0.024	0.030	0.033	0.000	0.000	0.000	0.000	1402.49	
22	0.7068	1161.8	1182.4	0.479	3.511	73.338	18.732	3.431	0.129	0.300	0.030	0.033	0.017	0.000	0.000	0.000	0.000	1406.37	
23	0.7030	1155.5	1175.9	0.507	3.497	73.618	18.890	3.054	0.113	0.253	0.021	0.024	0.024	0.000	0.000	0.000	0.000	1402.50	
24	0.7030	1155.7	1176.2	0.510	3.483	73.489	18.992	3.195	0.099	0.207	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1402.75	
25	0.6995	1149.1	1169.5	0.522	3.536	73.868	18.852	2.927	0.090	0.183	0.011	0.011	0.000	0.000	0.000	0.000	0.000	1398.28	
26	0.6991	1149.9	1170.3	0.497	3.487	74.054	18.621	3.043	0.090	0.184	0.011	0.012	0.000	0.000	0.000	0.000	0.000	1399.63	
27	0.7058	1161.5	1182.0	0.477	3.437	73.519	18.700	3.343	0.130	0.304	0.028	0.036	0.026	0.000	0.000	0.000	0.000	1406.98	
28	0.6908	1139.3	1159.4	0.347	3.582	75.170	18.001	2.642	0.063	0.142	0.012	0.015	0.026	0.000	0.000	0.000	0.000	1395.01	
29	0.6843	1128.2	1148.2	0.339	3.665	75.579	18.341	1.862	0.055	0.123	0.010	0.012	0.014	0.000	0.000	0.000	0.000	1388.00	
30	0.6898	1137.4	1157.6	0.433	3.476	74.939	18.747	2.132	0.079	0.170	0.011	0.012	0.001	0.000	0.000	0.000	0.000	1393.75	
31	0.6937	1144.0	1164.3	0.439	3.426	74.746	18.547	2.446	0.106	0.242	0.019	0.023	0.007	0.000	0.000	0.000	0.000	1397.92	
Avg	0.7054	1159.0	1179.1	0.473	3.579	73.265	19.058	3.155	0.118	0.274	0.025	0.031	0.022	0.000	0.000	0.000	0.000	1403.94	

Zone 272

GQ Source Daily Summary

July 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	0.6932	1142.8	1163.1	0.398	3.513	74.676	18.583	2.563	0.070	0.149	0.010	0.011	0.027	0.000	0.000	0.000	0.000	1396.98	
2	0.7086	1159.3	1179.8	0.501	3.801	72.554	19.577	3.115	0.112	0.251	0.022	0.025	0.041	0.000	0.000	0.000	0.000	1401.54	
3	0.7210	1181.6	1202.5	0.446	3.682	71.670	19.540	3.759	0.193	0.504	0.059	0.079	0.069	0.000	0.000	0.000	0.000	1416.16	
4	0.7188	1178.1	1198.9	0.448	3.684	72.001	19.185	3.871	0.181	0.461	0.051	0.067	0.052	0.000	0.000	0.000	0.000	1414.15	
5	0.7160	1173.8	1194.6	0.446	3.685	72.053	19.475	3.673	0.155	0.379	0.038	0.048	0.047	0.000	0.000	0.000	0.000	1411.79	
6	0.7049	1156.4	1176.8	0.464	3.687	73.112	19.236	3.117	0.102	0.223	0.017	0.021	0.021	0.000	0.000	0.000	0.000	1401.72	
7	0.7014	1150.3	1170.7	0.423	3.794	73.251	19.401	2.850	0.080	0.168	0.011	0.012	0.009	0.000	0.000	0.000	0.000	1397.84	
8	0.7017	1151.3	1171.7	0.459	3.708	73.229	19.484	2.822	0.085	0.186	0.012	0.013	0.002	0.000	0.000	0.000	0.000	1398.75	
9	0.7039	1151.7	1172.1	0.478	3.858	73.019	19.335	2.991	0.091	0.194	0.013	0.014	0.009	0.000	0.000	0.000	0.000	1397.04	
10	0.7073	1156.0	1176.5	0.483	3.909	72.378	19.841	3.081	0.088	0.187	0.012	0.013	0.007	0.000	0.000	0.000	0.000	1398.88	
11	0.7110	1161.6	1182.2	0.479	3.911	72.402	19.283	3.434	0.124	0.288	0.025	0.030	0.023	0.000	0.000	0.000	0.000	1402.07	
12	0.7135	1166.3	1186.9	0.466	3.877	72.558	18.823	3.576	0.156	0.387	0.041	0.054	0.061	0.000	0.000	0.000	0.000	1405.19	
13	0.7214	1184.6	1205.6	0.497	3.451	72.191	18.832	3.977	0.232	0.607	0.070	0.089	0.056	0.000	0.000	0.000	0.000	1419.41	
14	0.7199	1183.9	1204.8	0.514	3.332	72.352	18.901	3.930	0.208	0.535	0.067	0.092	0.070	0.000	0.000	0.000	0.000	1419.96	
15	0.7037	1157.8	1178.3	0.540	3.375	73.316	19.344	3.092	0.097	0.199	0.012	0.012	0.013	0.000	0.000	0.000	0.000	1404.61	
16	0.7004	1153.7	1174.1	0.490	3.390	73.637	19.325	2.849	0.092	0.190	0.012	0.012	0.003	0.000	0.000	0.000	0.000	1402.94	
17	0.7038	1159.3	1179.8	0.502	3.347	73.283	19.417	3.112	0.102	0.209	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1406.36	
18	0.7042	1159.2	1179.7	0.508	3.381	73.269	19.335	3.162	0.104	0.214	0.014	0.014	0.000	0.000	0.000	0.000	0.000	1405.83	
19	0.7129	1173.1	1193.9	0.497	3.360	72.779	19.028	3.656	0.161	0.391	0.041	0.052	0.036	0.000	0.000	0.000	0.000	1413.99	
20	0.7154	1173.9	1194.7	0.536	3.482	72.415	19.095	3.820	0.150	0.363	0.041	0.052	0.046	0.000	0.000	0.000	0.000	1412.53	
21	0.7049	1157.1	1177.6	0.521	3.554	73.363	18.986	3.128	0.110	0.251	0.024	0.030	0.033	0.000	0.000	0.000	0.000	1402.60	
22	0.7063	1161.0	1181.5	0.485	3.507	73.435	18.626	3.458	0.127	0.283	0.026	0.034	0.020	0.000	0.000	0.000	0.000	1405.84	
23	0.7036	1156.4	1176.9	0.508	3.499	73.529	18.938	3.092	0.114	0.252	0.021	0.024	0.024	0.000	0.000	0.000	0.000	1402.99	
24	0.7033	1156.1	1176.6	0.510	3.480	73.461	19.004	3.211	0.100	0.208	0.013	0.013	0.000	0.000	0.000	0.000	0.000	1402.99	
25	0.6995	1149.1	1169.4	0.522	3.544	73.859	18.850	2.930	0.090	0.184	0.011	0.011	0.000	0.000	0.000	0.000	0.000	1398.17	
26	0.6993	1150.0	1170.3	0.501	3.494	74.025	18.633	3.047	0.091	0.186	0.011	0.011	0.000	0.000	0.000	0.000	0.000	1399.53	
27	0.7058	1161.5	1182.0	0.478	3.440	73.511	18.703	3.344	0.130	0.304	0.028	0.036	0.026	0.000	0.000	0.000	0.000	1406.94	
28	0.6920	1141.0	1161.2	0.362	3.565	75.041	18.060	2.695	0.069	0.154	0.012	0.014	0.028	0.000	0.000	0.000	0.000	1395.94	
29	0.6844	1128.3	1148.3	0.339	3.667	75.564	18.351	1.863	0.055	0.123	0.010	0.012	0.015	0.000	0.000	0.000	0.000	1388.05	
30	0.6899	1137.6	1157.7	0.433	3.473	74.926	18.760	2.134	0.079	0.170	0.011	0.012	0.001	0.000	0.000	0.000	0.000	1393.85	
31	0.6940	1144.4	1164.7	0.439	3.430	74.712	18.553	2.464	0.107	0.245	0.019	0.023	0.008	0.000	0.000	0.000	0.000	1398.09	
Avg	0.7053	1159.0	1179.1	0.473	3.577	73.276	19.049	3.155	0.118	0.272	0.025	0.031	0.024	0.000	0.000	0.000	0.000	1403.96	

Zone 273

GQ Source Daily Summary

July 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	0.6994	1147.3	1167.6	0.501	3.676	73.801	18.903	2.814	0.083	0.172	0.011	0.012	0.027	0.000	0.000	0.000	0.000	1396.09	
2	0.7181	1174.7	1195.5	0.460	3.807	71.548	20.008	3.438	0.165	0.420	0.045	0.059	0.050	0.000	0.000	0.000	0.000	1410.82	
3	0.7192	1179.1	1200.0	0.458	3.647	71.939	19.338	3.757	0.187	0.487	0.055	0.072	0.060	0.000	0.000	0.000	0.000	1414.94	
4	0.7163	1174.3	1195.1	0.450	3.675	72.080	19.366	3.774	0.151	0.366	0.037	0.048	0.054	0.000	0.000	0.000	0.000	1412.12	
5	0.7104	1164.6	1185.3	0.449	3.724	72.579	19.367	3.326	0.132	0.315	0.030	0.037	0.042	0.000	0.000	0.000	0.000	1406.19	
6	0.7053	1156.6	1177.1	0.441	3.746	72.926	19.436	3.093	0.094	0.205	0.014	0.016	0.027	0.000	0.000	0.000	0.000	1401.57	
7	0.6997	1147.8	1168.2	0.443	3.753	73.506	19.321	2.698	0.076	0.161	0.010	0.011	0.022	0.000	0.000	0.000	0.000	1396.54	
8	0.7029	1152.2	1172.6	0.470	3.746	73.033	19.646	2.797	0.081	0.177	0.012	0.014	0.023	0.000	0.000	0.000	0.000	1398.67	
9	0.7058	1153.2	1173.6	0.487	3.934	72.774	19.369	3.106	0.091	0.192	0.012	0.013	0.022	0.000	0.000	0.000	0.000	1396.95	
10	0.7084	1158.4	1178.9	0.487	3.865	72.285	19.906	3.118	0.090	0.197	0.013	0.015	0.023	0.000	0.000	0.000	0.000	1400.61	
11	0.7144	1167.3	1188.0	0.474	3.890	72.345	18.954	3.674	0.155	0.380	0.038	0.048	0.040	0.000	0.000	0.000	0.000	1405.53	
12	0.7206	1181.0	1202.0	0.483	3.616	71.920	19.197	3.876	0.195	0.509	0.061	0.081	0.060	0.000	0.000	0.000	0.000	1415.94	
13	0.7219	1186.0	1207.0	0.515	3.387	72.121	18.938	4.006	0.227	0.586	0.067	0.088	0.065	0.000	0.000	0.000	0.000	1420.54	
14	0.7108	1169.4	1190.1	0.528	3.344	72.963	19.083	3.451	0.145	0.347	0.036	0.047	0.055	0.000	0.000	0.000	0.000	1411.55	
15	0.7017	1154.0	1174.4	0.534	3.429	73.521	19.287	2.906	0.091	0.186	0.011	0.011	0.023	0.000	0.000	0.000	0.000	1401.99	
16	0.7026	1158.3	1178.8	0.483	3.325	73.496	19.310	3.035	0.097	0.203	0.013	0.014	0.024	0.000	0.000	0.000	0.000	1406.36	
17	0.7034	1157.9	1178.4	0.514	3.380	73.360	19.344	3.052	0.099	0.204	0.013	0.013	0.021	0.000	0.000	0.000	0.000	1405.04	
18	0.7087	1166.5	1187.1	0.512	3.349	72.957	19.318	3.362	0.128	0.289	0.025	0.030	0.031	0.000	0.000	0.000	0.000	1410.20	
19	0.7161	1177.6	1198.5	0.500	3.373	72.633	18.800	3.917	0.176	0.439	0.048	0.063	0.051	0.000	0.000	0.000	0.000	1416.30	
20	0.7090	1163.0	1183.6	0.549	3.535	72.897	19.179	3.355	0.113	0.261	0.027	0.035	0.048	0.000	0.000	0.000	0.000	1405.66	
21	0.7063	1159.6	1180.2	0.504	3.558	73.078	19.195	3.263	0.105	0.229	0.018	0.021	0.029	0.000	0.000	0.000	0.000	1404.25	
22	0.7055	1159.1	1179.6	0.497	3.523	73.515	18.709	3.217	0.130	0.307	0.029	0.035	0.037	0.000	0.000	0.000	0.000	1404.40	
23	0.7044	1157.7	1178.2	0.510	3.487	73.403	19.012	3.178	0.110	0.239	0.018	0.019	0.024	0.000	0.000	0.000	0.000	1403.85	
24	0.7018	1153.2	1173.6	0.525	3.496	73.552	19.110	3.012	0.088	0.177	0.010	0.010	0.019	0.000	0.000	0.000	0.000	1400.96	
25	0.6999	1150.1	1170.5	0.516	3.521	73.939	18.710	2.997	0.090	0.185	0.011	0.011	0.020	0.000	0.000	0.000	0.000	1399.09	
26	0.6996	1149.5	1169.9	0.529	3.514	73.878	18.872	2.903	0.088	0.177	0.010	0.010	0.019	0.000	0.000	0.000	0.000	1398.61	
27	0.6977	1148.2	1168.5	0.466	3.509	74.243	18.567	2.908	0.083	0.175	0.012	0.013	0.024	0.000	0.000	0.000	0.000	1398.91	
28	0.6904	1137.7	1157.9	0.380	3.596	75.039	18.293	2.451	0.062	0.132	0.009	0.011	0.028	0.000	0.000	0.000	0.000	1393.48	
29	0.6870	1132.1	1152.1	0.398	3.591	75.226	18.639	1.901	0.061	0.137	0.010	0.012	0.026	0.000	0.000	0.000	0.000	1390.06	
30	0.6914	1140.4	1160.6	0.441	3.428	74.875	18.685	2.258	0.086	0.182	0.012	0.013	0.019	0.000	0.000	0.000	0.000	1395.79	
31	0.7011	1155.5	1176.0	0.439	3.419	74.223	18.478	2.771	0.150	0.380	0.042	0.056	0.043	0.000	0.000	0.000	0.000	1404.41	
Avg	0.7058	1159.0	1179.6	0.482	3.576	73.215	19.108	3.142	0.117	0.271	0.025	0.030	0.034	0.000	0.000	0.000	0.000	1404.11	

Zone 28

GQ Source Daily Summary

July 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	0.6448	1073.3	1092.3	0.670	2.781	83.681	11.128	1.587	0.044	0.097	0.000	0.000	0.012	0.000	0.000	0.000	0.000	1360.16	
2	0.6245	1050.8	1069.4	0.651	2.264	87.363	8.461	1.162	0.030	0.061	0.000	0.000	0.008	0.000	0.000	0.000	0.000	1353.30	
3	0.6323	1059.1	1077.8	0.693	2.437	85.989	9.428	1.330	0.037	0.078	0.000	0.000	0.009	0.000	0.000	0.000	0.000	1355.43	
4	0.6251	1050.3	1068.9	0.758	2.187	87.626	8.000	1.231	0.052	0.134	0.000	0.002	0.008	0.000	0.000	0.000	0.000	1351.98	
5	0.6303	1058.8	1077.6	0.705	2.241	86.908	8.393	1.477	0.071	0.184	0.001	0.008	0.011	0.000	0.000	0.000	0.000	1357.25	
6	0.6425	1074.5	1093.5	0.676	2.472	84.858	9.814	1.852	0.081	0.209	0.008	0.017	0.013	0.000	0.000	0.000	0.000	1364.23	
7	0.6362	1065.7	1084.5	0.640	2.475	85.576	9.531	1.560	0.060	0.140	0.002	0.004	0.012	0.000	0.000	0.000	0.000	1359.71	
8	0.6333	1061.9	1080.7	0.639	2.429	85.928	9.396	1.460	0.043	0.096	0.000	0.000	0.009	0.000	0.000	0.000	0.000	1358.11	
9	0.6279	1054.2	1072.9	0.654	2.375	86.707	8.948	1.208	0.031	0.069	0.000	0.000	0.008	0.000	0.000	0.000	0.000	1353.96	
10	0.6343	1062.0	1080.8	0.669	2.481	85.593	9.770	1.358	0.037	0.085	0.000	0.000	0.007	0.000	0.000	0.000	0.000	1357.04	
11	0.6304	1056.0	1074.7	0.677	2.463	86.419	8.939	1.375	0.037	0.082	0.000	0.000	0.007	0.000	0.000	0.000	0.000	1353.58	
12	0.6400	1069.1	1088.0	0.670	2.578	84.662	10.375	1.570	0.042	0.096	0.000	0.000	0.006	0.000	0.000	0.000	0.000	1360.06	
13	0.6760	1115.0	1134.7	0.571	3.322	78.265	15.051	2.528	0.078	0.176	0.000	0.000	0.008	0.000	0.000	0.000	0.000	1380.09	
14	0.7140	1166.1	1186.8	0.471	3.921	72.481	18.680	3.760	0.166	0.419	0.036	0.050	0.015	0.000	0.000	0.000	0.000	1404.49	
15	0.7176	1176.2	1197.0	0.483	3.621	72.467	18.580	3.962	0.204	0.533	0.054	0.075	0.020	0.000	0.000	0.000	0.000	1413.04	
16	0.7151	1175.3	1196.2	0.516	3.389	72.978	18.421	3.796	0.197	0.510	0.058	0.088	0.048	0.000	0.000	0.000	0.000	1414.49	
17	0.7014	1153.5	1173.9	0.539	3.409	73.733	18.933	3.059	0.094	0.199	0.000	0.000	0.032	0.000	0.000	0.000	0.000	1401.72	
18	0.6984	1148.6	1168.9	0.517	3.461	73.989	18.946	2.787	0.088	0.187	0.000	0.000	0.026	0.000	0.000	0.000	0.000	1398.77	
19	0.6974	1150.8	1171.2	0.471	3.298	74.371	18.572	2.967	0.097	0.208	0.000	0.000	0.016	0.000	0.000	0.000	0.000	1402.51	
20	0.6992	1151.6	1172.0	0.512	3.360	74.064	18.755	2.985	0.099	0.208	0.000	0.000	0.018	0.000	0.000	0.000	0.000	1401.61	
21	0.6916	1151.8	1172.2	0.296	2.971	74.253	20.247	2.032	0.059	0.124	0.000	0.000	0.018	0.000	0.000	0.000	0.000	1409.63	
22	0.6797	1150.0	1170.3	0.002	2.422	74.515	22.573	0.486	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1419.55	
23	0.6811	1150.5	1170.9	0.032	2.472	74.494	22.283	0.699	0.004	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.78	
24	0.6852	1149.4	1169.8	0.152	2.741	74.467	21.300	1.215	0.034	0.079	0.002	0.003	0.005	0.000	0.000	0.000	0.000	1413.23	
25	0.6996	1150.4	1170.7	0.492	3.499	74.154	18.386	3.081	0.112	0.259	0.005	0.003	0.009	0.000	0.000	0.000	0.000	1399.73	
26	0.6867	1152.4	1172.8	0.127	2.736	74.026	21.860	1.158	0.027	0.062	0.000	0.001	0.004	0.000	0.000	0.000	0.000	1415.34	
27	0.6842	1156.1	1176.6	0.000	2.477	73.727	23.156	0.640	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.40	
28	0.6831	1155.0	1175.5	0.000	2.439	73.979	22.920	0.662	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.21	
29	0.6832	1155.0	1175.5	0.000	2.448	73.969	22.911	0.673	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1422.12	
30	0.6732	1131.2	1151.2	0.074	2.843	76.257	19.938	0.871	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1402.93	
31	0.6555	1090.7	1110.0	0.209	3.430	80.162	15.094	1.074	0.012	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1371.05	
Avg	0.6685	1115.0	1134.8	0.438	2.821	78.957	15.767	1.794	0.059	0.140	0.005	0.008	0.011	0.000	0.000	0.000	0.000	1387.69	

Zone 31

GQ Source Daily Summary

July 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	0.6928	1146.9	1167.2	0.249	3.464	73.484	20.939	1.719	0.041	0.085	0.005	0.006	0.008	0.000	0.000	0.000	0.000	1402.35	
2	0.6418	1082.8	1102.0	0.463	2.245	83.390	12.903	0.914	0.024	0.044	0.004	0.004	0.009	0.000	0.000	0.000	0.000	1375.54	
3	0.6482	1091.5	1110.8	0.426	2.380	82.214	13.775	1.119	0.025	0.049	0.003	0.003	0.007	0.000	0.000	0.000	0.000	1379.66	
4	0.6536	1097.9	1117.3	0.440	2.477	81.053	14.886	1.049	0.027	0.054	0.003	0.003	0.007	0.000	0.000	0.000	0.000	1382.02	
5	0.6451	1087.8	1107.1	0.480	2.226	82.967	13.202	0.946	0.041	0.103	0.011	0.014	0.010	0.000	0.000	0.000	0.000	1378.36	
6	0.6501	1094.5	1113.8	0.455	2.331	82.144	13.739	1.120	0.048	0.120	0.013	0.016	0.014	0.000	0.000	0.000	0.000	1381.40	
7	0.6595	1106.7	1126.3	0.423	2.513	80.453	15.011	1.373	0.054	0.129	0.013	0.016	0.015	0.000	0.000	0.000	0.000	1386.94	
8	0.6524	1097.1	1116.6	0.398	2.467	81.402	14.520	1.076	0.035	0.076	0.007	0.008	0.011	0.000	0.000	0.000	0.000	1382.41	
9	0.6521	1095.8	1115.2	0.423	2.483	81.508	14.307	1.170	0.030	0.063	0.004	0.005	0.008	0.000	0.000	0.000	0.000	1381.04	
10	0.6480	1090.6	1109.9	0.429	2.409	82.091	14.030	0.950	0.025	0.052	0.003	0.003	0.006	0.000	0.000	0.000	0.000	1378.79	
11	0.6519	1095.4	1114.8	0.428	2.481	81.400	14.553	1.039	0.028	0.058	0.004	0.004	0.007	0.000	0.000	0.000	0.000	1380.78	
12	0.6491	1090.7	1110.0	0.447	2.477	81.970	13.980	1.031	0.027	0.054	0.003	0.004	0.006	0.000	0.000	0.000	0.000	1377.76	
13	0.6617	1112.7	1132.4	0.331	2.500	79.298	16.714	1.072	0.024	0.050	0.003	0.003	0.005	0.000	0.000	0.000	0.000	1392.07	
14	0.6752	1135.7	1155.8	0.205	2.558	76.459	19.558	1.144	0.023	0.045	0.003	0.003	0.004	0.000	0.000	0.000	0.000	1406.66	
15	0.6956	1158.7	1179.2	0.207	3.072	73.383	21.186	1.862	0.070	0.172	0.016	0.020	0.011	0.000	0.000	0.000	0.000	1413.88	
16	0.6996	1165.0	1185.6	0.226	3.031	73.057	21.219	2.074	0.089	0.227	0.025	0.033	0.019	0.000	0.000	0.000	0.000	1417.51	
17	0.6938	1158.1	1178.6	0.197	2.945	74.169	20.286	2.005	0.092	0.232	0.023	0.029	0.021	0.000	0.000	0.000	0.000	1414.97	
18	0.6920	1156.0	1176.5	0.238	2.849	73.734	21.415	1.567	0.045	0.099	0.012	0.017	0.024	0.000	0.000	0.000	0.000	1414.32	
19	0.6894	1154.1	1174.5	0.192	2.798	73.807	21.733	1.343	0.036	0.074	0.004	0.004	0.009	0.000	0.000	0.000	0.000	1414.59	
20	0.6898	1152.9	1173.3	0.208	2.879	73.992	21.222	1.547	0.043	0.089	0.005	0.006	0.008	0.000	0.000	0.000	0.000	1412.72	
21	0.6694	1113.5	1133.2	0.176	3.413	77.920	16.844	1.545	0.033	0.058	0.003	0.003	0.005	0.000	0.000	0.000	0.000	1384.81	
22	0.6643	1088.1	1107.4	0.103	4.587	79.271	13.816	2.122	0.038	0.057	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1358.75	
23	0.6648	1102.2	1121.7	0.147	3.708	78.701	15.868	1.497	0.028	0.044	0.002	0.002	0.003	0.000	0.000	0.000	0.000	1375.53	
24	0.6861	1155.8	1176.2	0.075	2.564	73.826	22.580	0.888	0.020	0.039	0.002	0.002	0.005	0.000	0.000	0.000	0.000	1420.07	
25	0.6836	1155.4	1175.8	0.005	2.462	73.851	23.099	0.567	0.007	0.010	0.000	0.000	0.001	0.000	0.000	0.000	0.000	1422.19	
26	0.6732	1129.0	1149.0	0.056	3.010	76.413	19.485	0.990	0.016	0.025	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1400.22	
27	0.6839	1153.6	1174.0	0.042	2.543	73.999	22.676	0.691	0.015	0.028	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1419.67	
28	0.6620	1103.2	1122.7	0.267	3.203	79.261	15.926	1.249	0.028	0.052	0.004	0.005	0.004	0.000	0.000	0.000	0.000	1379.39	
29	0.6520	1075.8	1094.9	0.237	3.971	81.578	12.443	1.674	0.036	0.054	0.002	0.003	0.002	0.000	0.000	0.000	0.000	1355.75	
30	0.6298	1037.4	1055.8	0.388	4.001	85.682	8.698	1.173	0.025	0.030	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1330.22	
31	0.6301	1038.7	1057.1	0.429	3.878	85.803	8.545	1.284	0.030	0.027	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1331.25	
Avg	0.6658	1114.0	1133.4	0.284	2.901	78.654	16.747	1.284	0.036	0.074	0.006	0.007	0.008	0.000	0.000	0.000	0.000	1388.76	

Zone 32

GQ Source Daily Summary

July 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	0.6901	1165.9	1186.5	0.000	2.437	72.823	23.857	0.863	0.008	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1428.37	
2	0.6898	1165.9	1186.5	0.000	2.418	72.918	23.734	0.909	0.009	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1428.57	
3	0.6871	1161.1	1181.7	0.000	2.450	73.170	23.755	0.611	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.61	
4	0.6861	1159.8	1180.3	0.000	2.438	73.219	23.868	0.462	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.01	
5	0.6853	1158.5	1179.0	0.000	2.448	73.330	23.786	0.424	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.16	
6	0.6862	1159.6	1180.1	0.000	2.467	73.187	23.873	0.462	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.56	
7	0.6862	1159.5	1180.0	0.000	2.467	73.186	23.879	0.457	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.52	
8	0.6877	1161.5	1182.1	0.000	2.483	73.069	23.794	0.638	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.44	
9	0.6863	1159.9	1180.4	0.000	2.450	73.208	23.839	0.490	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.93	
10	0.6859	1159.3	1179.8	0.000	2.449	73.256	23.823	0.461	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.60	
11	0.6864	1160.0	1180.6	0.000	2.450	73.169	23.898	0.471	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.00	
12	0.6885	1163.5	1184.1	0.000	2.441	72.994	23.819	0.729	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.02	
13	0.6897	1165.4	1186.1	0.000	2.435	72.892	23.785	0.868	0.008	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1428.15	
14	0.6853	1158.6	1179.1	0.000	2.440	73.330	23.804	0.415	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.30	
15	0.6863	1160.1	1180.6	0.000	2.443	73.202	23.852	0.491	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.10	
16	0.6850	1158.1	1178.6	0.000	2.440	73.393	23.731	0.424	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.05	
17	0.6865	1160.6	1181.1	0.000	2.429	73.092	24.054	0.414	0.004	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.54	
18	0.6866	1160.4	1180.9	0.000	2.449	73.130	23.933	0.476	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.21	
19	0.6860	1159.7	1180.2	0.000	2.439	73.221	23.872	0.457	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.94	
20	0.6867	1161.1	1181.7	0.000	2.415	73.178	23.862	0.525	0.007	0.011	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1425.97	
21	0.6858	1159.6	1180.1	0.000	2.421	73.282	23.827	0.458	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.07	
22	0.6867	1160.8	1181.4	0.000	2.432	73.175	23.842	0.537	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.64	
23	0.6864	1160.4	1181.0	0.000	2.431	73.215	23.820	0.521	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.41	
24	0.6868	1160.9	1181.4	0.000	2.442	73.157	23.837	0.551	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.56	
25	0.6879	1162.4	1183.0	0.000	2.451	72.994	23.932	0.609	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.30	
26	0.6888	1163.6	1184.2	0.000	2.457	72.888	23.976	0.654	0.008	0.013	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1426.91	
27	0.6886	1163.8	1184.4	0.000	2.427	72.927	23.961	0.670	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.32	
28	0.6883	1163.2	1183.8	0.000	2.435	72.998	23.877	0.675	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.91	
29	0.6875	1162.2	1182.7	0.000	2.430	73.148	23.721	0.686	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.39	
30	0.6875	1162.1	1182.6	0.000	2.436	73.142	23.728	0.679	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.27	
31	0.6878	1162.3	1182.9	0.000	2.441	73.126	23.705	0.712	0.007	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1426.35	
Avg	0.6871	1161.0	1181.8	0.000	2.442	73.130	23.840	0.574	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.78	

Zone 33

GQ Source Daily Summary

July 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	0.7954	1119.8	1139.6	2.338	11.607	54.628	28.378	2.757	0.066	0.193	0.008	0.021	0.004	0.000	0.000	0.000	0.000	1277.82	
2	0.7964	1119.5	1139.3	2.503	11.471	54.619	28.342	2.778	0.065	0.191	0.008	0.021	0.004	0.000	0.000	0.000	0.000	1276.66	
3	0.7933	1116.1	1135.8	2.451	11.463	55.180	27.879	2.734	0.065	0.193	0.008	0.022	0.004	0.000	0.000	0.000	0.000	1275.26	
4	0.7940	1120.2	1140.1	2.318	11.482	54.961	28.148	2.793	0.067	0.198	0.008	0.022	0.004	0.000	0.000	0.000	0.000	1279.40	
5	0.7944	1118.1	1137.9	2.337	11.617	54.984	27.889	2.866	0.069	0.204	0.008	0.022	0.004	0.000	0.000	0.000	0.000	1276.66	
6	0.7945	1116.6	1136.4	2.388	11.640	54.850	28.077	2.759	0.064	0.190	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1274.94	
7	0.7937	1122.2	1142.0	2.141	11.599	54.730	28.550	2.687	0.065	0.194	0.008	0.022	0.004	0.000	0.000	0.000	0.000	1281.91	
8	0.7990	1131.2	1151.2	2.347	11.239	54.205	28.925	2.983	0.068	0.200	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1287.85	
9	0.7981	1128.3	1148.3	2.329	11.355	54.337	28.734	2.926	0.071	0.211	0.009	0.023	0.004	0.000	0.000	0.000	0.000	1285.34	
10	0.7929	1112.7	1132.4	2.399	11.715	55.318	27.405	2.851	0.070	0.207	0.009	0.023	0.004	0.000	0.000	0.000	0.000	1271.63	
11	0.7998	1125.1	1145.1	2.531	11.403	54.143	28.692	2.932	0.067	0.199	0.008	0.022	0.004	0.000	0.000	0.000	0.000	1280.35	
12	0.7953	1113.9	1133.7	2.544	11.646	54.725	28.150	2.647	0.064	0.191	0.008	0.021	0.004	0.000	0.000	0.000	0.000	1271.25	
13	0.7920	1123.2	1143.0	2.091	11.463	54.914	28.661	2.588	0.063	0.188	0.008	0.021	0.004	0.000	0.000	0.000	0.000	1284.37	
14	0.7877	1120.4	1140.2	1.775	11.703	55.410	28.288	2.542	0.062	0.186	0.008	0.022	0.004	0.000	0.000	0.000	0.000	1284.69	
15	0.7857	1123.7	1143.6	1.600	11.583	55.606	28.435	2.496	0.063	0.186	0.008	0.020	0.004	0.000	0.000	0.000	0.000	1290.12	
16	0.7863	1119.2	1139.0	1.821	11.572	55.759	28.034	2.528	0.064	0.190	0.008	0.021	0.004	0.000	0.000	0.000	0.000	1284.51	
17	0.7898	1120.2	1140.0	1.963	11.630	55.265	28.232	2.620	0.064	0.192	0.008	0.021	0.004	0.000	0.000	0.000	0.000	1282.76	
18	0.7925	1124.5	1144.4	2.086	11.434	54.935	28.565	2.685	0.066	0.196	0.008	0.022	0.004	0.000	0.000	0.000	0.000	1285.52	
19	0.7900	1125.1	1145.0	1.942	11.374	55.433	28.177	2.770	0.067	0.200	0.009	0.023	0.004	0.000	0.000	0.000	0.000	1288.26	
20	0.7973	1137.8	1157.9	1.918	11.330	54.360	28.889	3.180	0.075	0.216	0.008	0.022	0.004	0.000	0.000	0.000	0.000	1296.73	
21	0.8006	1131.4	1151.4	2.059	11.801	54.194	28.042	3.552	0.082	0.234	0.009	0.023	0.004	0.000	0.000	0.000	0.000	1286.86	
22	0.8152	1159.6	1180.1	2.189	11.244	53.442	27.512	5.001	0.137	0.406	0.017	0.045	0.008	0.000	0.000	0.000	0.000	1307.01	
23	0.8094	1147.5	1167.8	2.259	11.345	53.905	27.733	4.077	0.138	0.446	0.022	0.063	0.012	0.000	0.000	0.000	0.000	1297.70	
24	0.7992	1132.7	1152.8	2.009	11.672	54.140	28.666	3.100	0.087	0.273	0.012	0.035	0.006	0.000	0.000	0.000	0.000	1289.40	
25	0.7971	1124.1	1144.0	2.118	11.840	54.566	28.011	3.069	0.084	0.261	0.012	0.033	0.006	0.000	0.000	0.000	0.000	1281.24	
26	0.7957	1119.7	1139.5	2.337	11.639	54.795	27.988	2.923	0.071	0.210	0.009	0.023	0.004	0.000	0.000	0.000	0.000	1277.45	
27	0.7920	1114.7	1134.4	2.186	11.828	55.066	27.968	2.649	0.067	0.200	0.008	0.023	0.004	0.000	0.000	0.000	0.000	1274.72	
28	0.7920	1120.6	1140.4	2.019	11.722	54.973	28.291	2.679	0.070	0.209	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1281.49	
29	0.7904	1120.0	1139.8	2.002	11.631	55.298	28.082	2.668	0.070	0.211	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1282.13	
30	0.7952	1121.3	1141.2	2.118	11.829	54.585	28.308	2.825	0.074	0.223	0.009	0.025	0.004	0.000	0.000	0.000	0.000	1279.73	
31	0.7977	1122.5	1142.4	2.198	11.863	54.459	28.066	3.036	0.082	0.251	0.011	0.029	0.005	0.000	0.000	0.000	0.000	1279.10	
Avg	0.7952	1124.0	1144.2	2.171	11.572	54.767	28.230	2.926	0.074	0.221	0.009	0.025	0.004	0.000	0.000	0.000	0.000	1282.99	

*** 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	JULY 11	JUNE 11	MAY 11	APR 11	MAR 11	FEB 11	JAN 11	DEC 10	NOV 10	OCT 10	SEPT 10	AUG 10	ZONE
MT/ND	211	Sidney Area	1210	1215	1205	1206	1202	1211	1216	1212	1218	1210	1206	1209	1208	211
ND	24	Williston Area	1200	1198	1197	1196	1194	1198	1196	1204	1207	1208	1193	1200	1212	24
ND	25	Watford City Area	1136	1135	1140	1128	1143	1143	1131	1150	1135	1133	1130	1133	1129	25
ND/MT	241	Fairview Area	1195	1199	1193	1193	1194	1197	0	0	0	0	0	0	0	241
ND	261	Williston - Tioga - Minot Line	1160	1176	1165	1159	1162	1172	1176	1171	1154	1135	1140	1145	1161	261
ND	262	Minot Area	1180	1179	1168	1161	1167	1175	1178	1182	1191	1186	1190	1191	1189	262
ND	263	Tioga - Portal	1107	1126	1082	1093	1123	1094	1090	1094	1100	1107	1120	1133	1127	263
ND	264	Williston - Ray	1200	1198	1197	1196	1194	1198	1196	1204	1207	1208	1193	1200	1212	264
ND	271	Bismarck - Cleveland	1162	1177	1166	1152	1161	1136	1118	1130	1160	1172	1190	1191	1187	271
ND	272	Cleveland - Mapleton	1161	1179	1166	1151	1161	1134	1117	1130	1159	1171	1190	1190	1187	272
ND	273	Cleveland - Grafton	1162	1179	1167	1151	1161	1135	1117	1130	1159	1172	1190	1190	1187	273
ND	28	Bismarck - Cabin Creek	1119	1180	1166	1139	1112	1051	1042	1045	1055	1097	1173	1191	1182	28
ND	31	Dickinson Area	1078	1135	1123	1109	1093	1049	1040	1044	1053	1082	1088	1056	1065	31
ND/MT	32	Cabin Creek - Dickinson	1070	1133	1153	1080	1071	1046	1037	1041	1050	1079	1075	1040	1031	32
ND	33	Killdeer	1178	1182	1183	1180	1177	1175	1175	1175	1175	1177	1179	1179	1177	33
ND	34	Bowman Area	1158	1144	1149	1153	1154	1163	1158	1163	1172	1167	1163	1157	1157	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**

July 2011

<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
263	44	Mix of gas in the area
32	20	Mix of gas in the area