



MONTANA-DAKOTA

UTILITIES CO.

A Division of MDU Resources Group, Inc.

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

May 26, 2009

RECEIVED

MAY 28 2009

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 – April 2009

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 May 2009.
2. Attachment B consists of copies of the monthly Heating Value Test Reports received from our supplier for the month of April 2009. There is a report for each of the 16 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 April.

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
Pricing & Tariff Manager

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
MAY 2009

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	314	APPLE VALLEY	271	1.0788
12	327	BISMARCK	28	1.0238
12	343	CARRINGTON	273	1.0788
12	344	CLEVELAND	272	1.0712
12	364	CAVALIER	273	1.1015
12	365	DAWSON	271	1.0712
12	374	FT TOTTEN	273	1.0864
12	375	DEVILS LAKE	273	1.0864
12	379	BARLOW	273	1.0788
12	387	ELDRIDGE	272	1.0788
12	411	GLEN ULLIN	31	.9511
12	417	GRAFTON	273	1.1091
12	439	HANKINSON	600	1.0768
12	449	JAMESTOWN	272	1.0864
12	463	LANGDON	273	1.0788
12	475	LINTON	802	.9736
12	478	LINCOLN	28	1.0238
12	494	MEDINA	271	1.0712
12	498	MANDAN	28	1.0238
12	524	NEW SALEM	28	1.0021
12	532	NEW ROCKFORD	273	1.0788
12	539	PARK RIVER	273	1.1015
12	574	SANBORN	272	1.0864
12	593	STEELE	271	1.0712
12	598	SHEYENNE	273	1.0864
12	610	TAPPEN	271	1.0712
12	625	VALLEY CITY	272	1.0939
12	629	WALHALLA	273	1.1015
12	647	WILTON	262	1.0796
12	717	SPIRITWOOD	272	1.0864
12	718	FAIRMOUNT	600	1.0746
12	732	MSR SITE	273	1.0788
12	733	PAR SITE	273	1.0788
15	303	ALEXANDER	25	1.0654
15	308	ARNEGARD	25	1.0654

MONTANA-DAKOTA UTILITIES CO.
 Therm Billing Factor
 MAY 2009

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	318	BEACH	32	.9213
15	319	BELFIELD	32	.9281
15	323	BERTHOLD	262	1.0796
15	330	BOWMAN	34	1.0705
15	337	BURLINGTON	262	1.1029
15	368	DES LACS	262	1.0873
15	369	DICKINSON	31	.9443
15	384	EPPING	264	1.0852
15	407	GLADSTONE	31	.9443
15	413	GOLVA	32	.9079
15	416	GARRISON	262	1.0873
15	429	HEBRON	31	.9511
15	459	KILLDEER	33	1.0928
15	469	LEFOR	31	.9443
15	474	LIGNITE	263	1.0445
15	500	MARMARTH	34	1.0784
15	505	MINOT	262	1.1029
15	510	MOTT	31	.9443
15	512	MAX	262	1.0796
15	522	NEW ENGLAND	31	.9374
15	540	PALERMO	262	1.0796
15	558	RAY	264	1.0852
15	561	REGENT	31	.9443
15	563	RHAME	34	1.0627
15	564	RICHARDTON	31	.9374
15	568	ROSS	261	1.0652
15	572	RUTHVILLE	262	1.1029
15	583	SENTINEL BUTTE	32	.9213
15	588	SOUTH HEART	31	.9374
15	590	SPRINGBROOK	264	1.0852
15	591	STANLEY	261	1.0730
15	605	SURREY	262	1.1029
15	611	TAYLOR	31	.9374
15	616	TIOGA	261	1.0652
15	619	TURTLE LAKE	262	1.0873

MONTANA-DAKOTA UTILITIES CO.
Therm Billing Factor
MAY 2009

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	620	TRENTON	24	1.0930
15	624	UNDERWOOD	262	1.0873
15	632	WATFORD CITY	25	1.0654
15	636	WHEELLOCK	264	1.0774
15	637	WHITE EARTH	261	1.0730
15	642	WILLISTON	24	1.0930
15	646	WASHBURN	262	1.0951
15	664	RIVERDALE	262	1.0873
15	691	FAIRVIEW	24	1.0930
15	712	MINOT AFB	262	1.1029
15	743	BAKER FIELD	35	.8935

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

GQ Source Daily Summary

April 2009

Number: 251

Name: SIDNEY BORDER

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	Crittherm
1	0.6955	1162.3	1182.9		0.028	3.115	72.486	22.668	1.659	0.019	0.024	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1418.40	
2	0.7009	1167.7	1188.4		0.095	3.187	71.877	22.759	1.980	0.038	0.059	0.002	0.002	0.000	0.000	0.000	0.000	0.000	1419.52	
3	0.6946	1159.9	1180.4		0.029	3.177	72.543	22.659	1.561	0.015	0.016	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1416.33	
4	0.6896	1152.8	1173.2		0.031	3.137	73.266	22.274	1.267	0.013	0.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1412.77	
5	0.7199	1170.8	1191.5		0.752	3.783	70.002	22.221	2.872	0.117	0.223	0.015	0.013	0.002	0.000	0.000	0.000	0.000	1404.45	
6	0.6956	1162.2	1182.7		0.045	3.108	72.391	22.838	1.583	0.016	0.019	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1418.09	
7	0.6911	1155.0	1175.4		0.033	3.139	73.136	22.227	1.438	0.013	0.014	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1413.93	
8	0.6527	1079.0	1098.1		0.067	4.101	80.420	14.402	0.990	0.010	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1358.91	
9	0.6498	1072.8	1091.8		0.077	4.188	81.016	13.718	0.973	0.012	0.012	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1354.39	
10	0.6262	1027.8	1046.0		0.091	4.700	85.364	9.223	0.608	0.007	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1321.67	
11	0.6596	1092.8	1112.1		0.061	3.928	79.064	15.884	1.041	0.011	0.011	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1369.19	
12	0.6439	1061.9	1080.7		0.075	4.310	82.157	12.485	0.938	0.015	0.018	0.001	0.001	0.000	0.000	0.000	0.000	0.000	1346.59	
13	0.6997	1144.1	1164.4		0.507	3.880	73.151	19.782	2.457	0.076	0.134	0.006	0.005	0.000	0.000	0.000	0.000	0.000	1392.02	
14	0.7164	1163.7	1184.3		0.800	3.808	70.342	22.114	2.673	0.090	0.158	0.008	0.007	0.001	0.000	0.000	0.000	0.000	1399.45	
15	0.7263	1167.1	1187.8		1.072	4.120	69.092	22.301	3.075	0.116	0.205	0.010	0.008	0.000	0.000	0.000	0.000	0.000	1393.71	
16	0.7054	1175.2	1196.0		0.108	3.131	71.564	22.600	2.440	0.055	0.091	0.005	0.005	0.001	0.000	0.000	0.000	0.000	1424.03	
17	0.6995	1169.0	1189.7		0.035	3.072	72.205	22.527	2.053	0.039	0.061	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1422.37	
18	0.7008	1161.8	1182.4		0.025	3.038	72.159	22.369	2.164	0.040	0.060	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1412.38	
19	0.7094	1174.9	1195.7		0.239	3.322	71.214	22.310	2.727	0.068	0.110	0.005	0.005	0.001	0.000	0.000	0.000	0.000	1419.70	
20	0.6924	1163.6	1184.2		0.033	2.729	73.613	21.565	1.969	0.034	0.051	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1423.16	
21	0.6911	1162.5	1183.1		0.033	2.680	73.822	21.442	1.936	0.032	0.047	0.002	0.003	0.002	0.000	0.000	0.000	0.000	1423.09	
22	0.7068	1170.5	1191.2		0.044	3.641	71.338	22.205	2.613	0.059	0.090	0.005	0.005	0.002	0.000	0.000	0.000	0.000	1417.31	
23	0.7045	1167.2	1187.9		0.149	3.476	71.517	22.457	2.256	0.052	0.084	0.004	0.004	0.001	0.000	0.000	0.000	0.000	1415.40	
24	0.6933	1160.4	1180.9		0.026	3.023	73.041	22.146	1.705	0.023	0.033	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1418.32	
25	0.7128	1167.8	1188.5		0.564	3.587	70.696	22.343	2.590	0.074	0.131	0.007	0.006	0.001	0.000	0.000	0.000	0.000	1407.89	
26	0.7235	1170.1	1190.8		0.888	3.951	69.545	22.163	3.125	0.110	0.198	0.011	0.008	0.001	0.000	0.000	0.000	0.000	1400.07	
27	0.7091	1166.6	1187.2		0.437	3.502	71.107	22.362	2.401	0.065	0.114	0.006	0.005	0.001	0.000	0.000	0.000	0.000	1410.10	
28	0.7267	1173.5	1194.3		0.925	3.986	69.313	21.965	3.443	0.123	0.222	0.012	0.010	0.001	0.000	0.000	0.000	0.000	1401.06	
29	0.7289	1177.8	1198.6		0.922	3.941	68.965	22.247	3.573	0.119	0.213	0.011	0.009	0.001	0.000	0.000	0.000	0.000	1403.98	
30	0.7250	1177.0	1197.8		0.789	3.819	69.389	22.320	3.359	0.109	0.195	0.010	0.009	0.001	0.000	0.000	0.000	0.000	1406.94	
AVG	0.6964	1149.0	1169.6		0.299	3.553	73.193	20.686	2.116	0.052	0.087	0.004	0.004	0.001	0.000	0.000	0.000	0.000	1401.51	

Zone 2/1

GQ Source Analysis

GQ Source Number:	0602230	Specific Gravity:	0.7287
GQ Source Name:	WATFORD CITY BORDER	BTU Base:	Dry
Effective Date:	4/10/2009 9:00:00 AM	Measured Heat Value:	1131.07
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	1128.42
Pressure Base:	14.730	Wet Heat Value:	1108.78
Viscosity:		As Deliv. Heat Value:	1128.42

		Mol %	Imported GPM	Calculated GPM @
C1	Methane	68.517		
C2	Ethane	17.950		4.786
C3	Propane	3.759	1.033	1.033
IC4	Iso-Butane	0.194	0.063	0.063
NC4	N-Butane	0.362	0.114	0.114
IC5	Iso-Pentane	0.029	0.011	0.011
NC5	N-Pentane	0.028	0.010	0.010
C6+	Hexanes Plus	0.007	0.003	0.003
CO2	Carbon Dioxide	0.680		
N2	Nitrogen	8.472		
O2	Oxygen	0.000		
HE	Helium			
H2	Hydrogen			
H2S	Hydrogen Sulfide			
Totals		99.998	1.234	6.020

Sample Date: 3/31/2009 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
Sample Remarks: *Zone 25*
Analysis Remarks:

GQ Source Daily Summary

April 2009

Number: 163

Name: NORTH TIOGA MINOT

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	Crit'herm
1	0.6516	1090.5	1109.8		0.124	3.219	80.394	15.719	0.507	0.009	0.014	0.000	0.000	0.013					1374.84	
2	0.6493	1086.3	1105.6		0.111	3.282	80.765	15.359	0.450	0.008	0.011	0.000	0.000	0.014					1371.98	
3	0.6527	1092.3	1111.6		0.132	3.207	80.273	15.737	0.614	0.010	0.014	0.000	0.000	0.014					1375.89	
4	0.6514	1090.0	1109.3		0.117	3.242	80.497	15.523	0.585	0.009	0.012	0.000	0.000	0.015					1374.42	
5	0.6519	1091.1	1110.4		0.119	3.218	80.390	15.667	0.570	0.009	0.012	0.000	0.000	0.015					1375.31	
6	0.6761	1119.0	1138.8		0.407	3.350	77.031	17.409	1.630	0.057	0.099	0.004	0.003	0.010					1385.01	
7	0.6842	1125.5	1145.4		0.454	3.648	75.425	18.593	1.724	0.050	0.088	0.005	0.005	0.008					1384.74	
8	0.6834	1126.1	1146.1		0.399	3.620	75.447	18.710	1.695	0.044	0.073	0.003	0.003	0.006					1386.32	
9	0.6762	1111.1	1130.8		0.403	3.848	76.818	17.189	1.612	0.045	0.074	0.004	0.003	0.005					1375.14	
10	0.6733	1108.5	1128.1		0.384	3.771	77.250	16.980	1.495	0.041	0.067	0.003	0.002	0.005					1374.74	
11	0.6674	1098.7	1118.1		0.371	3.824	78.308	16.019	1.368	0.038	0.062	0.003	0.002	0.006					1368.72	
12	0.6771	1115.9	1135.7		0.380	3.673	76.694	17.456	1.675	0.042	0.068	0.003	0.002	0.008					1380.17	
13	0.6742	1110.1	1129.8		0.387	3.747	77.157	17.032	1.549	0.043	0.071	0.003	0.003	0.010					1375.94	
14	0.6852	1124.6	1144.5		0.505	3.717	75.404	18.357	1.851	0.056	0.095	0.005	0.003	0.007					1382.65	
15	0.6900	1130.0	1150.1		0.579	3.725	74.687	18.820	2.003	0.063	0.107	0.005	0.004	0.007					1384.49	
16	0.6906	1130.3	1150.3		0.591	3.746	74.543	18.970	1.960	0.065	0.110	0.005	0.004	0.006					1384.20	
17	0.6867	1133.6	1153.7		0.389	3.484	74.984	19.149	1.843	0.051	0.086	0.004	0.003	0.006					1392.23	
18	0.6952	1135.7	1155.8		0.592	3.844	74.035	18.965	2.357	0.069	0.118	0.006	0.006	0.010					1386.18	
19	0.6555	1095.7	1115.1		0.147	3.235	79.868	15.952	0.756	0.011	0.016	0.000	0.000	0.014					1377.27	
20	0.6545	1094.8	1114.2		0.155	3.185	80.077	15.790	0.753	0.010	0.014	0.000	0.000	0.015					1377.20	
21	0.6581	1099.4	1118.9		0.186	3.187	79.502	16.218	0.863	0.013	0.018	0.000	0.000	0.013					1379.32	
22	0.6880	1126.9	1146.9		0.488	3.867	74.939	18.559	1.963	0.062	0.105	0.005	0.004	0.007					1382.64	
23	0.6952	1135.7	1155.8		0.592	3.844	74.035	18.965	2.357	0.069	0.118	0.006	0.006	0.010					1386.18	
24	0.6952	1135.7	1155.8		0.592	3.844	74.035	18.965	2.357	0.069	0.118	0.006	0.006	0.010					1386.18	
25	0.6952	1135.7	1155.8		0.592	3.844	74.035	18.965	2.357	0.069	0.118	0.006	0.006	0.010					1386.18	
26	0.6952	1135.7	1155.8		0.592	3.844	74.035	18.965	2.357	0.069	0.118	0.006	0.006	0.010					1386.18	
27	0.6952	1135.7	1155.8		0.592	3.844	74.035	18.965	2.357	0.069	0.118	0.006	0.006	0.010					1386.18	
28	0.6952	1135.7	1155.8		0.592	3.844	74.035	18.965	2.357	0.069	0.118	0.006	0.006	0.010					1386.18	
29	0.6952	1135.7	1155.8		0.592	3.844	74.035	18.965	2.357	0.069	0.118	0.006	0.006	0.010					1386.18	
30	0.6952	1135.7	1155.8		0.592	3.844	74.035	18.965	2.357	0.069	0.118	0.006	0.006	0.010					1386.18	
AVG	0.6768	1116.0	1136.2		0.392	3.596	76.707	17.592	1.580	0.044	0.073	0.002	0.003	0.010					1381.15	

Zone 261

GQ Source Daily Summary

April 2009

Number: 091
Name: MINOT

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	Cr'ltherm
1	0.6992	1114.6	1134.3		0.379	5.840	72.239	19.397	1.957	0.067	0.111	0.000	0.000	0.011	0.000				1356.55	
2	0.7003	1115.2	1135.0		0.383	5.899	72.027	19.523	1.985	0.065	0.106	0.000	0.000	0.012	0.000				1356.27	
3	0.6932	1112.3	1132.0		0.352	5.458	73.180	19.155	1.695	0.055	0.092	0.000	0.000	0.013	0.000				1359.62	
4	0.6992	1116.0	1135.8		0.376	5.758	72.217	19.522	1.948	0.063	0.103	0.000	0.000	0.013	0.000				1358.32	
5	0.7018	1116.2	1136.0		0.381	5.982	71.730	19.711	2.012	0.066	0.105	0.000	0.000	0.013	0.000				1356.02	
6	0.6977	1116.8	1136.6		0.385	5.555	72.545	19.400	1.943	0.061	0.097	0.000	0.000	0.014	0.000				1360.72	
7	0.7077	1131.1	1151.1		0.565	5.343	71.426	19.939	2.460	0.092	0.159	0.005	0.002	0.010	0.000				1368.38	
8	0.7040	1129.4	1149.4		0.482	5.234	71.803	19.992	2.288	0.072	0.119	0.000	0.000	0.010	0.000				1369.82	
9	0.7026	1128.6	1148.6		0.484	5.142	72.087	19.824	2.261	0.072	0.120	0.001	0.000	0.009	0.000				1370.27	
10	0.6985	1121.0	1140.9		0.480	5.222	72.885	18.980	2.227	0.074	0.122	0.001	0.000	0.009	0.000				1365.07	
11	0.6957	1116.5	1136.2		0.470	5.256	73.302	18.656	2.120	0.070	0.116	0.000	0.000	0.008	0.000				1362.24	
12	0.6958	1117.7	1137.5		0.460	5.200	73.312	18.695	2.130	0.073	0.121	0.000	0.000	0.008	0.000				1363.70	
13	0.7022	1128.4	1148.3		0.476	5.130	72.353	19.403	2.422	0.076	0.126	0.001	0.000	0.012	0.000				1370.38	
14	0.6999	1122.4	1142.3		0.487	5.260	72.683	19.054	2.302	0.075	0.127	0.001	0.000	0.011	0.000				1365.41	
15	0.7102	1136.1	1156.2		0.620	5.196	71.105	20.226	2.591	0.092	0.156	0.004	0.001	0.009	0.000				1371.90	
16	0.7098	1134.4	1154.5		0.615	5.264	71.168	20.106	2.594	0.088	0.150	0.004	0.001	0.010	0.000				1370.33	
17	0.7083	1134.0	1154.1		0.622	5.139	71.297	20.275	2.428	0.084	0.141	0.004	0.001	0.010	0.000				1371.30	
18	0.7088	1137.6	1157.7		0.482	5.185	71.034	20.629	2.443	0.081	0.135	0.002	0.000	0.009	0.000				1375.07	
19	0.7062	1127.9	1147.9		0.415	5.625	71.230	20.262	2.255	0.075	0.125	0.001	0.000	0.011	0.000				1366.02	
20	0.7047	1121.2	1141.0		0.405	5.912	71.507	19.689	2.271	0.076	0.127	0.000	0.000	0.013	0.000				1359.24	
21	0.6983	1118.7	1138.5		0.373	5.514	72.598	19.251	2.064	0.069	0.117	0.000	0.000	0.013	0.000				1362.40	
22	0.6948	1115.0	1134.8		0.376	5.404	73.160	18.943	1.944	0.060	0.100	0.000	0.000	0.013	0.000				1361.37	
23	0.7094	1133.1	1153.1		0.556	5.394	71.251	19.890	2.637	0.094	0.162	0.005	0.002	0.008	0.000				1369.15	
24	0.7056	1124.0	1143.9		0.429	5.789	71.363	19.920	2.284	0.076	0.127	0.001	0.000	0.011	0.000				1361.82	
25	0.7066	1121.7	1141.6		0.405	6.059	71.296	19.576	2.418	0.086	0.146	0.002	0.001	0.012	0.000				1358.03	
26	0.7030	1116.3	1136.1		0.387	6.075	71.895	19.075	2.338	0.081	0.136	0.001	0.000	0.011	0.000				1355.00	
27	0.7020	1116.2	1136.0		0.390	5.983	71.895	19.367	2.166	0.071	0.117	0.000	0.000	0.011	0.000				1355.84	
28	0.7033	1118.8	1138.6		0.394	5.951	71.544	19.820	2.096	0.069	0.114	0.000	0.000	0.011	0.000				1357.61	
29	0.7062	1131.6	1151.6		0.511	5.261	71.502	20.130	2.375	0.078	0.131	0.002	0.000	0.010	0.000				1370.36	
30	0.6989	1119.3	1139.1		0.349	5.565	72.560	19.165	2.161	0.069	0.117	0.002	0.001	0.012	0.000				1362.59	
Avg	0.7025	1123.0	1143.0		0.450	5.520	72.006	19.586	2.227	0.074	0.124	0.001	0.000	0.011	0.000				1363.69	

Zone 262

GQ Source Analysis

GQ Source Number:	2501030	Specific Gravity:	0.6436
GQ Source Name:	LIGNITE PLANT	BTU Base:	Dry
Effective Date:	4/10/2009 9:00:00 AM	Measured Heat Value:	1098.82
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	1097.57
Pressure Base:	14.730	Wet Heat Value:	1078.47
Viscosity:		As Deliv. Heat Value:	1097.57

		<u>Mol %</u>	<u>Imported GPM</u>	<u>Calculated GPM @</u>
C1	Methane	81.856		
C2	Ethane	14.367		3.831
C3	Propane	0.421	0.116	0.116
IC4	Iso-Butane	0.000	0.000	0.000
NC4	N-Butane	0.000	0.000	0.000
IC5	Iso-Pentane	0.000	0.000	0.000
NC5	N-Pentane	0.000	0.000	0.000
C6+	Hexanes Plus	0.039	0.018	0.016
CO2	Carbon Dioxide	0.084		
N2	Nitrogen	3.225		
O2	Oxygen	0.000		
HE	Helium			
H2	Hydrogen			
H2S	Hydrogen Sulfide			
Totals		99.992	0.133	3.962

Sample Date: 3/31/2009 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler
Sample Remarks: Zone 263
Analysis Remarks:

GQ Source Daily Summary

April 2009

Number: 043

Name: BISMARCK PLANT CLEVELAND PLANT

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	Crit'herm
1	0.6330	1039.0	1057.4		0.811	3.557	85.672	8.724	1.066	0.061	0.079	0.011	0.007	0.013	0.000				1328.95	
2	0.6325	1033.8	1052.1		0.807	3.828	85.692	8.462	1.048	0.058	0.076	0.009	0.006	0.012	0.000				1322.92	
3	0.6370	1038.3	1056.7		0.778	4.020	84.654	9.382	1.023	0.052	0.068	0.007	0.004	0.011	0.000				1323.98	
4	0.6335	1034.8	1053.1		0.729	3.987	85.250	8.930	0.964	0.054	0.063	0.008	0.004	0.011	0.000				1323.06	
5	0.6336	1037.9	1056.3		0.793	3.699	85.249	9.248	0.883	0.049	0.057	0.007	0.004	0.011	0.000				1327.08	
6	0.6718	1081.4	1100.6		0.553	5.007	77.723	15.016	1.538	0.057	0.085	0.005	0.003	0.014	0.000				1342.84	
7	0.6970	1115.7	1135.5		0.474	5.410	73.098	18.690	2.118	0.071	0.117	0.004	0.003	0.016	0.000				1360.08	
8	0.7055	1128.0	1148.0		0.547	5.345	71.810	19.642	2.406	0.082	0.143	0.006	0.005	0.014	0.000				1366.82	
9	0.7028	1129.8	1149.8		0.488	5.072	72.124	19.847	2.256	0.071	0.121	0.005	0.004	0.013	0.000				1371.60	
10	0.6871	1108.5	1128.2		0.609	4.715	75.289	17.120	2.055	0.073	0.115	0.006	0.004	0.013	0.000				1361.02	
11	0.6971	1119.8	1139.7		0.492	5.141	73.169	18.829	2.159	0.071	0.119	0.005	0.004	0.012	0.000				1365.00	
12	0.6948	1114.2	1133.9		0.480	5.285	73.585	18.309	2.126	0.072	0.122	0.005	0.003	0.012	0.000				1360.39	
13	0.6999	1125.6	1145.5		0.477	5.079	72.772	19.136	2.314	0.074	0.124	0.005	0.004	0.016	0.000				1369.23	
14	0.6994	1121.7	1141.6		0.489	5.246	72.845	18.907	2.290	0.073	0.126	0.005	0.004	0.016	0.000				1365.06	
15	0.7070	1132.3	1152.3		0.577	5.183	71.732	19.689	2.556	0.088	0.151	0.006	0.005	0.014	0.000				1370.46	
16	0.7100	1134.8	1154.9		0.629	5.231	71.227	20.041	2.599	0.090	0.157	0.006	0.005	0.015	0.000				1370.64	
17	0.7080	1132.9	1153.0		0.638	5.151	71.436	20.091	2.432	0.083	0.144	0.006	0.005	0.014	0.000				1370.22	
18	0.7083	1136.6	1156.7		0.502	5.153	71.240	20.423	2.441	0.081	0.137	0.005	0.004	0.013	0.000				1374.49	
19	0.6944	1115.5	1135.2		0.653	4.906	74.053	17.935	2.202	0.086	0.134	0.009	0.006	0.016	0.000				1362.34	
20	0.6829	1097.1	1116.5		0.623	4.990	75.934	16.398	1.841	0.072	0.109	0.008	0.005	0.019	0.000				1351.16	
21	0.6947	1112.6	1132.3		0.403	5.496	73.286	18.676	1.946	0.063	0.107	0.004	0.003	0.018	0.000				1358.50	
22	0.6961	1117.5	1137.3		0.403	5.325	73.160	18.840	2.074	0.065	0.109	0.003	0.003	0.018	0.000				1363.15	
23	0.7008	1120.0	1139.9		0.614	5.289	72.986	18.333	2.505	0.090	0.157	0.007	0.006	0.013	0.000				1361.60	
24	0.6505	1056.8	1075.5		0.782	4.158	82.211	11.337	1.366	0.049	0.082	0.004	0.003	0.008	0.000				1333.41	
25	0.6573	1072.5	1091.5		0.572	4.157	80.821	12.763	1.518	0.056	0.094	0.004	0.003	0.011	0.000				1346.36	
26	0.6582	1072.4	1091.4		0.533	4.308	80.558	12.925	1.510	0.055	0.094	0.004	0.003	0.011	0.000				1345.28	
27	0.6668	1079.7	1098.8		0.494	4.741	78.767	14.225	1.615	0.053	0.088	0.003	0.002	0.012	0.000				1345.59	
28	0.6934	1107.8	1127.4		0.422	5.637	73.545	18.248	1.956	0.065	0.108	0.003	0.002	0.015	0.000				1353.93	
29	0.7046	1129.6	1149.6		0.501	5.234	71.804	19.935	2.303	0.074	0.125	0.004	0.003	0.015	0.000				1369.61	
30	0.7032	1124.0	1143.9		0.495	5.544	72.041	19.409	2.332	0.077	0.135	0.005	0.004	0.016	0.000				1364.17	
Avg	0.6820	1099.0	1118.5		0.577	4.863	76.125	16.317	1.915	0.069	0.112	0.006	0.004	0.014	0.000				1354.30	

Zone 271

GQ Source Daily Summary

April 2009

Number: 063

Name: CLEVELAND PLANT MAPLETON

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	Crit'herm
1	0.6372	1044.7	1063.2		0.793	3.628	84.852	9.383	1.170	0.064	0.085	0.010	0.007	0.008	0.000				1331.82	
2	0.6306	1033.2	1051.5		0.807	3.681	86.021	8.334	1.000	0.058	0.073	0.010	0.006	0.009	0.000				1324.09	
3	0.6361	1036.5	1054.8		0.792	4.020	84.836	9.169	1.040	0.053	0.069	0.008	0.005	0.008	0.000				1322.61	
4	0.6351	1035.3	1053.7		0.767	4.037	84.980	9.055	1.018	0.056	0.068	0.008	0.004	0.007	0.000				1322.15	
5	0.6323	1035.9	1054.3		0.740	3.778	85.410	9.062	0.885	0.050	0.057	0.007	0.004	0.008	0.000				1325.84	
6	0.6545	1060.1	1078.9		0.681	4.486	81.122	12.289	1.275	0.055	0.074	0.006	0.003	0.008	0.000				1333.55	
7	0.6874	1101.7	1121.2		0.457	5.392	74.571	17.631	1.779	0.061	0.094	0.003	0.002	0.010	0.000				1352.28	
8	0.7069	1129.4	1149.4		0.566	5.371	71.497	19.903	2.404	0.087	0.151	0.006	0.005	0.009	0.000				1367.02	
9	0.7037	1129.3	1149.3		0.490	5.188	71.896	19.921	2.294	0.073	0.121	0.005	0.004	0.008	0.000				1370.00	
10	0.6922	1116.8	1136.6		0.604	4.689	74.206	18.247	2.052	0.071	0.112	0.006	0.004	0.009	0.000				1366.15	
11	0.6977	1118.5	1138.3		0.497	5.271	73.088	18.691	2.237	0.074	0.125	0.005	0.004	0.008	0.000				1362.78	
12	0.6948	1114.5	1134.2		0.489	5.256	73.492	18.468	2.094	0.070	0.116	0.004	0.003	0.007	0.000				1360.70	
13	0.6961	1117.3	1137.1		0.471	5.234	73.257	18.701	2.128	0.073	0.122	0.004	0.003	0.007	0.000				1362.90	
14	0.7019	1126.9	1146.9		0.474	5.184	72.395	19.325	2.398	0.076	0.129	0.005	0.004	0.011	0.000				1368.97	
15	0.7012	1123.7	1143.6		0.499	5.281	72.497	19.144	2.353	0.077	0.131	0.005	0.004	0.010	0.000				1365.66	
16	0.7108	1135.8	1155.9		0.637	5.235	71.016	20.245	2.595	0.093	0.161	0.006	0.005	0.008	0.000				1371.04	
17	0.7090	1133.4	1153.5		0.624	5.226	71.246	20.150	2.501	0.086	0.148	0.006	0.005	0.009	0.000				1369.96	
18	0.7085	1133.2	1153.3		0.629	5.194	71.238	20.277	2.418	0.083	0.143	0.006	0.005	0.008	0.000				1370.12	
19	0.7056	1132.3	1152.4		0.534	5.109	71.712	20.044	2.367	0.081	0.134	0.006	0.004	0.008	0.000				1371.90	
20	0.6828	1099.4	1118.9		0.713	4.695	76.137	16.339	1.891	0.079	0.117	0.009	0.006	0.012	0.000				1354.09	
21	0.6953	1110.3	1130.0		0.467	5.582	73.298	18.448	1.999	0.071	0.115	0.005	0.003	0.011	0.000				1355.18	
22	0.6990	1118.7	1138.5		0.393	5.540	72.498	19.283	2.088	0.067	0.113	0.003	0.003	0.012	0.000				1361.74	
23	0.6991	1123.1	1143.0		0.448	5.201	72.719	19.212	2.206	0.073	0.123	0.004	0.003	0.011	0.000				1366.98	
24	0.6736	1078.4	1097.5		0.835	4.925	78.194	13.898	1.933	0.072	0.126	0.006	0.005	0.006	0.000				1337.15	
25	0.6515	1067.2	1086.1		0.591	3.907	81.770	12.260	1.334	0.048	0.077	0.004	0.003	0.006	0.000				1345.56	
26	0.6593	1072.8	1091.8		0.540	4.371	80.341	13.025	1.556	0.057	0.097	0.004	0.003	0.006	0.000				1344.66	
27	0.6593	1072.1	1091.1		0.524	4.441	80.308	12.997	1.569	0.055	0.093	0.003	0.002	0.007	0.000				1343.80	
28	0.6779	1090.6	1109.9		0.466	5.153	76.569	15.886	1.759	0.058	0.096	0.003	0.002	0.008	0.000				1348.04	
29	0.7101	1132.8	1152.9		0.640	5.348	70.880	20.500	2.389	0.081	0.143	0.006	0.005	0.009	0.000				1368.10	
30	0.7101	1132.8	1152.9		0.640	5.348	70.880	20.500	2.389	0.081	0.143	0.006	0.005	0.009	0.000				1368.10	
AVG	0.6817	1098.0	1117.6		0.583	4.872	76.133	16.314	1.899	0.069	0.111	0.006	0.004	0.009	0.000				1353.56	

Zone 272

GQ Source Daily Summary

April 2009

Number: 061

Name: CLEVELAND PLANT GRAFTON

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	Crit'herm
1	0.6371	1044.6	1063.1		0.795	3.620	84.876	9.367	1.168	0.064	0.085	0.010	0.007	0.008	0.000				1331.82	
2	0.6307	1033.4	1051.7		0.809	3.676	86.004	8.352	1.002	0.058	0.073	0.010	0.006	0.009	0.000				1324.25	
3	0.6363	1036.8	1055.1		0.791	4.022	84.799	9.204	1.041	0.053	0.070	0.008	0.005	0.008	0.000				1322.79	
4	0.6353	1035.5	1053.9		0.767	4.041	84.946	9.082	1.021	0.056	0.068	0.008	0.004	0.008	0.000				1322.23	
5	0.6324	1036.1	1054.4		0.741	3.776	85.395	9.077	0.886	0.050	0.057	0.007	0.004	0.008	0.000				1325.94	
6	0.6542	1059.7	1078.5		0.682	4.477	81.178	12.242	1.276	0.055	0.074	0.006	0.003	0.008	0.000				1333.41	
7	0.6878	1102.2	1121.8		0.454	5.395	74.499	17.702	1.779	0.061	0.094	0.003	0.002	0.010	0.000				1352.62	
8	0.7071	1129.7	1149.7		0.566	5.366	71.467	19.930	2.410	0.087	0.151	0.006	0.005	0.009	0.000				1367.27	
9	0.7033	1129.4	1149.4		0.490	5.154	71.979	19.877	2.286	0.074	0.123	0.005	0.004	0.008	0.000				1370.50	
10	0.6913	1116.7	1136.5		0.603	4.616	74.360	18.183	2.036	0.072	0.112	0.006	0.004	0.009	0.000				1366.90	
11	0.6977	1118.5	1138.3		0.496	5.266	73.082	18.701	2.238	0.074	0.125	0.005	0.004	0.008	0.000				1362.85	
12	0.6951	1115.0	1134.8		0.489	5.251	73.422	18.542	2.096	0.070	0.117	0.004	0.003	0.007	0.000				1361.10	
13	0.6963	1117.7	1137.5		0.470	5.230	73.225	18.728	2.139	0.073	0.122	0.004	0.003	0.007	0.000				1363.16	
14	0.7018	1127.0	1147.0		0.470	5.177	72.406	19.332	2.391	0.076	0.128	0.005	0.004	0.011	0.000				1369.14	
15	0.7013	1123.9	1143.8		0.500	5.278	72.485	19.156	2.353	0.077	0.131	0.005	0.004	0.010	0.000				1365.80	
16	0.7109	1136.0	1156.1		0.637	5.226	71.004	20.267	2.595	0.093	0.161	0.006	0.005	0.008	0.000				1371.27	
17	0.7092	1133.9	1154.0		0.623	5.223	71.205	20.183	2.510	0.087	0.150	0.006	0.005	0.009	0.000				1370.29	
18	0.7082	1133.3	1153.3		0.636	5.142	71.319	20.255	2.403	0.083	0.143	0.006	0.005	0.009	0.000				1370.48	
19	0.7053	1131.7	1151.8		0.547	5.098	71.765	19.998	2.359	0.081	0.134	0.006	0.004	0.008	0.000				1371.51	
20	0.6841	1100.9	1120.4		0.696	4.762	75.838	16.572	1.908	0.079	0.116	0.010	0.006	0.013	0.000				1354.56	
21	0.6956	1110.8	1130.5		0.464	5.603	73.107	18.604	2.015	0.071	0.116	0.005	0.003	0.012	0.000				1355.43	
22	0.6989	1118.7	1138.5		0.393	5.541	72.498	19.281	2.089	0.067	0.113	0.003	0.003	0.012	0.000				1361.76	
23	0.6992	1123.1	1143.0		0.447	5.204	72.699	19.224	2.211	0.073	0.123	0.004	0.003	0.011	0.000				1366.97	
24	0.6744	1079.2	1098.3		0.830	4.968	77.933	14.089	1.964	0.073	0.127	0.006	0.005	0.006	0.000				1337.29	
25	0.6516	1067.4	1086.3		0.591	3.906	81.748	12.282	1.336	0.047	0.077	0.004	0.003	0.006	0.000				1345.71	
26	0.6593	1073.0	1092.0		0.540	4.365	80.321	13.056	1.551	0.057	0.097	0.004	0.003	0.006	0.000				1344.86	
27	0.6593	1072.1	1091.1		0.524	4.444	80.298	13.001	1.572	0.055	0.093	0.003	0.002	0.007	0.000				1343.73	
28	0.6779	1090.7	1110.0		0.466	5.148	76.538	15.922	1.759	0.058	0.096	0.003	0.002	0.008	0.000				1348.20	
29	0.7021	1120.8	1140.7		0.409	5.683	71.797	19.850	2.066	0.067	0.112	0.003	0.002	0.010	0.000				1361.28	
30	0.7102	1133.6	1153.7		0.568	5.414	70.976	20.219	2.568	0.088	0.150	0.006	0.004	0.008	0.000				1369.01	
Avg	0.6818	1098.0	1117.8		0.583	4.869	76.106	16.343	1.901	0.069	0.111	0.006	0.004	0.009	0.000				1353.74	

Zone 273

GQ Source Daily Summary

April 2009

Number: 041

Name: BISMARCK PLANT DICKINSON PLANT

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	Critherm
1	0.5986	995.3	1012.9		0.938	2.780	92.330	3.332	0.484	0.052	0.049	0.013	0.008	0.013	0.000				1309.26	
2	0.5986	990.6	1008.1		0.947	3.056	92.246	3.165	0.462	0.047	0.046	0.012	0.007	0.011	0.000				1303.04	
3	0.5979	989.9	1007.5		1.016	2.930	92.409	3.091	0.446	0.044	0.040	0.009	0.006	0.009	0.000				1302.86	
4	0.5967	989.6	1007.2		0.917	2.986	92.542	3.014	0.427	0.049	0.040	0.010	0.006	0.009	0.000				1303.79	
5	0.6016	997.4	1015.0		1.013	2.828	91.685	3.900	0.467	0.047	0.038	0.010	0.005	0.008	0.000				1308.63	
6	0.6008	996.2	1013.9		0.976	2.875	91.759	3.861	0.430	0.044	0.035	0.009	0.005	0.007	0.000				1308.07	
7	0.6007	999.0	1016.7		1.077	2.542	92.003	3.792	0.468	0.052	0.040	0.011	0.006	0.009	0.000				1311.84	
8	0.5969	993.4	1011.0		1.152	2.416	92.812	3.096	0.405	0.052	0.039	0.011	0.005	0.011	0.000				1308.56	
9	0.6883	1110.6	1130.3		0.605	4.705	74.961	17.534	1.996	0.068	0.108	0.006	0.004	0.012	0.000				1362.30	
10	0.5969	1004.6	1022.4		1.617	1.017	93.663	3.064	0.481	0.071	0.051	0.015	0.007	0.014	0.000				1323.39	
11	0.6306	1045.0	1063.5		1.232	2.312	86.796	8.430	1.050	0.074	0.075	0.012	0.006	0.013	0.000				1339.49	
12	0.6466	1057.4	1076.1		0.950	3.499	83.335	10.701	1.327	0.072	0.088	0.010	0.005	0.012	0.000				1338.28	
13	0.6889	1111.3	1131.0		0.574	4.765	74.951	17.380	2.120	0.071	0.114	0.005	0.004	0.015	0.000				1362.56	
14	0.6990	1120.8	1140.7		0.488	5.284	72.921	18.817	2.287	0.073	0.125	0.005	0.004	0.016	0.000				1364.37	
15	0.7063	1131.5	1151.6		0.574	5.171	71.835	19.630	2.530	0.087	0.149	0.006	0.005	0.014	0.000				1370.21	
16	0.7099	1134.4	1154.5		0.630	5.248	71.247	19.998	2.602	0.091	0.158	0.006	0.005	0.015	0.000				1370.21	
17	0.7078	1132.6	1152.6		0.638	5.146	71.497	20.034	2.432	0.084	0.145	0.006	0.005	0.015	0.000				1370.08	
18	0.7064	1134.4	1154.5		0.525	5.076	71.614	20.146	2.400	0.080	0.136	0.005	0.004	0.013	0.000				1373.62	
19	0.6057	1014.4	1032.3		1.621	1.241	92.242	3.981	0.669	0.094	0.081	0.028	0.017	0.025	0.000				1326.51	
20	0.6126	1011.1	1029.0		1.361	2.492	90.239	5.064	0.655	0.067	0.064	0.020	0.012	0.025	0.000				1314.67	
21	0.6772	1091.1	1110.4		0.588	4.880	76.868	15.791	1.685	0.062	0.097	0.007	0.005	0.019	0.000				1349.34	
22	0.6780	1095.0	1114.4		0.577	4.726	76.760	16.024	1.731	0.059	0.094	0.005	0.004	0.019	0.000				1353.37	
23	0.6399	1039.8	1058.2		0.873	4.064	84.114	9.786	1.047	0.037	0.061	0.003	0.002	0.012	0.000				1322.19	
24	0.5818	974.2	991.5		1.032	2.365	94.874	1.517	0.115	0.010	0.012	0.003	0.002	0.003	0.000				1299.88	
25	0.5812	992.9	1010.5		0.778	1.564	94.633	2.665	0.198	0.014	0.018	0.004	0.003	0.004	0.000				1325.49	
26	0.5792	990.5	1008.0		0.752	1.564	94.940	2.434	0.167	0.009	0.013	0.002	0.001	0.003	0.000				1324.53	
27	0.5776	989.5	1007.0		0.734	1.501	95.176	2.323	0.127	0.005	0.006	0.000	0.000	0.002	0.000				1325.04	
28	0.6646	1078.3	1097.4		0.496	4.620	78.883	14.337	1.485	0.049	0.082	0.003	0.002	0.011	0.000				1346.64	
29	0.6420	1060.5	1079.3		0.585	3.432	83.626	11.018	1.216	0.039	0.065	0.003	0.002	0.008	0.000				1347.06	
30	0.5912	1003.6	1021.3		0.656	2.032	92.818	4.064	0.328	0.010	0.015	0.001	0.000	0.004	0.000				1328.33	
Avg	0.6334	1043.0	1061.0		0.864	3.303	85.526	9.066	1.075	0.054	0.070	0.008	0.005	0.012	0.000				1333.12	

Zone 28

GQ Source Daily Summary

April 2009

Number: 271

Name: DICKINSON BORDER

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	Cri/therm
1	0.5952	987.8	1005.3		0.951	2.896	92.871	2.743	0.429	0.047	0.042	0.000	0.000	0.020	0.000				1303.06	
2	0.5985	990.5	1008.0		0.975	3.002	92.234	3.217	0.472	0.041	0.040	0.000	0.000	0.018	0.000				1303.05	
3	0.5965	989.3	1006.8		0.990	2.866	92.643	2.957	0.446	0.044	0.037	0.000	0.000	0.016	0.000				1303.61	
4	0.5979	996.0	1013.7		0.901	2.729	92.271	3.554	0.453	0.043	0.034	0.000	0.000	0.016	0.000				1310.88	
5	0.6036	994.9	1012.5		1.089	3.047	91.275	4.013	0.480	0.045	0.034	0.000	0.000	0.016	0.000				1303.75	
6	0.5992	999.7	1017.4		1.048	2.398	92.223	3.787	0.446	0.047	0.033	0.000	0.000	0.018	0.000				1314.36	
7	0.5951	992.7	1010.2		1.315	2.034	93.369	2.769	0.401	0.055	0.038	0.000	0.000	0.019	0.000				1309.57	
8	0.5975	1006.1	1023.9		1.615	0.979	93.490	3.289	0.484	0.071	0.050	0.000	0.000	0.022	0.000				1324.69	
9	0.5967	1002.8	1020.6		1.685	1.000	93.709	2.976	0.492	0.069	0.048	0.000	0.000	0.020	0.000				1321.21	
10	0.5978	1004.2	1022.0		1.535	1.245	93.325	3.248	0.507	0.071	0.049	0.000	0.000	0.020	0.000				1321.84	
11	0.5948	990.0	1007.6		1.385	2.060	93.456	2.605	0.395	0.047	0.034	0.000	0.000	0.018	0.000				1306.44	
12	0.5902	972.5	989.7		1.448	2.610	94.094	1.572	0.225	0.026	0.011	0.000	0.000	0.014	0.000				1288.13	
13	0.5878	967.7	984.8		1.374	2.782	94.411	1.233	0.160	0.019	0.008	0.000	0.000	0.012	0.000				1284.53	
14	0.5857	957.7	974.6		1.308	3.297	94.507	0.849	0.029	0.000	0.000	0.000	0.000	0.010	0.000				1273.54	
15	0.6019	1009.4	1027.3		1.530	1.321	92.626	3.748	0.602	0.082	0.066	0.002	0.000	0.023	0.000				1324.17	
16	0.6031	1013.7	1031.6		1.650	0.990	92.670	3.844	0.650	0.084	0.071	0.010	0.000	0.029	0.000				1328.40	
17	0.6023	1011.5	1029.4		1.581	1.155	92.669	3.801	0.608	0.084	0.068	0.007	0.000	0.027	0.000				1326.44	
18	0.5951	987.2	1004.7		1.615	1.908	93.787	2.138	0.400	0.067	0.054	0.002	0.000	0.029	0.000				1302.40	
19	0.5960	989.1	1006.6		1.400	2.203	93.119	2.886	0.298	0.038	0.030	0.000	0.000	0.025	0.000				1303.96	
20	0.5945	977.5	994.8		1.115	3.216	92.573	2.997	0.087	0.000	0.000	0.000	0.000	0.011	0.000				1290.00	
21	0.5896	967.5	984.6		1.155	3.298	93.590	1.885	0.061	0.000	0.000	0.000	0.000	0.011	0.000				1282.29	
22	0.6026	954.4	971.3		1.777	4.381	91.383	2.377	0.069	0.000	0.000	0.000	0.000	0.014	0.000				1252.15	
23	0.5893	958.4	975.4		1.450	3.376	93.909	1.213	0.040	0.000	0.000	0.000	0.000	0.012	0.000				1270.60	
24	0.5874	974.3	991.6		1.177	2.644	94.204	1.857	0.101	0.002	0.003	0.000	0.000	0.012	0.000				1293.85	
25	0.5840	997.0	1014.7		0.789	1.528	94.827	2.617	0.206	0.007	0.013	0.000	0.000	0.013	0.000				1327.71	
26	0.5833	995.0	1012.6		0.786	1.592	94.908	2.510	0.182	0.003	0.006	0.000	0.000	0.013	0.000				1325.77	
27	0.5814	994.2	1011.8		0.747	1.520	95.221	2.354	0.141	0.001	0.004	0.000	0.000	0.012	0.000				1326.90	
28	0.5816	994.2	1011.8		0.753	1.528	95.187	2.373	0.144	0.000	0.003	0.000	0.000	0.013	0.000				1326.71	
29	0.5860	1003.4	1021.1		0.606	1.606	94.087	3.578	0.112	0.000	0.000	0.000	0.000	0.011	0.000				1333.83	
30	0.5817	994.6	1012.2		0.680	2.587	93.478	2.779	0.117	0.007	0.007	0.001	0.000	0.017	0.000				1327.22	
Avg	0.5932	989.0	1006.6		1.214	2.260	93.404	2.726	0.308	0.033	0.026	0.001	0.000	0.017	0.000				1307.03	

Zone 31

GQ Source Daily Summary

April 2009

Number: 051

Name: CABIN CREEK DICKINSON PLANT

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value DRY	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	Crit'herm
1	0.5973	988.8	1006.4		0.965	3.012	92.550	2.879	0.464	0.049	0.048	0.012	0.008	0.012	0.000				1302.16	
2	0.5974	988.8	1006.3		1.016	2.948	92.537	2.934	0.456	0.044	0.042	0.010	0.006	0.009	0.000				1301.96	
3	0.5956	987.8	1005.3		0.932	2.965	92.806	2.748	0.433	0.049	0.042	0.010	0.006	0.009	0.000				1302.67	
4	0.6004	995.4	1013.0		1.018	2.824	91.950	3.633	0.467	0.047	0.039	0.010	0.005	0.007	0.000				1307.37	
5	0.6003	996.0	1013.6		1.001	2.807	91.906	3.748	0.434	0.046	0.036	0.010	0.005	0.008	0.000				1308.26	
6	0.5955	991.0	1008.6		1.181	2.387	93.150	2.745	0.412	0.055	0.041	0.012	0.006	0.011	0.000				1306.90	
7	0.5949	1000.6	1018.3		1.628	1.055	94.100	2.574	0.476	0.075	0.053	0.016	0.008	0.015	0.000				1320.31	
8	0.5946	1001.7	1019.4		1.626	0.967	94.161	2.599	0.486	0.074	0.052	0.015	0.007	0.013	0.000				1322.03	
9	0.5957	1003.9	1021.6		1.616	0.954	93.981	2.758	0.521	0.077	0.056	0.016	0.008	0.014	0.000				1323.69	
10	0.5927	989.0	1006.5		1.386	1.934	93.993	2.157	0.404	0.056	0.042	0.012	0.006	0.010	0.000				1307.33	
11	0.5916	981.1	998.4		1.427	2.245	94.099	1.796	0.332	0.047	0.033	0.009	0.005	0.008	0.000				1298.08	
12	0.5865	964.8	981.9		1.397	2.806	94.729	0.865	0.152	0.024	0.016	0.005	0.002	0.003	0.000				1282.13	
13	0.5829	952.7	969.6		1.345	3.288	95.130	0.196	0.027	0.006	0.005	0.002	0.000	0.001	0.000				1269.96	
14	0.5972	998.6	1016.3		1.514	1.569	93.511	2.703	0.523	0.075	0.060	0.018	0.010	0.015	0.000				1315.05	
15	0.6027	1015.8	1033.8		1.649	0.828	92.963	3.619	0.700	0.096	0.079	0.025	0.015	0.025	0.000				1331.68	
16	0.5973	1002.2	1019.9		1.550	1.304	93.625	2.783	0.550	0.074	0.061	0.020	0.012	0.020	0.000				1319.69	
17	0.5971	996.8	1014.5		1.640	1.481	93.743	2.425	0.490	0.083	0.069	0.027	0.016	0.026	0.000				1312.79	
18	0.5833	954.1	971.0		1.317	3.284	95.053	0.280	0.043	0.009	0.007	0.003	0.001	0.003	0.000				1271.38	
19	0.5827	951.6	968.5		1.331	3.357	95.131	0.152	0.018	0.005	0.004	0.001	0.000	0.001	0.000				1268.73	
20	0.5827	951.5	968.3		1.345	3.349	95.130	0.147	0.017	0.004	0.004	0.001	0.000	0.001	0.000				1268.48	
21	0.5829	952.3	969.1		1.330	3.339	95.101	0.191	0.026	0.005	0.005	0.001	0.001	0.001	0.000				1269.39	
22	0.5848	948.8	965.6		1.527	3.437	94.872	0.135	0.018	0.004	0.004	0.001	0.001	0.001	0.000				1262.58	
23	0.5849	947.6	964.4		1.475	3.592	94.780	0.127	0.015	0.004	0.004	0.001	0.001	0.001	0.000				1261.01	
24	0.5857	948.6	965.4		1.522	3.535	94.668	0.247	0.017	0.004	0.004	0.001	0.001	0.001	0.000				1261.48	
25	0.5890	981.4	998.8		1.104	2.481	93.897	2.360	0.130	0.010	0.012	0.003	0.002	0.002	0.000				1301.43	
26	0.5883	1003.4	1021.1		0.752	1.602	93.957	3.430	0.215	0.015	0.019	0.004	0.003	0.004	0.000				1331.37	
27	0.5864	995.6	1013.2		0.781	1.860	94.240	2.921	0.171	0.009	0.013	0.002	0.001	0.002	0.000				1323.12	
28	0.5825	951.3	968.2		1.300	3.406	95.123	0.143	0.016	0.005	0.004	0.001	0.000	0.001	0.000				1268.53	
29	0.5825	951.3	968.2		1.300	3.406	95.123	0.143	0.016	0.005	0.004	0.001	0.000	0.001	0.000				1268.53	
30	0.5825	951.3	968.2		1.300	3.406	95.123	0.143	0.016	0.005	0.004	0.001	0.000	0.001	0.000				1268.53	
AVG	0.5907	980.0	997.3		1.288	2.449	94.008	1.897	0.273	0.035	0.029	0.008	0.005	0.008	0.000				1297.47	

Zone 32

GQ Source Daily Summary

April 2009

Number: 111

Name: LITTLE KNIFE PLANT

Pressure Base: 14.730

Temperature Base:

Contract Day: 1 Contract Hour: 9

Day	Relative Density	Heating Value Wet	Heating Value Dry	Heating Value As Del	CO2	N2	C1	C2	C3	IC4	NC4	IC5	NC5	C6	C7	C8	C9	C10	Wobbe	Cri/therm
1	0.6675	1135.0	1155.1		0.000	2.192	77.054	20.290	0.446	0.008	0.010	0.000	0.000	0.000	0.000				1413.85	
2	0.6648	1131.6	1151.6		0.000	2.151	77.597	19.789	0.446	0.008	0.010	0.000	0.000	0.000	0.000				1412.38	
3	0.6679	1135.2	1155.3		0.000	2.218	76.970	20.338	0.456	0.008	0.010	0.000	0.000	0.000	0.000				1413.68	
4	0.6689	1136.5	1156.6		0.000	2.240	76.758	20.527	0.457	0.008	0.010	0.000	0.000	0.000	0.000				1414.14	
5	0.6687	1136.2	1156.4		0.000	2.236	76.786	20.514	0.446	0.008	0.010	0.000	0.000	0.000	0.000				1414.05	
6	0.6687	1136.4	1156.5		0.000	2.227	76.790	20.519	0.447	0.008	0.010	0.000	0.000	0.000	0.000				1414.24	
7	0.6682	1135.5	1155.6		0.000	2.227	76.945	20.331	0.479	0.008	0.010	0.000	0.000	0.000	0.000				1413.71	
8	0.6687	1136.5	1156.7		0.000	2.182	77.269	20.039	0.490	0.008	0.011	0.000	0.000	0.001	0.000				1413.35	
9	0.6687	1136.5	1156.7		0.000	2.218	76.837	20.440	0.486	0.008	0.011	0.000	0.000	0.000	0.000				1414.41	
10	0.6683	1136.0	1156.1		0.000	2.204	76.942	20.340	0.495	0.008	0.010	0.000	0.000	0.000	0.000				1414.27	
11	0.6686	1136.4	1156.6		0.000	2.211	76.883	20.379	0.507	0.008	0.011	0.000	0.000	0.000	0.000				1414.42	
12	0.6684	1136.0	1156.1		0.000	2.215	76.946	20.299	0.520	0.008	0.011	0.000	0.000	0.000	0.000				1414.12	
13	0.6680	1135.1	1155.2		0.000	2.233	77.028	20.190	0.529	0.009	0.011	0.000	0.000	0.000	0.000				1413.46	
14	0.6688	1136.0	1156.1		0.000	2.255	76.882	20.291	0.551	0.009	0.011	0.000	0.000	0.000	0.000				1413.69	
15	0.6653	1132.5	1152.6		0.000	2.133	77.619	19.682	0.547	0.009	0.011	0.000	0.000	0.000	0.000				1413.12	
16	0.6684	1136.2	1156.3		0.000	2.204	76.950	20.299	0.526	0.009	0.011	0.000	0.000	0.000	0.000				1414.38	
17	0.6690	1136.6	1156.7		0.000	2.236	76.825	20.394	0.526	0.009	0.011	0.000	0.000	0.000	0.000				1414.25	
18	0.6679	1135.5	1155.6		0.000	2.201	77.062	20.182	0.535	0.009	0.011	0.000	0.000	0.000	0.000				1414.02	
19	0.6693	1137.7	1157.9		0.000	2.198	76.784	20.456	0.541	0.009	0.011	0.000	0.000	0.000	0.000				1415.29	
20	0.6694	1137.6	1157.7		0.000	2.217	76.752	20.462	0.549	0.009	0.011	0.000	0.000	0.000	0.000				1415.01	
21	0.6713	1140.1	1160.3		0.000	2.237	76.364	20.827	0.554	0.009	0.011	0.000	0.000	0.000	0.000				1416.15	
22	0.6705	1139.0	1159.2		0.000	2.226	76.524	20.700	0.531	0.008	0.011	0.000	0.000	0.000	0.000				1415.71	
23	0.6701	1138.7	1158.8		0.000	2.219	76.545	20.733	0.484	0.008	0.010	0.000	0.000	0.000	0.000				1415.58	
24	0.6692	1136.8	1156.8		0.000	2.247	76.729	20.530	0.476	0.008	0.010	0.000	0.000	0.001	0.000				1414.25	
25	0.6703	1138.3	1158.5		0.000	2.258	76.531	20.676	0.517	0.008	0.011	0.000	0.000	0.000	0.000				1414.95	
26	0.6698	1137.5	1157.6		0.000	2.255	76.630	20.599	0.497	0.008	0.011	0.000	0.000	0.000	0.000				1414.53	
27	0.6705	1138.8	1159.0		0.000	2.244	76.502	20.723	0.513	0.008	0.011	0.000	0.000	0.000	0.000				1415.39	
28	0.6663	1133.2	1153.3		0.000	2.189	77.373	19.898	0.521	0.008	0.011	0.000	0.000	0.000	0.000				1412.86	
29	0.6702	1138.5	1158.7		0.000	2.229	76.569	20.663	0.519	0.008	0.011	0.000	0.000	0.000	0.000				1415.39	
30	0.6735	1142.5	1162.8		0.000	2.299	75.922	21.212	0.541	0.009	0.013	0.001	0.001	0.002	0.000				1416.86	
AVG	0.6688	1137.0	1156.7		0.000	2.220	76.846	20.411	0.504	0.008	0.011	0.000	0.000	0.000	0.000				1414.38	

Zone 33

GQ Source Analysis

GQ Source Number:	1202160	Specific Gravity:	0.7971
GQ Source Name:	BOWMAN BORDER	BTU Base:	Dry
Effective Date:	4/1/2009 9:00:00 AM	Measured Heat Value:	1170.13
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	1167.43
Pressure Base:	14.730	Wet Heat Value:	1147.11
Viscosity:		As Deliv. Heat Value:	1167.43

		Mol %	Imported GPM	Calculated GPM @
C1	Methane	55.490		
C2	Ethane	27.552		7.347
C3	Propane	4.012	1.102	1.102
IC4	Iso-Butane	0.097	0.032	0.032
NC4	N-Butane	0.294	0.092	0.092
IC5	Iso-Pentane	0.000	0.007	0.000
NC5	N-Pentane	0.033	0.012	0.012
C6+	Hexanes Plus	0.003	0.002	0.001
CO2	Carbon Dioxide	2.169		
N2	Nitrogen	10.329		
O2	Oxygen	0.000		
HE	Helium			
H2	Hydrogen			
H2S	Hydrogen Sulfide			
Totals		99.979	1.247	8.586

Sample Date: 3/9/2009 12:00:00 AM
Sample Type: Composite
Sample Tech: sampler

Sample Remarks: Zone 34

Analysis Remarks:

GQ Source Analysis

GQ Source Number:	1201140	Specific Gravity:	0.5740
GQ Source Name:	EAGLE 8B ND	BTU Base:	Dry
Effective Date:	7/1/2008 9:00:00 AM	Measured Heat Value:	974.02
Effective End Date:	1/18/2038 9:14:07 PM	Dry Heat Value:	974.02
Pressure Base:	14.730	Wet Heat Value:	957.16
Viscosity:		As Deliv. Heat Value:	974.02

		Mol %	Imported GPM	Calculated GPM @
C1	Methane	95.505		
C2	Ethane	0.281	0.076	0.075
C3	Propane	0.009	0.002	0.002
IC4	Iso-Butane	0.007	0.002	0.002
NC4	N-Butane	0.000	0.000	
IC5	Iso-Pentane	0.000	0.000	
NC5	N-Pentane	0.000	0.000	
C6+	Hexanes Plus	0.000	0.000	0.000
CO2	Carbon Dioxide	0.072		
N2	Nitrogen	4.126		
O2	Oxygen	0.000		
HE	Helium	0.000		
H2	Hydrogen	0.000		
H2S	Hydrogen Sulfide	0.000		
Totals		100.000	0.080	0.080

Sample Date: 6/13/2006 9:00:00 AM

Sample Type: Spot

Sample Tech: MG

Sample Remarks: Zone 35

Analysis Remarks: _____

NORTH DAKOTA HEATING VALUE ZONES		
ZONES	MEASURING DEVICE	LOCATION
211	Chromatograph	Sidney Area
24	Monthly Sampler	Williston 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	Monthly Sampler	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	APR 09	MAR 09	FEB 09	JAN 09	DEC 08	NOV 08	OCT 08	SEPT 08	AUG 08	JULY 08	JUNE 08	MAY 08	ZONE
MT/ND	211	Sidney Area	1144	1170	1100	1019	1021	1065	1184	1195	1198	1194	1192	1195	1190	21
ND	24	Williston Area	1166	1149	1106	1101	1158	1195	1171	1173	1175	1189	1189	1189	1193	24
ND	25	Watford City Area	1129	1128	1128	1128	1130	1127	1126	1130	1129	1131	1132	1130	1130	25
ND	261	Williston - Tioga - Minot Line	1128	1136	1110	1101	1102	1123	1148	1112	1130	1135	1148	1141	1147	261
ND	262	Minot Area	1133	1143	1130	1114	1105	1129	1147	1116	1133	1141	1147	1144	1152	262
ND	263	Tioga - Portal	1123	1098	1092	1089	1103	1139	1125	1129	1142	1145	1141	1132	1136	263
ND	264	Williston - Ray	1166	1149	1106	1101	1158	1195	1171	1173	1175	1189	1189	1189	1193	264
ND	271	Bismarck - Cleveland	1105	1118	1043	1058	1056	1081	1129	1068	1127	1140	1146	1142	1151	271
ND	272	Cleveland - Mepleton	1105	1118	1043	1057	1056	1080	1129	1068	1126	1140	1146	1142	1151	272
ND	273	Cleveland - Grafton	1069	1061	1014	1021	1028	1020	1013	1038	1127	1140	1146	1142	1151	273
ND	28	Bismarck - Cabin Creek	1027	1007	1013	1019	1028	1020	1008	1038	1088	1116	1147	1143	1135	28
ND	31	Dickinson Area	1023	997	1013	1019	1027	1018	1008	1037	1038	1044	1040	1032	1037	31
ND/MT	32	Cabin Creek - Dickinson	1156	1157	1156	1157	1156	1154	1160	1037	1032	1036	1036	1027	1031	32
ND	33	Killdeer	1169	1167	1172	1164	1168	1168	1160	1158	1158	1161	1158	1149	1146	33
ND	34	Bowman Area	974	974	974	974	974	974	974	1176	1176	1179	1170	1165	1167	34
ND	35	Baker Field - North Dakota	974	974	974	974	974	974	974	974	974	974	974	976	976	35

THERMAL ZONE VARIANCE DOCUMENTATION		
April 2009		
<i>ZONE</i>	<i>BTU VARIANCE</i>	<i>REASON</i>
211	70	Receipt from Saco Area and Sidney Plant
24	43	Receipt from Tioga Area and Lignite Plant
261	26	Receipt from Williston-Tioga-Minot Line
264	43	Receipt from Williston-Ray
271	75	Receipt from Dickinson and Minot Area
272	75	Receipt from Dickinson and Minot Area
273	75	Receipt from Dickinson and Minot Area
28	47	Receipt from Dickinson Area