



# MONTANA-DAKOTA

UTILITIES CO.

A Division of MDU Resources Group, Inc.

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

December 22, 2011

**RECEIVED**

DEC 22 2011

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

**PUBLIC SERVICE COMMISSION**

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

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
12	314	APPLE VALLEY	271	1.1077
12	327	BISMARCK	28	1.0460
12	343	CARRINGTON	273	1.1077
12	344	CLEVELAND	272	1.0999
12	364	CAVALIER	273	1.1310
12	365	DAWSON	271	1.0999
12	374	FT TOTTEN	273	1.1155
12	375	DEVILS LAKE	273	1.1155
12	379	BARLOW	273	1.1077
12	387	ELDRIDGE	272	1.1077
12	411	GLEN ULLIN	31	1.0210
12	417	GRAFTON	273	1.1388
12	439	HANKINSON	600	1.0739
12	449	JAMESTOWN	272	1.1155
12	463	LANGDON	273	1.1077
12	475	LINTON	802	.9765
12	478	LINCOLN	28	1.0460
12	494	MEDINA	271	1.0999
12	498	MANDAN	28	1.0460
12	524	NEW SALEM	28	1.0238
12	532	NEW ROCKFORD	273	1.1077
12	539	PARK RIVER	273	1.1310
12	574	SANBORN	272	1.1155
12	593	STEELE	271	1.0999
12	598	SHEYENNE	273	1.1155
12	610	TAPPEN	271	1.0999
12	625	VALLEY CITY	272	1.1232
12	629	WALHALLA	273	1.1310
12	647	WILTON	262	1.1032
12	717	SPIRITWOOD	272	1.1155
12	718	FAIRMOUNT	600	1.0717
12	732	MSR SITE	273	1.1077
12	733	PAR SITE	273	1.1077
15	303	ALEXANDER	25	1.0682
15	308	ARNEGARD	25	1.0682

MONTANA-DAKOTA UTILITIES CO.  
Therm Billing Factor  
DEC 2011

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	318	BEACH	32	.9805
15	319	BELFIELD	32	.9877
15	323	BERTHOLD	262	1.1032
15	330	BOWMAN	34	1.0246
15	337	BURLINGTON	262	1.1270
15	368	DES LACS	262	1.1111
15	369	DICKINSON	31	1.0137
15	384	EPPING	264	1.1362
15	407	GLADSTONE	31	1.0137
15	413	GOLVA	32	.9661
15	416	GARRISON	262	1.1111
15	429	HEBRON	31	1.0210
15	459	KILLDEER	33	1.1155
15	469	LEFOR	31	1.0137
15	474	LIGNITE	263	1.0388
15	500	MARMARTH	34	1.0322
15	505	MINOT	262	1.1270
15	510	MOTT	31	1.0137
15	512	MAX	262	1.1032
15	522	NEW ENGLAND	31	1.0063
15	540	PALERMO	262	1.1032
15	558	RAY	264	1.1362
15	561	REGENT	31	1.0137
15	563	RHAME	34	1.0171
15	564	RICHARDTON	31	1.0063
15	568	ROSS	261	1.0934
15	572	RUTHVILLE	262	1.1270
15	583	SENTINEL BUTTE	32	.9805
15	588	SOUTH HEART	31	1.0063
15	590	SPRINGBROOK	264	1.1362
15	591	STANLEY	261	1.1013
15	605	SURREY	262	1.1270
15	611	TAYLOR	31	1.0063
15	616	TIOGA	261	1.0934
15	619	TURTLE LAKE	262	1.1111

MONTANA-DAKOTA UTILITIES CO.  
Therm Billing Factor  
DEC 2011

Div Nbr	Off Code	City Name	Heat Zone Nbr	Therm Billing Factor
15	620	TRENTON	24	1.1444
15	624	UNDERWOOD	262	1.1111
15	632	WATFORD CITY	25	1.0682
15	636	WHEELOCK	264	1.1281
15	637	WHITE EARTH	261	1.1013
15	642	WILLISTON	24	1.1444
15	646	WASHBURN	262	1.1191
15	664	RIVERDALE	262	1.1111
15	691	FAIRVIEW	241	1.1425
15	712	MINOT AFB	262	1.1270
15	743	BAKER FIELD	35	.8980

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

# GQ Source Daily Summary

November 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	0.7228	1204.5	1225.8	0.069	3.038	69.545	23.524	3.368	0.126	0.277	0.022	0.023	0.008	0.000	0.000	0.000	0.000	1441.85	
2	0.7167	1196.6	1217.7	0.061	2.969	69.868	23.916	2.969	0.069	0.129	0.008	0.008	0.003	0.000	0.000	0.000	0.000	1438.39	
3	0.7216	1202.4	1223.7	0.065	3.065	69.418	23.874	3.217	0.103	0.220	0.016	0.018	0.006	0.000	0.000	0.000	0.000	1440.53	
4	0.7225	1203.3	1224.7	0.067	3.089	69.389	23.744	3.328	0.110	0.231	0.017	0.018	0.006	0.000	0.000	0.000	0.000	1440.73	
5	0.7159	1194.7	1215.8	0.065	3.005	70.121	23.555	3.014	0.077	0.144	0.008	0.008	0.003	0.000	0.000	0.000	0.000	1436.89	
6	0.7177	1195.8	1217.0	0.062	3.109	69.711	23.877	3.014	0.074	0.136	0.008	0.008	0.002	0.000	0.000	0.000	0.000	1436.45	
7	0.7179	1196.7	1217.9	0.059	3.073	69.795	23.736	3.091	0.078	0.148	0.008	0.008	0.003	0.000	0.000	0.000	0.000	1437.36	
8	0.7149	1193.0	1214.1	0.059	3.024	70.077	23.777	2.864	0.065	0.119	0.006	0.006	0.002	0.000	0.000	0.000	0.000	1435.86	
9	0.7162	1194.8	1216.0	0.059	3.034	69.964	23.750	2.976	0.071	0.131	0.007	0.007	0.002	0.000	0.000	0.000	0.000	1436.77	
10	0.7137	1191.7	1212.8	0.058	2.984	70.362	23.519	2.875	0.067	0.121	0.006	0.006	0.002	0.000	0.000	0.000	0.000	1435.62	
11	0.7151	1193.1	1214.2	0.069	3.019	70.154	23.608	2.942	0.069	0.126	0.006	0.006	0.002	0.000	0.000	0.000	0.000	1435.82	
12	0.7122	1189.2	1210.2	0.069	2.980	70.582	23.376	2.801	0.065	0.114	0.006	0.005	0.001	0.000	0.000	0.000	0.000	1434.07	
13	0.7148	1193.1	1214.2	0.063	2.995	70.270	23.486	2.966	0.074	0.132	0.007	0.006	0.002	0.000	0.000	0.000	0.000	1436.15	
14	0.7144	1191.8	1212.9	0.054	3.050	70.209	23.598	2.892	0.068	0.117	0.006	0.005	0.001	0.000	0.000	0.000	0.000	1435.03	
15	0.7144	1192.5	1213.6	0.067	2.989	70.296	23.518	2.903	0.080	0.133	0.006	0.006	0.002	0.000	0.000	0.000	0.000	1435.85	
16	0.7156	1194.2	1215.4	0.081	2.972	70.166	23.577	2.961	0.078	0.148	0.008	0.008	0.002	0.000	0.000	0.000	0.000	1436.77	
17	0.7159	1193.5	1214.7	0.080	3.051	69.964	23.778	2.920	0.069	0.125	0.006	0.006	0.001	0.000	0.000	0.000	0.000	1435.55	
18	0.7176	1197.6	1218.8	0.067	2.975	69.844	23.799	3.081	0.075	0.141	0.008	0.008	0.002	0.000	0.000	0.000	0.000	1438.81	
19	0.7121	1189.1	1210.2	0.062	2.986	70.567	23.407	2.796	0.061	0.110	0.005	0.005	0.001	0.000	0.000	0.000	0.000	1434.08	
20	0.7144	1191.4	1212.5	0.063	3.059	70.215	23.571	2.898	0.065	0.116	0.006	0.006	0.001	0.000	0.000	0.000	0.000	1434.59	
21	0.7157	1193.7	1214.9	0.056	3.056	70.032	23.692	2.949	0.070	0.129	0.007	0.007	0.002	0.000	0.000	0.000	0.000	1435.98	
22	0.7142	1191.5	1212.6	0.053	3.051	70.196	23.632	2.894	0.064	0.099	0.005	0.005	0.002	0.000	0.000	0.000	0.000	1434.89	
23	0.7132	1190.2	1211.2	0.052	3.046	70.333	23.561	2.835	0.061	0.101	0.005	0.005	0.002	0.000	0.000	0.000	0.000	1434.19	
24	0.7160	1193.7	1214.9	0.054	3.084	70.180	23.355	3.061	0.083	0.160	0.009	0.009	0.003	0.000	0.000	0.000	0.000	1435.70	
25	0.7143	1191.8	1212.9	0.053	3.047	70.326	23.407	2.943	0.073	0.135	0.007	0.007	0.002	0.000	0.000	0.000	0.000	1435.07	
26	0.7122	1189.2	1210.3	0.053	3.004	70.618	23.294	2.825	0.068	0.124	0.006	0.006	0.002	0.000	0.000	0.000	0.000	1434.11	
27	0.7113	1186.4	1207.4	0.053	3.096	70.624	23.308	2.745	0.059	0.104	0.005	0.005	0.001	0.000	0.000	0.000	0.000	1431.58	
28	0.7164	1193.8	1214.9	0.069	3.091	69.855	23.837	2.969	0.059	0.105	0.006	0.006	0.002	0.000	0.000	0.000	0.000	1435.45	
29	0.7113	1188.1	1209.1	0.061	2.980	70.734	23.236	2.806	0.062	0.110	0.005	0.005	0.001	0.000	0.000	0.000	0.000	1433.62	
30	0.7149	1192.3	1213.5	0.059	3.056	70.223	23.480	2.962	0.072	0.132	0.007	0.007	0.002	0.000	0.000	0.000	0.000	1435.17	
Avg	0.7155	1194.0	1214.8	0.062	3.033	70.121	23.593	2.962	0.074	0.137	0.008	0.008	0.002	0.000	0.000	0.000	0.000	1436.10	

Zone 211

# GQ Source Analysis

Williston Basin Interstate Pipeline Co.

Attachment B  
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<b>GQ Source Number:</b>	0602330	<b>Specific Gravity:</b>	0.7231
<b>GQ Source Name:</b>	WILLISTON BORDER	<b>BTU Base:</b>	Dry
<b>Effective Date:</b>	11/1/2011 9:00:00 AM	<b>Measured Heat Value:</b>	1205.74
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>Dry Heat Value:</b>	1202.53
<b>Pressure Base:</b>	14.730	<b>Wet Heat Value:</b>	1181.60
<b>Viscosity:</b>		<b>As Deliv. Heat Value:</b>	1202.53
		<b>Sample Pressure:</b>	0.00
		<b>Sample Temperature:</b>	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	69.452		CO2	Carbon Dioxide	0.680
C2	Ethane	22.608	6.028	N2	Nitrogen	3.499
C3	Propane	3.437	0.944	O2	Oxygen	0.000
IC4	Iso-Butane	0.106	0.035	HE	Helium	
NC4	N-Butane	0.187	0.059	H2	Hydrogen	
IC5	Iso-Pentane	0.011	0.004	H2S	Hydrogen Sulfide	
NC5	N-Pentane	0.009	0.003	AR	Argon	
C6	Hexane	0.010	0.005	CO	Carbon Monoxide	
C7	Heptane			H2O	Water	
C8	Octane			Neo-C5	Neo-Pentane	
C9	Nonane					
C10	Decane					

**Totals** 99.999% 7.078 GPM

**Sample Date:** 11/30/2011 12:00:00 AM  
**Sample Type:** Composite  
**Sample Tech:** sampler  
**Sample Remarks:**

**Analysis Tech:** Mary Berger

**Analysis Remarks:**

*Zone 24, 264*

# GQ Source Analysis

Williston Basin Interstate Pipeline Co.

Attachment B  
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<b>GQ Source Number:</b>	0602160	<b>Specific Gravity:</b>	0.7231
<b>GQ Source Name:</b>	FAIRVIEW BORDER	<b>BTU Base:</b>	Dry
<b>Effective Date:</b>	11/1/2011 9:00:00 AM	<b>Measured Heat Value:</b>	1203.98
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>Dry Heat Value:</b>	1200.78
<b>Pressure Base:</b>	14.730	<b>Wet Heat Value:</b>	1179.88
<b>Viscosity:</b>		<b>As Deliv. Heat Value:</b>	1200.78
		<b>Sample Pressure:</b>	0.00
		<b>Sample Temperature:</b>	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	69.458		CO2	Carbon Dioxide	0.708
C2	Ethane	22.515	6.004	N2	Nitrogen	3.566
C3	Propane	3.434	0.943	O2	Oxygen	0.000
IC4	Iso-Butane	0.103	0.034	HE	Helium	
NC4	N-Butane	0.184	0.058	H2	Hydrogen	
IC5	Iso-Pentane	0.011	0.004	H2S	Hydrogen Sulfide	
NC5	N-Pentane	0.009	0.003	AR	Argon	
C6	Hexane	0.014	0.006	CO	Carbon Monoxide	
C7	Heptane			H2O	Water	
C8	Octane			Neo-C5	Neo-Pentane	
C9	Nonane					
C10	Decane					
<b>Totals</b>			100.000 %			7.052 GPM

**Sample Date:** 11/30/2011 12:00:00 AM  
**Sample Type:** Composite  
**Sample Tech:** sampler  
**Sample Remarks:**

**Analysis Tech:** Mary Berger  
**Analysis Remarks:**

*Zone 241*

# GQ Source Analysis

Williston Basin Interstate Pipeline Co.

Attachment B  
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<b>GQ Source Number:</b>	0602230	<b>Specific Gravity:</b>	0.7278
<b>GQ Source Name:</b>	WATFORD CITY BORDER	<b>BTU Base:</b>	Dry
<b>Effective Date:</b>	11/1/2011 9:00:00 AM	<b>Measured Heat Value:</b>	1133.54
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>Dry Heat Value:</b>	1130.89
<b>Pressure Base:</b>	14.730	<b>Wet Heat Value:</b>	1111.21
<b>Viscosity:</b>		<b>As Deliv. Heat Value:</b>	1130.89
		<b>Sample Pressure:</b>	0.00
		<b>Sample Temperature:</b>	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	68.708		CO2	Carbon Dioxide	0.688
C2	Ethane	18.037	4.809	N2	Nitrogen	8.236
C3	Propane	3.710	1.019	O2	Oxygen	0.000
IC4	Iso-Butane	0.191	0.062	HE	Helium	
NC4	N-Butane	0.347	0.109	H2	Hydrogen	
IC5	Iso-Pentane	0.028	0.010	H2S	Hydrogen Sulfide	
NC5	N-Pentane	0.027	0.010	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** 99.998% 6.032 GPM

**Sample Date:** 11/30/2011 12:00:00 AM  
**Sample Type:** Composite  
**Sample Tech:** sampler  
**Sample Remarks:**

**Analysis Tech:** Mary Berger

**Analysis Remarks:**

*Zone 25*

# GQ Source Daily Summary

November 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	0.6963	1145.4	1165.7	0.512	3.472	74.272	18.832	2.596	0.092	0.186	0.013	0.015	0.011					1397.05	
2	0.6978	1147.1	1167.4	0.524	3.504	73.825	19.282	2.613	0.077	0.148	0.009	0.009	0.008					1397.47	
3	0.7006	1151.4	1171.8	0.519	3.505	73.418	19.506	2.823	0.074	0.134	0.007	0.007	0.006					1399.96	
4	0.7002	1151.7	1172.1	0.493	3.495	73.504	19.462	2.779	0.081	0.157	0.010	0.011	0.008					1400.64	
5	0.7000	1151.5	1171.9	0.501	3.474	73.530	19.512	2.685	0.089	0.176	0.012	0.013	0.008					1400.65	
6	0.6992	1150.0	1170.4	0.518	3.463	73.508	19.689	2.564	0.080	0.152	0.009	0.010	0.006					1399.65	
7	0.6968	1146.1	1166.4	0.498	3.507	73.938	19.246	2.574	0.075	0.141	0.008	0.009	0.005					1397.30	
8	0.6931	1140.3	1160.5	0.495	3.511	74.530	18.843	2.368	0.078	0.150	0.009	0.010	0.007					1394.03	
9	0.6937	1141.5	1161.7	0.500	3.490	74.487	18.796	2.503	0.070	0.131	0.008	0.008	0.007					1394.81	
10	0.6949	1144.4	1164.6	0.480	3.455	74.289	19.028	2.490	0.078	0.152	0.010	0.011	0.008					1397.15	
11	0.6944	1143.6	1163.8	0.486	3.450	74.363	19.027	2.388	0.080	0.165	0.013	0.015	0.012					1396.67	
12	0.6952	1144.5	1164.7	0.497	3.456	74.199	19.175	2.390	0.080	0.164	0.013	0.015	0.010					1396.92	
13	0.6954	1145.2	1165.4	0.496	3.438	74.084	19.308	2.445	0.070	0.135	0.009	0.010	0.006					1397.55	
14	0.6961	1145.9	1166.2	0.491	3.463	74.023	19.264	2.533	0.070	0.135	0.009	0.010	0.004					1397.74	
15	0.6949	1144.1	1164.4	0.475	3.478	74.168	19.227	2.409	0.072	0.143	0.011	0.012	0.006					1396.87	
16	0.6966	1146.1	1166.4	0.487	3.509	74.023	19.138	2.579	0.079	0.156	0.011	0.013	0.005					1397.42	
17	0.6955	1145.7	1165.9	0.470	3.450	74.139	19.234	2.433	0.079	0.161	0.013	0.015	0.007					1398.10	
18	0.6969	1145.5	1165.8	0.511	3.528	73.886	19.366	2.437	0.078	0.159	0.013	0.015	0.008					1396.51	
19	0.6967	1145.7	1166.0	0.496	3.529	73.793	19.539	2.399	0.073	0.142	0.011	0.012	0.006					1396.86	
20	0.6994	1150.4	1170.7	0.499	3.483	73.493	19.692	2.557	0.080	0.162	0.012	0.014	0.007					1399.95	
21	0.6973	1147.3	1167.6	0.497	3.484	73.840	19.468	2.394	0.086	0.183	0.016	0.020	0.012					1398.22	
22	0.6979	1148.5	1168.8	0.496	3.467	73.845	19.407	2.441	0.091	0.197	0.018	0.023	0.016					1399.09	
23	0.6977	1148.3	1168.6	0.508	3.440	73.965	19.262	2.463	0.095	0.207	0.019	0.024	0.017					1399.05	
24	0.6966	1144.8	1165.1	0.514	3.540	74.150	18.984	2.455	0.096	0.205	0.018	0.022	0.015					1395.92	
25	0.6973	1145.7	1166.0	0.511	3.558	73.971	19.163	2.450	0.095	0.202	0.017	0.021	0.012					1396.30	
26	0.6974	1145.8	1166.1	0.509	3.562	73.986	19.112	2.480	0.096	0.204	0.017	0.021	0.012					1396.33	
27	0.6966	1144.9	1165.2	0.505	3.543	74.104	19.064	2.441	0.093	0.198	0.017	0.021	0.014					1396.12	
28	0.6958	1143.5	1163.8	0.505	3.554	74.234	18.961	2.402	0.092	0.197	0.018	0.022	0.015					1395.20	
29	0.6965	1144.3	1164.6	0.515	3.562	74.047	19.144	2.407	0.089	0.188	0.016	0.020	0.012					1395.40	
30	0.6953	1142.5	1162.7	0.504	3.579	74.200	19.041	2.364	0.085	0.180	0.016	0.019	0.011					1394.34	
Avg	0.6967	1146.0	1166.3	0.500	3.498	73.994	19.226	2.495	0.082	0.167	0.013	0.015	0.009					1397.31	

Zone 261

# GQ Source Daily Summary

November 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	0.6956	1143.1	1163.4	0.524	3.529	74.160	19.037	2.499	0.078	0.152	0.007	0.008	0.006	0.000	0.000	0.000	0.000	1394.90	
2	0.6994	1151.3	1171.7	0.525	3.385	73.871	19.119	2.753	0.099	0.209	0.014	0.016	0.009	0.000	0.000	0.000	0.000	1401.02	
3	0.7004	1151.1	1171.5	0.542	3.470	73.423	19.557	2.779	0.076	0.139	0.005	0.005	0.004	0.000	0.000	0.000	0.000	1399.78	
4	0.7004	1152.2	1172.6	0.517	3.438	73.425	19.595	2.800	0.073	0.133	0.005	0.004	0.010	0.000	0.000	0.000	0.000	1401.16	
5	0.7022	1154.6	1175.1	0.517	3.455	73.338	19.514	2.844	0.097	0.200	0.013	0.014	0.009	0.000	0.000	0.000	0.000	1402.32	
6	0.7014	1153.7	1174.1	0.535	3.412	73.277	19.801	2.685	0.087	0.174	0.009	0.010	0.009	0.000	0.000	0.000	0.000	1401.95	
7	0.6964	1145.6	1165.8	0.528	3.458	73.825	19.565	2.417	0.068	0.125	0.003	0.003	0.009	0.000	0.000	0.000	0.000	1397.00	
8	0.6984	1149.3	1169.6	0.512	3.436	73.918	19.111	2.717	0.092	0.185	0.010	0.011	0.007	0.000	0.000	0.000	0.000	1399.57	
9	0.6930	1140.0	1160.2	0.523	3.475	74.524	18.875	2.380	0.069	0.133	0.006	0.005	0.010	0.000	0.000	0.000	0.000	1393.74	
10	0.6943	1143.3	1163.5	0.499	3.433	74.282	19.127	2.451	0.067	0.125	0.003	0.002	0.010	0.000	0.000	0.000	0.000	1396.43	
11	0.6964	1147.0	1167.3	0.499	3.411	74.188	19.039	2.539	0.092	0.195	0.013	0.016	0.009	0.000	0.000	0.000	0.000	1398.74	
12	0.6963	1146.7	1167.0	0.510	3.401	74.031	19.336	2.434	0.082	0.174	0.012	0.014	0.006	0.000	0.000	0.000	0.000	1398.56	
13	0.6954	1145.1	1165.4	0.512	3.414	74.131	19.285	2.387	0.078	0.163	0.011	0.013	0.006	0.000	0.000	0.000	0.000	1397.46	
14	0.6958	1145.8	1166.1	0.503	3.417	74.010	19.366	2.503	0.064	0.120	0.004	0.003	0.009	0.000	0.000	0.000	0.000	1397.98	
15	0.6972	1148.1	1168.4	0.508	3.404	73.875	19.422	2.539	0.074	0.152	0.010	0.012	0.004	0.000	0.000	0.000	0.000	1399.33	
16	0.6965	1146.1	1166.4	0.493	3.478	74.014	19.221	2.531	0.080	0.158	0.009	0.010	0.006	0.000	0.000	0.000	0.000	1397.64	
17	0.6974	1148.4	1168.7	0.495	3.420	73.922	19.299	2.588	0.081	0.166	0.011	0.012	0.005	0.000	0.000	0.000	0.000	1399.54	
18	0.6967	1146.5	1166.8	0.507	3.456	73.942	19.378	2.428	0.082	0.173	0.012	0.015	0.006	0.000	0.000	0.000	0.000	1397.85	
19	0.6976	1147.2	1167.5	0.516	3.485	73.661	19.659	2.431	0.074	0.149	0.009	0.010	0.004	0.000	0.000	0.000	0.000	1397.84	
20	0.6988	1149.8	1170.2	0.506	3.456	73.543	19.693	2.548	0.076	0.154	0.009	0.010	0.004	0.000	0.000	0.000	0.000	1399.77	
21	0.6988	1149.7	1170.0	0.515	3.449	73.547	19.750	2.439	0.085	0.181	0.013	0.016	0.006	0.000	0.000	0.000	0.000	1399.64	
22	0.6975	1148.1	1168.4	0.507	3.431	73.853	19.474	2.408	0.089	0.194	0.016	0.020	0.008	0.000	0.000	0.000	0.000	1399.06	
23	0.6990	1149.9	1170.3	0.529	3.429	73.711	19.489	2.488	0.095	0.209	0.017	0.023	0.010	0.000	0.000	0.000	0.000	1399.74	
24	0.6978	1148.4	1168.8	0.526	3.414	74.016	19.154	2.515	0.101	0.222	0.018	0.024	0.011	0.000	0.000	0.000	0.000	1399.11	
25	0.6972	1145.5	1165.8	0.527	3.533	73.966	19.200	2.431	0.095	0.204	0.016	0.019	0.009	0.000	0.000	0.000	0.000	1396.15	
26	0.6979	1147.2	1167.5	0.521	3.498	73.903	19.247	2.476	0.097	0.212	0.017	0.021	0.009	0.000	0.000	0.000	0.000	1397.61	
27	0.6979	1146.8	1167.1	0.524	3.526	73.902	19.192	2.508	0.097	0.209	0.016	0.019	0.007	0.000	0.000	0.000	0.000	1397.00	
28	0.6966	1145.4	1165.6	0.522	3.493	74.132	19.065	2.428	0.096	0.213	0.018	0.023	0.011	0.000	0.000	0.000	0.000	1396.59	
29	0.6967	1144.7	1165.0	0.531	3.524	74.009	19.201	2.417	0.089	0.191	0.014	0.017	0.007	0.000	0.000	0.000	0.000	1395.76	
30	0.6964	1144.1	1164.4	0.527	3.541	74.036	19.195	2.382	0.088	0.191	0.015	0.018	0.008	0.000	0.000	0.000	0.000	1395.30	
Avg	0.6975	1147.0	1167.8	0.517	3.456	73.881	19.332	2.525	0.084	0.173	0.011	0.013	0.008	0.000	0.000	0.000	0.000	1398.28	

Zone 262

# GQ Source Analysis

Williston Basin Interstate Pipeline Co.

Attachment B  
Page 7 of 16

<b>GQ Source Number:</b>	2501030	<b>Specific Gravity:</b>	0.6459
<b>GQ Source Name:</b>	LIGNITE PLANT	<b>BTU Base:</b>	Dry
<b>Effective Date:</b>	11/1/2011 9:00:00 AM	<b>Measured Heat Value:</b>	1092.70
<b>Effective End Date:</b>	1/18/2038 9:14:07 PM	<b>Dry Heat Value:</b>	1091.72
<b>Pressure Base:</b>	14.730	<b>Wet Heat Value:</b>	1072.72
<b>Viscosity:</b>		<b>As Deliv. Heat Value:</b>	1091.72
		<b>Sample Pressure:</b>	0.00
		<b>Sample Temperature:</b>	

		<u>Mol %</u>	<u>GPM</u>			<u>Mol %</u>
C1	Methane	81.560		CO2	Carbon Dioxide	0.138
C2	Ethane	14.055	3.748	N2	Nitrogen	3.715
C3	Propane	0.440	0.121	O2	Oxygen	0.000
IC4	Iso-Butane	0.001	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	0.079	0.032	CO	Carbon Monoxide	
C7	Heptane	0.008	0.004	H2O	Water	
C8	Octane	0.002	0.001	Neo-C5	Neo-Pentane	
C9	Nonane	0.001	0.001			
C10	Decane					

**Totals** : 100.000% 3.907 GPM

**Sample Date:** 11/30/2011 12:00:00 AM  
**Sample Type:** Composite  
**Sample Tech:** sampler  
**Sample Remarks:**

**Analysis Tech:** Mary Berger

**Analysis Remarks:**

*Zone 263*

\*\*\* End of Report \*\*\*



# GQ Source Daily Summary

November 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	1142.7	1162.9	0.531	3.474	74.558	18.585	2.515	0.093	0.195	0.015	0.017	0.017	0.000	0.000	0.000	0.000	1395.15	
2	0.6941	1142.7	1162.9	0.503	3.453	74.617	18.587	2.534	0.087	0.179	0.012	0.014	0.013	0.000	0.000	0.000	0.000	1395.83	
3	0.6918	1140.0	1160.2	0.463	3.464	74.875	18.476	2.462	0.076	0.152	0.011	0.011	0.011	0.000	0.000	0.000	0.000	1394.83	
4	0.6921	1140.1	1160.3	0.470	3.474	74.795	18.497	2.554	0.067	0.123	0.006	0.006	0.007	0.000	0.000	0.000	0.000	1394.68	
5	0.6920	1140.9	1161.1	0.437	3.466	74.834	18.499	2.514	0.074	0.146	0.010	0.010	0.009	0.000	0.000	0.000	0.000	1395.73	
6	0.6906	1138.5	1158.7	0.435	3.482	75.055	18.359	2.395	0.079	0.161	0.011	0.013	0.010	0.000	0.000	0.000	0.000	1394.24	
7	0.6912	1138.9	1159.0	0.466	3.469	74.836	18.644	2.347	0.072	0.141	0.008	0.009	0.008	0.000	0.000	0.000	0.000	1394.10	
8	0.6897	1136.2	1156.3	0.455	3.508	75.071	18.404	2.348	0.067	0.126	0.007	0.007	0.007	0.000	0.000	0.000	0.000	1392.36	
9	0.6852	1130.3	1150.3	0.414	3.508	75.829	17.842	2.174	0.070	0.138	0.009	0.009	0.008	0.000	0.000	0.000	0.000	1389.62	
10	0.6834	1127.3	1147.3	0.413	3.521	76.107	17.590	2.174	0.060	0.114	0.007	0.007	0.008	0.000	0.000	0.000	0.000	1387.82	
11	0.6844	1126.6	1146.6	0.592	3.383	76.215	17.376	2.201	0.069	0.136	0.009	0.009	0.010	0.000	0.000	0.000	0.000	1385.93	
12	0.6869	1132.4	1152.4	0.505	3.400	75.702	17.924	2.199	0.074	0.156	0.012	0.014	0.014	0.000	0.000	0.000	0.000	1390.48	
13	0.6882	1134.6	1154.7	0.505	3.391	75.425	18.215	2.197	0.073	0.154	0.012	0.014	0.014	0.000	0.000	0.000	0.000	1391.84	
14	0.6865	1132.0	1152.1	0.509	3.385	75.659	18.035	2.193	0.064	0.127	0.009	0.010	0.011	0.000	0.000	0.000	0.000	1390.40	
15	0.6727	1108.3	1127.9	0.571	3.437	78.210	15.644	1.959	0.054	0.103	0.007	0.007	0.007	0.000	0.000	0.000	0.000	1375.14	
16	0.6694	1103.2	1122.7	0.512	3.528	78.711	15.221	1.842	0.055	0.107	0.008	0.009	0.007	0.000	0.000	0.000	0.000	1372.19	
17	0.6690	1102.1	1121.6	0.522	3.544	78.875	14.966	1.898	0.058	0.114	0.008	0.009	0.007	0.000	0.000	0.000	0.000	1371.18	
18	0.6749	1113.4	1133.1	0.428	3.540	77.672	16.204	1.947	0.061	0.123	0.009	0.010	0.006	0.000	0.000	0.000	0.000	1379.37	
19	0.6763	1115.3	1135.1	0.394	3.612	77.306	16.558	1.928	0.059	0.117	0.009	0.010	0.008	0.000	0.000	0.000	0.000	1380.26	
20	0.6733	1110.3	1130.0	0.417	3.601	77.822	16.123	1.855	0.054	0.106	0.008	0.008	0.006	0.000	0.000	0.000	0.000	1377.11	
21	0.6782	1118.2	1138.1	0.428	3.561	77.070	16.701	2.032	0.061	0.122	0.009	0.010	0.007	0.000	0.000	0.000	0.000	1381.93	
22	0.6803	1121.4	1141.2	0.441	3.548	76.732	17.014	2.018	0.068	0.143	0.012	0.014	0.010	0.000	0.000	0.000	0.000	1383.64	
23	0.6862	1130.9	1150.9	0.449	3.506	75.806	17.779	2.168	0.077	0.167	0.015	0.019	0.015	0.000	0.000	0.000	0.000	1389.43	
24	0.6913	1139.0	1159.1	0.483	3.445	75.022	18.412	2.303	0.087	0.190	0.017	0.022	0.018	0.000	0.000	0.000	0.000	1394.12	
25	0.6903	1136.1	1156.2	0.484	3.524	75.227	18.127	2.303	0.088	0.191	0.017	0.021	0.018	0.000	0.000	0.000	0.000	1391.60	
26	0.6871	1130.4	1150.4	0.477	3.586	75.682	17.742	2.206	0.083	0.178	0.015	0.018	0.014	0.000	0.000	0.000	0.000	1387.82	
27	0.6837	1124.9	1144.8	0.490	3.578	76.344	17.128	2.157	0.081	0.175	0.015	0.018	0.014	0.000	0.000	0.000	0.000	1384.49	
28	0.6846	1126.2	1146.1	0.499	3.569	76.184	17.277	2.169	0.081	0.175	0.015	0.018	0.013	0.000	0.000	0.000	0.000	1385.21	
29	0.6810	1121.1	1140.9	0.489	3.559	76.764	16.851	2.047	0.076	0.165	0.015	0.018	0.016	0.000	0.000	0.000	0.000	1382.56	
30	0.6822	1122.6	1142.5	0.499	3.563	76.470	17.160	2.042	0.073	0.155	0.013	0.015	0.012	0.000	0.000	0.000	0.000	1383.25	
Avg	0.6844	1128.0	1147.5	0.476	3.503	76.116	17.465	2.189	0.071	0.146	0.011	0.013	0.011	0.000	0.000	0.000	0.000	1387.08	

Zone 272

# GQ Source Daily Summary

November 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	0.6953	1143.5	1163.7	0.540	3.461	74.568	18.513	2.556	0.098	0.211	0.016	0.020	0.018	0.000	0.000	0.000	0.000	1395.57	
2	0.6941	1142.9	1163.1	0.497	3.449	74.603	18.624	2.526	0.086	0.176	0.012	0.013	0.014	0.000	0.000	0.000	0.000	1396.06	
3	0.6920	1140.4	1160.6	0.462	3.459	74.840	18.507	2.472	0.076	0.152	0.010	0.011	0.011	0.000	0.000	0.000	0.000	1395.15	
4	0.6925	1140.8	1161.0	0.472	3.466	74.735	18.553	2.564	0.067	0.124	0.007	0.006	0.008	0.000	0.000	0.000	0.000	1395.13	
5	0.6925	1141.7	1161.9	0.441	3.457	74.757	18.560	2.534	0.075	0.148	0.010	0.010	0.009	0.000	0.000	0.000	0.000	1396.24	
6	0.6910	1139.1	1159.3	0.438	3.474	75.002	18.403	2.407	0.080	0.163	0.011	0.012	0.010	0.000	0.000	0.000	0.000	1394.64	
7	0.6915	1139.4	1159.6	0.466	3.460	74.794	18.686	2.355	0.073	0.142	0.008	0.009	0.008	0.000	0.000	0.000	0.000	1394.51	
8	0.6901	1137.0	1157.1	0.456	3.501	74.996	18.476	2.358	0.067	0.127	0.007	0.007	0.007	0.000	0.000	0.000	0.000	1392.86	
9	0.6855	1130.9	1151.0	0.413	3.501	75.777	17.885	2.187	0.071	0.140	0.009	0.009	0.008	0.000	0.000	0.000	0.000	1390.08	
10	0.6837	1127.8	1147.8	0.415	3.513	76.064	17.635	2.176	0.060	0.115	0.007	0.007	0.008	0.000	0.000	0.000	0.000	1388.13	
11	0.6873	1123.2	1143.1	0.898	3.398	75.918	17.356	2.197	0.069	0.136	0.008	0.009	0.010	0.000	0.000	0.000	0.000	1379.31	
12	0.6872	1132.9	1153.0	0.506	3.394	75.658	17.962	2.208	0.075	0.157	0.012	0.014	0.014	0.000	0.000	0.000	0.000	1390.84	
13	0.6885	1135.1	1155.2	0.508	3.382	75.373	18.264	2.204	0.074	0.154	0.012	0.014	0.014	0.000	0.000	0.000	0.000	1392.21	
14	0.6869	1132.6	1152.6	0.511	3.377	75.609	18.082	2.201	0.064	0.128	0.009	0.010	0.011	0.000	0.000	0.000	0.000	1390.78	
15	0.6730	1108.8	1128.4	0.571	3.430	78.173	15.681	1.966	0.054	0.104	0.007	0.007	0.007	0.000	0.000	0.000	0.000	1375.49	
16	0.6696	1103.6	1123.1	0.512	3.521	78.682	15.252	1.846	0.055	0.108	0.008	0.009	0.007	0.000	0.000	0.000	0.000	1372.48	
17	0.6692	1102.3	1121.8	0.523	3.538	78.861	14.978	1.905	0.058	0.113	0.008	0.009	0.007	0.000	0.000	0.000	0.000	1371.36	
18	0.6753	1114.3	1134.0	0.430	3.531	77.598	16.265	1.966	0.061	0.124	0.009	0.010	0.006	0.000	0.000	0.000	0.000	1379.94	
19	0.6766	1115.9	1135.7	0.394	3.601	77.259	16.602	1.940	0.059	0.117	0.009	0.010	0.008	0.000	0.000	0.000	0.000	1380.73	
20	0.6737	1111.1	1130.7	0.417	3.593	77.756	16.182	1.867	0.055	0.107	0.008	0.008	0.006	0.000	0.000	0.000	0.000	1377.63	
21	0.6786	1118.9	1138.8	0.428	3.551	77.013	16.755	2.043	0.062	0.123	0.009	0.010	0.007	0.000	0.000	0.000	0.000	1382.42	
22	0.6806	1122.0	1141.8	0.441	3.539	76.682	17.063	2.026	0.069	0.144	0.012	0.014	0.011	0.000	0.000	0.000	0.000	1384.08	
23	0.6864	1131.4	1151.4	0.449	3.498	75.768	17.815	2.176	0.078	0.168	0.015	0.019	0.015	0.000	0.000	0.000	0.000	1389.79	
24	0.6916	1139.5	1159.6	0.486	3.437	74.982	18.447	2.312	0.087	0.191	0.017	0.022	0.018	0.000	0.000	0.000	0.000	1394.43	
25	0.6906	1136.7	1156.8	0.484	3.516	75.179	18.172	2.312	0.089	0.192	0.017	0.021	0.018	0.000	0.000	0.000	0.000	1392.02	
26	0.6875	1131.0	1151.0	0.478	3.577	75.632	17.789	2.215	0.083	0.179	0.015	0.018	0.014	0.000	0.000	0.000	0.000	1388.25	
27	0.6839	1125.4	1145.3	0.491	3.569	76.302	17.173	2.162	0.082	0.176	0.015	0.018	0.014	0.000	0.000	0.000	0.000	1384.90	
28	0.6849	1126.7	1146.7	0.499	3.560	76.140	17.319	2.179	0.082	0.176	0.015	0.018	0.013	0.000	0.000	0.000	0.000	1385.62	
29	0.6813	1121.7	1141.5	0.489	3.551	76.716	16.895	2.055	0.077	0.167	0.015	0.018	0.016	0.000	0.000	0.000	0.000	1382.98	
30	0.6824	1123.1	1143.0	0.499	3.554	76.428	17.202	2.049	0.073	0.156	0.013	0.015	0.012	0.000	0.000	0.000	0.000	1383.64	
Avg	0.6848	1128.0	1148.0	0.487	3.495	76.062	17.503	2.199	0.072	0.147	0.011	0.013	0.011	0.000	0.000	0.000	0.000	1387.24	

\*\*\* End of Report\*\*\*

zone 273

# GQ Source Daily Summary

November 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	0.6529	1082.1	1101.3	0.391	3.444	81.368	13.334	1.323	0.042	0.081	0.006	0.006	0.005	0.000	0.000	0.000	0.000	1362.65	
2	0.6639	1103.6	1123.1	0.122	3.580	79.058	15.559	1.527	0.045	0.091	0.007	0.007	0.003	0.000	0.000	0.000	0.000	1378.37	
3	0.6616	1100.0	1119.5	0.124	3.575	79.476	15.203	1.475	0.044	0.086	0.007	0.007	0.004	0.000	0.000	0.000	0.000	1376.32	
4	0.6537	1087.1	1106.4	0.171	3.547	80.840	14.067	1.279	0.032	0.056	0.004	0.004	0.002	0.000	0.000	0.000	0.000	1368.40	
5	0.6613	1099.4	1118.9	0.127	3.580	79.470	15.267	1.405	0.045	0.089	0.007	0.007	0.003	0.000	0.000	0.000	0.000	1375.92	
6	0.6594	1094.9	1114.3	0.130	3.669	79.801	14.876	1.395	0.040	0.075	0.005	0.006	0.003	0.000	0.000	0.000	0.000	1372.26	
7	0.6560	1088.4	1107.7	0.134	3.741	80.352	14.335	1.341	0.032	0.055	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1367.64	
8	0.6585	1092.4	1111.8	0.124	3.751	79.945	14.636	1.434	0.036	0.064	0.004	0.004	0.002	0.000	0.000	0.000	0.000	1370.03	
9	0.6617	1099.5	1118.9	0.118	3.628	79.265	15.488	1.397	0.034	0.060	0.004	0.004	0.002	0.000	0.000	0.000	0.000	1375.57	
10	0.6445	1068.8	1087.7	0.236	3.701	82.474	12.475	1.040	0.025	0.042	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1354.79	
11	0.6196	1027.0	1045.2	0.532	3.463	87.224	8.290	0.460	0.012	0.015	0.001	0.001	0.002	0.000	0.000	0.000	0.000	1327.75	
12	0.6260	1040.2	1058.6	0.465	3.356	85.881	9.800	0.470	0.011	0.014	0.001	0.001	0.002	0.000	0.000	0.000	0.000	1338.00	
13	0.6287	1045.8	1064.4	0.424	3.335	85.321	10.377	0.510	0.012	0.016	0.001	0.001	0.002	0.000	0.000	0.000	0.000	1342.30	
14	0.6229	1033.3	1051.6	0.529	3.389	86.527	9.096	0.430	0.011	0.014	0.001	0.001	0.002	0.000	0.000	0.000	0.000	1332.39	
15	0.6001	988.5	1006.0	0.797	3.563	91.209	4.195	0.214	0.009	0.008	0.001	0.001	0.002	0.000	0.000	0.000	0.000	1298.66	
16	0.6259	1033.4	1051.7	0.465	3.758	86.225	8.695	0.795	0.023	0.033	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1329.40	
17	0.6249	1031.3	1049.6	0.534	3.686	86.451	8.531	0.739	0.021	0.031	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1327.64	
18	0.6442	1066.0	1084.8	0.278	3.780	82.700	12.010	1.146	0.030	0.049	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1351.63	
19	0.6500	1076.2	1095.2	0.231	3.775	81.608	13.019	1.270	0.033	0.055	0.004	0.003	0.002	0.000	0.000	0.000	0.000	1358.49	
20	0.6408	1060.3	1079.0	0.314	3.751	83.327	11.472	1.061	0.026	0.041	0.003	0.002	0.003	0.000	0.000	0.000	0.000	1348.00	
21	0.6451	1067.6	1086.5	0.270	3.775	82.538	12.150	1.179	0.030	0.049	0.003	0.003	0.003	0.000	0.000	0.000	0.000	1352.81	
22	0.6460	1068.7	1087.6	0.282	3.779	82.433	12.174	1.240	0.031	0.051	0.004	0.003	0.003	0.000	0.000	0.000	0.000	1353.19	
23	0.6498	1075.3	1094.4	0.259	3.763	81.738	12.822	1.313	0.034	0.059	0.004	0.004	0.003	0.000	0.000	0.000	0.000	1357.63	
24	0.6551	1085.4	1104.6	0.201	3.735	80.641	13.954	1.374	0.033	0.052	0.003	0.003	0.003	0.000	0.000	0.000	0.000	1364.83	
25	0.6507	1076.4	1095.5	0.206	3.865	81.347	13.274	1.233	0.028	0.041	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1358.05	
26	0.6428	1061.9	1080.7	0.287	3.886	82.957	11.650	1.132	0.030	0.051	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1347.90	
27	0.6351	1048.7	1067.3	0.391	3.809	84.465	10.278	0.982	0.026	0.042	0.003	0.002	0.002	0.000	0.000	0.000	0.000	1339.19	
28	0.6369	1051.0	1069.6	0.374	3.860	84.145	10.510	1.031	0.027	0.046	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1340.27	
29	0.6363	1052.8	1071.5	0.381	3.684	84.104	10.887	0.884	0.021	0.033	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1343.23	
30	0.6389	1056.1	1074.8	0.389	3.718	83.605	11.316	0.916	0.020	0.032	0.002	0.002	0.002	0.000	0.000	0.000	0.000	1344.63	
Avg	0.6431	1065.0	1084.3	0.309	3.665	82.883	11.991	1.067	0.028	0.048	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1351.93	

Zone 28

# GQ Source Daily Summary

November 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	0.6626	1101.6	1121.1	0.107	3.593	79.207	15.444	1.525	0.040	0.083	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1377.21	
2	0.6622	1100.9	1120.4	0.106	3.598	79.400	15.171	1.563	0.051	0.109	0.000	0.000	0.001	0.000	0.000	0.000	0.000	1376.78	
3	0.6539	1087.5	1106.8	0.139	3.586	80.714	14.166	1.318	0.027	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1368.62	
4	0.6590	1095.9	1115.4	0.117	3.583	79.823	14.958	1.397	0.039	0.082	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1373.92	
5	0.6577	1092.4	1111.7	0.118	3.674	80.113	14.556	1.409	0.042	0.088	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1370.81	
6	0.6548	1087.1	1106.4	0.120	3.717	80.572	14.145	1.355	0.032	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1367.27	
7	0.6583	1090.3	1109.6	0.117	3.856	79.878	14.655	1.409	0.030	0.055	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1367.70	
8	0.6590	1095.4	1114.8	0.103	3.632	79.733	15.060	1.382	0.031	0.059	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1373.30	
9	0.6538	1084.5	1103.7	0.140	3.754	80.681	14.073	1.275	0.028	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1364.97	
10	0.6189	1026.2	1044.4	0.521	3.450	87.282	8.282	0.460	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1327.47	
11	0.6280	1043.7	1062.2	0.435	3.369	85.368	10.336	0.489	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1340.34	
12	0.6285	1045.8	1064.3	0.403	3.336	85.288	10.444	0.521	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1342.51	
13	0.6234	1035.1	1053.4	0.507	3.349	86.324	9.400	0.417	0.000	0.003	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1334.20	
14	0.6061	1000.2	1017.9	0.719	3.523	89.925	5.538	0.294	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1307.48	
15	0.6109	1007.8	1025.7	0.624	3.658	89.081	6.111	0.498	0.011	0.018	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1312.04	
16	0.6196	1022.3	1040.4	0.563	3.681	87.439	7.609	0.670	0.015	0.024	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1321.67	
17	0.6380	1055.2	1073.9	0.321	3.780	83.847	10.926	1.057	0.024	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1344.40	
18	0.6489	1074.6	1093.6	0.208	3.789	81.758	12.883	1.281	0.029	0.051	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1357.67	
19	0.6426	1063.9	1082.7	0.265	3.765	82.978	11.760	1.157	0.027	0.049	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1350.65	
20	0.6413	1061.5	1080.3	0.279	3.768	83.191	11.574	1.121	0.024	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1349.03	
21	0.6446	1066.9	1085.7	0.261	3.779	82.628	12.028	1.228	0.028	0.048	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1352.34	
22	0.6488	1074.2	1093.2	0.237	3.762	81.840	12.773	1.304	0.030	0.054	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1357.26	
23	0.6530	1082.7	1101.8	0.181	3.734	80.935	13.735	1.341	0.028	0.046	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1363.45	
24	0.6478	1071.3	1090.3	0.198	3.908	81.858	12.748	1.222	0.025	0.040	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1354.58	
25	0.6418	1060.7	1079.4	0.267	3.888	83.106	11.510	1.152	0.027	0.050	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1347.37	
26	0.6356	1049.5	1068.0	0.365	3.838	84.326	10.389	1.016	0.023	0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1339.62	
27	0.6361	1049.9	1068.5	0.360	3.860	84.250	10.428	1.035	0.024	0.044	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1339.71	
28	0.6366	1053.4	1072.1	0.374	3.676	83.985	11.038	0.883	0.016	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1343.66	
29	0.6394	1057.2	1076.0	0.349	3.744	83.495	11.386	0.977	0.017	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1345.57	
30	0.6220	1027.1	1045.2	0.560	3.628	86.956	8.118	0.708	0.010	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1325.25	
Avg	0.6411	1062.0	1081.0	0.302	3.676	83.199	11.708	1.049	0.023	0.043	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1349.90	

Zone 31

# GQ Source Daily Summary

November 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	0.6580	1087.2	1106.5	0.142	3.988	80.761	12.999	1.861	0.070	0.152	0.012	0.013	0.004	0.000	0.000	0.000	0.000	1364.00	
2	0.6530	1080.2	1099.4	0.158	3.924	81.323	12.851	1.596	0.045	0.087	0.006	0.007	0.003	0.000	0.000	0.000	0.000	1360.38	
3	0.6493	1074.0	1093.0	0.191	3.902	81.986	12.295	1.495	0.041	0.078	0.005	0.005	0.002	0.000	0.000	0.000	0.000	1356.44	
4	0.6546	1081.6	1100.8	0.164	3.974	81.240	12.719	1.691	0.061	0.128	0.010	0.011	0.004	0.000	0.000	0.000	0.000	1360.53	
5	0.6535	1080.3	1099.4	0.159	3.964	81.243	12.866	1.616	0.047	0.090	0.006	0.006	0.003	0.000	0.000	0.000	0.000	1359.99	
6	0.6512	1075.9	1094.9	0.157	4.015	81.495	12.740	1.484	0.037	0.064	0.004	0.004	0.001	0.000	0.000	0.000	0.000	1356.89	
7	0.6552	1082.5	1101.7	0.146	4.006	80.879	13.189	1.642	0.044	0.082	0.005	0.005	0.002	0.000	0.000	0.000	0.000	1361.01	
8	0.6538	1080.0	1099.2	0.157	4.009	81.106	12.998	1.604	0.041	0.074	0.004	0.004	0.002	0.000	0.000	0.000	0.000	1359.36	
9	0.6139	1011.7	1029.6	0.539	3.840	88.584	6.326	0.663	0.018	0.026	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1314.00	
10	0.6050	997.8	1015.5	0.637	3.704	90.305	4.842	0.473	0.014	0.020	0.002	0.001	0.001	0.000	0.000	0.000	0.000	1305.55	
11	0.6073	1002.2	1020.0	0.581	3.736	89.836	5.285	0.520	0.016	0.022	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1308.81	
12	0.5997	986.2	1003.7	0.741	3.749	91.393	3.710	0.372	0.013	0.017	0.002	0.001	0.002	0.000	0.000	0.000	0.000	1296.10	
13	0.5966	979.8	997.2	0.799	3.765	92.006	3.084	0.314	0.012	0.015	0.002	0.001	0.002	0.000	0.000	0.000	0.000	1290.99	
14	0.5867	962.0	979.0	0.945	3.700	93.975	1.237	0.125	0.008	0.007	0.001	0.000	0.002	0.000	0.000	0.000	0.000	1278.09	
15	0.6208	1022.2	1040.3	0.508	3.900	87.334	7.361	0.830	0.024	0.037	0.003	0.002	0.002	0.000	0.000	0.000	0.000	1320.24	
16	0.6199	1019.9	1038.0	0.582	3.835	87.581	7.137	0.797	0.024	0.038	0.003	0.002	0.002	0.000	0.000	0.000	0.000	1318.23	
17	0.6418	1059.5	1078.3	0.283	3.941	83.272	11.172	1.236	0.032	0.056	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1345.94	
18	0.6458	1066.4	1085.3	0.257	3.939	82.565	11.779	1.352	0.036	0.063	0.004	0.004	0.002	0.000	0.000	0.000	0.000	1350.48	
19	0.6374	1052.0	1070.6	0.337	3.900	84.118	10.421	1.140	0.029	0.047	0.003	0.003	0.002	0.000	0.000	0.000	0.000	1341.04	
20	0.6421	1059.9	1078.7	0.297	3.920	83.252	11.182	1.253	0.033	0.054	0.004	0.003	0.002	0.000	0.000	0.000	0.000	1346.17	
21	0.6449	1064.1	1082.9	0.295	3.934	82.785	11.534	1.346	0.035	0.061	0.004	0.004	0.002	0.000	0.000	0.000	0.000	1348.50	
22	0.6495	1072.2	1091.2	0.250	3.938	81.902	12.357	1.446	0.037	0.061	0.004	0.004	0.002	0.000	0.000	0.000	0.000	1354.02	
23	0.6458	1063.0	1081.8	0.238	4.172	82.514	11.594	1.390	0.034	0.051	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1346.19	
24	0.6373	1048.3	1066.9	0.308	4.159	84.230	9.934	1.268	0.034	0.059	0.004	0.004	0.001	0.000	0.000	0.000	0.000	1336.46	
25	0.6320	1038.7	1057.1	0.404	4.102	85.286	8.969	1.143	0.032	0.056	0.004	0.003	0.001	0.000	0.000	0.000	0.000	1329.69	
26	0.6300	1035.4	1053.7	0.447	4.049	85.664	8.675	1.075	0.030	0.052	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1327.58	
27	0.6278	1032.1	1050.4	0.460	4.022	86.008	8.448	0.990	0.025	0.041	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1325.71	
28	0.6317	1037.8	1056.2	0.446	4.059	85.319	8.996	1.103	0.026	0.045	0.003	0.003	0.001	0.000	0.000	0.000	0.000	1328.95	
29	0.6085	1000.1	1017.8	0.715	3.776	89.790	5.077	0.598	0.016	0.023	0.002	0.001	0.001	0.000	0.000	0.000	0.000	1304.70	
30	0.6212	1022.6	1040.8	0.553	3.842	87.367	7.276	0.888	0.025	0.041	0.003	0.002	0.001	0.000	0.000	0.000	0.000	1320.45	
Avg	0.6325	1043.0	1061.0	0.397	3.925	85.171	9.302	1.110	0.031	0.055	0.004	0.004	0.002	0.000	0.000	0.000	0.000	1333.88	

zone 32

# GQ Source Daily Summary

November 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	0.6889	1164.7	1185.3	0.000	2.400	73.047	23.695	0.841	0.007	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1428.09	
2	0.6892	1165.4	1186.0	0.000	2.384	73.011	23.723	0.865	0.008	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1428.68	
3	0.6889	1164.4	1185.0	0.000	2.425	73.029	23.684	0.845	0.008	0.010	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1427.68	
4	0.6870	1161.1	1181.7	0.000	2.443	73.098	23.919	0.527	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.67	
5	0.6867	1161.0	1181.5	0.000	2.423	73.068	24.067	0.431	0.005	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.81	
6	0.6865	1160.4	1181.0	0.000	2.439	73.274	23.678	0.595	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.38	
7	0.6868	1160.7	1181.2	0.000	2.448	73.226	23.707	0.605	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.38	
8	0.6855	1158.7	1179.2	0.000	2.450	73.381	23.652	0.503	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.26	
9	0.6854	1157.9	1178.4	0.000	2.489	73.373	23.644	0.482	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.39	
10	0.6866	1159.6	1180.2	0.000	2.493	73.167	23.813	0.514	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.31	
11	0.6864	1159.8	1180.3	0.011	2.450	73.296	23.660	0.563	0.007	0.009	0.001	0.001	0.001	0.000	0.000	0.000	0.000	1424.67	
12	0.6857	1159.0	1179.5	0.000	2.448	73.373	23.637	0.529	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.45	
13	0.6852	1158.2	1178.7	0.000	2.449	73.464	23.558	0.516	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.97	
14	0.6860	1159.6	1180.2	0.000	2.443	73.378	23.578	0.571	0.010	0.017	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1424.85	
15	0.6853	1158.4	1178.9	0.000	2.446	73.405	23.659	0.478	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.14	
16	0.6856	1159.0	1179.5	0.000	2.443	73.355	23.689	0.499	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.48	
17	0.6861	1159.7	1180.3	0.000	2.447	73.265	23.755	0.520	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.86	
18	0.6861	1159.3	1179.8	0.000	2.473	73.217	23.834	0.464	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.33	
19	0.6857	1158.3	1178.8	0.000	2.488	73.303	23.729	0.468	0.005	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1423.64	
20	0.6902	1165.4	1186.0	0.000	2.482	72.861	23.733	0.876	0.015	0.027	0.002	0.002	0.001	0.000	0.000	0.000	0.000	1427.58	
21	0.6870	1160.8	1181.4	0.000	2.465	73.174	23.731	0.617	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.25	
22	0.6871	1160.7	1181.3	0.000	2.475	73.187	23.690	0.635	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.09	
23	0.6867	1160.3	1180.9	0.000	2.463	73.214	23.723	0.587	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.01	
24	0.6864	1160.1	1180.6	0.000	2.453	73.272	23.672	0.589	0.006	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.00	
25	0.6857	1158.9	1179.4	0.000	2.455	73.379	23.614	0.539	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.32	
26	0.6856	1159.0	1179.5	0.000	2.444	73.398	23.603	0.542	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.49	
27	0.6860	1159.7	1180.3	0.000	2.435	73.361	23.599	0.591	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1424.99	
28	0.6860	1159.7	1180.3	0.000	2.431	73.348	23.641	0.567	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.04	
29	0.6861	1159.8	1180.4	0.000	2.439	73.335	23.629	0.584	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.00	
30	0.6863	1160.1	1180.6	0.000	2.440	73.255	23.744	0.547	0.006	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.14	
Avg	0.6866	1160.0	1180.9	0.000	2.449	73.250	23.702	0.583	0.006	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1425.16	

*Zone 33*

# GQ Source Daily Summary

November 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	0.8002	1112.5	1132.2	2.368	12.453	53.689	28.333	2.843	0.071	0.209	0.009	0.022	0.003	0.000	0.000	0.000	0.000	1265.81	
2	0.8077	1099.9	1119.3	3.382	12.393	53.121	27.974	2.822	0.070	0.205	0.008	0.022	0.003	0.000	0.000	0.000	0.000	1245.62	
3	0.8067	1104.6	1124.1	2.726	13.006	52.783	28.183	2.972	0.074	0.220	0.009	0.024	0.003	0.000	0.000	0.000	0.000	1251.73	
4	0.8022	1106.5	1126.1	2.318	13.087	53.040	28.454	2.813	0.065	0.192	0.008	0.020	0.003	0.000	0.000	0.000	0.000	1257.51	
5	0.7984	1118.1	1137.9	1.978	12.539	53.557	28.848	2.782	0.067	0.197	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1273.61	
6	0.7996	1124.0	1143.9	2.132	12.061	53.583	29.254	2.763	0.066	0.192	0.008	0.020	0.003	0.000	0.000	0.000	0.000	1279.28	
7	0.8000	1097.2	1116.6	2.037	13.879	53.121	27.881	2.753	0.073	0.219	0.009	0.025	0.004	0.000	0.000	0.000	0.000	1248.70	
8	0.7976	1094.3	1113.6	1.988	13.911	53.426	27.679	2.695	0.068	0.201	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1247.08	
9	0.7966	1091.7	1111.1	2.065	13.848	53.590	27.613	2.611	0.062	0.182	0.007	0.019	0.003	0.000	0.000	0.000	0.000	1245.10	
10	0.7991	1093.6	1113.0	2.055	13.989	53.141	27.837	2.687	0.066	0.193	0.008	0.020	0.003	0.000	0.000	0.000	0.000	1245.22	
11	0.7977	1095.7	1115.1	2.074	13.695	53.578	27.609	2.749	0.067	0.196	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1248.72	
12	0.7950	1099.3	1118.8	1.940	13.425	53.955	27.724	2.659	0.067	0.197	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1254.88	
13	0.7928	1109.5	1129.1	1.827	12.770	54.312	28.196	2.613	0.064	0.187	0.008	0.020	0.003	0.000	0.000	0.000	0.000	1268.21	
14	0.7966	1108.6	1128.3	1.979	12.951	53.723	28.394	2.662	0.066	0.194	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1264.19	
15	0.8018	1102.5	1122.0	2.924	12.372	53.764	27.923	2.719	0.068	0.199	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1253.14	
16	0.8019	1095.4	1114.8	2.699	13.158	53.352	27.818	2.670	0.068	0.202	0.008	0.021	0.003	0.000	0.000	0.000	0.000	1245.06	
17	0.8009	1065.8	1084.6	2.147	15.713	52.697	26.416	2.707	0.070	0.210	0.009	0.025	0.006	0.000	0.000	0.000	0.000	1212.00	
18	0.7898	1111.4	1131.0	2.067	12.005	55.161	27.987	2.511	0.062	0.179	0.007	0.019	0.003	0.000	0.000	0.000	0.000	1272.73	
19	0.7990	1086.9	1106.2	3.110	12.782	54.113	27.272	2.458	0.061	0.177	0.007	0.018	0.003	0.000	0.000	0.000	0.000	1237.56	
20	0.7849	1070.3	1089.3	1.656	14.680	54.846	26.512	2.048	0.058	0.171	0.007	0.019	0.003	0.000	0.000	0.000	0.000	1229.72	
21	0.7921	1087.9	1107.2	1.799	14.065	54.007	27.453	2.394	0.064	0.187	0.008	0.020	0.003	0.000	0.000	0.000	0.000	1244.12	
22	0.7949	1098.4	1117.8	1.735	13.792	53.677	27.877	2.611	0.069	0.204	0.008	0.022	0.003	0.000	0.000	0.000	0.000	1253.82	
23	0.7940	1098.2	1117.6	1.889	13.473	54.246	27.339	2.717	0.074	0.222	0.009	0.025	0.004	0.000	0.000	0.000	0.000	1254.47	
24	0.7921	1098.0	1117.5	1.739	13.540	54.315	27.493	2.588	0.072	0.215	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1255.71	
25	0.7923	1106.3	1125.9	1.760	13.019	54.417	27.863	2.612	0.073	0.218	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1264.96	
26	0.7939	1110.4	1130.1	1.863	12.762	54.240	28.177	2.632	0.073	0.217	0.009	0.024	0.004	0.000	0.000	0.000	0.000	1268.44	
27	0.7998	1073.4	1092.4	1.729	15.780	52.472	27.041	2.628	0.078	0.232	0.010	0.025	0.005	0.000	0.000	0.000	0.000	1221.59	
28	0.7909	1090.7	1110.0	1.561	14.146	54.280	27.124	2.549	0.075	0.225	0.010	0.026	0.004	0.000	0.000	0.000	0.000	1248.37	
29	0.8056	1078.4	1097.5	1.976	15.646	51.946	27.102	2.940	0.086	0.259	0.011	0.029	0.005	0.000	0.000	0.000	0.000	1222.85	
30	0.7953	1096.2	1115.6	1.912	13.689	53.849	27.567	2.681	0.067	0.200	0.008	0.022	0.003	0.000	0.000	0.000	0.000	1251.08	
Avg	0.7973	1098.0	1117.0	2.115	13.488	53.664	27.765	2.663	0.069	0.203	0.008	0.022	0.004	0.000	0.000	0.000	0.000	1251.04	

zone 34

# GQ Source Analysis

Williston Basin Interstate Pipeline Co.

Attachment B  
Page 16 of 16

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

	<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*

<b>NORTH DAKOTA HEATING VALUE ZONES</b>		
<b>ZONES</b>	<b>MEASURING DEVICE</b>	<b>LOCATION</b>
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	NOV 11	OCT 11	SEPT 11	AUG 11	JULY 11	JUNE 11	MAY 11	APR 11	MAR 11	FEB 11	JAN 11	DEC 10	ZONE
MT/ND	211	Sidney Area	1210	1215	1212	1199	1204	1215	1205	1206	1202	1211	1216	1212	1218	211
ND	24	Williston Area	1199	1203	1197	1200	1200	1198	1197	1196	1194	1198	1196	1204	1207	24
ND	25	Wafford City Area	1136	1131	1129	1136	1138	1135	1140	1128	1143	1143	1131	1150	1135	25
ND/MT	241	Fairview Area	1197	1201	1198	1200	1200	1199	1193	1193	1194	1197	0	0	0	241
ND	261	Williston - Tioga - Minot Line	1164	1166	1158	1144	1159	1176	1165	1159	1162	1172	1176	1171	1154	261
ND	262	Minot Area	1171	1168	1163	1160	1161	1179	1168	1161	1167	1175	1178	1182	1191	262
ND	263	Tioga - Portal	1106	1092	1126	1128	1128	1126	1082	1093	1123	1094	1090	1094	1100	263
ND	264	Williston - Ray	1199	1203	1197	1200	1200	1198	1197	1196	1194	1198	1196	1204	1207	264
ND	271	Bismarck - Cleveland	1152	1148	1161	1159	1160	1177	1166	1152	1161	1136	1118	1130	1160	271
ND	272	Cleveland - Mapleton	1152	1148	1161	1159	1160	1179	1166	1151	1161	1134	1117	1130	1159	272
ND	273	Cleveland - Grafton	1152	1148	1162	1159	1160	1179	1167	1151	1161	1135	1117	1130	1159	273
ND	28	Bismarck - Cabin Creek	1112	1084	1148	1160	1160	1180	1166	1139	1112	1051	1042	1045	1055	28
ND	31	Dickinson Area	1098	1081	1138	1162	1152	1135	1123	1109	1093	1049	1040	1044	1053	31
ND/MT	32	Cabin Creek - Dickinson	1088	1061	1100	1156	1126	1133	1153	1080	1071	1046	1037	1041	1050	32
ND	33	Killdeer	1179	1181	1181	1181	1181	1182	1183	1180	1177	1175	1175	1175	1175	33
ND	34	Bowman Area	1149	1117	1139	1132	1138	1144	1149	1153	1154	1163	1158	1163	1172	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**

**November 2011**

<b><i>ZONE</i></b>	<b><i>BTU VARIANCE</i></b>	<b><i>REASON</i></b>
263	-34	Mix of Gas in the area
28	-64	Mix of Gas from Cabin Creek
31	-57	Mix of Gas from Cabin Creek
32	-39	Mix of Gas from Cabin Creek
34	-22	Mix of Gas in the area