Exhibit No.: Witness: Type of Exhibit: Issue: Sponsoring Party: Case No.:

)

Maurice Brubaker Direct Testimony Fuel Ag Processing, Inc. HR-2005-0450

Before the Public Service Commission of the State of Missouri

In the Matter of the Tariff Filing of Aquila, Inc., to Implement a General Rate Increase for Retail Steam Heat Service Provided to Customers in its L&P Missouri Service Area.

Case No. HR-2005-0450

Direct Testimony and Schedule of

Maurice Brubaker

On behalf of

Ag Processing, Inc.

Project 8418 October 14, 2005





BRUBAKER & ASSOCIATES, INC. St. Louis, MO 63141-2000

Before the Public Service Commission of the State of Missouri

In the Matter of the Tariff Filing of Aquila, Inc., to Implement a General Rate Increase for Retail Steam Heat Service Provided to Customers in its L&P Missouri Service Area.

Case No. HR-2005-0450

STATE OF MISSOURI

SS

COUNTY OF ST. LOUIS

Affidavit of Maurice Brubaker

Maurice Brubaker, being first duly sworn, on his oath states:

1. My name is Maurice Brubaker. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 1215 Fern Ridge Parkway, Suite 208, St. Louis, Missouri 63141-2000. We have been retained by Ag Processing, Inc. in this proceeding on their behalf.

2. Attached hereto and made a part hereof for all purposes is my direct testimony and schedule which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. HR-2005-0450.

3. I hereby swear and affirm that the testimony and schedule are true and correct and that they show the matters and things they purport to show.

Maurice Brubaker

Subscribed and sworn to before this 11th day of October 2005.

CAROL SCHULZ Notary Public - Notary Sea STATE OF MISSOURJ St. Louis County My Commission Expires: Feb. 26, 2008

not Schulz

Notary Public

My Commission Expires February 26, 2008.

Before the Public Service Commission of the State of Missouri

In the Matter of the Tariff Filing of Aquila, Inc.,) to Implement a General Rate Increase for) Retail Steam Heat Service Provided to) Customers in its L&P Missouri Service Area.)

Case No. HR-2005-0450

Direct Testimony of Maurice Brubaker

1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

- 2 A Maurice Brubaker. My business address is 1215 Fern Ridge Parkway, Suite 208,
- 3 St. Louis, Missouri 63141-2000.

4 Q WHAT IS YOUR OCCUPATION?

- 5 A I am a consultant in the field of public utility regulation and president of Brubaker &
- 6 Associates, Inc., energy, economic and regulatory consultants.

7 Q PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

8 A This information is included in Appendix A to my testimony.

9 Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

10 A I am appearing on behalf of Ag Processing, Inc.

11 Introduction

12 Q WHAT SUBJECTS ARE ADDRESSED IN YOUR TESTIMONY?

13 A I address fuel cost levels and coal costs.

Maurice Brubaker Page 1

1 Q ARE ANY OTHER WITNESSES ALSO APPEARING FOR THE SAME PARTIES?

A Yes. Mr. Michael Gorman presents evidence concerning an appropriate return on
 equity, capital structure and overall rate of return for Aquila. Ms. Sharon Hennings
 presents evidence with respect to problems associated with the acquisition of high
 Btu coal at the Sibley and Lake Road generating stations, and discusses alternatives
 available to Aquila that were not pursued.

7 Mr. Jim Selecky presents testimony with respect to depreciation rates and
8 expense levels associated with Aquila's generating stations.

9 Q HAVE YOU AND THE OTHER WITNESSES COLLECTIVELY ADDRESSED ALL

10 APPROPRIATE REVENUE REQUIREMENT ADJUSTMENTS?

11 A No. Our testimony addresses only selected revenue requirement issues. To the 12 adjustments we recommend should be added adjustments that are recommended by 13 others (and accepted by the Commission) in order to determine the overall final 14 revenue requirement that is appropriate.

15 Natural Gas Prices

16 Q FOR PURPOSES OF ITS DIRECT TESTIMONY, WHAT LEVEL OF NATURAL GAS

17 PRICES DID AQUILA ASSUME?

A As expressed in the testimony of Aquila witness Boehm, and shown on Schedule
 JGB-2, Aquila used the average of 2006 NYMEX futures prices, measured over the
 period October through December 2004. On an annual basis, the price proposed is
 \$6.57 per MMBtu.

1 Q HAVE YOU EXAMINED MORE RECENT NYMEX FUTURES PRICES?

A Yes. Schedule 1 attached to my testimony presents a listing of more recent NYMEX
 natural gas futures prices for one-, two- and three-year periods spanning April 2006
 through March 2009. The prices displayed are mid-month values from January
 through September 2005, and the prices as of October 5, 2005.

6 Q HOW WOULD YOU CHARACTERIZE THE TREND IN THESE PRICES?

7 A The prices were relatively stable, with a slight upward trend through the May data
8 point. Thereafter, as summer weather approached, and the Gulf Coast natural gas
9 gathering and processing facilities were severely damaged by the effects of
10 Hurricanes Katrina and Rita, the prices have escalated substantially.

11QDO YOU BELIEVE THAT THESE MORE RECENT PRICES REPRESENT NEW12PERMANENT LEVELS OF PRICING FOR NATURAL GAS?

A No, I do not. I believe they are, in large part, a reaction to the uncertainty surrounding
 the condition of, and time to restore to normal, the offshore production platforms and
 the associated delivery systems and processing facilities that have been damaged by
 Hurricanes Katrina and Rita. However, I believe gas prices will stay high until there is
 better visibility with respect to the restoration of these volumes to the market.

18 Q DO YOU INTEND TO UPDATE THIS INFORMATION LATER IN THE CASE?

19 A Yes, that is my present intent.

Maurice Brubaker Page 3

1 Q DOES AQUILA HAVE A HEDGING PROGRAM FOR ITS PURCHASED ENERGY 2 REQUIREMENTS (FUEL AND PURCHASE POWER) ASSOCIATED WITH L&P 3 AND MPS?

4 A Yes. This is discussed in the responses to several data requests, including Aquila's
5 responses to MPSC Data Request Nos. 266 and 269.

6 Q WHAT IS THE PURPOSE OF A HEDGING PROGRAM?

7 A The purpose of a hedging program is to moderate the effects of rising and falling
8 prices of the commodity being acquired. A hedging program may contain strategies
9 such as purchasing quantities and locking in fixed prices over a period of time,
10 purchasing call option contracts that cap the exposure to rising prices while permitting
11 the buyer to participate in price declines, and other strategies.

12QDOES AQUILA PROPOSE TO REFLECT THE OPERATION OF ITS HEDGING13PROGRAM IN DETERMINING FUEL AND PURCHASE POWER COSTS TO

- 14 CHARGE TO ITS ELECTRIC AND STEAM CUSTOMERS?
- 15 A No. Aquila has indicated in response to several data requests, including the 16 response to SIEUA Data Request No. 217 that it does not propose to reflect the 17 effects of the hedging program when determining the level of fuel and purchase 18 power expense to be borne by customers.

19 Q IN YOUR VIEW, WOULD IT BE APPROPRIATE TO REFLECT THE EFFECTS OF

- 20 THE HEDGING PROGRAM?
- 21 A Yes. As noted above, the main purpose of the hedging program is to dampen the 22 price swings in the market, and to otherwise protect consumers from increases in

price. Unless the results of the hedging program are reflected in determining the
 prices to be charged to consumers, this objective will not be met. Rather, consumers
 would continue to be exposed to the effects of market volatility, and the hedging
 program would basically benefit stockholders, rather than consumers.

5 Especially in light of the high and volatile gas prices currently being faced, it is 6 appropriate for the effects of the hedging program to be reflected in determining the 7 fuel and purchase power costs properly chargeable to consumers.

8 Q HOW SHOULD THE EFFECTS OF THE HEDGING PROGRAM BE 9 INCORPORATED?

10 A The fuel and purchase power prices that are the result of the hedging program should 11 be used to determine the cost chargeable to customers, to the extent of the hedge. It 12 is only the unhedged volumes that should be subject to a market or any other level of 13 pricing.

14 Q PLEASE PROVIDE AN EXAMPLE.

A For example, assume that a utility has hedged 60% of its natural gas requirements at a price of \$5.00 per MMBtu, and that the balance is exposed to market prices. In looking forward, the Commission should consider the 60% of the volumes that have been locked in at \$5.00 per MMBtu, and combine that with the expectation of market prices only for the remaining 40% of the volumes that are not hedged.

20 Of course, a hedging program contains many aspects, and they should all be 21 considered to the extent that prices are defined either by locking them in at fixed 22 levels, or by constraining the impact of price escalations by means of such instruments as call option contracts that allow a utility to purchase natural gas at a
 specified strike price, in return for having paid a premium to the seller of the option.

3 High Btu Coal

Q MS. SHARON HENNINGS DISCUSSES THE PROBLEMS THAT AQUILA HAS
 ENCOUNTERED WITH RESPECT TO COAL DELIVERIES UNDER A CONTRACT
 WITH C.W. MINING CO. ARE YOU ALSO OFFERING TESTIMONY ON THIS
 SUBJECT?

8 A Yes.

9 Q WHAT IS THE NATURE OF THE PROBLEM WITH THE C.W. MINING 10 CONTRACT?

- A Aquila entered into this contract to secure a supply of high Btu coal for its Sibley and
 Lake Road generating facilities. Unfortunately, it has not received the contracted
 deliveries from C.W. Mining. As a result, it has replaced those supplies with higher
 cost supplies acquired in the market.
- 15 Q DOES AQUILA PROPOSE, IN THE FUEL PRICE ASSUMPTIONS CONTAINED
- 16 WITHIN ITS DIRECT TESTIMONY, TO PASS ON TO CUSTOMERS THE INITIAL

17 CONTRACTED FOR PRICE OR THE HIGHER REPLACEMENT PRICE?

18 A It proposes to charge customers the higher replacement price.

1 Q IS IT REASONABLE FOR CUSTOMERS TO PAY THE HIGHER REPLACEMENT

2 **PRICE?**

A No. Customers should only be charged for the contract for price plus the rail charges
for delivery.

5 Q WHY SHOULD CUSTOMERS PAY THIS AMOUNT?

A Aquila entered into the contract with C.W. Mining based on its own evaluations and
analyses. Aquila is the one that was responsible for contracting for the coal, including
the selection of the specific suppliers to perform this role. In addition, I understand
that Aquila has taken legal action to assert its rights under the contract.

10 Until the litigation process is complete, and until there is a full airing of Aquila's 11 actions surrounding the execution of the contract, its management of the contract, 12 and the legal proceedings, customers should not be required to pay anything more 13 than the initial contracted price.

14 Q HOW MANY TONS OF HIGH BTU COAL, AND AT WHAT PRICE, HAS AQUILA

15 **PROPOSED FOR PURPOSES OF DEVELOPING ITS ELECTRIC AND STEAM** 16 **REVENUE REQUIREMENTS?**

A Based on my review of workpapers supplied by Aquila in connection with its direct
testimony in this proceeding, I find the following information with respect to the
purchases of high Btu coal for the test year.

TABLE 1									
High Btu Coal Purchases for the <u>Test Year (from Aquila's Direct Testimony)</u>									
<u>Utility System</u>	Tons	Dollar Cost (000)	Cost per <u>Ton</u>						
L&P Steam	28,551	****	****						

1 Q BASED ON THIS INFORMATION, HOW SHOULD ADJUSTMENTS BE MADE?

A The adjustment to be made is equal to the volumes indicated in this table, times the
difference in price between what Aquila has included in its test year revenue
requirement, and the contract price, including rail delivery charges.

5 Q WHAT COST PER TON WOULD BE APPROPRIATE TO UTILIZE?

A Based on the contract price of \$19.40/ton plus rail delivery charges (based on actual
costs incurred during 2005 of *****/ton at Lake Road), the cost per ton delivered for
high Btu coal at Lake Road (L&P) should be *****/ton.

9 Q ON THE BASIS OF THESE PRICES, WHAT ARE THE APPROPRIATE

10 **REDUCTIONS TO AQUILA'S TEST YEAR FUEL COSTS?**

11 A For L&P Steam, it is \$373,000.

12 Q SHOULD ADJUSTMENTS BE MADE FOR ANY ADDITIONAL SO2 ALLOWANCES

13 THAT AQUILA WAS REQUIRED TO BURN?

14 A Yes. To the extent that purchasing of substitute coal has caused Aquila to include in 15 its proposed revenue requirements the costs associated with SO2 allowances in addition to those that would have been required under the C.W. Mining contract, that
 adjustment should also be made in the revenue requirement.

3 Q MS. HENNINGS ALSO PRESENTS EVIDENCE WITH RESPECT TO THE 4 POSSIBLE USE OF PETROLEUM COKE AS A SUBSTITUTE FOR HIGH BTU 5 COAL. HOW SHOULD THIS INFORMATION BE CONSIDERED?

A To the extent that the Commission would consider allowing Aquila to charge prices in
excess of the contract for prices, the possibility of Aquila having acquired petroleum
coke, rather than high Btu coal should be reflected in the revenue requirement
calculation, and Aquila should be required to pursue development of this option.

10 Q BASED ON THE DOLLAR PER MILLION BTU COST ESTIMATE PROVIDED BY

11 MS. HENNINGS, WHAT WOULD BE THE ADJUSTMENT TO AQUILA'S TEST

12 YEAR REVENUE REQUIREMENT PROPOSAL IF PETROLEUM COKE WERE

13 SUBSTITUTED FOR THE ACTUAL PURCHASES OF HIGH BTU COAL?

A On the basis of a cost of \$1.50/MMBtu for petroleum coke and a heat content for the
high Btu coal of 12,000 Btu/lb., for L&P Steam it would be \$325,000.

16 Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A Yes, it does.

Appendix A

Qualifications of Maurice Brubaker

1 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

- 2 A Maurice Brubaker. My business address is 1215 Fern Ridge Parkway, Suite 208,
- 3 St. Louis, Missouri 63141.

4 Q PLEASE STATE YOUR OCCUPATION.

- 5 A I am a consultant in the field of public utility regulation and President of the firm of
- 6 Brubaker & Associates, Inc., energy, economic and regulatory consultants.

7 Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND 8 EXPERIENCE.

9 A I was graduated from the University of Missouri in 1965, with a Bachelor's Degree in
10 Electrical Engineering. Subsequent to graduation I was employed by the Utilities
11 Section of the Engineering and Technology Division of Esso Research and
12 Engineering Corporation of Morristown, New Jersey, a subsidiary of Standard Oil of
13 New Jersey.

In the Fall of 1965, I enrolled in the Graduate School of Business at
Washington University in St. Louis, Missouri. I was graduated in June of 1967 with
the Degree of Master of Business Administration. My major field was finance.

From March of 1966 until March of 1970, I was employed by Emerson Electric Company in St. Louis. During this time I pursued the Degree of Master of Science in Engineering at Washington University, which I received in June, 1970.

1 In March of 1970, I joined the firm of Drazen Associates, Inc., of St. Louis, 2 Missouri. Since that time I have been engaged in the preparation of numerous 3 studies relating to electric, gas, and water utilities. These studies have included 4 analyses of the cost to serve various types of customers, the design of rates for utility 5 services, cost forecasts, cogeneration rates and determinations of rate base and 6 operating income. I have also addressed utility resource planning principles and 7 plans, reviewed capacity additions to determine whether or not they were used and 8 useful, addressed demand-side management issues independently and as part of 9 least cost planning, and have reviewed utility determinations of the need for capacity 10 additions and/or purchased power to determine the consistency of such plans with 11 least cost planning principles. I have also testified about the prudency of the actions 12 undertaken by utilities to meet the needs of their customers in the wholesale power 13 markets and have recommended disallowances of costs where such actions were 14 deemed imprudent.

I have testified before the Federal Energy Regulatory Commission (FERC),
various courts and legislatures, and the state regulatory commissions of Alabama,
Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia,
Guam, Hawaii, Illinois, Indiana, Iowa, Kentucky, Louisiana, Michigan, Missouri,
Nevada, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania,
Rhode Island, South Carolina, South Dakota, Texas, Utah, Virginia, West Virginia,
Wisconsin and Wyoming.

The firm of Drazen-Brubaker & Associates, Inc. was incorporated in 1972 and assumed the utility rate and economic consulting activities of Drazen Associates, Inc., founded in 1937. In April, 1995 the firm of Brubaker & Associates, Inc. was formed. It includes most of the former DBA principals and staff. Our staff includes consultants

> Appendix A Maurice Brubaker Page 2

with backgrounds in accounting, engineering, economics, mathematics, computer
 science and business.

During the past ten years, Brubaker & Associates, Inc. and its predecessor firm has participated in over 700 major utility rate and other cases and statewide generic investigations before utility regulatory commissions in 40 states, involving electric, gas, water, and steam rates and other issues. Cases in which the firm has been involved have included more than 80 of the 100 largest electric utilities and over 30 gas distribution companies and pipelines.

9 An increasing portion of the firm's activities is concentrated in the areas of 10 competitive procurement. While the firm has always assisted its clients in negotiating 11 contracts for utility services in the regulated environment, increasingly there are 12 opportunities for certain customers to acquire power on a competitive basis from a 13 supplier other than its traditional electric utility. The firm assists clients in identifying 14 and evaluating purchased power options, conducts RFPs and negotiates with 15 suppliers for the acquisition and delivery of supplies. We have prepared option 16 studies and/or conducted RFPs for competitive acquisition of power supply for 17 industrial and other end-use customers throughout the Unites States and in Canada, 18 involving total needs in excess of 3,000 megawatts. The firm is also an associate 19 member of the Electric Reliability Council of Texas and a licensed electricity 20 aggregator in the State of Texas.

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In addition to our main office in St. Louis, the firm has branch offices in Phoenix, Arizona; Chicago, Illinois; Corpus Christi, Texas; and Plano, Texas.

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Appendix A Maurice Brubaker Page 3

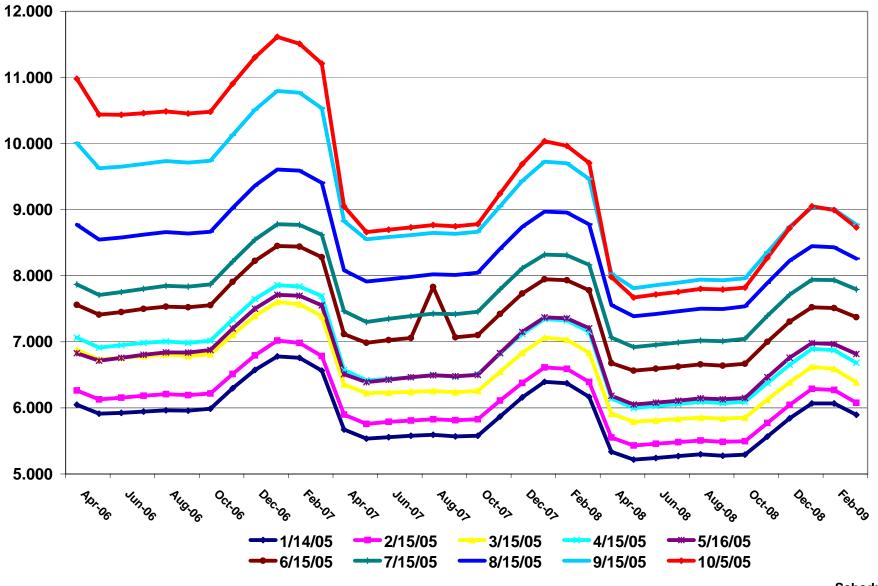
NYMEX NATURAL GAS FUTURES PRICES (\$/MMBTU) (APRIL 2006 - MARCH 2009)

<u>Line</u>	Contract <u>Month</u>	1/14/2005 Futures <u>Prices</u>	2/15/2005 Futures <u>Prices</u>	3/15/2005 Futures <u>Prices</u>	4/15/2005 Futures <u>Prices</u>	5/16/2005 Futures <u>Prices</u>	6/15/2005 Futures <u>Prices</u>	7/15/2005 Futures <u>Prices</u>	8/15/2005 Futures <u>Prices</u>	9/15/2005 Futures <u>Prices</u>	10/5/2005 Futures <u>Prices</u>
1	Apr-06	6.049	6.264	6.878	7.063	6.829	7.559	7.870	8.772	10.007	10.981
2	May-06	5.914	6.129	6.733	6.913	6.714	7.411	7.710	8.547	9.627	10.441
3	Jun-06	5.924	6.154	6.758	6.950	6.758	7.451	7.752	8.578	9.652	10.436
4	Jul-06	5.944	6.184	6.783	6.985	6.804	7.498	7.802	8.623	9.693	10.461
5	Aug-06	5.964	6.209	6.808	7.005	6.840	7.533	7.847	8.662	9.736	10.486
6	Sep-06	5.959	6.194	6.787	6.985	6.837	7.522	7.835	8.640	9.712	10.456
7	Oct-06	5.989	6.219	6.812	7.018	6.877	7.554	7.870	8.667	9.741	10.481
8	Nov-06	6.299	6.514	7.107	7.338	7.202	7.909	8.215	9.027	10.131	10.906
9	Dec-06	6.574	6.794	7.392	7.648	7.502	8.224	8.545	9.362	10.511	11.306
10	Jan-07	6.779	7.019	7.603	7.858	7.712	8.451	8.780	9.607	10.796	11.616
11	Feb-07	6.759	6.984	7.568	7.838	7.697	8.441	8.770	9.592	10.771	11.511
12	Mar-07	6.564	6.784	7.387	7.693	7.552	8.281	8.620	9.407	10.536	11.211
13	Apr-07	5.674	5.899	6.357	6.573	6.512	7.116	7.465	8.082	8.826	9.051
14	May-07	5.534	5.759	6.222	6.418	6.389	6.986	7.300	7.912	8.551	8.661
15	Jun-07	5.556	5.789	6.232	6.438	6.427	7.026	7.348	7.947	8.586	8.697
16	Jul-07	5.579	5.809	6.242	6.463	6.464	7.058	7.389	7.982	8.616	8.732
17	Aug-07	5.594	5.829	6.257	6.498	6.494	7.830	7.426	8.022	8.649	8.767
18	Sep-07	5.569	5.814	6.237	6.473	6.480	7.068	7.420	8.012	8.634	8.747
19	Oct-07	5.579	5.827	6.257	6.508	6.500	7.101	7.455	8.047	8.666	8.781
20	Nov-07	5.869	6.112	6.544	6.823	6.830	7.421	7.795	8.407	9.051	9.241
21	Dec-07	6.159	6.377	6.832	7.118	7.150	7.731	8.115	8.742	9.436	9.691
22	Jan-08	6.394	6.612	7.062	7.343	7.370	7.946	8.320	8.972	9.726	10.036
23	Feb-08	6.374	6.592	7.032	7.323	7.355	7.931	8.310	8.957	9.701	9.966
24	Mar-08	6.167	6.392	6.832	7.153	7.205	7.779	8.165	8.777	9.466	9.706
25	Apr-08	5.337	5.552	5.912	6.143	6.185	6.679	7.065	7.557	8.031	7.981
26	May-08	5.217	5.432	5.792	5.998	6.050	6.564	6.920	7.387	7.811	7.671
27	Jun-08	5.242	5.457	5.812	6.028	6.080	6.594	6.955	7.422	7.856	7.716
28	Jul-08	5.272	5.482	5.832	6.058	6.110	6.624	6.990	7.462	7.896	7.756
29	Aug-08	5.297	5.507	5.852	6.093	6.145	6.659	7.020	7.502	7.941	7.801
30	Sep-08	5.277	5.487	5.837	6.073	6.130	6.639	7.010	7.497	7.931	7.791
31	Oct-08	5.292	5.497	5.852	6.093	6.150	6.669	7.045	7.537	7.961	7.821
32	Nov-08	5.567	5.772	6.127	6.378	6.465	6.999	7.395	7.892	8.356	8.271
33	Dec-08	5.842	6.047	6.387	6.653	6.760	7.304	7.715	8.227	8.741	8.721
34	Jan-09	6.067	6.287	6.622	6.893	6.980	7.524	7.940	8.447	9.031	9.051
35	Feb-09	6.067	6.272	6.592	6.873	6.965	7.512	7.935	8.432	9.006	8.996
36	Mar-09	5.897	6.077	6.387	6.683	6.815	7.372	7.795	8.258	8.776	8.731
37	1st Year Avg ¹	6.227	6.454	7.051	7.275	7.110	7.820	8.135	8.957	10.076	10.858
38	2nd Year Avg ²	5.837	6.068	6.509	6.761	6.765	7.416	7.709	8.322	8.992	9.173
39	3rd Year Avg 3	5.531	5.739	6.084	6.331	6.403	6.928	7.315	7.802	8.278	8.192
40	Total 3-Year Avg	5.865	6.087	6.548	6.789	6.759	7.388	7.720	8.360	9.116	9.408

Notes:

¹ 1st year time frame is from April 2006 through March 2007
 ² 2nd year time frame is from April 2007 through March 2008
 ³ 3rd year time frame is from April 2008 through March 2009

NYMEX NATURAL GAS FUTURES PRICES (\$/MMBTU) APRIL 2006 - MARCH 2009



Schedule 1 Page 2 of 2