

Exhibit No.:

Issue:

Depreciation

Witness

Type of Exhibit:

Sponsoring Party:

John J. Spanos

Direct Testimony

Laclede Gas

Company

Case No.:

GR-2005-_____

Date Testimony Prepared: February 18, 2005

CASE NO. GR-2005- _____

DIRECT TESTIMONY

OF

JOHN J. SPANOS

ON BEHALF OF

LACLEDE GAS COMPANY

FEBRUARY 2005

DIRECT TESTIMONY OF
JOHN J. SPANOS

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I. INTRODUCTION

1 **Q. Please state your name and address.**

2 A. My name is John J. Spanos. My business address is 207 Senate Avenue,
3 Camp Hill, Pennsylvania, 17011.

4 **Q. Are you associated with any firm?**

5 A. Yes. I am associated with the firm of Gannett Fleming, Inc.

6 **Q. How long have you been associated with Gannett Fleming, Inc.?**

7 A. I have been associated with the firm since college graduation in June 1986.

8 **Q. What is your position with the firm?**

9 A. I am Vice President of its Valuation and Rate Division.

10 **Q. What is your educational background?**

11 A. I have Bachelor of Science degrees in Industrial Management and
12 Mathematics from Carnegie-Mellon University and a Master of Business
13 Administration from York College.

14 **Q. Do you belong to any professional societies?**

15 A. Yes. I am a member of the Society of Depreciation Professionals and the
16 American Gas Association/Edison Electric Institute Industry Accounting
17 Committee.

18 **Q. Do you hold any special certification as a depreciation expert?**

19 A. Yes. The Society of Depreciation Professionals has established national
20 standards for depreciation professionals. The Society administers an
21 examination to become certified in this field. I passed the certification exam

1 in September 1997 and was recertified in August 2003.

2 **Q. Have you received any additional education relating to utility plant**
3 **depreciation?**

4 A. Yes. I have completed the following courses conducted by Depreciation
5 Programs, Inc.: "Techniques of Life Analysis," "Techniques of Salvage and
6 Depreciation Analysis," "Forecasting Life and Salvage," "Modeling and Life
7 Analysis Using Simulation" and "Managing a Depreciation Study." I have
8 also completed the "Introduction to Public Utility Accounting" program
9 conducted by the American Gas Association.

10 **Q. Please outline your experience in the field of depreciation.**

11 A. In June 1986, I was employed by Gannett Fleming Valuation and Rate
12 Consultants, Inc. as a Depreciation Analyst. During the period from June
13 1986 through December 1995, I assisted in the preparation of numerous
14 depreciation and original cost studies for utility companies in various
15 industries.

16 In each of these studies, I assembled and analyzed historical and
17 simulated data, performed field reviews, developed preliminary estimates of
18 service life and net salvage, calculated annual depreciation, and prepared
19 reports for submission to state public utility commissions or federal
20 regulatory agencies. I performed these studies under the general direction
21 of William M. Stout, P.E.

22 In January 1996, I was assigned to the position of Supervisor of
23 Depreciation Studies. In July 1999, I was promoted to the position of
24 Manager, Depreciation and Valuation Studies. In December 2000, I was

1 promoted to my present position as Vice President of Gannett Fleming
2 Valuation and Rate Consultants, Inc., now the Valuation and Rate Division
3 of Gannett Fleming, Inc. I am responsible for conducting depreciation,
4 valuation and original cost studies, including the preparation of final exhibits
5 and responses to data requests for submission to the appropriate regulatory
6 bodies. My additional duties include determining final life and salvage
7 estimates, conducting field reviews and presenting recommended
8 depreciation rates to management for their consideration.

9 **Q. In total, how many depreciation studies have you performed during**
10 **your career.**

11 A. I have conducted over one hundred depreciation studies during my career
12 for various companies in the electric, natural gas, water, telephone, pipeline
13 and railroad industries. A list of these companies is attached to my direct
14 testimony.

15 **Q. Have you submitted testimony to any state utility commissions on the**
16 **subject of utility plant depreciation?**

17 A. Yes. I have submitted testimony to the Pennsylvania Public Utility
18 Commission, the Commonwealth of Kentucky Public Service Commission,
19 the Public Utilities Commission of Ohio, the Public Utilities Board of New
20 Jersey, The Missouri Public Service Commission, the Massachusetts
21 Department of Telecommunications and Energy, The Alberta Energy &
22 Utility Board, the Nevada Public Utility Commission, the Idaho Public Utility
23 Commission, the Louisiana Public Service Commission, the Oklahoma
24 Corporate Commission, The Public Service Commission of South Carolina,

1 Railroad Commission of Texas – Gas Services Division, Illinois Commerce
2 Commission, and the Indiana Utility Regulatory Commission.

3 **Q. What is the purpose of your testimony in this proceeding?**

4 **A.** My testimony is in support of the depreciation study conducted under my
5 supervision and direction for Laclede Gas Company. Based upon the
6 study, I am recommending that new depreciation accrual rates be adopted
7 by the Company and approved by the Commission.

8
9 **II. OVERVIEW**

10 **Q. Please describe what you mean by the term “depreciation”.**

11 **A.** “Depreciation” refers to the loss in service value not restored by current
12 maintenance, incurred in connection with the consumption or prospective
13 retirement of utility plant in the course of service from causes which can be
14 reasonably anticipated or contemplated, against which the Company is not
15 protected by insurance. Among the causes to be given consideration are
16 wear and tear, decay, action of the elements, inadequacy, obsolescence,
17 changes in the art, changes in demand, and the requirements of public
18 authorities.

19 **Q. Please explain the term “service value”.**

20 **A.** “Service value” is the original cost of an asset, less the net salvage value of
21 the asset. The net salvage value is the gross salvage value minus the cost
22 of removal or cost to retire the asset. For many types of property used in
23 the utility industry, the net salvage value is negative, meaning that the cost
24 to retire the asset exceeds any residual salvage value.

1 **Q. What is the primary goal of establishing depreciation accrual rates?**

2 A. Depreciation accrual rates are established and used to allocate, for
3 accounting purposes, the cost of assets, including the cost to retire them,
4 over their service lives. The total annual depreciation derived from the
5 establishment of such rates is based on a system of depreciation
6 accounting which aims to distribute the cost of fixed capital assets over the
7 estimated useful life of the unit, or group of assets, in a systematic and
8 rational manner.

9 **Q. What method did you use to derive your recommended accrual**
10 **depreciation rates in this case?**

11 A. In the study that I performed for purposes of preparing my testimony, I used
12 the straight line whole life method of depreciation, with the average service
13 life procedure to develop recommended depreciation accrual rates. In
14 addition, I calculated the amount required to amortize the variance between
15 the book depreciation reserve and the calculated accrued depreciation or
16 “theoretical reserve”.

17 For General Plant Accounts 391.1, 391.2, 391.3, 393, 394, 395, 397
18 and 398; I used the straight line method of amortization. The annual
19 amortization is based on amortization accounting which distributes the
20 unrecovered cost of fixed capital assets over the remaining amortization
21 period selected for each account and vintage.

22 **Q. Have you prepared a report presenting the results of your study?**

23 A. Yes. The report titled, “Depreciation Study - Calculated Annual
24 Depreciation Accruals Related to Utility Plant at September 30, 2003,”

1 which has been marked as Schedule JJS-1, sets forth the results of my
2 study.

3 **Q. How did you determine the recommended annual depreciation accrual**
4 **rates?**

5 A. The determination of annual depreciation accrual rates consists of two
6 phases. In the first phase, service life and net salvage characteristics are
7 estimated for each depreciable group, that is, each plant account or
8 subaccount identified as having similar characteristics. In the second
9 phase, the annual depreciation accrual rates and accrued depreciation are
10 calculated based on the service life and net salvage estimates determined
11 in the first phase.

12 13 **III. ESTIMATION OF SERVICE LIFE AND NET SALVAGE**

14 **Q. Please describe the first phase of the study in which you estimated the**
15 **service life and net salvage characteristics for each depreciable group.**

16 A. The service life and net salvage study consisted of compiling historical data
17 from records related to the Company's plant; analyzing these data to obtain
18 historical trends of survivor and salvage characteristics; obtaining
19 supplementary information from management and operating personnel
20 concerning the Company's practices and plans as they relate to plant
21 operations; and interpreting the above data to form judgments of average
22 service life and net salvage characteristics.

23 **Q. What historical data did you analyze for the purpose of estimating the**
24 **service life characteristics of the Company's plant?**

1 A. The data consisted of the entries made by the Company to record plant
2 transactions through 2003. The transactions included additions,
3 retirements, transfers and the related balances. The Company, in
4 accordance with my instructions, classified the data by depreciable group,
5 type of transaction, the year in which the transaction took place, and the
6 year in which the plant was installed.

7 **Q. What method did you use to analyze this service life data?**

8 A. I used the retirement rate method. That method is the most appropriate
9 when aged retirement data are available, because it develops the average
10 rates of retirement actually experienced during the period of study. Other
11 methods of life analysis infer the rates of retirement based on a selected
12 type survivor curve.

13 **Q. Please describe the results of your use of the retirement rate method.**

14 A. Each retirement rate analysis resulted in a life table which, when plotted,
15 formed an original survivor curve. Each original survivor curve as plotted
16 from the life table represents the average survivor pattern experienced by
17 the several vintage groups during the experience band studied. Inasmuch
18 as this survivor pattern does not necessarily describe the life characteristics
19 of the property group, interpretation of the original curves is required in
20 order to use them as valid considerations in service life estimation. Iowa
21 type survivor curves were used in these interpretations.

22 **Q. Please explain briefly what an “Iowa-type survivor curve” is and how**
23 **you use it in estimating service life characteristics for each**
24 **depreciable group.**

1 A. The range of survivor characteristics usually experienced by utility and
2 industrial properties is encompassed by a system of generalized survivor
3 curves known as the Iowa type curves. The Iowa curves were developed at
4 the Iowa State College Engineering Experiment Station through an
5 extensive process of observation and classification of the ages at which
6 industrial property had been retired.

7 Iowa type curves are used to smooth and extrapolate original survivor
8 curves determined by the retirement rate method. The Iowa curves and
9 truncated Iowa curves were used in this study to describe the forecasted
10 rates of retirement based on the observed rates of retirement and the
11 outlook for future retirements.

12 The estimated survivor curve designations for each depreciable group
13 indicate the average service life, the family within the Iowa system and the
14 relative height of the mode. For example, the Iowa 40-R2.5 indicates an
15 average service life of forty years; a right-moded, or R, type curve (the
16 mode occurs after average life for right-moded curves); and a moderate
17 height, 2.5, for the mode (possible modes for R type curves range from 1 to
18 5). The mode of a data set is a type of average. The mode represents the
19 value which appears most frequently in the data set.

20 **Q. What historical data did you analyze for the purpose of estimating net**
21 **salvage characteristics?**

22 A. The data consisted of the entries made by the Company to record
23 retirements, cost of removal and gross salvage during the period 1972
24 through 2003.

1 **Q. What method did you use to analyze this net salvage data?**

2 A. The net salvage data were analyzed by expressing the net salvage and its
3 two components, cost of removal and gross salvage, as percents of the
4 original cost retired on annual, three-year moving average and most recent
5 five-year average bases. The use of averages smooths the annual
6 fluctuations and assists in identifying underlying trends.

7 **Q. Please describe the manner in which you used the analyses of net**
8 **salvage to estimate net salvage percents.**

9 A. The results of the net salvage analyses provided indications of historical net
10 salvage levels. The judgments of net salvage incorporated these historical
11 indications and consideration of estimates made for other gas companies.

13 **IV. CALCULATION OF DEPRECIATION**

14 **Q. Please describe the second phase of the process that you used in**
15 **which you calculated annual depreciation accrual rates and accrued**
16 **depreciation.**

17 A. After I estimated the service life and net salvage characteristics for each
18 depreciable group, I calculated annual depreciation accrual rates and
19 accrued depreciation for each group in accordance with the straight line
20 whole life method, using the average service life procedure.

21 **Q. Please describe briefly the straight line whole life method of**
22 **depreciation that you used for depreciable property.**

23 A. The straight line whole life method of depreciation allocates the original cost
24 less net salvage in equal amounts to each year of service life.

1 **Q. In what manner do you propose to true-up the difference between the**
2 **theoretical accrued depreciation that you calculated and the book**
3 **depreciation reserve recorded on the Company's books?**

4 A. The difference or variance between the calculated accrued depreciation and
5 the book reserve should be amortized over a fixed time period. I
6 recommend that the variance in this case be amortized over the remaining
7 service life in each account, however, not to exceed 25 years, commencing
8 with the effective date of customer rates resulting from this proceeding.

9 **Q. Please describe briefly the amortization of certain General Plant**
10 **accounts.**

11 A. General Plant Accounts 391.1, 391.2, 391.3, 393, 394, 395, 397 and 398
12 include a very large number of units, but represent less than two percent of
13 depreciable utility plant. Depreciation accounting is difficult for these
14 assets, inasmuch as periodic inventories are required to properly reflect
15 plant in service. In amortization accounting, units of property are capitalized
16 in the same manner as they are in depreciation accounting. However,
17 retirements are recorded when a vintage is fully amortized rather than as
18 the units are removed from service. That is, there is no dispersion of
19 retirement. All units are retired when the age of the vintage reaches the
20 amortization period.

21 **V. DESCRIPTION OF REPORT**

22 **Q. Please outline the contents of your report.**

23 A. My report is presented in three parts. The Introduction section includes
24 statements related to the scope and basis of the depreciation study. The

1 section entitled "Methods Used in the Estimation of Depreciation" includes
2 descriptions of the estimation of survivor curves and net salvage and the
3 calculation of annual and accrued depreciation. Finally, the "Results of
4 Study" section presents a description of the results of my analysis,
5 summaries of the depreciation calculations, graphs and tables which relate
6 to the service life and net salvage studies, and the detailed depreciation
7 calculations.

8 Table 1 on pages III-4 through III-7 presents the estimated survivor
9 curve, the net salvage percent, the original cost at September 30, 2003, the
10 calculated annual depreciation accrual amount and rate and the calculated
11 accrued depreciation for each account or subaccount. Table 2 on pages III-
12 8 through III-10 presents the calculated accrued depreciation, the book
13 depreciation reserve, the unamortized balance of the previously determined
14 variance, and the variance calculated at September 30, 2003. Table 3 on
15 pages III-11 and III-12 sets forth the calculation of the total annual
16 depreciation expense incorporating the whole life annual depreciation
17 accrual and the variance amortization. The section beginning on page III-13
18 presents the results of the retirement rate analyses prepared as the
19 historical bases for the service life estimates. The section beginning on
20 page III-134 presents the results of the analyses of historical net salvage
21 data. The section beginning on page III-192 presents the depreciation
22 calculations related to surviving original cost at September 30, 2003.

23 **Q. Please use an example to illustrate the manner in which the study is**
24 **presented in the report.**

25 A. I will use Account 380.2, Services – Plastic & Copper, as my example,
26 inasmuch as it is a large depreciable group and is representative of the
27 presentation.

The retirement rate method was used to analyze the survivor characteristics of this group. The life tables for the 1964-2003, 1984-2003 and 1998-2003 experience bands are presented on pages III-98 through III-103 of the report. The life tables, or original survivor curves, are plotted along with the estimated smooth survivor curve, the 40-R2.5 on page III-97. The net salvage analysis for the period 1972 through 2003 is presented on pages III-172 and III-173.

The calculation of the annual and accrued depreciation related to the original cost at September 30, 2003 for this account is presented on pages III-234 and III-235. The calculation is based on the 40-R2.5 survivor curve, negative sixty-five percent net salvage and the attained age. The tabulation sets forth the installation year, the original cost, the average life, the annual accrual rate and amount, the expectancy and the calculated accrued depreciation factor and amount. The totals are brought forward to the table on page III-5.

VI. RECOMMENDATION

Q. What is your recommendation regarding annual depreciation accrual rates for the Company?

A. I recommend that the Company use and the Commission approve a composite annual depreciation accrual rate for each account or subaccount. My recommended depreciation accrual rates, based on the depreciation study, are set forth for each account in column 6 of Table 1 on pages III-4 through III-7 of Schedule JJS-1. I further recommend the amortization of the variance as shown in Column 3 of Table 3 on pages III-11 and III-12. In my opinion, these are reasonable and appropriate depreciation accrual

1 rates and amortization amounts for the Company and should be approved
2 by the Commission.

3 **Q. Are your recommended depreciation accrual rates reasonable for plant**
4 **added subsequent to September 30, 2003?**

5 A. Yes. The annual depreciation accrual rates calculated as of September 30,
6 2003, can reasonably be applied to the total balance including new plant
7 additions during the next several years.

8 **Q. Does this conclude your direct testimony?**

9 A. Yes, it does.

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1 I assisted in the preparation of depreciation studies for the following water
2 companies: Indiana-American Water Company, Consumers Pennsylvania Water
3 Company and The York Water Company; and depreciation and original cost studies
4 for Philadelphia Suburban Water Company and Pennsylvania-American Water
5 Company.

6 Since January 1996, I have conducted depreciation studies similar to those
7 previously listed including assignments for Hampton Water Works Company, Omaha
8 Public Power District, Enbridge Pipe Line Company, Inc., Columbia Gas of Virginia,
9 Inc., Virginia Natural Gas Company, National Fuel Gas Distribution Corporation - New
10 York and Pennsylvania Divisions, The City of Bethlehem - Bureau of Water, The City
11 of Coatesville Authority, The City of Lancaster - Bureau of Water, Peoples Energy
12 Corporation, The York Water Company, Public Service Company of Colorado, Reliant
13 Energy-HLP, Massachusetts-American Water Company, St. Louis County Water
14 Company, Missouri-American Water Company, Chugach Electric Association, Alliant
15 Energy, Nevada Power Company, Dominion Virginia Power, NUI-Virginia Gas
16 Companies, PSI Energy, NUI - Elizabethtown Gas Company, Cinergy Corporation –
17 CG&E, Cinergy Corporation – ULH&P, Columbia Gas of Kentucky, Idaho Power
18 Company, El Paso Electric Company, Centennial Pipeline Company, NSTAR –
19 Boston Edison Company, South Jersey Gas Company, Nevada Power, and B. C. Gas
20 Utility, Ltd.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Laclede Gas Company's)
Tariff to Revise Natural Gas Rate) Case No. GR-2005-
Schedules.)

A F F I D A V I T

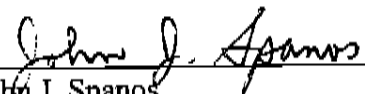
COMMONWEALTH OF PENNSYLVANIA)
) SS.
COUNTY OF CUMBERLAND)

John J. Spanos, of lawful age, being first duly sworn, deposes and states:

1. My name is John J. Spanos. My business address is 207 Senate Avenue, Camp Hill, Pennsylvania, 17011; and I am Vice-President of the Valuation and Rate Division of Gannett Fleming, Inc.

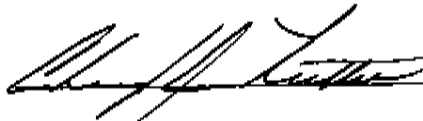
2. Attached hereto and made a part hereof for all purposes is my direct testimony on behalf of Laclede Gas Company.

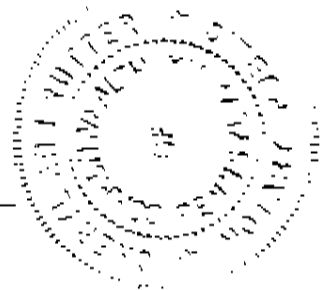
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.



John J. Spanos

Subscribed and sworn to before me this 16th day of February, 2005.





NOTARIAL SEAL
CHERYL ANN RUTTER, Notary Public
Camp Hill Boro, Cumberland County
My Commission Expires Feb. 20, 2007