	Bonds & Notes	Preferred Stock	Common Stock	Total
1936	$4,026,041,600	$270,840,364	$282,063,717	$4,578,945,681
1937	1,673,283,500	468,395,208	292,013,451	2,433,692,159
1938	2,042,783,895	78,560,510	17,837,784	2,139,182,189
1939	1,870,622,000	161,058,178	67,692,867	2,099,373,045

Security sales for new capital during 1939 were 17.4% of the total as against 40.8% in 1938 and the balance was for refunding purposes. During 1939 there were 128 issues involving $717,836,500 placed privately with institutional investors. The larger public utility issues sold during 1938 and 1939 appear on Schedule A.

D. A Fair Rate Of Return For The Hope Natural Gas Company Is Not Less Than 8%

Considering all the factors, the principal of which have previously been stated, it is my opinion that investors would not at the present time provide the capital for the natural gas business of the Hope Natural Gas Company unless it was allowed and was earning at least 8% upon whatever is determined to be the fair value of its natural gas properties.

I have tested this opinion by considering various possible capital structures that might be set up for the Company and the earnings that would be necessary to service the securities of such capital structures with a reasonable provision for surplus. They are as follows:

1. Refinancing on the basis of 100% common stock issue

The Hope Natural Gas Company is primarily a producer, purchaser from producers and exporter of natural gas. All the companies to which it sells have other sources

from which a part of their supplies are procured. Its business is therefore more speculative than that of any of the distributing companies to which it sells. Investors would

consider it to be in much the same category as a mining industrial enterprise for which the appropriate financial structure is all common stock.

The company bearing the closest similarity to the Hope Natural Gas Company is the National Fuel Gas Company which operates in the same general part of the country and has generally corresponding risks and uncertainties (See Schedule B). National Fuel Gas Company has but one class of securities, namely no par common stock. This is also true of Interstate Natural Gas Company (Schedule C). The organizers of the Hope Natural Gas Company recognized this as the appropriate financial structure for Hope which has only common stock outstanding.

The advantages of having a capital structure of all common stock for a mining enterprise is that the Company is relieved of fixed obligations. In bad years it will have no defaults and its directors are less likely to pass or reduce dividends in such a period. Directors of such a company with no fixed obligations may safely pay up to 80% of its earnings each year in dividends, carrying the remainder to surplus.

If Hope Natural Gas Company were refinanced on the basis of 100% common stock this could not be sold to the public on the basis of a yield of less than 6½%. An underwriting syndicate to distribute this common stock to the public would be necessary. Assuming the stock to be sold

to the public at par, the underwriting syndicate would purchase such an issue at a price not greater than 96, or 4 points less than the selling price to the public.

Assuming such a refinancing the resulting capital structure, the net cost of this issue to the Company and the return which the Company would have to earn on each $100 of value for which the common shares were issued would therefore be as follows:

Dividend 6.50% plus 4 points	6.770%
Surplus	1.692
	8.462%

On this basis the Company would have to earn $8.46 per year on each $100 fair value of its property in order to maintain a 6½% dividend and make a reasonable provision for surplus. Unless earnings permitted such a provision to be made for surplus the common stock could not be sold on a 6½% basis. Paying this dividend it would be required to distribute 80% of its net earnings.

For yields expected by investors in common stocks of natural gas companies see Schedules B, C, D, E and G.

2. Refinancing on a basis of 40% preferred and 60% common stock

It is possible that a part of the capital requirements of the Hope Natural Gas Company could be raised by an issue of preferred stock under conditions now prevailing. If so, such a preferred stock issue could not be sold to advantage if it represented more than 40% of the total capital requirements. It might be possible at the present time to attract the public to such an issue of preferred stock, at par, yielding the investor 5½%. The balance of the capital requirements, or 60%, would be raised by the sale of common stock. In view, however, of the fact that

this common stock would be junior to 40% of preferred stock it would be necessary to sell the common stock at a yield to the investor of not less than 7%. Assuming these securities to be sold to the public at par the underwriting syndicate necessary for their distribution would purchase at prices of not more than 97 for the preferred stock and not more than 96 for the common stock.

The resulting capital structure, the net cost of these issues to the Company and the return which the Company

would have to earn on each $100 of value would therefore be as follows:

	Per cent of capital	Net dividend cost to the Company	Per cent of earnings on each $100 fair value required to service the securities
5½% Preferred stock	40%	5.670%	2.268%
7% Common Stock	60	7.291	4.374
Surplus			1.458
Total return required			8.100%

It will be observed that this capital structure requires the Company to earn $8.10 annually on each $100 fair value of its property. Such earnings would provide a coverage for the preferred stock dividend of about 3½ to 1, which coverage would certainly be necessary to enable the underwriters to sell a 5½% preferred stock at par. The common stock dividend would be earned 1⅓ times and this coverage is necessary to enable the 7% common stock to be sold at par. The provision for surplus is as low as can reasonably be made in view of the necessity for allowing for fluctuations in earnings due to business conditions or to rising costs, wages, materials, etc. Such provision also conforms to the sound business principle that ¾ of the net

earnings available for common stock dividends is the maximum that should be paid out on such a stock where it is junior to a preferred stock.

For yields expected by investors in preferred stocks of natural gas companies see Schedules E, F and G.

3. Refinancing on basis of 30% bonds and 70% common stock

Both the capital structures heretofore considered are sounder from a business point of view than one involving the issuance of bonds. With only common stock, there is no danger that failure to earn bond interest during periods of adversity will result in foreclosure or receivership and

substantial impairment or loss of the equity in the property. With a senior security consisting of preferred stock the situation is not as ideal, since accruing unpaid preferred dividends create rights which may affect the company's finances and ability to secure additional capital for many years. Nevertheless, the preferred dividends can be omitted during adverse times without endangering the enterprise as a whole. For these and other reasons, financing in part through a bond issue is not a desirable procedure, particularly for a company such as the one under consideration.

Nevertheless it is probable that at the present time some part of the capital requirements of this Company could be raised through the sale of bonds. As a final test I have therefore assumed a capital structure which includes bonds. If these bonds are to be sold to yield a low return to the investor they must, of course, be well secured and the interest on them must be earned many times over. In my

opinion on property of this nature 30% of bonds is as large a part of the capital as can be raised by their sale, the balance, or 70%, to be raised from the sale of common stock.

In my opinion an issue of 15-year first mortgage bonds of the Hope Natural Gas Company, secured by all its natural gas property, would rate not higher than Baa, Moody's Rating. At best it would be a medium grade bond. In view of all the factors previously outlined these bonds would bear a coupon rate of not less than 4%. The remainder of the capital would be raised through the sale of 7% common stock. Assuming the price of these securities to the public to be par, the underwriting syndicate would purchase the bonds at a price of not more than 98, which would give it a 2 point spread or $20 per $1,000 on the bonds, and the common stock at a price of not more than 96, which allows a 4 point spread.

The resulting capital structure, the net cost of these issues to the Company and the return which the Company would have to earn on each $100 of value of its property would therefore be as follows:

	Per cent of Capital	Net interest and dividend cost to the Company	Per cent of earnings on each $100 fair value required to service the securities
4% Mortgage bonds	30%	4.181%	1.254%
7% Common stock	70	7.291	5.103
Surplus			1.701
Total return required			8.058%

Even by running the risks of fixed charges and procuring the lower cost money represented by 4% bonds it will be seen that in order to refinance its property the Company would need to earn a little more than $8 on each $100 of fair value. The interest on the bonds would be earned more than 6 times which is necessary to make them marketable at the prices fixed. The dividends on the common stock would be earned 1⅓ times which is necessary to its sale. Here again the Company would be paying out either in interest or dividends almost 80% of its net earnings, which is slightly more than a company with outstanding bonds should distribute.

For return expected by investors in the bonds of natural gas companies see Schedules E, F, G, H, I and J.

E. Summary

Having tested the rate of return by three possible capital structures we find that these vary from 8.46% return to 8.06% return. All of them indicate a return of above 8% as necessary to this enterprise. It is my opinion that securities to refinance these natural gas properties could not be sold if the return were less than 8% and that the fair rate of return for the natural gas properties of the Hope Natural Gas Company at the present time is not less than 8%.

SIGNED at Cleveland, Ohio, this April 29, 1940.

PERCY W. BROWN

BOSTON
NEW YORK
CHICAGO
CLEVELAND

HORNBLOWER & WEEKS

ESTABLISHED 1888

Members of the New York, Boston, Chicago, Cleveland, Philadelphia and Detroit Stock Exchanges and the New York Curb Exchange

DETROIT
PROVIDENCE
PHILADELPHIA
PORTLAND, ME.
BANGOR, ME.

BONDS ISSUED IN 1938 AND 1939

JANUARY 8, 1940

Offered	Ratings Moody	Ratings Standard	Millions	Issue	Original Offering Price	Approx. Market Jan. 8, 1940	Yield to Maturity
Feb 2, 38	A	A	57	Appalachian Elec. Power 1st, 4, 1963	98¾	x111½	3.30%
Feb 2, 38	Baa	B1 +	10	Appalachian Elec. Power Deb. 4½, 1948	100½	x107¼	3.55
Nov 3, 38	A	A	25	Argentine Republic 4½, 1948	95½	* 94¼	5.31
Sep 15, 38	A	A1	25	Atlantic Refining Deb. 3, 1953	99	*106	2.47
Jun 27, 39	A	A	25	Bethlehem Steel Mtge. 3¼, 1959	99	*100½	3.22
Nov 27, 38	Aa	A1 +	40	Canada (Dominion of) 3, 1968	97¼	* 88½	3.65
Oct 24, 38	B	B	2.5	Carrier Corp. Conv. Deb. 4½, 1948	100	89½	6.01
Jun 20, 39	Baa	B1 +	14.7	Central Illinois Elec. & Gas 3¾, 1964	100½	100	3.75
Dec 8, 38	A	A	38	Central Illinois P. S. 1st 3¾, 1968	100½	103¾	3.54
Dec 8, 38	Ba	B1	10	Central Illinois P. S. Deb. 3½-4, 1939/48	Var.	101a	3.86a
Aug 17, 39	Baa	B1 +	25	Central Power & Light 3¾, 1969	101	101¾	3.65
Aug 17, 39	Ba	B1	7	Central Power & Light 1½-3, 1940/6	Var.	99a	3.15a
Mar 28, 38	Ba	B1 +	5.5	Champion Paper & Fibre 4¾, 1950	99½	*102½	4.46
Dec 12, 38	Aa	A1	30	Chesapeake & Ohio Ry. 3½, 1963	101½	*106	3.14
Jun 1, 38	A	A	42	Commonwealth Edison, Cv, 3½, 1958	100s	*127¼	1.80
Jun 1, 38	Aa	A1	33	Commonwealth Edison 1st 3½, 1968	102¼	*110	2.97
Aug 25, 38	Aa	A1	33	Commonwealth Edison 1st 3½, 1968	103½	*110	2.97
Sep 2, 38	A	A	39	Commonwealth Edison, Cv, 3½, 1958	100s	*127¼	1.80
Mar 10, 39	Baa	A	6.6	Community Public Service 1st 4, 1964	100	104¾	3.71
Jan 13, 38	Aa	A1	30	Consolidated Edison, N. Y. 3½, 1958	101¾	*108½	2.92
Apr 21, 38	Aa	A1	60	Consolidated Edison, N. Y. 3½, 1948	101¾	*107	2.63
Jun 8, 39	Aaa	A1 +	7	Consolidated Gas Baltimore 3, 1969	105	x108	2.62
Dec 23, 38	Aa	A1	10.1	Consumers Power Co. 1st 3¼, 1966	104½	*106½	2.90
Jan 19, 38	Aa	A1	9	Consumers Power Co. 1st 3½, 1967	102	*108¾	3.03
Dec 2, 38	Baa	A1	21	Continental Oil Co. Cv, 2¾, 1948	100s	*108¾	1.70
Jul 7, 38	Ba	B1 +	10	Crown Cork & Seal, Deb. 4½, 1948	99	*103	4.10
Aug 24, 38	Baa	B1 +	10	Crucible Steel Co. Deb. 4½, 1948	99¼	*103½	4.03
Mar 30, 38	Aa	A1	28	Duluth, Missabe & I. R. Ry. 3½, 1962	98	*106¾	3.08
Sep 18, 39	B	B1	1.6	Durez Plastics & Chemicals 4½, 1949	100	106¼	3.75
Oct 26, 38	A	A	50	Firestone Tire & Rubber 3½, 1948	99½	*106	2.73
Apr 24, 39	Baa	A	52.5	Gatineau Power 1st A, 3¾, 1969	98¼	89	4.41
Jun 28, 39	A	A	27.3	Gulf States Utilities 1st 3½, 1969	106¾	*108½	3.07
Jun 6, 39	Ba	B1	10	Houston Oil Co. Deb. 4¼, 1954	100	* 98	4.42
Aug 5, 38	A	A	32	Indianapolis Power & Lt. 3¾, 1968	100	x109¼	3.25
Jul 20, 38	Ba	B1 +	7.5	Industrial Rayon Corp. 1st 4½, 1948	99	*102½	4.16
Dec 5, 39	Ba	B	5.9	Inspiration Cons. Copper Cv. 4, 1952	100s	100	4.00
Aug 8, 39	Baa	B1 +	14.2	Iowa Public Service 3¾, 1969	101	101½	3.67
Jul 14, 39	Baa	B1 +	5	Kansas Power Co. 1st 4, 1964	101½	101¾	3.88
Jul 26, 39	Aa	A1	26.5	Kansas Power & Light 3½, 1969	108½	111¼	2.93
Aug 25, 38	A	A1	20	Lone Star Gas Deb. 3½, 1953	102	*108¼	2.77
Dec 29, 39	A	A	30	Louisville & Nashville Coll. 3½, 1950	101	101½	3.33
Dec 29, 39	A	A	30	Louisville & Nashville Coll. 4, 1960	100½	102¾	3.81
Oct 6, 38	A	A	34	Michigan Cons. Gas 1st 4, 1963	97½	*101¾	3.89
May 23, 39	Baa	B1 +	9	Montana Dakota Utilities 4½, 1954	101	107¼	3.86
Jun 9, 38	Aa	A1 +	30	Mountain States Tel. & Tel. 3¼, 1968	102	*108¼	2.83
Mar 21, 39	Baa	B1 +	22.5	National Distillers Cv, Deb. 3½, 1949	100½	*104¼	3.00
Apr 25, 39	A	A1	50	National Steel 1st Coll. 3, 1965	99	*102¾	2.85
Jun 28, 39	A	A	13	N. Y. State Elec. & Gas 3¾, 1964	102	105¾	3.41
Aug 12, 38	Aa	A1	27.9	N. Y. Steam Corp. 1st 3½, 1963	100	*105¼	3.18
Feb 1, 39	A	A	20	North American Co. Deb. 3½, 1949	101¾	*106	2.80
Feb 1, 39	A	A	25	North American Co. Deb. 3¾, 1954	101	*106	3.23
Feb 1, 39	A	A	25	North American Co. Deb. 4, 1959	101¼	*107¾	3.47
Dec 14, 39	Baa	B1 +	45	Northern Ind. Pub. Svc. 1st 3¾, 1969	100	100	3.75
Mar 22, 38	Aa	A1	17.5	Northern States Pwr. (Wis.) 1st 3½, 1964	106	111	2.88
Oct 20, 38	Aa	A1	55	Ohio Power Co. 1st 3¼, 1968	101½	x108	2.84
Aug 17, 39	Baa	B1 +	17	Oklahoma Nat. Gas 3¾, 1955	103½	x107½	3.15
Aug 9, 39	A	A	95	Penn. Power & Lt. 1st 3½, 1969	105½	*108¾	3.05
Aug 9, 39	Baa	B1 +	28.5	Penn. Power & Lt. Deb. 4½, 1974	104	*108¾	4.03
Dec 20, 39	A	A1	10.9	Penn. Water & Power Coll. 3¼, 1964	104	105½	2.94
Aug 19, 38	Aa	A1	25	Phillips Petroleum Cv. 3, 1948	100s	*111	1.73
Nov 27, 39	A	A	40	Public Service Colorado 1st 3½, 1964	102	104½	3.22
Nov 27, 39	Baa	B1 +	12.5	Public Service Colorado Deb. 4, 1949	102	106¼	3.26
Oct 19, 38	Aa	A1	80	Public Service Co. No. Ill., 3½, 1968	103	*109	3.02
Aug 11, 38	Aaa	A1 +	10	Public Service Elec. & Gas 3¼, 1968	104¾	*111¼	2.69
Dec 7, 39	Baa	B1 +	38	Public Svc. Indiana 1st 4, 1969	102	102	3.89
Dec 7, 39	Ba	B1	10	Public Svc. Indiana Deb. 3⅞, 1940/49	97½a	97½a	4.20a
Dec 22, 38	Aaa	A1 +	16	Railway Express Agency 3/8-2½, 1948	100	104½	1.95a
Jun 21, 39	Aa	A1	8.3	Rochester Gas & Elec. 3¼, 1969	105½	*107½	2.88
May 26, 38	A	A	16.5	San Antonio Pub. Svc., 4, 1963	99	*107¾	3.52
Jul 19, 39	Aa	A1	85	Shell Union Oil Corp. 2½, 1954	97¾	* 95¾	2.85
Jun 28, 39	Aaa	A1 +	50	Socony Vacuum Oil 3, 1964	104	*105¼	2.73
Jul 20, 39	Aa	A1 +	25	Southern Bell Tel. & Tel. 3, 1979	107½	*105	2.78
Jul 14, 38	Aaa	A1 +	30	Southwestern Bell Tel., 3, 1968	100	*107¾	2.62
Dec 21, 39	Baa	A	6.7	Southwestern Lt. & Pw. 1st 3¾, 1969	102	103½	3.56
Jul 7, 38	Aaa	A1 +	50	Standard Oil Co., N. J., 2¾, 1953	99	*105	2.32
Jul 7, 38	Aaa	A1 +	35	Std. Oil Co., N. J., 1¾-2½, 1943/47	100	103a	2.08a
Aug 16, 39	A	A	7	Term. R. R. St. Louis 3⅝, 1974	102 6	98¾	3.43
Apr 12, 39	Aaa	A1 +	40	Texas Corp. Deb. 3, 1959	101	*105¼	2.67
Aug 10, 38	Aa	A1	30	Toledo Edison Co. 1st 3½, 1968	101½	108¼	3.07
Aug 10, 38	Baa	B1 +	6.5	Toledo Edison Co. Deb. 4, 1948	100¾	104½	3.41
Aug 15, 39	A	A1	30	Union Oil California 3, 1959	103	*102¼	2.85
Jun 2, 38	A	A1	100	U. S. Steel Corp. Deb. 3¼, 1948	100	*106	2.50
Oct 5, 38	Aa	A1	37.5	Virginia Elec. & Power 3½, 1968	103½	*110	2.97
Jun 28, 39	A	A1	22	Washington Water Power 3½, 1964	105	108	3.03
Jun 6, 39	A	B1 +	18	West Texas Utilities 1st 3¾, 1969	101¾	104	3.52
Dec 5, 39	A	A	8	West Va. Pulp & Paper 1st 3, 1954	99	99½	3.04
Oct 25, 38	Aa	A1	55	Wisconsin Electric Power 3½, 1968	103½	*109	3.02
Sep 8, 38	Baa	B1 +	30	Youngstown Sheet & Tube Cv, 4, 1948	100	*109¼	2.82

* Traded N. Y. Stock Exchange. x Traded N. Y. Curb. s Offered to Stockholders. a Longest Maturity.

We have participated in the distribution of most of these issues and will furnish on request more detailed information and prospectus on any of them which you may be interested in buying or selling. This list is not to be construed as an offering which is made by the Prospectus only.

CURRENT AVERAGE BOND YIELDS

The following are the ratings of three well known Investors' Services and their description of them. These ratings are intended to indicate the relative investment quality in bonds. The average yields shown are derived from recent prices of over one hundred representative issues.

Standard		Fitch		Utility	Industrial	Railroad	Average	Moody §
A1 +	Highest Grade	AAA	Maximum Safety	2.74%	2.51%	3.37%	2.87%	Aaa
A1	High Grade	AA	Very High Grade	2.91	2.80	3.54	3.08	Aa
A	Sound	A	High Grade	3.44	3.51	4.42	3.79	A
B1 +	Good	BBB	Good Grade	4.38	4.21	5.81	4.80	Baa

§—Explanation of Moody's Ratings will be forwarded on request.

The statistics in this circular are obtained from sources which we believe to be accurate. We do not own or offer any of these securities.

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Schedule B

NATIONAL FUEL GAS COMPANY

A holding company controlling natural gas producing, transmission and distribution properties in a well-developed area in Pennsylvania, New York, eastern Ohio and Ontario, including Buffalo and Jamestown, N. Y. Industrial sales are less than 15% of total, and about 40% of combined manufactured and natural gas requirements is purchased. Rockefeller Foundation owns 22% of common and other large holdings are identified with Rockefeller interests.

Capital Stock: 3,810,183 shares (no par).

Income statistics (Million $)

	Gross Revenue	Net Revenue	Earnings Per Share
1934	15.80	4.78	1.26
1935	15.75	3.81	1.00
1936	14.71	4.54	1.19
1937	13.86	3.66	0.96
1938	13.19	3.21	0.83
1939	13.65	3.63	0.95

Has been paying $1 dividends on common which rate while not fully earned in 1937, 1938 and 1939, the management has indicated a willingness to continue for a considerable period of time. The Company has a very strong cash position with net working capital on Dec. 31, 1939 of $11,229,000 including cash items of $10,280,000. The average price for the stock during the past two years has been 12 to 13 at which figure the yield is approximately 8%.

On February 15, 1940 an investment banking firm announced the sale of a block of 15,670 common shares at $12.50 per share to yield 8%.

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Schedule C

INTERSTATE NATURAL GAS CO., INC.

Produces and sells at wholesale. Owns 54,000 acres in the Monroe (Louisiana) field and 170 miles of 22-inch main pipe line together with compressor stations and field lines. The pipe line extends to Baton Rouge. Standard Oil owns 53.97% of the stock. Other stock interests include Rockefeller Foundation and Columbian Carbon Co.

Capital Stock: 952,953 shares (no par).

Income Statistics (Million $)

	Gross Revenue	Net	Earnings Per Share	Dividend Per Share
1936	5.2	1.7	1.82	1.75
1937	5.8	2.3	2.50	2.60
1938	5.5	2.0	2.13	1.75
1939	—	—	—	2.00

	Price Range	Average Price	Dividend Yield
1936	33—20½	26¾	6.54%
1937	33½—17	25¼	10.29%
1938	25—17½	21¼	8.23%
1939	27—22	24½	8.16%

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Schedule D

LONE STAR GAS CORP.

Through subsidiaries, this company produces, purchases, transmits and distributes natural gas chiefly in Texas with extensions in Oklahoma. A subsidiary also operates in Council Bluffs, Iowa, and the company has a 30% interest in a pipe line to Minneapolis. Natural gas reserves are substantial.

Debt and Capital Issues

3½% Convertible Debentures	$20,000,000
Bank loans	8,750,000
Common (no par)	5,529,747 shares

Income Statistics (Million $)

	Gross Revenue	Net	Earnings Per Share
1934	16.3	4.1	$0.59
1935	17.6	5.1	0.77
1936	20.1	6.2	0.97
1937	21.0	6.8	1.14
1938	19.5	5.3	0.88

	Common Price Range	Average Price	Dividend	Dividend Yield
1934	8⅜ — 4¼	6.31	*	
1935	10⅞ — 4½	7.69	$0.30	3.89%
1936	14¼ — 9⅞	12.06	0.60	4.98%
1937	14¼ — 5¼	9.75	0.60	6.15%
1938	10⅜ — 6⅝	8.50	0.60	7.05%
1939	10½ — 7⅛	8.81	0.70	7.95%

* In convertible preferred stock.

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Schedule E

OKLAHOMA NATURAL GAS CO.

Primarily a distributing company purchasing most of its gas under long-term contracts and serving eastern Oklahoma, including Tulsa and Oklahoma City. The load is chiefly (77%) residential and commercial.

Debt and Capital Issues

First 3¾—1955	$17,000,000
Bank loans	8,000,000
$5.50 Cumulative Convertible Preferred	5,800,000
$3 Cumulative Preferred ($50 par)	4,552,500
Common ($15 par)	549,986 shares

Income Statistics (Million $)

	Gross Revenue	Net for Dividends	$5.50 Pref.*	$3 Cum. Pref.*	Common*
1934	6.58	0.3	—	3.41	0.07
1935	6.92	0.6	—	6.36	0.58
1936	7.57	0.9	#41.89	8.78	0.95
1937	8.13	1.6	#71.10	15.91	2.13
1938	7.96	1.4	#64.26	14.23	1.86
1939	8.29	1.6	27.94	14.30	1.87

* per share.

based on 6% Prior Preferred which was redeemed October, 1939. No common dividends until 1939—now paying $1.

$16,814,000 4½'s-1951 were sold in June 1936 at 98½ and were refunded in 1939 by the first 3¾'s-1955.

The 5½% convertible preferred was sold in October, 1936 at 100.

In 1939 the net earnings available for interest charges on the 3¾'s-1955 were over 5 times requirements.

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Price Ranges

		1939	1938
4½	Bonds 1951	106¼-104¾	106 -96
3¾	Bonds 1955	107⅞-103⅝	—
5½%	Conv. Preferred	113 -106	105¾-89
$3	Preferred	49 - 35	41½-21½
—	Common	19⅞- 8⅞	14¼- 6¾

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Schedule F

COLUMBIA GAS & ELECTRIC CORP.

A leading natural gas system serving through subsidiaries industrial areas chiefly in Ohio and Western Pennsylvania. Electric subsidiaries, located principally in Ohio, bring in about 30% of gross revenues.

Debt and Capital Issues

Subsidiary	$ 77,559,000
Parent Co.	104,450,900
Subsidiary Stocks	50,179,928
$6 Cumulative Preferred	94,066,400
$5 Cumulative Preferred	3,869,500
$5 Cumulative Preference	12,166,800
Common (No Par)	12,223,256 shares

Income Statistics (Million $)

	Gross Revenue	Net for Dividends	Combined Pfd.*	$5 Pref.*	Common*
1934	77.4	9.8	9.98	17.76	0.25
1935	81.2	11.9	12.20	27.45	0.43
1936	90.9	13.2	13.50	33.52	0.53
1937	98.6	13.6	13.86	63.48	0.57
1938	93.0	10.2	10.45	36.00	0.31

* per share.

The company derives about two-thirds of its revenue from natural gas. The 41 principal subsidiaries are nearly all 100% owned through common stock ownership. Being chiefly a holding company, Columbia's securities have a lower investment rating although well protected by assets and earnings.

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Price Range

	1939	1938
Debenture 5s May 1952	104¼-92½	99 -86
Debenture 5s April 1952	104¼-92¾	98 -86
Debenture 5s 1961	104¼-92¾	96¼-85
Preferred (6%)	91 -74½	83 -57
Preferred (5%)	83 -62½	70 -50
Preference (5%)	74¾-55½	70 -47¼
Common	9 - 5¼	9⅞-5⅛

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Schedule G

EL PASO NATURAL GAS CO.

A wholesale pipe line company which purchases its supply from the Lea County Field in New Mexico. Latter has estimated reserves sufficient for 40 years. Pipe lines to El Paso, Tucson and Phoenix sell gas chiefly to public utilities (46%) and copper companies (42%) under long-term contracts.

Debt and Capital Issues

Funded debt	$6,000,000
Notes 1940-45	3,750,000
$7 Cumulative Preferred (Par $100)	14,797 shares
Common (Par $3)	601,594 shares

Income Statistics (Million $)

	Gross Revenue	Net	Per Share Common
1934	2.03	0.33	0.91
1935	2.33	0.42	1.20
1936	3.23	1.07	1.76
1937	4.68	1.89	3.00
1938	4.92	2.08	3.30
1939	5.88	2.35	3.73

	Common Price Range	Average Price	Dividend	Dividend Yield
1936	29¼—22¾	26.00	0.40	(Initial div. Dec. 29, 1936)
1937	29 —14½	21.75	2.00	9.91
1938	29⅞—17	23.43	2.00	8.53
1939	42¾—28	35.37	2.00	5.65

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In September, 1936, a syndicate of investment bankers purchased from private investors and sold to the public 60,000 shares of common stock at $20 per share. The underwriters were allowed $1 per share or 5%. The capital structure at that time consisted of $11,038,000 bonds, $1,479,700 7% cumulative preferred stock and 408,558 shares of common stock, which at $20 per share made an aggregate of

$6,171,180 common stock. The first mortgage 4½% bonds due 1951 were quoted at 101½ (yielding about 4.36%). The 7% preferred stock was then quoted at 106 (yielding about 6.60%). The company was showing a sharply rising trend in gross operating revenue and net income. In January, 1939, the bonds were retired and a new issue of $6,000,000 first mortgage 15-year 3½'s due December 1, 1953 were sold privately to six institutional investors at 98½ to yield about 3.63%. The preferred stock is unlisted but during 1939 broker's bids ranged from 105½ to 111¼. At the year end 109½ was bid at which figure the yield was 6.39%.

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Schedule H

NORTHERN NATURAL GAS CO.

Purchases, produces, transmits and distributes natural gas principally at wholesale in Iowa, Kansas, Nebraska, South Dakota and Minnesota. Cities supplied at wholesale include Omaha and Lincoln, Nebraska, Council Bluffs, Des Moines and Sioux City, Iowa, and Minneapolis and Rochester, Minnesota. Supply comes from Texas Panhandle and Kansas. Purchases most of its requirements. Stock is all owned by Lone Star Gas Corp., North American Light & Power Co. and United Light & Railways Co.

In August, 1939 an issue of $16,000,000 1st mortgage and 1st lien 3¼'s-1954 was sold privately at par.

	Gross	Net for Interest
1935	$7,952,000	$2,810,000
1936	9,037,000	3,019,000
1937	9,775,000	3,660,000
1938	9,959,000	3,521,000

Interest charges on the new bonds, $520,000.

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Schedule I

SOUTHERN NATURAL GAS CO.

Purchases gas from producers mostly in Louisiana. Reorganized in October 1935 under terms of Section 77B of Bankruptcy Act.

Debt and Capital Issues

Funded debt	$19,326,523
Bank loans	1,475,000
Common (Par 7½)	691,970 shares

Income Statistics (Million $)

	Gross Revenue	Net for Interest	Net for Dividends
1937	7.0	2.6	1.39
1938	6.8	2.2	1.03

The $12,939,000 first 4½'s-1951 were sold at par in November, 1936.

Bond Price Range

1939	1938	1937
106⅜—100¾	102—91	101½—94½

About 48% of the common is owned by Federal Water Service Corp. No dividend until June 30, 1939.

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Schedule J

NORTH PENN GAS CO.

Distributes gas in Pennsylvania and New York and through subsidiaries produces gas.

Debt and Capital Issues

Funded Debt	$3,450,000
$7 Prior Preferred	631,200
$7 Preferred	1,316,000
Common	100,000 shares

Income Statistics (Million $)

	Gross Revenue	Net for Interest
1935	2.3	0.55
1936	2.5	0.57
1937	2.6	0.54
1938	2.5	0.44

Common and preferred all owned by Penna. Gas & Electric.

The 5½% bonds due 1957 are callable at 105 to May 1, 1937 and ¼% less each November 1 thereafter.

Bond Price Range

1939	1938	1937	1936	1935
107¼—102½	106—102	106½—102½	106½—101	105½—100

17. COMPANY WITNESS COFFMAN'S EXHIBIT NO. 27 ENTITLED: "Investors' Appraisal of Comparative Risks of Capital in the Natural Gas Business, 1937-1939—Written Statement of Paul B. Coffman"

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STATEMENT OF EXPERIENCE AND QUALIFICATIONS OF PAUL B. COFFMAN

1. Name, address and age

Paul B. Coffman, 345 Hudson Street, New York City; age 39.

2. Education

Graduate of Ohio State University in 1923, with degree of B. S. Graduate of Harvard University, Graduate School of Business Administration, 1926, with degree of M.B.A.

3. Present position

Vice-President of Standard Statistics Company, Inc., a corporation engaged, among other things, in gathering, collating, analyzing and disseminating, on both a printed and personal advisory basis, statistical and general information on all phases of business, industry and investments.

4. Experience and qualifications

1926-1927: Professor of Economics at the College of William and Mary, Williamsburg, Virginia.

1927-1936: Professor of Accounting and Business Policy at the Graduate School of Business Administration at Harvard University; consulting economist for a number of industrial corporations and financial advisory institutions; during 1931 and 1932 Executive Vice-President and General Manager of Poor's Publishing Company of New York City, a firm which is engaged in a business similar to that of Standard Statistics Company, Inc. and publishes Poor's Manuals.

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1935-1939: Departmental Manager of Standard Statistics Company, Inc., having charge of statistical and research investigation and valuations.

1939 to date: Vice-President of Standard Statistics Company, Inc., directly in charge of statistical and economic research and valuation for individuals, institutional and corporate clients.

Duties with Standard Statistics Company, Inc., have included the constant examination and analyses of many situations involving all kinds of securities and various corporations with a view to determining the hazards involved and the intrinsic worth of the securities based upon personal investigation and analysis, and the presentation of the findings to the many clients of Standard Statistics Company, Inc.

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WRITTEN STATEMENT OF PAUL B. COFFMAN

1. Purpose Of This Exhibit

In March of this year, Standard Statistics Company, Inc. was retained by the Hope Natural Gas Company to make a statistical study for the years 1937, 1938 and 1939 of the investors' appraisal of the risks of capital invested in the natural gas business as compared with the risks of capital invested in other utility industries. The analysis covered the following utility classifications, namely, (1) electric utility operating companies, (2) water companies, (3) manufactured and mixed gas companies and (4) natural gas companies.

This exhibit is a statement of the result of that investigation. The working papers on which it is based are available for inspection by all parties to the present proceedings.

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2. Method Of Procedure

A group of companies in each of the utility classifications was selected on bases which will be described below. Statement E at pages 26 to 33 of this exhibit contains a general description of the business of each of the companies and the territory in which it operates.

The general method of procedure as to each company and group of companies involved four steps, as follows:

(1) The indicated total market value of all of the securities of a single company was determined by taking the sum of the amounts produced by multiplying the number of each class of security (bonds, preferred and common stocks as the case may be) outstanding at the end of each year by the average of its high and low market quotations in that year.

Example:

Indicated Market Value of the Securities Outstanding of the Boston Edison Company for 1939

	Capital Outstanding Dec. 31, 1939	1939 Market Prices			Indicated Market Value
		High	Low	Average	
Capital Stock ($100 par)	617,164 shs.	160	127	143.50	$ 88,563,034
1st Mortgage Bonds Series A, 3½'s, '65	$53,000,000	112½	103½	108	57,240,000
				Total	$145,803,034

(2) Next there was determined for the individual company the total earnings available for distribution to these securities after taxes, depreciation and

all other miscellaneous charges as reported in the particular company's published annual report to stockholders.

Example:

The consolidated earnings of the Boston Edison Company for 1939 available for its capital after taxes, depreciation and all other miscellaneous charges, as shown in the published report to its stockholders for 1939, was $7,297,587.

(3) The earnings so determined under (2) were then divided by the indicated market value of all securities as determined under (1) and a rate for the year was thus obtained.

Example:

In the case of the Boston Edison Company for 1939, dividing the consolidated earnings available for capital, in the amount of $7,297,587, as shown above, by the indicated market value of all capital of $145,803,034, gives a percentage of 5.01 per cent, which, in my opinion, fairly indicates the investors' appraisal of the risks of capital employed in that enterprise for the year 1939.

(4) Having determined in the manner described above the investors' appraisal of the risks of capital employed in each company selected, the indicated market value of all the companies in each group, determined under (1) above, was added to obtain the indicated market value of the capital securities of the entire group. Similarly, the earnings available for distribution to the securities of each of the companies, as determined under (2) above, were added to obtain the total earnings available for distribution to securities of the entire group. The

latter figure was then divided by the former in order to obtain the investors' overall appraisal of the risk of all capital in the group. This was done for each of the years 1937, 1938 and 1939.

Example:

Determination of Investors' Appraisal of Risks of Capital for Electric Operating Utility Companies as a Group

	Indicated Market Value of Capital		
	1937	1938	1939
Boston Edison Company	$ 140,377,138	$ 132,313,981	$ 145,803,034
Commonwealth Edison Company	627,713,979	659,945,351	705,040,810
Consolidated Edison Co. of New York, Inc.	1,081,937,457	1,021,974,547	1,101,280,966
Consolidated Gas, Electric Light & Power Co. of Baltimore	185,161,844	173,973,927	192,758,869
Detroit Edison Company	296,761,357	276,549,713	303,425,025
Pacific Gas & Electric Company	638,039,237	634,253,084	673,724,413
Southern California Edison Company, Ltd.	343,044,455	325,193,494	332,597,011
Total	$3,313,035,467	$3,224,204,097	$3,454,630,128

	Earnings Available for Distribution to Capital		
	1937	1938	1939
Boston Edison Company	$ 7,505,886	$ 7,163,506	$ 7,297,587
Commonwealth Edison Company	39,294,881	39,006,579	41,254,094
Consolidated Edison Co. of New York, Inc.	52,797,146	53,893,205	55,643,286
Consolidated Gas, Electric Light & Power Co. of Baltimore	9,162,762	8,316,215	9,240,571
Detroit Edison Company	15,898,965	13,841,099	15,685,727
Pacific Gas & Electric Company	37,322,975	35,976,977	38,214,304
Southern California Edison Company, Ltd.	19,146,425	19,019,797	19,480,429
Total	$ 181,129,040	$ 177,217,378	$ 186,815,998
Investors' Appraisal of Risks of Capital	5.47%*	5.50%*	5.41%*

Note: (*) Obtained by dividing "Earnings Available for Distribution to Capital" by "Indicated Market Value of Capital."

3. Analysis of Data On Electric Utility Operating Companies

All utility operating companies upon which Standard Statistics Company, Inc. currently publishes data in Standard Earnings Bulletin were first listed. These were the

more important utility operating companies in which there was substantial investment interest. From this list there were excluded all companies whose operations were not predominantly in the electric field. The resulting list included the following companies:

Boston Edison Company
Commonwealth Edison Company
Consolidated Edison Co. of New York, Inc.
Consolidated Gas, Electric Light & Power Co. of Baltimore
Detroit Edison Company
Pacific Gas & Electric Company
Southern California Edison Company, Ltd.

For each of these companies and for the group of companies, for each of the years 1937, 1938 and 1939, the investors' appraisal of the risks of capital as a percentage was obtained by application of the method fully described in Section 2 above.

The actual results of these determinations to the group of electric utility operating companies are presented in the following table:

Determination of the Investors' Appraisal of the Risks of Capital for Electric Utility Operating Companies

	1937	1938	1939
Total Indicated Market Value of Capital	$3,313,035,467	$3,224,204,097	$3,454,630,128
Total Earnings Available for Indicated Capital	181,129,040	177,217,378	186,815,998
Investors' Appraisal of Risks of Capital	5.47%	5.50%	5.41%

In other words, this analysis indicated that investors appraised the risk of capital invested in electric operating utility companies as a group in 1937, 1938 and 1939, respectively, at 5.47 per cent, 5.50 per cent and 5.41 per cent, or an average for the three years of 5.46 per cent.

Supporting data on each of the companies mentioned and for each of the years studied, as well as total figures

for the group, are presented in Statement A at page 21 of this exhibit.

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4. Analysis of Data on Water Companies

A list of all operating companies engaged solely in the water business was first prepared from Standard Corporation Records. From this list companies were eliminated for the following reasons:

1. Companies whose common stocks were held by one of the larger holding companies, such as American Water Works & Electric Company, Inc., the Federal Water Service Corporation and the Community Water Service Company, and whose stocks had no obtainable market evaluation.
2. Companies whose stocks were closely held by relatively few individuals and had no available market evaluation.
3. Companies whose 1939 gross operating revenues were less than $500,000. This latter class was not deemed of sufficient importance to be included in the study.

The result of these eliminations in the over-all list was the following group of companies:

Bridgeport Hydraulic Company
Elizabethtown Water Co. Consolidated
Hackensack Water Company
Middlesex Water Company
New Haven Water Company
Plainfield-Union Water Company
Stamford Water Company

The method of determining the investors' appraisal of the risks of capital in this division of the utility industry was the same as that previously described in Section 2 above.

The actual results of these determinations for the group of water companies are presented in the following table:

Determination of Investors' Appraisal of Risks of Capital for Water Company Securities

	1937	1938	1939
Total Indicated Market Value of Capital	$79,947,987	$76,395,996	$79,414,304
Total Earnings Available for Indicated Capital	4,410,457	4,114,122	4,495,678
Investors' Appraisal of Risks of Capital	5.52%	5.39%	5.66%

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In other words, this analysis indicated that investors appraised the risk of capital invested in water companies as a group in 1937, 1938 and 1939, respectively, at 5.52 per cent, 5.39 per cent and 5.66 per cent, or an average for the three years of 5.52 per cent.

Supporting data on each of the companies mentioned and for each of the years studied, as well as total figures for the group are presented in Statement B at page 22.

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5. Analysis of Data on Manufactured and Mixed Gas Companies

A list was prepared of all operating companies distributing manufactured or mixed gas and listed in Standard Corporation Records. From this list companies were elimininated for the following reasons:

1. Companies which did not have stocks outstanding in the hands of the public and for which there was no market evaluation.
2. Companies whose gross revenue was predominantly obtained from services other than the distribution of manufactured and/or mixed gas.
3. Companies which were in receivership at the end of 1939. Figures of such companies would not be comparable or representative.
4. Companies with gross revenues in 1939 of less than $1,000,000, because these were too small to have any important bearing on the final results.

After giving effect to these eliminations, the following companies remained in the list:

Bridgeport Gas Light Company
Brooklyn Union Gas Company
Elizabethtown Consolidated Gas Company
Hartford Gas Company
Laclede Gas Light Company
Peoples Gas Light & Coke Company
Providence Gas Company
Seattle Gas Company
Springfield (Mass.) Gas Light Company
Washington Gas Light Company

The method of determining the investors' appraisal of the risks of capital in this division of the utility industry was that previously described in Section 2 above.

The actual results of these determinations for the group of manufactured and mixed gas companies are presented in the following table:

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Determination of the Investors' Appraisal of the Risks of Capital for Manufactured and Mixed Gas Companies

	1937	1938	1939
Total Indicated Market Value of Capital	$279,745,945	$245,431,786	$262,282,318
Total Earnings Available for Indicated Capital	17,266,576	16,235,071	17,342,623
Investors' Appraisal of Risks of Capital	6.17%	6.61%	6.61%

In other words, this analysis indicated that investors appraised the risk of capital invested in manufactured and mixed gas companies in 1937, 1938 and 1939, respectively, at 6.17 per cent, 6.61 per cent and 6.61 per cent, or an average for the three years of 6.46 per cent.

Supporting data on each of the companies mentioned and for each of the years studied, as well as total figures for the group, are presented in Statement C at page 23.

6. Analysis of Data on Natural Gas Companies

A list was prepared of all operating and holding companies engaged in any phase of the natural gas business. From this there were eliminated:

1. Companies which had no stocks outstanding in hands of the public and no obtainable market evaluation of their stocks.
2. Companies which were not exclusively engaged in the natural gas business.
3. Companies in receivership at the end of 1939.

After giving effect to these eliminations, the following companies remained:

Duquesne Natural Gas Company
El Paso Natural Gas Company
Houston Natural Gas Corporation
Interstate Natural Gas Company, Inc.
Lone Star Gas Corporation
Memphis Natural Gas Company
Mountain Fuel Supply Company
National Fuel Gas Company
Northern Oklahoma Gas Company
Northern Utilities Company
Oklahoma Natural Gas Company
Pacific Lighting Corporation
Southern Natural Gas Company

The procedure followed in determining the investors' appraisal of the risks of capital in this division of the utility industry was that previously described in Section 2 above.

The actual results of these determinations for the group of natural gas companies are presented in the following table:

Determination of the Investors' Appraisal of the Risks of Capital for Natural Gas Companies

	1937	1938	1939
Total Indicated Market Value of Capital	$461,156,640	$420,658,527	$446,994,750
Total Earnings Available for Indicated Capital	36,488,033	32,757,549	33,658,297
Investors' Appraisal of Risks of Capital	7.91%	7.79%	7.53%

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In other words, this analysis indicated that investors appraised the risk of capital invested in natural gas companies in 1937, 1938 and 1939, respectively, at 7.91 per cent, 7.79 per cent and 7.53 per cent, or an average for the three years of 7.74 per cent.

Included in the above group of natural gas companies is Pacific Lighting Corporation. This company, through subsidiaries, distributes natural gas to 272 cities and towns in Southern California, including Los Angeles. Its subsidiaries serve about half the population of the state. Market prices of the securities of these operating companies are not available. In the absence of these, this holding company was treated as a single operating company in the above group. As a result, its indicated market value is nearly 40 per cent of that of the entire group of natural gas companies.

This gives entirely too much weight in the above table to a purely distributing company. Pacific Lighting Corporation owns no gas producing facilities. It does not run any of the risks of a producing and transporting company as does the Hope Natural Gas Company. It purchases its gas from independent oil and gas producers operating in the immediate territory served by it, where the actual and potential reserves are the greatest in its history.

For these reasons, the risks of capital employed in this company more nearly approximate those of strictly distributing companies serving manufactured or mixed gas. Comparison of the investors' evaluation of the risks of this

company as compared with the risks in the manufactured and mixed gas companies set forth above is as follows:

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Comparison of Investors' Appraisal of Risks of Capital in Pacific Lighting Corporation as Compared with the Manufactured and Mixed Gas Companies Group

	1937	1938	1939	Three Year Average
Pacific Lighting Corporation	7.20%	7.35%	6.26%	6.94%
Manufactured and Mixed Gas Companies Group	6.17%	6.61%	6.61%	6.46%

As a test, in the following table all figures for the Pacific Lighting Corporation are eliminated, and with this elimination the figures for the 12 natural gas companies remaining in the group are as follows:

Determination of the Investors' Appraisal of the Risks of Capital for Natural Gas Companies (Excluding Pacific Lighting Corporation)

	1937	1938	1939
Total Indicated Market Value of Capital	$294,414,969	$263,667,801	$275,217,638
Total Earnings Available for Indicated Capital	24,488,305	21,213,539	22,902,944
Investors' Appraisal of Risks of Capital	8.32%	8.05%	8.32%

In other words, when figures for the Pacific Lighting Corporation are eliminated from the group of natural gas companies, investors appraised the risk of capital invested in the remaining natural gas companies in 1937, 1938 and 1939, respectively, at 8.32 per cent, 8.05 per cent, and 8.32 per cent, or an average for the three years of 8.23 per cent.

Any inference from the summary figures given above for all natural gas companies that the investors' appraisal of the risk is decreasing is caused solely by the Pacific Lighting Corporation figures, which dropped from 7.20 per cent and 7.35 per cent in the years 1937 and 1938, respec-

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tively, to 6.26 per cent in 1939. The above figures for the rest of the natural gas industry show no decline in the in-

vestors' appraisal of the risk which remained constantly above 8 per cent.

For the reasons set forth, it is concluded that the last table of figures presented above more nearly approximates the investors' appraisal of the risks of capital in the natural gas industry as a whole than does the preceding table which includes Pacific Lighting Corporation.

Supporting data on each of the natural gas companies mentioned and for each of the years studied, as well as total figures for the group, are presented in Statement D at page 24.

Although plausible reasons might be given for the elimination of several of the smaller companies included in the final table of natural gas companies, if this were done no substantial change in the results would be made. This is clearly indicated by Statement D-1 at page 25.

7. Summary of Analyses

The foregoing analyses indicate most clearly that the percentages representing the investors' appraisal of the risks of capital invested in the various divisions of the utility industry analyzed, increased as the risks of the particular utility division increased. In order that this may be seen clearly, the summary figures are presented as follows:

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Investors' Appraisal of Capital Risk in Various Divisions of the Utility Business

	1937	1938	1939	Three Year Average
Electric Utility Operating Companies	5.47%	5.50%	5.41%	5.46%
Water Companies	5.52	5.39	5.66	5.52
Manufactured and Mixed Gas Companies	6.17	6.61	6.61	6.46
All Natural Gas Companies	7.91	7.79	7.53	7.74
All Natural Gas Companies Excluding Pacific Lighting Corporation	8.32	8.05	8.32	8.23

The above table clearly shows that in 1937, 1938 and 1939, investors appraised the risk of manufactured and mixed gas companies as a group at approximately 1 per cent higher, and the risk of natural gas companies as a group at 2 per cent to 2½ per cent higher, than the risk of electric operating companies and water companies.

SIGNED at New York, New York, this May 22, 1940.

PAUL B. COFFMAN.

18. COMPANY WITNESS COFFMAN'S EXHIBIT NO. 27-A ENTITLED: "Investors' Appraisal of Comparative Risks of Capital in the Natural Gas Business, 1940 (Supplement to Exhibit No. 27)"

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WRITTEN STATEMENT OF PAUL B. COFFMAN

1. Purpose of this Exhibit

The purpose of this exhibit is to bring up-to-date, through the inclusion of data for 1940, a previous exhibit dated May 22, 1940, entitled "Investors' Appraisal of Comparative Risks of Capital in the Natural Gas Business, 1937-1939" which was prepared for the Hope Natural Gas Company.

2. Summary of Analyses

A summary of the findings covering the year 1940 and the average for the four years 1937-1940, both inclusive, as compared with data presented previously covering each of the years 1937, 1938 and 1939, and the three year average 1937-1939, both inclusive, is presented in the following table. The method of computing the data for 1940 was exactly the same as for previous years.

Investors' Appraisal of Capital Risk in Various Divisions of the Utility Business

	1937	1938	1939	Three Year Average 1937-1939	1940	Four Year Average 1937-1940
Electric Utility Operating Companies	5.47%	5.50%	5.41%	5.46%	5.43%	5.45%
Water Companies	5.52	5.39	5.66	5.52	5.23	5.45
Manufactured and Mixed Gas Companies	6.17	6.61	6.61	6.46	6.88	6.57
All Natural Gas Companies	7.91	7.79	7.53	7.74	7.97	7.80
All Natural Gas Companies excluding Pacific Lighting Corporation	8.32	8.05	8.32	8.23	9.34	8.51

The above table shows conclusively that, for 1940, investors continued to appraise the risk of natural gas companies as a group at a rate considerably higher than for the other divisions of the utility industry studied, namely, manufactured and mixed gas companies, water companies and electric utility operating companies.

On the basis of averages for the four years 1937-1940, both inclusive, the risk of natural gas companies, as demonstrated by the investors' appraisal of all outstanding capital obligations, averaged approximately 2 per cent higher than for manufactured and mixed gas companies, and approximately 3 per cent higher than for electric operating companies and water companies.

SIGNED at New York, New York this July 3, 1941.

PAUL B. COFFMAN.

19. TESTIMONY OF COMPANY WITNESS PERCY W. BROWN AS TO PRESENT AND HISTORICAL RATE OF RETURN, WEDNESDAY, JULY 9, 1941, RECORD PAGES 5200 TO 5229

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Mr. Cockley: Mr. Brown, will you take the stand?

Whereupon, PERCY W. BROWN, called as a witness on behalf of the Hope Natural Gas Company, having been previously sworn, was examined and testified as follows:

Trial Examiner: The stipulation with respect to the correction of the record for the last preceding series of sessions is approved by the Trial Examiner, and will be incorporated into the record of these proceedings.

(The stipulation of corrections will be found at the end of today's transcript.)

Trial Examiner: You may proceed with the examination of the witness.

DIRECT EXAMINATION by Mr. Cockley.

Q. Mr. Brown, you testified previously in this case as to the present day rate of return for the Hope Company, did you not? A. Yes, in June, 1940, in Clarksburg, West Virginia.

Q. And am I correct that your testimony at that time was directed to your opinion as to the fair rate of return to be applied to the present fair value of the property of the Hope Company? A. You are correct.

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Q. Now since you testified before, the Commission has introduced, through Mr. Knapp, a 3-volume exhibit which is marked Exhibit 82, 82-A and 82-B in this case. I should like to inquire whether, in view of the voluminous information contained in those volumes, you want in any re-

spect to modify or change the testimony that you gave in June of 1940? A. No, I do not. The statistical information in Mr. Knapp's exhibits with reference to bond prices, preferred stock prices and common stock prices, and ratios, is extremely interesting and bears out the figures which I have. As a matter of fact, all that information was available to me and was given due consideration. I think the exhibit is an extremely capable and far-reaching one, but at the same time I wouldn't want to be understood as agreeing to all the information in it as being necessary. Some of it is a little superfluous, such as Federal re-discount rates, prime commercial paper rates, and so forth.

Q. Now aside from this exhibit, Mr. Brown, have any other matters come to your attention between the time you testified before, that would either confirm or cause you to modify the opinion you expressed at that time as to the fair rate of return to the Hope Company for the present and the near future time? A. Yes, there has been one very significant event that has taken place this summer, the almost complete refinancing of a major natural gas enterprise, the Southern Natural Gas Company.

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Q. Will you tell us about that? A. The two prospectuses are dated June 6, 1941, one covering $13,000,000 first 3½ percent bonds due 1956, which were sold to the public at 103, and netted the company 101¼. $4,500,000—2½ percent serial notes, sold presumably to the banks at par, and 234,868 shares of common stock offered to stockholders at $12.50 a share, with no underwriting other than the commitment of the parent company, the Federal Water Service Corporation, which agreed to purchase any stock not subscribed for by the stockholders, thus netting the company $12.50 per share.

The stockholders of record June 13, 1941, were given the right to subscribe for new shares in the ratio of one-fifth of one share for each share held, and the warrants

will expire September 15, 1941. The notes were sold to four banks, presumably at par.

Thus, all classes of securities are being issued to the public at the present time, that is, June, 1941, and up to September 15, 1941.

The depreciated book value of the properties was estimated as of December 31, 1940, at $30,979,000, which makes the mortgage in effect about 41.9 per cent. The bonds carry a Moody rating of A, and the interest on these bonds is being earned over 7 times.

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Thus, $13,000,000 of bonds at 101¼ makes $13,162,500; $4,500,000 of notes at par makes $4,500,000; 1,409,212 shares of common stock, the full amount outstanding, at $12.50 per share, makes $17,615,150; or a grand total of $35,277,650.

The net income for the past 4¼ years, after taxes and depreciation, is as follows:

1937—$2,478,652.
1938—$2,329,074.
1939—$2,799,244.
1940—$3,071,786.

And for the 12 months ending March 31, 1941—$3,087,638.

Most of the money was used for refunding purposes, but there are some $7,000,000 of new money, namely, $4,800,000 from the sale of this block of stock going on at the present time, plus a block of stock which was put out last January and February in 1941, of 482,374 shares, and I have given no weight to the earning power of this new money, of approximately $7,000,000.

But taking the picture as it stands today, $35,277,000 cost of the money and $3,087,000 of earnings, gives an earnings price ratio of 8.75 percent.

I might say that the prices at which these securities were sold were approved by the Securities and Exchange Commission.

And I think that is a very significant piece of financial

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history, as it is the most complete refinancing of a natural gas property in my recollection.

Q. Well, would that cause you in any respect to change the opinion you expressed before as to the fair rate of return for the Hope Company? A. No, it would not.

Q. Mr. Brown, since you testified in the former case, I have asked you to make such investigation as was necessary in order to form an opinion as to the rate of return which the Hope Company could reasonably expect to receive in the past at the various times at which it constructed or purchased property in its present plant. And I would like to inquire whether you have made such an investigation, and whether you are prepared to testify on that subject? A. I have and I am.

Q. Now will you state whether you have determined what you consider an appropriate rate of return for money invested by Hope in its plant for each year since the beginning, or have made some division of the entire period? A. Well, my investigation led me to make four divisions. It seems that the history of the Hope Company falls into four natural divisions—

Mr. Springer: (Interposing) I object to this line of inquiry. I don't see the relevancy of it. I would like to have a statement of the purpose of this type of testimony,

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the rate of return being a current problem.

Mr. Cockley: I would be very glad at this point, Mr. Examiner, because there are no secrets about this and no mystery, and I would be very glad to advise both the Examiner and counsel the purpose of it.

We put in evidence of reproduction cost new of this property, and depreciated, as bearing upon the present fair value of the property. As we all know, there have been a lot of changes upward in price levels since this property began to be constructed in 1898, and that is one way of reflecting the increased value of property that has occurred by reason of those changes in price levels where that property was constructed particularly prior to World War No. 1, as much of the Hope property was.

And we also, through Mr. Brown, introduced testimony as to what the present fair rate of return on that property was.

Now the Power Commission's staff has come in with what they say is an original cost, a depreciated original cost. I shall not argue at the present time that what they claim to be original cost isn't any such thing, but it is what they claim to be original cost; that is, they want to put in the rate base the pipe lines that were constructed prior to World War No. 1, at the low costs that were prevailing at that time.

Now I propose to have Mr. Brown testify as to what the rate of return that a company such as the Hope Com-

pany fairly was entitled to receive under all conditions prevailing at that time, and had a right to expect to receive on that property at the time it was constructed.

In other words, if we are going to go back to the original cost of this property, and the dollars that the Hope Company put in plant back in pre-World War periods, if that is to be given any consideration there must also be given consideration to the rate of return that the builders of that property had a right to expect when they put those dollars in property and thus permanently devoted them to public service.

To be more specific, if the rate of return in the development stage of this property, in its early history, under

all the conditions that prevailed at that time, the owners of property of this kind, engaged in that kind of a new enterprise, were entitled to a return of 20 percent upon it, at that time, and you are now going to take, you are now not going to reflect any increased value which we know has occurred in that property, then the proper rate of return to a company, that is the rate of return that they reasonably had a right to expect at the time they invested their dollars.

In other words, it is the rate of return that must accompany any notions as to original cost, as a rate base, and I am putting it in and I am offering Mr. Brown's testimony upon that point for that purpose, and I submit that it is entirely relevant and entirely proper testimony, and

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it is testimony that necessarily must accompany this notion that they have that the original cost can be used as a rate base.

Trial Examiner: Have you qualified this witness to testify with respect to that?

Mr. Cockley: Well, I think so. This witness, as I recall his qualifications, has testified that he has been in this business since 1908 or 1909. He has devoted his whole life to it.

Trial Examiner: That being the case, he is qualified to testify as to what rate of return this company was entitled to receive.

Mr. Cockley: He is qualified to express an opinion as to the rate of return that investors in a natural gas property such as this was, under all the conditions prevailing at various times over the past, the rate of return that they fairly were entitled to receive on money invested in plant account at those various times.

Mr. Springer: Do you mean that he has made a study for each of the 40 years in the past, of the prevailing current rate of return for each of those years?

Mr. Cockley: Well, he has grouped it by periods, as he has just stated.

Mr. Springer: And in 1909 he was a bookkeeper in the Boston office of Hornblower & Weeks?

Mr. Cockley: Well, if there is any question about

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qualification, I shall ask him additional questions.

Mr. Slaff: The objection goes much deeper than that, Mr. Examiner, before we get to the problem of qualification of this witness. I think the objection goes to the heart of this testimony, its relevancy and its materiality in this case. The relevancy of any testimony as to what an investor expected by way of return in 1898 or 1900 or 1915, or any other date, the relevancy of such testimony on the problem of fixing rate of return in the year 1941 for that time, and the reasonably immediate future, and it is to that that the objection is in the first instance directed.

Mr. Springer: And furthermore, it is history now, what rate of return Hope Natural Gas Company realized.

Mr. Cockley: So is original cost history.

Trial Examiner: Yes, the studies that the Commission's staff submitted aren't confined to the present.

Mr. Springer: It is reasonable return because the rate of return determination is controlled by current economic conditions.

Trial Examiner: Well, it occurs to me that the question might arise as to the reasonableness of the return received by the Company over the period of its history in connection with some of the problems here.

Mr. Slaff: Well, I don't understand that that is the purpose for which this testimony is offered, Mr. Examiner.

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Mr. Cockley: No, that isn't the purpose for which it is offered.

Let me put it this way: As I conceive original cost, if we are going to original cost in any respect as a rate base,

then we have got to, at the same time, take its Siamese twin along with it, and that Siamese twin is the rate of return that the owners of property reasonably had a right to expect when they built or purchased the property at the original cost, if you are going to take it as a rate base. In other words, this isn't offered as a part of my case at all. This is offered in answer to the claim that these rates that we have are too high because on an operating experience we made so many dollars over a certain period of time, and that is claimed on the other side as being too much.

I am going to show that if you take original cost as a rate base, and accompany it with this Siamese twin, namely, the rate of return that the owners of the property reasonably had a right to expect when they invested their dollars in this original cost, in this plant at the original cost, you will find that the amount of money that they are earning is not too much, because that rate of return will be substantially higher than the rate of return fixed on today.

In other words, in a word my claim is this, and I leave it with that,—if you are going to take an up-to-date, present value of the property, that pays very substantial attention

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to reproduction cost and present day cost, then the right rate of return for it is the present, up-to-date rate of return reflecting modern money conditions, and under the tests that have been laid down by the Court.

If you are going back to a rate base that is an accumulated history over a long period of years, then the right rate of return to go with that is the historical rate of return that should accompany original cost, and you can't both deprive the owners of this property of the increased value of the property and at the same time deprive them of the rate of return that they reasonably had a right to expect at the time they invested their dollars in that property.

Mr. Springer: I can't follow Mr. Cockley. There could be no deprivation of property here on the present de-

termination of rate base and what a fair rate of return is. Past profits in this case, which were great—there don't have to be any past losses. Neither can be a dominant factor in the determination of rates for the future. That is pretty well established.

Mr. Cockley: I have said nothing about either profits or losses, and the Company had both.

Mr. Reeder: Mr. Examiner, may I ask that counsel for the Company state whether he proposes to show the actual cost of the money invested at the time the investment was made, or whether he intends to offer, through this wit-

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ness, some speculation as to what the cost of money should have been?

Mr. Cockley: Well, that is an interesting question, but I don't understand it.

Trial Examiner: Well, there is a very serious question in my mind as to the relevance of the evidence. I appreciate the right of the respondent to make up his record here for the purpose of arguing the questions. I think more serious harm could be done by its exclusion than by its inclusion. The objection is overruled.

Mr. Cockley: Read the last question and answer, please?

(The record was read by the reporter as follows:

"Q. Now will you state whether you have determined what you consider an appropriate rate of return for money invested by Hope in its plant for each year since the beginning, or have made some division of the entire period? A. Well, my investigation led me to make four divisions. It seems that the history of the Hope Company falls into four natural divisions—").

By Mr. Cockley:

Q. Before you pursue that further, Mr. Brown, let me ask you one or two more questions that go to the matter of your qualifications.

As I recall it, your testimony was that you entered the brokerage business in about 1909, was it, or 1908? A. January, 1909.

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Q. And your first position was with Hornblower & Weeks, was it? A. Yes.

Q. The firm of which you are now a partner? A. Yes.

Q. And that was in the Boston office, as I recall it? A. Yes.

Q. When were you made chief statistician? A. I was assistant statistician from the middle of 1910 until the fall of 1916, when I was made chief statistician.

Q. Now will you tell us what the duties of a statistician are, or what your duties as statistician and as assistant statistician were, just generally? A. Well, the analyzing and reporting to the firm and to individuals on hundreds of corporations, railroads, public utilities and industrials.

Collaterally I gave lectures to college bodies on current financial conditions. That wasn't exactly a part of my duties, but they covered the whole range of securities held by the public, advising individuals and the firm.

As chief statistician I was the chief investigator for a number of years of corporations looking for financing by our firm.

Q. State the fact as to whether or not your duties, both as statistician and assistant statistician, required you

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to keep yourself informed, currently at least, as to the conditions of the money market, the financial conditions generally, and other factors that enter into a consideration of rate of return? A. They did, and I might add that down through the years I made a considerable study of past conditions, going back to perhaps 1890.

Q. And when was that done? A. When I was chief statistician.

Q. What did you study during the period from 1890, at that time? A. General financial conditions of the country.

Q. Markets? A. Markets for all kinds of securities.

Q. Prevailing prices at various times? A. General prices, not specific prices particularly, as many of the stocks that we have today date only back to 1899 and later years.

Q. Do you consider yourself fairly well informed and familiar with the period from 1898 down to date as to general financial conditions, prices of securities, and other factors that would enter into a determination of a rate of return?

Mr. Slaff: That is an objectionable question, Mr. Examiner. The facts must speak as to whether the witness is qualified, and not whether the witness himself considers

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himself qualified. That is thoroughly irrelevant.

Mr. Cockley: I beg your pardon, but it is a perfectly usual question to put to an expert witness, whether he himself feels that he is qualified to express an opinion upon the subject on which he is asked to express an opinion. I have heard it asked many, many times in all kinds of courts.

Trial Examiner: If he didn't think so, he wouldn't be here.

Mr. Cockley: Well, that is probably so, but the question has been raised whether he can go back to this period.

The Witness: Perhaps I can answer that by a simple statement, that I have trained many bond salesmen and have lectured to them on the year-by-year changes in current conditions from the early 90's on. I don't know whether that qualifies me or not.

By Mr. Cockley:

Q. Now, Mr. Brown, you said you found that this rate of return investigation fell naturally into four periods.

Will you tell us what the first period is, and why you have selected that as a period? A. The first period seems to be from 1898, when the Company was formed, down to and including 1907.

During that period a very substantial part, the bulk of the sales of gas were known as field sales to gas and oil companies in West Virginia during that boom period in

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West Virginia.

By 1908, this proportion had dropped until about three-quarters of the gas sales were to commercial and domestic consumers.

Secondly, in May 1908, the Company issued a block of stock to refinance, in permanent form, the advances made by the parent company.

Thirdly, in May 1908, the Company paid its first cash dividend.

So that the period from 1898 to 1907 represents what I might call the early development period of the Company's history.

Q. And what, in your opinion, was the fair rate of return that the owners had a right to expect on money invested in plant account during this early development period?

Mr. Reeder: I object, and may the record show an objection to this question upon the ground that it calls for a conclusion which is proper only for the Federal Power Commission and not for this witness. It calls for no fact and no matter which this witness is especially qualified to testify upon as an expert.

It may well be that if counsel intended to show the actual cost of money to this Company at the time the investment was made, that would be a proper analogue to the original cost, but as I understand it, what he is now

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calling for is to have a series of rate cases over 40 years

and have this witness express a conclusion for the Commission only upon each one of those four or five periods into which he has divided that vast period of time.

I submit that that kind of inquiry is entirely and wholly irrelevant, immaterial and incompetent.

Trial Examiner: That was my thought exactly with respect to the qualifications of this witness to answer such a question as that. It doesn't seem to me that he is qualified as an expert for the purpose of determining what a reasonable rate of return might have been to that Company back in that period.

Now if you want to show what the cost of money was during that period, that is a different thing.

Mr. Cockley: Well, Mr. Examiner, it seems to me that perhaps we are confused by words a little bit. Can there be any doubt that a man of Mr. Brown's broad business experience and investment experience is perfectly qualified to say, during a development period of a new enterprise, as this was, as to the earnings that would have been demanded by investors to put money into that enterprise? That is the question I have asked him.

Trial Examiner: If you want to ask him that question, go ahead.

Mr. Cockley: Well, that is the question that I under-

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stood I did ask him. Perhaps I used "fair rate of return" in place of it. Let me rephrase the question.

By Mr. Cockley:

Q. In your opinion, what prospective earnings on their money would investors in that period have demanded in order to put money into the plant of such a property as the Hope Company?

Mr. Reeder: I want to object to that question upon the ground that it is an incomplete question and wholly unintelligible, standing alone. If counsel wants to go into

the question of what return the investor would demand upon his money for some specific period of time, which came down to and included the present, that might be material, but if he is going into the question of what return the investor demanded in 1902, that, I submit, is entirely irrelevant and immaterial to this inquiry.

Why should this Commission go into an historical study of that kind and into evidence that might have been relevant to a rate case in 1902?

Now I am objecting to this question as it stands, as irrelevant and immaterial to this inquiry.

Trial Examiner: Well, I think we have gotten right back to the original question.

Mr. Reeder: No, Your Honor, I am objecting now upon the ground that this question doesn't include any period of time. He says, "What rate of return would they demand"—

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Trial Examiner: (Interposing) In the period beginning 1898 to 1907, as I understand, or 1908.

Mr. Cockley: That is right.

Mr. Reeder: Does he mean for their investment for that period only, or for their investment from that period down to 1941, because that is the period of time that we are interested in.

Trial Examiner: I realize that, of course, and as I said before, there is a very serious question in my mind as to the relevancy of this evidence, but I have already in effect ruled on that.

The objection is overruled.

Mr. Slaff: It is understood, Mr. Examiner, that our objection extends to this entire line of inquiry, so that we need not repeat it specifically?

Trial Examiner: Yes, that will be understood.

Mr. Reeder: And may we have an exception?

Trial Examiner: You may have an exception.

Mr. Reeder: And may it be understood that our objection and exception runs to all this line of inquiry?

Trial Examiner: That will be understood, yes.

Proceed.

The Witness: May I have the question read, please?

(The question was read by the reporter.)

The Witness: Not less than 15 to 20 percent.

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By Mr. Cockley:

Q. Will you state the factors that you took into consideration in arriving at that opinion? A. In the first place, this was a relatively new industry, it was a brand new enterprise in a young industry. There was substantially no growth in the natural gas industry until the late 80's, and the 90's showed a recession, largely due to the depression.

The history of the industry through the 80's and the 90's showed exploitation of local fields very largely, which were promoted by, in a few cases, municipalities, or a few public spirited citizens, or an occasional pioneer operator.

Those fields, in most instances, gave out. The only fields that continued were in Western Pennsylvania and in West Virginia, and a portion of Indiana.

As recently as December, 1903, the Ohio State geologists wrote an annual report which was very discouraging, on the future of the natural gas industry.

Secondly, there had to be new markets developed. As I stated before, the first few years showed sales very largely in the field.

Thirdly, with the local fields only being exploited, a high rate of return was necessary to attract capital.

Fourthly, there was practically no transmission of gas beyond the local fields. The transmission of gas was in its

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infancy, at least.

Fifthly, the Standard Oil Company, in its history, showed a net return on its net assets of about 25 percent during that period, and I can't conceive of a Board of Directors investing in a new mining enterprise for less than 15 to 20 percent, when it was already showing a 25 percent return on its own assets.

Q. Now what is your next period, Mr. Brown, that you have taken, and why have you taken that period? Give us the reasons why you have taken that as the second period? A. The second period I call from 1908 to 1926, both inclusive.

The Hope Company had passed from its early development stage to what might be called a certain stage of maturity and permanency. There were several issues of bonds put out during this period, notably in 1917, the Southern California Gas Company, and many issues since. I quote that company because for many years it has been regarded as the highest grade natural gas company in the United States, and the only company which has ever issued a Aaa Moody rating bond.

Secondly, I end the period in 1926 because at about that time, through improved electric welding and other processes, there were long distance pipe lines from the western and southwestern fields to the large markets, St. Louis, Chicago, Minneapolis, Detroit, and so forth.

Q. And on what terms could new capital be attracted,

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in your opinion, to invest in a natural gas business such as Hope's, during that period? A. In my judgment, you could not attract capital into an enterprise like Hope, which remained essentially a mining enterprise, very much on all-fours with a mining company of the better grade like Anaconda and Kennecott and Phelps-Dodge, or like the oil-producing companies—for less than 12 percent during that period, and some more than 12 percent in certain of those years.

Q. Now will you state the considerations that lead you to that opinion? A. During a large part of that period the average return or the average earnings price ratio of mining and smelting companies was 13 percent, and the average earnings price ratio of oil-producing and refining companies was 14 percent. The period started out with a panic and a depression in 1907-1908; good business in 1909; then a period from 1910 to 1913 which was below normal, with the exception of a few months in 1912. 1914 was a very bad year, with business at a low ebb; it was impossible to float any securities of any kind except the very highest grade. The Stock Exchange was shut down for 4 or 5 months in the latter part of the year.

Then came the World War boom, which started in the spring of 1915, and virtually continued to the middle of 1920, but it was essentially a common stock period, although

there were a few bonds issued, but practically no preferred stocks, and the earnings price ratio on those common stocks was quite high.

Then came the so-called inventory panic of the fall of 1920, with the depression lasting through 1921, with great difficulty in financing anything.

In 1921, the Southern California Gas Company put out two issues at better than a 7 percent yield basis, but only bonds of high grade could have been floated in 1921.

Mr. Knapp's Chart No. 1 in Exhibit 82-A, shows Moody Aaa bonds above 6 percent as compared with less than 3 percent today, and Moody's Baa bonds yielding above 8 percent, as compared with approximately 4½ percent today.

Then the period 1922 to 1926 was more normal, with a slight variation in 1923 and 1924, and good business in 1925 and 1926; but the rate of return was much higher during that period than it is today.

Q. During which period? A. From 1922 to 1926; in fact, during the whole period from 1908 to 1926.

Thirdly, the leading handbook on bonds, as recently as 1927, cautioned the investor with respect to bonds of natural gas properties, due to the prospective exhaustion of their supply.

So I rank the reasonable over-all return which an in-

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vestor would expect during the whole period, averaging it together, as not less than 12 percent, and in some of those years higher than that.

Q. Mr. Brown, will you state the fact as to whether or not the financing of natural gas companies during that period was a matter of private investment or accomplished through the public flotation of securities? A. There was occasionally a bond issue of relatively small amount sold in local markets, but not in national markets, dating back to 1900, on natural gas properties. I don't know of any preferred or common stock on a natural gas company that was floated by underwriters to the public until the end of this period.

There was a market for several issues which had been put out to the stockholders through early mergers—the National Fuel Gas, for instance. The earliest market I can find on Southern California Gas was 1923.

Q. Now are you talking about preferred or common? A. Preferred. The common was all owned by Pacific Lighting, which in turn had a common stock that was outstanding, but it also included electric properties.

So that my answer to your question would be that in this period, Hope might have been able to float an issue of bonds during several of these years, but could not have floated any bonds during other years in this period. It

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might have put out a common stock during a portion of that period, particularly in 1916, 1917, 1918 and 1919. It could

not have floated any common stock in 1920 or 1921. It might have been able to in 1922; it is very doubtful if it could in 1923 or 1924. It might have floated some common stock in 1925 and 1926. I doubt if it could have floated any preferred stock during any of those years.

Q. You have referred several times to the fact that it could put out an issue of bonds or could have sold some common stock. I ask you if there was any time during that period that it could have substantially recapitalized the corporation with new capital by the flotation of various classes of securities, such as is common today? A. No, sir, it could not. That is one reason why I ended the period at 1926, and when I come to my third period I will explain that.

Q. Now is there anything further you want to say concerning this period from 1908, your second period, to 1926? A. No, sir.

Mr. Slaff: Before you leave that, will you be good enough to state the name of the leading handbook to which you referred as cautioning investors about natural gas securities because of the possible exhaustion of the fields?

The Witness: The Principles of Bond Investment, by Lawrence Chamberlain, 1927 edition.

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By Mr. Cockley:

Q. Mr. Brown, will you tell us what your third period is, and why you have selected that? A. My third period is 1927 to 1934, both inclusive.

This period witnessed a widespread extension of market areas due to the long distance pipe lines. That aroused the interest of the investment banker and the investing public.

Prior to this period, there had been only occasional issues of bonds on natural gas properties. After the period started there were many issues of securities, with increased interest on the part of the public, and an in-

creased or rising quality rating of natural gas properties in the minds of the public.

The period includes the boom years of 1927, 1928 and 1929; the deep depression following the panic in the fall of 1929, and only a partial recovery in 1934. The reason I stopped at 1934 was because that was substantially the end of the normal money market, or the market for normal money rates.

Q. Well, in your opinion, on what terms could the capital requirements of the Hope Company during this period have been financed? A. The Hope Company still remained essentially a mining enterprise, and in my judgment could not have raised capital on an over-all basis of less than 10 to 11 percent, and it could not have refinanced itself in total during some of those years.

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Q. And will you tell us any other considerations that lead you to this opinion, other than you have mentioned? A. While the years 1927, 1928 and 1929 were boom years, and it was essentially an era of common stocks, it might have been possible to have issued some bonds on the Hope property. At no time during the period would it have been as sound to have put out bonds as it would to have had an all common stock capital structure, and at no time during the period could it have sold stock for less than an 8 percent yield to the public, with a 2 percent addition, carried to surplus, and much of the time it couldn't have sold common stock at any price.

Q. Well, is it your testimony that the most favorable terms it could have obtained during that period were the basis you have just described? A. It is.

Q. What is the fact during the few years when you say it might have sold a small issue of bonds—and, I suppose, or a small issue of preferred stock— A. (Interposing) That is correct.

Q. Was there any time during that period that it could have sold both with economy? A. No, there was no time during the period, in my judgment, where it could have put out three classes of securities.

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Q. And would there have been any economy in the cost of money to the Company for refinancing its needs, of putting out a small issue of bonds or preferred stock, with the balance common? A. Of course, bond money costs less than stock money, but in my judgment the saving by putting out a relatively modest amount of bonds would be more than offset by the higher cost of the common stock which necessarily carries a higher yield when it has senior securities ahead of it. So I see no net saving by financing during this period with bonds and common stock.

Q. Am I correct that your testimony, then, is that during this period this was a straight common stock risk? A. In my judgment, yes.

Q. Now what is your final period, and why have you selected that? A. My final period is from 1935 to date. The chief characteristic of this period has been the constantly declining money rates. That is very clearly shown in Mr. Knapp's exhibit. At the same time, there is a second factor there which I brought out a year ago in my direct testimony. There has been an improvement in the rating of senior securities of natural gas bonds during the past 3 or 3½ years.

Before this period, nearly all natural gas bonds ranked below, in rating, those of artificial gas bonds. The spread

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between those issues has now narrowed, and the first mortgage bonds of the higher grade natural gas companies now have a high investment rating. There are several issues carrying Moody's rating of Aa.

Q. And on what terms, during this period, is it your opinion that the financial requirements of the Hope Com-

pany could be met? A. In my testimony a year ago, I said not less than 8 percent, and I still stand by that.

Q. For the whole period? A. For the whole period.

Q. And are the reasons— A. (Interposing) The reasons are set forth in my prior testimony.

Now since January 1941, there has been a dip and a partial recovery in the price of bonds. There has been an improvement in the price of preferred stocks. There has been a very substantial dip in the price of common stocks of all utilities. So that the net cost of financing a utility today by bonds, preferred and common stock, in my judgment is slightly higher than it was on January 1. It certainly is not any lower, because the higher yields on common stocks today more than offset the improvement in preferred stock prices, with resultant lower yields, and the substantially no change in bond yields.

Q. How does the earnings price ratio of common stocks

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today compare with what it was, say, a year ago, or when you testified in June of 1940? A. The earnings price ratio of utility common stocks today is higher than it was a year ago.

Q. That is, you mean the price is lower? A. The price is lower and the yield is higher.

Q. The yield is higher? A. Yes.

Q. Than it was at the time you testified in the summer of 1940? A. That is correct.

20. COMPANY WITNESS RHODES' EXHIBIT NO. 24 ENTITLED: "Necessary Annual Rates for Depreciation—Written Statement of George I. Rhodes"

Table of Contents

TABLES [Not Printed Except Table A]

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WRITTEN STATEMENT OF GEORGE I. RHODES

1. Scope Of This Exhibit

This exhibit sets forth and explains an engineering determination of the necessary annual allowances or rates for depreciation required to reimburse Hope Natural Gas Company for the annual depreciation suffered by its:

A. Production system structures
B. Production system pipe lines and appurtenances
C. Transmission system structures
D. Transmission system pipe lines and appurtenances
E. Compressor station equipment
F. General structures
G. Office furniture and equipment
H. Warehouse, shop and laboratory equipment
I. Telephone and telegraph system

This determination is based on the actual depreciation experience of the Company from the beginning of business through 1938.

The property has been classified as above shown to meet the limitations of the Company's records of early depreciation experience. The appurtenances to pipe lines referred to above include rights of way and measuring and regulating equipment.

Allowances for drilling and cleaning equipment and for automobiles and trucks have not been determined in this exhibit because the depreciation on such equipment is now reflected in operating expenses through clearing accounts or their equivalent. Allowances for depreciation of wells, leaseholds and natural gas rights have not been determined in this exhibit, the necessary annual allowances for depletion of these properties being set forth in a separate Company exhibit containing the rate statement.

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2. Total Depreciation Suffered By The Company's Properties—Unrealized and Realized

Depreciation inevitably begins to take place when construction of a new natural gas property is complete. Corrosion begins in its pipe lines. Other kinds of property begin to wear out or deteriorate in various ways. For a considerable time the resulting depreciation causes no replacements of any kind. It accumulates or accrues in the property. It can be determined only by an inspection and study of the property. This accrued or accumulated depreciation is later herein referred to as "unrealized depreciation" since it has not as yet caused retirement losses.

As a natural gas property becomes older some of its parts such as short sections of pipe lines located in the most corrosive soils depreciate to such an extent that they must be renewed or replaced. Equipment is moved from place for various causes in the upkeep of the property. Whatever may be the cause of replacements or movements from place to place, the Company incurs a loss which is realized through the retirement of property. Generally the loss is the difference between the cost of the property retired and its salvage value. This loss is referred to as "realized depreciation."

If a natural gas property is inspected and studied before any property whatever has been retired or renewed the unrealized depreciation disclosed by inspection is the total depreciation suffered by the Company. After retirements have been made, however, an inspection and study disclose only that part of the total depreciation suffered which has not been eliminated by renewals.

—4—

The total depreciation suffered by the Company's properties is thus the amount of the unrealized depreciation found by inspection and study to have accumulated in

the property, plus the amount of realized depreciation previously experienced as ascertained from the Company's records.

3. Basic Method Used In This Exhibit

The basic method used in this exhibit is to determine first the total amount of depreciation that has occurred in the Company's properties from the beginning to December 31, 1938, both unrealized and realized. If this total were divided by the total years the property was in service it would give the average annual amount of depreciation. Dividing this average annual amount by the average annual cost of the property exposed to depreciation would give the average annual rate as a percentage. This percentage, had it been applied to the undepreciated cost of the property from the beginning of its history to December 31, 1938, would have provided sufficient money to provide for all retirement losses experienced and would leave in the depreciation reserve on December 31, 1938 a sum equivalent to the accrued depreciation found to exist on that date.

Mathematically, of course, precisely the same percentage will be found by taking the total amount of depreciation, both unrealized and realized, for the entire period and dividing this by the sum of the costs of the property exposed to depreciation at the beginning of each of the years of exposure. This sum is sometimes referred to by accountants and others and later herein as the "dollar-years exposure to depreciation." This simpler computation is used in this exhibit.

—5—

This basic method coordinates the Company's experience in the past both as to losses realized on the retirement of the property up to December 31, 1938, and the unrealized depreciation accumulated in the property as of that date, as set forth in a separate Company exhibit. It

produces a complete correlation of annual and accrued depreciation.

While the basic method is easily understood, the application of it for various reasons needs some further explanation. Accrued or unrealized depreciation existing on December 31, 1938, has been determined and set forth in a separate Company exhibit in terms of reproduction cost. The realized depreciation on the other hand has of necessity been determined on the basis of the Company's book retirement losses. Likewise the only available measure of the cost of the property at the beginning of each year from 1898 through 1938 is the cost heretofore capitalized on the Company's books, called "book cost" in this exhibit. In order, therefore, that the true percentage of depreciation may be determined these book costs have been converted into terms of reproduction cost.

In view of the Company's practices in recording current depreciation and particularly the requirements of the new system of accounts it is necessary to make certain adjustments to the book figures appearing in the Company's records which are explained in subsequent paragraphs.

4. Adjustments of the Company's Book Figures Related to Depreciation

The Company's past depreciation records were analyzed in detail from the commencement of business in 1898 to the end of 1938, including original vouchers and

entries relating to retirements and retirement losses. Care was exercised to eliminate the effect of transfers from one account to another, to eliminate charges resulting from restoration of materials to the warehouse at less than book cost, and to eliminate errors in the charges. The results of this detailed analysis are summarized on Tables G to N at pages 25 to 32 of this exhibit. These tables show

for each year for the several classes of property as grouped in this study the Company's retirements and retirement losses per books. They also show the cost of these properties as heretofore capitalized on the Company's books at January 1 of each year. These book figures constitute the basic data on which realized depreciation has been determined and adjusted in this exhibit.

The Company's past book depreciation figures differ from current requirements or otherwise require adjustment in four particulars:

(a) There have been some items of property retired from service whose retirement on the books has been deferred. These are called "deferred retirements" in this exhibit.

(b) A full determination of depreciation experience requires consideration of the depreciation on purchased property before the date of purchase.

(c) In pipe line accounts labor has usually been retired and charged as depreciation only in the case of lines lifted and not replaced. Present practice requires charging to depreciation the labor of installing all materials retired.

(d) For many years the cost of abandoning property has been charged to operating expense. Present practice requires charging to depreciation the cost of abandoning all property retired.

—7—

The basic methods of adjusting the book figures for these matters and correlating them with the accrued depreciation found to exist in the property at the end of 1938 are described in the succeeding subsections.

(a). Adjustments for deferred retirements

* * * * *

—8—

(b). Adjustments for purchased property

* * * * *

—9—

(c). Adjustment to reflect full retirement of labor costs

* * * * *

—11—

(d). Adjustment for cost of abandoning property

* * * * *

5. The Company's Book Depreciation Figures Expressed In Terms of Reproduction Cost

As heretofore noted, the figures as to the Company's past depreciation experience must be expressed in terms of the reproduction cost before they can be correlated with the accrued depreciation found to exist in the property at December 31, 1938. This is accomplished by the simple

—12—

operation of multiplying the appropriate depreciation figures in terms of book cost by the ratio of the reproduction cost of the property as of December 31, 1938 to the book cost of the property at that date. These adjusting factors are determined on Table F on page 24.

6. Determination of the Company's Retirements and Realized Depreciation

The data as to the Company's total book retirements and the adjustments to these book figures are shown by Table C at page 21.

* * * * *

The amount of realized depreciation (retirements less salvage) suffered by the Company over the years has been determined from its records and from the adjusted retirements shown in Table C. This determination is shown by Table B on page 20.

* * * * *

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7. Determination of Unrealized Depreciation

The unrealized depreciation existing in the Company's properties at December 31, 1938 in terms of reproduction cost is stated for the various classes of property on Table D. In this table column (1) lists the several classes of property. Column (2) shows the reproduction cost at December 31, 1938 as taken from the Company's reproduction cost exhibit. Column (5) shows the accrued or unrealized depreciation existing in the several classes of property at December 31, 1938 as found by inspection, observation and study of the properties as set forth in a separate Company exhibit. Column (4) expresses this existing accrued or unrealized depreciation in percentages of the cost new.

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8. Determination of Dollar-Years Exposure to Depreciation

The determination of the dollar-years exposure to depreciation for the several classes of the Company's property is shown by Table E.

* * * * *

9. Determination of Necessary Annual Depreciation Rates

All of the elements entering into a determination of the necessary annual allowances or rates for depreciation

—15—

are described above together with the adjustments applied to book figures to make them applicable to the methods currently required to be followed in handling depreciation. The determinations of the necessary annual allowances for depreciation are all made on Table A.

Column (1) shows the class of property for which the annual allowances or rates of depreciation are determined. As explained above, these classes of property were defined by the limitations of the early retirement records.

Column (2) shows the total realized depreciation suffered by the property taken from column (8) of Table B.

Column (3) shows the amount of unrealized depreciation accumulated in the property taken from column (5) of Table D.

Column (4) shows the total depreciation suffered by the Company to December 31, 1938. It is the sum of the realized depreciation, column (2), and the unrealized depreciation, column (3), for each class of property.

Column (5) shows the dollar-years exposure of the property to depreciation taken from column (9) of Table E.

Column (6) shows the final determination of the necessary annual allowances or rates for depreciation expressed as a percentage applicable to cost new. It is the result obtained by dividing the total dollar amount of all depreciation suffered to December 31, 1938 shown by column (4) by the total dollar-years exposure to depreciation up to that date as shown by column (5).

Column (7) shows the corresponding rates applicable to the depreciated cost of the property determined by dividing the rates in column (6) by the per cent condition of the property as shown in column (3) of Table D.

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The annual rate of depreciation of telephone and telegraph system property could not be determined by the above method because the Company has recorded no realized depreciation of this kind of property. A study of pole replacements and the condition of the property as inspected indicates that 4.0 per cent per year is a fair allowance for depreciation applicable to reproduction cost new and 5.9 per cent per year applicable to reproduction cost new less depreciation.

In summary of Table A the necessary annual allowances or rates of depreciation applicable to costs new and less depreciation of the several classes of the Company's property are as follows:

Class of Property	Annual Rate of Depreciation Applicable To Reproduction Cost	
	New	Depreciated
A. Production system structures.....	4.52%	8.04%
B. Production system pipe lines and appurtenances	2.04	2.71
C. Transmission system structures.....	2.64	3.67
D. Transmission system pipe lines and appurtenances	1.28	1.61
E. Compressor station equipment.....	1.76	2.17
F. General structures	2.59	3.55
G. Office furniture and equipment.....	3.41	4.87
H. Warehouse, shop and laboratory equipment	3.29	4.37
I. Telephone and telegraph system.....	4.00	5.88
Average	1.80%	2.32%

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These annual rates of depreciation as heretofore stated are determined from the Company's actual depreciation experience over the entire history of its properties and correlate annual depreciation with the accrued depreciation deducted in the Company's exhibits from reproduction cost new. They constitute minimum necessary rates in that they provide for no contingencies except such as have occurred in the past.

SIGNED at Clarksburg, West Virginia, this May 20, 1940.

GEORGE I. RHODES.

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Table A

HOPE NATURAL GAS COMPANY

Determination of Necessary Annual Depreciation Rates

Based on Realized Depreciation Up To December 31, 1938, Unrealized Depreciation Accrued at December 31, 1938 and Dollar-Years Property Has Been Exposed to Depreciation

Classes of Property	Realized Depreciation to December 31, 1938 (From Table B)	Unrealized Depreciation at December 31, 1938 (From Table D)	Total Depreciation Suffered to December 31, 1938	Dollar-Years Exposure to Depreciation (From Table E)	Necessary Annual Depreciation Rates Applicable To Reproduction Cost	
					New	Depreciated
(1)	(2)	(3)	(4) = (2) + (3)	(5)	(6) = (4) ÷ (5)	(7)
Production System Property						
(1) Structures	$ 190,016	$ 217,115	$ 407,131	$ 8,997,669	4.52%	8.04%
(2) Pipe Lines and Appurtenances	4,938,471	5,082,534	10,021,005	491,976,896	2.04	2.71
Transmission System Property						
(3) Structures	578,841	622,148	1,200,989	45,468,543	2.64	3.67
(4) Pipe Lines and Appurtenances	1,480,634	3,873,141	5,353,775	416,739,397	1.28	1.61
(5) Compressor Station Equipment	1,534,547	2,092,052	3,626,599	205,717,473	1.76	2.17
General Property						
(6) Structures	6,686	89,510	96,196	3,709,176	2.59	3.55
(7) Office Furniture and Equipment	83,877	70,267	154,144	4,520,997	3.41	4.87
(8) Warehouse, Shop and Laboratory Equipment	106,239	100,270	206,509	6,281,999	3.29	4.37
(9) Telephone and Telegraph System	—	—	—	—	4.00	5.88
Average Annual Rate					1.80%	2.32%

21. **COMPANY WITNESS SULLIVAN'S EXHIBIT NO. 126 ENTITLED: "Average Return from the Company's Export Business, 1937-1940, Based on the Company's Claims as to Rate Base as of December 31, 1938 and Operating Expenses"**

HOPE NATURAL GAS COMPANY

Average Return from the Company's Export Business, 1937-1940,

Based on the Company's Claims as to Rate Base as of December 31, 1938 and Operating Expenses*

	Reproduction Cost New Less Depreciation of Production Plant, Transmission Plant and General Plant (Jointly Used) as of December 31, 1938 (A)	1937	1938	1939	Average of Years 1937-1939	1940	Average of Years 1937-1940
(1)	**Rate Base**	$66,360,837	$66,360,837	$66,360,837	$66,360,837	$66,360,837	$66,360,837
	Revenues from Export Business						
	Revenue from Gas Sales to:						
(2)	The East Ohio Gas Company	$12,757,670	$11,157,537	$12,359,500	$12,091,569	$14,726,736	$12,750,361
(3)	The Peoples Natural Gas Company	1,349,815	1,105,160	1,487,680	1,314,218	3,749,366	1,923,005
(4)	The River Gas Company	115,725	77,915	83,174	92,272	136,063	103,219
(5)	Fayette County Gas Company	267,531	263,966	264,725	265,407	270,618	266,710
(6)	The Manufacturers Light & Heat Company	1,425,050	1,258,602	787,738	1,157,130	706,130	1,044,380
(7)	**Total Revenues from Export Business**	$15,915,791	$13,863,180	$14,982,817	$14,920,596	$19,588,913	$16,087,675
	Cost of Export Gas Exclusive of Return						
(8)	Production Expenses Exclusive of Exploration and Development Costs	$ 2,146,382	$ 2,190,148	$ 1,906,524	$ 2,081,018	$ 2,010,170	$ 2,063,306
(9)	Exploration and Development Costs	518,581	633,272	508,832	553,562	407,920	517,151
(10)	Gas Purchased	8,150,053	7,650,099	7,680,938	7,827,030	8,538,973	8,005,016
(11)	Transmission Expenses	1,798,308	1,695,381	1,728,006	1,740,565	2,240,591	1,865,571
(12)	General Administrative Expenses	1,064,224	1,063,471	1,034,758	1,054,151	1,014,206	1,044,165
(13)	Taxes at Rates in Effect Exclusive of Federal Income Taxes	1,075,220	1,019,757	1,078,979	1,057,985	1,211,461	1,096,355
(14)	Other Expenses	10,522	12,481	—	7,668	—	5,751
(15)	10 Year Amortization of Property Reclassification Expense	100,595	100,595	100,595	100,595	100,595	100,595
(16)	10 Year Amortization of F. P. C. Rate Investigation Expense	122,950	122,950	122,950	122,950	122,950	122,950
(17)	Depletion of Wells	625,129	434,997	558,871	539,666	827,743	611,685
(18)	Depletion of Operated Leases	26,624	18,569	23,826	23,006	35,257	26,069
(19)	Depreciation of Other Property	984,850	984,850	984,850	984,850	984,850	984,850
(20)	Credit: Gas Used in Own Operations	(458,977)	(459,725)	(471,686)	(463,463)	(582,576)	(493,241)
(21)	Credit: Other Revenue	(525,784)	(440,737)	(419,492)	(462,004)	(392,638)	(444,663)
(22)	Credit: Revenue from Local Distribution of Gas in West Virginia Less Specific Distribution Costs	(2,690,096)	(2,002,247)	(2,312,984)	(2,335,109)	(2,695,796)	(2,425,281)
(23)	Cost of Deep Test Well Chargeable to Non-Productive Well Drilling Expense for 1940	—	—	—	—	165,963	41,491
(24)	Federal Income Taxes on Basis of Tax Rates in Effect	324,758	54,239	228,938	—	969,889	—
(25)	Federal Income Tax at Rate of 24 Per Cent Plus Probable 6 Per Cent Surtax	—	—	—	301,044	—	507,580
(26)	Increases in Payrolls during Years 1940 and 1941 Not Reflected in Operating Expenses	—	—	—	202,172	—	202,172
(27)	Increase in Unemployment Tax to Reflect Present 3 per Cent Tax Rate in 1937	—	—	—	9,324	—	6,992
(28)	Increase in West Virginia Property Tax Assessment in 1941	—	—	—	81,751	—	81,751
(29)	**Total Cost of Export Gas Exclusive of Return**	$13,273,339	$13,078,100	$12,753,905	$13,426,761	$14,959,558	$13,920,265
	Net Return from Export Business						
(30)	**Amount**	$ 2,642,452	$ 785,080	$ 2,228,912	$ 1,493,835	$ 4,629,355	$ 2,167,410
(31)	**Per Cent Return**	3.98%	1.18%	3.36%	2.25%	6.98%	3.27%

NOTES: ( ) Parentheses denote red figures.

* The Company's figures appearing on this statement do not reflect any increase in rate base due to capital additions or increase in valuation subsequent to December 31, 1938. Also the Company expenses for the individual years 1937, 1938, 1939 and 1940 do not include the increase in taxes or payrolls which will be incurred in the future as shown by the testimony presented at the hearings commencing July 7, 1941, these increased expenses being reflected only in the 3 year and 4 year average figures.

(A) Including the nominal acquisition cost of leaseholds, gas rights and royalties and working capital, but excluding property used to transport coke oven gas and going concern costs or value.

22. TESTIMONY OF COMPANY WITNESS EUGENE P. SULLIVAN AS TO EXHIBIT NO. 126 SHOWING AVERAGE RETURN FROM THE COMPANY'S EXPORT BUSINESS, WEDNESDAY, JULY 16, 1941, RECORD PAGES 6198-6208, 6210-6212, 6215-6216, 6218, 6227.

—6198—

Mr. Milde: May I have marked as Exhibit No. 126 a statement entitled "Average Return from the Company's Export Business, 1937-1940, Based on the Company's Claims as to Rate Base as of December 31, 1938 and Operating Expenses"?

Trial Examiner: It may be so marked.

(The statement referred to was marked as Exhibit No. 126 for identification.)

DIRECT EXAMINATION by Mr. Milde (Continued).

Q. Mr. Sullivan, I hand you Exhibit No. 126 for identification, entitled as I have just stated, and ask you if you prepared the statement contained in this exhibit? A. I did.

Mr. Milde: Mr. Examiner, before I interrogate Mr. Sullivan about this statement, I would like to say just one thing: Our view of the case is that the normal average experience of the company is fully reflected by the company's operating experience during the years 1937, 1938 and 1939, and we have not heretofore put in figures for 1940 for that reason.

However, the Commission's staff has included figures for 1940, and in order that our figures could be compared to theirs, we have in this exhibit also set out the 1940 results

—6199—

of operation as we see them, and the average of the years 1937-1940, as well as the average for the three years I previously mentioned.

I just wanted to make that statement to make it perfectly clear that we do not intend, by offering this exhibit and some of the other subsequent exhibits, which set out our figures for 1940, to deviate in any way from our claim, which we think will be supported by the evidence, that the normal average operating experience of the company, on the basis of which future rates should be set, is fully and adequately revealed by the operating conditions and results of the three-year period, 1937-1939, inclusive.

Trial Examiner: These figures shown under 1940, then, in this exhibit, are not the same as the figures shown by Commission counsel's exhibit?

Mr. Milde: No, these are our figures for 1940, and we put them in, in order that they could be compared with the Commission staff's exhibit.

By Mr. Milde:

Q. Mr. Sullivan, will you explain very briefly what the statement in Exhibit 126 shows? A. This statement shows the average return from the company's export business during the period 1937 to 1940, based on the company's claims as to rate base as of December 31, 1938, and operating expenses.

—6200—

In arriving at net return from the export business, the revenue from the local sale of gas in West Virginia less specific distribution costs has been credited to production, transmission and general expenses.

Q. Is that the same method that the company used in its original rate statement, Exhibit No. 37 and— A. (Interposing) Yes, the figures appearing under the column headed "Average of Years 1937-1939" correspond with those presented in Company Exhibit 37.

Q. Let me ask you also, Mr. Sullivan, whether that method of handling West Virginia revenues as a credit against the cost of export gas, was not also used by Mr.

Dunn of the Commission's staff in Exhibit No. 90? A. It was. Mr. Dunn did set forth the results on the basis of the Commission examiners' rate base and expenses, in Exhibit No. 90.

Q. And that method assumes that the full contribution of the West Virginia business by way of revenues over and above specific expenses, should be applied in reduction of the cost of export gas? A. It does.

Q. Will you proceed with the explanation? A. Referring to the column headed "Average of Years 1937-1939," which is the same as that appearing in Exhibit No. 37, except as to the items of amortization of property re-

—6201—

classification expense and FPC rate investigation expense—

Q. (Interposing) What are the numbers of those? A. Those are items Nos. 15 and 16.

Q. And what is the difference? A. In this exhibit these costs are based on amortizing the total cost of these items over a 10-year period, and providing 8 percent interest on the unamortized balance.

Q. Well, you use there the figures that you show in Exhibit No. 125? A. That is correct.

Q. And in the company's original rate statement, you used, or Mr. Rhodes used, the 5-year amortization period? A. The 5-year amortization period applied to a preliminary estimate of this expense of $1,250,000.

Q. For the two expenses? A. Yes.

Q. Will you proceed? A. On line 25 is set forth the Federal income taxes at the rate of 24 percent, plus probably 6 percent surtax. The figures in this exhibit are based on those tax rates, while in Exhibit 37 they were based on the 18 percent tax rate which was in effect at the time Exhibit 37 was prepared.

Q. Well, in line 24, don't you show for the individual years the income taxes at the rates actually in effect? A.

—6202—

Yes, the figures for the individual years appearing on this statement are based on the tax rates and labor rates in effect, and in the three and four year average columns are included the taxes on the basis of the present tax rates, and the operating expenses have been adjusted to include the increase in pay rolls not reflected in these years' operating expenses.

Q. That was shown in one of Mr. Chisler's exhibits? A. Yes, that was taken from Exhibit No. 107 as to the increase in pay rolls, and Exhibit No. 109 for the increase in West Virginia tax in 1941 due to the increase in West Virginia assessment.

Trial Examiner: What exhibit was that last one?

The Witness: 109.

By Mr. Milde:

Q. Well, then, let me ask you if this isn't the substance of how these statements are set up.

For the individual years you show the operating results under the pay roll and tax rates that were actually in effect? A. That is correct.

Q. But when you average that expense to get some idea as to the future, you include present Federal income tax rates and the present West Virginia property tax payment, or the additional tax payment, and the present pay roll, rather than the pay roll in the past; is that the substance of what this is? A. That is correct.

—6203—

There are also some minor adjustments in the figures appearing in Exhibit No. 37.

* * * * *

—6204—

Q. Now, you have explained generally that your 1937, 1938, 1939 figures are the same as Exhibit 37, subject to these changes you have mentioned? A. That is correct.

Q. What are these 1940 figures? A. The 1940 figures were determined from the company's books, and all adjustments were made to conform with the adjusted expenses as previously presented in Exhibit 37.

Also, for the year 1940, the expenses have been adjusted to include the cost of the deep-test well chargeable to non-productive well drilling expense for 1940, as shown in the exhibit presented by Mr. Chisler, Exhibit 110.

Q. And except for any modifications you have made in your testimony just now, these 1940 figures are set up in the same general form as the company's figures for 1937 to 1939? A. They are.

On the last line of this statement, line 31, is shown the average return earned during the average of the years 1937 to 1939, on the reproduction cost new less depreciation of the company's production, transmission and general properties, in the amount of 2.25 percent.

Q. And what do you show for the year 1940? A. The year 1940 by itself shows a return of 6.98 percent, and the

—6205—

average return during the four years, 1937 to 1940, amounts to 3.27 percent.

Q. And are the notes on page 2 of this exhibit to be read as part of your statement? A. They are.

Mr. Milde: I offer in evidence Exhibit No. 126.

Mr. Reeder: May our objection be noted on the same grounds as to the previous exhibit?

Mr. Springer: May we have ruling reserved until cross examination is completed?

Trial Examiner: All right, go ahead.

CROSS EXAMINATION by Mr. Springer.

Q. Mr. Sullivan, referring to Exhibit 126, on line 24, Federal income taxes on basis of tax rates in effect,—take the first column, for example, $324,758 for 1937? A. Yes.

Q. Is that the actual amount of taxes paid by the Hope Natural Gas Company in that year? A. No, the taxes paid have been adjusted to reflect the company's adjustments to operating expenses which would affect the Federal income tax. This computation is shown in a work sheet which will be presented as an exhibit.

Q. Do you conclude from your exhibit that the Hope Company would have paid more Federal income tax than it

—6206—

actually paid? A. This expense is based on the income tax the company would have paid if they received the additional revenues from gasoline royalties, and their operating expenses were reduced, due to reducing the price of coke-oven gas purchased from the Domestic Coke Corporation.

Q. Do you know whether or not the Hope Natural Gas Company plans to pay a deficiency assessment on its past taxes for 1937, 1938, 1939 and 1940, that you have indicated here? A. No, I do not, but I do think that if we consider for these years that they have additional revenue, that in order to be clear we must compute the additional taxes that would be payable on that additional revenue.

Q. Although you don't think the company will file an amended return and pay the additional taxes on the years you have set out in this exhibit? A. I don't know as to that.

Q. Now, the next line, line 25, Federal income tax at rate of 24 percent plus probable 6 percent surtax,—you show there in the column "Average of Years 1937-1939" the amount of $301,044, and in the column captioned "Average of Years 1937-1940" you show $507,580.

Has the company ever paid that probable 6 percent

—6207—

surtax? A. No, that probable 6 percent surtax is not yet in effect.

Q. Yet, you included in an average for the past years? A. But if the average for the past years is to be used in

testing the reasonableness of the rates in the future, the past years' expenses must be adjusted for known increases in taxes and pay rolls.

* * * * *

—6208—

Q. Did you hear the testimony of Mr. Tonkin that there is an unusual increase in the Hope Natural Gas Company's sales? A. I didn't hear Mr. Tonkin's testimony, but I do know of the increase in the sales. But I also have been informed that all that the present property could be expected to do was the experience that was achieved in the average of the years 1937 to 1939.

Q. Assuming that Hope Natural Gas Company's rates are reduced $1,000,000 on an annual basis, what kind of a test would your average figure give in that case? A. If the rates were reduced $1,000,000, I believe that the income taxes should be reduced 30 percent of that, or $300,000, which would leave an income tax of $1,044. Likewise, if they were increased $1,000,000, that tax should be increased to $600,000.

* * * * *

—6210—

Q. You didn't make any adjustments for known increases in revenues, did you? A. No, there is no adjustment to be made for known increases in revenues from the property as it existed at that period. By "existed," I mean the extent of the properties in this period.

Q. Well, you take for your exhibit future increases in expenses, but you ignore future increases in revenues? A. No, they haven't been ignored because it is the company's view that all that could be expected out of the property that existed on December 31, 1938 are sales that were apt to be experienced in that period.

Q. Of course, you know that the year 1940 showed a favorable operating result picture, about $5,000,000 on your

exhibit, in line 7, over the average of 1937 to 1939? A. Yes, I know that the sales for the year 1940 were substantially in excess of the average for the period 1937 to 1939,

—6211—

but this rate could only be maintained for a short period without substantial additions to the property.

Q. How do you know that? A. Well, I have been around these properties for about 10 years, and that is my impression, and while I am not testifying to it, it comes from discussions and what I believe to be so.

* * * * *

—6212—

Q. Well, in your own exhibit, for the very next column, 1940, you show an increase in revenues, yet for your column average years of 1937 to 1939, you studiously include all known future expenses, but seem to leave out known increased revenues for 1940? A. Well, that is for the reason that it is our view that sales that were achieved during the years 1937 to 1939 would be all that the present property would be able to do, except for a short period of time, you would get a spurt in there, but you would have to make it up very shortly.

Q. Mr. Sullivan, in your column headed "Average of Years 1937-1939," and the figures appearing opposite line 25 and line 26 and line 28, which we have discussed as being expenses which will be incurred in the future, with an increase over the past years, they all affect your total in line 31, percent rate of return of 2.25 percent, do they not? A. Yes.

* * * * *

—6215—

Q. Now do you think that you can set up an equitable standard for an average of any number of past years by taking into consideration only the known increase in operating expenses for the future, without taking into considera-

tion the known increases in revenues for the future? A. Well, the known increases in operating expenses and revenues, as applicable to the property as it existed at December 31, 1938, are reflected in this exhibit. There are going to be increases in expenses, but according to the testimony there will be no increase in revenues from the present properties, that is, those increases in revenues will only come through substantial additions to the present property.

Q. Do you know that there is an exhibit in this case comparing the first three months of 1941 with 1940 revenues, which shows a substantial increase in 1941 over 1940? A. I know that there is such an exhibit, yes.

Mr. Milde: For the first three months.

The Witness: Yes.

By Mr. Springer:

Q. You still didn't consider that in your Exhibit 126? A. Yes, it was given consideration at the time that this exhibit was made up.

—6216—

Q. Where does that appear in Exhibit 126? A. It is reflected by considering that, from the property as it existed in 1938, there could only be supplied from that property the average sales for the period 1937 to 1939, and any additional sales, except for a short period, would have to be supplied through substantial additions to the plant.

Q. Do you know whether or not there was any substantial addition to the Hope Company property in 1940 as compared with 1939, where your exhibit shows, in line 7, an increase in revenues of $5,000,000? A. I am not familiar with those figures, but I do know that if the sales continue at that rate, there will very shortly have to be substantial additions.

* * * * *

—6218—

Q. Now, Mr. Sullivan, did you deduct the accrued depletion from the rate base for your exhibit? A. No, the rate base used in this exhibit is the reproduction cost new less depreciation of the company's production, transmission and general properties as of December 31, 1938, and does not reflect any capital additions or increases in valuation due to increase in prices subsequent to that date, nor any additional accrued depreciation that has taken place in the company's properties since that date.

Q. And it reflects no retirements? A. No retirements and no additions.

* * * * *

—6227—

RE-DIRECT EXAMINATION by Mr. Milde.

Q. Mr. Sullivan, referring to your average columns for '37 to '39 and '37 to '40, as shown on page 1 of Exhibit 126, did I understand you to state that these increases in payrolls and this increase in Federal income tax rate, and increase in the unemployment tax, and the increase in the West Virginia property tax assessment are known increases in cost which have no reference to the amount of gas that the company might handle? A. That is correct.

Q. In other words, your view is that whether the company sells 50 billion, or 60 billion, or 40 billion, those expenses will be incurred irrespective—those increased expenses will be incurred irrespective of the volume of gas handled? A. Yes, I believe they will.

Mr. Milde: That is all.

* * * * *

23. COMMISSION WITNESS DUNN'S EXHIBIT NO. 90 ENTITLED: "Rate of Return Earned on Original Cost Base Years 1937 to 1940, Inclusive."

Table of Contents

WRITTEN STATEMENT

The attached schedules have been prepared to summarize the plant costs, reserves and operating expenses for the four year period 1937 to 1940, inclusive, to show the profit earned and the rate of return on the original cost base. There are set forth certain rate adjustments proposed by the examiners which have not been made in the underlying exhibits, but are included here for the purpose of summarizing all costs expected to increase or decrease income in the future.

Return Earned on Original Cost Base:

Schedule No. 1 shows the average original cost base in the amount of $31,281,373. This amount includes production, transmission, distribution and general plant with the related reserves for depreciation and depletion deducted and the allowance for working capital added.

Net Operating Revenues are shown in the amount of $4,125,399 as the annual average for the four year period. The determination of net operating revenues, as adjusted, is shown by the income statements summarized on Schedule No. 1A. The expenses of the four year period are expected to serve as a guide for future operating costs; therefore, certain non-recurring expenses are not included in Schedule No. 1.

—2—

Exploration and Development Costs:

The actual costs and losses as set forth in accounts 510, 511 and 512 have been included as a deduction from net operating revenues for the four year period. Due to cancellations of unoperated acreage, delay rental cost is expected to be reduced in the future. However, the company is starting a program of exploratory deep drilling, and there is a known loss on the first of these deep wells of

approximately $200,000.00 due to a well completed dry in 1941. For this reason it is believed proper to include the full amount of exploration and development costs as shown.

Interest on Unoperated Acreage:

Interest on unoperated acreage has been included as a deduction from net operating revenues. The investment has been classified as Gas Plant Held for Future Use which is not included in Gas Plant in Service. The examiners propose the allowance in operating expenses of interest as a carrying cost of the investment. A rate of 6% has been used pending the decision by the Commission as to a fair rate of interest.

The minor adjustment on Gas Plant Held for Future Use relates to adjusting entries 338 and 342, Exhibit No. 57A. Certain wells and field lines not used in prior years were placed in service in 1940.

It is proposed to amortize property reclassification and rate case expenditures over a period of ten years, being a period of six years in the future.

—3—

Adjustment of Income Taxes:

The income taxes actually paid were included in the taxes account. This adjustment removes the Federal Income Taxes pending the determination of a fair return by the Commission and the computation of the indicated taxes on income at the latest tax rate.

For Federal Income Tax purposes certain deductions and allowances are made which are not recorded on the books or set forth in the examiners' income statements. To illustrate a method for the Commission to use in estimating an allowance for future income taxes, giving effect to whatever reduction in revenues may be ordered by the Commission, the following tabulation is submitted:

	1937	1938	1939	1940	Average
Income Taxes Paid	$ 282,315	$ 17,515	$ 191,524	$ 912,313	$ 350,916
Income Tax Rate	14.9386%	16.5%	16.5%	24%	—
Net Taxable Income	$1,889,830	$106,150	$1,160,733	$3,801,304	$1,739,504
Assumed Reduction (for illustration only)					1,000,000
Revised Net Taxable Income					739,504
Tax Rate in Effect					.24
Allowance for Income Tax (illustrative only)					$ 177,481

Schedule No. 1 shows the annual average return earned in the amount of $3,809,201 and the average rate of return earned on the original cost base as 12.18%.

—4—

Return Earned on Original Cost Base, Exclusive of Distribution Plant, using Company Method.

The company's method of determining return applicable to interstate sales avoids an allocation of costs to West Virginia domestic and industrial consumers. The rates to these consumers are subject to West Virginia regulation, and such sales amount to less than 20% of the total.

Company Exhibit No. 37 sets forth certain reasons why the method of crediting the revenue received from the local distribution of gas in West Virginia in excess of specific distribution costs to the production, transmission and general costs, should be adopted.

> "The return is worked out on the premise that the Company's local West Virginia business is unavoidable in carrying out its major business of exporting gas from West Virginia; and that these local sales being subject to West Virginia regulation, the remainder of the gross revenues therefrom after deducting specific distribution costs, is the full contribution of the West Virginia consumers towards the costs incurred jointly on account of all gas sold. The cost of the gas exported from the state is thus the Company's total production, transmission and general expenses after crediting this remainder of the revenue from

local distribution of gas after deducting specific distribution costs."

Schedule No. 2 sets forth the plant costs, revenues and operating costs which are taken from the other accounting exhibits. Schedule No. 2A shows the gas service revenues other than interstate sales and the specific costs which have

—5—

been deducted. Return is computed at an assumed 6% on net original cost of distribution plant, including an allowance for working capital.

Schedule No. 1 shows the annual average rate of return earned at 12.18% on the total base as compared with 12.53% on the interstate base, shown by Schedule No. 2. The difference in return earned and the rate is $104,535, representing the return on distribution plant included in Schedule No. 2.

Washington, D. C.
June 2, 1941.

EDWARD L. DUNN,
Examiner in Charge of Field Assignment.

Approved:

W. E. BAKER,
Chief Accountant.

CHAS. W. SMITH,
Chief, Bureau of Accounts, Finance and Rates.

Exhibit No. 90—Dunn

Docket G-113

Schedule No.

HOPE NATURAL GAS COMPANY

Rate of Return Earned on Original Cost Base
Years 1937 to 1940, Inclusive

	Year Ended December 31				4 Year
	1937	1938	1939	1940	Average
Original Cost of Gas Plant in Service	Same as	$54,022,699	$54,020,330	$55,174,551	$54,310,07
Reserves for Depreciation and Depletion	1938	24,807,523	25,423,364	26,076,378	25,278,69
Net Original Cost		29,215,176	28,596,966	29,098,173	29,031,37
Working Capital		2,250,000	2,250,000	2,250,000	2,250,00
Original Cost Base	$31,465,176	$31,465,176	$30,846,966	$31,348,173	$31,281,37
Net Operating Revenues	$ 4,111,672	$ 2,133,121	$ 3,874,557	$ 6,382,247	$ 4,125,39
Examiners' Rate Adjustments:					
Exploration and Development Costs	501,076	612,242	500,344	407,920	505,39
6% Interest on Unoperated Acreage	35,063	35,063	35,063	35,063	35,06
Adjustment of Gas Plant Held for Future Use				6,619	1,65
Amortization of Rate Case Expenses	125,000	125,000	125,000	125,000	125,00
Adjustment of Income Taxes	(282,315)	(17,515)	(191,521)	(912,313)	(350,91
Return Earned	$ 3,732,848	$ 1,378,331	$ 3,405,671	$ 6,719,958	$ 3,809,20
Rate of Return Earned	11.86%	4.38%	11.04%	21.45%	12.18%

( ) Denote red figures.

Docket G-113

Schedule No. 2

HOPE NATURAL GAS COMPANY

Rate of Return Earned on Original Cost Base, Exclusive of Distribution Plant, Using Company Method

Description	1937	1938	1939	1940	Average 1937-1940
(a)	(b)	(c)	(d)	(e)	
Original Cost of Gas Plant in Service, Exclusive of Distribution Plant	Same as 1938	$51,207,621	$51,099,024	$52,064,557	$51,394,706
Reserves for Depreciation and Depletion		23,501,356	24,072,167	24,683,271	23,939,538
Net Original Cost		27,706,265	27,026,857	27,381,286	27,455,168
Working Capital		2,100,000	2,100,000	2,100,000	2,100,000
Original Cost Base for Interstate Sales	$29,806,265	$29,806,265	$29,126,857	$29,481,286	$29,555,168
Operating Revenues from Interstate Business					
The East Ohio Gas Company	$12,757,670	$11,157,537	$12,359,500	$14,725,648	$12,750,089
The Peoples Natural Gas Company	1,244,635	1,019,044	1,371,757	3,457,207	1,773,161
The River Gas Company	115,725	77,915	83,174	137,151	103,491
Fayette County Gas Company	267,531	263,966	264,725	270,618	266,710
The Manufacturers Light & Heat Company	1,425,050	1,258,602	787,738	706,131	1,044,380
Total Interstate Revenues	$15,810,611	$13,777,064	$14,866,894	$19,296,755	$15,937,831
Operating Revenue Deductions, exclusive of Specific Distribution Costs					
Natural Gas Production	$ 1,106,896	$ 1,367,877	$ 1,135,864	$ 1,214,307	$ 1,206,236
Other Production Expenses	8,160,524	7,671,133	7,630,871	8,493,753	7,989,070
Transmission Expenses	1,697,806	1,603,809	1,432,856	1,761,019	1,623,872
Administrative and General Expenses	913,999	886,828	808,908	839,506	862,311
Depreciation	1,346,945	1,262,391	1,214,641	1,423,863	1,311,960
Amort. and Depl. of P. N. G. L. & L. R.	40,704	31,408	36,772	57,084	41,492
Amort. of Other Limited-Term G. I.		813	6,369	5,996	3,295
Taxes	1,318,110	1,001,688	1,227,674	2,034,284	1,395,439
Total	$14,584,984	$13,825,947	$13,493,955	$15,829,812	$14,433,675
Examiners' Rate Adjustments					
6% Interest on Unoperated Acreage	$ 35,063	$ 35,063	$ 35,063	$ 35,063	$ 35,063
Exploration and Development Costs	501,076	612,242	500,344	407,920	505,395
Amortization of Property Reclassification and River Rate Expenditures	125,000	125,000	125,000	125,000	125,000
Other Revenue	(85,260)	(62,645)	(68,695)	(107,171)	(80,943)
Adjustment of Federal Income Taxes	(282,315)	(17,515)	(191,521)	(912,313)	(350,916)
Adjustment of Gas Plant Held for Future Use				6,619	1,655
Revenue from West Virginia Sales	(2,697,396)	(2,019,825)	(2,329,716)	(2,696,120)	(2,435,764)
Total Examiner's Rate Adjustments	$(2,403,832)	$(1,327,680)	$(1,929,525)	$(3,141,002)	$(2,200,510)
Net Operating Income from Interstate Sales	$ 3,629,459	$ 1,278,797	$ 3,302,464	$ 6,607,945	$ 3,704,666
Rate of Return Earned	12.18%	4.29%	11.34%	22.41%	12.53%

( ) Denote red figures.

24. TESTIMONY OF COMPANY WITNESS LORING L. TONKIN AS TO ABILITY OF THE COMPANY TO MEET WAR DEMANDS, SATURDAY, JULY 12, 1941, RECORD PAGES 5764 TO 5771.

—5764—

By Mr. Cockley:

Q. Mr. Tonkin, have you in mind any other capital expenditures made by the Hope Company during these years other than those set forth in these, as related directly to your present production, transmission, and general property as set forth in this exhibit? A. Yes, we have. These would be our normal expenditures, but we have in mind, as I told you, on this year's budget, I had another $100,000 that I haven't had approved, but I have already authorized the expenditure.

We are finding ourself in a rather peculiar situation. Our normal sales of gas of the Hope system go around

—5765—

52,000,000,000 feet of gas a year. I think around 51,500,000,000. The average for the last 10 years has been slightly under 50,000,000,000 feet, and that has been running along for years.

You take the 20 year average. We have settled in our own mind that a normal year for the Hope Company is right around 52,000,000,000 feet sales.

Now, we come to the point where our sales in 1940, due largely to increase in industrial sales due to the emergency for the preparedness program, have jumped very rapidly, far beyond what we could have anticipated for gas reserves and gas supplies.

In other words, in 1940 we sold approximately 65,000,000,000 feet compared to a normal year of less than 52,000,000,000.

Q. Now, you are not including in any of these figures the sales by the old Reserve Company? A. Anything I am talking about today does not include anything in the Reserve Gas Company property.

Q. All right. A. As I say, in 1940 we actually sold almost 65,000,000,000 feet. Just slightly under 65,000,000,000, and in 1941 it looks like we are going to sell in excess of 70,000,000,000 feet.

Now, when you jump from 52,000,000,000 to 70,000,-

—5766—

000,000, within a year and a half, or two years, you might say, you are drawing on your reserves more than we could have foreseen several years ago and, therefore, we have to do something else to replace that if we are going to take care of our customers.

Q. Is it possible for you to replace that gas in West Virginia? A. It is not.

Q. What is going to be your situation as to supply in West Virginia, assuming that that demand that you have spoken of is maintained? A. Well, the supply in West Virginia is at its peak right now as far as any gas the Hope Company can get its hands on.

The Oriskany field in Kanawha county, rock pressure is dropping off.

This summer we have not been able to get accurate figures on it, but I would say the rock pressure was dropping off from a pound and a half to two pounds a day in the Oriskany field in Kanawha county.

Everybody is drawing on it. We are drawing very heavily on it, United Fuel and other people.

—5767—

Q. What do you estimate you will get out of the Oriskany Field this coming winter? A. We expect to get probably 72, maybe 75 million feet of gas a day out of that Oriskany Field in Kanawaha County.

Q. You mean a peak delivery of approximately that? A. No. We are taking better than 80 million right today out of it.

Q. This coming winter you expect that to drop to 72 million? A. That will drop to 72, and we hope it will hold up to 75.

Q. And how much can you count on for the following winter? A. The following winter the best we can judge—we have had our superintendents out watching the decline all around—and we will not get out of that field, in my estimation, over 30 or 35 million feet a day the year after this winter we are coming to.

Q. Now, Mr. Tonkin, what is your solution of this problem? A. Well, the solution of the problem—and we have already started on it—and that is where my hundred thousand dollars comes in—we have started a survey from Cornwell Station down through that part of West Virginia,

southern West Virginia, through the entire state of Kentucky, the entire state of Tennessee, the entire state of Mississippi, the corner of Arkansas, in northern Louisiana, with a survey. We have eleven crews on the job now and have been on the job since early in May.

The survey is either half or a little over half completed. Right of way crews are right with the surveyors, and we are for a prospective line to Louisiana, making that survey and later drawing on the fields—that is, northern Louisiana; I am speaking of Monroe, Louisiana, field—and later drawing on the gas from East Texas and the Gulf Coast of Louisiana, where there are enormous resources of gas in that region.

Q. Well, how far, at present, are you contemplating building that line? A. The line will be approximately 826 miles long, 20 inches in diameter and built for high pressure.

Q. Built for high pressure? A. Yes.

Q. And what do you estimate that line will cost? A. Approximately 25 million dollars, if we stop at Monroe, Louisiana, field.

Q. And that includes, I presume, the compressor stations and the other appliances that are necessary to put

—5769—

the line into effect. A. That includes the compressor stations, the five relay stations, and one field station on that line, a total of six at the present time.

Q. Will you tell me what the fact is as to whether or not you are building that line in order to serve markets other than those that you are now serving, your company and your affiliated companies? A. No. We are building that line to serve the markets of our customers. The fact of the matter is we have been thinking of this line for some time, but we did not think we would have to build it for another five years, but this severe demand upon us, that we have struck in the last year and a half, you might say, and apparently is continuing on through '41, due to the emergency of the preparedness program, has drawn down on our reserves for peak loads, I might say—that we find that we have got to jump ahead of ourselves if we are going to supply our customers.

In other words, we have been through this period once before. After the last world war, during the world war and shortly after, we had enormous demands upon the Hope Company for a supply of gas, due chiefly to industrial war demands, you might say.

We depleted our reserves very rapidly in those days and from 1919 to 1925 we had to spend, on account of this depletion, or the lessening of our ability to deliver—as

—5770—

maybe you better word it—we had to spend between 7½ to 8 million dollars over and above our normal capital expenditures, to go to southern West Virginia, to replenish our gas supply.

Now, that was caused by depleting our supplies, due to the war period.

Now we are facing identically the same thing today. If this emergency keeps up we are going to have to do something but the supplies are not available in West Virginia. Therefore we have investigated Kentucky.

There is a lot of shale gas down there and we have had our geologists down there.

Mr. Tollefson has been down there, and we have had other men down there, and there is not enough gas available in Kentucky at a reasonable price.

In other words, we figure it will cost us more to get it up from Kentucky than it will from Louisiana, so Mr. Tollefson has been many weeks in Louisiana investigating it with other geologists, and we have decided that, if this emergency keeps up the only thing to do is to go on through to Louisiana with the idea of later drawing on East Texas and Southern Louisiana for gas.

Q. At the present time the reserves in Louisiana are ample for— A. (Interposing) At the present time,

—5771—

around in the Monroe field, they are ample for a few years, but eventually we would have to receive gas from East Texas and southern Louisiana, where the reserves are— well, they are as big as the ocean, I guess.