some 275 small buildings that were in there, and so on? A. I don't think we have, Mr. Cockley, but someone else can cover the details of that.

Q. But your view is that it is some evidence of the original cost and therefore some evidence of present value of all the property, and not merely of that part of the property that is included? A. That is right.

Q. And as of what date do you think this is evidence of value? A. As of December 31, 1938.

Q. You recognize, do you not, that you have in here costs incurred from the period 1898 down to 1938? A. That is correct.

Q. Forty years? A. That is correct.

Q. You recognize, do you not, that the price levels in that period have substantially changed? A. Yes, I recognize that; I recognize many other things also.

Q. And you recognize that the price level that prevailed prior to the first World War is about half the price

—2816—

level that has prevailed since that? A. No, I don't recognize that. I think we had better get a graph of prices if we are going into that. After the depression you know we went back I believe to the 1913 levels, so far as general prices are concerned.

Q. Do you really believe that as to the items that enter into the cost of a natural gas plant, do you think we went back to the 1913 levels in labor costs? A. I think that the gross cost, the original cost of these properties, was far higher than any conception of value as of 1938 on a strictly value basis, because the inexorable law operating is depreciation and depletion, there can be no question about that.

These properties, like all physical properties, are on the irresistible march to the junk heap. All physical property is in the same category. As they get older, depreciation occurs, and as you use up the gas, depletion occurs.

Those are the things, I think, which are of primary importance.

Q. Well, you started with this original cost and then you have taken all that off, haven't you? A. I think it ought to be taken off.

Q. Well, I understand— A. (Interposing): But were we talking about original cost only, in your question.

Q. Well, now, Mr. Smith, what I asked you was

—2817—

whether or not you believed that the labor prices prevailing in 1931 and 1932 were as low or lower, the ones entering into construction of a natural gas plant, than they were in 1913?

Mr. Springer: We don't have any evidence in this case on the trend, on the variation in labor prices, and if it weren't for the fact that this is in a field in which Mr. Smith has taken a great interest and a hobby, I would object; but I would be glad to have him answer it.

By Mr. Cockley:

Q. Just answer the one question? A. You can't answer the question categorically, Mr. Cockley, for this reason, that while the hourly rate of labor has gone up, the efficiency has improved, and I don't know whether the real wage, that is the real cost, has gone up or gone down. In some industries it has gone up and in some it has gone down. I don't know enough about the natural gas industry at this stage to say, other than that I have made some tests and I find that there has been a substantial increase in the labor efficiency in the case of the Hope Natural Gas Company.

Q. Is it your testimony that a laborer in West Virginia in 1932 or during the depression, or at any time since, could dig as many yards of dirt out of the ground as one in 1913? A. He could dig more. Let's change the date of 1913; take the period 1900 to 1913, and he would dig more in 1932.

—2818—

Mr. Cockley: That is all.

Trial Examiner: Does counsel for the City of Cleveland have any questions?

Mr. Reeder: No questions.

Trial Examiner: The City of Toledo?

Mr. Nathanson: No questions.

Trial Examiner: The Pennsylvania Commission?

Mr. Keenan: No questions.

Trial Examiner: The West Virginia Commission?

Mr. Goldsmith: No questions.

Trial Examiner: Is there any re-direct examination?

Mr. Springer: Yes.

RE-DIRECT EXAMINATION by Mr. Springer.

Q. If the management makes elections, Mr. Smith, under acceptable accounting principles, and expenses an item, should it later be permitted to capitalize that same item retroactively? A. No, sir.

Q. If such permission were granted, would there be any integrity to accounting? A. There would not be, in my opinion.

Q. If such permission were granted, could it not be possible that with every change of management there would be a retroactive revision of accounts?

Mr. Cockley: I object to that; there is no question

—2819—

here about changing accounting. I object to further questions based on the assumption that there is.

Mr. Springer: That happens to be the conflict here, on principles of accounting.

Mr. Cockley: No, it isn't, it is just your conception of it. We are not here asking for permission to change our accounts in any respect.

Mr. Springer: Only to capitalize $17,000,000 that were not formerly capitalized by the election of management under acceptable principles of accounting.

Mr. Cockley: We are not asking to do any such thing. All we did in the exhibit was to show the dollars we spent in drilling the 2600 wells, in addition to the 700 that were on our books.

Trial Examiner: I think I understand the position of counsel. Counsel for the company, of course, claims it is not in issue; and counsel for the Federal Power Commission claims that it is. Well, that makes it in issue, as far as I am concerned. The objection is overruled.

Mr. Springer: Will you please read the question?

(Whereupon the pending question was read by the reporter.)

The Witness: That would be perfectly possible.

By Mr. Springer:

Q. And would it be proper? A. It would not be proper.

—2820—

Q. Mr. Smith, is there a relation between the plant accounts and the income statement? A. There is a direct relationship.

Q. They are inseparable, aren't they? A. They are indeed.

Q. And you would get a distorted picture if you looked at only plant accounts without also considering the related income statement, that is, the treatment of income and expense, isn't that so? A. That is correct.

Q. If the company were permitted to capitalize retroactively items which it had formerly expensed, in a rate case, would not multiple charges against the consumers result?

Mr. Cockley: I object to that; it is just going over the same old ground again.

Mr. Springer: This is new ground.

Mr. Cockley: Oh, no, it isn't.

Trial Examiner: Why wasn't it gone into to begin with, on direct examination?

Mr. Springer: Mr. Cockley opened this up on cross examination, Mr. Examiner.

Mr. Cockley: No, I didn't, the witness volunteered a statement.

Mr. Springer: It will only take me two more questions, Mr. Examiner.

—2821—

Mr. Cockley: Well, the question is just improper, whether it takes two more questions only, or not.

Trial Examiner: The objection is overruled; proceed.

The Witness: It would be purely a question of fact. If they are allowed as expenses and then put in plant and allowed again, of course there is duplication.

By Mr. Springer:

Q. There would be a return on the former items that were expensed if they were put into plant, isn't that so? A. Obviously if they are allowed both places, there is duplication.

Q. And in addition to that return on a capitalized former expense item, there would be an additional expense for depreciation, would there not? A. That is correct.

Q. Which makes three times the consumer pays for—

Mr. Cockley (Interposing): I object to that.

By Mr. Springer:

Q. In your definition of original cost, in your discussion of the principles of accounting, I believe you concluded that your idea of original cost is the same for accounting and for rate making purposes? A. That is correct.

Mr. Springer: That is all.

Trial Examiner: Is there any re-cross examination?

—2822—

Mr. Cockley: Yes.

RE-CROSS EXAMINATION by Mr. Cockley.

Q. When you were answering Mr. Springer you said that if items were allowed as operating expense, they shouldn't be subsequently capitalized. Do you mean "allowed" as a matter of making rates, or as a matter of bookkeeping for the company? A. I tried to make it clear that if they were allowed both places there would be duplication. If they are not allowed, regardless of how they are accounted for, there may not be duplication.

Q. You mean allowed in fixing rates? A. Yes, sir. I mean to say that if you allowed an item as expense in fixing rates, and later that is allowed as capital plant, on which a return and depreciation is allowed, there is duplication, it is obvious duplication.

Q. And you are confining your answer now to fixing rates? A. Yes, sir.

Mr. Cockley: That is all.

RE-DIRECT EXAMINATION by Mr. Springer.

Q. Well, you aren't confining your answer to fixing rates by a regulatory body, are you; I mean the management itself fixes rates, and has many times, before regulation—

Mr. Cockley (Interposing): I object to this argument

—2823—

with the witness; he isn't asking a question.

The Witness: I think that is the substance of my testimony this morning.

Mr. Cockley: After we have examined today's transcript we may have a few more questions of Mr. Smith, I don't know, but I would like to reserve that right if it proves necessary.

Trial Examiner: I presume there is no objection to that, is there?

Mr. Springer: No.

Trial Examiner: The hearing is recessed, to reconvene tomorrow morning at 9:30 in the Commission's Hearing Room on the second floor of 1757 K Street, N. W., Washington, D. C.

(Whereupon, at 4:45 p. m., the hearing was recessed until 10 a. m., Wednesday, April 23, 1941.)

10. TESTIMONY OF COMMISSION WITNESS JOHN W. PACE AS TO DETERMINATION OF ADJUSTED BOOK COST, WEDNESDAY, APRIL 23, 1941, RECORD PAGES 2861-2863, 2871-2873, 2877-2893, 2895-2899, 2903-2911, 2941-2949, 2953-2957, 2964, 2972-2974.

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Whereupon, JOHN W. PACE, called as a witness on behalf of the Commission, being duly sworn was examined and testified as follows:

DIRECT EXAMINATION by Mr. Springer.

Q. Mr. Pace, will you state your full name and position, please? A. John W. Pace, senior examiner of accounts for the Federal Power Commission.

Q. Will you state your qualifications, please, starting with your education? A. I attended grade and high school in Terrell, Texas.

I attended the Metropolitan Business College in Dallas, Texas, where I completed a one-year accounting course.

I also attended a private school in Dallas, Texas, conducted by a chartered accountant, where I studied general accounting for five years.

My experience, in general, has been as follows:

In 1918 I was employed by the Texas Power and Light Company in the Accounting Department where my duties involved handling of cash receipts, consumers' ledgers and material and supplies records.

For the period 1919 to 1923 I was employed by the

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Middle West Utilities Company. I was employed first as assistant treasurer and district auditor of all the southwestern properties belonging to this company. Later, I was advanced to treasurer and general auditor. The duties in this position were supervision of all accounting and re-

sponsibility for all financial matters. The properties under my supervision consisted of 20 corporations, including gas, light, water, traction and ice companies.

In 1924 I was employed for a short time by H. M. Byllesby Engineering Corporation. My duties with this company were auditing gas properties located in Oklahoma and Arkansas.

From 1925 to 1935 I conducted my own commission business in Dallas, Texas. This business consisted principally of appraisals of city property, financing homes, and buying and selling of oil properties located in the East Texas oil fields.

From 1936 to 1941 I have been employed by the Federal Power Commission as an Examiner of Accounts.

Q. Mr. Pace, will you state briefly your responsibility in the preparation of the two-volume original cost work marked for identification as Exhibits 57 and 57-A? A. Well, I was directly in charge of all the detailed work in connection with assembling the figures in this report.

Q. Now referring to the written statements in this two-volume work, and the supporting schedules, if appropriate questions were presented to you, would your answers be, in

essence, and your direct testimony, that which is contained in the two-volume work? A. Yes, they would.

Mr. Springer: Mr. Examiner, I offer in evidence at this time the exhibits marked for identification as 57 and 57-A, being the original cost of gas plant as at December 31, 1938, for the Hope Natural Gas Company.

Mr. Cockley: I want to object to these exhibits as not being a statement of the original cost at all. If they are offered for that purpose, I object to them. If they are offered as an adjusted book cost, for whatever relevancy that would have, I will not object; but as an offer of original cost, I object to them.

It has been proved beyond any controversy, by the admissions of the witness the other day, that the figure in here is an adjusted book cost.

Mr. Springer: It was also proved by Mr. Smith, on examination of his definition of original cost and the principles of accounting that applied in this case, that this two-volume work is precisely offered as the original cost of the Hope Company's properties as of December 31, 1938, and that is the purpose for which I offer it at this time.

Trial Examiner: Well, it seems to me that that is something which might well be taken up in the briefs. The objection is overruled.

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CROSS EXAMINATION by Mr. Cockley.

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—2871—

Q. Now your schedule 1 on page 10 is the final summation of all these new plant accounts you are going to set up for the Hope Company, is that right? A. Yes, sir.

Q. Which are taken into the original cost? A. Yes, sir.

Q. I don't know that it is necessary to go over it again because Mr. Smith was over it yesterday, but isn't it a fact that what you did was to start with these various accounts as re-stated, start with the cost shown on the company's books, in column (d), and recognize the reclassification insofar as it was proper by the company, in columns (e) and (f), and arrive at a cost per books that merely reclassified these accounts? A. That was our starting point, yes.

Q. And the dollars in the reclassified book costs are just the same as the dollars in the book costs as set up originally? A. Yes, sir.

Q. That was just transferred from one account to another, all of them being shown on your page here, is that not so? A. Yes, sir.

—2872—

Q. And then you made adjustments both up and down in those, for various reasons, and arrived at a figure that is an adjustment of that book cost, shown in column (d), is that not so? A. In one sense, yes. However, we of course know that that is not on the company's books, it is what we have determined as being the actual cost.

Q. Well, now, Mr. Pace, did you listen carefully to my question? I did not suggest, did I, that the $51,207,000 is on the company's books. There isn't any doubt, is there, but that what is recorded on the company's books at the present time is $53,306,000-odd, is that not so? A. That is correct.

Q. And your $51,000,000 is an adjustment that you have made of that figure of $53,300,000, is it not?

Mr. Springer: Would it be more understandable to him if you said net adjustment?

Mr. Cockley: I don't know, if he wants to say it was a net adjustment—

Mr. Springer: (Interposing) Of course there were additions and deductions in the adjustment.

Mr. Cockley: Of course.

The Witness: And that is the result of the net adjustments to those book figures.

—2873—

By Mr. Cockley:

Q. And am I further correct that all the subsequent schedules appearing in the rest of volume 1, and all that appear in volume 2, are merely supporting details for that figure? A. Yes, sir.

Q. And do you agree—I assume you do—with the statement made by Mr. Smith yesterday, that where you have used in here, investment in gas plant "per books," and at other places have used "book cost" or, as you do on schedule 2, "capitalized cost per books," that those

all mean the same thing and in total refer to the item of $53,307,000? A. Yes, sir, that is correct.

Q. And where you use those same expressions and say "as adjusted," they mean the total of $51,207,000? A. That is correct.

* * * * *

—2877—

Q. Well, regardless of the reasons, the fact is that you didn't make any investigation of the work orders, or any

—2878—

analysis of the work orders and the vouchers and the records of the prior utility, where they were available, to try to find out how much money the company drilling those wells had actually spent for drilling them, is that not so? A. No, sir, we didn't try to determine how much money they spent in drilling wells.

Q. And you did not at any time attempt to make any estimates of the amount they originally spent for drilling those wells, did you? A. No, sir, we don't go by estimates.

Q. What? A. We don't go by estimates.

Q. And you didn't go by estimates at any time in this so-called original cost study, did you? A. Not by estimates, no, sir.

Q. And you threw out every estimate that had been made of original cost where it couldn't be accurately determined from an analysis of vouchers and work orders and other records, is that not so? A. I don't think that we threw them all out, in the case of the prior utility acquisitions.

Q. Will you prepare for me a list of them that you didn't throw out? A. Well, I think most of the amounts that are recorded as prior utility costs were arrived at by estimates.

—2879—

Q. What is that? A. I think most of the amounts that are recorded as prior utility acquisitions, represent

estimates, and were estimated at the time the acquisition was made, according to the inventories that are attached to those vouchers.

Q. Were estimated at the time the acquisition was made? A. Yes.

Q. You mean 50 per cent of them or more, is that what you mean by "most of them"? A. Well, I would say more than that, because the vouchers that I examined all had an inventory attached to them, and from the notations shown thereon would indicate that all of them were estimated with the exception, maybe, of the Clarksburg Light & Heat.

Q. You are talking now about the vouchers of the Hope Company, are you not? A. Yes, sir.

Q. My point is that you did not analyze or attempt to analyze any of the vouchers, work orders or other records or data, of the utility that first devoted that property to public service, and from whom Hope purchased it as utility property, is that not so? A. We made an attempt to examine some of their records, but there were so few of them submitted to us that it was useless, so we gave up.

—2880—

Q. Well now, Mr. Pace, do you say that there wasn't submitted to you every record which the Hope Company had or could obtain, in its possession, and if there were records that they had or could obtain, and didn't submit them, will you tell me what they were? A. I didn't say that, I think they submitted to us all they had, but I don't think they ever had them.

Q. And in the absence of those vouchers of the company first devoting the property to public service, did you make any estimates at all as to the drilling costs or other costs? A. No, sir.

Q. Or as to the amount of money properly spent by those companies in acquiring that utility property, or in constructing it? A. No, sir, we accepted the company's estimate.

Q. Well, what you mean is that you accepted the figures that appeared on the Hope Company's books or records? A. Yes, sir.

Q. And in the case of well construction that was zero because they had no estimate? A. That is right.

Q. In the original records? A. That is right.

Q. And what I am asking you is that you did not at any time attempt to go back and determine the cost to the

—2881—

utility first devoting that property to public service, did you? A. No, sir. There is one exception there, that they did show well drilling cost in the acquisitions, and I think that was in the amount of approximately $160,000 which the Hope Company expensed at the time of acquisition. They did not put it in plant accounts.

Q. What did you do with it? A. We left it right there.

Q. By "leaving it right there," you mean you didn't put it in plant accounts either? A. No, sir, we left it right there in expense.

Q. Let me see if I understand what you have just said. You have said that although the plant accounts of the utility that first devoted that property to public service showed the drilling expense for those wells acquired by Hope of $160,000, when Hope acquired it, it charged that to expense, and you did not restore it—do I misunderstand you or is that what you said? A. I don't believe I said that the vendor reflected that in their plant accounts. That amount was included in the purchase price of that property. Now whether it was reflected on the vendor's books in plant accounts or expense accounts, I don't know, but it was considered in the purchase of the property and was charged to expense in the Hope books.

Q. Well, the truth is that you didn't investigate the

—2882—

plant accounts of the company first devoting that to public service, to see whether to charge it to expense or whether to capitalize it, did you? A. I don't think those books were available.

Q. And in the absence of their availability, you made no estimate of it? A. No, sir.

Q. And your statement is, as I understand it, that Hope paid $160,000 on account of those drilling costs? A. In one particular case they did.

Q. In one particular case? A. Yes, sir.

Q. But that you did not include it in your statement of original cost because Hope subsequently charged that to operating expense instead of to capital account, is that right? A. Yes, sir, that is correct.

Q. You did not, in any case, consider it necessary to apply Instruction 2(C) of the Code of Accounts which you were following which states:

> "Detailed gas plant accounts 301 to 390 inclusive shall be stated on the basis of cost to the utility of plant constructed by it and the original cost estimated if not known, of plant acquired as an operating unit or system."

Is that right? A. We considered that instruction, of

—2883—

course, in determining our cost, but I don't believe that the instruction ever intended the accountants to do any estimating.

Q. Well, your view is that that contemplated that the engineers would make the estimate and furnish it to the accountants, is that it? A. No, my understanding is that it is up to the company to make the estimate and submit it to us.

Q. Well, isn't that exactly what Mr. Antonelli did? A. Well, of course in that one particular case we are discussing, I don't think he made any estimate there, I don't think it was necessary.

Q. Well, as a matter of fact, didn't he make estimates wherever he couldn't, from original records, analysis of original records and vouchers, find the actual dollars paid; didn't he make some estimates, where necessary, of drilling costs? A. Yes, sir.

Q. Didn't he make some estimates of overheads? A. Yes, sir.

Q. Aren't they all contained in Exhibit 20? A. Yes, sir.

Q. And wasn't that submitted to you and before you when you made this? A. Yes, sir.

Q. But you didn't either accept any of those estimates or check them, or use them in any way, did you? A. No,

—2884—

sir.

Q. Did your engineers in the Commission ever furnish you with an estimate of any kind, of any of those items? A. They didn't supply us with an estimate of those items, no, sir.

Q. Well, of any items that entered into this $51,200,000 you arrived at? A. I don't believe that there is anything in that, which represents estimates, no, sir.

Q. Did you ever request any of your engineers to give you an estimate of drilling costs or overheads, or any other items, the exact amount paid for which you could not determine from an analysis of the records of the company constructing that property? A. I don't believe that we did.

Q. Well, you know you didn't, don't you? A. Not that I remember of, at the present time; I don't think that we did, no, sir.

Q. Now as a matter of fact, as to these well accounts, Mr. Antonelli had determined the amount of dollars actually expended by the company first devoting this to public service, whether it was the Hope Company or a predecessor company, in the great bulk of those cases, had he not, and estimated it only in a relatively small number, compared to the entire item? A. Yes, sir.

—2885—

Q. Now let's come to the wells drilled by the Hope Company itself, and distinguished from those it purchased.

—2886—

To shorten this, isn't it a fact that as to all money spent by the Hope Company prior to 1923, which was not capitalized in its plant accounts, and represented the construction cost of wells drilled by it, you did not include any of that in your statement of original cost, did you? A. No, sir, we did not.

Q. It is not included in the $51,200,000? A. No, sir.

Q. Did you make any check of Mr. Antonelli's statement of original cost of drilling Hope's own wells, to see whether or not his statement of original cost was correct or not, his statement of the money spent in drilling those wells was correct or not? A. We checked a large part of it. I don't know whether we checked every bit of the well drilling costs or not, but we did check quite a number of wells.

Q. And you found his costs, as stated, to be correct in those cases? A. Yes, I think in most all cases it was exact.

Q. He had, for practically all of the Hope's own drilled wells, the original work order, did he not? A. Yes, sir.

Q. And the vouchers? A. Yes, sir.

Q. Which would show exactly how much money was

—2887—

spent for well equipment and how much for well drilling, and what it was, and all about it; didn't he? A. He had the records that were in support of the charges on the various work orders. Just how far in detail they went, I couldn't say from memory.

Q. So that you knew that the company had spent the dollars that he showed, when they originally drilled the wells of the Hope Company, did you not? A. Yes, I think that is right.

Q. Now in this Account 332.1, will you tell me how many wells were included in the inventory, including both those purchased by Hope Company from any source, and those drilled by the Hope Company? A. The total number of wells?

Q. Yes. A. At December 31, 1938?

Q. Yes. A. I think it was approximately 3300 or 3400.

Q. Approximately 3300, wasn't it? A. Something like that, yes, sir, approximately.

Q. And those wells were all in use, or were connected with the system on December 31, 1938, and were accepted in the inventories of the property, were they not? A. Yes, sir.

Q. Now in your Account 332.2, which is right below,

—2888—

the well equipment account, will you tell me how many wells are included in that account? A. The equipment?

Q. The equipment account—that includes 3300, all of them, doesn't it? A. That includes all the wells in service.

Q. Will you tell me how many wells are included in the item right above it of 4,000,000-odd dollars, which you set up for the well construction account? A. I believe it was 772.

Q. Less than 800 of the 3300 wells you show in your so-called original cost the amount spent for drilling them, is that right? A. Yes, sir.

Q. Stated the other way, there are nearly 2600 wells for which your figure contains not a dollar for drilling costs, isn't that a fact? A. Yes, sir, that is correct.

Q. And for all of the 2600 wells, or approximately that, that were omitted, that were drilled by the Hope Company, at least, you had available a perfectly accurate record of the amount of dollars the company had spent in drilling or constructing those wells, did you not? A. Yes, I think so. We didn't examine all of them.

Q. And if you had been instructed to include in your

—2889—

figures the actual amount of money that the company first devoting this property to public service had spent in drilling and constructing these wells, you would have had, in your adjusted figure on the right-hand column (J), page 10, substantially the same amount as Mr. Antonelli, would you not?

Mr. Springer: I object. His instructions didn't encompass that, as has been testified to by Mr. Smith and by himself, and why put a hypothetical question to this witness? He hasn't testified to the accounting principles. Mr. Smith is the expert on accounting principles.

Mr. Cockley: Well, of course this question goes to the accuracy of the figures. I want to see if there is any dispute about Mr. Antonelli's figures. This is the man that I have understood is responsible for the figures and who has checked them, and knows whether they are right. What I have said to him is, if he were setting it up on the same theory as Mr. Antonelli, if he wouldn't have had substantially the same figure that Mr. Antonelli had.

It is a perfectly proper question.

Trial Examiner: The objection is overruled.

The Witness: Please read the question.

(The question was read by the reporter.)

By Mr. Cockley:

Q. Well, perhaps that isn't a fair way to ask it. I will change it to read this way:

—2890—

If you had been instructed to do what I have said in that question, you would have had, for Account 332.1, substantially the same figure as he had, would you not? A. Yes, sir, our figures would probably have been the same. I think his figures are correct.

Q. I mean, you don't make much question about the accuracy of his figures? A. No, sir, I don't.

Q. The whole dispute is the question of whether or not they are a part of the original cost or whether they are not, is that right? A. Yes, sir.

Q. Thank you.

Now in various of these accounts—I will not take you through them in detail—but there were overheads that Mr. Antonelli, or for which Mr. Antonelli did not have original records, and for which he made estimates, is that not so? A. Yes, sir.

Q. And he has included them in his figures, and you have not included them in any of yours? A. That is correct.

Q. Now I suppose there would be no dispute that a proper amount of overheads is necessary and is permissible to be added to the direct cost of materials and labor, and capitalized in the account, is that not so? A. Well, our

—2891—

system of accounts provides for a reasonable amount to be attached to cost so long as it is in accordance with good accounting.

Q. Did you make any estimates at all of overheads to be applied, properly applied, to these various accounts? A. No, sir.

Q. So that you didn't form any opinion, one way or the other, as to whether Mr. Antonelli's overheads were reasonable or not, his estimate of overheads were reasonable or not? A. Well, we did form some opinion in that respect inasmuch as we wouldn't agree with certain amounts that he excluded from his estimates.

Q. You wouldn't agree to certain amounts that he excluded from his estimates? A. Yes, in arriving at his ratios. I mean, certain amounts that he has excluded from his total expense in order to arrive at the ratio of the amount to be charged to construction.

Q. Well, just where was your difference with him, what did you investigate and what use did you make of overheads? A. Well, we didn't make any estimates; we merely made a check of what he shows here in his Exhibit 20, and in that respect we couldn't agree with him in some of his figures.

Q. Well, what do you think he excluded that he should

—2892—

not have excluded? A. Well, in arriving at his ratio between the operating expense and construction cost, he excluded from his operating expense gas purchased for resale; gas used for compressor station operations; depreciation and amortization items; and taxes other than payroll taxes—these items were excluded from the total expenditures that the overheads were applicable to, which states that they were applicable to all operating expense with the following exceptions that I have just read, plus the total gross additions to investment.

I don't know that we would agree altogether with that basis of distribution of those costs.

Q. Well, what basis would you take? A. Well, it seems to me that part of the overhead costs should apply to the items that he has excluded. There probably wouldn't be a great deal of difference, but then there would be some.

Q. Well, how much difference would it make in the percentage; what percentage did he arrive at finally? A. Well, this page is full of them, I don't know which one you have reference to.

Q. Well, what was the over-all picture, or which one do you think ought to be changed? A. I don't believe there is an over-all percentage shown on this page, it is broken down between general overheads, purchasing, land,

—2893—

payroll, and so forth, and each one of them shows individual ratios.

Q. And which one would you change? A. Well, it would probably, to a certain extent, change all of them. I don't know just how much it would change them, because we didn't figure that.

Q. That is the only criticism you have to offer of his estimates of the amounts to be excluded from current expenses for construction overheads, is that right? A. Well, that is the only criticism I have as to his estimate as he made it.

Q. And would the amount you exclude be more or less than he excluded? Are you able to say? A. It would be less, I think.

Q. That is, you think more ought to be included in operating expenses, and less capitalized, is that it? A. It would have that effect, yes, sir.

Q. But you can't say how much less, if any? A. No, I couldn't give you figures.

Q. And on this whole picture, it would make almost no difference at all, would it? A. Well, I don't know just to what extent it would go. I should say that the gas purchase would probably amount to a considerable difference, if it was included.

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—2895—

Q. Well, you think, do you, that $8,000,000 spent for the purchase of gas under these permanent contracts, that every one of those dollars requires as much supervision as it does for dollars spent for labor, for example, in the course of a year? A. Well, I don't know that it would require altogether as much supervision.

Q. Well, you know it wouldn't, don't you? A. I don't believe it would, no, sir, to be frank.

Q. It would be an infinitesimal fraction as much, would it not? A. It probably would, yes, sir.

Q. And if you made your complete adjustments that you are talking about, you wouldn't substantially change

Mr. Antonelli's figure, isn't that a fact, his percentages? A. Well, I couldn't say, I made no attempt—

Trial Examiner: (Interposing) I am not sure that I understand the relationship between the direct testimony of this witness and Mr. Antonelli's figures. Are these figures in columns (e) and (f), headed "reclassification by company," supposed to be Mr. Antonelli's reclassifications and

—2896—

adjustments?

The Witness: Yes, sir, in columns (e) and (f), those figures were determined by Mr. Antonelli.

Trial Examiner: But your adjustments were not based on Mr. Antonelli's adjustments, were they, or on the figures he got after those adjustments?

The Witness: Well, Mr. Antonelli's figures, shown in columns (e) and (f), merely represent a reclassification of the number of dollars that were shown on the books—

Trial Examiner: (Interposing) What I am trying to get at is whether or not you analyzed all Mr. Antonelli's figures to determine whether they were correct or not, and just what bearing that would have on your adjustments?

The Witness: Yes, sir, we examined every one of Mr. Antonelli's adjustments in detail.

Trial Examiner: And you took the results of that investigation into account in making your adjustments?

The Witness: Yes, sir.

By Mr. Cockley:

Q. Well, as a matter of fact, what you did here is merely to accept his adjustments insofar as you approved them, and you eliminated all others, isn't that right? A. Yes, sir; we did examine them, though.

Q. Yes. And you checked and spot-checked them very

—2897—

carefully, didn't you? A. Very carefully.

Q. But your exhibit nowhere shows the items that are included in Mr. Antonelli's adjustments, which you have not accepted, in any way,—or as I would put it, ignored, isn't that right? A. No, sir, it doesn't show them at all.

Q. You have taken merely the part of it that you were willing to accept? A. Yes, sir.

Q. Well, so far as these overheads are concerned, the reason you rejected them wasn't that they were too high, was it, or too low? A. No, sir, it was not.

Q. If you had agreed with them right to the penny, you still wouldn't have added them to your figures in any way, would you? A. No, sir.

Q. Now I want to hand you, Mr. Pace, a paper that I am going to have marked Exhibit No. 59 for identification.

Trial Examiner: It may be so marked.

(The document referred to was marked Exhibit No. 59 for identification.)

By Mr. Cockley:

Q. Now, Mr. Pace, this paper which I have had marked for identification as Exhibit No. 59, attempts to set up on

—2898—

statement 1 here, the original cost as shown in Exhibit 20 of Mr. Antonelli, in the first column of figures, and your adjusted book cost as shown in Exhibit 57-A, and I direct your attention there to Account 332.1, which is the account we have just been discussing, is it not? A. Yes, sir.

Q. And the difference shown of $13,694,000, is in part the drilling cost of wells drilled by the Hope Company, and in part the cost of drilling wells of other utilities purchased by the Hope Company? A. Yes, sir.

Q. And in part overheads? A. Yes, sir.

Q. Is that not so? A. Yes.

Q. We would be glad to have you check these figures, all of them, and if you find any error in them, to have you

report that, because we want an accurate comparison in the record.

Now am I correct, then, that practically all the problems you had in connection with this were where you disagreed in principle with what occurred in that well-drilling account? A. Yes, I think that is the majority of the difference.

Q. I don't mean by that to say that there weren't disputed items in other accounts, but that account illustrates the three things that I have discussed with you where, in

—2899—

principle, you were not in agreement, doesn't it? A. Yes, sir.

* * * * *

—2903—

Q. No, I am talking about this $120,000 of labor that you say you disallowed because they were estimates, and you didn't know how they were made, and I am asking you if it isn't a fact that these represented construction costs and labor costs of lines for which there was no labor cost recorded in plant accounts, so that you know they are other lines, and of course you know they got into the ground in

—2904—

some way, don't you? A. Yes, but that still wouldn't keep me from thinking that there might be a possibility of improper distribution of labor.

Q. Well, it is true that you don't just know now why you did turn it down, isn't that a fact? A. Because I didn't think it was properly supported, it was estimated and I wasn't convinced that the expenditures were made.

Q. And when you came to an item that you didn't think was properly supported, was an estimate, and so on, you didn't go out and determine what the right estimate for that was, did you? A. No, sir.

Q. You just turned it down and didn't use it, isn't that a fact? A. That is right.

Q. As to all the estimates that were submitted to you by Mr. Antonelli, in this account and others, did you have an engineer review those estimates to see whether they were proper or not? A. I didn't, no, sir.

Q. As far as you know, nobody on the Commission's staff reviewed them to see whether they were proper, no engineer? A. Not that I know of myself.

—2905—

Q. At any rate, if they did, they didn't report to you about it, and they are not reflected in any way in your figures, are they? A. No, sir.

Q. Well, you didn't assume to review an engineering estimate yourself and arrive at an opinion as to whether it was proper or not, did you? A. No, sir.

Q. Now, Mr. Pace, I direct your attention to the next group of accounts known as Transmission Plant. I am correct, am I not, that the only sizable items of difference there are $284,000 for compressor station structures; $1,048,000 for mains, which is transmission mains; and $629,000, which is compressor station equipment—is that right? A. Those are the three principal amounts.

Q. And two of those three items relate to compressor stations, and the other, transmission mains. That represents practically all the money in that group of accounts, doesn't it? A. Yes, sir, that is correct.

Q. Am I correct that we have already discussed the principles that you applied in determining your figures on all of those items? A. Yes, sir.

Q. That is, these differences would be due to direct

—2906—

material and labor costs omitted, or for which no records were available and estimates were made; and overheads, would they not? A. Yes, sir.

Q. Now I direct your attention to the second statement that appears in this exhibit, and we would be glad to have you check it, and I want to say to you, so as to save

time, that here is set out, in paragraph (a), the direct material and labor cost, the differences, I will say, between Mr. Antonelli's exhibit and yours, which consist of direct material and labor costs which you did not allow because they were not capitalized, or because they were estimated—$14,023,000.

The next item is $679,000, which you transferred to utility plant in service. Now am I right that that item consisted of unoperated leases and some wells, that it consisted almost entirely of those two items, which you transferred out of the utility plant account? A. I don't believe it was transferred entirely out of the plant accounts; it was probably transferred out of the plant in service account.

Q. That is what I meant to say.

So that it would still appear, if the books were set up the way you think they ought to be, it would still appear on the books of the company? A. Yes.

—2907—

Q. And it isn't a disallowance; it is merely setting it aside for a particular reason, is it not? A. Yes.

Q. It is the other items that make the real difference between you, isn't it? A. Yes.

Q. But this $679,000 is not shown in your $51,000,000 figure, is it? A. No, sir, that isn't included in the $51,000,000.

Q. And it is in Mr. Antonelli's figure of $70,000,000, isn't it? A. Yes, sir.

Q. Then follows there the overheads and the Interest During Construction, which is also at some times considered a type of overhead, isn't it? A. Yes, sir.

Q. And the reasons why you have eliminated each of these groups are shown—I would be glad to have you check this and tell me if this is a correct statement, and Mr. Antonelli's work figures on it are available.

Now I direct your attention to Statement No. 3, which is, in turn, a classification and break-down of the $14,000,-

000 item of direct material and labor costs, and I will be glad to have you make such check of this as you care to and report, if it isn't accurate.

—2908—

But for present purposes, assume it is accurate, and I will ask you if it isn't a fact that the items of property or costs for the construction of property, shown on that page, are not of property that was included in the inventory as of December 31, 1938? A. They are included in Mr. Antonelli's statement.

Q. Well, it is included in the inventory of the Hope Company's property, isn't it? A. Yes, sir, I assume that it is, I didn't check that inventory.

Q. And that inventory was checked and accepted, and it is the one from which you worked also, isn't it, or didn't you pay any attention to the inventory? A. I didn't check it myself.

Q. I didn't ask you about checking it, but did you use it? A. In a manner, yes. It is reflected in the detailed original cost study.

Q. Tell me this,—go to item (f), this well construction account—the 2633 wells, the drilling cost of which is omitted in your statement—those wells were all in the inventory, weren't they? A. Yes, sir.

Q. There is no doubt about that, is there? A. I don't think there is, no, sir.

—2909—

Q. Take the next item of 803,000, the construction costs for 803,000 feet of pipe, ranging in size from 1-inch to 20-inch. That pipe was in the inventory, wasn't it? A. Yes, sir. Mr. Antonelli shows it in his inventory.

Q. For my purposes, assume it was in the inventory, and if you have any doubt about it, check it and report; but now, as a matter of fact, that in its entirety represents money paid by the company first devoting this property to public service for the construction of that property, which

is not reflected in your Exhibit 57-A; isn't that so? A. Those amounts are not reflected in my exhibit.

Q. That is right,—not even to the extent of a dollar, are they? A. No, sir.

Q. And the fact is that your exhibit does not include the money originally paid, for example, in constructing 275 buildings ranging in size from 4′ 2″ x 5′ 6″ x 7′ 5″ to 30′ 4″ x 20′ 6″ x 7′ 7″? A. It might include that, yes, sir.

Q. What is that? A. It might include that cost, yes, sir.

Q. You think your figures do include that cost? A. I said they might.

Q. Will you check that, and at a later time report to me whether you have a single dollar in there for the con-

struction of the warehouses, barns, garages, blacksmith shop, and so on, that are listed there? A. I am afraid that would take another two years to do that.

Q. Mr. Antonelli's work sheets are available, and it won't take you long to check. A. I think it is quite possible that those figures are in our cost figures at the present time. That, again, is a matter of improper distribution of costs.

Q. What do you mean by improper distribution of costs? A. Well, you build a compressor station there and you build one of these little garages or something around it, and whether the labor is buried in the cost of that compressor station or whether it is properly allocated to that little bitty house out in the back yard, I couldn't say. I say it is possible for it to be in there.

Q. Well, your theory is that if you build a garage 30 x 20, and for some reason or other the cost of the materials and the cost of the labor and everything else that goes into that garage originally are not shown in plant accounts, it should be excluded from a consideration of the amount of money actually spent in the first instance for it? A. It

should be included in plant accounts, but the proper cost should be allocated to it at the time it was constructed. As I understand this, Mr. Antonelli has inventoried these

—2911—

buildings and now claims that he finds no costs in the company's records to cover those buildings, which I say doesn't mean that the costs are not, in some manner, already recorded in the plant accounts.

Q. And did you investigate and find out how much they were in the plant accounts at? A. No, that would be practically impossible for us to do.

Q. Well, if it was impossible to do it from an investigation of the books and the vouchers and an analysis of them, did you make any estimate of it? A. No, sir, we didn't make any estimate; it would be practically impossible.

Q. You just didn't put it in, is that right, either by way of estimate or by way of exact ascertainment? A. No, sir, we didn't include it at all.

Q. And the same thing is true of every single one of the items that are listed on this page? A. None of those costs are included in our $51,207,000.

Trial Examiner: The hearing is recessed, to reconvene at 2 o'clock.

(Whereupon, at 12:30 o'clock p. m., a recess was taken until 2 o'clock p. m., of the same day.)

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Q. Now, coming back to the first page of this Exhibit 57, the middle paragraph says: "Volume 1 sets forth the investment of Hope Natural Gas Company in gas plant per company books as adjusted at December 31, 1938." I think we developed before that what you mean by investment of the Hope Natural Gas Company in gas plant per company books is the $51,200,000 we have mentioned; is that right? A. No, sir, the $53,000,000.

Q. I am sorry. It is the $53,000,000, which, as adjusted, means the $51,200,000? A. That is correct.

Q. Then you say the adjusted figure—you are there talking about the adjusted figure of $51,200,000? A. Yes.

Q. You say the adjusted figure developed in that way shows the original cost as defined in Federal Power Commission's Uniform System of Accounts for Natural Gas Companies of a gas plant. I suppose that still refers to the

—2942—

same figure, does it not? A. Yes, sir.

Q. It is now called an original cost as defined in the Federal Power Commission's Uniform System of Accounts; is that right? A. Yes, sir.

Q. And that is all you mean when you put it on the front cover "Original cost of gas plant as at December 31, 1938"? A. Yes, sir, we are accepting that as the original cost.

Q. It is a different name for the same figure; is that right? A. It is the original cost. That is what we have determined as original cost of the plant, regardless of what it is called.

Q. Then, what you have determined is in accordance with your interpretation of the Uniform System of Accounts? A. Yes, sir.

Q. And that is all it is? A. Yes, sir.

Q. Now, Mr. Pace, it is perfectly clear, is it not, that that figure is not intended by you to be a statement of all of the dollars that were spent by the Hope Company and other persons who first constructed the property shown in

—2943—

this inventory and devoted it to public service at the time it was so constructed? A. It does not, of course, represent every dollar of cost that was spent, but it does represent all of the dollars of cost that we consider as the real original cost of the property.

Q. What you mean by that is, it represents all of the dollars that the companies at the time charged up on their plant accounts? A. We think it represents all of the costs that were put into plant accounts then or at any other time.

Q. Let us avoid the word "cost" because Mr. Smith told us the other day that it had various meanings. A. I said cost in plant accounts.

Q. Is it not a fact that if you had been turned loose and asked, regardless of the Uniform System of Accounts and regardless of interpretation of that, to determine the amount of dollars actually spent for construction of property of the Hope Company by the company first devoting it to public service, that you would have had many millions of dollars more than shown in this exhibit; there can not be any doubt about that, can there? A. If I had to total the number of dollars spent without determining where the cost was—

—2944—

Q. Properly spent, I mean, of course.

Mr. Springer: Permit him to finish his answer.

Mr. Cockley: I thought he had.

The Witness: If it was just a matter of totaling up the number of dollars spent, I would probably come out with a lot more dollars, but I do not see that would change our figures as far as plant accounts are concerned.

Q. Did you understand my question to include dollars properly spent, necessarily spent in the construction and for property in use on December 31, 1938? A. I still say if we were just instructed to total up the number of dollars spent, we would probably have a larger figure than shown here, but that is without showing any distinction as to where the cost should be shown.

Q. Well, if without reference to how the books were kept over the years you had been told to go back to the original vouchers and the original records as far as you could and to make estimates where you could not get them,

but to come in, in the end, with the dollars actually paid by the company first devoting this utility property to service, you would have had substantially Mr. Antonelli's figure, would you not? A. May I have the question again?

Mr. Springer: I object. This witness has testified to volumes 1 and 2, Exhibits 57 and 57-A, original cost, and

—2945—

states that in his opinion that was the only valid original cost for the Hope Company property. He has not done anything of the kind Mr. Cockley has asked him to assume. He has said the original cost depends upon the principles of accounting by the company in the past, and since under the accepted principles of accounting some goes into operating expenses and some is capitalized, you get a different answer, and I do not think it is a proper question to put to Mr. Pace.

Trial Examiner: You summarize in a general way his testimony, but I do not know that I get the objection. Do I understand that the witness is to assume that this calculation or determination which he makes will conform to the Uniform System of Accounts?

Mr. Cockley: Yes, he is to assume it conforms, if he wants to, but I am asking him if it is not a fact if he were sent out without any specific instructions as to how he is to go about it, but he was merely to determine the actual dollars spent in the construction of this utility property as it existed at December 31, 1938 at the time it was constructed, and properly spent by the company first devoting it to public service, if he would not have substantially the same amount shown by Mr. Antonelli in Exhibit No. 20.

Mr. Springer: But you have not included in this ques-

—2946—

tion he would have access to income statements as well as plant accounts.

Mr. Cockley: I do not have to include in my assumption something you think should be in the assumption.

Mr. Springer: You are asking him to ignore the other part of a Siamese twin; you are confining it to plant—

Mr. Cockley: I do not care to argue with you, Mr. Springer. I have asked a question and you have not made a legal objection to it.

Mr. Springer: I object to his asking Mr. Pace under an assumption that would call for a similar study that Mr. Antonelli made and which Mr. Pace has challenged here by putting in a different original cost statement showing the only valid original cost for Hope Natural Gas Company at the end of 1938.

Trial Examiner: I assume the witness as an accountant would know what he would have to do to make the determination. I do not understand that counsel has restricted him to any particular records of any kind. The objection is overruled.

Mr. Cockley: Will you read the question?

(Question read.)

—2947—

Trial Examiner: Read the question, please.

(Whereupon the reporter read the pending question.)

The Witness: Not for plant accounts, I wouldn't.

By Mr. Cockley:

Q. I didn't ask you anything about plant accounts. I am asking you to state the dollars actually and properly spent for property in existence on December 31, 1938, but at the time that property was first devoted to public service by the company constructing it? A. As far as total number of dollars is concerned, of course if I secured my information from the same records that he did—

Trial Examiner: (Interposing) And made the same estimates?

The Witness: Yes, and made the same estimates—I would probably come out with approximately the same number of dollars; but again I would say that I don't know

that we would be anything like close together so far as plant costs are concerned.

By Mr. Cockley:

Q. What do you mean by "plant costs"? A. He shows plant costs—

Q. (Interposing) That is a classification; but I am asking you what you mean by "plant costs"? A. The costs that are charged to plant in accordance with good accepted accounting principles.

Q. And it is only that part of the cost that is charged

—2948—

to plant that you have used, isn't it? A. Yes, sir.

Q. And the other part of the cost, like well drilling, that is drilling that was charged to expense, you haven't shown? A. No—in this case where it was expensed, I left it there.

Q. All right. In other words, you haven't any doubt, have you, that if you spend $5000 for drilling a well, and $5000 for equipping it, that the original cost of that well, the actual dollars spent for it, is $10,000; there is no doubt about that, is there? A. Not a bit.

Q. Now if subsequently the utility charges $5000 of that to expense and $5000 to plant account, you treat the cost of that well from there on as $5000, don't you? A. Yes.

Q. And as far as you are concerned the original cost changes the minute you put it on the books, from $10,000 to $5000, doesn't it? A. The original cost of plant account does.

Q. I am talking about the original cost of the well. A. The total number of dollars of course remains the same.

Q. And you didn't try in this case to go back and determine, in the case of any item of property, that total number of dollars originally spent, regardless of how it

—2949—

was charged, did you? A. No, sir.

Q. And I suppose you carry that distinction you have just made into the title here, and that when you say "Original Cost of Gas Plant" you mean by that the original cost of the gas plant account as distinguished from the property of the Hope Company for which those accounts stand, is that right? A. Yes, sir, that is the original cost of the gas plant as determined by the Federal Power Commission examiners.

Q. In other words, in the case of wells you have got the original cost of the well account set up rather than the original cost of drilling and equipping the wells themselves, haven't you? A. Well, this exhibit is only for the original cost of the amounts that are properly chargeable to gas plant.

Q. And not the original cost of the drilling and equipping of the wells, but only that part of the cost that is carried over to the gas plant accounts; isn't that right? A. It is the original cost as we determined it.

Trial Examiner: Does the City of Cleveland have any questions?

Mr. Reeder: One or two questions.

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—2953—

RE-DIRECT EXAMINATION by Mr. Springer.

Q. Mr. Pace, will you please refer to page 6 of Exhibit 57, and the last sentence on that page, "It is the opinion of the examiners that the amounts recorded at the

—2954—

time of acquisition represent the original cost as near as can be determined" is the logical result of your substitution of Hope's book figures for Mr. Antonelli's opinions and estimates, isn't it? A. Yes, sir.

Mr. Cockley: I object to that.

Mr. Springer: He has already answered it yes.

Mr. Cockley: All right.

By Mr. Springer:

Q. Mr. Pace, you are aware of the provision in the Natural Gas Act, aren't you, which provides in Section 8 (B) that the burden of proof is on the Hope Company to support claimed expenditures or any items questioned by the examiners of accounts?

Mr. Cockley: I object to that as a wholly improper question. It certainly is not true, as a matter of fact.

Trial Examiner: It doesn't mention the Hope Company, does it, Mr. Springer?

Mr. Springer: No, but it mentions natural gas companies, and Hope is a natural gas company.

Mr. Cockley: Let's be fair about this. We are not making an application to this Commission for an increase in rates, or anything else. We were asked, if not directed, to go ahead and put on our evidence first, and we did it, and did it with the express reservation that we were not thereby assuming any burden of proof. There is no burden of proof cast upon a company which is merely in defend-

ing existing rates. If it asks for additional rates, yes, but when it is defending merely existing rates, it does not have any burden of proof, the burden is upon those who allege they are unreasonable and unfair, which is the City of Cleveland in this case.

I don't think it is a proper question to ask this witness in any event; what he knew or didn't know about the burden of proof is a matter of interpretation of the statute in this case.

Mr. Springer: Mr. Examiner, this is a provision of the Natural Gas Act and it is not confined to rate making; it covers specifically, Accounting.

Trial Examiner: Well, that is another question which might well be argued in the briefs. It seems to me that the question is not improper. The question asked the witness is as to whether he is acquainted with this provision in the Act. He isn't called on to interpret the Act or its practicability in the instant case. If counsel expects to go that far I think perhaps we have a different problem.

The objection is overruled.

Mr. Cockley: I would like to have the question read, please?

(Whereupon the reporter read the pending question.)

Trial Examiner: I understand you are willing to amend that to eliminate the use of the Hope Company's name?

Mr. Cockley: I withdraw my objection.

Mr. Springer: Well, any natural gas company, and make it a general provision.

—2956—

Trial Examiner: Of course there is no provision in the Act as you suggest, that is the point.

Mr. Cockley: I wasn't objecting on that ground, but of course the Examiner is perfectly right.

Mr. Springer: May I quote from Section 8 of the Natural Gas Act which is included in the forepart of the copy of the Federal Power Commission's Uniform System of Accounts, Exhibit 58 in this record:

> "The burden of proof to justify every accounting entry questioned by the Commission shall be on the person making, authorizing or requiring such entry, and the Commission may suspend a charge or credit pending submission of satisfactory proof in support thereof."

What I have done is paraphrase that in my question.

Trial Examiner: You are familiar with that provision are you, Mr. Pace?

The Witness: Yes, sir.

By Mr. Springer:

Q. Well, Mr. Pace, as a principle of accounting, when you audit any company's books you demand satisfactory proof that an expenditure has been made, don't you? A. Yes, sir.

Q. And you insist on documentary proof where it is

—2957—

available, don't you? A. Yes, sir.

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—2964—

Trial Examiner: Is there any re-cross examination of this witness?

Mr. Cockley: One or two questions.

RE-CROSS EXAMINATION by Mr. Cockley.

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—2972—

Q. Now your attention was directed to Section 8(A) of the Natural Gas Act which has a sentence in it that the burden of proof, to justify every accounting entry, shall be on the person making or authorizing or requiring such entry—and I think you said you knew that and were you instructed that that imposed upon the Hope Company the duty of supporting, by entries and vouchers, any entry that you might challenge in its accounts? A. I didn't have specific instructions in the case of the Hope Company, but we have always had instructions to carry out those—

—2973—

Q. (Interposing) That is your general instruction? A. That is my general instruction.

Q. And you felt perfectly free in this case, as applied to the Hope Company, when you came to an item which you questioned, to have the company produce its records on it, and if you were not satisfied with the records or the esti-

mate or whatever it was, you felt perfectly free to disregard it, and just because the company hadn't produced as much evidence as you thought it should have produced; is that right? A. That is correct.

Q. And it is your understanding that this Section that I have read to you is applicable to a respondent whose rates are challenged, as the Hope Company's rates are, in this kind of a case? A. That is my understanding.

Q. And it is applicable to the investigation that you conducted, is that right? A. That is my understanding.

Q. And this exhibit was prepared in part on that assumption, was it? A. Yes, sir.

Q. It was prepared throughout on that assumption, but I suppose you didn't have to apply this rule to every

—2974—

item, did you, Mr. Pace? A. No, not quite.

Mr. Cockley: That is all.

11. TESTIMONY OF COMPANY WITNESS PETER ANTONELLI AS TO ORIGINAL COST OF PROPERTIES ACQUIRED FROM PRIOR UTILITIES, MONDAY, JULY 7, 1941, RECORD PAGES 5042 TO 5049.

—5042—

By Mr. Milde:

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Q. Have you read the testimony of Mr. Pace on the subject of original cost as he defines it? A. Yes, sir.

Q. Do you recall Mr. Pace's statement that the Hope Company made estimates of the original cost to acquire utility properties at the time it purchased them? A. Yes, sir, I do.

Q. Do you further recall that Mr. Pace referred to the acquisition of the Fayette County Gas Company and the Flaggy Meadow Gas Company properties? A. Yes, sir, I recall that.

Q. And specified Voucher Nos. G-353 in 1910 and M-44 in 1902 as showing that such estimates had been made? A. Yes, sir.

Q. Do you have before you the Hope Company's vouchers pertaining to the Fayette County Gas Company

—5043—

acquisition to which Mr. Pace referred? A. I will get them.

Q. Do you now have those vouchers before you, Mr. Antonelli? A. Yes, I do.

Q. How many vouchers were involved in this Fayette County Gas Company acquisition? A. Two vouchers.

Q. Where are they, or what are their numbers, rather? A. One is E-95, 1910; and the other is G-353, 1910.

Q. What does Voucher E-95 show? A. Voucher E-95 shows the amount of money that Hope Natural Gas Company paid Fayette for the properties that they purchased in 1910.

Q. How much was that? A. $600,000.

Q. What else does it show? A. On its face it bears the written receipt of the Fayette County Gas Company, and also debits Fayette County Gas Company purchase account with $600,000.

Q. You say this is an actual receipt of the Fayette County Gas Company for $600,000? A. Yes, sir, there is a written receipt right here.

Q. What does the other voucher, G-353, show? A. This voucher credits the Fayette County Gas Company pur-

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chase account with $600,000, distributes the cost over the plant accounts, and charges each account with its allocated portion.

Q. Did you say that it distributes the cost—do you mean the $600,000? A. Distributes the purchase price.

Q. Does that voucher show how that purchase price of $600,000 was distributed to the various plant accounts? A. Yes, sir, it does.

Q. And how was that made, as shown by the voucher? A. The distribution was made by pricing a field inventory, using current market prices as of the date of the purchase.

Trial Examiner: Is that what the voucher says?

The Witness: No, the voucher doesn't say that. It says that they paid $600,000. This is a credit of $600,000, and it shows it distributed in these various accounts, but here it shows the various amounts for the pipe account.

By Mr. Milde:

Q. Will you explain to the Examiner that that voucher includes subsidiary pages which appear in the envelope that you have before you? A. Oh, yes, I have another part of this voucher here that shows the inventory that I just referred to, and also the current market prices that the Company used to price this inventory.

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Q. How do you know they are current market prices? A. By spot-checking some of these prices we were able to

say that they are current market prices, and also from Company men we know that that is the current market price, and they are different from the original cost price.

Now I might say that after we spread these costs, we adjusted the total to the total shown on this voucher; in other words, we came to the $600,000 when we were finished.

Q. Was there anything in that inventory that showed when the properties were originally built, or anything of that sort? A. No, sir, it is just an inventory, using certain prices, and then adjusted.

Q. And if the price didn't come out right, some adjustment was made all along the line, is that what the voucher shows? A. Yes, sir. That makes me believe that it couldn't be original cost or actual cost to the predecessor, or anything of that kind.

Q. Then those amounts that were arrived at that way were used to distribute the purchase price, were they? A. Yes, they were used to distribute the purchase price over the various accounts, plant accounts.

Q. Now do you also have before you the Flaggy Meadow purchase voucher M-44, for 1902, to which Mr. Pace

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referred? A. Yes, I have M-44, and I have M-45.

Q. Was there more than one voucher involved in that acquisition? A. Yes, there were several vouchers involved, they are all here.

Q. Well, what does M-45 refer to, which you just mentioned? A. M-45—

Q. (Interposing) Or rather, what does it cover? A. It covers the payment of Hope Natural Gas Company to Flaggy Meadow Gas Company, amounting to $1,134,010.60. It shows—it is a written receipt that the Flaggy Meadow Company received this money, here is the written receipt (indicating); and it also debits Flaggy Meadow Gas Company account with the purchase amount.

Q. You mean an account called Flaggy Meadow purchase account? A. Yes, sir, that is it.

Q. Well, that shows that the Hope Company paid $1,134,000 in round figures for that property, and that the Flaggy Meadow Gas Company received that amount of money, is that right? A. Yes, sir, that is what it shows.

Q. What does Voucher M-44 show? A. M-44 shows that the Company credited the Flaggy Meadow Gas Com-

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pany account with the amount of $1,134,010.60, and distributes that cost over the various plant accounts.

Q. How is that distribution of the purchase price made? A. It is made in the same manner as I just described in connection with the Fayette County Gas Company purchase in 1910, namely, by distributing this purchase price over an inventory, using current market prices, and then adjusting the total of these to the purchase price.

Q. Now do these vouchers, in connection with the Fayette County Gas Company acquisition and the Flaggy Meadow Gas Company acquisition, indicate in any way that the Hope Company estimated the original cost of these purchased properties to the companies from whom they bought these properties, and made that estimate at the time of purchase? A. Not at all, it is very evident that the Hope Company did not attempt to estimate the original cost of these properties.

Q. Now, Mr. Pace in his testimony referred to the fact that on the Flaggy Meadow voucher M-44, there appeared the words "Average Cost."

Will you explain where that appears? A. This "Average Cost" appears in one of the summary statements, but this, again, is the adjusted current market price that the company used in pricing the inventory as of the date of the purchase, and it is not the cost to Flaggy Meadow Gas

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Company.

Q. And did you check to ascertain that the costs, or rather the prices used for this inventory pricing in connection with these purchase price distributions over the plant accounts, were not the cost to the predecessor company? A. Yes, sir, it was very plain that it was not the original cost price. We determined the original cost and we know what the actual price is.

Q. And the original cost, as you found by your investigation, was other than the purchase price or the prices appearing in this priced inventory that distributed the purchase price? A. Certainly. The original cost of the—the properties were built at various years, and they couldn't be the same prices.

Q. Are you familiar with Mr. Dunn's testimony that in connection with properties purchased from non-utilities, the practice of the Hope Company was to record the original cost of these properties as nearly as it could be determined at the time of acquisition? A. Yes, sir.

Q. In connection with your examination of the Company's records pertaining to purchased properties, in the course of your original cost study, did you ever find one instance in which the Hope Company estimated or at-

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tempted to estimate the original cost of the properties purchased at the time of acquisition? A. No, sir.

Q. Did you ever find the Company recorded or attempted to record any estimate of the original cost of purchased properties at the time of acquisition? A. No, sir.

12. **COMPANY WITNESS ANTONELLI'S EXHIBIT NO. 59 ENTITLED: "Comparison of Original Cost (Exhibit No. 20) with F. P. C. Examiners' Adjusted Book Cost (Exhibit No. 57)"**

Statement 1

HOPE NATURAL GAS COMPANY

Comparison of Original Cost (Exhibit No. 20) with F. P. C. Examiners' Adjusted Book Cost

Account No.	Description	Total Original Cost (Ex. 20, p. 31 Col. 18)*	F. P. C. Examiners' Adjusted Book Cost (Ex. 57, Vol. I, p. 10, Col. J)	F. P. C. Examiners Lower By
Natural Gas Production Plant				
330-1	Natural Gas Producing Lands	$ 2,370.39	$ 3,319.84	$ (949.45)
330-2	Natural Gas Producing Leaseholds			
	Operated Leaseholds, Gas Rights and Royalties	1,684,635.98	1,599,004.86	85,631.12
	Unoperated Leaseholds, Gas Rights and Royalties	681,882.21	—	681,882.21
330-4	Rights of Way	701,555.24	645,391.47	56,163.77
330-5	Other Land and Land Rights	22,125.56	21,008.52	1,117.04
331-2	Field Measuring and Regulating Station Structures	40,773.27	21,138.92	19,634.35
331-3	Other Production System Structures	291,872.40	191,188.81	100,683.59
332-1	Producing Gas Wells—Well Construction	17,783,637.13	4,089,477.71	13,694,159.42
332-2	Producing Gas Wells—Well Equipment	8,168,191.52	7,610,509.75	557,681.77
333-1′	Field Lines	12,301,880.71	11,296,741.40	1,005,139.31
333-2	Field Measuring and Regulating Station Equipment	267,099.02	184,385.03	82,713.99
334	Drilling and Cleaning Equipment	604,936.40	595,692.71	9,243.69
337	Other Production Equipment	89,102.37	75,532.21	13,570.16
	Total Natural Gas Production Plant	$42,640,062.20	$26,333,391.23	$16,306,670.97
Transmission Plant				
351-12	Land	$ 164,104.55	$ 162,912.21	$ 1,192.34
351-23	Rights of Way	442,393.99	391,242.69	51,151.30
352-2	Compressor Station Structures	1,725,945.46	1,441,882.38	284,063.08
352-3	Transmission System Measuring and Regulating Station Structures	11,987.58	8,207.21	3,780.37
352-4	Other Transmission System Structures	11,508.57	6,775.69	4,732.88
353	Mains	15,180,596.17	14,132,074.72	1,048,521.45
354-2	Compressor Station Equipment	8,313,530.62	7,683,671.99	629,858.63
354-3	Transmission System Measuring and Regulating Equipment	26,713.48	17,615.91	9,097.57
354-4	Other Transmission System Equipment	23,041.90	21,015.55	2,026.35
	Total Transmission Plant	$25,899,822.32	$23,865,398.35	$ 2,034,423.97
General Plant (Jointly Used)				
370	Land and Land Rights	$ 98,187.72	$ 96,981.21	$ 1,206.51
371	Structures and Improvements	274,427.36	225,887.78	48,539.58
372	Office Furniture and Equipment	195,911.07	178,683.34	17,227.73
373	Transportation Equipment	148,540.34	142,314.49	6,225.85
374	Stores Equipment	9,465.88	5,106.76	4,359.12
375	Shop Equipment	114,705.84	104,185.17	10,520.67
376	Laboratory Equipment	1,070.22	1,003.40	66.82
377	Tools and Work Equipment	4,634.27	4,545.33	88.94
378	Communication Equipment	347,638.66	248,975.74	98,662.92
379	Miscellaneous Equipment	1,171.98	1,147.84	24.14
	Total General Plant (Jointly Used)	$ 1,195,753.34	$ 1,008,831.06	$ 186,922.28
	Total Natural Gas Production Plant, Transmission Plant and General Plant (Jointly Used)	$69,735,637.86	$51,207,620.64	$18,528,017.22

NOTES: *After deduction of original cost of properties used to transport coke oven gas.
( ) denotes F. P. C. higher.

Statement 2

Parts of Original Cost (Exhibit No. 20) Excluded from F. P. C. Examiners' Adjusted Book Cost for Total Gas Plant (Exclusive of Distribution)

	Description		Costs
(a)	Direct material and labor costs:		
	For property constructed by Hope and property purchased not as an operating unit	$12,276,097.31	
	For property purchased by Hope from other utilities as an operating unit	1,747,698.39	
	Total direct material and labor costs		$14,023,795.70
(b)	Transfers by F. P. C. Examiners from Utility Plant in Service...		679,093.74
(c)	Overheads:		
	Unloading, hauling and warehouse handling costs	$ 402,010.63	
	Indirect field costs	434,660.36	
	Purchasing	277,742.93	
	Payroll	145,919.38	
	Land	48,570.09	
	General	1,885,509.56	
	Total overheads		3,194,412.95
(d)	Interest during construction		630,714.83
	Total		$18,528,017.22

Statement 3

Detail of Direct Material and Labor Costs Excluded from F. P. C. Examiners' Adjusted Book Cost

	Description	Costs
(a)	Abstracting or recording costs for 125 deeds	$ 2,670.16
(b)	Obtaining, recording or abstracting costs for 5,539 leases	120,887.05
(c)	24 Rights of Way consisting of consideration, damages or obtaining costs	3,133.30
(d)	122 wood frame houses, 6'11" x 6'8" x 7'2" average size, and 1,386 wood frame boxes, 4'6" x 3'3" x 2'11" average size	17,235.46
(e)	275 buildings ranging in size from 4'2" x 5'6" x 7'5" to 30'4" x 20'6" x 7'7" consisting of warehouses, barns, garages, blacksmith shop, wagon sheds, tool houses, storage buildings, wash houses, etc. 686 miscellaneous structures consisting of sidewalks, pits, bridges, fences, pipe skids, pipe racks, etc. 1,574 miscellaneous items such as electric lights, plumbing fixtures, drain outlets, painting, water, sewer and drain lines, hardware, roofing, ventilators, electric wiring, sand, cement and stone to complete structure	293,374.32
(f)	Drilling and other well construction costs for 2,633 wells	12,643,641.57
(g)	Construction costs for 803,389 feet of pipe lines ranging in size from 1" to 20"	229,310.08
(h)	Material and installation costs for 2,945 benches, racks, heaters, cabinets, tables, truck flat beds, accessory items, etc. Installation costs for 2,759 items consisting of meter connections of orifice, positive and free consumer meters, miscellaneous equipment such as blueprint machines, brass railing, chain hoists, forgers, motors, air compressors, drip tanks, etc. 3,408 law books	114,213.79
(i)	752 installation costs for auxiliary equipment units, consisting of tanks, pumps, motors, transformers, engines, turbines, gas coolers, scrubbers, compressor cylinders, air compressors, boilers, traveling cranes, etc. Installation costs for pipe and fittings ranging in size from 2" to 30", valves ranging in size from 2" to 20" Installation costs for miscellaneous items, such as floodlights, flow meters, damper regulators, etc.	135,078.44
(j)	9,584 telephone poles with cross arms, brackets, pins, insulators, etc.	80,640.63
(k)	Difference between direct material and labor costs (exclusive of well construction) to other utilities and F. P. C. Examiners' Adjusted Book Cost for properties acquired as operating units from other utilities	383,610.90
	Total (as shown on Statement 2, item (a))	$14,023,795.70

13. COMPANY WITNESS RHODES' EXHIBIT NO. 21 ENTITLED: "Reproduction Cost New Less Depreciation of Company Properties as of December 31, 1938—Written Statement of George I. Rhodes."

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WRITTEN STATEMENT OF GEORGE I. RHODES.

1. Scope of this Exhibit.

In a separate Company exhibit there is set forth in summary form and in detail the reproduction cost new as of December 31, 1938 of the Company's production property, its transmission property and its general property with certain exceptions therein named. This exhibit describes the methods used in determining the depreciation accumulated in that property.

In general the depreciation accrued or accumulated in the property was determined from an extensive and painstaking examination of the property as hereinafter set forth. However, because of the natural limitations of the practicable methods of inspection and to make full allowance for any and all depreciation that exists in fact the percentages of accrued depreciation determined from observation have been increased appropriately wherever necessary.

The attached summary sets forth by accounts the reproduction cost new, the per cent depreciation found to have accumulated in the property, the amount of this depreciation, the per cent condition and the reproduction cost new less depreciation.

2. Depreciation Accumulated in Gas Wells.

The depreciation accumulated in the Company's gas wells was determined from the proportionate decline in useful rock pressure from the time the well was drilled (initial

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pressure) to a lower pressure at which a well may be considered to be exhausted (abandonment pressure). The initial pressures of all operating wells were determined from the Company's records by the Company's geologist. He fixed the average abandonment pressure at 100 pounds per square inch for the Benson and Speechley sands and at

30 pounds per square inch for all other sands. The December 31, 1938 rock pressures were based on the 1938 pressure gaugings taken in the fall of that year as shown by the Company's records.

The per cent condition of each producing sand in each well was determined as the ratio of (a) the excess of the 1938 rock pressure above the abandonment pressure to (b) the excess of the initial rock pressure above the abandonment pressure. The per cent condition of each well was determined as the numerical average of the per cents condition of the sands in that well considering exhausted sands as being in zero condition. The condition of the Company's wells as a group was determined as the numerical average of all the per cents condition of the individual wells.

The per cent condition of Account No. 332-1, Producing Gas Wells—Well Construction, was taken as the average per cent condition of all the wells so determined.

The per cent condition of Account No. 332-2, Producing Gas Wells—Well Equipment, was determined from the gross salvage of equipment, the cost of abandoning wells and the per cent condition of the wells. In determining the per cent condition of this well equipment account the excess of the cost new of the well equipment over and above the net salvage was depreciated in the proportion of the per cent condition of the wells as a group.

* * * * *

[Details of determination of gross salvage, cost of abandoning, and net salvage are omitted.]

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During the life of the well the cost of well construction is depleted from 100 per cent to zero, but the equipment depreciates only to the net salvage or to 36.6 per cent. Thus when a well is fully depleted the loss in equipment is only 63.4 per cent of the total equipment cost. At any condition of the well the per cent depreciation in the equipment is therefore 63.4 per cent of that in the construction.

Taking into consideration the above matters, depreciation was found in the Company's gas wells as follows:

	Gas Well Construction	Gas Well Equipment
Total depreciation	68.7%	43.6%
Corresponding condition	31.3%	56.4%

3. Depreciation Accumulated in Pipe Lines.

* * * * *

[Detailed description of field inspection of pipe at 554 locations is omitted.]

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The depreciation was determined from a consideration of the field inspections above described. The records of the field work were tabulated and summarized. They were subject to study and analysis both scientific and practical. Consideration was given to the many factors affecting depreciation through corrosion which are described in the succeeding paragraphs.

Renewals of pipe are most commonly the result of a troublesome succession of leaks caused by corrosion. As leaks occur they are stopped by bolting band clamps around the pipe with a rubber packing over the leaks. Sometimes two or more leaks develop at widely separated dates on the same joint of pipe. The development of leaks first occurs in stretches of lines where for various reasons local condi-

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tions are favorable to corrosion. These are called "hot spots" and range from a few joints to thousands of feet in length. When the leaks begin to develop with troublesome frequency not only is the pipe in the "hot spot" itself renewed but also pipe for an appropriate distance on either side. In practice the worst joints of pipe may have two or more leaks. Stretches of pipe 100 feet long may contain five to ten leaks and other stretches of 100 feet may have no leaks at all. Some of the pipe is suitable for reuse with

a simple cleaning operation, some requires welding up the pits before it can be reused and other pipe is reduced to junk value.

The progress of corrosion has universally been found to fall off with age. When pipe is first buried it starts to corrode rapidly. As time goes on the intensity of corrosion slows down. The field inspections of the Company's major pipe lines were specially studied to determine the Company's experience in this connection. It was for this reason that more inspections were made on the long large lines than on other lines and that many inspections were made on new lines to insure adequate data on corrosion in its early stages. It was found from this study that the corrosion of the Company's pipe slows down to such an extent that doubling the time the pipe has been in place results in less than a 50 per cent increase in pit depths.

It is also the universal experience that the greater the lengths of pipe examined on inspection the greater will be the average depths of the deepest pits found. This is illustrated by the fact that the average depths of the deepest pits found on the 554 three foot sections of the Company's pipe inspected in 1939 were 10 per cent greater than the average depths of the deepest pits found in the 1108 eight-

een inch sections. A study of the relative depths of the deepest pits in the 18 inch sections was made in conjunction with the deepest pits in the 3 foot sections from which was determined by scientific analysis the average depths that could be expected in greater lengths of the Company's pipe—20 foot, 40 foot, or 50 foot—as the case might be. This study also determined the number of pits required to be welded in reconditioning.

Through a correlation and application to the field inspections of the rules of corrosion outlined above by the use of proper engineering methods it was determined that the production system pipe lines of the Company had pro-

gressed through corrosion towards complete depreciation by 22.5 per cent and that the transmission system pipe lines of the Company had progressed through corrosion towards complete depreciation to the extent of 20 per cent. To insure the inclusion of all depreciation existing in fact in the lines the above percentages were increased to 26% in the production system pipe lines and to 21% in the transmission system pipe lines. While these inspections were made in the spring and early summer of 1939 they fairly represent the accrued depreciation as of December 31, 1938.

4. Depreciation Accumulated In Compressor Station Equipment.

The wear and tear and other deterioration that has developed in the compressor station equipment was determined from a detailed field inspection of all of the main units and a more general but complete inspection of the many units of auxiliary and miscellaneous equipment. Particular attention was given to the wearing parts such as power and compressor cylinder assemblies, valves and

valve gears and the like. The condition of each important wearing part was determined and recorded in the field. The field reports were summarized, analyzed and studied, and determinations made of the over-all physical condition of the equipment in each compressor station.

In determining the condition of this equipment consideration was given to the fact that the greater part of the cost of the equipment is in non-wearing parts which are subject to replacement only as a result of an accident. The over-all rating of any particular unit was determined by giving weight to the condition and the relative contribution to cost of the wearing parts and the existence of any defects in the non-wearing parts which had been damaged by accidents or otherwise. In determining the condition of boilers not only were they inspected but several years'

insurance inspection reports were taken into consideration. It was not reasonably possible to inspect buried equipment such as foundations, piping, etc. and such equipment in each station was rated at the average condition of all the equipment in that station. The yard piping was rated as being in the same physical condition as transmission line piping. The over-all physical condition of each station was arrived at by giving weight to the relative cost of the equipment separately rated on inspection.

A few stations contain equipment which has not been used for a period of years but which is available for movement to and re-erection at other locations as required. In stations containing this equipment, its cost installed has been depreciated to the cost of the equipment itself as though carried in a warehouse. In other stations equipment of types being gradually retired by the Company or

susceptible of modernization through retirement and replacement of parts has been appropriately depreciated.

The observed depreciation accumulated in the equipment in each compressor station was determined by a consideration of the factors outlined above. It was found that in the aggregate the Company's compressor station equipment had depreciated 17 per cent. To insure the inclusion of all the depreciation existing in fact in the compressor station equipment the above percentage was increased to 19 per cent. While these inspections were made in the fall of 1939 they fairly represent the accumulated depreciation as of December 31, 1938.

5. Depreciation Accumulated In Buildings And Structures.

The deterioration existing in buildings costing more than $1000 each was determined in general by a detailed inspection of each of the buildings in the field. These buildings aggregate some 470 in number and constitute about 71 per cent of all the Company's structural property. Mis-

cellaneous improvements aggregating a further 19 per cent of all the Company's structural property were separately inspected to the extent of about one-half in value, the remainder being largely underground. The deterioration in the smaller buildings, some 2670 in number, was determined by an extensive sampling and individual inspection of about 20 per cent of these smaller buildings. In this field inspection the various parts of the larger buildings and structures such as visible foundations, walls, framework and roof were separately rated as to physical condition. The smaller buildings were inspected in less detail appropriate to their lesser costs.

The field inspections were tabulated and summarized and the condition of the buildings determined in groups such as those at each compressor station and the like. In determining the depreciation existing in these buildings be-

cause of deterioration, there was taken into account the depreciation found to exist in the various parts, the relative extent to which these parts contributed to the whole cost of the structures and the relative extent to which the individual groups of structures contributed to the whole cost of the group. Incidental details of the structures were taken as being in the same condition as the structures themselves.

Certain buildings soon to be retired were depreciated to gross salvage. Generally such buildings shelter equipment available for movement to other locations. The known early abandonment of certain structures or parts thereof was appropriately allowed for.

The observed depreciation accumulated in the buildings and structures of the several accounts both as found and as adjusted to insure the inclusion of all the depreciation existing in fact are shown below.

	Observed Depreciation	Total Depreciation
Gas Well Structures	40%	44%
Field Measuring and Regulating Station Structures	44	49
Other Production System Structures	39	43
Compressor Station Structures	25	28
Transmission System Measuring and Regulating Station Structures	37	41
Other Transmission System Structures	27	30
General Structures	26	27

The inspections of property on which the above percentages are based were made in the fall of 1939, but they fairly represent the condition of the property as of December 31, 1938.

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6. Depreciation Accumulated In Measuring And Regulating Station Equipment.

The depreciation accumulated in measuring and regulating station equipment both production and transmission was determined by inspections in the field and by a consideration of the Company's records related to the retirement and depreciation of such property.

Installations of meters and regulators were conditioned for physical depreciation by taking into consideration their condition of maintenance found by inspection and the fact that the greater part of the total cost of such equipment consists of parts which are replaced for causes other than deterioration. The buried pipe in the production system meters and regulators was taken to be in the same physical condition as the production system pipe lines and the buried pipe in the transmission system installations was taken to be in the same physical condition as the transmission system pipe lines. It was found that the total observed

deterioration existing in meter and regulator equipment was 19 per cent for the production equipment and 22.5 per cent for the transmission equipment. To insure the inclusion of all depreciation existing in fact in such equipment, the above percentages were increased to 21 per cent in production meter and regulator equipment and 27 per cent in transmission meter and regulator equipment.

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7. Depreciation Accumulated In Communication Equipment.

The depreciation accumulated in communication equipment was determined from an inspection of the property in the field. By a sampling method approximately 1,000, or 5 per cent, of the Company's poles were inspected as to condition at reasonably accessible locations. At each point of inspection the poles, fixtures, insulators and supporting wire were separately rated as to their condition. All of the station equipment was inspected in the field.

It was found that the deterioration existing in the communication equipment is 27 per cent. To insure inclusion of all depreciation existing in fact the deterioration as found was increased to 32 per cent. The inspections were made in the summer of 1939 but they fairly represent the condition as of December 31, 1938.

8. Depreciation Accumulated In Transportation Equipment.

The depreciation accumulated in automotive equipment was determined from a study of the records of 155 automobiles and 131 trucks operated and disposed of by the Company from 1925 to 1938, inclusive, as compared with the 77 automobiles and the 76 trucks owned as of December 31, 1938. These records show that the mileage at time of turn-in has increased materially within the past ten years, as well as the percentage of cost recovered at the time of turn-in. This experience of the Company is in accord with

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the universal experience as to the improving quality of automobiles and trucks available in the market. Taking into account this steady improvement in automotive equipment as to mileage and turn-in ratio and the average mileage of automobiles and trucks at December 31, 1938, it was found that the automobiles in the aggregate were 36 per cent depreciated and the trucks in the aggregate 50 per cent depreciated as of December 31, 1938. The condition of the other transportation equipment amounting to about one-eighth of the whole account was determined in various ways appropriate to the class of equipment, and was found to be 42 per cent depreciated. Transportation equipment in the aggregate was found to be 44 per cent depreciated or in 56 per cent condition.

9. Depreciation Accumulated In Miscellaneous Property Accounts.

The major accounts including gas wells, pipe lines, compressor equipment and structures constitute about 95 per cent of the Company's properties subject to depreciation. The methods of determining the depreciation accumulated in the property constituting these accounts have been described above in considerable detail. There have also been described above the methods of determining depreciation accumulated in four minor but diverse types of property aggregating about 1 per cent of the remaining 5 per cent. The depreciation accumulated in the other miscellaneous property accounts covering about 4 per cent of the depreciable property has been determined by similar methods appropriate to the respective classes of property. The same care has been exercised in determining the depreciation of these accounts as has been used in the major

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accounts and described above. The condition of these various accounts is shown in the summary, which is attached.

10. Depreciation Accumulated In Undistributed Construction Costs.

In the Company exhibit setting forth the estimated cost of reproduction new of the Company's properties, allowances for undistributed construction costs were adopted which as there explained had repeatedly been used by agreement before the Public Utilities Commission of Ohio and adopted by that Commission in its findings relative to the Company's property. These allowances aggregated 17.72%.

These agreements, above referred to, reached by representatives of The East Ohio Gas Company and representatives of the City of Cleveland in the 1931 East Ohio-Cleveland case and with representatives of the City of Akron in the 1932 East Ohio-Akron case, included also agreements relative to the extent to which these undistributed construction costs depreciated with the property. It was agreed in both cases that those undistributed construction costs to the extent of 11.51% depreciated with the Company's property and the Ohio Commission so found in the 1932 Akron and the 1937 East Ohio-Cleveland cases. In the 1931 Cleveland case the Commission made no findings as to depreciated cost of the Company's property except as to pipe lines.

In view of the repeated use of the above percentage of depreciating undistributed construction costs by engineers representing the various parties to rate controversies involving this same property and by the Ohio Commission in its findings related thereto, this same percentage has been used in this exhibit. Such allowance for the depreciating undistributed construction costs is fair and reasonable.

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11. Summary

The estimated cost of reproduction new of the Company's properties here considered as set forth in the separate Company exhibit previously referred to and this re-

production cost new less depreciation determined as described in this exhibit, all as of December 31, 1938, are summarized by accounts on the attached statement which shows:

Reproduction cost new as of December 31, 1938	$94,973,856
Depreciation accumulated as of December 31, 1938	32,774,442
Reproduction cost new less depreciation as of December 31, 1938	$62,199,414
Per cent of depreciation accumulated	34.51%
Corresponding per cent condition	65.49%

SIGNED at Clarksburg, West Virginia, this May 16, 1940.

GEO. I. RHODES.

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HOPE NATURAL GAS COMPANY

Natural Gas Production Plant, Transmission Plant and General Plant (Jointly Used)

Estimated Costs of Reproduction New and Less Depreciation as of December 31, 1938

(Exclusive of Leaseholds, Properties Used to Transport Coke Oven Gas, Working Capital and Going Concern Costs or Value)

Summary by Accounts

Account Nos. Old	Account Nos. New W. Va. P. S. C.	Description	Cost New	Accumulated Depreciation Per Cent	Accumulated Depreciation Amount	Per Cent Condition	Cost New Less Depreciation
Natural Gas Production Plant (exclusive of leaseholds and properties used to transport coke oven gas)							
204	330-1	Natural Gas Producing Lands	$ 2,275	0.0 %	$ —	100.0 %	$ 2,275
206	330-4	Rights of Way	772,814	0.0	—	100.0	772,814
204	330-5	Other Land and Land Rights	21,045	0.0	—	100.0	21,045
210	331-1	Gas Well Structures	11,912	44.0	5,241	56.0	6,671
209	331-2	Field Measuring and Regulating Station Structures	58,222	49.0	28,529	51.0	29,693
210	331-3	Other Production System Structures	374,267	43.0	160,935	57.0	213,332
211	332-1	Producing Gas Wells—Well Construction	19,321,139	68.7	13,273,622	31.3	6,047,517
212	332-2	Producing Gas Wells—Well Equipment	10,874,199	43.6	4,741,151	56.4	6,133,048
213, 214	333-1	Field Lines	17,282,312	26.0	4,493,401	74.0	12,788,911
215, 217	333-2	Field Measuring and Regulating Station Equipment	307,222	21.0	64,517	79.0	242,705
216	334	Drilling and Cleaning Equipment	1,028,888	27.0	277,800	73.0	751,088
249, 251, 256, 257	337	Other Production Equipment	112,910	28.0	31,615	72.0	81,295
		Total Natural Gas Production Plant (exclusive of leaseholds and properties used to transport coke oven gas)	$50,167,205	46.00%	$23,076,811	54.00%	$27,090,394
Transmission Plant (exclusive of properties used to transport coke oven gas)							
218	351-12	Land	$ 155,842	0.0 %	$ —	100.0 %	$ 155,842
220	351-23	Rights of Way	554,352	0.0	—	100.0	554,352
221, 223	352-2	Compressor Station Structures	1,957,473	28.0	548,092	72.0	1,409,381
222	352-3	Transmission System Measuring and Regulating Station Structures	14,842	41.0	6,085	59.0	8,757
223	352-4	Other Transmission System Structures	12,507	30.0	3,752	70.0	8,755
226	353	Mains	16,500,288	21.0	3,465,060	79.0	13,035,228
224	354-2	Compressor Station Equipment	9,874,271	19.0	1,876,111	81.0	7,998,160
225	354-3	Transmission System Measuring and Regulating Equipment	30,731	27.0	8,297	73.0	22,434
249, 251, 256, 257	354-4	Other Transmission System Equipment	30,795	27.0	8,315	73.0	22,480
		Total Transmission Plant (exclusive of properties used to transport coke oven gas)	$29,131,101	20.31%	$ 5,915,712	79.69%	$23,215,389

(Concluded on next page)

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Summary by Accounts (Concluded)

Account Nos. Old	Account Nos. New W. Va. P. S. C.	Description	Cost New	Accumulated Depreciation Per Cent	Accumulated Depreciation Amount	Per Cent Condition	Cost New Less Depreciation
General Plant (Jointly Used) (exclusive of properties used to transport coke oven gas)							
244, 245	370	Land and Land Rights	$ 75,018	0.0 %	$ —	100.0 %	$ 75,018
247, 248	371	Structures and Improvements	297,298	27.0	80,270	73.0	217,028
249	372	Office Furniture and Equipment	210,047	30.0	63,014	70.0	147,033
252, 253, 256	373	Transportation Equipment	166,990	44.0	73,476	56.0	93,514
251	374	Stores Equipment	10,304	25.0	2,576	75.0	7,728
251, 256, 257	375	Shop Equipment	189,110	23.0	43,495	77.0	145,615
224, 257	376	Laboratory Equipment	3,971	15.0	596	85.0	3,375
257	377	Tools and Work Equipment	5,365	15.0	805	85.0	4,560
255	378	Communication Equipment	419,860	32.0	134,355	68.0	285,505
249, 257	379	Miscellaneous Equipment	1,488	25.0	372	75.0	1,116
		Total General Plant (Jointly Used) (exclusive of properties used to transport coke oven gas)	$ 1,379,451	28.92%	$ 398,959	71.08%	$ 980,492
Total Of Above			$80,677,757	36.43%	$29,391,482	63.57%	$51,286,275
Undistributed Construction Costs			14,296,099	23.66%	3,382,960	76.34%	10,913,139
Total Natural Gas Production Plant, Transmission Plant and General Plant (Jointly Used) (exclusive of leaseholds, properties used to transport coke oven gas, working capital and going concern costs or value)			$94,973,856	34.51%	$32,774,442	65.49%	$62,199,414

14. TESTIMONY OF COMMISSION WITNESS CHARLES W. SMITH AS TO PRINCIPLES OF DEPRECIATION, WEDNESDAY, APRIL 23, 1941, RECORD PAGES 2826 TO 2850.

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Whereupon, CHARLES W. SMITH resumed the stand and testified further as follows:

DIRECT EXAMINATION by Mr. Springer.

Q. Mr. Smith, you testified on the principles of accounting yesterday, did you not? A. I did.

Q. And you made a statement of qualifications. Have you had any experience in connection with determining depreciation expense and accrued depreciation, and if so will

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you please describe it briefly? A. I have been actively dealing with depreciation matters since 1920. When I was in the Income Tax Unit of the Internal Revenue Bureau, I necessarily passed upon depreciation claims in numerous, probably hundreds, of cases. In fact, as I look back upon it, it seems that almost every large case involved depreciation in one manner or another. When I was in the employ of the Public Service Commission of Maryland, one of my duties was to pass upon matters of depreciation expense and the depreciation reserve.

Since joining the staff of the Federal Power Commission, I have taken an active part in the functions of the Commission as relating to depreciation. Here again, depreciation is involved in almost every rate case. Thus, since 1920, I have been constantly applying depreciation principles, have been determining service lives, depreciation rates, depreciation expense and accrued depreciation. In addition, I have been a close student of public utility depreciation matters and have taken a very active part in

the work of the Committee on Depreciation of the National Association of Railroad and Utilities Commissioners.

Q. Have you supervised in a general way the preparation of an exhibit showing depreciation and depletion of gas plant as of December 31, 1938, for the Hope Company? A. I have.

Incidentally, when I speak of depreciation hereafter,

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depletion will be included in the meaning of the term. For convenience, in other words, both depreciation and depletion will be spoken of as depreciation.

Q. And the exhibit referred to shows the annual and accrued depreciation and depletion as related to the original cost of the gas plant of the Company, does it not? A. It does.

Q. Are there two phases to the depreciation problem? A. There are. One phase relates to depreciation expense, and the other phase relates to depreciation in the properties as of a particular date, the latter being referred to as accrued depreciation.

Q. Is the purpose of depreciation accounting to determine, as reasonably accurately as possible, another element of the cost of service for a given period? A. Yes, that is true.

Q. What do you mean by the word "depreciation"? A. Depreciation signifies the expiration or consumption, in whole or in part, of the service life, that is, the economic life or utility, of depreciable property resulting from the action of one or more of the various forces which operate to bring about the retirement of such property from service. Among the forces so operating are wear and tear, decay, action of the elements, inadequacy, obsolescence, and public requirements.

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Q. Is depreciation wear and tear? A. No, depreciation is not wear and tear. Wear and tear is simply one of

the forces which operate to bring about the retirement of property.

Q. Is depreciation inadequacy? A. No, inadequacy is also only one of the forces which operate to bring about the retirement of property.

Q. Is depreciation obsolescence? A. No, true depreciation is not obsolescence. Again, obsolescence is merely one of the forces which bring about the ultimate retirement of property.

Q. Will you please explain the difference between depreciation per se and the forces bringing about the retirement of property? A. All physical property of a utility, except certain land, will come to the end of its useful or economic life. If it did not come to the end of its economic life, if its life, in other words, were perpetual, there would be no depreciation. The force or forces causing the ultimate retirement of property are usually classified into two broad categories, such as physical and functional. Wear and tear, or deterioration, is the chief physical cause of retirement, whereas inadequacy and obsolescence are the chief functional causes.

Sometimes, of course, several causes of retirement are acting simultaneously. Depreciation, however, is not syn-

onymous with retirement or with the cause of retirement. Depreciation results, as I have indicated, because the properties will not last forever. Depreciation, itself, is the diminution, the lessening, or the reduction in the service life of properties.

Service life is the same as economic life, the utility of property, or the over-all work it will do or what it will yield during its useful life in service. Depreciable assets are, therefore, no more than stored-up services. The purchase of a gas well is the purchase of so much gas in the ground. The purchase of an automobile is, in reality, the purchase of so many automobile miles or automobile hours of service.

The purchase of a building is the purchase of so much shelter. The purchase of a gas transmission line is the purchase of so much transmission service. The purchase of capital goods, in other words, is the purchase of future service. This is obviously so, for otherwise capital goods would have no economic value. As Professor Taussig classically remarked, "the printing press ripens into books."

Plant costs are incurred to make production possible. The use of plant results in some sort of production, and this production reduces to possession some of the over-all stored-up service, over-all yield of work units.

As service is performed, a corresponding part of the cost of plant—that is, the cost of stored up services—should be charged as an expense of doing business—depreciation expense.

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As this service capacity, or utility, or economic life, or service life, which Professor Paton calls a "bundle of services," is used up, depreciation occurs regardless of the cause of final retirement. The present fact of depreciation does not vary because of the nature of the ultimate retirement. Only the fact of ultimate retirement and the time of retirement are important. The final retirement may be due to deterioration, exhaustion of natural resources, inadequacy, obsolescence, or some other cause, but the cause of ultimate retirement should not be confused with depreciation itself, which is a diminution in service life.

To illustrate this point, if a certain gas well will produce one million cubic feet of gas during its useful life, and if the well has no salvage value, then every time a thousand cubic feet of gas is removed, a proportionate part of the economic or service life of the well has been consumed or has expired. This results in depreciation and depletion. Each unit of production,—and I use production in the broad sense of service,—reduces the utility or the over-all yield of the item and reduces the economic worth. This reduction is depreciation.

Q. Then what you have said supports the unit-of-production method of computing depreciation, Mr. Smith? A. Yes, theoretically, it does, and actually that method has been applied in the instant case to as large a part of the

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property of the company as is feasible. In other words, certain of the costs, such as the cost of well construction and the cost of laying field lines, are depreciated on the basis of production. It is not practical, however, to apply that method to many other items of plant. It is very seldom possible to apply the unit-of-production method to a large part of the properties of a public utility. The reason is that sufficient data necessary to apply the unit-of-production method are not available, and could not be made available without the expenditure of large sums of money, and it is doubtful if the data could be made available even by that means, and the result would not likely vary greatly from results which obtain from the use of the straight-line method. The straight-line method is the nearest approach to the unit-of-production method for a utility, in my opinion. That method emphasizes the time element. There is very good reason for the application of the straight-line method to public utility properties, for the service or economic life does have a direct relationship to the expiration of time, and because public utility operations are relatively stable compared with other business enterprises.

I might add, too, that the straight-line method is used far more than any other depreciation method. In fact, no other method comes even close to having the widespread application of the straight-line method.

Q. Well, Mr. Smith, what, in your opinion, is "actual

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existing depreciation"? A. Actual existing depreciation is the expired, diminished, or consumed service life, which I also term the economic life, of a utility's depreciable plant.

Q. How, in your opinion, should actual existing depreciation be determined? A. First of all, it is necessary to estimate the over-all service life of the various property items. In making this estimate, resort should be had to a thorough field inspection of the property and then consideration should be given to all other available data, such as life tables, mortality curves, retirement experience of the company, et cetera, which may have a bearing on the problem.

After service lives have been determined, they are converted into depreciation rates. These rates should then be applied to the cost of properties so as to determine that part of the cost which is associated with the expired, consumed, or diminished service life. This means that a properly computed depreciation reserve will be determined from the depreciation rates. In other words, a properly computed depreciation reserve measures, in my opinion, the actual existing depreciation on a cost basis, for it measures the cost of the economic life which has expired, or which relates to past transactions.

It was the practice at one time to charge off the plant

cost directly as depreciation occurred rather than indirectly through the use of a depreciation reserve. It should be borne in mind that the reserve for depreciation is simply a complement to the plant account. It is a part of the plant account, being contra thereto.

Q. In your opinion, is so-called "observed depreciation" true depreciation?

Mr. Cockley: To which question the respondent objects on the ground that the witness has shown no qualifications to answer it, it being, as I understand it, a strictly engineering question.

Mr. Springer: It is hardly strictly an engineering question that hasn't come to Mr. Smith's knowledge in his 20 years of appraising depreciation studies. He is certainly entitled to an opinion on it.

Mr. Cockley: May I interrogate him briefly upon his qualifications?

Trial Examiner: Well, I doubt that that will be necessary. There has always been a question in my mind as to whether it was either strictly an engineering problem or strictly an accounting problem, and I have often wondered just what kind of an expert you might put on the stand to testify with respect to that. If you wish to go into Mr. Smith's qualifications in that respect, you may do so.

Mr. Springer: Could that be reserved until he has an-

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swered my question? He is amply qualified to assert his opinion on such a depreciation study as the so-called observed depreciation.

Trial Examiner: Of course, the question has been raised as to whether he is or not. I think perhaps we might postpone the answer to the question until Mr. Cockley has had an opportunity—

Mr. Springer: (Interposing) He has already testified that he has spent 20 years in appraising depreciation studies, and that he himself has determined service lives and the annual depreciation expense.

Trial Examiner: Well, I am satisfied as to the witness' qualifications, but you realize, of course, that Mr. Cockley is making up a record here, and he is entitled to develop those qualifications on that.

Mr. Cockley: Am I right, Mr. Smith, that your experience with depreciation in the past has been as an accountant?

The Witness: Not exclusively, Mr. Cockley.

Mr. Cockley: Are you an engineer?

The Witness: No, sir.

Mr. Cockley: Have you had any engineering experience at all?

The Witness: I have charge of a certain engineering group, they work under my direction. I have studied the phases of engineering which relate to regulation, certainly

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for the last 12 years or more.

Mr. Cockley: Will you define for me exactly what you mean or what you understand by so-called "observed depreciation" as used in the question put to you?

The Witness: You go out and look at the properties, you measure the deterioration as far as you can, you measure the pitting in pipes, you observe the physical condition of structures and equipment, you take into consideration all of the defects which are visible to the eye, you take into consideration all of the inadequacy or obsolescence which is visible or effective as of that time, and you convert that into a condition per cent.

I have accompanied field parties in making such studies. I very frankly think that they are worthless.

Mr. Cockley: Well, just a minute. What you think about it isn't the question.

Did you ever have to determine, yourself, the condition of any part of a gas plant or other property based on that?

The Witness: The condition is not depreciation, no, sir.

Mr. Cockley: Or the amount of existing depreciation in it, or how much its service life has expired? Did you ever have to do that as a practical matter?

The Witness: I think we have done it here, a group of us—

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Mr. Cockley: (Interposing) Just a minute—

Mr. Springer: (Interposing) Permit the witness, please, to finish his answer.

Mr. Examiner, I think the witness should be protected from this interjection of question after question before he completes his answer and explanation.

Mr. Cockley: You are the one that is interrupting him now.

Mr. Springer: I am protecting him now.

Trial Examiner: Well, I really don't think the witness needs much protection, as far as that is concerned.

Mr. Cockley: I haven't observed that he did.

Go ahead and make your explanation.

The Witness: What I wanted to say was that Mr. French, of the Division of Gas Engineering, determined the service lives from a thorough inspection of the property. My staff worked in very close association and collaboration with Mr. French, and we applied his service lives or depreciation rates, so that in this particular case I have not determined the depreciation rate element which goes into the determination of expired service lives.

Mr. Cockley: Isn't—

The Witness: (Interposing) But I say a group of us have done that job.

Mr. Cockley: Mr. Smith, isn't it a fact that you

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couldn't, yourself, go to any piece of machinery in the Hope Company's property, or pipe line, and tell from an inspection, or otherwise, when that property's service life would end, or had ended?

The Witness: If it had ended, certainly I could tell.

Mr. Cockley: Well, you could tell because some practical gas man told you that this engine was no longer useful?

The Witness: That is probably so.

Mr. Cockley: And you couldn't—

The Witness: (Interposing) You asked me two questions before.

Mr. Cockley: Answer the other one, then.

The Witness: You asked me whether I could tell the future life. I think by making a study of all the information available I could tell the future life. I have done it in many instances.

Mr. Cockley: Could you look at a compressor and tell whether it was in good operating condition or not?

The Witness: I wouldn't attempt to.

Mr. Cockley: Could you tell by looking at a compressor engine how much of its useful service life—if you had all the information, now, that an engineer could get—could you tell how much of its useful service life had expired?

The Witness: I wouldn't want to do that, and I haven't done it here.

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Mr. Cockley: You couldn't do that, you don't feel qualified to do that, is that right?

The Witness: I wouldn't want to attempt it.

Mr. Cockley: And isn't the most important factor you take into consideration, in determining the service life, the amount of service life that has expired in an item of property at the time it is observed?

The Witness: Well now, we do, but that is not usually done in observed depreciation; that is, our method—

Mr. Cockley: (Interposing) Well, isn't that a fact, that your engineer has to go and consider all the facts that his observation and investigation show him, and determine how much of the service life has expired up to a given date? Isn't that right?

The Witness: No, he doesn't do it that way. In effect he gets that answer, but what he does is to determine an over-all service life and then, by knowing the age of the property, he can get the amount expired.

Mr. Cockley: Isn't it a fact, Mr. Smith, that what he does is determine the amount of the service life that has expired in a given number of years, and project that in the future?

The Witness: No, indeed, that is wrong. First of all, to get the right answer, he must project the over-all service life to get the proportion which has expired,—he can't get the proportion expired unless he knows the over-all life.

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Mr. Cockley: You have to determine the over-all, first?

The Witness: That is the only real way to do it.

Mr. Cockley: And you don't use at all the condition of the property that he finds it in after 20 years of service to prognosticate how much longer it is going to last?

The Witness: Yes, indeed, you do.

Mr. Cockley: That is exactly what you do?

The Witness: Yes, to get the over-all life.

Mr. Cockley: And that observation and that determination is an engineering question, isn't it, primarily?

The Witness: We have treated it so here.

Mr. Cockley: All right.

I object to this witness expressing any comments on whether, in his opinion, so-called observed depreciation is true depreciation in view of the fact, as he has just stated, that the essential thing in it is an engineering determination.

Trial Examiner: The objection is overruled.

Mr. Cockley: Note an exception.

The Witness: In the cases with which I am familiar, and I have studied a great many cases involving observed depreciation, observed depreciation was not true depreciation. I do not believe true depreciation can possibly be determined by observation alone, because I do not believe by observation alone the expired service life can be de-

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termined. Observation and field inspection of physical properties should be resorted to for the purpose of aiding in the determination of service lives, that is to say, depreciation rates, and these in turn are used in determining the exhausted service life. Observation should not be resorted to for the purpose of determining directly from the physical condition of property the depreciation therein. To repeat, field inspections are most important, but their importance lies in the determination of service lives in

order that true depreciation, which is the diminished, consumed or expired service life, may be computed.

By Mr. Springer:

Q. Mr. Smith, in a gas company where much of the property is underground and not visible, would it be possible for anyone to go out and inspect the property and reach an accrued depreciation answer, if he had no other information than his inspection notes?

Mr. Cockley: I object. That is a theoretical question that relates to a form of inspection to determine a condition, which nobody, so far as I know, has employed in this case.

In addition to that, it calls for an engineering opinion which this witness is obviously not qualified to express.

Mr. Springer: He is certainly entitled to an opinion on this subject, and that is just what Mr. Rhodes did when he had 40 or 50 men look at the property and take samples

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and come in with some sort of an accrued depreciation percent. I am asking him whether or not he knows anybody who has X-ray eyes who can tell how much depreciation exists in a property when most of it isn't visible.

Trial Examiner: You asked him if anybody could do it, not if he knew anybody.

Mr. Cockley: I object to counsel's characterization of what Mr. Rhodes did, because it is just as inaccurate as to call "black," "white."

Wholly aside from that, if this witness wants to be used as a rebuttal witness to Mr. Rhodes' depreciation study in his determination of percent condition, then he ought to take up his exhibit in a logical way and present it, and not come in with some general comment as to what he generally thinks about this assumed situation, which doesn't exist here at all. It is plainly an improper question.

Trial Examiner: Will you read the question again, please?

(The question was read by the reporter.)

Mr. Cockley: There is no such case here.

Trial Examiner: Well, I am concerned about the ability of the witness to testify as to what it is possible for somebody to do. The objection is overruled.

Mr. Cockley: Note an exception.

The Witness: I presume it would be possible to go out and dig up all the pipe and see it. That usually isn't done.

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In practice, sample studies are made. It is my opinion that these sample studies are not sufficient to show the actual existing depreciation of the properties, because they are not sufficient to enable a determination of the exhausted service life.

Mr. Cockley: I move that the answer be stricken on the ground that the last half of it is not responsive to the question.

Trial Examiner: It seemed to me that the last half was more responsive than the first.

Mr. Cockley: Then I move to strike it all out.

Trial Examiner: The motion is overruled.

Mr. Cockley: Exception.

By Mr. Springer:

Q. Mr. Smith, I believe you said that it wasn't possible to see the inside of much of the gas company's equipment. Is it important to know the age of the various classes of property so far as that can be ascertained? A. Yes, it is important to have knowledge of the age of property in computing the expired service life.

Q. And is it important to know the retirement experience of the company for various classes of property? A. Yes, that retirement experience of the company is one of the factors that ought to be taken into consideration in determining service lives.

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Q. Is it important to study the maintenance policies and practices of the company? A. Yes, of course.

Q. From your former testimony, then, you believe that properly computed depreciation reserves measure the actual depreciation in properties? A. Yes, that is correct, assuming now we are speaking of a cost basis. It is correct, for in my opinion, a properly computed depreciation reserve measures, as best can be measured, that part of the bundle of services we call plant, which has been used up.

Q. Now, Mr. Smith, in your discussion of the principles of depreciation and the definitions that you have given, are they consistent with the definitions of depreciation and depletion in the Federal Power Commission's Uniform System of Accounts for Natural Gas Companies?

Mr. Cockley: I object to that. Plainly, if they want to prove what these are, they should introduce the exhibit and let it speak for itself, and not ask the opinion of the witness as to whether what he has done is, in his opinion, consistent with it, when they can safely wait until there is an attack on him on that basis.

Mr. Springer: Mr. Examiner, he is certainly entitled to state whether or not his testimony is consistent with the definition in the System of Accounts which he is re-

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sponsible for interpreting.

Mr. Cockley: I never heard of such a suggestion in my life, for a witness to do that. Now he may testify, if he wants to, that the depreciation principles set forth in the Code of Accounts were the ones he instructed the engineers to follow. That would be perfectly proper. But to ask him if, in his opinion, his own testimony is consistent with that Code of Accounts is, to my mind, a conclusion of the witness, it is wholly unwarranted by anything I know, except in cross examination. It probably would be a proper

question for somebody to ask on cross examination as a foundation question, but to ask the witness himself whether, in his opinion, what he had done conformed to some depreciation Code of Accounts, or conformed to the Statutes of the State, or conformed to the Constitution of the United States, is wholly improper.

Mr. Springer: I haven't asked an expert witness for an improper conclusion. He is eminently qualified, and I have asked him whether or not the various definitions he has used in his testimony here are consistent with the precise wording of the definition in the System of Accounts. I can't see anything objectionable about that.

Trial Examiner: Well, of course, it certainly calls for a conclusion on the part of the witness.

Mr. Springer: I think expert witnesses make conclusions constantly, I think that is an accepted fact.

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Mr. Cockley: Not of that kind.

Trial Examiner: It is perhaps true that under the strict rules of evidence the question would be improper. I am satisfied that a good many that have been asked in this proceeding would certainly be; but of course, we don't follow those rules here, and I can't see where any particular harm might result from it.

The objection is overruled.

Mr. Cockley: Exception.

The Witness: Yes.

Mr. Springer: That is all from Mr. Smith at this time.

Mr. Cockley: We reserve the right to cross examine after we have had a chance to examine his testimony in a little more detail, but I would like to ask one or two questions now, that have occurred to me, if I may.

Trial Examiner: Surely.

CROSS EXAMINATION by Mr. Cockley.

Q. Did you assume that Mr. Rhodes, in the determination of accrued depreciation of the Hope Company's property, did or did not give consideration to age of various items of property which he was expressing an opinion about? A. I think, from reading his testimony, that he gave some consideration to age.

Q. And did you answer the questions you did on the

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assumption that he did not know and give weight to the retirement experience of the company, to various classes of property? A. What question are you referring to?

Q. Expressing your general opinion. A. I don't recall giving testimony on Mr. Rhodes' method.

Q. No, but in discussing generally the method of determining the depreciation, in response to questions that were put to you which were said to correctly reflect the method that had been used here, I am asking you whether you did or did not assume that Mr. Rhodes, in this case, knew the retirement experience of the company as to various classes of property? A. I made no assumption as to what Mr. Rhodes did. I did not testify as to Mr. Rhodes' methods. I knew that Mr. Rhodes did have knowledge of the retirement experience, that is quite evident in the statement he filed.

Q. In your comments upon observed depreciation, do I understand that you were not referring to Mr. Rhodes' testimony? A. I was speaking generally of observed depreciation studies.

Q. And you weren't referring specifically to the testimony in this case? A. That is correct.

Q. Now one other question.

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Mr. French, I believe, was the engineer who made the depreciation study, or determined the service lives of various classes of Hope's property? A. Yes, sir.

Q. Did you instruct him how to do it? A. Mr. French is not under my jurisdiction. I did have conversations with Mr. French, but I gave him no instructions.

Q. You gave him no instructions? A. That is right.

Q. Did you talk it over with him and explain fully your ideas about it, before he went to work? A. No, sir.

Q. You had talks with him about it before? A. I had talks with Mr. French toward the end of his studies, and I have had talks with Mr. French particularly since he prepared his exhibit.

Q. Had he arrived at any judgment as to lives of various classes of properties when you first talked to him? A. Yes, he had.

Q. And were those the lives that he subsequently used? A. Well, he may have made some changes, but he didn't make any changes as a result of my conversations, I am sure.

Q. Generally speaking, they were the lives you think he used? A. That is right.

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Q. Did you give him any directions at all, or discuss with him before he had completed his work, as to the things he should take into consideration in determining the service lives of those properties? A. I gave him no instructions. Toward the end of the investigation, I spent about a half an hour talking to Mr. French in the office of the Hope Natural Gas Company, and at that time we had some general discussion as to the determination of rates, but it was a general discussion only. I can't claim any contribution to Mr. French's study, Mr. Cockley.

Mr. Springer: Would it help you, Mr. Cockley, if I stated that the assignment for determining service lives was an engineering assignment to Mr. French from the division of Gas Engineering, headed by Mr. C. C. Brown; and that the service life determination was applied by men

under the direction of Mr. Smith in computing the depletion and depreciation reserve requirements.

By Mr. Cockley:

Q. Well, your testimony is that you did not discuss with Mr. French, prior to the time he substantially determined these service lives, the elements that he should take into consideration in determining service life, is that right? A. That is correct.

Now, Mr. Cockley, it is quite possible that at some time or other I may have had some conversation with Mr.

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French generally about depreciation matters, but they were no more than conversations that I might have had with any other member of the Commission's staff on that subject.

I don't recall anything specific in regard to that. In other words, I have done a good deal of work on depreciation, a good deal of writing on depreciation, and some of the members of the staff of the Commission occasionally come around and consult me; but I recall nothing specific in that connection relating to Mr. French.

Q. And that same thing is true with reference to other engineers who worked on depreciation? A. That is correct.

Q. Including both the gasoline plant study of Mr. Soyster and anybody else in the engineering department who worked on depreciation? A. That is true. As a matter of fact, I don't believe I have ever met Mr. Soyster.

Mr. Cockley: That is all.

15. **COMPANY'S EXHIBIT NO. 108 ENTITLED: "Photostatic Copy of Certified Copy of the Records of the Board of Public Works of the State of West Virginia Showing the Valuation of the Company's Properties Fixed for Taxation Purposes for the Year 1941" (Not Admitted).**

ASSESSMENT OF PUBLIC SERVICE CORPORATIONS—1941

The Board took up the consideration of the assessment of the properties of the public service corporations for the purposes of taxation for the year 1941, i.e. water, light and power companies, bridge companies, telegraph and telephone companies, oil and gas companies, express companies, private car line companies, steam railroad companies, street railway companies, bus lines and bus companies, and all other companies doing business in the State of West Virginia, and assessable by The Board of Public Works, and upon a thorough examination of the returns made by said companies, and upon a separate vote of The Board taken upon the valuation in the State of each property assessed, with the right of any member of this Board to have his vote recorded at the time on the assessment of any particular property fixed the valuations of the properties owned by said companies in the State of West Virginia, for the tax-paying year 1941, as hereinafter set forth, and apportioned the same to the counties in which said property is located, as follows:

* * * * * * * * * * * * * *
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County	Class No. 1 (Intangible Personal Property)	Class Nos. 3 & 4 (All other Property)	Total
* * * * * * * * * * * * * *			
Gas, Oil and Pipe Line Companies			
* * * * * * * * * * * * * *			
Hope Natural Gas Company			
Barbour	$ 20,600	$ 265,200	
Boone	121,500	1,566,000	
Braxton	39,600	510,600	
Brooke	2,500	31,500	
Calhoun	223,300	2,877,700	
Clay	5,800	74,200	
Doddridge	341,200	4,398,400	
Gilmer	258,800	3,336,300	
Harrison	1,142,500	14,725,600	
Jackson	1,000	13,800	
Kanawha	230,400	2,969,400	
Lewis	622,300	8,020,300	
Lincoln	4,600	59,800	
Logan	2,300	29,700	
Marion	214,600	2,766,500	
Marshall	75,700	975,100	
Mason	600	7,600	
Mingo	100	1,100	
Monongalia	61,600	794,400	
Nicholas	17,100	220,500	
Ohio	200	2,500	
Pleasants	42,000	541,500	
Preston	1,100	14,300	
Putnam	400	4,500	
Raleigh	300	3,400	
Randolph	—	200	
Ritchie	295,900	3,814,300	
Roane	53,600	691,500	
Taylor	11,200	144,000	
Tyler	115,300	1,486,000	

Upshur	3,500	45,600	
Wetzel	452,000	5,826,000	
Wood	134,200	1,728,600	
Wirt	4,200	54,000	
	$4,500,000	$58,000,000	$62,500,000

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STATE OF WEST VIRGINIA,
OFFICE OF THE SECRETARY OF STATE,
CHARLESTON, SS:

I, Wm. S. O'Brien, Secretary of State and Ex-Officio Secretary of The Board of Public Works, do hereby certify that the foregoing is a true and correct copy of the records of The Board of Public Works as touching the valuation of the properties of the Hope Natural Gas Company in the State of West Virginia for the tax-paying year 1941.

Given under my hand and the Great Seal of the said State, at the City of Charleston, this 3rd day of July, 1941.

WM. S. O'BRIEN,
Secretary of State and Ex-officio Secretary of The Board of Public Works.

16. COMPANY WITNESS BROWN'S EXHIBIT NO. 19 ENTITLED: "Rate of Return—Written Statement of Percy W. Brown"

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STATEMENT OF EXPERIENCE AND QUALIFICATIONS OF PERCY W. BROWN

1. Name, address and age

Percy W. Brown, 1040 Union Commerce Building, Cleveland, Ohio, age 53.

2. Education

Graduated from Harvard University in 1908 with degree of A. B.

3. Present position

General partner in the firm of Hornblower & Weeks, brokers and investment dealers, members of the New York, Chicago, Boston and Cleveland Stock Exchanges, and underwriters and distributors of industrial, public utility and railroad bonds and stocks. The firm maintains offices in nine cities: Boston, New York, Chicago, Cleveland, Detroit, Providence, Philadelphia, Portland and Bangor.

4. Experience

1909-1910	Bookkeeper in the Boston office of Hornblower & Weeks.
1910-1916	Assistant statistician with Hornblower & Weeks.
1916-1922	Chief statistician of Hornblower & Weeks.
1923 to date	General partner of Hornblower & Weeks; for the past 10 years member of the Executive Committee of the firm and member of the Buying Committee. Since March, 1924, resident partner in charge of the Cleveland office, and 1924-1930 partner in charge of a Pittsburgh office.

My duties with Hornblower & Weeks have included the constant examination and analysis of many securities, both bonds and stock, the examination of various corpora-

tions with a view to purchasing and selling at retail large blocks of their bonds and stocks based on personal in-

vestigation and report to the other partners, the negotiation for the purchase of blocks of securities running into many millions and participation as a member of the firm in the purchase and sale of numerous security issues in very large amounts, both bonds and stocks, of industrial, utility and other companies.

Attached hereto as Schedule A is a list of the principal bond issues sold in 1938 and 1939 including generally only those issues of $5,000,000 and over. Hornblower & Weeks participated as an underwriter in 35 of the issues there shown and as member of the selling group in 41 additional issues there shown, including the Lone Star Gas debentures and Oklahoma Natural Gas 3¾% bonds shown on Schedules D and E hereto attached. Hornblower & Weeks were also co-underwriters in the public offering in June, 1936, of the first mortgage bonds and the convertible debentures and were members of the selling group for the public offering of the common stock in September, 1936, of the El Paso Natural Gas Company, Schedule G hereto attached.

I am a member of the investment committee of four endowed institutions. I have served as a director in more than 15 corporations with assets ranging from $3,000,000 to $50,000,000. I have been employed a number of times to give testimony in valuation cases for large blocks of securities—bonds, preferred and common stocks, both listed and unlisted, and both widely distributed and closely held. I have participated in various reorganization plans of corporations with a view to readjustment of the capital structure or with a view to getting new capital from the public. I have given advice on the relative merits and investment values of securities to many hundreds of individual investors over a period of more than 29 years.

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WRITTEN STATEMENT OF PERCY W. BROWN

A. General Problem

I have been asked by the Hope Natural Gas Company to give my opinion as to what is a fair rate of return to be earned by it on a fair valuation of its natural gas properties.

For this purpose I have examined the income figures and balance sheets of the Company for the past ten years and have studied other material and data as to the history, organization and nature of the business of the Company. I am generally familiar with the territories served by it and have made such study and investigation as seems to me necessary to form a judgment as to the fair rate of return to be earned by it.

In approaching this problem I have assumed that the Federal Power Commission will find the fair value of the natural gas properties of the Company and will allow its necessary operating expenses and charges, including reasonable allowances for depreciation and depletion.

The importance to the general public of an adequate rate of return for public utilities is sometimes overlooked. The interests of every citizen of every community are adversely affected if that community has not adequate and efficient public utility service. Starved utility enterprises are a real detriment in any community, affecting living conditions, business opportunities and property values, among other things.

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The construction and constant extension of efficient public utility enterprises must be financed by the permanent hiring of money, principally through the medium of bonds and stocks. This money comes in part from individual investors and in part through the savings of the public deposited in banks, paid as premiums to insurance companies

or contributions made to educational and philanthropic institutions.

Probably more than half of all our people have a vital interest in having their money hired to utilities at an adequate rate of return. All of them have a direct and vital interest in adequate and efficient utility service in their respective communities.

The problem of a fair rate of return therefore reduces itself to a decision as to the rate at which one large part of the public will be willing to hire its money to public utilities to enable them to serve another part of the public. To insure a steady flow of capital into the building and extension of public utility facilities the utilities must earn a rate of return that the investing public deems fair. If lower rates are prescribed by public authorities than the investing public deems fair they simply will not hire their money to public utilities. Deprived of this the utilities in the end will be unable efficiently to perform their function to the injury of everyone.

More specifically the problem reduces itself to one of what rate of earnings the Hope Natural Gas Company would have to enjoy at the present time on its natural gas

properties to enable it to replace the money invested in them. This requires a consideration of those factors that the investing public would consider and the terms upon which it would hire its money to the Hope Company.

B. General Character Of The Hope Natural Gas Company's Business

Investors will only hire their money if they can receive a return commensurate with the risks and opportunities offered.

From the investors' viewpoint the natural gas business is probably the most hazardous of any of the public utilities. It sells a wasting asset. In the past many natu-

ral gas companies have come into existence and then passed out due to a failure of gas reserves. Throughout the Appalachian region gas reserves during the past 40 years have only been maintained by constant exploration and extension of the natural gas fields. The Hope Natural Gas Company itself has found it necessary constantly to extend its transmission system further and further south in West Virginia to bring into its lines either by production or purchase newly discovered fields. So far its business has not suffered appreciably from lack of adequate gas supplies but it is present in the minds of investors that this cannot always continue to be true.

Until recently the securities of manufactured gas companies have been favored by investors over those of natural gas companies for the very reason that the manufactured gas company, making the product it sells, is a much less hazardous undertaking than a natural gas enterprise. The recent change in the public attitude towards the securities of manufactured gas companies has been largely due to the discovery of large reserves of natural gas in

the west and southwest, to the development of long distance transmission lines bringing this gas into what had theretofore been manufactured gas markets, and the low cost of natural gas in comparison with manufactured gas. One million British thermal units of energy can be purchased in the form of natural gas for a fraction of its cost in the form of manufactured gas. Thus recently a hazard not theretofore serious has been introduced into the manufactured gas business in some places due to the fear in the mind of the investing public that natural gas may supplant it.

The natural gas business, however, remains in the mind of the investor as an inherently hazardous enterprise.

Another hazard in the natural gas business is the fluctuation of revenues as a result of general business condi-

tions. Investors know that a large part of the natural gas produced in the United States is used for industrial purposes. In 1938 about 79% of all gas produced in the United States was so used and about 30% of the Hope Natural Gas Company's sales in that year was used for industrial purposes.

In industry natural gas is merely a fuel and in consequence is competitive with other fuels, principally coal and oil. Not only this but where natural gas wins out in this competition the annual sales for industrial use fluctuate from year to year with the rise and fall of general business activity.

While domestic sales fluctuate widely from month to month and indeed from day to day, the average domestic

consumer tends to purchase about the same amount of gas each year, variations being caused largely by departure from average weather conditions. On an annual basis it is a fairly stable demand. Industrial sales, on the other hand, while they do not vary greatly from week to week, do increase in periods of industrial activity and decline in periods of industrial depression.

The investor, of course, is not interested in the day to day or weekly demands of either domestic consumers or industrial consumers. His interest is in the annual sales out of which he hopes the Company in which he invests will have net earnings with which to pay interest and dividends. Since the total sales of any natural gas company in a year will thus depend in part upon the degree of industrial activity, natural gas securities in the minds of the investors are associated with the risks of non-utility enterprises. If Hope were able economically to sell gas only for domestic consumption it would be regarded by the investing public as a more stable and less speculative enterprise than it now is.

This difference is well illustrated by a comparison of the revenues of the Bell Telephone system and those of the Western Union Telegraph system. The telephone revenues over a long period of years have been remarkably constant due to the fact that so large a part of this business is dependent upon residence subscribers. The revenues of the Western Union Telegraph system, on the other hand, have paralleled more nearly those of manufacturing corporations and its securities are generally regarded by investors as highly speculative.

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A third factor, which would bear directly on the investor's attitude towards the Hope Natural Gas Company is the fact that natural gas production in the Appalachian field has shown no growth in the last 20 years and apparently has passed the peak. The tremendous recent growth in the production of natural gas in this country has been largely in the southwest and west. In 1906, Pennsylvania and West Virginia accounted for about 67% of the total national production, whereas in 1937, those two states accounted for only 11% of the total. California, Louisiana, Oklahoma and Texas, which together produced only a little over 1% in 1906, in 1937 accounted for about 75%. The extension of pipe lines from southern fields to densely populated areas, such as Detroit and Chicago, has been notable. That the trend in natural gas production in the Appalachian field is not upward is shown by the following table (from Moody's Manual of Public Utilities, 1939), in millions of cubic feet:

	United States	W. Virginia	Penna.	Ohio	Kentucky
1915	628,000	244,000	113,000	79,000	1,000
1920	798,000	239,000	125,000	58,000	3,000
1925	1,188,000	180,000	101,000	43,000	10,000
1930	1,943,000	144,000	88,000	63,000	28,000
1935	1,916,000	115,000	94,000	49,000	39,000
1937	2,447,000	149,000	115,000	42,000	55,000

From an investor's viewpoint the Hope Natural Gas Company does not have possibilities of growth and therefore its securities would be less attractive than, for example, the securities of El Paso Natural Gas Company which has, through expansion of its properties, shown a substantial increase in both gross and net earnings during the past several years. This is well illustrated by the following table which shows gross revenue and net earnings after depreciation per books (million $):

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	Hope (from natural gas business)		El Paso	
	Gross Revenue	Net	Gross Revenue	Net
1929	22.0	3.0	(Not available)	
1930	19.9	1.0	1.2	0.28
1931	18.0	0.6	1.5	0.33
1932	14.2	0.9 (deficit)	1.3	0.19
1933	14.1	0.3	1.3	0.25
1934	16.0	0.9	2.0	0.33
1935	17.0	2.1	2.3	0.42
1936	20.1	3.4	3.2	1.07
1937	20.4	1.9	4.6	1.89
1938	16.9	0.5	4.9	2.08
1939	(Not available)		5.8	2.35

Further details of El Paso Natural Gas Company are shown in Schedule G.

These fluctuations in revenues plus the declining trend of production in West Virginia plus the fact that for a few days in 1940 many industrial consumers dependent on the Hope Natural Gas Company for a supply were curtailed to conserve the supply for domestic users indicate to the investor declining rather than increasing sales for the Hope Natural Gas Company over any considerable future period.

As a practical matter the net earnings of the Hope Natural Gas Company from the natural gas business during recent years, as shown by its books, would prove a substantial obstacle in any refinancing of its properties. Unless earnings increased and stabilized, it would be difficult to sell common shares to the public except at a high yield. However, in approaching the problem of fixing a

fair and reasonable rate of return, I have assumed that the Commission will permit the Company a volume of net earnings from its natural gas business sufficient to support a sound capital structure equivalent to the fair valuation of its natural gas properties.

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An investor would, of course, give consideration to the fact that the markets in which the Hope Natural Gas Company's product is distributed is in a thickly populated, well developed and growing industrial section of the country. This insures a continuous market for both domestic and industrial uses probably as long as adequate service can be maintained. This background of continued population and business growth in the minds of the investors would tend to give confidence in the Company's position and stability.

To some small extent an investor would take into account (and I have taken into account in the conclusions set forth) the fact that the Hope Company is a subsidiary of Standard Oil Company (New Jersey), a company which for many years has enjoyed the highest reputation from the standpoint of management, quality of production, and general efficiency of operation. In each of the plans for replacing the capital invested in these natural gas properties I have assumed that the parent company would retain a sufficient part of the equity securities to preserve working control and continue responsibility for the management of the properties.

C. Present Security Market Conditions

Since the matter under consideration is the fair rate of return at the present time, a brief consideration of market conditions during the past several years is appropriate. During that time we have witnessed an unprecedented low-yield money market, which has been due, in large measure, to a combination of circumstances which in-

cludes the large influx of gold, the excessive bank reserves,

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the low rate of building construction and other factors. The following table shows the average yield of 40 public utility bonds (taken from Moody's Bond Survey) classified as to Moody ratings of quality.

	1938		1939	
	High	Low	High	Low
40 bonds (average)	4.23%	3.61%	3.76%	3.37%
Aaa	3.15	2.90	3.22	2.79
Aa	3.47	3.07	3.39	2.91
A	4.17	3.71	3.80	3.36
Baa	6.24	4.73	4.74	4.35

How long this low-yield market for bonds of various qualities, high and medium grade, will continue cannot be forecasted, but it is my judgment that eventually the yields on higher grade bonds will return to a normal level around 4%, and bonds rated at medium grade will find a level around 5%. This opinion is based on the reasonable expectation that natural and normal forces will eventually prevail over any artificial or temporary forces or situations.

However, the conclusions which follow are not based upon the assumption that more normal money yields will soon prevail, but take into consideration the situation as it exists, and as it has existed for the past two years.

In general, it may be said that except for a few weeks in the second half of 1939, when the approaching European crisis, the declaration of war, and the uncertainty following it, affected the markets for new securities, for the past two years the market for new security flotations of the higher grade bonds and investment quality preferred stocks was reasonably good. The market for equities (common stocks) has been a highly selective one.

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According to the Commercial & Financial Chronicle (January 6, 1940) the domestic corporate issues floated were as follows: